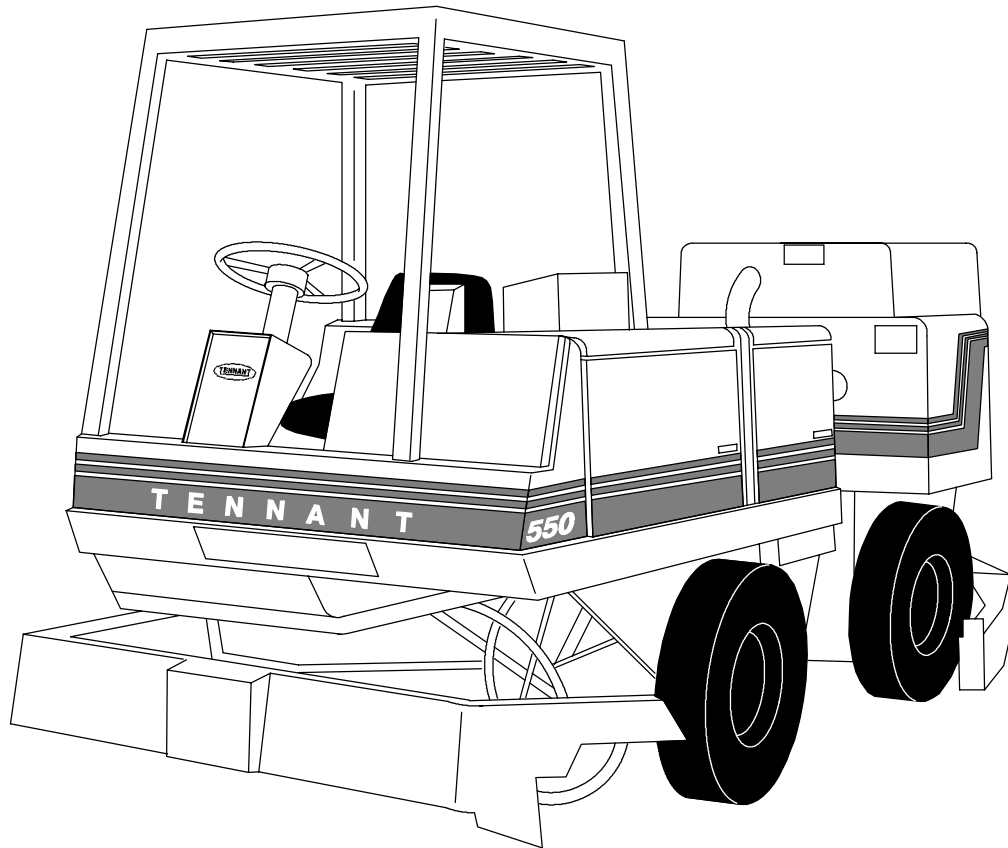




550



MM148
Rev. 25 (9-99)



This manual is furnished with each new TENNANT Model 550. It provides necessary operating and preventive maintenance instructions. Read this manual completely and understand the machine before operating or servicing it.

This manual covers all machine variations and standard options. The instruction portion of the manual consists of the Specification, Operation, Maintenance, and Appendix sections. The parts portion consists of the How To Use This Manual; Standard Parts; LPG Parts; Diesel Parts, SRS® Parts; Options; Breakdowns; F163 Engine Parts, Gasoline, LPG; TM27 Engine Parts, Gasoline, LPG; Engine Parts, Diesel; 65951 Engine Parts, Diesel; and Cross Reference.

All right side and left side references to the machine are determined by facing the direction of forward travel. All hardware considered to be of a common nature or locally available has been omitted from the parts sections. Be aware that this machine may contain metric hardware. Make sure you use equivalent hardware when replacement becomes necessary.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:

- The machine is operated with reasonable care.
- The machine is maintained regularly - per the maintenance instructions provided.
- The machine is maintained with TENNANT supplied or equivalent parts.

MACHINE DATA	
<i>Please fill out at time of installation.</i>	
Machine Serial Number -	_____
Engine Serial Number -	_____
Sales Representative -	_____
Customer Number -	_____
Date of Installation -	_____
Manual Number -	MM148
Revision:	25
Published:	9-99
<small>03952</small>	

Trademark Registered in: Austria, Benelux, Denmark, England, France, Germany, Italy, Spain, Switzerland, United States, Argentina, Australia, Canada, Japan, Mexico, Sweden, by TENNANT, Minneapolis, Minnesota, U.S.A.

Acknowledgements: Technical information and/or illustrations supplied by Teledyne Continental Motors, Industrial Products Division; Sperry Vickers Corporation; Eaton Corporation, Hydraulics Division.



CALIFORNIA PROPOSITION 65 WARNING:

Engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

SAFETY PRECAUTIONS

The following symbols are used throughout this manual as indicated in their descriptions:



WARNING: To warn of hazards or unsafe practices which could result in severe personal injury or death.

FOR SAFETY: To identify actions which must be followed for safe operation of equipment.

The following information signals potentially dangerous conditions to the operator or equipment. Read this manual carefully. Know when these conditions can exist. Locate all safety devices on the machine. Then, take necessary steps to train machine operating personnel. Report machine damage or faulty operation immediately. Do not use the machine if it is not in proper operating condition.

FOR SAFETY:

1. **Do Not Operate Machine:**
 - Unless Trained And Authorized.
 - Unless Operation Manual Is Read And Understood.
 - In Flammable Or Explosive Areas Unless Designed For Use In Those Areas.
 - In Areas With Possible Falling Objects Unless Equipped With Overhead Guard.
2. **Before Starting Machine:**
 - Check For Fuel Leaks.
 - Keep Sparks And Open Flame Away From Refueling Area.
 - Make Sure All Safety Devices Are In Place And Operate Properly.
 - Check Brakes And Steering For Proper Operation.
3. **When Starting Machine:**
 - Keep Foot On Brake And Directional Pedal In Neutral.
4. **When Using Machine:**
 - Use Brakes To Stop Machine.
 - Go Slow On Grades And Slippery Surfaces.
 - Use Care When Backing Machine.
 - Do Not Carry Riders On Machine.
 - Always Follow Safety And Traffic Rules.
 - Report Machine Damage of Faulty Operation Immediately.

5. **Before Leaving Or Servicing Machine:**
 - Stop On Level Surface.
 - Set Parking Brake.
 - Turn Off Machine And Remove Key.
6. **When Servicing Machine:**
 - Avoid Moving Parts. Do Not Wear Loose Jackets, Shirts, Or Sleeves.
 - Block Machine Tires Before Jacking Machine Up.
 - Jack Machine Up At Designated Locations Only. Block Machine Up With Jack Stands.
 - Use Hoist Or Jack Of Adequate Capacity To Lift Machine.
 - Wear Eye And Ear Protection When Using Pressurized Air Or Water.
 - Disconnect Battery Connections Before Working On Machine.
 - Avoid Contact With Battery Acid.
 - Avoid Contact With Hot Engine Coolant.
 - Allow Engine To Cool.
 - Keep Flames And Sparks Away From Fuel System Service Area. Keep Area Well Ventilated.
 - Use Cardboard To Locate Leaking Hydraulic Fluid Under Pressure.
 - Use TENNANT Supplied Or Approved Replacement Parts.



WARNING: Engine Emits Toxic Gases. Severe Respiratory Damage Or Asphyxiation Can Result. Provide Adequate Ventilation. Consult With Your Regulatory Agency For Exposure Limits. Keep Engine Properly Tuned.



WARNING: Machine Can Emit Excessive Noise. Consult With Your Regulatory Agency For Exposure Limits. Hearing Loss Can Result. Wear Hearing Protection.



WARNING: Flammable Materials Can Cause An Explosion Or Fire. Do Not Use Flammable Materials In Tank(s).

GENERAL INFORMATION



WARNING: Explosion or fire could occur:

- If machine is used to pick up flammable spills from floors.
- If machine picks up reactive metals, such as aluminum or magnesium. Reactive metals and some detergents form explosive hydrogen gas. Contact Tennant Company for appropriate detergent selection.



WARNING: Moving Belt. Keep Away.



WARNING: Moving Fan Blades. Keep Away.



WARNING: Raised Scrub Head May Fall. Block Scrub Head Up.



WARNING: Crush Hazard Between Front And Rear Halves Of Machine. Engage Pivot Lock.



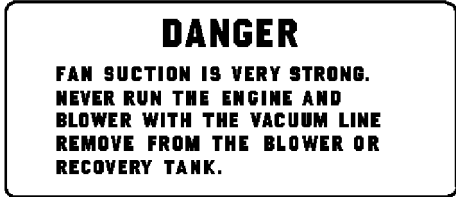
WARNING: Strong Vacuum. Keep Away From Fan Inlet When Fan Is Running.

The following safety decals are mounted on the machine in the locations indicated. If these, or any decal becomes damaged or illegible, install a new decal in its place.

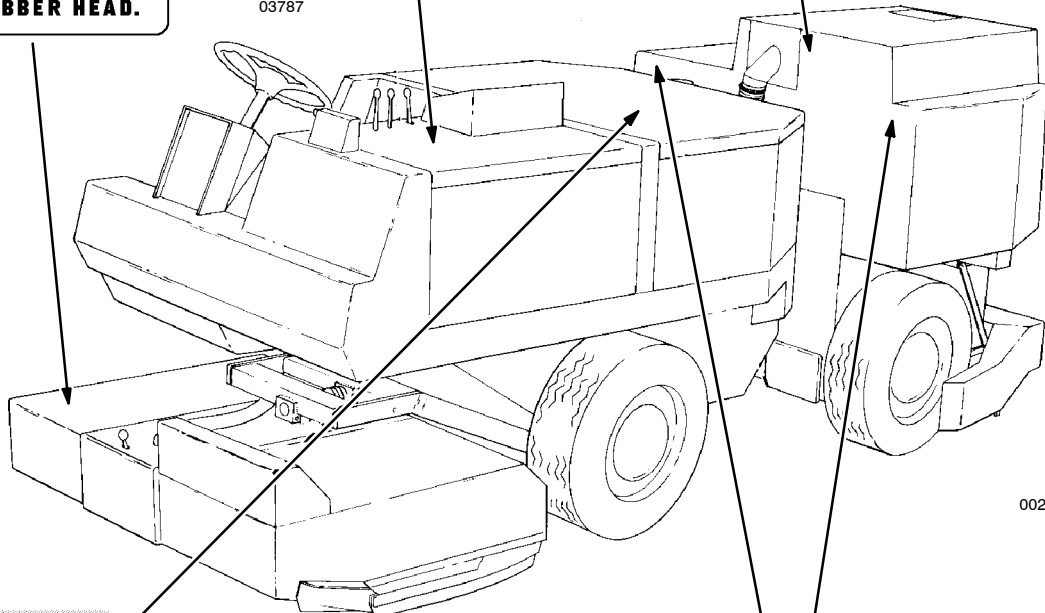
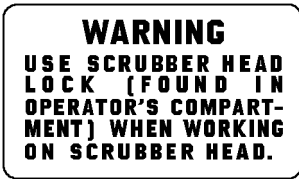
**TRAVEL SPEED CAUTION DECAL -
LOCATED ON THE SIDE OPERATOR
PANEL**



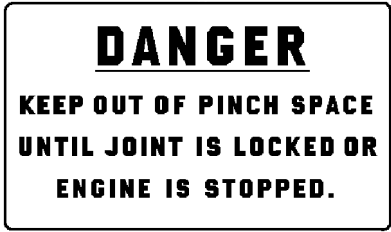
**FAN SUCTION DANGER DECAL -
LOCATED ON THE SOLUTION TANK**



**SCRUB HEAD LOCK WARNING DECAL -
LOCATED ON THE SCRUB HEAD**



**ENGINE FAN WARNING DECAL -
LOCATED ON THE FAN SHROUD**



**PINCH SPACE DANGER DECAL -
LOCATED ON THE SOLUTION TANK**

CONTENTS

	Page		Page
GENERAL INFORMATION	i	SOLUTION LEVER	2-9
SAFETY PRECAUTIONS	i	ENGINE CHOKE KNOB	2-9
SPECIFICATIONS	1-1	THROTTLE LEVER	2-9
MACHINE SPECIFICATIONS	1-3	STEERING WHEEL	2-9
POWER TYPE	1-3	MACHINE OPERATION	2-10
POWER TRAIN	1-3	NORMAL SCRUBBING OPERATION	2-10
STEERING	1-3	PRE-START CHECKLIST	2-10
HYDRAULIC SYSTEM	1-3	TO START MACHINE	2-10
BRAKING SYSTEM	1-4	TO FILL SOLUTION TANK	2-11
SUSPENSION SYSTEM	1-4	TO SCRUB	2-11
SYSTEM FLUID CAPACITIES	1-4	TO DRAIN AND CLEAN RECOVERY	
GENERAL MACHINE		TANK AND EMPTY HOPPER	2-12
DIMENSIONS/CAPACITIES	1-4	POST OPERATION CHECKLIST -	
MACHINE WEIGHTS	1-4	ENGINE OPERATING	2-13
GENERAL MACHINE		TO STOP MACHINE	2-13
PERFORMANCE	1-4	POST OPERATION CHECKLIST -	
MACHINE DIMENSIONS	1-5	ENGINE STOPPED	2-13
OPERATION	2-1	DOUBLE SCRUBBING OPERATION	2-13
PREPARATION FOR OPERATION	2-3	OPERATION ON GRADES	2-13
AFTER UNLOADING AND BEFORE		MACHINE TROUBLESHOOTING	2-14
OPERATING THE MACHINE:	2-3	OPTIONS OPERATION	2-15
OPERATION OF CONTROLS	2-4	HIGH PRESSURE SPRAYER	2-15
MACHINE COMPONENTS	2-4	TO OPERATE HIGH PRESSURE	
INSTRUMENTS AND CONTROLS	2-5	SPRAYER	2-15
BRAKE PEDAL	2-6	VACUUM WAND	2-15
DIRECTIONAL PEDAL	2-6	TO OPERATE VACUUM WAND	2-15
OPERATOR SEAT	2-6	TRANSPORTING MACHINE	2-16
SCRUB HEAD LOCK LEVER	2-6	PUSHING OR TOWING MACHINE	2-16
PIVOT LOCK PIN	2-7	MACHINE JACKING LOCATIONS	2-17
PARKING BRAKE LEVER	2-7	MACHINE STORAGE	2-18
AMMETER	2-7	STORING MACHINE	2-18
SQUEEGEE POSITION LAMP	2-7	GASOLINE POWERED	
TANK DRAIN LAMP	2-7	MACHINES	2-18
SCRUB BRUSH PRESSURE LAMP	2-7	DIESEL POWERED MACHINES	2-19
IGNITION SWITCH	2-7	MAINTENANCE	3-1
DIESEL PRE-HEAT INDICATING		RECOMMENDED FIRST 50-HOUR	
LAMP	2-7	MACHINE INSPECTION	3-3
OPERATING LIGHTS SWITCH	2-8	MAINTENANCE CHART	3-4
ROTATING LIGHT SWITCH	2-8	LUBRICATION	3-6
HAZARD LIGHT SWITCH	2-8	ENGINE	3-6
FUEL LEVEL GAUGE	2-8	GASOLINE AND LPG POWERED	
PANEL LAMP	2-8	ENGINES	3-6
FUSES	2-8	DIESEL POWERED ENGINES	3-6
ENGINE HOUR METER	2-8	VACUUM FAN SHAFT	3-6
ENGINE OIL PRESSURE GAUGE	2-8	MACHINE PIVOT	3-7
ENGINE COOLANT TEMPERATURE		SCRUB HEAD PIVOT	3-7
GAUGE	2-8	SCRUB HEAD HINGES	3-8
SQUEEGEE SWITCH	2-8	REAR SQUEEGEE CASTERS	3-8
SCRUB BRUSH LEVER	2-9	SCRUB BRUSH IDLER PLUGS	3-8
SCRUB HEAD POSITION LEVER	2-9	REAR WHEELS	3-8
SRS® LIQUID LOW LEVEL LAMPS	2-9	HYDRAULICS	3-9
SRS® CLEANING SOLUTION		HYDRAULIC FLUID	3-9
FLOW KNOB	2-9	HYDRAULIC FLUID RESERVOIR	3-9
		TO DRAIN THE HYDRAULIC FLUID	
		RESERVOIR	3-10

GENERAL INFORMATION

	Page		Page
TO FILL THE HYDRAULIC FLUID RESERVOIR	3-10	CYLINDER HEAD - GASOLINE, LPG	3-27
HYDRAULIC FLUID RESERVOIR BREATHER	3-11	CYLINDER HEAD BOLT TIGHTENING	3-27
HYDRAULIC FLUID FILTER	3-11	VALVE TAPPET CLEARANCE	3-28
TO REPLACE THE HYDRAULIC FLUID FILTER ELEMENT ..	3-11	CYLINDER HEAD - DIESEL	3-28
HYDRAULIC FLUID LEAKS	3-11	CYLINDER HEAD BOLT TIGHTENING	3-28
HYDRAULIC COMPONENTS TROUBLESHOOTING	3-12	VALVE TAPPET CLEARANCE	3-28
ENGINE	3-13	PCV SYSTEM	3-29
LUBRICATION	3-13	TUNE-UP CHART - GASOLINE, LPG	3-29
GASOLINE AND LPG POWERED ENGINES	3-13	ELECTRICAL SYSTEM	3-30
DIESEL POWERED ENGINES ...	3-13	BATTERY	3-30
COOLING SYSTEM	3-13	BELTS AND CHAINS	3-31
AIR INTAKE SYSTEM	3-14	VACUUM FAN DRIVE BELT	3-31
AIR FILTER SERVICE INDICATOR	3-14	TO ADJUST VACUUM FAN DRIVE BELT	3-31
AIR FILTER	3-14	INTERMEDIATE DRIVE BELT	3-32
TO REPLACE AIR FILTER ELEMENT	3-15	TO ADJUST INTERMEDIATE DRIVE BELT	3-32
FUEL SYSTEM - GASOLINE	3-16	ALTERNATOR AND RADIATOR FAN BELT	3-32
FUEL FILTER	3-16	TO ADJUST ALTERNATOR AND RADIATOR FAN BELT	3-32
CARBURETOR	3-16	SCRUB HEAD	3-33
FUEL SYSTEM - LPG	3-17	SCRUB HEAD	3-33
LPG FUEL SYSTEM	3-17	TO ADJUST SCRUB HEAD HEIGHT	3-33
FUEL TANKS	3-17	TO ADJUST SCRUB BRUSH PATTERN	3-33
TO CHANGE AN LPG FUEL TANK	3-18	SCRUB BRUSHES	3-35
FUEL FILTER LOCK	3-19	TO REPLACE SCRUB BRUSHES	3-35
VAPORIZER-REGULATOR	3-19	SOLUTION SYSTEM	3-37
CARBURETOR	3-19	RECOVERY TANK	3-37
OIL PRESSURE SWITCH	3-19	WATER SPRAY DEFLECTOR	3-37
LPG FUEL TROUBLESHOOTING	3-20	SRS® WATER SPRAY DEFLECTOR	3-38
FUEL SYSTEM - DIESEL	3-21	SRS® SOLUTION TANK	3-39
FUEL WATER TRAP	3-21	SOLUTION DISPENSING TUBE ..	3-40
TO CLEAN WATER TRAP	3-21	SRS® CLEANING SOLUTION FILTER	3-40
FUEL FILTER	3-21	SRS® METERING SOLUTION PUMP	3-40
TO REPLACE FUEL FILTER (For machines below serial number 005002)	3-21	TROUBLESHOOTING	3-40
TO REPLACE FUEL FILTER (For machines serial number 005002 and above)	3-21	SQUEEGEES	3-41
FUEL INJECTION PUMP	3-22	SIDE SQUEEGEES	3-41
FUEL INJECTORS	3-22	REAR SQUEEGEE	3-41
PRIMING THE FUEL SYSTEM ...	3-23	TO REPLACE REAR SQUEEGEE BLADES	3-42
GOVERNOR, F163 - GASOLINE, LPG	3-23	TO FACTORY ADJUST REAR SQUEEGEE	3-42
TO ADJUST GOVERNOR, F163	3-24	TO ADJUST REAR SQUEEGEE	3-45
GOVERNOR, TM27 - GASOLINE, LPG	3-24	BRAKES AND TIRES	3-47
ELECTRICAL SYSTEM	3-25	SERVICE BRAKES	3-47
SPARK PLUGS	3-25	PARKING BRAKES	3-47
DISTRIBUTOR	3-26	TIRES	3-48
DISTRIBUTOR IGNITION TIMING	3-26	OPTIONS	3-49
		HIGH PRESSURE SPRAYER	3-49

	Page		Page
APPENDIX	4-1	Fig. 31 - Hydraulic Schematic (For machines serial number 005269 and above)	6-45
HARDWARE INFORMATION	4-3	Fig. 32 - Hydraulic Hoses Group	6-46
STANDARD BOLT TORQUE CHART	4-3	Fig. 33 - Hydraulic Hoses Group	6-48
METRIC BOLT TORQUE CHART .	4-3	Fig. 34 - Hydraulic Hoses Group	6-50
BOLT IDENTIFICATION	4-4	Fig. 35 - Hydraulic Propelling Motors Group	6-52
THREAD SEALANT AND LOCKING COMPOUNDS	4-4	Fig. 36 - Hydraulic Reservoir Group	6-53
HYDRAULIC FITTING INFORMATION	4-4	Fig. 37 - Hydraulic Control Valves Group	6-54
HYDRAULIC TAPERED PIPE FITTING (NPT) TORQUE CHART	4-4	Fig. 38 - Hydraulic Pump Group	6-55
HYDRAULIC TAPERED SEAT FITTING (JIC) TORQUE CHART	4-4	Fig. 39 - Hydraulic Pump Group	6-56
HYDRAULIC O-RING FITTING TORQUE CHART	4-4	Fig. 40 - Hydraulic Pump Group	6-57
HOW TO USE THIS MANUAL	5-1	Fig. 41 - Hydraulic Filters Group	6-58
IMPORTANT INFORMATION	5-1	Fig. 42 - Hydraulic Filters Group	6-59
FINDING A TENNANT PART NUMBER	5-2	Fig. 43 - Hydraulic Tow Bypass Group ..	6-60
PLACING AN ORDER	5-3	Fig. 44 - Directional Pedal Group	6-61
STANDARD PARTS	6-1	Fig. 45 - Directional Pedal Group	6-62
Fig. 1 - Recommended General Maintenance Items	6-3	Fig. 46 - Directional Pedal Group	6-64
Fig. 2 - Replacement Brushes	6-5	Fig. 47 - Wire Harnesses Group	6-66
Fig. 3 - Seat Group	6-6	Fig. 48 - Electrical Schematic-Gasoline, LPG (For machines below serial number 004255)	6-67
Fig. 4 - Main Frame Group	6-8	Fig. 49 - Electrical Schematic-Gasoline, LPG (For machines serial number 004255 and above) ...	6-68
Fig. 5 - Noise Insulation Group	6-10	Fig. 50 - Electrical Schematic, Diesel (For machines below serial number 003619)	6-69
Fig. 6 - Hopper Group	6-11	Fig. 51 - Electrical Schematic, Diesel (For machines serial number 003619 to 004254	6-70
Fig. 7 - Scrub Head Lift Group	6-12	Fig. 52 - Electrical Schematic, Diesel (For machines serial number 004255 and above)	6-71
Fig. 8 - Solution Supply and Control Group	6-14	Fig. 53 - Electrical Schematic, Options (For machines serial number 004255 and above)	6-72
Fig. 9 - Right Side Squeegee Assembly	6-16	Fig. 54 - Electrical Schematic, Specials .	6-73
Fig. 10 - Left Side Squeegee Assembly .	6-18	Fig. 55 - Vacuum Fan Idler Assembly ...	6-74
Fig. 11 - Front Brush Drive Components Group	6-20	Fig. 56 - Vacuum Fan Assembly	6-76
Fig. 12 - Front Brush Idler Assembly	6-21	Fig. 57 - Vacuum Fan Assembly	6-78
Fig. 13 - Rear Brush Idler Assembly	6-22	Fig. 58 - Instrument Panel Group	6-80
Fig. 14 - Rear Brush Drive Components Group	6-23	Fig. 59 - Rear Wheel Group	6-81
Fig. 15 - Steering Column Group	6-24	Fig. 60 - Trunnion Group	6-82
Fig. 16 - Front Wheel Assembly	6-26	Fig. 61 - Front Side of Solution and Recovery Tanks Group	6-84
Fig. 17 - Front Wheel Drive Group	6-27	Fig. 62 - Rear Side of Solution and Recovery Tanks Group	6-86
Fig. 18 - Parking Brake Grou	6-28	Fig. 63 - Rear Bumper Group	6-88
Fig. 19 - Brakes Group	6-29	Fig. 64 - Rear Bumper Group	6-89
Fig. 20 - Engine Group, F163	6-30	Fig. 65 - Rear Squeegee Assembly	6-90
Fig. 21 - Engine Group, TM27	6-32		
Fig. 22 - Engine Group, TM27	6-34		
Fig. 23 - Muffler Group	6-36		
Fig. 24 - Radiator Group	6-37		
Fig. 25 - Air Cleaner Group	6-38		
Fig. 26 - Air Cleaner Group	6-39		
Fig. 27 - Fuel Tank Group	6-40		
Fig. 28 - Battery Group	6-42		
Fig. 29 - Hydraulic Schematic (For machines below serial number 004438)	6-43		
Fig. 30 - Hydraulic Schematic (For machines serial number 004438 thru 005268)	6-44		

	Page		Page
F163 ENGINE PARTS, GASOLINE, LPG ..	12-1	ENGINE PARTS, DIESEL	14-1
Fig. 1 - Cylinder Head, Crankcase and Flywheel Housing Group .	12-2	Fig. 1 - Engine Block Group	14-2
Fig. 2 - Valve and Camshaft Group ..	12-4	Fig. 2 - Fuel System Group	14-4
Fig. 3 - Front End Plate and Gear Cover Group	12-5	Fig. 3 - Cylinder Head Group	14-6
Fig. 4 - Piston, Crankshaft and Flywheel Group	12-6	Fig. 4 - Camshaft Group	14-8
Fig. 5 - Oil Pump Group	12-8	Fig. 5 - Crankshaft Group	14-9
Fig. 6 - Water Pump Group	12-9	Fig. 6 - Piston Group	14-10
Fig. 7 - Governor Group	12-9	Fig. 7 - Oil Pump Group	14-11
Fig. 8 - PCV Group	12-9	Fig. 8 - Gear Cover Group	14-12
Fig. 9 - Fuel Pump Group	12-9	Fig. 9 - Flywheel and Starter Group ..	14-13
Fig. 10 - Oil Filter Group	12-10	Fig. 10 - Intake and Exhaust Manifold Group	14-14
Fig. 11 - Distributor and Coil Group ...	12-10	Fig. 11 - Water Pump Group	14-15
Fig. 12 - Water Outlet Group, Gasoline	12-10	Fig. 12 - Water Header and Thermostat Group	14-16
Fig. 13 - Water Outlet Group, LPG ...	12-11	Fig. 13 - Alternator Brackets and PCV Group	14-17
Fig. 14 - Exhaust and Intake Manifold Group	12-11	Fig. 14 - Oil Filter Group	14-18
Fig. 15 - Carburetor Group	12-11	65951 ENGINE PARTS, DIESEL	15-1
Fig. 16 - Starter and Alternator Group .	12-12	Fig. 1 - Engine Block Group	15-2
TM27 ENGINE PARTS, GASOLINE, LPG ..	13-1	Fig. 2 - Fuel System Group	15-4
Fig. 1 - Engine Block Group	13-2	Fig. 3 - Cylinder Head Group	15-6
Fig. 2 - Cylinder Head Group	13-4	Fig. 4 - Camshaft Group	15-8
Fig. 3 - Camshaft Group	13-6	Fig. 5 - Crankshaft Group	15-9
Fig. 4 - Crankshaft Group	13-8	Fig. 6 - Piston Group	15-10
Fig. 5 - Piston Group	13-9	Fig. 7 - Oil Pump Group	15-11
Fig. 6 - Oil Pump Group	13-10	Fig. 8 - Gear Cover Group	15-12
Fig. 7 - Gear Cover Group	13-11	Fig. 9 - Flywheel and Starter Group ..	15-13
Fig. 8 - Flywheel and Starter Group ..	13-12	Fig. 10 - Intake and Exhaust Manifold Group	15-14
Fig. 9 - Intake and Exhaust Manifold Group	13-13	Fig. 11 - Water Pump Group	15-15
Fig. 10 - Water Pump Group	13-14	Fig. 12 - Water Header and Thermostat Group	15-16
Fig. 11 - Water Header and Thermostat Group	13-15	Fig. 13 - Alternator Brackets and PCV Group	15-17
Fig. 12 - Carburetor and Controls Group	13-16	Fig. 14 - Oil Filter Group	15-18
Fig. 13 - Oil Filter Group	13-17	CROSS REFERENCE	16-1
Fig. 14 - Distributor and Fuel Pump Group	13-18	PART NUMBER TO PAGE NUMBER CROSS REFERENCE LIST	16-2
		PART DESCRIPTION TO PAGE NUMBER CROSS REFERENCE LIST	16-22

SECTION 1**CONTENTS**

	Page
MACHINE SPECIFICATIONS	1-3
POWER TYPE	1-3
POWER TRAIN	1-3
STEERING	1-3
HYDRAULIC SYSTEM	1-3
BRAKING SYSTEM	1-4
SUSPENSION SYSTEM	1-4
SYSTEM FLUID CAPACITIES	1-4
GENERAL MACHINE	
DIMENSIONS/CAPACITIES	1-4
MACHINE WEIGHTS	1-4
GENERAL MACHINE PERFORMANCE	1-4
MACHINE DIMENSIONS	1-5

MACHINE SPECIFICATIONS

POWER TYPE

Engine manufacturer/model - Continental F163
 Engine type - piston
 Ignition - breaker type spark
 Cycle - 4
 Aspiration - natural
 Cylinders - 4
 Bore - 3.44 (85 mm)
 Stroke - 4.38 (110 mm)
 Displacement - 162 cu in (2.7 L)
 Net power - 59 hp (45 kw) @ 2400 rpm
 governed 63 hp (50 kw) @ 2800 rpm
 maximum
 Fuels - gasoline, 86 octane, or LPG
 Cooling system - water
 Electrical system - 12 V nominal, 35 A alternator

Engine manufacturer/model - Continental TM27
 Engine type - piston
 Ignition - breaker-less type spark
 Cycle - 4
 Aspiration - natural
 Cylinders - 4
 Bore - 3.58 in (90 mm)
 Stroke - 4.06 in (105 mm)
 Displacement - 164 cu in (2.7 L)
 Net power - 58 hp (43 kw) @ 2400 rpm
 governed 70 hp (52 kw) @ 3000 rpm
 maximum
 Fuels - gasoline, 85 octane unleaded, or LPG
 Cooling system - water
 Electrical system - 12 V nominal, 42 A alternator

Engine manufacturer/model - Continental
 TMD27
 Engine type - piston
 Ignition - diesel
 Cycle - 4
 Aspiration - natural
 Cylinders - 4
 Bore - 3.58 in (90 mm)
 Stroke - 4.06 in (105 mm)
 Displacement - 164 cu in (2.7 L)
 Net power - 55 hp (40 kw) @ 2400 rpm
 governed 66 hp (50 kw) @ 3000 rpm
 maximum
 Fuels - #1 or #2 diesel fuel
 Cooling system - water
 Electrical system - 12 V nominal, 42 A alternator

POWER TRAIN

Propelling - hydraulic drive motors (2)
 Scrub brush - hydraulic drive motors (2)
 Vacuum fan - belt driven

STEERING

Type - articulated frame
 Power source - double action hydraulic cylinder
 Emergency steering - manual

HYDRAULIC SYSTEM

Function - operates propelling, steering, scrub
 brush drive, scrub head lift, rear squeegee
 lift.
 Control valve, scrub brush drive, scrub head lift -
 open center, single spool.
 Control valve, squeegee position - two position,
 electrical solenoid actuated.
 Propelling pump - variable displacement piston
 type, 20.9 gpm (80 L/min) @ 2400 rpm
 Propelling pump - variable displacement piston
 type, 22.7 gpm (86 L/min) @ 2200 rpm
 Propelling system rated pressure - 4500 psi
 (31,030 kPa)
 Scrub brush drive pump - vane type, 17.2 gpm
 (65 L/min) @ 2400 rpm
 Scrub brush drive system rated pressure -
 2500 psi (17,240 kPa)
 Accessories pump - vane type, 6.2 gpm
 (25 L/min) @ 2400 rpm
 Accessories pump - gear type,
 front section: 15.8 gpm (60 L/min) @
 2400 rpm
 rear section: 4 gpm (15 L/min) @ 2400 rpm
 Accessories system rated pressure - 2000 psi
 (13,790 kPa)
 Propelling motor (2) internal gear type, 17 cu in
 (275 cc) per revolution, 1750 psi (12,065
 kPa) maximum rated pressure
 Scrub brush drive motor (2) - internal gear type,
 9.9 cu in (160 cc) per revolution, 1200 psi
 (8275 kPa) maximum rated pressure
 Scrub head lift cylinder - single action type, 2 in
 (50 mm) bore x 4 in (100 mm) stroke, 1 in
 (25 mm) diameter rod, 1500 psi
 (10,345 kPa) maximum rated pressure

SPECIFICATIONS

HYDRAULIC SYSTEM (Continued)

Rear squeegee lift cylinder - double action type, 2 in (50 mm) bore x 4 in (100 mm) stroke, 1 in (25 mm) diameter rod, 1500 psi (10,345 kPa) maximum rated pressure.

Steering cylinder - double action type, 2 in (50 mm) bore x 11 in (280 mm) stroke, 1 in (25 mm) diameter rod, 2000 psi (13,790 kPa) maximum rated pressure

BRAKING SYSTEM

Service brakes - hydraulic caliper disc brakes (2), (one per front wheel) foot brake master cylinder actuated.

Parking brakes - mechanical caliper disc brakes (2), (one per front wheel), cable actuated.

SUSPENSION SYSTEM

Front - two 8.00 x 16.5 6-ply rating tubeless tires
Rear - two 8.00 x 16.5 6-ply rating tubeless tires

SYSTEM FLUID CAPACITIES

Engine cooling system, radiator - 6.4 qt (6 L)
Engine cooling system, total system - 13.4 qt (13 L)

Fuel tank, gasoline, diesel - 15.3 gal (60 L)
Fuel tank, LPG - 33 lb (15 kg)

Engine lubricating oil, gasoline, LPG - 4.5 qt (4 L)
Engine lubricating oil, diesel - 7 qt (6.5 L)

Hydraulic system, reservoir - 11.5 gal (45 L)
Hydraulic system, total system - 13.8 gal (52 L)

Standard solution tank - 140 gal (530 L)

Standard recovery tank - 120 gal (455 L)

SRS® solution tank - 240 gal (905 L)

SRS® cleaning solution tank - 10 gal (40 L)

GENERAL MACHINE DIMENSIONS/CAPACITIES

Length - 156.5 in (3975 mm)

Width - 61.25 in (1555 mm)

Height - 60.87 in (1545 mm)
Height with overhead guard - 83.63 in (2425 mm)

Track, front - 46.7 in (1185 mm)
Track, rear - 45.3 in (1150 mm)

Wheel base - 58.75 in (1490 mm)

Scrub brush (2), path width - 50 in (1270 mm)
Scrub brush (2), diameter - 11 in (280 mm)

Rear squeegee path width - 56.5 in (1435 mm)

Debris hopper capacity - 2.6 cu ft (0.073 m³)

MACHINE WEIGHTS

GVWR - 7200 lb (3265 kg)

GENERAL MACHINE PERFORMANCE

Maximum forward speed - 9 mph (14.5 km/h)

Maximum reverse speed - 5 mph (8 km/h)

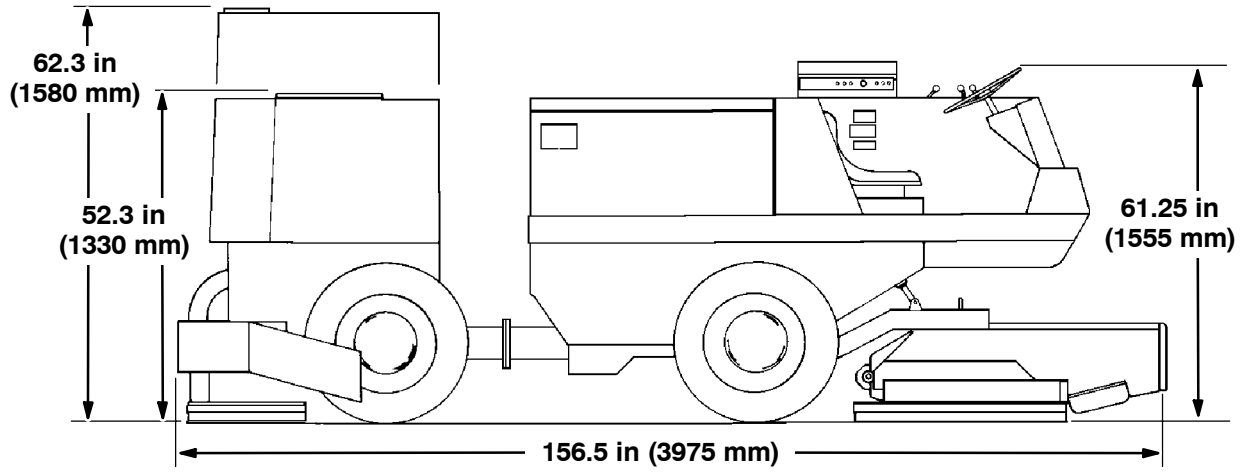
Turning radius, right - 98 in (2490 mm)

Turning radius, left - 95.25 in (2420 mm)

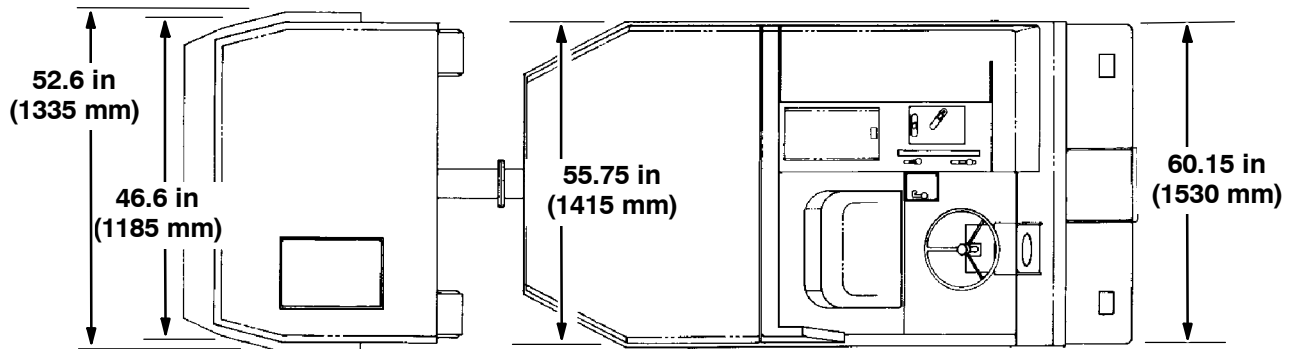
Maximum rated climb and descent angle - 10°

Maximum rated climb and ascent angle when tanks are full - 8°

MACHINE DIMENSIONS



SIDE VIEW



TOP VIEW

00362

SECTION 2

CONTENTS

	Page		Page
PREPARATION FOR OPERATION	2-3	MACHINE OPERATION	2-10
AFTER UNLOADING AND BEFORE		NORMAL SCRUBBING OPERATION ..	2-10
OPERATING THE MACHINE:	2-3	PRE-START CHECKLIST	2-10
OPERATION OF CONTROLS	2-4	TO START MACHINE	2-10
MACHINE COMPONENTS	2-4	TO FILL SOLUTION TANK	2-11
INSTRUMENTS AND CONTROLS	2-5	TO SCRUB	2-11
BRAKE PEDAL	2-6	TO DRAIN AND CLEAN RECOVERY	
DIRECTIONAL PEDAL	2-6	TANK AND EMPTY HOPPER	2-12
OPERATOR SEAT	2-6	POST OPERATION CHECKLIST -	
SCRUB HEAD LOCK LEVER	2-6	ENGINE OPERATING	2-13
PIVOT LOCK PIN	2-7	TO STOP MACHINE	2-13
PARKING BRAKE LEVER	2-7	POST OPERATION CHECKLIST -	
AMMETER	2-7	ENGINE STOPPED	2-13
SQUEEGEE POSITION LAMP	2-7	DOUBLE SCRUBBING OPERATION ..	2-13
TANK DRAIN LAMP	2-7	OPERATION ON GRADES	2-13
SCRUB BRUSH PRESSURE LAMP ...	2-7	MACHINE TROUBLESHOOTING	2-14
IGNITION SWITCH	2-7	OPTIONS OPERATION	2-15
DIESEL PRE-HEAT INDICATING LAMP	2-7	HIGH PRESSURE SPRAYER	2-15
OPERATING LIGHTS SWITCH	2-8	TO OPERATE HIGH PRESSURE	
ROTATING LIGHT SWITCH	2-8	SPRAYER	2-15
HAZARD LIGHT SWITCH	2-8	VACUUM WAND	2-15
FUEL LEVEL GAUGE	2-8	TO OPERATE VACUUM WAND ...	2-15
PANEL LAMP	2-8	TRANSPORTING MACHINE	2-16
FUSES	2-8	PUSHING OR TOWING MACHINE ...	2-16
ENGINE HOUR METER	2-8	MACHINE JACKING LOCATIONS	2-17
ENGINE OIL PRESSURE GAUGE	2-8	MACHINE STORAGE	2-18
ENGINE COOLANT TEMPERATURE		STORING MACHINE	2-18
GAUGE	2-8	GASOLINE POWERED MACHINES	2-18
SQUEEGEE SWITCH	2-8	DIESEL POWERED MACHINES ...	2-19
SCRUB BRUSH LEVER	2-9		
SCRUB HEAD POSITION LEVER	2-9		
SRS® LIQUID LOW LEVEL LAMPS ...	2-9		
SRS® CLEANING SOLUTION FLOW			
KNOB	2-9		
SOLUTION LEVER	2-9		
ENGINE CHOKE KNOB	2-9		
THROTTLE LEVER	2-9		
STEERING WHEEL	2-9		

PREPARATION FOR OPERATION

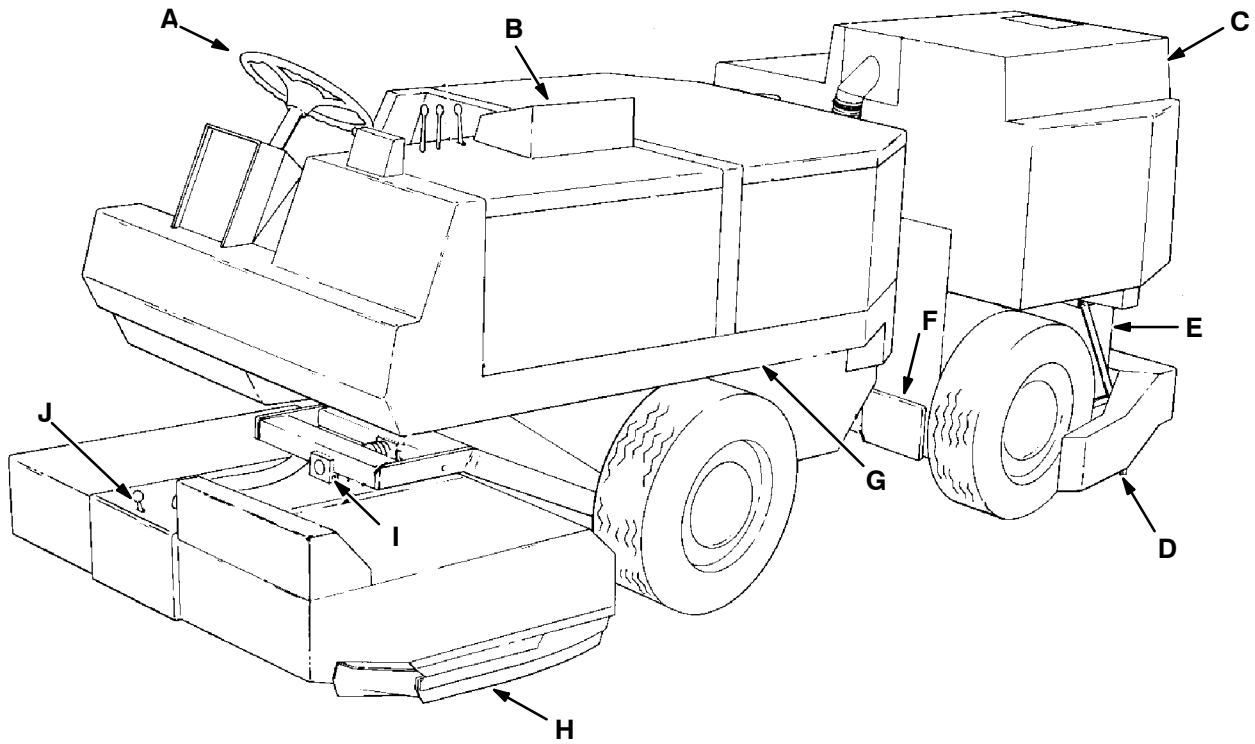
AFTER UNLOADING AND BEFORE OPERATING THE MACHINE:

1. Check the machine for shipping damage.
2. Read this manual carefully before operating or servicing the machine.

FOR SAFETY: Do Not Operate Machine Unless Operation Manual Is Read And Understood.

3. Check the hydraulic fluid level in the hydraulic fluid reservoir, using the dipstick provided. TENNANT hydraulic fluid is recommended. If TENNANT hydraulic fluid is not available, use only new, approved hydraulic fluid. See the *HYDRAULICS* in the *MAINTENANCE* section.
4. Check the engine oil level.
5. Check the radiator coolant level.
6. Check the brush adjustment, as described in *SCRUB HEAD* in the *MAINTENANCE* section.
7. Check the air pressure of the tires.
8. Fill the fuel tank, or install an LPG fuel tank on the machine per the instructions in this manual.

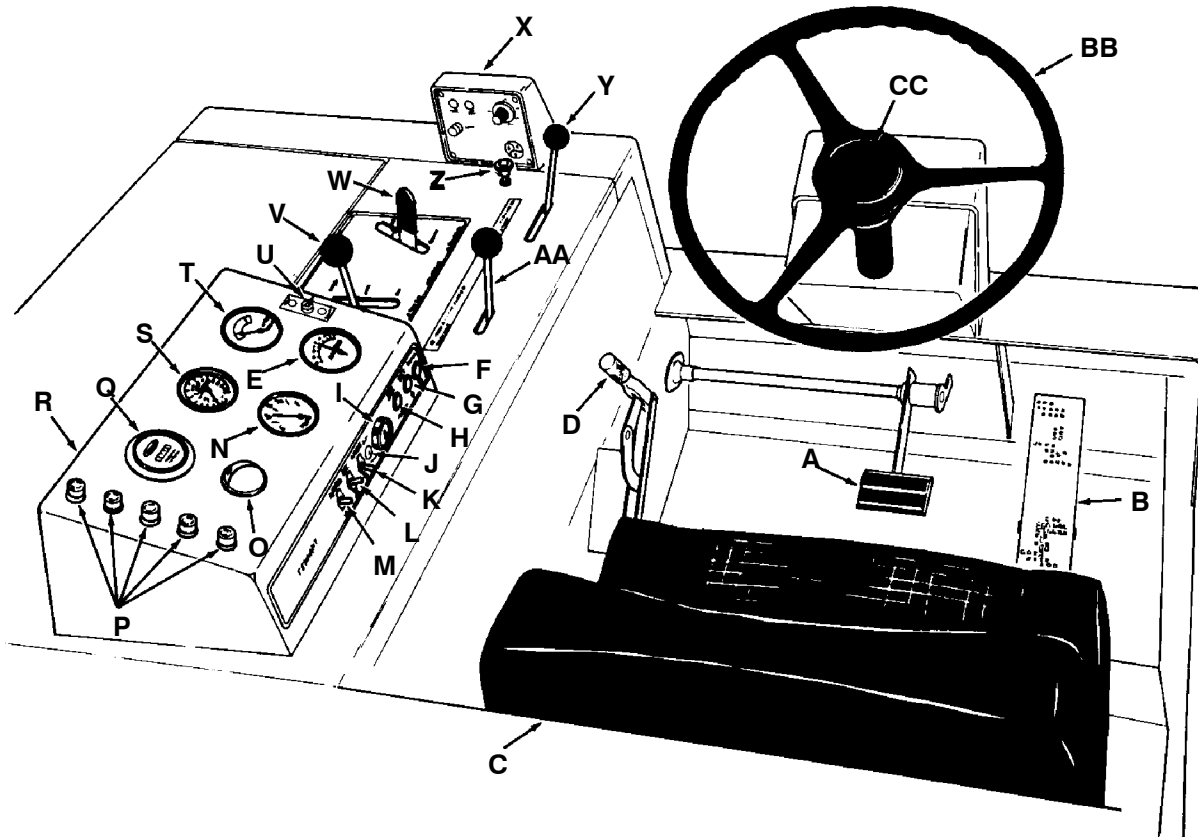
OPERATION OF CONTROLS



MACHINE COMPONENTS

00291

- | | |
|----------------------------|---------------------------------------|
| A. Steering Wheel | F. Clean-out Door |
| B. Instrument Panel | G. Articulated Joint |
| C. Solution Tank | H. Side Squeegee |
| D. Rear Squeegee | I. Head Pivot |
| E. Recovery Tank | J. Debris Trough Release Lever |



02353

INSTRUMENTS AND CONTROLS

- | | |
|------------------------------------|-------------------------------------|
| A. Brake Pedal | P. Fuses |
| B. Directional Pedal | Q. Engine Hour Meter |
| C. Operator Seat | R. Instrument Panel |
| D. Parking Brake Lever | S. Oil Pressure Gauge |
| E. Ammeter | T. Engine Coolant Temperature Gauge |
| F. Squeegee Position Lamp | U. Squeegee Switch |
| G. Tank Drain Lamp | V. Scrub Brush Lever |
| H. Scrub Brush Pressure Lamp | W. Scrub Head Position Lever |
| I. Ignition Switch | X. SRS® Panel |
| J. Diesel Pre-Heat Indicating Lamp | Y. Solution Lever |
| K. Operating Lights Switch | Z. Choke Knob |
| L. Rotating Light Switch | AA. Throttle Lever |
| M. Hazard Light Switch | BB. Steering Wheel |
| N. Fuel Level Gauge | CC. Horn Button |
| O. Panel Lamp | |

OPERATION

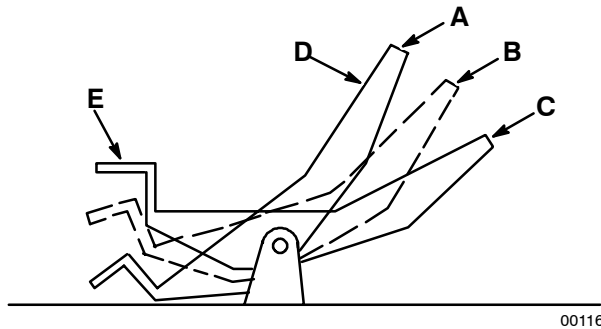
BRAKE PEDAL

The brake pedal operates the brakes on the two front wheels.

To stop the machine, return the directional control pedal to neutral; then apply pressure to the brake pedal.

DIRECTIONAL PEDAL

A single foot pedal controls the propelling drive. The foot pedal is used to select the direction of travel and the speed of the machine.



DIRECTIONAL PEDAL

00116

- A. "Reverse" Position
- B. "Neutral" Position
- C. "Forward" Position
- D. "Toe" Portion
- E. "Heel" Portion

Gradually press the "toe" portion of the pedal for forward travel or the "heel" portion of the pedal for reverse travel. Regulate the speed of the machine by varying the pressure on the pedal.

NOTE: Always use the brake pedal for normal stopping and controlling machine speed on down grades.

OPERATOR SEAT

The operator seat is of a fixed back style with a forward-backward adjustment. To adjust the seat, loosen the seat mounting bolts, slide the seat to the position desired, and tighten the bolts.

SCRUB HEAD LOCK LEVER

The scrub head lock lever controls the scrub head lock mechanism. This locks the scrub head, preventing it from lowering.

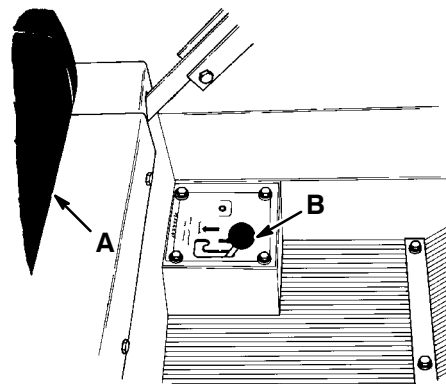
To set the scrub head lock, fully raise the scrub head. Then push the scrub head lock lever into the "LOCK" position.

To release the scrub head lock, fully raise the scrub head. Then pull the scrub head lock lever into the "UNLOCK" position.

Always set the scrub head lock before working under the scrub head. The scrub head lock must also be set whenever the machine will not be used for an extended period of time, overnight for example. Flat spots on the brushes will appear if the scrub head is left down for an extended period of time.



WARNING: Raised Scrub Head May Fall. Block Scrub Head Up.



SCRUB HEAD LOCK LEVER

01816

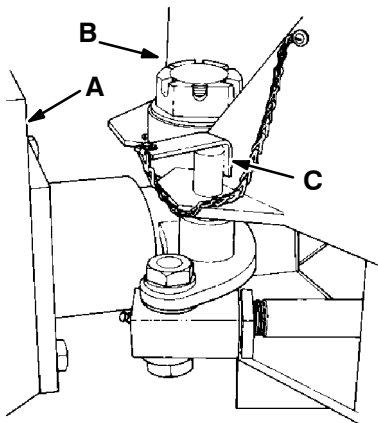
- A. Operator Seat
- B. Scrub Head Lock Lever

PIVOT LOCK PIN

The pivot lock pin is provided to lock the pivot joint between the front and rear machine sections. The pin is hung on the front section of the machine adjacent to the machine pivot.

To lock the sections, turn the machine so the pivot lock holes line up, then insert the pin in the lined up holes. The pin will prevent the machine from pivoting and creating a pinch area.

⚠ WARNING: Crush Hazard Between Front And Rear Halves Of Machine. Engage Pivot Lock.



PIVOT LOCK PIN IN USE

00251

- A. Machine Trailer Section**
- B. Machine Tractor Section**
- C. Pivot Lock Pin**

PARKING BRAKE LEVER

The parking brake lever controls the brakes on the two front wheels. To set the parking brake pull the brake handle up. To release the parking brake push the brake handle down. Always set the parking brake before leaving the machine unattended and before working on the machine.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, Turn Off Machine And Remove Key.

AMMETER

The ammeter registers the charging current which is being passed to the battery by the alternator. It also registers battery discharge used by the machine when the alternator is not charging.

SQUEEGEE POSITION LAMP

The squeegee position lamp lights when the squeegee is either fully raised or lowered. This can be helpful to the operator when the squeegee is not visible.

TANK DRAIN LAMP

The tank drain lamp lights when the recovery tank is nearly full. The machine operator can then plan to return to a draining location.

SCRUB BRUSH PRESSURE LAMP

The scrub brush pressure lamp option lights when scrub brush down pressure is excessive, which may cause the brushes to stall. The operator should then check the brush position adjustment.

NOTE: This information holds true only after the hydraulic fluid has warmed up (about 10 to 15 minutes). If the light comes on after the oil is warm, the cause may be operating on a rough floor-use "restricted" brush down pressure.

IGNITION SWITCH

The key-operated ignition switch has four positions. Those positions are "accessories," "off," "on," and "start." To operate any electrical option without operating the engine, turn the switch to the "accessories" position.

To start the engine, turn the key to the "start" position. Do not engage the starter for more than ten seconds at a time, or after the engine has started, as the starter may be damaged. To stop the engine, turn the key to the "off" position.

FOR SAFETY: Before Starting Machine, Make Sure All Safety Devices Are In Place And Operate Properly.

DIESEL PRE-HEAT INDICATING LAMP

The diesel pre-heat indicating lamp is present on diesel powered machines. The lamp lights when the diesel pre-heater is operating.

OPERATING LIGHTS SWITCH

The operating lights switch is present on machines with the operating lights option. It controls the headlights, taillights, and the brush spot light. Flip the switch toggle upward to turn the lights on. Flip the switch toggle down to turn the lights off.

ROTATING LIGHT SWITCH

The rotating light switch is present on machines with the rotating light switch option. Flip the switch toggle up to turn the light on. Flip the switch toggle down to turn light off.

HAZARD LIGHT SWITCH

The hazard light switch is present on machines with the hazard light option. Flip the switch toggle up to turn the light on. Flip the switch toggle down to turn the light off.

FUEL LEVEL GAUGE

The fuel level gauge is present on all gasoline and diesel powered machines. The gauge indicates how much fuel is left in the fuel tank.

PANEL LAMP

The panel lamp is present on machines with the operating lights option. The lamp lights whenever the operating lights switch toggle is flipped up to turn on the operating lights.

FUSES

Fuses are a one-time circuit protection device designed to stop the flow of current in the event of a circuit overload. Never substitute higher value fuses than those specified in this manual. The chart below shows the various fuses and the electrical components they protect.

PROTECTIVE-DEVICE	RATING	CIRCUIT PROTECTED
Fuse	15 A	Auto-Squeegee
Fuse	1 A	Recovery Tank Level Lamps
Fuse	1 A	SRS® Tank Level Lamps
Fuse	15 A	Brush Pressure Lamp, Squeegee Pressure Lamps
Fuse	20 A	Rotating, Hazard Lights
Fuse	10 A	SRS® Solution Pump

ENGINE HOUR METER

The hour meter records the number of hours the machine has been operated. This information is useful in determining when to service the machine.

ENGINE OIL PRESSURE GAUGE

The engine oil pressure gauge registers the engine oil pressure. Normal engine oil pressure ranges from 7 psi (50 kPa) at idle, to 35 psi (240 kPa) at full engine throttle. If the gauge registers an oil pressure reading below 7 psi (50 kPa), stop the engine immediately and determine the cause. Failure to stop the engine will result in severe engine damage.

ENGINE COOLANT TEMPERATURE GAUGE

The engine coolant temperature gauge registers the engine coolant temperature. Normal engine coolant temperatures range up to 200° F (93° C). Temperatures above this level indicate an over-heating engine. Over-heating may occur due to a low coolant level, a clogged radiator, a loose fan belt, a defective thermostat, or other engine malfunctions. Engine overheating will always cause a coolant loss. If coolant loss does not occur, check for malfunction of the temperature sending unit.

SQUEEGEE SWITCH

The squeegee switch, in conjunction with a hydraulic flow sensing device, and the scrub brush lever, controls the position of the rear squeegee.

To raise the squeegee, flip the switch toggle forward into the “Squeegee Up” position. This position cannot be overridden by the hydraulic flow sensing device.

To lower the squeegee, flip the switch toggle back into the “Down” position. The squeegee will lower when the machine starts moving in the forward direction. When traveling in the reverse direction, the hydraulic flow sensing device overrides the squeegee switch and raises the rear squeegee. This prevents the rear squeegees from being damaged when traveling in reverse. The squeegee switch should always be in the “Down” position when scrubbing.

SCRUB BRUSH LEVER

The scrub brush lever controls the scrub brush motors. To start the scrub brushes rotating in their normal direction, pull the lever into the “ON” position. To stop brush rotation, move the lever into the “OFF” position.

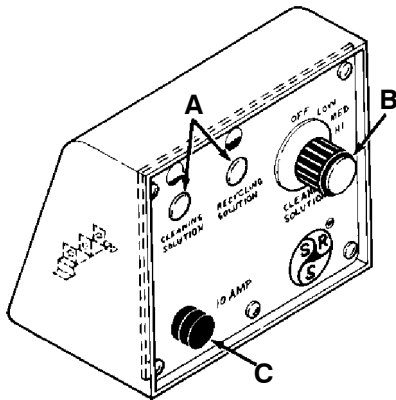
To start the scrub brushes rotating opposite their normal direction for double scrubbing, push the lever into the “REVERSE” position.

SCRUB HEAD POSITION LEVER

The scrub head position lever controls the position of the scrub head. To raise the scrub head, pull the lever back into the “RAISE” position. To stop scrub head movement move the lever to the “HOLD” position. To lower the scrub head, push the lever into the “LOWER” position.

SRS® LIQUID LOW LEVEL LAMPS

The SRS® liquid low level lamps option includes two indicating lamps. The cleaning solution lamp lights when the cleaning solution level is low. The recycling solution lamp lights when the recycling solution is low.



SRS® CONTROL PANEL

00351

- A. Liquid Low Level Indicator Lamps**
- B. Cleaning Solution Flow Knob**
- C. SRS® Pump System Fuse**

SRS® CLEANING SOLUTION FLOW KNOB

The SRS® cleaning solution flow knob controls the pumping of cleaning solution into the solution flow to the floor. The “LOW”, “MED”, and “HI” levels indicate the rate of cleaning solution flow.

The “LOW” level causes the pump to deliver one-fourth flow capacity, “MED” level one-half capacity, and “HI” level full pump capacity of cleaning solution into the solution flow to the floor. The “OFF” position shuts off the cleaning solution flow.

SOLUTION LEVER

The solution lever controls the solution control valve. To stop solution flow to the floor, push the lever into the “CLOSED” position. To start solution flow, pull the lever into the “OPEN” position.

ENGINE CHOKE KNOB

The engine choke knob is present on gasoline powered machines. The knob controls the engine choke. To aid the starting of a cold engine, close the engine choke by pulling the knob out. After the engine has warmed up, push the knob in to open the engine choke, allowing the engine to run normally at its operating temperature and speed. Using the choke on a warm engine is not necessary.

THROTTLE LEVER

The throttle lever controls the engine governed speed on a gasoline and LPG powered machine. The throttle lever controls the engine governed speed and stops the engine on a diesel powered machine. To speed the engine to the maximum governed speed, move the lever into the “FULL” position. To slow the engine to idle speed, move the lever to the “IDLE” position. To stop the engine on a diesel powered machine, move the lever to the “STOP” position.

STEERING WHEEL

The steering wheel controls a steering cylinder which is mounted between the two halves of the machine. Do not turn the steering wheel excessively when the engine is not running. An articulated trunnion connects the front and rear sections of the machine so that the rear section always follows the path of the front section. A horn button is located in the center of the steering wheel.

MACHINE OPERATION

NORMAL SCRUBBING OPERATION

A normal scrubbing operation consists of eight typical operations: pre-start checklist, starting machine, filling solution tank, scrubbing, draining recovery tank and emptying hopper, post operation checklist – engine operating, stopping machine, and post operation checklist – engine stopped.

PRE-START CHECKLIST lists things to check before starting the machine.

TO START MACHINE lists the steps required to start the machine.

TO FILL SOLUTION TANK lists the steps required to fill the solution tank.

TO SCRUB lists things to keep in mind before and during the scrubbing operation.

TO DRAIN RECOVERY TANK AND EMPTY HOPPER lists the steps required to empty the debris hopper and the recovery tank.

POST OPERATION CHECKLIST – ENGINE OPERATING lists things to check before stopping the machine engine.

TO STOP MACHINE lists the steps required to stop the machine.

POST OPERATION CHECKLIST – ENGINE STOPPED lists things to check after stopping the machine engine.

PRE-START CHECKLIST

Check under the machine for leak spots.

Check the engine lubricating oil level.

Check the engine air filter restriction indicator.

Check the fuel level.

Check for LPG odor indicating a leak.

Check for frosting on the LPG hoses and components.

Check to make sure a liquid withdrawal LPG tank is to be used.

Check the brakes and controls for proper operation.

Check the service records to determine service requirements.

TO START MACHINE

NOTE: Before starting machine, perform the pre-start checks.

1. LPG machines: Check the LPG fuel tank gauge to see if there is an adequate fuel supply.
2. LPG machines: Slowly open the liquid service valve.

NOTE: Opening the service valve too quickly may cause the service valve check valve to stop the flow of LPG fuel. If the check valve stops the flow of fuel, close the service valve, wait a few seconds, and slowly open the service valve once again.

3. The machine operator must be in the operator's seat with the directional pedal in the "neutral" position and with a foot on the brake pedal or with the parking brake set.

FOR SAFETY: Before Starting Machine, Make Sure All Safety Devices Are In Place And Operate Properly.

4. Cold gasoline engines: Pull out the choke button about three-fourths of the way. Push choke in after the engine has started and is running smoothly.

Cold diesel engines: Turn the ignition key to the "on" position to start the diesel pre-heater. Wait until the pre-heater lamp goes off, then proceed to start the engine.

ATTENTION! Do not use a cold engine starting aid such as ether unless directed to by a representative of the engine manufacturer.

5. Move the throttle control lever to the "IDLE" position.

- Turn the ignition switch key to the “start” position until the engine starts. Do not operate the starter for more than ten seconds at a time or after the engine has started.

NOTE: Do not operate the starter motor for more than ten seconds at a time or after the engine has started. Allow the starter to cool between starting attempts. The starter motor may be damaged if it is operated incorrectly.

- Allow the engine and hydraulic system to warm up three to five minutes.
- Release the machine parking brake.
- Drive the machine to the solution filling site.

TO FILL SOLUTION TANK

- Stop the engine and set the parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

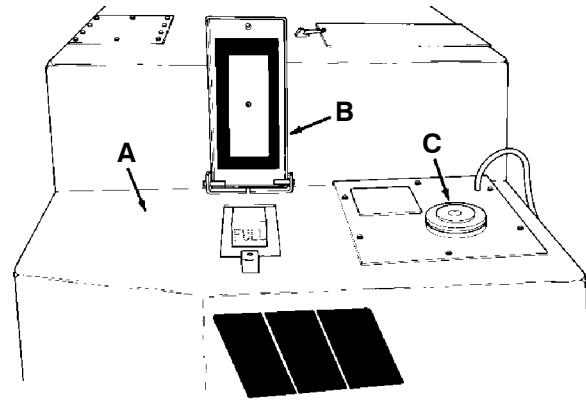
- Open the solution tank fill door or cap.
- Pour the required amount of detergent into the tank. Fill the tank with water to 1 in (25 mm) below the tank opening. The water must not be hotter than 130°F (54°C) or tank damage may occur.

NOTE: If standing water is to be picked up in addition to the solution put down by machine, do not fill tank all of the way. This will allow more water to be picked up before the ball float shutoff is actuated.

SRS® machines: Pour liquid detergent into the cleaning solution tank - not the solution tank. Do not use powdered detergent or any other detergent not designed for the SRS® application. Replace the cleaning solution tank fill cap.

NOTE: Floor conditions, water condition, amount of soilage, type of soilage, brush action, and squeegee action all play an important role in determining the type and the concentration of detergent to be used. For specific recommendations, contact the local TENNANT representative.

! WARNING: Flammable Materials Can Cause An Explosion Or Fire. Do Not Use Flammable Materials In Tank(s).



00348

SRS® TANK

- A. Solution Tank**
- B. Solution Fill Door**
- C. Cleaning Solution Fill Cap**

- Close the solution fill door.

TO SCRUB

Plan the scrubbing in advance. Try to arrange long runs with minimum stopping and starting. Do an entire floor or section at one time.

Pick up oversize debris before scrubbing. Remove bulky debris from aisles before scrubbing. Pick up pieces of wire, twine, string, etc., which could become entangled in brush or brush plugs.

Allow a few inches overlap of brush paths.

Do not turn steering wheel too sharply when the machine is in motion. It is very responsive to the movement of the steering wheel. Avoid sudden turns, except in emergencies.

Try to scrub as straight a path as possible. Avoid bumping into posts or scraping the sides of the machine.

- Drive the machine to the area to be scrubbed.
- Move the scrub head position lever to the “RAISE” position to release the scrub head lock.

OPERATION

3. Move the scrub head lock lever to the "UNLOCK" position.
4. Place the squeegee switch in the "Down" position.
5. Move the solution lever back to start the solution flow.

For SRS® machines: Turn the cleaning solution knob to the desired cleaning solution flow.

6. Move the scrub brush lever to the "ON" position.
7. Scrub as required.



WARNING: Explosion or fire could occur:

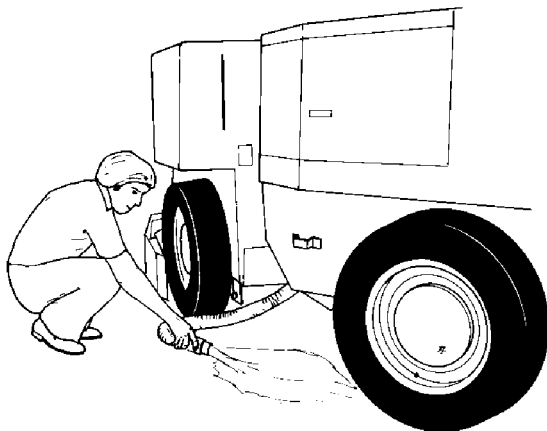
- If machine is used to pick up flammable spills from floors.
- If machine picks up reactive metals, such as aluminum or magnesium. Reactive metals and some detergents form explosive hydrogen gas. Contact Tennant Company for appropriate detergent selection.

TO DRAIN AND CLEAN RECOVERY TANK AND EMPTY HOPPER

1. Stop the engine and set the parking brake.

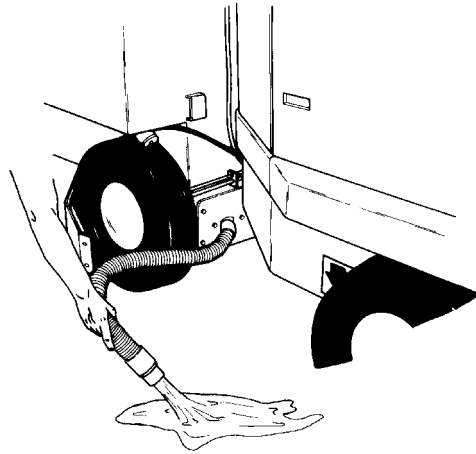
FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Remove and unplug the tank drain hose next to a floor drain.



DRAINING RECOVERY TANK

00288

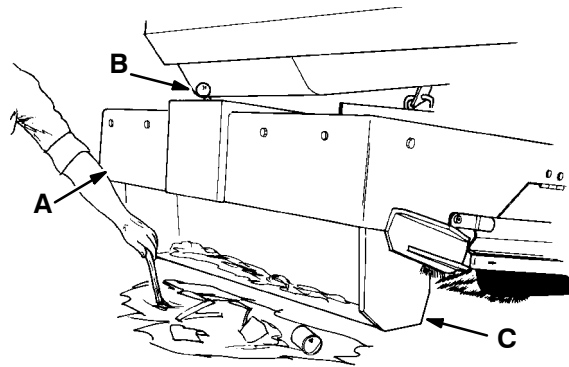


DRAINING SRS® TANK

00343

3. Pull the debris trough lever to dump the debris trough.

NOTE: If a more gentle dumping action is desired, the trough can be dumped with the scrub head lowered; then the head can be raised hydraulically to slowly tip the trough.



DUMPING DEBRIS TROUGH

00283

- A. Scrub Head**
- B. Debris Trough Lever**
- C. Debris Trough**

4. Clean the trough screen.
5. Clean the channel above the debris trough. If debris builds up in this area, the trough will not swing all the way up and latch properly. Remove any debris which has accumulated on top of the rail.

6. Close the debris trough.
7. Plug and secure the drain hose to the machine after tank is drained.
8. SRS® machines: Partially fill the solution tank with clean water. Run the SRS® pump for a few minutes to flush the solution hoses.

POST OPERATION CHECKLIST - ENGINE OPERATING

Check the scrub brush pattern for width and evenness.

Check the squeegees for proper deflection.

TO STOP MACHINE

1. Return the directional pedal to the “neutral” position. Apply the brake.
2. Move the solution lever to the “OFF” position.
3. Move the scrub head position lever to the “RAISE” position to set the scrub head lock.
4. Move the scrub head lock lever to the “LOCK” position.
5. Move the scrub brush lever to the “OFF” position.
6. Place the squeegee switch in the “Squeegee Up” position.
7. Turn off the operating lights if used.
8. Place the throttle lever in the “IDLE” position.
9. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, Turn Off Machine And Remove Key.

10. Turn the ignition key switch to the “off” position. Remove the ignition key from the ignition switch.
11. Diesel powered machines: Hold the throttle lever in the “STOP” position to stop the engine.
12. LPG powered machines: Close the LPG tank liquid service valve.

POST OPERATION CHECKLIST - ENGINE STOPPED

Check for wire or string tangled on the scrub brushes.

Check the squeegees for wear or damage.

Empty and clean the debris hopper.

Drain and clean the recovery tank.

Check the vacuum hoses for debris or obstructions.

Fill the fuel tank.

Check for leaks.

DOUBLE SCRUBBING OPERATION

Double pass scrubbing should be necessary only for heavy soilage and build-up of dirt, wax, etc. Operate the machine as desired for normal scrubbing but keep the rear squeegee up while making the first scrubbing pass. Allow the solution to soak on the floor for 15 to 20 minutes. Then make a second pass in the normal manner with the rear squeegee down.

FOR SAFETY: When Using Machine, Go Slow On Grades And Slippery Surfaces.

OPERATION ON GRADES

Drive the machine slowly on grades. Some loss of rear wheel steering traction could occur when braking with empty solution tanks.

The maximum rated ramp climb angle is 10°.

FOR SAFETY: When Using Machine, Go Slow On Grades And Slippery Surfaces.

OPERATION

MACHINE TROUBLESHOOTING

Problem	Cause	Remedy
Trailing water – poor or no water pickup	Worn rear squeegee	Rotate or replace rear squeegee blade
	Rear squeegee out of adjustment	Adjust rear squeegee
	Worn side squeegee	Replace side squeegee blade
	Side squeegee out of adjustment	Adjust side squeegee
	Vacuum hose clogged	Flush vacuum hoses
	Recovery tank full	Drain tank
	Float stuck shutting off vacuum	Clean float
	Vacuum fan drive belt loose or broken	Adjust, or replace and adjust belt
	Debris caught on squeegee	Remove debris
	Foam filling recovery tank	Empty recovery tank; use less or change detergent
	Vacuum hose to rear squeegee disconnected or damaged	Reconnect or replace vacuum hose
	Vacuum fan to recovery tank hose damaged	Replace hose
	Little or no solution flow to floor	Solution tank empty	Fill solution tank
Solution control linkage broken or out of adjustment		Replace and/or adjust linkage
Solution supply lines plugged		Flush solution supply lines
Solution spreader holes plugged		Flush spreader holes
Poor scrubbing performance	Debris caught on scrub brushes	Remove debris
	Improper detergent or brushes used	Check with Tennant representative for advice
	Worn scrub brushes	Replace scrub brushes
	Scrub brushes out of adjustment	Adjust scrub brushes
	Debris hopper full	Empty hopper
	Brushes have rotation set	Rotate brushes end-for-end
	Scrub brush drive failure	See <i>HYDRAULIC COMPONENTS TROUBLESHOOTING</i> - Hydraulic Motor Failure, in the <i>MAINTENANCE</i> section

OPTIONS OPERATION

HIGH PRESSURE SPRAYER

The high pressure sprayer option gives the machine the ability to spray wash grease, oil, and other dirt from trucks, racks, walls, etc. The water and detergent solution is taken from the solution supply line located under the operator seat. The solution is directed first to the spray pump which is driven off the machine hydraulic system. The spray pump has a 4 gpm (15 L/min) capacity up to 800 psi (5515 kPa). From the pump, the water flows through the hand-held sprayer.

NOTE: Pump only approved machine detergents and solutions through the high pressure sprayer. Acids and abrasive fluids may damage the unit.

The engine idle must be set between 700 and 850 rpm to allow the pump to operate at normal speed.

TO OPERATE HIGH PRESSURE SPRAYER

1. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Start engine. Place the throttle lever in the "IDLE" position.

ATTENTION! Do not operate the high pressure sprayer at full engine throttle or the water pump will fail.

3. Open the shutoff valve on the scrub head.
4. Adjust water pressure to 800 psi (5515 kPa) using red pressure adjustment knob on regulator.

FOR SAFETY: When Servicing Machine, Wear Eye And Ear Protection When Using Pressurized Air Or Water.

5. Spray as required.

NOTE: Check the water spray pressure. It is to be 600 to 800 psi (4140 to 5515 kPa) when operating the sprayer. The maximum pressure when not spraying is 1200 psi (8275 kPa). To change the water pressure, adjust the red pressure adjustment knob on the regulator, or adjust the engine idle.

6. When finished, close the shutoff valve and relieve water pressure in the high pressure spray hose. Place all equipment in its proper storage location.

VACUUM WAND

The vacuum wand option gives the machine the added flexibility of picking up spills not accessible by the machine. A 20 ft (6095 mm) hose and wand utilizes the machine vacuum system.

TO OPERATE VACUUM WAND

1. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Remove the vacuum wand and hose from storage on the machine.
3. Remove the rear squeegee vacuum hose plate from the rear of the tank.
4. Attach the vacuum wand hose plate to the rear of the tank using the toggle clamps provided.
5. Start the engine.
6. Move the throttle lever to the "FULL" position.
7. Operate the vacuum wand as required.
8. When finished, stop the engine, and remove the vacuum wand hose plate from the rear of the tank.
9. Reconnect the rear squeegee vacuum hose plate to the rear of the tank using the toggle clamps provided.
10. Clean and rinse off the vacuum wand, hose, and related equipment as required.
11. Store the vacuum wand equipment in the proper locations.

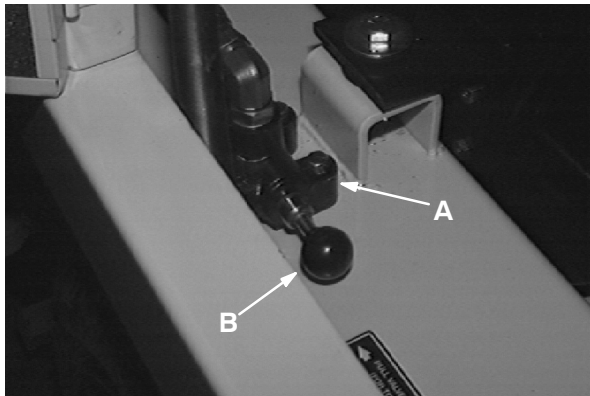
TRANSPORTING MACHINE

PUSHING OR TOWING MACHINE

The machine may be pushed or towed up to a distance of 1 mile (1.6 km) at speeds up to, but not exceeding, 5 mph (8 km/h). Distances and speeds over these may damage the hydraulic motors.

ATTENTION! Do not push or tow machine for more than 1 mile (1.6 km) at speeds exceeding 5 mph (8 km/h). Distances and speeds greater than these may damage the hydraulic motors.

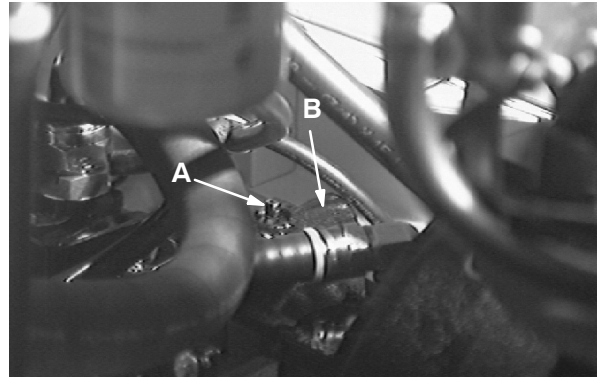
Machines serial number 005101 to 005268 have a tow bypass valve to prevent damage to the hydraulic system when the machine is being towed. Pull the handle out to tow the machine.



TOW BYPASS VALVE

- A. Tow Bypass Valve
- B. Handle

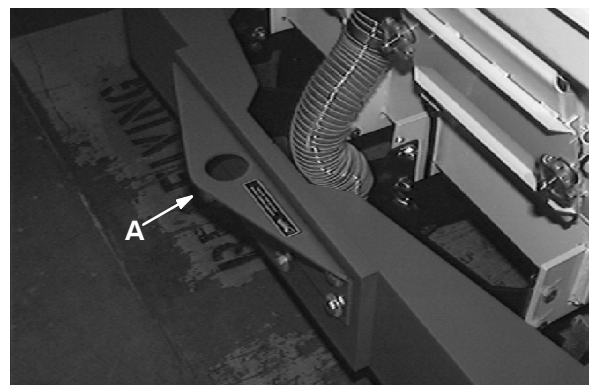
Machines serial number 005269 and above have a towing valve on the propelling pump to prevent damage to the hydraulic system when the machine is being towed. Turn the valve 90° clockwise before towing the machine.



TOWING VALVE

- A. Towing Valve
- B. Propelling Pump

You can tow the machine from the front or rear using the towing and tie-down brackets, located at the front or rear of the machine.



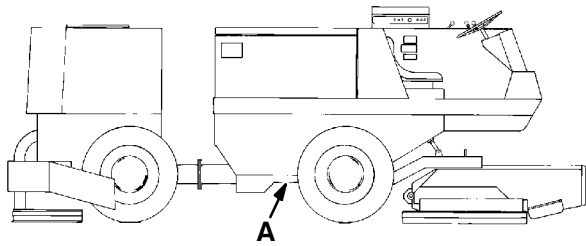
TOWING BRACKET

- A. Towing Bracket

MACHINE JACKING LOCATIONS

The machine jacking locations are labeled with a label. The tractor jacking locations are behind each of the front wheels, and the tank jacking locations are in front of the rear wheels.

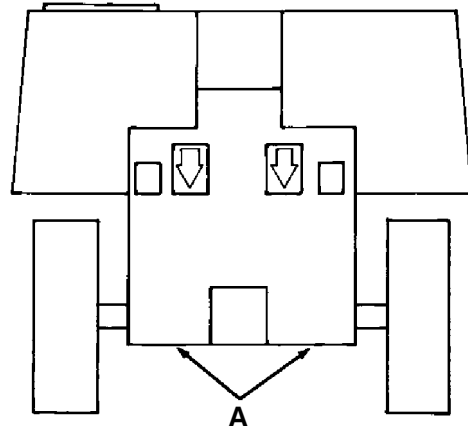
FOR SAFETY: When Servicing Machine, Block Machine Tires Before Jacking Machine Up. Jack Machine Up At Designated Locations Only. Block Machine Up With Jack Stands. Use Hoist Or Jack Of Adequate Capacity To Lift Machine.



TRACTOR JACKING LOCATION

A. Jacking Location

00362



TANK JACKING LOCATION

A. Jacking Location

01820

MACHINE STORAGE

STORING MACHINE

When storing the machine for extended periods of time, the following procedures must be followed to reduce the chance of rust, sludge, and other undesirable deposits to form:

1. Drain and clean out the solution recovery and cleaning solution tanks.
2. Park the machine in a cool and dry area.
3. Stop the engine and set the machine parking brake.

LPG powered machines: Close the LPG tank liquid service valve.

4. Raise and lock the scrub head.
5. Fill the hydraulic reservoir with hydraulic fluid to the full mark on the dipstick, to prevent excessive condensation from forming in the reservoir.

GASOLINE POWERED MACHINES

To store the machine 30 to 90 days:

1. Change engine oil and oil filter.
2. Remove the spark plugs.
3. Pour 3 oz (90 cc) of clean engine oil into each spark plug hole.
4. Remove the ignition coil high tension wire. Operate the engine starter motor for at least a dozen revolutions. This distributes the oil over the cylinder walls.

NOTE: Before preparing the engine for storage, allow it to cool down to the surrounding temperature. Oil adheres to cold metal surfaces much better than hot surfaces.

5. Replace the high tension coil wire and spark plugs.
6. Drain the gasoline from the carburetor.

7. Seal the air cleaner inlet, the exhaust outlet, and the crankcase breather tube with weatherproof masking tape.
8. Tighten the engine oil filler cap, the fuel tank cap, and the radiator cap to make certain they are securely in place.

To store the machine 90 days to 6 months:

1. Remove the spark plugs.
2. Pour 3 oz (90 ml) of clean engine oil into each spark plug hole.
3. Remove the ignition coil high tension wire. Operate the engine starter motor for at least a dozen revolutions. This distributes the oil over the cylinder walls.

NOTE: Before preparing the engine for storage, allow it to cool down to the surrounding temperature. Oil adheres to cold metal surfaces much better than hot surfaces.

4. Replace the high tension coil wire and spark plugs.
5. Drain the engine oil.
6. Drain the engine coolant from the radiator, and the engine block.
7. Close the drain cocks.
8. Drain gasoline from the carburetor, fuel tank, and the fuel lines.
9. Seal the air cleaner inlet, the exhaust outlet, and the crankcase breather tube with weatherproof masking tape.
10. Tighten the engine oil filler cap, the fuel tank cap, and the radiator cap to make certain they are securely in place.

DIESEL POWERED MACHINES

To store the machine for 30 days or more:

1. Change the engine oil and filter.
2. Drain all fuel from the fuel tank and the fuel filters. Pour 1 gal (4 L) of new, clean #1 diesel fuel in tank.
3. Prime the fuel system.
4. Seal the air vent in the fuel tank or filler cap with waterproof tape.
5. Drain engine coolant.
6. Remove the injectors and pour a small amount of pure castor oil into the cylinder bores.
7. Replace the injectors (using new copper sealing washers) and slowly rotate the crankshaft one complete revolution to evenly distribute the lubricant. Do not rotate crankshaft further so as not to destroy protective film on bore walls.
8. Remove the engine air filter and carefully seal the intake orifice with waterproof tape or some other suitable medium.
9. Remove the exhaust pipe and seal the manifold outlet.
10. Remove valve rocker cover. Lubricate the rocker gear with engine oil and replace the cover. Be sure that the gasket is correctly fitted.
11. Clean the engine breather pipe. Seal the end with waterproof tape or a cork.
12. Remove all of the belts from the engine and save for future use. Attach them to the engine to prevent loss.

SECTION 3

CONTENTS

	Page		Page
RECOMMENDED FIRST 50-HOUR MACHINE		FUEL SYSTEM - DIESEL	3-21
INSPECTION	3-3	FUEL WATER TRAP	3-21
MAINTENANCE CHART	3-4	TO CLEAN WATER TRAP	3-21
LUBRICATION	3-6	FUEL FILTER	3-21
ENGINE	3-6	TO REPLACE FUEL FILTER (For	
GASOLINE AND LPG POWERED		machines below serial number	
ENGINES	3-6	005002)	3-21
DIESEL POWERED ENGINES	3-6	TO REPLACE FUEL FILTER (For	
VACUUM FAN SHAFT	3-6	machines serial number 005002	
MACHINE PIVOT	3-7	and above)	3-21
SCRUB HEAD PIVOT	3-7	FUEL INJECTION PUMP	3-22
SCRUB HEAD HINGES	3-8	FUEL INJECTORS	3-22
REAR SQUEEGEE CASTERS	3-8	PRIMING THE FUEL SYSTEM	3-23
SCRUB BRUSH IDLER PLUGS	3-8	GOVERNOR, F163 - GASOLINE, LPG	3-23
REAR WHEELS	3-8	TO ADJUST GOVERNOR, F163	3-24
HYDRAULICS	3-9	GOVERNOR, TM27 - GASOLINE, LPG	3-24
HYDRAULIC FLUID	3-9	TO ADJUST GOVERNOR, TM27	3-25
HYDRAULIC FLUID RESERVOIR	3-9	ELECTRICAL SYSTEM	3-25
TO DRAIN THE HYDRAULIC FLUID		SPARK PLUGS	3-25
RESERVOIR	3-10	DISTRIBUTOR	3-26
TO FILL THE HYDRAULIC FLUID		DISTRIBUTOR IGNITION TIMING	3-26
RESERVOIR	3-10	CYLINDER HEAD - GASOLINE, LPG	3-27
HYDRAULIC FLUID RESERVOIR		CYLINDER HEAD BOLT	
BREATHER	3-11	TIGHTENING	3-27
HYDRAULIC FLUID FILTER	3-11	VALVE TAPPET CLEARANCE	3-28
TO REPLACE THE HYDRAULIC		CYLINDER HEAD - DIESEL	3-28
FLUID FILTER ELEMENT	3-11	CYLINDER HEAD BOLT	
HYDRAULIC FLUID LEAKS	3-11	TIGHTENING	3-28
HYDRAULIC COMPONENTS		VALVE TAPPET CLEARANCE	3-28
TROUBLESHOOTING	3-12	PCV SYSTEM	3-29
ENGINE	3-13	TUNE-UP CHART - GASOLINE, LPG	3-29
LUBRICATION	3-13	ELECTRICAL SYSTEM	3-30
GASOLINE AND LPG POWERED		BATTERY	3-30
ENGINES	3-13	BELTS AND CHAINS	3-31
DIESEL POWERED ENGINES	3-13	VACUUM FAN DRIVE BELT	3-31
COOLING SYSTEM	3-13	TO ADJUST VACUUM FAN	
AIR INTAKE SYSTEM	3-14	DRIVE BELT	3-31
AIR FILTER SERVICE INDICATOR	3-14	INTERMEDIATE DRIVE BELT	3-32
AIR FILTER	3-14	TO ADJUST INTERMEDIATE	
TO REPLACE AIR FILTER		DRIVE BELT	3-32
ELEMENT	3-15	ALTERNATOR AND RADIATOR	
FUEL SYSTEM - GASOLINE	3-16	FAN BELT	3-32
FUEL FILTER	3-16	TO ADJUST ALTERNATOR AND	
CARBURETOR	3-16	RADIATOR FAN BELT	3-32
FUEL SYSTEM - LPG	3-17	SCRUB HEAD	3-33
LPG FUEL SYSTEM	3-17	SCRUB HEAD	3-33
FUEL TANKS	3-17	TO ADJUST SCRUB HEAD HEIGHT	3-33
TO CHANGE AN LPG FUEL TANK	3-18	TO ADJUST SCRUB BRUSH	
FUEL FILTER LOCK	3-19	PATTERN	3-33
VAPORIZER-REGULATOR	3-19	SCRUB BRUSHES	3-35
CARBURETOR	3-19	TO REPLACE SCRUB BRUSHES	3-35
OIL PRESSURE SWITCH	3-19		
LPG FUEL TROUBLESHOOTING	3-20		

MAINTENANCE

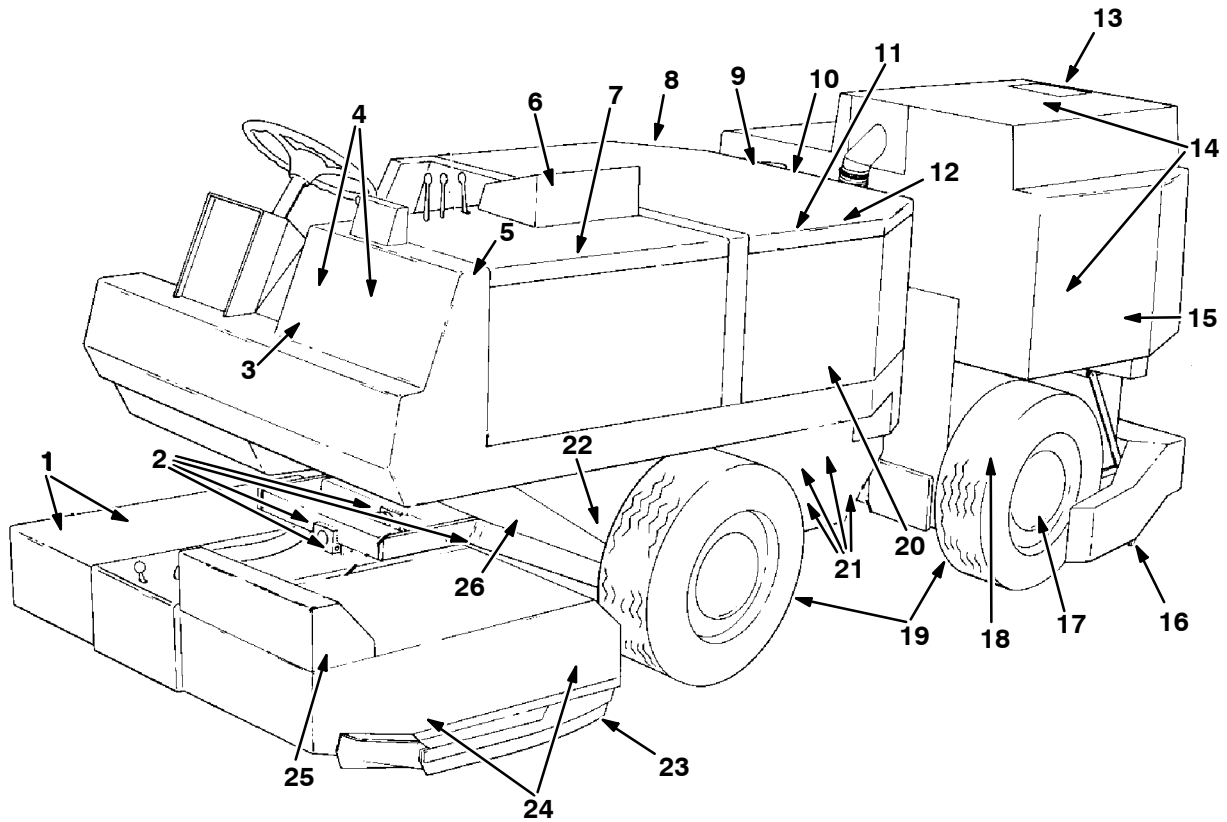
	Page
SOLUTION SYSTEM	3-37
RECOVERY TANK	3-37
WATER SPRAY DEFLECTOR	3-37
SRS® WATER SPRAY DEFLECTOR ...	3-38
SRS® SOLUTION TANK	3-39
SOLUTION DISPENSING TUBE	3-40
SRS® CLEANING SOLUTION FILTER .	3-40
SRS® METERING SOLUTION PUMP ..	3-40
TROUBLESHOOTING	3-40
SQUEEGEES	3-41
SIDE SQUEEGEES	3-41
REAR SQUEEGEE	3-41
TO REPLACE REAR SQUEEGEE	
BLADES	3-42
TO FACTORY ADJUST REAR	
SQUEEGEE	3-42
TO ADJUST REAR SQUEEGEE ...	3-45
BRAKES AND TIRES	3-47
SERVICE BRAKES	3-47
PARKING BRAKES	3-47
TIRES	3-48
OPTIONS	3-49
HIGH PRESSURE SPRAYER	3-49

RECOMMENDED FIRST 50-HOUR MACHINE INSPECTION

After the first 50 hours of operation, the following procedures are recommended:

1. Check the air filter element. Tighten all connections on intake hose, air filter, etc.
2. Change engine oil and filter.
3. Check for the correct alternator and vacuum fan belt tension.
4. Check the scrub brush pattern.
5. Check the scrub head side squeegee blades for wear or damage.
6. Check the rear squeegee for worn or damaged blades or for incorrect adjustment.
7. Check vacuum hoses for damage or loose connections.
8. Check engine valve tappet clearance.
9. Diesel powered machines: Remove the rocker assembly and tighten the cylinder head nuts in the correct sequence and to the correct torque.
10. Torque the cylinder head bolts to the proper specification.
11. Perform all remaining 50-hour lubrication and maintenance procedures listed in the *MAINTENANCE CHART*.

MAINTENANCE CHART



00291

Interval	Key	Description	Procedure	Lubricant/ Fluid	No. of Service Points
Daily	7	Engine air filter	Check service indicator	-	1
	11	Engine crankcase	Check oil level	EO	1
	16	Rear squeegee	Check for damage, wear, and adjustment	-	1
	23	Side squeegees	Check for damage, wear, and adjustment	-	2
	24	Scrub brushes	Check for damage, wear, and adjustment	-	2
	19	Tires	Check air pressure	-	4
	13	SRS® Solution tank and metering pump	Empty and clean Flush laminar tubes	-	1
50 Hours	11	Engine crankcase	Change oil and oil filter element	EO	1
	24	Scrub brushes	Rotate brushes	-	2
	21	Machine pivot	Lubricate	SPC	4
	2	Scrub head pivot	Lubricate	SPC	4
	22	Scrub head hinges	Lubricate	SPC	2
	18	Rear squeegee casters	Lubricate	SPC	3
	1	Scrub brush idler plugs	Lubricate	SPC	2
	6	Vacuum fan shaft	Lubricate	SPC	1
	10	Radiator	Clean exterior	-	1
9	SRS® cleaning solution filter on machines below serial number 003790	Clean	-	1	

Interval	Key	Description	Procedure	Lubricant/ Fluid	No. of Service Points
50 Hours	25	Solution dispensing tube	Flush	-	1
	8	Vacuum fan drive belt	Check tension	-	1
100 Hours	11	Water trap, diesel	Clean	-	1
	8	Intermediate drive belt	Check tension	-	1
	12	Alternator belt	Check tension	-	1
	5	Hydraulic fluid reservoir	Check fluid level	HYDO	1
	10	Radiator	Check coolant level	WG	1
200 Hours	11	Engine, gasoline, LPG	Clean or replace and adjust spark plugs	-	4
			Clean or replace and adjust distributor points (F163 only)	-	1
			Clean PCV hoses, tubes, and fittings	-	1
			Lubricate distributor felt	EO	1
	26	Parking brake	Check adjustment	-	1
	14	Spray deflectors	Check for wear	-	2
	19	Wheels	Tighten lug nuts	-	4
400 Hours	5	Hydraulic fluid reservoir	Change hydraulic fluid	HYDO	1
	4	Hydraulic fluid filters	Change filter element	-	2
	3	Brake master cylinder	Check fluid level	BF	1
	11	Engine, gasoline, LPG	Adjust valve tappets	-	8
			Torque cylinder head bolts	-	15
	11	Engine, diesel	Adjust valve tappets	-	8
	11	Fuel filter, diesel	Replace filter elements	-	2
11	Water trap filter, diesel	Replace filter element	-	1	
800 Hours	5	Hydraulic reservoir breather	Replace	-	1
	10	Cooling system	Flush	-	1
2000 Hours	17	Rear wheel bearings	Repack with lubricant	WBG	2

BF - Brake fluid

EO - Engine oil

HYDO - TENNANT or approved hydraulic fluid

SPC - Special lubricant, Lubriplate EMB grease, TENNANT Part No. 01433-1

WBG - Wheel bearing grease

WG - Water and permanent-type ethylene glycol antifreeze, one-to-one ratio

NOTE: More frequent intervals may be required in extremely dusty conditions.

LUBRICATION

ENGINE

Check the engine oil level daily.

GASOLINE AND LPG POWERED ENGINES

Gasoline and LPG powered engines should be lubricated with SAE-SG/SH rated engine oil. Change the engine oil and oil filter after every 50 hours of operation. Change the engine oil more frequently if the environment is extremely dusty.

The following oil grades are recommended for engines operating in the ambient temperatures listed.

MULTI-VISCOSITY OILS			
Below 32°F (Below 0°C) 5W 30	-10° to 90°F (-23° to 32°C) 10W 30	-10° to above 90°F (-23 to above 32°C) 10W 40	Above 10°F (Above -12°C) 20W 40

SINGLE VISCOSITY OILS			
-10° to 32°F (-23° to 0°C) 10W	10° to 60°F (-12° to 16°C) 20W 20	32° to 90°F (0° to 32°C) 30	Above 60°F (Above 16°C) 40

The engine oil capacity for machines with the F163 engine is 4.5 qt (4.2 L) with filter.

The engine oil capacity for machines with the TM27 engine is 7 qt (6.6 L) with filter.

DIESEL POWERED ENGINES

Diesel powered engines should be lubricated with SAE-CC/CD rated engine oil. Change the engine oil and oil filter after every 50 hours of operation. Change the engine oil more frequently if the environment is extremely dusty.

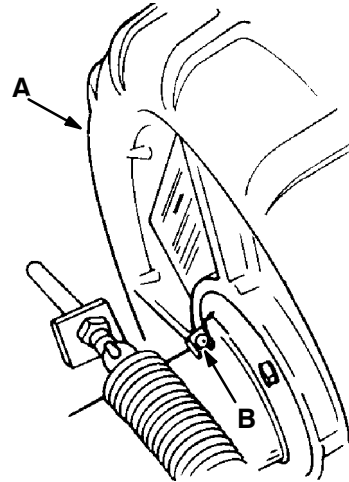
The following oil grades are recommended for engines operating in the ambient temperatures listed.

SINGLE AND MULTI-VISCOSITY OILS		
Below 32°F (Below 0°C) 10W 10W 30	32° to 77° F (0° to 25° C) 20	Above 77° F (Above 25° C) 30

The engine oil capacity is 7 qt (6.6 L) with filter.

VACUUM FAN SHAFT

There is one grease fitting which is used to lubricate the vacuum fan shaft. Grease the vacuum fan bearings after every 50 hours of operation. The vacuum fan grease fitting is covered with a plastic cap. Snap the cap open and apply Lubriplate EMB grease (TENNANT Part No. 01433-1) to the vacuum fan grease fitting. Wipe off all excess grease and replace the grease fitting cap.



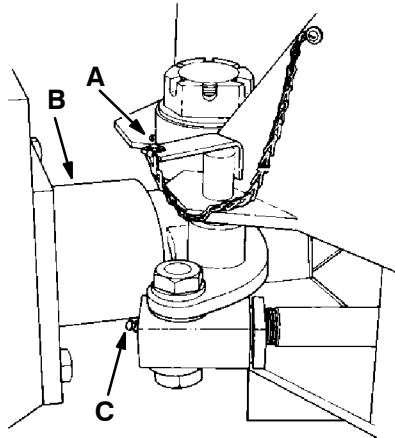
VACUUM FAN

03789

- A. Vacuum Fan
- B. Grease Fitting

MACHINE PIVOT

There are four grease fittings which are used to lubricate the machine pivot assembly. There is an upper bearing grease fitting, a lower bearing grease fitting, and a grease fitting on each rod end of the steering cylinder. Apply grease to these fittings after every 50 hours of operation. Use a Lubriplate EMB grease (TENNANT Part No. 01433-1).



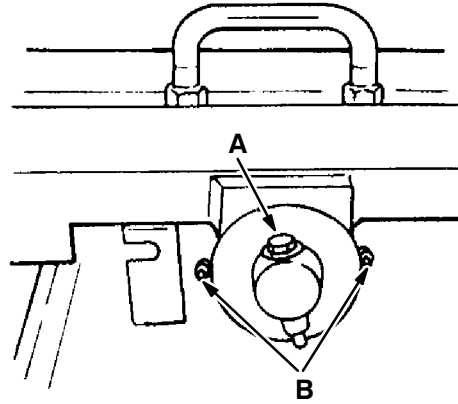
MACHINE PIVOT

00251

- A. Upper Bearing Grease Fitting**
- B. Machine Pivot**
- C. Steering Cylinder Rod End Grease Fitting**

SCRUB HEAD PIVOT

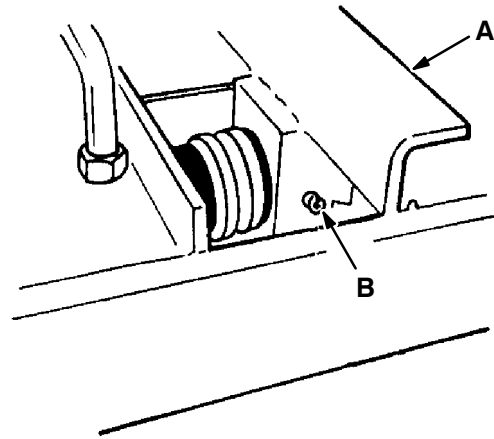
There are four grease fittings which are used to lubricate the scrub head pivot assembly--one on each of the four scrub head pivot blocks. Apply grease to these fittings after every 50 hours of operation. Use a Lubriplate EMB grease (TENNANT Part No. 01433-1).



SCRUB HEAD PIVOT

03790

- A. Pivot**
- B. Grease Fitting**



SCRUB HEAD PIVOT

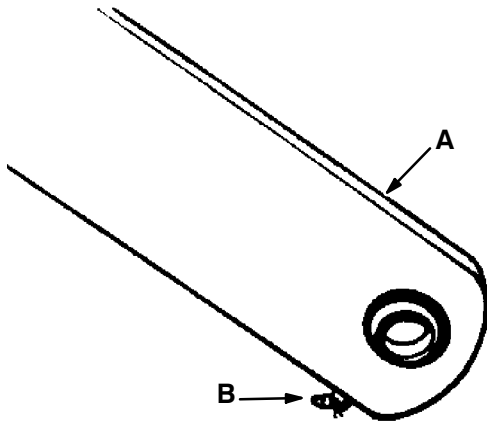
03791

- A. Scrub Head**
- B. Grease Fitting**

MAINTENANCE

SCRUB HEAD HINGES

There are two grease fittings which are used to lubricate the scrub head hinges. One grease fitting is located on the underside of each of the hinges. Apply grease to these fittings after every 50 hours of operation. Use a Lubriplate EMB grease (TENNANT Part No. 01433-1).



03792

SCRUB HEAD HINGE

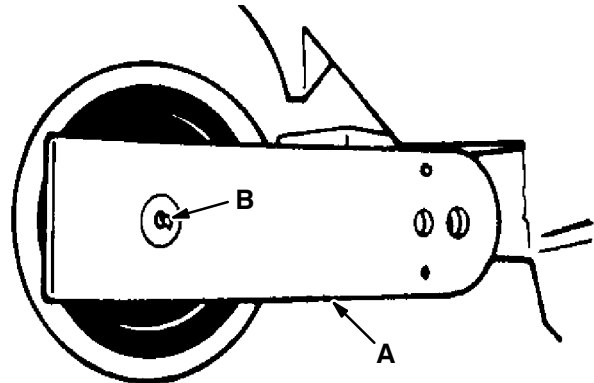
- A. Scrub Head
- B. Grease Fitting

REAR SQUEEGEE CASTERS

Lubricate the rear squeegee casters after every 50 hours of operation. Use Lubriplate EMB grease (TENNANT Part No. 01433-1).

SCRUB BRUSH IDLER PLUGS

There are two grease fittings which are used to lubricate the brush idler plugs. They are located in the center of each idler plug and are covered with plastic caps. Snap the caps open to apply grease to the fittings. Use a Lubriplate EMB grease (TENNANT Part No. 01433-1). Wipe off all excess grease and replace the plastic cap. Apply grease to the fittings after every 50 hours of operation.



03793

BRUSH IDLER PLUG

- A. Idler Arm
- B. Grease Fitting

REAR WHEELS

The rear wheels have automotive-type bearings. Repack the bearings with automotive-type wheel bearing grease after every 2000 hours of operation.

HYDRAULICS

HYDRAULIC FLUID

The quality and condition of the hydraulic fluid plays a very important role in how well the machine operates. TENNANT's hydraulic fluid is designed to meet the special needs of its machines.

TENNANT's hydraulic fluids provide longer life of the hydraulic components. There are two fluids available for two different temperature ranges:

TENNANT part no.	Ambient Temperatures
65869	above 45° F (7° C)
65870	below 45° F (7° C)

The higher temperature fluid is designed with a higher viscosity and should not be used at the lower temperatures. Possible damage to the hydraulic pumps may occur because of improper lubrication.

The lower temperature fluid is a thinner fluid designed for colder temperatures.

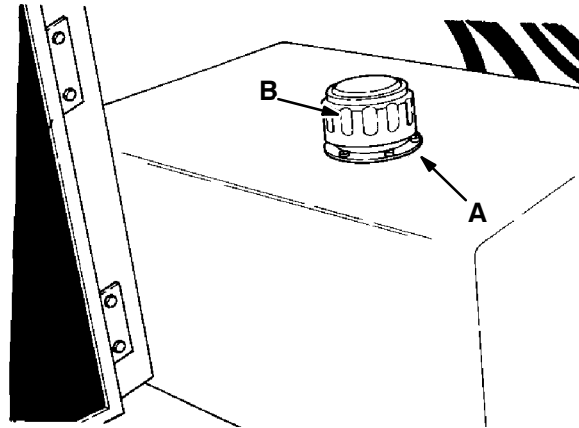
If a locally-available hydraulic fluid is preferred, or if products of only one oil company are used, contact TENNANT Technical Customer Service to check the specifications of the substitute fluid. Using substitute fluids can cause premature failure of hydraulic components.

ATTENTION! Hydraulic components depend on system hydraulic fluid for internal lubrication. If dirt or other contaminants are allowed to enter the hydraulic system, malfunctions, accelerated wear, and damage will result.

HYDRAULIC FLUID RESERVOIR

Hydraulic fluid is stored in the hydraulic fluid reservoir. The reservoir holds up to 11.5 gal (44 L) of hydraulic fluid. The reservoir is located in the front left corner of the machine.

The reservoir is equipped with a breather-filler cap and fluid level dipstick mounted on the filler neck. See Hydraulic Fluid Reservoir Breather for breather service information.



02354

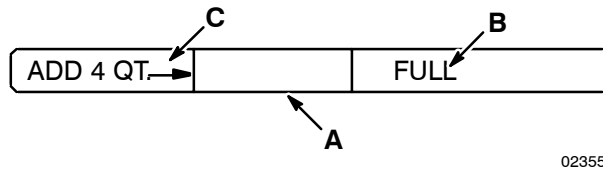
**HYDRAULIC FLUID RESERVOIR
BREATH-FILLER CAP**

- A. Filler Neck**
- B. Breather-Filler Cap**

The hydraulic fluid level dipstick is built into the breather-filler cap. The end of the dipstick is marked with "full" and "add" levels. This indicates the level of hydraulic fluid in the reservoir.

MAINTENANCE

Check the hydraulic fluid level after every 100 hours of operation. It should be above the “add” mark on the dipstick, but not above the “full” mark when the hydraulic fluid is at operating temperature.



HYDRAULIC FLUID LEVEL DIPSTICK

- A. Dipstick**
- B. Full Range**
- C. Add Range**

Lubricate the filler cap gasket with a film of hydraulic fluid before putting the cap back on the reservoir.

Do not overfill the hydraulic fluid reservoir. The hydraulic fluid expands as it heats to its normal operating temperature. Always allow for expansion when filling the reservoir.

ATTENTION! Do not overfill the hydraulic fluid reservoir or operate the machine with a low level of hydraulic fluid in the reservoir. Damage to the machine hydraulic system may result.

Drain, flush, and refill the hydraulic fluid reservoir with hydraulic fluid after every 400 hours of operation.

TO DRAIN THE HYDRAULIC FLUID RESERVOIR

1. Stop the engine and set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Allow the hydraulic fluid to cool.
3. Open the left side access door.

4. Loosen the breather-filler cap. Remove the reservoir drain plug located on the bottom of the reservoir to drain the hydraulic fluid. Discard the used hydraulic fluid.

NOTE: Always change the hydraulic fluid filter when draining the hydraulic fluid reservoir.

5. Flush the reservoir with clean hydraulic fluid or suitable solvent. Do not use gasoline, kerosene, or diesel fuel.
6. Reinstall the reservoir drain plug and breather-filler cap.
7. Close the left side access door.

TO FILL THE HYDRAULIC FLUID RESERVOIR

1. Open the left side access doors.
2. Remove the breather-filler cap.
3. Pour the new hydraulic fluid into the hydraulic fluid reservoir through a 200 mesh screened funnel. Watch the hydraulic fluid level on the sight gauge. Do not overfill the reservoir.

ATTENTION! Use only new-approved hydraulic fluid to fill the hydraulic fluid reservoir.

4. Check the hydraulic fluid level in the reservoir with the reservoir dipstick.
5. Add hydraulic fluid until the level in the reservoir is between the “ADD” and the “FULL” range. Do not overfill.

NOTE: Do not overfill the hydraulic fluid reservoir. As hydraulic fluid heats to its normal operating temperature, it expands. Always allow for this expansion when filling the hydraulic fluid reservoir.

6. Place the reservoir breather-filler cap securely on the reservoir.
7. Close the access doors.

HYDRAULIC FLUID RESERVOIR BREATHER

The hydraulic fluid reservoir is equipped with a breather. The breather is built into the filler cap on top of the reservoir. It maintains atmospheric pressure in the reservoir. The breather should be replaced after every 800 hours of operation.

HYDRAULIC FLUID FILTER

The hydraulic system is kept clean to a level of 10 microns by two hydraulic fluid filters. They are located in the engine compartment and should be changed after every 400 hours of operation.

TO REPLACE THE HYDRAULIC FLUID FILTER ELEMENT

1. Park the machine on a flat surface, stop the engine, and set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

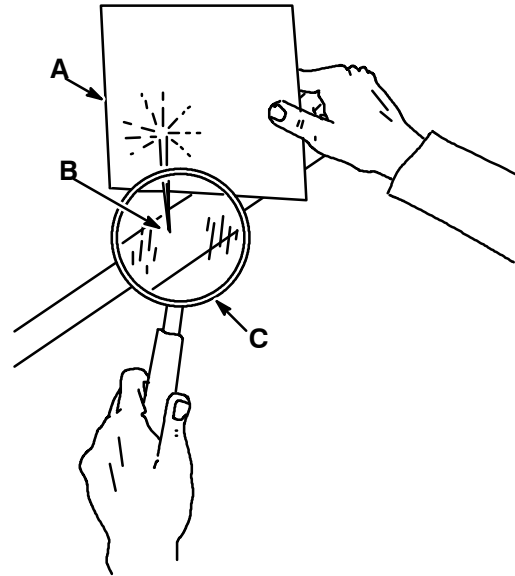
2. Open the left side access doors.
3. Unthread and discard the hydraulic fluid filter elements.

NOTE: Discard all hydraulic fluid drained from the system. Drained hydraulic fluid may contain foreign material harmful to the hydraulic system.

4. Apply a thin coat of hydraulic fluid to the seal of the new hydraulic fluid filter element.
5. Thread and hand tighten the new hydraulic fluid filter elements on the filter heads.
6. Operate the machine and check for leaks. Correct any leaks found.
7. Check the hydraulic fluid reservoir level and fill as required.
8. Close the access doors.

HYDRAULIC FLUID LEAKS

Hydraulic fluid escaping at high pressure from a very small hole can be almost invisible and can cause serious injuries. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.



HYDRAULIC PIN HOLE LEAK

00002

- A. Cardboard**
- B. Pin Hole Leak**
- C. Magnifying Glass**

If injured by escaping hydraulic fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

FOR SAFETY: When Servicing Machine, Use Cardboard To Locate Leaking Hydraulic Fluid Under Pressure.

MAINTENANCE

HYDRAULIC COMPONENTS TROUBLESHOOTING

Problem	Cause	Remedy
Hydraulic cylinder failure	Piston seals leaking	Install seal kit
	Barrel worn or rod bent	Replace cylinder
Hydraulic control valve failure	Valve seals leaking	Install seal kit
	Solenoid failure	Replace solenoid
	Solenoid spool sticking	Replace valve section
	Check valve sticking	Replace valve
	Relief valve stuck open (leaking)	Clean or replace relief valve
Hydraulic steering valve failure	Valve leaking	Install seal kit
	Drive link failure	Replace drive link
	Thrust bearing worn	Replace thrust bearing
	Gerotor worn	Replace gerotor set
Hydraulic motor failure	Motor leaking	Install seal kit
	Drive link failure	Replace drive link
	Gerotor worn	Replace gerotor set
	Output shaft failure	Replace output shaft and bearings
Hydraulic vane pump failure	Pump leaking	Install seal kit
	Vane set failure	Replace vane set
	Relief valve stuck	Replace relief valve
	Engine-to-pump coupling failure	Replace coupling
Hydraulic piston pump failure	Pump leaking	Install seal kit
	Relief valve stuck	Clean or replace relief valve
	Integral charge pump failure	Replace charge pump
	Rotating group worn	Replace rotating group
	Shaft failure	Replace shaft
	Backplate worn	Replace backplate
	Engine-to-pump coupling failure	Replace coupling

ENGINE

LUBRICATION

Check the engine oil level daily.

GASOLINE AND LPG POWERED ENGINES

Gasoline and LPG powered engines should be lubricated with SAE-SE/SF rated engine oil. Change the engine oil and oil filter after every 50 hours of operation. Change the engine oil more frequently if the environment is extremely dusty.

The following oil grades are recommended for engines operating in the ambient temperatures listed.

MULTI-VISCOSITY OILS			
Below 32°F (Below 0°C) 5W 30	-10° to 90°F (-23° to 32°C) 10W 30	-10° to above 90°F (-23 to above 32°C) 10W 40	Above 10°F (Above -12°C) 20W 40

SINGLE VISCOSITY OILS			
-10° to 32°F (-23° to 0°C) 10W	10° to 60°F (-12° to 16°C) 20W 20	32° to 90°F (0° to 32°C) 30	Above 60°F (Above 16°C) 40

The engine oil capacity for machines with the F163 engine is 4.5 qt (4.2 L) with filter.

The engine oil capacity for machines with the TM27 engine is 7 qt (6.6 L) with filter.

DIESEL POWERED ENGINES

Diesel powered engines should be lubricated with SAE-CC/CD rated engine oil. Change the engine oil and oil filter after every 50 hours of operation. Change the engine oil more frequently if the environment is extremely dusty.

The following oil grades are recommended for engines operating in the ambient temperatures listed.

SINGLE AND MULTI-VISCOSITY OILS		
Below 32°F (Below 0°C) 10W 10W 30	32° to 77° F (0° to 25° C) 20	Above 77° F (Above 25° C) 30

The engine oil capacity is 7 qt (6.6 L) with filter.

COOLING SYSTEM

Maintaining cooling system efficiency is important. Engine temperatures must be brought up to and maintained within the satisfactory range for efficient operation. However, the engine must be kept from overheating in order to prevent damage to the valves, pistons, and bearings. Check the coolant level after every 100 hours of operation.

Use soft, clean water mixed with permanent-type, ethylene glycol antifreeze in a one-to-one ratio. Deposits of sludge, scale, and rust prevent normal heat transfer. Flush the radiator and the cooling system after every 800 hours of operation using a dependable cleaning compound. Follow the mixing procedure recommended by the compound manufacturer. This is important because of the difference in concentration and composition of the cleaning compounds. After cleaning, flush the system with clean water.

Whenever a cooling system is badly rust-clogged as indicated by overflow loss or abnormally high operating temperatures, corrective cleaning by reverse flow flushing will most effectively remove the heavy deposits of sludge, rust, and scale. The reverse flow flushing should be performed immediately after draining the cleaning solution. Flush the radiator first, then the engine, to allow the engine to cool as much as possible.

Engine overheating may also be caused by dirty radiator fins. The exterior fins of the radiator can be cleaned with an air hose. Clean the radiator exterior after every 50 hours of operation.

Blow all dust, which may have collected on the radiator, in through the grill and radiator fins, opposite the direction of normal air flow. This should be done only after the radiator has cooled, to avoid cracking.

FOR SAFETY: When Servicing Machine, Wear Eye And Ear Protection When Using Pressurized Air Or Water.

The engine is equipped with a 180° F (82° C) thermostat. Normal engine temperature is 200° F (93° C). Temperatures up to 220° F (104° C) are allowable. Temperatures over 220° F (104° C) indicate a problem exists.

NOTE: Overheating is always accompanied by loss of coolant water. If in doubt, check.

A pressure cap is used on the radiator to prevent overflow loss of water during normal operation. The spring-loaded valve in the cap closes the outlet to the overflow pipe of the radiator and thus seals the system. Pressure developing within the system raises the boiling point of the coolant and allows higher temperatures without overflow loss from boiling. The pressure valve opens at 15 psi (100 kPa) allowing steam and water to pass out the overflow pipe.

FOR SAFETY: When Servicing Machine, Avoid Contact With Hot Engine Coolant.

AIR INTAKE SYSTEM

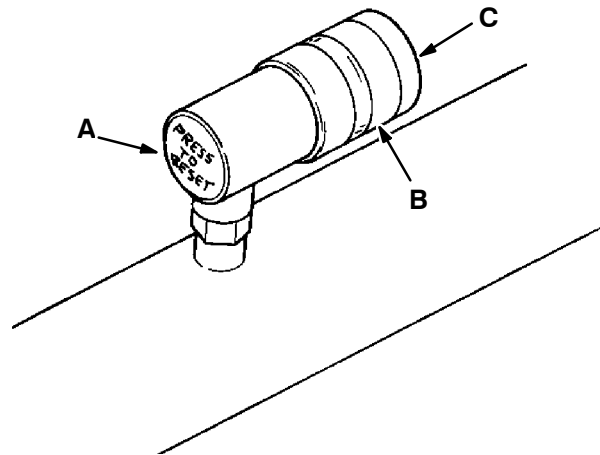
The importance of maintaining an air filter cannot be overemphasized. Dirt ingested through improperly installed, improperly serviced, or inadequate air filter elements wears out more engines than long hours of operation. Even a small amount of dirt will wear out a set of piston rings in just a few hours. Operating with a clogged air filter element also causes the fuel mixture to be richer, which can lead to formation of harmful sludge deposits in the engine. Always cover the air intake when the air filter is removed for servicing. Do not neglect servicing the air filter. Use only approved replacement parts. Keep all other air intake components such as hoses and clamps secure and in good condition to prevent entrance of unfiltered air.

Over maintenance can cause more damage than good. Removing the air filter element more often than is needed allows contaminants to enter the engine unnecessarily. Replace the air filter element only when the restriction indicator indicates excessive restriction in the system.

AIR FILTER SERVICE INDICATOR

The air filter service indicator signals when to replace the air filter element. Check the service indicator daily. The red line will move on the scale as the air filter element fills with dirt. Do not replace the air filter element until the red line reaches 20 in H₂O (5 kPa) and the "Service when Red" window is filled with red. The service indicator red line may return to a lower reading on the scale when the engine is shut off. The red line will return to a correct reading when the engine is started.

Replace the filter element when the service indicator reads 20 in H₂O (5 kPa). After replacing the air filter element, reset the service indicator by pushing the reset button on the end of the indicator.



AIR FILTER RESTRICTION INDICATOR

00212

- A. Indicator Reset Button**
- B. Indicator Window**
- C. Restriction Indicator**

AIR FILTER

The engine air filter housing includes a dust cap and a dry cartridge-type air filter element. The dust cap must be emptied of dirt daily. The air filter element must be inspected or replaced whenever the air filter service indicator reads 20 in H₂O (5 kPa). The filter element must be replaced if it is damaged.

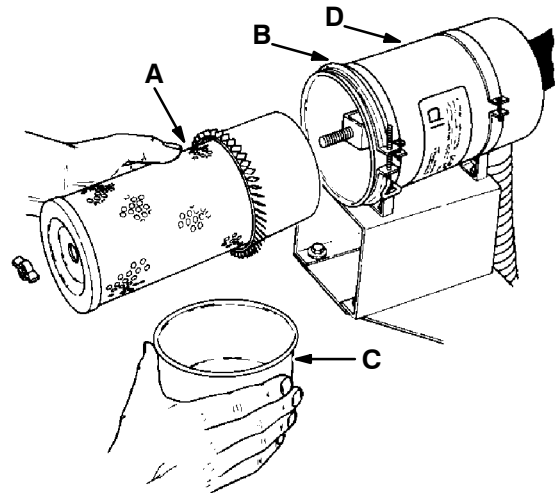
Service the air filter element only when the air filter service indicator shows excessive restriction in the system. Do not remove the air filter element unless it is restricting air flow.

TO REPLACE AIR FILTER ELEMENT

1. Stop the engine and set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Open the left side and top engine access doors.
3. Unscrew the clamp ring on the filter.
4. Remove the dust cap.
5. Empty the dust cap.
6. Remove the filter wing nut.
7. Gently pull the filter element out of the filter housing.



REMOVING AIR FILTER ELEMENT

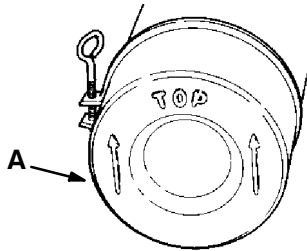
00044

- A. Filter Element**
- B. Clamp Ring**
- C. Dust Cap**
- D. Filter Housing**

8. Clean the interior of the air cleaner housing with a damp cloth. Clean the element housing sealing surfaces.

MAINTENANCE

9. Install the new filter element so the fins on the element are at the intake end of the air cleaner. Use care so the fins are not damaged. Tighten the wing nut attaching the element.
10. Install the dust cap with the arrows pointing up. Tighten the clamp ring to hold it in place. Check all intake hose connections for leaks or abrasion.



DUST CAP

A. Dust Cap

11. Reset the air filter service indicator.
12. Close the access doors.

02492

FUEL SYSTEM - GASOLINE

FUEL FILTER

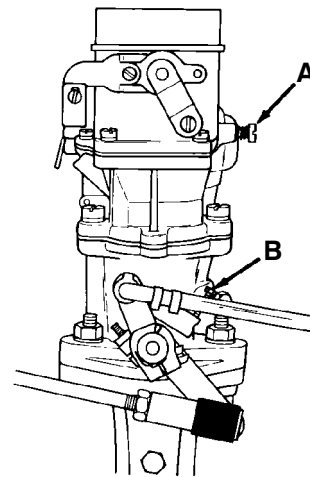
The in-line fuel filter is located under the fuel tank. Clean the fuel filter as required.

CARBURETOR

The carburetor has three basic adjustments. They are idle fuel mixture, fixed high speed jet, and idle speed adjustment.

The idle fuel-air adjusting needle controls the idle mixture. Turning the idle adjusting needle clockwise results in a leaner mixture. Turning the idle adjusting needle counterclockwise results in a richer mixture.

The high speed jet is not adjustable. For high altitude it may be exchanged for reduction in size to lean the fuel to compensate for the lighter, thin air. The size must be carefully determined first by testing a smaller jet with 0.001 to 0.002 in (0.025 to 0.050 mm) smaller passage, depending on the elevation.



CARBURETOR ADJUSTMENTS

00052

- A. Idle Mixture Adjustment Needle
- B. Idle Speed Adjustment

The idle speed is adjusted by turning the screw clockwise to increase speed or counterclockwise to lower the speed.



WARNING: Engine Emits Toxic Gases. Severe Respiratory Damage Or Asphyxiation Can Result. Provide Adequate Ventilation. Consult With Your Regulatory Agency For Exposure Limits. Keep Engine Properly Tuned.

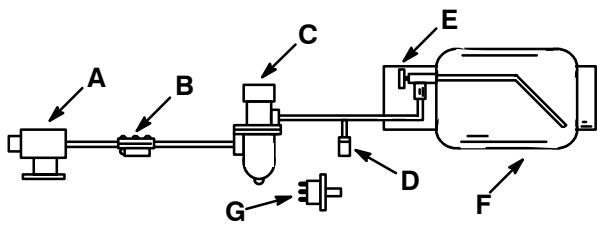
FUEL SYSTEM - LPG

LPG FUEL SYSTEM

The liquid withdrawal LPG fuel system is made up of five components which are: the LPG fuel tank, pressure relief valve, fuel filter lock, vaporizer-regulator, and the carburetor.

Liquid LPG fuel flows from the LPG tank, under its own pressure, to the pressure relief valve. This valve is normally closed, preventing LPG fuel from escaping into the atmosphere. The valve opens to relieve pressure if the fuel pressure exceeds system limits. From the pressure relief valve, the liquid LPG fuel is piped to the fuel filter lock. The fuel filter lock filters unwanted tank scale and deposits out of the LPG fuel. The fuel filter lock also stops the flow of LPG fuel when the engine is not operating. The oil pressure switch controls the fuel filter lock. When the engine oil pressure is 4 psi (30 kPa) or greater, the oil pressure switch permits an electrical current to open the fuel filter lock which allows LPG fuel to flow on to the vaporizer-regulator. The oil pressure switch is bypassed when the engine is being started, allowing LPG fuel to flow.

The vaporizer section of the vaporizer-regulator converts the liquid LPG fuel into a gaseous LPG fuel. From the vaporizer section, the gaseous LPG fuel is sent to the primary regulator section of the vaporizer-regulator. The primary regulator section reduces the pressure of the LPG fuel. The secondary regulator section reduces the LPG fuel pressure to the level required by the carburetor. From the vaporizer-regulator, the LPG fuel is sent to the carburetor where it is finally metered into the air flow which is sent to the engine combustion chamber.



LPG FUEL SYSTEM

- A. Carburetor**
- B. Vaporizer-Regulator**
- C. Fuel Filter Lock**
- D. Pressure Relief Valve**
- E. Tank Service Valve**
- F. LPG Fuel Tank**
- G. Oil Pressure Switch**

Never operate an LPG powered machine if the LPG fuel system is leaking, or if any component in the fuel system is malfunctioning. Operating the machine under either of these conditions may cause a fire or explosion.

Check for frosting. If frosting occurs on or near any LPG component, there is a possibility of an LPG fuel leak or a malfunctioning component. To locate the leak, apply a soapy water solution to the suspected area. Watch for bubbles forming in the suspected area. This area may have an LPG fuel leak. Repair or replace the part. Use Loctite brand Stainless Steel PST thread sealant when reassembling. This epoxy-type sealant is not affected by aging or high humidity. Be sure to follow application directions and apply proper torque when reconnecting fittings. Never bypass safety components except to test. If the safety components are defective, replace them before operating the machine.

Check routings of all LPG hoses. Keep them away from sharp edges, exhaust manifolds, or other hot surfaces. Check for signs of abrasion or deterioration. Replace hoses found to be worn or damaged.

FUEL TANKS

The LPG fuel tanks should be inspected for sharp dents, gouges, leaks, and broken protecting rings whenever the tanks are refilled. All tank valves must be inspected for leaks using a soap solution. Valves must also be checked for dirt, paint, or other debris in the valve openings. The following specific checks must also be made:

Filler Valve - Check for proper functioning and the presence of the handwheel. Valve must be closed except during filling.

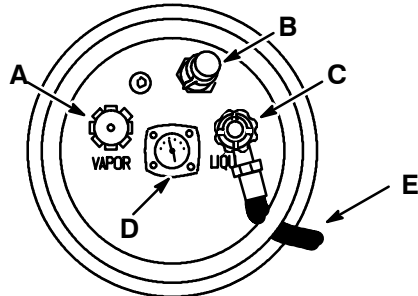
Safety Relief Valve - Check for damage. Check for the presence of the relief valve elbow and the proper direction of the elbow. If the rain cap is missing, check for foreign matter and replace the rain cap. Do not tamper with the relief valve setting.

Vapor and Liquid Service Valves - Check for proper functioning and presence of the handwheel. The valve must be closed except when in service.

MAINTENANCE

Magnetic Liquid Level Gauge – Check operation against the maximum filling point as determined by weight.

Tank Service Valve Coupling – Check for proper functioning, thread condition, and damaged or missing washers or o-rings.



03485
TYPICAL LPG LIQUID WITHDRAWAL FUEL TANK

- A. Filler Valve**
- B. Safety Relief Valve**
- C. Liquid Service Valve**
- D. Magnetic Liquid Level Gauge**
- E. Tank Service Valve Coupling**

An LPG fuel tank with any of the stated defects must be removed from service and be repaired or destroyed accordingly.

If an LPG fuel tank is damaged or leaking, it should be removed to a designated safe area, and the proper personnel should be notified. Do not attempt to make repairs to the tank, regardless of condition. Repairs or disposal must only be made by qualified personnel.

The care an LPG fuel tank receives has a direct bearing on how long that tank can be used safely. LPG fuel tanks must not be dropped or dragged across any surface. To move LPG fuel tanks, use a hand truck or roll the tank on its foot ring while it is being held in a position slightly off vertical.

Whether the storage is inside or outside, fuel tanks should not be stored in the vicinity of combustible materials or high temperature sources such as ovens and furnaces, since the heat may raise the pressure of the fuel to a point where the safety relief valves would function. Take care to insure that the tanks are stored in such a way that if the safety relief valves do function, they will relieve vapor, rather than liquid.

Valves on empty tanks must be closed during storage and transportation.

Similar precautions should be taken in storing machines fitted with LPG fuel tanks. The machines may be stored or serviced inside buildings, provided there are no leaks in the fuel system and the tanks are not overfilled. While machines are being repaired inside a building, the shut-off valve on the tank must be closed, except when the engine must be operated.

Changing the tank is a chance for the machine operator to carefully check the tank, fittings, and the fuel lines and fittings. If abnormal wear is detected, the operator should report the findings to the appropriate personnel.

TO CHANGE AN LPG FUEL TANK

1. Park the machine in a designated safe area. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Close the tank service valve.
3. Operate the engine until it stops from lack of fuel.



WARNING: Engine Emits Toxic Gases. Severe Respiratory Damage Or Asphyxiation Can Result. Provide Adequate Ventilation. Consult With Your Regulatory Agency For Exposure Limits. Keep Engine Properly Tuned.

4. Put on gloves and remove the quick-disconnect tank coupling.
5. Inspect the LPG fuel lines for wear or damage.
6. Remove the empty LPG fuel tank from the machine.
7. Check the tank for damage or wear.
8. Store the tank in a designated safe area.

9. Select a filled LPG fuel tank and inspect it for damage or leaks.

NOTE: Make sure the LPG fuel tank matches the fuel system (liquid tank with liquid system).

10. Carefully place the LPG tank in the machine so that the tank centering pin enters the aligning hole in the tank collar.

NOTE: If the pin cannot be engaged, make sure you have the correct LPG fuel tank and then adjust the mounting bracket up or down.

11. Fasten the tank hold-down clamp to lock the tank in position.
12. Connect the LPG fuel line to the tank service coupling. Make sure the service coupling is clean and free of damage. Also make sure it matches the machine service coupling.
13. Open the tank service valve slowly and check for leaks. If an LPG leak is found, close the service valve immediately and notify the appropriate personnel.
14. If no leaks are found, the engine is ready to start.

FUEL FILTER LOCK

The fuel filter lock filters the LPG fuel. The fuel filter lock also stops the flow of LPG fuel to the engine when the engine is not operating, or when the engine oil pressure is less than 4 psi (30 kPa).

Replace the fuel filter lock filter pack with the filter pack replacement kit if diminished gas flow indicates the filter is clogged. A drain plug is provided for purging the filter bowl. Clean out the bowl when replacing the filter pack.

VAPORIZER-REGULATOR

If any malfunction is noted, completely disassemble the vaporizer-regulator. Clean all of the parts in alcohol. Inspect all of the parts and replace where needed. Carefully reassemble the vaporizer-regulator with the seal repair kit. Check for proper operation.

CARBURETOR

If any malfunction is noted, completely disassemble the carburetor. Clean all of the parts in alcohol.

Inspect all of the parts and replace when needed. Carefully reassemble the carburetor with the seal repair kit.

OIL PRESSURE SWITCH

The engine oil pressure switch requires no regular maintenance. Never bypass the oil pressure switch as this is a safety feature which prevents LPG fuel from flowing when the engine is not operating properly.

MAINTENANCE

LPG FUEL TROUBLESHOOTING

Problem	Cause	Remedy
Engine will not start	Out of fuel	Replace fuel tank with full one
	Service valve opened too quickly - engaging safety valve	Close valve and reopen slowly
	Plugged fuel filter	Replace filter
	Kinked or restricted fuel line	Straighten or replace fuel line
	Engine out of tune	Tune-up engine
	Oil pressure switch failure	Replace oil pressure switch
	Fuel lock valve failure	Repair or replace fuel filter lock
	Vaporizer-regulator failure	Repair or replace vaporizer - regulator
Engine runs unevenly lacks power	Wrong type of fuel tank - vapor withdrawal tank	Replace vapor withdrawal tank or with liquid withdrawal tank
	Plugged fuel filter	Replace filter
	Kinked or restricted fuel line	Straighten or replace fuel line
	Engine out of tune	Tune-up engine
	Restricted air filter	Replace air filter element
	Vaporizer - regulator maladjusted	Adjust vaporizer - regulator

FUEL SYSTEM - DIESEL

FUEL WATER TRAP

The fuel water trap is located next to the fuel tank. The water trap should be drained of water daily. To drain the water trap, unscrew the spigot on the bottom of the water trap. Drain the water trap of water. As fuel appears, tighten the spigot to stop the flow. It may be necessary to bleed the fuel system of air after draining the water trap.

After every 100 hours of operation, the water trap must be cleaned as described in *TO CLEAN THE WATER TRAP*. Replace the water trap filter element after every 400 hours of operation.

TO CLEAN WATER TRAP

1. Thoroughly clean the exterior of the water trap.
2. Unscrew the bowl retaining bolt in the center of the water trap head.
3. Lower the bowl from the water trap head. Replace the filter element if it is due to be replaced.
4. Thoroughly clean the water trap bowl in cleaning fluid.

NOTE: Do not use gasoline to clean the bowl.

5. After cleaning the water trap bowl, fill the bowl with clean fuel. Hold the water trap bowl in position under the water trap head.
6. Secure the bowl retaining bolt.
7. Prime the fuel system as described in *PRIMING THE FUEL SYSTEM*.

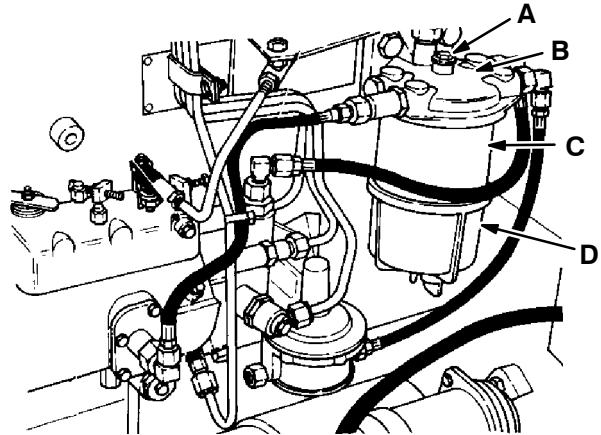
FUEL FILTER

The fuel filter is mounted on the top right side of the engine. The fuel filter should be replaced after every 400 hours of operation.

TO REPLACE FUEL FILTER (For machines below serial number 005002)

1. Thoroughly clean the exterior of the fuel filter assembly.

2. Unscrew the filter bolt in the center of the head.



FUEL FILTER

01475

- A. Filter Bolt**
- B. Filter Head**
- C. Filter Element**
- D. Filter Bowl**

3. Lower the filter bowl and element and discard the fuel, together with the old element.
4. Thoroughly clean the filter bowl in cleaning fluid.

NOTE: Do not use gasoline as a cleaning fluid.

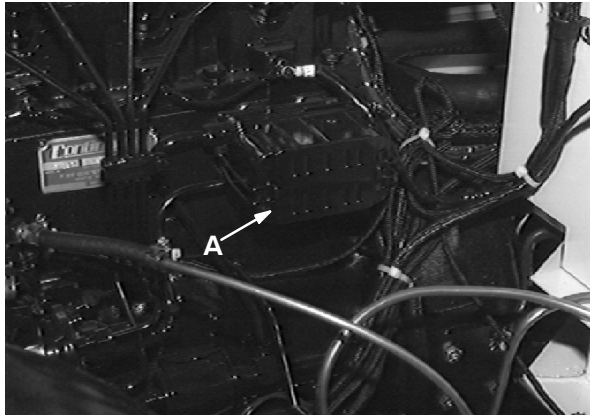
5. Place the new element and sealing rings in position, fill with clean fuel, and push the filter bowl up firmly and squarely so that the top rim of the filter element locates centrally against the sealing ring in the filter head.
6. Hold in this position while the filter bolt is located and tightened. If the bowl is located correctly, no excessive tightening will be required to obtain a leak-proof seal.

After the fuel filter has been reassembled, it is necessary to remove air from the fuel system. See *PRIMING THE FUEL SYSTEM*.

TO REPLACE FUEL FILTER (For machines serial number 005002 and above)

1. Thoroughly clean the exterior of the fuel filter assembly.

2. Release the two spring claps on either side of the metal canister element and pull the element off the filter bracket.



FUEL FILTER

A. Fuel Filter Element

3. Lubricate the new element grommets with clean diesel fuel, and push the element into place. Snap the spring clamps into position.

After the fuel filter element has been changed, it is necessary to remove air from the fuel system. See *PRIMING THE FUEL SYSTEM*.

FUEL INJECTION PUMP

The fuel injection pump controls the engine speed. The maximum speed screw is set and sealed by the manufacturer and must not be altered in any way unless factory authority is first obtained. Any adjustments should be carried out by experienced fuel pump technicians. The unauthorized removal of any seals on the pump may void the warranty.

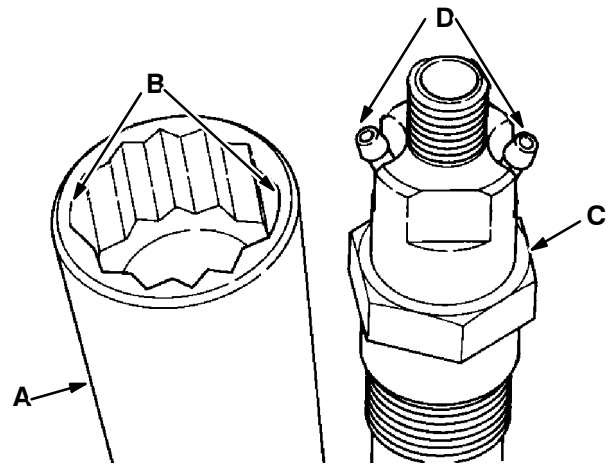
NOTE: Unless proper test equipment and trained technicians are available, adjustment or maintenance of the fuel injection pump should not be attempted.

FUEL INJECTORS

When replacing injectors in the cylinder head, it is essential that a new, correct-type heat shield washer be fitted between the nozzle cap and the cylinder head.

Use care when replacing the fuel injectors to prevent loosening the injector leak-off nipples.

Be sure to cut a relief in the inside of your socket for clearance. This will prevent an interference between the socket and the leak-off nipple.



SOCKET RELIEF CLEARANCE

01477

- A. Socket**
- B. Relief**
- C. Injector**
- D. Leak-Off Nipple**

Tighten injectors evenly to 52 ft lb (70 Nm).

Injectors should be taken out only if engine is malfunctioning as outlined below:

- Misfiring
- Knocking in one (or more) cylinders
- Engine overheating
- Loss of power
- Smoky exhaust (black or white)
- Increased fuel consumption

The faulty injector or injectors may be located by loosening the line fitting nut on each, in turn, with the engine running at a fast idle. This allows the fuel to escape and not enter the cylinder. The injector least affecting the engine performance should be removed from the cylinder head and reconditioned or replaced.

NOTE: No attempt should be made to adjust the injection pressure without a proper testing pump and pressure gauge. It is impossible to adjust the setting of the injector with any degree of accuracy without proper equipment.

PRIMING THE FUEL SYSTEM

Priming is necessary on initial installation of the fuel injection system, after any subsequent removal, or if the system was drained by running out of fuel.

Before priming and venting, ensure that the outside of the vent screws and surrounding area is thoroughly clean to prevent dirt and foreign matter entering the system.

NOTE: Electrical equipment such as starters should be shielded during priming to prevent fuel entry.

Carry out steps 1 and 2 while operating the fuel lift pump priming lever.

1. Operate the fuel lift pump priming lever and loosen the filter outlet connection until fuel flows free of air.
2. Continue operating the fuel lift pump priming lever while loosening the top vent valve and the vent screw on the governor housing. When fuel flows free of air, tighten the connections. Stop operating the priming lever and place it in the vertical position.

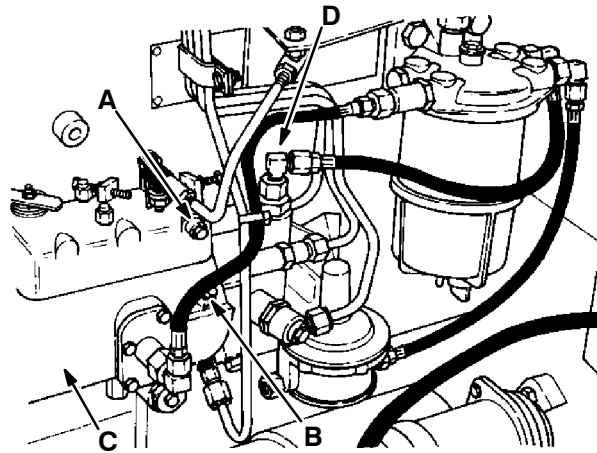
NOTE: Leaving the priming lever in the horizontal position will lock the pump action stopping the fuel supply.

3. Loosen any two injector high pressure pipe nuts at the injector end. Set the accelerator to the fully "open" position and ensure that the stop control is in the "run" position. Crank engine until fuel is free of air bubbles. Tighten nuts.

NOTE: The bleeding operation may take a considerable amount of cranking with the starter to purge all air. It is important that the battery be in good operating condition when bleeding.

If the engine will not start after bleeding, or any other time, it may be an indication of a low battery charge. If the voltage to the fuel shutoff solenoid falls below 8 volts, the valve will shut off fuel to the engine. This may happen during cranking if the battery charge is low. The condition may not be readily apparent since cranking speed might still be good.

4. Start the engine.



INJECTION PUMP VENTS

- A. Top Vent Valve**
- B. Governor Housing Vent Valve**
- C. Injection Pump**
- D. Fuel Pump Inlet Connection**

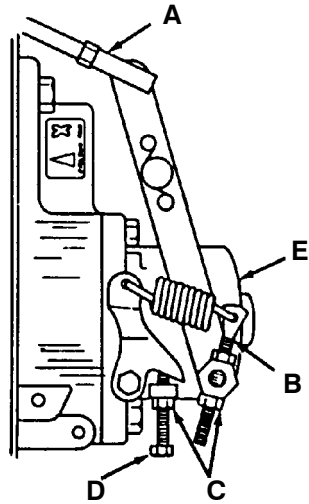
01475

GOVERNOR, F163 - GASOLINE, LPG

The F163 engine speed is governed by a governor located at the front of the engine. The governor makes the engine operate at a constant speed. It is factory set and should not be adjusted unless the engine exceeds 2400 ± 50 rpm under load, 2700 ± 100 rpm no-load, or if the engine surges.

With the engine stopped and spring tension about normal, the governor should hold the throttle in the open position. The governor to carburetor control rod should be adjusted in length so the throttle stop lever is 0.01 to 0.03 in (0.2 to 0.8 mm) off the pin.

Make certain that all linkage is movable with the governor spring attached at operating tension. Disconnect the governor spring and check movement of levers and rods.



01821

F163 MECHANICAL GOVERNOR LINKAGE

- A. Carburetor to Governor Rod
- B. Sensitivity Screw
- C. Lock Nut
- D. Speed Adjustment Screw
- E. Governor

TO ADJUST GOVERNOR, F163

1. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Start the engine and allow it to warm up.

FOR SAFETY: When Servicing Machine, Avoid Moving Parts. Do Not Wear Loose Jackets, Shirts, Or Sleeves When Working On Machine.

3. With the engine warmed up, adjust the idle speed approximately 150 rpm higher than the required speed under load, by turning the speed screw in or out, thus either increasing or decreasing pull on the spring.
4. Apply the desired load and readjust the speed screw in order to obtain the required speed under load.

Release load and note rpm at which the engine settles out. Again apply load and observe the drop in rpm before the governor opens throttle to compensate.

5. The range of a governor's action is indicated by the differential between rpm under load and that under no load. This can be varied and the sensitivity of the governor is changed by changing the length of the sensitivity screw.

To broaden the range of the governor and produce a more stable action, lengthen the sensitivity screw and compensate for this change by turning the speed screw in to restore the speed.

To narrow the range and increase the sensitivity of the governor, reverse the procedure outlined in step 5. (Changing the length of the sensitivity screw has the same effect as using a stronger or weaker spring.)

6. With the governor adjusted for desired performance, release the load and allow the engine to run at governed speed with no load. If a surge is noted, lengthen the sensitivity screw at spring anchor and readjust the speed screw to obtain desired no load rpm.
7. When governor adjustment is completed, make sure that all lock nuts are tight in order to maintain the adjustment.

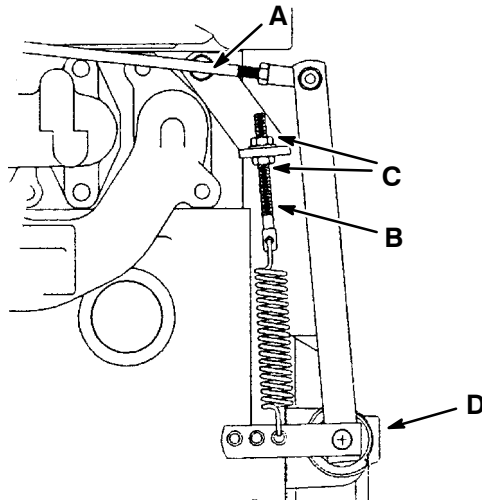
GOVERNOR, TM27 - GASOLINE, LPG

The TM27 cam gear governor differs from a conventional centrifugal governor, mainly in the round steel balls used as the actuating force producer instead of pivoting masses of weight. When the governor is driven at increasing speeds by the engine, the hardened steel balls move outward forcing the conical upper race and lever assembly toward a closed throttle position.

The lever assembly is pulled towards the open position by an externally mounted spring. As the speed increases, the centrifugal force created by the balls will increase until a balanced condition between the governor force and the spring force exists, and the governing lever remains stationary — holding constant engine RPM.

This built-in cam-gear governor is sealed, dust proof, engine lubricated, compact and easily adjusted. The control shaft floats on two needle bearings to remove friction for closer and more accurate control through the whole power range.

The idle surge adjusting screw, if supplied, should be adjusted "in" just far enough to eliminate any tendency of the engine to surge.



11123

TM27 GOVERNOR LINKAGE

- A. Carburetor to Governor Rod**
- B. Speed Adjustment Screw**
- C. Lock Nut**
- D. Governor**

TO ADJUST GOVERNOR, TM27

1. Set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Linkage adjustment: With the engine stopped and the spring tension about normal, the governor should hold the throttle, (butterfly) in the wide open position.

The governor to carburetor control rod should be adjusted in length so that the throttle stop lever is 0.4 to 0.8 mm (0.02 to 0.03 in) off the stop pin. Be sure that the bumper screw, if supplied, is backed out so it doesn't interfere.

Make sure that all the linkage at the governor and carburetor operate freely — without binding.

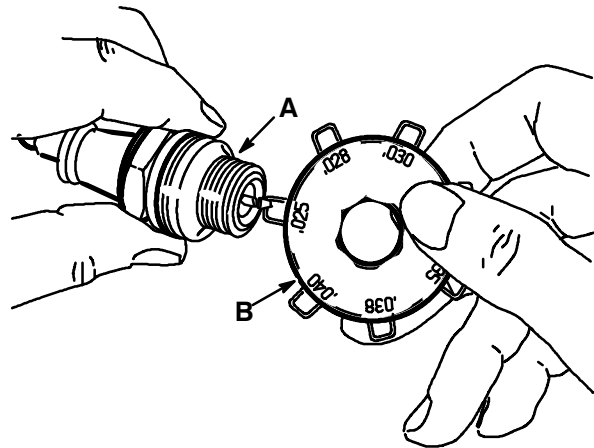
3. Speed adjustment: To increase the speed, increase the spring tension using the adjusting screw. To decrease the speed, decrease the spring tension using the adjusting screw.

4. Idle surge adjustment: (When the surge screw is supplied) Turn the governor idle surge adjusting screw "in" or to the right until corrected.
5. Continue surging: This may indicate an excessive looseness or binding of the governor linkage, and sometimes too lean a fuel mixture.

ELECTRICAL SYSTEM

SPARK PLUGS

Clean or replace and adjust spark plugs after every 200 hours of operation. A wire gauge is best for checking the spark plug gap. A flat gauge should not be used unless the electrode surfaces have been dressed with a small file to get parallel surfaces between the center and side electrodes. Set the spark plug gap by bending the side electrode. All spark plugs, new or used, should have the gaps checked and reset if necessary.



00054

GAPPING THE SPARK PLUG

- A. Spark Plug**
- B. Gapping Tool**

The proper spark plug gap for F163 engines is 0.025 in (0.6 mm). The proper spark plug gap for TM27 engines is 0.035 in (0.9 mm).

To get good performance from the spark plugs, follow these steps when installing the plugs:

1. Clean the spark plug seat in the cylinder head.
2. Use a new seat gasket and screw the plug in by hand.

MAINTENANCE

3. Tighten the spark plugs to 22 to 28 ft lb (30 to 38 Nm) with a socket wrench of the correct size.

DISTRIBUTOR

The distributor operation is vital to the operation of the engine and the following items should be carefully inspected every 200 hours of normal operation; however, dirt, dust, water and high speed operation may cause more rapid wear and necessitate more frequent inspections:

1. Remove the distributor cap. Clean the cap and examine for cracks, carbon runners, or corroded terminals. If the vertical faces of the inserts are burned, install a new cap. If the horizontal faces of the inserts are burned, replace the cap and the rotor as this condition is caused by the rotor being too short.
2. Check the centrifugal advance mechanism for "freeness" by turning the distributor shaft in the direction of rotation and then releasing it. The advance springs should return the shaft to its original position.
3. F163 engines: Inspect the breaker points and gap. If the points are pitted, burned or worn, install a new set of points. Badly pitted points may be caused by a defective or improper condenser capacity.

When replacing points, make sure they are aligned and that they make full contact. Bend the stationary arm to obtain proper alignment; do not bend the breaker arm.

4. F163 engines: Lubrication is required at the shaft, advance mechanism, breaker cam, and pivot. The shaft may be either oil or grease cup lubricated. Make sure the breaker arm moves freely on its hinge. Apply a drop of light oil or a trace of ball bearing lubricant to the breaker arm hinge.

Special grease (with Moly) should be used sparingly on the breaker cam unless the breaker cam is lubricated by a felt wick, which is lubricated with a couple drops of oil.

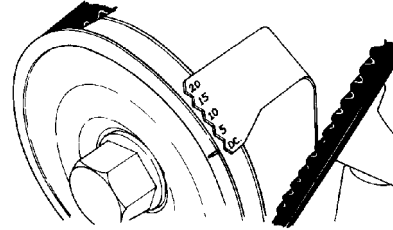
NOTE: Avoid excessive lubrication. Excess lubricant may get on the contact points and cause burning.

DISTRIBUTOR IGNITION TIMING

There are two methods of checking ignition timing: with or without a timing light.

The preferred method is to use a timing light in the following sequence:

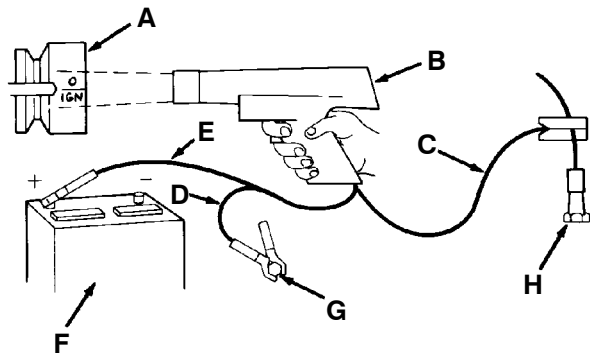
NOTE: Painting a line on the front pulley will make the timing mark more legible under the timing light.



03944

CRANKSHAFT PULLEY TIMING MARK

1. Clip the blue secondary lead of light to the #1 spark plug. Leave the spark plug wire on the plug.
2. Connect the primary red positive lead to the positive terminal of the battery.



00059

TIMING LIGHT HOOKUP

- A. Crankshaft Pulley
- B. Timing Light
- C. Blue Lead
- D. Black Lead
- E. Red Lead
- F. Battery
- G. Head Bolt
- H. Spark Plug

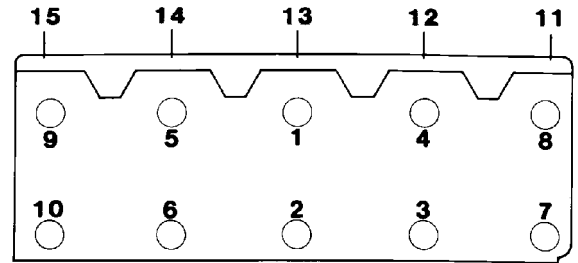
3. Connect the black primary negative lead to the cylinder head cap screw or the alternator bracket. Disconnect the vacuum line from the distributor to the manifold, and clamp the end of the line leading to the manifold.

4. Start the engine and run it at idle speed, 400 rpm or lower, so the automatic advance of the distributor is completely retarded.

NOTE: The engine must be operating at or below 400 rpm to obtain the correct engine timing.

5. Direct the timing light on the crankshaft pulley and note the timing marks as the light flashes.
6. Timing is TDC at engine idle for F163 engines, 2° for gasoline TM27 engines, and 5° for LPG TM27 engines.
7. To advance the timing, turn the distributor body clockwise. To retard the timing, turn the distributor body counterclockwise.
8. When the timing is correct, tighten the distributor clamp screw securely. Then recheck timing again with the light.
9. This operation is best performed in a shaded area so the timing light is visible.
10. After setting the timing, remove the clamp and reconnect the rubber tube to the vacuum advance unit on the distributor.

TM27 engines: Hand torque cold M10 bolts to 50 to 55 ft lb (68 to 75 Nm) and M12 bolts to 80 to 85 ft lb (108 to 115 Nm) in the correct order.



TM27 CYLINDER HEAD BOLT TIGHTENING SEQUENCE

The cylinder head cap screws and risers must be re-torqued after the engine is put into operation and brought up to proper operating temperatures. To re-torque cap screws, follow the correct sequence. Loosen one head cap screw or riser at a time one quarter turn (90 degrees); then re-torque it to the correct value.

NOTE: Power wrench torque limit must be held at least 10 ft lb (14 Nm) below hand torque specification; then hand torque to the specifications.

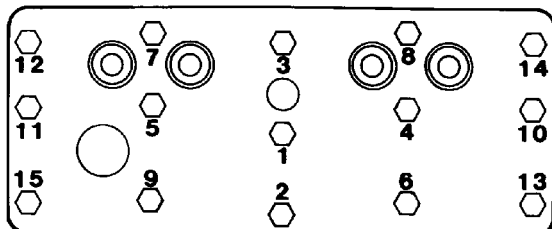
CYLINDER HEAD - GASOLINE, LPG

CYLINDER HEAD BOLT TIGHTENING

A three-stage torque procedure should be used when reassembling the cylinder head. The cylinder head cap screws and risers must be tightened in the proper sequence after the first 50 hours of operation and after every 400 hours of operation.

Snug down cap screws and risers in the proper sequence. Tighten the cap screws and risers to one-half of the specified value.

F163 engines: Torque to 45 to 48 ft lb (61 to 65 Nm).



F163 CYLINDER HEAD BOLT TIGHTENING SEQUENCE

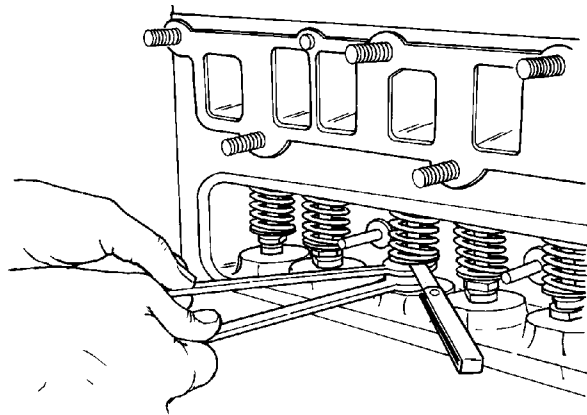
MAINTENANCE

VALVE TAPPET CLEARANCE

The valve tappet clearance must be checked after the first 50 hours of operation and after every 400 hours of operation.

F163 engines: Check and adjust the intake valve tappets to 0.012 in (0.3 mm) clearance and the exhaust valve tappets to 0.020 in (0.5 mm) clearance when the engine is warm.

TM27 engines: Check and adjust the intake tappets to 0.014 in (0.36 mm) clearance and the exhaust valve tappets to 0.018 in (0.46 mm) clearance when the engine is warm and is operating at idle speed.



00061

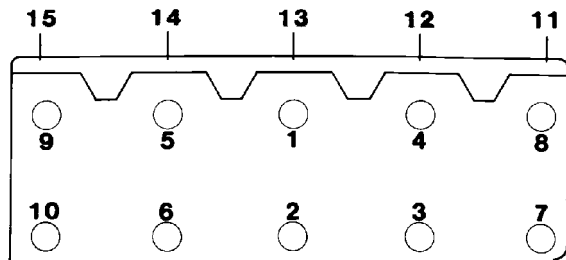
ADJUSTING F163 VALVE TAPPET CLEARANCE

CYLINDER HEAD - DIESEL

CYLINDER HEAD BOLT TIGHTENING

The proper sequence and torque values should be used when reassembling the cylinder head. The cylinder head bolts must be tightened in the proper sequence after the first 50 hours of operation.

Hand torque cold M10 bolts to 50 to 55 ft lb (70 to 75 Nm) and M12 bolts to 90 to 95 ft lb (120 to 130 Nm) in the correct order.



01472

CYLINDER HEAD BOLT TIGHTENING SEQUENCE

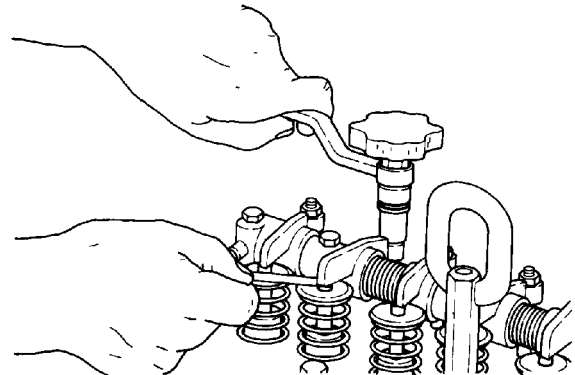
The cylinder head cap screws and risers must be retorqued after the engine is put into operation and brought up to proper operating temperatures. To retorque cap screws, follow the correct sequence. Loosen one head cap screw or riser at a time one quarter turn (90 degrees); then retorque it to the correct value. Check the valve tappet clearance.

NOTE: Power wrench torque limit must be held at least 10 ft lb (15 Nm) below hand torque specification; then hand torque to the specifications.

VALVE TAPPET CLEARANCE

The valve tappet clearance must be checked after the first 50 hours of operation and after every 400 hours of operation.

Check and adjust the intake valve tappets to 0.014 in (0.35 mm) clearance and the exhaust valve tappets to 0.018 in (0.45 mm) clearance when the engine is warm and is operating at idle speed.



01473

ADJUSTING VALVE TAPPET CLEARANCE

PCV SYSTEM

Check the PCV system after every 200 hours of operation. Check all connections. They are to be airtight. To service the system, clean the PCV valve and the air inlet. Check all hoses for wear or plugging.

TUNE-UP CHART - GASOLINE, LPG

Idle speed, no load	600 ± 50 rpm
Maximum governed speed	2400 ± 50 rpm
Spark plug gap, F163	0.025 in (0.6 mm)
Spark plug gap, TM27	0.035 in (0.9 mm)
Ignition point gap, F163	0.020 in (0.5 mm)
Timing, F163	TDC @ 400 rpm
Timing, TM27 gasoline	15° BTDC @ 1850 rpm
Timing, TM27 LPG	18° BTDC @ 1850 rpm
Firing order	1-3-4-2
Valve clearances, F163 warm	intake 0.012 in (0.3 mm)
	exhaust 0.020 in (0.5 mm)
Valve clearances, TM27 warm	intake 0.014 in (0.36 mm)
	exhaust 0.018 in (0.46 mm)

ELECTRICAL SYSTEM**BATTERY**

The battery on gasoline and LPG powered machines is rated at 12 V, 540 ccA. The battery on diesel powered machines is rated at 12 V, 625 ccA. The battery is located in the engine compartment. When removing battery cables, remove the negative (-) cable before the positive (+) cable.

Do not allow the battery to remain in discharged condition for any length of time. Do not operate the machine if the battery is in poor condition or only 25% of the charge is left.

Clean the top surface and the terminals of the battery periodically. Use a strong solution of baking soda and water. Brush the solution sparingly over the battery top, terminals, and cable clamps. Do not allow any baking soda solution to enter the battery. Use a wire brush to clean the terminal posts and the cable connectors. After cleaning, apply a coating of clear petroleum jelly to the terminals and the cable connectors. Keep the top of the battery clean and dry.

Keep all metallic objects off the top of the battery, as they may cause a short circuit. Replace worn or damaged wires.

The electrolyte level in regular non-sealed batteries can be checked. The level must always be above the battery plates. Add distilled water to maintain solution at the correct level above the plates, but do not overfill. Never add acid to batteries, only water. Keep vent plugs firmly in place at all times, except when adding water or taking hydrometer readings.

FOR SAFETY: When Servicing Machine, Avoid Contact With Battery Acid.

If, when checking battery specific gravity, one or more battery cells tests lower than the other battery cells (0.050 or more), the cell is damaged, shorted, or is about to fail.

NOTE: Do not take readings immediately after adding water - if the water and acid are not thoroughly mixed, the readings may not be accurate. Check the hydrometer readings against this chart:

SPECIFIC GRAVITY at 80° F (27° C)	BATTERY CONDITION
1.260 - 1.280	100% charged
1.230 - 1.250	75% charged
1.200 - 1.220	50% charged
1.170 - 1.190	25% charged
1.110 - 1.160	Discharged

NOTE: If the readings are taken when the battery electrolyte is any temperature other than 80° F (27° C), the reading must be temperature corrected.

To determine the corrected specific gravity reading when the temperature of the battery electrolyte is other than 80° F (27° C):

Add to the specific gravity reading 0.004, 4 points, for each 10° F (5.5° C) above 80° F (27° C).

Subtract from the specific gravity reading 0.004, 4 points, for each 10° F (5.5° C) below 80° F (27° C).

BELTS AND CHAINS

VACUUM FAN DRIVE BELT

The vacuum fan drive belt tension should be checked after every 50 hours of operation. The proper belt tension is obtained when the midpoint of the belt deflects 0.25 in (6 mm) from a force of 3 lb (1.4 kg) on all machines below serial number 004111. The proper belt tension for gasoline and LPG machines is obtained when the midpoint of the belt deflects 0.34 in (9 mm) from a force of 7 to 8 lb (3.2 to 3.6 kg) on machines serial number 004111 and above. The proper belt tension for diesel machines is obtained when the midpoint of the belt deflects 8 to 9 lb (3.6 to 4.0 kg) on machines serial number 004111 and above.

TO ADJUST VACUUM FAN DRIVE BELT

1. Stop the engine and set the machine parking brake.

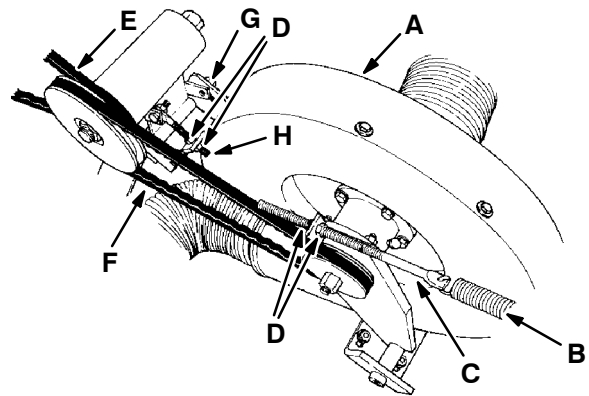
FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Raise the engine cover.

FOR SAFETY: When Servicing Machine, Avoid Moving Parts. Do Not Wear Loose Jackets, Shirts, Or Sleeves When Working On Machine.

3. Loosen the jam nuts on the tension spring eyebolt.
4. Thread the tension spring eyebolt in to tighten the vacuum fan drive belt or out to loosen the vacuum fan drive belt to get the desired belt tension.
5. Tighten the tension spring eyebolt jam nuts.

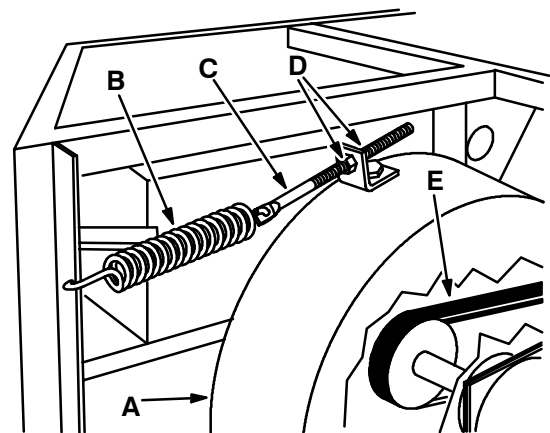
6. Lower the engine cover.



02359

**ADJUSTING VACUUM FAN BELT
(For machines below serial number 004111)**

- A. Vacuum Fan Housing
- B. Tension Spring
- C. Tension Spring Eyebolt.
- D. Jam Nut
- E. Intermediate Drive Belt
- F. Vacuum Fan Drive Belt
- G. Belt Tension Bolt
- H. Belt Tension Adjusting Eye Bolt



06973

**ADJUSTING VACUUM FAN BELT
(For machines serial number 004111 and above)**

- A. Vacuum Fan Housing
- B. Tension Spring
- C. Tension Spring Eyebolt.
- D. Jam Nut
- E. Vacuum Fan Drive Belt

MAINTENANCE

INTERMEDIATE DRIVE BELT

The intermediate belt is used on machines serial number below 004111. The intermediate drive belt tension should be checked after every 100 hours of operation. The proper belt tension is obtained when the midpoint of the belt deflects 0.12 in (3 mm) from a force of 5 lb (2.3 kg).

TO ADJUST INTERMEDIATE DRIVE BELT

1. Stop the engine and set the machine parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Raise the engine cover.
3. Loosen the belt idler tension bolt.
4. Thread the belt tension adjusting eye bolt in to tighten the belt tension or thread the belt tension adjusting eye bolt out to loosen the belt tension.
5. Tighten the belt idler tension bolt.
6. Lower the engine cover.

ALTERNATOR AND RADIATOR FAN BELT

The alternator and radiator fan belt tension should be checked after every 100 hours of operation. The proper belt tension is obtained when the midpoint of the belt's longest span deflects 0.50 in (13 mm) from a force of 10 to 12 lb (5 to 6 kg).

TO ADJUST ALTERNATOR AND RADIATOR FAN BELT

1. Stop the engine and set the machine parking brake.

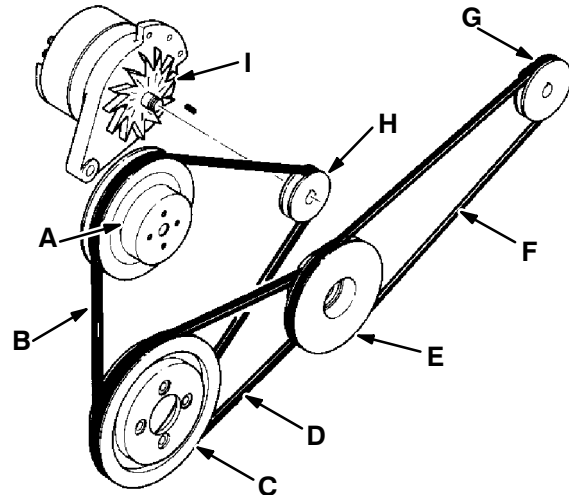
FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

2. Open the left rear engine access door.
3. Loosen the alternator clamp bolt.

4. Push the alternator out to tighten the belt.

ATTENTION! Do not use a pry bar against the alternator to tighten the belt. Using a pry bar may damage the alternator.

5. Tighten the alternator clamp bolt.
6. Check the belt deflection; adjust if necessary.
7. Close the left rear engine access door.



00796

DRIVE BELT SYSTEM
(For machines below serial number 004111)

- A. Engine Water Pump Sheave
- B. Alternator and Radiator Fan Belt
- C. Engine Crankshaft Sheave
- D. Intermediate Drive Belt
- E. Idler Sheave
- F. Vacuum Fan Drive Belt
- G. Vacuum Fan Drive Sheave
- H. Alternator Sheave
- I. Alternator

SCRUB HEAD

SCRUB HEAD

The scrub head houses the two scrub brushes and the brush drive mechanisms. The scrub head has two adjustments; scrub head height, and scrub brush pattern.

The scrub head height adjustment sets the minimum scrub head height. The height adjustment should not be changed unless, due to a major parts replacement or collision, the head adjustment may have been altered. If the head height is too low, excessive brush wear, engine overheating, brush bounce, or excessive brush drive plug and bearing wear may occur.

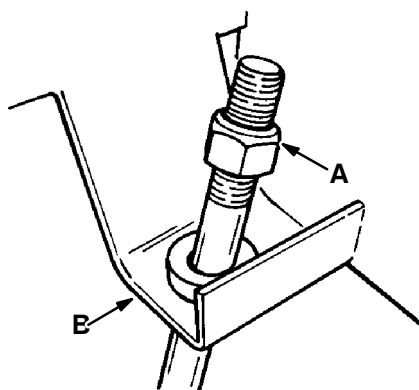
The scrub brush pattern adjustment determines the amount of contact the brush has with the floor. The brush pattern should be checked daily.

TO ADJUST SCRUB HEAD HEIGHT

1. The head height adjustment must be made with a full solution tank and tires correctly inflated; 55 psi (380 kPa) front, 35 psi (240 kPa) rear.

NOTE: Using a different sized tire on the machine, other than standard, will affect the head height adjustment.

2. The head height adjusting nut is located under the operator's seat. The nut is accessible by lifting up the seat. Hold the seat up by attaching its chain to the steering wheel.

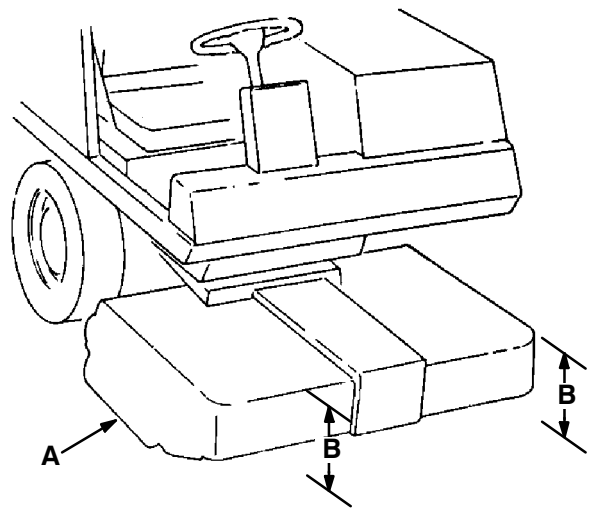


ADJUSTMENT NUT

03734

- A. Nut**
- B. Scrub Head Link**

3. Adjust the nut so that the top front of the head is 13.62 in to 13.75 in (345 to 350 mm) from the floor.



01822

SCRUB HEAD ADJUSTMENT

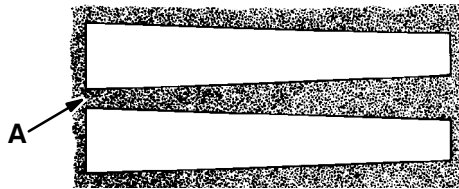
- A. Scrub Head**
- B. 13.62 to 13.75 in (345 to 350 mm)**

4. If the scrub head is lower than 13.62 in (345 mm), washers should be added below the adjusting nut.

TO ADJUST SCRUB BRUSH PATTERN

1. The machine must have correct tire pressures, full solution tank, and correct scrub head height adjustment.
2. On a smooth, level floor, apply chalk or some other material that won't blow away easily.
3. With the scrub head raised, move the machine over the test area. Start the brush rotation, apply the foot brakes, and lower the scrubber head, allowing the brushes to spin in one spot for 15 to 20 seconds. With no chalk or other material on the floor, allow the brushes to spin approximately two minutes.
4. Polish marks made by both brushes should be visible. They should be about 1.5 in (40 mm) wide the full length of the brush. With a soft brush the polish mark should not exceed 3 in (75 mm) wide, evenly, the full length of the brush.

5. The rear brush polish mark is the most critical and should be adjusted first. If the polish mark is uneven or cone shaped from one end to the other, the brush leveling spring located at the operator side of the head lift, should be adjusted. The spring compensates for the weight of the brush drive motors. Loosen the top nut first to make the adjustment.

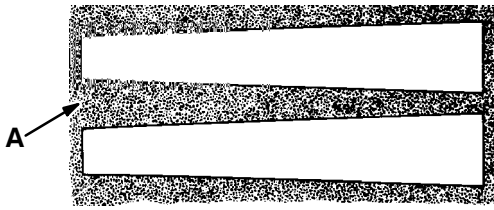


00082

TAPERED BRUSH PATTERN

A. Operator Side

Lower the brush leveling adjusting nut if the polish mark is too wide on the operator's side.

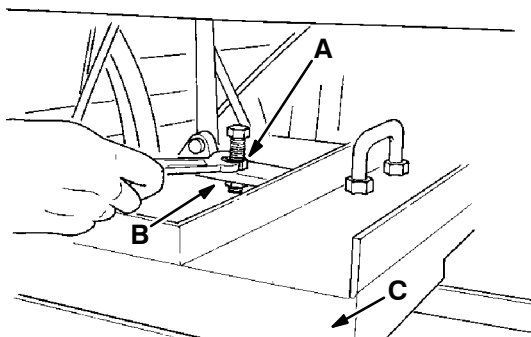


00082

TAPERED BRUSH PATTERN

A. Operator Side

Raise the brush leveling adjusting nut if the polish mark is too narrow on the operator's side. Retighten the top nut after making adjustments.

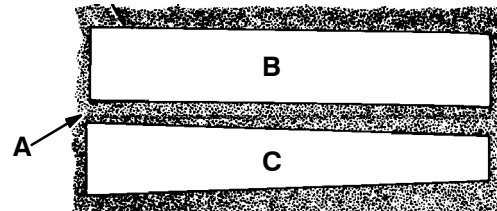


00285

LEVELING BRUSH

**A. Top Nut
B. Brush Leveling Adjusting Nut
C. Operator Side of Scrub Head**

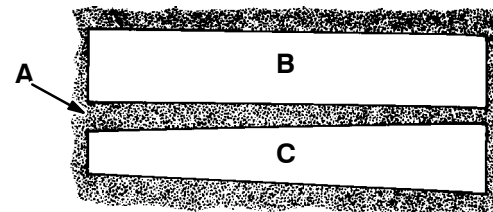
6. The polish mark of the front brush should match the polish mark of the rear brush. If the front brush polish mark is uneven, the narrow side should be shimmed. Add shims to the shaft bearing mount located on the underside of the scrub head. Remove the debris trough, loosen the bolts holding the bearing protector, and loosen the flat socket head bolts that hold the bearing mounting bracket before installing shims. One 0.12 in (3 mm) thick shim will add about 0.50 in (13 mm) width to the polish mark.



00082

TAPERED BRUSH PATTERN

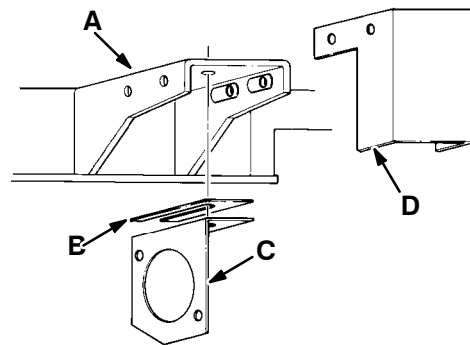
**A. Operator Side
B. Rear Brush Marks
C. Front Brush Marks**



00082

TAPERED BRUSH PATTERN

**A. Operator Side
B. Rear Brush Marks
C. Front Brush Marks**

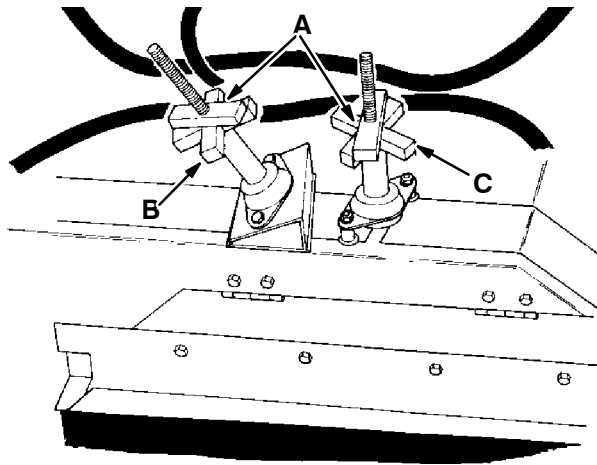


00284

BRUSH SHAFT MOUNTING

**A. Scrub Head
B. Shim
C. Bearing Mounting Bracket
D. Bearing Protector**

7. Recheck the brush polish marks to see if the front and rear match, and are even across the full length of the brush.
8. The width of the rear brush polish mark can vary more than the desired 2 to 3 in (50 to 75 mm). There are adjusting knobs located on the drive side of the scrub head. Turn the knob clockwise to decrease the width of the polish mark and counterclockwise to increase the width of the polish mark. The polish mark should not exceed 3 in (75 mm). Use the locking strips to keep the adjusting knobs in place.



BRUSH ADJUSTMENT KNOBS

- A. Locking Strips**
- B. Front Brush Adjusting Knob**
- C. Rear Brush Adjusting Knob**

9. For maximum brush life, rotate the brushes from front-to-rear after every 50 hours of operation.

SCRUB BRUSHES

The scrub brushes are tubular and run the width of the scrub head sweeping debris into the debris trough while they scrub the floor. The brushes should be inspected daily for damage or wear. Remove any string or wire found tangled on the scrub brushes, drive or idler hubs.

Rotate the scrub brushes from front-to-rear after every 50 hours of operation for maximum brush life and best scrubbing performance.

The scrub brush patterns should be checked daily. The width of the patterns should be 2 to 3 in (50 to 75 mm). The scrub brush pattern is adjusted by turning the adjustment knobs on top of the scrub head. See *TO ADJUST SCRUB BRUSH PATTERN*.

TO REPLACE SCRUB BRUSHES

1. Raise scrub head and set scrub head lock.

! WARNING: Raised Scrub Head May Fall. Block Scrub Head Up.

2. Stop engine and set parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

3. Open right side door on scrub head and use the chain to hold the door in the raised position.
4. Use wrench to remove hex head bolt attaching the brush arm.

NOTE: If arm does not come off easily, insert bolt in the adjacent threaded hole and screw in until arm comes off.

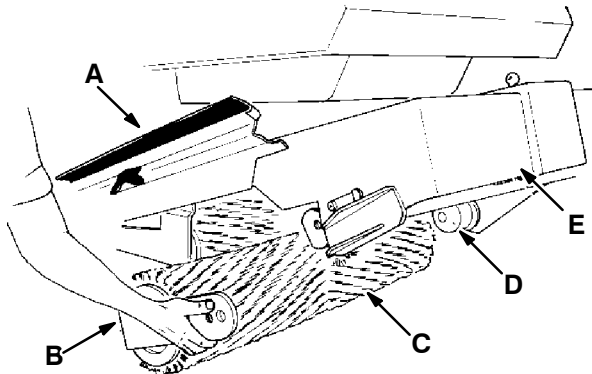
5. The brush arm and brush can then be pulled out.

MAINTENANCE

- Repeat steps 4 and 5 to remove other brush.
- Insert one end of brush through access door and push the brush in until it touches the drive plug.

It is helpful to have a second person guide the other brush end onto the drive plug while you are pushing and turning the brush until it engages the drive keyway on the plug.

- Install the brush arm with the hex head bolt.



00287

REPLACING BRUSH

- A. Door
- B. Brush Arm
- C. Brush
- D. Brush Drive Plug
- E. Raised Scrubber Head

- Repeat the steps 7 and 8 for the other brush.
- Unhook the chain and lower the access door.
- Release the scrub head lock before lowering the scrub head.

SOLUTION SYSTEM

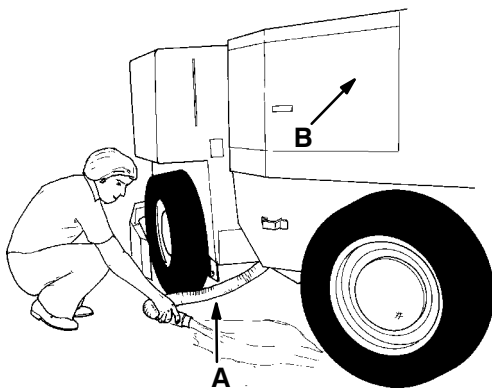
RECOVERY TANK

The recovery tank has a capacity of 120 gal (455 L). When the tank is full, a ball float will rise and shut off the vacuum to the tank. A 48 in (220 mm) long drain hose for the recovery tank is located on the front of the tank.

You can determine the water level in the recovery tank by lowering the hose end until water appears - this will then be the water level in the tank, (engine must be off; this stops vacuum).

To drain the tank, lower the hose and place it near a suitable floor drain.

NOTE: The hose will not drain until the engine is off, stopping vacuum.



00288

DRAINING RECOVERY TANK

- A. Drain hose**
- B. Operator Side of Machine**

Three clean-out doors are provided for the recovery tank; two at the front and one at the rear of the tank.

Flush all sand, sludge, debris, etc., out of the tank. Also, check the return hoses and connections for clogging or damage.

NOTE: The clean-out door seal will leak if small particles of debris are caught between the door edge and rubber seal.

NOTE: When replacing the clean-out doors, the thumbscrews should be tightened to 20 - 50 in lb (2.26 - 5.65 Nm). Do not over-tighten. Too much torque on the thumbscrews will cause the clean-out doors to bow and cut the door seals.

Empty and clean the recovery tank after every shift. The ball float screen retainer at the top of the tank should also be cleaned when draining the tank.

NOTE: The water must not be hotter than 130° F (54° C) or tank damage may occur.

WATER SPRAY DEFLECTOR

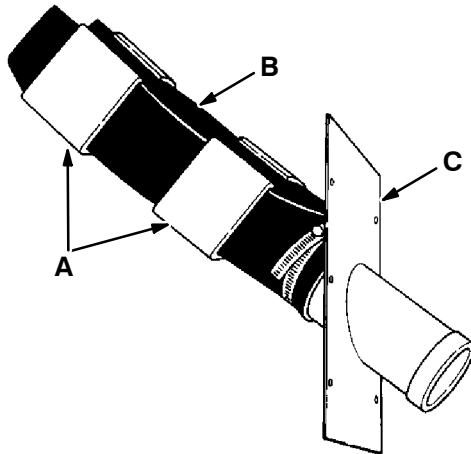
The water spray deflector is located on the rear squeegee discharge tube inside of the recovery tank. The spray deflector deflects the spray of water and small debris picked up by the rear squeegee away from the walls of the recovery tank. The deflector should be checked for wear after every 200 hours of operation.

To check the water spray deflector for wear, the rear squeegee discharge tube must be removed. Be sure to save and reuse the rubber-backed washers which are located on the inside of the recovery tank. Inspect or replace the spray deflector. Reinstall discharge tube, using a new gasket if the existing one was damaged.

SRS® WATER SPRAY DEFLECTOR

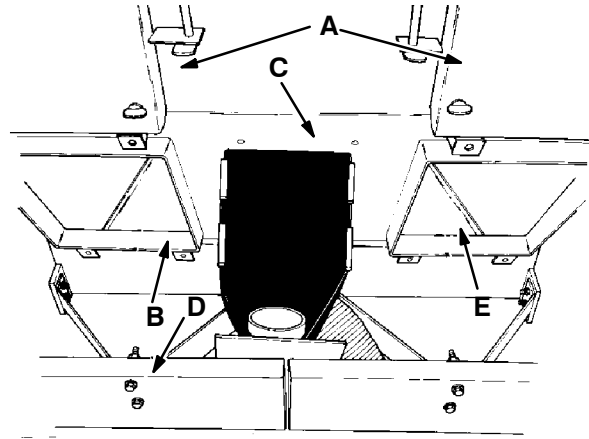
The SRS® solution tank has two spray deflectors; a lower spray deflector located on the rear squeegee discharge tube inside the tank, and a top spray deflector located in the top rear of the tank. The spray deflectors deflect the spray of water and small debris away from the walls of the solution tank. The deflectors should be checked for wear after every 200 hours of operations.

To check the lower spray deflector for wear, the rear squeegee discharge tube must be removed from the rear of the tank. Be sure to save the rubber seal washers which are located on the inside of the tank. Inspect the spray deflector for wear. If replacement is necessary, install a new deflector into the spray deflector frames, and mount the deflector to the rear squeegee discharge tube. Reinstall the discharge tube into the rear of the tank. Use a new discharge tube gasket if the existing one is damaged.



CORRECT POSITIONING OF LOWER SPRAY DEFLECTOR

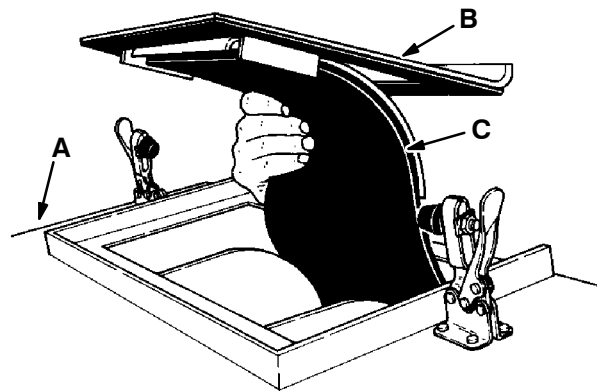
- A. Spray Deflector Frames
- B. Spray Deflector
- C. Rear Squeegee Discharge Tube



INSTALLING LOWER SPRAY DEFLECTOR

- A. Top Rear Clean-Out Doors
- B. Bottom Clean-Out Door
- C. Spray Deflector
- D. Rear Bumper
- E. Bottom Clean-Out Door

To check the top spray deflector for wear, remove the top access cover at the top rear of the solution tank. Inspect the deflector for wear. Remove the deflector if replacement is necessary. Replace the top access cover gasket if the gasket is damaged. To install the spray deflector back into the tank, slide the bottom of the deflector down the back of the tank. Then, with the top cover gasket in place on the solution tank, position the deflector to follow the curvature of the bottom of the access cover. Clamp the top access cover in place.



INSTALLING TOP SPRAY DEFLECTOR

- A. Solution Tank
- B. Top Access Cover
- C. Spray Deflector

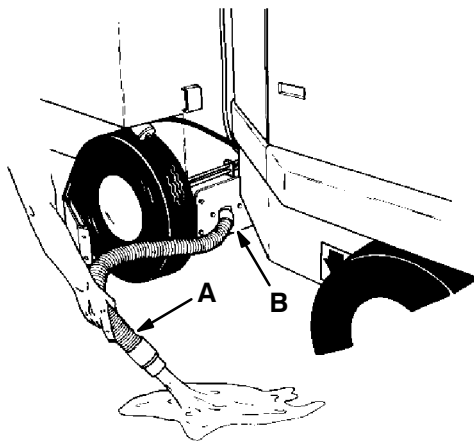
SRS® SOLUTION TANK

The tank has a capacity of 265 gal (1000 L). When the tank is full, a ball float will rise and shut off the vacuum to the tank. A 72 in (1830 mm) long drain hose for the recovery tank is located on the front of the tank. You can determine the water level in the tank by lowering the hose end until water appears—this will then be the water level in the tank, (engine must be off; this stops vacuum). To drain the tank, lower the hose and place in suitable floor drain.

Empty and clean the solution tank and flush the laminar tubes after every shift.

Partially fill the solution tank with clean water. Run the SRS® pump for a few minutes to flush the solution hoses.

NOTE: The water must not be hotter than 130°F (54°C) or tank damage may occur.



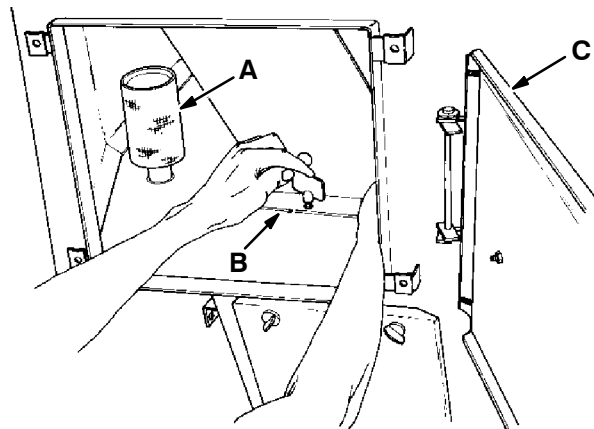
DRAINING SOLUTION TANK

- A. Drain Hose**
- B. Clean-out Door**

00343

Six clean-out doors are provided on the tank: two at the front, two at the upper rear, and two at the lower rear of the tank. Using the sludge removal tool, remove all sand, sludge, debris, etc., from the tank. Remove the two large plugs above the tank tires near the upper front of the tank. Flush the sediment from all compartments of the tank and the wire mesh filters. Check for dirt buildup in the laminar flow tubes. To clean tubes, remove and flush. Also, check the return hoses and connections for clogging or damage.

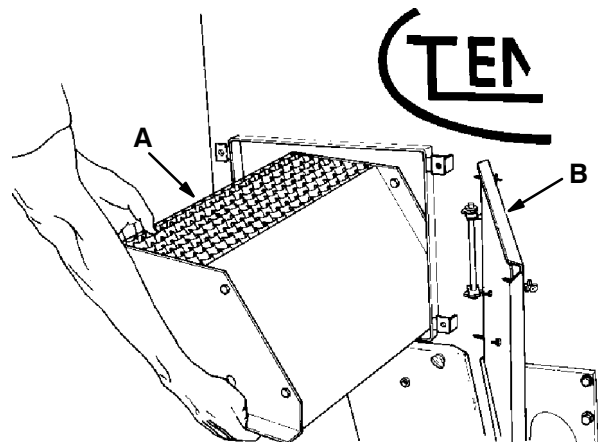
NOTE: For machines below serial number 004934, when replacing the clean-out doors, the thumbscrews should be tightened to 20 - 50 in lb (2.26 - 5.65 Nm). Do not over-tighten. Too much torque on the thumbscrews will cause the clean-out doors to bow and cut the door seals.



REMOVING LAMINAR TUBES

00345

- A. Solution Outlet Filter**
- B. Laminar Tube Set Fastener**
- C. Upper Rear Clean-Out Door**



REMOVING LAMINAR TUBES

00342

- A. Laminar Tube Set**
- B. Upper Rear Clean-Out Door**

NOTE: Keep laminar tube sections facing the outside of the machine.

SOLUTION DISPENSING TUBE

The solution dispensing tube has a flushing connection built in. The flushing connection is the tee fitting next to the solution control valve. This allows a garden hose to be threaded into the dispensing system to flush the system. Flush the system after every 50 hours of operation.

SRS® CLEANING SOLUTION FILTER

Machines below serial number 003790 have a cleaning solution filter provided to filter cleaning solution before it enters the main supply hoses or pump. The filter is mounted on the top front right side of the solution tank. Clean the filter after every 50 hours of operation.

SRS® METERING SOLUTION PUMP

A bellows pump meters cleaning solution into the recycling solution at rates of one-quarter, one-half and one percent. The cleaning solution is introduced to the recycling solution at a point just before the spray nozzle. Clean the metering pump daily when cleaning the solution tank.

TROUBLESHOOTING

Low Flow

1. Poppet valves dirty, dried cleaning solution residue on valves.
2. Restriction in cleaning solution lines.
3. Air leak at pump intake.
4. Defective wiring or motor.

Motor Fails to Turn On

1. Loose wiring connection.
2. Defective motor.

Motor Operates, But No Pump Discharge

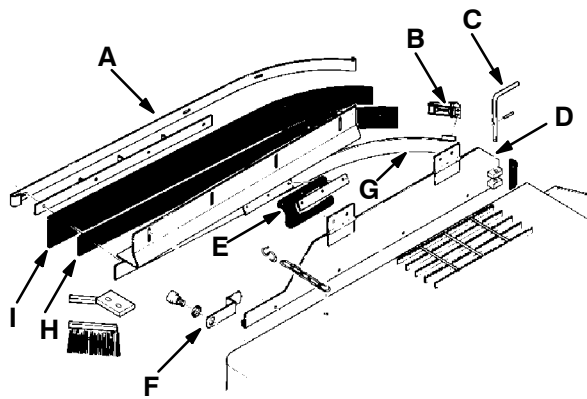
1. Damaged bellows.
2. Restriction in cleaning solution lines.
3. Air leak in intake line.
4. Unprimed pump.
 - a. Remove pump inlet hose.
 - b. Fill pump chamber with approximately one ounce SRS® solution.
 - c. Reinstall pump inlet hose.
 - d. Pump should start metering tank solution after 3 to 4 minutes run time.

SQUEEGEES

SIDE SQUEEGEES

The side squeegees control scrub brush water spray. They consist of a squeegee blade, backup strip, band, and clamp. Check the side squeegee blades for damage or wear daily. Replace squeegee blade by opening the quick-release latch and removing the band. Remove the bracket, old blade, and backup strip. Replace the squeegee blade and backup strip if the blade is worn.

Adjust the squeegee clamp so that there is adequate pressure to hold the squeegee blade in place. The squeegee blade should be held so that it cannot be pulled from between the locating pins.

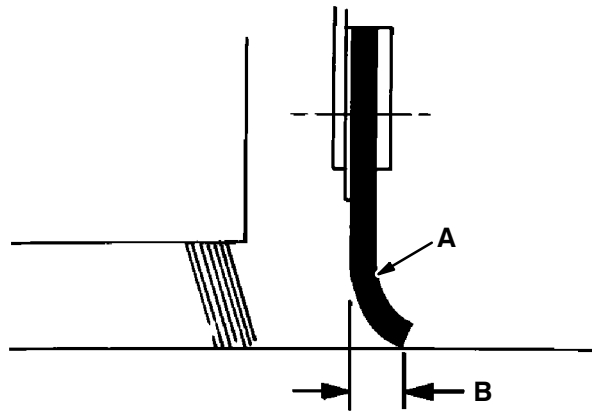


SIDE SQUEEGEE ASSEMBLY

- A. Retaining Band**
- B. Latch**
- C. Door Locking Pin**
- D. Door**
- E. Flap**
- F. Door Latch**
- G. Squeegee Frame**
- H. Backup Strip**
- I. Squeegee Blade**

The side squeegee frame is attached to the squeegee door with four screws. The screw mounting holes are slotted, allowing vertical adjustment of the squeegee blade by simply loosening the screws and moving the squeegee up or down. Check the side squeegee blades adjustment daily.

Lower the head and adjust the squeegee so that the blade deflects 0.50 in (13 mm). The squeegee should deflect evenly across its entire length.



SIDE SQUEEGEE BLADE DEFLECTION

- A. Side Squeegee Blade**
- B. 0.50 in (13 mm) Deflection**

REAR SQUEEGEE

The rear squeegee assembly channels water into the vacuum fan suction. When properly maintained, the squeegee should leave floors nearly dry. The assembly consists of a front and rear blade held in place by bands and clamps. Two back-up strips are used with the rear blade. Check the rear squeegee for damage or wear and adjustment daily.

The rear squeegee has been factory adjusted. The factory adjustments need to be done only after replacing a major component of the rear squeegee assembly. Regular squeegee adjustments are covered in *TO ADJUST REAR SQUEEGEE*.

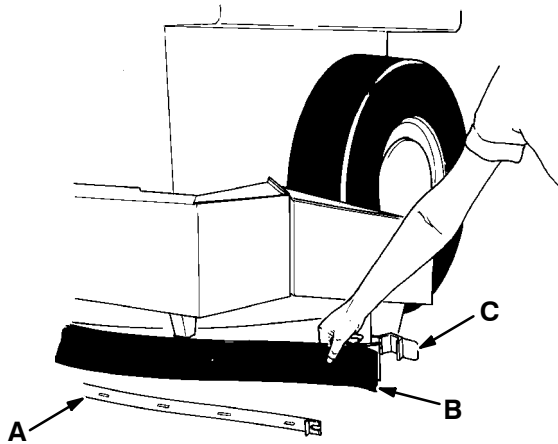
MAINTENANCE

TO REPLACE REAR SQUEEGEE BLADES

1. Stop the engine and set the parking brake.

FOR SAFETY: Before Leaving Or Servicing Machine; Stop On Level Surface, Set Parking Brake, And Turn Off Machine.

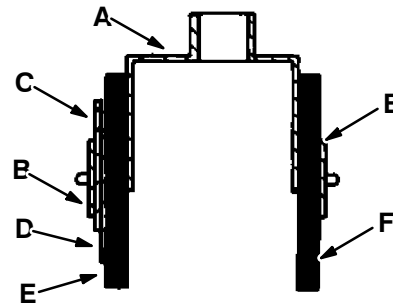
2. Open the band clamp and remove all parts.
3. Place the new squeegee blade over the pins on the frame.
4. Next, fit the two back-up strips on the pins. Inner strip down, outer strip up.
5. Position the retaining band in place and engage the clamp.
6. The front blade is replaced in the same manner, except that backup strips are not used.
7. Adjust the squeegee clamp so that there is adequate pressure to hold the squeegees in place. The squeegee blades should be held so they cannot be pulled from between the locating pins. After proper adjustment is made, lock each adjusting screw with a jam nut.



REAR SQUEEGEE

00290

- A. Band
- B. Blade and Back-Up Strips on Pins
- C. Clamp



REAR SQUEEGEE CROSS-SECTION

00151

- A. Squeegee Frame
- B. Band
- C. Outer Back-Up Strip
- D. Inner Back-Up Strip
- E. Rear Blade
- F. Front Blade

NOTE: Install back-up strips with outer strip up, inner strip down.

TO FACTORY ADJUST REAR SQUEEGEE

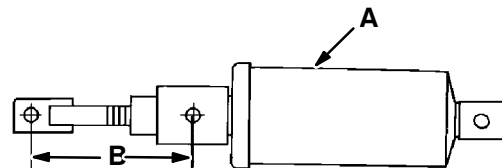
NOTE: The solution tank must be full, and the tires must be correctly inflated to properly adjust the rear squeegee.

1. LINKAGE PIVOTS

Check the squeegee linkage pivot points and, if necessary, tighten the locknuts on each bearing joint in the linkage. Tighten each locknut until the joint is just short of locking up. The linkage must be snug, but still free enough to rotate the linkage by hand.

2. SQUEEGEE LIFT CYLINDER

The squeegee lift cylinder rod end should be adjusted so there is 5.50 ± 0.12 in (140 ± 3 mm) between the cylinder rod hole and the rod end hole for machines below serial number 004506. For machines serial number 004507 and above, the adjustment should be 6.00 ± 0.12 in (150 ± 3 mm).



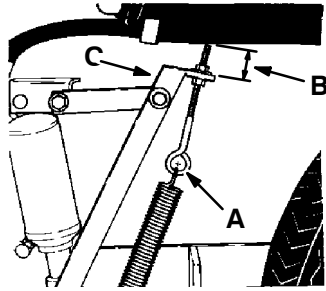
SQUEEGEE LIFT CYLINDER

01725

- A. Cylinder
- B. Adjustment Length

3. EYEBOLTS

The eyebolts should be adjusted so there is 1.38 ± 0.12 in (35 ± 3 mm) between the end of the eyebolt and the top of the arm on each side of the squeegee.



EYEBOLT

- A. Eyebolt**
- B. 1.38 ± 0.12 in (35 ± 3 mm)**
- C. Arm**

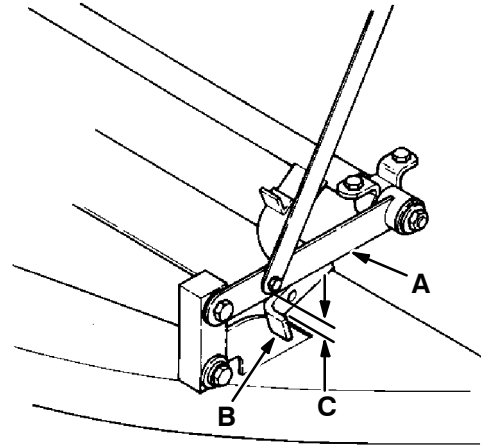
01726

4. CASTERS

The caster should be in good condition and be free to spin. The center caster should be 0.25 ± 0.06 in (6 ± 2 mm) off the floor with the squeegee blade perpendicular to the floor. The tip casters should touch the floor with the squeegee blade perpendicular to the floor.

5. ARM CLEARANCE

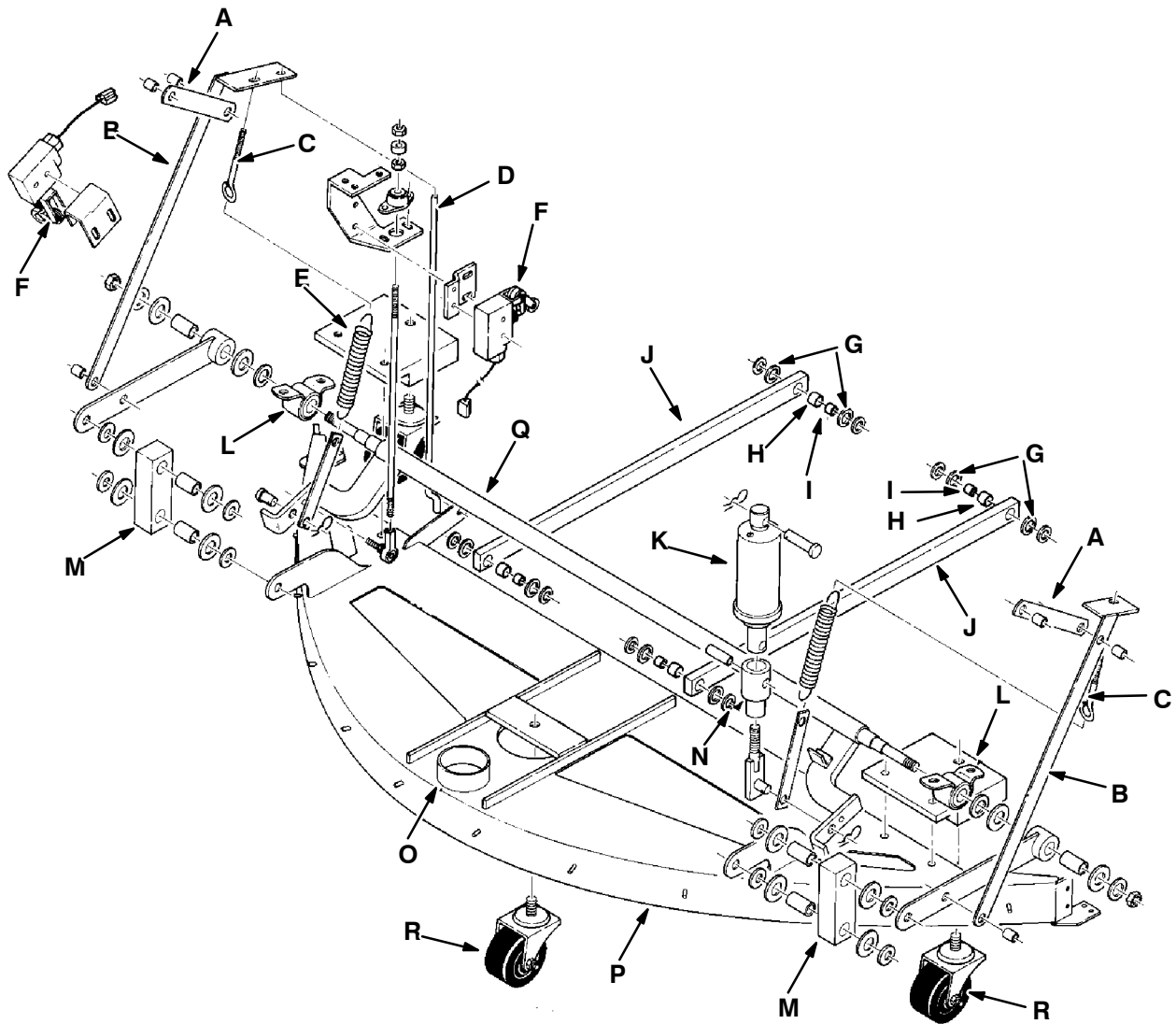
The distance between the arm assembly and the squeegee lift shaft arm should be 1 to 1.25 in (25 to 30 mm) with the squeegee blade down and perpendicular to the floor.



ARM CLEARANCE

- A. Arm Assembly**
- B. Squeegee Lift Shaft Arm**
- C. 1 to 1.25 in (25 to 30 mm)**

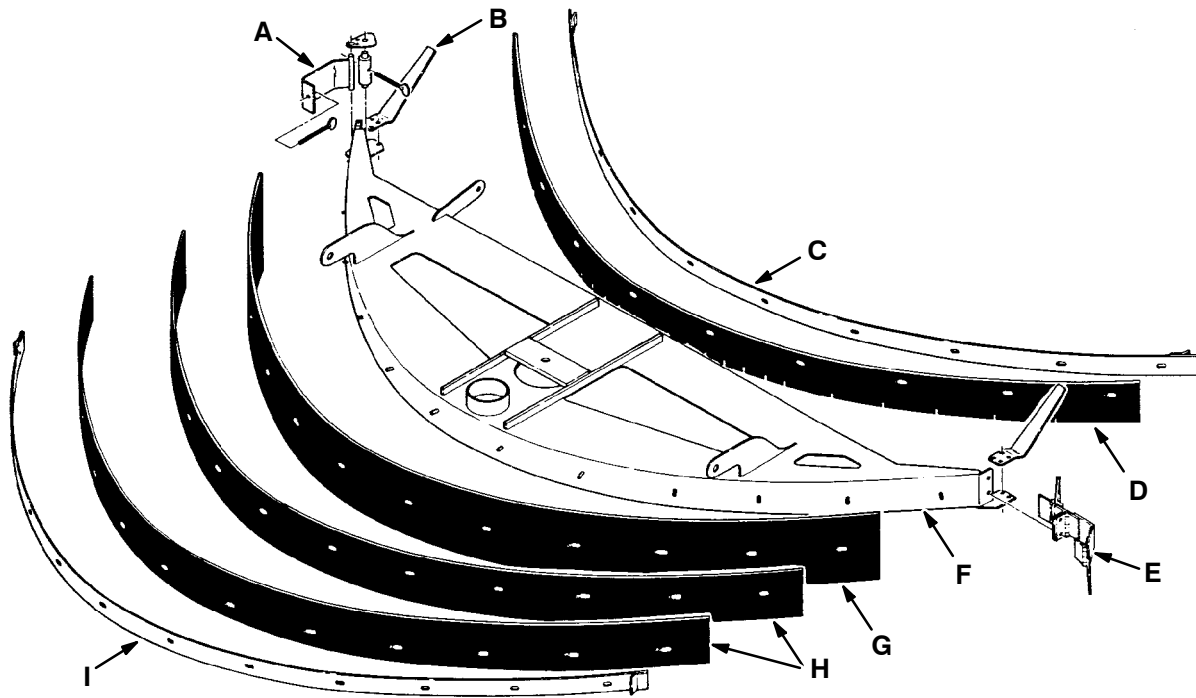
01728



REAR SQUEEGEE LINKAGE

00191

- | | |
|---------------------------------|----------------------------------|
| A. Link | J. Front Drag Link |
| B. Arm | K. Squeegee Lift Cylinder |
| C. Eyebolt | L. Bearing |
| D. Squeegee Tip Lift Rod | M. Block Link |
| E. Down Pressure Spring | N. Cylinder Rod End |
| F. Roller Switch | O. Vacuum Hose Connection |
| G. Fiberglass Washer | P. Squeegee Frame |
| H. Bearing | Q. Lift Shaft |
| I. Sleeve | R. Caster |



REAR SQUEEGEE

00196

- | | |
|--|---|
| <p>A. Adjuster
 B. Spring Guide
 C. Front Band
 D. Front Blade
 E. Band Clamp</p> | <p>F. Frame
 G. Rear Blade
 H. Back-Up Strip
 I. Band</p> |
|--|---|

TO ADJUST REAR SQUEEGEE

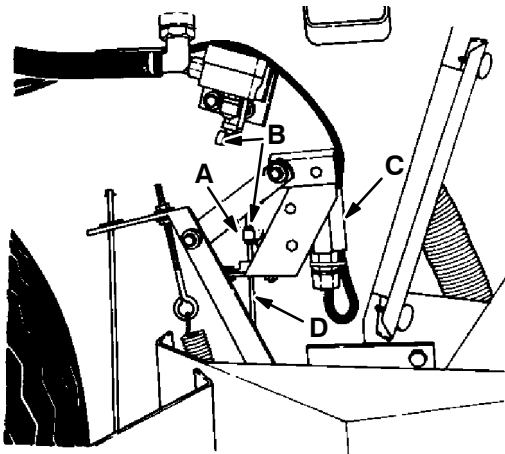
1. Lower the rear squeegee and drive the machine slowly forward to observe the squeegee roll-out. Adjust the squeegee roller height adjustment stud or add or remove washers from the caster to get an even roll-out. The top nut acts as a locknut. The nut just under the squeegee frame is the adjusting nut. Loosen the locking nut and turn the adjusting nut clockwise to increase down pressure, or counterclockwise to decrease pressure. Tighten the locknut after adjusting the adjusting nut.
2. Lower the rear squeegee and drive the machine slowly forward to observe the tips of the squeegee.
 - a. If both tips are too low, tighten both eyebolts which increases the down pressure on the back side of the squeegee frame to lift both tips.

- b. If both tips are too high, loosen both eyebolts which decreases the down pressure on the back side of the squeegee frame to lower both tips.
- c. If just one tip is too low, loosen the eyebolt on the side that is too low. If the tip is still too low, tighten the eyebolt on the opposite side.
- d. If just one tip is too high, tighten the eyebolt on the side that is too high. If the tip is still too high, loosen the eyebolt on the opposite side.

NOTE: The number of washers on the squeegee tip casters may need to be changed to properly adjust the squeegee tips.

MAINTENANCE

3. After the tips are adjusted, make sure the eyebolt adjustments are locked in place. The center of the squeegee may have to be readjusted to get an even roll-out across the squeegee. If the squeegee roll-out is set too small, the squeegee will skip when traveling on a uneven floor.
4. Lower the rear squeegee. The lower squeegee switch roller should be in line and tripped by the top of the trip barrel. Adjust the trip barrel position on the threaded rod to adjust.

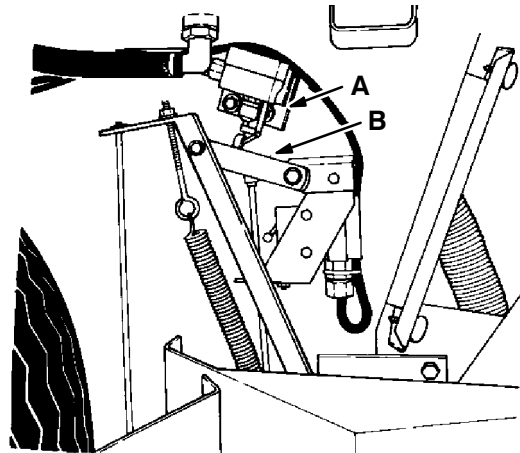


LOWERED SQUEEGEE

02357

- A. Trip Barrel
- B. Switch Roller
- C. Lower Switch
- D. Threaded Rod

Raise the rear squeegee. The upper squeegee switch roller should be tripped by the squeegee link. The lower squeegee switch roller should be free standing.



RAISED SQUEEGEE

02358

- A. Upper Switch
- B. Link

After both switches are properly adjusted with the engine operating, put the instrument panel squeegee switch in the "Down" position. The squeegee should lower. Press the directional pedal into the "reverse" direction. The squeegee should rise as soon as the machine moves backward. Press the directional pedal into the "forward" direction. The squeegee should lower.

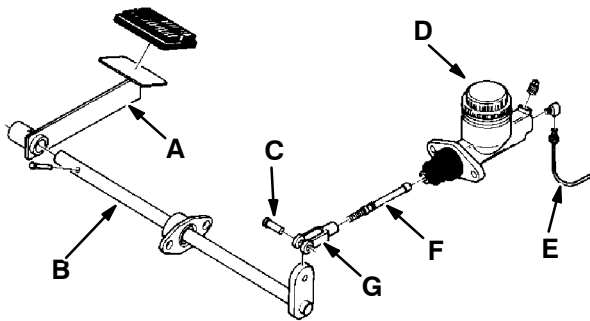
BRAKES AND TIRES

SERVICE BRAKES

The service brakes are hydraulically activated by a master brake cylinder.

Check the master brake cylinder fluid level after every 400 hours of operation and add brake fluid as needed. The master brake cylinder is located at the front of the machine. Open the front compartment door for access to the master cylinder.

If necessary, adjust brake linkage as follows: adjust clevis on master cylinder push rod so that brake pedal is in a horizontal position when the cylinder push rod starts to engage the cylinder piston.



00105

BRAKE SYSTEM COMPONENTS

- A. Brake Pedal**
- B. Shaft**
- C. Pin**
- D. Master Brake Cylinder**
- E. Brake Line**
- F. Push Rod**
- G. Clevis**

Brakes require bleeding whenever air enters the system, lowering the effective braking pressure. Air can enter when the master cylinder or wheel cylinders are serviced or if the fluid in the reservoir runs dry. Air can also enter through a leaky brake line or hose. Find the leaking line and replace it before bleeding.

Whenever handling brake fluid, do not get any on the brake pads, brake discs, calipers, or body paint. Brake pads will be permanently damaged, requiring replacement. Body paint can be damaged also unless you wipe the area with a clean cloth and wash it with a soapy solution immediately.

1. Make sure that the brake fluid reservoir is full and that the vent in the cap is open.
2. Connect a plastic or rubber tube to the bleeder valve on the left front wheel. Suspend the other end of the tube in a jar or bottle filled with a few inches of brake fluid. During the remaining steps, keep this end submerged at all times and never let the level in the brake fluid reservoir drop below one half full.
3. Open the bleeder valve and plug on the left front wheel about one turn. Have an assistant press the brake pedal slowly to the floor. As soon as the pedal is all the way down, close the bleeder valve and let the pedal up. Repeat this step as many times as necessary, until fluid with no air bubbles exits from the tube.
4. Bleed the right front wheel in the same manner as described in the steps above. Keep checking the brake fluid reservoir to be sure it doesn't run out of fluid.
5. When all wheels are bled, discard the brake fluid in the jar or bottle; never reuse such fluid.
6. Top up the brake fluid reservoir with clean fluid.

PARKING BRAKES

The parking brakes are mechanically activated by the parking brake lever and two cables.

The parking brake cables should be adjusted after every 200 hours of operation or whenever the machine rolls after setting the parking brake or when it becomes very easy to set the parking brake. To adjust the brake cables, turn the knurled knob on the end of the parking brake clockwise. Tighten the brake cable enough to make the parking brake slightly resist being set.

TIRES

The machine is equipped with four pneumatic tires. The air pressure in these tires is critical to machine performance. Check the tire pressure daily. The correct tire pressures are: 55 psi (380 kPa) front, 35 psi (240 kPa) rear.

Tighten the wheel lug nuts in a star pattern after every 200 hours of operation. Tighten lug nuts 85 to 95 ft lb (115 to 130 Nm).

OPTIONS

HIGH PRESSURE SPRAYER

The high pressure sprayer option requires some periodic maintenance to keep it operating properly.

Fill the crankcase and oil wicks according to the following instructions. Operate and maintain the pump only as directed.

The pump must not be run dry and must be drained of water prior to exposure to freezing temperatures.

NOTE: Do not pump acids, abrasive, or flammable fluids with this unit.

Crankcase - Fill crankcase to the dot on the oil gauge window with 1.25 pt (0.6 L) of genuine Cat Pump Crankcase Oil.

Change the oil after a 50 hour run-in period. Then change the oil every three months or at 500 hour intervals when using genuine Cat Pump Crankcase Oil. If other approved oil is used, change oil every month or at 200 hour intervals.

Piston Rod Wicks - Prior to initial operation, saturate the piston rod wicks and fill the reservoir (approximately 60 drops of oil - two pumps of a push-type oil can in each of the three lubricator housing holes). Add 30 drops of oil to each hole every week or 100 hours of operation.

Filter - The in-line solution filter must be cleaned or replaced after the 50 hour run-in period and every three months or 500 hours of service.

SECTION 4

CONTENTS

	Page
HARDWARE INFORMATION	4-3
STANDARD BOLT TORQUE CHART ..	4-3
METRIC BOLT TORQUE CHART	4-3
BOLT IDENTIFICATION	4-4
THREAD SEALANT AND LOCKING COMPOUNDS	4-4
HYDRAULIC FITTING INFORMATION	4-4
HYDRAULIC TAPERED PIPE FITTING (NPT) TORQUE CHART	4-4
HYDRAULIC TAPERED SEAT FITTING (JIC) TORQUE CHART	4-4
HYDRAULIC O-RING FITTING TORQUE CHART	4-4

HARDWARE INFORMATION

The following charts state standard plated hardware tightening ranges for normal assembly applications. Decrease the specified torque by 20% when using a thread lubricant. Do not substitute lower grade hardware for higher grade hardware. If higher grade hardware than specified is substituted, tighten only to the specified hardware torque value to avoid damaging the threads of the part being threaded into, as when threading into speed nuts or weldments.

STANDARD BOLT TORQUE CHART

Thread Size	SAE Grade 5 Torque ft lb (Nm)	SAE Grade 8 Torque ft lb (Nm)
0.25 in	7-10 (9-14)	10-13 (14-38)
0.31 in	15-20 (20-27)	20-26 (27-35)
0.38 in	27-35 (37-47)	36-47 (49-64)
0.44 in	43-56 (58-76)	53-76 (72-103)
0.50 in	65-85 (88-115)	89-116 (121-157)
0.62 in	130-170 (176-231)	117-265 (159-359)
0.75 in	215-280 (291-380)	313-407 (424-552)
1.00 in	500-650 (678-881)	757-984 (1026-1334)

NOTE: Decrease torque by 20% when using a thread lubricant.

METRIC BOLT TORQUE CHART

Thread Size	SAE Grade 5 Torque ft lb (Nm)	SAE Grade 8 Torque ft lb (Nm)
M4	2 (3)	3 (4)
M5	4 (5)	6 (8)
M6	7 (9)	10 (14)
M8	18 (24)	25 (34)
M10	32 (43)	47 (64)
M12	58 (79)	83 (112)
M14	94 (127)	133 (180)
M16	144 (195)	196 (265)
M20	260 (352)	336 (455)
M24	470 (637)	664 (900)

NOTE: Decrease torque by 20% when using a thread lubricant.

Exceptions to the above chart:

Nut to hold front wheel hub on propelling motor axle shaft: 200 to 250 ft lb (270 to 340 Nm)

Rear and front wheel nuts: 85 to 95 ft lb (115 to 130 Nm)

Rear wheel axle nuts: Tighten nuts until resistance is felt. Back off nut to first slot,

but no more than one-twelfth of a turn.

Allen head cap screw on o-ring tube assemblies of hydraulic drive motor: 15 to 20 ft lb (20 to 27 Nm)

Allen head cap screws on porting block of brush motor: 18 to 20 ft lb (25 to 27 Nm)

Brush drive motor plug: Torque slotted nut to 25 to 60 ft lb (35 to 80 Nm). Insert cotter pin through slot nearest the pin hole.

Pump drive coupling to flywheel: 35 to 40 ft lb (45 to 55 Nm)

Steering cylinder rod bolt: 240 to 250 ft lb (325 to 340 Nm)

Articulated joint horizontal shaft: Torque slotted nut to 15 to 20 in lb (1.7 to 2.3 Nm). Insert cotter pin through slot nearest pin hole. The snap ring should be tight against the bottom bearing, and joint should pivot freely.

Articulated pivot bolts (Connecting tractor to tank): torque to 125 to 135 ft lb (170 to 185 Nm)

Steering cylinder block flat head bolt 80 to 95 ft lb (110 to 130 Nm)

Main brush drive plug nut - 30 ft lb (40 Nm) then tighten to next slot.

Brake unit to hub sockethead screw - 9 to 12 ft lb (12 to 16 Nm) with Loctite 242 blue.

Front wheel nut - 10 to 12 ft lb (14 to 16 Nm) while turning wheel, tighten to spec, then backoff, retighten by hand till snug, then turn to next slot.

Damper solenoid nut - 20 to 23 in lb (2.5 to 3 Nm).





Pitman arm to steering column nut - 160 ft lb (215 Nm).

Propelling motor shaft thin nylon lock nut - 7 to 10 ft lb (9 to 14 Nm).

Propelling motor adapter bolts - 16 to 21 ft lb (21 to 28 Nm) with Loctite 242 blue on threads. Use loctite 515 sealant on the pilot fillet of the motor and the adapter.

APPENDIX

BOLT IDENTIFICATION

Identification Grade Marking	Specification and Grade
	SAE-Grade 5
	SAE-Grade 8
	ISO-Grade 8.8
	ISO-Grade 10.9

01395

THREAD SEALANT AND LOCKING COMPOUNDS

Thread sealants and locking compounds may be used on this machine. They include the following:

Loctite 515 sealant – gasket forming material. TENNANT® Part No. 75567, 15 oz (440 ml) cartridge.

Loctite 242 blue – medium strength thread locking compound. TENNANT® Part No. 32676, 0.5 ml tube.

Loctite 271 red – high strength thread locking compound. TENNANT® Part No. 19857, 0.5 ml tube.

HYDRAULIC FITTING INFORMATION

HYDRAULIC TAPERED PIPE FITTING (NPT) TORQUE CHART

NOTE: Ratings listed are when using teflon thread seal.

Size	Minimum Torque	Maximum Torque
1/4 NPT	10 ft lb (14 Nm)	30 ft lb (41 Nm)
1/2 NPT	25 ft lb (34 Nm)	50 ft lb (68 Nm)
3/4 NPT	50 ft lb (68 Nm)	100 ft lb (136 Nm)

HYDRAULIC TAPERED SEAT FITTING (JIC) TORQUE CHART

Tube O.D. (in)	Thread Size	Maximum Torque
0.25	0.44-20	9 ft lb (12 Nm)
0.38	0.56-18	20 ft lb (27 Nm)
0.50	0.75-16	30 ft lb (41 Nm)
0.62	0.88-14	40 ft lb (54 Nm)
0.75	1.12-12	70 ft lb (95 Nm)
1.0	1.31-12	90 ft lb (122 Nm)

HYDRAULIC O-RING FITTING TORQUE CHART

Tube O.D.(in)	Thread Size	Minimum Torque	Maximum Torque
0.25	0.44-20	6 ft lb (8 Nm)	9 ft lb (12 Nm)
0.38	0.56-18	13 ft lb (18 Nm)	20 ft lb (27 Nm)
		*10 ft lb (14 Nm)	12 ft lb (16 Nm)
0.50	0.75-16	20 ft lb (27 Nm)	30 ft lb (41 Nm)
		*21 ft lb (28 Nm)	24 ft lb (33 Nm)
0.62	0.88-14	25 ft lb (34 Nm)	40 ft lb (54 Nm)
0.75	1.12-12	45 ft lb (61 Nm)	70 ft lb (95 Nm)
1.0	1.31-12	60 ft lb (81 Nm)	90 ft lb (122 Nm)

NOTE: Do not use sealant on o-ring threads.

*Aluminum bodied components

HOW TO USE THIS MANUAL

This section on *HOW TO USE THIS MANUAL* will tell you how to:

- Find important machine information for ordering correct repair parts.
- Find TENNANT part numbers.
- Order TENNANT parts and supplies.

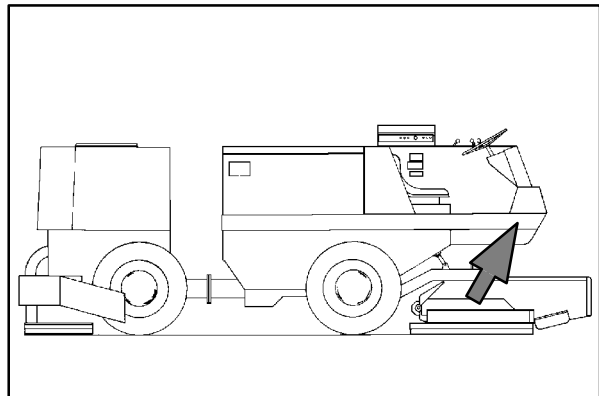
IMPORTANT INFORMATION

When placing an order for parts, the machine model and machine serial number are important. Refer to the *MACHINE DATA* box which is filled out during the installation of your machine. The *MACHINE DATA* box is located on the inside of the front cover of this manual.

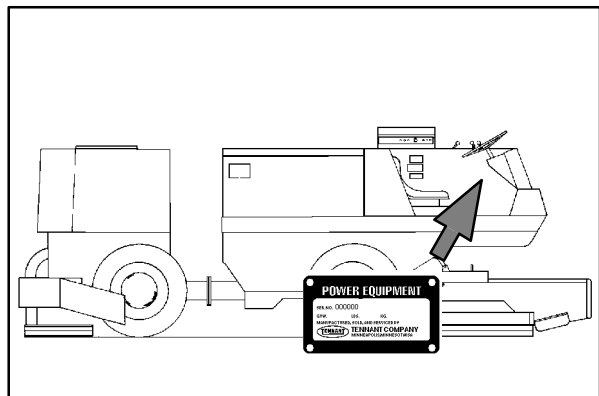
MACHINE DATA	
<i>Please fill out at time of installation.</i>	
Machine Serial Number -	_____
Engine Serial Number -	_____
Sales Representative -	_____
Customer Number -	_____
Date of Installation -	_____
Manual Number -	MM148
Revision:	18
Published:	2-95

03452

The model number of your machine is on the side of the machine.



The serial number of your machine is printed on the machine data plate located as shown.



HOW TO USE THIS MANUAL

FINDING A TENNANT PART NUMBER

This manual contains the following sections:

- HOW TO USE THIS MANUAL
- STANDARD PARTS
- OPTIONS
- BREAKDOWNS
- CROSS REFERENCE

The STANDARD PARTS section lists repair parts for standard machines. They are grouped in this general order:

- General wear parts.
- Machine frame and related parts.
- Machine propelling system.
- Scrubbing components.
- Electrical parts.

The OPTION section lists repair parts of options.

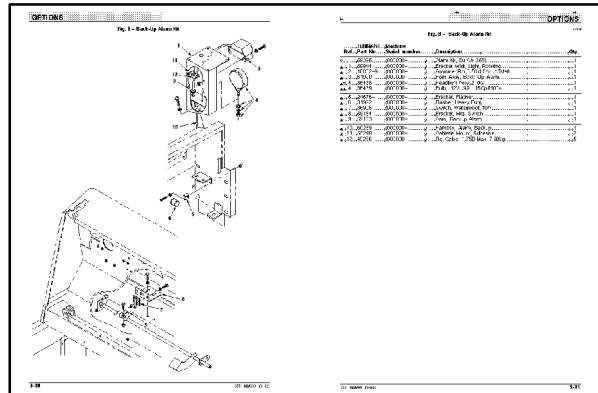
The BREAKDOWN section lists available repair parts of major components.

All sections in this manual consist of parts illustrations and corresponding parts lists.

The parts illustrations are numbered with **Ref** numbers which refer to corresponding parts lists.

The parts lists include a number of columns of information:

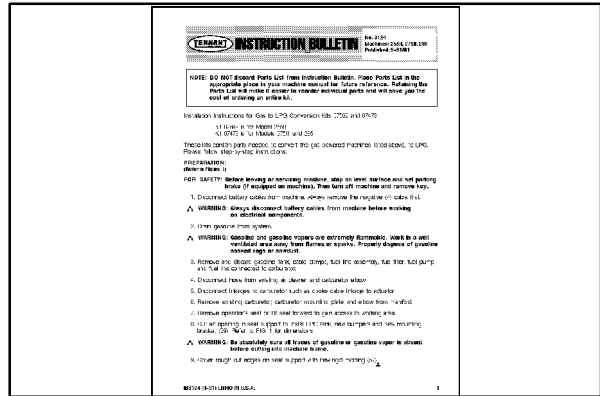
- **Ref** - column refers to the reference number on the parts illustration.
 ▽ - indicates the part is an assembly.
 ▲ - indicates the part is included in the assembly listed just before it.
- **TENNANT Part No.** - column lists the TENNANT part number for the part.
- **Serial Number** - column indicates the set of machines the part number is applicable to. Serial numbers change when the machine design has been modified. The most current design of the machine is shown in the main illustration, older designs are boxed in a corner of the illustration.
- **Description** - column is a brief description of the part.
- **Qty.** - column lists the quantity of that part used in that area of the machine.



Ref.	TENNANT Part No.	Machine Serial number	Description	Qty.
▽	59395	(000000-	Alarm Kit, Bu Alv 355L	1
▲ 1	59344	(000000-	Bracket W/lt, Light, Rotating	1
▲ 2	10532-9	(000000-	Grommet, Rbr, 0.56ld, For .13Matl	1
▲ 3	61920	(000000-	Hom Assy, Back-Up Alarm	1
▲▽ 4	36438	(000000-	Headlight Assy, 210G	1
▲▲ 4	36439	(000000-	Bulb, 12V .5A 15Cp#1004	1
▲ 5	24576-1	(000000-	Bracket, Flasher	1
▲ 6	31922	(000000-	Flasher, Heavy Duty	1
▲ 7	35905	(000000-	Switch, Waterproof, 10A	1
▲ 8	59154	(000000-	Bracket, Mlt, Switch	1
▲ 9	59153	(000000-	Cam, Backup Alarm	1
▲ 10	60289	(000000-	Harness, Alarm, Backup	1
▲ 11	55248	(000000-	Cabletie Mount, Adhesive	2
▲ 12	49256	(000000-	Tie, Cable 1.75D Max 7.50Lg	5

NOTE: If a service kit is installed on your machine, be sure to keep the **INSTRUCTION BULLETIN** which came with the kit. It contains repair parts numbers needed for ordering future parts.

NOTE: Fasteners used in this machine may be metric or non-metric. Take care when replacing hardware to replace with same thread size.



PLACING AN ORDER

Orders may be placed by phone, fax, or by mail. Phone orders may need written confirmation. Follow the steps below to insure prompt delivery:

1. Identify the model number of your machine.
2. Identify the serial number of your machine.
3. Find the part number of the part you need. Do not order by page number or reference number. If you are not able to find the part number, call your TENNANT representative for help or send the old part as a sample.
4. Determine the quantity of the part you need.
5. Provide the following company information:
 - Company name
 - Customer ID Number
 - Shipping address
 - Billing address
 - First and last name of person ordering parts
 - Telephone number
 - Purchase order number
6. Provide definitive shipping instructions.

HOW TO USE THIS MANUAL

Any claim for loss or damage to a shipment in transit should be filed promptly with the transportation company making the delivery. Shipments will be complete unless the packing list or order acknowledgement indicates items back ordered.

If parts received are suspected to be incorrect or defective, please contact the TENNANT representative from whom you ordered the part. They will give authorization for return and/or handle replacement shipments when required.

SECTION 6

CONTENTS	PAGE
Fig. 1 - Recommended General Maintenance Items	6-3
Fig. 2 - Replacement Brushes	6-5
Fig. 3 - Seat Group	6-6
Fig. 4 - Main Frame Group	6-8
Fig. 5 - Noise Insulation Group	6-10
Fig. 6 - Hopper Group	6-11
Fig. 7 - Scrub Head Lift Group	6-12
Fig. 8 - Solution Supply and Control Group	6-14
Fig. 9 - Right Side Squeegee Assembly	6-16
Fig. 10 - Left Side Squeegee Assembly	6-18
Fig. 11 - Front Brush Drive Components Group	6-20
Fig. 12 - Front Brush Idler Assembly	6-21
Fig. 13 - Rear Brush Idler Assembly	6-22
Fig. 14 - Rear Brush Drive Components Group	6-23
Fig. 15 - Steering Column Group	6-24
Fig. 16 - Front Wheel Assembly	6-26
Fig. 17 - Front Wheel Drive Group	6-27
Fig. 18 - Parking Brake Group	6-28
Fig. 19 - Brakes Group	6-29
Fig. 20 - Engine Group, F163	6-30
Fig. 21 - Engine Group, TM27	6-32
Fig. 22 - Engine Group, TM27	6-34
Fig. 23 - Muffler Group	6-36
Fig. 24 - Radiator Group	6-37
Fig. 25 - Air Cleaner Group	6-38
Fig. 26 - Air Cleaner Group	6-39
Fig. 27 - Fuel Tank Group	6-40
Fig. 28 - Battery Group	6-42
Fig. 29 - Hydraulic Schematic (For machines below serial number 004438)	6-43
Fig. 30 - Hydraulic Schematic (For machines serial number 004438 thru 005268)	6-44
Fig. 31 - Hydraulic Schematic (For machines serial number 005269 and above)	6-45
Fig. 32 - Hydraulic Hoses Group	6-46
Fig. 33 - Hydraulic Hoses Group	6-48
Fig. 34 - Hydraulic Hoses Group	6-50
Fig. 35 - Hydraulic Propelling Motors Group	6-52
Fig. 36 - Hydraulic Reservoir Group	6-53
Fig. 37 - Hydraulic Control Valves Group	6-54
Fig. 38 - Hydraulic Pump Group	6-55
Fig. 39 - Hydraulic Pump Group	6-56
Fig. 40 - Hydraulic Pump Group	6-57
Fig. 41 - Hydraulic Filters Group	6-58
Fig. 42 - Hydraulic Filters Group	6-59
Fig. 43 - Hydraulic Tow Bypass Group	6-60
Fig. 44 - Directional Pedal Group	6-61
Fig. 45 - Directional Pedal Group	6-62
Fig. 46 - Directional Pedal Group	6-64
Fig. 47 - Wire Harnesses Group	6-66
Fig. 48 - Electrical Schematic-Gasoline, LPG (For machines below serial number 004255)	6-67
Fig. 49 - Electrical Schematic-Gasoline, LPG (For machines serial number 004255 and above)	6-68
Fig. 50 - Electrical Schematic, Diesel (For machines below serial number 003619)	6-69
Fig. 51 - Electrical Schematic, Diesel (For machines serial number 003619 to 004254)	6-70
Fig. 52 - Electrical Schematic, Diesel (For machines serial number 004255 and above)	6-71
Fig. 53 - Electrical Schematic, Options (For machines serial number 004255 and above)	6-72

CONTINUED

STANDARD PARTS

CONTENTS	PAGE
Fig. 54 - Electrical Schematic, Specials	6-73
Fig. 55 - Vacuum Fan Idler Assembly	6-74
Fig. 56 - Vacuum Fan Assembly	6-76
Fig. 57 - Vacuum Fan Assembly	6-78
Fig. 58 - Instrument Panel Group	6-80
Fig. 59 - Rear Wheel Group	6-81
Fig. 60 - Trunnion Group	6-82
Fig. 61 - Front Side of Solution and Recovery Tanks Group	6-84
Fig. 62 - Rear Side of Solution and Recovery Tanks Group	6-86
Fig. 63 - Rear Bumper Group	6-88
Fig. 64 - Rear Bumper Group	6-89
Fig. 65 - Rear Squeegee Assembly	6-90

Fig. 1 - Recommended General Maintenance Items

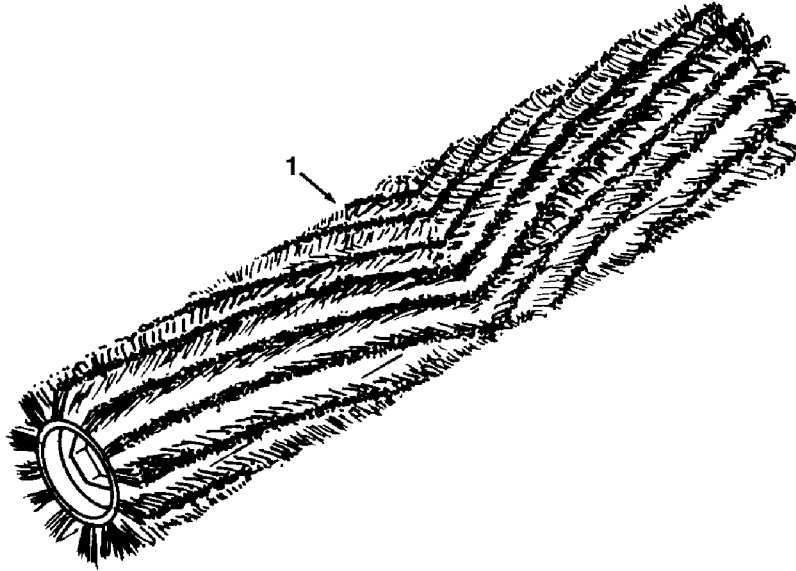
Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	02461	(003370-003933)	Performance Package, F163, 400 Hour, Gas & LPG	1
▲	53055-2	(003370-003933)	Element, Oil Filter	8
▲	01433-1	(003370-003933)	Grease, Special	1
▲	55994	(003370-003933)	Spark Plug	8
▲	37420	(003370-003933)	Point Set	2
▲	45631	(003370-003933)	Condenser	2
▲	37421	(003370-003933)	Rotor	2
▲	58120	(003370-003933)	Element, Air Cleaner	1
▲	55740	(003370-003933)	Element, Hydraulic Filter	2
▲	65869-5	(003370-003933)	Hydraulic Fluid, 5 Gal (18.9 L)	3
▽	61478	(003934-005268)	Performance Package, TM27, 400 Hour, Gas & LPG	1
▲	16853	(003934-005268)	Filter, Oil	8
▲	01433-1	(003934-005268)	Grease, Special	1
▲	34726	(003934-005268)	Spark Plug	8
▲	09837	(003934-005268)	Rotor	2
▲	58120	(003934-005268)	Element, Air Cleaner	1
▲	55740	(003934-005268)	Element, Hydraulic Filter	2
▲	65869-5	(003934-005268)	Hydraulic Fluid, 5 Gal (18.9 L)	3
▽	79111	(005269-)	Performance Package, TM27, 400 Hour, Gas & LPG, Servo	1
▲	16853	(005269-)	Filter, Oil	8
▲	01433-1	(005269-)	Grease, Special	1
▲	34726	(005269-)	Spark Plug	8
▲	09837	(005269-)	Rotor	2
▲	58120	(005269-)	Element, Air Cleaner	1
▲	65221	(005269-)	Element, Hydraulic Filter	2
▲	65869-5	(005269-)	Hydraulic Fluid, 5 Gal (18.9 L)	3
▽	02462	(003370-005268)	Performance Package, 400 Hour, Diesel	1
▲	39703-2	(003370-005268)	Element, Oil Filter	8
▲	01433-1	(003370-005268)	Grease, Special	1
▲	76335	(003370-005268)	Element Assembly, Air Cleaner	1
▲	52770-9	(003370-005268)	Element, Fuel Filter	1
▲	55740	(003370-005268)	Element, Hydraulic Filter	2
▲	65869-5	(003370-005268)	Hydraulic Fluid, 5 Gal (18.9 L)	3
▽	79112	(005269-)	Performance Package, 400 Hour, Diesel, Servo	1
▲	39703-2	(005269-)	Element, Oil Filter	8
▲	01433-1	(005269-)	Grease, Special	1
▲	76335	(005269-)	Element Assembly, Air Cleaner	1
▲	52770-9	(005269-)	Element, Fuel Filter	1
▲	65221	(005269-)	Element, Hydraulic Filter	2
▲	65869-5	(005269-)	Hydraulic Fluid, 5 Gal (18.9 L)	3
▽	02460	(003370-)	Squeegee Blades Kit, Side	1
▲	60015	(003370-)	Blade, Squeegee	4
▲	59617	(003370-)	Flap, Containment	2
▲	75711	(003370-)	Brush	2
▲	75799	(003370-)	Skirt	2

STANDARD PARTS

Fig. 1 - Recommended General Maintenance Items

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	02457	(003370-	) Squeegee Blades Kit, Rear	1
▲	60016	(003370-	) Blade, Rear	1
▲	76937	(003370-	) Strip, Rear Backup	2
▲	60018	(003370-	) Blade, Front	1
▽	02458	(003370-	) Seal Kit, Tank Door	1
▲	25665	(003370-	) Replacement Kit, Thumbscrew	10
▲	25656	(004345-004344	) Fastener, Thumbscrew	10
▲	28165	(003370-004344	) Fastener, Nut	10
▲	25663	(004345-	) Fastener, Nut	10
▲	26015	(003370-	) Fastener, Washer	10
▲	06332	(003370-	) Seal, Door	2
▲	76532	(003370-	) Gasket, Front Suction Tube	1
▲	06227	(003370-	) Gasket	1
▲	75076	(003370-	) Gasket, Rear Suction Tube	1
▲	50518	(003370-	) Flap, Rubber	1
▽	02456	(003370-	) Hose Kit, Vacuum, SRS®	1
▲	40870-7	(003370-	) Hose Assembly	1
▲	23498	(003370-	) Clamp, Worm Drive	4
▲	76828	(003370-	) Hose Assembly	1
▲	75635	(003370-	) Hose Assembly	1
▲	11531	(003370-	) Clamp, Worm Drive	1
▲	50845	(003370-	) Hose, Hopper	1
▲	22297	(003370-	) Clamp, Worm Drive	2
▲	40870-1	(003370-	) Hose Assembly	1
▲	25649	(003370-	) Hose, Squeegee	1
▲	43555	(003370-	) Clamp, Worm Drive	2
▽	02455	(003370-	) Seal Kit, Tank Door, SRS®	1
▲	78802	(003370-	) Gasket	3
▲	06229	(003370-	) Gasket, Door	1
▲	79500	(003370-	) Sheet, Top Sandblast	2
▲	76395	(003370-	) Gasket, Sandblast Cover	1
▲	79557	(003370-	) Gasket, Air Outlet	1
▲	76532	(003370-	) Gasket, Front Suction Tube	1
▲	25665	(003370-004344	) Replacement Kit, Thumbscrew	10
▲	25656	(004345-	) Fastener, Thumbscrew	10
▲	28165	(003370-004344	) Fastener, Nut	10
▲	25663	(004345-	) Fastener, Nut	10
▲	26015	(003370-	) Fastener, Washer	10
▲	79391	(003370-	) Gasket, Solution Door	1
▲	06223	(003370-	) Gasket	2
▲	79545	(003370-	) Gasket	1
▲	23498	(003370-	) Clamp, Worm Drive	1

Fig. 2 - Replacement Brushes



02575 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	75718	(003370-	) Brush, Polypropylene	2
1	75722	(003370-	) Brush, Abrasive Bristle	2

Fig. 3 - Seat Group

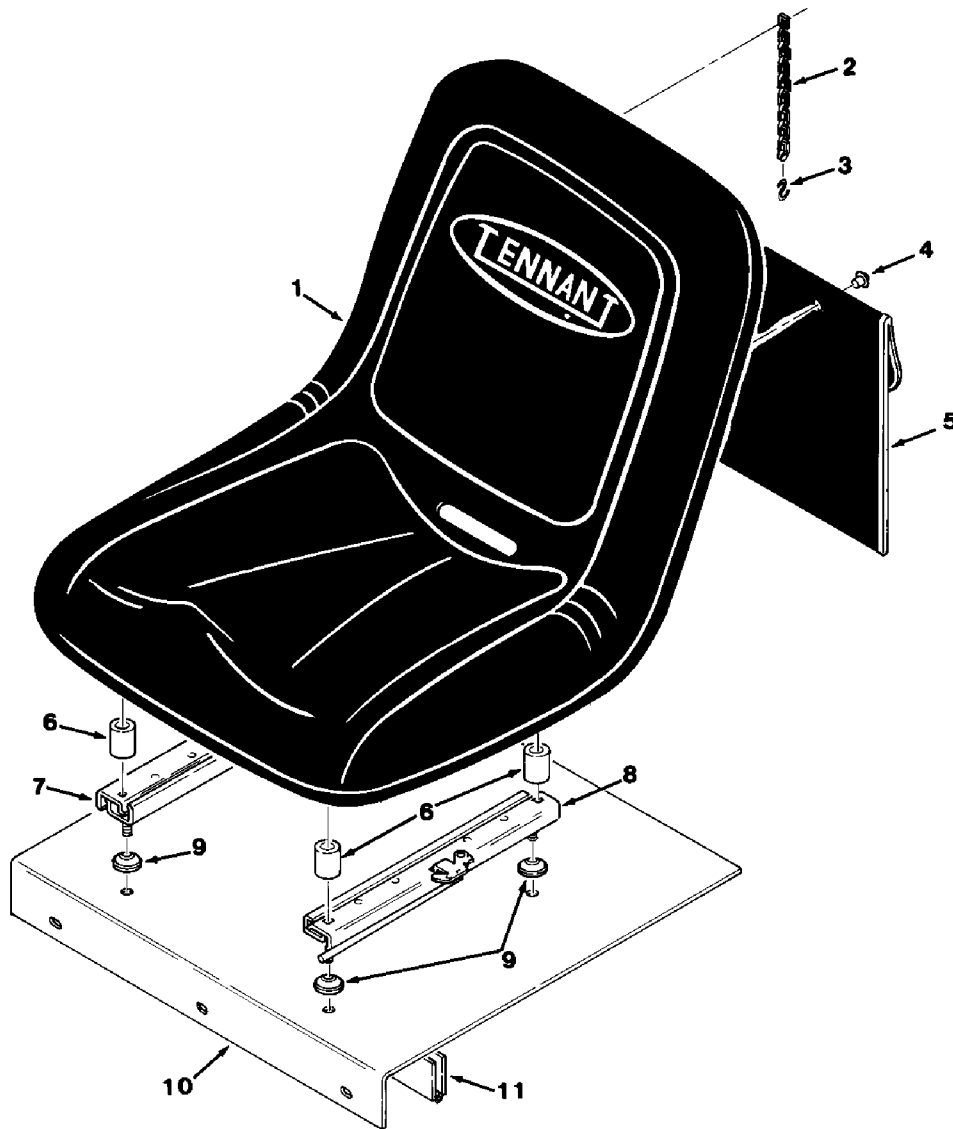
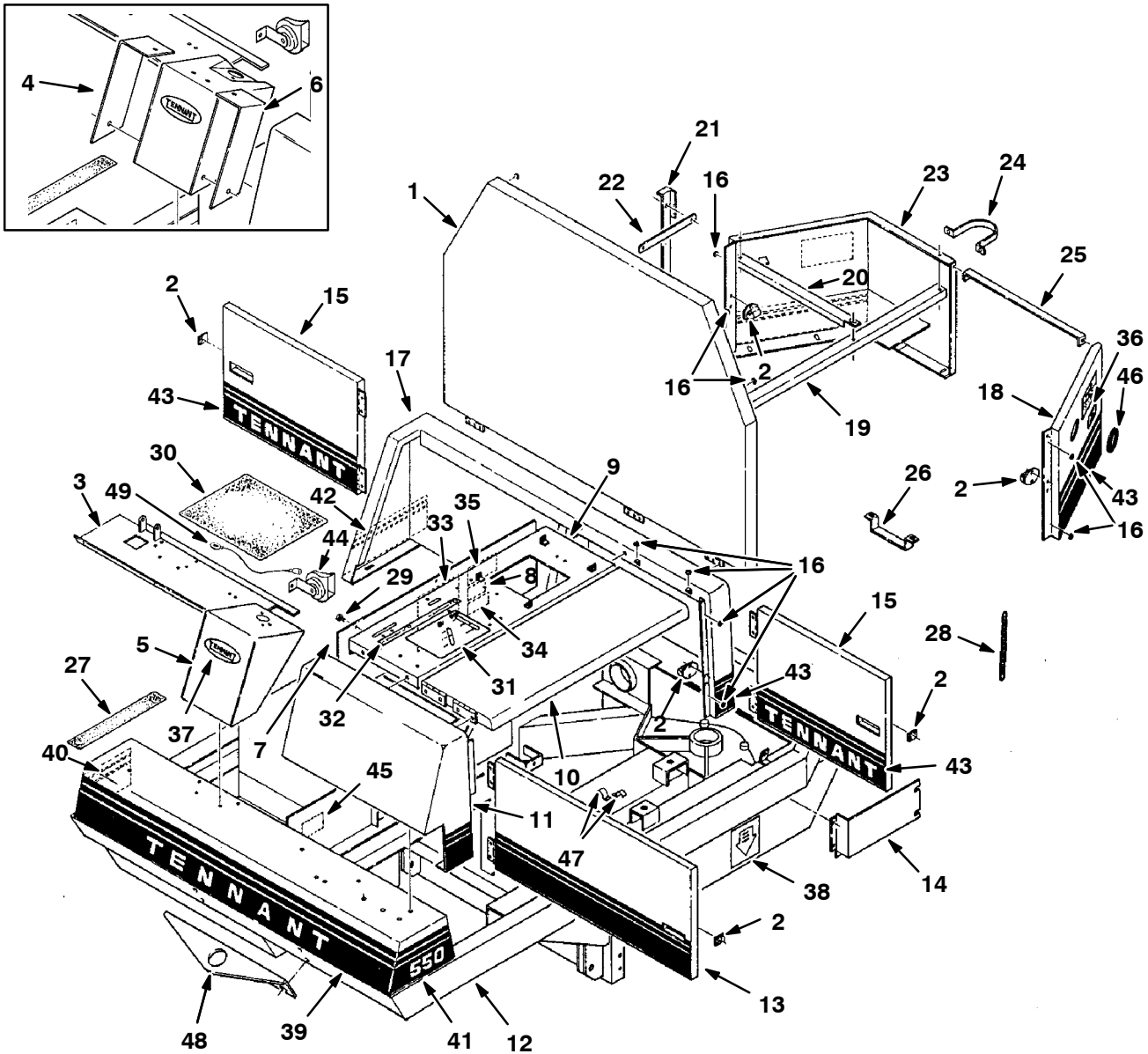


Fig. 3 - Seat Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	79605	(003370-	) Seat	1
2	43203	(003370-	) Chain	1
3	43363	(003370-	) Hook, S	1
4	68567	(003370-	) Rivet, Pop	2
5	68275	(003370-004674	) Pouch, Operator's Manual, 13.6 in (345mm)	1
5	48790	(004675-	) Pouch, Operator's Manual, 7.5 in (190mm)	1
6	02997	(003370-	) Sleeve	4
7	51459	(003370-	) Adjuster, Seat	1
8	51458	(003370-	) Adjuster Assembly, Seat	1
9	52615	(003370-	) Spacer, Seat Adjuster	4
10	16669	(003370-	) Plate, Seat Mount	1
11	75272	(003370-	) Hinge, Seat	1

Fig. 4 - Main Frame Group



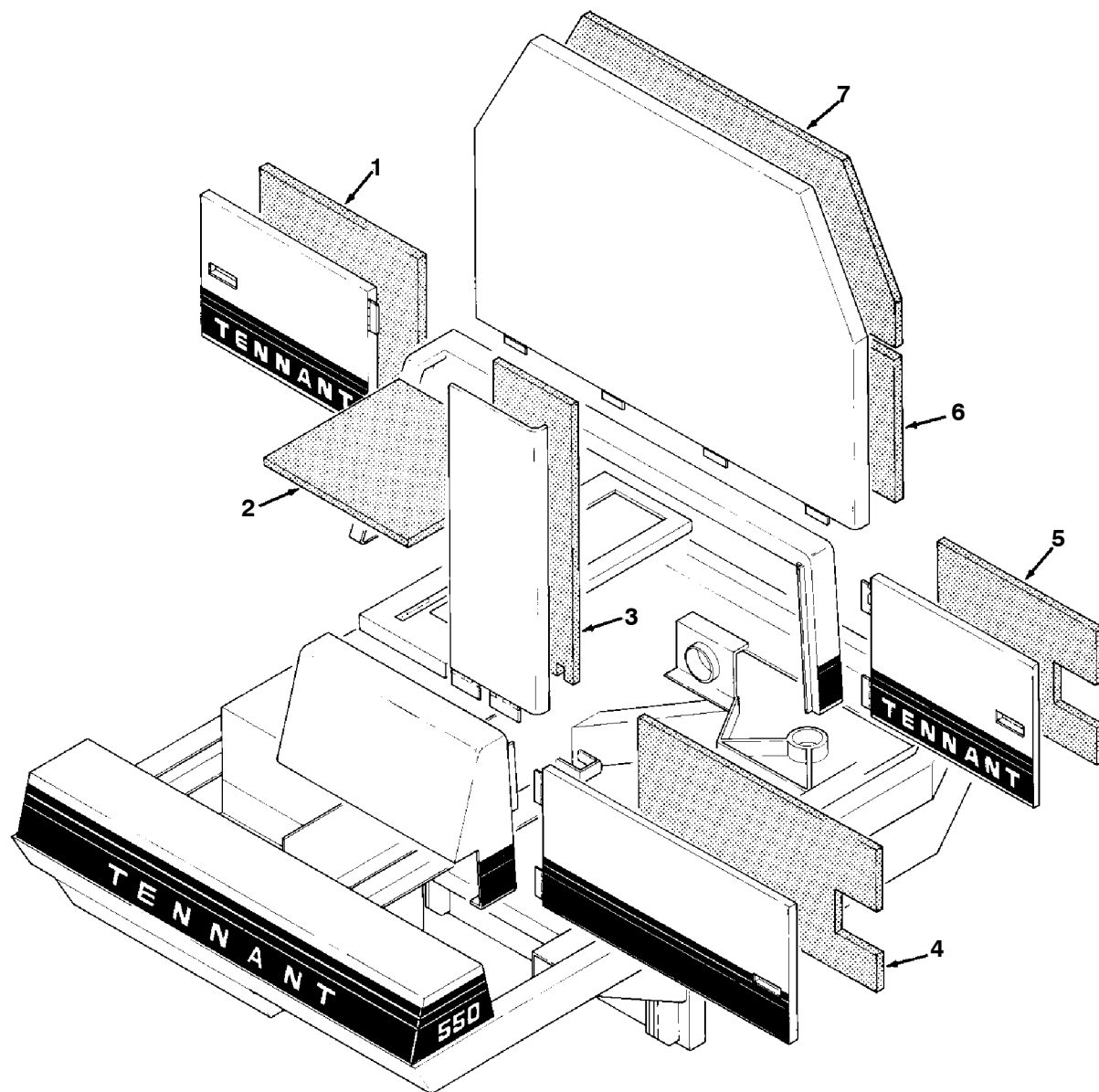
09796 - 550, NA

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	76811	(003370-)	Door, Engine Cover	1	
2	64903	(003370-)	Latch, Door	3	
3	76640	(003370-)	Pan, Floor	1	
4	75379	(003370-004362)	Wrap, R.H., Replaced by none	1	
5	25186	(003370-)	Housing, Steering Column	1	
6	75379-1	(003370-004362)	Wrap, L.H., Replaced by none	1	
▽	7	75244-1	(003370-)	Panel, Side Kick	1
▲	8	37089	(003370-)	Label, Caution, Reduce Travel	1
	9	75547	(003370-)	Panel, Dash	1
	10	75268	(003370-)	Door, Hydraulic Tank, Top Access	1
	11	31668	(003370-)	Shroud, Front	1
	12	60970	(003370-)	Frame, Main Tractor	1
	13	75267	(003370-)	Door, Access, Side, L.H.	1

Fig. 4 - Main Frame Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
14	76650	(003370-	) Cover, Governor	1
15	76813	(003370-	) Door, Rear Side Access	2
16	51787	(003370-	) Bumper, Rubber	12
17	75480A	(003370-	) Back Frame	1
▽	18	78104-4	(003370-) Shroud, Engine Compartment, L.H.	1
▲	57630	(003370-	) Label, Danger, Keep Out Pinch	1
19	32575	(003370-	) Brace, Engine Compartment	1
20	76583	(003370-	) Support, Brace	1
21	01736	(003370-	) Arm, Engine Cover Support	1
	43454	(003370-	) Washer, Nylon	3
22	32580	(003370-	) Link, Engine Cover Support	1
▽	23	78140-1	(003370-) Shroud, Engine Compartment, R.H.	1
▲	57630	(003370-	) Label, Danger, Keep Out Pinch	1
24	78118	(003370-004152	) Clamp, Hose	1
25	76562	(003370-	) Angle, Grille	1
26	76869	(003370-	) Bracket, Hose	1
27	75430	(003370-	) Pad, Non-skid	1
28	48183	(003370-	) Chain, Static Drag	1
	50646	(003370-	) Trim, Plastic, Steering Column Housing	4
29	24593	(003370-	) Screw, Hex	6
	62595-18	(003370-	) Molding, Rigid, 3.0" (76 mm)	2
30	69571	(003370-	) Mat, Floor	1
31	76354	(003370-	) Label, Brushes	1
32	76113	(003370-	) Label, Throttle and Solution	1
33	76156	(003370-	) Label, Maintenance Chart	1
34	76067	(003370-	) Label, Tire Pressure	1
35	48242	(003370-	) Label, Important	1
36	51368	(003370-	) Label, Maintenance Note	1
37	27474	(003370-	) Label, TENNANT®	1
38	76158	(003370-	) Label, Jack At This Point	2
39	75812	(003370-	) Label, Stripe, Front	1
40	75813	(003370-	) Label, Wing, R.H.	1
41	75814	(003370-	) Label, Wing, L.H.	1
42	75810	(003370-	) Label, Stripe, Side	2
43	75811	(003370-	) Label, Stripe	2
44	21642	(003370-	) Horn, 12 Volt	1
45	37101	(003370-	) Label, Patent, Scrubber	1
46	62595-4	(003370-	) Molding, Rigid	1
47	44031	(003370-	) Clamp	2
	10632-12	(003370-	) Grommet, 0.38" (10 mm) I.D.	1
	62595-9	(003370-	) Molding, Rigid, 17.75" (450 mm) L	1
48	32117	(005101-	) Bracket, Tow Bypass	1
49	70284	(003370-	) Wire, Lead	1

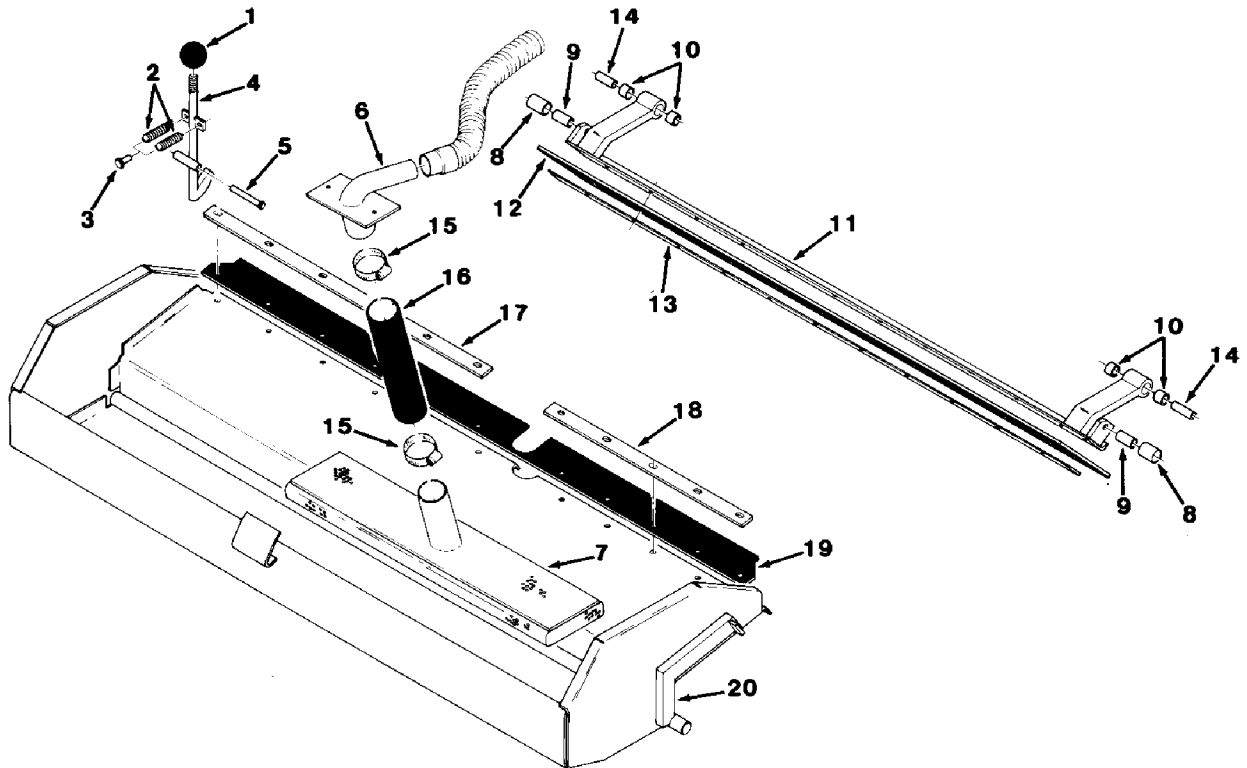
Fig. 5 - Noise Insulation Group



00314 - 550, 1550, NA

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	76864	(003370-)	Insulation, Side Door, R.H.	1
2	76870	(003370-)	Insulation, Seat	1
3	76867	(003370-)	Insulation, Top, Hydraulic Tank Door	1
4	76868	(003370-)	Insulation, Front, Side Door, L.H.	1
5	76864	(003370-)	Insulation, Rear, Side Door, L.H.	1
6	76866	(003370-)	Insulation, Engine Access Door	1
7	78012	(003370-)	Insulation, Engine Access Door	1

Fig. 6 - Hopper Group



00299 - 550, 550E

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	26156	(003370-)	Knob	1	
2	75575	(003370-)	Spring	2	
3	46800	(003370-)	Pin, Clevis	1	
4	75530	(003370-)	Latch, Hopper	1	
5	23191	(003370-)	Pin, Clevis	1	
6	75607	(003370-)	Nozzle, Hopper	1	
7	40061A	(003370-)	Strainer, Suction	1	
▽	75634	(003370-)	Deflector Assembly, Scrub Brush	1	
▲	8	75642	(003370-)	Bearing, Sleeve	2
▲	9	75636	(003370-)	Sleeve	2
▲	10	75681	(003370-)	Bearing	4
▲	11	75638	(003370-)	Deflector, Scrub Brush	1
▲	12	75649	(003370-)	Skirt, Deflector	1
▲	13	75648	(003370-)	Retainer, Deflector Skirt	1
14	75643	(003370-)	Sleeve	2	
15	22297	(003370-)	Clamp, Worm Drive	2	
16	50845	(003370-)	Hose, Hopper	1	
▽	75569	(003370-)	Hopper Assembly	1	
▲	17	75571	(003370-)	Retainer, Hopper Lip	1
▲	18	75572	(003370-)	Retainer, Hopper Lip	1
▲	19	75570	(003370-)	Lip, Hopper	1
▲	20	75550	(003370-)	Hopper, Debris	1

Fig. 7 - Scrub Head Lift Group

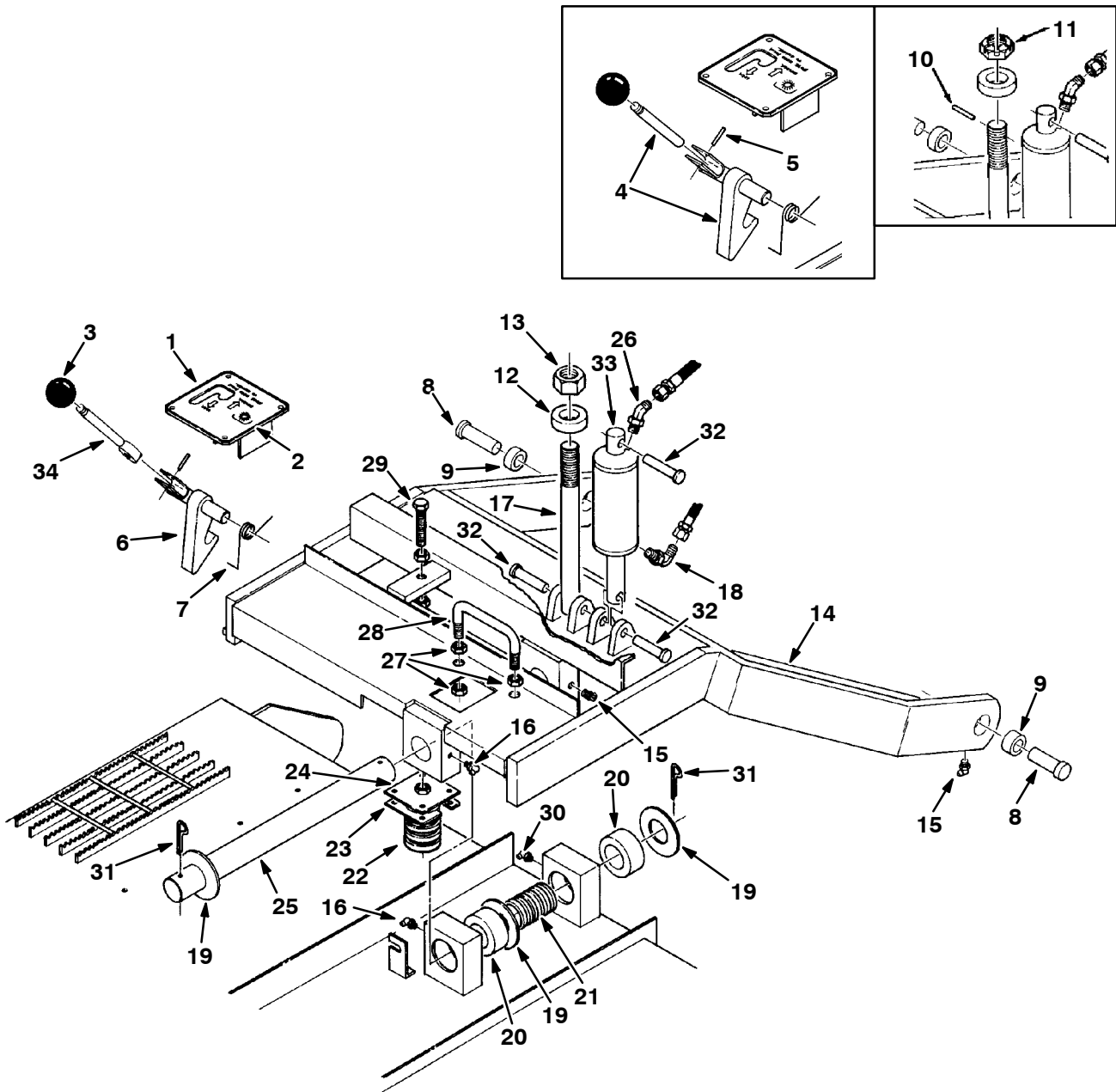


Fig. 7 - Scrub Head Lift Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	76063	(003370-	) Label, Headlock	1
2	76628	(003370-	) Cover, Headlock	1
3	26565	(003370-	) Knob	1
4	25224	(003370-004164	) Replacement Kit, Headlock	1
5	11476	(003370-004164	) Pin, Roll	1
6	25219	(004165-	) Pivot, Headlock	1
7	78078	(003370-	) Spring	1
8	04733-12	(003370-	) Pin, Clevis	2
9	42120	(003370-	) Bearing	2
10	14326	(003370-003402	) Pin, Roll	1
11	25018	(003370-003402	) Nut, Slotted	1
12	15398	(003370-	) Sleeve	1
13	02589	(003403-	) Nut, Nylon	1
14	75627	(003370-	) Lift, Scrubber Head	1
15	11716	(003370-	) Fitting, Grease, 45°	3
16	11048	(003370-	) Fitting, Grease	2
17	75622	(003370-	) Stud	1
18	77097	(003370-	) Fitting, Elbow	1
19	39348	(003370-	) Washer	3
20	42120-9	(003370-	) Bearing	2
21	75617	(003370-	) Spring	1
22	40846	(003370-	) Spring	1
23	75766	(003370-	) Plate, Mounting	1
24	75764	(003370-	) Plate	1
25	75616	(003370-	) Shaft, Pivot	1
26	34359	(003370-	) Fitting, Elbow, 45°	1
27	32524	(003370-	) Nut	4
28	48901	(003370-	) U-Bolt	1
29	53963A	(003370-	) Screw, Hex	1
30	06418	(003370-	) Fitting, Grease	1
31	08174	(003370-	) Pin, Cotter	2
32	06279	(003370-	) Pin, Clevis	3
33	31554	(003370-003879	) Cylinder, Hydraulic	1
33	09624	(003880-	) Cylinder, Hydraulic	1
34	25220	(004165-	) Lever, Headlock	1

Fig. 8 - Solution Supply and Control Group

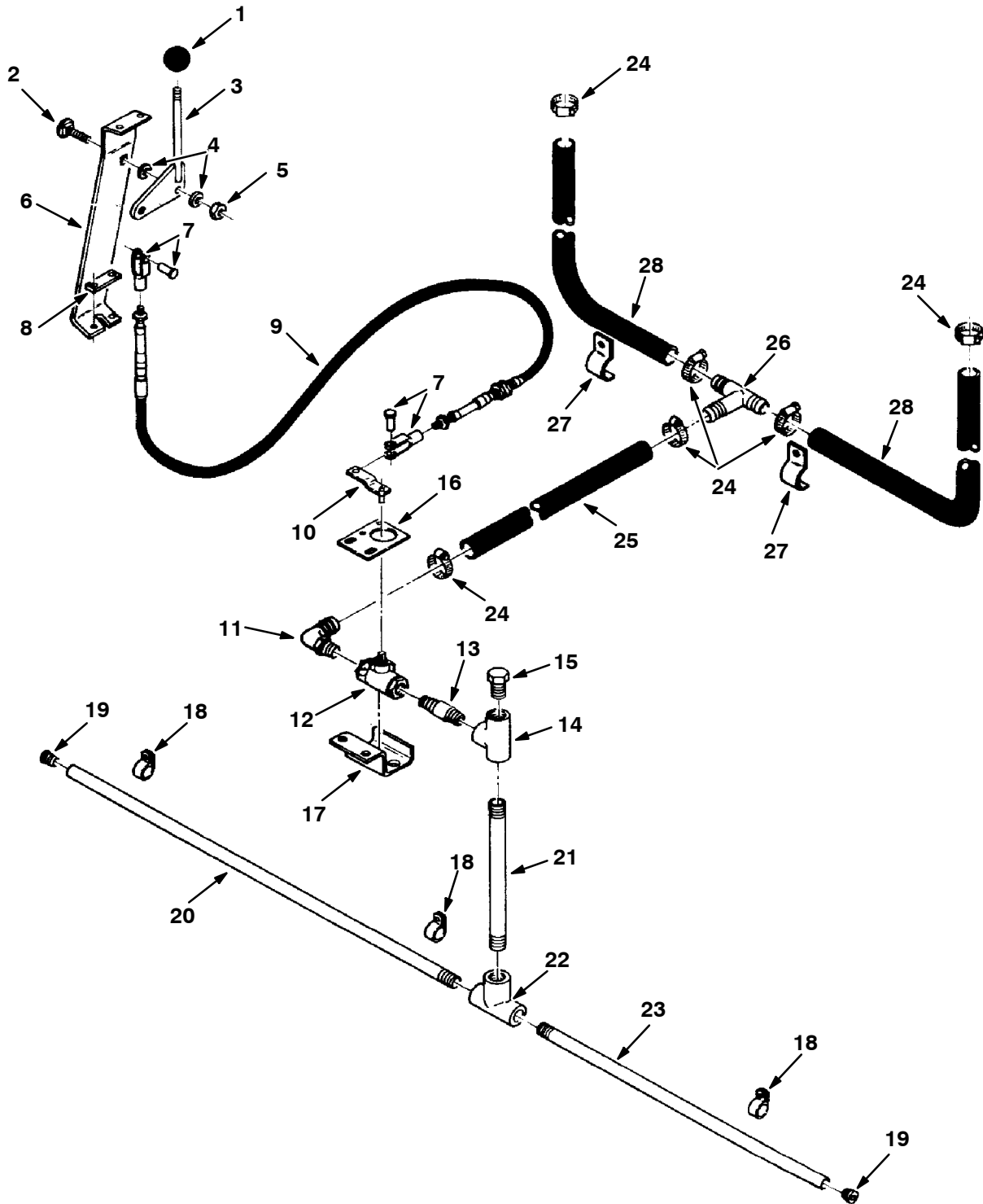


Fig. 8 - Solution Supply and Control Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	26565	(003370-	) Knob	1
▽	75318	(003370-	) Lever Assembly, Solution Control	1
▲	2 56903	(003370-	) Bolt	1
▲	3 08791	(003370-	) Bellcrank	1
▲	4 52296	(003370-	) Washer, Nylon	2
▲	5 50902	(003370-	) Nut	1
▲	6 75319	(003370-	) Bar, Mounting	1
▲	7 41063	(003370-	) Clevis and Pin	2
▲	8 23515	(003370-	) Strip, Cable Mounting	1
▲	9 75314	(003370-	) Cable, Solution Control	1
10	75801	(003370-004014	) Arm, Control	1
10	12072	(004015-	) Arm, Control	1
11	75604	(003370-	) Elbow	1
12	12052	(003370-004014	) Valve Replacement Kit, Water	1
12	12060	(004015-	) Valve, Water	1
13	75601A	(003370-	) Tube, Connector	1
14	42133A	(003370-	) Tee, Plastic	1
15	75611	(003370-	) Plug, Flushing	1
16	75803	(003370-004014	) Plate, Valve Mounting	1
16	12074	(004015-	) Plate, Valve Mounting	1
17	75802-1	(003370-	) Bracket, Water Valve Mounting	1
18	50544	(003370-	) Clamp, Cable	3
19	42153A	(003370-	) Plug, Tube	2
20	75596A	(003370-	) Tube, Spreader	1
21	31313	(003370-	) Tube, Spreader	1
22	42133A	(003370-	) Tee, Plastic	1
23	75597A	(003370-	) Tube, Spreader	1
24	11399	(003370-	) Clamp, Worm Drive	6
25	47846	(003370-	) Hose, Solution	1
26	75119	(003370-	) Tee, Plastic	1
27	44031	(003370-	) Clamp, Hose	2
28	47845	(003370-	) Hose, Solution	2

Fig. 9 - Right Side Squeegee Assembly

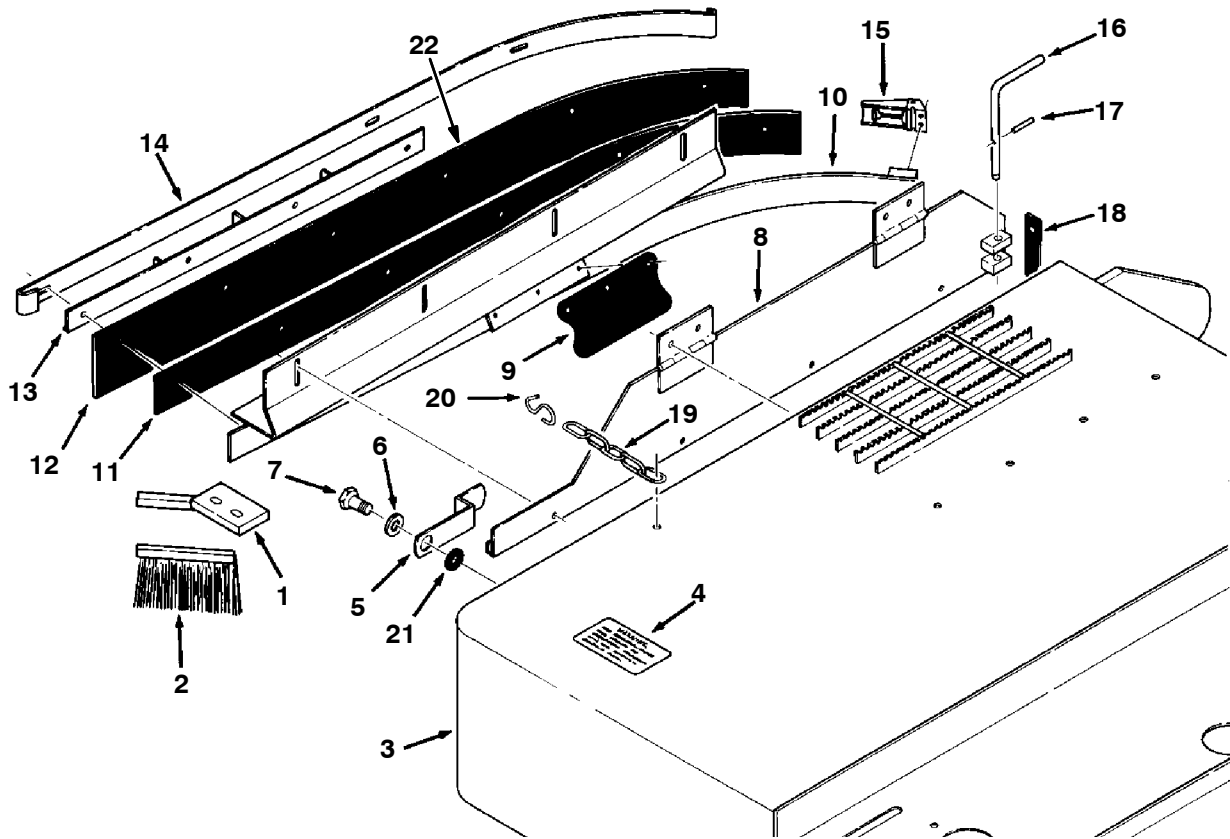


Fig. 9 - Right Side Squeegee Assembly

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽		75712	(003370-	) Deflector Assembly, Brush	1
▲	1	75702	(003370-	) Retainer, Brush	1
▲	2	75711	(003370-	) Brush	1
▽	3	75501-1	(003370-	) Frame, Scrubber Head	1
▲	4	40575	(003370-	) Label, Warning, Use Scrubber	2
	5	75757	(003370-	) Latch, Door	1
	6	32486	(003370-	) Washer	1
	7	39810	(003370-	) Screw, Hex	1
▽		75790	(003370-	) Squeegee Assembly, Right Side	1
▲	8	75791	(003370-	) Door, Squeegee	1
▲	9	59617	(003370-	) Flap, Containment	1
▲	10	75788	(003370-	) Frame, Side Squeegee, R.H.	1
▲	11	75799	(003370-	) Strip, Backup	1
▲	12	60015	(003370-	) Blade, Squeegee	1
▲	13	75588	(003370-	) Bracket, Bridge	1
▲	14	75592	(003370-	) Band, Squeegee, Retaining	1
▲	15	87579	(003370-	) Latch, Cam Lock Band	1
▲	16	75528	(003370-	) Pin, Door Locking	1
▲	17	11476	(003370-	) Pin, Roll	1
	18	75740	(003370-	) Guard, Splash	1
▽		40759	(003370-	) Chain and Hook Assembly	1
▲	19	40758	(003370-	) Chain	1
▲	20	40646	(003370-	) Hook, Chain	1
	21	59633	(003370-	) Bearing, Thrust	2
	22	78562	(003370-	) Blade, Squeegee, Urethane	1

Fig. 10 - Left Side Squeegee Assembly

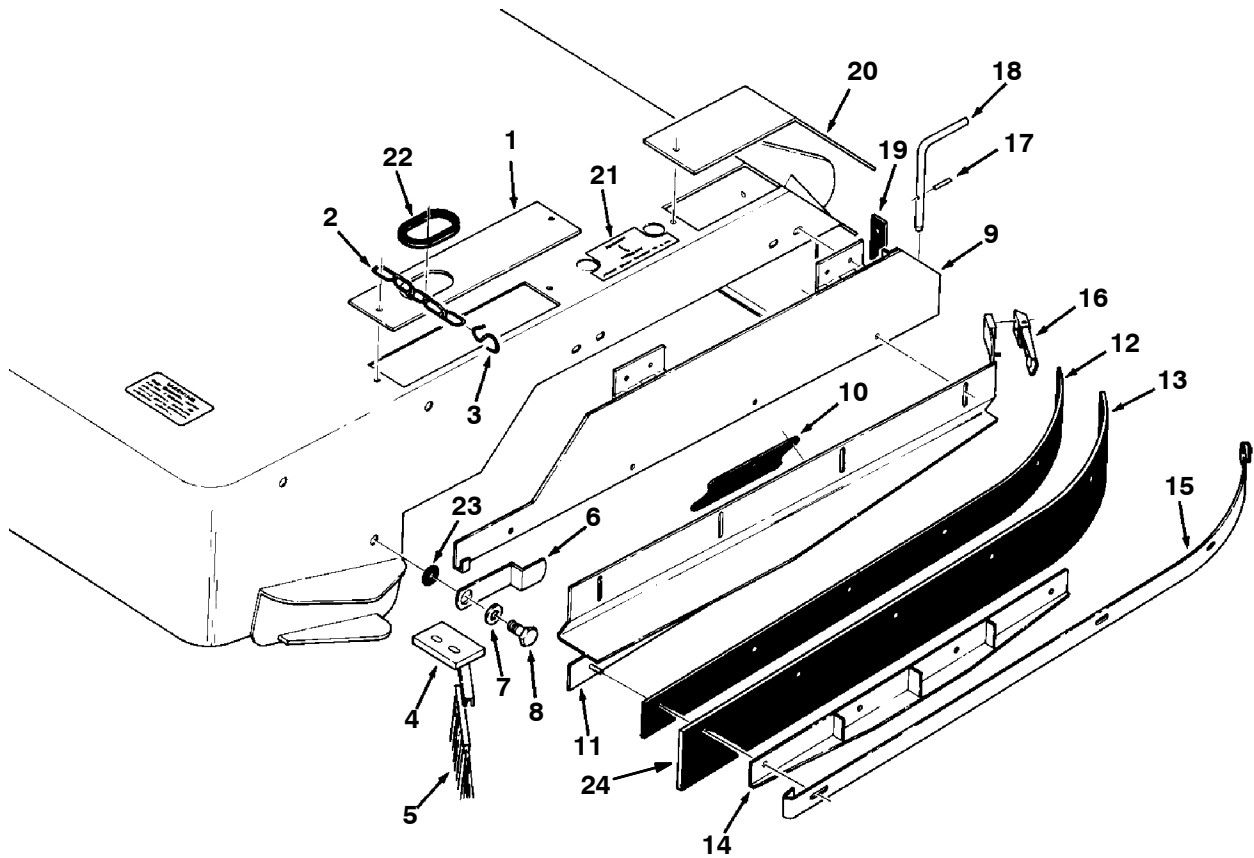
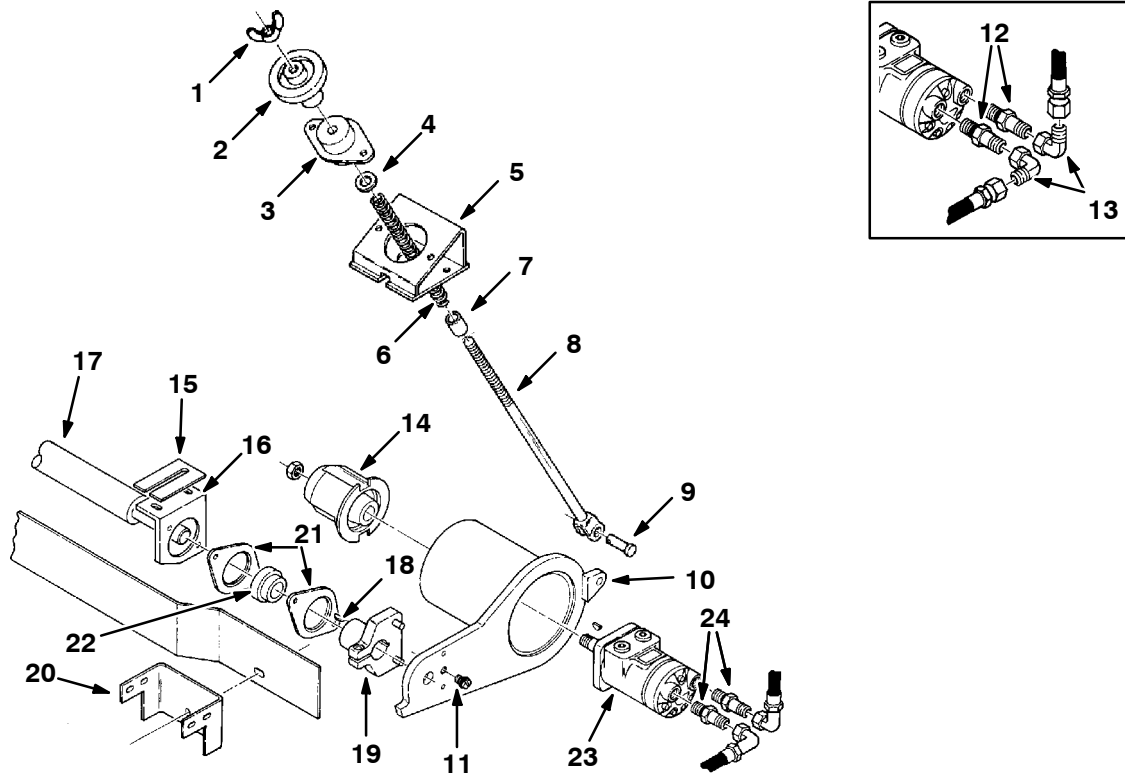


Fig. 10 - Left Side Squeegee Assembly

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	31634	(003370-	) Strip, Cover	1
▽	40759	(003370-	) Chain, Assembly, Door	2
▲	2 40758	(003370-	) Chain	1
▲	3 40646	(003370-	) Hook	1
▽	75713	(003370-	) Deflector Assembly, Brush, L.H.	1
▲	4 75703	(003370-	) Retainer, Brush	1
▲	5 75711	(003370-	) Brush	1
	6 75757	(003370-	) Latch, Door	1
	7 32486	(003370-	) Washer	1
	8 39810	(003370-	) Screw, Hex	1
▽	75795	(003370-	) Squeegee Assembly, Left Side	1
▲	9 75796	(003370-	) Door, Squeegee, L.H.	1
▲	10 59617	(003370-	) Flap, Containment	1
▲	11 75789	(003370-	) Frame, Side Squeegee, L.H.	1
▲	12 75799	(003370-	) Strip, Backup	1
▲	13 60015	(003370-	) Blade, Squeegee	1
▲	14 75588	(003370-	) Bracket, Bridge	1
▲	15 75592	(003370-	) Band, Squeegee, Retaining	1
▲	16 87579	(003370-	) Latch, Cam Lock Band	1
▲	17 11476	(003370-	) Pin, Roll	1
▲	18 75528	(003370-	) Pin, Door Locking	1
	19 75740	(003370-	) Guard, Splash	1
	20 76677	(003370-	) Strip, Cover	1
	21 76066	(003370-	) Label, Brush Pressure	1
	22 10632-19	(003370-	) Grommet	1
	23 59633	(003370-	) Bearing, Thrust	2
	24 78562	(003370-	) Blade, Squeegee, Urethane	1

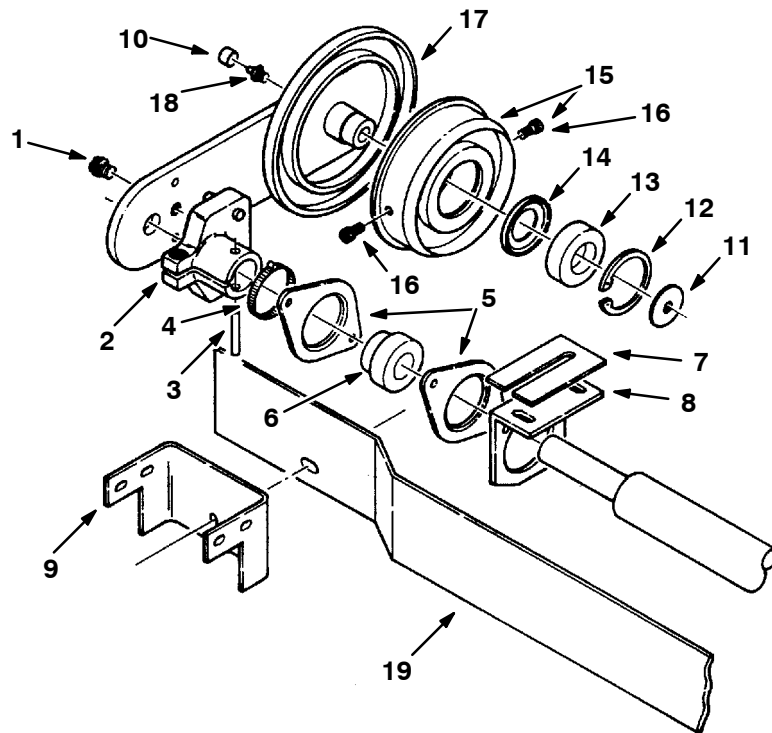
Fig. 11 - Front Brush Drive Components Group



00320-02487 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	39274	(003370-)	Lock, Knob, Adjusting	1	
2	51452	(003370-)	Knob, Adjusting	1	
3	75768	(003370-)	Isolator, Vibration	1	
4	32493	(003370-)	Washer	1	
5	75769	(003370-)	Bracket, Mounting	1	
6	75773	(003370-)	Spring	1	
7	75772	(003370-)	Sleeve	1	
8	06573	(003370-)	Link, Brush Lift	1	
9	75520	(003370-)	Pin, Clevis	1	
10	76667	(003370-)	Arm, Brush Drive	1	
11	51938	(003370-)	Plug, Plastic	1	
12	31605	(003370-005528)	Fitting, Straight	2	
13	17980	(003370-005528)	Fitting, Elbow	2	
14	76568	(003370-)	Plug, Brush Drive	1	
15	75600	(003370-)	Shim, Bracket, 0.12" (3 mm)	3	
	76218	(003370-)	Shim, Bracket, 0.06" (1.5 mm)	1	
16	42499	(003370-)	Bracket, Bearing, L.H.	1	
▽	75761	(003370-)	Shaft Assembly, Brush	1	
▲	17	75786	(003370-)	Shaft, Brush	1
▲	18	00500-20	(003370-)	Key, Woodruff	1
▲	19	75780	(003370-)	Hub, Brush	1
	20	75760	(003370-)	Channel, Bearing Cover	1
	21	42126	(003370-)	Flange, Bearing	2
	22	51448	(003370-)	Bearing	1
	23	27792	(003370-005025)	Motor, Hydraulic (Replaced by 61489) (See Breakdowns)	1
	23	61489	(005026-)	Motor, Hydraulic (See Breakdowns)	1
	24	47518	(005529-)	Fitting, Straight	2

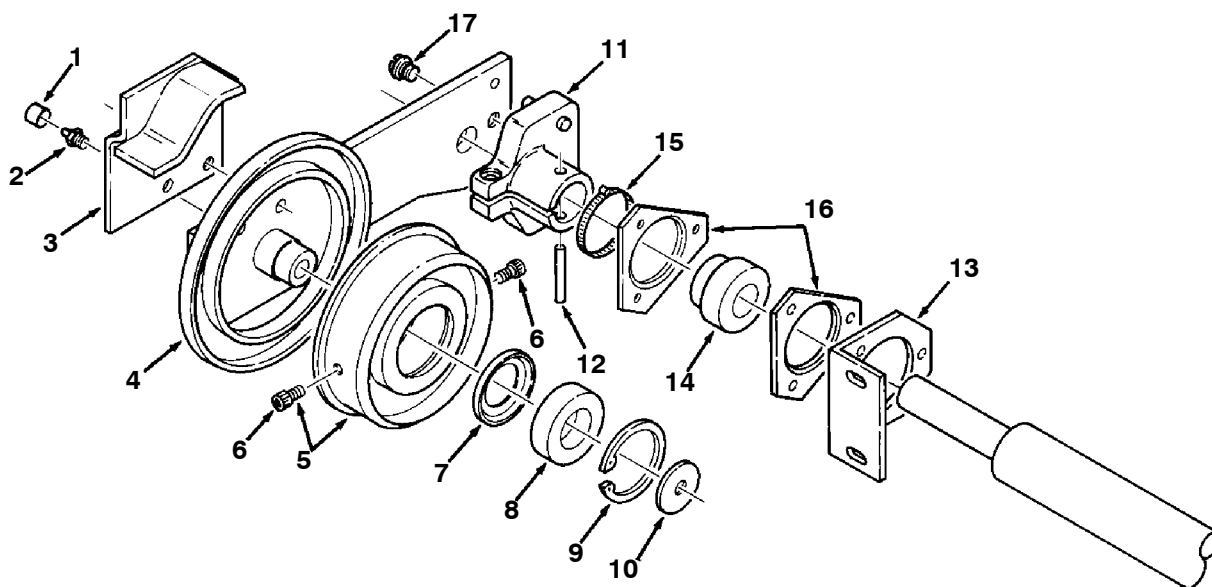
Fig. 12 - Front Brush Idler Assembly



00320 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	51938	(003370-	) Plug, Plastic	1	
▽	75761	(003370-	) Shaft Assembly, Brush	1	
▲	2	75781	(003370-	) Hub, Brush	1
▲	3	51317	(003370-	) Pin, Roll	1
4	22297	(003370-	) Clamp, Worm Drive	1	
5	42126	(003370-	) Flange, Bearing	2	
6	51448	(003370-	) Bearing	1	
7	75600	(003370-	) Shim, Bearing Bracket, 0.12" (3 mm)	3	
	76218	(003370-	) Shim, Bearing Bracket, 0.06" (1.5 mm)	1	
8	42498	(003370-	) Bracket, Bearing, R.H.	1	
9	75760	(003370-	) Channel, Bearing Cover	1	
▽	75656	(003370-	) Idler Assembly, Front Scrub Brush	1	
▲	10	40390	(003370-	) Cover, Grease Fitting	1
▲	11	51564	(003370-	) Washer	1
▲	12	51046	(003370-	) Ring, Retaining	1
▲	13	41032	(003370-	) Bearing	1
▲	14	40076	(003370-	) Shield, Bearing	1
▲▽	15	40999A	(003370-	) Plug, Brush Idler	1
▲▲	16	02984	(003370-	) Screw, Socket	2
▲	17	75657	(003370-	) Arm, Front Brush Idler	1
▲	18	06418	(003370-	) Fitting, Grease	1
▲	36328	(003370-	) Washer, Belleville	1	
	19	25195	(004129-	) Deflector	1

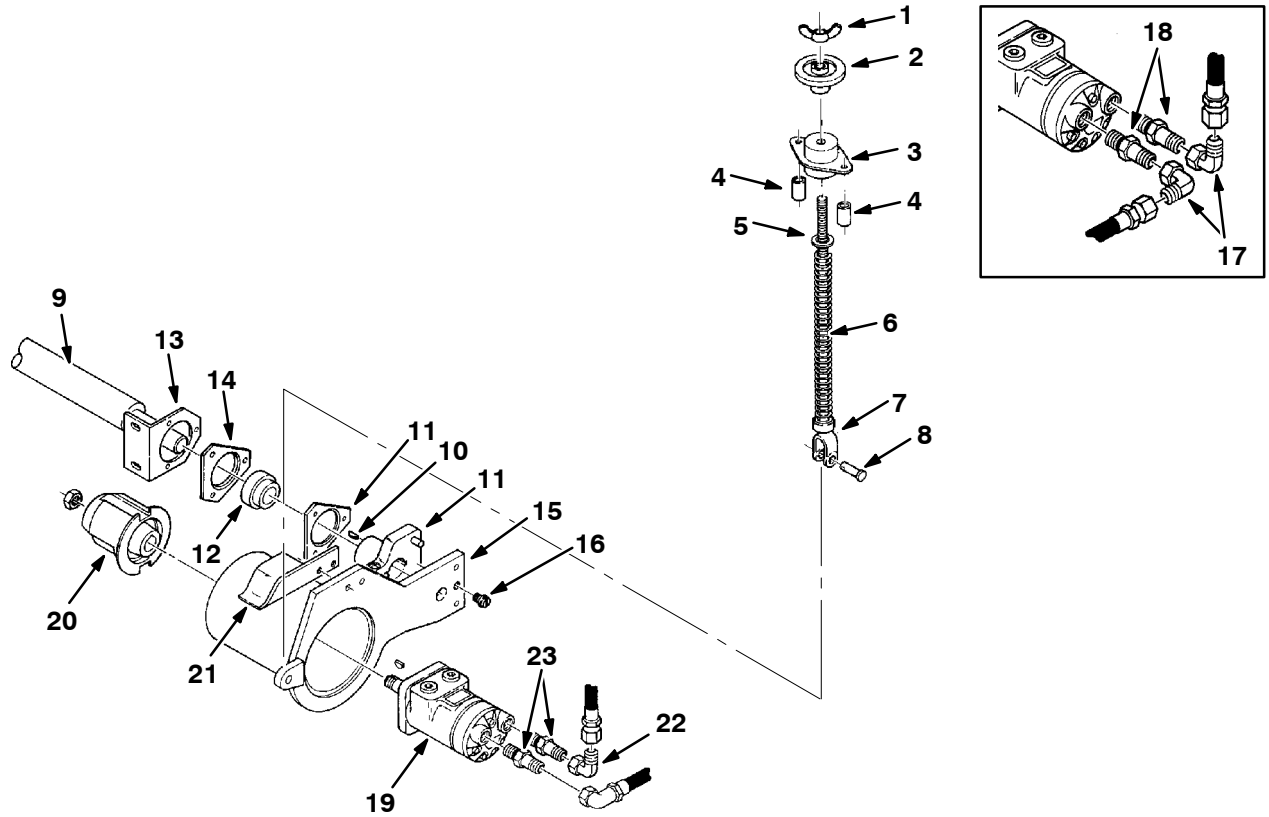
Fig. 13 - Rear Brush Idler Assembly



00320 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	75654	(003370-	) Idler Assembly, Rear Brush	1
▲	1 40390	(003370-	) Cover, Grease Fitting	1
▲	2 06418	(003370-	) Fitting, Grease	1
▲	3 75631	(003370-	) Slide, R.H.	1
▲	4 75655	(003370-	) Arm, Rear Brush Idler	1
▲▽	5 40999A	(003370-	) Plug, Brush Idler	1
▲▲	6 02984	(003370-	) Screw, Socket	2
▲	7 40076	(003370-	) Shield, Bearing	1
▲	8 41032	(003370-	) Bearing	1
▲	9 51046	(003370-	) Ring, Retaining	1
▲	10 51564	(003370-	) Washer	1
▲	36328	(003370-	) Washer, Belleville	1
▽	75761	(003370-	) Shaft Assembly, Brush	1
▲	11 75781	(003370-	) Hub, Brush	1
▲	12 51317	(003370-	) Pin, Roll	1
	13 42639	(003370-	) Bracket, Bearing	1
	14 51448	(003370-	) Bearing	1
	15 22297	(003370-	) Clamp, Worm Drive	1
	16 51449	(003370-	) Flange, Bearing	2
	17 51938	(003370-	) Plug, Plastic	1

Fig. 14 - Rear Brush Drive Components Group



00320-02487 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	39274	(003370-	) Lock, Knob Adjusting	1	
2	51452	(003370-	) Knob, Brush Adjusting	1	
3	75768	(003370-	) Isolator, Vibration	1	
4	75772	(003370-	) Spacer, Isolator	2	
5	32493	(003370-	) Washer	1	
6	75774	(003370-	) Spring	1	
7	06573	(003370-	) Link, Brush Lift	1	
8	75520	(003370-	) Pin, Clevis	1	
▽	75761	(003370-	) Shaft Assembly, Brush	1	
▲	9	75786	(003370-	) Shaft, Brush	1
▲	10	00500-20	(003370-	) Key, Woodruff	1
▲	11	75780	(003370-	) Hub, Brush Drive	1
	12	51448	(003370-	) Bearing	1
	13	42639	(003370-	) Bracket, Bearing Mount	1
	14	51449	(003370-	) Flange, Bearing	2
	15	76665	(003370-	) Arm, Brush Drive	1
	16	51938	(003370-	) Plug, Plastic	1
	17	17980	(003370-005528	) Fitting, Elbow	2
	18	31605	(003370-005528	) Fitting, Straight	2
	19	27792	(003370-005025	) Motor, Hydraulic (Replaced by 61489) (See Breakdowns)	1
	19	61489	(005026-	) Motor, Hydraulic (See Breakdowns)	1
	20	76568	(003370-	) Plug, Brush Drive	1
	21	75706	(003370-	) Slide, L.H.	1
	22	54194	(005529-	) Fitting, Elbow	1
	23	47518	(005529-	) Fitting, Straight	2

Fig. 15 - Steering Column Group

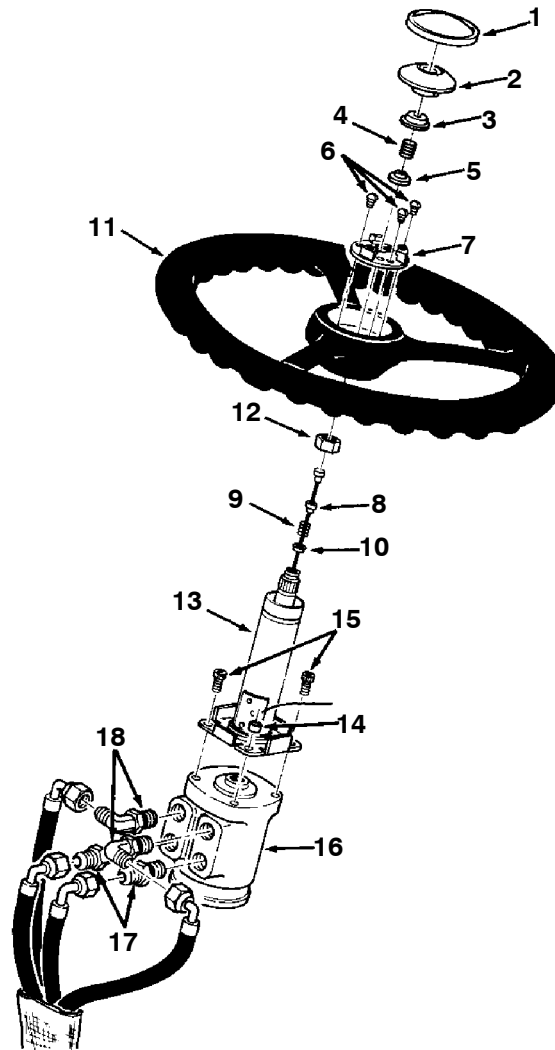
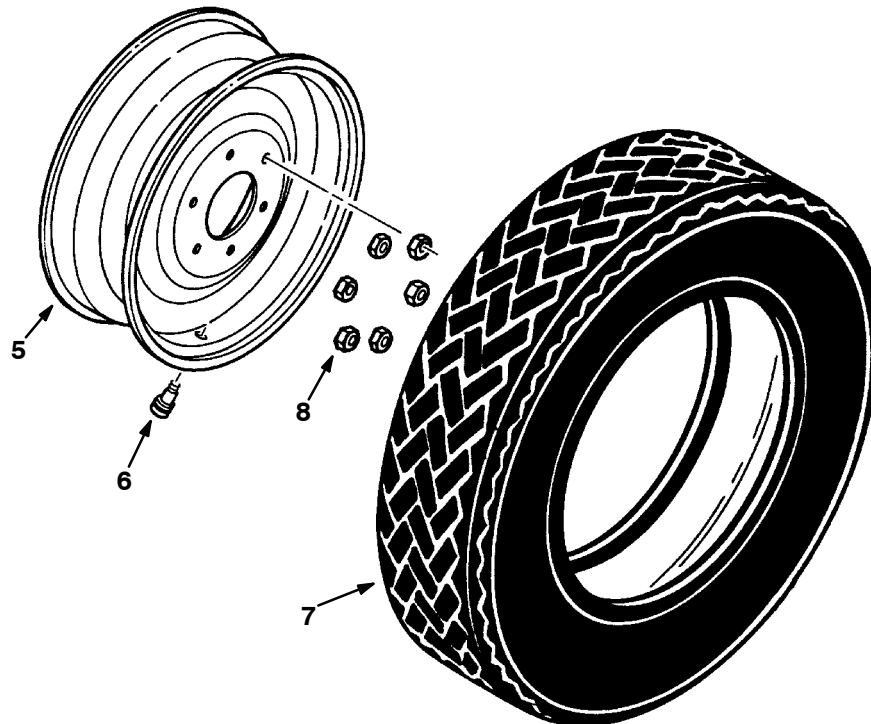
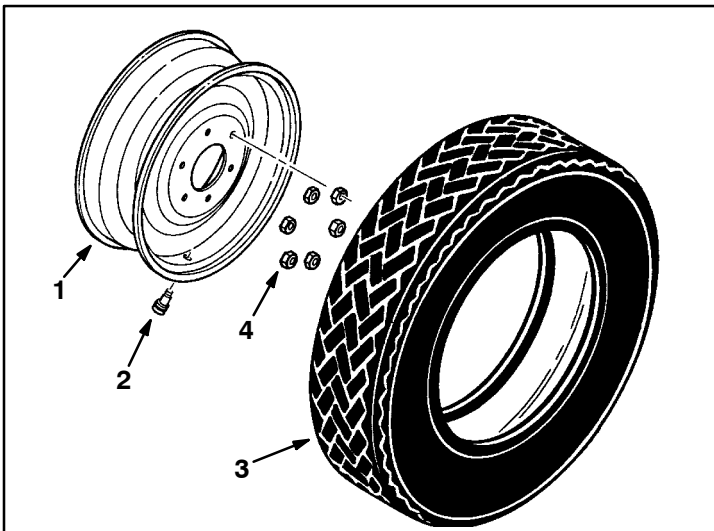


Fig. 15 - Steering Column Group

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽		14700	(003370-	) Horn Button Assembly	1
▲	1	47010-7	(003370-	) Cover, Horn Button	1
▲	2	47010-6	(003370-	) Button, Horn	1
▲	3	47010-2	(003370-	) Cup, Contact	1
▲	4	47010-3	(003370-	) Spring	1
▲	5	47010-1	(003370-	) Cap, Contact	1
▲	6	47010-4	(003370-	) Screw, Horn Button, Wood	3
▲	7	14700-4	(003370-	) Plate	1
▲	8	14700-1	(003370-	) Ferrule, Insulation	1
▲	9	14700-2	(003370-	) Spring	1
▲	10	14700-3	(003370-	) Washer	1
	11	17269	(003370-	) Wheel, Steering	1
	12	57676	(003370-	) Nut	1
	13	52388	(003370-	) Column, Steering	1
	14	44310	(003370-	) Sleeve	2
	15	10829	(003370-	) Screw, Socket	2
	16	57982	(003370-005268	) Control, Steering (See Breakdowns)	1
	16	74176	(005269-	) Control, Steering (See Breakdowns)	1
	17	56690	(003370-	) Fitting, Straight	2
	18	56820	(003370-	) Fitting, Elbow	2

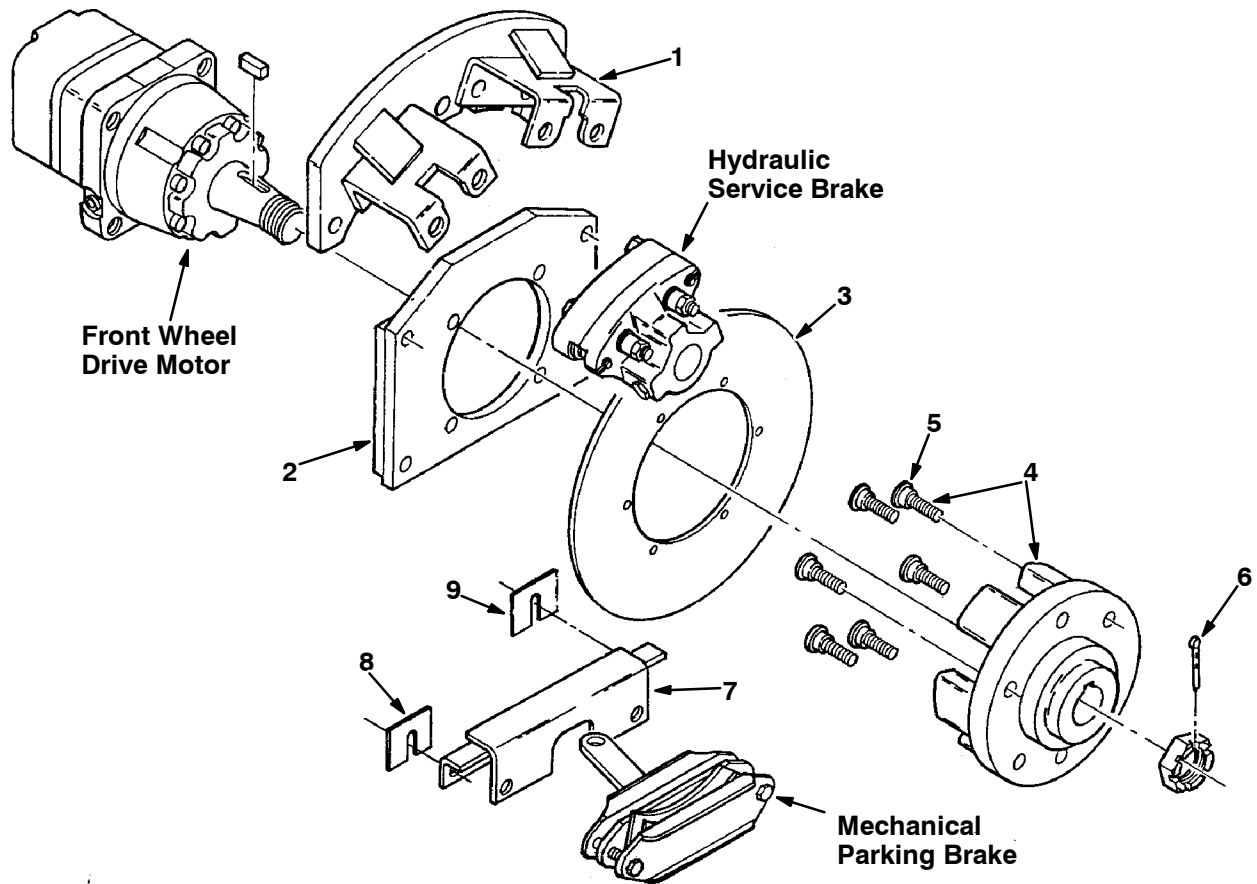
Fig. 16 - Front Wheel Assembly



00311 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
∇	03967	(003370-004506)	Tire & Wheel Assembly (Replaced by 48911)	2
▲ 1	78189	(003370-004506)	Rim, Tire	1
▲ 2	75365	(003370-004506)	Valve, Tire, Air	1
▲ 3	78187	(003370-004506)	Tire (Replaced by 48910)	1
4	24339	(003370-004506)	Nut, Wheel	12
∇	48911	(004507-)	Tire & Wheel Assembly	2
▲ 5	78189	(004507-)	Rim, Tire	1
▲ 6	75365	(004507-)	Valve, Tire, Air	1
▲ 7	48910	(004507-)	Tire	1
8	24339	(004507-)	Nut, Wheel	12

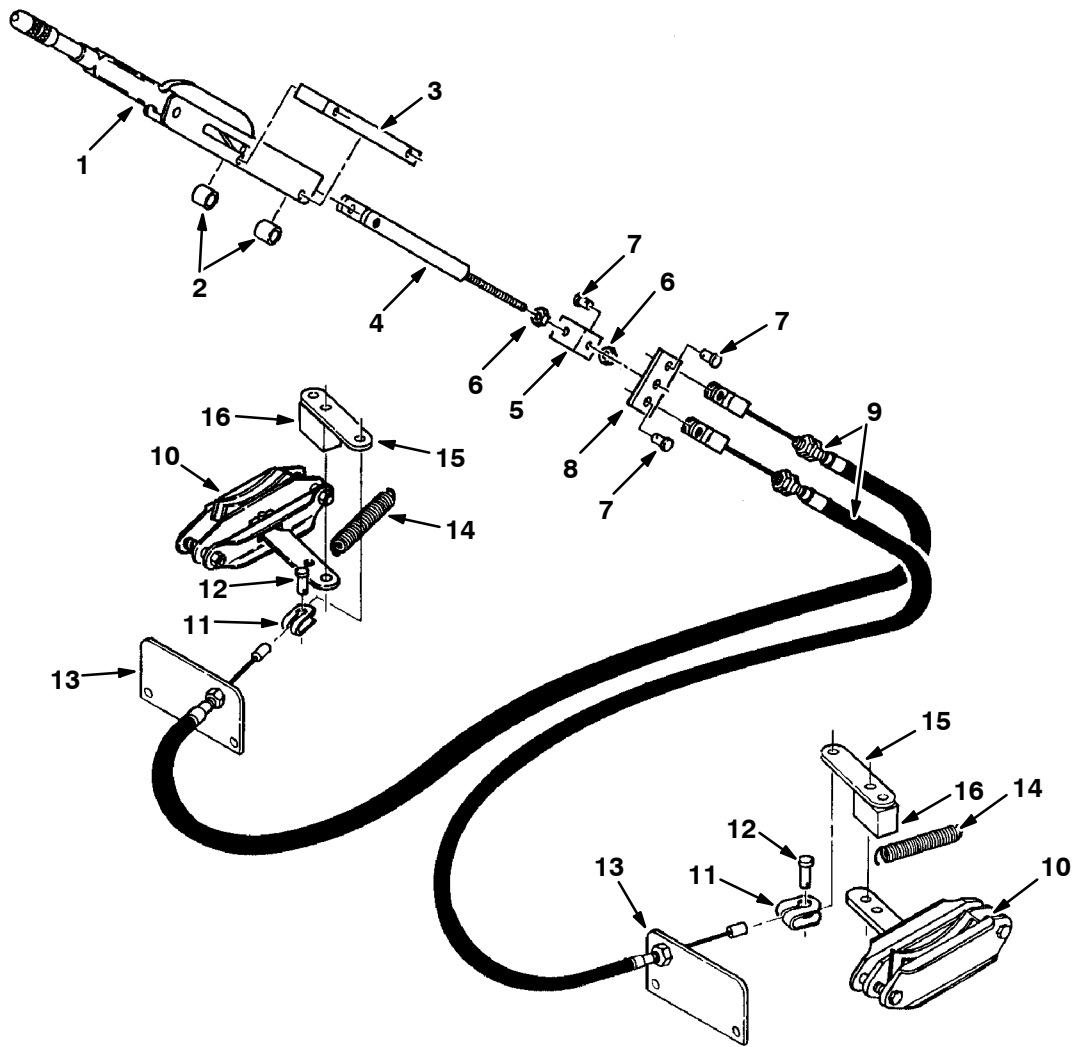
Fig. 17 - Front Wheel Drive Group



09798 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	61649	(003370-	) Bracket, Brake	2
2	78191	(003370-	) Plate, Motor Mounting	2
3	78190	(003370-	) Disk, Brake	2
▽ 4	76649	(003370-	) Hub Assembly	2
▲ 5	32126	(003370-	) Stud	6
6	08329	(003370-	) Pin, Cotter	2
7	76539	(003370-	) Bracket, Brake	2
8	04210	(003370-	) Shim, 20 Ga.	4
9	04048	(003370-	) Shim, 16 Ga.	4

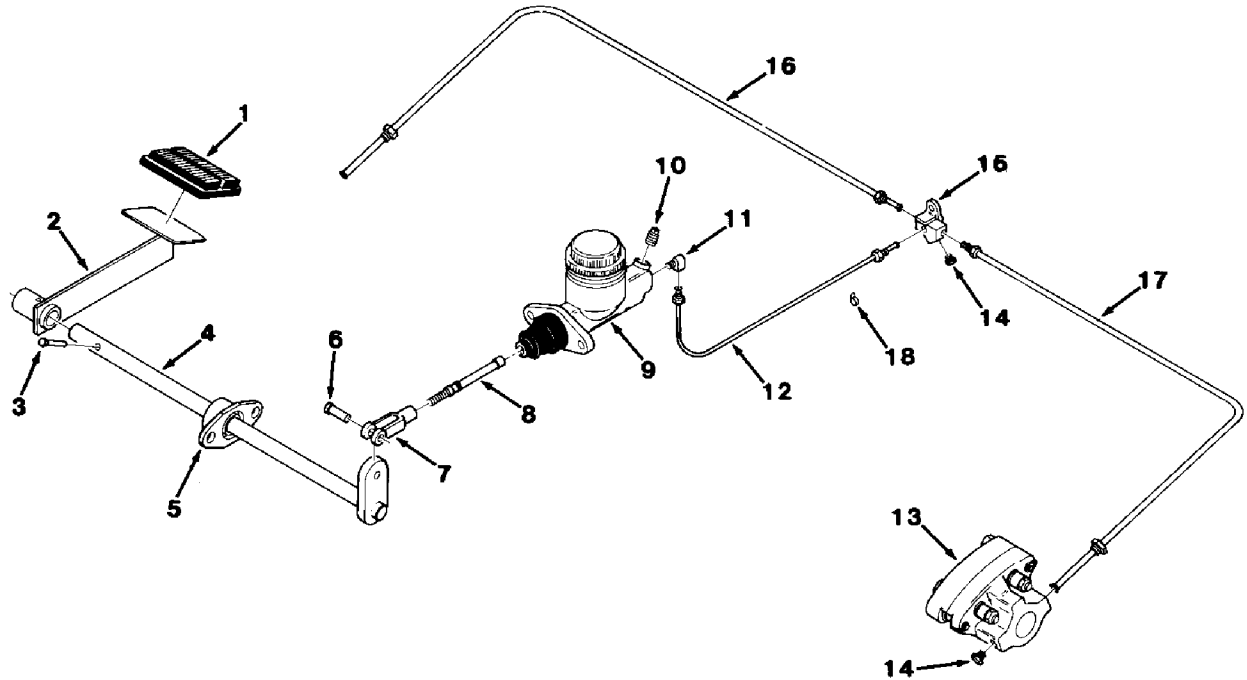
Fig. 18 - Parking Brake Group



06953 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	51545	(003370-)	Lever, Parking	1
2	51562	(003370-)	Sleeve, Brake Lever	2
3	76816	(003370-)	Spacer, Brake	1
4	76903	(003370-)	Rod, Adjustment	1
5	76904	(003370-)	Angle, Brake Adjustment	1
6	25014	(003370-)	Nut, Adjustment	2
7	10120	(003370-)	Pin, Clevis	3
8	40354	(003370-)	Strip	1
9	32477	(003370-)	Cable Assembly, Brake, Separate Spring	2
▽ 10	75368	(003370-)	Brake, Mechanical	2
▲	SK2223	(003370-)	Repair Kit, Brake Pad	1
11	75369	(003370-)	Clevis, Brake Cable	2
12	09088	(003370-)	Pin, Clevis	2
13	61258	(003370-)	Bracket, Brake Cable	2
14	50304	(003370-)	Spring, Brake Cable	2
15	75535	(003370-)	Arm, Brake	2
16	61639	(003370-)	Spacer, Brake Arm	2

Fig. 19 - Brakes Group

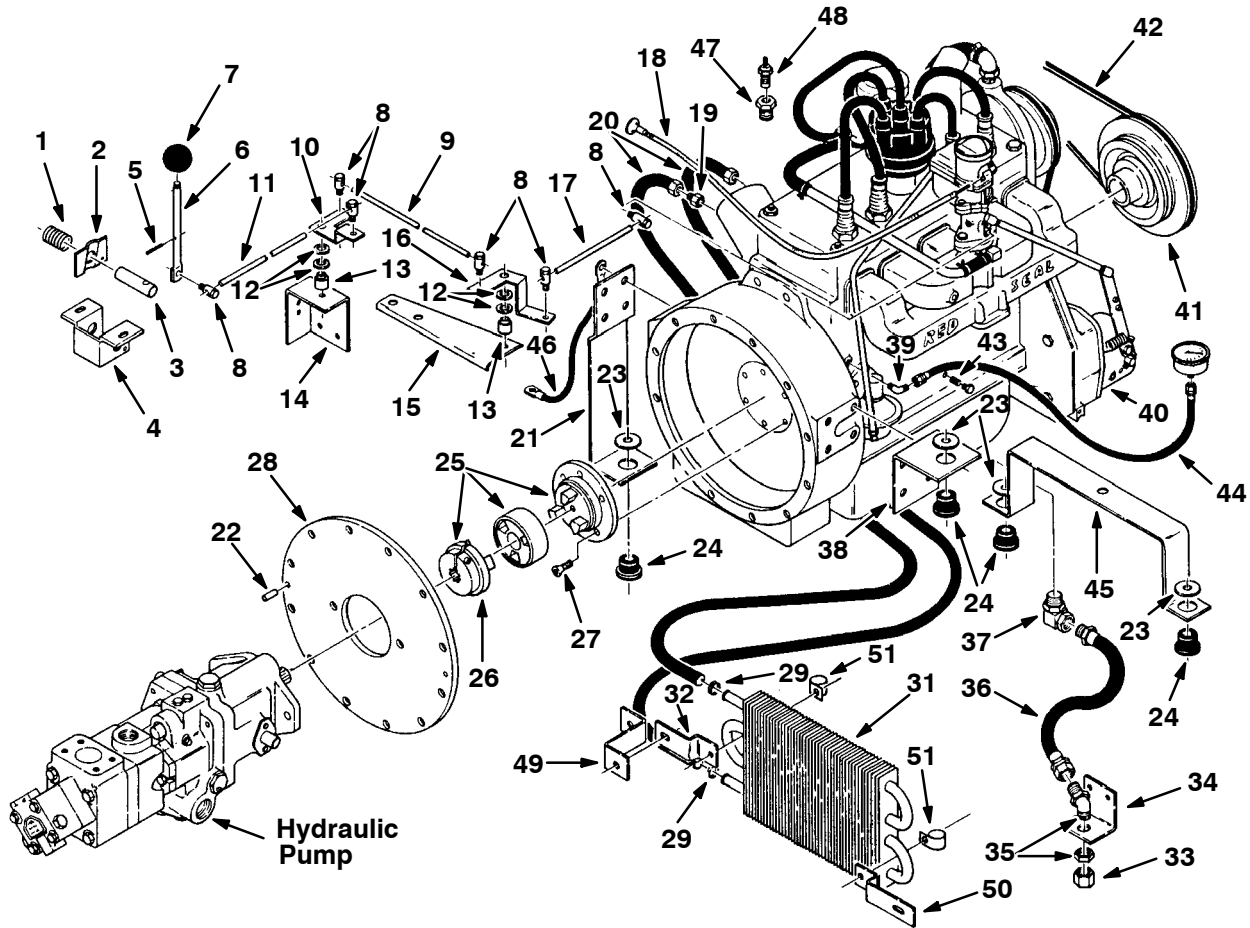
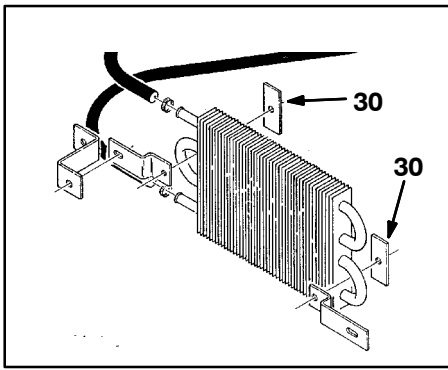


00105 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	51109	(003370-	) Pad, Brake	1
2	75249	(003370-	) Pedal, Brake	1
3	26315	(003370-	) Pin, Roll	1
4	78080	(003370-	) Rod, Brake	1
5	26663	(003370-	) Bearing, Flange	1
6	14331	(003370-	) Pin, Clevis	1
7	14330	(003370-	) Clevis, Adjustable	1
8	52163	(003370-	) Rod, Push, Brake	1
▽ 9	50461	(003370-	) Master Cylinder, Brake	1
▲	SK2137	(003370-	) Repair Kit, Master Cylinder	1
10	48126	(003370-	) Plug	1
11	53078	(003370-	) Elbow	1
12	76058	(003370-	) Tube, Brake Line	1
▽ 13	75285	(003370-	) Brake Assembly, Hydraulic	2
▲	SK2222	(003370-	) Repair Kit, Brake	1
14	76087	(003370-	) Plug	3
15	53079	(003370-	) Tee	1
16	42239	(003370-	) Tube Assembly, R.H.	1
17	76059	(003370-	) Tube Assembly, L.H.	1
18	46236	(003370-	) Clamp, Cable	3

STANDARD PARTS

Fig. 20 - Engine Group, F163



00106 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	52925	(003370-003933)	Control Assembly, Throttle	1
▲ 1	51693	(003370-003933)	Spring, Throttle	1
▲ 2	52814	(003370-003933)	Plate, Throttle	1
▲ 3	51692	(003370-003933)	Pin, Throttle Pivot	1
▲ 4	51689	(003370-003933)	Bracket, Throttle	1
▲ 5	20021	(003370-003933)	Pin, Roll	1
▲ 6	51690	(003370-003933)	Lever, Throttle	1
▲ 7	26565	(003370-003933)	Knob	1
8	47744	(003370-003933)	Ball Joint	6
9	76580	(003370-003933)	Rod, Throttle Control	1

Fig. 20 - Engine Group, F163

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
10	76800	(003370-003933)	Bellcrank, Throttle	1	
11	76581	(003370-003933)	Rod, Throttle Control	1	
12	52508	(003370-003933)	Washer, Wavy	4	
13	52504	(003370-003933)	Spacer, Throttle Control	2	
14	76579A	(003370-003933)	Mount, Bellcrank	1	
15	52830	(003370-003933)	Bracket, Bellcrank	1	
16	76564	(003370-003933)	Bellcrank, Throttle	1	
17	47743	(003370-003933)	Rod, Throttle Control	1	
18	76560	(003370-003933)	Cable, Choke	1	
19	75400	(003370-003933)	Connector	1	
20	75404	(003370-003933)	Hose	2	
21	76544	(003370-003933)	Bracket, Engine Mounting	1	
22	23999-8	(003370-003933)	Pin, Roll	2	
23	51564	(003370-003933)	Washer, Engine Mounting	4	
24	51176	(003370-003933)	Damper, Engine Mounting	4	
▽	25	78068	(003370-003933)	Coupling Assembly	1
▲	26	76291	(003370-003933)	Insert, Pump Coupling	1
	27	76292	(003370-003933)	Screw, Pump Coupling	6
	28	76290	(003370-003933)	Plate, Pump Mounting	1
	29	43844	(003370-003933)	Clamp, Worm Drive	2
	30	40678-1	(003370-003861)	Strip, Oil Cooler Mounting	2
	31	76588	(003370-003933)	Cooler, Engine Oil	1
	32	75499A	(003370-003933)	Strip, Oil Cooler Mounting, L.H.	1
	33	47579	(003370-003933)	Cap, Engine Oil Drain	1
	34	75420A	(003370-003933)	Bracket, Oil Drain	1
	35	78146	(003370-003933)	Elbow, Oil Drain	1
	36	78126	(003370-003933)	Hose, Engine Oil Drain	1
	37	78032	(003370-003933)	Elbow, Oil Drain	1
	38	76602	(003370-003933)	Bracket, Engine Mounting	1
	39	06507	(003370-003933)	Elbow	1
▽	40	76874A	(003370-003933)	Engine, Gasoline, F163 (Replaced by 60534) (See F163 Engine Parts, Gasoline, LPG)	1
▲	41	76607	(003370-003933)	Sheave, Crankshaft	1
▲	42	76873-1	(003370-003933)	V-Belt	1
▲	43	62515	(003370-003933)	Spring, Compression	1
	44	32552	(003370-003933)	Hose, Oil Pressure Gauge	1
	45	76601	(003370-003933)	Bracket, Engine Mounting	1
	46	29832-7	(003370-003933)	Cable, Grounding	1
	47	78170	(003370-003933)	Bushing, Sending Unit	1
	48	78005-2	(003370-003933)	Sending Unit, Water Temperature	1
	49	75486A	(003370-003933)	Bracket, Oil Cooler Mounting	1
	50	75498A	(003370-003933)	Strip, Oil Cooler Mounting, R.H.	1
	51	40678-1	(003862-003933)	Clamp	2

Fig. 21 - Engine Group, TM27

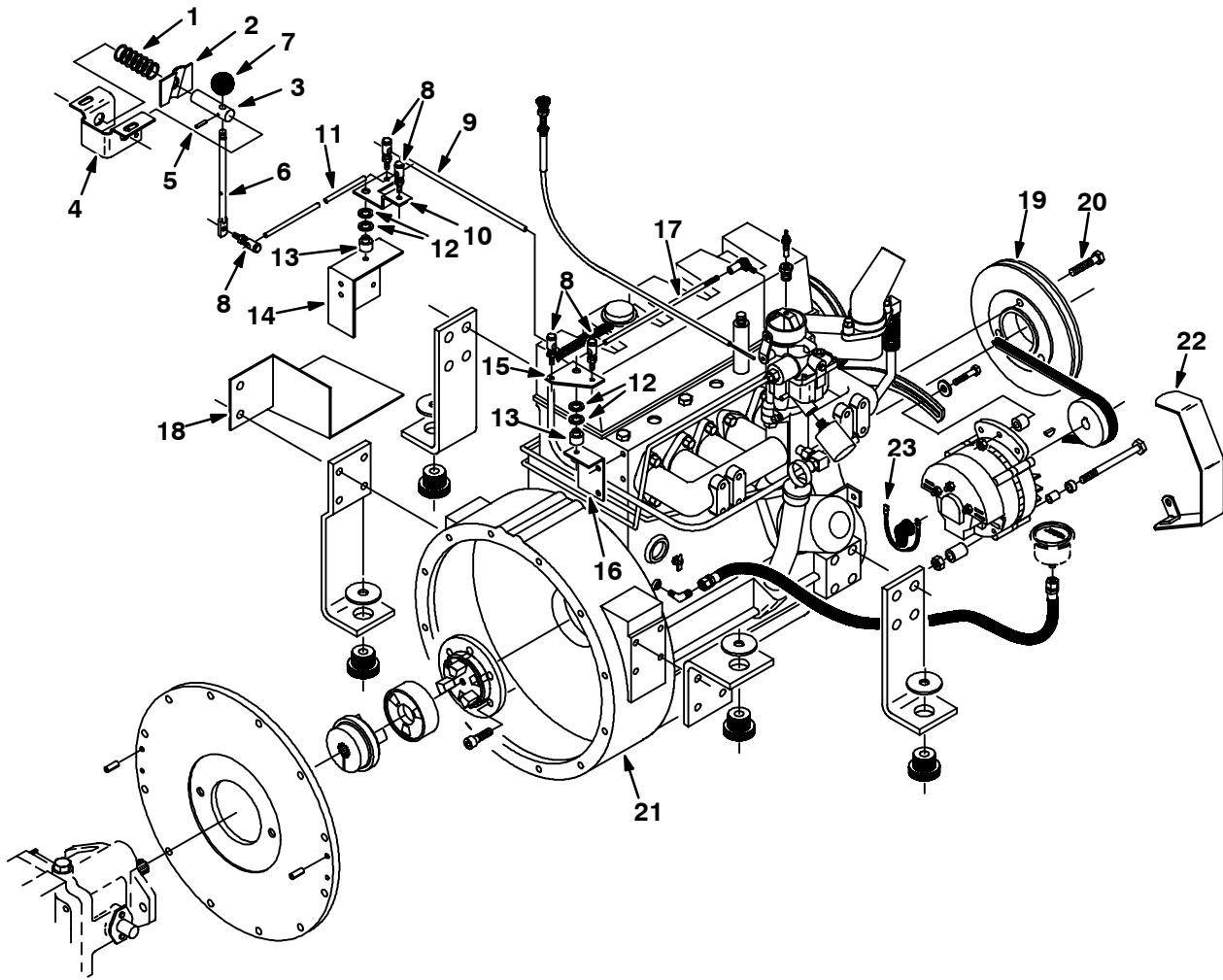
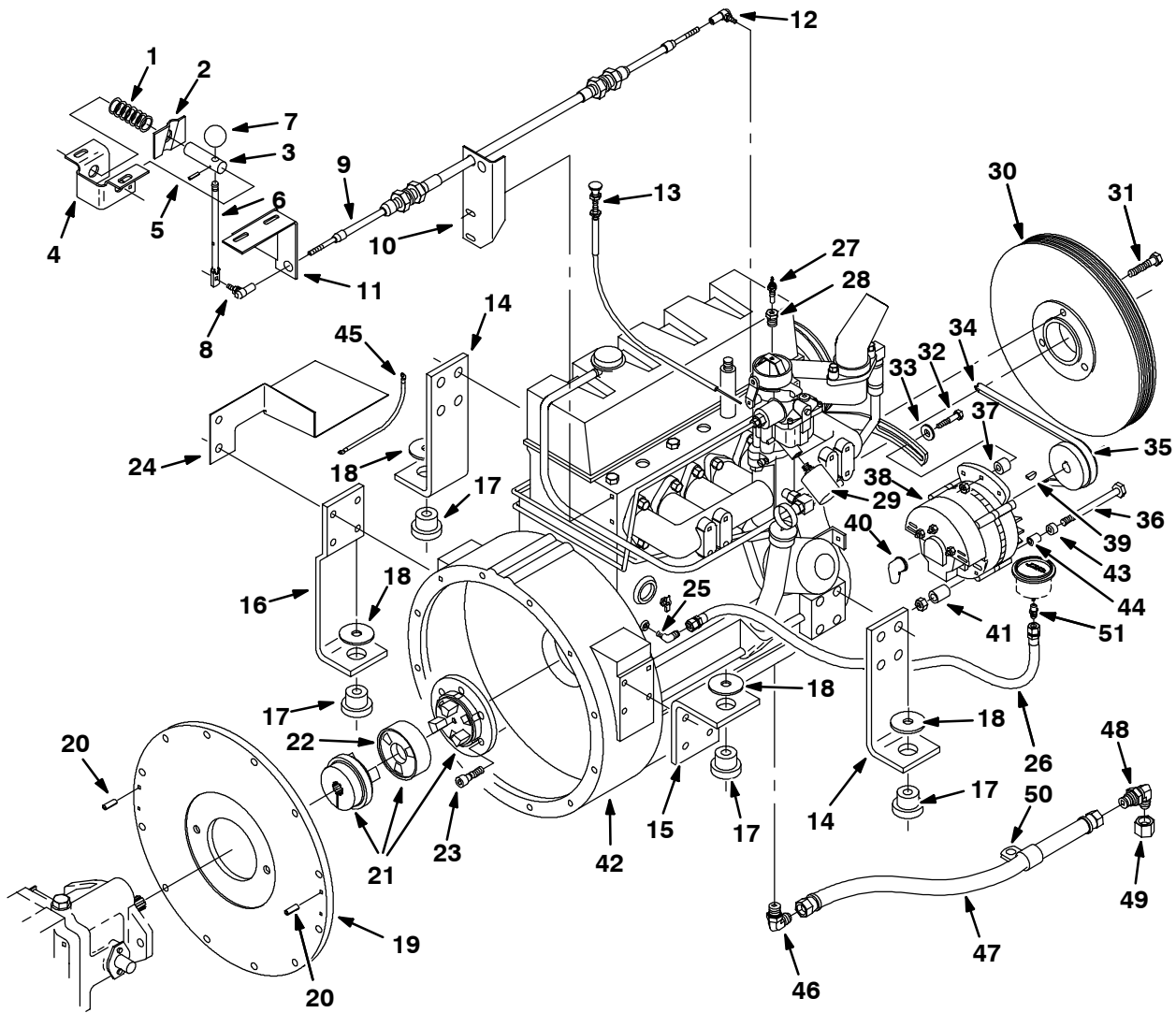


Fig. 21 - Engine Group, TM27

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	52925	(003934-004164)	Control Assembly, Throttle	1
▲ 1	51693	(003934-004164)	Spring, Compression	1
▲ 2	52814	(003934-004164)	Plate, Throttle	1
▲ 3	51692	(003934-004164)	Pin, Pivot	1
▲ 4	51689	(003934-004164)	Bracket, Throttle	1
▲ 5	20021	(003934-004164)	Pin, Roll	1
▲ 6	51690	(003934-004164)	Lever, Throttle	1
	7 26565	(003934-004164)	Knob	1
	8 47744	(003934-004164)	Ball Joint	5
	9 10473	(003934-004164)	Rod, Upper	1
	10 76800	(003934-004164)	Bellcrank, Upper	1
	11 76581	(003934-004164)	Rod, Upper	1
	12 52508	(003934-004164)	Washer, Wavy Spring	4
	13 52504	(003934-004164)	Spacer, Throttle Control	2
	14 76579A	(003934-004164)	Bracket, Throttle Linkage	1
	15 10470	(003934-004164)	Bellcrank	1
	16 10472	(003934-004164)	Bracket, Bellcrank	1
	17 10471	(003934-004164)	Rod, Throttle	1
	18 16832	(003934- xxxxxx)	Shield, Starter	1
	19 16495	(003934-004437)	Sheave	1
	20 16930	(003934-004437)	Screw, Hex, M10	3
	21 16860	(003934-004260)	Engine, Gasoline, TM27, (Replaced by 31935) (See TM27 Engine Parts, Gasoline, LPG)	1
	22 08890	(003934- xxxxxx)	Guard, Alternator	1
	23 08889	(003934- xxxxxx)	Wire, Jumper	1

Fig. 22 - Engine Group, TM27



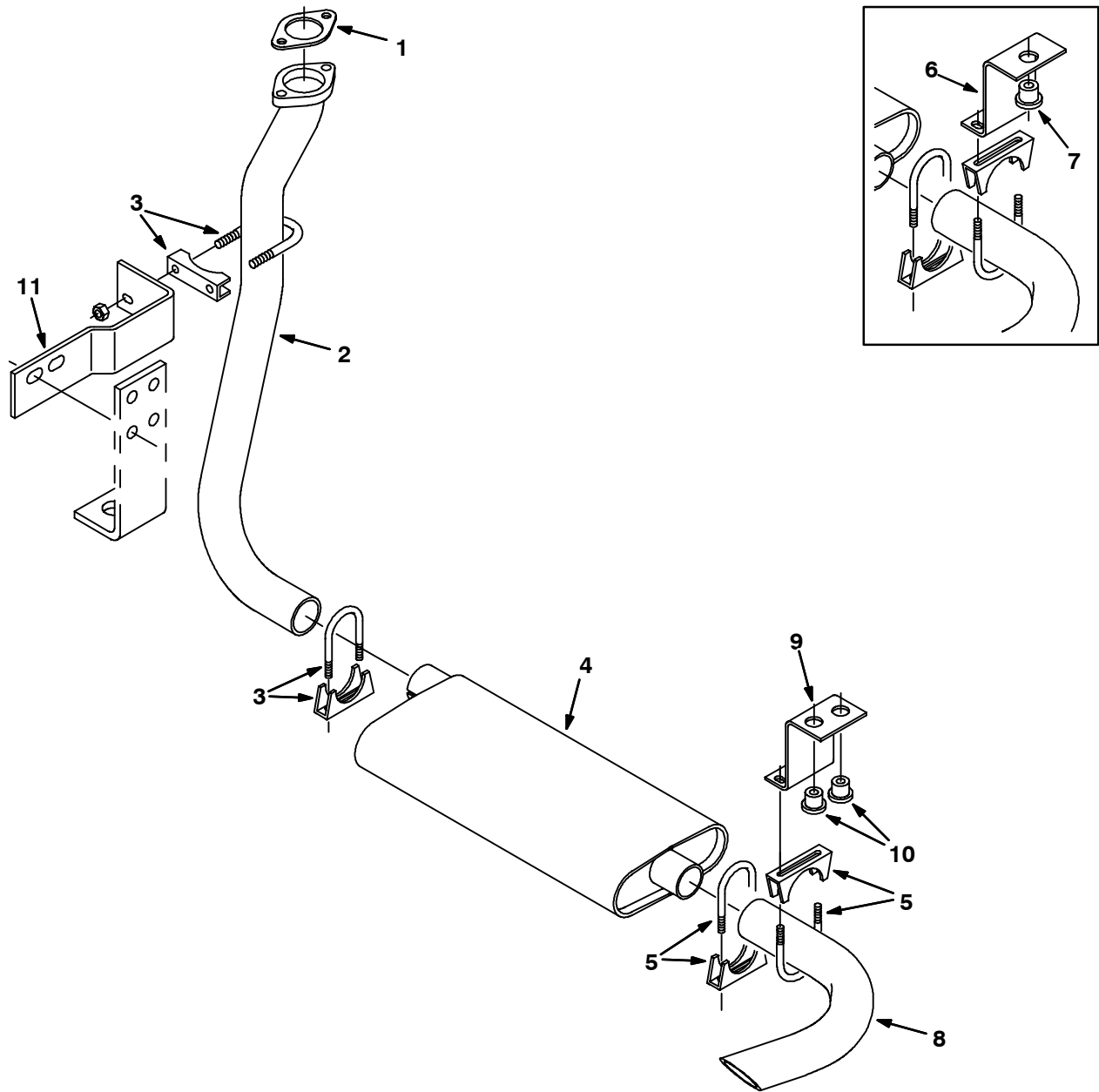
06190 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
∇	52049	(004165-	) Control Assembly, Throttle	1
▲	1 51693	(004165-	) Spring, Compression	1
▲	2 51691	(004165-	) Plate, Throttle	1
▲	3 51692	(004165-	) Pin, Pivot	1
▲	4 51689	(004165-	) Bracket, Throttle	1
▲	5 20021	(004165-	) Pin, Roll	1
▲	6 51690	(004165-	) Lever, Throttle	1
▲	7 26565	(004165-	) Knob	1
	8 14601	(004165-	) Ball Joint	1
	9 69494	(004165-	) Cable Assembly, Push-Pull	1
	10 25218	(004165-	) Angle, Cable	1
	11 25217	(004165-	) Bracket, Throttle	1
	12 14601	(003934-	) Ball Joint	1
	13 76560	(003934-	) Cable, Choke	1
	14 16490	(003934-	) Bracket, Engine Mounting	2
	15 76602	(003934-	) Bracket, Mounting Engine	1

Fig. 22 - Engine Group, TM27

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
16	76544	(003934-	) Bracket, Mounting Engine	1
17	51176	(003934-	) Dampner, Engine	4
18	51564	(003934-	) Washer	4
19	76290	(003934-	) Plate, Pump Mounting	1
20	23999-8	(003934-	) Pin, Roll	2
21	78068	(003934-	) Coupling Assembly, Drive	1
22	76291	(003934-	) Insert, Drive	1
23	41358	(003934-	) Screw, Socket, M10	6
24	25180	(xxxxxx-	) Shield, Starter	1
25	06507	(003934-	) Fitting, Elbow	1
26	32552	(003934-	) Hose	1
27	78005-2	(003934-	) Sending Unit, Temperature	1
28	78170	(003934-	) Fitting, Straight	1
29	34805	(003934-	) Solenoid, Anti-Runon	1
30	25650	(004438-	) Sheave	1
31	39284	(004438-	) Screw, Hex, M10	3
32	41342	(003934-	) Screw, Hex, M8	1
33	41186	(003934-	) Washer, Belleville	1
34	34194	(003934-	) V-Belt	1
35	34833	(003934-	) Pulley, Alternator	1
36	34877	(003934-	) Screw, Hex, M10	1
37	08892	(003934-	) Sleeve	1
▽	38	03233	(003934-) Alternator	1
▲		61515	(003934-) Diode and Rectifier Assembly	1
▲		61516	(003944-) Brush Assembly	2
▲		01844	(003934-) Bearing, Ball	1
▲		61517	(003934-) Regulator, Voltage	1
▲	39	00500-5	(003934-) Key, Woodruff	1
	40	34065	(003934-) Boot, Electric	1
	41	08891	(003934-) Sleeve	1
	42	31935	(004261-004878) Engine, Gasoline, TM27 (Replaced by 61696) (See TM27 Engine Parts, Gasoline, LPG)	1
	42	61696	(004879-005070) Engine, Gasoline, TM27 (Replaced by 65947) (See TM27 Engine Parts, Gasoline, LPG)	1
	42	65947	(005071-) Engine, Gasoline, TM27 (See TM27 Engine Parts, Gasoline, LPG)	1
	43	36417	(003934-) Sleeve	1
	44	57311	(003934-) Bushing	1
	45	29832-7	(003934-) Cable, Grounding	1
	46	49934	(004879-) Fitting, Elbow	1
	47	76762	(004879-) Hose	1
	48	57075	(004879-) Fitting, Elbow	1
	49	40625	(004879-) Fitting, Cap	1
	50	82829	(004879-) Clamp, Hose Support	1
	51	11979	(005497-) Fitting, Straight, Brass	1

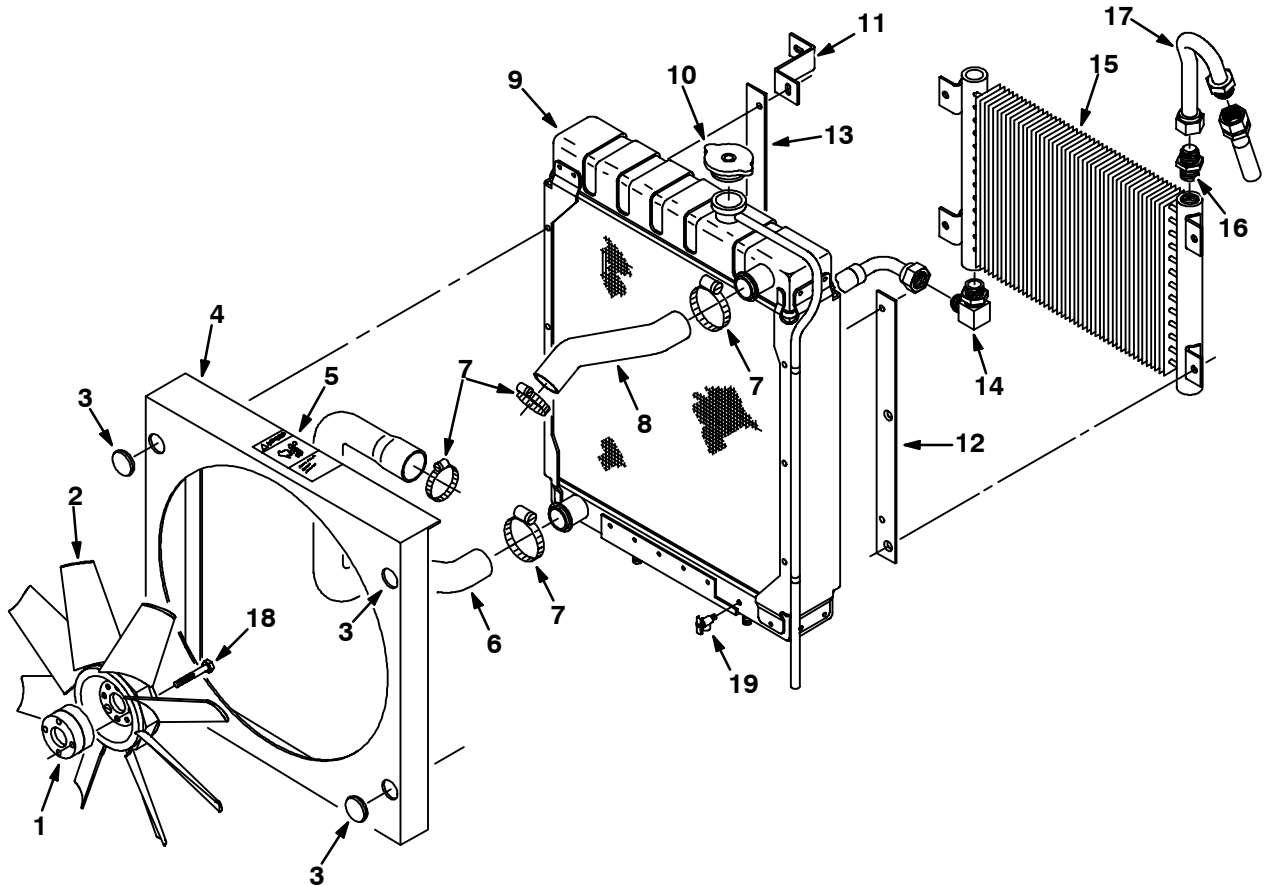
Fig. 23 - Muffler Group



09881 - 550, NA

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	52781	(003370-003933)	Gasket, Tail Pipe	1
1	34908	(003934-)	Gasket, Tail Pipe	1
2	76830	(003370-003933)	Tube, Exhaust	1
2	16496	(003934-)	Tube, Exhaust	1
3	05880	(003370-)	Clamp, Muffler	2
4	21726	(003370-)	Muffler	1
5	24012-1	(003370-)	Clamp, Muffler	2
6	30173	(003370-004224)	Bracket Replacement Kit, Mounting	1
7	54274	(003370-004224)	Isolator, Vibration	1
8	76831	(003370-)	Pipe, Tail	1
9	12959	(004225-)	Bracket, Exhaust Mounting	1
10	54274	(004225-)	Isolator, Vibration	2
11	49024	(003370-)	Bracket, Exhaust Support	1

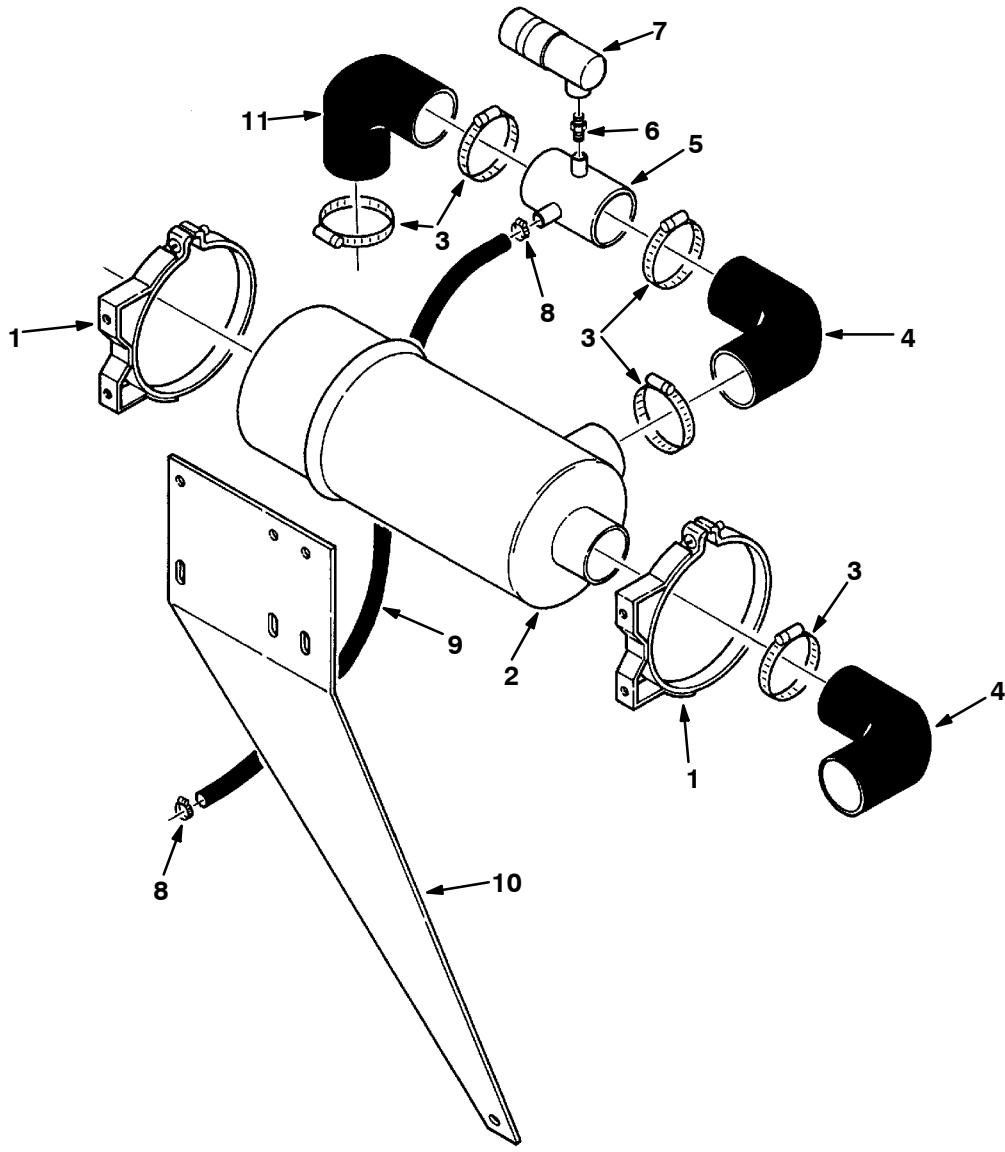
Fig. 24 - Radiator Group



00762 - 550, NA

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	52785-1	(003370-004437)	Spacer, Fan	1
1	25653	(004438-	Spacer, Fan	1
2	375585	(003370-	Fan	1
3	50967	(003370-	Plugbutton	4
4	50817	(003370-	Shroud, Fan	1
5	68962	(003370-	Label, Engine Fan	1
6	76841	(003370-003933)	Hose, Radiator	1
6	16501	(003934-004437)	Hose, Radiator	1
6	25179	(004438-	Hose, Radiator	1
7	11531	(003370-	Clamp, Worm Drive	4
8	10323	(003370-003933)	Hose, Radiator	1
8	16820	(003934-	Hose, Radiator	1
∇ 9	61611	(003370-	Radiator	1
▲ 10	51321-3	(003370-	Cap, Radiator	1
11	75486A	(003934-	Bracket, Radiator	1
12	76596A-1	(003370-	Strip, Mounting	1
13	76596A	(003370-	Strip, Mounting	1
14	46481	(003370-	Fitting, Elbow	1
15	31592	(003370-	Cooler, Hydraulic	1
16	42260	(003370-	Fitting, Straight	1
17	78144B	(003370-	Tube Assembly, Hydraulic	1
18	39279	(003934-	Screw, Hex, M8	4
19	51305	(003934-	Cock, Drain	1

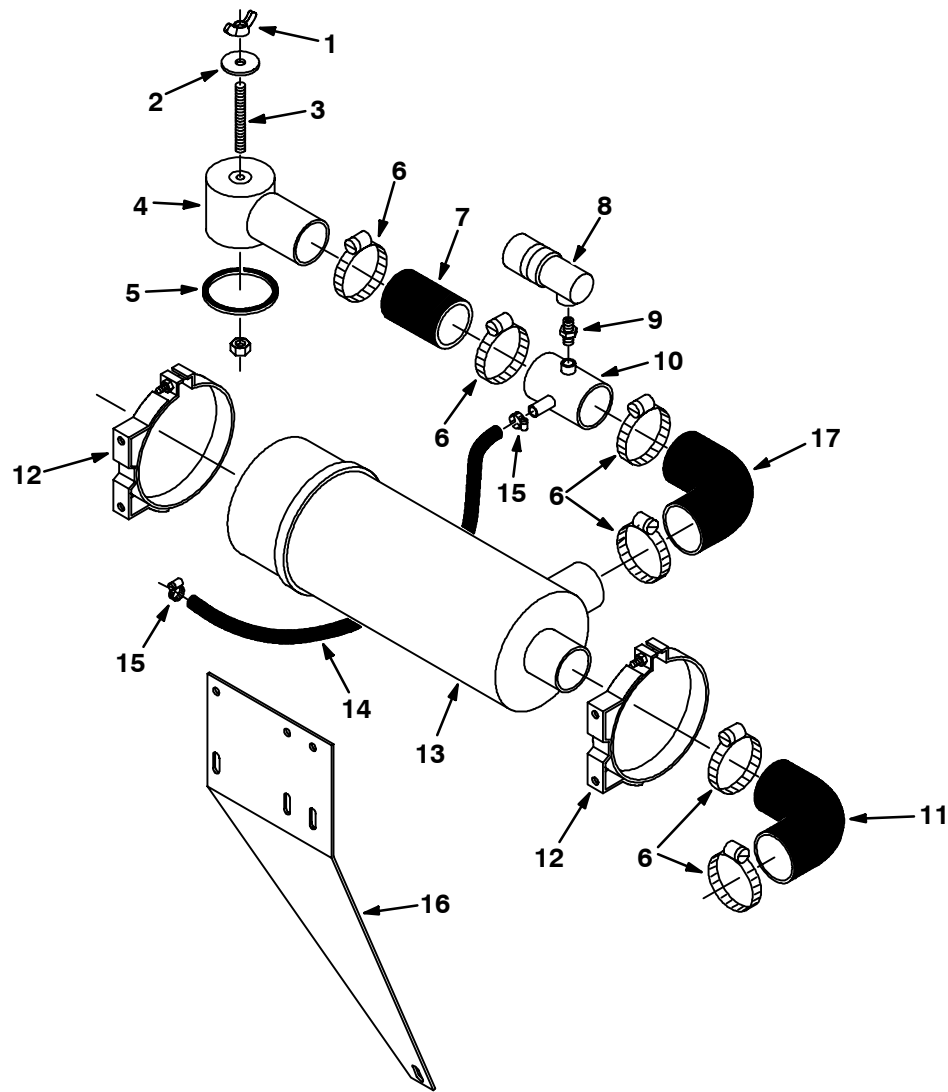
Fig. 25 - Air Cleaner Group



06183 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	52450	(003370-003933)	Clamp, Mounting	2	
▽	2	76827	(003370-003933)	Air Cleaner	1
▲	58120	(003370-003933)	Element, Air Filter	1	
3	22297	(003370-003933)	Clamp, Worm Drive	6	
4	76825	(003370-003933)	Elbow, Carburetor	2	
5	76833	(003370-003933)	Tube, Air Cleaner	1	
6	51560-5	(003370-003933)	Adapter, Filter, 1/8NPT	1	
7	51658-5	(003370-003933)	Indicator, Filter Service	1	
8	54333	(003370-003933)	Clamp, Worm Drive	2	
9	47826	(003370-003933)	Hose, Rubber	1	
10	76332	(003370-003933)	Brace, Rear Shroud	1	
11	52580	(003370-003933)	Elbow, Carburetor	1	

Fig. 26 - Air Cleaner Group



00107 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	26509	(003934-	) Nut, Wing	1
2	24924	(003934-	) Washer, Nylon	1
3	34996	(003934-	) Stud	1
4	34997	(003934-	) Elbow, Carburetor	1
5	16738	(003934-	) Gasket, Carburetor Air Horn	1
6	22297	(003934-	) Clamp, Worm Drive	6
7	15543	(003934-	) Coupling, Air Cleaner Tube	1
8	51658-5	(003934-	) Indicator, Filter Service	1
9	51560-5	(003934-	) Adapter, Filter, 1/8NPT	1
10	09725	(003934-	) Tube, Air Cleaner	1
11	76825	(003934-	) Elbow, Carburetor	1
12	51560-3	(003934-	) Clamp, Mounting	2
▽	13	76827	(003934-) Air Cleaner	1
▲	58120	(003934-	) Element, Air Filter	1
14	47826	(003934-	) Hose, Rubber	1
15	54333	(003934-	) Clamp, Worm Drive	2
16	76332	(003934-	) Brace, Rear Shroud	1
17	10509	(003934-	) Elbow, Air Cleaner	1

Fig. 27 - Fuel Tank Group

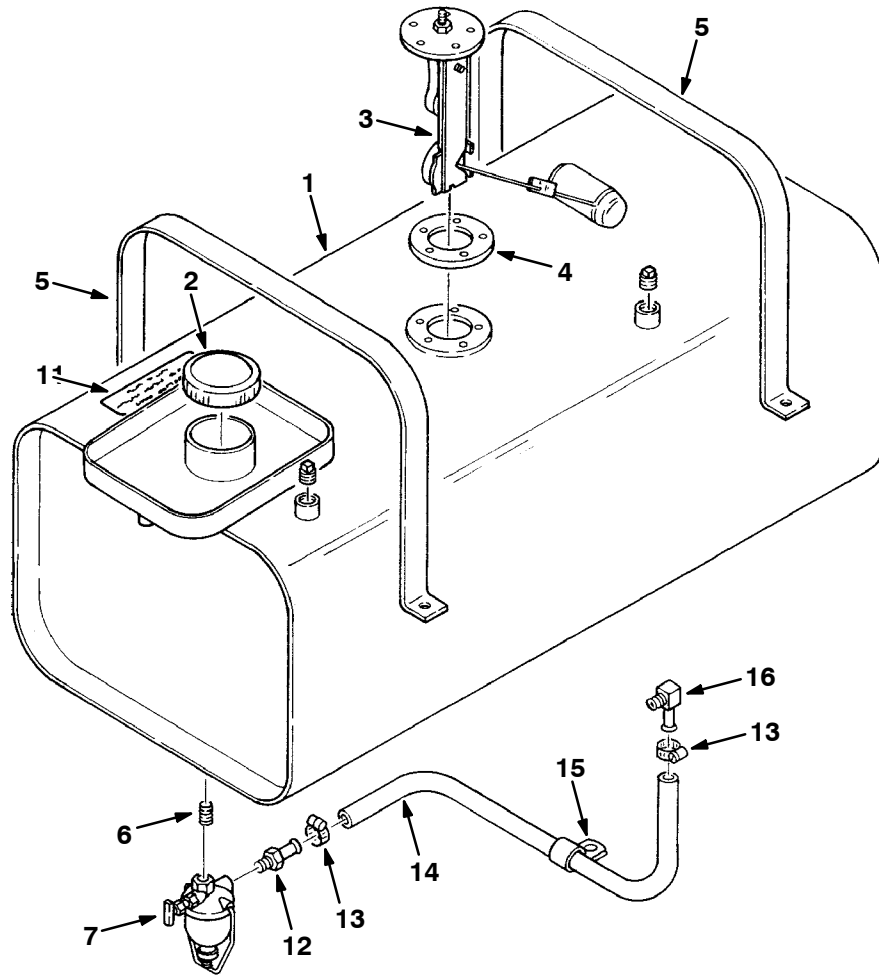
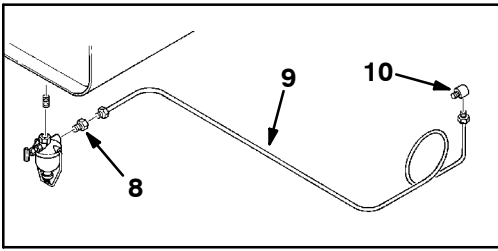
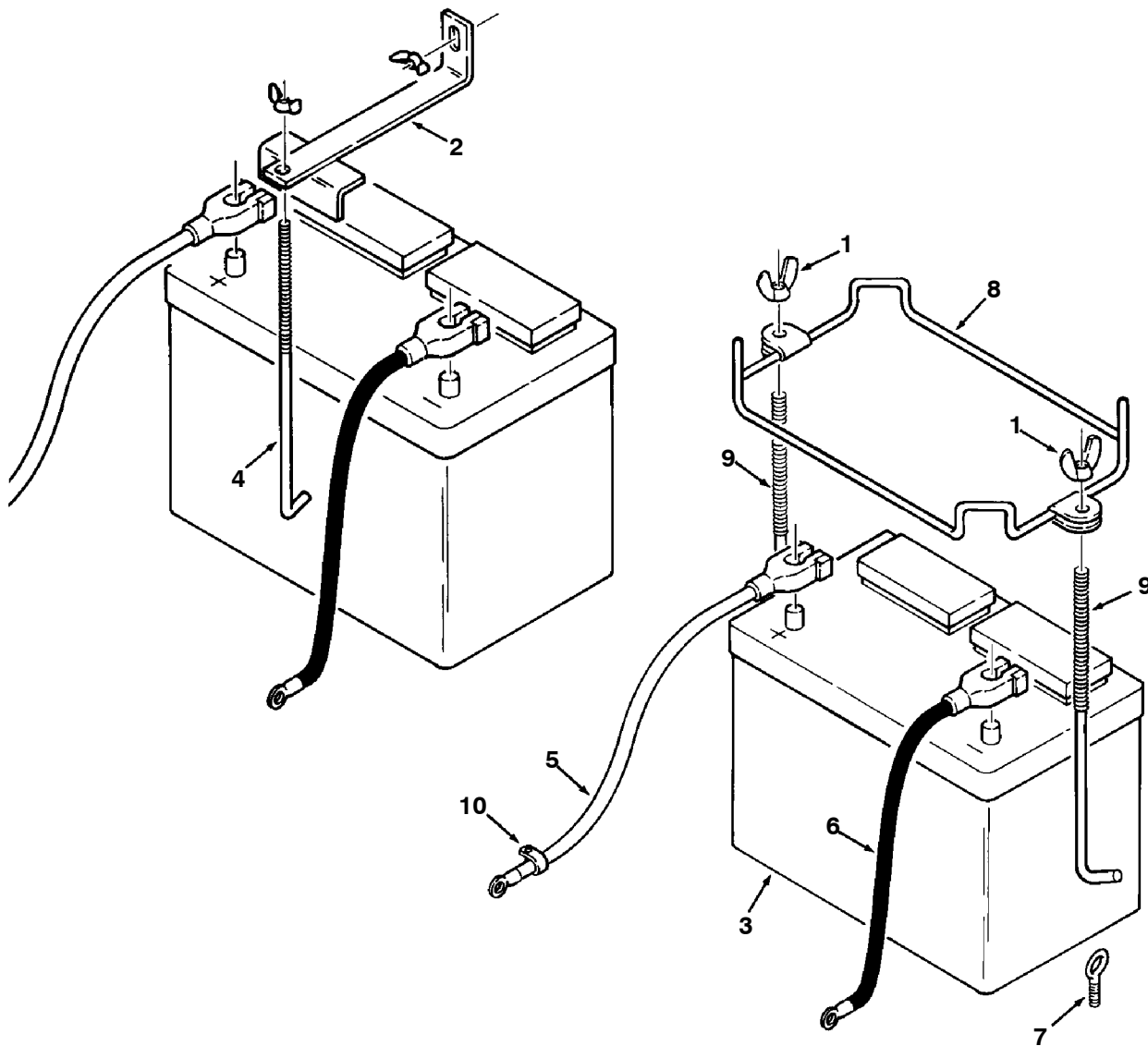


Fig. 27 - Fuel Tank Group

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	16560	(003370-003618)	Tank, Fuel	1
▽ 1	03977	(003619-	Tank, Fuel	1
▲ 2	48267	(003370-	Cap, Fuel Tank	1
3	07875	(003370-	Sending Unit, Fuel Tank	1
4	14131	(003370-	Gasket	1
5	16559	(003370-003618)	Clamp, Fuel Tank	2
5	04020	(003619-	Clamp, Fuel Tank	2
6	47566	(003370-	Connector	1
7	04601	(003370-	Strainer, Fuel	1
8	40585	(003370-004773)	Connector	1
9	61279	(003370-004773)	Fuel Line Replacement Kit	1
10	15555-1	(003370-004773)	Elbow	1
11	19048	(003370-	Label, Gasoline Only	1
12	61686	(004774-	Fitting, Straight	1
13	54333	(004774-	Clamp, Worm Drive	2
14	61683	(004774-	Hose, Fuel Line	1
15	82829	(004774-	Clamp, Cable	1
16	61687	(004774-	Fitting, Elbow	1

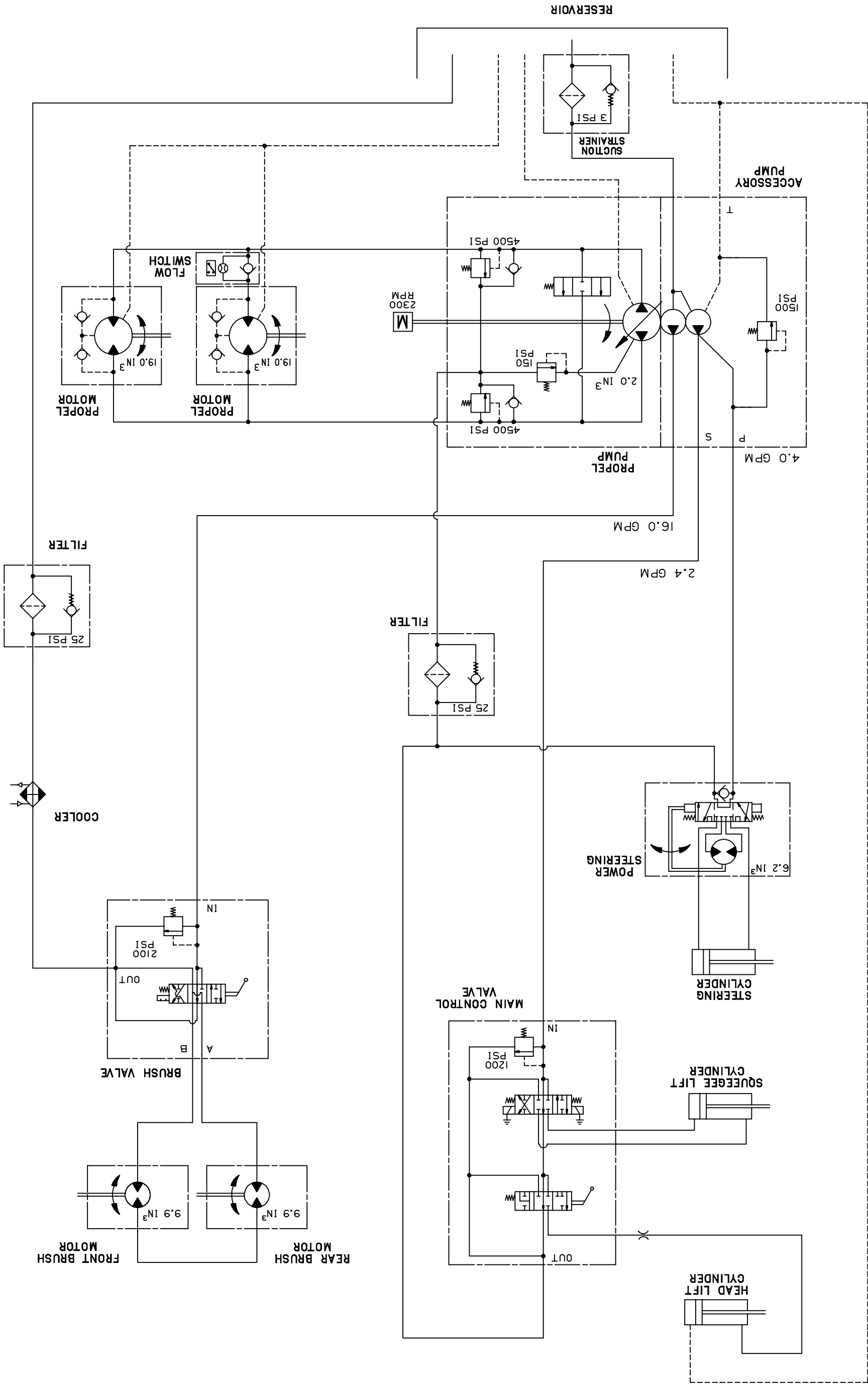
Fig. 28 - Battery Group



02376 - 550

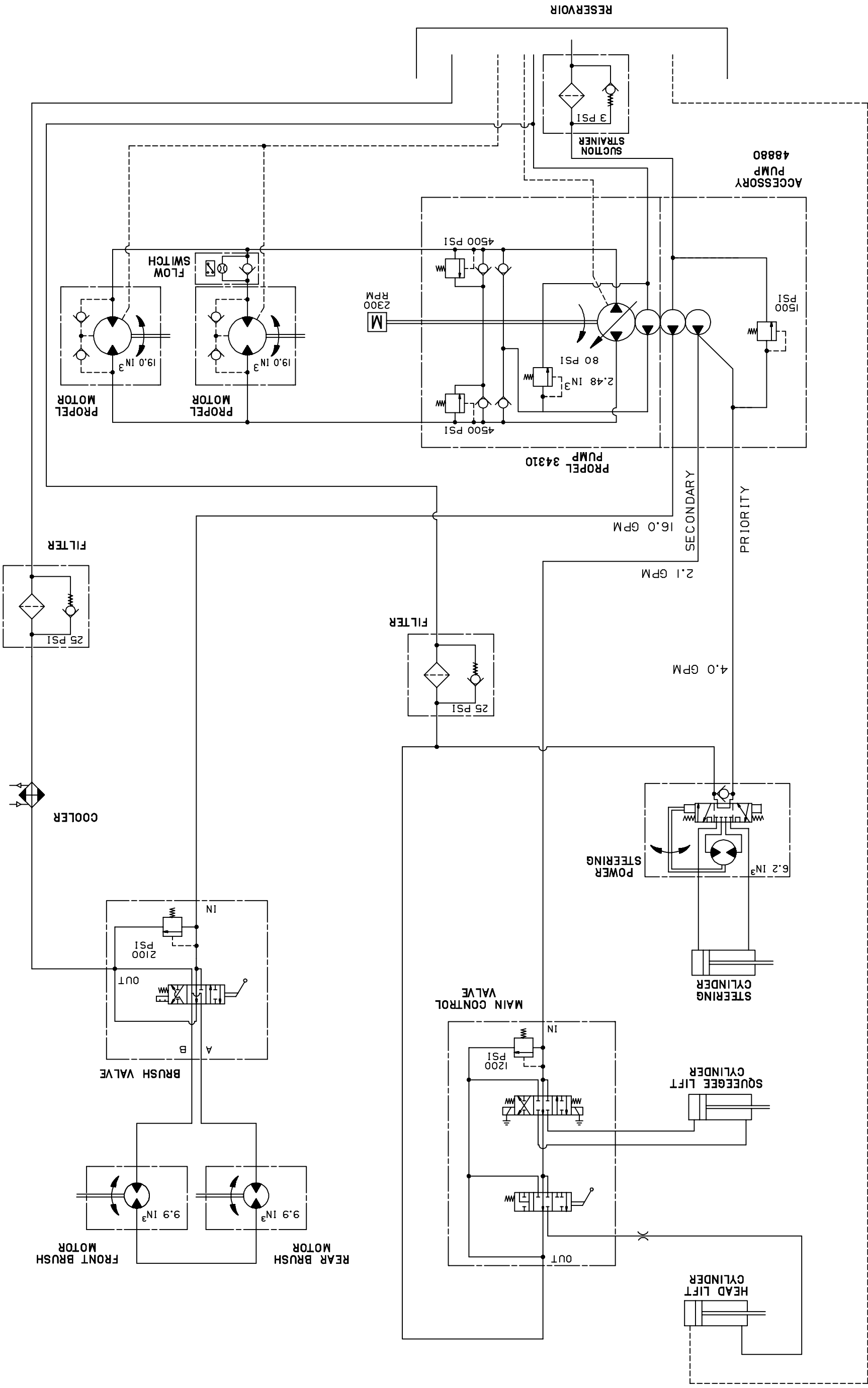
Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	39272	(003370-	) Nut, Wing	2
2	16936	(003370- xxxxxx)	Bracket, Battery	1
3	10143	(003370-	) Battery, 540 CCA	1
4	13015-1	(003370- xxxxxx)	Bolt, Hold Down	1
5	76313	(003370-004437)	Cable, Positive Battery	1
5	48899	(004438-	) Cable, Positive Battery	1
6	29831-6	(003370-	) Cable, Negative Battery	1
7	11893	(xxxxxx-	) Eyebolt	2
8	13016	(xxxxxx-	) Bracket, Battery, L	1
9	13015	(xxxxxx-	) Bolt, Hold Down	2
10	76736	(003370-	) Clamp, Cable	1

Fig. 29 - Hydraulic Schematic (For machines below serial number 004438)



02356 - 550

Fig. 30 - Hydraulic Schematic (For machines serial number 004438 thru 005268)



06164 - 550, 1550

550 MM148 (9-99)

Fig. 31 - Hydraulic Schematic (For machines serial number 005269 and above)

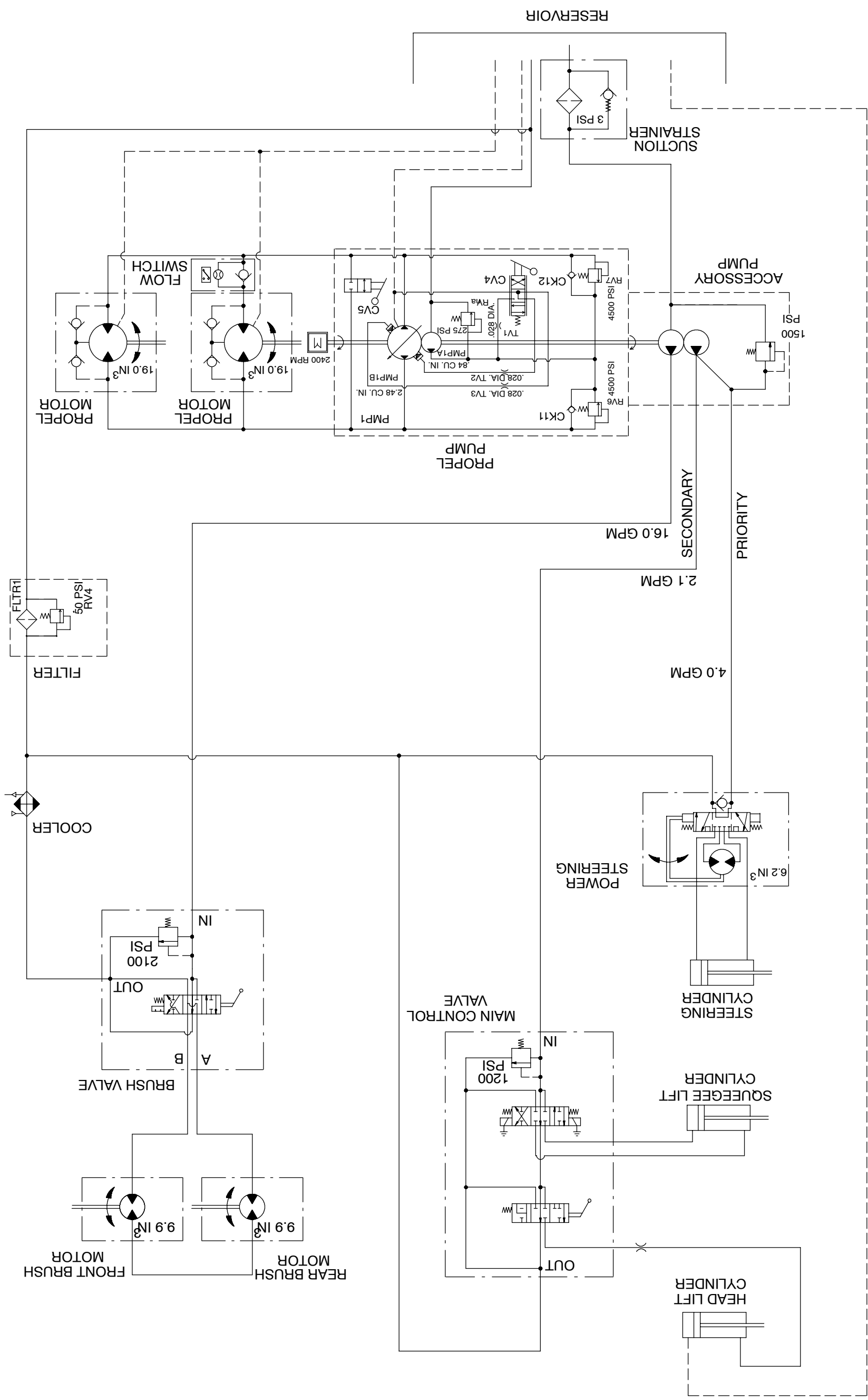


Fig. 32 - Hydraulic Hoses Group

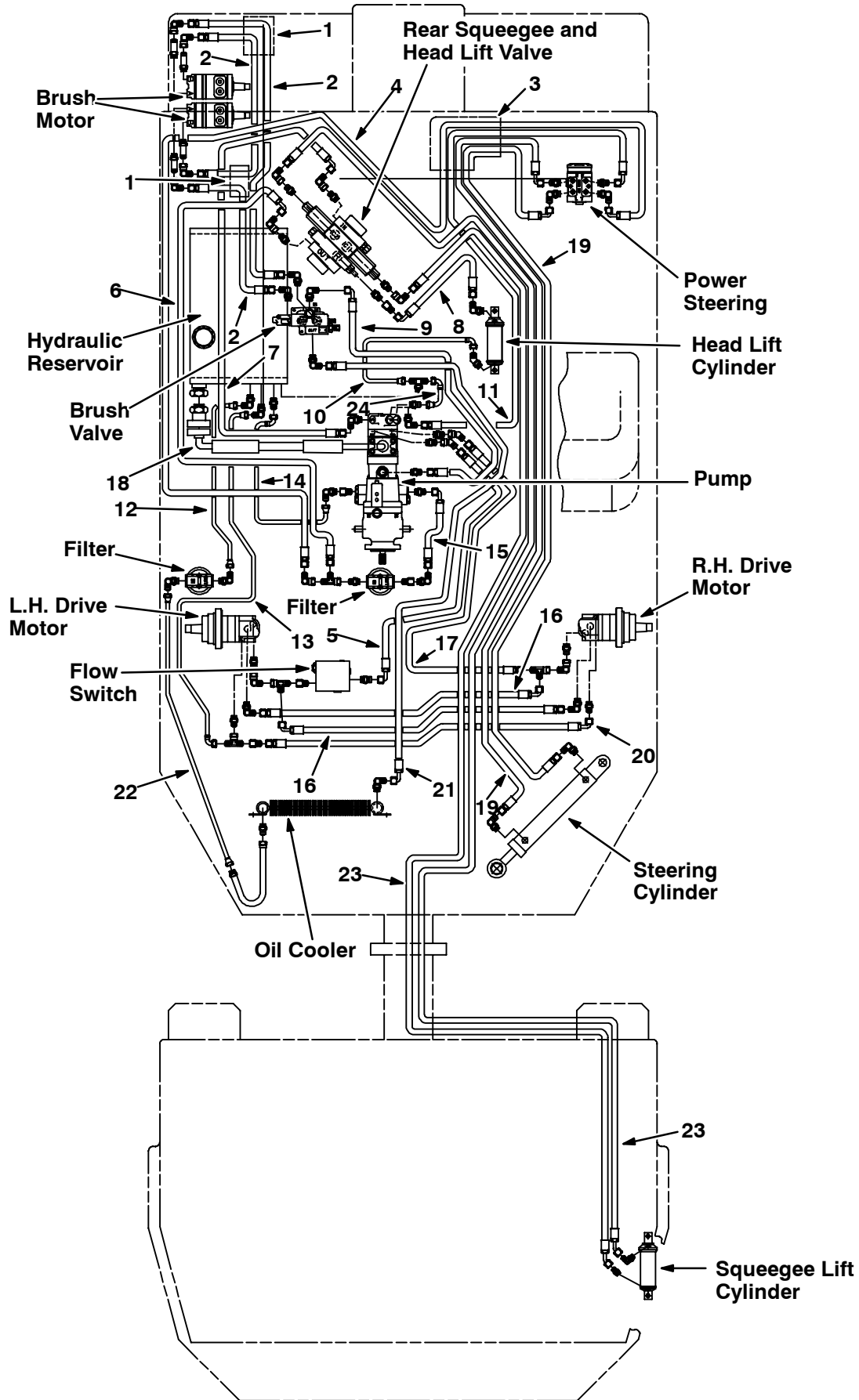


Fig. 32 - Hydraulic Hoses Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	82832	(003370-004437)	Sleeve, Hose	2
2	31606	(003370-004437)	Hose, Hydraulic	3
3	31672	(003370-004437)	Sleeve, Hose	1
4	02469	(003370-004437)	Hose, Hydraulic	1
5	02468	(003370-004437)	Hose, Hydraulic	1
6	31597	(003370-004437)	Hose, Hydraulic	1
7	31598	(003370-004437)	Hose, Hydraulic	1
8	57964	(003370-004437)	Hose, Hydraulic	1
9	31612	(003370-004437)	Hose, Hydraulic	1
10	31600	(003370-004437)	Hose, Hydraulic	1
11	31596	(003370-004437)	Hose, Hydraulic	1
12	82835	(003370-004437)	Hose, Hydraulic	1
13	31603	(003370-004437)	Hose, Hydraulic	1
14	57971	(003370-004437)	Hose, Hydraulic	1
15	34355	(003370-004437)	Hose, Hydraulic	1
16	31608	(003370-004437)	Hose, Hydraulic	2
17	51748	(003370-004437)	Hose, Hydraulic	1
18	31616	(003370-004437)	Hose, Hydraulic	1
19	31565	(003370-004437)	Hose, Hydraulic	2
20	31602	(003370-004437)	Hose, Hydraulic	1
21	31610	(003370-004437)	Hose, Hydraulic	1
22	31611	(003370-004437)	Hose, Hydraulic	1
23	31570	(003370-004437)	Hose, Hydraulic	2
24	31601	(003370-004437)	Hose, Hydraulic	1

Fig. 33 - Hydraulic Hoses Group

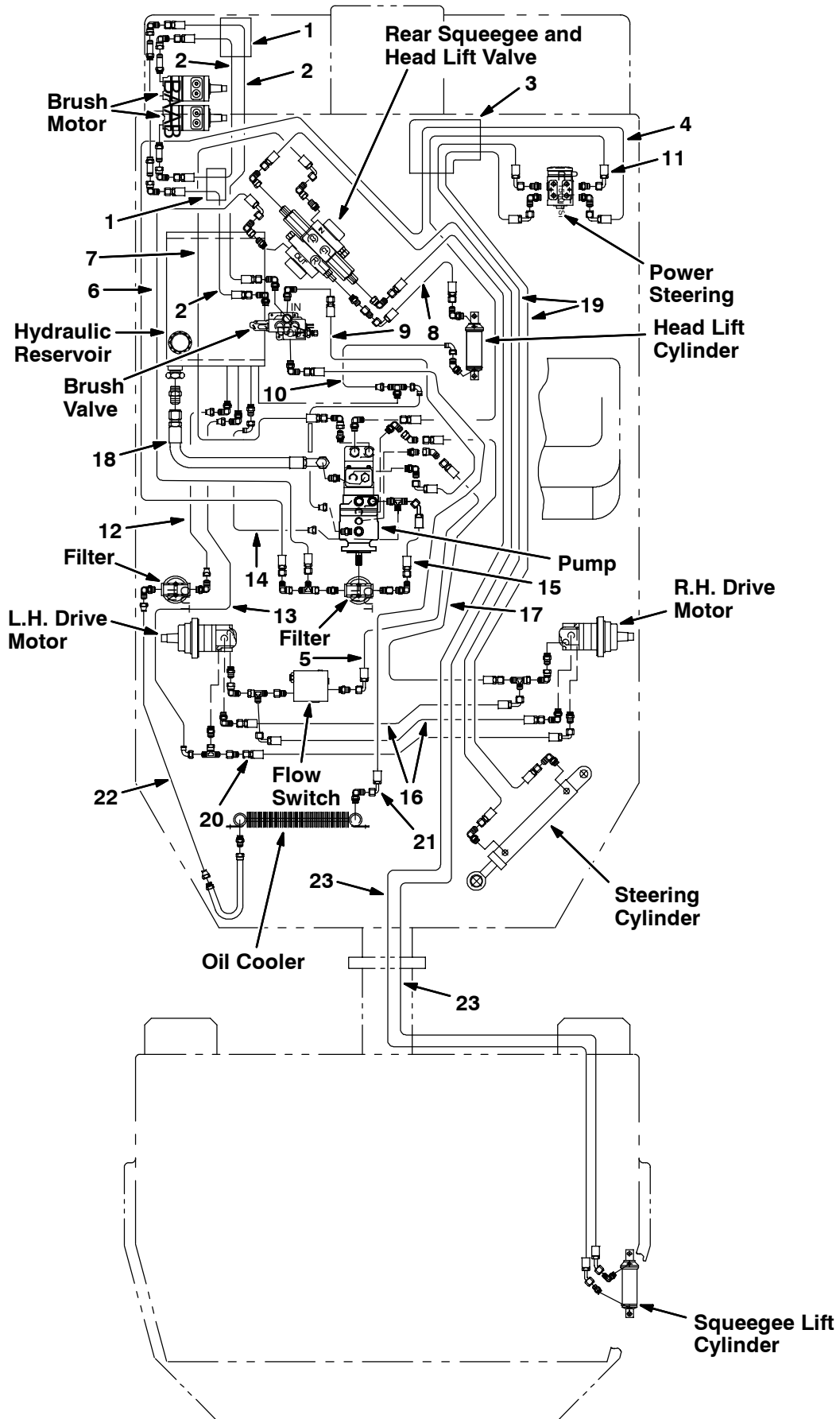


Fig. 33 - Hydraulic Hoses Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	82832	(004438-005268)	Sleeve, Hose	2
2	31606	(004438-005268)	Hose, Hydraulic	3
3	31672	(004438-005268)	Sleeve, Hose	1
4	02469	(004438-005268)	Hose, Hydraulic	1
5	02468	(004438-005268)	Hose, Hydraulic	1
6	31597	(004438-005268)	Hose, Hydraulic	1
7	31598	(004438-005268)	Hose, Hydraulic	1
8	57964	(004438-005268)	Hose, Hydraulic	1
9	31612	(004438-005268)	Hose, Hydraulic	1
10	31600	(004438-005268)	Hose, Hydraulic	1
11	31597	(004438-005268)	Hose, Hydraulic	1
12	82835	(004438-005268)	Hose, Hydraulic	1
13	31603	(004438-005268)	Hose, Hydraulic	1
14	55705	(004438-005268)	Hose, Hydraulic	1
15	34422	(004438-005268)	Hose, Hydraulic	1
16	31608	(004438-005268)	Hose, Hydraulic	2
17	34387	(004438-005268)	Hose, Hydraulic	1
18	34351	(004438-005268)	Hose, Hydraulic	1
19	31565	(004438-005268)	Hose, Hydraulic	2
20	31602	(004438-005268)	Hose, Hydraulic	1
21	31610	(004438-005268)	Hose, Hydraulic	1
22	31611	(004438-005268)	Hose, Hydraulic	1
23	31570	(004438-005268)	Hose, Hydraulic	2
24	34420	(004438-005268)	Hose, Hydraulic	1

Fig. 34 - Hydraulic Hoses Group

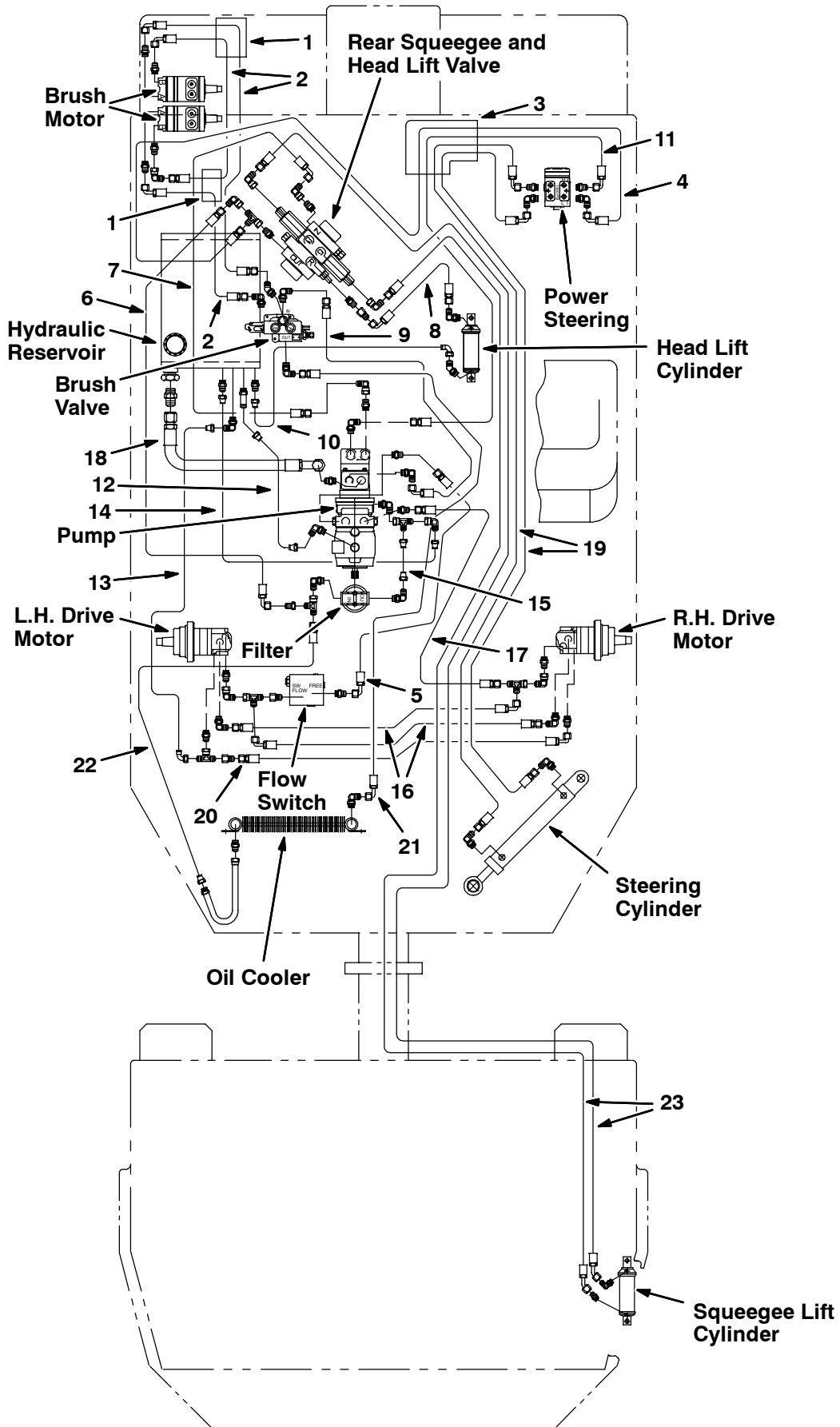
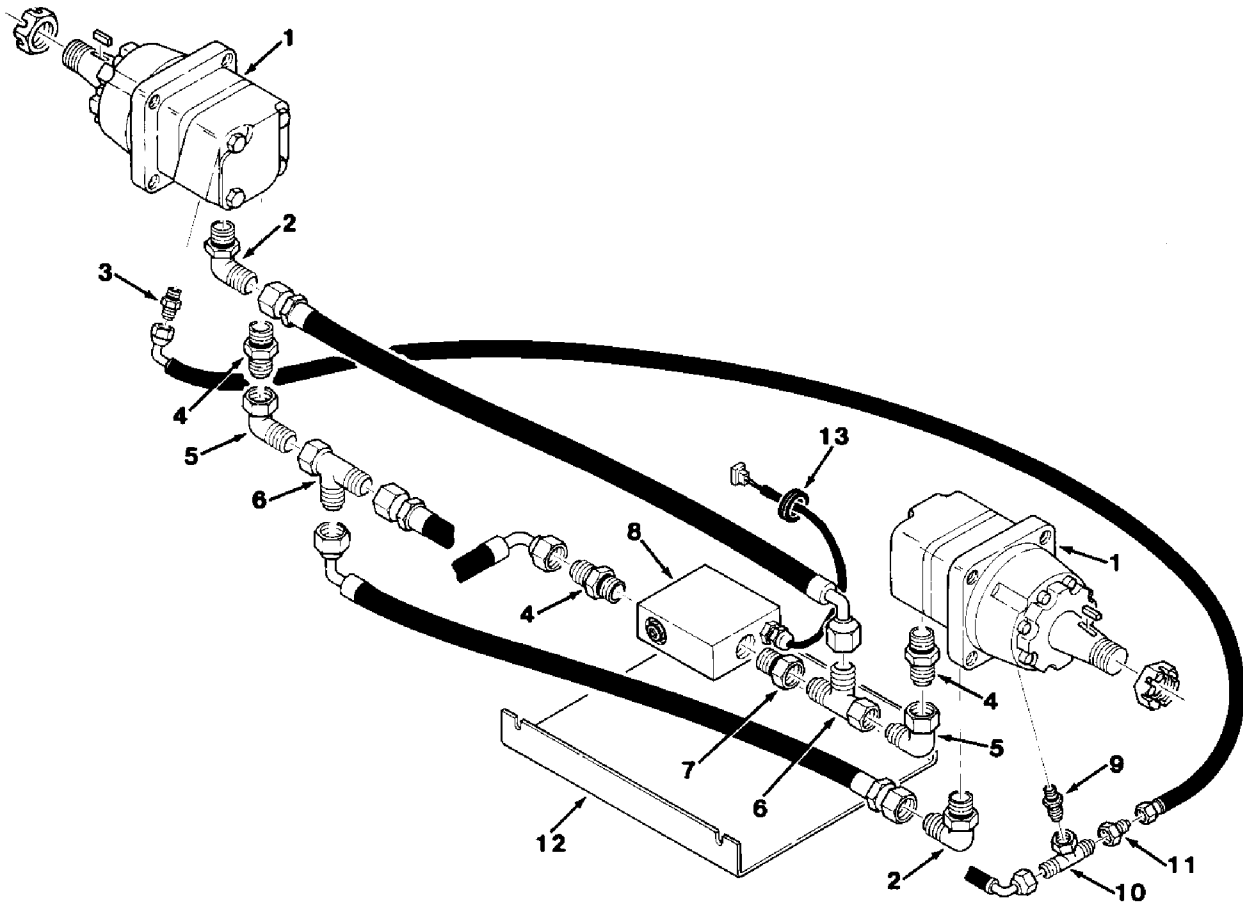


Fig. 34 - Hydraulic Hoses Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	82832	(005269-	) Sleeve, Hose	2
2	79079	(005269-	) Hose, Hydraulic	3
3	31672	(005269-	) Sleeve, Hose	1
4	02683	(005269-	) Hose, Hydraulic	1
5	79106	(005269-	) Hose, Hydraulic	1
6	59560	(005269-	) Hose, Hydraulic	1
7	31598	(005269-	) Hose, Hydraulic	1
8	57964	(005269-	) Hose, Hydraulic	1
9	79104	(005269-	) Hose, Hydraulic	1
10	31600	(005269-	) Hose, Hydraulic	1
11	31597	(005269-	) Hose, Hydraulic	1
12	57568	(005269-005349	) Hose, Hydraulic	1
12	13113	(005350-	) Hose, Hydraulic	1
13	31603	(005269-	) Hose, Hydraulic	1
14	55775	(005269-	) Hose, Hydraulic	1
15	82835	(005269-	) Hose, Hydraulic	1
16	79105	(005269-	) Hose, Hydraulic	2
17	79107	(005269-	) Hose, Hydraulic	1
18	34351	(005269-	) Hose, Hydraulic	1
19	31565	(005269-	) Hose, Hydraulic	2
20	31602	(005269-	) Hose, Hydraulic	1
21	31610	(005269-	) Hose, Hydraulic	1
22	31611	(005269-	) Hose, Hydraulic	1
23	31570	(005269-	) Hose, Hydraulic	2

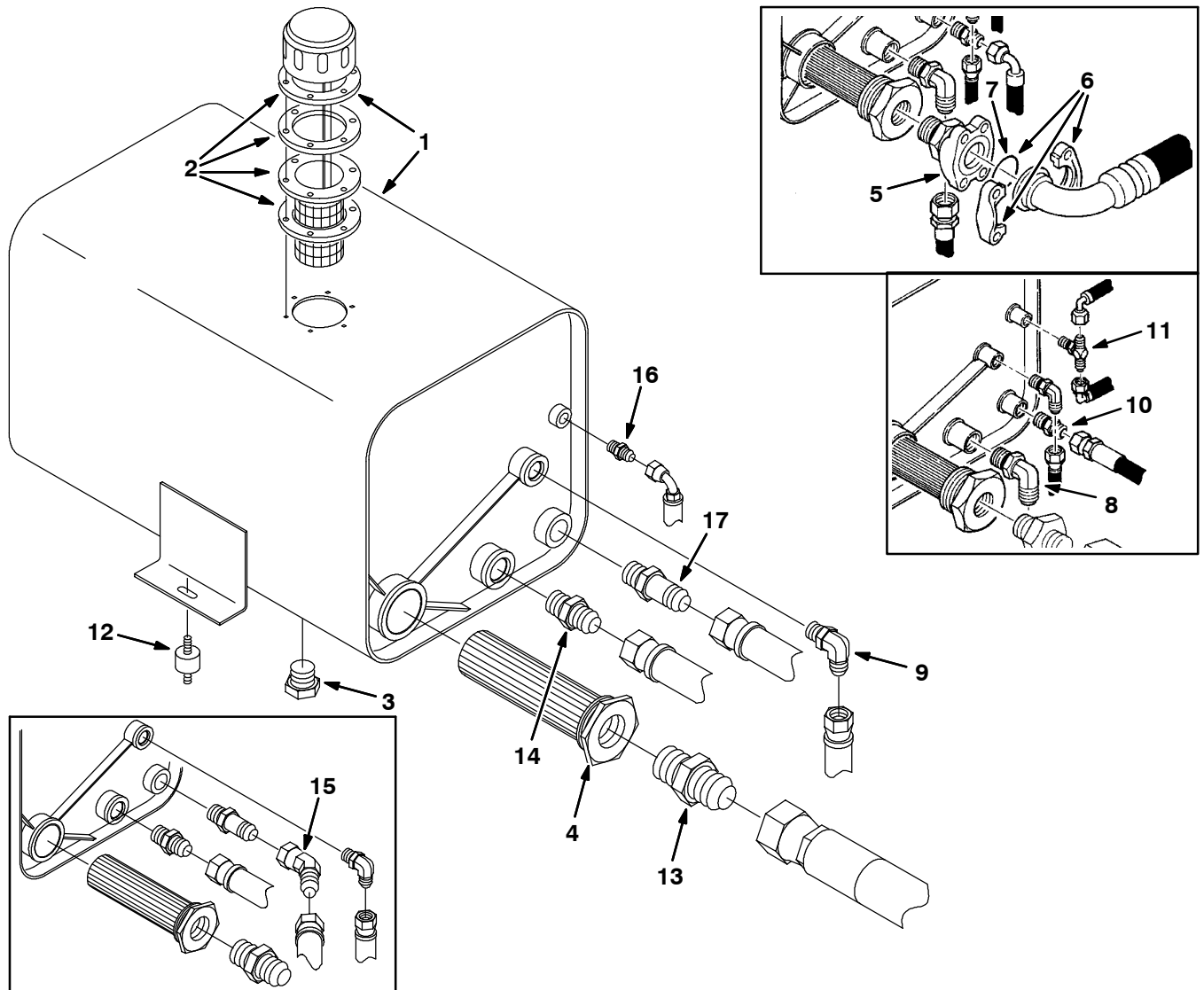
Fig. 35 - Hydraulic Propelling Motors Group



09875 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	48663	(003370-005214)	Motor, Hydraulic (See Breakdowns) (Replaced by 378710)	2
1	74162	(005215-005724)	Motor, Hydraulic (See Breakdowns) (Replaced by 378710)	2
1	22604	(005725-	Motor, Hydraulic (See Breakdowns)	2
2	46481	(003370-	Fitting, Elbow	2
3	55586	(003370-	Fitting, Straight	1
4	42260	(003370-	Fitting, Straight	3
5	35033	(003370-	Fitting, Elbow	2
6	40514	(003370-	Fitting, Tee	2
7	67832	(003370-	Fitting, Straight	1
8	31556	(003370-	Switch, Flow (See Breakdowns)	1
9	50960	(003370-	Fitting, Straight	1
10	35586	(003370-	Fitting, Tee	1
11	47752	(003370-	Fitting, Straight	1
12	02543	(003370-	Guard, Flow Switch	1
13	10632-1	(003370-	Grommet	1

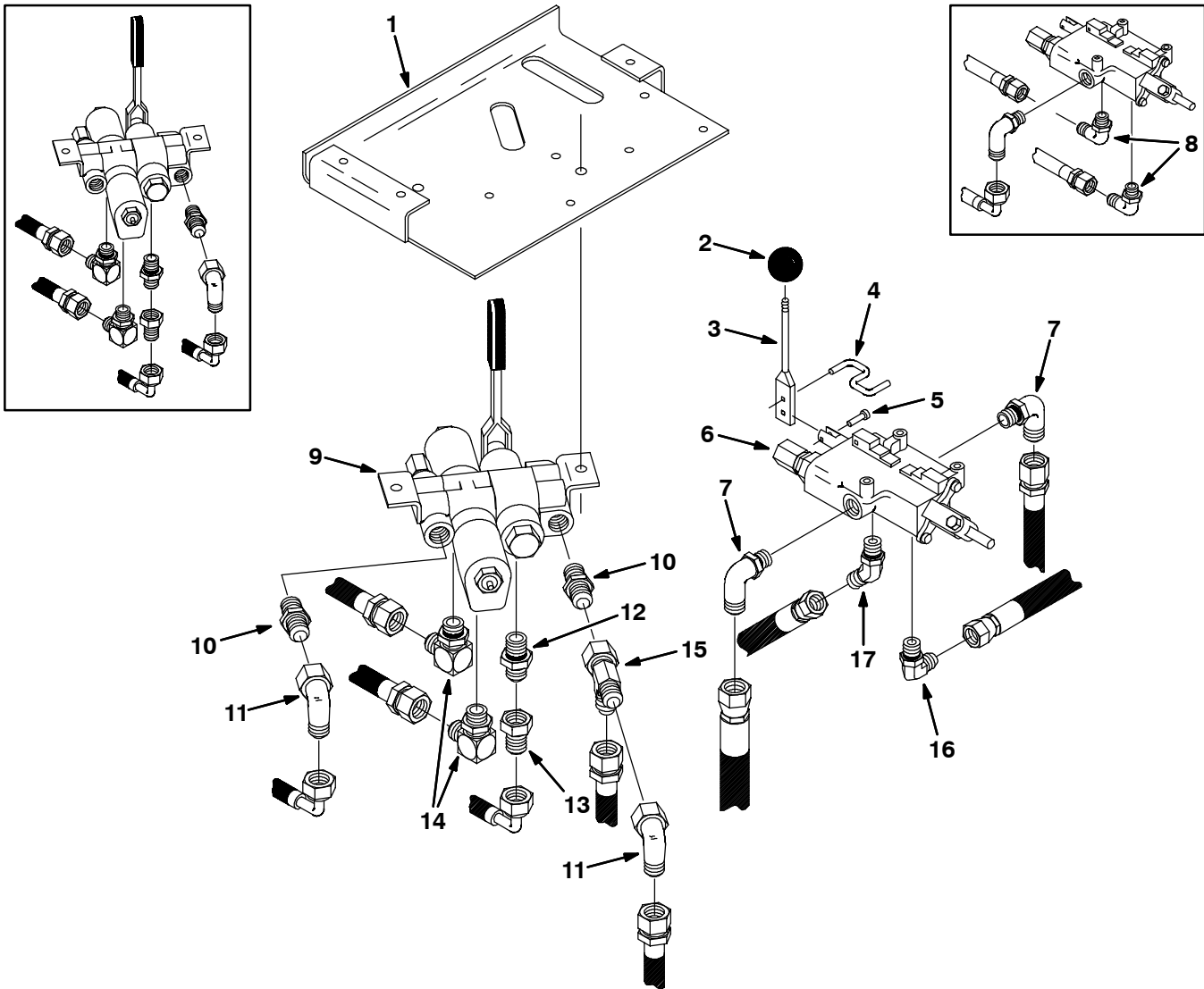
Fig. 36 - Hydraulic Reservoir Group



09876 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽ 1	31557	(003370-)	Reservoir Assembly, Hydraulic	1
▲ 2	31559	(003370-)	Breather, Filler	1
▲ 3	40362	(003370-)	Fitting, Plug	1
4	31613	(003370-)	Strainer, Suction	1
5	31589	(003370-004437)	Fitting, Straight	1
▽ 6	31595	(003370-004437)	Flange, Split	1
▲ 7	42140	(003370-004437)	Seal, O-Ring	1
8	46481	(003370-005268)	Fitting, Elbow	1
9	56820	(003370-)	Fitting, Elbow	1
10	44869	(003370-005268)	Fitting, Straight	1
11	31599	(003370-005268)	Fitting, Tee	1
12	82661	(003370-)	Isolator, Vibration	4
13	58858	(004438-)	Fitting, Straight	1
14	42260	(005269-)	Fitting, Straight	1
15	07934	(005269-005349)	Fitting, Elbow, 45°	1
16	55586	(005269-)	Fitting, Straight	1
17	62390	(005269-)	Fitting, Straight	1

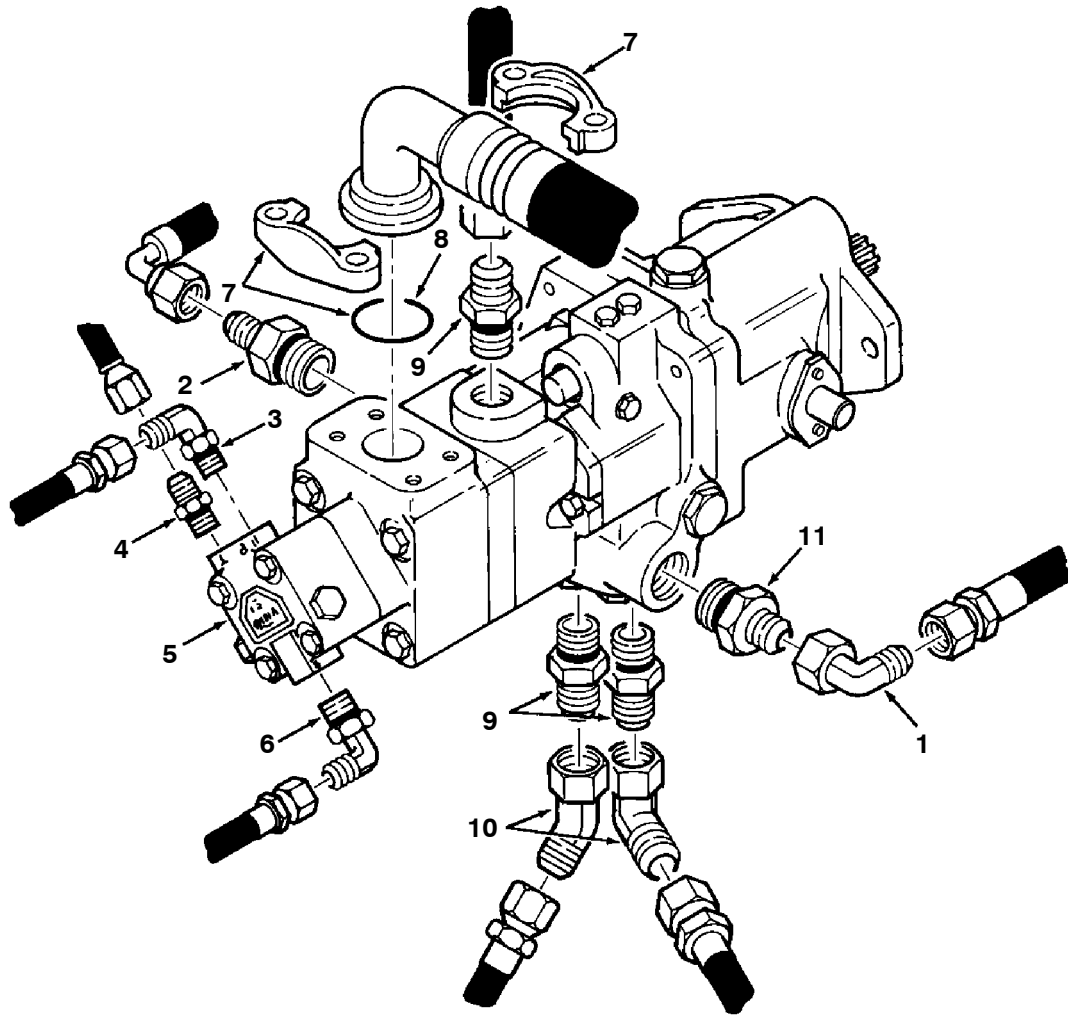
Fig. 37 - Hydraulic Control Valves Group



02371 - 550, 1550

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	31632	(003370-	) Bracket, Control Valves	1
2	26565	(003370-	) Knob	1
3	62234	(003370-	) Rod and Link	1
4	32759	(003370-	) Link, Hook	1
5	14605	(003370-	) Pin, Clevis	1
6	32761	(003370-	) Valve, Hydraulic (See Breakdowns)	1
7	47498	(003370-	) Fitting, Elbow	2
8	44868	(003370-005268	) Fitting, Elbow	2
9	31575	(003370-	) Valve, Hydraulic (See Breakdowns)	1
10	56690	(003370-	) Fitting, Straight	2
11	47504	(003370-	) Fitting, Elbow	2
12	55685	(003370-	) Fitting, Straight	1
13	16456	(003370-	) Fitting, Restrictor	1
14	47638	(003370-	) Fitting, Elbow	2
15	42215	(005269-	) Fitting, Tee	1
16	56827	(005269-	) Fitting, Elbow	1
17	77099	(005269-	) Fitting, Elbow, 45°	1

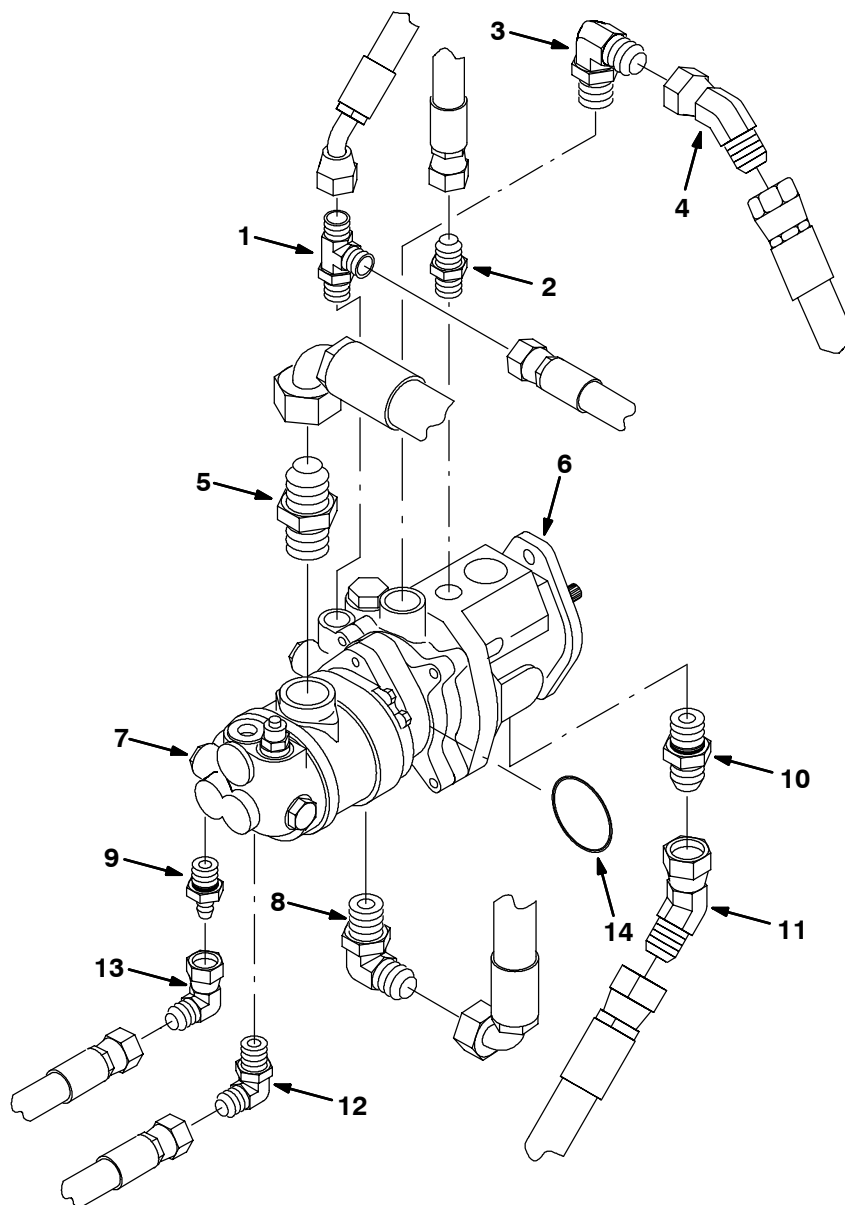
Fig. 38 - Hydraulic Pump Group



02389 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	02555	(003370-004437)	Fitting, Elbow	1
2	02545	(003370-004437)	Fitting, Straight	1
3	56820	(003370-004437)	Fitting, Elbow	1
4	55685	(003370-004437)	Fitting, Straight	1
5	47915	(003370-004437)	Pump, Hydraulic (See Breakdowns)	1
6	47512	(003370-004437)	Fitting, Elbow	1
▽ 7	31595	(003370-004437)	Flange, Split	1
▲ 8	42140	(003370-004437)	Seal, O-Ring	1
9	42260	(003370-004437)	Fitting, Straight	3
10	07934	(003370-004437)	Fitting, Elbow, 45°	2
11	02554	(003370-004437)	Fitting, Straight	1

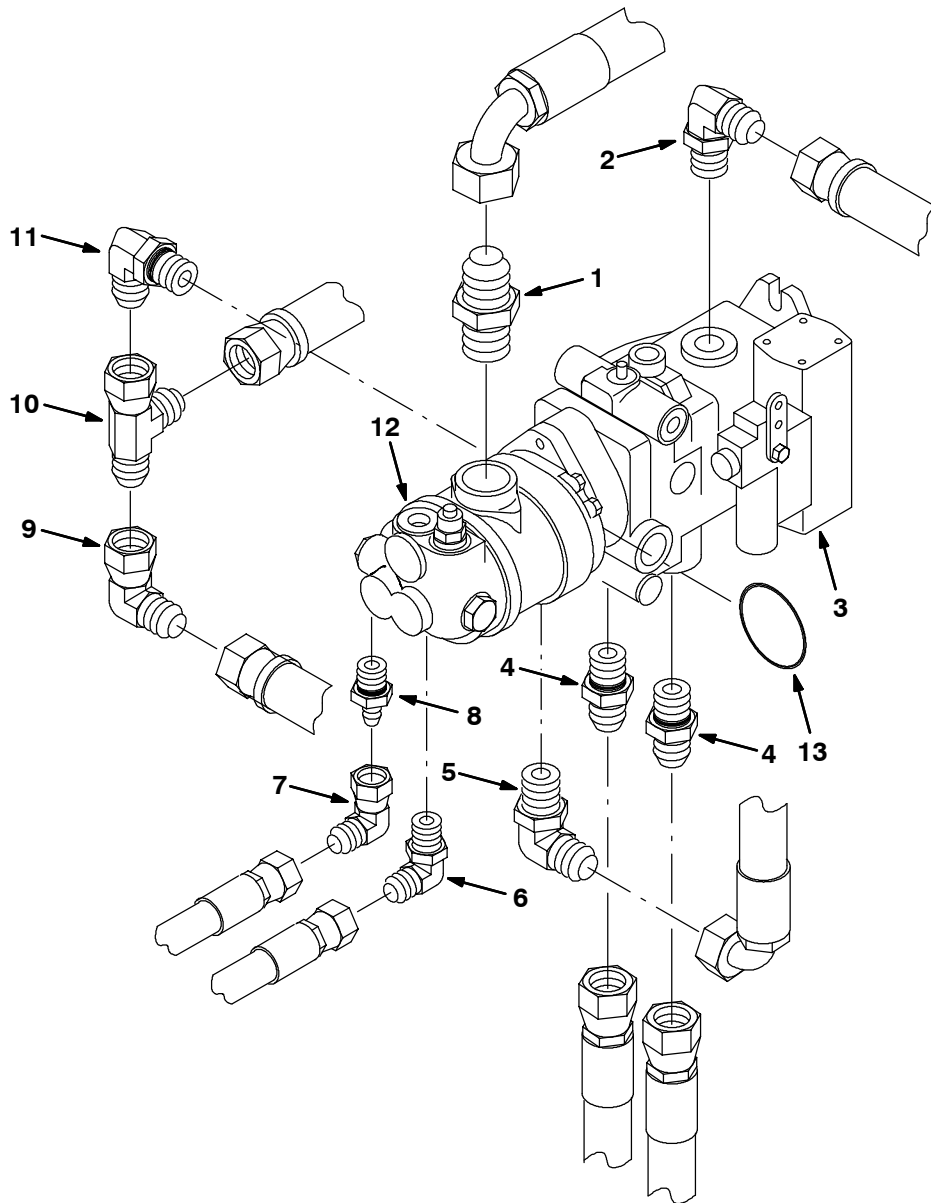
Fig. 39 - Hydraulic Pump Group



06019 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	40755	(004438-005268)	Fitting, Tee	1
2	55685	(004438-005268)	Fitting, Straight	1
3	46481	(004438-005268)	Fitting, Elbow	1
4	07934	(004438-005268)	Fitting, Elbow, 45°	1
5	58858	(004438-005268)	Fitting, Straight	1
6	34310	(004438-005268)	Pump, Hydrualic (See Breakdowns)	1
7	48880	(004438-005268)	Pump, Hydrualic (See Breakdowns)	1
8	47498	(004438-005268)	Fitting, Elbow	1
9	47508	(004438-005268)	Fitting, Straight	1
10	42260	(004438-005268)	Fitting, Straight	1
11	07934	(004438-005268)	Fitting, Elbow, 45°	1
12	47512	(004438-005268)	Fitting, Elbow	1
13	47504	(004438-005268)	Fitting, Elbow	1
14	65145-1	(004438-005268)	Seal, O-Ring	1

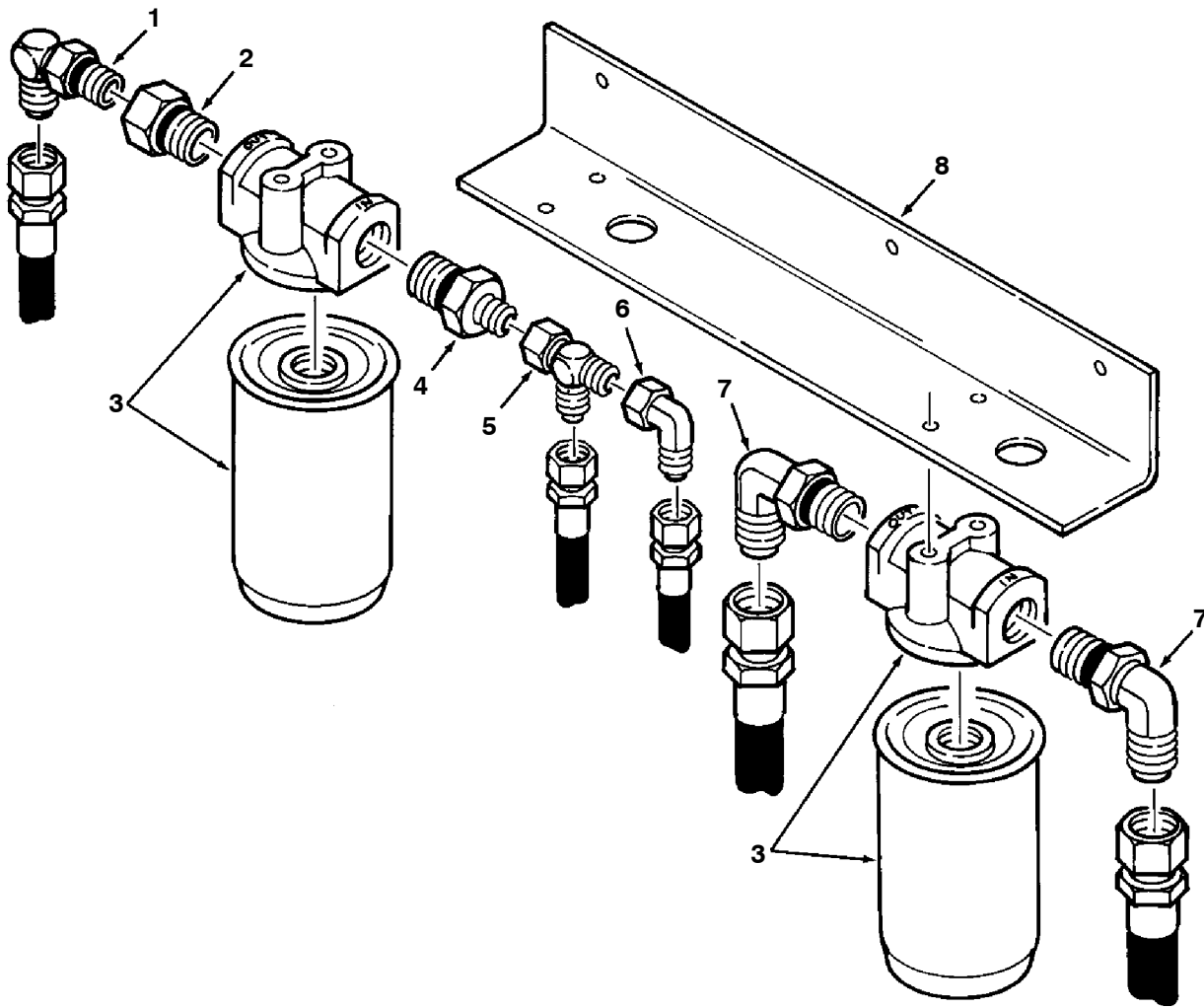
Fig. 40 - Hydraulic Pump Group



10144 - 550, 1550

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	58858	(005269-)	Fitting, Straight	1
2	46481	(005269-)	Fitting, Elbow	1
3	74163	(005269-)	Pump, Hydrualic (See Breakdowns)	1
4	67310	(005269-)	Fitting, Straight	2
5	47498	(005269-)	Fitting, Elbow	1
6	47512	(005269-)	Fitting, Elbow	1
7	47504	(005269-)	Fitting, Elbow	1
8	47508	(005269-)	Fitting, Elbow	1
9	35033	(005269-)	Fitting, Elbow	1
10	40514	(005269-)	Fitting, Tee	1
11	52911	(005269-)	Fitting, Elbow	1
12	79078	(005269-)	Pump, Hydrualic	1
13	65145-1	(005269-)	Seal, O-Ring	1

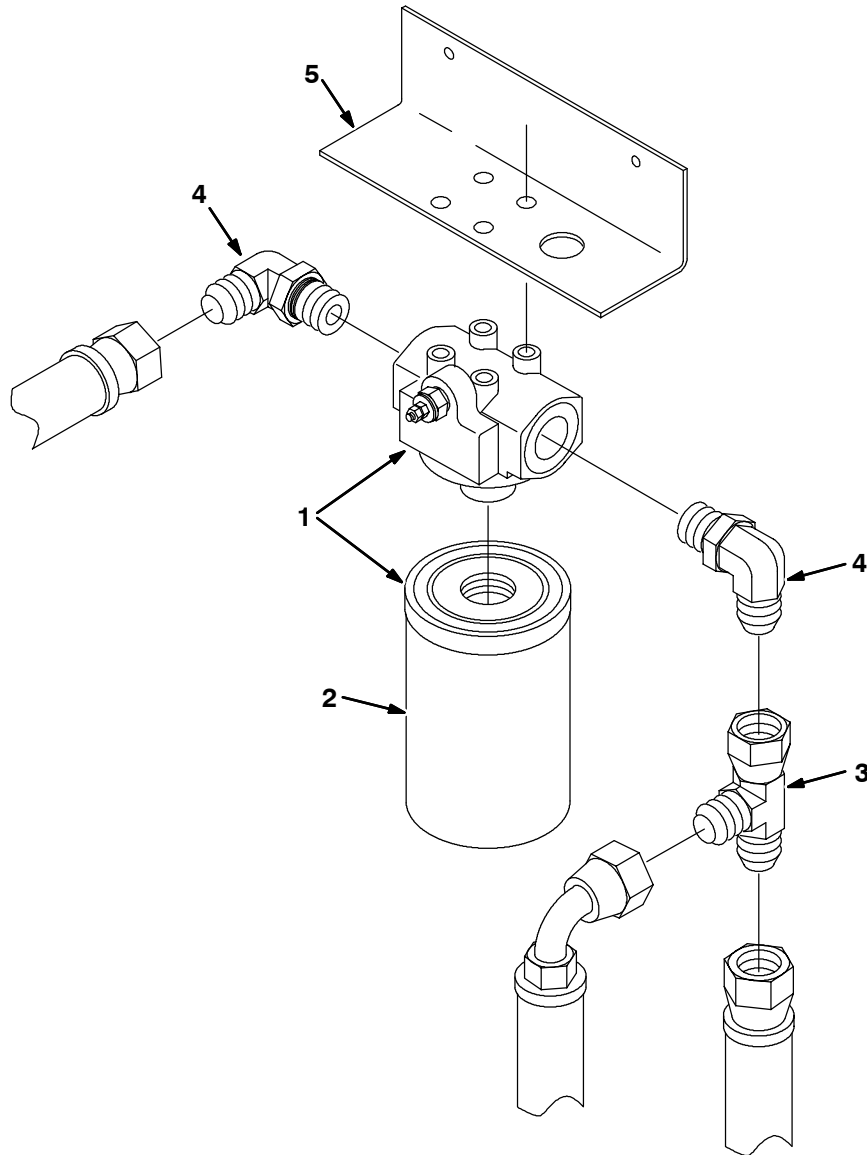
Fig. 41 - Hydraulic Filters Group



02382 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	44868	(003370-005268)	Fitting, Elbow	1
2	47519	(003370-005268)	Fitting, Straight	1
▽ 3	55619	(003370-005268)	Filter Assembly, Hydraulic	2
▲	55740	(003370-005268)	Element, Filter	1
4	31572	(003370-005268)	Fitting, Straight	1
5	42215	(003370-005268)	Fitting, Tee	1
6	47504	(003370-005268)	Fitting, Elbow	1
7	46481	(003370-005268)	Fitting, Elbow	2
8	31593	(003370-005268)	Bracket, Filters Mounting	1

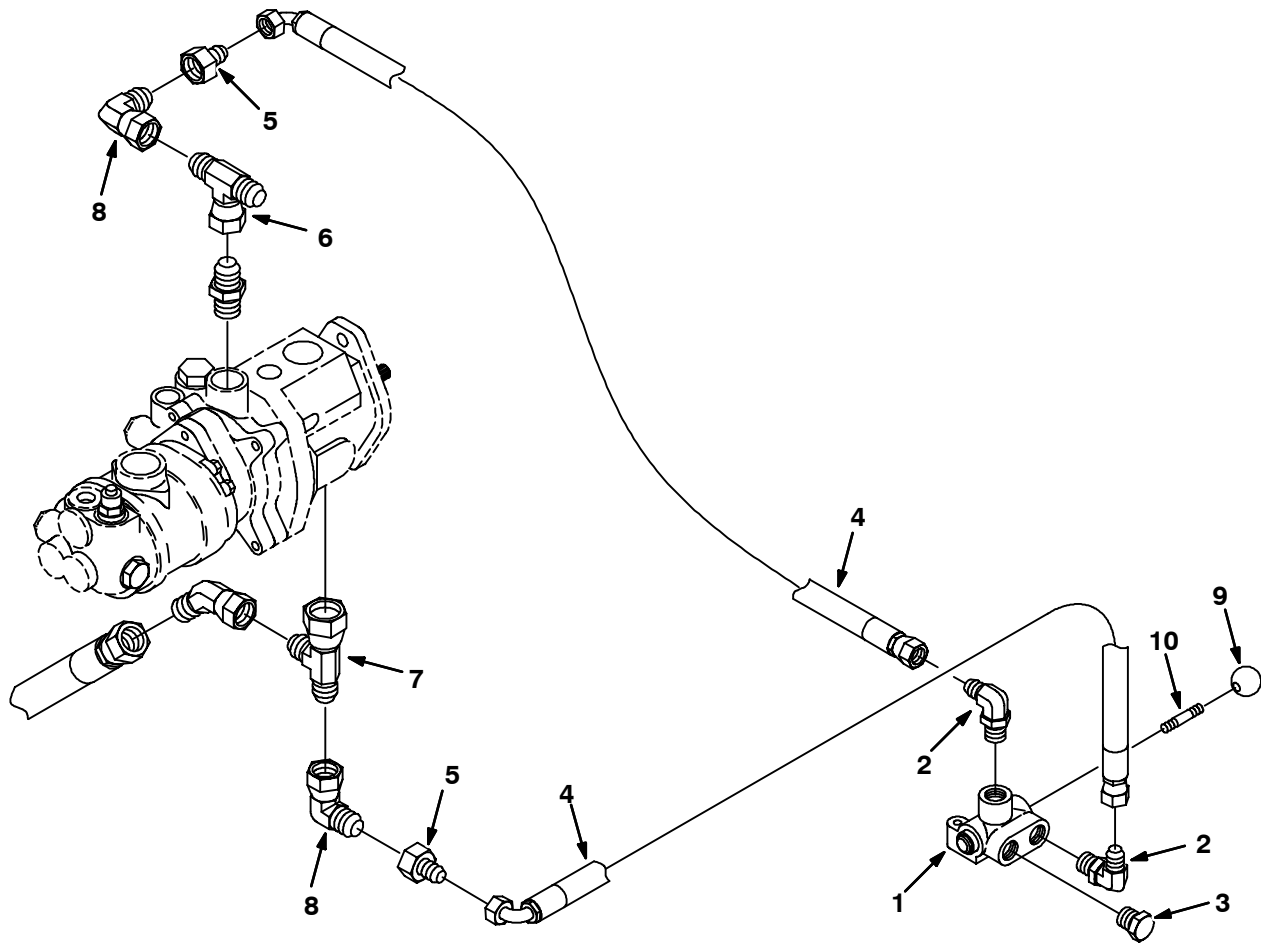
Fig. 42 - Hydraulic Filters Group



10149 - 550, 1550

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	1	10664	(005269-	) Filter Assembly, Hydraulic	1
▲	2	65221	(005269-	) Element, Filter	1
	3	40514	(005269-	) Fitting, Tee	1
	4	46481	(005269-	) Fitting, Elbow	2
	5	79075	(005269-	) Bracket, Filters Mounting	1

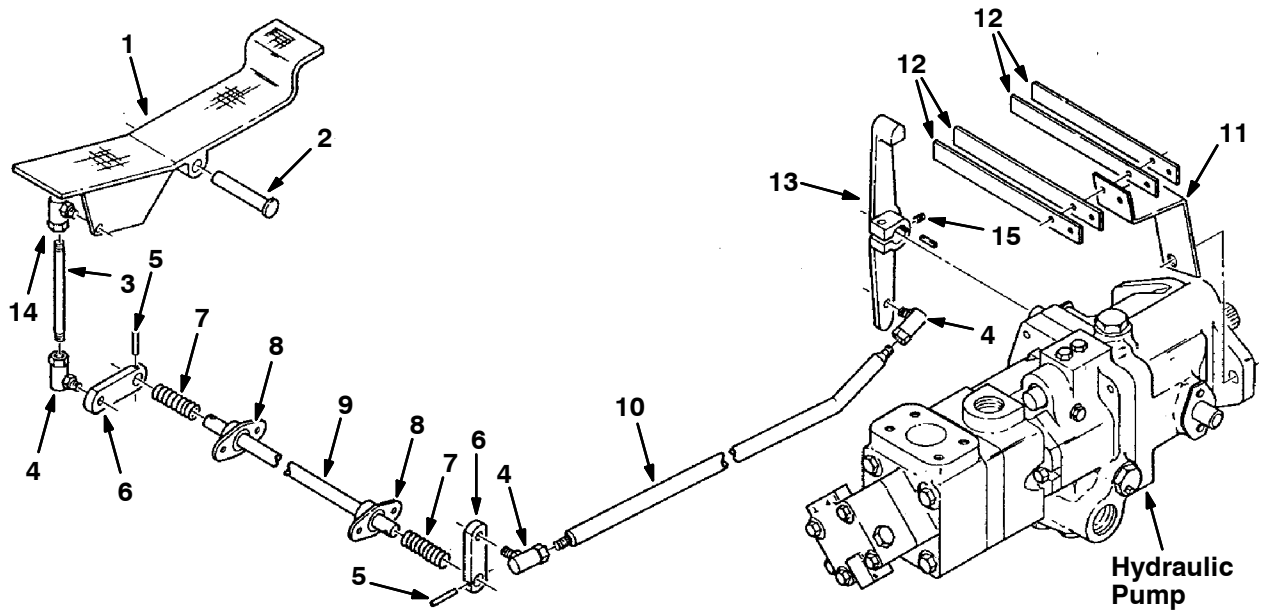
Fig. 43 - Hydraulic Tow Bypass Group



09752 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	48108A	(005101-005268)	Valve, Hydraulic (See Breakdowns)	1
2	56821	(005101-005268)	Fitting, Elbow	2
3	40362	(005101-005268)	Fitting, Plug	1
4	57196	(005101-005268)	Hose, Hydraulic	2
5	78143	(005101-005268)	Fitting, Straight	2
6	62389	(005101-005268)	Fitting, Tee	1
7	40514	(005101-005268)	Fitting, Tee	1
8	35033	(005101-005268)	Fitting, Elbow	2
9	26565	(005101-005268)	Knob	1
10	36829	(005101-005268)	Stud	1

Fig. 44 - Directional Pedal Group



09950 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	42240	(003370-004437)	Pedal, Foot Speed	1
2	06474A	(003370-004437)	Pin, Clevis	1
3	76823	(003370-004437)	Stud	1
4	51531	(003370-004437)	Ball Joint, Lower	3
5	22134	(003370-004437)	Pin, Roll	2
6	52789	(003370-004437)	Link, Directional Control	2
7	22290	(003370-004437)	Spring	2
8	47585	(003370-004437)	Bearing, Flange	2
9	76821	(003370-004437)	Shaft, Control	1
10	76822	(003370-004437)	Link, Control	1
11	54127	(003370-004437)	Angle, Spring Mounting	1
12	49681	(003370-004437)	Spring, Pump Lever Centering	4
13	42897	(003370-004437)	Lever, Pump Control	1
14	63282	(003370-004437)	Ball Joint, Upper	1
15	39322	(003370-004437)	Screw, Set	1

Fig. 45 - Directional Pedal Group

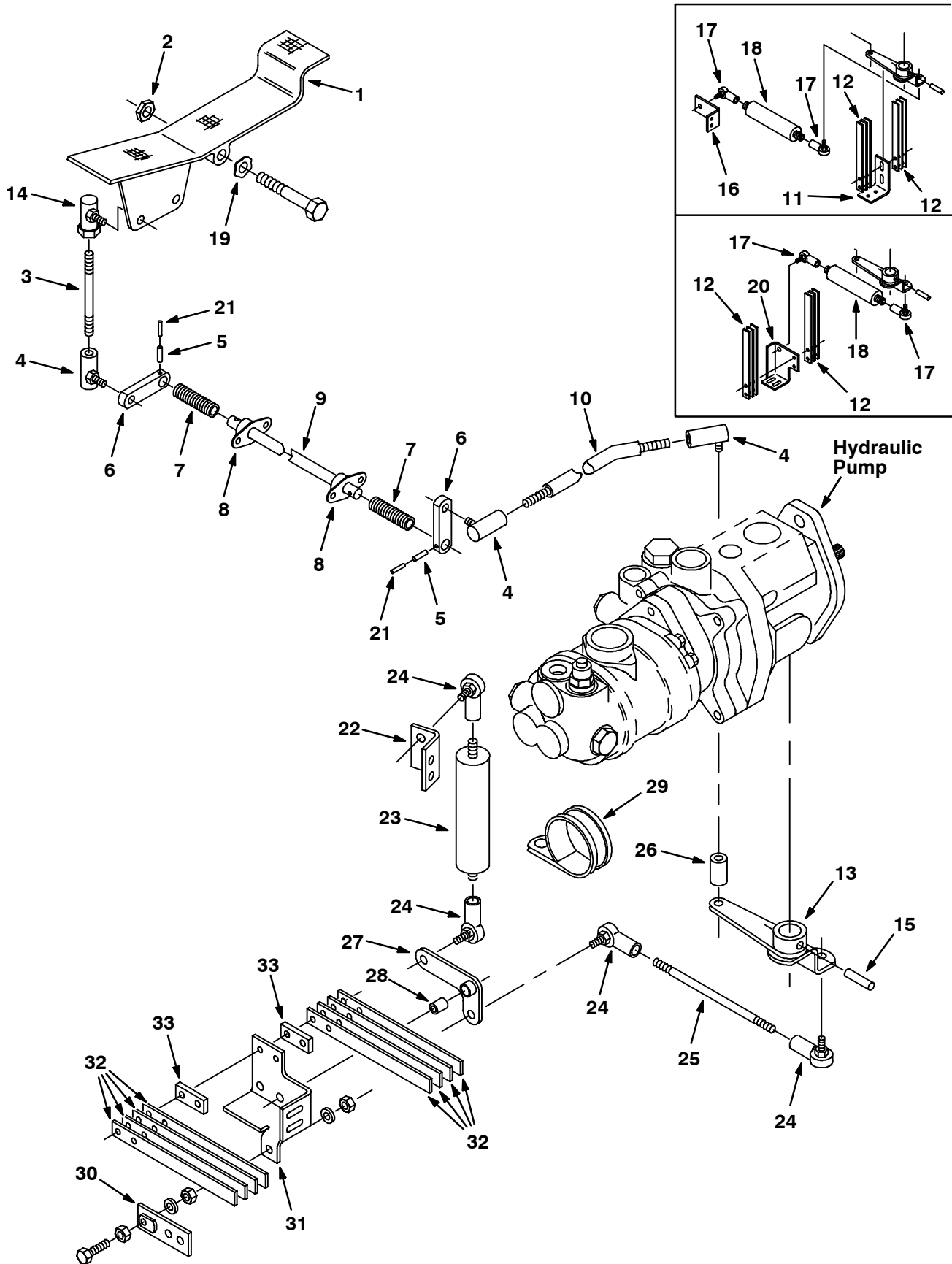


Fig. 45 - Directional Pedal Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	42240	(004438-005268)	Pedal, Foot Speed	1
2	86029	(004438-005268)	Nut, Nex, Thin	1
3	76823	(004438-005268)	Stud	1
4	50493	(004438-005268)	Ball Joint	3
5	22134	(004438-005268)	Pin, Roll	2
6	52789	(004438-005268)	Link, Directional Control	2
7	22290	(004438-005268)	Spring	2
8	47585	(004438-005268)	Bearing, Flange	2
9	76821	(004438-005268)	Shaft, Control	1
10	48887	(004438-005268)	Link, Control	1
11	48879	(004438-004626)	Angle, Spring Mounting	1
12	49681	(004438-004827)	Spring, Pump Lever Centering	6
13	62702	(004438-005268)	Arm, Pump Control	1
14	63282	(004438-005268)	Ball Joint, Upper	1
15	14854	(004438-005268)	Roll, Pin	1
16	48897	(004438-004626)	Angle, Shock	1
17	50493	(004438-004827)	Rod, End	2
18	62700	(004438-004827)	Shock, Absorber	1
19	52508	(004438-005268)	Washer, Wavy	1
20	25659	(004627-004827)	Angle, Shock	1
21	46029	(004438-005268)	Pin, Roll	2
22	65935	(004828-005268)	Angle, Shock Mount	1
23	62700	(004828-005268)	Shock, Absorber	1
24	50493	(004828-005268)	Rod, End	4
25	65942	(004828-005268)	Rod, Shock	1
26	65941	(004828-005268)	Spacer	1
27	65936	(004828-005268)	Bellcrank	1
28	76390	(004828-005268)	Sleeve	1
29	41016	(004828-005268)	Clamp, Cable	1
30	65939	(004828-005268)	Strap, Adjuster	1
31	65934	(004828-005268)	Angle, Shock	1
32	49681	(004828-005268)	Spring, Pump Lever Centering	8
33	65940	(004828-005268)	Spacer, Spring	2

Fig. 46 - Directional Pedal Group

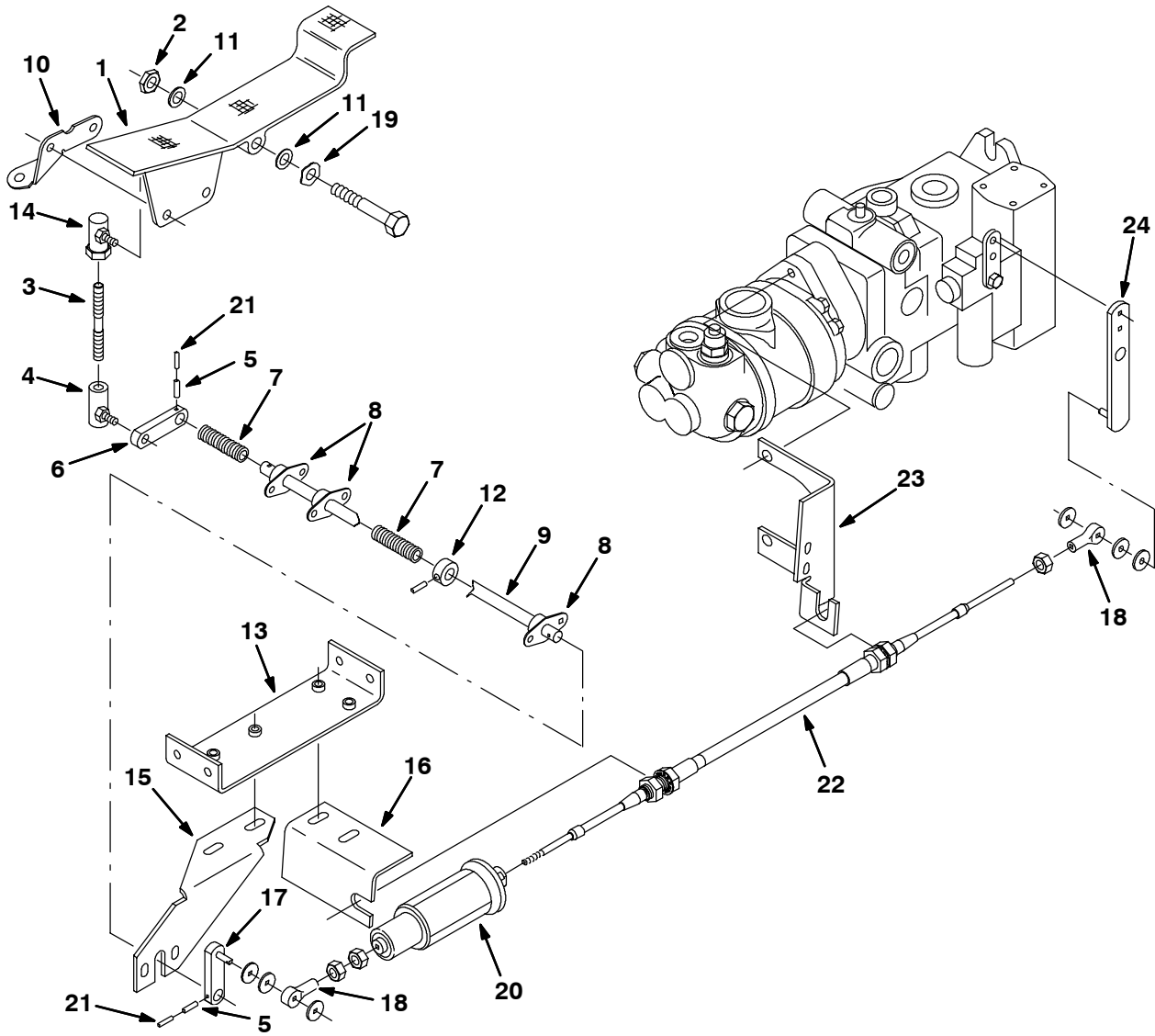
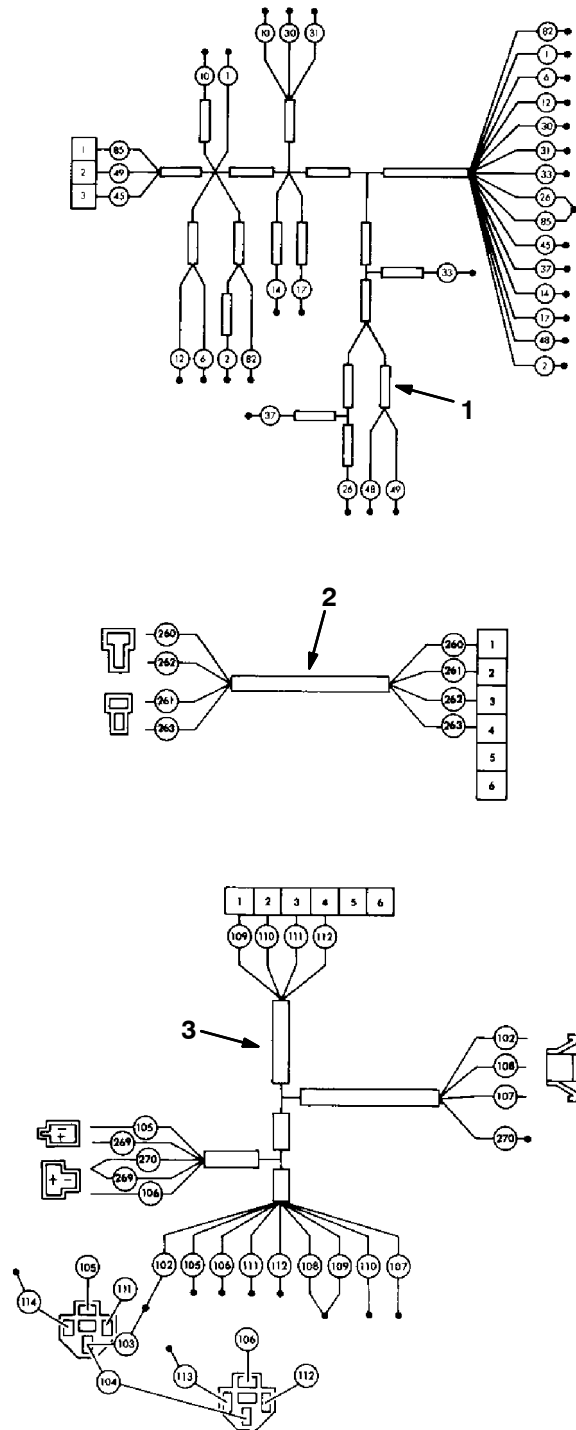


Fig. 46 - Directional Pedal Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	42240	(005269-	) Pedal, Foot Speed	1
2	86029	(005269-	) Nut, Nex, Thin	1
3	79074	(005269-	) Stud	1
4	50493	(005269-	) Ball Joint,	1
5	22134	(005269-	) Pin, Roll	2
6	52789	(005269-	) Link, Directional Control	1
7	22290	(005269-	) Spring	2
8	47585	(005269-	) Bearing, Flange	3
9	79067	(005269-	) Shaft, Control	1
10	79066	(005269-	) Bracket, Stop	1
11	59633	(005269-	) Bearing, Thrust	1
12	75371	(005269-	) Collor, Locking	1
13	79068	(005269-	) Bracket, Main	1
14	63282	(005269-	) Ball Joint, Upper	1
15	79069	(005269-	) Bracket, Mtg, Bearing	1
16	79070	(005269-	) Bracket, Cable	1
17	79077	(005269-	) Link, Direct Control	1
18	68866	(005269-	) Rod End	2
19	52508	(005269-	) Washer, Wavy	1
20	63292	(005269-	) Spring, Propel, Centering	1
21	46029	(005269-	) Pin, Roll	2
22	79080	(005269-	) Cable, Push-Pull	1
23	79071	(005269-	) Bracket, Cable & Alarm	1
24	79073	(005269-005349	) Lever, Pump	1
24	79114	(005350-	) Lever, Pump	1

Fig. 47 - Wire Harnesses Group



00357-00806 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	76217	(003370-003373)	Wire Harness, Main, Gasoline and LPG	1
1	02515	(003374-004254)	Wire Harness, Main, Gasoline and LPG	1
1	25181	(004255-)	Wire Harness, Main, Gasoline and LPG	1
2	76231	(003370-004254)	Wire Harness, Auto Squeegee	1
2	25184	(004255-)	Wire Harness, Auto Squeegee	1
3	31651	(003370-004254)	Wire Harness, Tractor, Auto Squeegee	1
3	25182	(004255-)	Wire Harness, Tractor, Auto Squeegee	1

Fig. 48 - Electrical Schematic-Gasoline, LPG (For machines below serial number 004255)

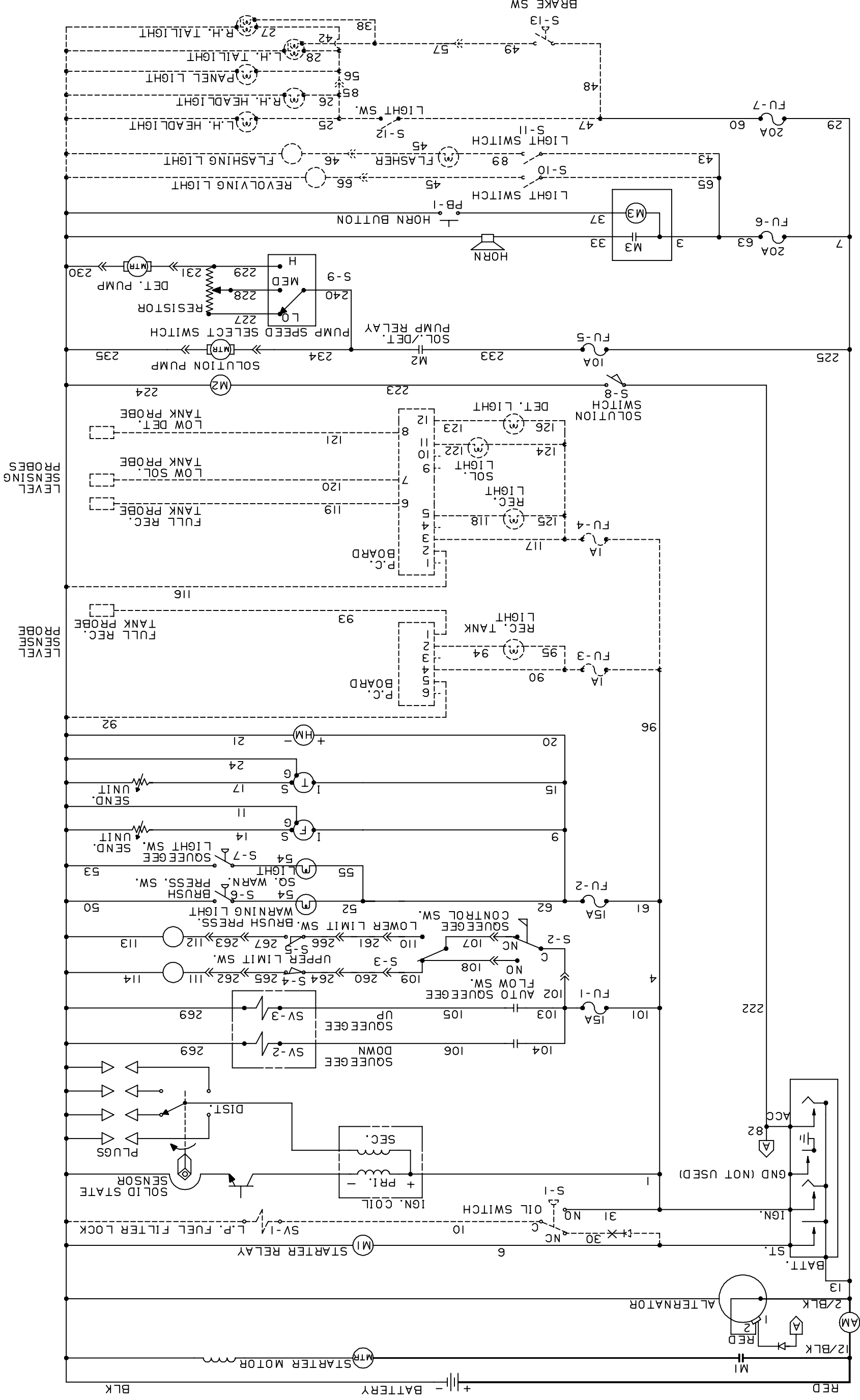
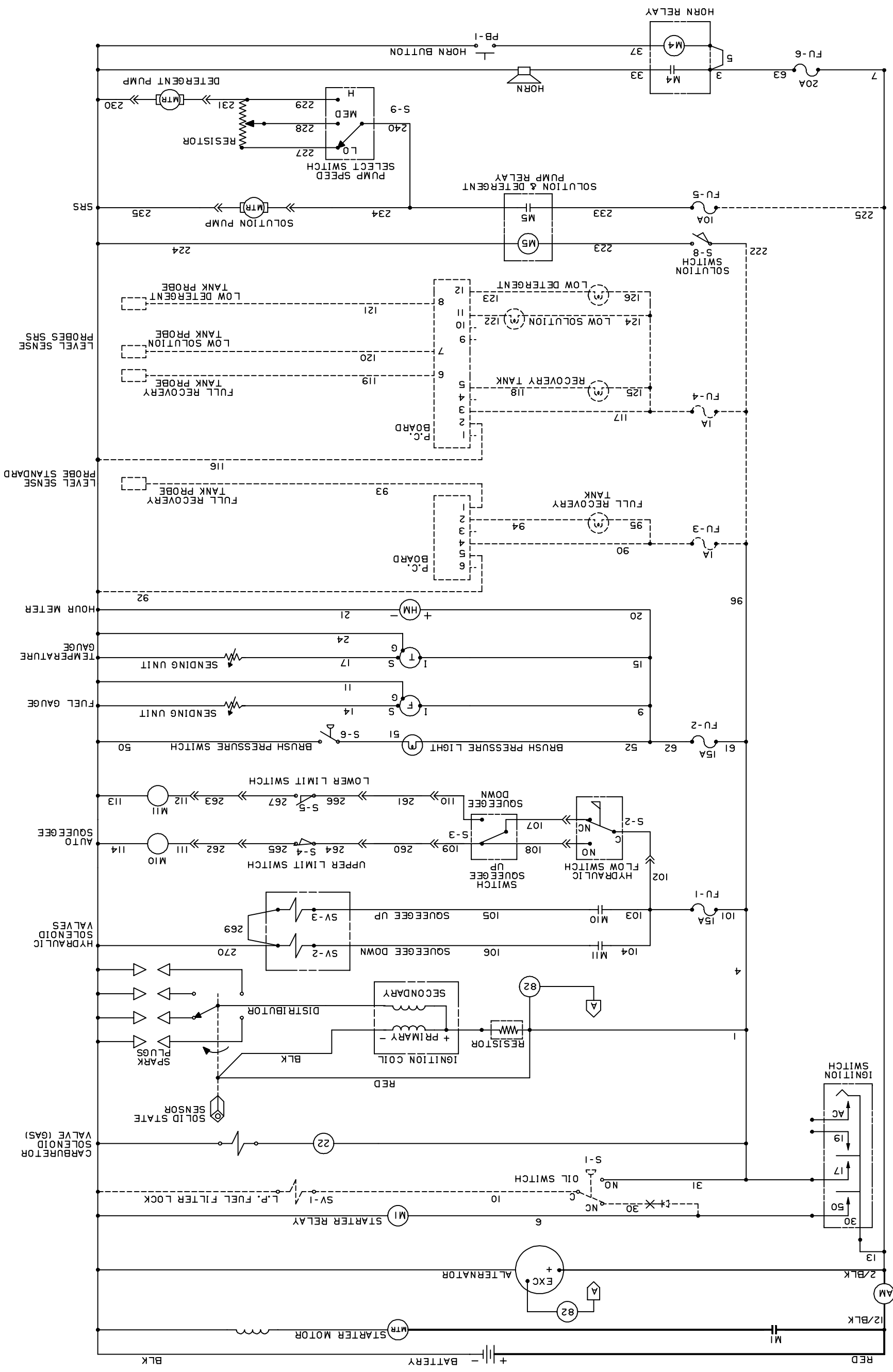


Fig. 49 - Electrical Schematic-Gasoline, LPG (For machines serial number 004255 and above)



06182 - 550, 1550, G, LP

550 MM148 (9-99)

Fig. 50 - Electrical Schematic, Diesel (For machines below serial number 003619)

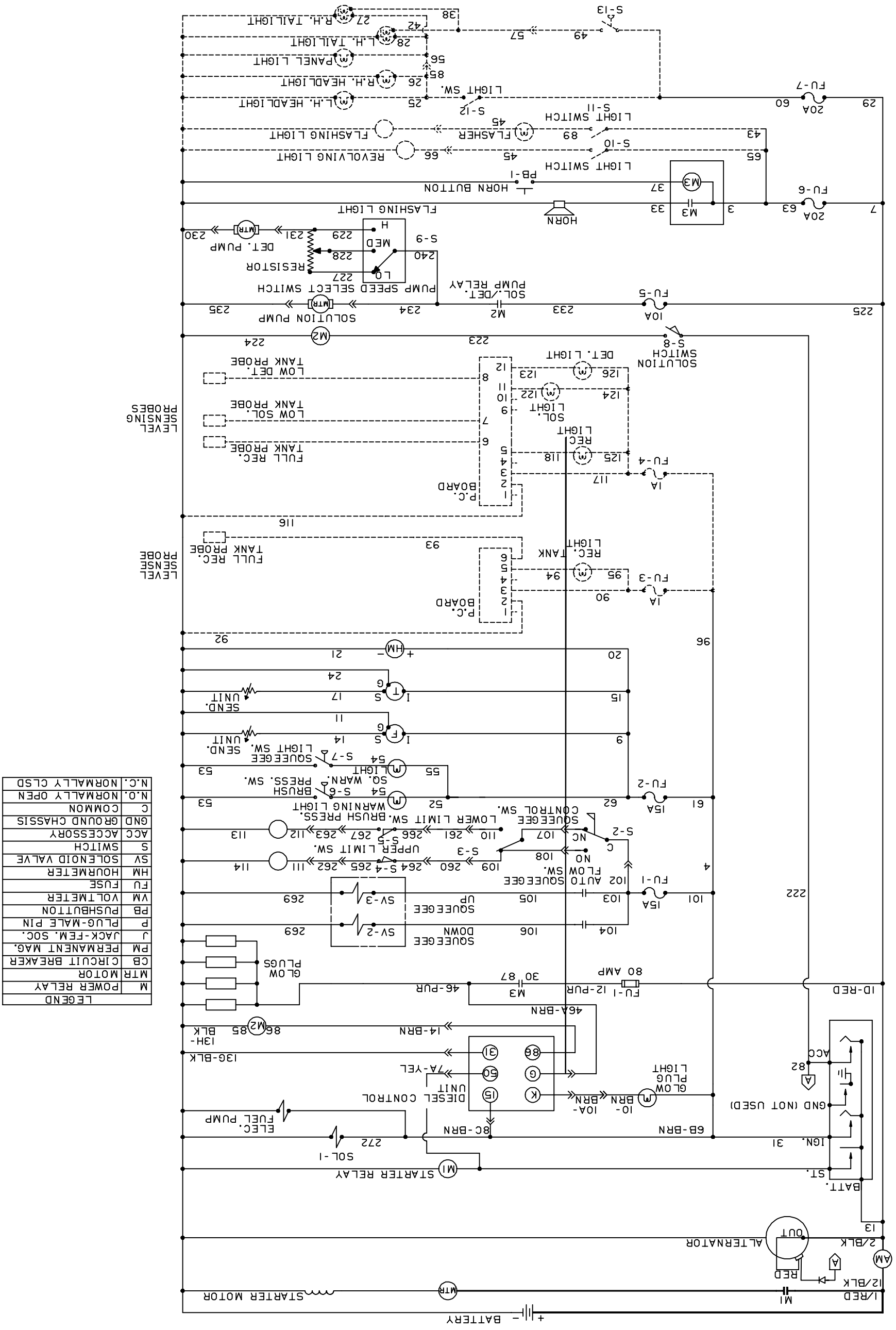


Fig. 51 - Electrical Schematic, Diesel (For machines serial number 003619 to 004254)

LEGEND	
M	POWER RELAY
MTR	MOTOR
CB	CIRCUIT BREAKER
PM	PERMANENT MAG.
J	JACK-FEM. SOC.
P	PLUG-MALE PIN
PB	PUSHBUTTON
VM	VOLTMETER
FU	FUSE
HM	HOURMETER
SV	SOLENOID VALVE
S	SWITCH
ACC	ACCESSORY
GND	GROUND CHASSIS
C	COMMON
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLSD

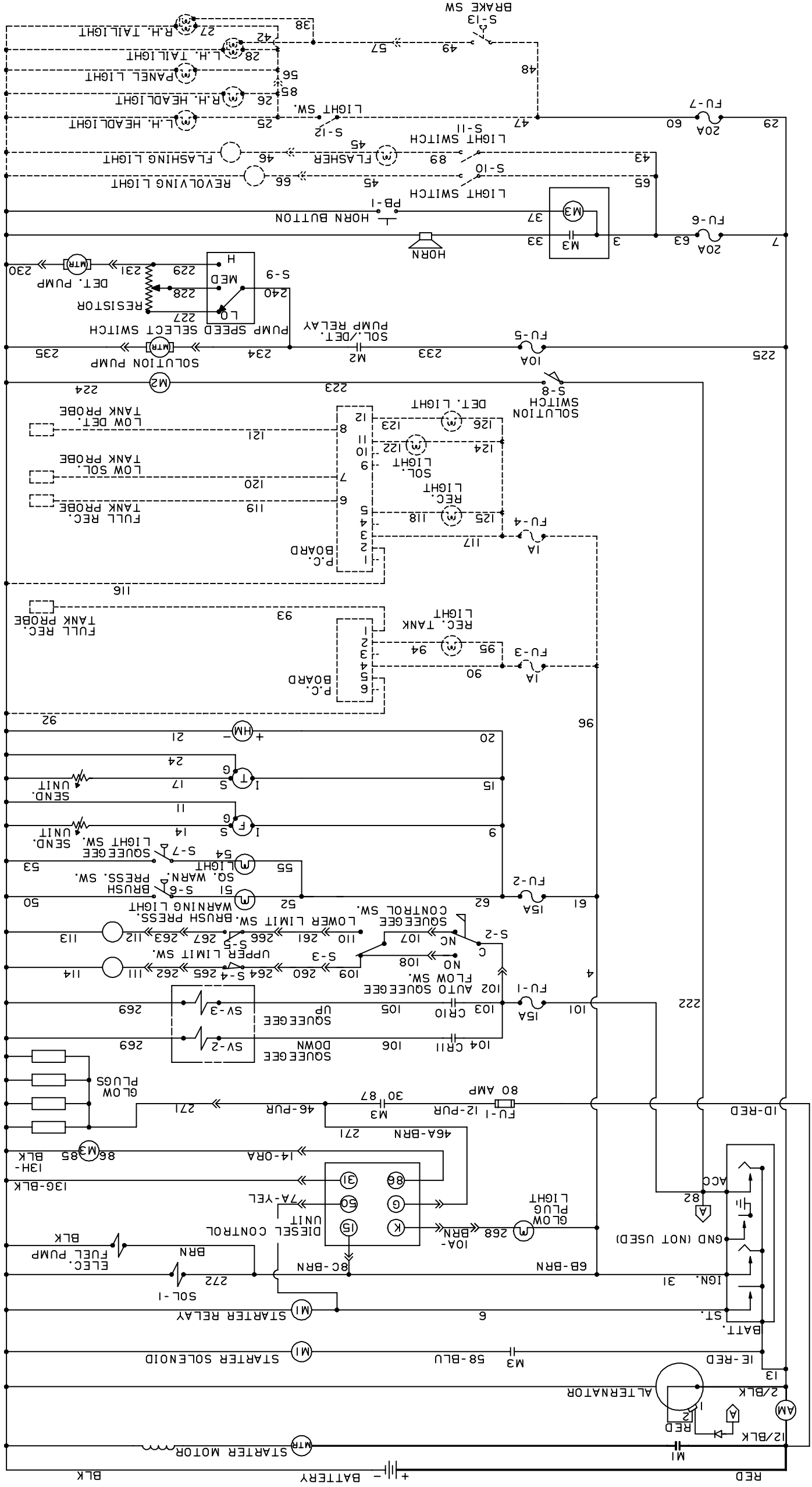


Fig. 52 - Electrical Schematic, Diesel (For machines serial number 004255 and above)

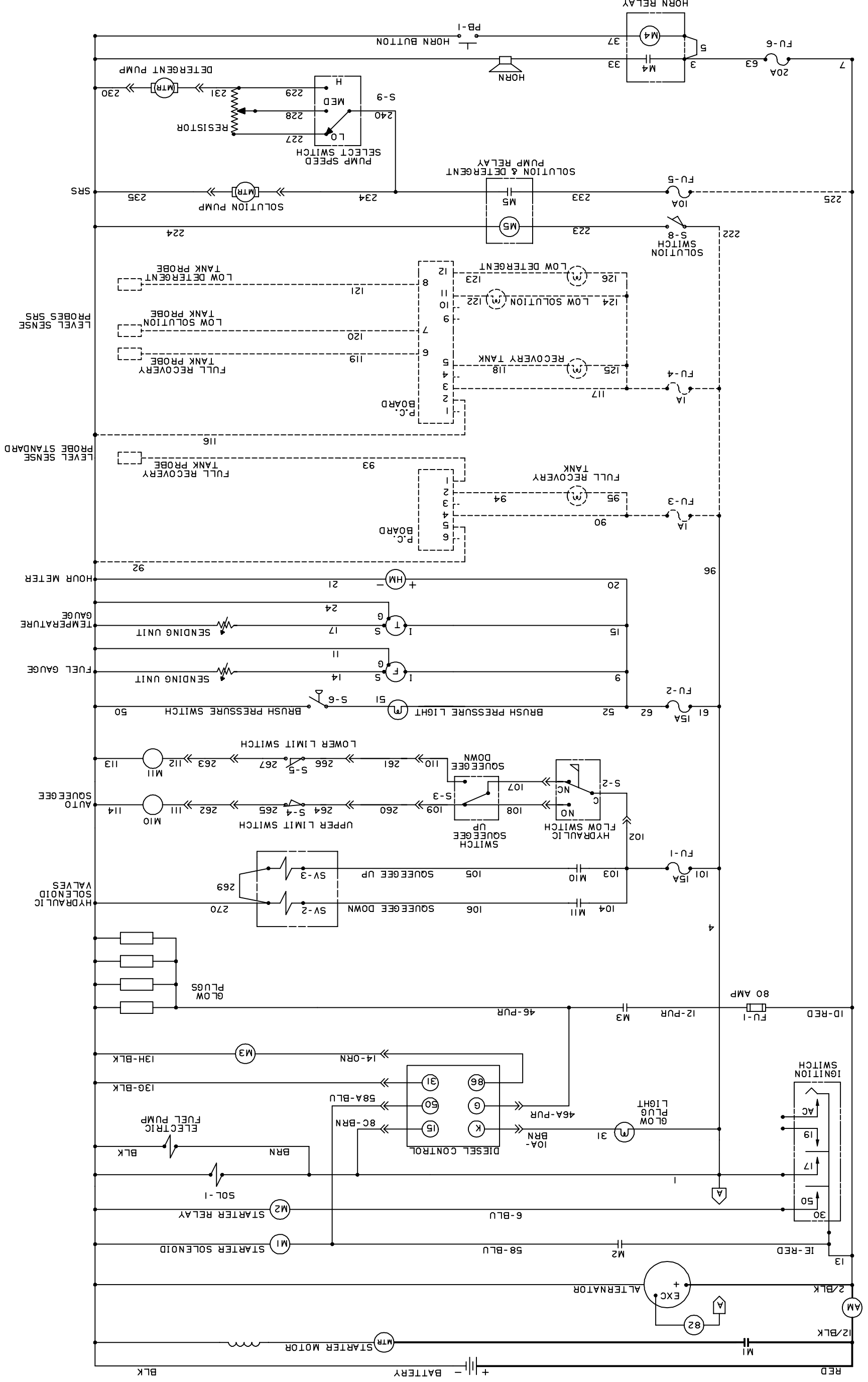


Fig. 53 - Electrical Schematic, Options (For machines serial number 004255 and above)

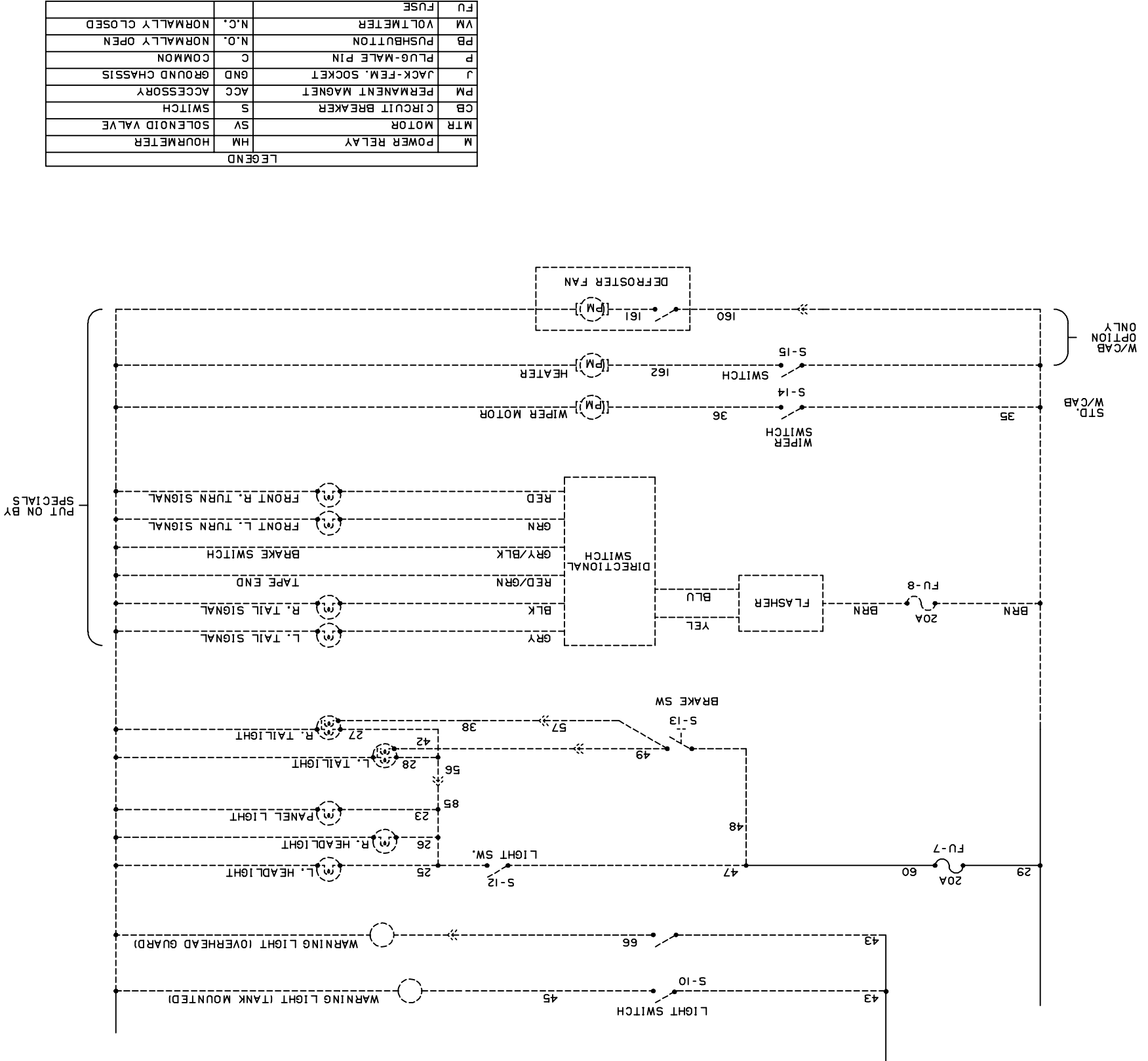
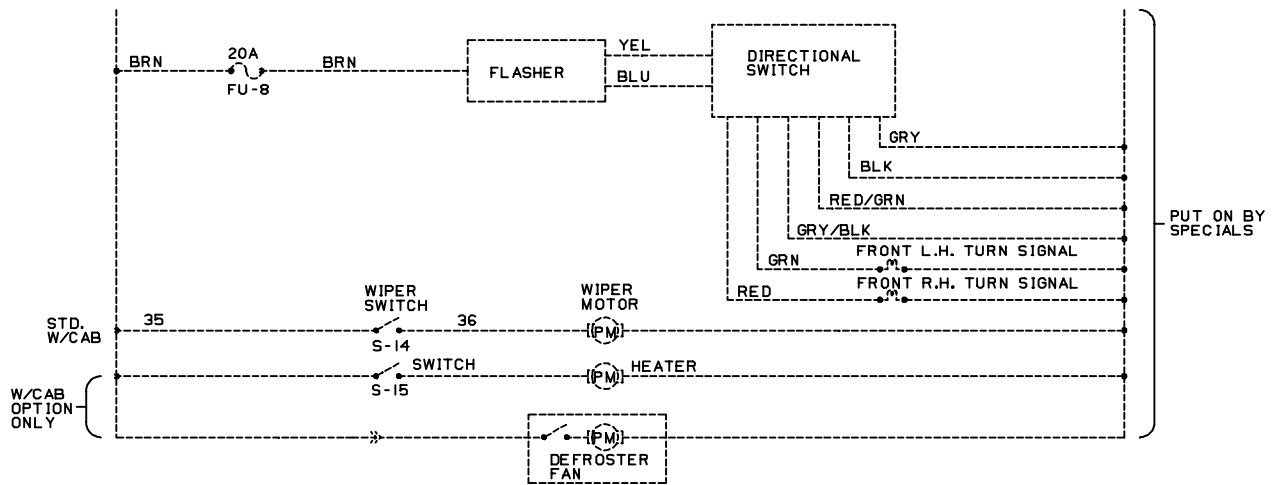


Fig. 54 - Electrical Schematic, Specials



PAGE 2 OF 2

LEGEND			
M	POWER RELAY	HM	HOURLMETER
MTR	MOTOR	SV	SOLENOID VALVE
CB	CIRCUIT BREAKER	S	SWITCH
PM	PERMANENT MAGNET	ACC	ACCESSORY
J	JACK-FEM. SOCKET	GND	GROUND CHASSIS
P	PLUG-MALE PIN	C	COMMON
PB	PUSHBUTTON	N.O.	NORMALLY OPEN
VM	VOLTMETER	N.C.	NORMALLY CLOSED
FU	FUSE		

06182 - 550, 1550

Fig. 55 - Vacuum Fan Idler Assembly

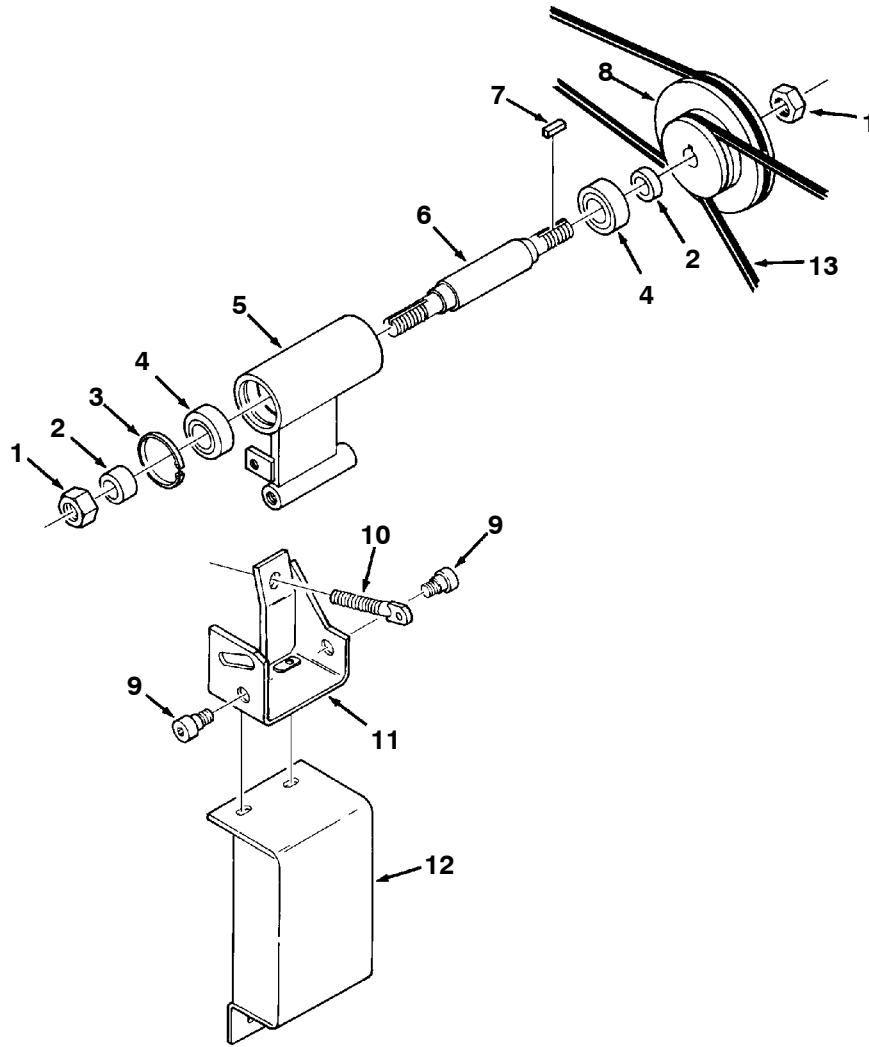


Fig. 55 - Vacuum Fan Idler Assembly

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78135	(003370-004437)	Idler, Assembly	1
▲ 1	41109	(003370-004437)	Nut	2
▲ 2	41046	(003370-004437)	Sleeve	2
▲ 3	40727	(003370-004437)	Ring, Retaining	1
▲ 4	13534	(003370-004437)	Bearing	2
▲ 5	59851	(003370-004437)	Housing, Idler Shaft	1
▲ 6	59874	(003370-004437)	Shaft, Idler	1
▲ 7	00961	(003370-004437)	Key, Square	1
▲ 8	76899	(003370-004437)	Sheave, Idler Shaft	1
▲ 9	40565	(003370-004437)	Screw, Shoulder	2
▲ 10	59865	(003370-004437)	Bolt, Eye	1
▲ 11	59857	(003370-004437)	Bracket, Idler Mounting	1
	12 32712	(003370-004437)	Support, Shaft	1
	13 25642	(003370-004152)	Replacement Kit, V-Belt	1
	13 64899	(004153-004437)	V-Belt	1

Fig. 56 - Vacuum Fan Assembly

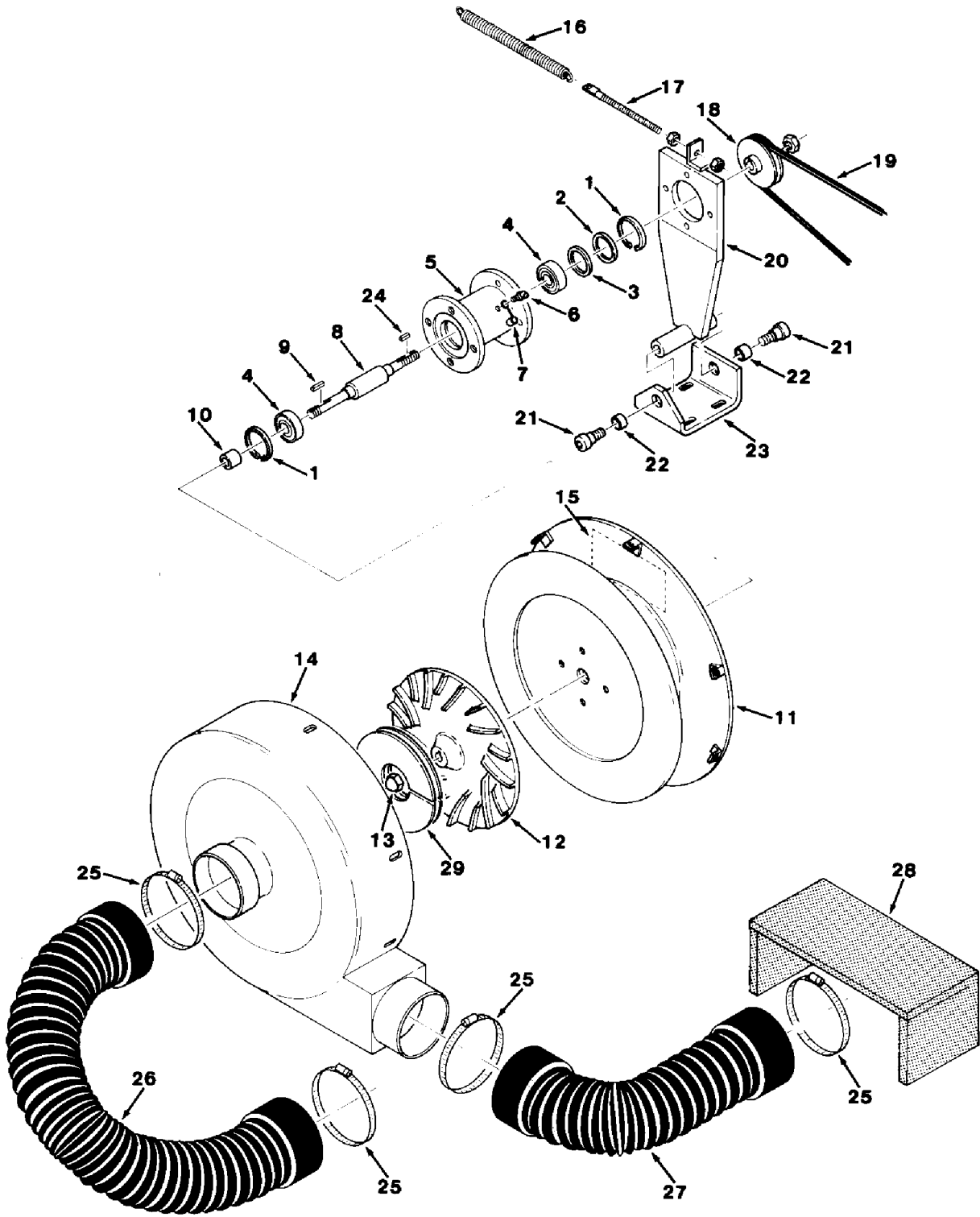
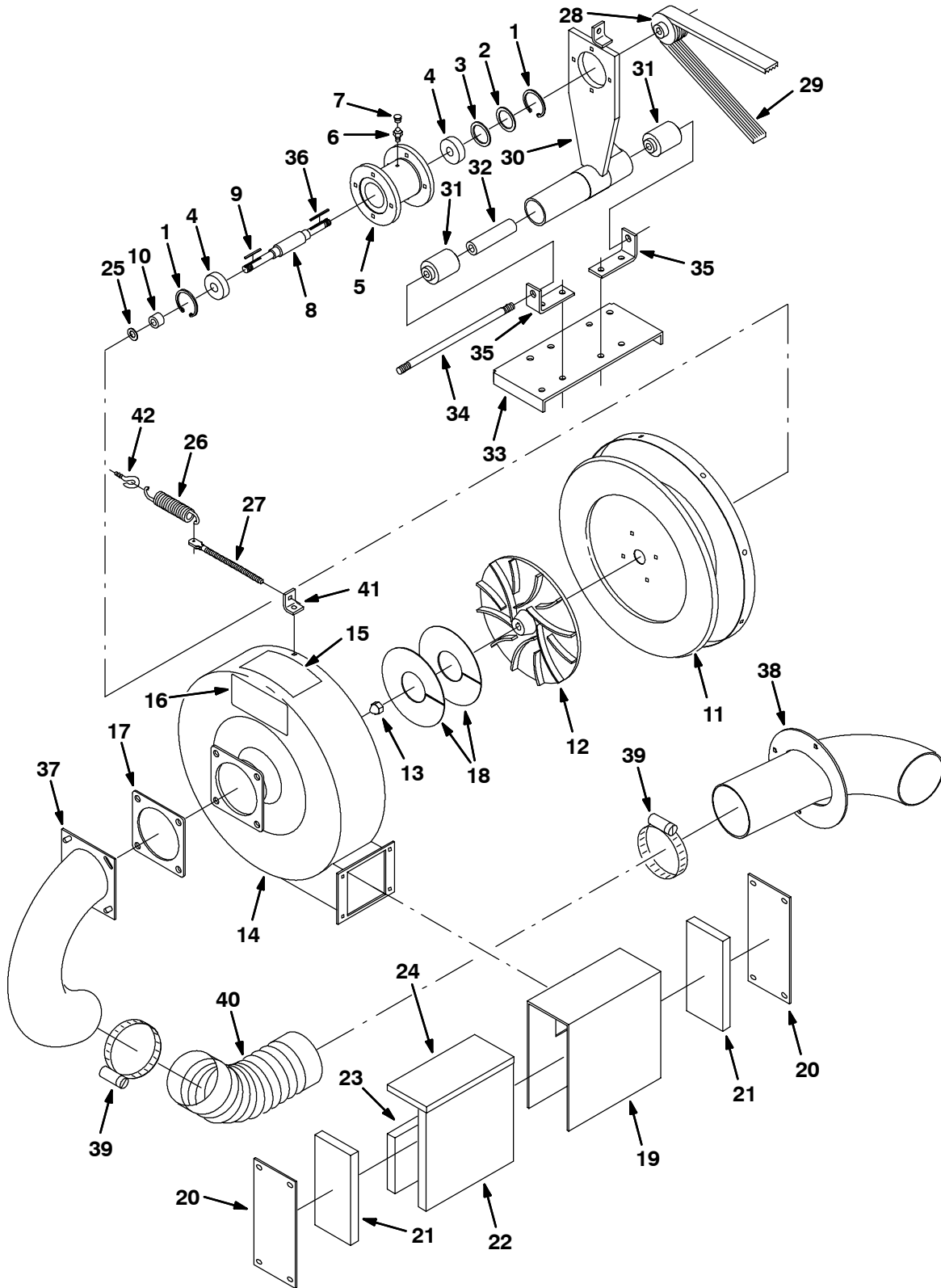


Fig. 56 - Vacuum Fan Assembly

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
▽	31614	(003370-004152)	Fan Assembly, Vacuum (Replaced by 61702)	1	
▲ 1	10464	(003370-004152)	Ring, Retaining	2	
▲ 2	75454	(003370-004152)	Shim	1	
▲ 3	42809	(003370-004152)	Washer, Wavy	1	
▲ 4	40496	(003370-004152)	Bearing, Ball	2	
▲ 5	16400	(003370-004152)	Housing, Bearing	1	
▲ 6	08407	(003370-004152)	Fitting, Grease	1	
▲ 7	40390	(003370-004152)	Cover, Grease	1	
▲ 8	03839	(003370-004152)	Shaft, Fan	1	
▲ 9	00966	(003370-004152)	Key, Square	1	
▲ 10	75461	(003370-004152)	Sleeve	1	
▲ 11	58107	(003370-004152)	Housing, Rear	1	
▲ 12	03922	(003370-004152)	Impeller	1	
▲ 13	41130	(003370-004152)	Nut, Low Crown	1	
▲ 14	31615	(003370-004152)	Housing, Front	1	
▲ 15	41007	(003370-004152)	Label, Lubricating Instructions	1	
	16	47745	(003370-004152)	Spring, Tension	1
	17	42331-1	(003370-004152)	Bolt, Eye	1
	18	76882	(003370-004152)	Sheave, Fan	1
	19	25642	(003370-004152)	Replacement Kit, V-Belt	1
	20	31619	(003370-004152)	Bracket, Fan	1
	21	40565	(003370-004152)	Screw, Shoulder	2
	22	40840	(003370-004152)	Bushing, Bronze	2
	23	75467	(003370-004152)	Bracket, Mounting	1
	24	00960	(003370-004152)	Key, Square	1
	25	23498	(003370-004152)	Clamp, Wormdrive	4
	26	40870-1	(003370-004152)	Hose Assembly	1
	27	40870-5	(003370-004152)	Hose Assembly	1
	28	75210	(003370-004152)	Insulation, Muffler	1
	29	58114	(003370-004152)	Repair Kit, Fan Assembly	1

Fig. 57 - Vacuum Fan Assembly



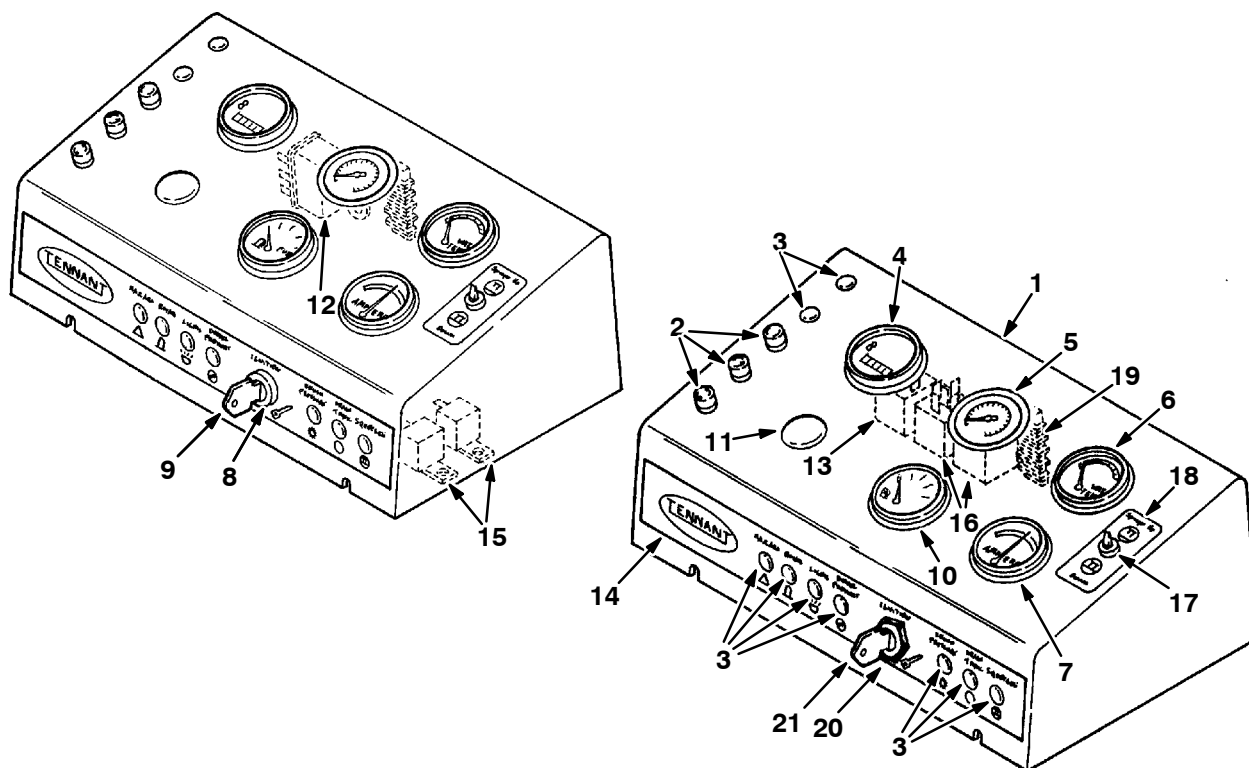
11117 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
∇	61701	(004153-)	Fan Assembly, Vacuum	1
▲ 1	10464	(004153-)	Ring, Retaining	2
▲ 2	75454	(004153-)	Shim	1

Fig. 57 - Vacuum Fan Assembly

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▲	3	42809	(004153-) Washer, Wavy	1
▲	4	40496	(004153-) Bearing, Ball	2
▲	5	16400	(004153-) Housing, Bearing	1
▲	6	47801	(004153-) Fitting, Grease	1
▲	7	40390	(004153-) Cover, Grease	1
▲	8	03839	(004153-004437) Shaft, Fan (Replaced by 61694)	1
▲	8	375613	(004438-) Shaft, Fan	1
▲	9	00966	(004153-) Key, Square	1
▲	10	75461	(004153-) Sleeve	1
▲	11	58107	(004153-) Housing, Rear	1
▲	12	03922	(004153-) Impeller	1
▲	13	41130	(004153-) Nut, Low Crown	1
▲▽		25383	(004153-) Housing Assembly, Front	1
▲▲	14	25189	(004153-) Housing, Front	1
▲▲	15	41007	(004153-) Label, Lubricating Instructions	1
▲▲	16	40052	(004153-) Label, Danger, Fan Suction	1
▲▲	17	25216	(004153-) Gasket, Fan	1
▲	18	58114	(004153-) Repair Kit, Fan Assembly	1
▲▽		09314	(004153-) Muffler Assembly	1
▲▲	19	25207	(004153-) Frame, Muffler	1
▲▲	20	25208	(004153-) Plate, Side	2
▲▲	21	25373	(004153-) Foam, Acoustic	2
▲▲	22	25359	(004153-) Foam, Acoustic	1
▲▲	23	25364	(004153-) Foam, Acoustic	1
▲▲	24	25365	(004153-) Foam, Acoustic	1
▲	25	75456	(004153-) Shim, 0.003" (0.07 mm)	1
▲		75456-1	(004153-) Shim, 0.005" (0.12 mm)	1
▲		75456-2	(004153-) Shim, 0.010" (0.25 mm)	2
▲		75456-3	(004153-) Shim, 0.020" (0.50 mm)	2
▲		75456-4	(004153-) Shim, 0.060" (1.52 mm)	2
	26	50864	(004153-) Spring, Tension	1
	27	42331-1	(004153-) Bolt, Eye	1
	28	76882	(004153-004437) Sheave, Fan	1
	28	375614	(004438-) Sheave, Fan	1
	29	25642	(003370-004153) Replacement Kit, V-Belt	1
	29	25643	(004154-004437) V-Belt	1
	29	25202	(004438-) V-Belt	1
▽		25640	(004153-) Bracket Mounting Assembly, Fan	1
▲	30	25632	(004153-) Bracket, Mounting	1
▲	31	25384	(004153-) Bearing	2
▲	32	25636	(004153-) Spacer	1
	33	25655	(004438-) Mount, Fan	1
	34	25637	(004153-) Rod, Threaded	1
	35	25639	(004153-) Bracket, Angle	2
	36	00911	(004153-) Key, Square	1
	37	25212	(004153-) Tube, Intake	1
	38	09311	(004153-) Tube, Inlet	1
	39	23498	(004153-) Clamp, Wormdrive	2
	40	40870-2	(004153-) Hose Assembly	1
	41	49021	(004153-) Angle	1
	42	11893	(004153-) Bolt, Eye	1

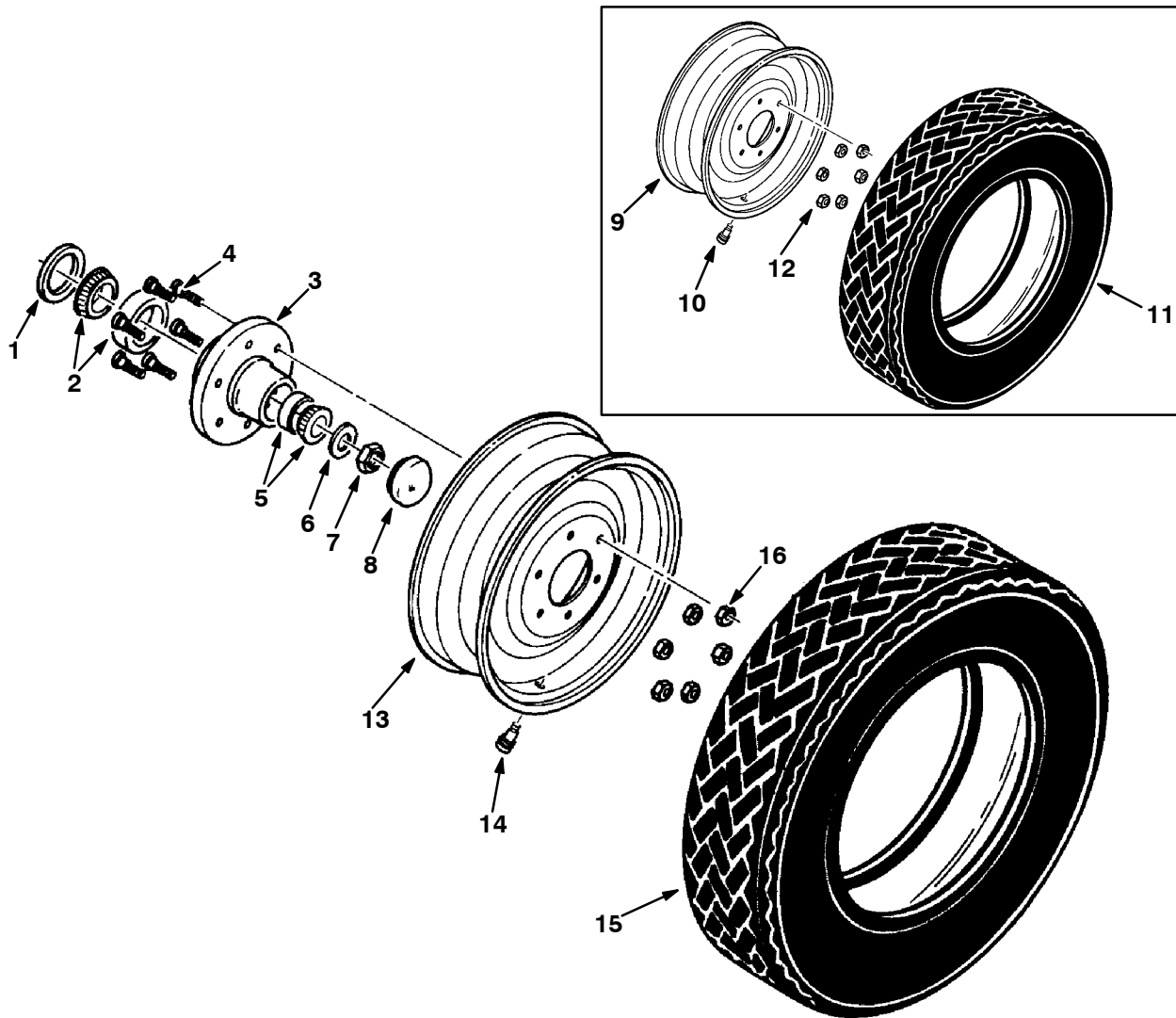
Fig. 58 - Instrument Panel Group



00195 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	16676	(003370-004254)	Console, Instrument	1	
1	25645	(004255-	Console, Instrument	1	
2	07422	(003370-	Holder, Fuse	3	
	14215	(003370-	Fuse, 20 A	1	
	07423	(003370-	Fuse, 15 A	2	
3	56992	(003370-	Plug Button, 0.50" (13 mm)	9	
4	34810	(003370-	Meter, Hour	1	
5	21693	(003370-005496)	Replacement Kit, Oil Pressure Gauge	1	
5	21690	(005497-	Gauge, Oil Pressure	1	
6	50330	(003370-	Gauge, Water Temperature	1	
7	54180	(003370-	Ammeter	1	
∇	8	62530	(003370-004254)	Switch, Ignition	1
▲	9	62530-1	(003370-004254)	Key, Ignition Switch	1
10	34813	(003370-	Gauge, Fuel Level	1	
11	47178-13	(003370-	Plug Button, 1.25" (32 mm)	1	
12	12927	(003370-004254)	Replacement Kit, Horn Relay	1	
13	10865	(004255-	Relay, Horn	1	
14	16667	(003370-	Label, Instrument Console	1	
15	64730	(003370-004254)	Relay, Rear Squeegee Lift	2	
16	10865	(004255-	Relay, Rear Squeegee Lift	2	
17	76306	(003370-	Switch, On-Off, Squeegee Lift	1	
18	76234	(003370-	Label, Switch, Squeegee Lift	1	
19	26523	(003370-	Board, Terminal	1	
	76536	(003370-	Wire Kit, Instrument Panel	1	
	47178-12	(003370-	Plugbutton, 2.0" (50 mm)	1	
∇	20	87536	(004255-	Switch, Ignition	1
▲	21	87866	(004255-	Key, Ignition Switch	1

Fig. 59 - Rear Wheel Group



00311 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	75072-5	(003370-	) Seal, Inner Wheel Bearing	2
2	75073	(003370-	) Bearing Assembly, Cup and Cone	2
▽	3	75072-1	(003370-) Hub Assembly	2
▲	4	32126	(003370-) Stud, Wheel	6
5	75075	(003370-	) Bearing Assembly, Cup and Cone	2
6	31705	(003370-	) Washer, Flat	2
7	41112	(003370-	) Nut, Slotted	2
8	57567	(003370-	) Cap, Hub Dust	2
▽	03967	(003370-004506	) Tire and Wheel Assembly, Rear (Replaced by 48911)	2
▲	9	78189	(003370-004506) Rim, Tire	1
▲	10	75365	(003370-004506) Valve, Tire, Air	1
▲	11	78187	(003370-004506) Tire (Replaced by 48910)	1
12	24339	(003370-004506	) Nut, Wheel	12
▽	48911	(004507-	) Tire and Wheel Assembly, Rear	2
▲	13	78189	(004507-) Rim, Tire	1
▲	14	75365	(004507-) Valve, Tire, Air	1
▲	15	48910	(004507-) Tire	1
16	24339	(004507-	) Nut, Wheel	12

Fig. 60 - Trunnion Group

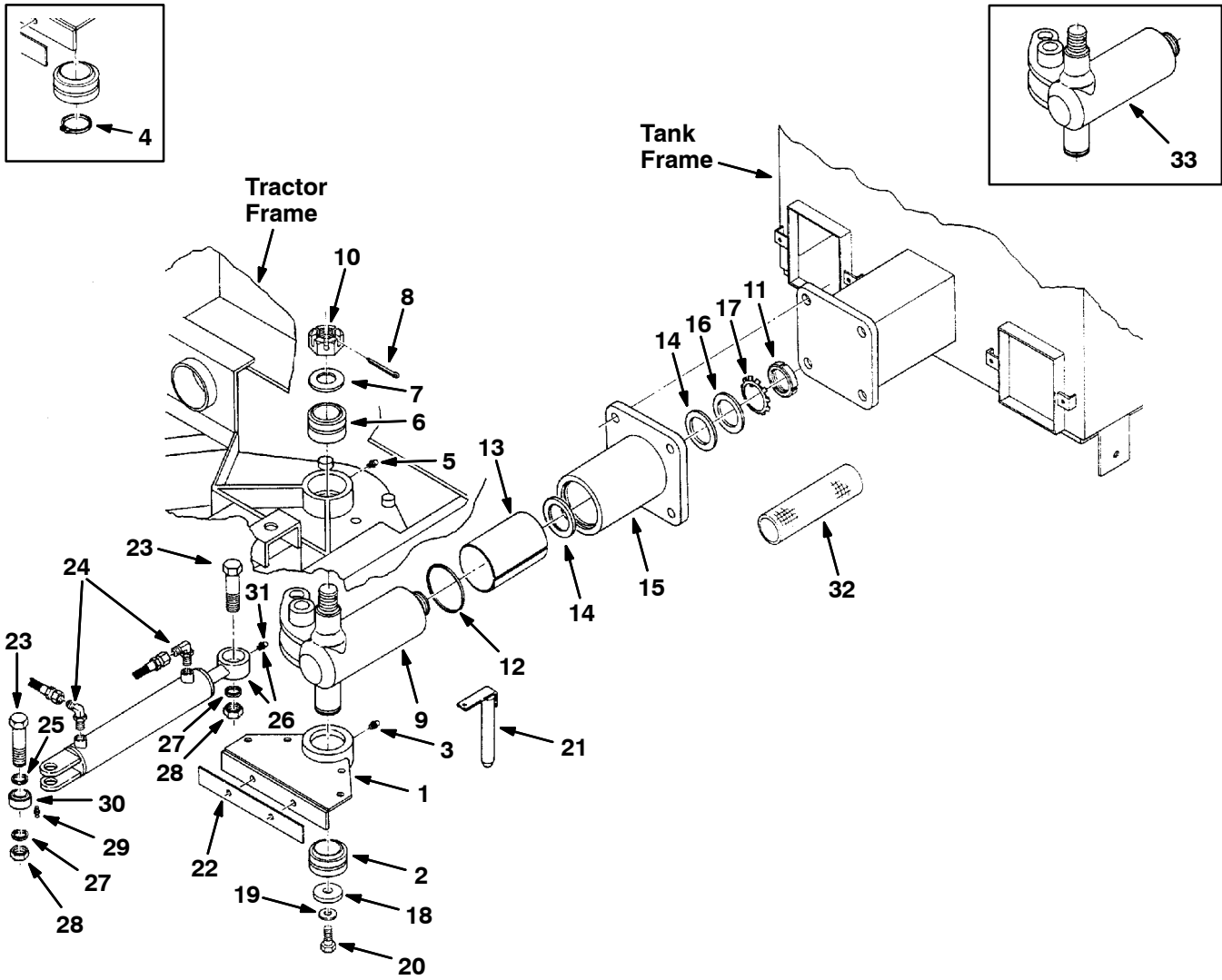


Fig. 60 - Trunnion Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	42399	(003370-	) Support Assembly, Lower Bearing	1
▲ 1	42311	(003370-	) Support, Lower Bearing	1
▲ 2	42120-2	(003370-	) Bearing	1
▲ 3	07259	(003370-	) Fitting, Grease	1
4	26439	(003370-003633	) Ring, Retaining	1
5	07259	(003370-	) Fitting, Grease	1
6	42120-2	(003370-	) Bearing	1
7	41066	(003370-	) Washer	3
8	08298	(003370-	) Pin, Cotter	1
▽	08100	(003634-	) Housing Assembly, Bearing	1
▲▽ 9	06846	(003634-	) Pivot, Shaft	1
▲▲ 10	13611	(003370-	) Nut, Slotted Hex	1
▲▲ 11	41073	(003370-	) Nut, Lock	1
▲ 12	41082	(003370-	) O-Ring	1
▲ 13	41083	(003370-	) Bearing, Liner	1
▲ 14	41084	(003370-	) Bearing, Thrust	2
▲ 15	32724	(003370-	) Housing, Pivot	1
▲ 16	41081	(003370-	) Washer	1
▲ 17	369701	(003370-	) Washer, Lock	1
▲ 18	06845	(003634-	) Washer, Spacer	1
▲ 19	15331	(003634-	) Washer	1
▲ 20	08099	(003634-	) Screw, Hex	1
21	75296	(003370-	) Pin, Articulating Locking	1
22	76540	(003370-	) Shim	1
	44961	(003370-	) Tie, Cable	2
23	39912	(003370-	) Screw, Hex	2
24	56820	(003370-	) Fitting, Elbow	2
25	76915	(003370-	) Washer	1
26	04431	(003370-	) Cylinder, Hydraulic (See Breakdowns)	1
27	39347	(003370-	) Washer, Flat	2
28	02464	(003370-	) Nut, Nylon	2
29	06418	(003370-	) Fitting, Grease	1
30	42120-4	(003370-	) Bearing, Self-Aligning	1
31	47801	(003370-	) Fitting, Grease	1
32	82833	(004255-	) Sleeve, Nylon	1
	19659	(004255-	) Sleeve, Nylon	1
33	06837	(003370-003633	) Service Kit, Pivot Shaft	1

Fig. 61 - Front Side of Solution and Recovery Tanks Group

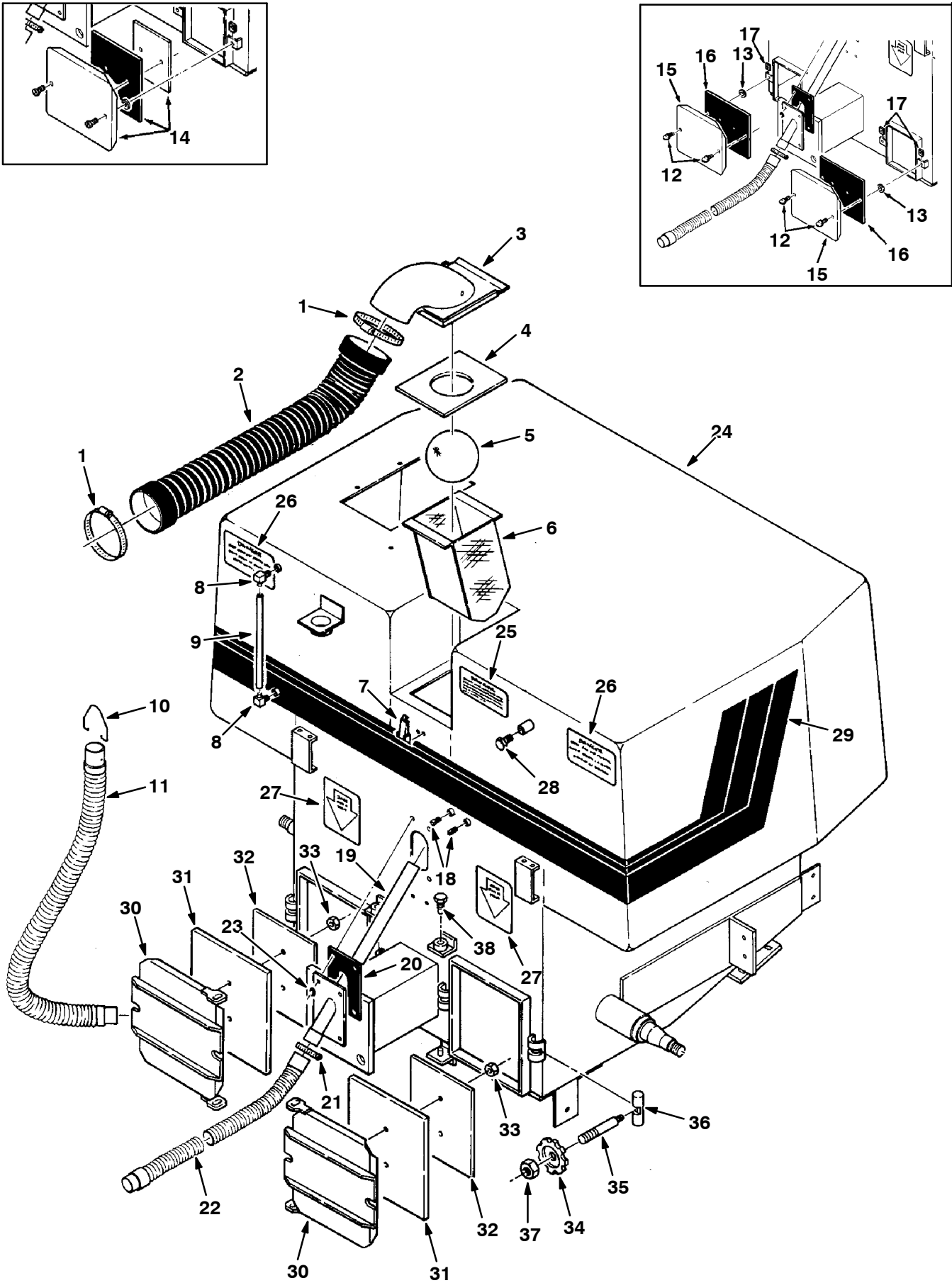


Fig. 61 - Front Side of Solution and Recovery Tanks Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	23498	(003370-	) Clamp, Worm Drive	2
2	09322	(003370-004152	) Hose Kit, Interconnection	1
2	25360	(004153-	) Hose, Vacuum Fan	1
3	75182	(003370-	) Flange, Top Float	1
4	75188	(003370-	) Seal, Float Flange	1
5	75106	(003370-	) Ball, Float	1
6	75103	(003370-	) Retainer, Ball	1
7	87579	(003370-	) Latch, Cam Lock	1
8	08228	(003370-	) Elbow, Solution Level	2
9	42779	(003370-	) Hose, Solution Level	1
10	40550	(003370-	) Clip, Drain Hose Retainer	1
11	76828	(003370-	) Hose, Recovery Tank Drain	1
∇	42038	(003370-004933	) Door Assembly, Cleanout	2
▲	12 25665	(003370-004344	) Replacement Kit, Thumbscrew	2
▲	12 25656	(004345-004933	) Fastener, Thumbscrew	2
▲	13 26015	(003370-004933	) Fastener, Washer	2
▲	14 06333	(003370-003696	) Service Kit, Cleanout Door	1
▲	15 42034	(003697-004933	) Door, Cleanout	1
▲	16 06332	(003697-004933	) Gasket, Door	1
17	28165	(003370-004344	) Fastener, Nut	4
17	25663	(004345-004933	) Fastener, Nut	4
18	63511	(003370-	) Plug	2
19	75045	(003370-	) Tube, Front Suction	1
20	76532	(003370-	) Seal, Suction Tube	1
21	22297	(003370-	) Clamp, Worm Drive	1
22	75635	(003370-	) Hose, Debris	1
23	76426	(003370-	) Washer, Sealing	4
24	65890	(003370-004933	) Replacement Kit, Tank	1
∇	24 75143-2	(004934-	) Tank, Solution and Recovery	1
▲	25 40052	(003370-	) Label, Danger, Fan Suction	1
▲	26 57630	(003370-	) Label, Danger, Keep Out	2
▲	27 76157	(003370-	) Label, Jack Only On Pad	2
▲	28 75611	(003370-	) Fitting, Plug	1
▲	09905	(003370-	) Label, TENNANT Logo	1
29	75816	(003370-	) Label, Stripe, L.H.	1
30	61176	(004934-	) Door	2
31	61174	(004934-	) Gasket, Door	2
32	61175	(004934-	) Plate, Door	2
33	41169	(004934-	) Nut, Stainless Steel	4
34	82958	(004934-	) Knob, Door Latch	4
35	61171	(004934-	) Stud, Door Latch	4
36	61170	(004934-	) Rod, Door Latch	4
37	36644	(004934-	) Nut, Locking	4
38	61181	(004934-	) Pivot, Door Hinge	2

STANDARD PARTS

Fig. 62 - Rear Side of Solution and Recovery Tanks Group

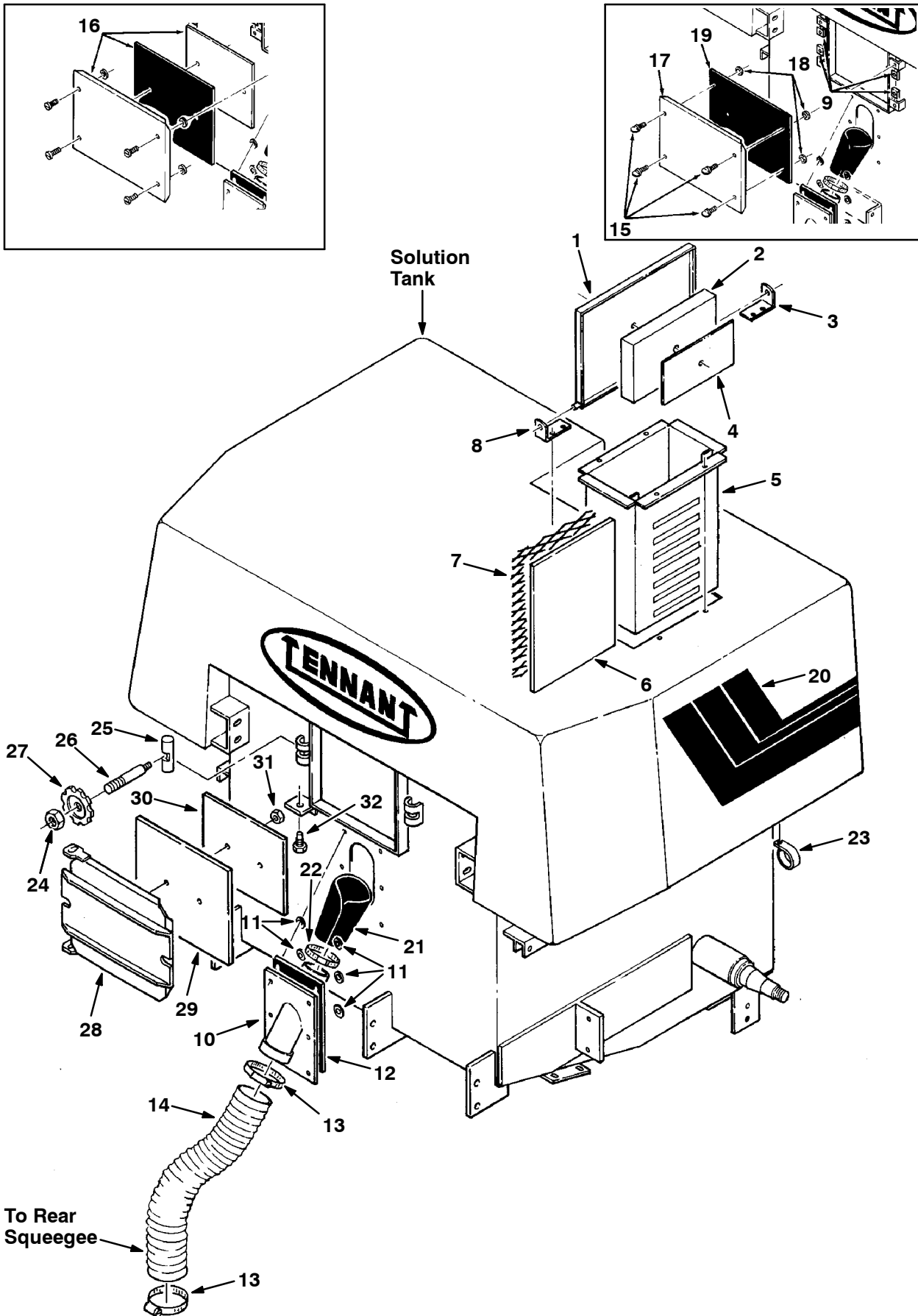
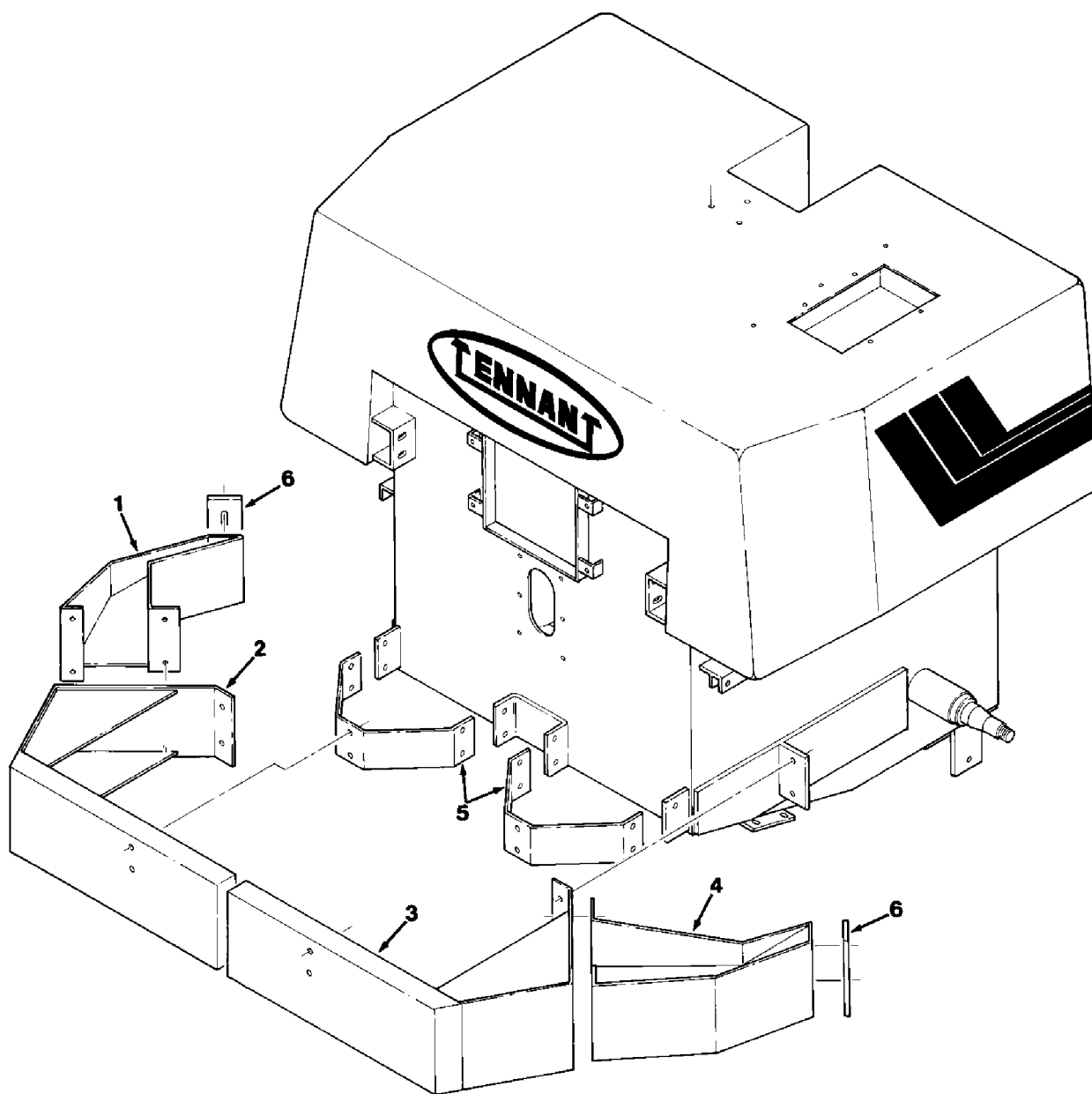


Fig. 62 - Rear Side of Solution and Recovery Tanks Group

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	75170	(003370-	) Door, Solution	1	
2	75171	(003370-	) Gasket, Solution Door	1	
3	75175	(003370-	) Bracket, Door Hinge	1	
4	79392	(003370-	) Plate	1	
5	75156	(003370-	) Basket, Soap	1	
6	75096	(003370-	) Filter, Foam, Soap Basket	1	
7	75098	(003370-	) Screen	1	
8	75174	(003370-	) Bracket, Door Hinge	1	
9	28165	(003370-004344	) Fastener, Nut	4	
9	25663	(004345-004933	) Fastener, Nut	4	
10	75081A	(003370-	) Tube, Rear Squeegee Suction	1	
11	76426	(003370-	) Washer, Rubber, (Located Inside Tank)	6	
12	75076	(003370-	) Gasket, Rear Suction Tube	1	
13	43555	(003370-	) Clamp, Worm Drive	2	
14	25649	(003370-	) Hose, Rear Squeegee Suction	1	
▽	78819	(003370-004933	) Cover Assembly, Recovery Tank Cleanout	1	
▲	15	25665	(003370-004344	) Replacement Kit, Thumbscrew	4
▲	15	25656	(004345-004933	) Fastener, Thumbscrew	4
▲	16	06224	(003370-003696	) Service Kit, Cleanout Door	1
▲	17	06228	(003697-004933	) Door, Cleanout	1
▲	18	26015	(003370-004933	) Fastener, Washer	4
▲	19	06227	(003697-004933	) Gasket, Door	1
	20	75815	(003370-	) Label, Stripe, R.H.	1
	21	50518	(003370-	) Flap, Rubber	1
	22	23498	(003370-	) Clamp, Worm Drive	1
	23	40678-1	(003370-	) Clamp, Cable	1
	24	36644	(004934-	) Nut, Locking	2
	25	61170	(004934-	) Rod, Door Latch	2
	26	61171	(004934-	) Stud, Door Latch	2
	27	82958	(004934-	) Knob, Door Latch	2
	28	61245	(004934-	) Door	1
	29	61174	(004934-	) Gasket, Door	1
	30	61175	(004934-	) Plate, Door	1
	31	41169	(004934-	) Nut, Stainless Steel	2
	32	61181	(004934-	) Pivot, Door Hinge	2

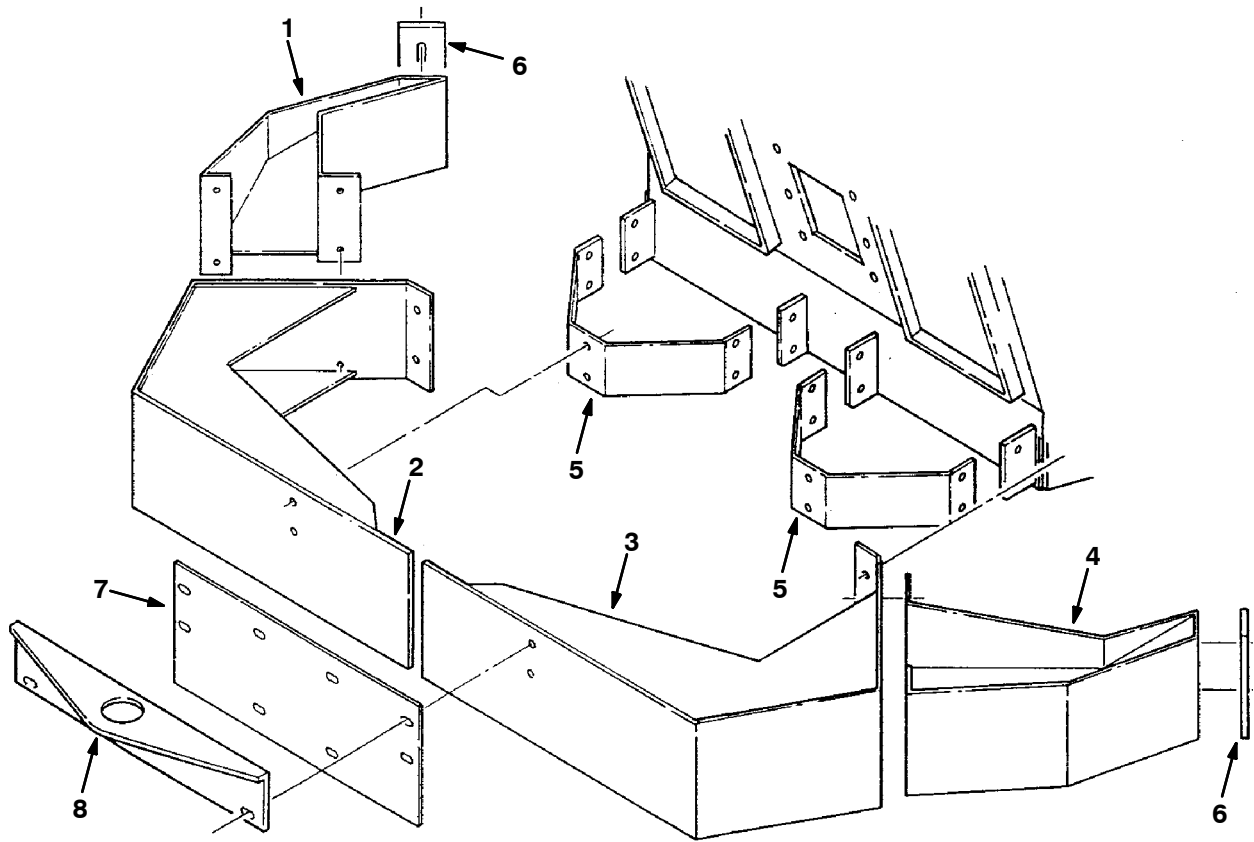
Fig. 63 - Rear Bumper Group



00309 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	78673	(003370-004933)	Guard, L.H.	1
2	02579	(003370-004933)	Bumper, Rear, L.H.	1
3	02556	(003370-004933)	Bumper, Rear, R.H.	1
4	78670	(003370-004933)	Guard, R.H.	1
5	78059	(003370-004933)	Bracket, Mounting	2
6	75190	(003370-004933)	Guard, Squeegee	2

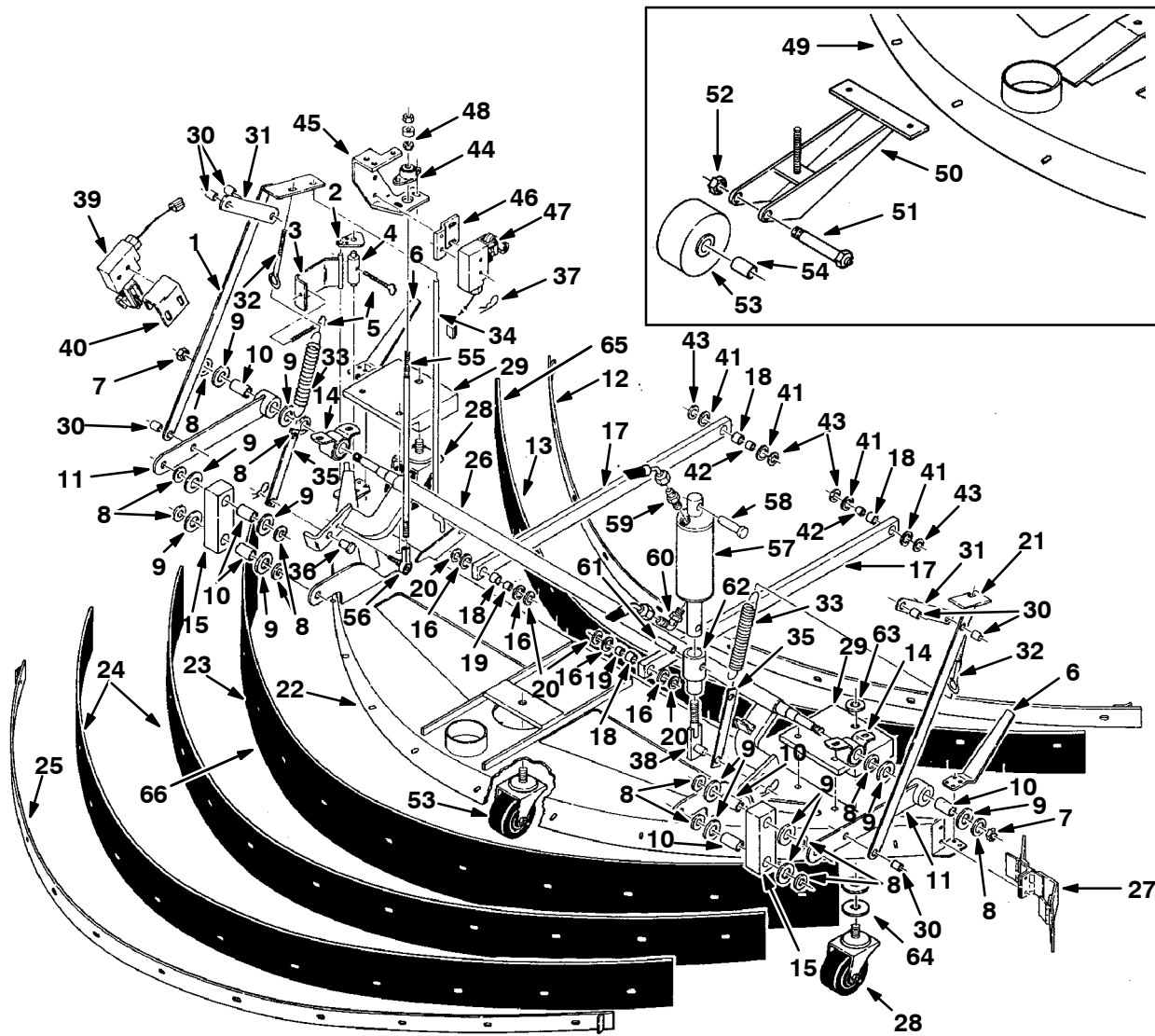
Fig. 64 - Rear Bumper Group



06844 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	78673	(004934-	) Guard, L.H.	1
2	65899	(004934-	) Bumper Rear, L.H.	1
3	65898	(004934-	) Bumper Rear, R.H.	1
4	78670	(004934-	) Guard, R.H.	1
5	61261	(004934-	) Bracket, Mounting	2
6	75190	(004934-	) Guard, Squeegee	2
7	65897	(004934-	) Plate, Bumper	1
8	32117	(005101-	) Bracket, Tow Bypass	1

Fig. 65 - Rear Squeegee Assembly



09874 - 550, 550E

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	32415	(003370-	) Rear Squeegee Assembly	1
▲	1 78096	(003370-	) Arm, L.H.	1
▲	2 76922-1	(003370-	) Plate, Pivot	1
▲	3 76921	(003370-	) Adjuster, Rear	1
▲	4 76927	(003370-	) Pivot, Adjuster	1
▲	5 78641	(003370-	) Screw, Thumb	2
▲	6 59639A	(003370-	) Guide, Spring	2
▲	7 32985	(003370-	) Nut	2
▲	8 32493	(003370-	) Washer, Flat	12
▲	9 76979	(003370-	) Washer, Thrust	12
▲	10 76392	(003370-	) Sleeve, Bearing	6
▲▽	11 76984-1	(003370-	) Arm Assembly	2
▲▲	76978	(003370-	) Bearing, Fiberglide	1
▲	12 76896	(003370-	) Band, Front, Squeegee	1
▲	13 60018	(003370-	) Blade, Front, Squeegee	1
▲	14 16928	(003370-	) Bearing, Pillow Block	2

Fig. 65 - Rear Squeegee Assembly

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▲▲	15	76974-1	(003370-	) Arm Assembly, Vertical Block	2
▲▲		76978	(003370-	) Bearing, Fiberglide	1
▲	16	59633	(003370-	) Washer, Fiberglide	4
▲▽	17	33510	(003370-	) Link, Rear Drag	2
▲▲	18	59634	(003370-	) Sleeve, Bearing	2
▲	19	59632	(003370-	) Sleeve	2
▲	20	01686	(003370-	) Washer	4
▲	21	76988	(003370-	) Arm, R.H.	1
▲	22	09689	(003415-003873	) Frame Kit, Squeegee	1
▲	22	10150	(003874-	) Frame, Rear	1
▲	23	60016	(003370-	) Blade, Rear, Squeegee	1
▲	24	76937	(003370-	) Strip, Rear, Backup	2
▲	25	76946	(003370-	) Band, Rear, Squeegee	1
▲	26	33749	(003370-	) Shaft, Squeegee Lift	1
▲	27	78642	(003370-	) Clamp, Squeegee Band	1
▲	28	02530	(003370-003414	) Caster Kit	1
▲	28	10154	(003415-003873	) Caster	2
▲	28	10160	(003415-003873	) Caster Kit	1
▲	28	370133	(003874-	) Caster	2
▲	29	10160	(003415-003873	) Mount Kit, Caster	1
▲	29	10149	(003874-	) Mount, Caster	2
▲	30	76390	(003370-	) Sleeve	6
▲	31	76391	(003370-	) Link	2
	32	76353	(003370-	) Bolt, Eye	2
	33	47745	(003370-	) Spring	2
	34	78093	(003370-	) Rod	1
		20021	(003370-	) Pin, Roll	1
	35	78695	(003370-	) Strip, Spring	2
	36	51530	(003370-	) Pin, Clevis	1
	37	08175	(003370-	) Pin, Cotter	4
	38	48884	(003370-	) Adaptor, Cylinder	1
	39	76340	(003370-	) Switch, Roller	1
	40	76269	(003370-	) Bracket, Switch Mounting	1
	41	59633	(003370-	) Washer, Fiberglide	4
	42	59632	(003370-	) Sleeve	2
	43	32492	(003370-	) Washer	4
	44	33743	(003370-	) Bearing, Flange	1
	45	33744	(003370-	) Bracket, Mounting	1
	46	33745	(003370-	) Bracket, Switch	1
	47	33748	(003370-	) Switch	1
	48	33747	(003370-	) Barrel, Trip	1
	49	09689	(003370-003414	) Frame, Rear Squeegee	1
	50	78795	(003370-003414	) Bracket, Caster	1
▽	51	76943	(003370-003414	) Stud, Caster	1
▲	52	32985	(003370-003414	) Nut	1
	53	20833	(003370-003414	) Caster	1
	53	10154	(003415-003873	) Caster	1
	53	10160	(003415-003873	) Caster Kit	1
	53	370133	(003874-	) Caster	1
	54	75050	(003370-003414	) Bushing, Spanner	1
	55	33746	(003370-	) Rod, Trip	1

Fig. 65 - Rear Squeegee Assembly

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
56	36466	(003370-	) Ball Joint	1
57	31554	(003370-003879	) Cylinder, Hydraulic	1
57	09624	(003880-	) Cylinder, Hydraulic	1
58	51534	(003370-	) Pin, Clevis	1
59	55586	(003370-	) Fitting, Straight	1
60	77097	(003370-	) Fitting, Elbow	1
61	54041	(003370-	) Pin, Roll	1
62	76997	(003370-003879	) Adapter, Cylinder Rod	1
62	09626	(003880-	) Adapter, Cylinder Rod	1
63	36328	(003370-	) Washer, Belleville	3
64	51564	(003370-	) Washer	5
65	78560	(001330-	) Blade, Front, Squeegee, Urethane	1
66	78561	(001330-	) Blade, Rear, Squeegee, Urethane	1

SECTION 7

CONTENTS	PAGE
Fig. 1 - Fuel Tank Group, LPG	7-2
Fig. 2 - Engine Cover Group, LPG	7-4
Fig. 3 - Air Cleaner Group, LPG	7-5
Fig. 4 - Vacuum Fan Group, LPG	7-6

Fig. 1 - Fuel Tank Group, LPG

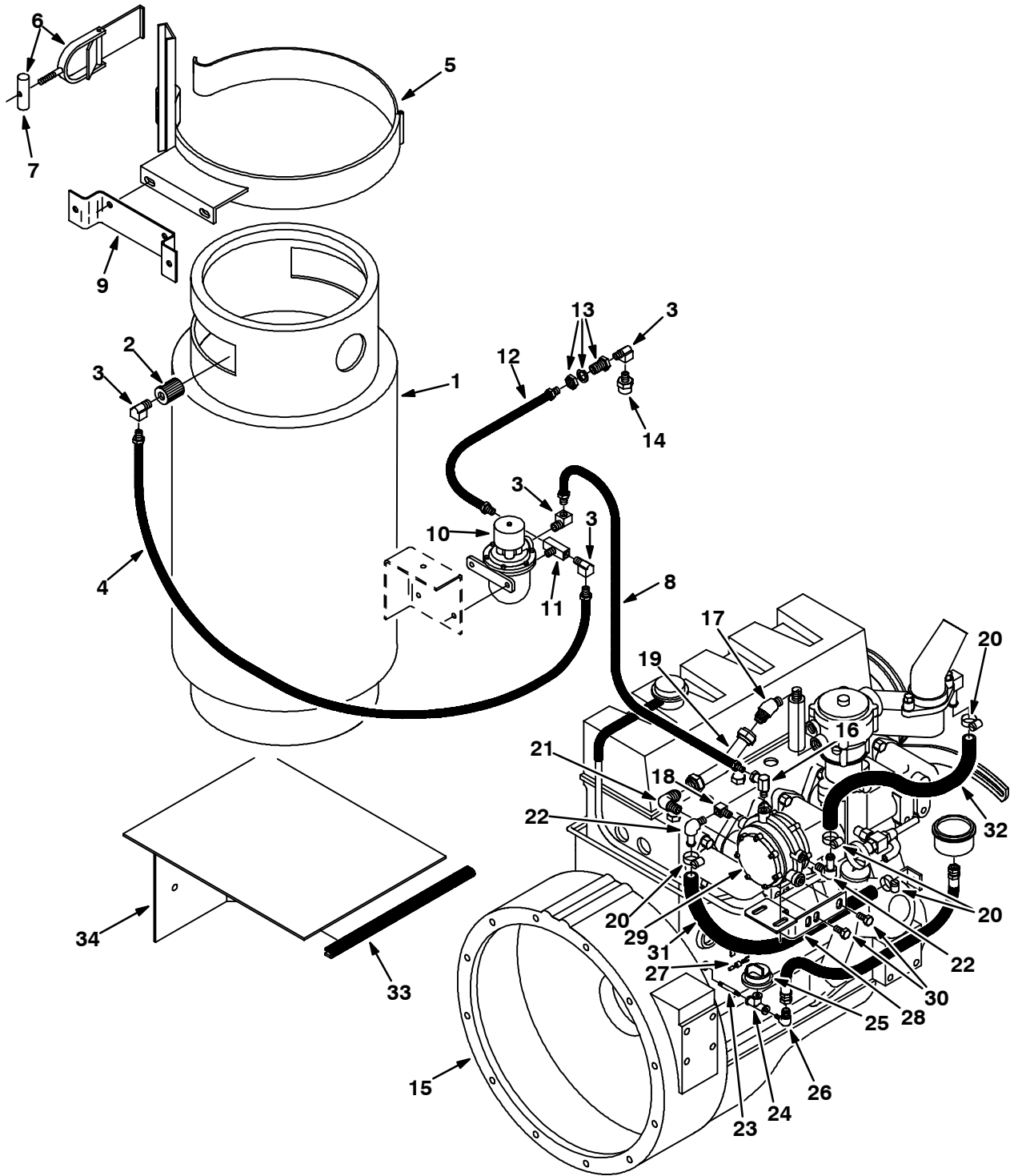
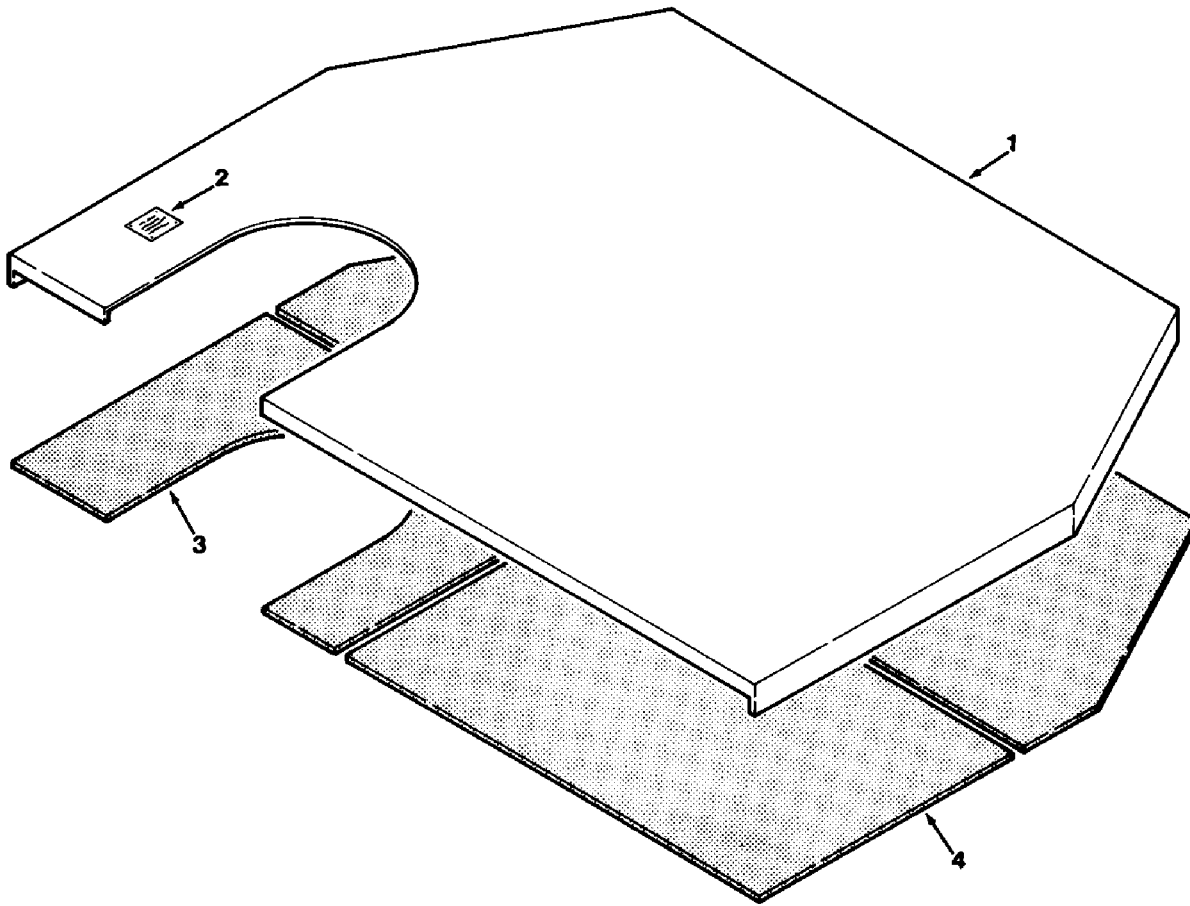


Fig. 1 - Fuel Tank Group, LPG

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.	
1	24928-1	(003370-	) Tank, LPG, with Filler Gauge	1	
2	26496	(003370-	) Coupling, LPG Tank	1	
3	27048	(003370-	) Fitting, Elbow	4	
4	10754	(003370-	) Hose, LPG	1	
5	78092	(003370-	) Bracket, LPG Tank	1	
▽	6	53400-1	(003370-	) Latch Assembly, LPG Tank	1
▲	7	53400-4	(003370-	) Nut, Adjustable	1
	8	10756	(003370-	) Hose, LPG	1
	9	78085	(003370-	) Mount, Strap	1
▽	10	53395-2	(003370-	) Fuel Filter Lock	1
▲		SK1444	(003370-	) Repair Kit, Fuel Filter Lock	1
	11	53268	(003370-	) Fitting, Tee	1
	12	22308-1	(003370-	) Hose, LPG	1
	13	78122	(003370-	) Fitting, Bulkhead	1
	14	24047	(003370-	) Valve, Pressure Relief	1
	15	78081A	(003370-003933)	Engine, F163 (Replaced by 60539) See F163 Engine Parts, Gasoline, LPG)	1
	15	16870	(003934-004248)	Engine, TM27, (Replaced by 31936) (See TM27 Engine Parts, Gasoline, LPG)	1
	15	31936	(004249-004719)	Engine, TM27, (Replaced by 61695) (See TM27 Engine Parts, Gasoline, LPG)	1
	15	61695	(004720-	) Engine, TM27, (See TM27 Engine Parts, Gasoline, LPG)	1
	16	11442-1	(003370-	) Fitting, Elbow	1
	17	46485	(003934-	) Fitting, Elbow, 45°	1
	18	24584	(003934-	) Fitting, Elbow	1
	19	34880	(003934-	) Tube, Hydraulic	1
	20	54333	(003934-	) Clamp, Worm Drive	4
	21	46611	(003934-	) Fitting, Elbow	1
	22	47388	(003934-	) Fitting, Elbow	2
	23	48144	(003934-	) Fitting, Nipple	1
	24	22309	(003370-	) Fitting, Tee	1
	25	51805	(003370-	) Switch, Oil Pressure	1
	26	06507	(003370-	) Fitting, Elbow	1
	27	50565	(003370-	) Diode Assembly, LPG	1
	28	34881	(003934-	) Bracket, Mount	1
▽	29	374648	(003934-	) Vaporizer, LPG	1
▲		374649	(003934-	) Repair Kit, Vaporizer	1
▲		374532	(003934-	) Hi Alt Vaporizer Spring	1
	30	16735	(003934-	) Screw, Hex, M8	2
	31	47826	(003934-	) Hose, Rubber	1
	32	54027	(003934-	) Hose, Rubber	1
	33	62595-4	(003370-	) Molding, Rigid	1
	34	78088	(003370-	) Support, LPG Tank	1

Fig. 2 - Engine Cover Group, LPG

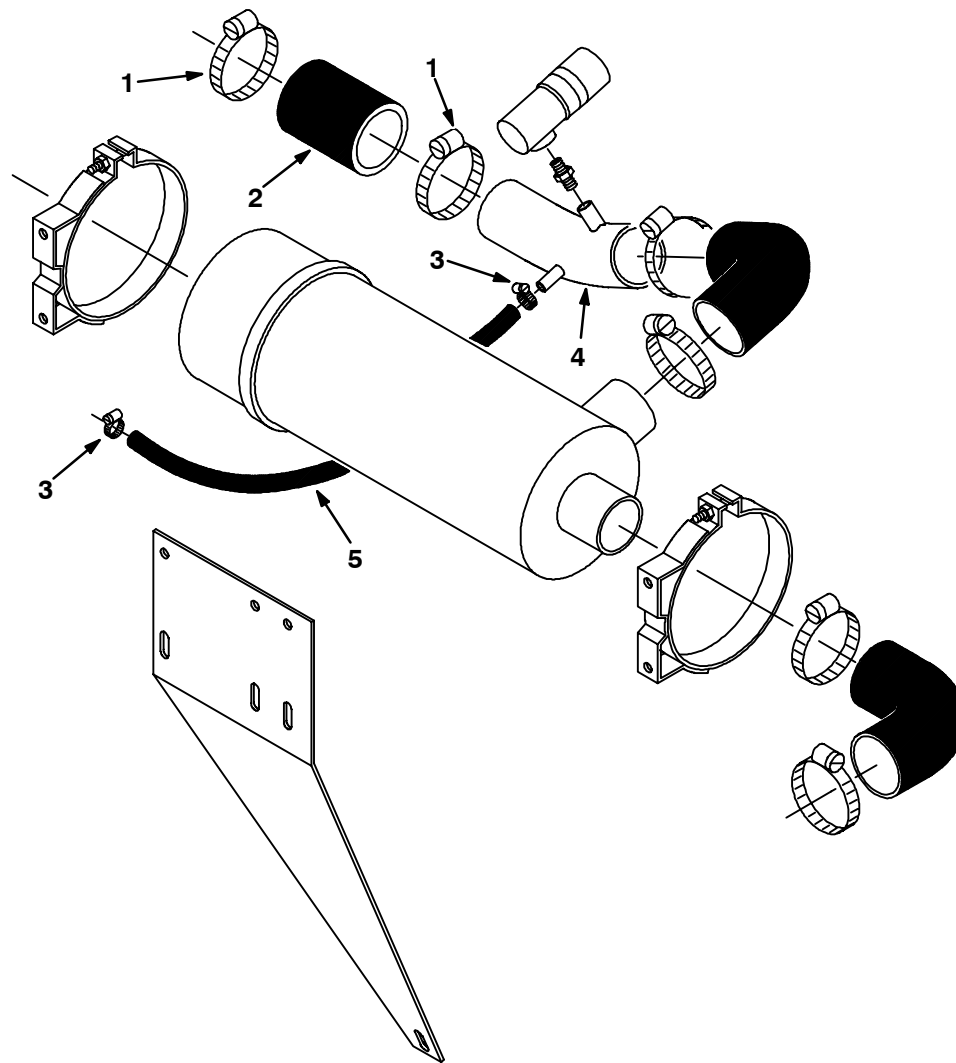


01733 - 550, 1550, LP

	Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
▽	1	78017	(003370-	) Door, Engine Cover	1
▲	2	58067	(003370-	) Data Plate, LPG	1
	3	78013	(003370-	) Insulation, Tank Opening	1
	4	78014	(003370-	) Insulation, Engine Cover	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 3 - Air Cleaner Group, LPG

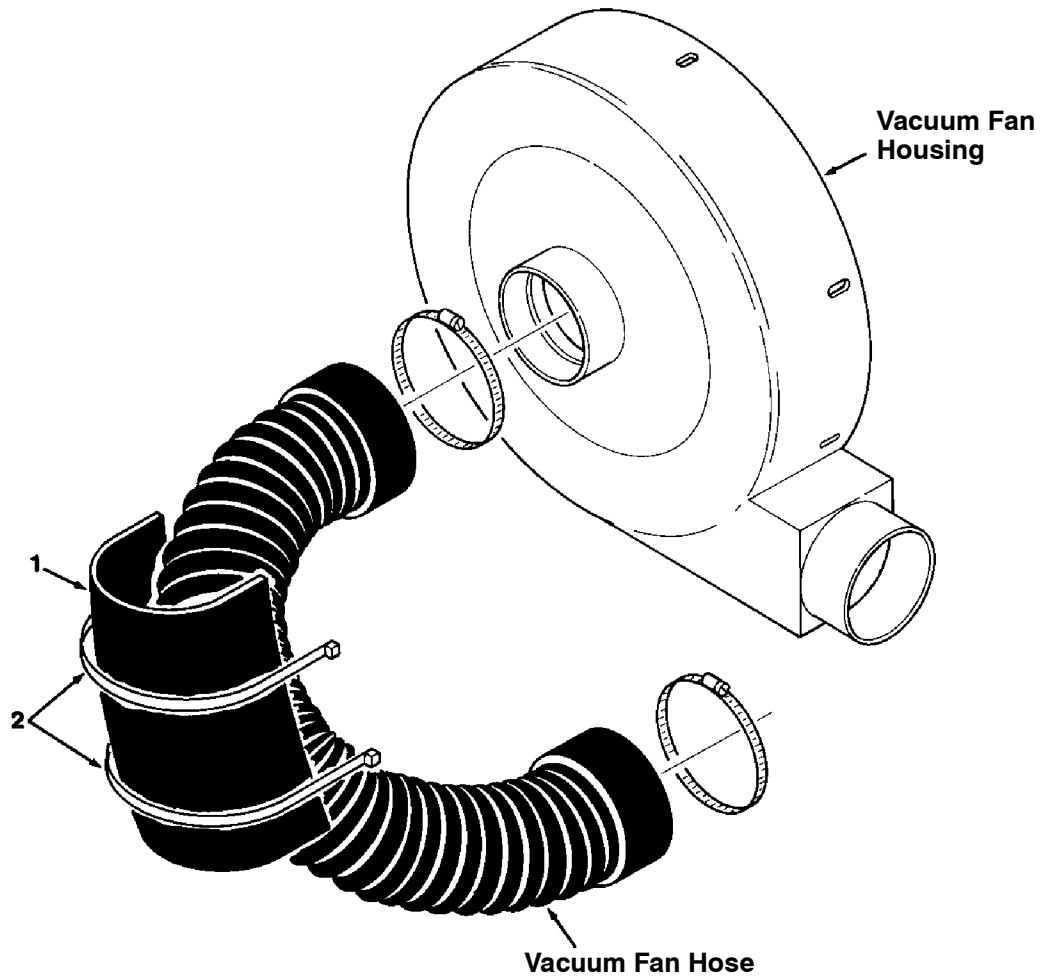


00108 - 550, LP

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	43555	(003934-)	Clamp, Worm Drive	2
2	15543-2	(003370-)	Coupling, Air Cleaner Tube	1
3	54333	(003370-)	Clamp, Worm Drive	2
4	10488	(003934-)	Tube, Air Cleaner	1
5	47826	(003370-003933)	Hose, Rubber	1
5	76589-2	(003934-)	Hose, Rubber	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 4 - Vacuum Fan Group, LPG



00808 - 550, LP

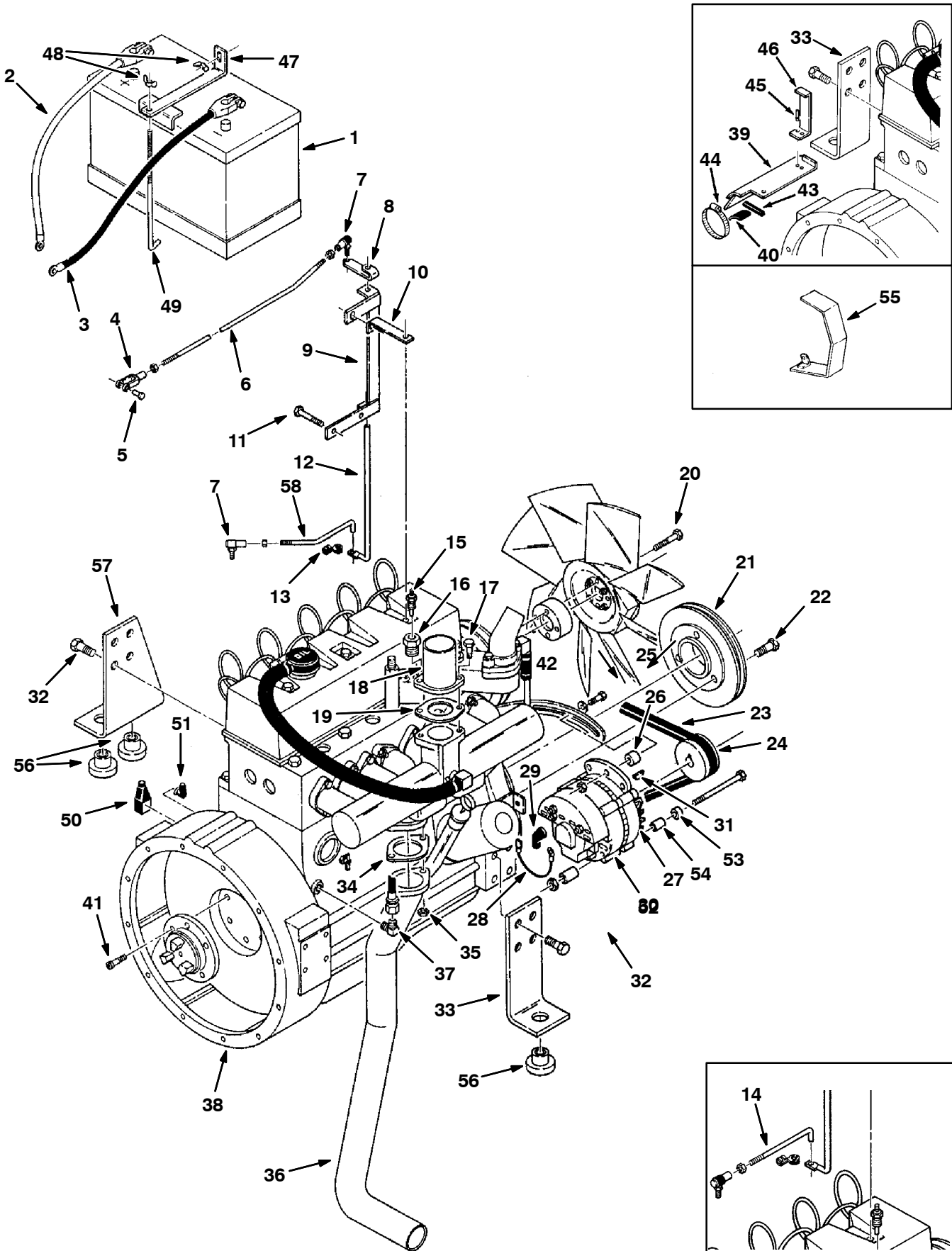
Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	75375	(003370-004152)	Wrap, Hose	1
2	44961	(003370-004152)	Tie, Cable	2

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

SECTION 8

CONTENTS	PAGE
Fig. 1 - Engine Group, Diesel	8-2
Fig. 2 - Glow Plug Control Group, Diesel	8-5
Fig. 3 - Fuel Tank Group, Diesel	8-6
Fig. 4 - Radiator Group, Diesel	8-7
Fig. 5 - Air Cleaner Group, Diesel	8-8

Fig. 1 - Engine Group, Diesel



NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 1 - Engine Group, Diesel

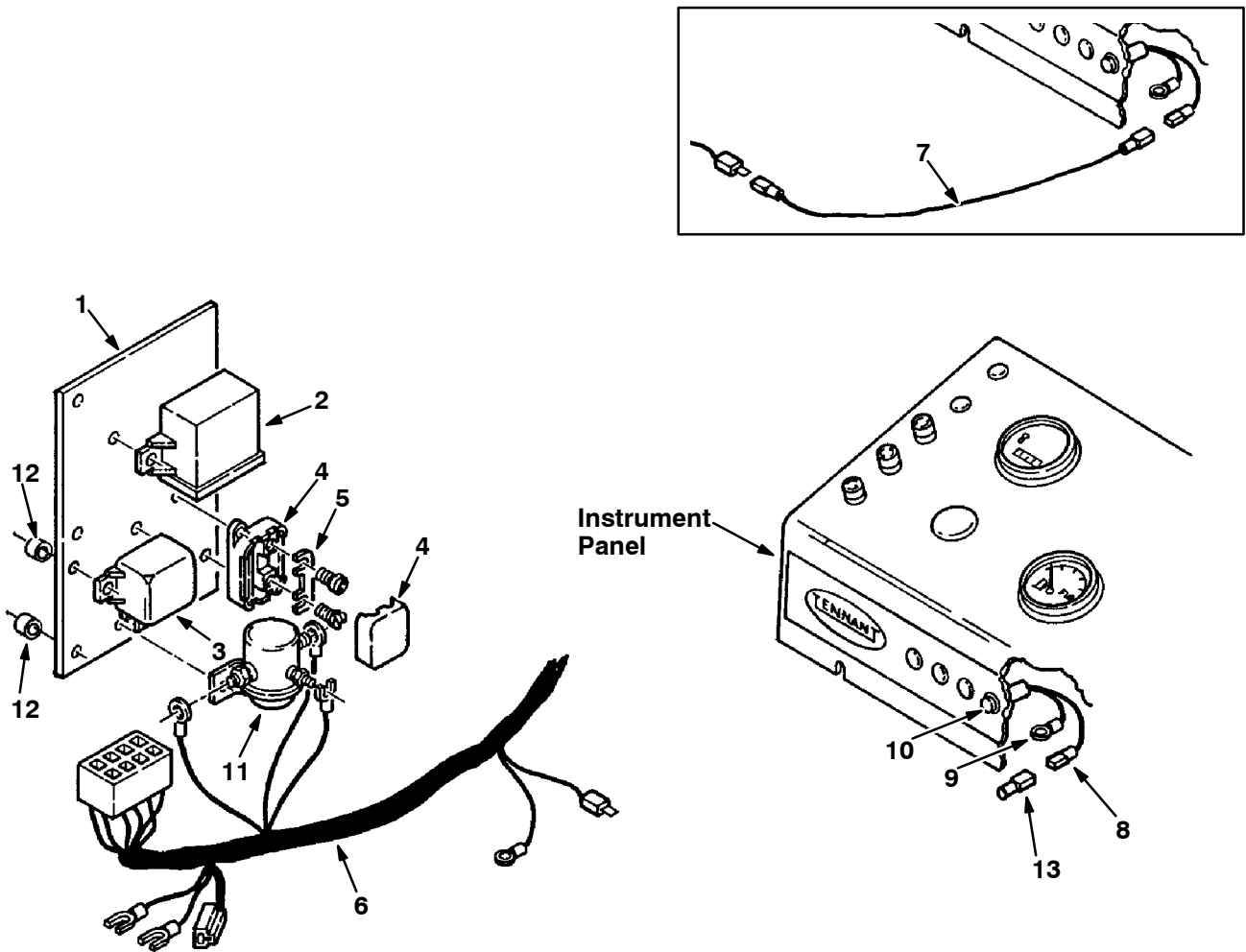
Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	10136	(003370-	) Battery, 625 CCA	1
2	68869	(003370-	) Cable, Positive Battery	1
3	68870	(003370-	) Cable, Negative Battery	1
4	14595-1	(003370-	) Clevis, Adjustable	1
5	14605	(003370-	) Pin, Clevis	1
6	16551	(003370-	) Rod, Throttle	1
7	14601	(003370-	) Ball Joint	2
8	15785	(003370-	) Arm	1
9	16556	(003370-	) Bracket, Throttle	1
10	16557	(003370-	) Angle, Mounting Bracket	1
11	16931	(003370-	) Screw, Hex, M8	2
12	16552	(003370-	) Rod, Vertical Throttle	1
13	15806	(003370-	) Clip, Rod End	1
14	16550	(003370-005001	) Rod, Throttle	1
15	78005-2	(003370-	) Sending Unit, Temperature	1
16	78170	(003370-	) Fitting, Straight	1
17	39277	(003370-	) Screw, Hex, M8	2
18	16499	(003370-	) Tube, Air Intake	1
19	34954	(003370-	) Gasket, Intake	1
20	39279	(003370-	) Screw, Hex, M8	4
21	16495	(003370-004437	) Sheave	1
21	25650	(004438-	) Sheave	1
22	16930	(003370-004437	) Screw, Hex, M10	3
22	39284	(004438-	) Screw, Hex, M10	3
23	34194	(003370-	) V-Belt	1
24	34904	(003370-003882	) Pulley, Alternator	1
24	34833	(003883-	) Pulley, Alternator	1
25	41342	(003370-	) Screw, Hex, M8	1
26	34867	(003370-003882	) Sleeve	1
26	08892	(003883-	) Sleeve	1
27	42170-36	(003370-003882	) Fan, Alternator	1
28	39703-6	(003370-003882	) Harness, Rectifier	1
28	08889	(003883- xxxxxx	) Wire, Jumper	1
29	34065	(003370-	) Boot	1
▽	30	08893	(003370-003882) Replacement Kit, Alternator	1
▲	30	03233	(003883-) Alternator	1
▲	61515	(003883-	) Diode and Rectifier Assembly	1
▲	61516	(003883-	) Brush Assembly	2
▲	01844	(003883-	) Bearing, Ball	1
▲	61517	(003883-	) Regulator, Voltage	1
▲	31	00500-5	(003883-) Key, Woodruff	1
	32	41348	(003370-) Screw, Hex, M14	8
	33	16490	(003370-) Bracket, Engine Mounting	1
	34	34908	(003370-) Gasket, Tail Pipe	1
	35	39312	(003370-) Nut, M10	2
	36	16496	(003370-) Pipe, Exhaust	1
	37	06507	(003370-) Fitting, Elbow	1
	38	34910	(003370-003618) Engine, (Replaced by 16850) (See Engine Parts Diesel)	1
	38	16850	(003619-004191) Engine, (Replaced by 31937) (See Engine Parts Diesel)	1
	38	31937	(004192-004746) Engine, (Replaced by 61697) (See Engine Parts Diesel)	1

DIESEL PARTS

Fig. 1 - Engine Group, Diesel

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
38	61697	(004747-005001)	Engine, (Replaced by 65951) (See Engine Parts Diesel)	1
38	65951	(005002-)	Engine, Diesel, TM27, (See 65951 Engine Parts Diesel)	1
▽ 39	16769	(003370-003618)	Shield, Starter	1
▲ 40	29662	(003370-003618)	Pad, Rubber	1
41	41358	(003370-)	Screw, Socket, Metric	6
42	41187	(003370-)	Washer, Belleville	1
43	62595-18	(003370-003618)	Molding, Rigid	1
44	14432	(003370-003618)	Clamp, Worm Drive	1
45	34738	(003370-003618)	Rivet, Steel	2
46	16683	(003370-003618)	Bracket, Wire	1
47	16936	(003370-)	Bracket, Battery	1
48	39272	(003370-)	Nut, Wing	2
49	13015-1	(003370-)	Bolt, Hold Down	2
50	68872	(003619-)	Boot, Battery	1
51	02076	(003619-)	Cover, Terminal	1
52	16932	(003370-003882)	Sleeve	1
52	08891	(003883-)	Sleeve	1
53	36417	(003883-)	Sleeve	1
54	57311	(003883-)	Bushing	1
55	08890	(003883- xxxxxx)	Guard, Alternator	1
	32814	(003370-)	Label, Throttle and Solution Control	1
	16933	(004255-)	Wire Assembly, No. 46	1
	50456	(004255-)	Terminal, Quick-Disconnect	1
56	51176	(003370-)	Dampner, Engine	5
57	65894	(003370)	Mount, Engine, R.H.	1
58	65967	(005002-)	Rod, Throttle	1

Fig. 2 - Glow Plug Control Group, Diesel

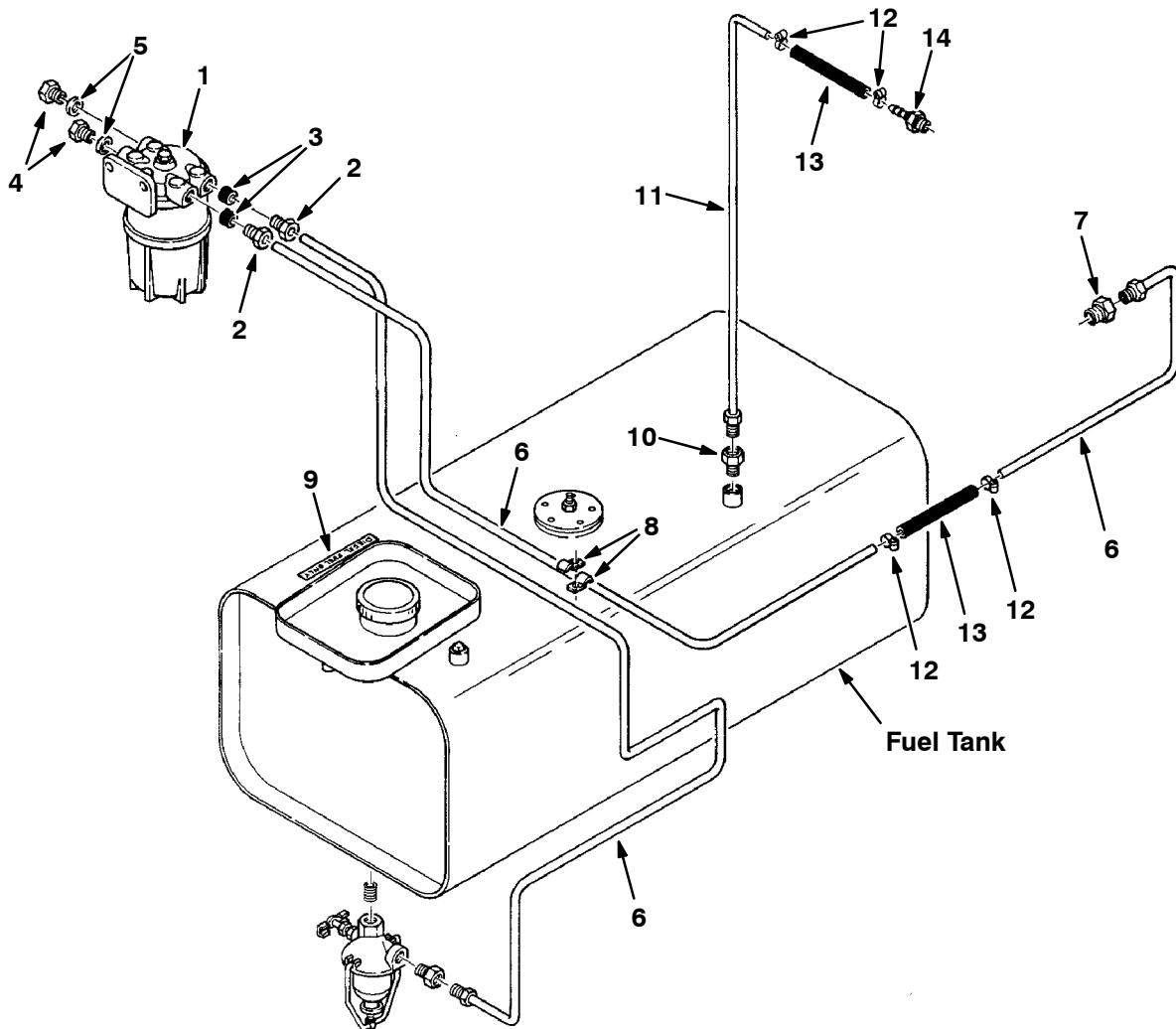


02381 - 550, D

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.	
1	34841	(003370-	) Plate	1
▽	34866	(003370-	) Control Unit Kit	1
▲	2	34801	(003370-) Control Unit, Glow Plug	1
▲	3	34804	(003370-) Relay, Power	1
▲	4	34802	(003370-) Holder, Fuse	1
▲	5	34803	(003370-) Fuse, 80 A	1
6	34861	(003370-003618	) Control Harness	1
6	16848	(003619-	) Control Harness	1
7	16929	(003370-004254	) Wire Assembly, Replaced by none	1
8	45223	(003370-	) Terminal	1
9	68101	(003370-	) Terminal, Ring	1
10	68222	(003370-	) Light, Pilot	1
11	47356	(003619-	) Terminal, Starter	1
12	53051A	(003370-	) Spacer	2
13	45224	(004255-	) Terminal, Quick-Disconnect	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 3 - Fuel Tank Group, Diesel

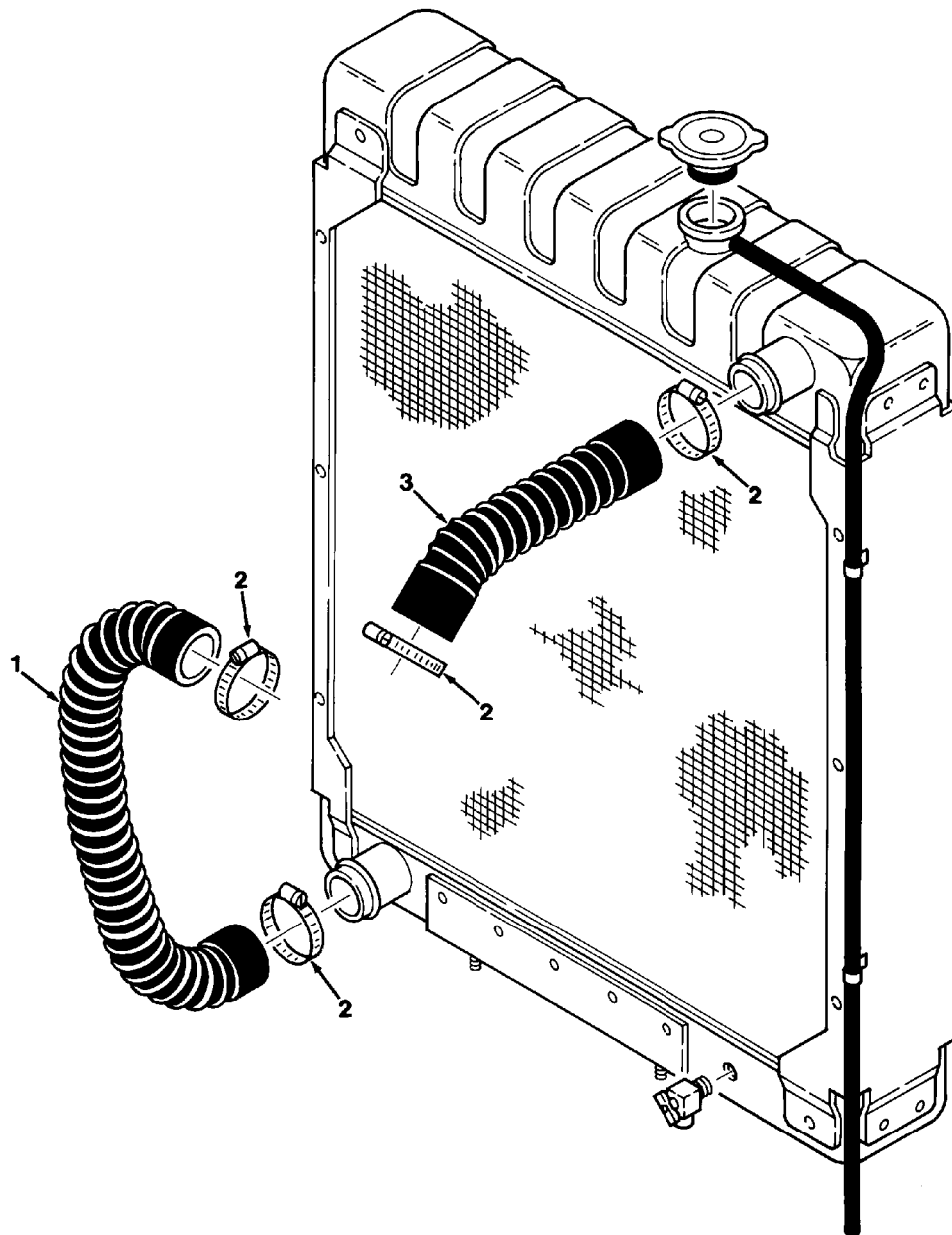


09877 - 550, 1550, D

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	52770-8	(003370-	) Watertrap, Fuel	1
2	32587	(003370-	) Nut, Water Trap	2
3	32590	(003370-	) Olive, Rubber	2
4	32436	(003370-	) Plug, Sealing	2
5	32435	(003370-	) Washer, Sealing	2
6	16562	(003370-	) Tube Assembly	2
7	16713	(003370-	) Fitting, Straight	1
8	46236	(003370-	) Clamp, Cable	2
9	45850	(003370-	) Decal, Diesel Fuel Only	1
10	16564	(003370-	) Fitting, Connector	1
11	16563	(003370-	) Tube Assembly	1
12	43844	(003370-	) Clamp, Worm Drive	4
13	32808	(003370-	) Hose, Fuel Line	2
14	61686	(003370-	) Fitting, Straight	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts, or Section 14, Diesel Engine Parts.

Fig. 4 - Radiator Group, Diesel

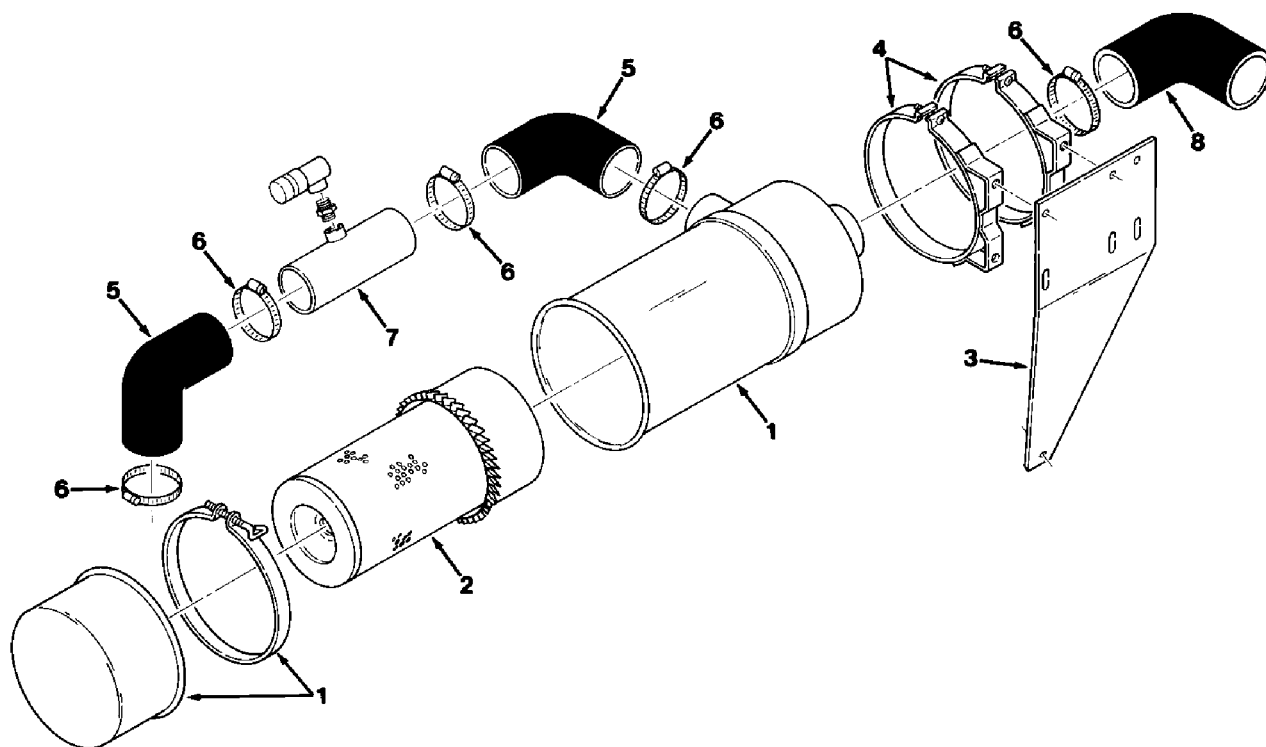


02380 - 550, 1550, D

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	25179	(003370-)	Hose, Radiator	1
2	11531	(003370-)	Clamp, Worm Drive	4
3	16820	(003370-)	Hose, Radiator	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 5 - Air Cleaner Group, Diesel



09880 - 550, 1550, D

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽ 1	76319	(003370-	) Air Cleaner	1
▲ 2	76335	(003370-	) Element, Air Cleaner	1
3	76332	(003370-	) Brace, Rear Panel	1
4	76321	(003370-	) Band, Air Cleaner	2
5	52580-2	(003370-	) Elbow, 90°	2
6	14432	(003370-	) Clamp, Worm Drive	5
7	16498	(003370-	) Tube, Air Cleaner	1
8	16497	(003370-	) Elbow	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

SECTION 9

CONTENTS	PAGE
Fig. 1 - Solution Supply and Control Group, SRS®	9-2
Fig. 2 - Solution Pumps Group, SRS®	9-4
Fig. 3 - Solution Control Group, SRS®	9-6
Fig. 4 - Wire Harnesses, SRS®	9-8
Fig. 5 - Control Panel Assembly, SRS®	9-9
Fig. 6 - Front Side of Solution Tank Group, SRS®	9-10
Fig. 7 - Front Side of Solution Tank Group, SRS®	9-12
Fig. 8 - Rear Side of Solution Tank Group, SRS®	9-14
Fig. 9 - Rear Side of Solution Tank Group, SRS®	9-16

Fig. 1 - Solution Supply and Control Group, SRS®

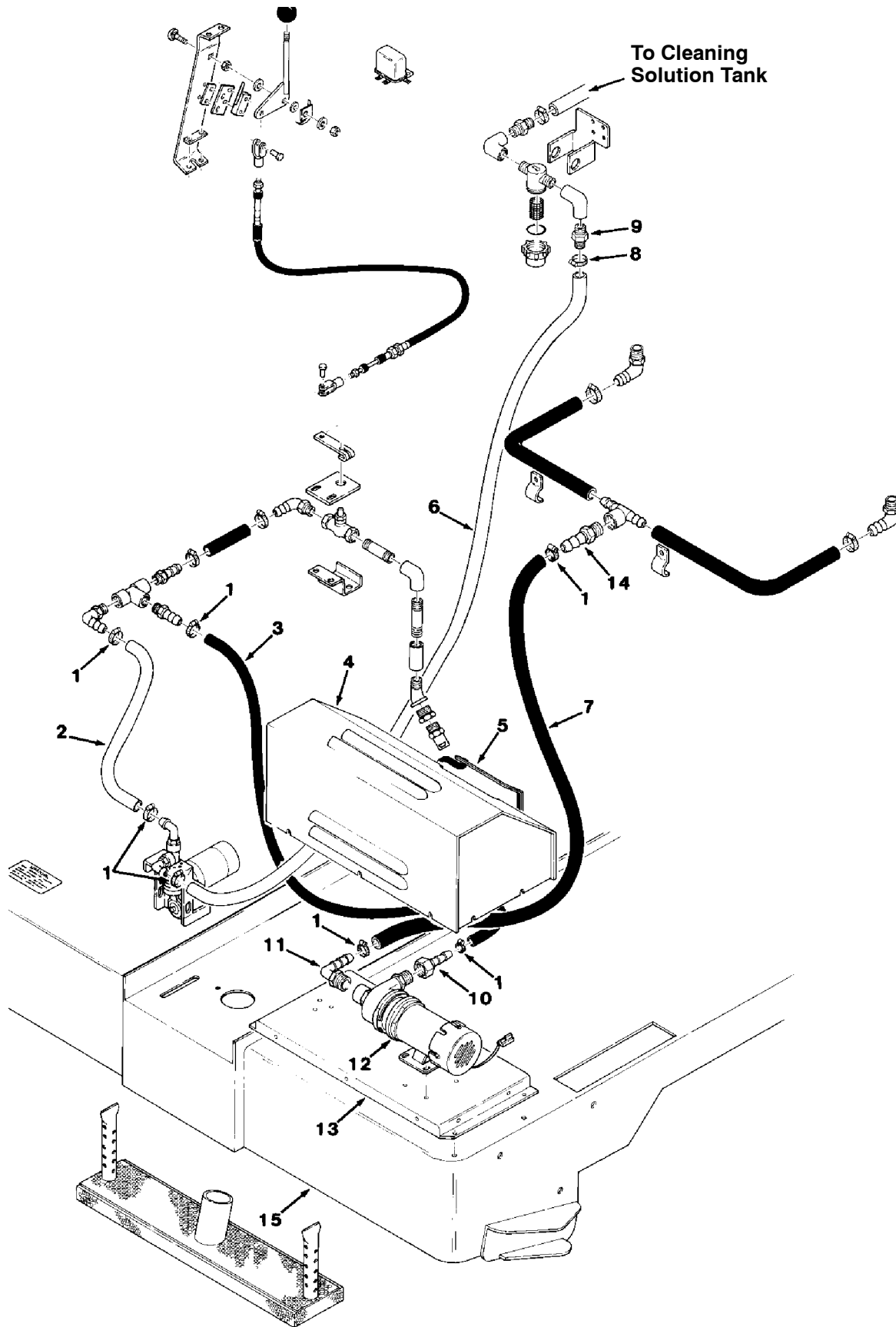


Fig. 1 - Solution Supply and Control Group, SRS®

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	11399	(003370-003466)	Clamp, Worm Drive	7
2	63182-2	(003370-003466)	Hose, Vinyl	1
3	47848	(003370-003466)	Hose, Rubber	1
4	31254	(003370-003466)	Cover, Pump	1
5	62595-5	(003370-003466)	Molding, Rigid	1
6	63182-1	(003370-003466)	Hose, Vinyl	1
7	76411	(003370-003466)	Hose, Solution	1
8	54333	(003370-003466)	Clamp, Worm Drive	1
9	79273	(003370-003466)	Fitting, Straight	1
10	76408	(003370-003466)	Adaptor	1
11	18594	(003370-003466)	Fitting, Elbow	1
12	57444	(003370-003466)	Replacement Kit, Water Pump	1
13	76414	(003370-003466)	Plate, Mounting	1
14	57379	(003370-003466)	Fitting, Straight	1
15	75501A-1	(003370-003466)	Frame, Scrub Head, SRS®	1

Fig. 2 - Solution Pumps Group, SRS®

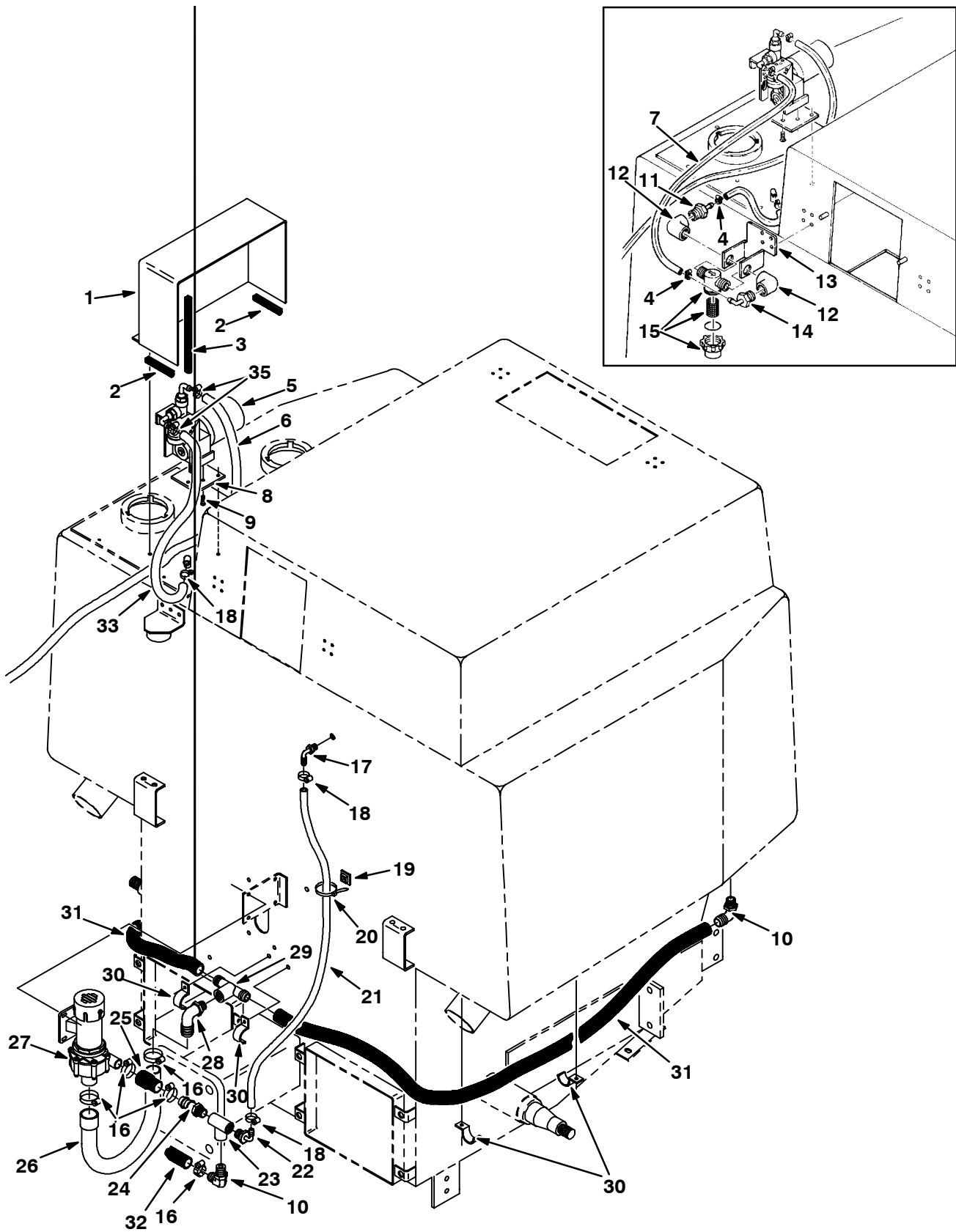


Fig. 2 - Solution Pumps Group, SRS®

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	03393	(003467-	) Cover, Pump	1
2	62595-18	(003467-	) Molding, Rigid	2
3	62595-6	(003467-	) Molding, Rigid	1
4	11399	(003467-003789	) Clamp, Worm Drive	2
5	16485	(003467-	) Pump, Metering (See Breakdowns)	1
6	63182-1	(003467-	) Hose, Vinyl	1
7	63182-4	(003467-003789	) Hose, Vinyl	1
8	02597	(003467-	) Plate, Pump Mounting	1
9	03391	(003467-	) Screw, Flat	3
10	75604	(003370-	) Fitting, Elbow	3
11	79273	(003370-003789	) Fitting, Straight	1
12	79572	(003370-003789	) Fitting, Elbow	2
13	79571	(003370-003789	) Bracket, Filter Mount	1
14	03394	(003467-003789	) Fitting, Elbow	1
15	08877	(003370-003789	) Filter, Replacement Kit	1
16	11399	(003467-	) Clamp, Worm Drive	7
17	03401	(003467-	) Fitting, Elbow	1
18	54333	(003467-	) Clamp, Worm Drive	3
19	55248	(003467-	) Mount, Cable Tie	2
20	49263	(003467-	) Tie, Cable	4
21	68301	(003467-	) Hose, Vinyl	1
22	79484	(003467-	) Fitting, Elbow	1
23	42133A	(003467-	) Fitting, Tee	1
24	57379	(003467-	) Fitting, Straight	1
25	57377	(003467-	) Hose, Pump Outlet	1
26	57378	(003467-	) Hose, Pump Inlet	1
27	03838	(003467-xxxxxx	) Pump, Water (Replaced by 48787) (See Breakdowns)	1
27	33327	(xxxxxx-	) Pump, Solution (See Breakdowns)	1
28	18595	(003467-	) Fitting, Elbow	1
29	02446	(003370-	) Fitting, Tee	1
30	44031	(003370-	) Clamp	6
31	47846-3	(003370-	) Hose, Rubber	2
32	47846	(003467-	) Hose, Rubber	1
33	79580	(003370-	) Hose, Vinyl	1

Fig. 3 - Solution Control Group, SRS®

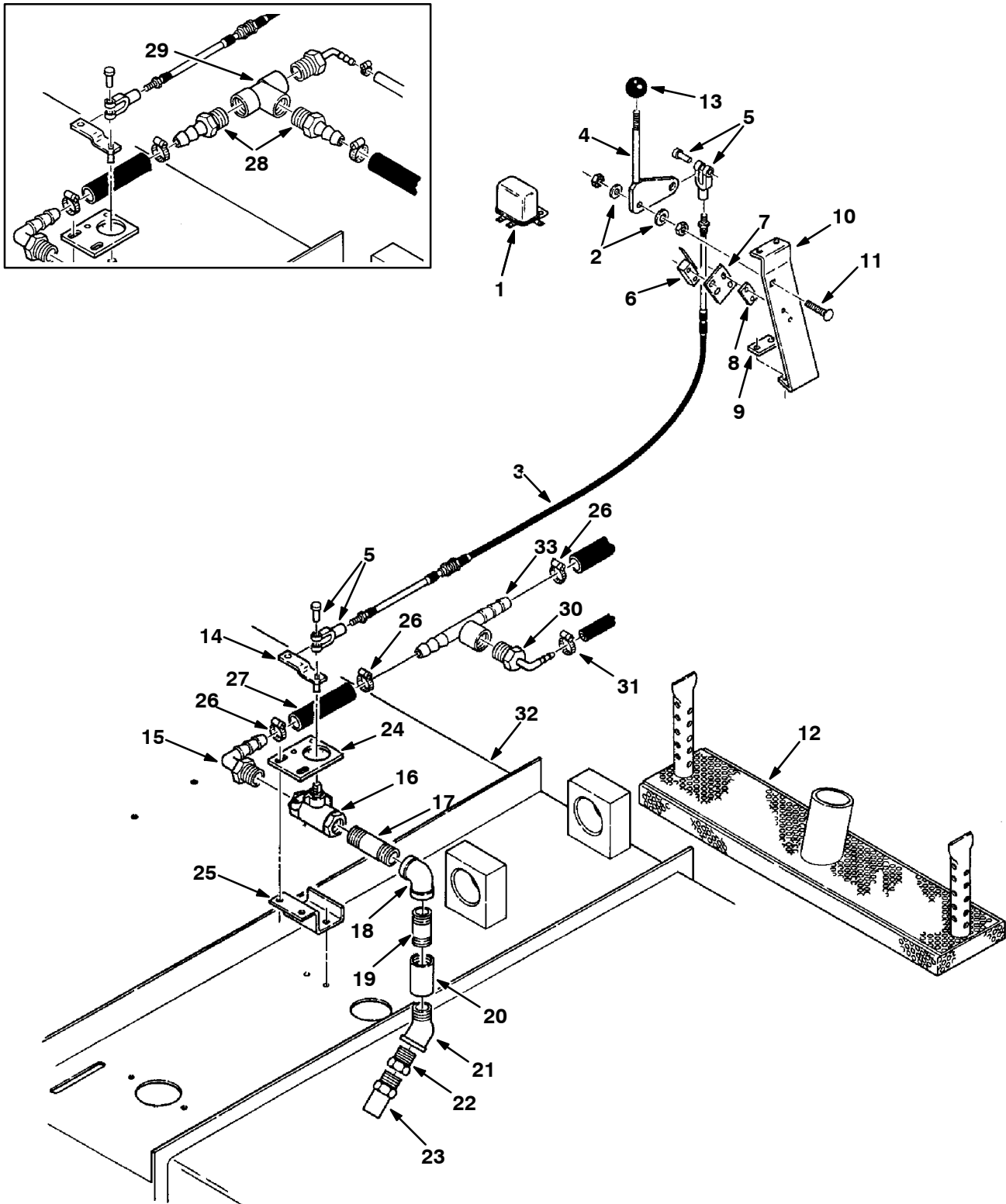
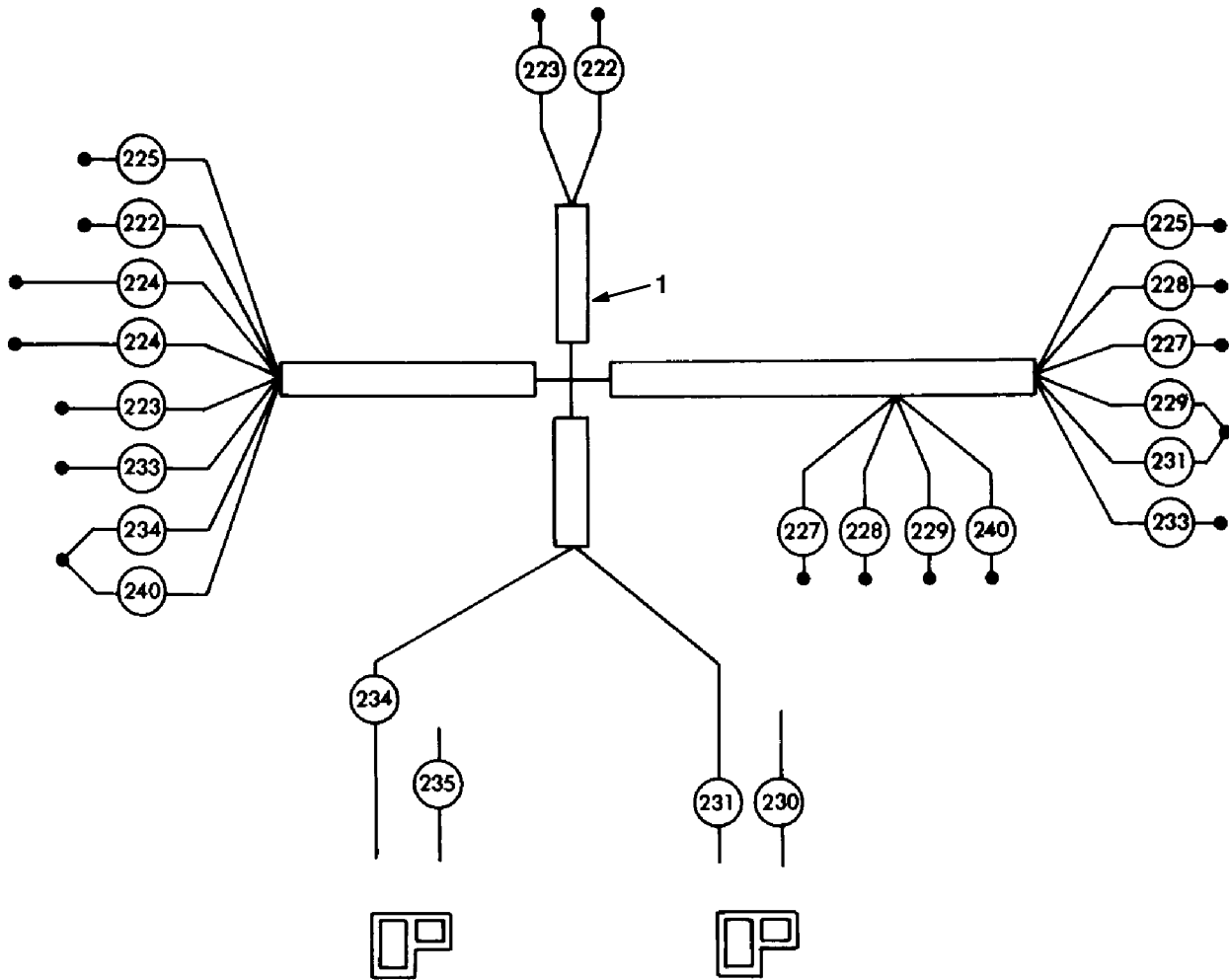


Fig. 3 - Solution Control Group, SRS®

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	44542	(003370-004254)	Relay	1
1	10865	(004255-	Relay	1
∇	02819	(003370-	Lever Assembly, Solution Control	1
▲	3 75314	(003370-	Cable, Control	1
▲	2 52296	(003370-	Washer, Nylon	2
▲	4 08791	(003370-	Bellcrank	1
▲	5 41063	(003370-	Clevis and Pin	2
▲	6 44847	(003370-	Switch	1
▲	7 02817	(003370-	Bracket, Switch	1
▲	8 02818	(003370-	Spacer, Switch	1
▲	9 23515	(003370-	Strip	1
▲	10 75319	(003370-	Bar, Mounting	1
▲	11 56903	(003370-	Bolt, Carriage	1
	12 79301	(003370-	Nozzle, Suction	1
	13 26565	(003370-	Knob	1
	14 02578	(003370-004014)	Arm, Control	1
	14 12072	(004015-	Arm, Control	1
	15 75604	(003370-	Fitting, Elbow	1
	16 12052	(003370-004014)	Valve Replacement Kit, Water	1
	16 12060	(004015-	Valve, Water	1
	17 07483	(003370- xxxxxx)	Fitting, Nipple, 3.0" (75 mm) L	1
	17 29035	(xxxxxx-	Fitting, Nipple, 2.5" (65 mm) L	1
	18 23563	(003370-	Fitting, Elbow	1
	19 11442-7	(003370-	Fitting, Nipple	1
	20 07484	(003370-	Fitting, Coupling	1
	21 11870	(003370-	Fitting, Elbow, 45°	1
	22 11442-8	(003370-	Fitting, Straight	1
	23 79606	(003370-	Nozzle	1
	24 75803	(003370-004014)	Plate, Valve Mounting	1
	24 12074	(004015-	Plate, Valve Mounting	1
	25 75802-1	(003370-	Bracket	1
	26 11399	(003370-	Clamp, Worm Drive	3
	27 75197	(003370-	Hose, Rubber	1
	28 79273-2	(003370- xxxxxx)	Fitting, Coupling	2
	29 42133A	(003370- xxxxxx)	Fitting, Tee	1
	30 79484	(003370-	Fitting, Elbow	1
	31 54333	(003370-	Clamp, Worm Drive	1
∇	32 03402	(003467-	Frame, Scrubber Head	1
▲	40575	(003370-	Decal, Warning, Lock Scrubber Head	2
	02586	(003467-	Label, Instruction, Pump Lever Model	1
	31260	(003467-	Label, Instruction, Pump Prime	1
33	02446	(xxxxxx-	Fitting, Tee	1

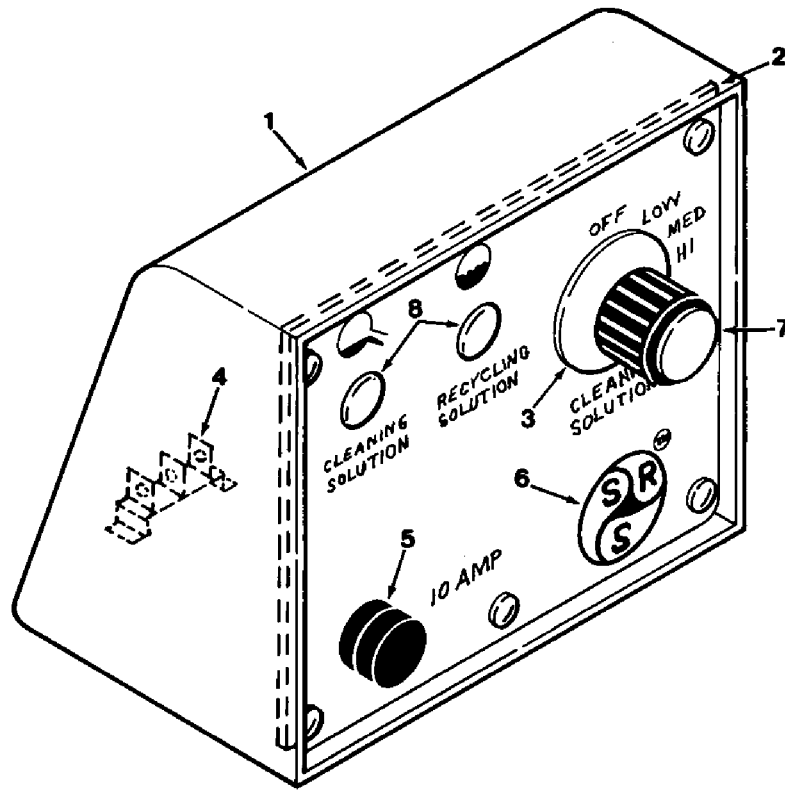
Fig. 4 - Wire Harnesses, SRS®



00813 - 550

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
1	76436	(003370-003466)	Wire Harness, Control Box	1
1	03406	(003467-004254)	Wire Harness, Control Box	1
1	25185	(004255-	) Wire Harness, Control Box	1

Fig. 5 - Control Panel Assembly, SRS®



00351 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	79318	(003370-	) Control Panel Assembly	1
▲	1 79314	(003370-	) Console, Instrument	1
▲	2 32798	(003370-	) Panel, Front	1
▲	3 63837	(003370-	) Switch, Cleaning Solution Metering	1
▲	4 16440	(003370-	) Resistor	1
▲	5 07422	(003370-	) Holder, Fuse	1
▲	45595	(003370-	) Fuse, 10 A	1
▲	6 79410	(003370-	) Decal, Control Panel	1
▲	7 63814	(003370-	) Knob	1
▲	8 56992	(003370-	) Plugbutton	2

Fig. 6 - Front Side of Solution Tank Group, SRS®

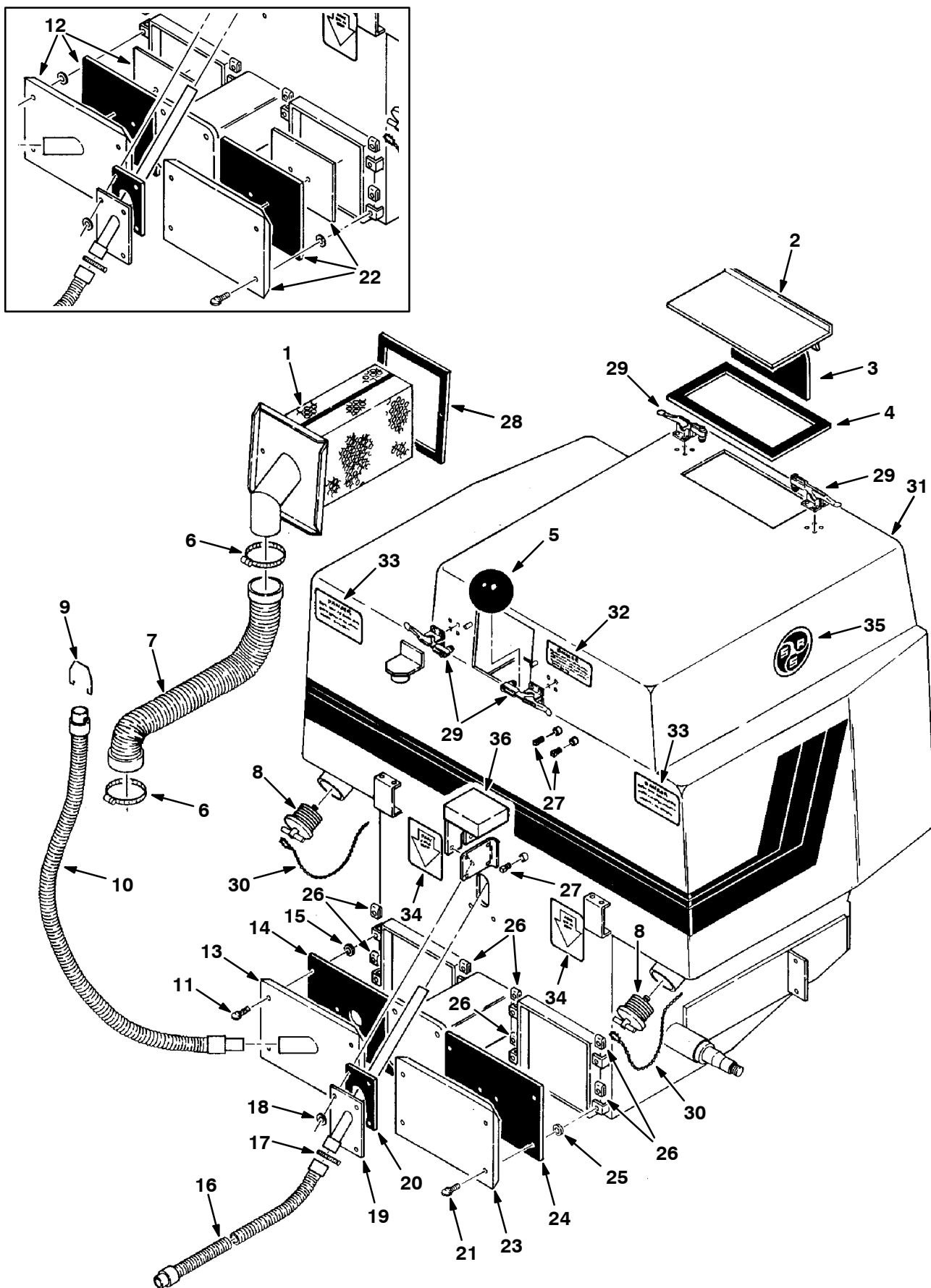


Fig. 6 - Front Side of Solution Tank Group, SRS®

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	79558	(003370-004933)	Screen, Debris	1
2	76403	(003370-004933)	Cover, Sandblast	1
3	79500	(003370-004933)	Sheet, Top Sandblast	1
4	76395	(003370-004933)	Gasket, Cover	1
5	03706	(003370-004933)	Ball, Float	1
6	23498	(003370-004933)	Clamp, Worm Drive	2
7	09328	(003370-004152)	Hose Kit, Interconnection	1
7	25360	(004153-004933)	Hose Vacuum	1
8	30145	(003370-004194)	Drain Kit, Plug	2
8	222831	(004195-004933)	Plug, Drain	2
9	40550	(003370-004933)	Clip, Drain Hose Retainer	1
10	76828	(003370-004933)	Hose, Recovery Tank Drain	1
▽	79396	(003370-004933)	Door Assembly, Cleanout, R.H.	1
▲	11 25665	(003370-004344)	Replacement Kit, Thumbscrew	4
▲	11 369849	(004345-004933)	Fastener, Thumbscrew	4
▲	12 06231	(003370-003696)	Service Kit, Cleanout Door	1
▲	13 06230	(003697-004933)	Door, Cleanout	1
▲	14 06229	(003697-004933)	Gasket, Door	1
▲	15 26015	(003370-004933)	Fastener, Washer	4
16	75635	(003370-004933)	Hose, Debris Trough Pickup	1
17	11531	(003370-004933)	Clamp, Worm Drive	1
18	76426	(003370-004933)	Washer, Rubber Seal	4
19	61157	(003370-004933)	Tube, Front Suction	1
20	76532	(003370-004933)	Gasket, Suction Tube, Front	1
▽	78819	(003370-004933)	Door Assembly, Cleanout	1
▲	21 25665	(003370-004344)	Replacement Kit, Thumbscrew	4
▲	21 369849	(004345-004933)	Fastener, Thumbscrew	4
▲	22 06224	(003370-003696)	Service Kit, Cleanout Door	1
▲	23 06228	(003697-004933)	Door, Cleanout	1
▲	24 06227	(003697-004933)	Gasket, Door	1
▲	25 26015	(003370-004933)	Fastener, Washer	4
26	28165	(003370-004344)	Fastener, Nut	8
26	25663	(004345-004933)	Fastener, Nut	8
27	63511	(003370-004933)	Plug	3
28	79557	(003370-004933)	Gasket, Debris Screen	1
29	03823	(003370-004933)	Clamp, Toggle	4
▽	30 56506	(003370-004933)	Chain, Drain plug	2
▲	43363	(003370-004933)	Hook	2
31	65889	(003370-004933)	Replacement Kit, Tank, SRS®	1
32	40052	(003370-004933)	Decal, Fan Suction	1
33	57630	(003370-004933)	Decal, Danger, Keep Out	2
34	76157	(003370-004933)	Decal, Jack Only On Pad	2
35	79475	(003370-004933)	Decal, SRS®	2
36	61628	(003370-004933)	Bracket, Pump Cover	1

Fig. 7 - Front Side of Solution Tank Group, SRS®

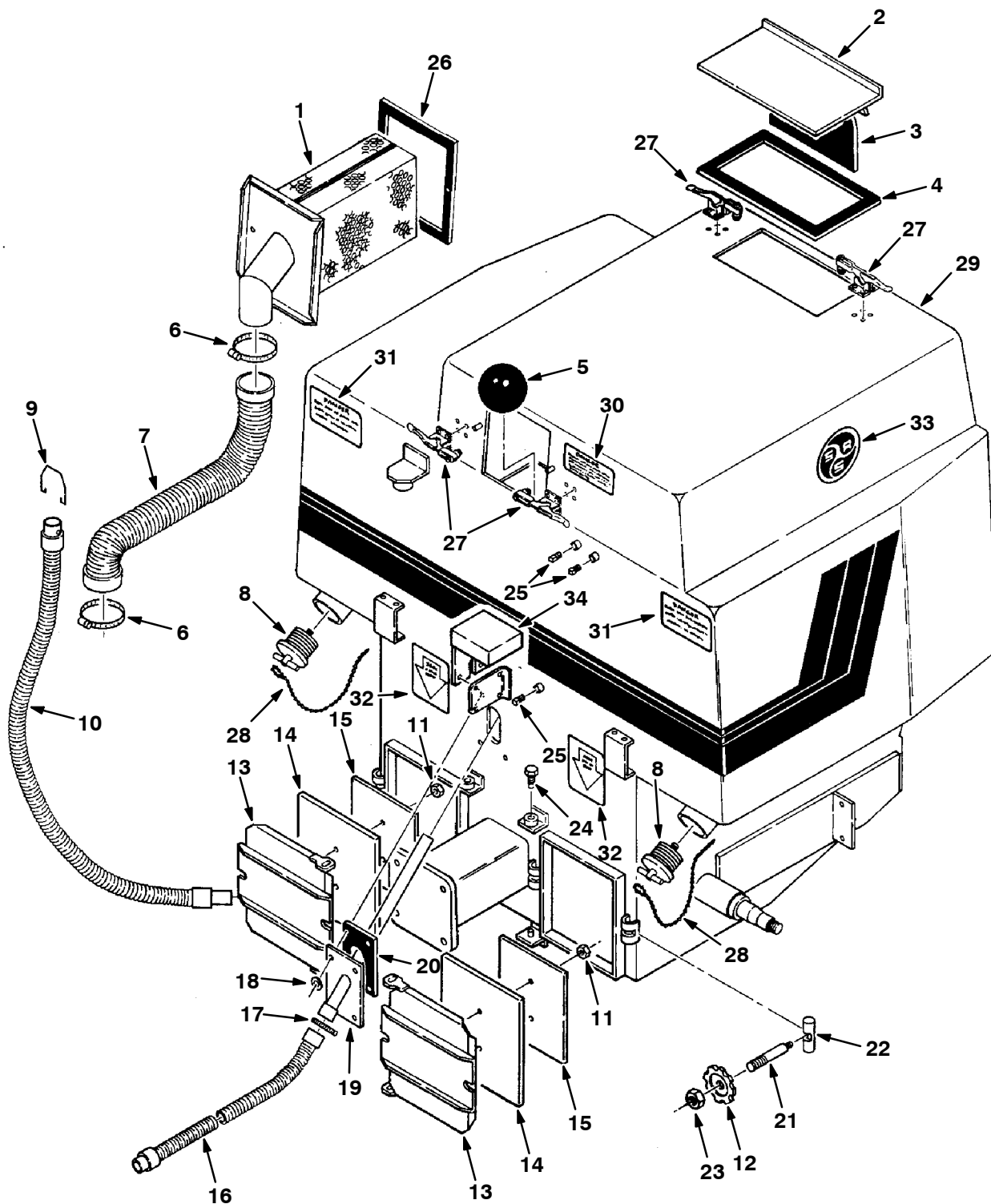
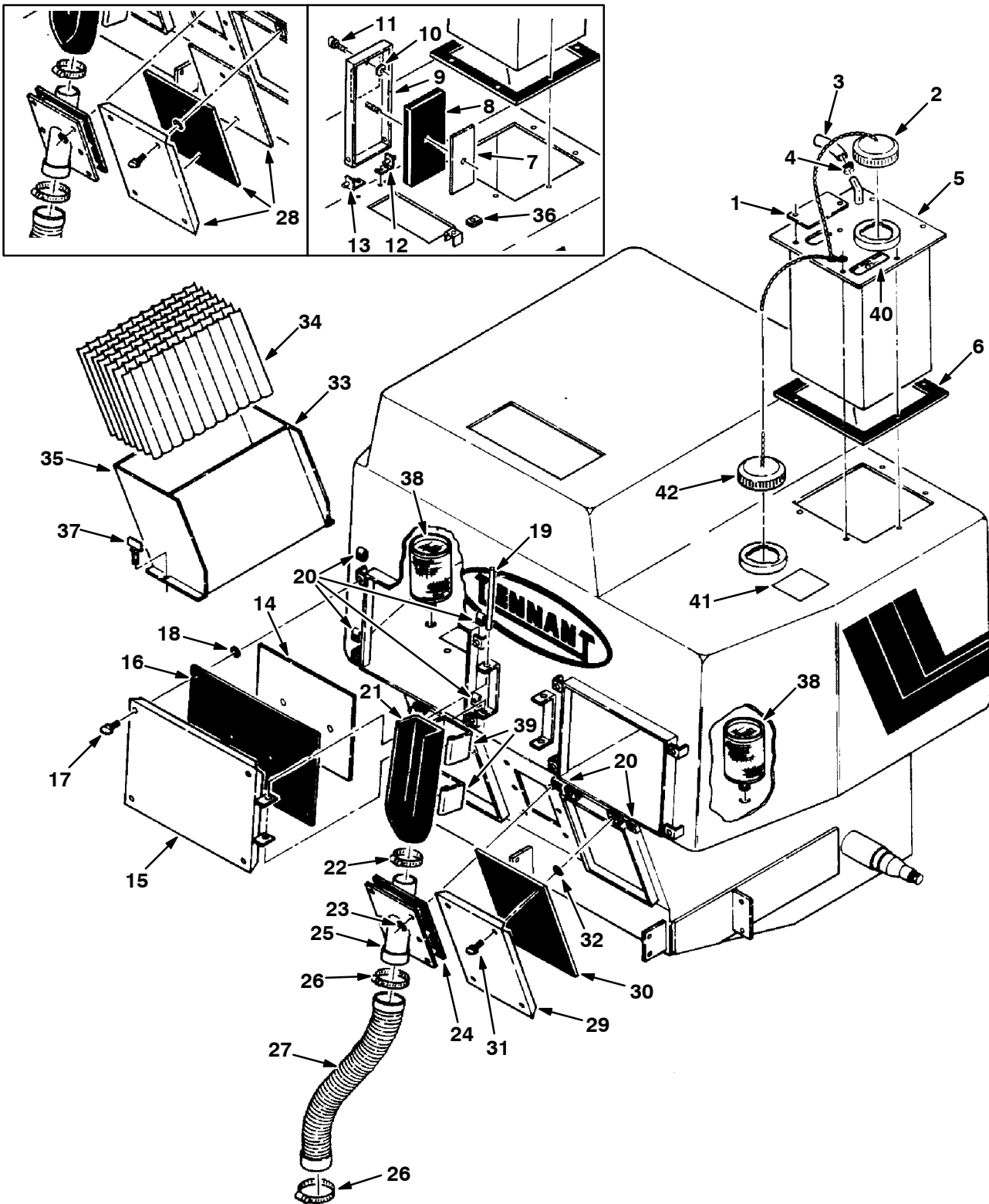


Fig. 7 - Front Side of Solution Tank Group, SRS®

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	79558	(004934-	) Screen, Debris	1
2	76403	(004934-	) Cover, Sandblast	1
3	79500	(004934-	) Sheet, Top Sandblast	1
4	76395	(004934-	) Gasket, Cover	1
5	03706	(004934-	) Ball, Float	1
6	23498	(004934-	) Clamp, Worm Drive	2
7	25360	(004934-	) Hose, Vacuum	1
8	222831	(004934-	) Plug, Drain	2
9	40550	(004934-	) Clip, Drain Hose Retainer	1
10	76828	(004934-	) Hose, Recovery Tank Drain	1
11	41169	(004934-	) Nut, Stainless Steel	4
12	82958	(004934-	) Knob, Door Latch	4
13	61176	(004934-	) Door	2
14	61174	(004934-	) Gasket, Door	2
15	61175	(004934-	) Plate, Door	2
16	75635	(004934-	) Hose, Debris Trough Pickup	1
17	11531	(004934-	) Clamp, Worm Drive	1
18	76426	(004934-	) Washer, Rubber Seal	4
19	61157	(004934-	) Tube, Front Suction	1
20	76532	(004934-	) Gasket, Suction Tube, Front	1
21	61171	(004934-	) Stud, Door Latch	4
22	61170	(004934-	) Rod, Door Latch	4
23	36644	(004934-	) Nut, Locking	4
24	61181	(004934-	) Pivot, Door Hinge	2
25	63511	(004934-	) Plug	3
26	79557	(004934-	) Gasket, Debris Screen	1
27	03823	(004934-	) Clamp, Toggle	4
∇	28	56506	(004934-) Chain, Drain Plug	2
▲	43363	(004934-	) Hook	2
∇	29	79250-1	(004934-) Tank, Solution and Recovery, SRS®	1
▲	30	40052	(004934-) Label, Fan Suction	1
▲	31	57630	(004934-) Label, Danger Keep Out	2
▲	32	76157	(004934-) Label, Jack Only On Pad	2
	33	79475	(004934-) Label, SRS®	2
	34	61628	(004934-) Bracket, Pump	1

Fig. 8 - Rear Side of Solution Tank Group, SRS®



00355 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	79453	(003370-004933)	Plate	1
2	375724	(003370-004933)	Cap, Filler	1
3	79580	(003370-004933)	Hose, Cleaning Solution	1
4	54333	(003370-004933)	Clamp, Worm Drive	1

Fig. 8 - Rear Side of Solution Tank Group, SRS®

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
	5	03405	(003370-003466) Replacement Kit, Detergent Tank	1
	5	03404	(003467-004933) Tank, Detergent	1
	6	79367	(003370-004933) Gasket, Cleaning Solution Tank	1
▽		79414	(003370-003564) Door Assembly, Solution Filling	1
▲	7	79392	(003370-003564) Retainer, Seal	1
▲	8	79391	(003370-003564) Seal, Door	1
▲	9	79390	(003370-003564) Door, Cleaning Solution	1
▲	10	26015	(003370-003564) Retainer, Screw	1
▲	11	43460	(003370-003564) Thumbscrew	1
	12	75174	(003370-003564) Bracket, Hinge, R.H.	1
	13	75175	(003370-003564) Bracket, Hinge, L.H.	1
▽		79332	(003370-004933) Door Assembly, Rear Cleanout	2
▲	14	25928	(003370-004933) Strip	1
▲	15	06222	(003370-004933) Door, Cleanout	1
▲	16	06223	(003370-004933) Gasket, Door	1
▲	17	25665	(003370-004344) Replacement Kit, Thumbscrew	4
▲	17	369849	(004345-004933) Fastener, Thumbscrew	4
▲	18	26015	(003370-004933) Fastener, Washer	4
	19	49924	(003370-004933) Pin, Clevis	2
	20	28165	(003370-004344) Fastener, Nut	16
	20	25663	(004345-004933) Fastener, Nut	16
	21	79500	(003370-004933) Deflector, Spray, Rubber	1
	22	23498	(003370-004933) Clamp, Worm Drive	1
	23	76426	(003370-004933) Washer, Rubber Seal	6
	24	79545	(003370-004933) Seal, Suction Tube	1
	25	79471	(003370-004933) Tube, Rear Squeegee Suction	1
	26	43555	(003370-004933) Clamp, Worm Drive	2
	27	25649	(003370-004933) Hose, Rear Squeegee Suction	1
▽		78819	(003370-004933) Door Assembly, Cleanout	2
▲	28	06224	(003370-003696) Service Kit, Cleanout Door	1
▲	29	06228	(003697-004933) Door, Cleanout	1
▲	30	06227	(003697-004933) Gasket, Door	1
▲	31	25665	(003370-004344) Replacement Kit, Thumbscrew	4
▲	31	369849	(004345-004933) Fastener, Thumbscrew	4
▲	32	26015	(003370-004933) Fastener, Washer	4
▽		79477	(003370-004933) Filter Assembly, Laminar Flow, L.H.	1
▲	33	79473-1	(003370-004933) Housing, Filter Mounting	1
▲	34	64685	(003370-004933) Filter, Laminar Flow	1
▲	35	79474	(003370-004933) Panel, Flow tube Mounting Cover	1
	36	28165	(003370-003564) Fastener, Nut	1
▽		79476	(003370-004933) Filter Assembly, Laminar Flow, R.H.	1
▲		79472-1	(003370-004933) Housing, Filter Mounting	1
▲		64685	(003370-004933) Filter, Laminar Flow	1
▲		79474	(003370-004933) Panel, Flow Tube Mounting Cover	1
	37	79464	(003370-004933) Thumbscrew, Filter Hold Down	2
	38	79424	(003370-004933) Filter, Solution Outlet	2
	39	79570	(003370-004933) Frame, Spray Deflector	2
	40	79488	(003370-004933) Decal, SRS® Cleaning Solution	1
	41	79478	(003370-004933) Decal, Fill Tank	1
	42	375724	(003565-004933) Cap, Filler	1

Fig. 9 - Rear Side of Solution Tank Group, SRS®

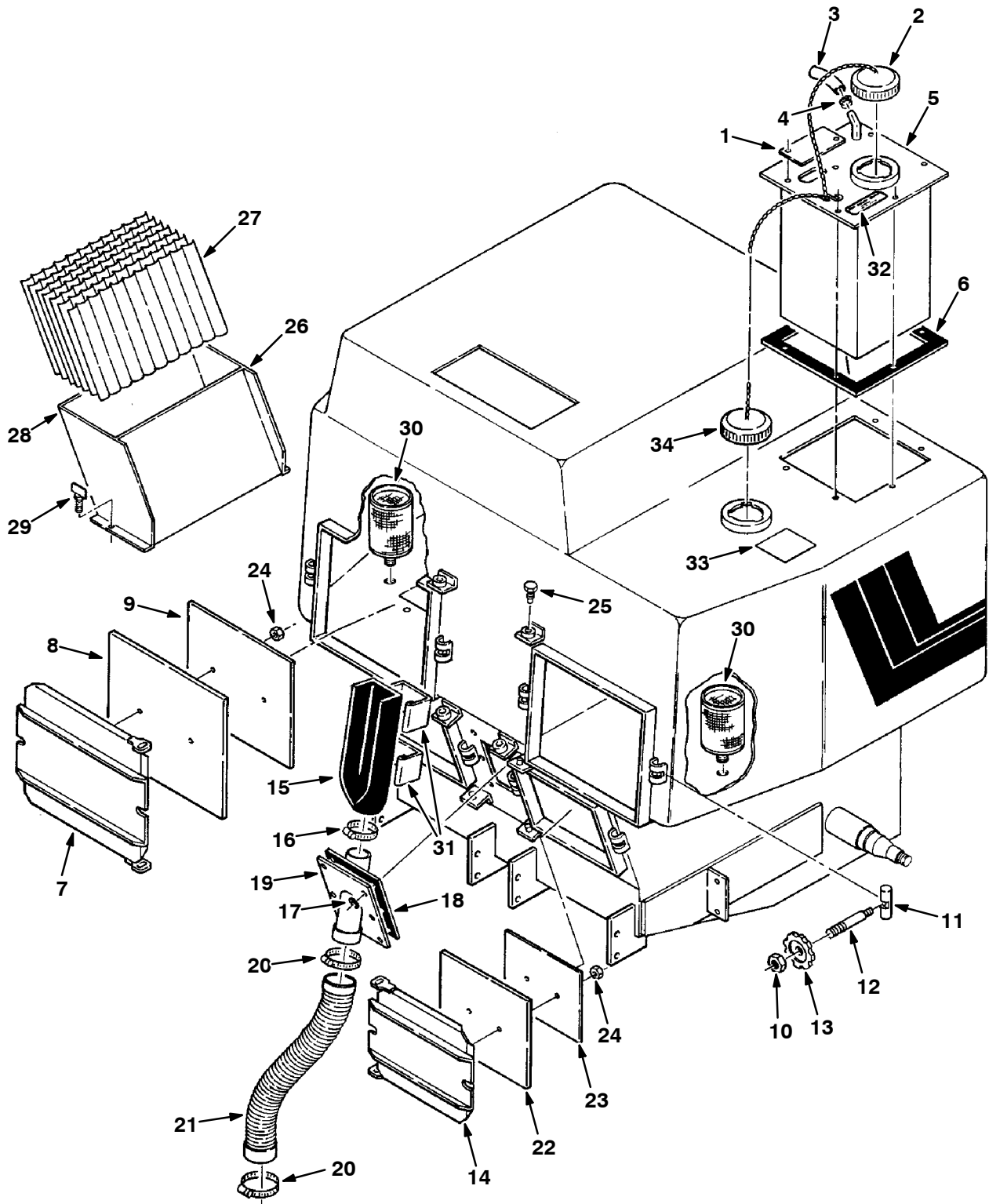


Fig. 9 - Rear Side of Solution Tank Group, SRS®

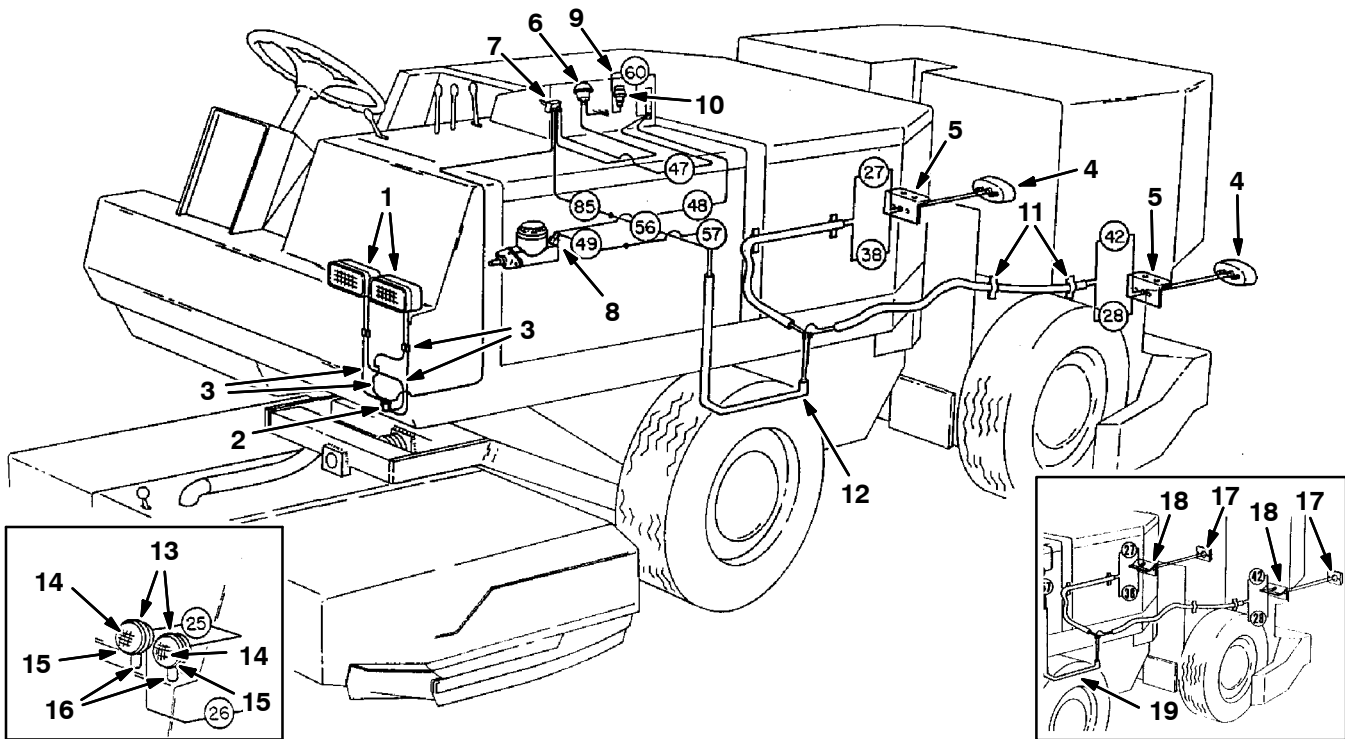
Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	79453	(004934-	) Plate	1
2	375724	(004934-	) Cap, Filler	1
3	79580	(004934-	) Hose, Cleaning Solution	1
4	54333	(004934-	) Clamp, Worm Drive	1
5	03404	(004934-	) Tank, Detergent	1
6	79367	(004934-	) Gasket, Cleaning Solution Tank	1
7	61189	(004934-	) Door, Upper	2
8	61187	(004934-	) Gasket, Upper Door	2
9	61188	(004934-	) Plate, Upper Door	2
10	36644	(004934-	) Nut, Locking	8
11	61170	(004934-	) Rod, Door Latch	8
12	61171	(004934-	) Stud, Door Latch	8
13	82958	(004934-	) Knob, Door Latch	8
14	61245	(004934-	) Door, Lower	2
15	79500	(004934-	) Deflector, Spray, Rubber	1
16	23498	(004934-	) Clamp, Worm Drive	1
17	76426	(004934-	) Washer, Rubber Seal	6
18	79545	(004934-	) Seal, Suction Tube	1
19	79471	(004934-	) Tube, Rear Squeegee Suction	1
20	43555	(004934-	) Clamp, Worm Drive	2
21	25649	(004934-	) Hose, Rear Squeegee Suction	1
22	61174	(004934-	) Gasket, Lower Door	2
23	61175	(004934-	) Plate, Lower Door	2
24	41169	(004934-	) Nut, Stainless Steel	8
25	61181	(004934-	) Pivot, Door Hinge	4
▽	79477	(004934-	) Filter Assembly, Laminar Flow, L.H.	1
▲	26 79473-1	(004934-	) Housing, Filter Mounting	1
▲	27 64685	(004934-	) Filter, Laminar Flow	1
▲	28 79474	(004934-	) Panel, Flow Tube Mounting Cover	1
▽	79476	(004934-	) Filter Assembly, Laminar Flow, R.H.	1
▲	79472-1	(004934-	) Housing, Filter Mounting	1
▲	64685	(004934-	) Filter, Laminar Flow	1
▲	79474	(004934-	) Panel, Flow Tube Mounting Cover	1
	29 79464	(004934-	) Thumbscrew, Filter Hold Down	2
	30 79424	(004934-	) Filter, Solution Outlet	2
	31 79570	(004934-	) Frame, Spray Deflector	2
	32 79488	(004934-	) Label, SRS® Cleaning Solution	1
	33 79478	(004934-	) Label, Fill Tank	1
	34 375724	(004934-	) Cap, Filler	1

SECTION 10

CONTENTS	PAGE
Fig. 1 - Light Kit	10-2
Fig. 2 - Overhead Guard Kit	10-3
Fig. 3 - Heavy Duty Bumper Kit	10-4
Fig. 4 - Brush Pressure Warning Kit	10-5
Fig. 5 - Flashing Light Kit	10-6
Fig. 6 - Revolving Light Group	10-7
Fig. 7 - Revolving Light Kit	10-8
Fig. 8 - Reserve LPG Tank Group with Filler Valve, SRS®	10-9
Fig. 9 - Reserve LPG Tank Kit with Filler Valve	10-10
Fig. 10 - Reserve LPG Tank Mounting Kit	10-11
Fig. 11 - Squeegee Wand Kit	10-12
Fig. 12 - High Pressure Sprayer Kit	10-14
Fig. 13 - Sludge Removal Tool Assembly, SRS®	10-17
Fig. 14 - Heavy Duty Bumper Kit, SRS®	10-18
Fig. 15 - Squeegee Wand Kit, SRS®	10-20
Fig. 16 - Light Kit, SRS®	10-22
Fig. 17 - Flashing Light Kit, SRS®	10-23
Fig. 18 - Revolving Light Group, SRS®	10-24
Fig. 19 - Level Warning Light Kit, SRS®	10-25
Fig. 20 - Fire Extinguisher Kit	10-26
Fig. 21 - Protectoseal Gasoline Cap	10-26
Fig. 22 - Wheel Assembly, Foam Filled	10-27
Fig. 23 - Solution Tank Drain Kit	10-27
Fig. 24 - Rear View Mirror Kit	10-28
Fig. 25 - Spark Arresting Muffler Kit	10-28
Fig. 26 - Recovery Level Warning Light Kit	10-29
Fig. 27 - Side Squeegees Extension Kit	10-30
Fig. 28 - Documentation Group	10-31

OPTIONS

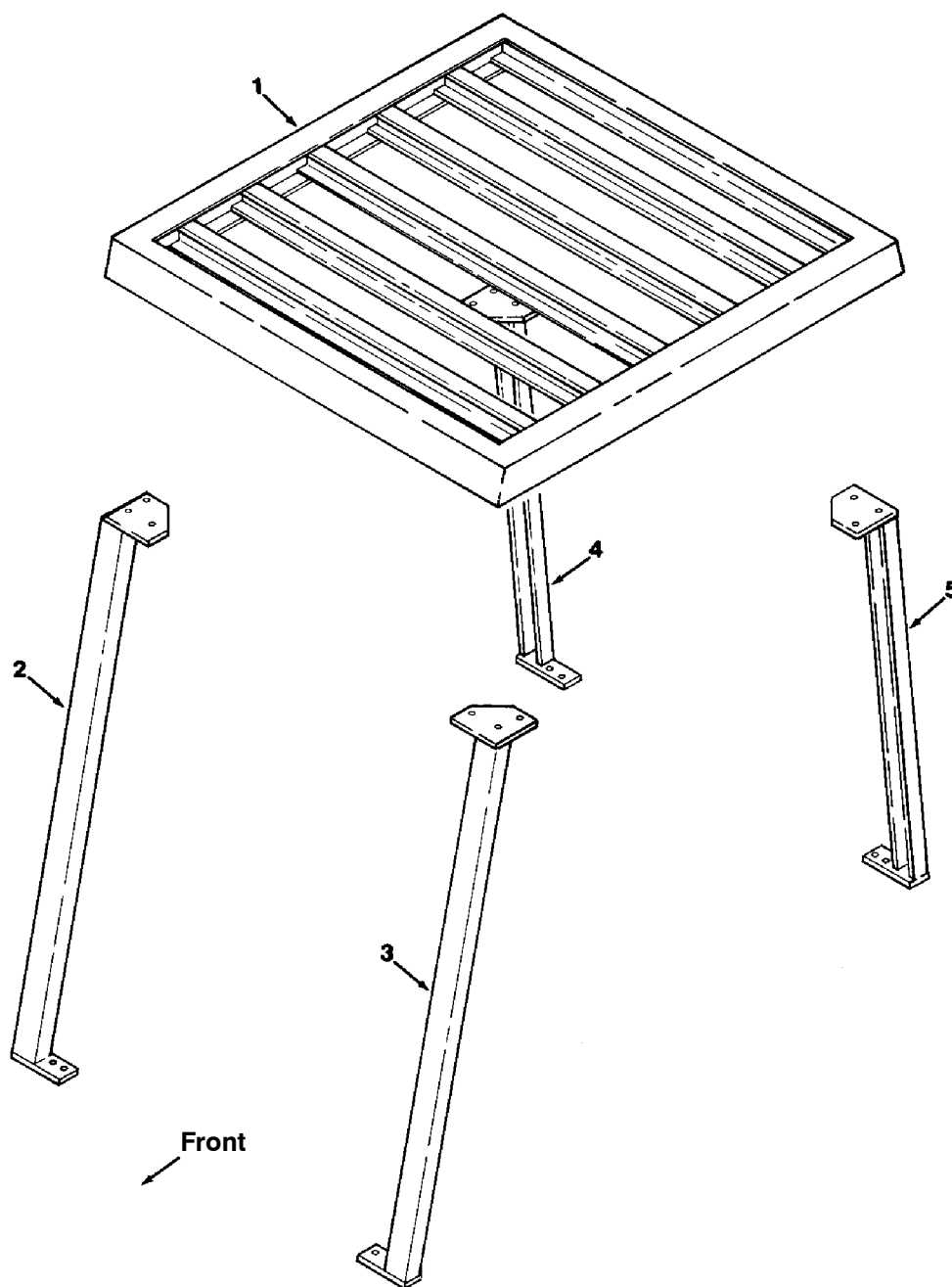
Fig. 1 - Light Kit



09871 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78160	(003370-)	Light Kit	1
▲	1 24298	(005290-)	Headlight Assembly	2
▲	2 76062	(005290-)	Insulator	1
▲	3 79102	(005290-)	Wire Assembly, Headlight	2
▲▽	4 51572	(004957-)	Taillight	2
▲▲	45780	(004957-)	Bulb	1
▲	5 49022	(004957-)	Bracket, Taillight	2
▲	76426	(003370-)	Washer, Sealing	4
▲▽	6 47768	(003370-)	Light, Panel	1
▲▲	24427	(003370-)	Bulb	1
▲	7 10701	(003370-)	Switch, Toggle	1
▲	8 13959	(003370-)	Switch, Brake Light Sending	1
▲	9 07422	(003370-)	Holder, Fuse	1
▲	10 14215	(003370-)	Fuse	1
▲	11 49262	(003370-)	Clamp, Conduit	2
▲	78153	(003370-)	Wire Kit, Operating Lights	1
▲	09385	(003370-)	Clamp, Cable	1
▲	12 25183	(004255-)	Wire Harness	1
▲	49266	(003370-)	Tie, Cable	6
▲	10632-19	(003370-)	Grommet, Rubber	1
	13 21639	(003370-005289)	Light Kit, Hd-TI/550	1
	14 51570	(003370-005289)	Bulb	1
	15 24227	(003370-005289)	Washer, Dished	2
	16 24142	(003370-005289)	Washer, Spherical	4
▽	17 79439	(003370-004956)	Taillight	2
▲	48211	(003370-004956)	Bulb	1
	18 76877	(003370-004956)	Bracket, Taillight	2
	19 76220	(003370-004254)	Wire Harness	1

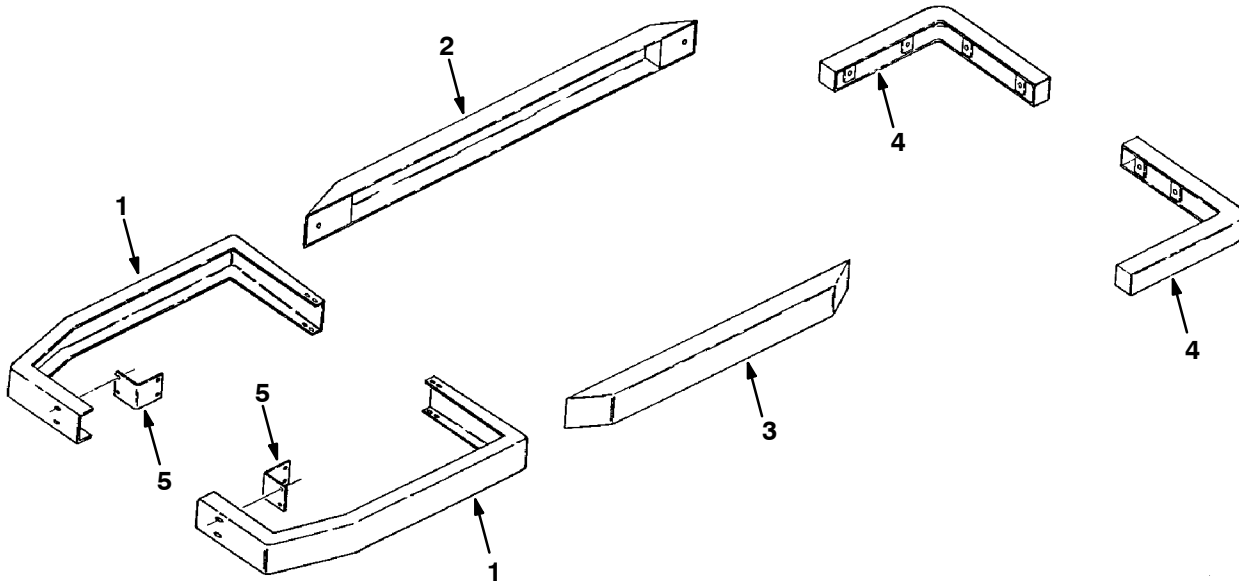
Fig. 2 - Overhead Guard Kit



00317 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	75903	(003370-	) Guard Kit, Overhead	1
▲ 1	76862	(003370-	) Guard, Top	1
▲ 2	76858	(003370-	) Leg, Front, R.H.	1
▲ 3	76859	(003370-	) Leg, Front, L.H.	1
▲ 4	76860	(003370-	) Leg, Rear, R.H.	1
▲ 5	76861	(003370-	) Leg, Rear, L.H.	1

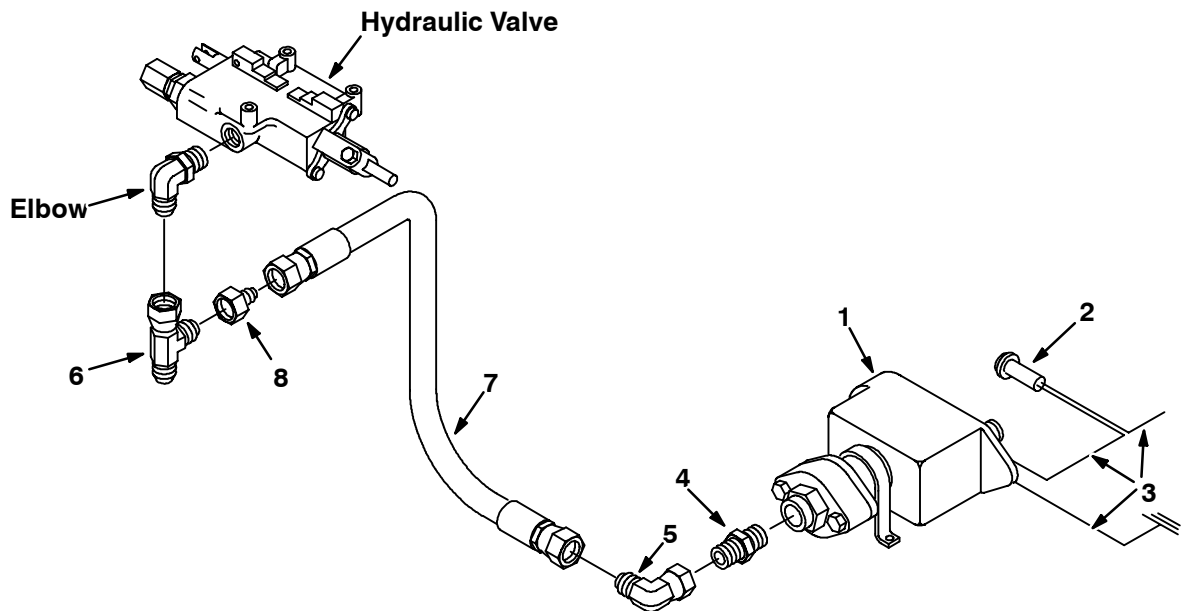
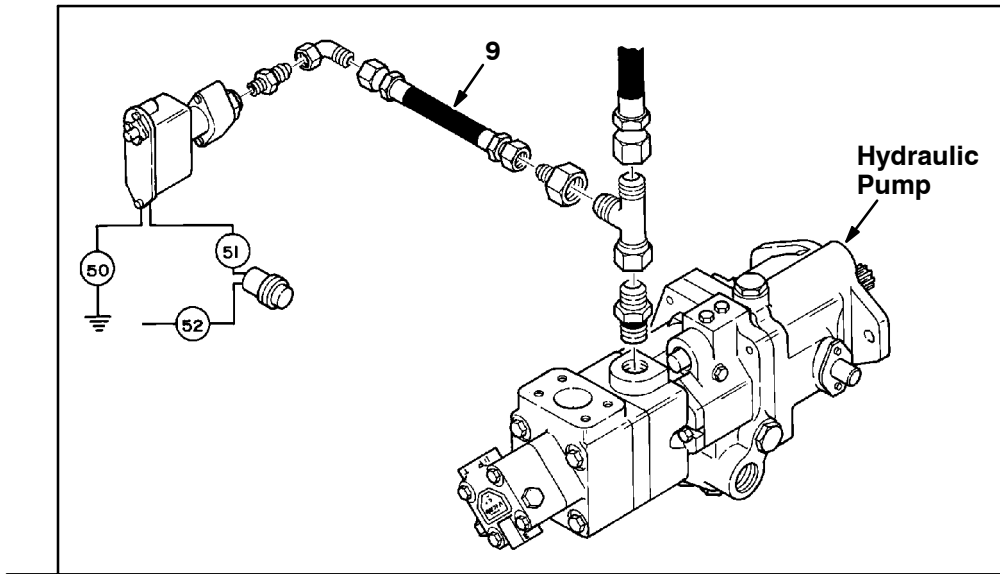
Fig. 3 - Heavy Duty Bumper Kit



00825 - 550, 550E

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
▽	75906	(003370-	) Bumper Kit, Heavy Duty	1
▲ 1	75108	(003370-	) Bumper, Recovery and Solution Tank	2
▲ 2	78101	(003370-	) Bumper, Left Side, Tractor	1
▲ 3	78099	(003370-	) Bumper, Right Side, Tractor	1
▲ 4	75673	(003370-	) Bumper, Scrubber Head	2
▲ 5	75144	(003370-	) Bracket, L	2

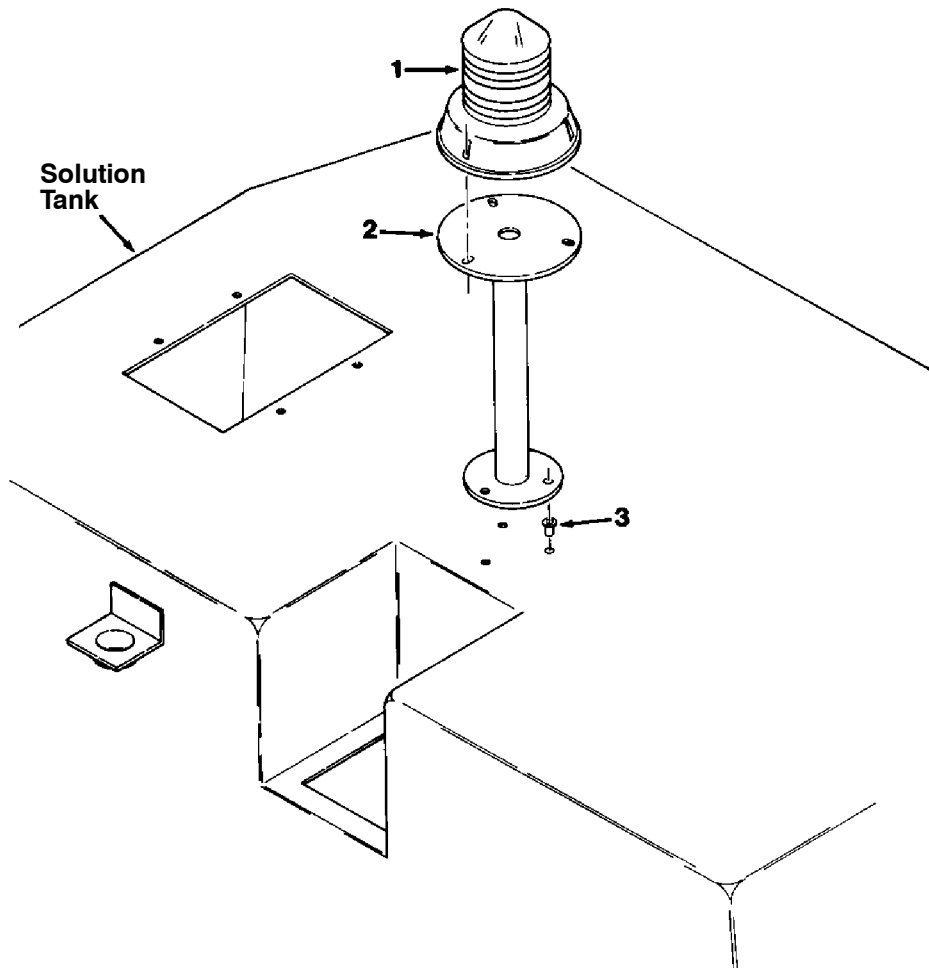
Fig. 4 - Brush Pressure Warning Kit



02858 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	03992	(003370-	) Warning Kit, Brush Pressure	1
▲ 1	62417-2	(003370-	) Switch, Pressure	1
▲ 2	68222	(003370-	) Light, Pilot	1
▲ 3	78157	(003370-	) Wire Kit	1
▲ 4	15724	(003370-	) Fitting, Straight	1
▲ 5	47504	(003370-	) Fitting, Elbow	1
▲ 6	40514	(003370-	) Fitting, Tee	1
▲ 7	49943	(004438-	) Hose, Hydraulic	1
▲ 8	34375	(003370-	) Fitting, Straight	1
▲ 9	76252	(003370-004437	) Hose, Hydraulic	1

Fig. 5 - Flashing Light Kit

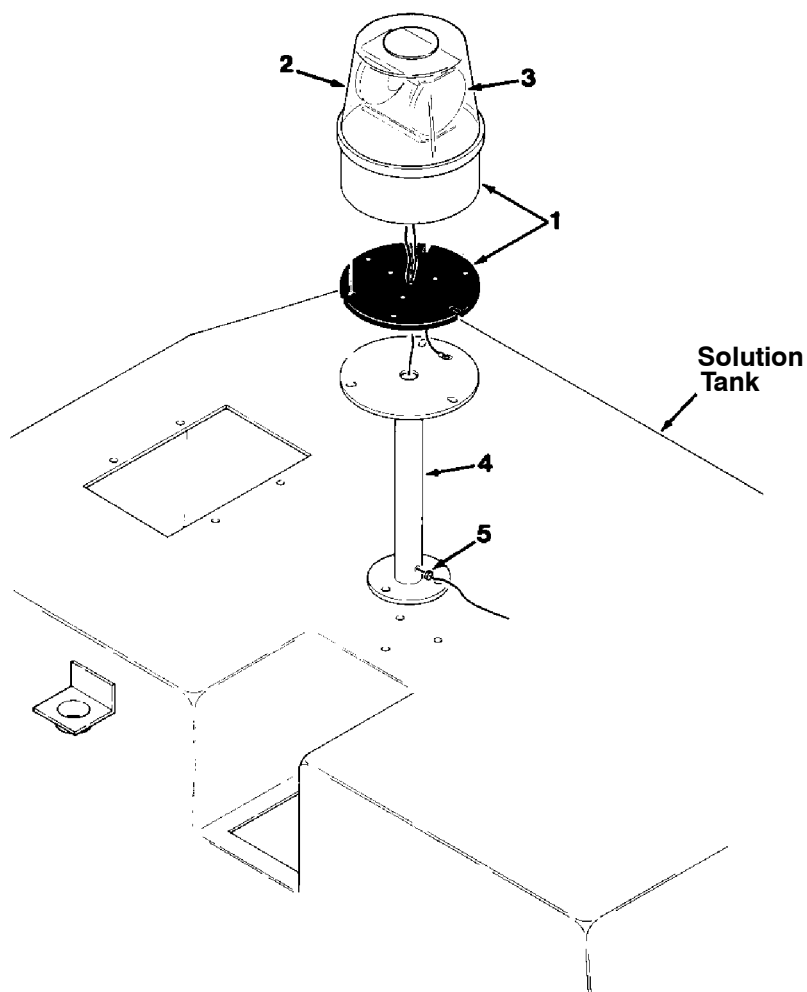


00817 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
∇	78164	(003370-	) Light Kit, Flashing	1
▲∇ 1	47535	(003370-	) Lamp Assembly, Flashing	1
▲▲	47535-2	(003370-	) Lamp, Flashing	1
▲▲	24576-1	(003370-	) Bracket, Flasher	1
▲▲	24576	(003370-	) Flasher	1
▲▲	47535-1	(003370-	) Lens, Lamp, Red	1
▲▲	22640	(003370-	) Bulb	1
▲ 2	16513	(003370-	) Support	1
▲ 3	42082	(003370-	) Rivnut	3
▲	78155	(003370-	) Wire Kit	1
▲	10701	(003370-	) Switch	1
∇	47536	(003370-	) Lamp Assembly, Flashing, Amber	1
▲	47536-1	(003370-	) Lens, Lamp, Amber	1
∇	47537	(003370-	) Lamp Assembly, Flashing, Blue	1
▲	47537-1	(003370-	) Lens, Lamp, Blue	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 6 - Revolving Light Group

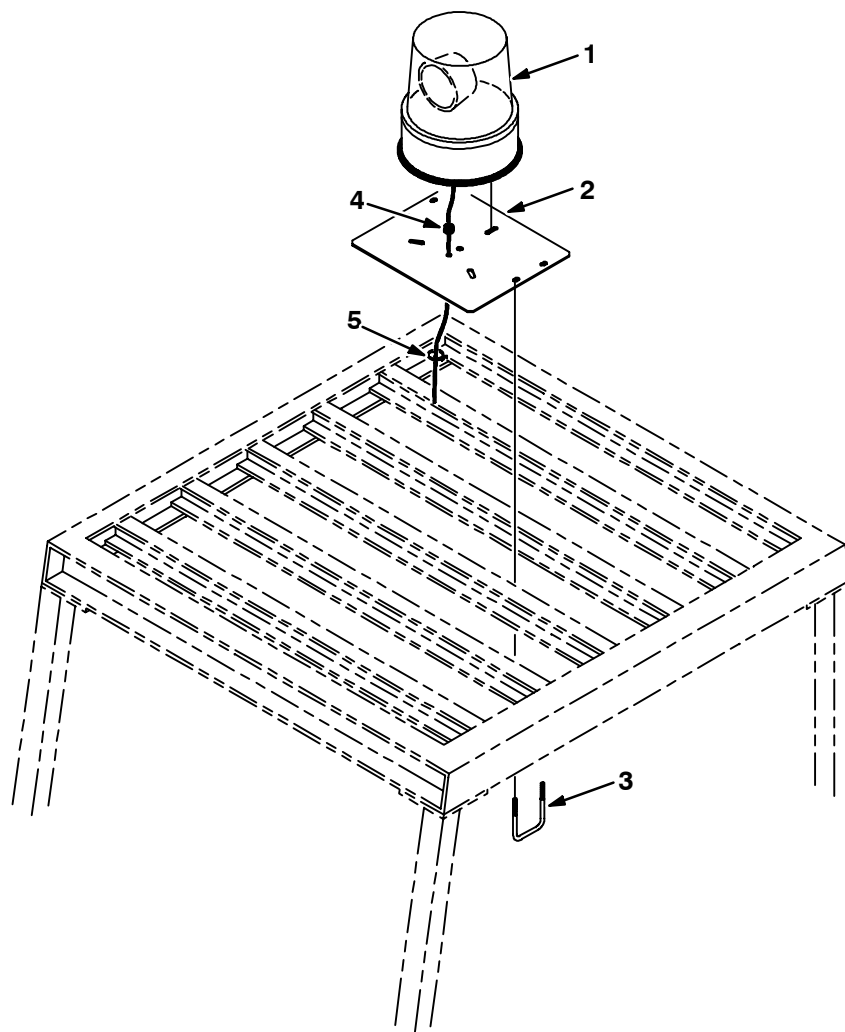


02386 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽ 1	16418	(003370-	) Light Assembly, Revolving Red	1
▲ 2	16421	(003370-	) Lens, Red	1
▲ 3	16511	(003370-	) Bulb	2
4	53174-1	(003370-	) Support	1
5	46314	(003370-	) Grommet	1
	49262	(003370-	) Clamp, Conduit	5
	10701	(003370-	) Switch, Toggle	1
▽	16419	(003370-	) Light Assembly, Revolving Blue	1
▲	16422	(003370-	) Lens, Blue	1
▲	16511	(003370-	) Bulb	2
▽	16420	(003370-	) Light Assembly, Revolving Amber	1
▲	16423	(003370-	) Lens, Amber	1
▲	16511	(003370-	) Bulb	2

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

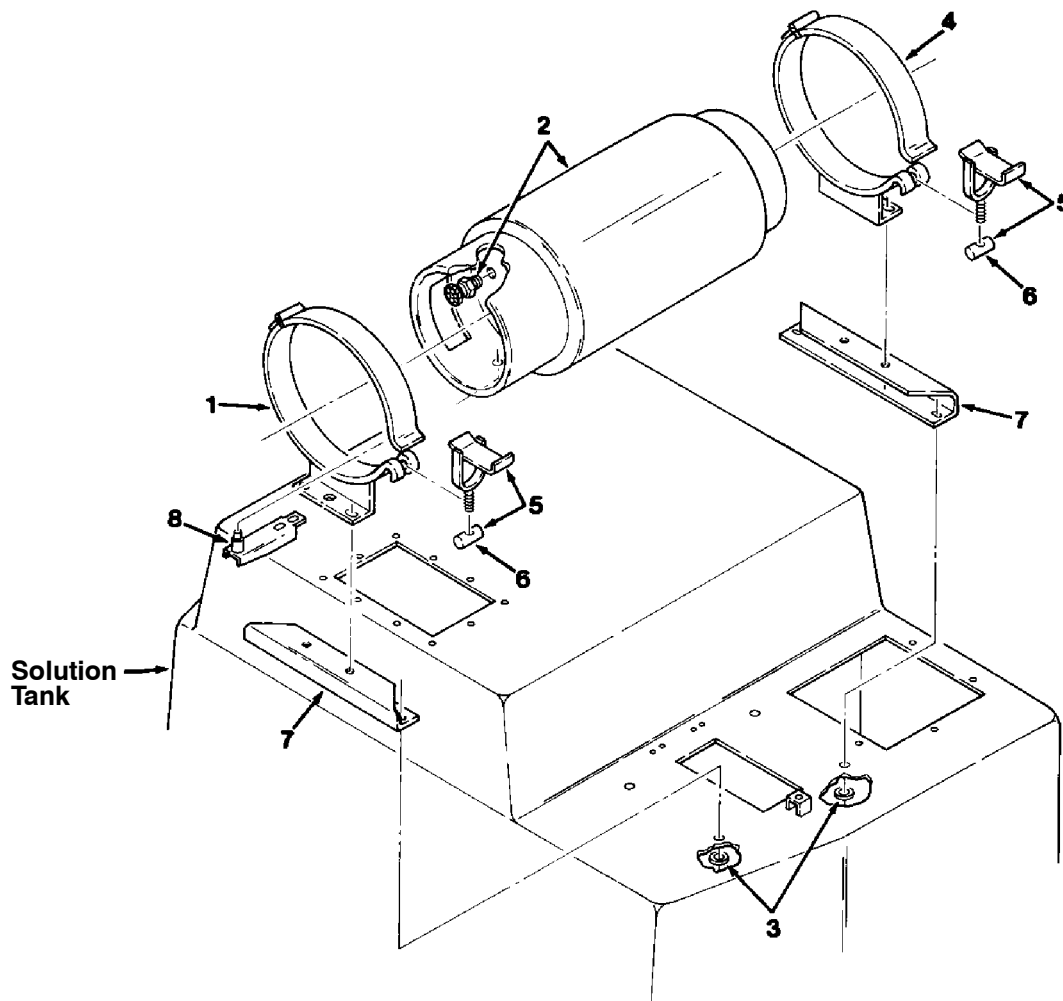
Fig. 7 - Revolving Light Kit



01108 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78161	(003370-	) Light Kit, Revolving	1
▲▽	1 16418	(003370-	) Lamp Assembly, Revolving	1
▲▲	46928-1	(003370-	) Lens, Lamp, Red	1
▲▲	45670	(003370-	) Bulb	1
▲	2 33782	(003370-	) Plate, Mounting	1
▲	3 33783	(003370-	) V-Bolts	2
▲▽	78154	(003370-	) Wire Kit	1
▲▲	4 51798	(003370-	) Grommet, Rubber	1
▲	10701	(003370-	) Switch, Toggle	1
▲	5 09384	(003370-	) Clamp, Cable	5
▽	16420	(003370-	) Lamp Assembly, Revolving, Amber	1
▲	16423	(003370-	) Lens, Lamp, Amber	1
▽	16419	(003370-	) Lamp Assembly, Revolving, Blue	1
▲	16422	(003370-	) Lens, Lamp, Blue	1

Fig. 8 - Reserve LPG Tank Group with Filler Valve, SRS®

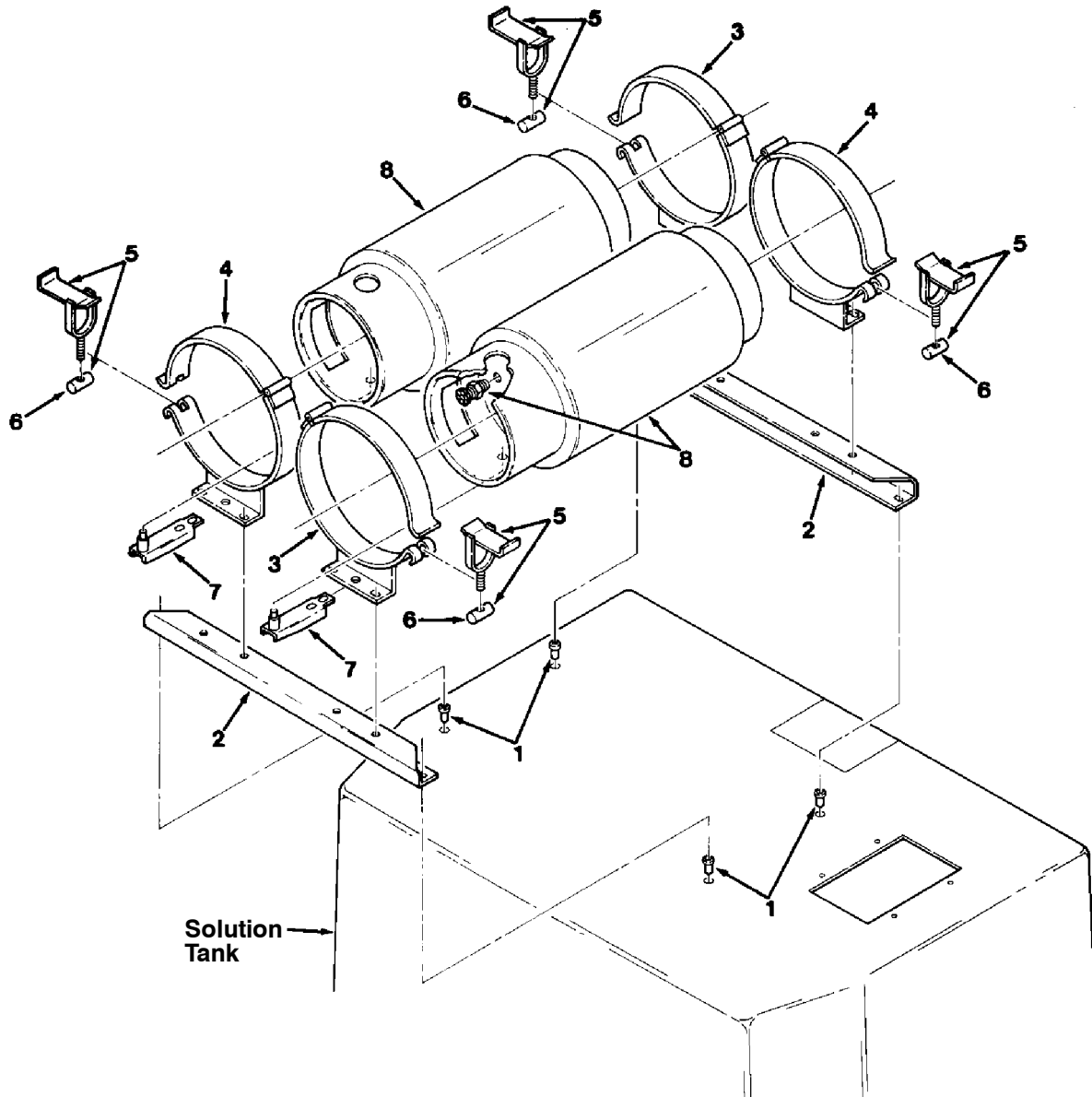


00795 - 550, 1550, LP

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	53400-3	(003370-	) Mount, LPG Tank	1
2	24928-1	(003370-	) Tank Assembly, LPG	1
3	76426	(003370-	) Washer, Rubber	4
4	53400-2	(003370-	) Mount, LPG Tank	1
∇	5	53400-1	(003370-) Latch	2
▲	6	53400-4	(003370-) Lug	1
	7	79368	(003370-) Bracket, LPG Tank Mounting, Replaced by none	2
	8	53400-5	(003370-) Locator	1

NOTE: To identify parts shown but not listed here, see Section 9, SRS® Parts.

Fig. 9 - Reserve LPG Tank Kit with Filler Valve

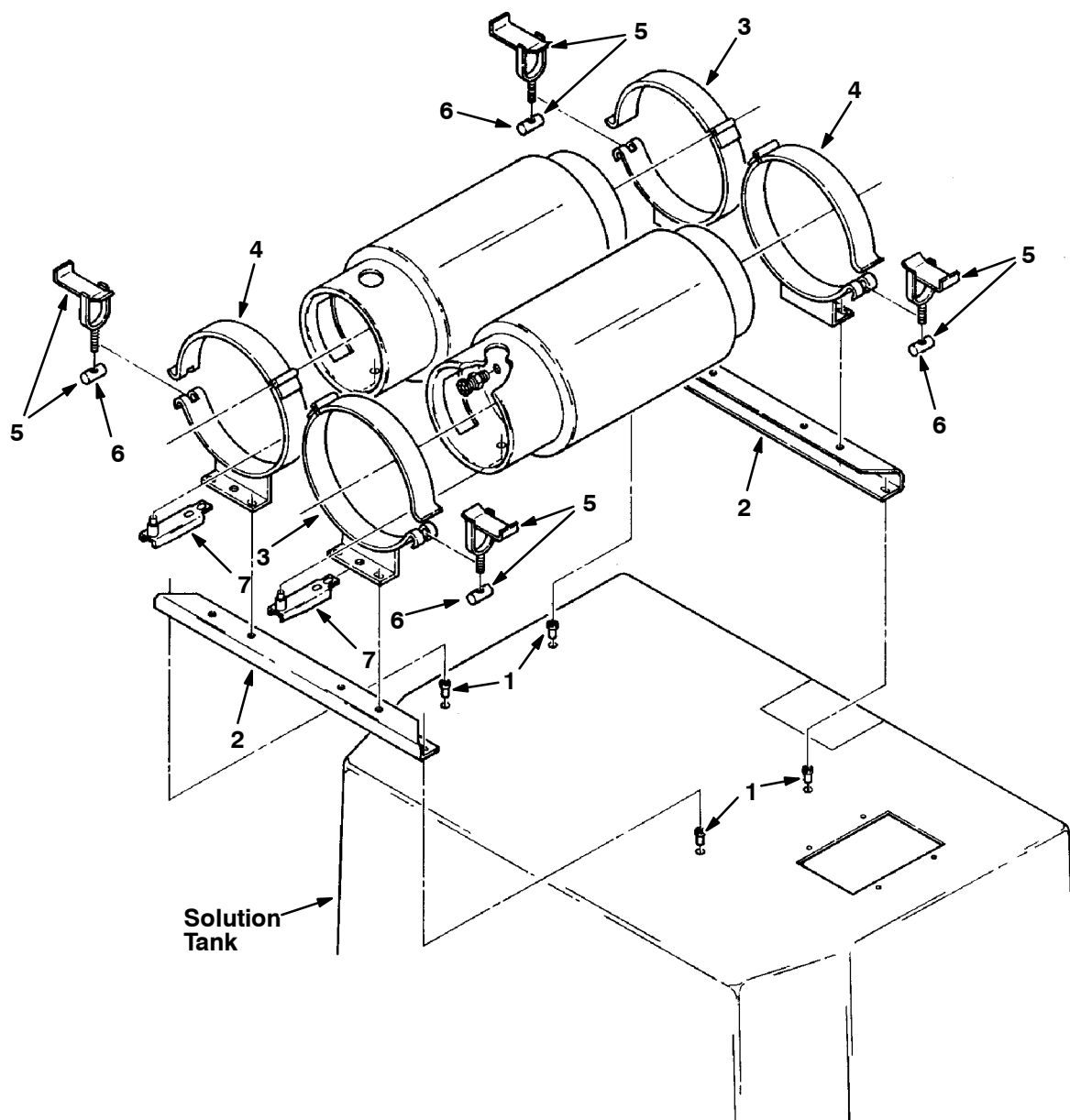


00437 - 550, LP

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78109	(003370-	) Tank Kit, Reserve LPG	1
▲	1 42082	(003370-	) Rivnut	4
▲	2 78120	(003370-	) Bracket, LPG Tank Mounting	2
▲	3 53400-3	(003370-	) Mount, LPG Tank	2
▲	4 53400-2	(003370-	) Mount, LPG Tank	2
▲▽	5 53400-1	(003370-	) Latch, Tank	4
▲▲	6 53400-4	(003370-	) Lug	1
▲	7 53400-5	(003370-	) Locator, Tank	2
▲	8 24928-1	(003370-	) Tank Assembly, LPG	2

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 10 - Reserve LPG Tank Mounting Kit

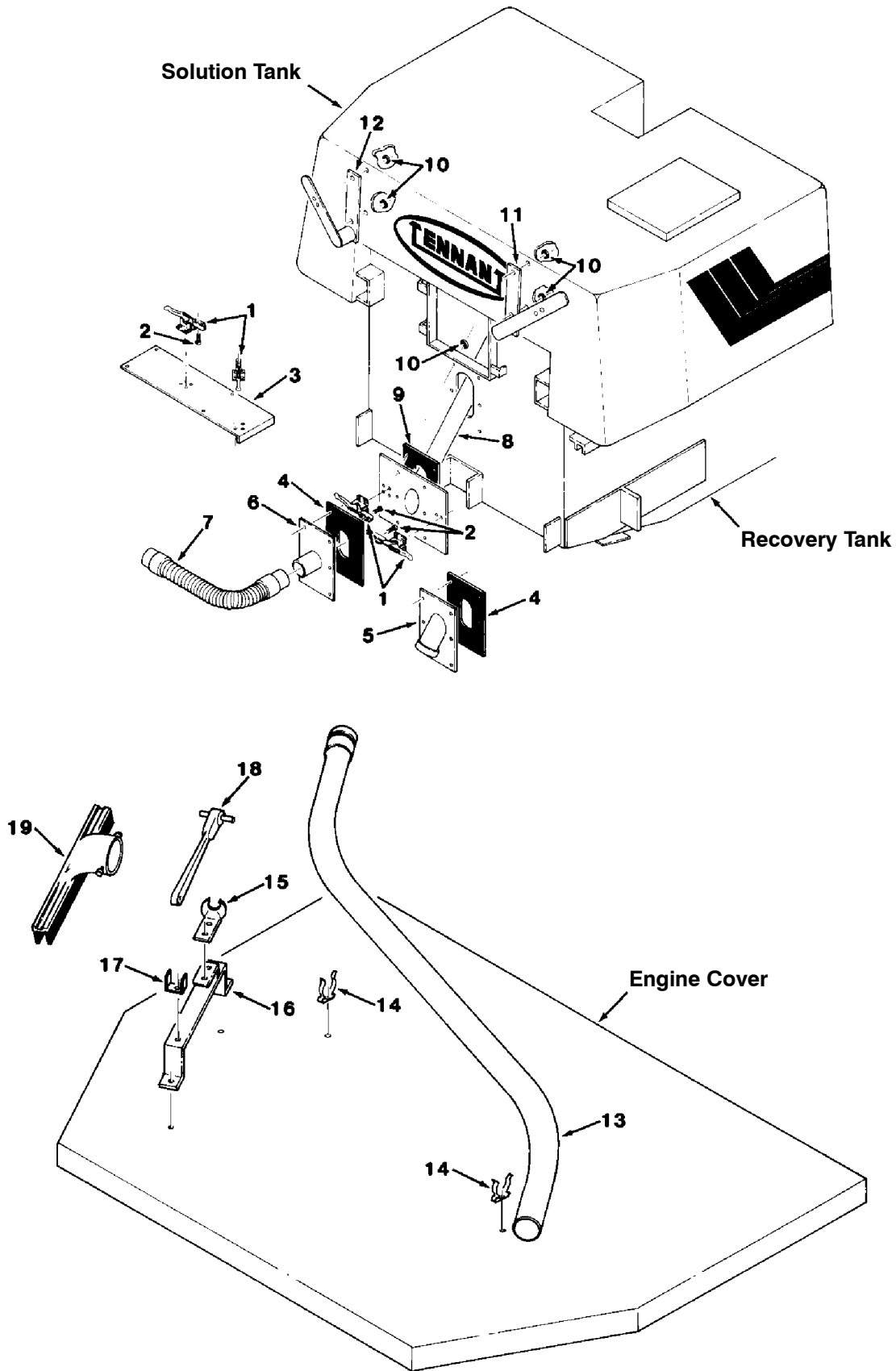


00437 - 550, LP

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78090	(003370-	) Tank Mounting Kit, Reserve LPG	1
▲	1 42082	(003370-	) Rivnut	4
▲	2 78120	(003370-	) Bracket, LPG Tank Mounting	2
▲	3 53400-3	(003370-	) Mount, LPG Tank	2
▲	4 53400-2	(003370-	) Mount, LPG Tank	2
▲▽	5 53400-1	(003370-	) Latch, Tank	4
▲▲	6 53400-4	(003370-	) Lug	1
▲	7 53400-5	(003370-	) Locator, Tank	2

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 11 - Squeegee Wand Kit

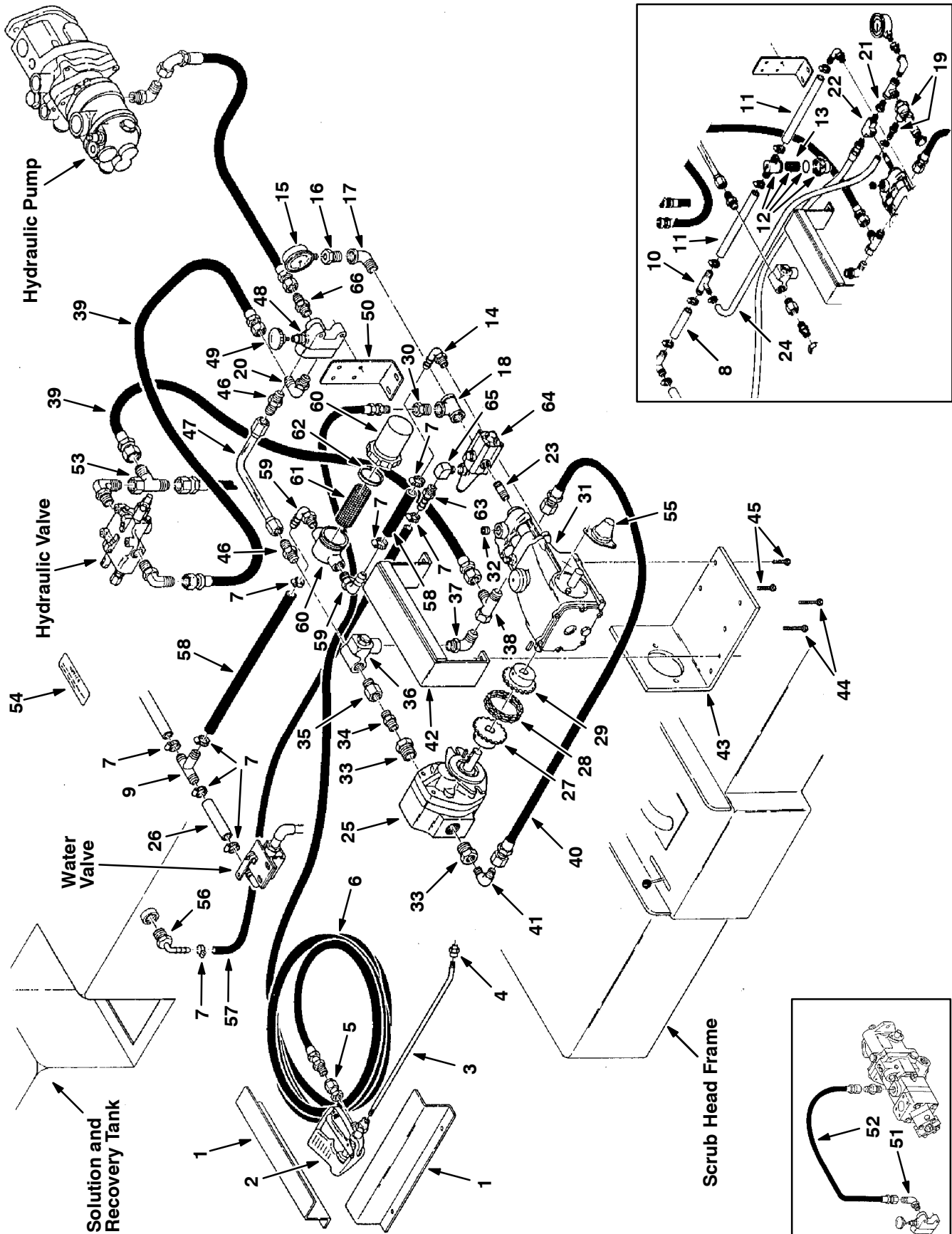


NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 11 - Squeegee Wand Kit

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽		78167	(003370-	) Squeegee Wand Kit	1
▲	1	03823	(003370-	) Clamp, Toggle	4
▲	2	75128	(003370-	) Spindle, Adjusting	4
▲	3	50790	(003370-	) Plate, Wand Hose Adaptor Storage	1
▲	4	75095	(003370-	) Seal, Adhesive Backed	2
▲	5	76152	(003370-	) Adaptor, Rear Squeegee	1
▲	6	76153	(003370-	) Adaptor, Squeegee Wand	1
▲	7	75127	(003370-	) Hose, Squeegee Wand	1
▲	8	76154A	(003370-	) Tube, Rear Suction	1
▲	9	75076	(003370-	) Seal, Rear Suction Tube	1
▲	10	76426	(003370-	) Washer, Rubber Backed	10
▲		42082	(003370-	) Rivnut	4
▲	11	50788	(003370-	) Bracket, Hose Mounting, R.H.	1
▲	12	50789	(003370-	) Bracket, Hose Mounting, L.H.	1
▲	13	40171	(003370-	) Handle, Squeegee Wand	1
▲	14	22473	(003370-	) Clip, Handle, Retaining	2
▲	15	40670	(003370-	) Catch	1
▲	16	75054	(003370-	) Mount, Squeegee Nozzle	1
▲	17	40671	(003370-	) Bracket, U	1
▲	18	75118	(003370-	) Hook, Rubber	1
▲▽	19	40173	(003370-	) Nozzle Assembly, Squeegee	1
▲▲		40173-1	(003370-	) Blade Set, Replacement	1

Fig. 12 - High Pressure Sprayer Kit



NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

Fig. 12 - High Pressure Sprayer Kit

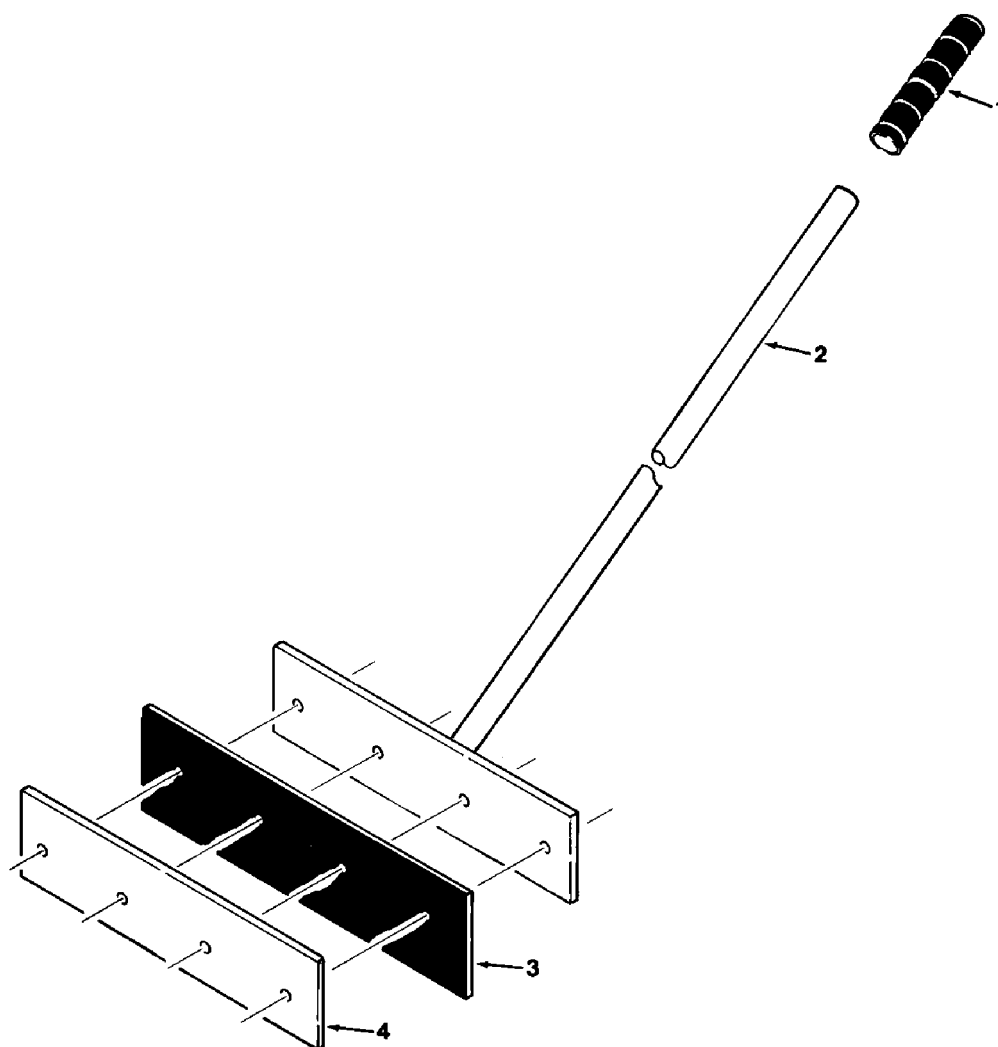
Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78171	(003370-	) Sprayer Kit, High Pressure	1
▲ 1	75180	(003370-	) Retainer, Hose, Water	2
▲ 2	40151	(003370-	) Handle, Spray	1
▲ 3	40152	(003370-	) Wand, Spray	1
▲ 4	75186	(003370-	) Nozzle, Spray	1
▲ 5	40155	(003370-	) Connector, Handle, Spray	1
▲ 6	40154	(003370-	) Hose, Water, High Pressure	1
▲ 7	11399	(003370-	) Clamp, Worm Drive	10
▲ 8	75197	(003370-003483	) Hose, Rubber	1
▲ 9	75119	(003370-	) Tee, Barbed	1
▲ 10	40175	(003370-003483	) Tee, Barbed	1
▲ 11	75198	(003370-003483	) Hose, Rubber	1
▲▽	08877	(003370-003483	) Filter	1
▲▲	08877	(003370-003483	) Element, Filter Screen	1
▲ 14	40145	(003370-	) Fitting, Barbed Elbow	1
▲ 15	40144-5	(003370-	) Gauge, Pressure	1
▲ 16	47721	(003370-	) Fitting, Straight	1
▲ 17	11869	(003370-	) Fitting, Elbow	1
▲ 18	11442-10	(003370-	) Fitting, Tee	1
▲ 19	02453	(003370-003483	) Replacement Kit, Water Valve	1
▲ 20	51782	(003370-	) Fitting, Elbow	1
▲ 21	42214	(003370-003483	) Fitting, Straight	1
▲ 22	52448	(003370-003483	) Fitting, Tee	1
▲ 23	02281	(003370-	) Fitting, Nipple	1
▲ 24	75196	(003370-003483	) Hose, Rubber	1
▲ 25	75185	(003370-	) Motor, Hydraulic	1
▲ 26	75197	(003370-	) Hose, Rubber	1
▲ 27	75187	(003370-	) Coupling, Keyed, R.H.	1
▲	39322	(003370-	) Screw, Set	4
▲▽	33778	(003370-	) Chain Assembly	1
▲▲	33692	(003370-	) Link, Chain	1
▲ 29	40143	(003370-	) Coupling, Keyed, L.H.	1
▲ 30	42214	(003484-	) Fitting, Straight	1
▲ 31	40144-1	(003370-	) Pump, Water (See Braekdowns)	1
▲	40144-4	(003370-	) Oil, Cat Water Pump	1
▲ 32	05178	(003370-	) Plug, Pipe	1
▲ 33	05492	(003370-	) Fitting, Straight	2
▲ 34	40573	(003370-	) Fitting, Straight	1
▲ 35	47636	(003370-	) Fitting, Straight	1
▲ 36	67515	(003370-	) Valve, Relief, Hydraulic	1
▲ 37	51782	(003370-	) Fitting, Elbow	1
▲ 38	51779	(003370-	) Fitting, Tee	1
▲ 39	47662	(003370-	) Hose, Hydraulic	2
▲ 40	53083-14	(003370-	) Hose, Hydraulic	1
▲ 41	46611	(003370-	) Fitting, Elbow	1
▲ 42	75179	(003370-	) Guard, Coupling	1
▲ 43	75181	(003370-	) Mount, Pump, Water	1
▲ 44	39278	(003370-	) Screw, Hex, (50 mm)	2
▲ 45	76570	(003370-	) Screw, Hex, (30 mm)	2
▲ 46	46480	(003370-	) Fitting, Straight	2

OPTIONS

Fig. 12 - High Pressure Sprayer Kit

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▲	47 75199	(003370-	) Tube, Hydraulic	1
▲	48 48108A	(003370-	) Valve, Shut-off	1
▲	49 48108A-1	(003370-	) Knob, Valve	1
▲	50 75184	(003370-	) Mount, Valve, Hydraulic	1
▲	51 47498	(003370-004437	) Fitting, Elbow	1
▲	52 51809	(003370-004437	) Hose, Hydraulic	1
▲	53 40514	(003370-	) Fitting, Tee	1
▲	54 75194	(003370-	) Decal, Throttle High Pressure Spray	1
▲	55 38321	(003370-	) Cover	1
▲	56 63244-3	(003484-	) Fitting, Elbow	1
▲	57 02452	(003484-	) Hose, Rubber	1
▲	58 47848	(003484-	) Hose, Rubber (Cut in 2)	1
▲	59 40145	(003484-	) Fitting, Elbow	2
▲▽	60 02450	(003484-	) Strainer, Water	1
▲▲	61 02534	(003484-	) Screen	1
▲▲	62 02535	(003484-	) Gasket	1
▲	63 43246	(003484-	) Fitting, Straight	1
▲	64 02449	(003484-	) Valve, Water Pressure	1
	65 24584	(003370-	) Fitting, Elbow	1
	66 06750	(004438-	) Fitting, Straight	1

Fig. 13 - Sludge Removal Tool Assembly, SRS®



00338 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	79518	(003370-	) Tool Assembly, Sludge Removal	1
▲ 1	03292B	(003370-	) Grip, Handle	1
▲ 2	79517	(003370-	) Handle, Sludge Removal	1
▲ 3	79515	(003370-	) Squeegee	1
▲ 4	79508-1	(003370-	) Retainer, Squeegee	1

Fig. 14 - Heavy Duty Bumper Kit, SRS®

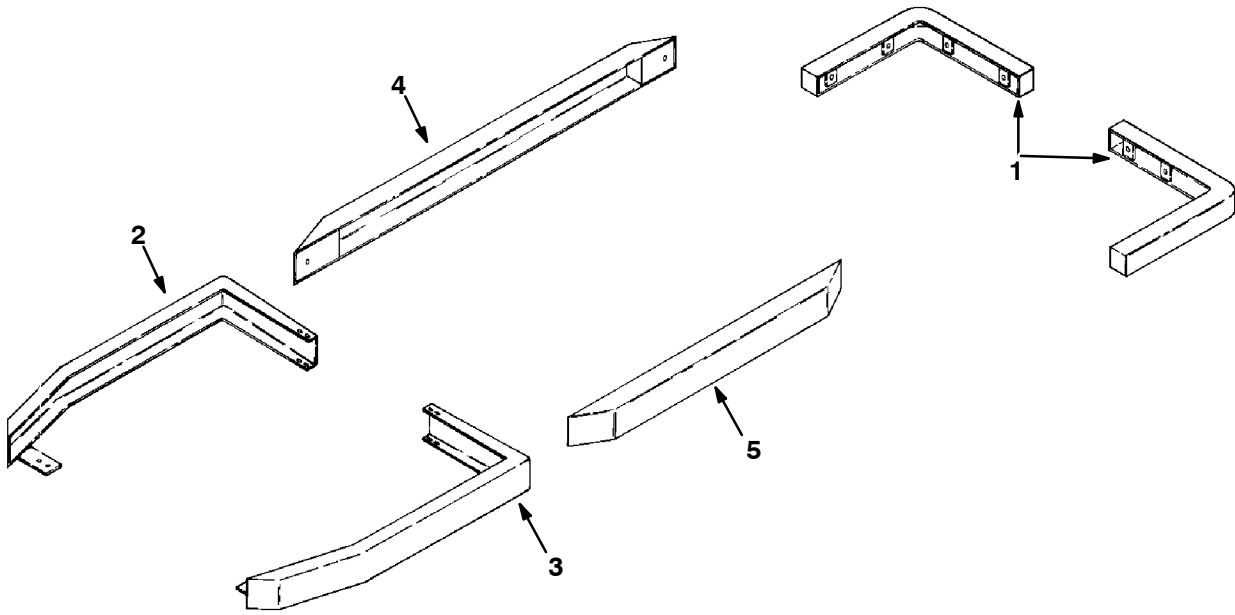
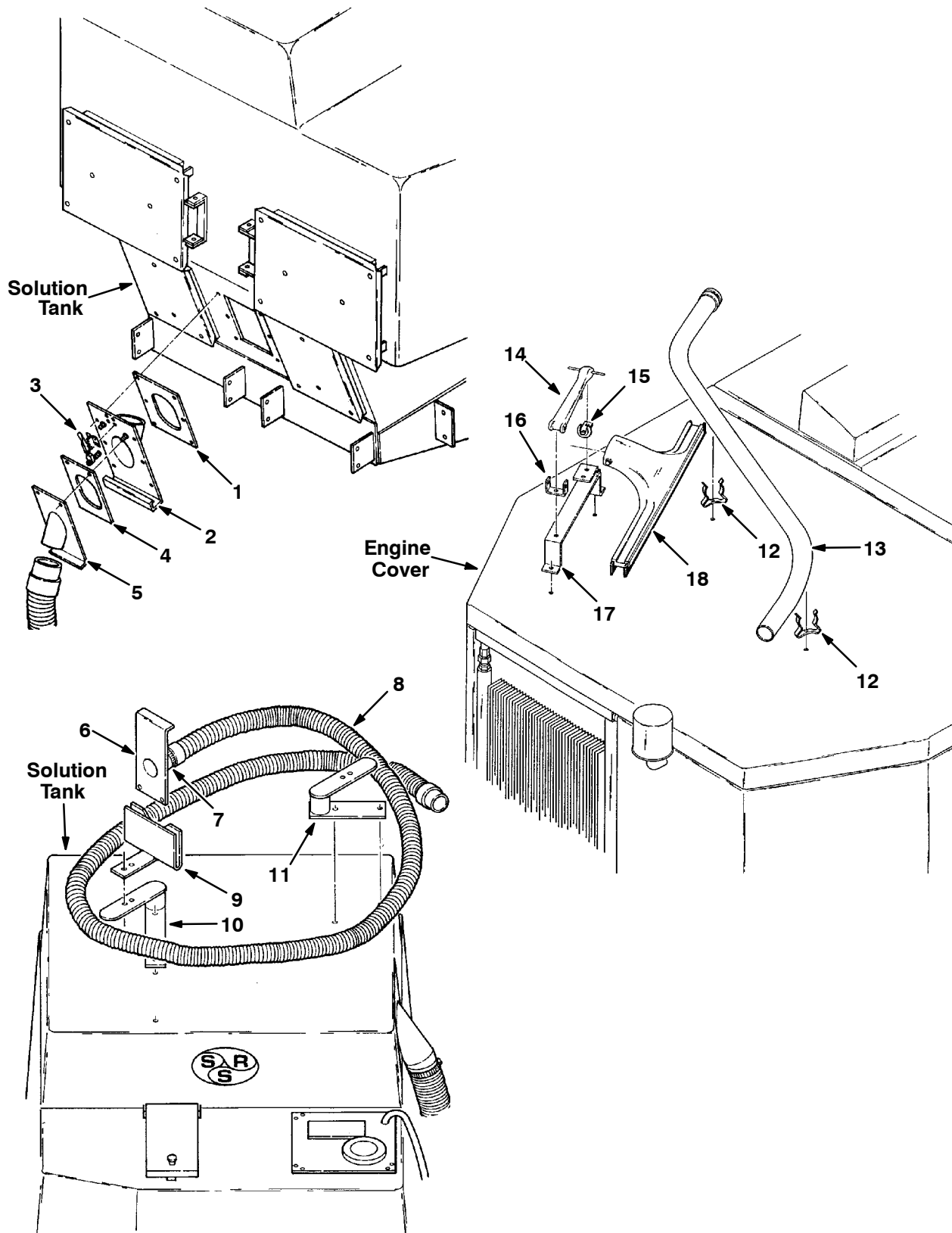


Fig. 14 - Heavy Duty Bumper Kit, SRS®

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
∇		79426	(003370-	) Bumper Kit, Heavy Duty	1
▲	1	75673	(003370-	) Bumper, Scrubber Head	2
▲	2	76880	(003370-	) Bumper, Recovery and Solution Tank, L.H.	1
▲	3	76881	(003370-	) Bumper, Recovery and Solution Tank, R.H.	1
▲	4	78101	(003370-	) Bumper, Tractor, Left Side	1
▲	5	78099	(003370-	) Bumper, Tractor, Right Side	1

Fig. 15 - Squeegee Wand Kit, SRS®



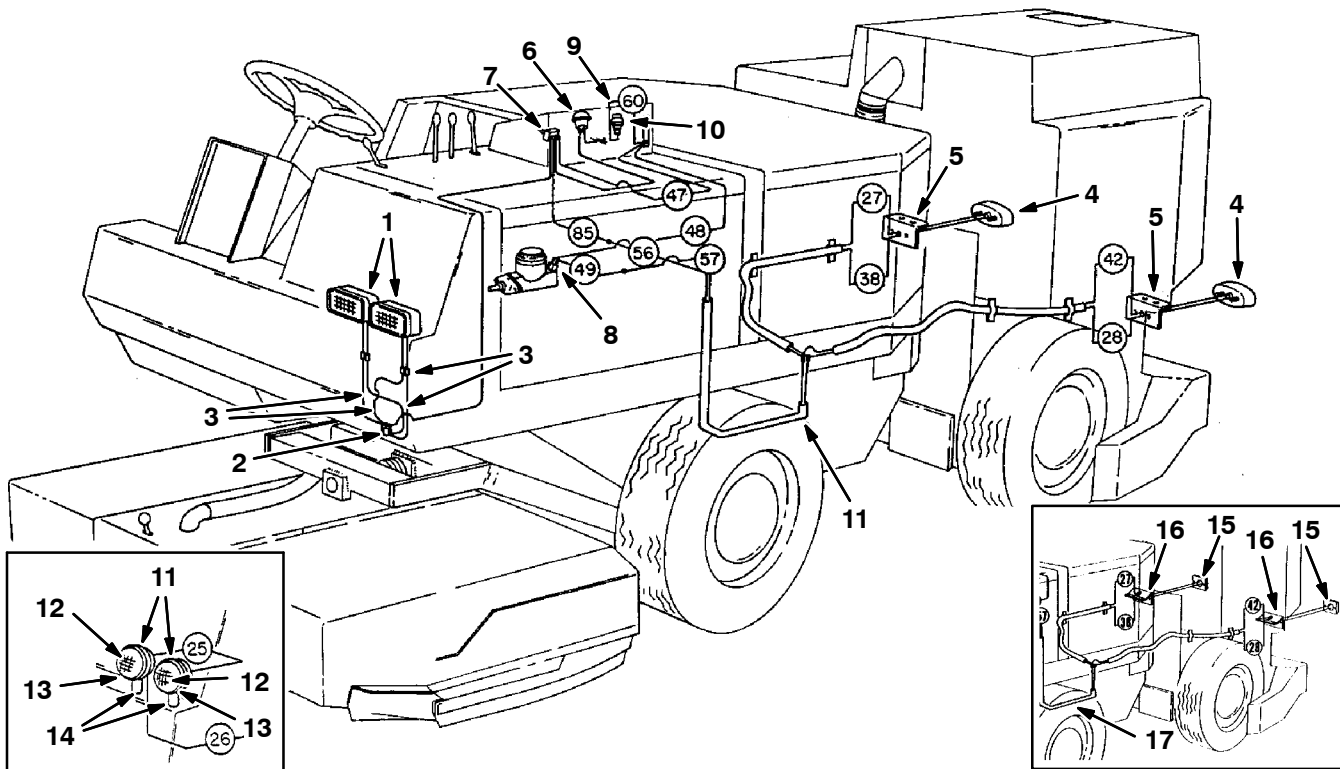
NOTE: To identify parts shown but not listed here, see Section 9, SRS® Parts, or Section 6, Standard Parts.

Fig. 15 - Squeegee Wand Kit, SRS®

	Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
▽		79429	(003370-	) Wand Kit, Squeegee	1
▲	1	79545	(003370-	) Gasket, Tank Adaptor	1
▲	2	79538	(003370-	) Adaptor, Tank	1
▲	3	03823	(003370-	) Clamp, Toggle	1
▲		75128	(003370-	) Spindle, Adjusting	1
▲	4	79546	(003370-	) Gasket, Wand Adaptor	1
▲	5	79532	(003370-	) Adaptor, Squeegee Wand	1
▲	6	79535	(003370-	) Adaptor, Vacuum Wand	1
▲	7	14432	(003370-	) Clamp, Worm Drive	1
▲	8	75127	(003370-	) Hose	1
▲	9	79547	(003370-	) Bracket, Adaptor, Storage	1
▲	10	50788	(003370-	) Mount, Wand Hose, R.H.	1
▲	12	22473	(003370-	) Clip, Finger Grip	2
▲	11	50789	(003370-	) Mount, Wand Hose, L.H.	1
▲	13	40171	(003370-	) Handle, Nozzle	1
▲	14	75118	(003370-	) Hook, Rubber	1
▲	15	40670	(003370-	) Catch, Rubber Hook	1
▲	16	40671	(003370-	) Bracket, U	1
▲	17	75054	(003370-	) Mount, Squeegee	1
▲	18	40173	(003370-	) Nozzle	1

OPTIONS

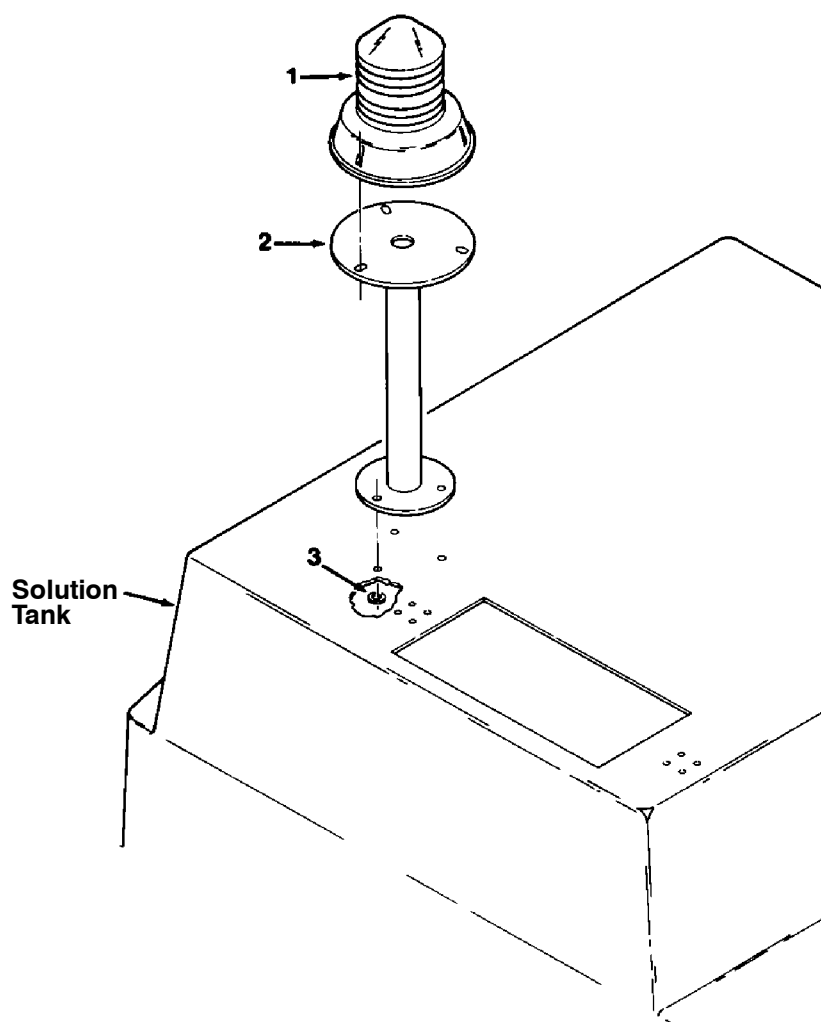
Fig. 16 - Light Kit, SRS®



00828 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	79427	(003370-	) Light Kit, SRS®	1
▲	1 24298	(005290-	) Headlight Assembly	2
▲	2 76062	(005290-	) Insulator	1
▲	3 79102	(005290-	) Wire Assembly, Headlight	2
▲▽	4 51572	(004934-	) Taillight	2
▲▲	45780	(004934-	) Bulb	1
▲	5 49022	(004934-	) Bracket, Taillight	2
▲▽	6 47768	(003370-	) Light, Panel	1
▲▲	24427	(003370-	) Bulb	1
▲	7 10701	(003370-	) Switch, Toggle	1
▲	8 13959	(003370-	) Switch, Brake Light Sending	1
▲	9 07422	(003370-	) Holder, Fuse	1
▲	10 14215	(003370-	) Fuse, 20 A	1
▲	78153	(003370-	) Wire Kit, Operating Lights	1
▲	49266	(003370-	) Tie, Cable	6
▲	11 25183	(004255-	) Wire Harness	1
▲	45339	(003370-	) Terminal, Ring	2
▲	10632-19	(003370-	) Grommet, Rubber	1
	21639	(003370-005289)	Light Kit, Hd-TI/550	1
	12 51570	(003370-005289)	Bulb	1
	13 24227	(003370-005289)	Washer, Dished	2
	14 24142	(003370-005289)	Washer, Spherical	4
▽	15 79439	(003370-004933)	Taillight	2
▲	48211	(003370-004933)	Bulb	1
	61705	(003370-004933)	Gasket, Taillight	2
	16 76877	(003370-004933)	Bracket, Taillight	2
	17 76220	(003370-004254)	Wire Harness	1

Fig. 17 - Flashing Light Kit, SRS®

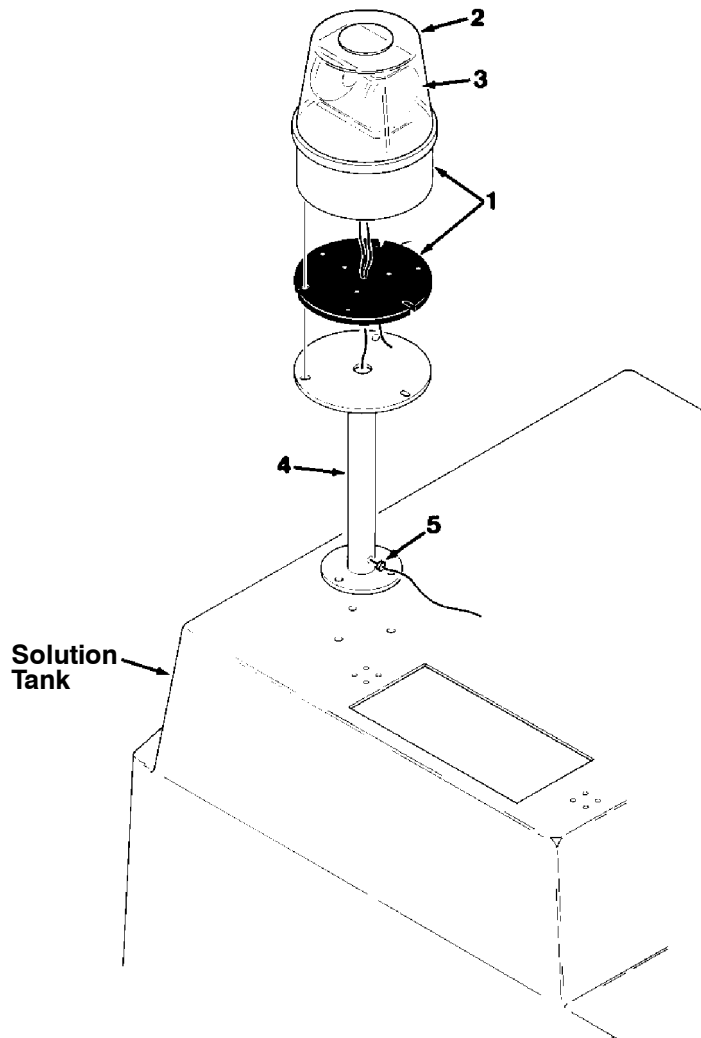


00347 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	79428	(003370-	) Light Kit, Flashing	1
▲▽	1 47535	(003370-	) Lamp Assembly, Flashing	1
▲▲	47535-2	(003370-	) Lamp, Flashing	1
▲▲	47535-1	(003370-	) Lens, Lamp, Red	1
▲▲	22640	(003370-	) Bulb	1
▲▲	24576-1	(003370-	) Bracket, Flasher	1
▲▲	24576	(003370-	) Flasher	1
▲	2 16513	(003370-	) Support, Light	1
▲	79436	(003370-	) Wire Kit	1
▲	10701	(003370-	) Switch	1
▲	3 76426	(003370-	) Washer, Sealing	3
▽▲	47536	(003370-	) Lamp Assembly, Flashing, Amber	1
▲▲	47536-1	(003370-	) Lens, Lamp, Amber	1
▽▲	47537	(003370-	) Lamp Assembly, Flashing, Blue	1
▲▲	47537-1	(003370-	) Lens, Lamp, Blue	1

NOTE: To identify parts shown but not listed here, see Section 9, SRS® Parts.

Fig. 18 - Revolving Light Group, SRS®

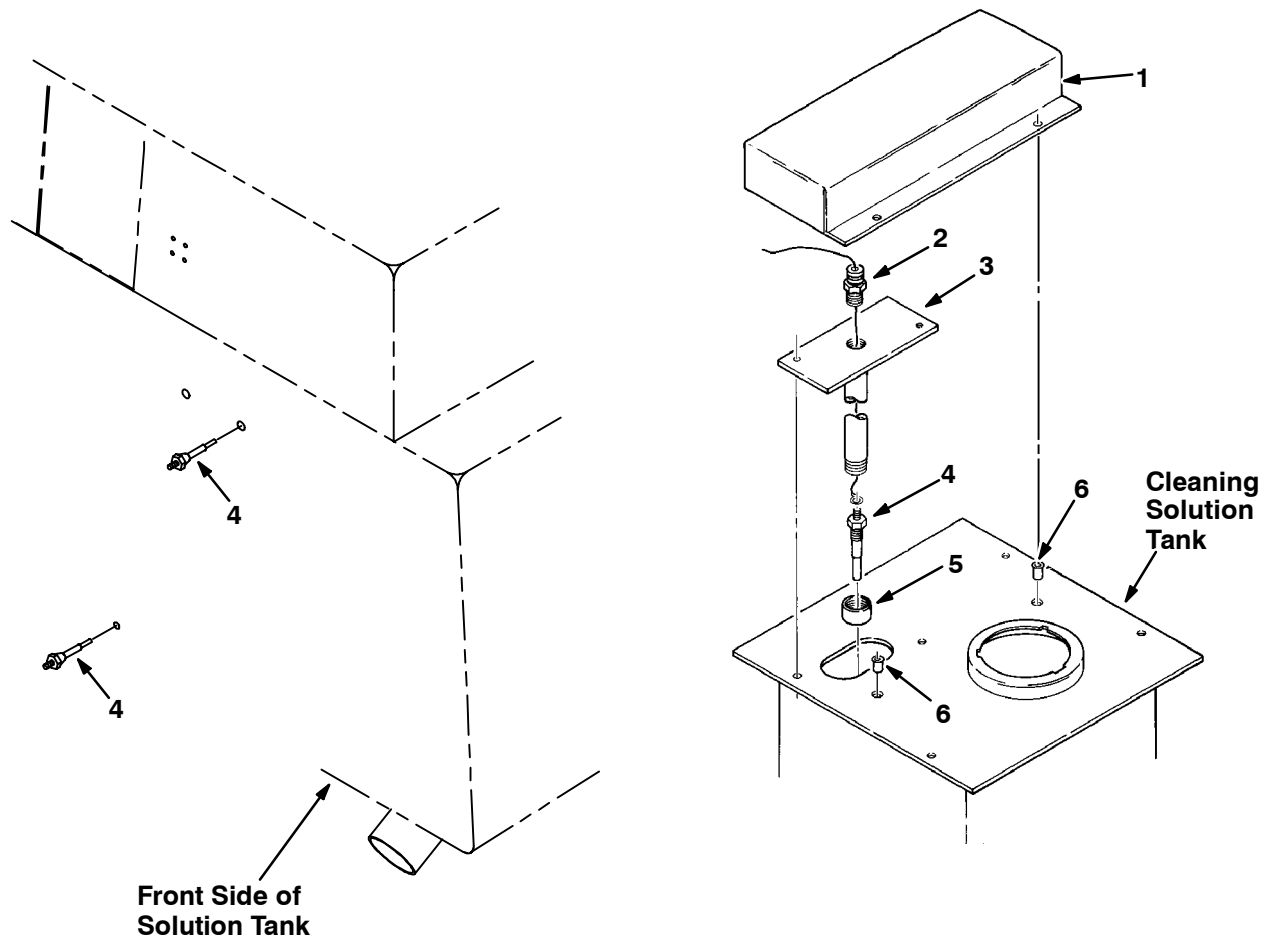


02387 - 550, 1550

	Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	1	16418	(003370-	) Light Assembly, Revolving Red	1
▲	2	16421	(003370-	) Lens, Red	1
▲	3	16511	(003370-	) Bulb	2
	4	31960	(003370-	) Support, 13 in (330mm)	1
	4	60969	(003370-	) Support, 10 in (254mm)	1
	5	46314	(003370-	) Grommet	1
		49262	(003370-	) Clamp, Conduit	5
		10701	(003370-	) Switch, Toggle	1
▽		16419	(003370-	) Light Assembly, Revolving Blue	1
▲		16422	(003370-	) Lens, Blue	1
▲		16511	(003370-	) Bulb	2
▽		16420	(003370-	) Light Assembly, Revolving Amber	1
▲		16423	(003370-	) Lens, Amber	1
▲		16511	(003370-	) Bulb	2

NOTE: To identify parts shown but not listed here, see Section 9, SRS® Parts.

Fig. 19 - Level Warning Light Kit, SRS®

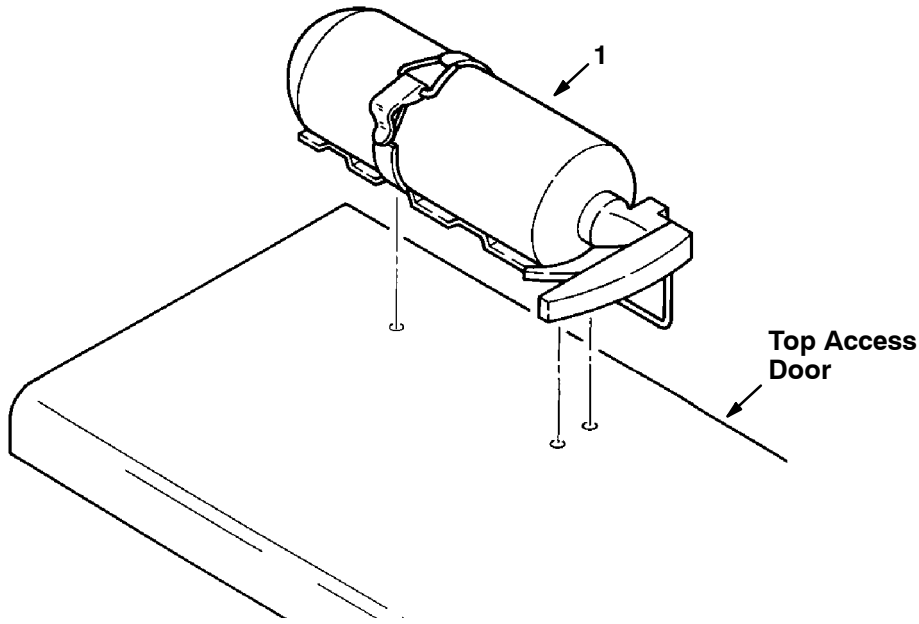


06185-06186 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	79434	(003370-	) Light Kit, Level Warning	1
▲	1 03393	(003370-	) Cover, Liquid Level Probe	1
▲	2 79553	(003370-	) Connector	1
▲	3 79452	(003370-	) Housing, Probe	1
▲	4 76089-2	(003370-	) Probe, Liquid Level	3
▲	5 79451	(003370-	) Fitting, Cap	1
▲	6 42082	(003370-	) Rivnut	2
▲	64795C-1	(003370-	) Board, P.C.	1
▲	64921	(003370-	) Spacer	4
▲	24592	(003370-	) Screw, Hex, 10 - 24 x 0.75"	4
▲▽	79542	(003370-	) Wire Kit	1
▲▲	79530	(003370-	) Wire Harness	1
▲▲	68222	(003370-	) Pilot Light	3
▲	59984	(003370-	) Fuse, 1 A	1
▲	07422	(003370-	) Holder, Fuse	1
▲	62595-6	(003370-	) Molding, Trim, 7.5" (190 mm)	1
▲	62595-18	(003370-	) Molding, Trim, 3" (75 mm)	1

NOTE: To identify parts shown but not listed here, see Section 9, SRS® Parts.

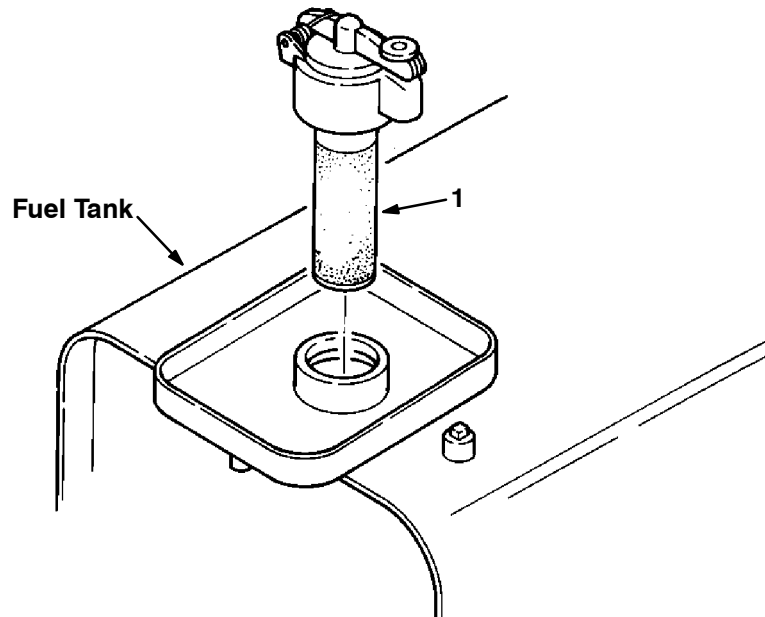
Fig. 20 - Fire Extinguisher Kit



00830 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78127	(003370-	) Extinguisher Kit, Fire	1
▲ 1	25312	(003370-	) Extinguisher, Fire	1

Fig. 21 - Protectoseal Gasoline Cap

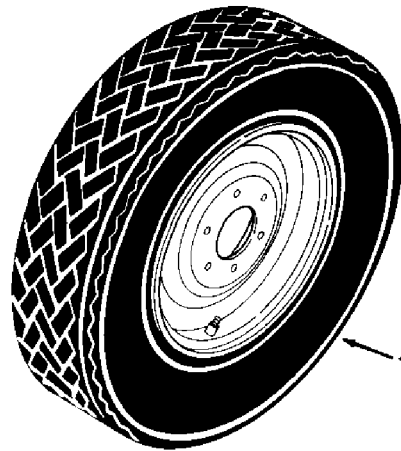


00829 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	02506-6	(003370-	) Cap, Gasoline, Protectoseal	1

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

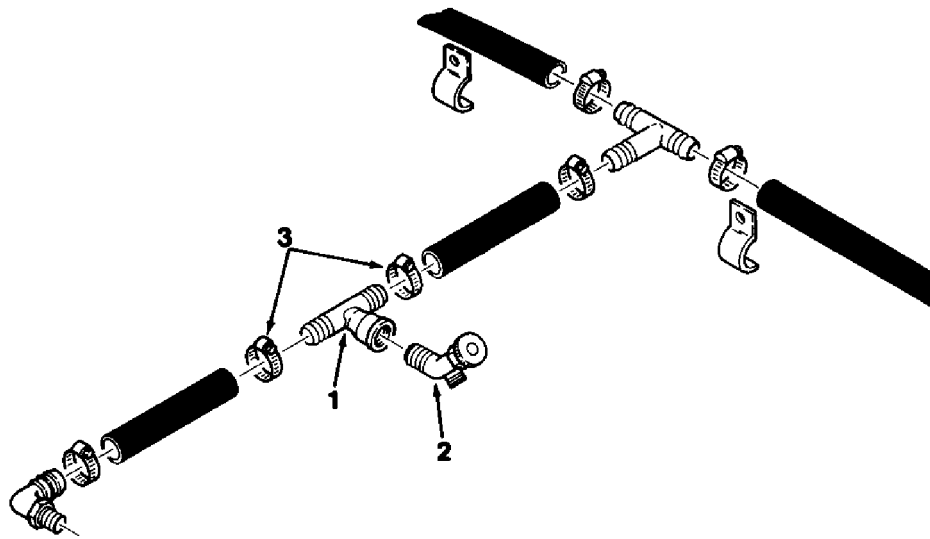
Fig. 22 - Wheel Assembly, Foam Filled



00839 - 550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	48912	(003370-	) Wheel Assembly, Foam Filled	4

Fig. 23 - Solution Tank Drain Kit

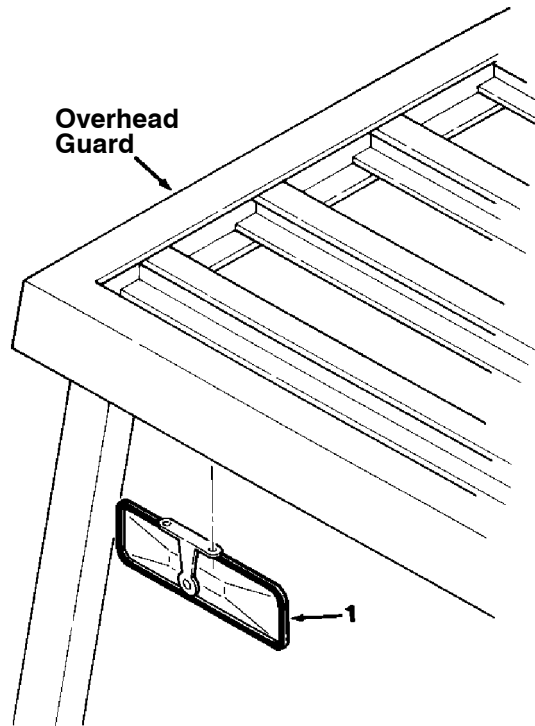


00837 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	75923	(003370-	) Drain Kit, Solution Tank	1
▲ 1	76075	(003370-	) Tee	1
▲ 2	76076	(003370-	) Valve, Water, Drain	1
▲ 3	11399	(003370-	) Clamp, Worm Drive	2

NOTE: To identify parts shown but not listed here, see Section 6, Standard Parts.

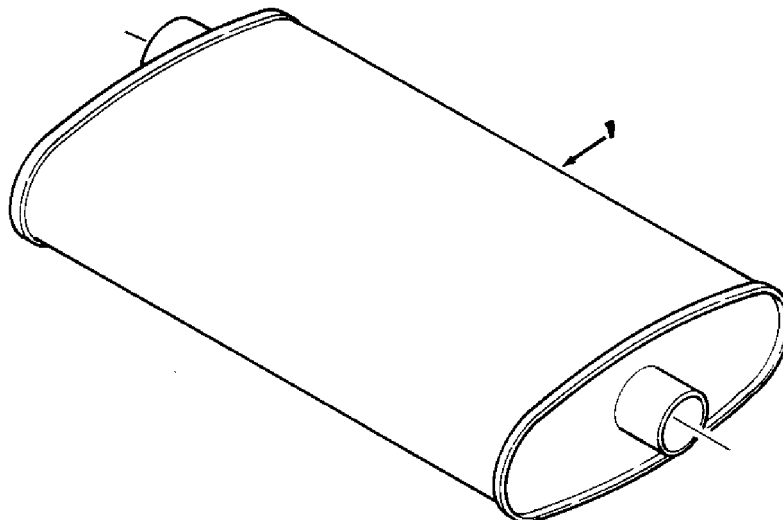
Fig. 24 - Rear View Mirror Kit



00836 - ALL

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78156	(003370-	) Mirror Kit, Rear View	1
▲ 1	76863	(003370-	) Mirror, Rear View	1

Fig. 25 - Spark Arresting Muffler Kit



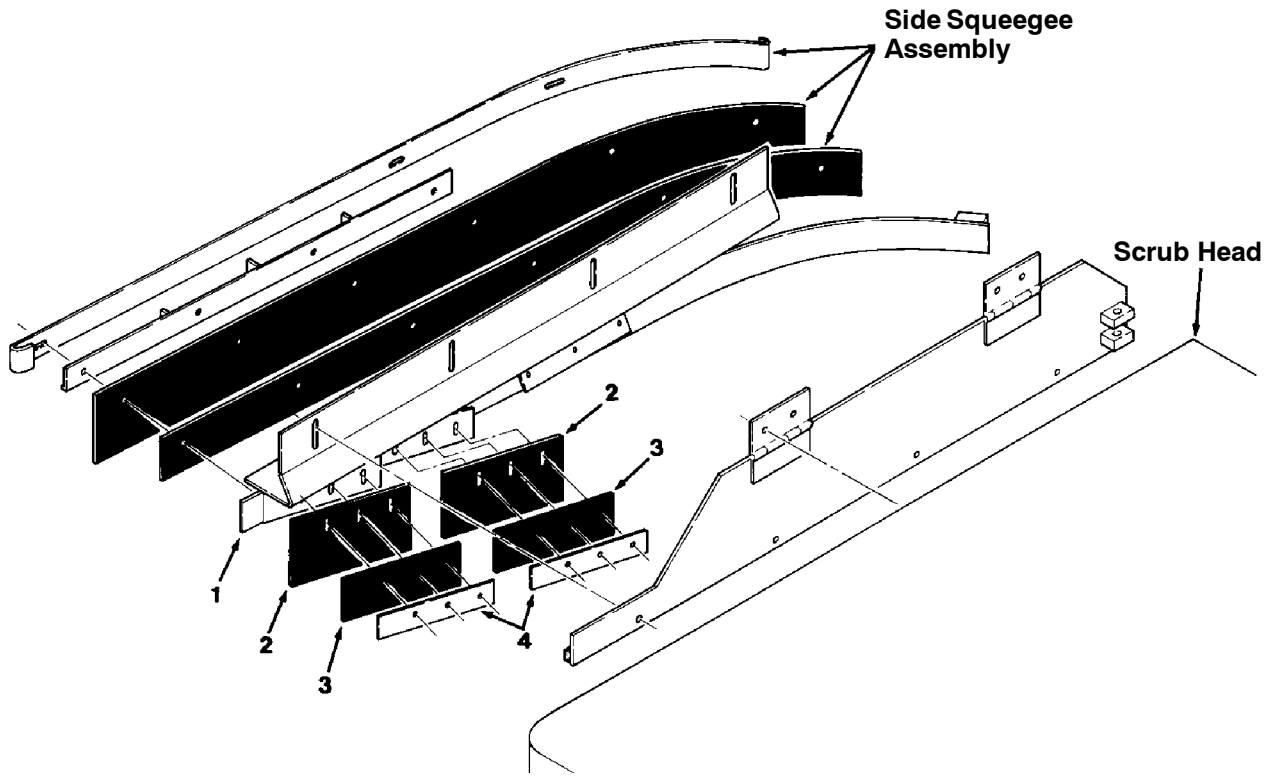
00303 - 550, 1550

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	78116	(003370-	) Muffler, Spark Arresting	1

Fig. 26 - Recovery Level Warning Light Kit

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
▽	78159	(003370-	) Light Kit, Recovery Level Warning	1
▲	64795A	(003370-	) P.C. Board, Level Sensing	1
▲	64921	(003370-	) Spacer, P.C. Board	4
▲	24592	(003370-	) Screw, Hex	4
▲	68222	(003370-	) Light, Pilot	1
▲▽	76090	(003370-	) Wire Kit	1
▲▲	76155	(003370-	) Wire Harness	1
▲	76089-2	(003370-	) Probe, Liquid Level	1
▲	59984	(003370-	) Fuse, 1 A	1
▲	07422	(003370-	) Holder, Fuse, (Panel Mount)	1

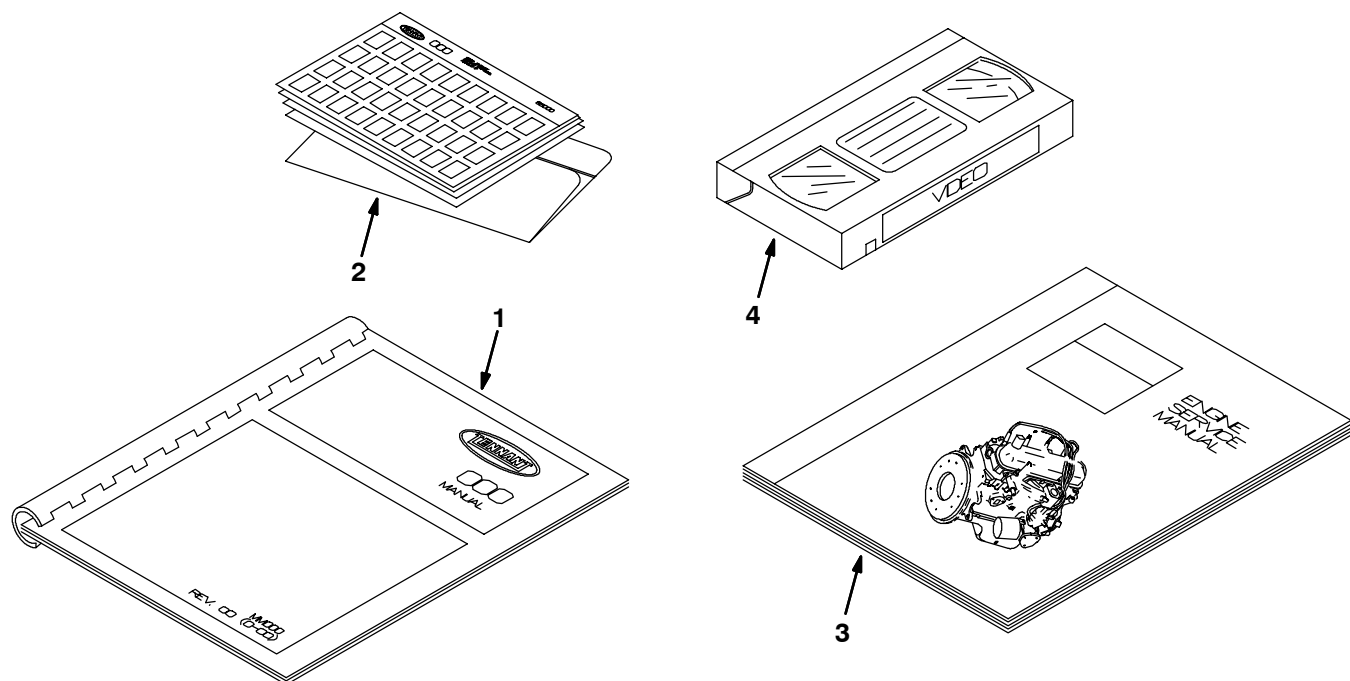
Fig. 27 - Side Squeegees Extension Kit



03874 - ALL

Ref.	Tenant Part No.	Machine Serial Number	Description	Qty.
▽	04595	(000000-)	Extension Kit, Side Squeegees	1
▲ 1	04598	(000000-)	Frame, Side Squeegee, R.H.	1
▲ 2	03395	(000000-)	Blade, Squeegee	4
▲ 3	03409	(000000-)	Strip, Backup	4
▲ 4	03408	(000000-)	Retainer, Blade	4
▲	04597	(000000-)	Frame, Side Squeegee, L.H.	1

Fig. 28 - Documentation Group



07501 - 550, NA

Ref.	Tennant Part No.	Machine Serial Number	Description	Qty.
1	MM148	(000000-)	Manual Pkg, 550	1
2	85148	(000000-)	Manual Fiche, 550	1
3	34792	(000000-)	Manual, Engine, Continental, TM27-D	1
4	10397	(000000-)	Video, Operator, 550	1

SECTION 11

CONTENTS	PAGE
Fig. 1 - High Pressure Spray Pump Breakdown	11-2
Fig. 2 - Solution Pump Breakdown, 79614	11-4
Fig. 3 - Solution Pump Breakdown, 03838	11-5
Fig. 4 - Solution Pump Breakdown, 33327	11-6
Fig. 5 - Metering Solution Pump Breakdown, 16485	11-7
Fig. 6 - Hydraulic Pump Breakdown, 47915	11-8
Fig. 7 - Hydraulic Pump Breakdown, 34310	11-9
Fig. 8 - Hydraulic Piston Pump Breakdown, 74163	11-10
Fig. 9 - Hydraulic Piston Pump Breakdown, 74163	11-12
Fig. 10 - Manual Control Breakdown, 74273	11-14
Fig. 11 - Hydraulic Motor Breakdown, 48663	11-16
Fig. 12 - Hydraulic Motor Breakdown, 74162	11-18
Fig. 13 - Hydraulic Motor Breakdown, 22604	11-20
Fig. 14 - Hydraulic Pump Breakdown, 48880	11-22
Fig. 15 - Hydraulic Motor Breakdown, 27792	11-23
Fig. 16 - Hydraulic Motor Breakdown, 61489	11-24
Fig. 17 - Hydraulic Steering Valve Breakdown, 57982	11-25
Fig. 18 - Hydraulic Steering Valve Breakdown, 74176	11-26
Fig. 19 - Hydraulic Solenoid Valve Breakdown, 31575	11-27
Fig. 20 - Hydraulic Valve Breakdown, 32761	11-28
Fig. 21 - Hydraulic Flow Switch Breakdown, 31556	11-29
Fig. 22 - Hydraulic Cylinder Breakdown, 04431	11-30
Fig. 23 - Hydraulic Valve Breakdown, 48108A	11-31
Fig. 24 - Hydraulic Motor Breakdown, 75185	11-32

Fig. 1 - High Pressure Spray Pump Breakdown

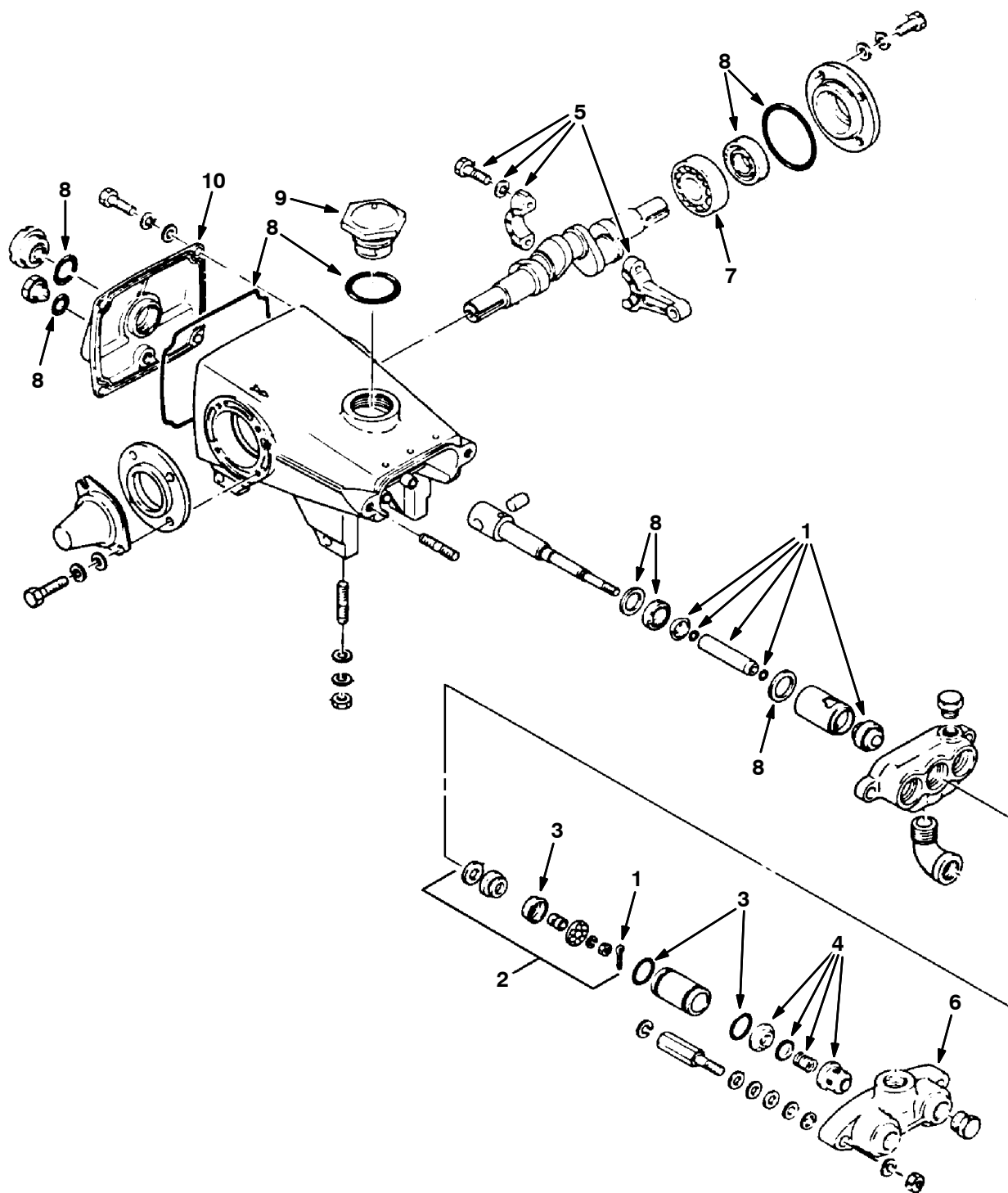
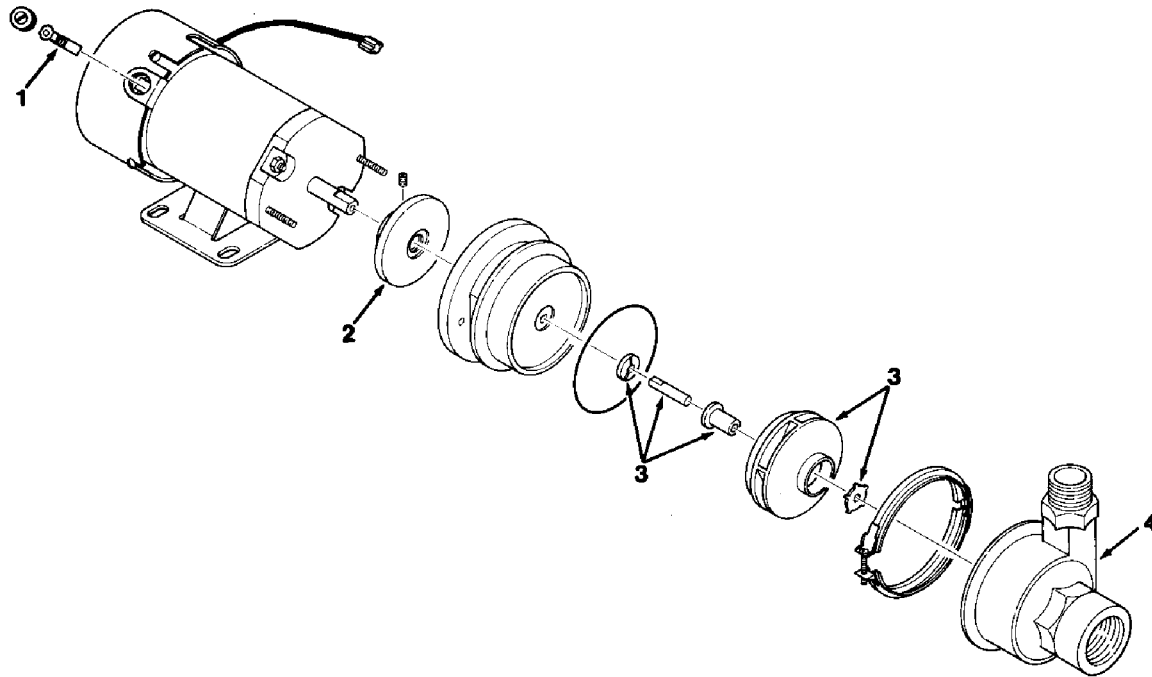


Fig. 1 - High Pressure Spray Pump Breakdown, 40144-1

	Tenant Ref. Part No.	Manufacturer Serial Number	Description	Qty.
▽	40144-1	(000000-	) Sprayer, High Pressure	1
▲	40144-4	(000000-	) Oil, Cat Pump	1
▲	1 38595	(000000-	) Sleeve and Seal Kit	1
▲	2 40144-20	(000000-	) Piston Kit	1
▲	3 40144-21	(000000-	) Cup Kit, Short	1
▲	4 40144-22	(000000-	) Valve Kit, Discharge	1
▲	5 37572	(000000-	) Rod, Connecting	3
▲	6 37778	(000000-	) Manifold, Discharge	1
▲	7 02582	(000000-	) Bearing, Ball	2
▲	8 02583	(000000-	) Seal Kit	1
▲	9 37573	(000000-	) Cap, Oil Filler	1
▲	10 38321	(000000-	) Pump Cover	1
▲	40144-6	(000000-	) Key	1

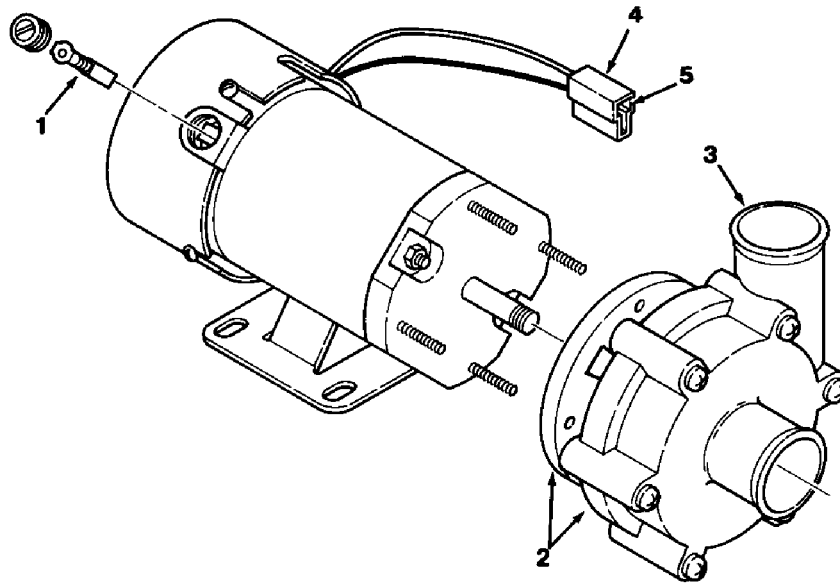
Fig. 2 - Solution Pump Breakdown, 79614



02123 - 550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.	
▽	79614	(000000-	) Pump, Solution	1	
▲	1	SK2498	(000000-	) Replacement Kit, Brush	1
▲	2	SK2500	(000000-	) Hub and Magnet Kit	1
▲	3	SK2499	(000000-	) Impeller Shaft and Bearing Kit	1
▲	4	38715	(000000-	) Housing	1

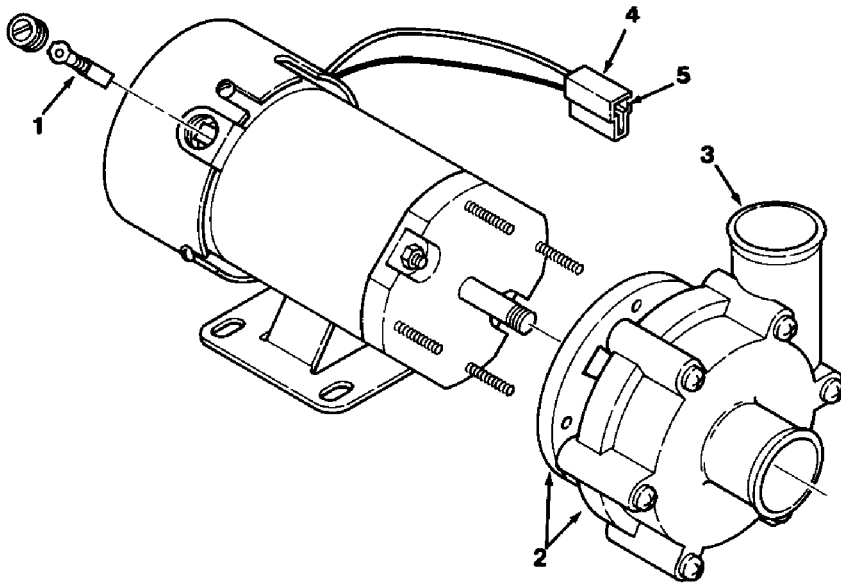
Fig. 3 - Solution Pump Breakdown, 03838



06963 - 550

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		03838	(000000-	) Pump Assembly, Solution	1
▲	1	SK2498	(000000-	) Replacement Kit, Brush	1
▲▽	2	03711	(000000-	) Replacement Kit, Pump Head	1
▲▲	3	33308	(000000-	) Replacement Kit, Pump Body	1
▲	4	51406	(000000-	) Connector	1
▲	5	51416	(000000-	) Terminal, Male	2

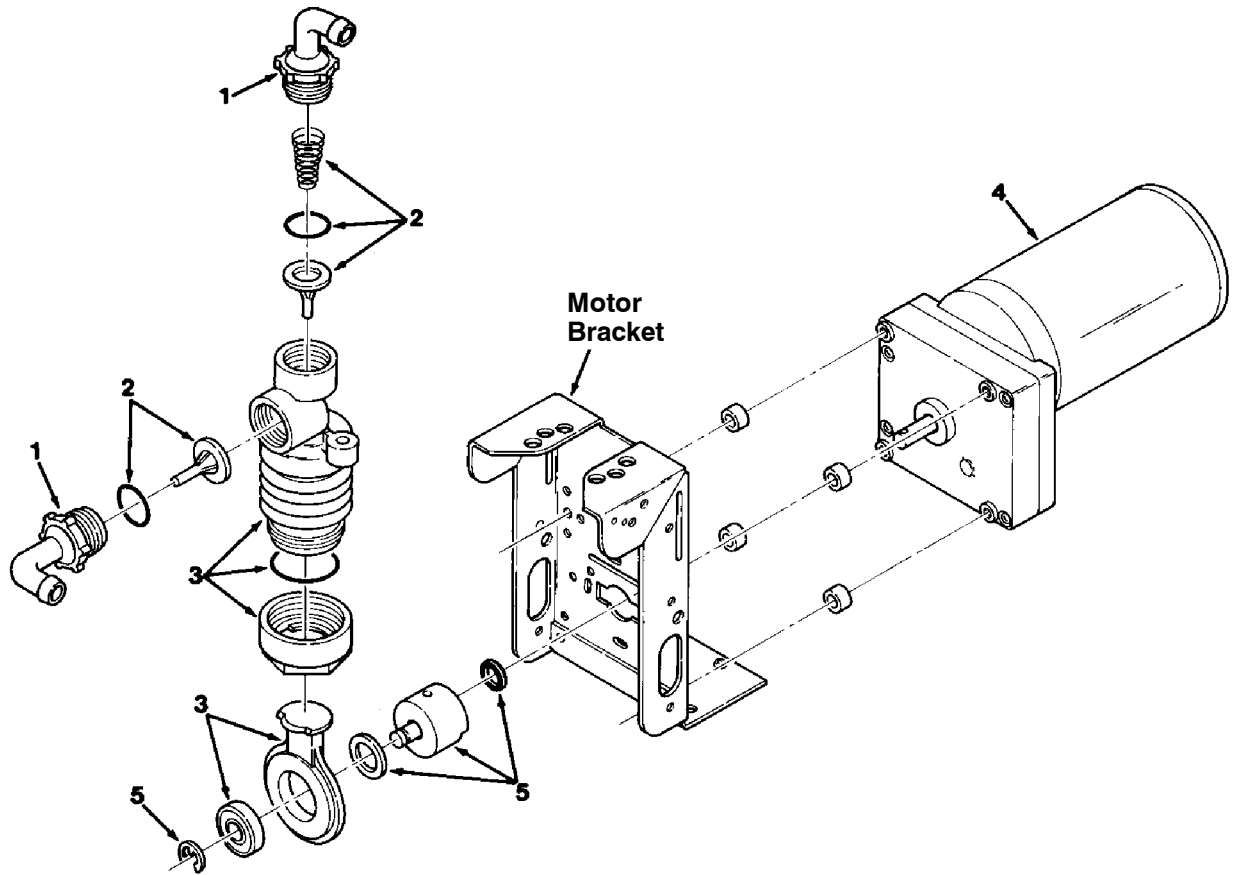
Fig. 4 - Solution Pump Breakdown, 33327



06963 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	33327	(000000-	) Pump Assembly, Solution	1
▲	1 48791	(000000-	) Replacement Kit, Brush	1
▲	2 03711	(000000-	) Replacement Kit, Pump Head	1
▲	3 48789	(000000-	) Replacement Kit, Pump Body	1
▲	4 51406	(000000-	) Connector	1
▲	5 51416	(000000-	) Terminal, Male	2

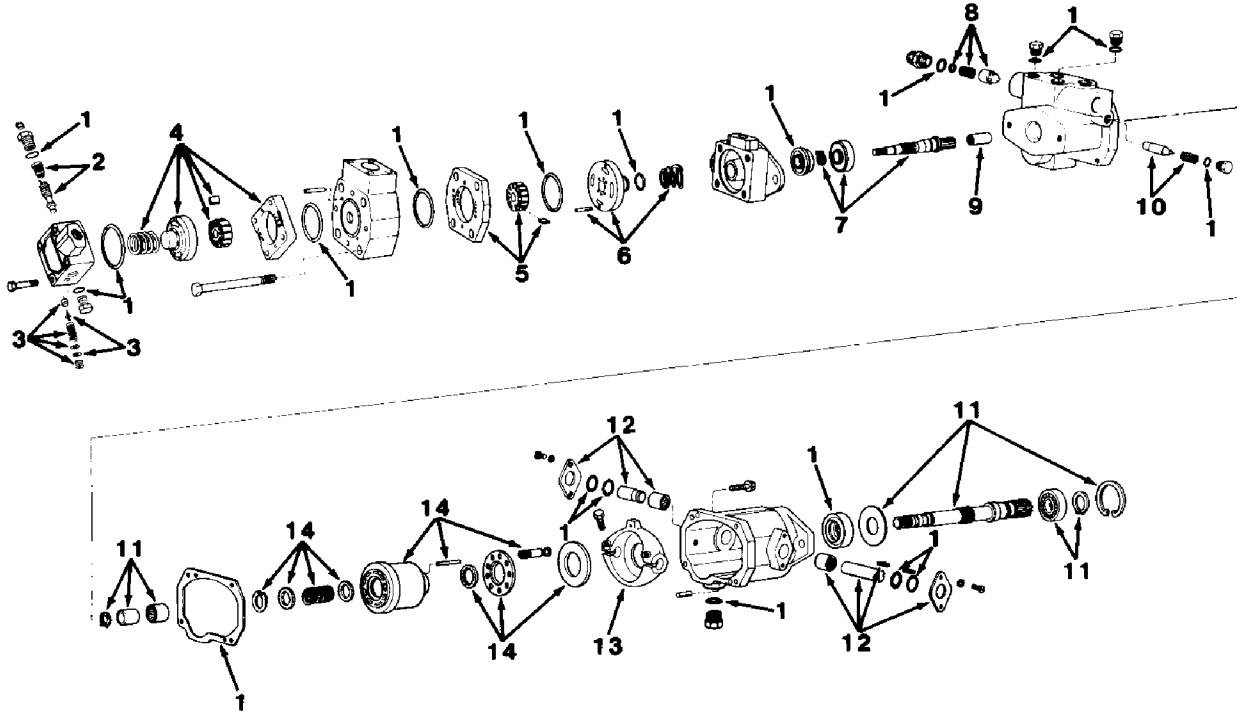
Fig. 5 - Metering Solution Pump Breakdown, 16485



00112 - ALL

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	16485	(000000-	) Pump, Metering Solution	1
▲	1 63923	(000000-	) Connector Kit, Tubing	1
▲	2 21660	(000000-	) Valve Kit, Pump	1
▲	3 21661	(000000-	) Replacement Kit, Bellows	1
▲	4 63924	(000000-	) Motor, Gear	1
▲	5 02430	(000000-	) Crank Replacement Kit	1

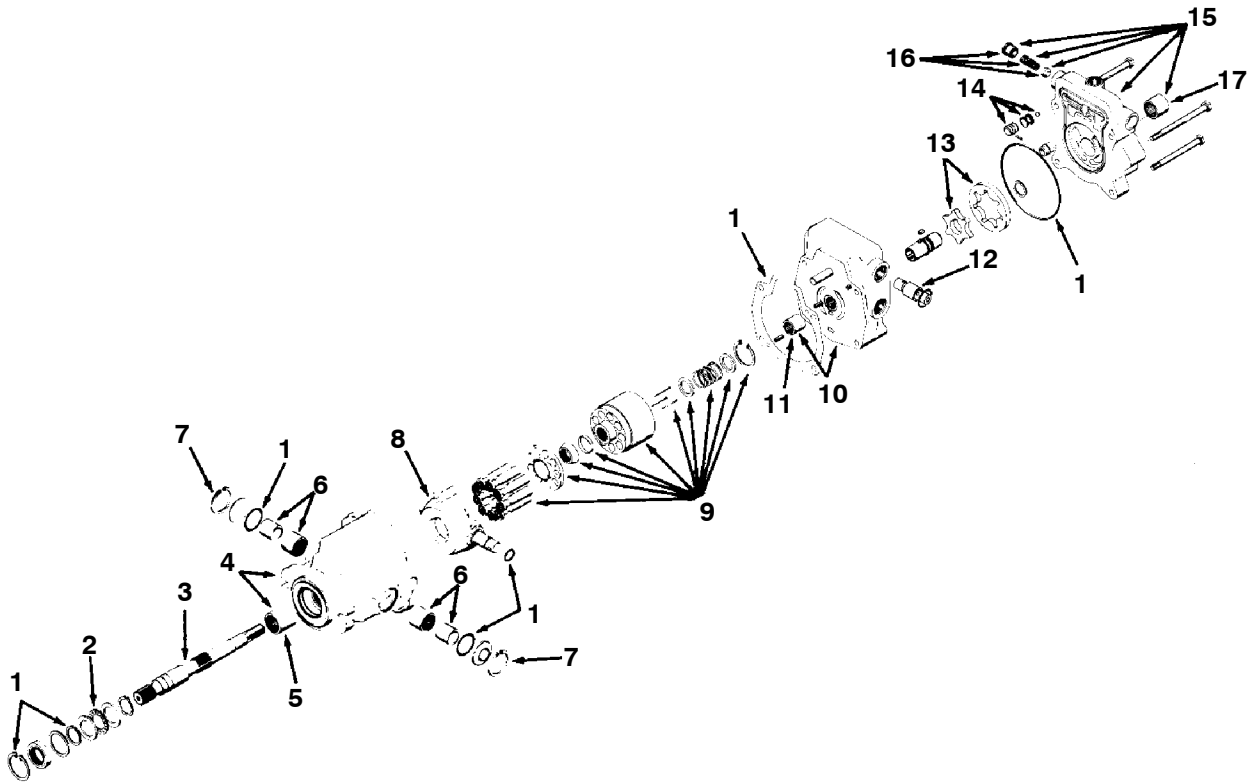
Fig. 6 - Hydraulic Pump Breakdown, 47915



02377 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.	
▽	47915	(000000-	) Pump, Hydraulic	1	
▲	1	SK1450	(000000-	) Seal Kit	1
▲▽	40726	(000000-	) Pump (Replaced by none)	1	
▲▲	2	02445	(000000-	) Priority Valve Assembly	1
▲▲	3	02444	(000000-	) Relief Valve Assembly	1
▲▲	4	02443	(000000-	) Cartridge Kit, Cover End	1
▲▲	5	02441	(000000-	) Cartridge Kit	1
▲▲	6	02442	(000000-	) Valve Plate Assembly	1
▲▲	7	02440	(000000-	) Shaft Kit	1
▲▽	38446	(000000-	) Pump	1	
▲▲	8	02437	(000000-	) Charge Relief Kit	1
▲▲	9	02439	(000000-	) Coupling	1
▲▲	10	02438	(000000-	) Replenishing Valve Assembly	2
▲▲	11	02435	(000000-	) Shaft Kit	1
▲▲	12	02436	(000000-	) Pintle Kit, (Replaced by none)	1
▲▲	13	02434	(000000-	) Yoke	1
▲▲	14	02433	(000000-	) Rotating Group Kit	1

Fig. 7 - Hydraulic Pump Breakdown, 34310



03620 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	34310	(000000-	) Pump, Hydraulic	1
▲	1 34092	(000000-	) Seal Kit	1
▲	2 37467	(000000-	) Bearing, Thrust	1
▲	3 34094	(000000-	) Shaft	1
▲▽	4 37453	(000000-	) Housing Assembly, Pump	1
▲▲	5 37462	(000000-	) Bearing	1
▲	6 34097	(000000-	) Bearing	2
▲	7 55926	(000000-	) Ring, Retaining	2
▲	8 37451	(000000-	) Plate, Cam	1
▲	9 37450	(000000-	) Piston Block Assembly	1
▲▽	10 34158	(000000-	) Housing Assembly, Relief	1
▲▲	11 34159	(000000-	) Bearing	1
▲	12 34160	(000000-	) Valve, Relief	2
▲	13 34161	(000000-	) Pump Kit, Charge	1
▲	14 SK2586	(000000-	) Valve Assembly, Check	1
▲▽	15 34162	(000000-	) Adaptor Assembly	1
▲▲	16 55936	(000000-	) Valve Assembly, Relief (Includes Bearing)	1
▲▲	17 55929	(000000-	) Bearing	1

Fig. 8 - Hydraulic Piston Pump Breakdown, 74163

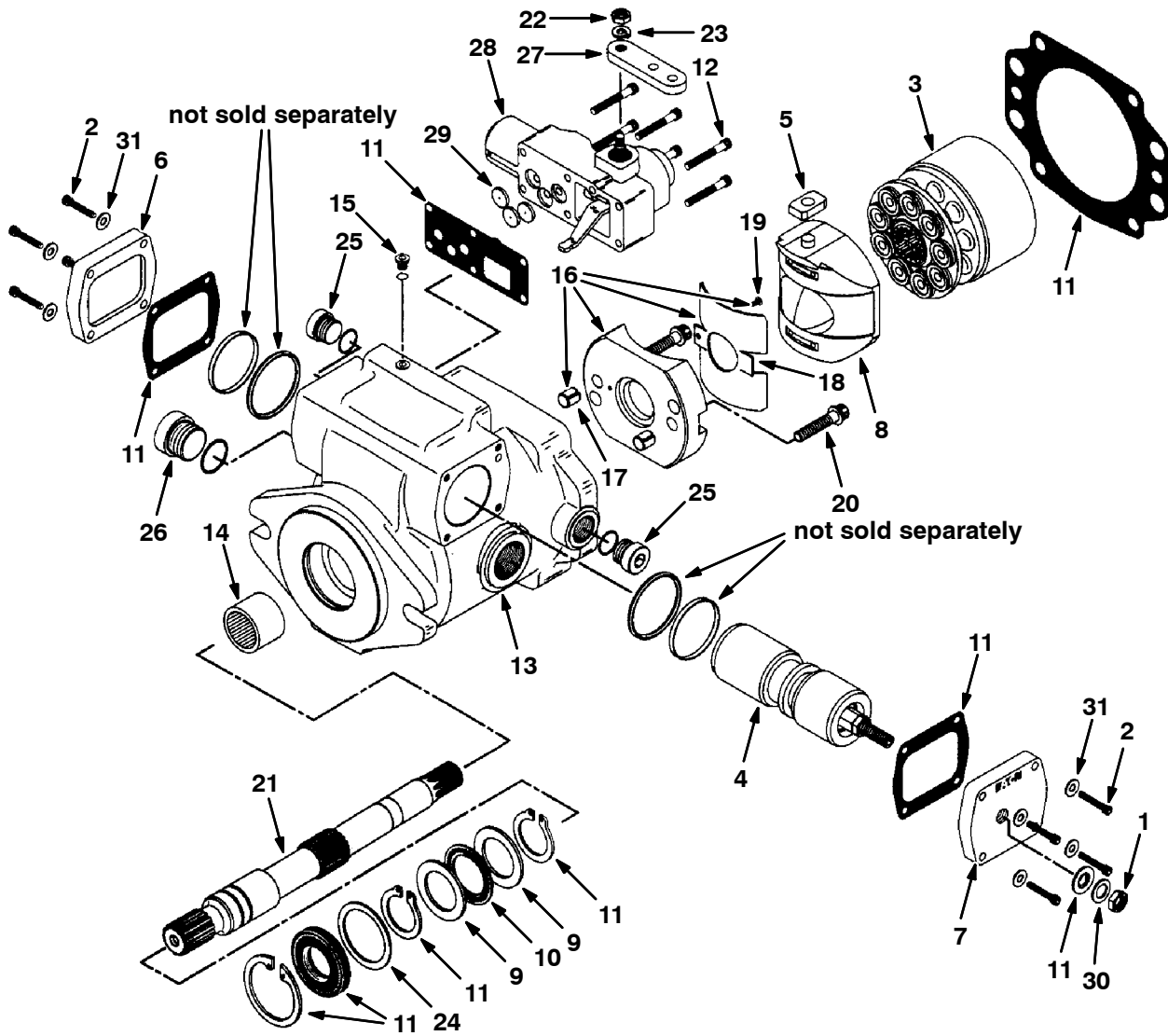


Fig. 8 - Hydraulic Piston Pump Breakdown, 74163

NOTE: Piston Pump, TENNANT Part Number 74163, includes Fig. 8, and Fig. 9.

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		74163	(000000-	) Pump, Hyd Piston V 2.48	1
▲	1	74184	(000000-	) Nut, Jam	1
▲	2	74223	(000000-	) Screw, Cap	8
▲	3	61882	(000000-	) Rotating Kit	1
▲	4	74253	(000000-	) Piston, Servo	1
▲	5	74254	(000000-	) Follower, Piston	1
▲	6	74256	(000000-	) Plate, Cover	1
▲	7	74257	(000000-	) Plate, Cover	1
▲	8	74258	(000000-	) Camplate S/A	1
▲	9	74240	(000000-	) Race, Bearing	2
▲	10	74210	(000000-	) Bearing	1
▲	11	74283	(000000-	) Seal Kit, Pump	1
▲	12	74262	(000000-	) Screw, Cap	6
▲▽		74263	(000000-	) Housing S/A	1
▲▲	13	79771	(000000-	) Housing	1
▲▲	14	37462	(000000-	) Bearing	1
▲▲	15	79742	(000000-	) Plug S/A	1
▲▽	16	79743	(000000-	) Cradle Sub Assy	1
▲▲	17	79744	(000000-	) Dowel Bushing	2
▲▲	18	79745	(000000-	) Bushing	1
▲▲	19	79746	(000000-	) Cap Screw	1
▲▲	20	79747	(000000-	) Cap Screw	2
▲	21	74265	(000000-	) Shaft, Drive Sp	1
▲	22	74266	(000000-	) Nut	1
▲	23	74267	(000000-	) Lockwasher	1
▲	24	37460	(000000-	) Washer	1
▲	25	13907	(000000-	) Plug #8	2
▲	26	79779	(000000-	) Plug,#12 O-Ring Ph	1
▲	27	74272	(000000-	) Arm, Control	1
▲	28	74273	(000000-	) Control, Manual (See Breakdown)	1
▲	29	74276	(000000-	) Orifice, Valve	1
▲	30	74280	(000000-	) Washer	1
▲	31	74281	(000000-	) Washer	8

Fig. 9 - Hydraulic Piston Pump Breakdown, 74163

NOTE: Piston Pump, TENNANT Part Number 74163, includes Fig. 8, and Fig. 9.

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		74163	(000000-	) Pump, Hyd Piston V 2.48	1
▲	1	74259	(000000-	) Relief Valve Sa	2
▲	2	74283	(000000-	) Seal Kit, Pump	1
▲	3	74260	(000000-	) Screw, Cap	2
▲	4	74261	(000000-	) Screw, Cap	2
▲	5	61886	(000000-	) Valve Plate	1
▲	6	79708	(000000-	) Repair Info,Pmp	1
▲▽	7	74264	(000000-	) Backplate S/A	1
▲▲	8	34159	(000000-	) Bearing	1
▲▲	9	79748	(000000-	) Roll Pin	1
▲	10	74270	(000000-	) Key	1
▲▽	11	74271	(000000-	) Charge Pmp Adap	1
▲▲	12	79749	(000000-	) Bushing	1
▲▲	13	79750	(000000-	) Plug	1
▲▲	14	79751	(000000-	) Shims	1
▲▲	15	79752	(000000-	) Spring	1
▲▲	16	79753	(000000-	) Poppet	1
▲	17	74274	(000000-	) Geroter,Ring In	1
▲	18	74275	(000000-	) Geroter,Ring Ot	1
▲	19	74277	(000000-	) Coupler	1
▲	20	74278	(000000-	) Ring, Retaining	2
▲	21	74279	(000000-	) Actuator, Valve	1
▲	22	74282	(000000-	) Washer	4

Fig. 10 - Manual Control Breakdown, 74273

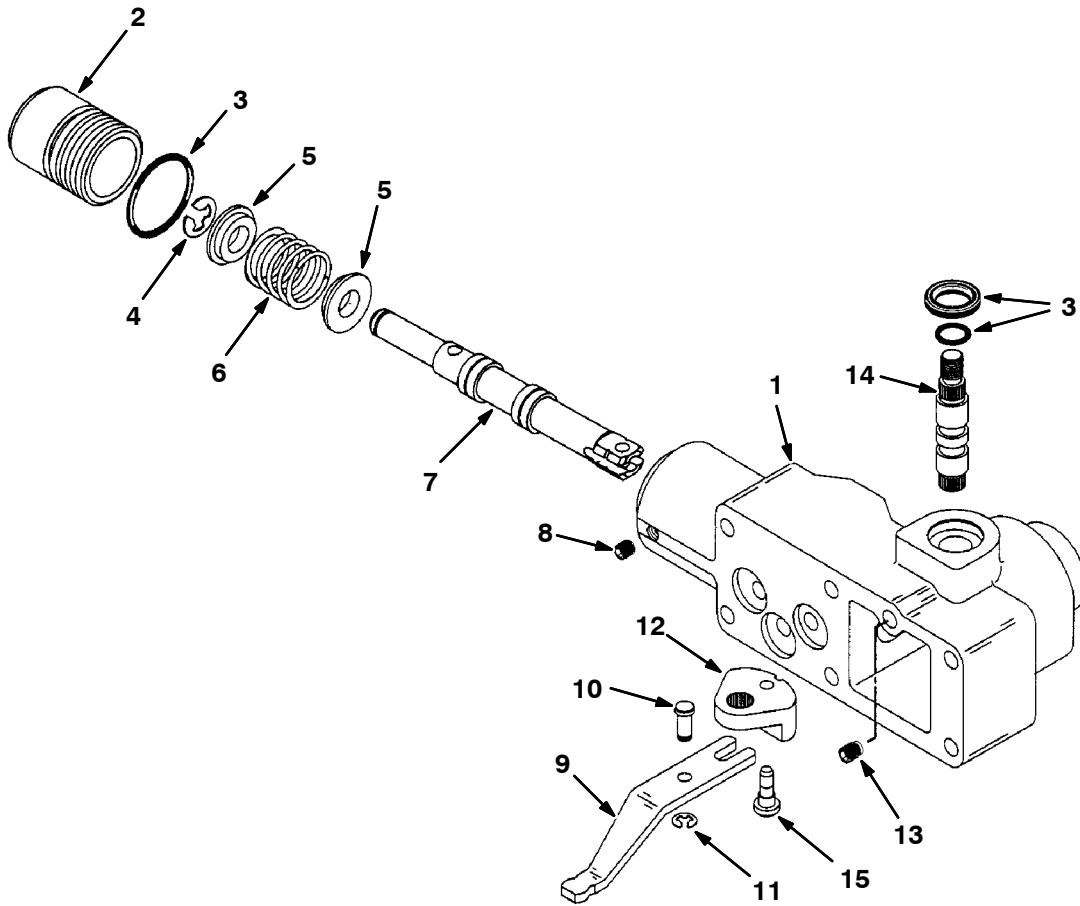


Fig. 10 - Manual Control Breakdown, 74273

	Tenant Ref.	Part No.	Manufacturer Serial Number	Description	Qty.
▽		74273	(000000-	) Control, Manual	1
▲	1	79754	(000000-	) Housing,Control	1
▲	2	79755	(000000-	) Plug	1
▲	3	79776	(000000-	) Seal Kit,Cntrl	1
▲	4	79756	(000000-	) Ring, Retaining	1
▲	5	79757	(000000-	) Spring,Retainer	2
▲	6	79758	(000000-	) Spring, Cntr	1
▲	7	79759	(000000-	) Valve Spool	1
▲	8	79760	(000000-	) Screw, Set	1
▲	9	79761	(000000-	) Link, Feedback	1
▲	10	79762	(000000-	) Dowel Pin	1
▲	11	79763	(000000-	) Ring, Retaining	1
▲	12	79764	(000000-	) Bell Crank	1
▲	13	79765	(000000-	) Screw, Set	1
▲	14	79766	(000000-	) Shaft, Input	1
▲	15	79767	(000000-	) Pin, Headed	1

Fig. 11 - Hydraulic Motor Breakdown, 48663

Ref.	Tenant Part No.	Manufacturer Serial Number	Description	Qty.
▽	48663	(000000-	) Motor, Hyd Gear In 19.0	1
▲	1 33694	(000000-	) Shaft, Assy Cl	1
▲	2 74121	(000000-	) Housing, Brg Cl	1
▲	3 37955	(000000-	) Retainer, Frt Cl	1
▲	4 74168	(000000-	) Screw, Cap Cl	8
▲	5 37616	(000000-	) Drive	1
▲	6 37756	(000000-	) Geroler	1
▲	7 74122	(000000-	) Plate, Valve	1
▲	8 52405	(000000-	) Valve	1
▲	9 74123	(000000-	) Valve Cl	1
▲	10 34178	(000000-	) Spring	2
▲	11 38968	(000000-	) Ring	1
▲	12 74125	(000000-	) Bolt Cl	3
▲	13 38255	(000000-	) Bolt	1
▲	14 74124	(000000-	) Housing, Assy Cl	1
▲	15 37766	(000000-	) Ball	2
▲	16 34179	(000000-	) Spring	2
▲	17 74137	(000000-	) Plug Assembly Cl	2
▲	18 74098	(000000-	) Plug Assembly Ph	1
▲	19 45622	(000000-	) Nut	1
▲	20 45623	(000000-	) Key	1
▲	21 33580	(000000-	) Seal Kit, Rear	1
▲	22 33579	(000000-	) Seal Kit, Shaft Cl	1
▲	23 74249	(000000-	) Repair Info. Cl	1

Fig. 12 - Hydraulic Motor Breakdown, 74162

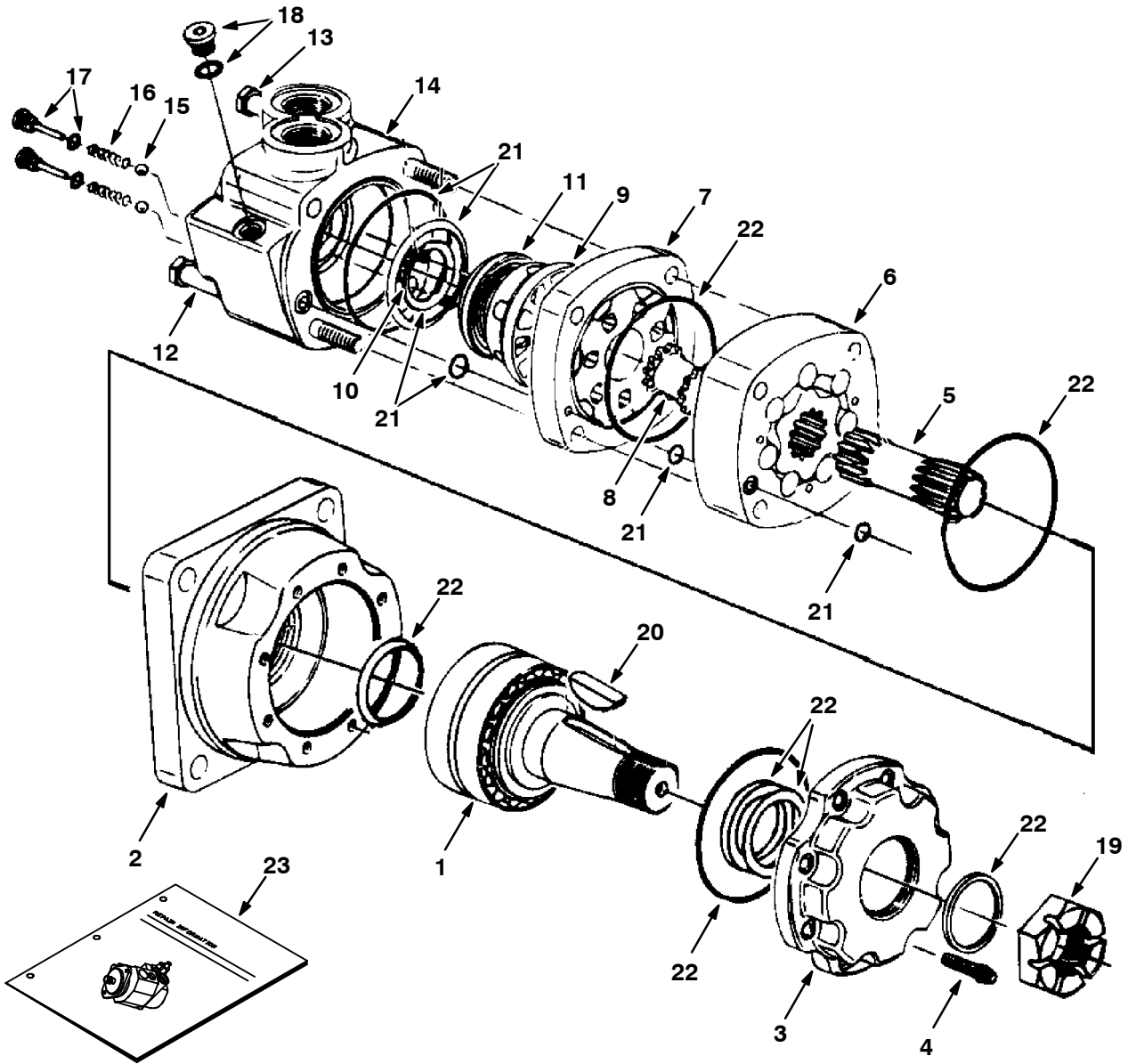


Fig. 12 - Hydraulic Motor Breakdown, 74162

Ref.	Tenant Part No.	Manufacturer Serial Number	Description	Qty.
▽	74162	(000000-	) Motor, Hyd Gear In 19.0	1
▲	1 74165	(000000-	) Shaft, Assy Cl	1
▲	2 74166	(000000-	) Housing, Brg Cl	1
▲	3 74167	(000000-	) Retainer, Frt Cl	1
▲	4 74168	(000000-	) Screw, Cap Cl	8
▲	5 37616	(000000-	) Drive	1
▲	6 37756	(000000-	) Geroler	1
▲	7 74122	(000000-	) Plate, Valve	1
▲	8 52405	(000000-	) Valve	1
▲	9 74123	(000000-	) Valve Cl	1
▲	10 34178	(000000-	) Spring	2
▲	11 38968	(000000-	) Ring	1
▲	12 74125	(000000-	) Bolt Cl	3
▲	13 38255	(000000-	) Bolt	1
▲	14 74171	(000000-	) Housing, Assy Cl	1
▲	15 37766	(000000-	) Ball	2
▲	16 34179	(000000-	) Spring	2
▲	17 74137	(000000-	) Plug Assembly Cl	2
▲	18 74098	(000000-	) Plug Assembly Ph	1
▲	19 45622	(000000-	) Nut	1
▲	20 45623	(000000-	) Key	1
▲	21 33580	(000000-	) Seal Kit, Rear	1
▲	22 74170	(000000-	) Seal Kit, Shaft Cl	1
▲	23 74249	(000000-	) Repair Info. Cl	1

Fig. 13 - Hydraulic Motor Breakdown, 22604

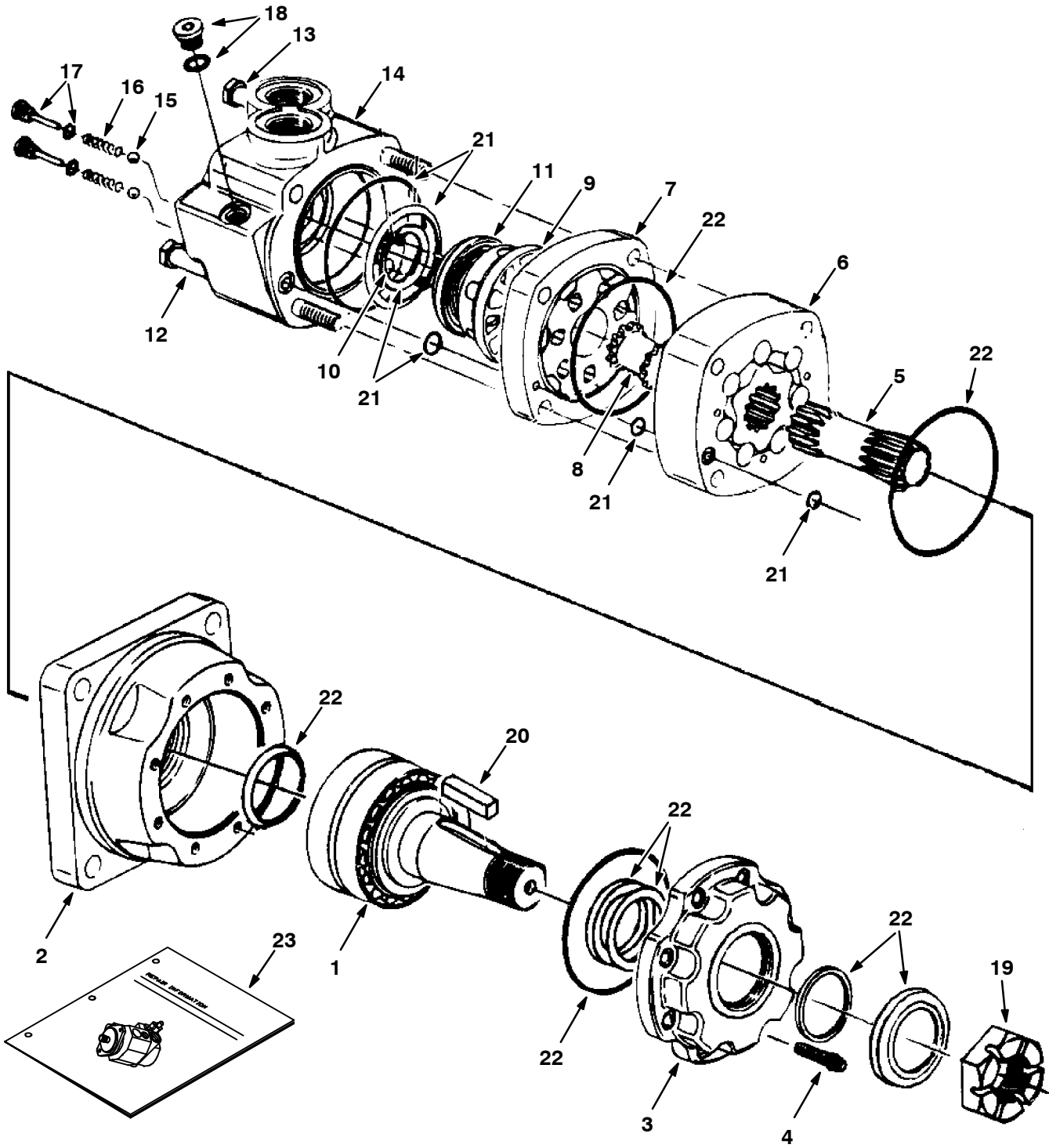
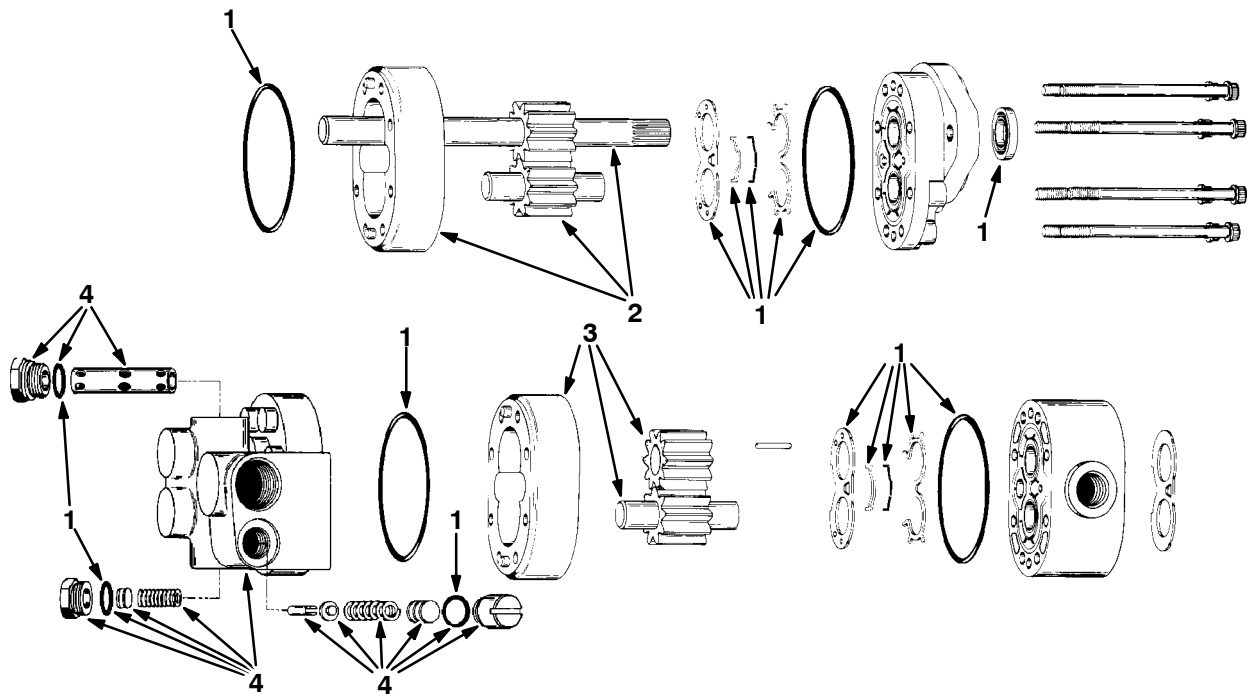


Fig. 13 - Hydraulic Motor Breakdown, 22604

	Ref.	Tenant Part No.	Manufacturer Serial Number	Description	Qty.
▽		22604	(000000-	) Motor, Hyd Gear	1
▲	1	74165	(000000-	) Shaft S/A	1
▲	2	74166	(000000-	) Housing, Brg	1
▲	3	74167	(000000-	) Retainer, Frt	1
▲	4	74168	(000000-	) Screw, Cap	8
▲	5	37616	(000000-	) Drive	1
▲	6	37756	(000000-	) Geroler	1
▲	7	74122	(000000-	) Plate, Valve	1
▲	8	52405	(000000-	) Valve	1
▲	9	74123	(000000-	) Valve	1
▲	10	34178	(000000-	) Spring	2
▲	11	38968	(000000-	) Ring	1
▲	12	74125	(000000-	) Bolt	3
▲	13	38255	(000000-	) Bolt	1
▲	14	74171	(000000-	) Housing Assy,	1
▲	15	37766	(000000-	) Ball	2
▲	16	34179	(000000-	) Spring	2
▲	17	74137	(000000-	) Plug Assembly	2
▲	18	74098	(000000-	) Plug #4	1
▲	19	45622	(000000-	) Nut	1
▲	20	45623	(000000-	) Key	1
▲	21	33580	(000000-	) Seal Kit, Rear	1
▲	22	79828	(000000-	) Seal Kit, Shaft	1
▲	23	74249	(000000-	) Instr. Repair Info, Motor	1

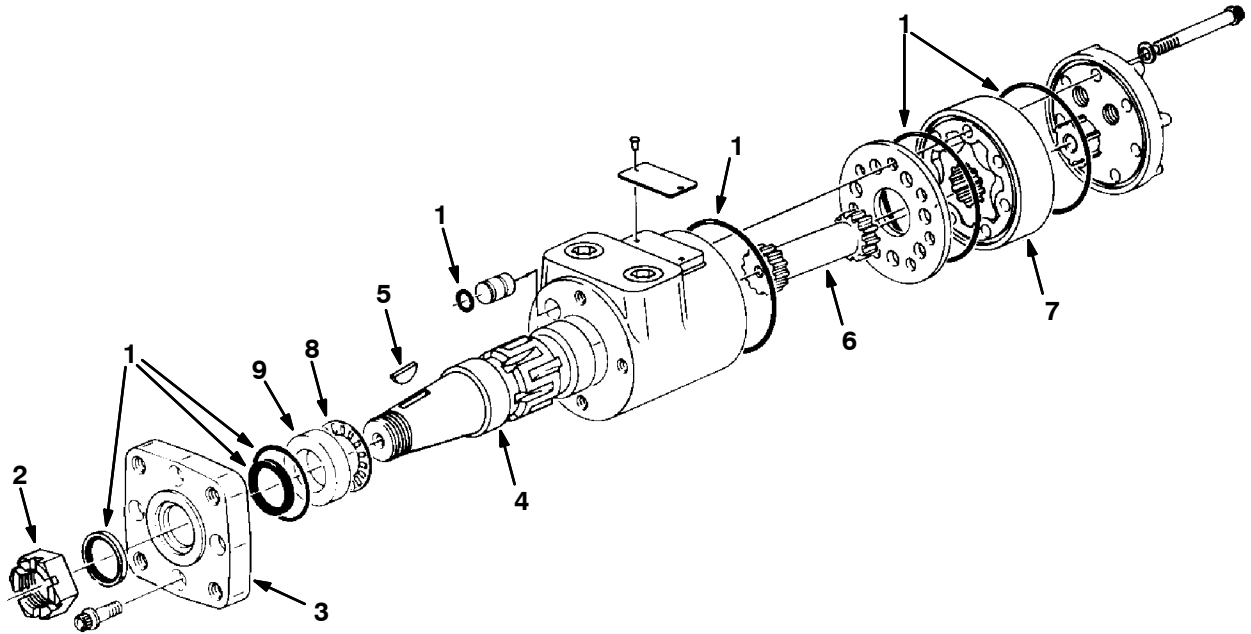
Fig. 14 - Hydraulic Pump Breakdown, 48880



06184 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	48880	(000000-	) Pump, Hydraulic	1
▲	1 48906	(000000-	) Seal Kit	1
▲	2 48909	(000000-	) Body and Gear Kit, Front	1
▲	3 48908	(000000-	) Body and Gear Kit, Rear	1
▲	4 48907	(000000-	) Backplate Kit	1

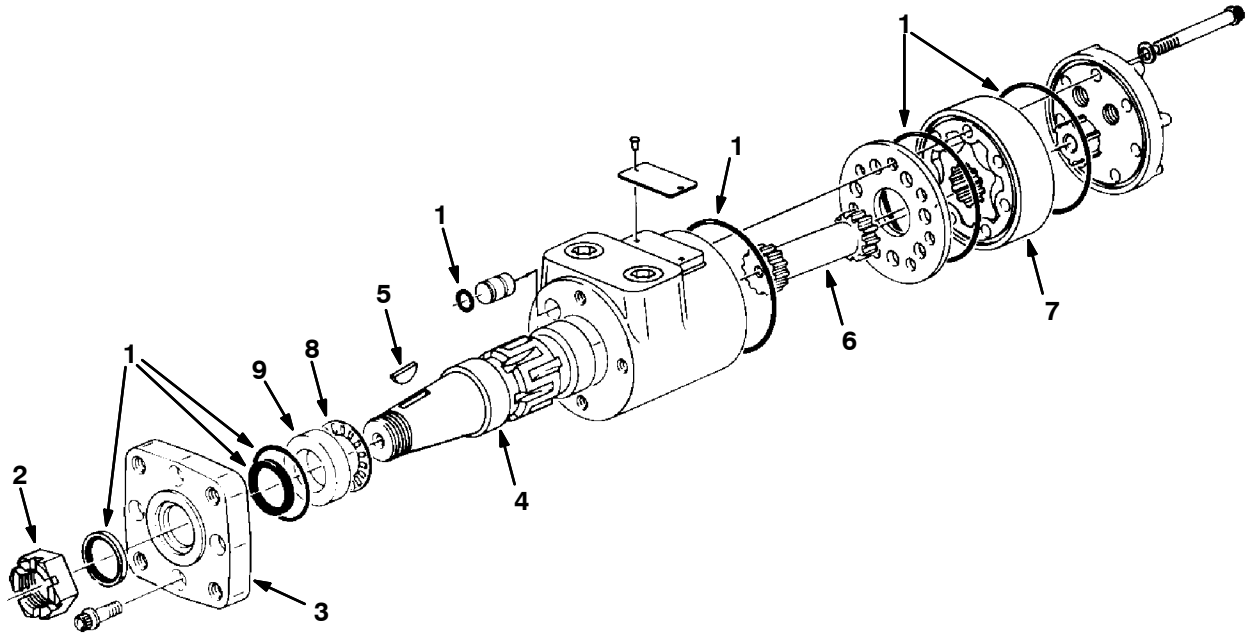
Fig. 15 - Hydraulic Motor Breakdown, 27792



09795 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	27792	(000000-	) Motor, Hydraulic	1
▲	1 28835	(000000-	) Seal Kit	1
▲	2 39527	(000000-	) Nut, Slotted	1
▲	3 31354	(000000-	) Flange, Mounting	1
▲	4 37617	(000000-	) Shaft, Output	1
▲	5 00500-15	(000000-	) Key, Woodruff	1
▲	6 31377	(000000-	) Drive	1
▲	7 31382	(000000-	) Gerotor	1
▲	8 45628	(000000-	) Bearing	1
▲	9 16695	(000000-	) Race, Thrust	1

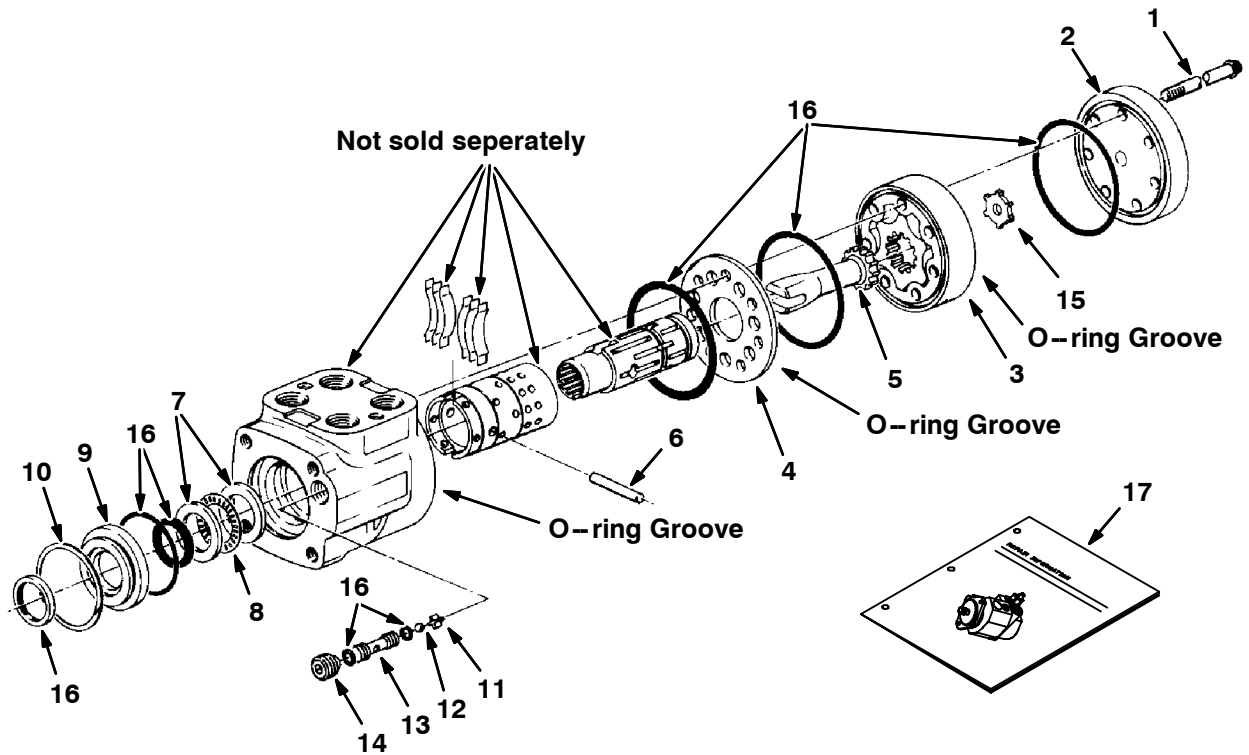
Fig. 16 - Hydraulic Motor Breakdown, 61489



09795 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	61489	(000000-	) Motor, Hydraulic	1
▲	1	61490	(000000-) Seal Kit	1
▲	2	39527	(000000-) Nut, Slotted	1
▲	3	31354	(000000-) Flange, Mounting	1
▲	4	37617	(000000-) Shaft, Output	1
▲	5	00500-15	(000000-) Key, Woodruff	1
▲	6	31377	(000000-) Drive	1
▲	7	31382	(000000-) Gerotor	1
▲	8	45628	(000000-) Bearing	1
▲	9	16695	(000000-) Race, Thrust	1

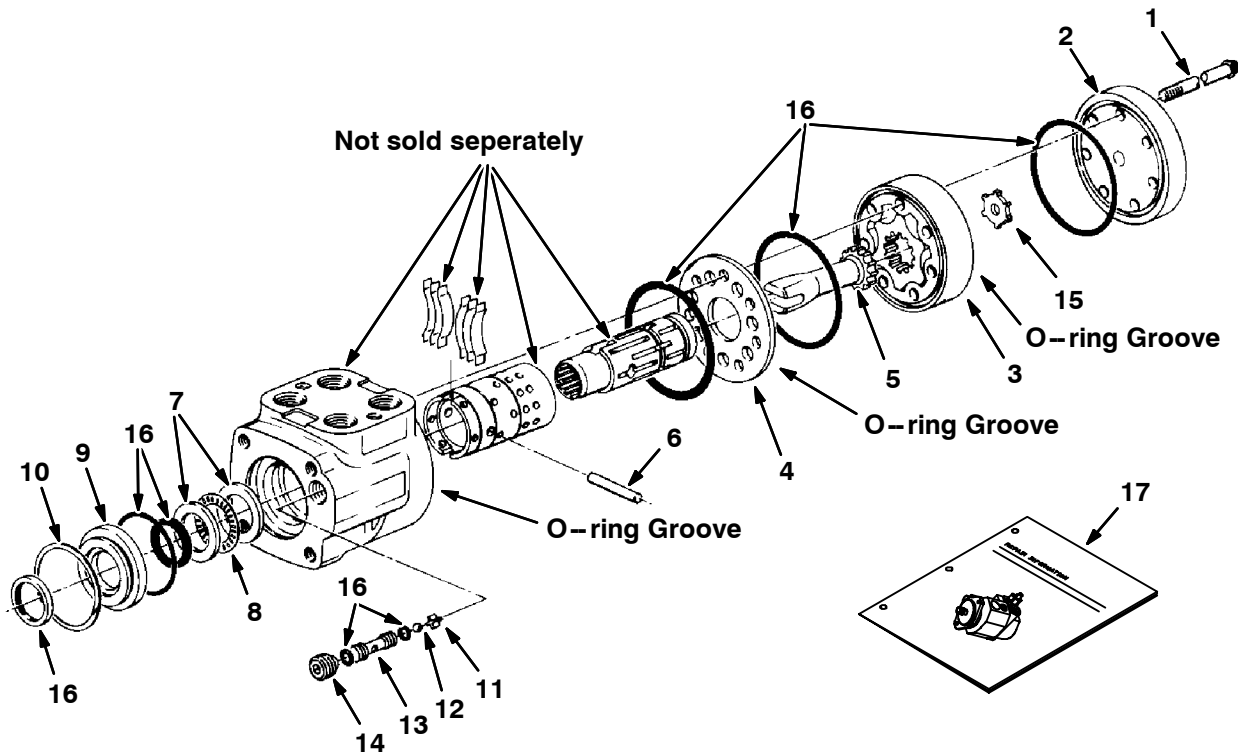
Fig. 17 - Hydraulic Steering Valve Breakdown, 57982



09936-09670 - ALL

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	57982	(000000-	) Steer Control, Hyd 3 6.2 1000	1
▲	1 74097	(000000-	) Cap Screw	7
▲	2 38873	(000000-	) Cover Cap	1
▲	3 57156	(000000-	) Geroter	1
▲	4 74094	(000000-	) Spacer Plate	1
▲	5 58596	(000000-	) Drive	1
▲	6 74218	(000000-	) Pin	1
▲	7 74109	(000000-	) Race, Bearing	2
▲	8 74110	(000000-	) Bearing, Needle	1
▲	9 74112	(000000-	) Bushing, Seal	1
▲	10 74111	(000000-	) Ring, Retainer	1
▲	11 74186	(000000-	) Retainer, Chk	1
▲	12 74187	(000000-	) Ball	1
▲	13 74188	(000000-	) Seat, Chk Ball	1
▲	14 74189	(000000-	) Screw Set	1
▲	15 74105	(000000-	) Spacer	1
▲	16 57152	(000000-	) Seal Kit, Stg	1
▲	74195	(000000-	) Spring Kit, Scu	1
▲	17 74251	(000000-	) Repair Info, Scu	1

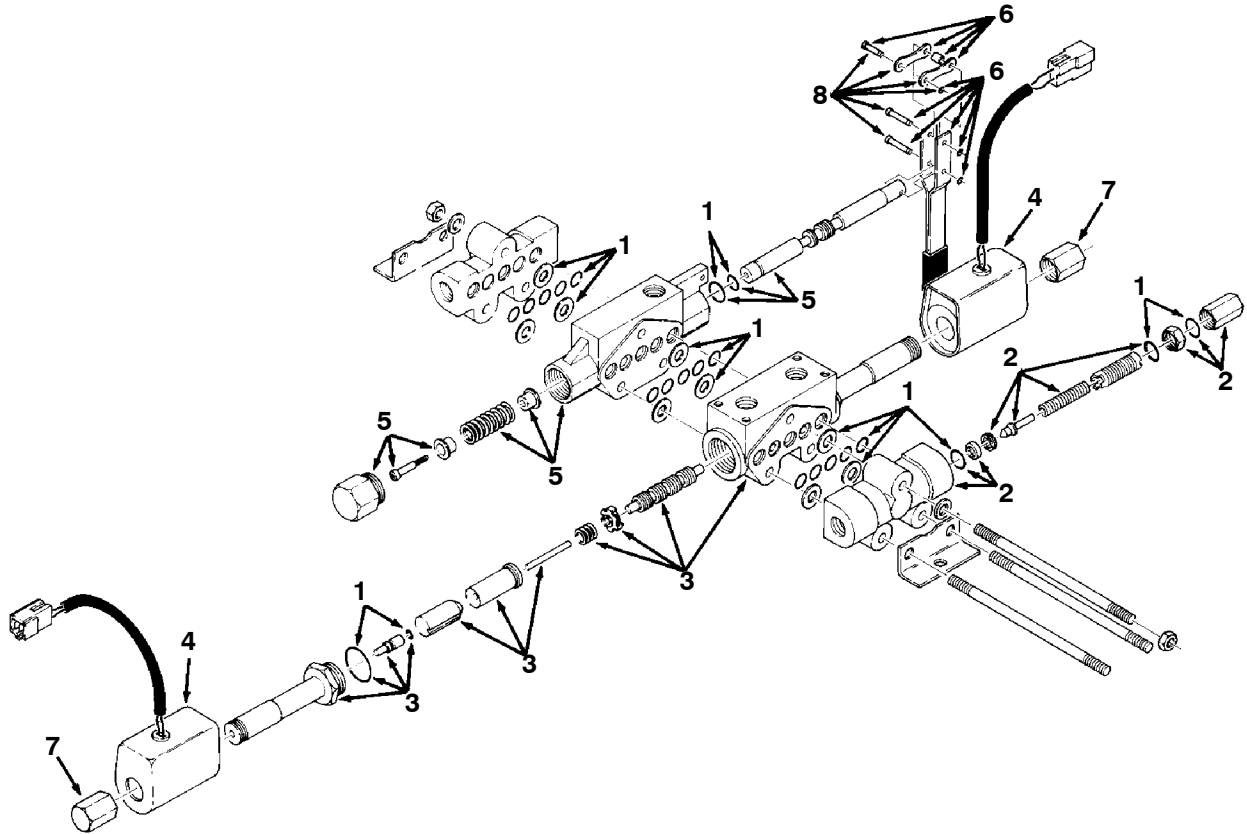
Fig. 18 - Hydraulic Steering Valve Breakdown, 74176



09936-09670 - ALL

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	74176	(000000-	) Steer Control, Hyd #4 05.9 150	1
▲	1 65241	(000000-	) Cap Screw	7
▲	2 74181	(000000-	) Cap, End	1
▲	3 57156	(000000-	) Geroter	1
▲	4 74182	(000000-	) Plate, Wear	1
▲	5 58596	(000000-	) Drive	1
▲	6 74218	(000000-	) Pin	1
▲	7 74109	(000000-	) Race, Bearing	2
▲	8 74110	(000000-	) Bearing, Needle	1
▲	9 74112	(000000-	) Bushing, Seal	1
▲	10 74111	(000000-	) Ring, Retainer	1
▲	11 74186	(000000-	) Retainer, Chk	1
▲	12 74187	(000000-	) Ball	1
▲	13 74188	(000000-	) Seat, Chk Ball	1
▲	14 74189	(000000-	) Screw Set	1
▲	15 74105	(000000-	) Spacer	1
▲	16 74190	(000000-	) Seal Kit, Scu	1
▲	74195	(000000-	) Spring Kit, Scu	1
▲	17 74251	(000000-	) Repair Info,Scu	1

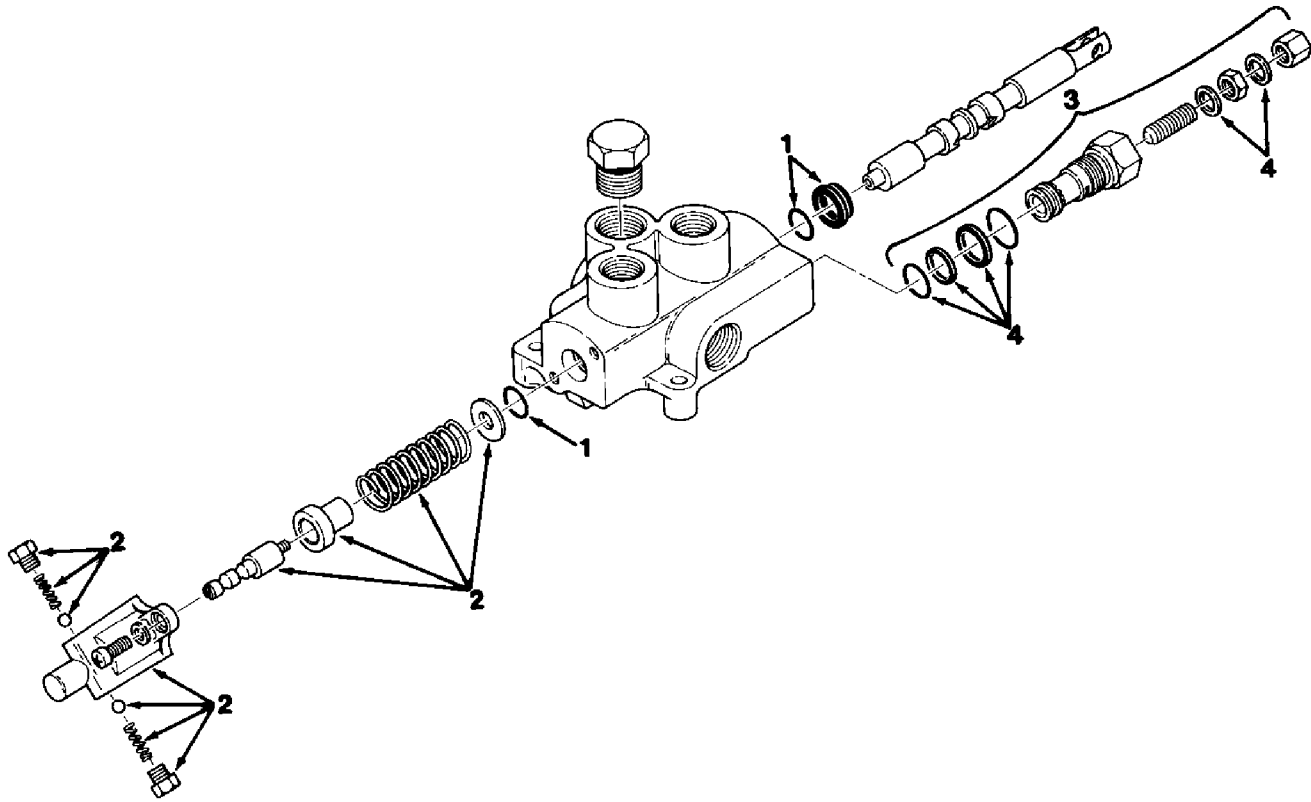
Fig. 19 - Hydraulic Solenoid Valve Breakdown, 31575



02392 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	31575	(000000-	) Valve, Hydraulic, Solenoid	1
▲ 1	04198	(000000-	) Seal Kit	1
▲ 2	31642	(000000-	) Inlet Section	1
▲ 3	31643	(000000-	) Valve Section	1
▲ 4	02536	(000000-	) Coil	2
▲ 5	02520	(000000-	) Valve Section, Manual	1
▲ 6	02519	(000000-	) Handle Assembly, Complete	1
▲ 7	04525	(000000-	) Nut, Solenoid	2
▲ 8	04185	(000000-	) Linkage Kit, Handle	1

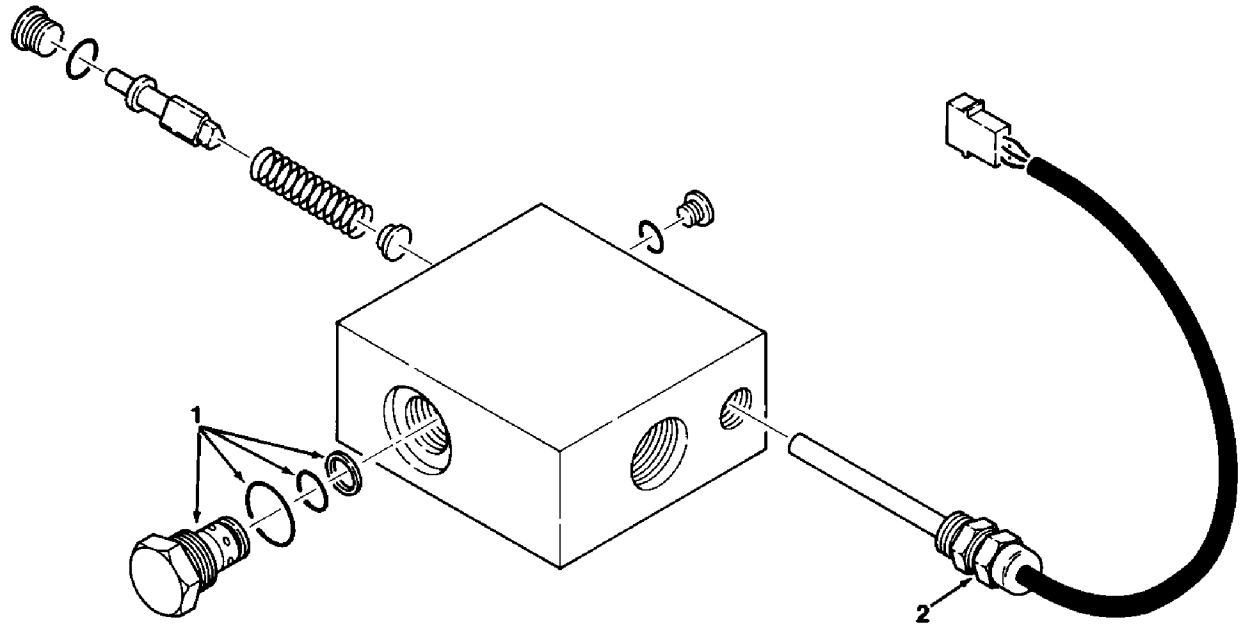
Fig. 20 - Hydraulic Valve Breakdown, 32761



02362 - 550, 1550

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.	
▽	32761	(000000-	) Valve, Hydraulic	1	
▲	1	01666	(000000-	) Seal Kit	1
▲	2	01668	(000000-	) Detent Kit	1
▲▽	3	01818	(000000-	) Relief Valve	1
▲▲	4	69261	(000000-	) Seal Kit, Relief Valve	1

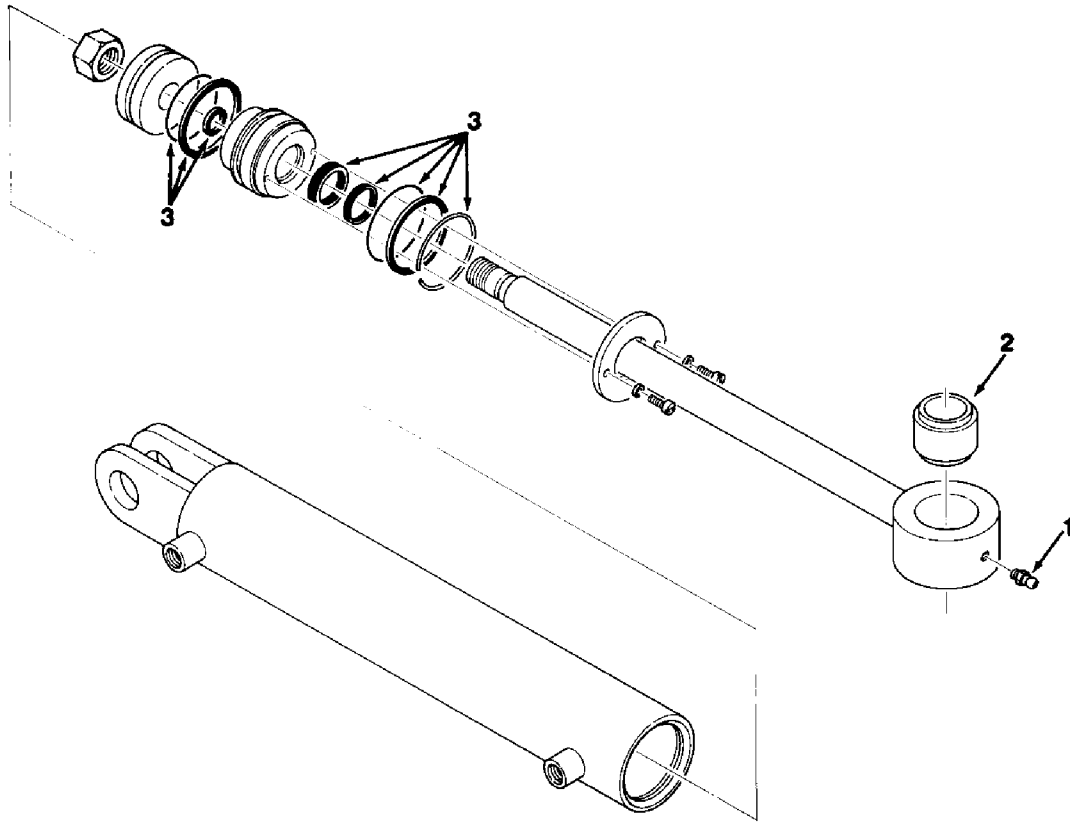
Fig. 21 - Hydraulic Flow Switch Breakdown, 31556



02399 - 550, 1550

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		31556	(000000-	) Switch, Flow	1
▲	1	31638	(000000-	) Check Valve	1
▲	2	31639	(000000-	) Switch Assembly	1

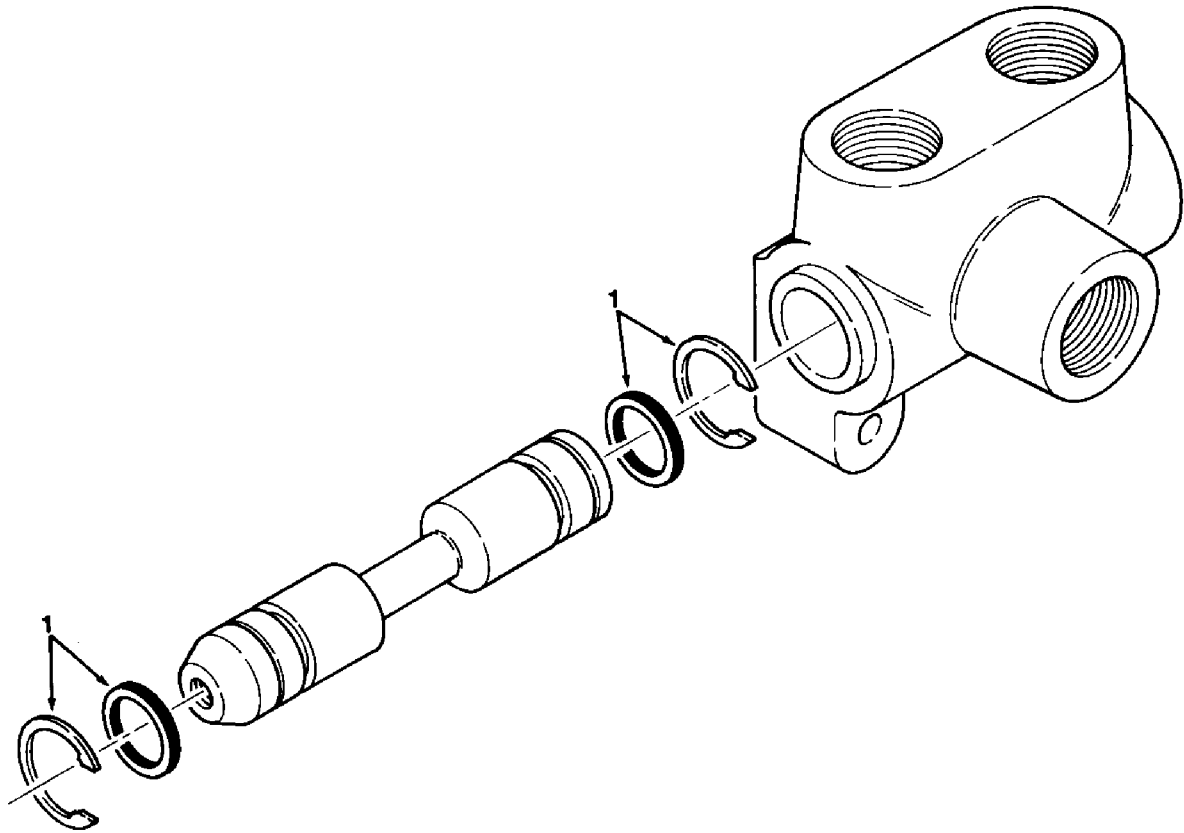
Fig. 22 - Hydraulic Cylinder Breakdown, 04431



03175 - ALL

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		04431	(000000-	) Cylinder, Hydraulic	1
▲	1	47801	(000000-	) Fitting, Grease	1
▲	2	04499	(000000-	) Bearing, Self-Aligning	1
▲	3	04477	(000000-	) Seal Kit	1

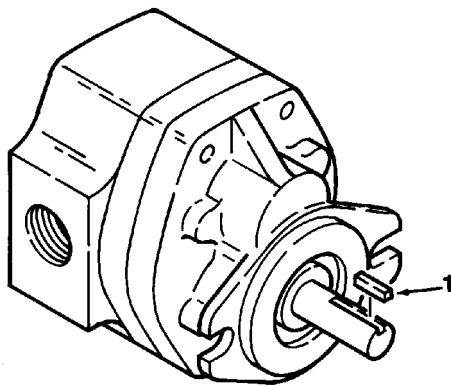
Fig. 23 - Hydraulic Valve Breakdown, 48108A



04230 - ALL

Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽	48108A	(000000-	) Valve, Hydraulic	1
▲	1 SK1288	(000000-	) Seal Kit	1

Fig. 24 - Hydraulic Motor Breakdown, 75185



02401 - ALL

	Ref.	Tennant Part No.	Manufacturer Serial Number	Description	Qty.
▽		75185	(000000-	) Motor, Hydraulic	1
▲		02412	(000000-	) Seal Kit	1
▲	1	00912	(000000-	) Key, Square	1

SECTION 12

CONTENTS	PAGE
Fig. 1 - Cylinder Head, Crankcase and Flywheel Housing Group	12-2
Fig. 2 - Valve and Camshaft Group	12-4
Fig. 3 - Front End Plate and Gear Cover Group	12-5
Fig. 4 - Piston, Crankshaft and Flywheel Group	12-6
Fig. 5 - Oil Pump Group	12-8
Fig. 6 - Water Pump Group	12-9
Fig. 7 - Governor Group	12-9
Fig. 8 - PCV Group	12-9
Fig. 9 - Fuel Pump Group	12-9
Fig. 10 - Oil Filter Group	12-10
Fig. 11 - Distributor and Coil Group	12-10
Fig. 12 - Water Outlet Group, Gasoline	12-10
Fig. 13 - Water Outlet Group, LPG	12-11
Fig. 14 - Exhaust and Intake Manifold Group	12-11
Fig. 15 - Carburetor Group	12-11
Fig. 16 - Starter and Alternator Group	12-12

Fig. 1 - Cylinder Head, Crankcase and Flywheel Housing Group

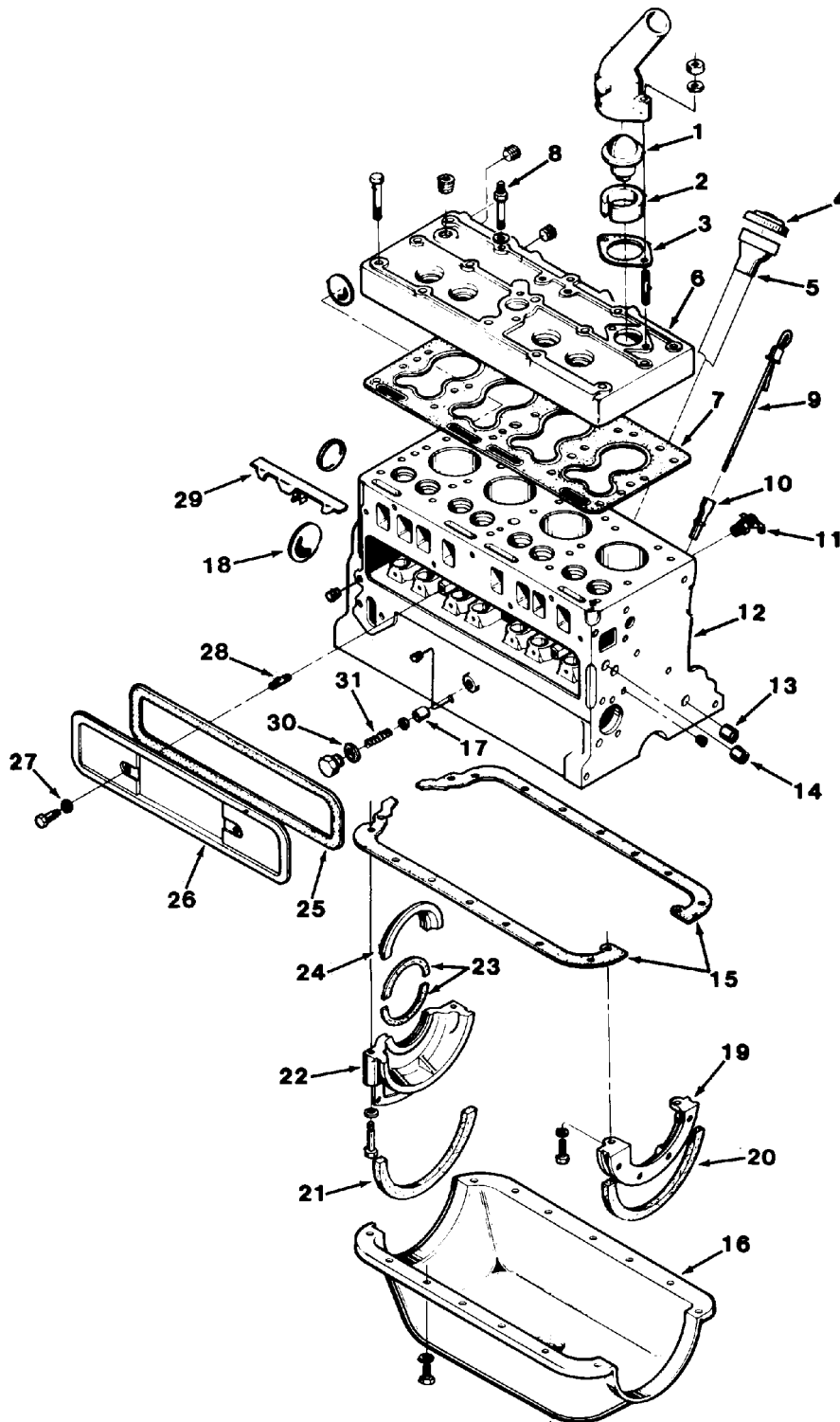
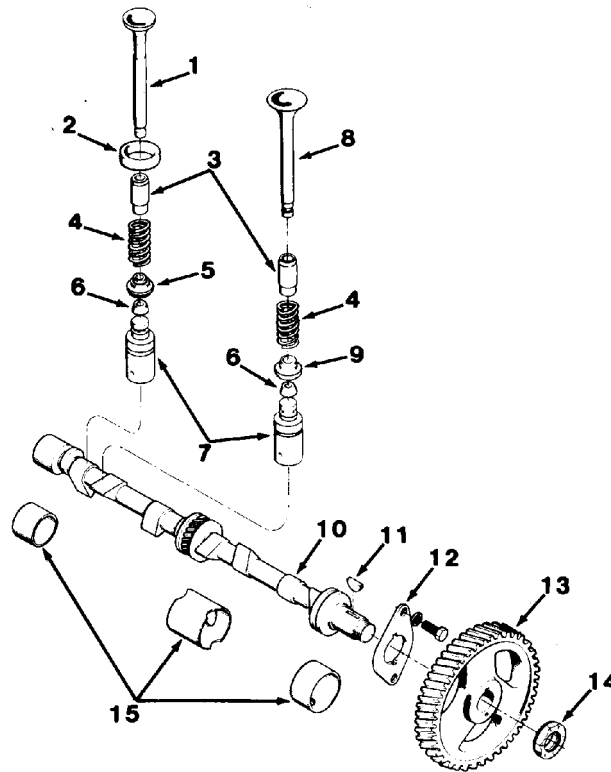


Fig. 1 - Cylinder Head, Crankcase and Flywheel Housing Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	53988-13	F601K00303	Thermostat, 180° F (82.2°c)	1
2	53988-14	F218K00202	Ring, Thermostat Adapter	1
3	53988-12	C400K00215	Gasket, Water Outlet Elbow	1
4	38228	20CL02020	Cap, Oil Filler	1
5	37803	F400L04300	Body, Oil Filler Crankcase	1
6	16162	F401A06021	Head, Cylinder	1
7		F401A00424	Gasket, Cylinder Head	1
8		X22128	Screw, Special, Cylinder Head to Crankcase (4, 5, 10, 11, & 15)	5
9	38102	F401L00402	Rod, Oil Gauge	1
10	38101	F401L00304	Support, Oil Gauge Rod	1
		F401L00203	Brace, Oil Gauge Support (Not Shown)	1
11		X01015	Valve, Cylinder Water Drain	1
12	SK2198		Cylinder and Crankcase Assembly, Includes: Cylinder Block, Connecting Rods, Camshaft Bushings, Front End Plate, Bearing Caps, Thrust Plate, Valve Train, Cam Gear, Tappets, Crankshaft Gear, Camshaft, Oil Gauge Rod Main and Rod Bearings, Crankshaft Support, Pistons, Piston Pins, Piston Rings, Oil Rod, Gauge Hole Cover- Fuel Pump, Service Gasket Set, Oil Guard- Rear Bearing	1
13		8TC00200 1	Dowel, Ring, Gear Cover and Front End Plate to Crankcase	1
14		7TC00215	Dowel, Ring, Front End Plate to Crankcase, Upper Right	1
15		X07814	Gasket, Oil Pan	1
16	37634	F401B-4321	Pan, Oil	1
17	38226	15SL00211	Valve, Relief, Oil Pressure	1
18	10203	X02236	Plug, Expansion, Crankcase at Rear Camshaft Bearing	1
19	16172	F601B-305	Block, Filler, Front	1
20	38081	F400B00255	Gasket, Filler Block, Front	1
21	38081	F400B00255	Gasket, Filler Block, Rear	1
22		F601B00425	Block, Filler, Rear	1
23	37793	T427B00201	Seal, Rear Bearing, Oil	2
24		F600B0399	Guard, Rear Bearing, Oil	1
25	38077	F124A00201	Gasket, Valve Chamber Cover	1
26	16148	F400A0366	Cover, Valve Chamber	1
27		X00334	Gasket, Copper, Valve Chamber Cover to Crankcase	2
28		X04038	Stud, Valve Chamber Cover To Crankcase	2
29		F401A03760	Baffle, Valve Chamber Oil Drain, Rear	1
		F401A03760	Baffle, Valve Chamber Oil Drain, Front	1
30		X00365	Gasket, Copper, Oil Pressure Relief Valve	1
31	62515		Spring, Oil Pressure Relief Valve	1
		F140B0320	Housing, Flywheel	1
		X07005	Dowel, Fly Housing to Crankcase	2
		8FC00205	Cover, Timing Hole	1

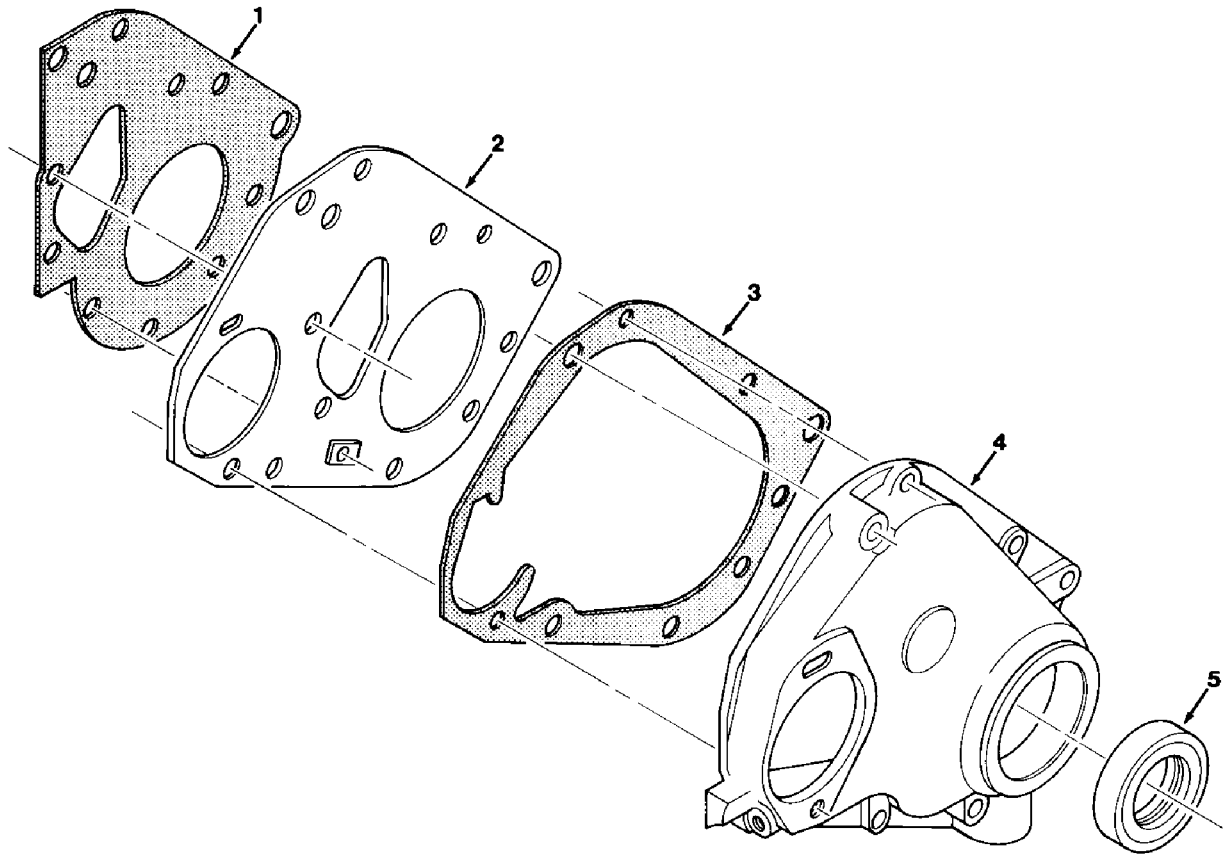
Fig. 2 - Valve and Camshaft Group



01772 - 550, G

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38109	F601I00303	Valve, Exhaust	4
2	37808	F140A00216010	Insert, Valve Seat, Exhaust (0.010" Oversize for Service)	4
3	16153	F400I00251	Guide, Valve Stem, Intake and Exhaust	8
4		Y400I00215	Spring, Valve, Intake and Exhaust	8
5	38110	F601I00301	Roto Coil, Exhaust	4
6		CVT03234	Lock, Valve Spring Retainer, Intake and Exhaust	16
7	16170	F600102520	Tappet, Valve, Standard	8
		F600102520001	Tappet, Valve, 0.001" Oversize	8
		F600102520003	Tappet, Valve, 0.003" Oversize	8
		F600102520005	Tappet, Valve, 0.005" Oversize	8
		F600102520010	Tappet, Valve, 0.010" Oversize	8
		F600102520015	Tappet, Valve, 0.015" Oversize	8
		F600102520020	Tappet, Valve, 0.020" Oversize	8
8		F600I00347	Valve, Intake	4
9	37594	F601I00200	Retainer, Valve Spring, Intake	4
10		F400I00343	Camshaft	1
11		X00506	Key, Cam Gear to Camshaft	1
12		F400I00246	Plate, Camshaft Thrust	1
13	16141	F124H00302	Gear, Camshaft	1
14		X18521	Nut, Cam Gear to Camshaft	1
15	38097	F400T00181	Bushing, Camshaft, Kit	1

Fig. 3 - Front End Plate and Gear Cover Group



01744 - 550, G

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	37631	F401B00342	Gasket, Front End Plate	1
2		F401B00333	Plate, Front End	1
3	38083	F400B00383	Gasket, Gear Cover	1
4	38084	F162B00412	Cover, Gear	1
5		X07810	Seal, Oil And Felt	1
		F401B00308	Pointer, Timing	1

Fig. 4 - Piston, Crankshaft and Flywheel Group

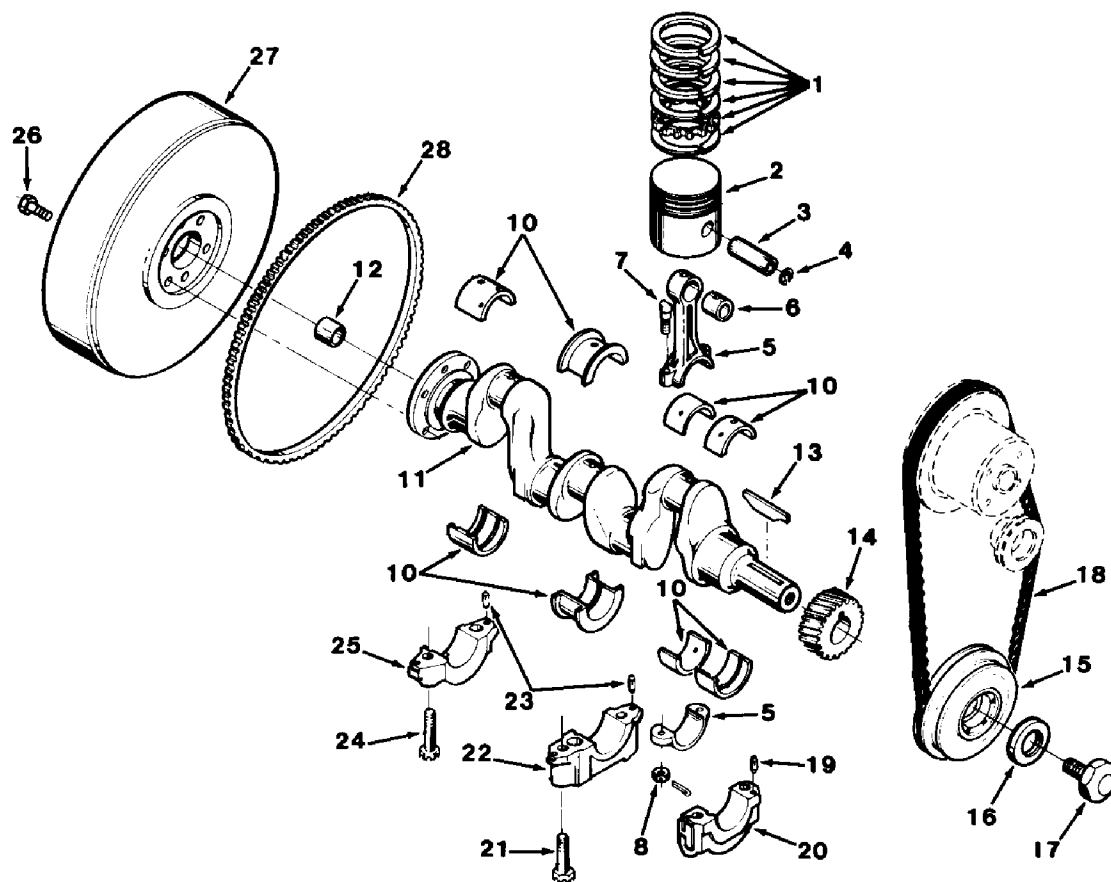
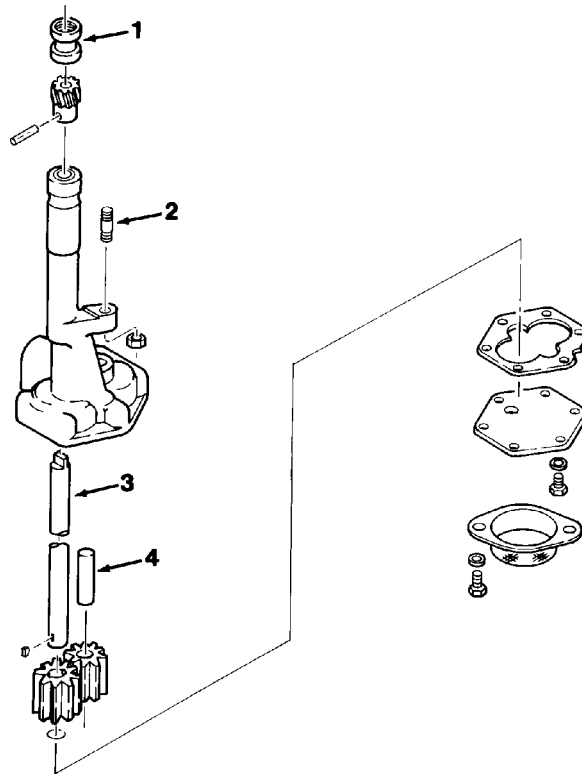


Fig. 4 - Piston, Crankshaft and Flywheel Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	37806	F163T00119	Ring Kit, Re-Ring, Standard	4
1		F163T00119020	Ring Kit, Re-Ring, 0.020" Oversize	4
1		F163T00119030	Ring Kit, Re-Ring, 0.030" Oversize	4
1		F163T00119040	Ring Kit, Re-Ring, 0.040" Oversize	4
1		F163T00119060	Ring Kit, Re-Ring, 0.060" Oversize	4
2	37958	F163A04081E	Piston, Standard	4
2		F163A04081E020	Piston, 0.020" Oversize	4
2		F163A04081E030	Piston, 0.030" Oversize	4
2		F163A04081E040	Piston, 0.040" Oversize	4
∇	2	F163A04081E060	Piston, 0.060" Oversize	4
▲	3	F600A00214	Pin, Piston, Standard	1
▲	3	F600A00214003	Pin, Piston, 0.003" Oversize	1
▲	3	F600A00214005	Pin, Piston, 0.005" Oversize	1
▲	4	F163A00205	Plug, Piston	1
5		F226D04002	Rod, Connecting, Less Bearings, Cast (Replace in Sets Only)	4
5		F227D06001	Rod, Connecting, Less Bearings, Forged (Replace in Sets Only)	4
6		F400G00211	Bushing, Piston Pin	4
7		F400D00202	Bolt, Connecting Rod	8
8		X18546	Nut, Connecting Rod Bolt	8
10		F163T00103	Bearing Kit, Main, Standard	1
10		F163T00103002	Bearing Kit, Main, 0.002" Undersize	1
10		F163T00103010	Bearing Kit, Main, 0.010" Undersize	1
10		F163T00103020	Bearing Kit, Main, 0.020" Undersize	1
10		F163T00103030	Bearing Kit, Main, 0.030" Undersize	1
10		F163T00103040	Bearing Kit, Main, 0.040" Undersize	1
11	38086	F400C02351	Crankshaft	1
12	38225	15LG00202	Bearing, Crankshaft Pilot	1
13		X00675	Key, Crankshaft Gear	1
14		D600H00300	Gear, Crankshaft	1
15	38099	F401C00416	Pulley, Crankshaft	1
16		X14235	Washer, Pulley to Crankshaft	1
17		X02959	Screw, Pulley to Crankshaft	1
18	76873-1		Belt, Alternator and Water Pump Drive	1
19		F600B00242	Dowel, Bearing Cap to Crankcase, Front	2
20		F600B00470	Cap, Crankshaft Bearing, Front	1
21		X06920	Bolt, Place, Bearing Cap to Crankcase, Center	2
22		F400B00359	Cap, Crankshaft Bearing, Center	1
23		F600B00247	Dowel, Bearing Cap to Crankcase, Center and Rear	4
24		X06503	Bolt, Place, Bearing Cap to Crankcase, Front-Rear	4
25		F401B00301	Cap, Crankshaft Bearing, Rear	1
26		X06828	Screw, Flywheel to Crankshaft (special)	6
27	16174	F601C04350	Flywheel	1
28	16147	F244C00317	Gear, Ring	1

Fig. 5 - Oil Pump Group



01775 - 550, G

	Tennant Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽		16171	F600L04132	Pump, Oil, Complete	1
▲	1		F400L00210	Bushing, Oil Pump Drive Shaft (In Crankcase)	1
▲	2		X04182	Stud, Oil Pump Body to Center Bearing Cap	1
▲	3		F218L00204	Shaft, Oil Pump Drive	1
▲	4		8UL00212	Stud, Oil Pump Idler Gear	1
▲			F6T02002	Repair Kit, Oil Pump	1

Fig. 6 - Water Pump Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	45617	F400K04471	Pump, Water, Service (Less Pulley)	1
	45639	F401K00324	Pulley, Water Pump	1
	38106	F600K00371	Gasket, Water Pump	1
		F6T01014	Repair Kit, Water Pump	1

Fig. 7 - Governor Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	45659	F401S00407	Governor	1
	23158		Gasket, Governor to Cover	1
		X005692122	Rod, Control, Governor to Carburetor	1
		X13203	Ball Joint, Governor Rod to Governor Arm	1
		X13201	Ball Joint, Governor Rod to Carburetor	1
		X18137	Nut, Ball Joint	4
		X18402	Nut, Governor Arm to Rod	1
		F401H00303	Gear, Governor	1
	37934	F401S00230	Spring, Governor	1
	37933	F401S00227	Seal, Oil	1

Fig. 8 - PCV Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
		X26125	Elbow, Restrictor, Intake Manifold	1
		X08253020	Hose	2
		F400F00478	Tube, Manifold to Tee	1
		X02751	Clamp, Hose	6
		X26124	Tee	1
		X08253120	Hose, Tee to Filler Tube	1

Fig. 9 - Fuel Pump Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	33842		① Replacement Kit, Fuel Pump	1
	47680	X01698	Gasket, Fuel Pump	1
		X03182	① Screw, Fuel Pump Mounting	2
	33861	F401F0500	① Tube, Fuel Pump to Carburetor	1
		X12251	Elbow, Fuel Pump Tube	2
	47675	F600B00234	Cover, Fuel Pump Hole (LPG Only)	1
	33846		② Pump Assembly, Fuel	1
	33856		② Screw, Hex, Mounting	2
	33861	F401F0500	② Tube, Fuel Pump to Carburetor	1

① Teledyne Continental Engine Serial Number (302064-330436)

② Teledyne Continental Engine Serial Number (330437-)

Fig. 10 - Oil Filter Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	37935	F600L004340	Filter, Oil	1
		F600L00447	Base, Oil Filter	1
		F600L00436	Bracket, Oil Filter	1
		X08016120	Hose, Oil	2
		X12143	Bushing, Reducing	1
		X12502	Elbow, Crankcase Oil Outlet at Bushing	1
		X12511	Elbow, Oil Filter Inlet and Outlet	2
		X12502	Elbow, Crankcase Oil Inlet	1
		X08016100	Hose, Oil Filter Outlet to Crankcase Inlet	1

Fig. 11 - Distributor and Coil Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽	16168	F401M00405	Distributor	1
▲	37422		Cap	1
▲	37421		Rotor	1
▲	37420		Contact Point Set	1
▲	45631		Condenser	1
		X19002	Stud, Distributor to Head	1
	16158	F400M00279	Shaft, Distributor to Drive	1
	38094	F400M00293	Clamp, Distributor	1
		22RM00303	Coil, Ignition	1
	55994	SP207S00016RD	Plug, Spark	4
	38076	FW00307100	Wire, Distributor to Plugs (10" Long)	4
	55911	FW00308120	Wire, Distributor to Coil (14" Long)	1
		F401M00219	Gasket, Distributor to Cylinder Head	1

Fig. 12 - Water Outlet Group, Gasoline

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	16142	F124K00334	Elbow, Water Outlet	1
	53988-12	C400K00215	Gasket, Water Outlet	1
	37816	X04136	Stud, Water Outlet	2
		X12517	Nipple, Water Outlet Elbow	1
		X01801E	Nut, Water Outlet Elbow	2
	53988-16	X400K00261	Hose, Outlet Elbow to Bypass	1
		X12191	Elbow, Bypass	1
		X01015	Drain Cock	1

Fig. 13 - Water Outlet Group, LPG

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽	SK2669	F400K04570	Elbow And Vaporizer Kit	1
▲	33603		Elbow, Water Outlet, LPG	1
▲▽	33600		Vaporizer, LPG	1
▲▲	33602		Repair Kit, Vaporizer	1
▲	53988-13	F601K00303	Thermostat	1
▲	53988-14	F218K00202	Ring, Retaining	1
▲	53988-12	C400K00215	Gasket, Thermostat	1
		X04107	Stud, Water Outlet	2
		C400K00215	Gasket, Water Outlet	1
	50508	X08072120	Hose, Vaporizer to Carburetor	1
	50502	X08100102	Hose, Water Recirculating	1
	50501	X12474	Elbow, Vaporizer Outlet	1
		X07057	Ring, Retaining	1
	50509		Elbow, Carburetor	1
	15791-1		Connector, Water Pump	1
	54241		Elbow, Water Pump	1

Fig. 14 - Exhaust and Intake Manifold Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
		X04057	Stud, Exhaust and Intake Manifold to Crankcase	6
		X04182	Stud, Exhaust Manifold Outlet	3
	38087	F400E00303	Gasket, Manifold	1
	38428	F400E00423	Manifold, Intake and Exhaust	1
		X04182	Stud, Carburetor to Manifold	2

Fig. 15 - Carburetor Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽	38089	F400F00263	Carburetor, Gasoline	1
▲	37612		Repair Kit, Carburetor	1
▽	45647	CA10F00319	Carburetor, LPG	1
▲		K2948	Repair Kit, Carburetor	1
		X12251	Elbow, Carburetor, Gasoline	1
		X12774	Elbow, Carburetor, LPG	1
	38010	M330F00253	Gasket, Carburetor	1

Fig. 16 - Starter and Alternator Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
	55977	F401M00338	Starter	1
		X07580	Connector, Alternator Wire	1
		X14234	Spacer, Alternator to Bracket, Rear	1
	38445	F401M00355	Alternator	1
	37794	HD277M00407	Fan, Alternator	1
		X14531	Spacer, Between Alternator Pulley and Fan	1
	34904		Pulley, Alternator	1
	38104	F401M00407	Bracket, Alternator	1
		X19002	Stud, Alternator Bracket to Crankcase	2
	38103	F401M00201	Strap, Alternator, Adjusting	1
		F401M00332	Harness, Wiring, Alternator	1

SECTION 13

CONTENTS	PAGE
Fig. 1 - Engine Block Group	13-2
Fig. 2 - Cylinder Head Group	13-4
Fig. 3 - Camshaft Group	13-6
Fig. 4 - Crankshaft Group	13-8
Fig. 5 - Piston Group	13-9
Fig. 6 - Oil Pump Group	13-10
Fig. 7 - Gear Cover Group	13-11
Fig. 8 - Flywheel and Starter Group	13-12
Fig. 9 - Intake and Exhaust Manifold Group	13-13
Fig. 10 - Water Pump Group	13-14
Fig. 11 - Water Header and Thermostat Group	13-15
Fig. 12 - Carburetor and Controls Group	13-16
Fig. 13 - Oil Filter Group	13-17
Fig. 14 - Distributor and Fuel Pump Group	13-18

Fig. 1 - Engine Block Group

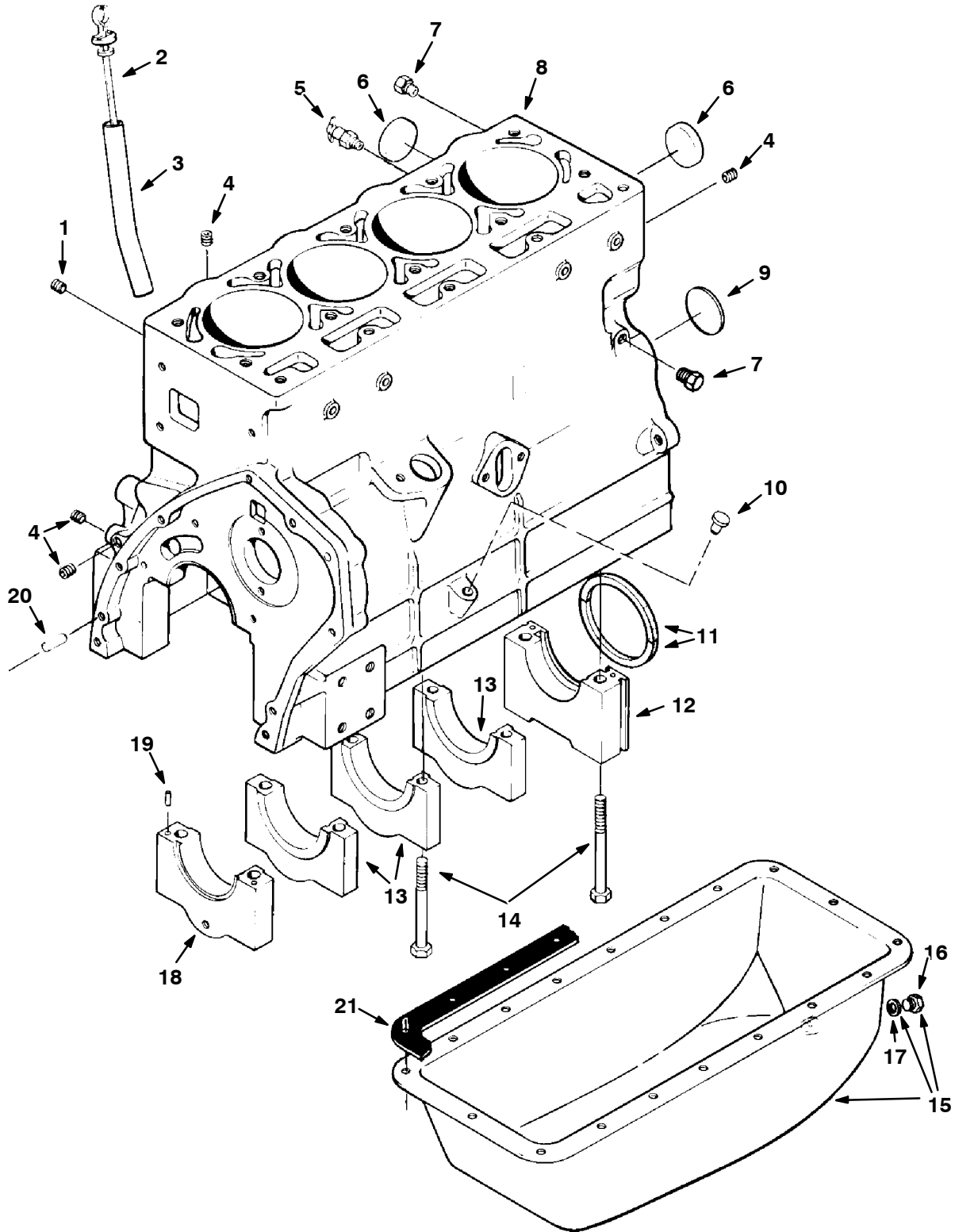


Fig. 1 - Engine Block Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		X00110	Plug, Crankcase	1
2	38404	TM27L00427	Rod, Oil Gauge	1
3	52736	TM27L00406	Tube, Oil Gauge	1
4		X00137A	Plug, Crankcase	5
5	51305	X01015	Cock, Drain	1
6	78517	X13304	Plug, Cup	5
7		X26129	Plug	2
8	31945	TM27A615605R	Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrustplate, Cam Gear, Gear, Oil Pump, Oil Gauge Support, and Gasket Set	1
8	31944	TM27A615802S	Long Block Assembly, S, Includes: R Short Block Assembly Plus - Head, Guides, Valves and Associated Parts, Rocker Arm Shaft Assembly, Pushrods, Head Cover, Gear Cover, Oil Pan, Oil Filler Cap, and Gasket Set	1
9	38413	X02208	Plug, Expansion	1
10		X07663	Plug, Crankcase	1
11	38408	TM27L00513	Seal, Oil	2
12		TM27B00500	Cap and Filler Block, Rear Bearing	1
		X07846	Gasket, Rear Bearing Cap	1
13		TM27B00401	Cap, Crankshaft Bearing	3
14		XM32018	Screw	10
15		TM27B05071	Oil Pan Assembly	1
▽ 15	61711	TM27B05100	Oil Pan Assembly	1
▲ 16	38082	F400B00282	Plug, Drain	1
▲ 17		X14583	Washer, Drain Plug	1
18		TM27B00400	Cap, Crankshaft	1
19		F600B00242	Dowel, Bearing Cap	4
20		X17025	Pin, Dowel	2
21		TM27T00107	Gasket, Oil Pan, Form-in-Place	1

Fig. 2 - Cylinder Head Group

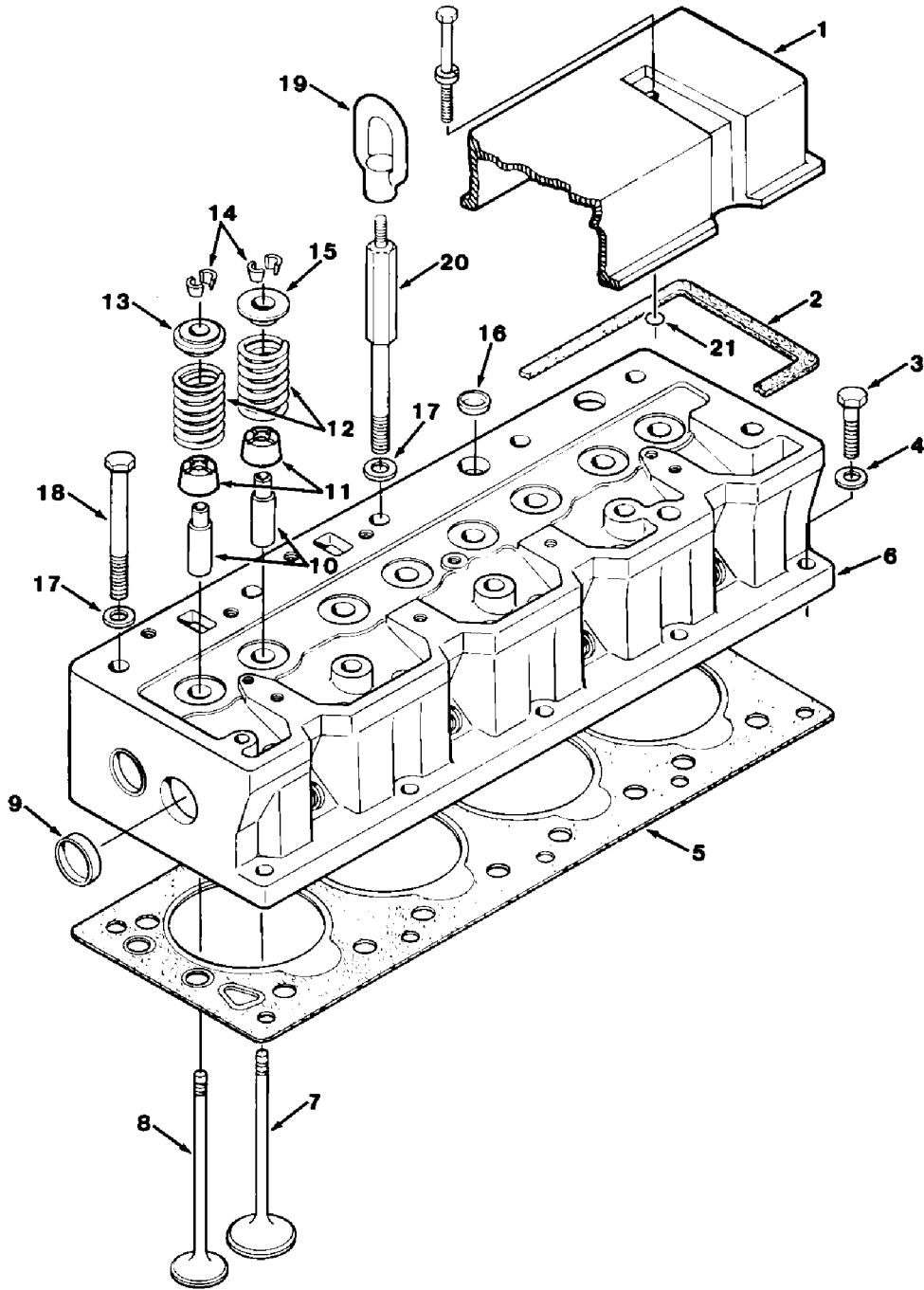


Fig. 2 - Cylinder Head Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38397	TM27A00610	Cover, Cylinder Head	1
2	34876	TM27A00502	Gasket, Head Cover	1
3		XM32021	Screw	5
4	37942	13XX14141	Washer, Plain	5
5	38665	TMD27A00205	Gasket, Cylinder Head	1
▽ 6		TM27A06091	Head Assembly, Cylinder	1
▲ 7		TM27I00504	Valve, Intake	4
▲ 8		TM27I00505	Valve, Exhaust	4
▲		TM27A00400	Seat, Exhaust Valve	4
▲		TM27A0040025	Seat, Exhaust Valve, 0.025 mm oversize	4
▲ 9		X02583	Plug, Cup	4
▲ 10		TM27I00316	Guide, Valve Stem	8
▲ 11		TM27I00311	Guard, Valve Stem Oil	8
▲ 12		TM27I00309	Spring, Valve	8
▲ 13		TM27I00308	Roto-Coil, Exhaust	4
▲ 14		CVT03234	Lock, Valve Spring Retainer	16
▲ 15		TM27I00300	Retainer, Valve Spring	4
▲ 16		X07689	Plug, Cup	2
17		XM37003	Washer, Plain	10
18		XM32020	Screw	9
19		XM38004	Eye, Lifting	1
20		XM32094	Screw	1
21		XM39000	O-Ring	3
		TM27U01002	Gasket Set	1

Fig. 3 - Camshaft Group

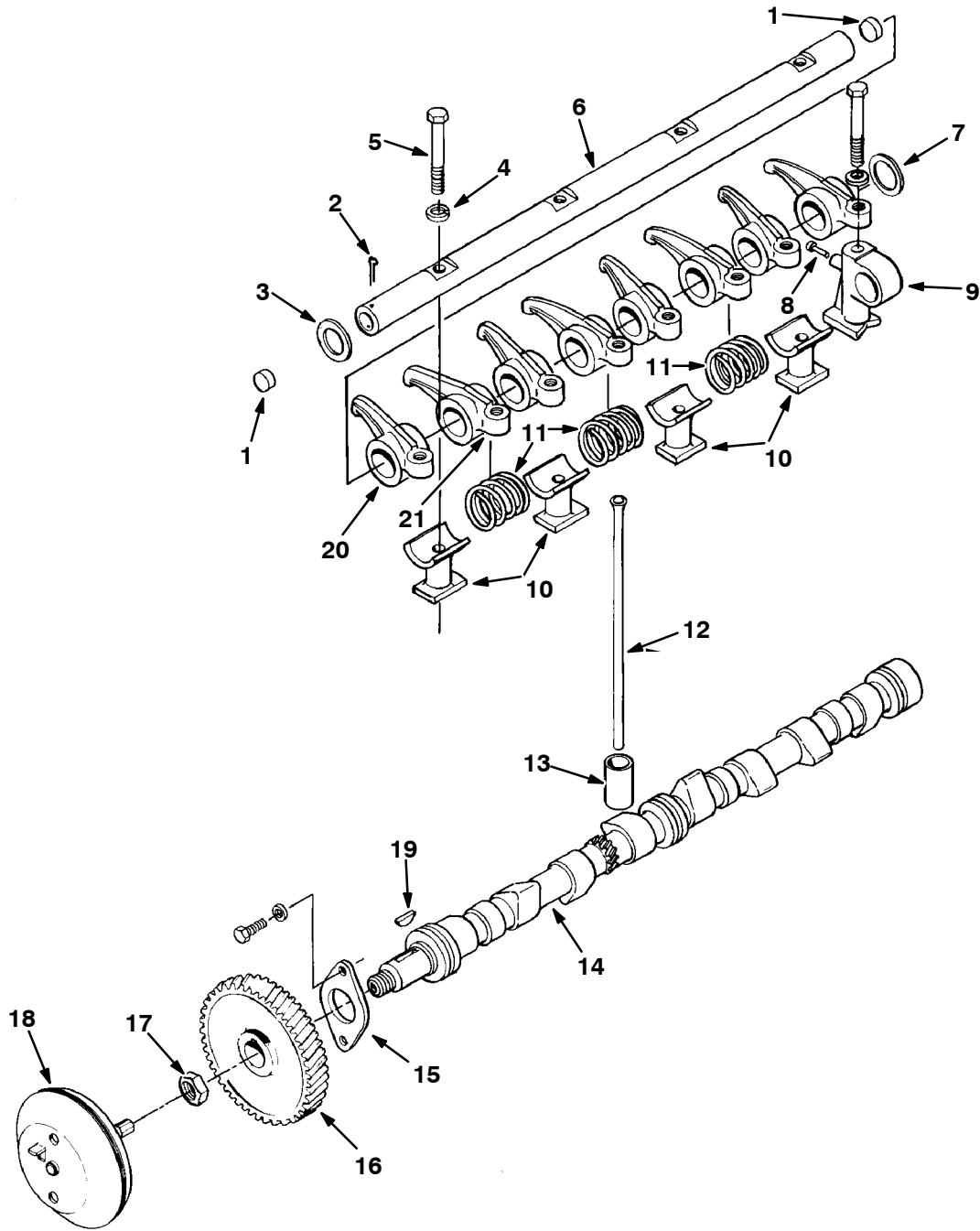
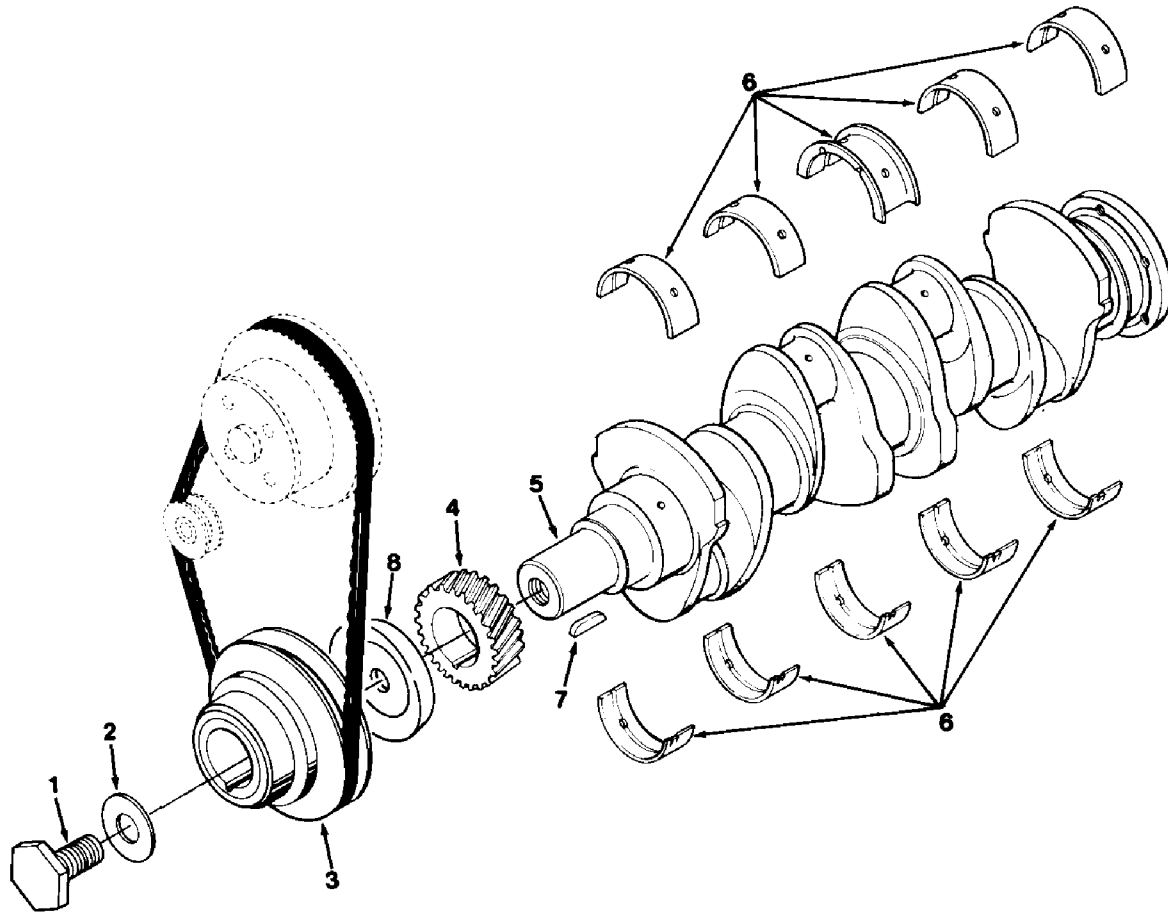


Fig. 3 - Camshaft Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27I00202	Plug, Shaft Ends	2
2		X00623	Pin, Cotter	2
3		X14589	Washer, Flat	2
4		XM37005	Washer, Flat	5
5		XM32031	Screw	4
6		TM27I00511	Shaft, Rocker Arm	1
7		TM27I00313	Washer, Wavy	2
8		X17066	Pin, Rear Support Top	1
9			Support, Rocker Arm Shaft, Rear	1
10		TM27I00314	Support, Rocker Arm Shaft	4
11		TM27I00303	Spring, Rocker Arm Shaft	3
12		TM27I00403	Rod, Push	8
13		TM27I00305	Tappet, Valve	8
14		TM27I00601	Camshaft	1
15		F400I00246	Plate, Camshaft Thrust	1
16		TM27H00500	Gear, Camshaft	1
17		X18552	Nut	1
18		Z145S03000	Governor Assembly	1
19		X00599D	Key	1
20		TM27I05070	Arm Assembly, Rocker, Exhaust	4
21		TM27I05060	Arm Assembly, Rocker, Intake	4

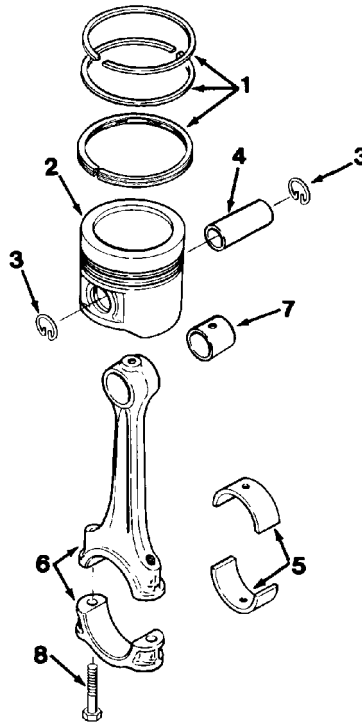
Fig. 4 - Crankshaft Group



/09767 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32064	Screw, Crankshaft	1
2		XM37014	Washer, Plain	1
3		TM27C00401	Pulley, Crankshaft	1
4		TM27H00407	Gear, Crankshaft	1
5		TMD27C00300	Crankshaft	1
6		TM27T00102	Bearing Kit, Crankshaft, Standard	1
6		TM27T00102025	Bearing Kit, Crankshaft, 0.25 mm undersize	1
6		TM27T00102050	Bearing Kit, Crankshaft, 0.50 mm undersize	1
6		TM27T00102075	Bearing Kit, Crankshaft, 0.75 mm undersize	1
6		TM27T00102100	Bearing Kit, Crankshaft, 1.00 mm undersize	1
7		X00666	Key	1
8		TM27C00408	Slinger, Oil	1

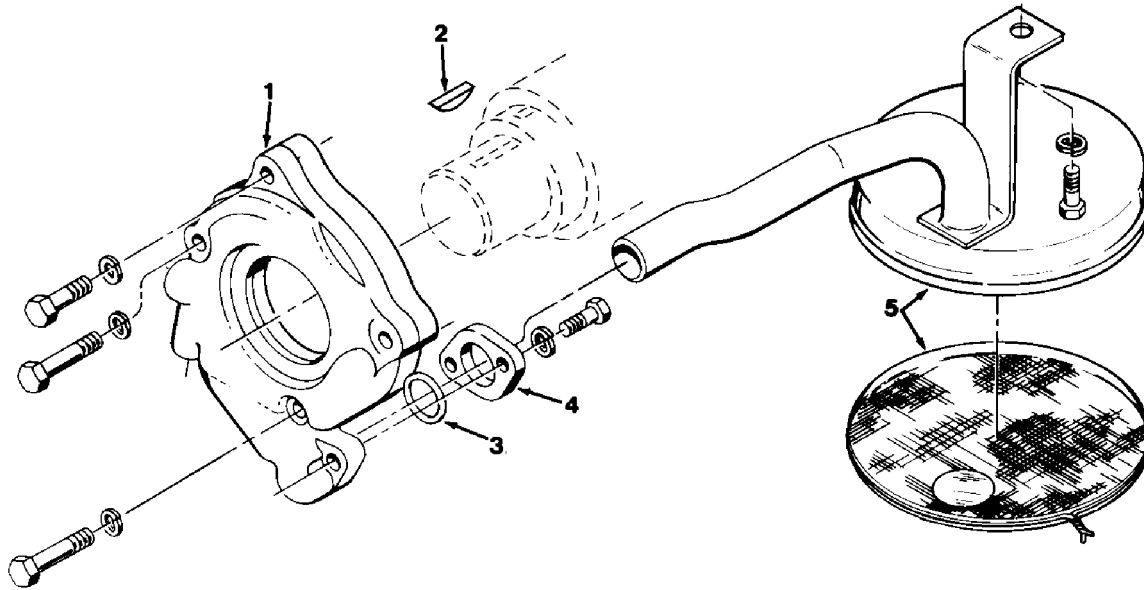
Fig. 5 - Piston Group



01610 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27T00120	Ring Kit, Re-Ring, Standard	4
1		TM27T00106050	Ring Kit, Re-Ring, 0.50 mm Oversize	4
1		TM27T00106075	Ring Kit, Re-Ring, 0.75 mm Oversize	4
1		TM27T00106100	Ring Kit, Re-Ring, 1.00 mm Oversize	4
2		TM27A05001E	Piston Assembly, Standard	4
2		TM27A05001E050	Piston Assembly, 0.50 mm Oversize	4
2		TM27A05001E075	Piston Assembly, 0.75 mm Oversize	4
∇	2	TM27A05001E100	Piston Assembly, 1.00 mm Oversize	4
▲	3	K800A00203	Ring, Retaining	2
▲	4	TM27A00300	Pin, Piston	1
5		TM27T00103	Bearing Kit, Connecting Rod, Standard	1
5		TM27T00103025	Bearing Kit, Connecting Rod, 0.25 mm undersize	1
5		TM27T00103050	Bearing Kit, Connecting Rod, 0.50 mm undersize	1
5		TM27T00103075	Bearing Kit, Connecting Rod, 0.75 mm undersize	1
5		TM27T00103100	Bearing Kit, Connecting Rod, 1.00 mmundersize	1
∇	6	TMD27D03001	Rod Assembly, Connecting	4
▲	7	TM27G00301	Bushing, Piston Pin	4
▲	8	Z145D00300	Bolt, Connecting Rod	8

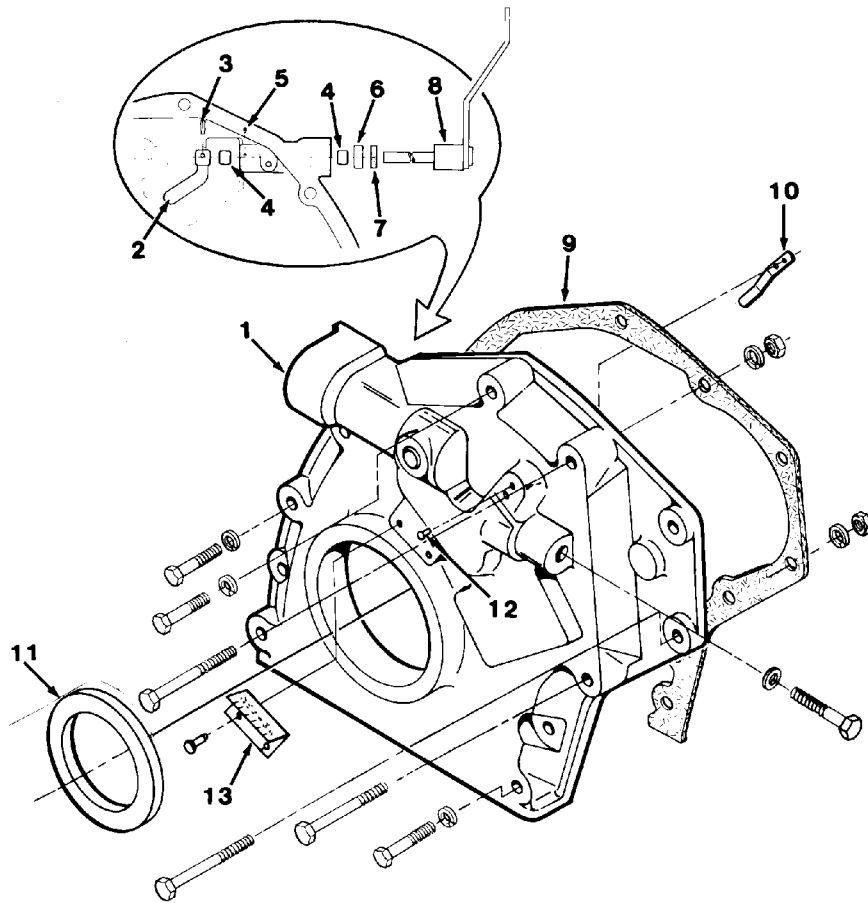
Fig. 6 - Oil Pump Group



01611 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27L06030	Pump, Oil	1
2		X00692	Key, Woodruff	1
3		X01673	O-Ring	1
4		TM27L00200	Adapter, Inlet Tube	1
5		TM27L05100	Tube Assembly, Oil Pump Inlet	1

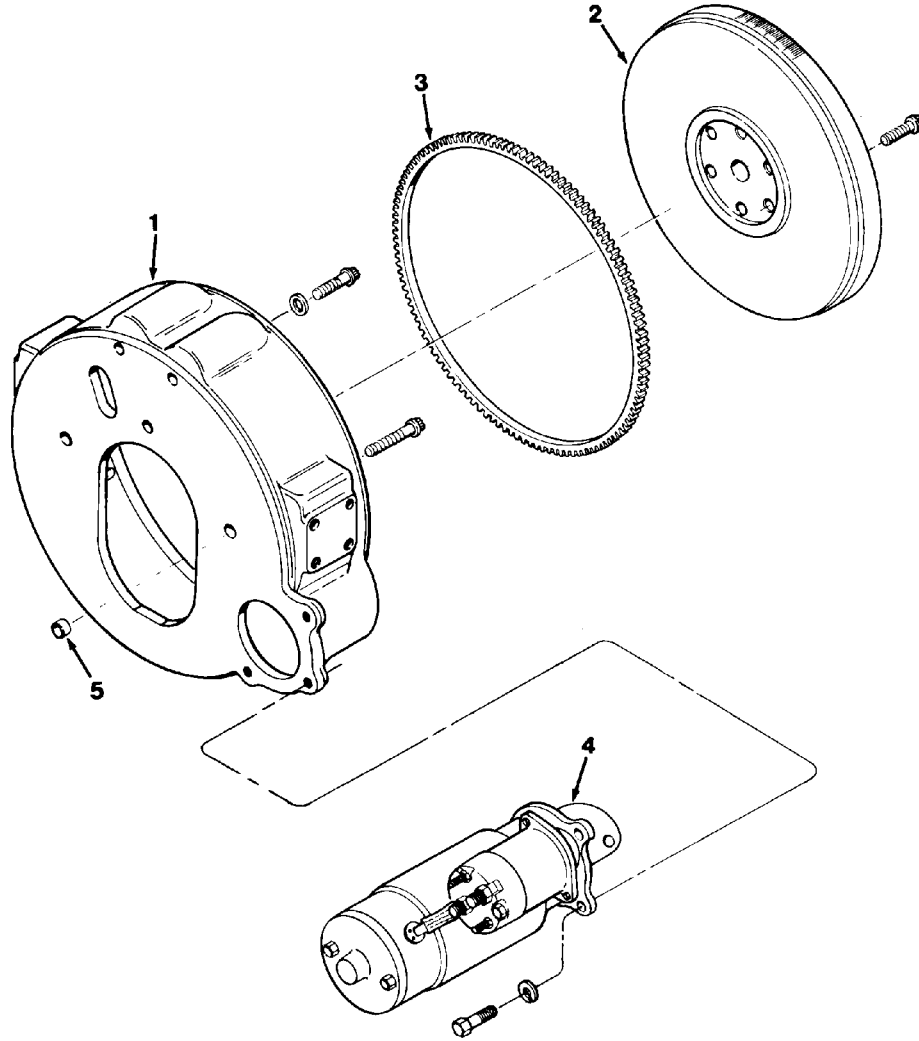
Fig. 7 - Gear Cover Group



01612 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽ 1		TM27B06005	Cover Assembly, Gear	1
▲ 2		Z120S00203	Arm, Rocker	1
▲ 3		X17040	Pin, Groove	1
▲ 4		Z120S00202	Bearing, Rocker Shaft	2
▲ 5		X17045	Pin, Groove	1
▲ 6		D600S00207	Seal, Shaft Oil	1
▲ 7		Z120S00207	Seal, Shaft	1
▲ 8		TM27S04080	Lever and Shaft Assembly, Governor, Gasoline	1
▲ 8		TM27S00406	Lever and Shaft Assembly, Governor, LPG	1
▲ 9	38381	TMD27B00529	Gasket, Gear Cover	1
▲ 10		TM27S00302	Spring, Governor Bumper	1
▲ 11	38416	X07845	Seal, Oil	1
▲ 12		X17048	Rivet	2
		TM27B00300	Pointer, Engine Timing	1
		TM27U02001	Gasket Set, Front	1

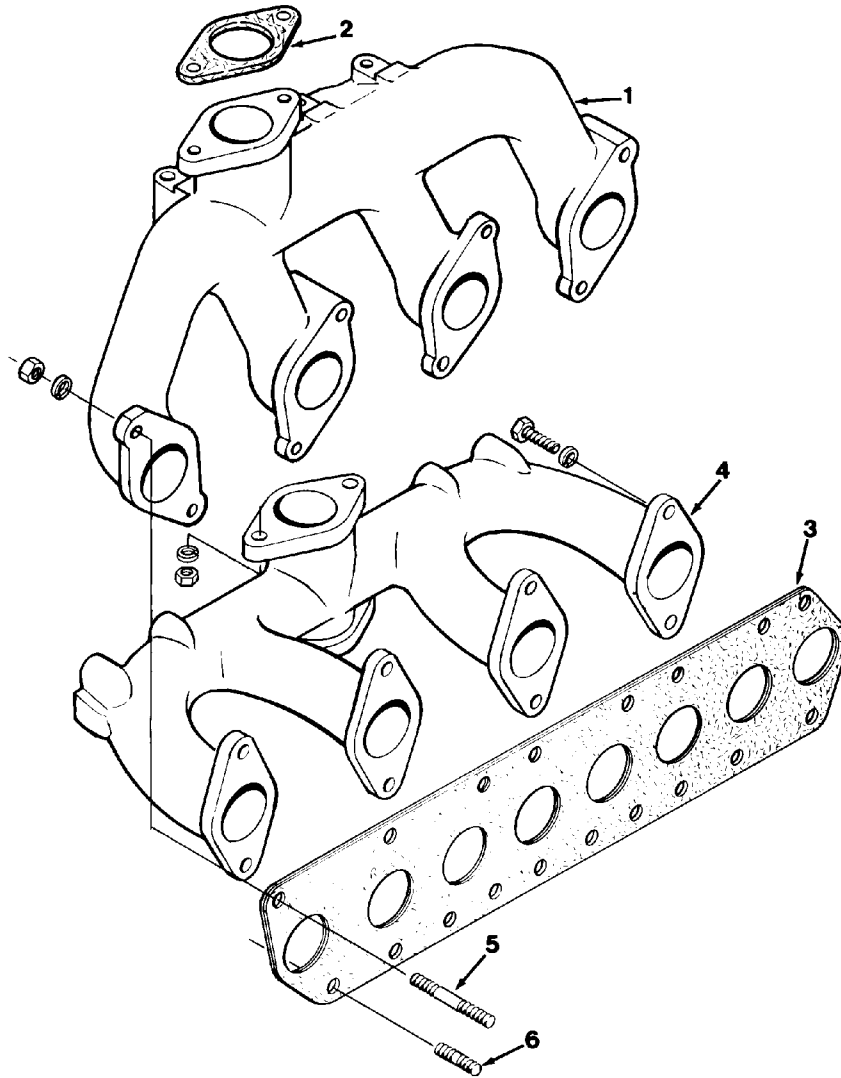
Fig. 8 - Flywheel and Starter Group



01613 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	16143	F140B00320	Housing, Flywheel	1
▽ 2	16851	TM13C03100	Flywheel	1
▲ 3	16852	TM13C00502	Ring Gear	1
4	16865	TMD13M00500	Starter	1
5		X07005	Dowel, Ring	2

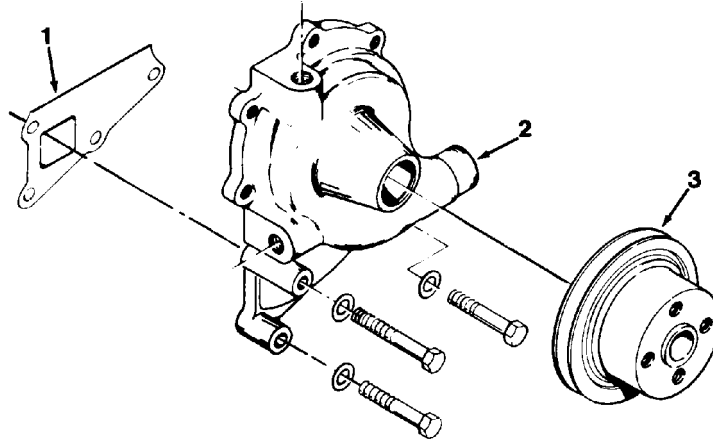
Fig. 9 - Intake and Exhaust Manifold Group



09761 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38420	TM27E00601	Manifold, Exhaust	1
▽	34640		Gasket Set, Manifold	1
▲	2	TM27E00300	Gasket, Manifold	1
▲	3	TM27E00400	Gasket, Manifold	1
4		TM27F00507	Manifold, Intake	1
5		XM32050	Stud	2
6		XM32022	Stud	6

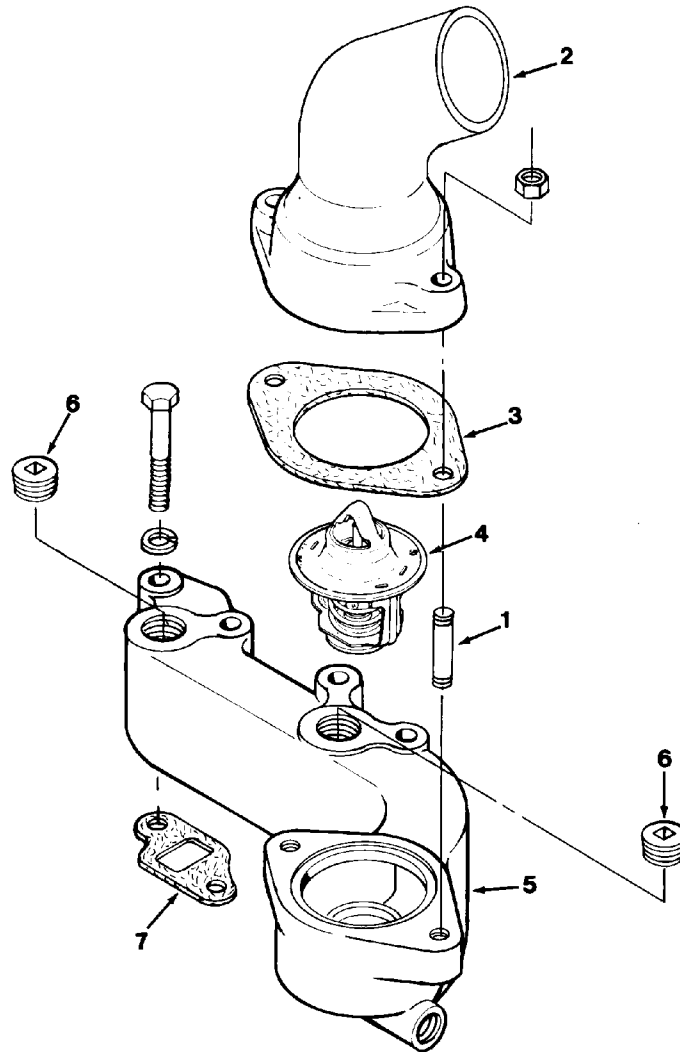
Fig. 10 - Water Pump Group



01615 - 550, 1550, G, LP

	Tennant Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽		34830		Pump and Gasket, Water	1
▲	1	34873	TM27K00301	Gasket, Water Pump to Crankcase	1
▲▽	2	34429	TM27K06051	Pump, Water	1
▲▲			TM27T01003	Repair Kit, Water Pump	1
▲▲	3		TM27K00412	Pulley, Water Pump	1

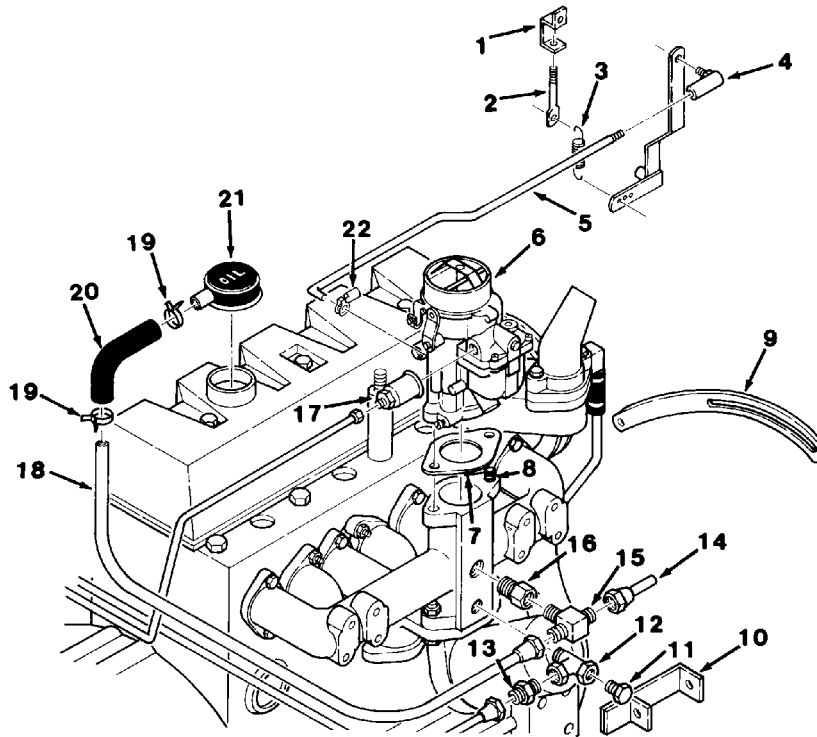
Fig. 11 - Water Header and Thermostat Group



01616 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32001	Stud	2
2	38401	TM27K00310	Elbow, Water Outlet	1
▽	34752		Thermostat and Gasket	1
▲	53988-12	C400K00215	Gasket, Elbow	1
▲	53988-13	F601K00303	Thermostat	1
5		TM27K00503	Header, Water Outlet	1
6		X00101B	Plug	2
7		TM27K00304	Gasket, Header	2

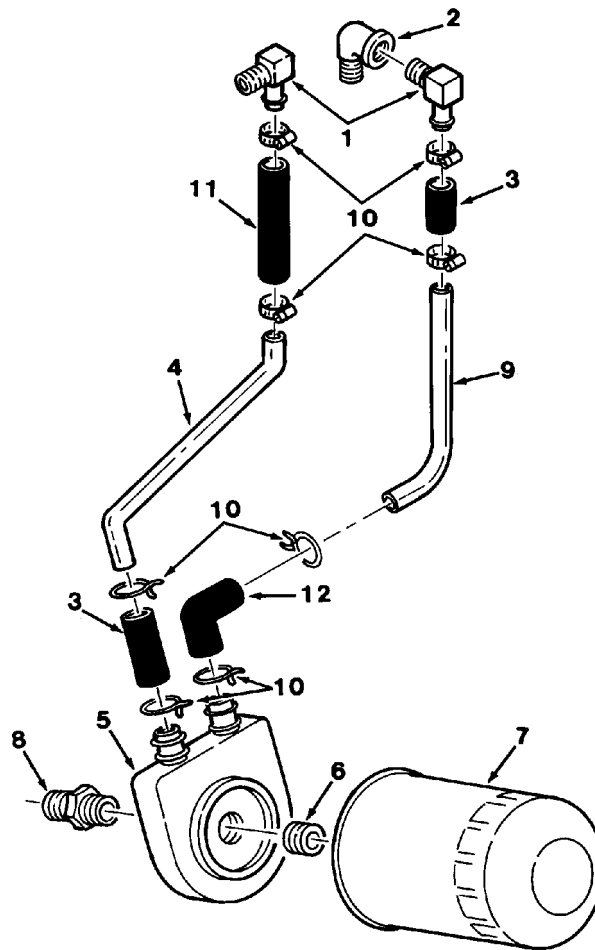
Fig. 12 - Carburetor and Controls Group



01618 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1		TM27S00314	Anchor, Governor Spring	1	
2		TM27S00318	Screw, Governor Spring	1	
3		F401S00230	Spring, Governor	1	
4		X13201	Balljoint	1	
5		TM27S00316	Rod, Control	1	
▽	34798		Carburetor and Gasket, LPG	1	
▲	6	39797	TM27F00421	Carburetor, LPG	1
▲	7	38010	M330F00253	Gasket, Carburetor	1
▲		34797		Carburetor Repair Kit	1
▽	65948		Carburetor and Gasket, Gasoline	1	
▲	65949	TM27F00205	Carburetor, Gasoline	1	
▲	65950	TM27F00206	Gasket, Carburetor	1	
8		XM32048	Stud	2	
9		TM27M00308	Strap, Adjusting, Alternator	1	
10		TM27M00401	Bracket, Alternator	1	
11		X26129	Plug	1	
12		X12671	Tee	1	
13		X12131	Connector	1	
14		TM27F02000	Adapter	1	
15		X26153	Tee	1	
16		X26146	Adapter	1	
17	34749	TM27F00304	Filter, Fuel, Gasoline	1	
18		TM27F05180	Tube, PCV	1	
19		X02708	Clamp	2	
20		F401F00274	Hose	1	
21	38403	TM27L00412	Cap, Oil Filler	1	
22		X05696	Clip, Rod End	1	

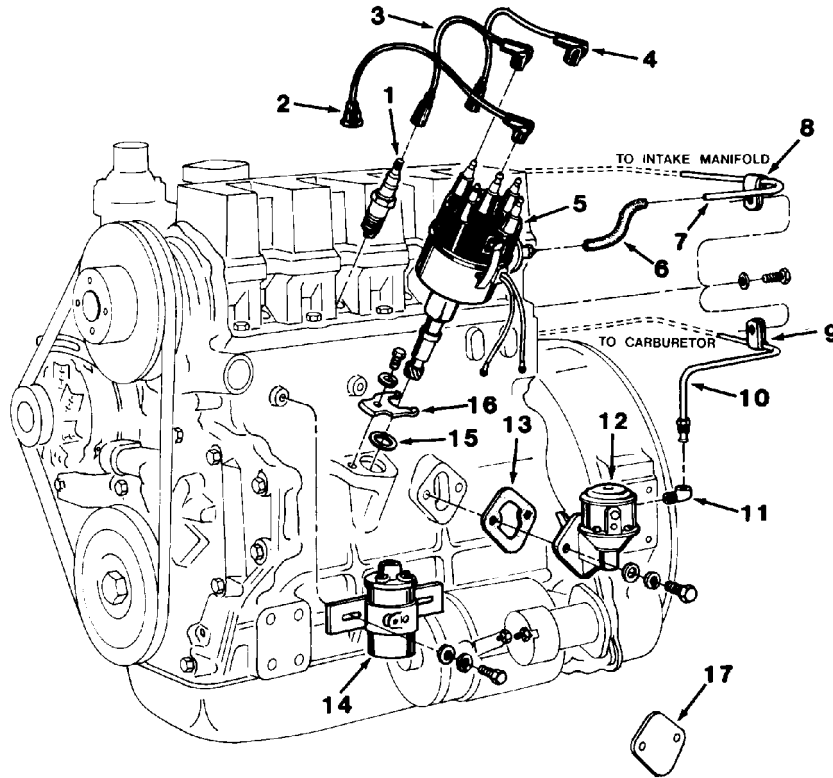
Fig. 13 - Oil Filter Group



09772 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	47388	X26142	Elbow, Water Header	2
2		X12191	Elbow, Water Pump	1
3		X08253020	Hose, Oil Cooler	2
4	38409	TM27L00516	Tube, Oil Cooler	1
5	38405	TM27L00420	Cooler, Oil	1
6	38402	TM27L00202	Adapter, Oil Filter	1
7	16853	TM27L00312	Element, Oil Filter	1
8		TM27L00204	Connector, Oil Cooler	1
9	38406	TM27L00423	Tube, Oil Cooler	1
10		X02751	Clamp, Hose	8
11		X08253040	Hose, Oil Cooler	1
12		TM27L00208	Hose, Oil Cooler	1

Fig. 14 - Distributor and Fuel Pump Group



01617 - 550, 1550, G, LP

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1	34726	SP200S00009RNYC	Spark Plug, Gasoline	4	
1	34297	SP200S00006RNY	Spark Plug, LPG	4	
▽	34727		Wire Set, Spark Plug	1	
▲	2	FW00313080	Wire, Coil	1	
▲	3	FW00312080	Wire, Spark Plug #1, #2	2	
▲	4	FW00312120	Wire, Spark Plug, #3, #4	2	
▽	5	38410	TM27M00502	① Distributor Assembly, (replaced by 09892)	1
▲		34193	① Cap	1	
▲		34189	① Rotor	1	
▽	5	38991	TM27M00510	② Distributor Assembly	1
▲		09819	TM27M00234	② Cap and Gasket	1
▲		09837	TM27M00224	② Rotor	1
▲		09852	20120003	② Cover, Dust	1
▲		09910	20120010	② Cap, Gasket	1
▲		09861	20120004	② Magnet	1
▲		09867	TM27M00226	② Module	1
▲			TM27M00235	② Weights Set, Advance	1
▲		09890	TM27M00231	② Spring Set, Advance	1
▲		09891	TM27M00232	② Vacuum Advance	1
▲		09857	TM27M00225	② Gear Kit	1
▲		09930	20120011	② Spacer, Rotor	1
	6	X08258080	① Hose, Vacuum	1	
	6	X08258110	② Hose, Vacuum	1	
	7	TM27F05140	Tube, Vacuum	1	
	8	X07737	Clip	1	

Fig. 14 - Distributor and Fuel Pump Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
9		X07738	Clip	1
10	38550	TM27F05130	⑤ Tube, Fuel (for Engines 34920/34930) (Replaced by none)	1
10	33855	TM27F05200	⑥ Tube, Fuel (for Engines 34920/34930)	1
10		TM27F05190	Tube, Fuel (for Engines 16860/16870)	1
11		X12015	Elbow	1
	33843		⑤ Pump Replacement Kit	1
∇	33848		⑥ Pump and Gasket, Fuel	1
▲	12 33849	TM27F00425	Pump, Fuel	1
▲	13 47680	X01698	Gasket, Fuel Pump	1
	14 38423	F401M00343	① Coil Assembly, Ignition, (replaced by 38992)	1
		38006	① Clamp, Coil, (replaced by 38992)	1
∇	14 38992	TM27M3170	③ Coil Assembly, Ignition (replaced by 79092)	1
▲		79092	③ Coil Replacement Kit	1
▲		79091	④ Coil	1
▲		TM27M00229	② Bracket, Coil	1
▲		09877	③ Restistor (replaced by 79092)	1
▲		TM27M00230	② Bracket, Resistor	1
	15	F401M00219	Gasket, Distributor	1
	16	Z145M00308	Clamp, Distributor	1
	17	F600B00234	Cover, Fuel Pump Hole, LPG	1
	33850	F601F00304	⑥ Plate, Adapter, Pump	1

- ① Teledyne Continental Engine Serial Number (000000-302530)
- ② Teledyne Continental Engine Serial Number (302531-)
- ③ Teledyne Continental Engine Serial Number (302531- xxxxxx)
- ④ Teledyne Continental Engine Serial Number (xxxxxx-)
- ⑤ Teledyne Continental Engine Serial Number (000000-000472)
- ⑥ Teledyne Continental Engine Serial Number (000473-)

SECTION 14

CONTENTS	PAGE
Fig. 1 - Engine Block Group	14-2
Fig. 2 - Fuel System Group	14-4
Fig. 3 - Cylinder Head Group	14-6
Fig. 4 - Camshaft Group	14-8
Fig. 5 - Crankshaft Group	14-9
Fig. 6 - Piston Group	14-10
Fig. 7 - Oil Pump Group	14-11
Fig. 8 - Gear Cover Group	14-12
Fig. 9 - Flywheel and Starter Group	14-13
Fig. 10 - Intake and Exhaust Manifold Group	14-14
Fig. 11 - Water Pump Group	14-15
Fig. 12 - Water Header and Thermostat Group	14-16
Fig. 13 - Alternator Brackets and PCV Group	14-17
Fig. 14 - Oil Filter Group	14-18

Fig. 1 - Engine Block Group

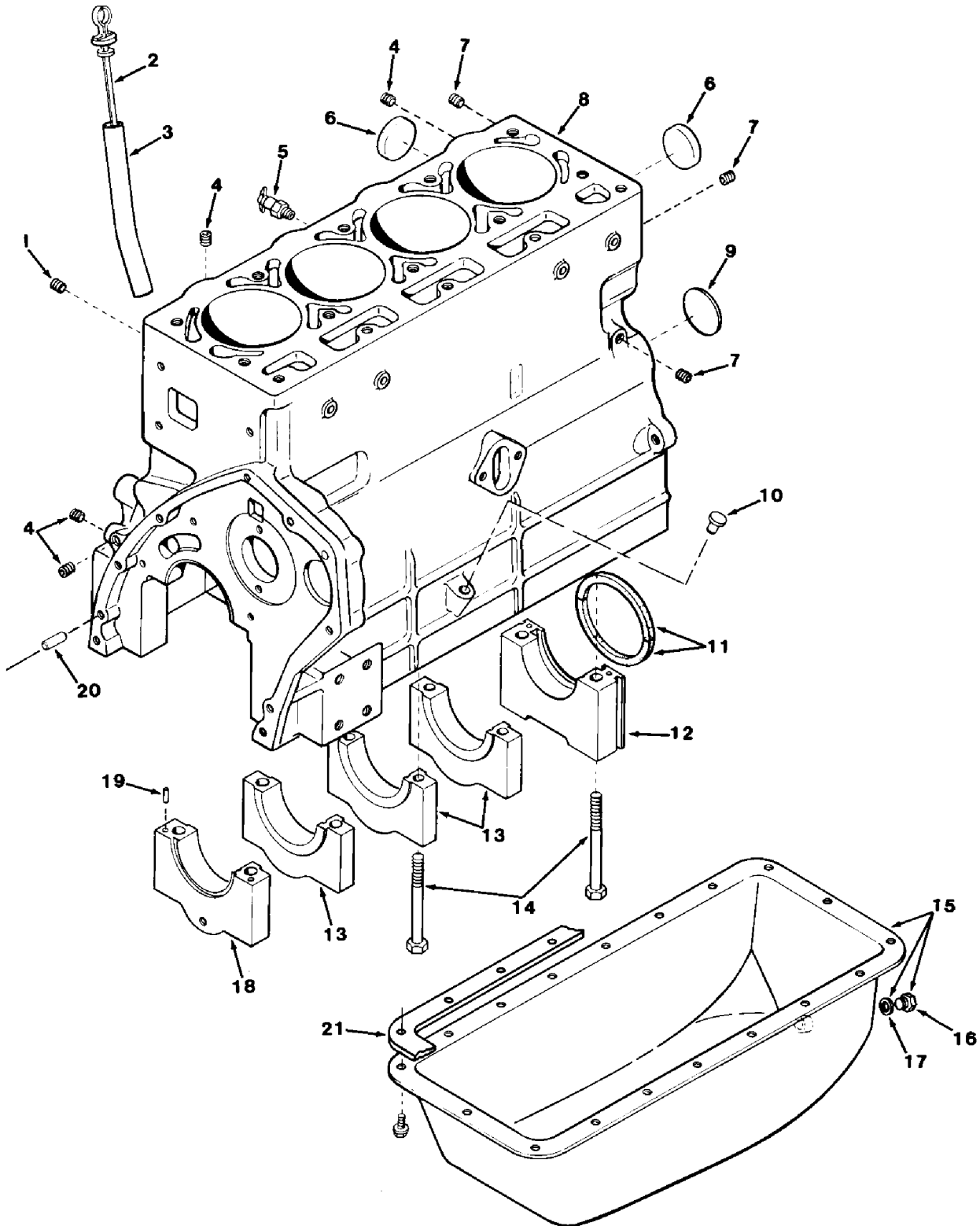


Fig. 1 - Engine Block Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		X00110	Plug	1
2	38404	TM27L00427	Rod, Oil Gauge	1
3	52736	TM27L00406	Tube, Oil Filler	1
4		X00137A	Plug	5
5	51305	X01015	Cock, Water Drain	1
6	78517	X13304	Plug, Cup	5
7		X26129	Plug	2
8	31943	TMD27A610602R	Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrust Plate, Cam Gear, Gear, Oil Pump, Oil Gauge Support, and Gasket Set	1
8	31942	TMD27A610802S	Short Block Assembly, S, Includes: R ShortBlock Assembly Plus - Head, Guides, Valves and Associated Parts, Rocker Arm Shaft Assembly, Pushrods, Head Cover, Gear Cover, Oil Pan, Oil Filler Cap, and Gasket Set	1
9	38413	X02208	Plug, Expansion	1
10		X07663	Plug	1
11	38408	TM27L00513	Seal, Oil	2
12		TMD27B00502	Cap And Filler Block, Rear Bearing	1
		X07846	Gasket, Rear Bearing Cup	1
13		TMD27B00403	Cap, Crankshaft Bearing	3
14		XM32018	Screw	10
15		TM27B05071	Pan Assembly, Oil	1
▽ 15	61711	TM27B05100	Pan Assembly, Oil	1
▲ 16	38082	F400B00282	Plug, Drain	1
▲ 17		X14583	Washer, Drain Plug	1
18		TMD27B00402	Cap, Crankshaft Bearing, Front	1
19		F600B00242	Dowel, Bearing Cap, Front and Rear	4
20		X17025	Pin, Dowel, Gear Cover to Crankcase	2
21	38758	TM27T00107	Gasket, Oil Pan, Form-In-Place	1

Fig. 2 - Fuel System Group

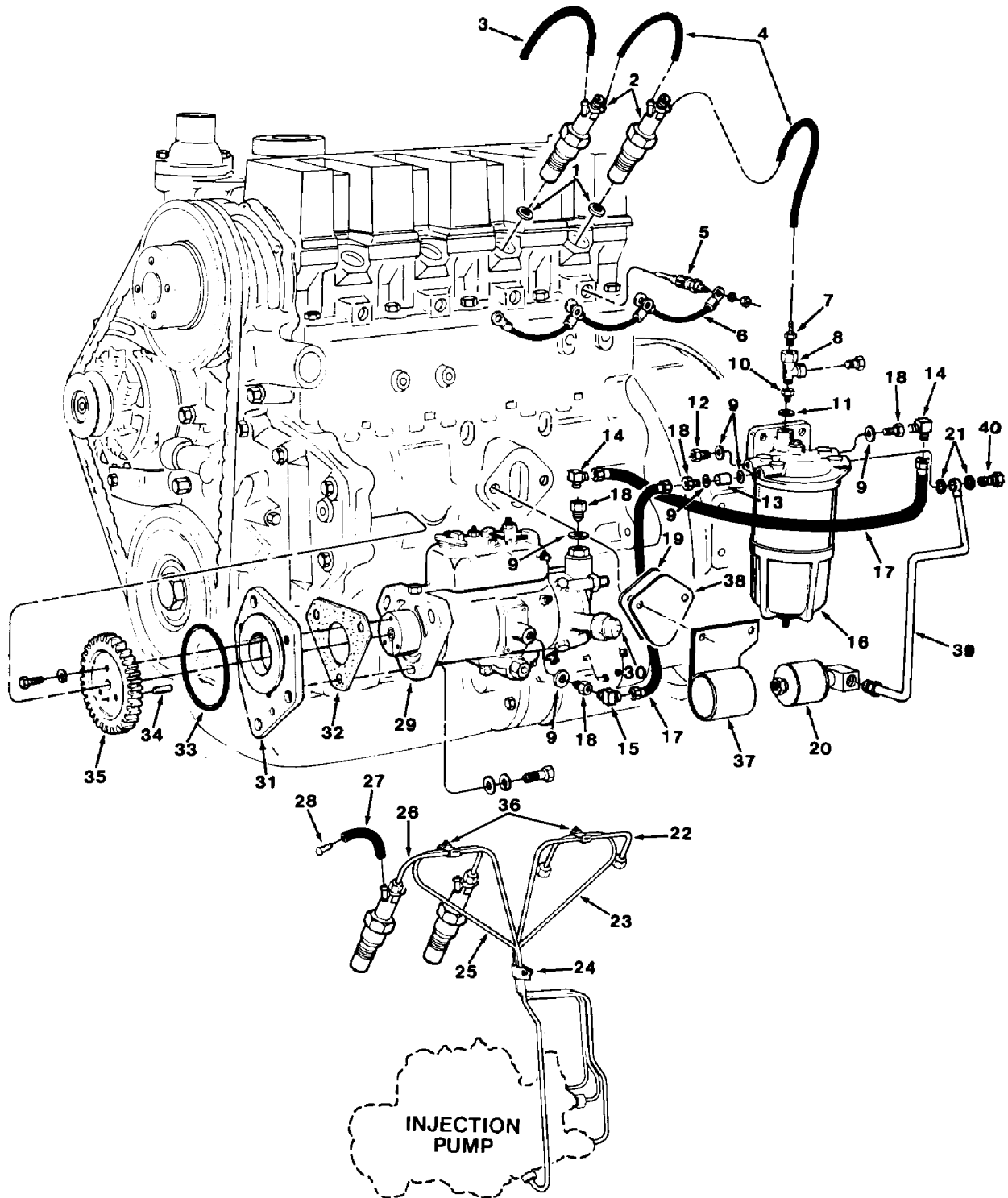


Fig. 2 - Fuel System Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38393	TMD27F00301	Shield, Heat	4
▽ 2	78520	TMD27T00203	Nozzle and Tip Assembly	4
▲	78521	TMD27T00204	Tip, Nozzle	4
3	38411	XM38003050	Hose, Fuel	1
4		XM38003054	Hose, Fuel	3
5	38386	TMD27F00300	Plug, Glow	4
6		LW00203042	Wire, Glow Plug	3
7	38419	X26144	Adapter	1
		TMD27F00305	Adapter (For Engine 16850)	1
8	38417	X12671	Tee	1
9		X14434	Washer	6
10	38412	XM40000	Adapter	1
11		X14134	Washer, Copper	1
12		TMD27F00214	Plug	1
13		TMD27F00405	Valve, Check	1
14		X12393	Adapter	1
15		X12489	Elbow, #3 Inlet	2
▽ 16	38388	TMD27F00506	Filter, Fuel And Water Separator	1
▲	52770-9	TMD27F00212	Element, Fuel Filter	1
17		X08261110	Hose	2
		X08016120	Hose, Injection (For Engine 16850)	1
18		X26140	Adapter	5
19	47680	X07861	Gasket, Fuel Pump	2
20	16706	TMD20F00506	Pump, Fuel	1
21	16712	TMD27F00309	Washer, Sealing	2
22	38396	TMD27F05120	Tube Assembly, Fuel Injection #4	1
23	38395	TMD27F05110	Tube Assembly, Fuel Injection #3	1
24	38384	TMD27F00220	Clamp, Injection Line	1
25	38391	TMD27F05100	Tube Assembly, Fuel Injection #2	1
26	38390	TMD27F05090	Tube Assembly, Fuel Injection #1	1
27		XM38003020	Hose, Fuel, #1 Leak-off End	1
28		X26138	Plug	1
▽ 29	38392	TMD27F00224	Pump, Fuel Injection (Replaced by none)	1
▲ 30	16739		Solenoid, Fuel Shut-Off	1
31		TMD27B00404	Adapter	1
32	38379	TMD27B00300	Gasket, Injection Pump	1
33	38415	X07837	O-Ring	1
34		TMD27F00200	Pin	1
35		TMD27H00403	Gear, Injection Pump	1
36	38385	TM27F00221	Clamp, Injection Line	2
		TMD27F00233	Clamp, Leak-Off Line	10
37	16708	TMD27F00311	Bracket, Fuel Pump	1
38	16707	F600B00234	Cover, Fuel Pump	1
39	16710	TMD27F05200	Tube Assembly	1
40	16711	TMD27F00308	Fitting, Banjo	1

Fig. 3 - Cylinder Head Group

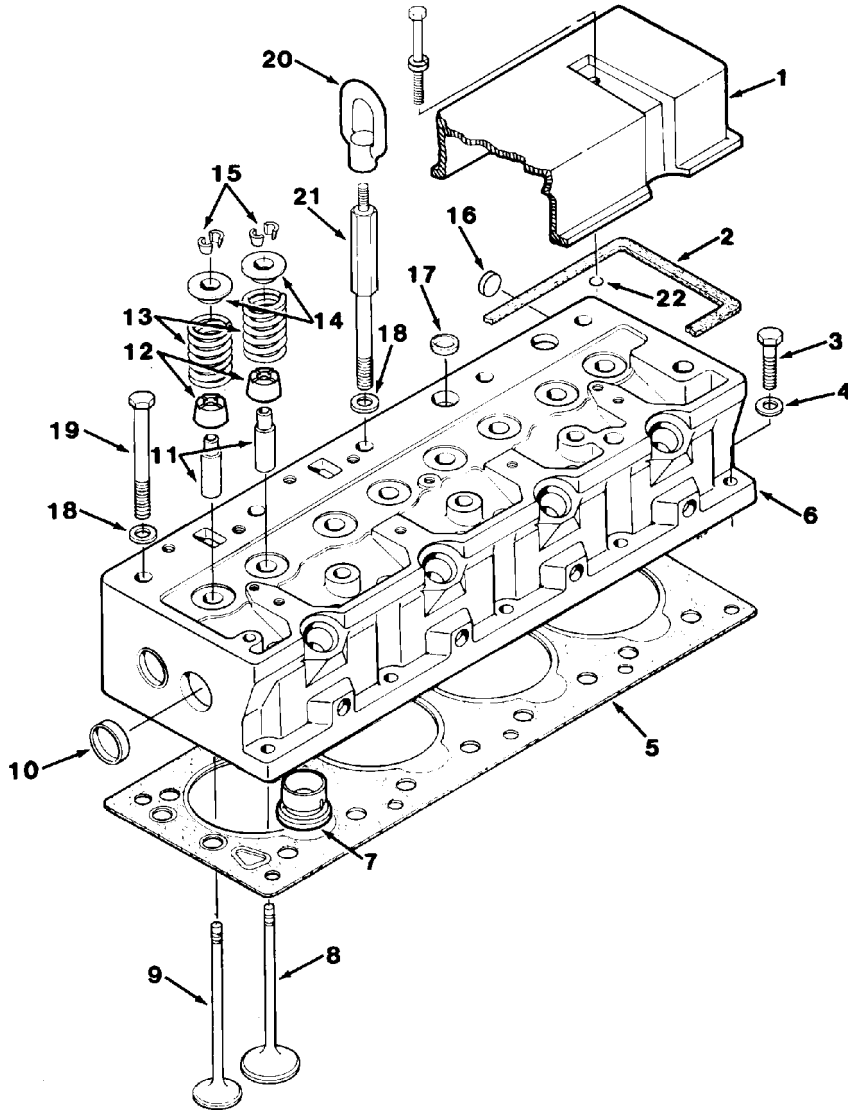
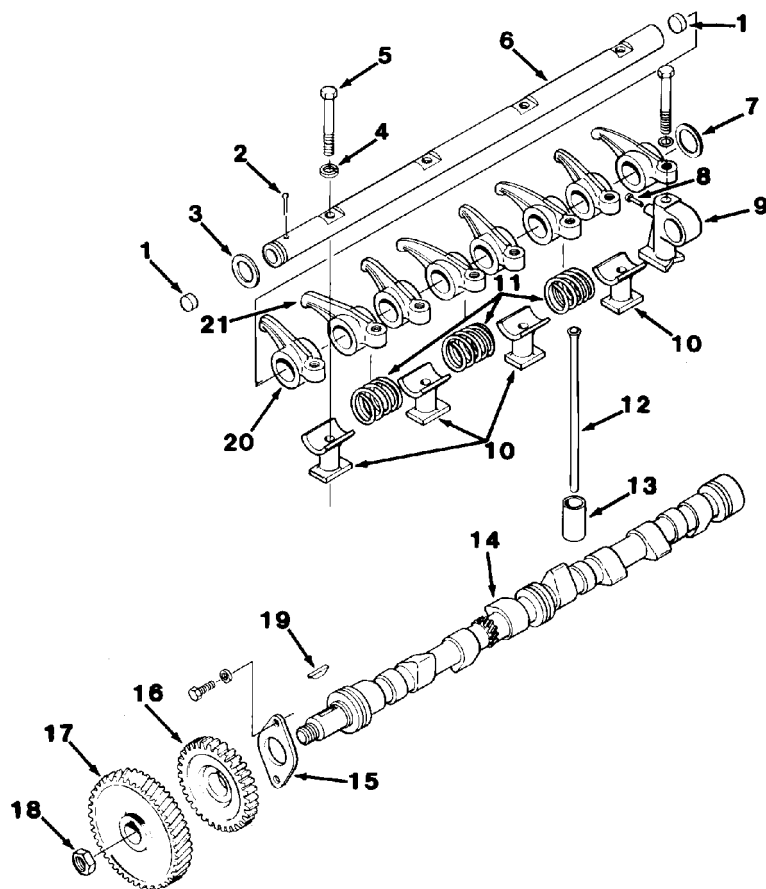


Fig. 3 - Cylinder Head Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27A0610	Cover, Cylinder Head	1
2	34876	TM27A00502	Gasket, Cover	1
3		XM32021	Screw	5
4	37942	13XX14141	Washer, Plain	5
5		TMD27A00507	Gasket, Cylinder Head (For Engine 34910)	1
5		TMD27A00205	Gasket, Cylinder Head (For Engine 16850)	1
▽	6 52757	TMD27A06031	Head, Cylinder	1
▲	7 52756	TMD27A00500	Insert, Combustion Chamber	4
▲	8 42006	TMD27I00502	Valve, Intake	4
▲	9 42009	TMD27I00501	Valve, Exhaust	4
▲	10 61741	X02583	Plug, Cup	4
▲	11 16153	F400I00251	Guide, Valve Stem	8
▲	12 52760	TMD27I00401	Guard, Valve Stem Oil	8
▲	13 42116	TM27I00309	Spring, Valve	8
▲	14	TM27I00300	Retainer, Valve Spring	8
▲	15	CVT03234	Lock, Valve Spring Retainer	16
▲	16 10100	X07606	Plug, Cup	4
▲	17	X07689	Plug, Core	2
	18 52898	XM37003	Washer, Flat	10
	19	XM32020	Screw	9
	20	XM38004	Eye, Lifting	1
	21	XM32094	Screw	1
	22 61725	XM39000	O-Ring	3
		TMD27U01001	Gasket Set, Top (For Engine 34910)	1
		TMD27U01002	Gasket Set, Top (For Engine 16850)	1

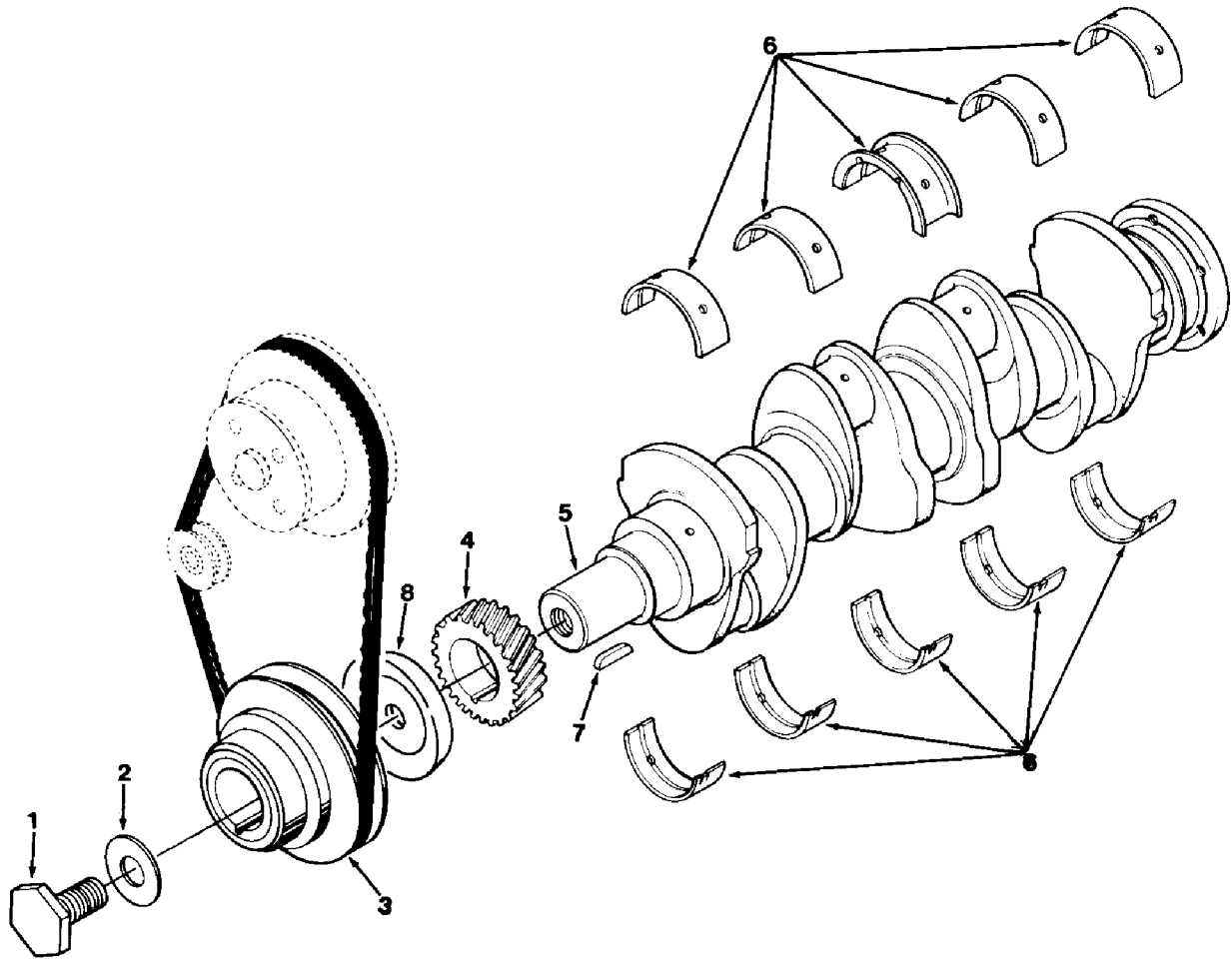
Fig. 4 - Camshaft Group



01622 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		X02544	Plug, Shaft Ends	2
2		X00623	Pin, Cotter	2
3		X14589	Washer, Rocker Arm Shaft	2
4		XM37005	Washer, Flat	4
5		XM32031	Screw	4
6		TM27I00511	Shaft, Rocker Arm	1
7		TM27I00306	Washer, Wavy	1
8		X17066	Pin, Rear Support Top	1
9			Support, Rocker Arm Shaft, Rear	1
10		TM27I00314	Support, Rocker Arm Shaft	4
		TM27I00313	Spring, Rocker Shaft Ends (For Engine 16850)	1
11		TM27I00303	Spring, Rocker Arm Shaft	3
12		TM27I00403	Rod, Push	8
13	52725	TM27I00305	Tappet, Valve	8
14		TMD27I00402	Camshaft	1
15	38753	F400I00246	Plate, Camshaft Thrust	1
16	42328	TMD27H00402	Gear, Injection Pump Driver	1
17		TMD27H00503	Gear, Camshaft	1
18	52859	X18498	Nut	1
19	42337	X00599D	Key	1
20		TM27I05130	Arm Assembly, Rocker, Exhaust	4
21		TM27I05120	Arm Assembly, Rocker, Intake	4

Fig. 5 - Crankshaft Group



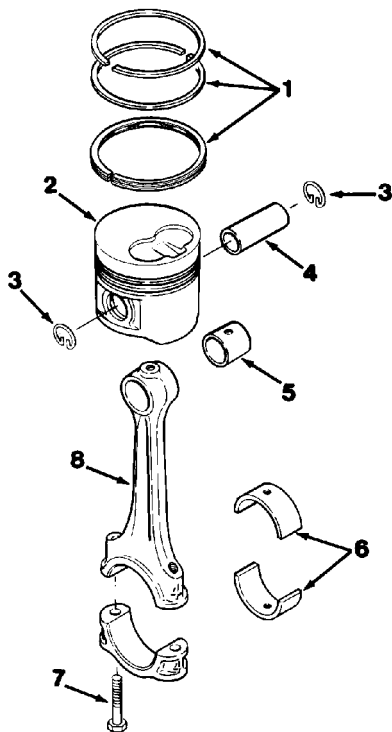
09767 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32064	Screw	1
2		XM37014	Washer, Plain	1
3	38449	TM27C00501	① Pulley, Crankshaft	1
3	61736	TM27C00401	② Pulley, Crankshaft	1
4		TM27H00407	Gear, Crankshaft	1
5	42148	TMD27C00300	Crankshaft	1
6	12784	TM27T00102	Bearing Kit, Main, Standard	1
6	52753	TM27T00102025	Bearing Kit, Main, 0.25 mm Undersize	1
6		TM27T00102050	Bearing Kit, Main, 0.50 mm Undersize	1
6	61724	TM27T00102075	Bearing Kit, Main, 0.75 mm Undersize	1
6		TM27T00102100	Bearing Kit, Main, 1.00 mm Undersize	1
7	61762	X00666	Key	1
8	61775	TM27C00408	Slinger, Oil	1

① Teledyne Continental Engine Serial Number (000000-302297)

② Teledyne Continental Engine Serial Number (302298-)

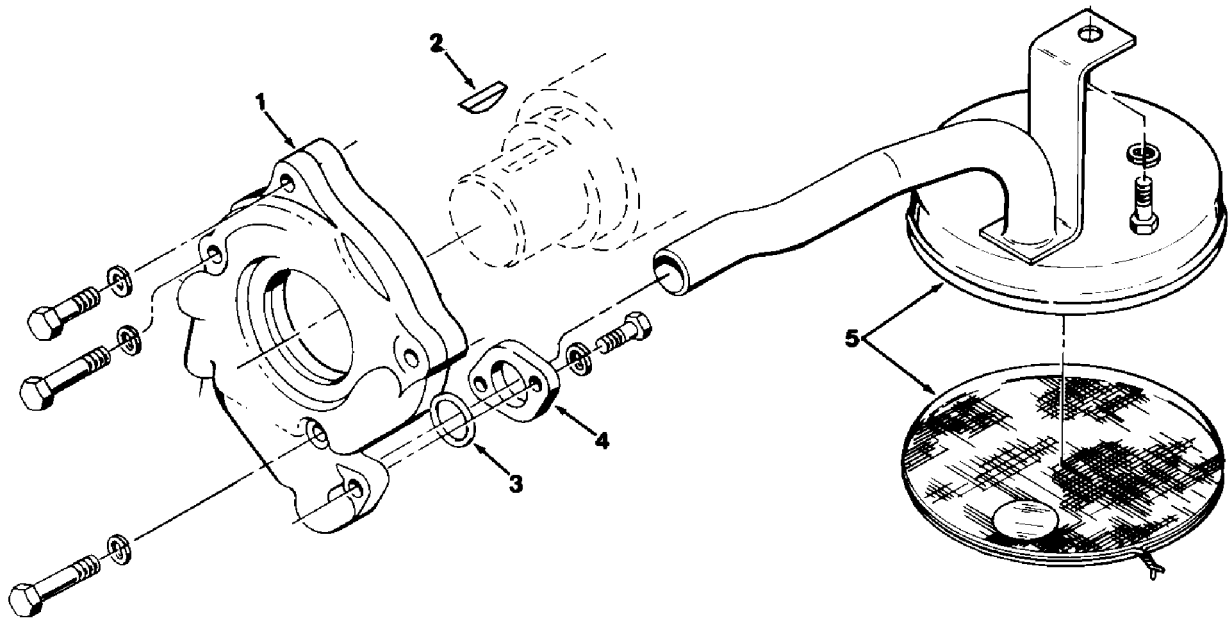
Fig. 6 - Piston Group



09768 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1	38836	TMD20T00201	Ring Kit, Re-Ring, Standard	4	
1		TMD27T00201050	Ring Kit, Re-Ring, 0.50 mm Oversize	4	
1		TMD27T00201075	Ring Kit, Re-Ring, 0.75 mm Oversize	4	
1		TMD27T00201100	Ring Kit, Re-Ring, 1.00 mm Oversize	4	
2	38839	TMD27A05031E	Piston Assembly, Standard	4	
2	38842	TMD27A05031E050	Piston Assembly, 0.50 mm Oversize	4	
2		TMD27A05031E075	Piston Assembly, 0.75 mm Oversize	4	
∇	2	TMD27A05031E100	Piston Assembly, 1.00 mm Oversize	4	
▲	3	38572	K800A00203	Ring, Retaining, Piston Pin	2
▲	4		TMD27A00300	Pin, Piston	1
5	52724	TM27G00301	Bushing, Piston Pin	4	
6		TM27T00103	Bearing Kit, Connecting Rod, Standard	1	
6		TM27T00103025	Bearing Kit, Connecting Rod, 0.25 mm Undersize	1	
6		TM27T00103050	Bearing Kit, Connecting Rod, 0.50 mm Undersize	1	
6		TM27T00103075	Bearing Kit, Connecting Rod, 0.75 mm Undersize	1	
6		TM27T00103100	Bearing Kit, Connecting Rod, 1.00 mm Undersize	1	
7		Z145D00300	Bolt, Connecting Rod	8	
8	38917	TMD27D03001	Rod Assembly, Connecting	4	

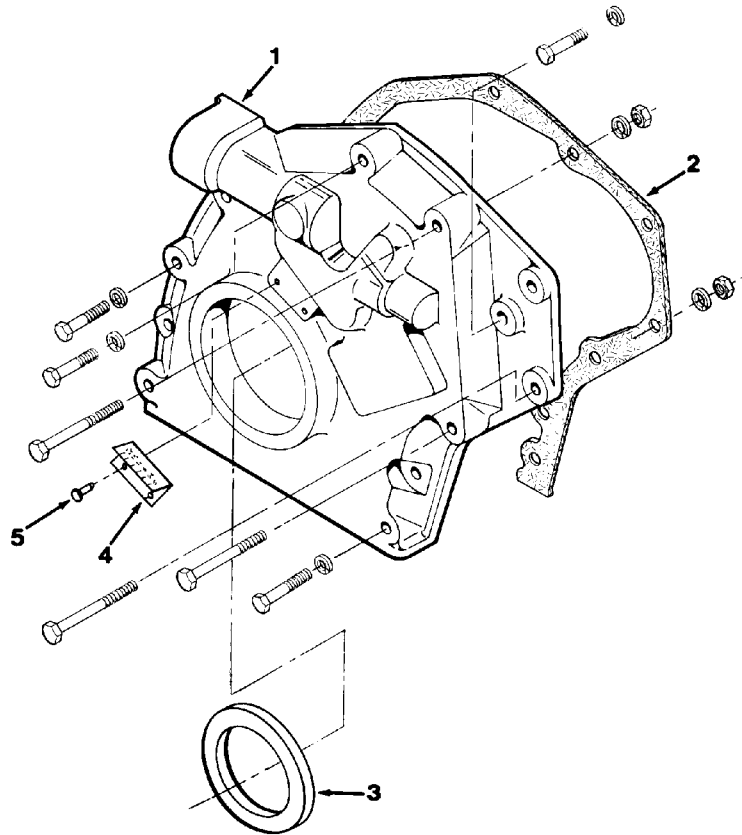
Fig. 7 - Oil Pump Group



01611 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27L06020	Pump, Oil (For Engine 34910)	1
1		TM27L06030	Pump, Oil (For Engine 16850)	1
2	61749	X00692	Key, Woodruff	1
3	52764	X01673	O-Ring	1
4		TM27L00200	Adapter, Inlet Tube	1
5		TM27L05100	Tube Assembly, Oil Pump Inlet	1

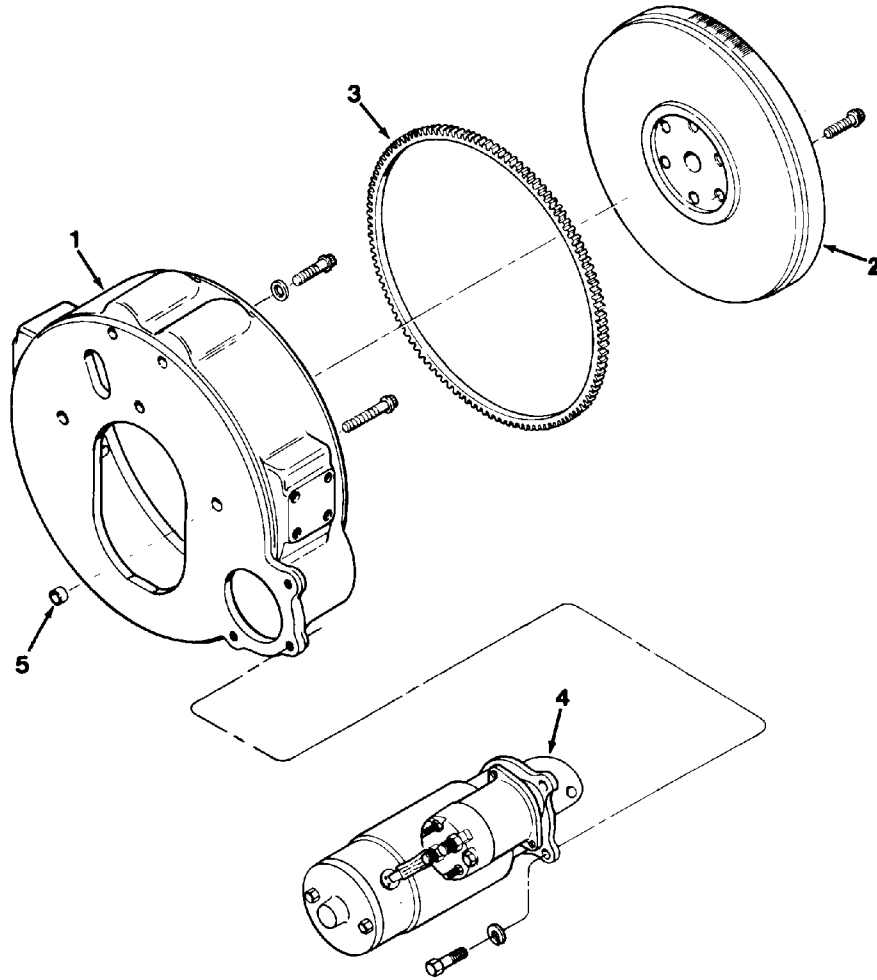
Fig. 8 - Gear Cover Group



09769 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TMD27B05003	Cover, Gear	1
2	38381	TMD27B00529	Gasket, Gear Cover	1
3		X07823	Seal, Oil, Crankshaft (For Engine 34910)	1
3	38416	X07845	Seal, Oil, Crankshaft (For Engine 16850)	1
4		TM27B00300	Pointer, Engine Timing	1
5		X13012	Rivet, Timing Pointer to Gear Cover	2
		TMD27U02001	Gasket Set, Front	1

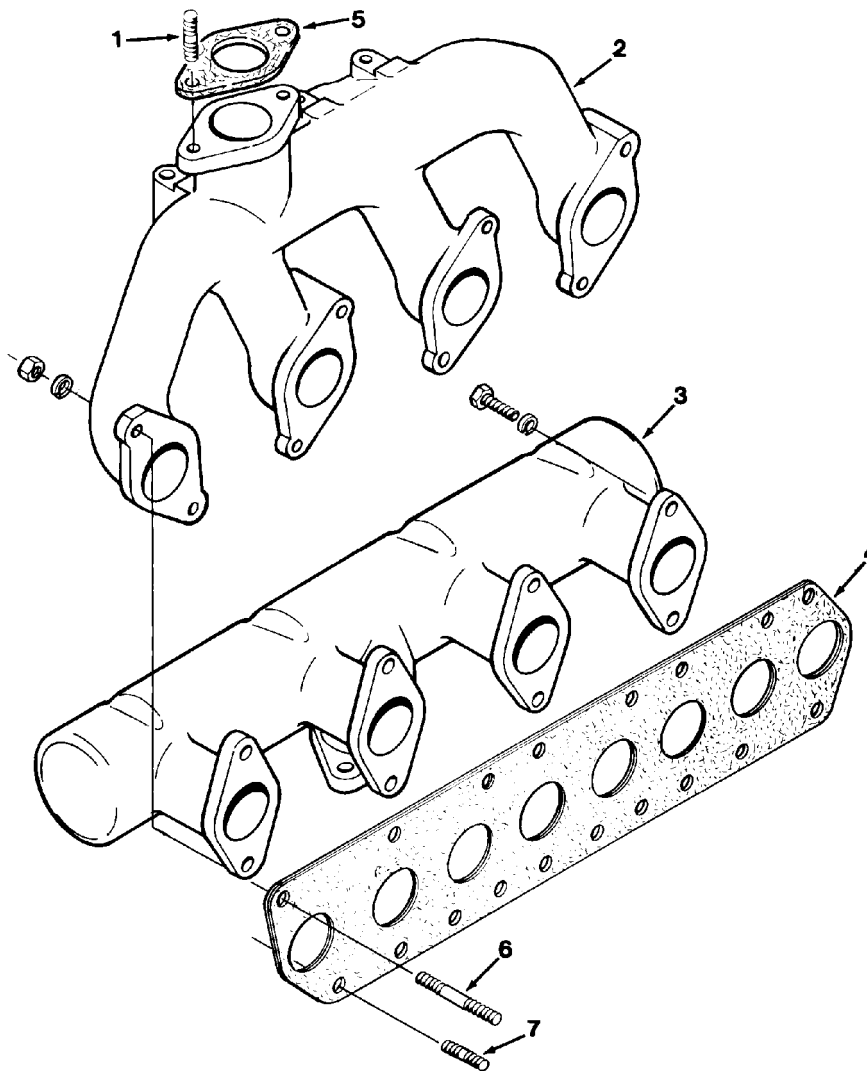
Fig. 9 - Flywheel and Starter Group



01625 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1	16143	F140B00320	Housing, Flywheel	1	
▽	16174	F601C04350	Flywheel (For Engine 34910)	1	
▲	16147	F244C00317	Ring Gear (For Engine 34910)	1	
▽	2	16851	TM13C03100	Flywheel (For Engine 16850)	1
▲	3	16852	TM13C00502	Ring Gear (For Engine 16850)	1
4	34547	TMD27M00315	Starter (For Engine 34910)	1	
4	16855	TMD27M00504	Starter (For Engine 16850)	1	
5		X07005	Dowel, Ring	2	

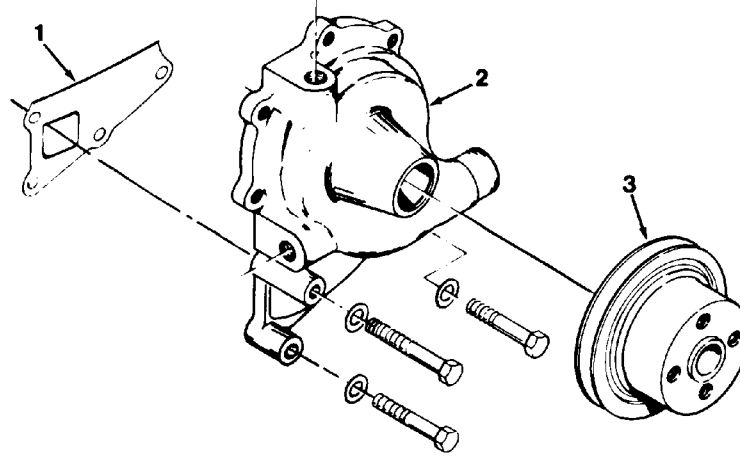
Fig. 10 - Intake and Exhaust Manifold Group



09770 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1		XM32048	Stud	2	
2	38383	TMD27E00501	Manifold, Exhaust	1	
3		TMD27F00601	Manifold, Intake	1	
▽	34640		Gasket Set, Manifold	1	
▲	4	38843	TM27E00502	Gasket, Manifold	1
▲	5	34796	TM27E00300	Gasket, Manifold, Exhaust	1
6		XM32050	Stud	2	
7		XM32022	Stud	6	

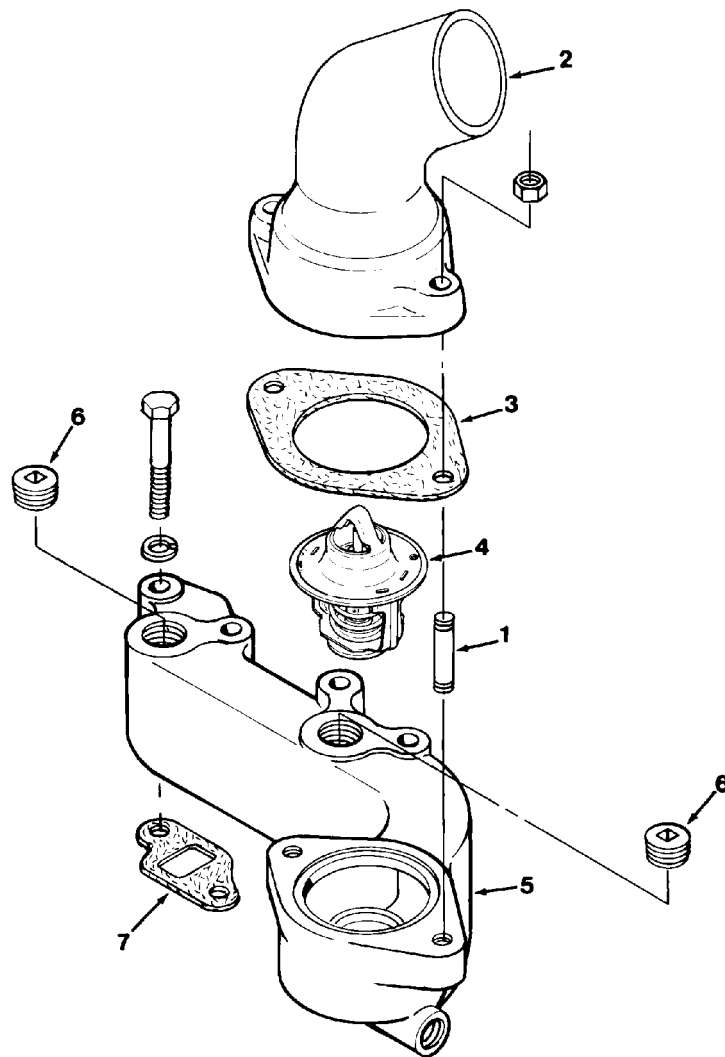
Fig. 11 - Water Pump Group



01615 - 550, 1550, D

	Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽		34830		Pump and Gasket, Water	1
▲	1	34873	TM27K00301	Gasket, Water Pump to Crankcase	1
▲▽	2	34429	TM27K06051	Pump, Water	1
▲▲		38788	TM27T01003	Repair Kit, Water Pump	1
▲▲	3	38918	TM27K00412	Pulley	1

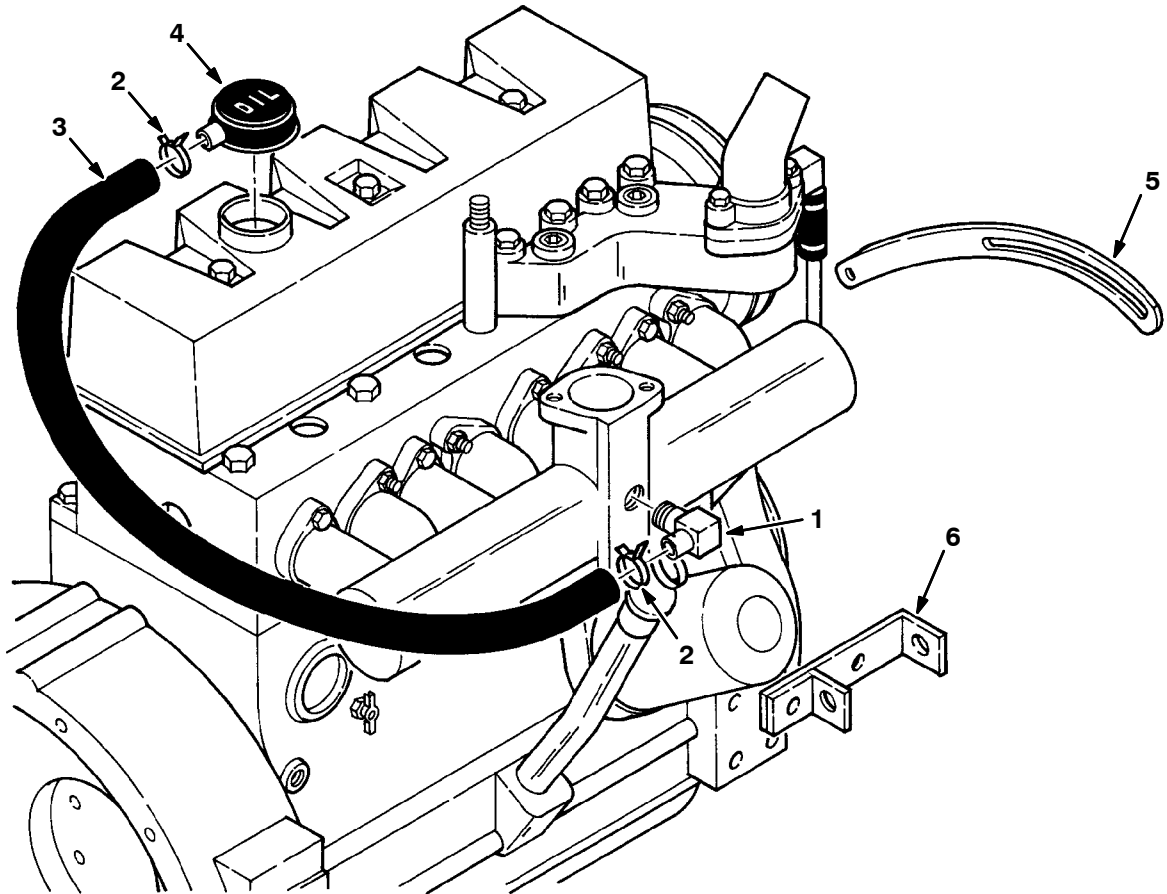
Fig. 12 - Water Header and Thermostat Group



09761 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32001	Stud	2
2	38401	TM27K00310	Elbow, Water Outlet	1
▽	34752		Thermostat and Gasket	1
▲	53988-12	X07854	Gasket, Elbow	1
▲	53988-13	F601K00303	Thermostat	1
5		TM27K00503	Header, Water Outlet	1
6		X00101B	Plug	2
7		TM27K00304	Gasket, Header	2

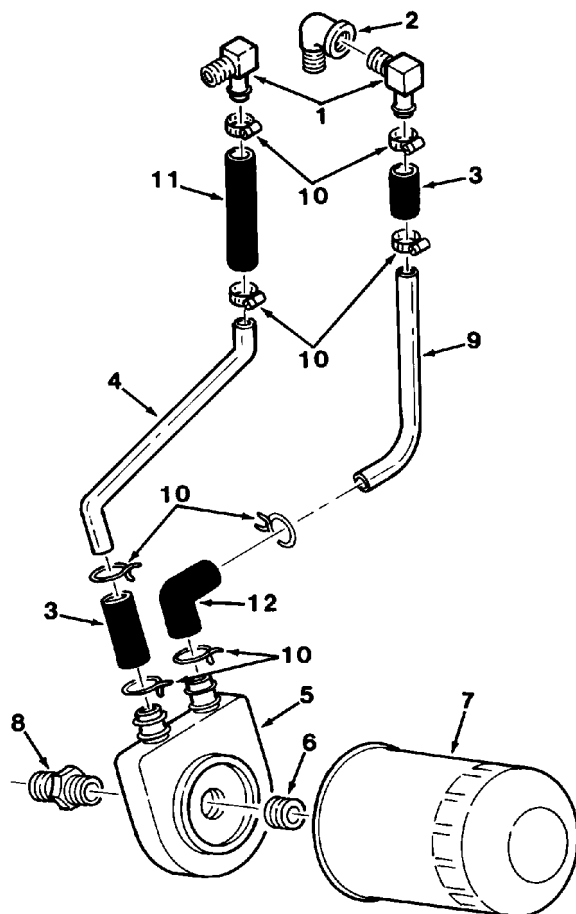
Fig. 13 - Alternator Brackets and PCV Group



09771 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38418	X26136	Elbow, Intake Manifold (Replaced by None)	1
2	52766	X02751	Clamp, Hose	2
3	61776	X08253180	Hose, Elbow to Filler Cap	1
4	38403	TM27L00412	Cap, Oil Filler	1
5	30036	TM27M00308	Strap, Alternator	1
6		TM27M00401	Bracket, Alternator	1

Fig. 14 - Oil Filter Group



09772 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	47388	X26142	Elbow, Water Header	2
2		X12191	Elbow, Water Pump	1
3	38856	X08253020	Hose, Oil Cooler	2
4	38409	TM27L00516	Tube, Oil Cooler	1
5	38405	TM27L00420	Cooler, Oil	1
6	38402	TM27L00202	Adapter, Oil Filter	1
7	39703-2	F600L03750	Element, Oil Filter (For Engine 34910)	1
7	16853	TM27L00312	Element, Oil Filter (For Engine 16850)	1
8		TM27L00204	Connector, Oil Cooler	1
9	38406	TM27L00423	Tube, Oil Cooler	1
10	52766	X02751	Clamp, Hose	8
11	38857	X08253040	Hose, Oil Cooler	1
12	38919	TM27L00208	Hose, Oil Cooler	1

SECTION 15

CONTENTS	PAGE
Fig. 1 - Engine Block Group	15-2
Fig. 2 - Fuel System Group	15-4
Fig. 3 - Cylinder Head Group	15-6
Fig. 4 - Camshaft Group	15-8
Fig. 5 - Crankshaft Group	15-9
Fig. 6 - Piston Group	15-10
Fig. 7 - Oil Pump Group	15-11
Fig. 8 - Gear Cover Group	15-12
Fig. 9 - Flywheel and Starter Group	15-13
Fig. 10 - Intake and Exhaust Manifold Group	15-14
Fig. 11 - Water Pump Group	15-15
Fig. 12 - Water Header and Thermostat Group	15-16
Fig. 13 - Alternator Brackets and PCV Group	15-17
Fig. 14 - Oil Filter Group	15-18

Fig. 1 - Engine Block Group

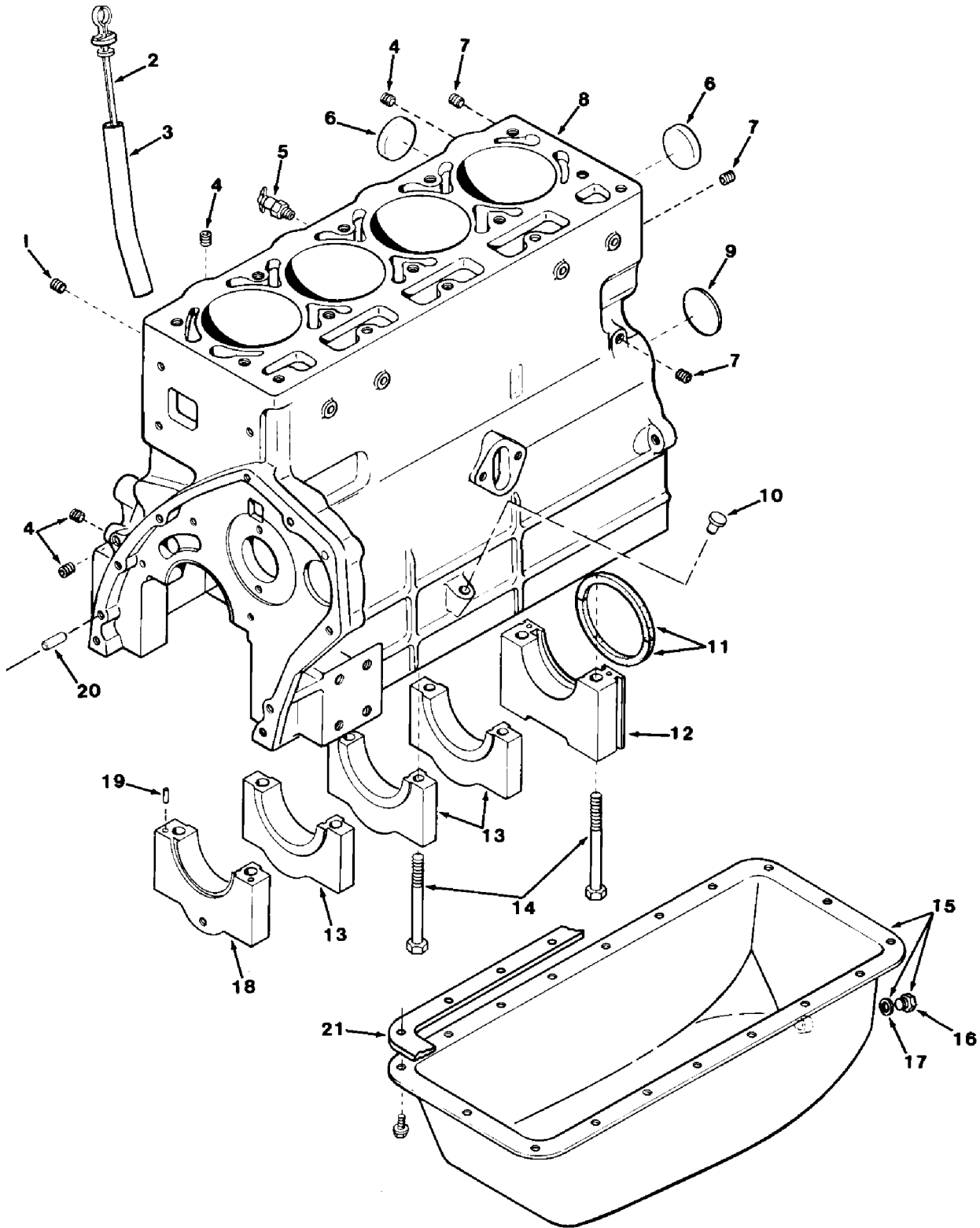


Fig. 1 - Engine Block Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1		26X00110	Plug	1	
2	38404	TM27L00427	Rod, Oil Gauge	1	
3	52736	TM27L00406	Tube, Oil Filler	1	
4		26X00137A	Plug	5	
5	51305	X01015	Cock, Water Drain	1	
6	78517	X13304	Plug, Cup	5	
7		26X26129	Plug	2	
8	78518	TMD27A610601R	Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrust Plate, Cam Gear, Gear, Oil Pump, Oil Gauge Support, and Gasket Set	1	
8	78519	TMD27A610807S	Short Block Assembly, S, Includes: R ShortBlock Assembly Plus - Head, Guides, Valves and Associated Parts, Rocker Arm Shaft Assembly, Pushrods, Head Cover, Gear Cover, Oil Pan, Oil Filler Cap, and Gasket Set	1	
9	38413	X02208	Plug, Expansion	1	
10		X07663	Plug	1	
11	38408	TM27L00513	Seal, Oil	2	
12		TMD27B00500	Cap And Filler Block, Rear Bearing	1	
		X07846	Gasket, Rear Bearing Cup	1	
13		TMD27B00403	Cap, Crankshaft Bearing	3	
14		XM32018	Screw	10	
▽	15	61711	TM27B05100	Pan Assembly, Oil	1
▲	16	38082	F400B00282	Plug, Drain	1
▲	17		X14583	Washer, Drain Plug	1
18		TMD27B00402	Cap, Crankshaft Bearing, Front	1	
19		TM27B00322	Dowel, Bearing Cap, Front and Rear	4	
20		X17025	Pin, Dowel, Gear Cover to Crankcase	2	
21	38758	TM27T00107	Gasket, Oil Pan, Form-In-Place	1	

Fig. 2 - Fuel System Group

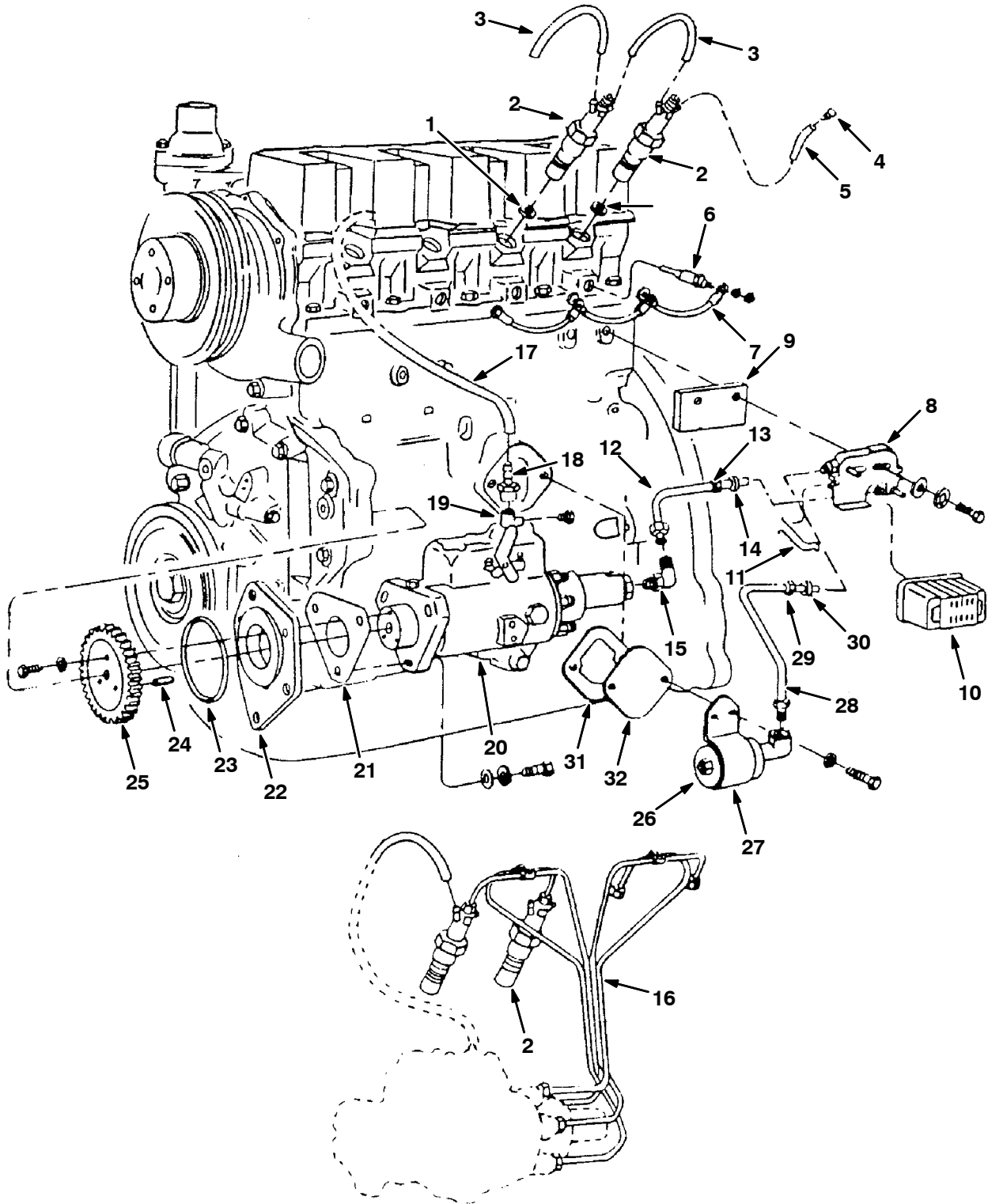


Fig. 2 - Fuel System Group

	Tennant Ref. Part No.	Teledyne Continental Part Number	Description	Qty.
	1 38393	TMD27F00301	Shield, Heat	4
▽	2 78520	TMD20T00203	Nozzle and Tip Assembly	4
▲	78521	TMD20T00204	Tip, Nozzle	4
	3 52899	XM38003052	Hose, Fuel	3
	4 61777	X26138	Plug, Hose	1
	5 42149	XM38003020	Hose, Fuel	4
	6 65966	TMD27F00268	Plug, Glow	4
	7 61733	LW00203042	Wire, Glow Plug	3
	8 78522	TMD20F00401	Base, Fuel Filter	1
	9 78523	TMD20F00300	Adapter, Fuel Filter	1
	10 78524	TMD20F00400	Element, Fuel Filter	1
	11	TMD20F00301	Clamp, Fuel Filter	2
▽	12 78525	TMD20F03100	Tube Assembly	1
▲	13	X12644	Nut, Tube Assembly	1
▲	14	X12645	Sleeve, Tube Assembly	1
	15	X26162	Elbow, Fuel Injection Pump	1
	16 78526	TMD27F05140	Tube Set, Fuel Injection	1
	17 78527	XM38003110	Hose, Fuel	1
	18	X26175	Adapter	1
	19 38417	X12671	Tee	1
	20 65965	TMD27F00265	Pump, Fuel Injection	1
	21 38379	TMD27B00300	Gasket, Injection Pump	1
	22 61748	TMD27B00404	Adapter, Injection Pump	1
	23 38415	X07837	O-Ring, Injection Pump	1
	24	TMD27F00200	Pin, Injection Pump	1
	25	TMD27H00403	Gear, Injection Pump	1
	26 16706	TMD20F00506	Pump, Fuel	1
	27 78528	TMD20F00304	Clamp, Fuel Pump	1
▽	28 78529	TMD27F04110	Tube Assembly	1
▲	29	X12644	Nut, Tube Assembly	1
▲	30	X12645	Sleeve, Tube Assembly	1
	31 47680	X07861	Gasket, Fuel Pump	1
	32 16707	F600B00234	Cover, Fuel Pump	1

Fig. 3 - Cylinder Head Group

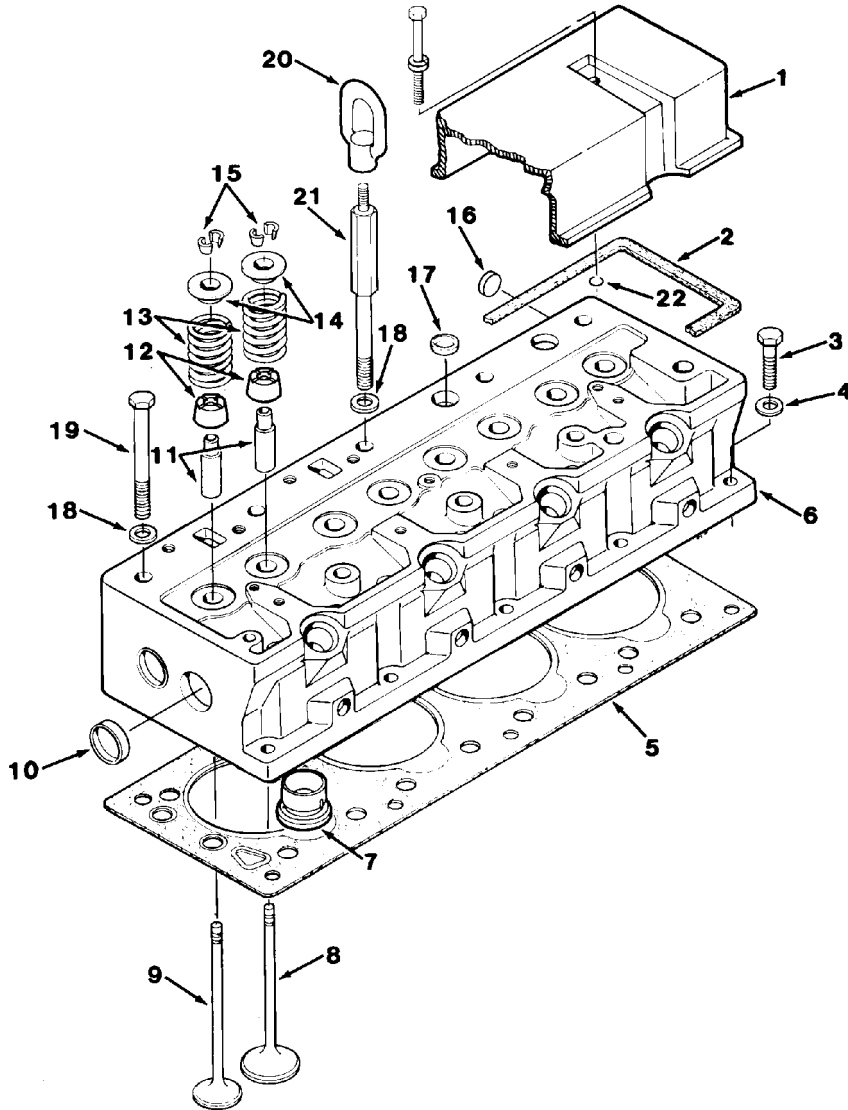
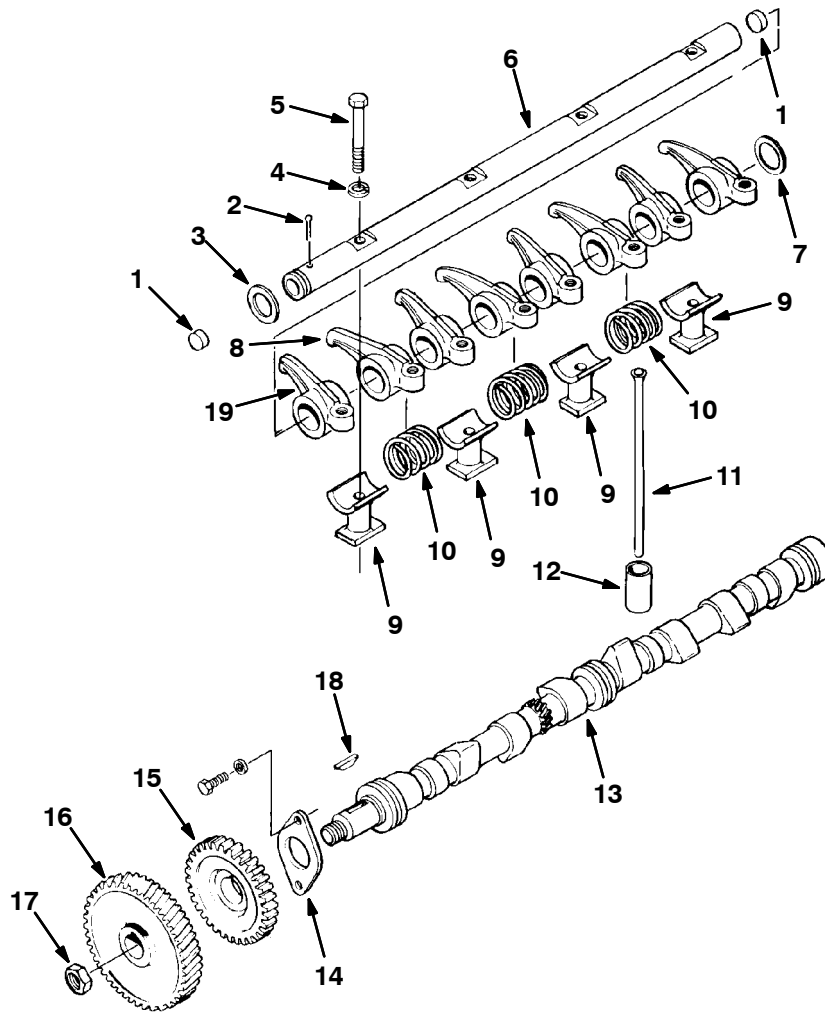


Fig. 3 - Cylinder Head Group

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		TM27A0610	Cover, Cylinder Head	1
2	34876	TM27A00502	Gasket, Cover	1
3		XM32021	Screw	5
4	37942	15XX14141	Washer	5
5	38665	TMD27A00613	Gasket, Cylinder Head	1
▽ 6	52757	TMD27A06031	Head, Cylinder	1
▲ 7	52756	TMD27A00500	Insert, Combustion Chamber	4
▲ 8	42006	TMD27100502	Valve, Intake	4
▲ 9	42009	TMD27100501	Valve, Exhaust	4
▲ 10	61741	X02583	Plug, Cup	4
▲ 11	16153	TM27100316	Guide, Valve Stem	8
▲ 12	52760	TMD27100401	Guard, Valve Stem Oil	8
▲ 13	42116	TM27100309	Spring, Valve	8
▲ 14		TM27100300	Retainer, Valve Spring	8
▲ 15		CVT03234	Lock, Valve Spring Retainer	16
▲ 16	10100	X07606	Plug, Cup	4
▲ 17		X07689	Plug, Core	2
18	52898	XM37003	Washer, Flat	9
19	61793	XM32134	Screw	10
20		XM38004	Eye, Lifting	1
21		XM32094	Screw	1
22	61725	XM39000	O-Ring	3
		TMD27U01006	Gasket Set, Top	1

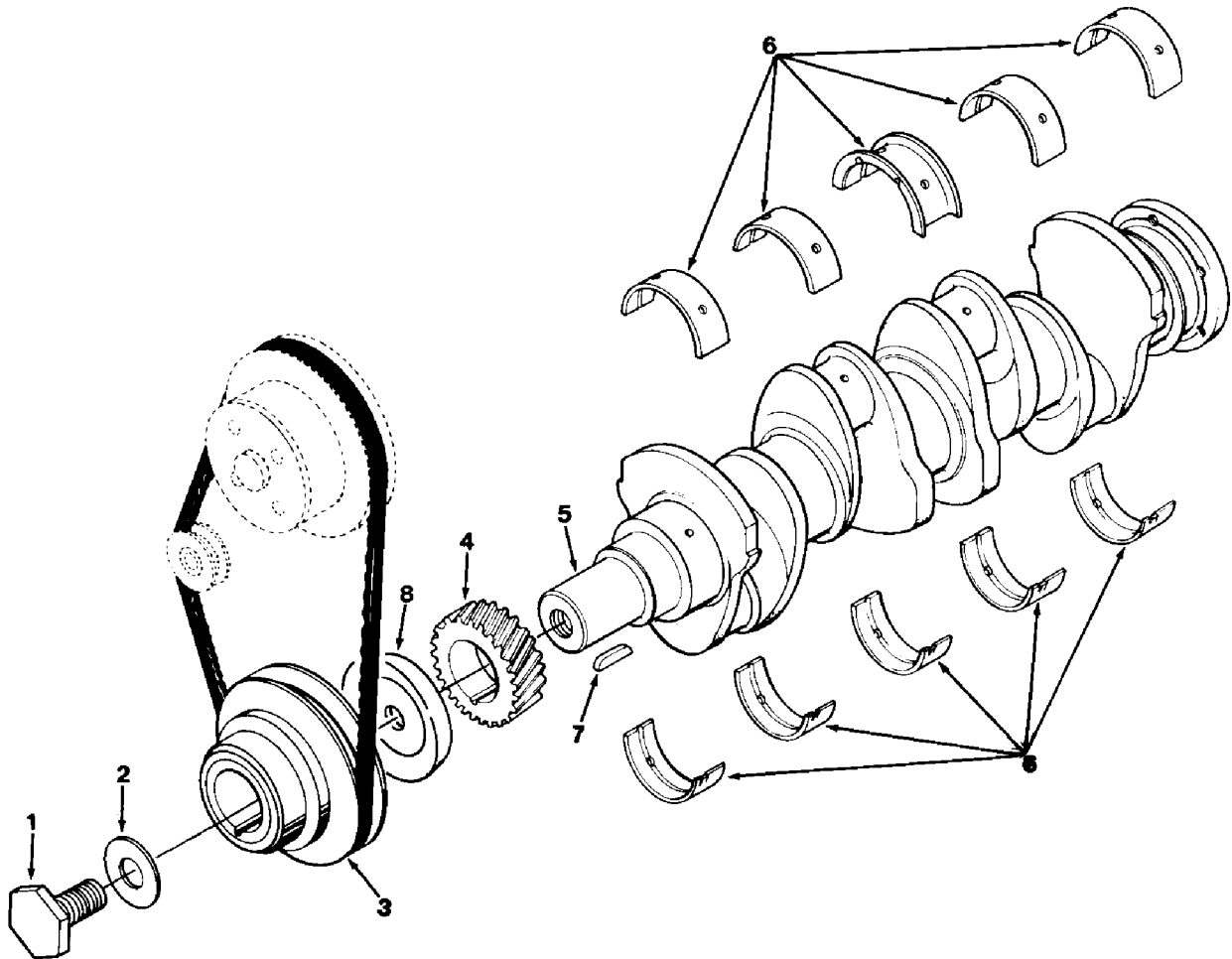
Fig. 4 - Camshaft Group



09408 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		X07815	Plug, Shaft Ends	2
2		X00623	Pin, Cotter	2
3		X14589	Washer, Rocker Arm Shaft	2
4		XM37005	Washer, Flat	4
5		XM32031	Screw	4
6		TM27I05162	Shaft, Rocker Arm	1
7		X14589	Washer, Plain	1
8	52734	TM27I05150	Arm Assembly, Rocker, Intake	4
9		TM27I00314	Support, Rocker Arm Shaft	4
10		TM27I00303	Spring, Rocker Arm Shaft	3
11		TM27I00403	Rod, Push	8
12	52725	TM27I00305	Tappet, Valve	8
13	42330	TMD27I00402	Camshaft	1
14	38753	F400I00246	Plate, Camshaft Thrust	1
15	42328	TMD27H00402	Gear, Injection Pump Driver	1
16		TMD27H00506	Gear, Camshaft	1
17	52859	X18498	Nut	1
18	42337	X00599D	Key	1
19	52730	TM27I05140	Arm Assembly, Rocker, Exhaust	4

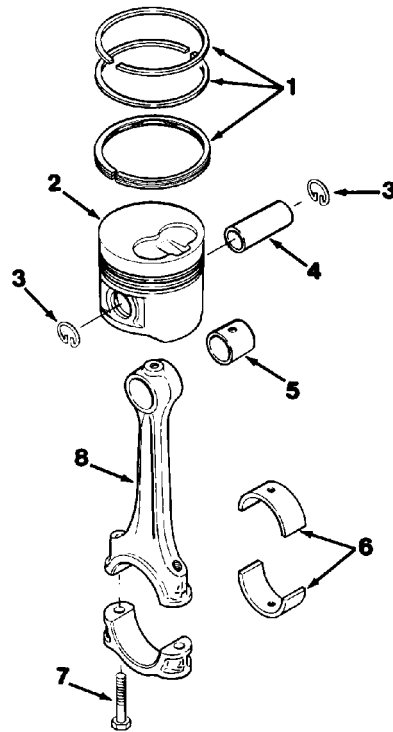
Fig. 5 - Crankshaft Group



09767 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32064	Screw	1
2		XM37014	Washer, Plain	1
3	61736	TM27C00401	Pulley, Crankshaft	1
4		TM27H00409	Gear, Crankshaft	1
5	42148	TMD27C00300	Crankshaft	1
6	12784	TM27T00102	Bearing Kit, Main, Standard	1
6	52753	TM27T00102025	Bearing Kit, Main, 0.25 mm Undersize	1
6		TM27T00102050	Bearing Kit, Main, 0.50 mm Undersize	1
6	61724	TM27T00102075	Bearing Kit, Main, 0.75 mm Undersize	1
6		TM27T00102100	Bearing Kit, Main, 1.00 mm Undersize	1
7	61762	X00666	Key	1
8	61775	TM27C00408	Slinger, Oil	1

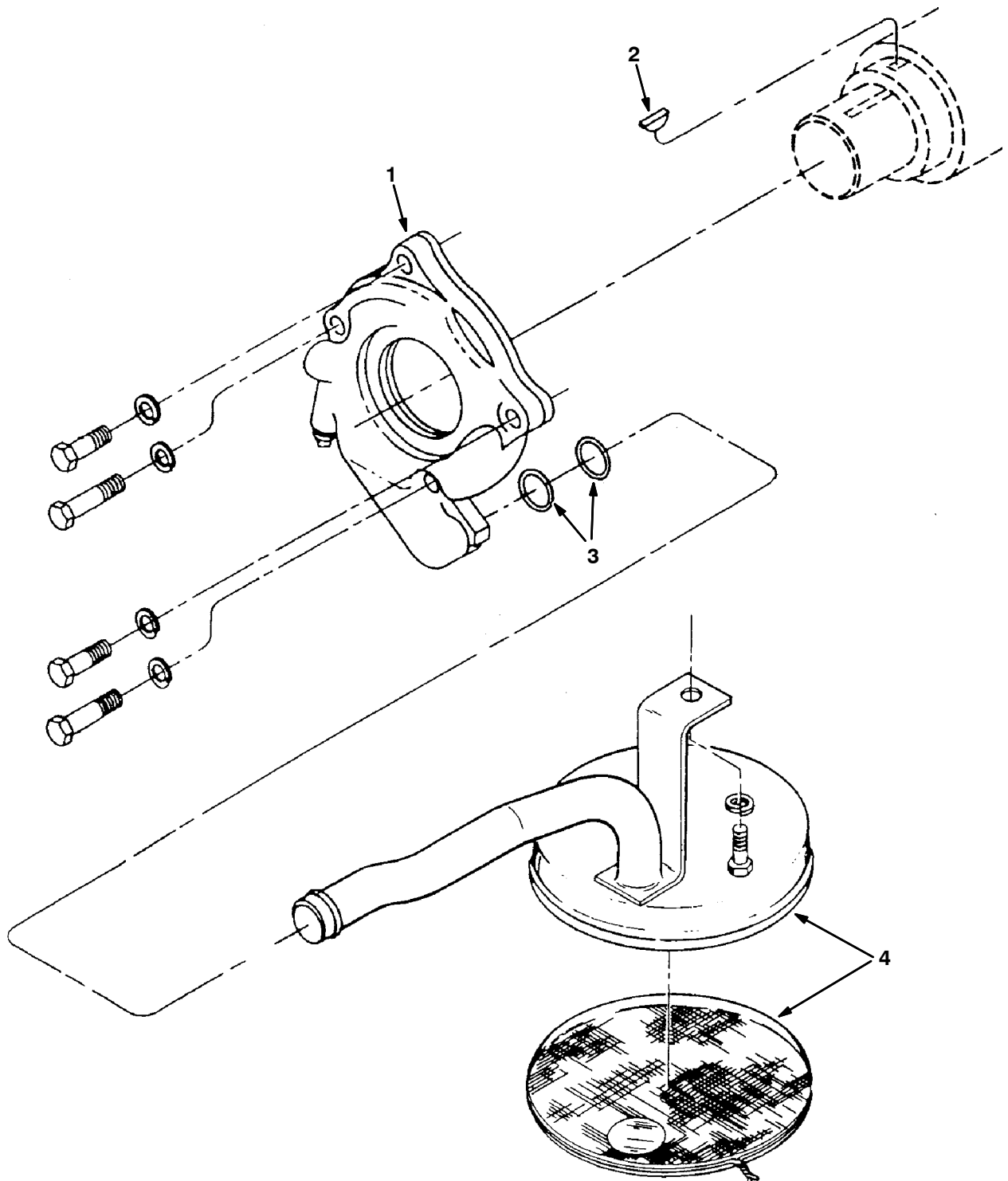
Fig. 6 - Piston Group



09768 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38836	TMD20T00201	Ring Kit, Re-Ring, Standard	4
1		TMD27T00201050	Ring Kit, Re-Ring, 0.50 mm Oversize	4
1		TMD27T00201075	Ring Kit, Re-Ring, 0.75 mm Oversize	4
1		TMD27T00201100	Ring Kit, Re-Ring, 1.00 mm Oversize	4
2	38839	TMD27A05031E	Piston Assembly, Standard	4
2	38842	TMD27A05031E050	Piston Assembly, 0.50 mm Oversize	4
2		TMD27A05031E075	Piston Assembly, 0.75 mm Oversize	4
∇ 2		TMD27A05031E100	Piston Assembly, 1.00 mm Oversize	4
▲ 3	38572	K800A00203	Ring, Retaining, Piston Pin	2
▲ 4		TMD27A00300	Pin, Piston	1
5	52724	TM27G00301	Bushing, Piston Pin	4
6	38916	TM20T00102	Bearing Kit, Connecting Rod, Standard	1
6		TM20T00102025	Bearing Kit, Connecting Rod, 0.25 mm Undersize	1
6		TM20T00102050	Bearing Kit, Connecting Rod, 0.50 mm Undersize	1
6		TM20T00102075	Bearing Kit, Connecting Rod, 0.75 mm Undersize	1
6		TM20T00102100	Bearing Kit, Connecting Rod, 1.00 mm Undersize	1
7		Z145D00300	Bolt, Connecting Rod	8
8	38917	TMD27D03001	Rod Assembly, Connecting	4

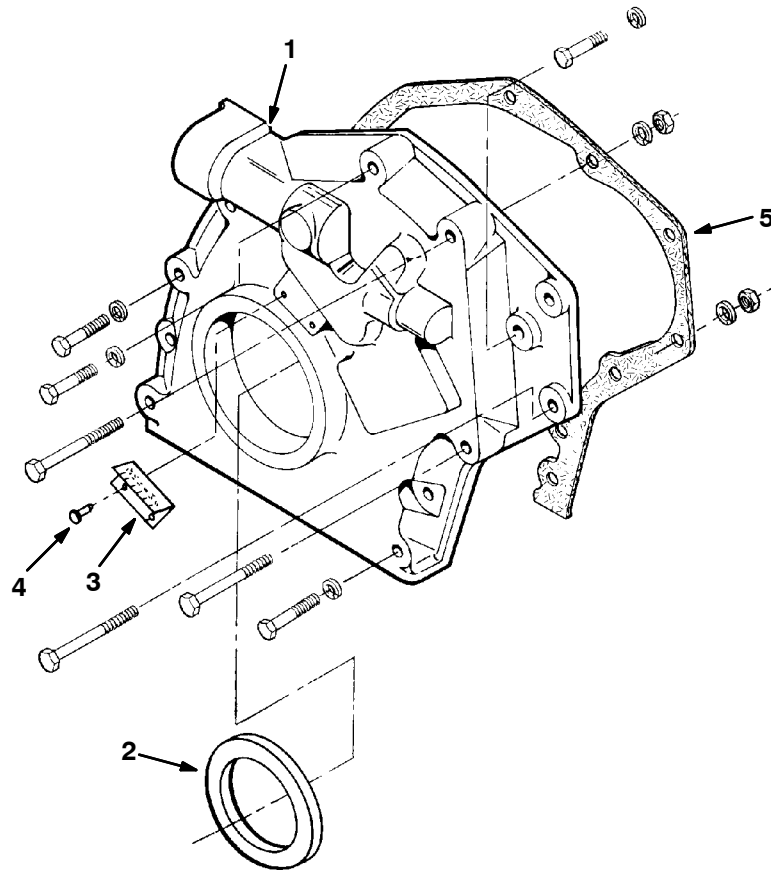
Fig. 7 - Oil Pump Group



09756 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38920	TM27L06050	Pump, Oil	1
2	61749	X00692	Key, Woodruff	1
3	52764	X01673	O-Ring	1
4		TM27L05180	Tube Assembly, Oil Pump Inlet	1

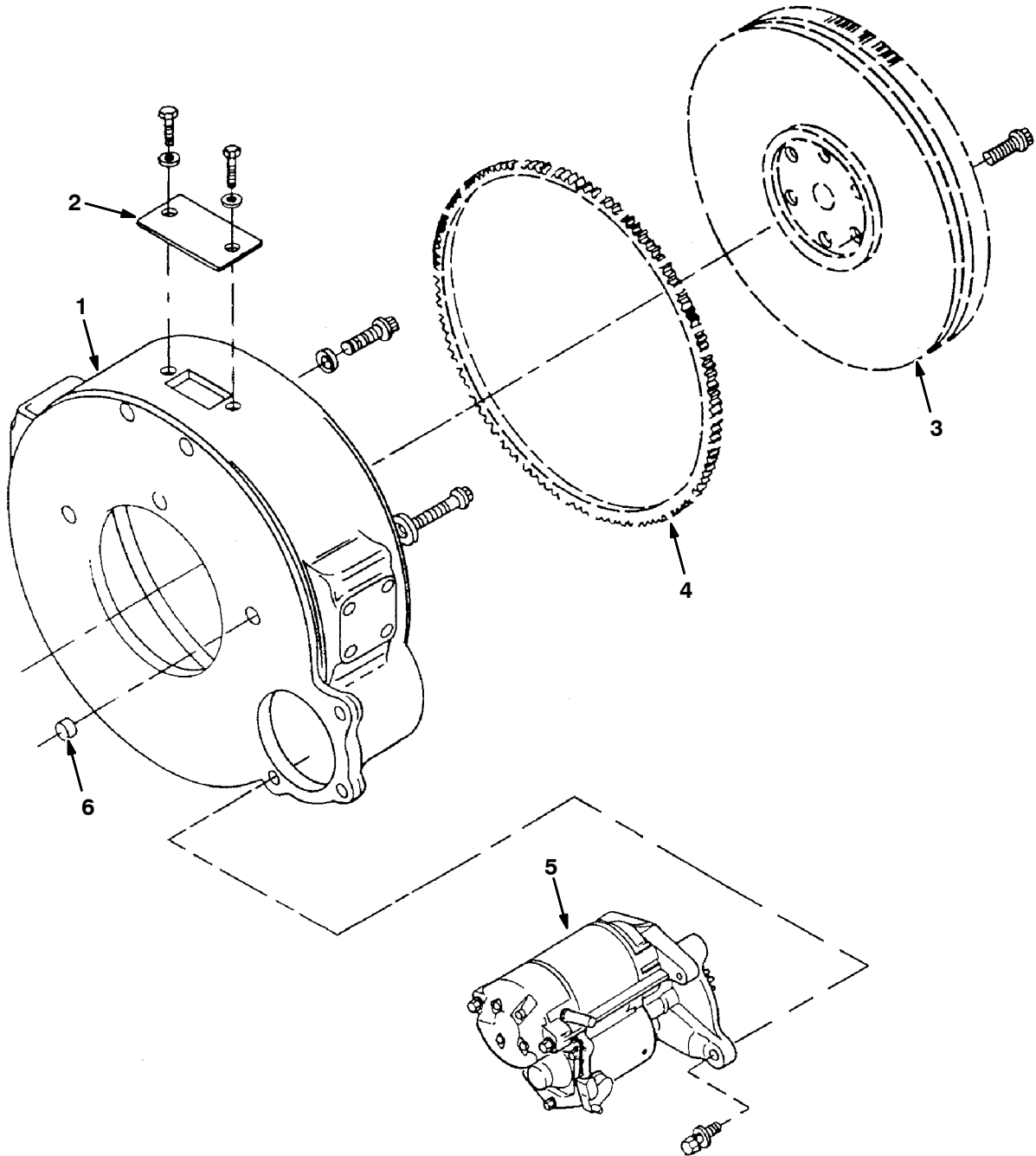
Fig. 8 - Gear Cover Group



09769 - 550, 1550, D

	Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽	1		TMD27B05141	Cover Assembly, Gear	1
▲	2	38416	X07845	Seal, Oil, Crankshaft	1
▲	3		TM27B00300	Pointer, Engine Timing	1
▲	4		X13012	Rivet, Timing Pointer to Gear Cover	2
	5	38381	TMD27B00529	Gasket, Gear Cover	1
		38844	TMD27U02002	Gasket Set, Front	1

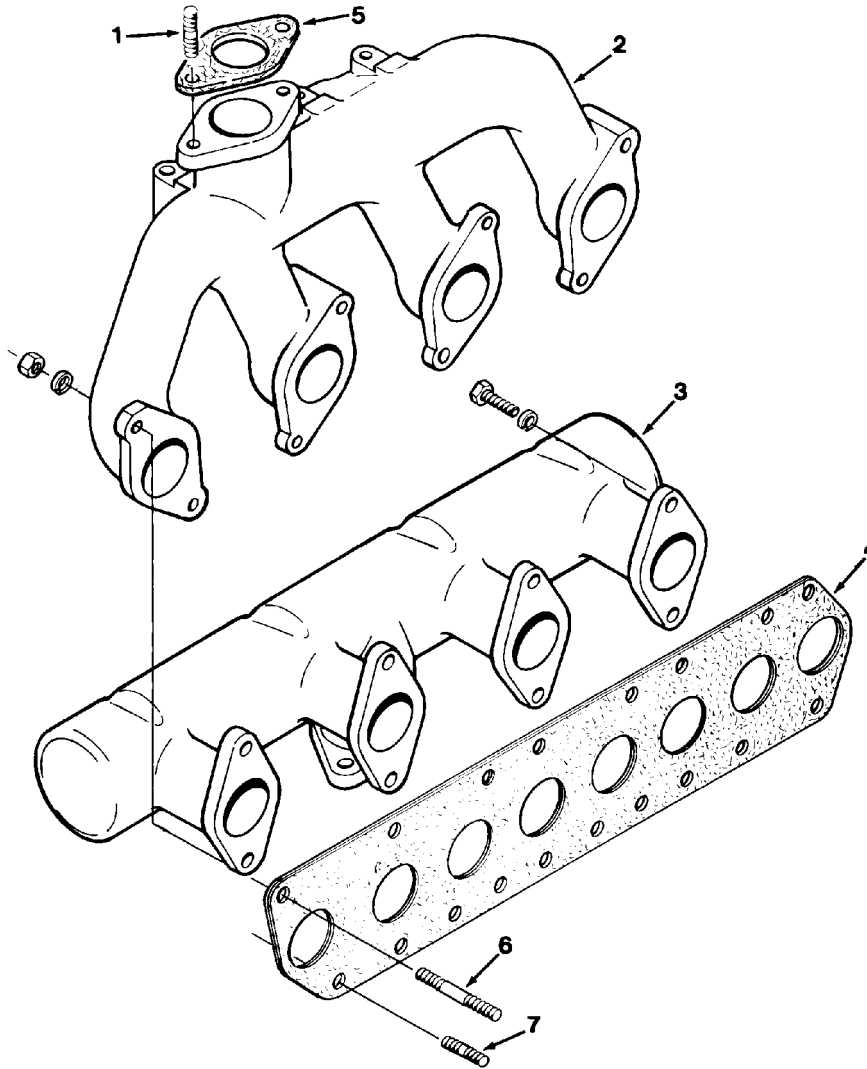
Fig. 9 - Flywheel and Starter Group



09758 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽ 1	78531	TM27B00607	Housing, Flywheel	1
▲ 2		TM27B00304	Cover, Timing Hole	1
▽ 3	16851	TM13C03100	Flywheel	1
▲ 4	16852	TM13C00502	Ring Gear	1
5	16855	TMD27M00504	Starter	1
6		X07005	Dowel, Ring	2

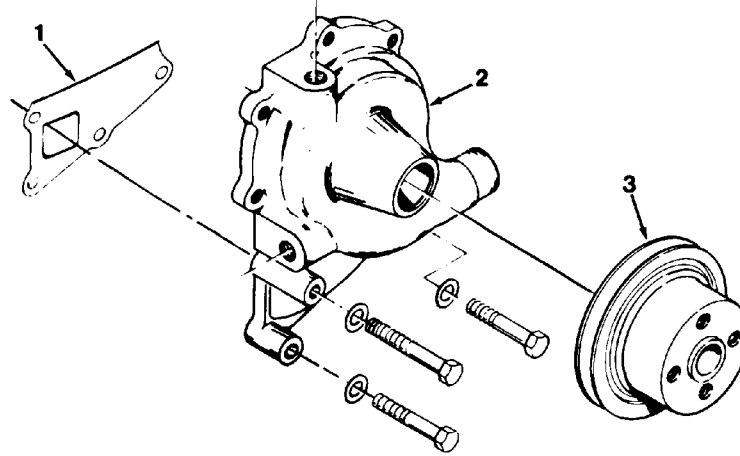
Fig. 10 - Intake and Exhaust Manifold Group



09770 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.	
1		XM32048	Stud	2	
2	38383	TMD27E00501	Manifold, Exhaust	1	
3		TMD27F00601	Manifold, Intake	1	
▽	34640		Gasket Set, Manifold	1	
▲	4	38843	TM27E00502	Gasket, Manifold	1
▲	5	34796	TM27E00300	Gasket, Manifold, Exhaust	1
6		XM32050	Stud	2	
7		XM32022	Stud	6	

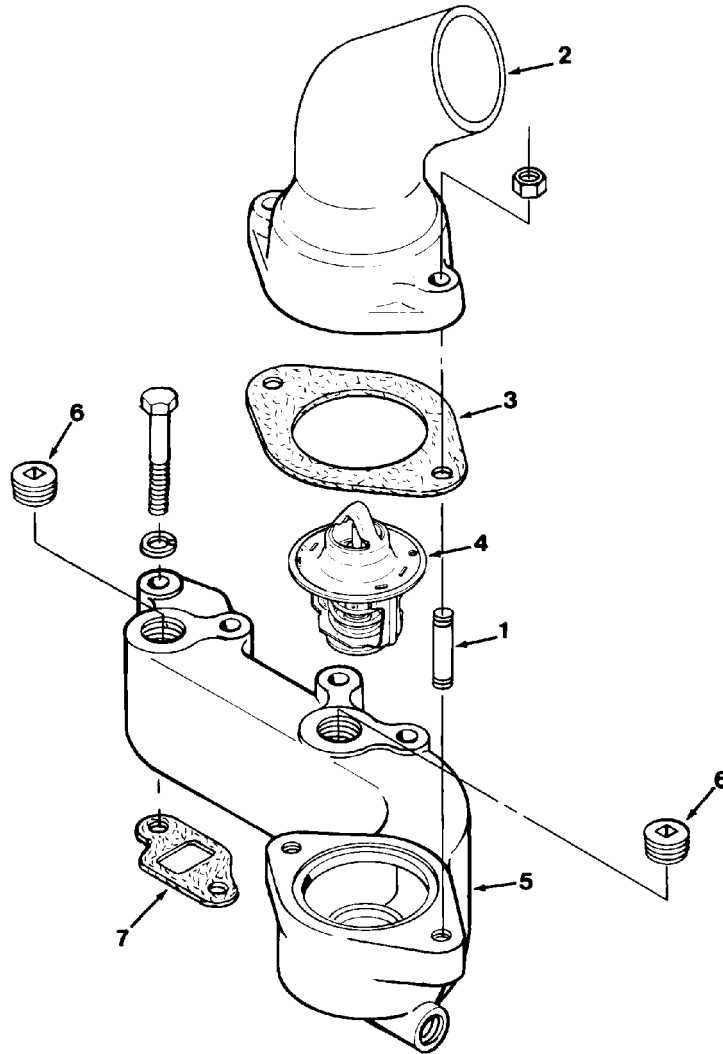
Fig. 11 - Water Pump Group



01615 - 550, 1550, D

	Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
▽		34830		Pump and Gasket, Water	1
▲	1	34873	TM27K00301	Gasket, Water Pump to Crankcase	1
▲▽	2	34429	TM27K06051	Pump, Water	1
▲▲		38788	TM27T01003	Repair Kit, Water Pump	1
▲▲	3	38918	TM27K00412	Pulley	1

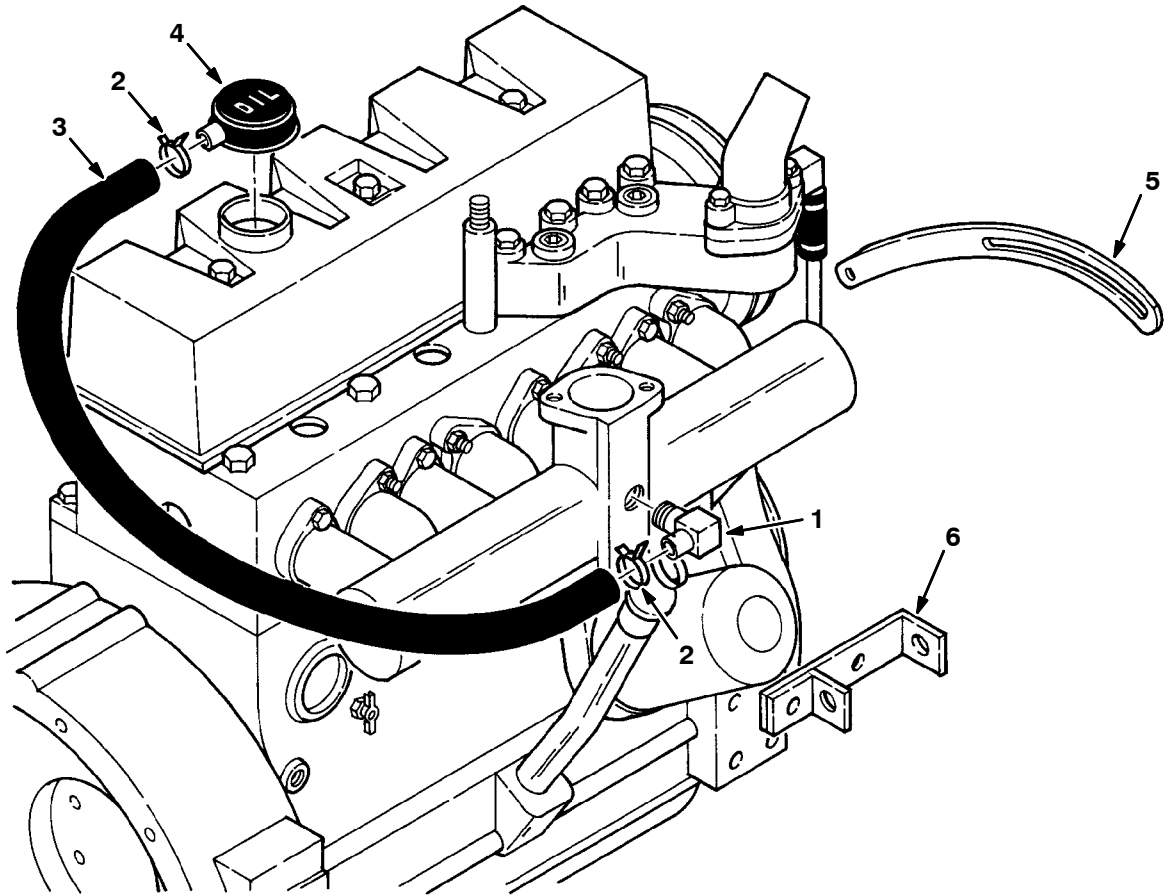
Fig. 12 - Water Header and Thermostat Group



09761 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1		XM32001	Stud	2
2	38401	TM27K00310	Elbow, Water Outlet	1
▽	34752		Thermostat and Gasket	1
▲	53988-12	X07854	Gasket, Elbow	1
▲	53988-13	F601K00303	Thermostat	1
5		TM27K00503	Header, Water Outlet	1
6		26XX00101B	Plug	2
7	30035	TM27K00202	Gasket, Header	2

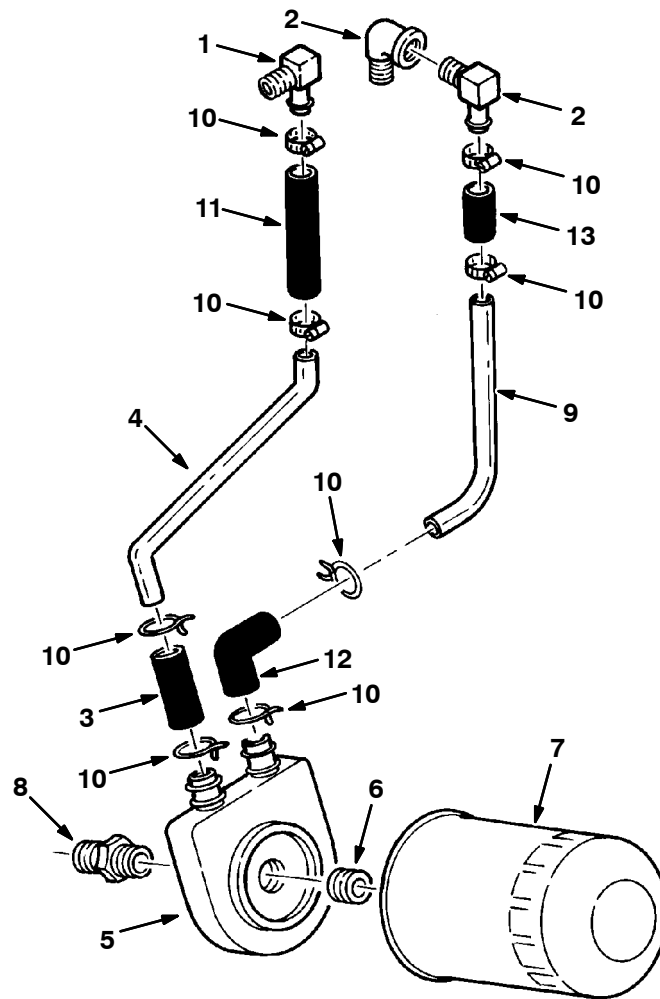
Fig. 13 - Alternator Brackets and PCV Group



09771 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	38418	X26136	Elbow, Intake Manifold (Replaced by None)	1
2	52766	X02751	Clamp, Hose	2
3	61776	X08253180	Hose, Elbow to Filler Cap	1
4	38403	TM27L00412	Cap, Oil Filler	1
5	30036	TM27M00308	Strap, Alternator	1
6	52738	TM27M00411	Bracket, Alternator	1

Fig. 14 - Oil Filter Group



09772 - 550, 1550, D

Ref.	Tennant Part No.	Teledyne Continental Part Number	Description	Qty.
1	47388	X26142	Elbow, Water Header	2
2		X12191	Elbow, Water Pump	1
3	38856	X08253020	Hose, Oil Cooler	1
4	38409	TM27L00516	Tube, Oil Cooler	1
5	38405	TM27L00420	Cooler, Oil	1
6	38402	TM27L00202	Adapter, Oil Filter	1
7	78532	F600L00312	Element, Oil Filter	1
8		TM27L00204	Connector, Oil Cooler	1
9	38406	TM27L00423	Tube, Oil Cooler	1
10	52766	X02751	Clamp, Hose	8
11	38857	X08253040	Hose, Oil Cooler	1
12	38919	TM27L00208	Hose, Oil Cooler	1
13		X082531020	Hose, Oil Cooler	1

SECTION 16

CONTENTS

PAGE

PART NUMBER TO PAGE NUMBER CROSS REFERENCE LIST	16-2
PART DESCRIPTION TO PAGE NUMBER CROSS REFERENCE LIST	16-22

CROSS REFERENCE

PART NUMBER TO PAGE NUMBER CROSS REFERENCE LIST

Part Number	Page Number	Part Number	Page Number
C400K00215	12-3, 12-10, 12-11, 13-15	F401B-4321	12-3
CA10F00319	12-11	F401B00301	12-7
CVT03234	12-4, 13-5, 14-7, 15-7	F401B00308	12-5
D600H00300	12-7	F401B00333	12-5
D600S00207	13-11	F401B00342	12-5
F124A00201	12-3	F401C00416	12-7
F124H00302	12-4	F401F00274	13-16
F124K00334	12-10	F401F0500□□□	12-9
F140A00216010	12-4	F401F0500□□	12-9
F140B00320	13-12, 14-13	F401H00303	12-9
F140B0320	12-3	F401K00324	12-9
F162B00412	12-5	F401L00203	12-3
F163A00205	12-7	F401L00304	12-3
F163A04081E	12-7	F401L00402	12-3
F163A04081E020	12-7	F401M00201	12-12
F163A04081E030	12-7	F401M00219	12-10, 13-19
F163A04081E040	12-7	F401M00221□□□	13-19
F163A04081E060	12-7	F401M00332	12-12
F163T00103	12-7	F401M00338	12-12
F163T00103002	12-7	F401M00343□□□	13-19
F163T00103010	12-7	F401M00355	12-12
F163T00103020	12-7	F401M00405	12-10
F163T00103030	12-7	F401M00407	12-12
F163T00103040	12-7	F401S00227	12-9
F163T00119	12-7	F401S00230	12-9, 13-16
F163T00119020	12-7	F401S00407	12-9
F163T00119030	12-7	F600102520	12-4
F163T00119040	12-7	F600102520001	12-4
F163T00119060	12-7	F600102520003	12-4
F218K00202	12-3, 12-11	F600102520005	12-4
F218L00204	12-8	F600102520010	12-4
F226D04002	12-7	F600102520015	12-4
F227D06001	12-7	F600102520020	12-4
F244C00317	12-7, 14-13	F600A00214	12-7
F400A0366	12-3	F600A00214003	12-7
F400B00255	12-3	F600A00214005	12-7
F400B00282	13-3, 14-3, 15-3	F600B00234	12-9, 13-19, 14-5, 15-5
F400B00359	12-7	F600B00242	12-7, 13-3, 14-3
F400B00383	12-5	F600B00247	12-7
F400C02351	12-7	F600B00470	12-7
F400D00202	12-7	F600B0399	12-3
F400E00303	12-11	F600I00347	12-4
F400E00423	12-11	F600K00371	12-9
F400F00263	12-11	F600L00312	15-18
F400F00478	12-9	F600L004340	12-10
F400G00211	12-7	F600L00436	12-10
F400I00246	12-4, 13-7, 14-8, 15-8	F600L00447	12-10
F400I00251	12-4, 14-7	F600L03750	14-18
F400I00343	12-4	F600L04132	12-8
F400K04471	12-9	F601B-305	12-3
F400K04570	12-11	F601B00425	12-3
F400L00210	12-8	F601C04350	12-7, 14-13
F400L04300	12-3	F601F00304□□□	13-19
F400M00279	12-10	F601I00200	12-4
F400M00293	12-10	F601I00301	12-4
F400T00181	12-4	F601I00303	12-4
F401A00424	12-3	F601K00303	12-3, 12-11, 13-15, 14-16, 15-16
F401A03760	12-3		
F401A06021	12-3	F6T01014	12-9

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
F6T02002	12-8	TM27C00501	14-9
FW00307100	12-10	TM27E00300	13-13, 14-14, 15-14
FW00308120	12-10	TM27E00400	13-13
FW00312080	13-18	TM27E00502	14-14, 15-14
FW00312120	13-18	TM27E00601	13-13
FW00313080	13-18	TM27F00205	13-16
HD277M00407	12-12	TM27F00206	13-16
K2948	12-11	TM27F00221	14-5
K800A00203	13-9, 14-10, 15-10	TM27F00304	13-16
LW00203042	14-5, 15-5	TM27F00421	13-16
M330F00253	12-11, 13-16	TM27F00425	13-19
MM148	10-31	TM27F00507	13-13
SK1288	11-31	TM27F02000	13-16
SK1444	7-3	TM27F05130	13-19
SK1450	11-8	TM27F05140	13-18
SK2137	6-29	TM27F05180	13-16
SK2198	12-3	TM27F05190	13-19
SK2222	6-29	TM27F05200	13-19
SK2223	6-28	TM27G00301	13-9, 14-10, 15-10
SK2498	11-4, 11-5	TM27H00407	13-8, 14-9
SK2499	11-4	TM27H00409	15-9
SK2500	11-4	TM27H00500	13-7
SK2586	11-9	TM27I00202	13-7
SK2669	12-11	TM27I00300	13-5, 14-7, 15-7
SP200S00006RNY	13-18	TM27I00303	13-7, 14-8, 15-8
SP200S00009RNYC	13-18	TM27I00305	13-7, 14-8, 15-8
SP207S00016RD	12-10	TM27I00306	14-8
T427B00201	12-3	TM27I00308	13-5
TM13C00502	13-12, 14-13, 15-13	TM27I00309	13-5, 14-7, 15-7
TM13C03100	13-12, 14-13, 15-13	TM27I00311	13-5
TM20T00102	15-10	TM27I00313	13-7, 14-8
TM20T00102025	15-10	TM27I00314	13-7, 14-8, 15-8
TM20T00102050	15-10	TM27I00316	13-5, 15-7
TM20T00102075	15-10	TM27I00403	13-7, 14-8, 15-8
TM20T00102100	15-10	TM27I00504	13-5
TM27A00300	13-9	TM27I00505	13-5
TM27A00400	13-5	TM27I00511	13-7, 14-8
TM27A0040025	13-5	TM27I00601	13-7
TM27A00502	13-5, 14-7, 15-7	TM27I05060	13-7
TM27A00610	13-5	TM27I05070	13-7
TM27A05001E	13-9	TM27I05120	14-8
TM27A05001E050	13-9	TM27I05130	14-8
TM27A05001E075	13-9	TM27I05140	15-8
TM27A05001E100	13-9	TM27I05150	15-8
TM27A06091	13-5	TM27I05162	15-8
TM27A0610	14-7, 15-7	TM27K00202	15-16
TM27A615605R	13-3	TM27K00301	13-14, 14-15, 15-15
TM27A615802S	13-3	TM27K00304	13-15, 14-16
TM27B00300	13-11, 14-12, 15-12	TM27K00310	13-15, 14-16, 15-16
TM27B00304	15-13	TM27K00412	13-14, 14-15, 15-15
TM27B00322	15-3	TM27K00503	13-15, 14-16, 15-16
TM27B00400	13-3	TM27K06051	13-14, 14-15, 15-15
TM27B00401	13-3	TM27L00200	13-10, 14-11
TM27B00500	13-3	TM27L00202	13-17, 14-18, 15-18
TM27B00607	15-13	TM27L00204	13-17, 14-18, 15-18
TM27B05071	13-3, 14-3	TM27L00208	13-17, 14-18, 15-18
TM27B05100	13-3, 14-3, 15-3	TM27L00312	13-17, 14-18
TM27B06005	13-11	TM27L00406	13-3, 14-3, 15-3
TM27C00401	14-9	TM27L00412	13-16, 14-17, 15-17
TM27C00401	13-8, 15-9	TM27L00420	13-17, 14-18, 15-18
TM27C00408	13-8, 14-9, 15-9	TM27L00423	13-17, 14-18, 15-18

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
TM27L00427	13-3, 14-3, 15-3	TMD27A00300	14-10, 15-10
TM27L00513	13-3, 14-3, 15-3	TMD27A00500	14-7, 15-7
TM27L00516	13-17, 14-18, 15-18	TMD27A00507	14-7
TM27L05100	13-10, 14-11	TMD27A00613	15-7
TM27L05180	15-11	TMD27A05031E	14-10, 15-10
TM27L06020	14-11	TMD27A05031E050	14-10, 15-10
TM27L06030	13-10, 14-11	TMD27A05031E075	14-10, 15-10
TM27L06050	15-11	TMD27A05031E100	14-10, 15-10
TM27M00224	13-18	TMD27A06031	14-7, 15-7
TM27M00225	13-18	TMD27A610601R	15-3
TM27M00226	13-18	TMD27A610602R	14-3
TM27M00227	13-19	TMD27A610802S	14-3
TM27M00228	13-19	TMD27A610807S	15-3
TM27M00229	13-19	TMD27B00300	14-5, 15-5
TM27M00230	13-19	TMD27B00402	14-3, 15-3
TM27M00231	13-18	TMD27B00403	14-3, 15-3
TM27M00232	13-18	TMD27B00404	14-5, 15-5
TM27M00234	13-18	TMD27B00500	15-3
TM27M00235	13-18	TMD27B00502	14-3
TM27M00308	13-16, 14-17, 15-17	TMD27B00529	13-11, 14-12, 15-12
TM27M00401	13-16, 14-17	TMD27B05003	14-12
TM27M00411	15-17	TMD27B05141	15-12
TM27M00502	13-18	TMD27C00300	13-8, 14-9, 15-9
TM27M00510	13-18	TMD27D03001	13-9, 14-10, 15-10
TM27M3170	13-19	TMD27E00501	14-14, 15-14
TM27S00302	13-11	TMD27F00200	14-5, 15-5
TM27S00314	13-16	TMD27F00212	14-5
TM27S00316	13-16	TMD27F00214	14-5
TM27S00318	13-16	TMD27F00220	14-5
TM27S00406	13-11	TMD27F00224	14-5
TM27S04080	13-11	TMD27F00233	14-5
TM27T00102	13-8, 14-9, 15-9	TMD27F00265	15-5
TM27T00102025	13-8, 14-9, 15-9	TMD27F00268	15-5
TM27T00102050	13-8, 14-9, 15-9	TMD27F00300	14-5
TM27T00102075	13-8, 14-9, 15-9	TMD27F00301	14-5, 15-5
TM27T00102100	13-8, 14-9, 15-9	TMD27F00305	14-5
TM27T00103	13-9, 14-10	TMD27F00308	14-5
TM27T00103025	13-9, 14-10	TMD27F00309	14-5
TM27T00103050	13-9, 14-10	TMD27F00311	14-5
TM27T00103075	13-9, 14-10	TMD27F00405	14-5
TM27T00103100	13-9, 14-10	TMD27F00506	14-5
TM27T00106050	13-9	TMD27F00601	14-14, 15-14
TM27T00106075	13-9	TMD27F04110	15-5
TM27T00106100	13-9	TMD27F05090	14-5
TM27T00107	13-3, 14-3, 15-3	TMD27F05100	14-5
TM27T00120	13-9	TMD27F05110	14-5
TM27T01003	13-14, 14-15, 15-15	TMD27F05120	14-5
TM27U01002	13-5	TMD27F05140	15-5
TM27U02001	13-11	TMD27F05200	14-5
TMD13M00500	13-12	TMD27H00402	14-8, 15-8
TMD20F00300	15-5	TMD27H00403	14-5, 15-5
TMD20F00301	15-5	TMD27H00503	14-8
TMD20F00304	15-5	TMD27H00506	15-8
TMD20F00400	15-5	TMD27I00401	14-7, 15-7
TMD20F00401	15-5	TMD27I00402	14-8, 15-8
TMD20F00506	14-5, 15-5	TMD27I00501	14-7, 15-7
TMD20F03100	15-5	TMD27I00502	14-7, 15-7
TMD20T00201	14-10, 15-10	TMD27M00315	14-13
TMD20T00203	15-5	TMD27M00504	14-13, 15-13
TMD20T00204	15-5	TMD27T00201050	14-10, 15-10
TMD27A00205	13-5, 14-7	TMD27T00201075	14-10, 15-10

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
TMD27T00201100 ..	14-10, 15-10	X08072120	12-11
TMD27T00203	14-5	X08100102	12-11
TMD27T00204	14-5	X08253020	12-9, 13-17, 14-18, 15-18
TMD27U01001	14-7	X08253040	13-17, 14-18, 15-18
TMD27U01002	14-7	X082531020	15-18
TMD27U01006	15-7	X08253120	12-9
TMD27U02001	14-12	X08253180	14-17, 15-17
TMD27U02002	15-12	X08258080	13-18
X00101B	13-15, 14-16	X08258110	13-18
X00110	13-3, 14-3	X08261110	14-5
X00137A	13-3, 14-3	X12015	13-19
X00334	12-3	X12131	13-16
X00365	12-3	X12143	12-10
X00506	12-4	X12191	12-10, 13-17, 14-18, 15-18
X005692122	12-9	X12251	12-9, 12-11
X00599D	13-7, 14-8, 15-8	X12393	14-5
X00623	13-7, 14-8, 15-8	X12474	12-11
X00666	13-8, 14-9, 15-9	X12489	14-5
X00675	12-7	X12502	12-10
X00692	13-10, 14-11, 15-11	X12511	12-10
X01015	12-3, 12-10, 13-3, 14-3, 15-3	X12517	12-10
X01673	13-10, 14-11, 15-11	X12644	15-5
X01698	12-9, 13-19	X12645	15-5
X01801E	12-10	X12671	13-16, 14-5, 15-5
X02208	13-3, 14-3, 15-3	X12774	12-11
X02236	12-3	X13012	14-12, 15-12
X02544	14-8	X13201	12-9, 13-16
X02583	13-5, 14-7, 15-7	X13203	12-9
X02708	13-16	X13304	13-3, 14-3, 15-3
X02751	12-9, 13-17, 14-17, 14-18, 15-17, 15-18	X14134	14-5
X02959	12-7	X14234	12-12
X03182	12-9	X14235	12-7
X04038	12-3	X14434	14-5
X04057	12-11	X14531	12-12
X04107	12-11	X14583	13-3, 14-3, 15-3
X04136	12-10	X14589	13-7, 14-8, 15-8
X04182	12-8, 12-11	X17025	13-3, 14-3, 15-3
X05696	13-16	X17040	13-11
X06503	12-7	X17045	13-11
X06828	12-7	X17048	13-11
X06920	12-7	X17066	13-7, 14-8
X07005	12-3, 13-12, 14-13, 15-13	X18137	12-9
X07057	12-11	X18402	12-9
X07580	12-12	X18498	14-8, 15-8
X07606	14-7, 15-7	X18521	12-4
X07663	13-3, 14-3, 15-3	X18546	12-7
X07689	13-5, 14-7, 15-7	X18552	13-7
X07737	13-18	X19002	12-10, 12-12
X07738	13-19	X22128	12-3
X07810	12-5	X26124	12-9
X07814	12-3	X26125	12-9
X07815	15-8	X26129	13-3, 13-16, 14-3
X07823	14-12	X26136	14-17, 15-17
X07837	14-5, 15-5	X26138	14-5, 15-5
X07845	13-11, 14-12, 15-12	X26140	14-5
X07846	13-3, 14-3, 15-3	X26142	13-17, 14-18, 15-18
X07854	14-16, 15-16	X26144	14-5
X07861	14-5, 15-5	X26146	13-16
X08016100	12-10	X26153	13-16
X08016120	12-10, 14-5	X26162	15-5
		X26175	15-5

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
X400K00261	12-10	02445	11-8
XM32001	13-15, 14-16, 15-16	02446	9-5, 9-7
XM32018	13-3, 14-3, 15-3	02449	10-16
XM32020	13-5, 14-7	02450	10-16
XM32021	13-5, 14-7, 15-7	02452	10-16
XM32022	13-13, 14-14, 15-14	02453	10-15
XM32031	13-7, 14-8, 15-8	02455	6-4
XM32048	13-16, 14-14, 15-14	02456	6-4
XM32050	13-13, 14-14, 15-14	02457	6-4
XM32064	13-8, 14-9, 15-9	02458	6-4
XM32094	13-5, 14-7, 15-7	02460	6-3
XM32134	15-7	02461	6-3
XM37003	13-5, 14-7, 15-7	02462	6-3
XM37005	13-7, 14-8, 15-8	02464	6-83
XM37014	13-8, 14-9, 15-9	02468	6-47, 6-49
XM38003020	14-5, 15-5	02469	6-47, 6-49
XM38003050	14-5	02506-6	10-26
XM38003052	15-5	02515	6-66
XM38003054	14-5	02519	11-27
XM38003110	15-5	02520	11-27
XM38004	13-5, 14-7, 15-7	02530	6-91
XM39000	13-5, 14-7, 15-7	02534	10-16
XM40000	14-5	02535	10-16
Y400I00215	12-4	02536	11-27
Z120S00202	13-11	02543	6-52
Z120S00203	13-11	02545	6-55
Z120S00207	13-11	02554	6-55
Z145D00300	13-9, 14-10, 15-10	02555	6-55
Z145M00308	13-19	02556	6-88
Z145S03000	13-7	02578	9-7
00500-15	11-23, 11-24	02579	6-88
00500-20	6-20, 6-23	02582	11-3
00500-5	6-35, 8-3	02583	11-3
00911	6-79	02586	9-7
00912	11-32	02589	6-13
00960	6-77	02597	9-5
00961	6-75	02683	6-51
00966	6-77, 6-79	02817	9-7
01433-1	6-3	02818	9-7
01666	11-28	02819	9-7
01668	11-28	02984	6-21, 6-22
01686	6-91	02997	6-7
01736	6-9	03233	6-35, 8-3
01818	11-28	03292B	10-17
01844	6-35, 8-3	03391	9-5
02076	8-4	03393	9-5, 10-25
02281	10-15	03394	9-5
02412	11-32	03395	10-30
02430	11-7	03401	9-5
02433	11-8	03402	9-7
02434	11-8	03404	9-15, 9-17
02435	11-8	03405	9-15
02436	11-8	03406	9-8
02437	11-8	03408	10-30
02438	11-8	03409	10-30
02439	11-8	03706	9-11, 9-13
02440	11-8	03711	11-5, 11-6
02441	11-8	03823	9-11, 9-13, 10-13, 10-21
02442	11-8	03838	9-5, 11-5
02443	11-8	03839	6-77, 6-79
02444	11-8	03922	6-77, 6-79

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
03967	6-26, 6-81	08893	8-3
03977	6-41	09088	6-28
03992	10-5	09311	6-79
04020	6-41	09314	6-79
04048	6-27	09322	6-85
04185	11-27	09328	9-11
04198	11-27	09384	10-8
04210	6-27	09385	10-2
04431	6-83, 11-30	09624	6-13, 6-92
04477	11-30	09626	6-92
04499	11-30	09689	6-91
04525	11-27	09725	6-39
04595	10-30	09819	13-18
04597	10-30	09837	6-3, 13-18
04598	10-30	09852	13-18
04601	6-41	09857	13-18
04733-12	6-13	09861	13-18
05178	10-15	09867	13-18
05492	10-15	09877	13-19
05880	6-36	09890	13-18
06222	9-15	09891	13-18
06223	6-4, 9-15	09905	6-85
06224	6-87, 9-11, 9-15	09910	13-18
06227	6-4, 6-87, 9-11, 9-15	09930	13-18
06228	6-87, 9-11, 9-15	10100	14-7, 15-7
06229	6-4, 9-11	10120	6-28
06230	9-11	10136	8-3
06231	9-11	10143	6-42
06279	6-13	10149	6-91
06332	6-4, 6-85	10150	6-91
06333	6-85	10154	6-91
06418	6-13, 6-21, 6-22, 6-83	10160	6-91
06474A	6-61	10203	12-3
06507	6-31, 6-35, 7-3, 8-3	10323	6-37
06573	6-20, 6-23	10397	10-31
06750	10-16	10464	6-77, 6-78
06837	6-83	10470	6-33
06845	6-83	10471	6-33
06846	6-83	10472	6-33
07259	6-83	10473	6-33
07422	6-80, 9-9, 10-2, 10-22, 10-25, 10-29	10488	7-5
07423	6-80	10509	6-39
07483	9-7	10632-1	6-52
07484	9-7	10632-12	6-9
07875	6-41	10632-19	6-19, 10-2, 10-22
07934	6-53, 6-55, 6-56	10664	6-59
08099	6-83	10701	10-2, 10-6, 10-7, 10-8, 10-22, 10-23, 10-24
08100	6-83	10754	7-3
08174	6-13	10756	7-3
08175	6-91	10829	6-25
08228	6-85	10865	6-80, 9-7
08298	6-83	11048	6-13
08329	6-27	11399	6-15, 9-3, 9-5, 9-7, 10-15, 10-27
08407	6-77	11442-1	7-3
08791	6-15, 9-7	11442-10	10-15
08877	9-5, 10-15	11442-7	9-7
08889	6-33, 8-3	11442-8	9-7
08890	6-33, 8-4	11476	6-13, 6-17, 6-19
08891	6-35, 8-4	11531	6-4, 6-37, 8-7, 9-11, 9-13
08892	6-35, 8-3		

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
11716	6-13	16400	6-77, 6-79
11869	10-15	16418	10-7, 10-8, 10-24
11870	9-7	16419	10-7, 10-8, 10-24
11893	6-42, 6-79	16420	10-7, 10-8, 10-24
11979	6-35	16421	10-7, 10-24
12052	6-15, 9-7	16422	10-7, 10-8, 10-24
12060	6-15, 9-7	16423	10-7, 10-8, 10-24
12072	6-15, 9-7	16440	9-9
12074	6-15, 9-7	16456	6-54
12784	14-9, 15-9	16485	9-5, 11-7
12927	6-80	16490	6-34, 8-3
12959	6-36	16495	6-33, 8-3
13015-1	6-42, 8-4	16496	6-36, 8-3
13015	6-42	16497	8-8
13016	6-42	16498	8-8
13113	6-51	16499	8-3
13534	6-75	16501	6-37
13611	6-83	16511	10-7, 10-24
13907	11-11	16513	10-6, 10-23
13959	10-2, 10-22	16550	8-3
13XX14141	13-5, 14-7	16551	8-3
14131	6-41	16552	8-3
14215	6-80, 10-2, 10-22	16556	8-3
14326	6-13	16557	8-3
14330	6-29	16559	6-41
14331	6-29	16560	6-41
14432	8-4, 8-8, 10-21	16562	8-6
14595-1	8-3	16563	8-6
14601	6-34, 8-3	16564	8-6
14605	6-54, 8-3	16667	6-80
14700-1	6-25	16669	6-7
14700-2	6-25	16676	6-80
14700-3	6-25	16683	8-4
14700-4	6-25	16690	13-18
14700	6-25	16695	11-23, 11-24
14854	6-63	16706	14-5, 15-5
15331	6-83	16707	14-5, 15-5
15398	6-13	16708	14-5
15543-2	7-5	16710	14-5
15543	6-39	16711	14-5
15555-1	6-41	16712	14-5
15724	10-5	16713	8-6
15785	8-3	16735	7-3
15791-1	12-11	16738	6-39
15806	8-3	16739	14-5
15LG00202	12-7	16769	8-4
15SL00211	12-3	16820	6-37, 8-7
15XX14141	15-7	16832	6-33
16141	12-4	16848	8-5
16142	12-10	16850	8-3
16143	13-12, 14-13	16851	13-12, 14-13, 15-13
16147	12-7, 14-13	16852	13-12, 14-13, 15-13
16148	12-3	16853	6-3, 13-17, 14-18
16153	12-4, 14-7, 15-7	16855	14-13, 15-13
16158	12-10	16860	6-33
16162	12-3	16865	13-12
16168	12-10	16870	7-3
16170	12-4	16928	6-90
16171	12-8	16929	8-5
16172	12-3	16930	6-33, 8-3
16174	12-7, 14-13	16931	8-3

Part Number	Page Number	Part Number	Page Number
16932	8-4	25183	10-2, 10-22
16933	8-4	25184	6-66
16936	6-42, 8-4	25185	9-8
17269	6-25	25186	6-8
17980	6-20, 6-23	25189	6-79
18594	9-3	25195	6-21
18595	9-5	25202	6-79
19048	6-41	25207	6-79
19659	6-83	25208	6-79
20021	6-30, 6-33, 6-34, 6-91	25212	6-79
20120003	13-18	25216	6-79
20120004	13-18	25217	6-34
20120010	13-18	25218	6-34
20120011	13-18	25219	6-13
20833	6-91	25220	6-13
20CL02020	12-3	25224	6-13
21639	10-2, 10-22	25312	10-26
21642	6-9	25359	6-79
21660	11-7	25360	6-85, 9-11, 9-13
21661	11-7	25364	6-79
21690	6-80	25365	6-79
21693	6-80	25373	6-79
21726	6-36	25383	6-79
22134	6-61, 6-63, 6-65	25384	6-79
222831	9-11, 9-13	25632	6-79
22290	6-61, 6-63, 6-65	25636	6-79
22297	6-4, 6-11, 6-21, 6-22, 6-38, 6-39, 6-85	25637	6-79
22308-1	7-3	25639	6-79
22309	7-3	25640	6-79
22473	10-13, 10-21	25642	6-75, 6-77, 6-79
22604	6-52, 11-21	25643	6-79
22640	10-6, 10-23	25645	6-80
22RM00303	12-10	25649	6-4, 6-87, 9-15, 9-17
23158	12-9	25650	6-35, 8-3
23191	6-11	25653	6-37
23498	6-4, 6-77, 6-79, 6-85, 6-87, 9-11, 9-13, 9-15, 9-17	25655	6-79
23515	6-15, 9-7	25656	6-4, 6-85, 6-87
23563	9-7	25659	6-63
23999-8	6-31, 6-35	25663	6-4, 6-85, 6-87, 9-11, 9-15
24012-1	6-36	25665	6-4, 6-85, 6-87, 9-11, 9-15
24047	7-3	25928	9-15
24142	10-2, 10-22	26015	6-4, 6-85, 6-87, 9-11, 9-15
24227	10-2, 10-22	26156	6-11
24298	10-2, 10-22	26315	6-29
24339	6-26, 6-81	26439	6-83
24427	10-2, 10-22	26496	7-3
24576-1	10-6, 10-23	26509	6-39
24576	10-6, 10-23	26523	6-80
24584	7-3, 10-16	26565	6-13, 6-15, 6-30, 6-33, 6-34, 6-54, 6-60, 9-7
24592	10-25, 10-29	26663	6-29
24593	6-9	26X00110	15-3
24924	6-39	26X00137A	15-3
24928-1	7-3, 10-9, 10-10	26X26129	15-3
25014	6-28	26XX00101B	15-16
25018	6-13	27048	7-3
25179	6-37, 8-7	27474	6-9
25180	6-35	27792	6-20, 6-23, 11-23
25181	6-66	28165	6-4, 6-85, 6-87, 9-11, 9-15
25182	6-66	28835	11-23
		29035	9-7

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
29662	8-4	31960	10-24
29831-6	6-42	32117	6-9, 6-89
29832-7	6-31, 6-35	32126	6-27, 6-81
30035	15-16	32415	6-90
30036	14-17, 15-17	32435	8-6
30145	9-11	32436	8-6
30173	6-36	32477	6-28
31254	9-3	32486	6-17, 6-19
31260	9-7	32492	6-91
31313	6-15	32493	6-20, 6-23, 6-90
31354	11-23, 11-24	32524	6-13
31377	11-23, 11-24	32552	6-31, 6-35
31382	11-23, 11-24	32575	6-9
31554	6-13, 6-92	32580	6-9
31556	6-52, 11-29	32587	8-6
31557	6-53	32590	8-6
31559	6-53	32712	6-75
31565	6-47, 6-49, 6-51	32724	6-83
31570	6-47, 6-49, 6-51	32759	6-54
31572	6-58	32761	6-54, 11-28
31575	6-54, 11-27	32798	9-9
31589	6-53	32808	8-6
31592	6-37	32814	8-4
31593	6-58	32985	6-90, 6-91
31595	6-53, 6-55	33308	11-5
31596	6-47	33327	9-5, 11-6
31597	6-47, 6-49, 6-51	33510	6-91
31598	6-47, 6-49, 6-51	33579	11-17
31599	6-53	33580	11-17, 11-19, 11-21
31600	6-47, 6-49, 6-51	33600	12-11
31601	6-47	33602	12-11
31602	6-47, 6-49, 6-51	33603	12-11
31603	6-47, 6-49, 6-51	33692	10-15
31605	6-20, 6-23	33694	11-17
31606	6-47, 6-49	33743	6-91
31608	6-47, 6-49	33744	6-91
31610	6-47, 6-49, 6-51	33745	6-91
31611	6-47, 6-49, 6-51	33746	6-91
31612	6-47, 6-49	33747	6-91
31613	6-53	33748	6-91
31614	6-77	33749	6-91
31615	6-77	33778	10-15
31616	6-47	33782	10-8
31619	6-77	33783	10-8
31632	6-54	33842	12-9
31634	6-19	33843	13-19
31638	11-29	33846	12-9
31639	11-29	33848	13-19
31642	11-27	33849	13-19
31643	11-27	33850	13-19
31651	6-66	33855	13-19
31668	6-8	33856	12-9
31672	6-47, 6-49, 6-51	33861	12-9
31705	6-81	34065	6-35, 8-3
31935	6-35	34092	11-9
31936	7-3	34094	11-9
31937	8-3	34097	11-9
31942	14-3	34158	11-9
31943	14-3	34159	11-9, 11-13
31944	13-3	34160	11-9
31945	13-3	34161	11-9

Part Number	Page Number	Part Number	Page Number
34162	11-9	369849	9-11, 9-15
34178	11-17, 11-19, 11-21	370133	6-91
34179	11-17, 11-19, 11-21	37089	6-8
34189	13-18	37101	6-9
34193	13-18	37420	6-3, 12-10
34194	6-35, 8-3	37421	6-3, 12-10
34297	13-18	37422	12-10
34298	13-18	37450	11-9
34299	13-18	37451	11-9
34310	6-56, 11-9	37453	11-9
34351	6-49, 6-51	374532	7-3
34355	6-47	37460	11-11
34359	6-13	37462	11-9, 11-11
34375	10-5	374648	7-3
34387	6-49	374649	7-3
34420	6-49	37467	11-9
34422	6-49	375585	6-37
34429	13-14, 14-15, 15-15	375613	6-79
34547	14-13	375614	6-79
34640	13-13, 14-14, 15-14	37572	11-3
34726	6-3, 13-18	375724	9-14, 9-15, 9-17
34727	13-18	37573	11-3
34738	8-4	37594	12-4
34749	13-16	37612	12-11
34752	13-15, 14-16, 15-16	37616	11-17, 11-19, 11-21
34792	10-31	37617	11-23, 11-24
34796	14-14, 15-14	37631	12-5
34797	13-16	37634	12-3
34798	13-16	37756	11-17, 11-19, 11-21
34801	8-5	37766	11-17, 11-19, 11-21
34802	8-5	37778	11-3
34803	8-5	37793	12-3
34804	8-5	37794	12-12
34805	6-35	37803	12-3
34810	6-80	37806	12-7
34813	6-80	37808	12-4
34830	13-14, 14-15, 15-15	37816	12-10
34833	6-35, 8-3	37933	12-9
34841	8-5	37934	12-9
34861	8-5	37935	12-10
34866	8-5	37942	13-5, 14-7, 15-7
34867	8-3	37955	11-17
34873	13-14, 14-15, 15-15	37958	12-7
34876	13-5, 14-7, 15-7	38006	13-19
34877	6-35	38010	12-11, 13-16
34880	7-3	38076	12-10
34881	7-3	38077	12-3
34904	8-3, 12-12	38081	12-3
34908	6-36, 8-3	38082	13-3, 14-3, 15-3
34910	8-3	38083	12-5
34954	8-3	38084	12-5
34996	6-39	38086	12-7
34997	6-39	38087	12-11
35033	6-52, 6-57, 6-60	38089	12-11
35586	6-52	38094	12-10
36328	6-21, 6-22, 6-92	38097	12-4
36417	6-35, 8-4	38099	12-7
36466	6-92	38101	12-3
36644	6-85, 6-87, 9-13, 9-17	38102	12-3
36829	6-60	38103	12-12
369701	6-83	38104	12-12

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
38106	12-9	38916	15-10
38109	12-4	38917	14-10, 15-10
38110	12-4	38918	14-15, 15-15
38225	12-7	38919	14-18, 15-18
38226	12-3	38920	15-11
38228	12-3	38968	11-17, 11-19, 11-21
38255	11-17, 11-19, 11-21	38991	13-18
38321	10-16, 11-3	38992	13-19
38379	14-5, 15-5	39272	6-42, 8-4
38381	13-11, 14-12, 15-12	39274	6-20, 6-23
38383	14-14, 15-14	39277	8-3
38384	14-5	39278	10-15
38385	14-5	39279	6-37, 8-3
38386	14-5	39284	6-35, 8-3
38388	14-5	39312	8-3
38390	14-5	39322	6-61, 10-15
38391	14-5	39347	6-83
38392	14-5	39348	6-13
38393	14-5, 15-5	39527	11-23, 11-24
38395	14-5	39703-2	6-3, 14-18
38396	14-5	39703-6	8-3
38397	13-5	39797	13-16
38401	13-15, 14-16, 15-16	39810	6-17, 6-19
38402	13-17, 14-18, 15-18	39912	6-83
38403	13-16, 14-17, 15-17	40052	6-79, 6-85, 9-11, 9-13
38404	13-3, 14-3, 15-3	40061A	6-11
38405	13-17, 14-18, 15-18	40076	6-21, 6-22
38406	13-17, 14-18, 15-18	40143	10-15
38408	13-3, 14-3, 15-3	40144-1	10-15, 11-3
38409	13-17, 14-18, 15-18	40144-20	11-3
38410	13-18	40144-21	11-3
38411	14-5	40144-22	11-3
38412	14-5	40144-4	10-15, 11-3
38413	13-3, 14-3, 15-3	40144-5	10-15
38415	14-5, 15-5	40144-6	11-3
38416	13-11, 14-12, 15-12	40145	10-15, 10-16
38417	14-5, 15-5	40151	10-15
38418	14-17, 15-17	40152	10-15
38419	14-5	40154	10-15
38420	13-13	40155	10-15
38423	13-19	40171	10-13, 10-21
38428	12-11	40173-1	10-13
38445	12-12	40173	10-13, 10-21
38446	11-8	40175	10-15
38449	14-9	40354	6-28
38550	13-19	40362	6-53, 6-60
38572	14-10, 15-10	40390	6-21, 6-22, 6-77, 6-79
38595	11-3	40496	6-77, 6-79
38665	13-5, 15-7	40514	6-52, 6-57, 6-59, 6-60, 10-5, 10-16
38715	11-4	40550	6-85, 9-11, 9-13
38753	14-8, 15-8	40565	6-75, 6-77
38758	14-3, 15-3	40573	10-15
38788	14-15, 15-15	40575	6-17, 9-7
38836	14-10, 15-10	40585	6-41
38839	14-10, 15-10	40625	6-35
38842	14-10, 15-10	40646	6-17, 6-19
38843	14-14, 15-14	40670	10-13, 10-21
38844	15-12	40671	10-13, 10-21
38856	14-18, 15-18	40678-1	6-31, 6-87
38857	14-18, 15-18	40726	11-8
38873	11-25		

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
40727	6-75	42499	6-20
40755	6-56	42639	6-22, 6-23
40758	6-17, 6-19	42779	6-85
40759	6-17, 6-19	42809	6-77, 6-79
40840	6-77	42897	6-61
40846	6-13	43203	6-7
40870-1	6-4, 6-77	43246	10-16
40870-2	6-79	43363	6-7, 9-11, 9-13
40870-5	6-77	43454	6-9
40870-7	6-4	43460	9-15
40999A	6-21, 6-22	43555	6-4, 6-87, 7-5, 9-15, 9-17
41007	6-77, 6-79	43844	6-31, 8-6
41016	6-63	44031	6-9, 6-15, 9-5
41032	6-21, 6-22	44310	6-25
41046	6-75	44542	9-7
41063	6-15, 9-7	44847	9-7
41066	6-83	44868	6-54, 6-58
41073	6-83	44869	6-53
41081	6-83	44961	6-83, 7-6
41082	6-83	45223	8-5
41083	6-83	45224	8-5
41084	6-83	45339	10-22
41109	6-75	45595	9-9
41112	6-81	45617	12-9
41130	6-77, 6-79	45622	11-17, 11-19, 11-21
41169	6-85, 6-87, 9-13, 9-17	45623	11-17, 11-19, 11-21
41186	6-35	45628	11-23, 11-24
41187	8-4	45631	6-3, 12-10
41342	6-35, 8-3	45639	12-9
41348	8-3	45647	12-11
41358	6-35, 8-4	45659	12-9
42006	14-7, 15-7	45670	10-8
42009	14-7, 15-7	45780	10-2, 10-22
42034	6-85	45850	8-6
42038	6-85	46029	6-63, 6-65
42082	10-6, 10-10, 10-11, 10-13, 10-25	46236	6-29, 8-6
42116	14-7, 15-7	46314	10-7, 10-24
42120-2	6-83	46480	10-15
42120-4	6-83	46481	6-37, 6-52, 6-53, 6-56, 6-57, 6-58, 6-59
42120-9	6-13	46485	7-3
42120	6-13	46611	7-3, 10-15
42126	6-20, 6-21	46800	6-11
42133A	6-15, 9-5, 9-7	46928-1	10-8
42140	6-53, 6-55	47010-1	6-25
42148	14-9, 15-9	47010-2	6-25
42149	15-5	47010-3	6-25
42153A	6-15	47010-4	6-25
42170-36	8-3	47010-6	6-25
42214	10-15	47010-7	6-25
42215	6-54, 6-58	47178-12	6-80
42239	6-29	47178-13	6-80
42240	6-61, 6-63, 6-65	47356	8-5
42260	6-37, 6-52, 6-53, 6-55, 6-56	47388	7-3, 13-17, 14-18, 15-18
42311	6-83	47498	6-54, 6-56, 6-57, 10-16
42328	14-8, 15-8	47504	6-54, 6-56, 6-57, 6-58, 10-5
42330	15-8	47508	6-56, 6-57
42331-1	6-77, 6-79	47512	6-55, 6-56, 6-57
42337	14-8, 15-8	47518	6-20, 6-23
42399	6-83	47519	6-58
42498	6-21	47535-1	10-6, 10-23

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
47535-2	10-6, 10-23	49934	6-35
47535	10-6, 10-23	49943	10-5
47536-1	10-6, 10-23	50304	6-28
47536	10-6, 10-23	50330	6-80
47537-1	10-6, 10-23	50456	8-4
47537	10-6, 10-23	50461	6-29
47566	6-41	50493	6-63, 6-65
47579	6-31	50501	12-11
47585	6-61, 6-63, 6-65	50502	12-11
47636	10-15	50508	12-11
47638	6-54	50509	12-11
47662	10-15	50518	6-4, 6-87
47675	12-9	50544	6-15
47680	12-9, 13-19, 14-5, 15-5	50565	7-3
47721	10-15	50646	6-9
47743	6-31	50788	10-13, 10-21
47744	6-30, 6-33	50789	10-13, 10-21
47745	6-77, 6-91	50790	10-13
47752	6-52	50817	6-37
47768	10-2, 10-22	50845	6-4, 6-11
47801	6-79, 6-83, 11-30	50864	6-79
47826	6-38, 6-39, 7-3, 7-5	50902	6-15
47845	6-15	50960	6-52
47846-3	9-5	50967	6-37
47846	6-15, 9-5	51046	6-21, 6-22
47848	9-3, 10-16	51109	6-29
47915	6-55, 11-8	51176	6-31, 6-35, 8-4
48108A-1	10-16	51305	6-37, 13-3, 14-3, 15-3
48108A	6-60, 10-16, 11-31	51317	6-21, 6-22
48126	6-29	51321-3	6-37
48144	7-3	51368	6-9
48183	6-9	51406	11-5, 11-6
48211	10-2, 10-22	51416	11-5, 11-6
48242	6-9	51448	6-20, 6-21, 6-22, 6-23
48267	6-41	51449	6-22, 6-23
48663	6-52, 11-17	51452	6-20, 6-23
48789	11-6	51458	6-7
48790	6-7	51459	6-7
48791	11-6	51530	6-91
48879	6-63	51531	6-61
48880	6-56, 11-22	51534	6-92
48884	6-91	51545	6-28
48887	6-63	51560-3	6-39
48897	6-63	51560-5	6-38, 6-39
48899	6-42	51562	6-28
48901	6-13	51564	6-21, 6-22, 6-31, 6-35, 6-92
48906	11-22	51570	10-2, 10-22
48907	11-22	51572	10-2, 10-22
48908	11-22	51658-5	6-38, 6-39
48909	11-22	51689	6-30, 6-33, 6-34
48910	6-26, 6-81	51690	6-30, 6-33, 6-34
48911	6-26, 6-81	51691	6-34
48912	10-27	51692	6-30, 6-33, 6-34
49021	6-79	51693	6-30, 6-33, 6-34
49022	10-2, 10-22	51748	6-47
49024	6-36	51779	10-15
49262	10-2, 10-7, 10-24	51782	10-15
49263	9-5	51787	6-9
49266	10-2, 10-22	51798	10-8
49681	6-61, 6-63	51805	7-3
49924	9-15	51809	10-16

Part Number	Page Number	Part Number	Page Number
51938	6-20, 6-21, 6-22, 6-23	54194	6-23
52049	6-34	54241	12-11
52163	6-29	54274	6-36
52296	6-15, 9-7	54333	6-38, 6-39, 6-41, 7-3, 7-5, 9-3, 9-5, 9-7, 9-14, 9-17
52388	6-25	55248	9-5
52405	11-17, 11-19, 11-21	55586	6-52, 6-53, 6-92
52448	10-15	55619	6-58
52450	6-38	55685	6-54, 6-55, 6-56
52504	6-31, 6-33	55705	6-49
52508	6-31, 6-33, 6-63, 6-65	55740	6-3, 6-58
52580-2	8-8	55775	6-51
52580	6-38	55911	12-10
52615	6-7	55926	11-9
52724	14-10, 15-10	55929	11-9
52725	14-8, 15-8	55936	11-9
52730	15-8	55977	12-12
52734	15-8	55994	6-3, 12-10
52736	13-3, 14-3, 15-3	56506	9-11, 9-13
52738	15-17	56690	6-25, 6-54
52753	14-9, 15-9	56820	6-25, 6-53, 6-55, 6-83
52756	14-7, 15-7	56821	6-60
52757	14-7, 15-7	56827	6-54
52760	14-7, 15-7	56903	6-15, 9-7
52764	14-11, 15-11	56992	6-80, 9-9
52766	14-17, 14-18, 15-17, 15-18	57075	6-35
52770-8	8-6	57152	11-25
52770-9	6-3, 14-5	57156	11-25, 11-26
52781	6-36	57196	6-60
52785-1	6-37	57311	6-35, 8-4
52789	6-61, 6-63, 6-65	57377	9-5
52814	6-30, 6-33	57378	9-5
52830	6-31	57379	9-3, 9-5
52859	14-8, 15-8	57444	9-3
52898	14-7, 15-7	57567	6-81
52899	15-5	57568	6-51
52911	6-57	57630	6-9, 6-85, 9-11, 9-13
52925	6-30, 6-33	57676	6-25
53051A	8-5	57964	6-47, 6-49, 6-51
53055-2	6-3	57971	6-47
53078	6-29	57982	6-25, 11-25
53079	6-29	58067	7-4
53083-14	10-15	58107	6-77, 6-79
53174-1	10-7	58114	6-77, 6-79
53268	7-3	58120	6-3, 6-38, 6-39
53395-2	7-3	58596	11-25, 11-26
53400-1	7-3, 10-9, 10-10, 10-11	58858	6-53, 6-56, 6-57
53400-2	10-9, 10-10, 10-11	59560	6-51
53400-3	10-9, 10-10, 10-11	59617	6-3, 6-17, 6-19
53400-4	7-3, 10-9, 10-10, 10-11	59632	6-91
53400-5	10-9, 10-10, 10-11	59633	6-17, 6-19, 6-65, 6-91
53963A	6-13	59634	6-91
53988-12	12-3, 12-10, 12-11, 13-15, 14-16, 15-16	59639A	6-90
53988-13	12-3, 12-11, 13-15, 14-16, 15-16	59851	6-75
53988-14	12-3, 12-11	59857	6-75
53988-16	12-10	59865	6-75
54027	7-3	59874	6-75
54041	6-92	59984	10-25, 10-29
54127	6-61	60015	6-3, 6-17, 6-19
54180	6-80	60016	6-4, 6-91
		60018	6-4, 6-90

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
60969	10-24	62700	6-63
60970	6-8	62702	6-63
61157	9-11, 9-13	63182-1	9-3, 9-5
61170	6-85, 6-87, 9-13, 9-17	63182-2	9-3
61171	6-85, 6-87, 9-13, 9-17	63182-4	9-5
61174	6-85, 6-87, 9-13, 9-17	63244-3	10-16
61175	6-85, 6-87, 9-13, 9-17	63282	6-61, 6-63, 6-65
61176	6-85, 9-13	63292	6-65
61181	6-85, 6-87, 9-13, 9-17	63511	6-85, 9-11, 9-13
61187	9-17	63814	9-9
61188	9-17	63837	9-9
61189	9-17	63923	11-7
61245	6-87, 9-17	63924	11-7
61258	6-28	64685	9-15, 9-17
61261	6-89	64730	6-80
61279	6-41	64795A	10-29
61478	6-3	64795C-1	10-25
61489	6-20, 6-23, 11-24	64899	6-75
61490	11-24	64903	6-8
61515	6-35, 8-3	64921	10-25, 10-29
61516	6-35, 8-3	65145-1	6-56, 6-57
61517	6-35, 8-3	65221	6-3, 6-59
61611	6-37	65241	11-26
61628	9-11, 9-13	65869-5	6-3
61639	6-28	65889	9-11
61649	6-27	65890	6-85
61683	6-41	65894	8-4
61686	6-41, 8-6	65897	6-89
61687	6-41	65898	6-89
61695	7-3	65899	6-89
61696	6-35	65934	6-63
61697	8-4	65935	6-63
61701	6-78	65936	6-63
61705	10-22	65939	6-63
61711	13-3, 14-3, 15-3	65940	6-63
61724	14-9, 15-9	65941	6-63
61725	14-7, 15-7	65942	6-63
61733	15-5	65947	6-35
61736	14-9, 15-9	65948	13-16
61741	14-7, 15-7	65949	13-16
61748	15-5	65950	13-16
61749	14-11, 15-11	65951	8-4
61762	14-9, 15-9	65965	15-5
61775	14-9, 15-9	65966	15-5
61776	14-17, 15-17	65967	8-4
61777	15-5	67310	6-57
61793	15-7	67515	10-15
61882	11-11	67832	6-52
61886	11-13	68101	8-5
62234	6-54	68222	8-5, 10-5, 10-25, 10-29
62389	6-60	68275	6-7
62390	6-53	68301	9-5
62417-2	10-5	68567	6-7
62515	6-31, 12-3	68866	6-65
62530-1	6-80	68869	8-3
62530	6-80	68870	8-3
62595-18	6-9, 8-4, 9-5, 10-25	68872	8-4
62595-4	6-9, 7-3	68962	6-37
62595-5	9-3	69261	11-28
62595-6	9-5, 10-25	69494	6-34
62595-9	6-9	69571	6-9

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
70284	6-9	74278	11-13
74094	11-25	74279	11-13
74097	11-25	74280	11-11
74098	11-17, 11-19, 11-21	74281	11-11
74105	11-25, 11-26	74282	11-13
74109	11-25, 11-26	74283	11-11, 11-13
74110	11-25, 11-26	75045	6-85
74111	11-25, 11-26	75050	6-91
74112	11-25, 11-26	75054	10-13, 10-21
74121	11-17	75072-1	6-81
74122	11-17, 11-19, 11-21	75072-5	6-81
74123	11-17, 11-19, 11-21	75073	6-81
74124	11-17	75075	6-81
74125	11-17, 11-19, 11-21	75076	6-4, 6-87, 10-13
74137	11-17, 11-19, 11-21	75081A	6-87
74162	6-52, 11-19	75095	10-13
74163	6-57, 11-11, 11-13	75096	6-87
74165	11-19, 11-21	75098	6-87
74166	11-19, 11-21	75103	6-85
74167	11-19, 11-21	75106	6-85
74168	11-17, 11-19, 11-21	75108	10-4
74170	11-19	75118	10-13, 10-21
74171	11-19, 11-21	75119	6-15, 10-15
74176	6-25, 11-26	75127	10-13, 10-21
74181	11-26	75128	10-13, 10-21
74182	11-26	75143-2	6-85
74184	11-11	75144	10-4
74186	11-25, 11-26	75156	6-87
74187	11-25, 11-26	75170	6-87
74188	11-25, 11-26	75171	6-87
74189	11-25, 11-26	75174	6-87, 9-15
74190	11-26	75175	6-87, 9-15
74195	11-25, 11-26	75179	10-15
74210	11-11	75180	10-15
74218	11-25, 11-26	75181	10-15
74223	11-11	75182	6-85
74240	11-11	75184	10-16
74249	11-17, 11-19, 11-21	75185	10-15, 11-32
74251	11-25, 11-26	75186	10-15
74253	11-11	75187	10-15
74254	11-11	75188	6-85
74256	11-11	75190	6-88, 6-89
74257	11-11	75194	10-16
74258	11-11	75196	10-15
74259	11-13	75197	9-7, 10-15
74260	11-13	75198	10-15
74261	11-13	75199	10-16
74262	11-11	75210	6-77
74263	11-11	75244-1	6-8
74264	11-13	75249	6-29
74265	11-11	75267	6-8
74266	11-11	75268	6-8
74267	11-11	75272	6-7
74270	11-13	75285	6-29
74271	11-13	75296	6-83
74272	11-11	75314	6-15, 9-7
74273	11-11, 11-15	75318	6-15
74274	11-13	75319	6-15, 9-7
74275	11-13	75365	6-26, 6-81
74276	11-11	75368	6-28
74277	11-13	75369	6-28

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
75371	6-65	75702	6-17
75375	7-6	75703	6-19
75379-1	6-8	75706	6-23
75379	6-8	75711	6-3, 6-17, 6-19
75400	6-31	75712	6-17
75404	6-31	75713	6-19
75420A	6-31	75718	6-5
75430	6-9	75722	6-5
75454	6-77, 6-78	75740	6-17, 6-19
75456-1	6-79	75757	6-17, 6-19
75456-2	6-79	75760	6-20, 6-21
75456-3	6-79	75761	6-20, 6-21, 6-22, 6-23
75456-4	6-79	75764	6-13
75456	6-79	75766	6-13
75461	6-77, 6-79	75768	6-20, 6-23
75467	6-77	75769	6-20
75480A	6-9	75772	6-20, 6-23
75486A	6-31, 6-37	75773	6-20
75498A	6-31	75774	6-23
75499A	6-31	75780	6-20, 6-23
75501-1	6-17	75781	6-21, 6-22
75501A-1	9-3	75786	6-20, 6-23
75520	6-20, 6-23	75788	6-17
75528	6-17, 6-19	75789	6-19
75530	6-11	75790	6-17
75535	6-28	75791	6-17
75547	6-8	75795	6-19
75550	6-11	75796	6-19
75569	6-11	75799	6-3, 6-17, 6-19
75570	6-11	75801	6-15
75571	6-11	75802-1	6-15, 9-7
75572	6-11	75803	6-15, 9-7
75575	6-11	75810	6-9
75588	6-17, 6-19	75811	6-9
75592	6-17, 6-19	75812	6-9
75596A	6-15	75813	6-9
75597A	6-15	75814	6-9
75600	6-20, 6-21	75815	6-87
75601A	6-15	75816	6-85
75604	6-15, 9-5, 9-7	75903	10-3
75607	6-11	75906	10-4
75611	6-15, 6-85	75923	10-27
75616	6-13	76058	6-29
75617	6-13	76059	6-29
75622	6-13	76062	10-2, 10-22
75627	6-13	76063	6-13
75631	6-22	76066	6-19
75634	6-11	76067	6-9
75635	6-4, 6-85, 9-11, 9-13	76075	10-27
75636	6-11	76076	10-27
75638	6-11	76087	6-29
75642	6-11	76089-2	10-25, 10-29
75643	6-11	76090	10-29
75648	6-11	76113	6-9
75649	6-11	76152	10-13
75654	6-22	76153	10-13
75655	6-22	76154A	10-13
75656	6-21	76155	10-29
75657	6-21	76156	6-9
75673	10-4, 10-19	76157	6-85, 9-11, 9-13
75681	6-11	76158	6-9

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
76217	6-66	76811	6-8
76218	6-20, 6-21	76813	6-9
76220	10-2, 10-22	76816	6-28
76231	6-66	76821	6-61, 6-63
76234	6-80	76822	6-61
76252	10-5	76823	6-61, 6-63
76269	6-91	76825	6-38, 6-39
76290	6-31, 6-35	76827	6-38, 6-39
76291	6-31, 6-35	76828	6-4, 6-85, 9-11, 9-13
76292	6-31	76830	6-36
76306	6-80	76831	6-36
76313	6-42	76833	6-38
76319	8-8	76841	6-37
76321	8-8	76858	10-3
76332	6-38, 6-39, 8-8	76859	10-3
76335	6-3, 8-8	76860	10-3
76340	6-91	76861	10-3
76353	6-91	76862	10-3
76354	6-9	76863	10-28
76390	6-63, 6-91	76864	6-10
76391	6-91	76866	6-10
76392	6-90	76867	6-10
76395	6-4, 9-11, 9-13	76868	6-10
76403	9-11, 9-13	76869	6-9
76408	9-3	76870	6-10
76411	9-3	76873-1	6-31, 12-7
76414	9-3	76874A	6-31
76426	6-85, 6-87, 9-11, 9-13, 9-15, 9-17, 10-2, 10-9, 10-13, 10-23	76877	10-2, 10-22
76436	9-8	76880	10-19
76532	6-4, 6-85, 9-11, 9-13	76881	10-19
76536	6-80	76882	6-77, 6-79
76539	6-27	76896	6-90
76540	6-83	76899	6-75
76544	6-31, 6-35	76903	6-28
76560	6-31, 6-34	76904	6-28
76562	6-9	76915	6-83
76564	6-31	76921	6-90
76568	6-20, 6-23	76922-1	6-90
76570	10-15	76927	6-90
76579A	6-31, 6-33	76937	6-4, 6-91
76580	6-30	76943	6-91
76581	6-31, 6-33	76946	6-91
76583	6-9	76974-1	6-91
76588	6-31	76978	6-90, 6-91
76589-2	7-5	76979	6-90
76596A-1	6-37	76984-1	6-90
76596A	6-37	76988	6-91
76601	6-31	76997	6-92
76602	6-31, 6-34	77097	6-13, 6-92
76607	6-31	77099	6-54
76628	6-13	78005-2	6-31, 6-35, 8-3
76640	6-8	78012	6-10
76649	6-27	78013	7-4
76650	6-9	78014	7-4
76665	6-23	78017	7-4
76667	6-20	78032	6-31
76677	6-19	78059	6-88
76736	6-42	78068	6-31, 6-35
76762	6-35	78078	6-13
76800	6-31, 6-33	78080	6-29
		78081A	7-3

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
78085	7-3	78802	6-4
78088	7-3	78819	6-87, 9-11, 9-15
78090	10-11	79066	6-65
78092	7-3	79067	6-65
78093	6-91	79068	6-65
78096	6-90	79069	6-65
78099	10-4, 10-19	79070	6-65
78101	10-4, 10-19	79071	6-65
78104-4	6-9	79073	6-65
78109	10-10	79074	6-65
78116	10-28	79075	6-59
78118	6-9	79077	6-65
78120	10-10, 10-11	79078	6-57
78122	7-3	79079	6-51
78126	6-31	79080	6-65
78127	10-26	79091	13-19
78135	6-75	79092	13-19
78140-1	6-9	79102	10-2, 10-22
78143	6-60	79104	6-51
78144B	6-37	79105	6-51
78146	6-31	79106	6-51
78153	10-2, 10-22	79107	6-51
78154	10-8	79111	6-3
78155	10-6	79112	6-3
78156	10-28	79114	6-65
78157	10-5	79250-1	9-13
78159	10-29	79273-2	9-7
78160	10-2	79273	9-3, 9-5
78161	10-8	79301	9-7
78164	10-6	79314	9-9
78167	10-13	79318	9-9
78170	6-31, 6-35, 8-3	79332	9-15
78171	10-15	79367	9-15, 9-17
78187	6-26, 6-81	79368	10-9
78189	6-26, 6-81	79390	9-15
78190	6-27	79391	6-4, 9-15
78191	6-27	79392	6-87, 9-15
78517	13-3, 14-3, 15-3	79396	9-11
78518	15-3	79410	9-9
78519	15-3	79414	9-15
78520	14-5, 15-5	79424	9-15, 9-17
78521	14-5, 15-5	79426	10-19
78522	15-5	79427	10-22
78523	15-5	79428	10-23
78524	15-5	79429	10-21
78525	15-5	79434	10-25
78526	15-5	79436	10-23
78527	15-5	79439	10-2, 10-22
78528	15-5	79451	10-25
78529	15-5	79452	10-25
78531	15-13	79453	9-14, 9-17
78532	15-18	79464	9-15, 9-17
78560	6-92	79471	9-15, 9-17
78561	6-92	79472-1	9-15, 9-17
78562	6-17, 6-19	79473-1	9-15, 9-17
78641	6-90	79474	9-15, 9-17
78642	6-91	79475	9-11, 9-13
78670	6-88, 6-89	79476	9-15, 9-17
78673	6-88, 6-89	79477	9-15, 9-17
78695	6-91	79478	9-15, 9-17
78795	6-91	79484	9-5, 9-7

CROSS REFERENCE

Part Number	Page Number	Part Number	Page Number
79488	9-15, 9-17	82958	6-85, 6-87, 9-13, 9-17
79500	6-4, 9-11, 9-13, 9-15, 9-17	85148	10-31
79508-1	10-17	86029	6-63, 6-65
79515	10-17	87536	6-80
79517	10-17	87579	6-17, 6-19, 6-85
79518	10-17	87866	6-80
79530	10-25	8FC00205	12-3
79532	10-21	8TC00200 1	12-3
79535	10-21	8UL00212	12-8
79538	10-21		
79542	10-25		
79545	6-4, 9-15, 9-17, 10-21		
79546	10-21		
79547	10-21		
79553	10-25		
79557	6-4, 9-11, 9-13		
79558	9-11, 9-13		
79570	9-15, 9-17		
79571	9-5		
79572	9-5		
79580	9-5, 9-14, 9-17		
79605	6-7		
79606	9-7		
79614	11-4		
79708	11-13		
79742	11-11		
79743	11-11		
79744	11-11		
79745	11-11		
79746	11-11		
79747	11-11		
79748	11-13		
79749	11-13		
79750	11-13		
79751	11-13		
79752	11-13		
79753	11-13		
79754	11-15		
79755	11-15		
79756	11-15		
79757	11-15		
79758	11-15		
79759	11-15		
79760	11-15		
79761	11-15		
79762	11-15		
79763	11-15		
79764	11-15		
79765	11-15		
79766	11-15		
79767	11-15		
79771	11-11		
79776	11-15		
79779	11-11		
79828	11-21		
7TC00215	12-3		
82661	6-53		
82829	6-35, 6-41		
82832	6-47, 6-49, 6-51		
82833	6-83		
82835	6-47, 6-49, 6-51		

PART DESCRIPTION TO PAGE NUMBER CROSS REFERENCE LIST**A**

Actuator, Valve, 11-13
Adapter (For Engine 16850), 14-5
Adapter, Cylinder Rod, 6-92
Adapter, Filter, 1/8NPT, 6-38, 6-39
Adapter, Fuel Filter, 15-5
Adapter, Injection Pump, 15-5
Adapter, Inlet Tube, 13-10, 14-11
Adapter, Oil Filter, 13-17, 14-18, 15-18
Adapter, 13-16, 14-5, 15-5
Adaptor Assembly, 11-9
Adaptor, Cylinder, 6-91
Adaptor, Rear Squeegee, 10-13
Adaptor, Squeegee Wand, 10-13, 10-21
Adaptor, Tank, 10-21
Adaptor, Vacuum Wand, 10-21
Adaptor, 9-3
Adjuster Assembly, Seat, 6-7
Adjuster, Rear, 6-90
Adjuster, Seat, 6-7
Air Cleaner, 6-38, 6-39, 8-8
Alternator, 6-35, 8-3, 12-12
Ammeter, 6-80
Anchor, Governor Spring, 13-16
Angle, Brake Adjustment, 6-28
Angle, Cable, 6-34
Angle, Grille, 6-9
Angle, Mounting Bracket, 8-3
Angle, Shock Mount, 6-63
Angle, Shock, 6-63
Angle, Spring Mounting, 6-61, 6-63
Angle, 6-79
Arm Assembly, Rocker, Exhaust, 13-7, 14-8, 15-8
Arm Assembly, Rocker, Intake, 13-7, 14-8, 15-8
Arm Assembly, Vertical Block, 6-91
Arm Assembly, 6-90
Arm, Brake, 6-28
Arm, Brush Drive, 6-20, 6-23
Arm, Control, 6-15, 9-7, 11-11
Arm, Engine Cover Support, 6-9
Arm, Front Brush Idler, 6-21

Arm, L.H., 6-90
Arm, Pump Control, 6-63
Arm, R.H., 6-91
Arm, Rear Brush Idler, 6-22
Arm, Rocker, 13-11
Arm, 8-3

B

Back Frame, 6-9
Backplate Kit, 11-22
Backplate S/A, 11-13
Baffle, Valve Chamber Oil Drain, Front, 12-3
Baffle, Valve Chamber Oil Drain, Rear, 12-3
Ball Joint, Governor Rod to Carburetor, 12-9
Ball Joint, Governor Rod to Governor Arm, 12-9
Ball Joint, Lower, 6-61
Ball Joint, Upper, 6-61, 6-63, 6-65
Ball Joint,, 6-65
Ball Joint, 6-30, 6-33, 6-34, 6-63, 6-92, 8-3
Ball, Float, 6-85, 9-11, 9-13
Ball, 11-17, 11-19, 11-21, 11-25, 11-26
Balljoint, 13-16
Band, Air Cleaner, 8-8
Band, Front, Squeegee, 6-90
Band, Rear, Squeegee, 6-91
Band, Squeegee, Retaining, 6-17, 6-19
Bar, Mounting, 6-15, 9-7
Barrel, Trip, 6-91
Base, Fuel Filter, 15-5
Base, Oil Filter, 12-10
Basket, Soap, 6-87
Battery, 625 CCA, 8-3
Battery, 540 CCA, 6-42
Bearing Assembly, Cup and Cone, 6-81
Bearing Kit, Connecting Rod, 0.25 mm Undersize, 14-10, 15-10
Bearing Kit, Connecting Rod, 0.25 mm undersize, 13-9
Bearing Kit, Connecting Rod, 0.50 mm Undersize, 14-10, 15-10
Bearing Kit, Connecting Rod, 0.50 mm undersize, 13-9

- Bearing Kit, Connecting Rod, 0.75 mm Undersize, 14-10, 15-10
- Bearing Kit, Connecting Rod, 0.75 mm undersize, 13-9
- Bearing Kit, Connecting Rod, 1.00 mm Undersize, 14-10, 15-10
- Bearing Kit, Connecting Rod, 1.00 mmundersize, 13-9
- Bearing Kit, Connecting Rod, Standard, 13-9, 14-10, 15-10
- Bearing Kit, Crankshaft, 0.25 mm undersize, 13-8
- Bearing Kit, Crankshaft, 0.50 mm undersize, 13-8
- Bearing Kit, Crankshaft, 0.75 mm undersize, 13-8
- Bearing Kit, Crankshaft, 1.00 mm undersize, 13-8
- Bearing Kit, Crankshaft, Standard, 13-8
- Bearing Kit, Main, 0.002" Undersize, 12-7
- Bearing Kit, Main, 0.010" Undersize, 12-7
- Bearing Kit, Main, 0.020" Undersize, 12-7
- Bearing Kit, Main, 0.030" Undersize, 12-7
- Bearing Kit, Main, 0.040" Undersize, 12-7
- Bearing Kit, Main, 0.25 mm Undersize, 14-9, 15-9
- Bearing Kit, Main, 0.50 mm Undersize, 14-9, 15-9
- Bearing Kit, Main, 0.75 mm Undersize, 14-9, 15-9
- Bearing Kit, Main, 1.00 mm Undersize, 14-9, 15-9
- Bearing Kit, Main, Standard, 12-7, 14-9, 15-9
- Bearing, Ball, 6-35, 6-77, 6-79, 8-3, 11-3
- Bearing, Crankshaft Pilot, 12-7
- Bearing, Fiberglide, 6-90, 6-91
- Bearing, Flange, 6-29, 6-61, 6-63, 6-65, 6-91
- Bearing, Liner, 6-83
- Bearing, Needle, 11-25, 11-26
- Bearing, Pillow Block, 6-90
- Bearing, Rocker Shaft, 13-11
- Bearing, Self-Aligning, 6-83, 11-30
- Bearing, Sleeve, 6-11
- Bearing, Thrust, 6-17, 6-19, 6-65, 6-83, 11-9
- Bearing, 6-11, 6-13, 6-20, 6-21, 6-22, 6-23, 6-75, 6-79, 6-83, 11-9, 11-11, 11-13, 11-23, 11-24
- Bell Crank, 11-15
- Bellcrank, Throttle, 6-31
- Bellcrank, Upper, 6-33
- Bellcrank, 6-15, 6-33, 6-63, 9-7
- Belt, Alternator and Water Pump Drive, 12-7
- Blade Set, Replacement, 10-13
- Blade, Front, Squeegee, Urethane, 6-92
- Blade, Front, Squeegee, 6-90
- Blade, Front, 6-4
- Blade, Rear, Squeegee, Urethane, 6-92
- Blade, Rear, Squeegee, 6-91
- Blade, Rear, 6-4
- Blade, Squeegee, Urethane, 6-17, 6-19
- Blade, Squeegee, 6-3, 6-17, 6-19, 10-30
- Block, Filler, Front, 12-3
- Block, Filler, Rear, 12-3
- Board, P.C., 10-25
- Board, Terminal, 6-80
- Body and Gear Kit, Front, 11-22
- Body and Gear Kit, Rear, 11-22
- Body, Oil Filler Crankcase, 12-3
- Bolt Cl, 11-17, 11-19
- Bolt, Carriage, 9-7
- Bolt, Connecting Rod, 12-7, 13-9, 14-10, 15-10
- Bolt, Eye, 6-75, 6-77, 6-79, 6-91
- Bolt, Hold Down, 6-42, 8-4
- Bolt, Place, Bearing Cap to Crankcase, Center, 12-7
- Bolt, Place, Bearing Cap to Crankcase, Front-Rear, 12-7
- Bolt, 6-15, 11-17, 11-19, 11-21
- Boot, Battery, 8-4
- Boot, Electric, 6-35
- Boot, 8-3
- Brace, Engine Compartment, 6-9
- Brace, Oil Gauge Support (Not Shown), 12-3
- Brace, Rear Panel, 8-8
- Brace, Rear Shroud, 6-38, 6-39
- Bracket Mounting Assembly, Fan, 6-79
- Bracket Replacement Kit, Mounting, 6-36
- Bracket, Adaptor, Storage, 10-21
- Bracket, Alternator, 12-12, 13-16, 14-17, 15-17
- Bracket, Angle, 6-79
- Bracket, Battery, L, 6-42
- Bracket, Battery, 6-42, 8-4
- Bracket, Bearing Mount, 6-23
- Bracket, Bearing, L.H., 6-20
- Bracket, Bearing, R.H., 6-21
- Bracket, Bearing, 6-22
- Bracket, Bellcrank, 6-31, 6-33
- Bracket, Brake Cable, 6-28

CROSS REFERENCE

Bracket, Brake, 6-27
Bracket, Bridge, 6-17, 6-19
Bracket, Cable & Alarm, 6-65
Bracket, Cable, 6-65
Bracket, Caster, 6-91
Bracket, Coil, 13-19
Bracket, Control Valves, 6-54
Bracket, Door Hinge, 6-87
Bracket, Engine Mounting, 6-31, 6-34, 8-3
Bracket, Exhaust Mounting, 6-36
Bracket, Exhaust Support, 6-36
Bracket, Fan, 6-77
Bracket, Filter Mount, 9-5
Bracket, Filters Mounting, 6-58, 6-59
Bracket, Flasher, 10-6, 10-23
Bracket, Fuel Pump, 14-5
Bracket, Hinge, L.H., 9-15
Bracket, Hinge, R.H., 9-15
Bracket, Hose Mounting, L.H., 10-13
Bracket, Hose Mounting, R.H., 10-13
Bracket, Hose, 6-9
Bracket, Idler Mounting, 6-75
Bracket, L, 10-4
Bracket, LPG Tank Mounting, Replaced by none, 10-9
Bracket, LPG Tank Mounting, 10-10, 10-11
Bracket, LPG Tank, 7-3
Bracket, Main, 6-65
Bracket, Mount, 7-3
Bracket, Mounting Engine, 6-34, 6-35
Bracket, Mounting, 6-20, 6-77, 6-79, 6-88, 6-89, 6-91
Bracket, Mtg, Bearing, 6-65
Bracket, Oil Cooler Mounting, 6-31
Bracket, Oil Drain, 6-31
Bracket, Oil Filter, 12-10
Bracket, Pump Cover, 9-11
Bracket, Pump, 9-13
Bracket, Radiator, 6-37
Bracket, Resistor, 13-19
Bracket, Stop, 6-65
Bracket, Switch Mounting, 6-91
Bracket, Switch, 6-91, 9-7
Bracket, Taillight, 10-2, 10-22
Bracket, Throttle Linkage, 6-33
Bracket, Throttle, 6-30, 6-33, 6-34, 8-3
Bracket, Tow Bypass, 6-9, 6-89
Bracket, U, 10-13, 10-21
Bracket, Water Valve Mounting, 6-15
Bracket, Wire, 8-4
Bracket, 9-7
Brake Assembly, Hydraulic, 6-29
Brake, Mechanical, 6-28
Breather, Filler, 6-53
Brush Assembly, 6-35, 8-3
Brush, Abrasive Bristle, 6-5
Brush, Polypropylene, 6-5
Brush, 6-3, 6-17, 6-19
Bulb, 10-2, 10-6, 10-7, 10-8, 10-22, 10-23, 10-24
Bumper Kit, Heavy Duty, 10-4, 10-19
Bumper Rear, L.H., 6-89
Bumper Rear, R.H., 6-89
Bumper, Left Side, Tractor, 10-4
Bumper, Rear, L.H., 6-88
Bumper, Rear, R.H., 6-88
Bumper, Recovery and Solution Tank, L.H., 10-19
Bumper, Recovery and Solution Tank, R.H., 10-19
Bumper, Recovery and Solution Tank, 10-4
Bumper, Right Side, Tractor, 10-4
Bumper, Rubber, 6-9
Bumper, Scrubber Head, 10-4, 10-19
Bumper, Tractor, Left Side, 10-19
Bumper, Tractor, Right Side, 10-19
Bushing, Bronze, 6-77
Bushing, Camshaft, Kit, 12-4
Bushing, Oil Pump Drive Shaft (In Crankcase), 12-8
Bushing, Piston Pin, 12-7, 13-9, 14-10, 15-10
Bushing, Reducing, 12-10
Bushing, Seal, 11-25, 11-26
Bushing, Sending Unit, 6-31
Bushing, Spanner, 6-91
Bushing, 6-35, 8-4, 11-11, 11-13
Button, Horn, 6-25

C

- Cable Assembly, Brake, Separate Spring, 6-28
- Cable Assembly, Push-Pull, 6-34
- Cable, Choke, 6-31, 6-34
- Cable, Control, 9-7
- Cable, Grounding, 6-31, 6-35
- Cable, Negative Battery, 6-42, 8-3
- Cable, Positive Battery, 6-42, 8-3
- Cable, Push-Pull, 6-65
- Cable, Solution Control, 6-15
- Camplate S/A, 11-11
- Camshaft, 12-4, 13-7, 14-8, 15-8
- Cap And Filler Block, Rear Bearing, 14-3, 15-3
- Cap and Filler Block, Rear Bearing, 13-3
- Cap and Gasket, 13-18
- Cap Screw, 11-11, 11-25, 11-26
- Cap, Contact, 6-25
- Cap, Crankshaft Bearing, Center, 12-7
- Cap, Crankshaft Bearing, Front, 12-7, 14-3, 15-3
- Cap, Crankshaft Bearing, Rear, 12-7
- Cap, Crankshaft Bearing, 13-3, 14-3, 15-3
- Cap, Crankshaft, 13-3
- Cap, End, 11-26
- Cap, Engine Oil Drain, 6-31
- Cap, Filler, 9-14, 9-15, 9-17
- Cap, Fuel Tank, 6-41
- Cap, Gasket, 13-18
- Cap, Gasoline, Protectoseal, 10-26
- Cap, Hub Dust, 6-81
- Cap, Oil Filler, 11-3, 12-3, 13-16, 14-17, 15-17
- Cap, Radiator, 6-37
- Cap, 12-10, 13-18
- Carburator Repair Kit, 13-16
- Carburetor and Gasket, Gasoline, 13-16
- Carburetor and Gasket, LPG, 13-16
- Carburetor, Gasoline, 12-11, 13-16
- Carburetor, LPG, 12-11, 13-16
- Cartridge Kit, Cover End, 11-8
- Cartridge Kit, 11-8
- Caster Kit, 6-91
- Caster, 6-91
- Catch, Rubber Hook, 10-21
- Catch, 10-13
- Chain and Hook Assembly, 6-17
- Chain Assembly, 10-15
- Chain, Assembly, Door, 6-19
- Chain, Drain Plug, 9-13
- Chain, Drain plug, 9-11
- Chain, Static Drag, 6-9
- Chain, 6-7, 6-17, 6-19
- Channel, Bearing Cover, 6-20, 6-21
- Charge Pmp Adap, 11-13
- Charge Relief Kit, 11-8
- Check Valve, 11-29
- Clamp, Fuel Filter, 15-5
- Clamp, Cable, 6-15, 6-29, 6-41, 6-42, 6-63, 6-87, 8-6, 10-2, 10-8
- Clamp, Coil, (replaced by 38992), 13-19
- Clamp, Conduit, 10-2, 10-7, 10-24
- Clamp, Distributor, 12-10, 13-19
- Clamp, Fuel Pump, 15-5
- Clamp, Fuel Tank, 6-41
- Clamp, Hose Support, 6-35
- Clamp, Hose, 6-9, 6-15, 12-9, 13-17, 14-17, 14-18, 15-17, 15-18
- Clamp, Injection Line, 14-5
- Clamp, Leak-Off Line, 14-5
- Clamp, Mounting, 6-38, 6-39
- Clamp, Muffler, 6-36
- Clamp, Squeegee Band, 6-91
- Clamp, Toggle, 9-11, 9-13, 10-13, 10-21
- Clamp, Worm Drive, 6-4, 6-11, 6-15, 6-21, 6-22, 6-31, 6-37, 6-38, 6-39, 6-41, 6-85, 6-87, 7-3, 7-5, 8-4, 8-6, 8-7, 8-8, 9-3, 9-5, 9-7, 9-11, 9-13, 9-14, 9-15, 9-17, 10-15, 10-21, 10-27
- Clamp, Wormdrive, 6-77, 6-79
- Clamp, 6-9, 6-31, 9-5, 13-16
- Clevis and Pin, 6-15, 9-7
- Clevis, Adjustable, 6-29, 8-3
- Clevis, Brake Cable, 6-28
- Clip, Drain Hose Retainer, 6-85, 9-11, 9-13
- Clip, Finger Grip, 10-21
- Clip, Handle, Retaining, 10-13
- Clip, Rod End, 8-3, 13-16
- Clip, 13-18, 13-19
- Cock, Drain, 6-37, 13-3

CROSS REFERENCE

- Cock, Water Drain, 14-3, 15-3
Coil Assembly, Ignition (replaced by 79092), 13-19
Coil Assembly, Ignition, (replaced by 38992), 13-19
Coil Replacement Kit, 13-19
Coil, Ignition, 12-10
Coil, 11-27, 13-19
Collor, Locking, 6-65
Column, Steering, 6-25
Condenser, 6-3, 12-10
Connector Kit, Tubing, 11-7
Connector, Alternator Wire, 12-12
Connector, Handle, Spray, 10-15
Connector, Oil Cooler, 13-17, 14-18, 15-18
Connector, Water Pump, 12-11
Connector, 6-31, 6-41, 10-25, 11-5, 11-6, 13-16
Console, Instrument, 6-80, 9-9
Contact Point Set, 12-10
Control Assembly, Throttle, 6-30, 6-33, 6-34
Control Harness, 8-5
Control Panel Assembly, 9-9
Control Unit Kit, 8-5
Control Unit, Glow Plug, 8-5
Control, Manual (See Breakdown), 11-11
Control, Manual, 11-15
Control, Steering (See Breakdowns), 6-25
Cooler, Engine Oil, 6-31
Cooler, Hydraulic, 6-37
Cooler, Oil, 13-17, 14-18, 15-18
Coupler, 11-13
Coupling Assembly, Drive, 6-35
Coupling Assembly, 6-31
Coupling, Air Cleaner Tube, 6-39, 7-5
Coupling, Keyed, L.H., 10-15
Coupling, Keyed, R.H., 10-15
Coupling, LPG Tank, 7-3
Coupling, 11-8
Cover Assembly, Gear, 13-11, 15-12
Cover Assembly, Recovery Tank Cleanout, 6-87
Cover Cap, 11-25
Cover, Cylinder Head, 13-5, 14-7, 15-7
Cover, Dust, 13-18
Cover, Fuel Pump Hole (LPG Only), 12-9
Cover, Fuel Pump Hole, LPG, 13-19
Cover, Fuel Pump, 14-5, 15-5
Cover, Gear, 12-5, 14-12
Cover, Governor, 6-9
Cover, Grease Fitting, 6-21, 6-22
Cover, Grease, 6-77, 6-79
Cover, Headlock, 6-13
Cover, Horn Button, 6-25
Cover, Liquid Level Probe, 10-25
Cover, Pump, 9-3, 9-5
Cover, Sandblast, 9-11, 9-13
Cover, Terminal, 8-4
Cover, Timing Hole, 12-3, 15-13
Cover, Valve Chamber, 12-3
Cover, 10-16
Cradle Sub Assy, 11-11
Crank Replacement Kit, 11-7
Crankshaft, 12-7, 13-8, 14-9, 15-9
Cup Kit, Short, 11-3
Cup, Contact, 6-25
Cylinder and Crankcase Assembly, Includes: Cylinder Block, Connecting Rods, Camshaft Bushings, Front End Plate, Bearing Caps, Thrust Plate, Valve Train, Cam Gear, Tappets, Crankshaft Gear, Camshaft, Oil Gauge Rod Main and Rod Bearings, Crankshaft Support, Pistons, Piston Pins, Piston Rings, Oil Rod, Gauge Hole Cover-Fuel Pump, Service Gasket Set, Oil Guard-Rear Bearing, 12-3
Cylinder, Hydraulic (See Breakdowns), 6-83
Cylinder, Hydraulic, 6-13, 6-92, 11-30
- ### D
- Damper, Engine Mounting, 6-31
Dampner, Engine, 6-35, 8-4
Data Plate, LPG, 7-4
Decal, Control Panel, 9-9
Decal, Danger, Keep Out, 9-11
Decal, Diesel Fuel Only, 8-6
Decal, Fan Suction, 9-11
Decal, Fill Tank, 9-15
Decal, Jack Only On Pad, 9-11
Decal, SRSr Cleaning Solution, 9-15
Decal, SRSr, 9-11
Decal, Throttle High Pressure Spray, 10-16

Decal, Warning, Lock Scrubber Head, 9-7
 Deflector Assembly, Brush, L.H., 6-19
 Deflector Assembly, Brush, 6-17
 Deflector Assembly, Scrub Brush, 6-11
 Deflector, Scrub Brush, 6-11
 Deflector, Spray, Rubber, 9-15, 9-17
 Deflector, 6-21
 Detent Kit, 11-28
 Diode and Rectifier Assembly, 6-35, 8-3
 Diode Assembly, LPG, 7-3
 Disk, Brake, 6-27
 Distributor Assembly, (replaced by 09892), 13-18
 Distributor Assembly, 13-18
 Distributor, 12-10
 Door Assembly, Cleanout, R.H., 9-11
 Door Assembly, Cleanout, 6-85, 9-11, 9-15
 Door Assembly, Rear Cleanout, 9-15
 Door Assembly, Solution Filling, 9-15
 Door, Access, Side, L.H., 6-8
 Door, Cleaning Solution, 9-15
 Door, Cleanout, 6-85, 6-87, 9-11, 9-15
 Door, Engine Cover, 6-8, 7-4
 Door, Hydraulic Tank, Top Access, 6-8
 Door, Lower, 9-17
 Door, Rear Side Access, 6-9
 Door, Solution, 6-87
 Door, Squeegee, L.H., 6-19
 Door, Squeegee, 6-17
 Door, Upper, 9-17
 Door, 6-85, 6-87, 9-13
 Dowel Bushing, 11-11
 Dowel Pin, 11-15
 Dowel, Bearing Cap to Crankcase, Center and Rear, 12-7
 Dowel, Bearing Cap to Crankcase, Front, 12-7
 Dowel, Bearing Cap, Front and Rear, 14-3, 15-3
 Dowel, Bearing Cap, 13-3
 Dowel, Fly Housing to Crankcase, 12-3
 Dowel, Ring, Front End Plate to Crankcase, Upper Right, 12-3
 Dowel, Ring, Gear Cover and Front End Plate to Crankcase, 12-3
 Dowel, Ring, 13-12, 14-13, 15-13

Drain Cock, 12-10
 Drain Kit, Plug, 9-11
 Drain Kit, Solution Tank, 10-27
 Drive, 11-17, 11-19, 11-21, 11-23, 11-24, 11-25, 11-26

E

Elbow And Vaporizer Kit, 12-11
 Elbow, #3 Inlet, 14-5
 Elbow, 90°, 8-8
 Elbow, Air Cleaner, 6-39
 Elbow, Bypass, 12-10
 Elbow, Carburetor, Gasoline, 12-11
 Elbow, Carburetor, LPG, 12-11
 Elbow, Carburetor, 6-38, 6-39, 12-11
 Elbow, Crankcase Oil Inlet, 12-10
 Elbow, Crankcase Oil Outlet at Bushing, 12-10
 Elbow, Fuel Injection Pump, 15-5
 Elbow, Fuel Pump Tube, 12-9
 Elbow, Intake Manifold (Replaced by None), 14-17, 15-17
 Elbow, Oil Drain, 6-31
 Elbow, Oil Filter Inlet and Outlet, 12-10
 Elbow, Restrictor, Intake Manifold, 12-9
 Elbow, Solution Level, 6-85
 Elbow, Vaporizer Outlet, 12-11
 Elbow, Water Header, 13-17, 14-18, 15-18
 Elbow, Water Outlet, LPG, 12-11
 Elbow, Water Outlet, 12-10, 13-15, 14-16, 15-16
 Elbow, Water Pump, 12-11, 13-17, 14-18, 15-18
 Elbow, 6-15, 6-29, 6-31, 6-41, 8-8, 13-19
 Element Assembly, Air Cleaner, 6-3
 Element, Air Cleaner, 6-3, 8-8
 Element, Air Filter, 6-38, 6-39
 Element, Filter Screen, 10-15
 Element, Filter, 6-58, 6-59
 Element, Fuel Filter, 6-3, 14-5, 15-5
 Element, Hydraulic Filter, 6-3
 Element, Oil Filter (For Engine 16850), 14-18
 Element, Oil Filter (For Engine 34910), 14-18
 Element, Oil Filter, 6-3, 13-17, 15-18
 Engine, (Replaced by 16850) (See Engine Parts Diesel), 8-3
 Engine, (Replaced by 31937) (See Engine Parts

CROSS REFERENCE

Diesel), 8-3
Engine, (Replaced by 61697) (See Engine Parts Diesel), 8-3
Engine, (Replaced by 65951) (See Engine Parts Diesel), 8-4
Engine, Diesel, TM27, (See 65951 Engine Parts Diesel), 8-4
Engine, F163 (Replaced by 60539) (See F163 Engine Parts, Gasoline, LPG), 7-3
Engine, Gasoline, F163 (Replaced by 60534) (See F163 Engine Parts, Gasoline, LPG), 6-31
Engine, Gasoline, TM27 (Replaced by 61696) (See TM27 Engine Parts, Gasoline, LPG), 6-35
Engine, Gasoline, TM27 (Replaced by 65947) (See TM27 Engine Parts, Gasoline, LPG), 6-35
Engine, Gasoline, TM27 (See TM27 Engine Parts, Gasoline, LPG), 6-35
Engine, Gasoline, TM27, (Replaced by 31935) (See TM27 Engine Parts, Gasoline, LPG), 6-33
Engine, TM27, (Replaced by 31936) (See TM27 Engine Parts, Gasoline, LPG), 7-3
Engine, TM27, (Replaced by 61695) (See TM27 Engine Parts, Gasoline, LPG), 7-3
Engine, TM27, (See TM27 Engine Parts, Gasoline, LPG), 7-3
Extension Kit, Side Squeegees, 10-30
Extinguisher Kit, Fire, 10-26
Extinguisher, Fire, 10-26
Eye, Lifting, 13-5, 14-7, 15-7
Eyebolt, 6-42

F

Fan Assembly, Vacuum (Replaced by 61702), 6-77
Fan Assembly, Vacuum, 6-78
Fan, Alternator, 8-3, 12-12
Fan, 6-37
Fastener, Nut, 6-4, 6-85, 6-87, 9-11, 9-15
Fastener, Thumbscrew, 6-4, 6-85, 6-87, 9-11, 9-15
Fastener, Washer, 6-4, 6-85, 6-87, 9-11, 9-15
Ferrule, Insulation, 6-25
Filter Assembly, Hydraulic, 6-58, 6-59
Filter Assembly, Laminar Flow, L.H., 9-15, 9-17
Filter Assembly, Laminar Flow, R.H., 9-15, 9-17
Filter, Foam, Soap Basket, 6-87
Filter, Fuel And Water Separator, 14-5
Filter, Fuel, Gasoline, 13-16

Filter, Laminar Flow, 9-15, 9-17
Filter, Oil, 6-3, 12-10
Filter, Solution Outlet, 9-15, 9-17
Filter, Replacement Kit, 9-5
Filter, 10-15
Fitting, Tee, 10-15
Fitting, Banjo, 14-5
Fitting, Barbed Elbow, 10-15
Fitting, Bulkhead, 7-3
Fitting, Cap, 6-35, 10-25
Fitting, Connector, 8-6
Fitting, Coupling, 9-7
Fitting, Elbow, 45°, 6-13, 6-53, 6-54, 6-55, 6-56, 7-3, 9-7
Fitting, Elbow, 6-13, 6-20, 6-23, 6-25, 6-35, 6-37, 6-41, 6-52, 6-53, 6-54, 6-55, 6-56, 6-57, 6-58, 6-59, 6-60, 6-83, 6-92, 7-3, 8-3, 9-3, 9-5, 9-7, 10-5, 10-15, 10-16
Fitting, Grease, 45°, 6-13
Fitting, Grease, 6-13, 6-21, 6-22, 6-77, 6-79, 6-83, 11-30
Fitting, Nipple, 2.5" (65 mm) L, 9-7
Fitting, Nipple, 3.0" (75 mm) L, 9-7
Fitting, Nipple, 7-3, 9-7, 10-15
Fitting, Plug, 6-53, 6-60, 6-85
Fitting, Restrictor, 6-54
Fitting, Straight, Brass, 6-35
Fitting, Straight, 6-20, 6-23, 6-25, 6-35, 6-37, 6-41, 6-52, 6-53, 6-54, 6-55, 6-56, 6-57, 6-58, 6-60, 6-92, 8-3, 8-6, 9-3, 9-5, 9-7, 10-5, 10-15, 10-16
Fitting, Tee, 6-52, 6-53, 6-54, 6-56, 6-57, 6-58, 6-59, 6-60, 7-3, 9-5, 9-7, 10-5, 10-15, 10-16
Flange, Bearing, 6-20, 6-21, 6-22, 6-23
Flange, Mounting, 11-23, 11-24
Flange, Split, 6-53, 6-55
Flange, Top Float, 6-85
Flap, Containment, 6-3, 6-17, 6-19
Flap, Rubber, 6-4, 6-87
Flasher, 10-6, 10-23
Flywheel (For Engine 16850), 14-13
Flywheel (For Engine 34910), 14-13
Flywheel, 12-7, 13-12, 15-13
Foam, Acoustic, 6-79
Follower, Piston, 11-11
Frame Kit, Squeegee, 6-91

Frame, Main Tractor, 6-8
 Frame, Muffler, 6-79
 Frame, Rear Squeegee, 6-91
 Frame, Rear, 6-91
 Frame, Scrub Head, SRSr, 9-3
 Frame, Scrubber Head, 6-17, 9-7
 Frame, Side Squeegee, L.H., 6-19, 10-30
 Frame, Side Squeegee, R.H., 6-17, 10-30
 Frame, Spray Deflector, 9-15, 9-17
 Fuel Filter Lock, 7-3
 Fuel Line Replacement Kit, 6-41
 Fuse, 1 A, 10-25, 10-29
 Fuse, 10 A, 9-9
 Fuse, 15 A, 6-80
 Fuse, 20 A, 6-80, 10-22
 Fuse, 80 A, 8-5
 Fuse, 10-2

G

Gasket Set, Front, 13-11, 14-12, 15-12
 Gasket Set, Manifold, 13-13, 14-14, 15-14
 Gasket Set, Top (For Engine 16850), 14-7
 Gasket Set, Top (For Engine 34910), 14-7
 Gasket Set, Top, 15-7
 Gasket Set, 13-5
 Gasket, Air Outlet, 6-4
 Gasket, Carburetor Air Horn, 6-39
 Gasket, Carburetor, 12-11, 13-16
 Gasket, Cleaning Solution Tank, 9-15, 9-17
 Gasket, Copper, Oil Pressure Relief Valve, 12-3
 Gasket, Copper, Valve Chamber Cover to Crankcase, 12-3
 Gasket, Cover, 9-11, 9-13, 14-7, 15-7
 Gasket, Cylinder Head (For Engine 16850), 14-7
 Gasket, Cylinder Head (For Engine 34910), 14-7
 Gasket, Cylinder Head, 12-3, 13-5, 15-7
 Gasket, Debris Screen, 9-11, 9-13
 Gasket, Distributor to Cylinder Head, 12-10
 Gasket, Distributor, 13-19
 Gasket, Door, 6-4, 6-85, 6-87, 9-11, 9-13, 9-15
 Gasket, Elbow, 13-15, 14-16, 15-16
 Gasket, Fan, 6-79
 Gasket, Filler Block, Front, 12-3
 Gasket, Filler Block, Rear, 12-3
 Gasket, Front End Plate, 12-5
 Gasket, Front Suction Tube, 6-4
 Gasket, Fuel Pump, 12-9, 13-19, 14-5, 15-5
 Gasket, Gear Cover, 12-5, 13-11, 14-12, 15-12
 Gasket, Governor to Cover, 12-9
 Gasket, Head Cover, 13-5
 Gasket, Header, 13-15, 14-16, 15-16
 Gasket, Injection Pump, 14-5, 15-5
 Gasket, Intake, 8-3
 Gasket, Lower Door, 9-17
 Gasket, Manifold, Exhaust, 14-14, 15-14
 Gasket, Manifold, 12-11, 13-13, 14-14, 15-14
 Gasket, Oil Pan, Form-In-Place, 14-3, 15-3
 Gasket, Oil Pan, Form-in-Place, 13-3
 Gasket, Oil Pan, 12-3
 Gasket, Rear Bearing Cap, 13-3
 Gasket, Rear Bearing Cup, 14-3, 15-3
 Gasket, Rear Suction Tube, 6-4, 6-87
 Gasket, Sandblast Cover, 6-4
 Gasket, Solution Door, 6-4, 6-87
 Gasket, Suction Tube, Front, 9-11, 9-13
 Gasket, Tail Pipe, 6-36, 8-3
 Gasket, Taillight, 10-22
 Gasket, Tank Adaptor, 10-21
 Gasket, Thermostat, 12-11
 Gasket, Upper Door, 9-17
 Gasket, Valve Chamber Cover, 12-3
 Gasket, Wand Adaptor, 10-21
 Gasket, Water Outlet Elbow, 12-3
 Gasket, Water Outlet, 12-10, 12-11
 Gasket, Water Pump to Crankcase, 13-14, 14-15, 15-15
 Gasket, Water Pump, 12-9
 Gasket, 6-4, 6-41, 10-16
 Gauge, Fuel Level, 6-80
 Gauge, Oil Pressure, 6-80
 Gauge, Pressure, 10-15
 Gauge, Water Temperature, 6-80
 Gear Kit, 13-18
 Gear, Camshaft, 12-4, 13-7, 14-8, 15-8
 Gear, Crankshaft, 12-7, 13-8, 14-9, 15-9

CROSS REFERENCE

Gear, Governor, 12-9
Gear, Injection Pump Driver, 14-8, 15-8
Gear, Injection Pump, 14-5, 15-5
Gear, Ring, 12-7
Geroler, 11-17, 11-19, 11-21
Geroter, Ring In, 11-13
Geroter, Ring Ot, 11-13
Geroter, 11-25, 11-26
Gerotor, 11-23, 11-24
Governor Assembly, 13-7
Governor, 12-9
Grease, Special, 6-3
Grip, Handle, 10-17
Grommet, 0.38" (10 mm) I.D., 6-9
Grommet, Rubber, 10-2, 10-8, 10-22
Grommet, 6-19, 6-52, 10-7, 10-24
Guard Kit, Overhead, 10-3
Guard, Alternator, 6-33, 8-4
Guard, Coupling, 10-15
Guard, Flow Switch, 6-52
Guard, L.H., 6-88, 6-89
Guard, R.H., 6-88, 6-89
Guard, Rear Bearing, Oil, 12-3
Guard, Splash, 6-17, 6-19
Guard, Squeegee, 6-88, 6-89
Guard, Top, 10-3
Guard, Valve Stem Oil, 13-5, 14-7, 15-7
Guide, Spring, 6-90
Guide, Valve Stem, Intake and Exhaust, 12-4
Guide, Valve Stem, 13-5, 14-7, 15-7

H

Handle Assembly, Complete, 11-27
Handle, Nozzle, 10-21
Handle, Sludge Removal, 10-17
Handle, Spray, 10-15
Handle, Squeegee Wand, 10-13
Harness, Rectifier, 8-3
Harness, Wiring, Alternator, 12-12
Head Assembly, Cylinder, 13-5
Head, Cylinder, 12-3, 14-7, 15-7
Header, Water Outlet, 13-15, 14-16, 15-16

Headlight Assembly, 10-2, 10-22
Hi Alt Vaporizer Spring, 7-3
Hinge, Seat, 6-7
Holder, Fuse, (Panel Mount), 10-29
Holder, Fuse, 6-80, 8-5, 9-9, 10-2, 10-22, 10-25
Hook, Chain, 6-17
Hook, Rubber, 10-13, 10-21
Hook, S, 6-7
Hook, 6-19, 9-11, 9-13
Hopper Assembly, 6-11
Hopper, Debris, 6-11
Horn Button Assembly, 6-25
Horn, 12 Volt, 6-9
Hose Assembly, 6-4, 6-77, 6-79
Hose Kit, Interconnection, 6-85, 9-11
Hose Kit, Vacuum, SRSr, 6-4
Hose Vacuum, 9-11
Hose, Rear Squeegee Suction, 9-17
Hose, Cleaning Solution, 9-14, 9-17
Hose, Debris Trough Pickup, 9-11, 9-13
Hose, Debris, 6-85
Hose, Elbow to Filler Cap, 14-17, 15-17
Hose, Engine Oil Drain, 6-31
Hose, Fuel Line, 6-41, 8-6
Hose, Fuel, #1 Leak-off End, 14-5
Hose, Fuel, 14-5, 15-5
Hose, Hopper, 6-4, 6-11
Hose, Hydraulic, 6-47, 6-49, 6-51, 6-60, 10-5, 10-15, 10-16
Hose, Injection (For Engine 16850), 14-5
Hose, LPG, 7-3
Hose, Oil Cooler, 13-17, 14-18, 15-18
Hose, Oil Filter Outlet to Crankcase Inlet, 12-10
Hose, Oil Pressure Gauge, 6-31
Hose, Oil, 12-10
Hose, Outlet Elbow to Bypass, 12-10
Hose, Pump Inlet, 9-5
Hose, Pump Outlet, 9-5
Hose, Radiator, 6-37, 8-7
Hose, Rear Squeegee Suction, 6-87, 9-15
Hose, Recovery Tank Drain, 6-85, 9-11, 9-13
Hose, Rubber (Cut in 2), 10-16
Hose, Rubber, 6-38, 6-39, 7-3, 7-5, 9-3, 9-5, 9-7,

10-15, 10-16

Hose, Solution Level, 6-85
 Hose, Solution, 6-15, 9-3
 Hose, Squeegee Wand, 10-13
 Hose, Squeegee, 6-4
 Hose, Tee to Filler Tube, 12-9
 Hose, Vacuum Fan, 6-85
 Hose, Vacuum, 9-13, 13-18
 Hose, Vaporizer to Carburetor, 12-11
 Hose, Vinyl, 9-3, 9-5
 Hose, Water Recirculating, 12-11
 Hose, Water, High Pressure, 10-15
 Hose, 6-31, 6-35, 10-21, 12-9, 13-16, 14-5
 Housing Assembly, Bearing, 6-83
 Housing Assembly, Front, 6-79
 Housing Assembly, Pump, 11-9
 Housing Assembly, Relief, 11-9
 Housing Assy,, 11-21
 Housing S/A, 11-11
 Housing, Assy Cl, 11-17, 11-19
 Housing, Bearing, 6-77, 6-79
 Housing, Brg Cl, 11-17, 11-19
 Housing, Brg, 11-21
 Housing, Filter Mounting, 9-15, 9-17
 Housing, Flywheel, 12-3, 13-12, 14-13, 15-13
 Housing, Front, 6-77, 6-79
 Housing, Idler Shaft, 6-75
 Housing, Pivot, 6-83
 Housing, Probe, 10-25
 Housing, Rear, 6-77, 6-79
 Housing, Steering Column, 6-8
 Housing,Control, 11-15
 Housing, 11-4, 11-11
 Hub and Magnet Kit, 11-4
 Hub Assembly, 6-27, 6-81
 Hub, Brush Drive, 6-23
 Hub, Brush, 6-20, 6-21, 6-22
 Hydraulic Fluid, 5 Gal (18.9 L), 6-3

I

Idler Assembly, Front Scrub Brush, 6-21
 Idler Assembly, Rear Brush, 6-22

Idler, Assembly, 6-75
 Impeller Shaft and Bearing Kit, 11-4
 Impeller, 6-77, 6-79
 Indicator, Filter Service, 6-38, 6-39
 Inlet Section, 11-27
 Insert, Combustion Chamber, 14-7, 15-7
 Insert, Drive, 6-35
 Insert, Pump Coupling, 6-31
 Insert, Valve Seat, Exhaust (0.010" Oversize for Service), 12-4
 Instr. Repair Info, Motor, 11-21
 Insulation, Engine Access Door, 6-10
 Insulation, Engine Cover, 7-4
 Insulation, Front, Side Door, L.H., 6-10
 Insulation, Muffler, 6-77
 Insulation, Rear, Side Door, L.H., 6-10
 Insulation, Seat, 6-10
 Insulation, Side Door, R.H., 6-10
 Insulation, Tank Opening, 7-4
 Insulation, Top, Hydraulic Tank Door, 6-10
 Insulator, 10-2, 10-22
 Isolator, Vibration, 6-20, 6-23, 6-36, 6-53

K

Key, Cam Gear to Camshaft, 12-4
 Key, Crankshaft Gear, 12-7
 Key, Ignition Switch, 6-80
 Key, Square, 6-75, 6-77, 6-79, 11-32
 Key, Woodruff, 6-20, 6-23, 6-35, 8-3, 11-23, 11-24, 13-10, 14-11, 15-11
 Key, 11-3, 11-13, 11-17, 11-19, 11-21, 13-7, 13-8, 14-8, 14-9, 15-8, 15-9
 Knob, Adjusting, 6-20
 Knob, Brush Adjusting, 6-23
 Knob, Door Latch, 6-85, 6-87, 9-13, 9-17
 Knob, Valve, 10-16
 Knob, 6-11, 6-13, 6-15, 6-30, 6-33, 6-34, 6-54, 6-60, 9-7, 9-9

L

Label, Brush Pressure, 6-19
 Label, Brushes, 6-9
 Label, Caution, Reduce Travel, 6-8

CROSS REFERENCE

Label, Danger Keep Out, 9-13
Label, Danger, Fan Suction, 6-79, 6-85
Label, Danger, Keep Out Pinch, 6-9
Label, Danger, Keep Out, 6-85
Label, Engine Fan, 6-37
Label, Fan Suction, 9-13
Label, Fill Tank, 9-17
Label, Gasoline Only, 6-41
Label, Headlock, 6-13
Label, Important, 6-9
Label, Instruction, Pump Lever Model, 9-7
Label, Instruction, Pump Prime, 9-7
Label, Instrument Console, 6-80
Label, Jack At This Point, 6-9
Label, Jack Only On Pad, 6-85, 9-13
Label, Lubricating Instructions, 6-77, 6-79
Label, Maintenance Chart, 6-9
Label, Maintenance Note, 6-9
Label, Patent, Scrubber, 6-9
Label, SRSr Cleaning Solution, 9-17
Label, SRSr, 9-13
Label, Stripe, Front, 6-9
Label, Stripe, L.H., 6-85
Label, Stripe, R.H., 6-87
Label, Stripe, Side, 6-9
Label, Stripe, 6-9
Label, Switch, Squeegee Lift, 6-80
Label, TENNANT Logo, 6-85
Label, TENNANTr, 6-9
Label, Throttle and Solution Control, 8-4
Label, Throttle and Solution, 6-9
Label, Tire Pressure, 6-9
Label, Warning, Use Scrubber, 6-17
Label, Wing, L.H., 6-9
Label, Wing, R.H., 6-9
Lamp Assembly, Flashing, Amber, 10-6, 10-23
Lamp Assembly, Flashing, Blue, 10-6, 10-23
Lamp Assembly, Flashing, 10-6, 10-23
Lamp Assembly, Revolving, Amber, 10-8
Lamp Assembly, Revolving, Blue, 10-8
Lamp Assembly, Revolving, 10-8
Lamp, Flashing, 10-6, 10-23
Latch Assembly, LPG Tank, 7-3
Latch, Cam Lock Band, 6-17, 6-19
Latch, Cam Lock, 6-85
Latch, Door, 6-8, 6-17, 6-19
Latch, Hopper, 6-11
Latch, Tank, 10-10, 10-11
Latch, 10-9
Leg, Front, L.H., 10-3
Leg, Front, R.H., 10-3
Leg, Rear, L.H., 10-3
Leg, Rear, R.H., 10-3
Lens, Amber, 10-7, 10-24
Lens, Blue, 10-7, 10-24
Lens, Lamp, Amber, 10-6, 10-8, 10-23
Lens, Lamp, Blue, 10-6, 10-8, 10-23
Lens, Lamp, Red, 10-6, 10-8, 10-23
Lens, Red, 10-7, 10-24
Lever and Shaft Assembly, Governor, Gasoline, 13-11
Lever and Shaft Assembly, Governor, LPG, 13-11
Lever Assembly, Solution Control, 6-15, 9-7
Lever, Headlock, 6-13
Lever, Parking, 6-28
Lever, Pump Control, 6-61
Lever, Pump, 6-65
Lever, Throttle, 6-30, 6-33, 6-34
Lift, Scrubber Head, 6-13
Light Assembly, Revolving Amber, 10-7, 10-24
Light Assembly, Revolving Blue, 10-7, 10-24
Light Assembly, Revolving Red, 10-7, 10-24
Light Kit, Flashing, 10-6, 10-23
Light Kit, Hd-TI/550, 10-2, 10-22
Light Kit, Level Warning, 10-25
Light Kit, Recovery Level Warning, 10-29
Light Kit, Revolving, 10-8
Light Kit, SRSr, 10-22
Light Kit, 10-2
Light, Panel, 10-2, 10-22
Light, Pilot, 8-5, 10-5, 10-29
Link, Brush Lift, 6-20, 6-23
Link, Chain, 10-15
Link, Control, 6-61, 6-63
Link, Direct Control, 6-65

Link, Directional Control, 6-61, 6-63, 6-65
 Link, Engine Cover Support, 6-9
 Link, Feedback, 11-15
 Link, Hook, 6-54
 Link, Rear Drag, 6-91
 Link, 6-91
 Linkage Kit, Handle, 11-27
 Lip, Hopper, 6-11
 Locator, Tank, 10-10, 10-11
 Locator, 10-9
 Lock, Knob Adjusting, 6-23
 Lock, Knob, Adjusting, 6-20
 Lock, Valve Spring Retainer, Intake and Exhaust, 12-4
 Lock, Valve Spring Retainer, 13-5, 14-7, 15-7
 Lockwasher, 11-11
 Long Block Assembly, S, Includes: R Short Block Assembly Plus – Head, Guides, Valves and Associated Parts, Rocker Arm Shaft Assembly, Pushrods, Head Cover, Gear Cover, Oil Pan, Oil Filler Cap, and Gasket Set, 13-3
 Lug, 10-9, 10-10, 10-11

M

Magnet, 13-18
 Manifold, Discharge, 11-3
 Manifold, Exhaust, 13-13, 14-14, 15-14
 Manifold, Intake and Exhaust, 12-11
 Manifold, Intake, 13-13, 14-14, 15-14
 Manual Fiche, 550, 10-31
 Manual Pkg, 550, 10-31
 Manual, Engine, Continental, TM27-D, 10-31
 Master Cylinder, Brake, 6-29
 Mat, Floor, 6-9
 Meter, Hour, 6-80
 Mirror Kit, Rear View, 10-28
 Mirror, Rear View, 10-28
 Module, 13-18
 Molding, Rigid, 17.75" (450 mm) L, 6-9
 Molding, Rigid, 3.0" (76 mm), 6-9
 Molding, Rigid, 6-9, 7-3, 8-4, 9-3, 9-5
 Molding, Trim, 3 " (75 mm), 10-25
 Molding, Trim, 7.5" (190 mm), 10-25
 Motor, Gear, 11-7

Motor, Hyd Gear In 19.0, 11-17, 11-19
 Motor, Hyd Gear, 11-21
 Motor, Hydraulic (Replaced by 61489) (See Breakdowns), 6-20, 6-23
 Motor, Hydraulic (See Breakdowns) (Replaced by 378710), 6-52
 Motor, Hydraulic (See Breakdowns), 6-20, 6-23, 6-52
 Motor, Hydraulic, 10-15, 11-23, 11-24, 11-32
 Mount Kit, Caster, 6-91
 Mount, Bellcrank, 6-31
 Mount, Cable Tie, 9-5
 Mount, Caster, 6-91
 Mount, Engine, R.H., 8-4
 Mount, Fan, 6-79
 Mount, LPG Tank, 10-9, 10-10, 10-11
 Mount, Pump, Water, 10-15
 Mount, Squeegee Nozzle, 10-13
 Mount, Squeegee, 10-21
 Mount, Strap, 7-3
 Mount, Valve, Hydraulic, 10-16
 Mount, Wand Hose, L.H., 10-21
 Mount, Wand Hose, R.H., 10-21
 Muffler Assembly, 6-79
 Muffler, Spark Arresting, 10-28
 Muffler, 6-36

N

Nipple, Water Outlet Elbow, 12-10
 Nozzle and Tip Assembly, 14-5, 15-5
 Nozzle Assembly, Squeegee, 10-13
 Nozzle, Hopper, 6-11
 Nozzle, Spray, 10-15
 Nozzle, Suction, 9-7
 Nozzle, 9-7, 10-21
 Nut, Adjustable, 7-3
 Nut, Adjustment, 6-28
 Nut, Ball Joint, 12-9
 Nut, Cam Gear to Camshaft, 12-4
 Nut, Connecting Rod Bolt, 12-7
 Nut, Governor Arm to Rod, 12-9
 Nut, Jam, 11-11
 Nut, Lock, 6-83
 Nut, Locking, 6-85, 6-87, 9-13, 9-17

CROSS REFERENCE

Nut, Low Crown, 6-77, 6-79
Nut, M10, 8-3
Nut, Nex, Thin, 6-63, 6-65
Nut, Nylon, 6-13, 6-83
Nut, Slotted Hex, 6-83
Nut, Slotted, 6-13, 6-81, 11-23, 11-24
Nut, Solenoid, 11-27
Nut, Stainless Steel, 9-13
Nut, Stainless Steel, 6-85, 6-87, 9-17
Nut, Tube Assembly, 15-5
Nut, Water Outlet Elbow, 12-10
Nut, Water Trap, 8-6
Nut, Wheel, 6-26, 6-81
Nut, Wing, 6-39, 6-42, 8-4
Nut, 6-13, 6-15, 6-25, 6-75, 6-90, 6-91, 11-11, 11-17, 11-19, 11-21, 13-7, 14-8, 15-8

O

O-Ring, Injection Pump, 15-5
O-Ring, 6-83, 13-5, 13-10, 14-5, 14-7, 14-11, 15-7, 15-11
Oil Pan Assembly, 13-3
Oil, Cat Pump, 11-3
Oil, Cat Water Pump, 10-15
Olive, Rubber, 8-6
Orifice, Valve, 11-11

P

P.C. Board, Level Sensing, 10-29
Pad, Brake, 6-29
Pad, Non-skid, 6-9
Pad, Rubber, 8-4
Pan Assembly, Oil, 14-3, 15-3
Pan, Floor, 6-8
Pan, Oil, 12-3
Panel, Dash, 6-8
Panel, Flow Tube Mounting Cover, 9-15, 9-17
Panel, Flow tube Mounting Cover, 9-15
Panel, Front, 9-9
Panel, Side Kick, 6-8
Pedal, Brake, 6-29
Pedal, Foot Speed, 6-61, 6-63, 6-65

Performance Package, 400 Hour, Diesel, Servo, 6-3
Performance Package, 400 Hour, Diesel, 6-3
Performance Package, F163, 400 Hour, Gas & LPG, 6-3
Performance Package, TM27, 400 Hour, Gas & LPG, Servo, 6-3
Performance Package, TM27, 400 Hour, Gas & LPG, 6-3
Pilot Light, 10-25
Pin, Articulating Locking, 6-83
Pin, Clevis, 6-11, 6-13, 6-20, 6-23, 6-28, 6-29, 6-54, 6-61, 6-91, 6-92, 8-3, 9-15
Pin, Cotter, 6-13, 6-27, 6-83, 6-91, 13-7, 14-8, 15-8
Pin, Door Locking, 6-17, 6-19
Pin, Dowel, Gear Cover to Crankcase, 14-3, 15-3
Pin, Dowel, 13-3
Pin, Groove, 13-11
Pin, Headed, 11-15
Pin, Injection Pump, 15-5
Pin, Piston, 0.003" Oversize, 12-7
Pin, Piston, 0.005" Oversize, 12-7
Pin, Piston, Standard, 12-7
Pin, Piston, 13-9, 14-10, 15-10
Pin, Pivot, 6-33, 6-34
Pin, Rear Support Top, 13-7, 14-8
Pin, Roll, 6-13, 6-17, 6-19, 6-21, 6-22, 6-29, 6-30, 6-31, 6-33, 6-34, 6-35, 6-61, 6-63, 6-65, 6-91, 6-92
Pin, Throttle Pivot, 6-30
Pin, 11-25, 11-26, 14-5
Pintle Kit, (Replaced by none), 11-8
Pipe, Exhaust, 8-3
Pipe, Tail, 6-36
Piston Assembly, 0.50 mm Oversize, 13-9, 14-10, 15-10
Piston Assembly, 0.75 mm Oversize, 13-9, 14-10, 15-10
Piston Assembly, 1.00 mm Oversize, 13-9, 14-10, 15-10
Piston Assembly, Standard, 13-9, 14-10, 15-10
Piston Block Assembly, 11-9
Piston Kit, 11-3
Piston, 0.020" Oversize, 12-7
Piston, 0.030" Oversize, 12-7
Piston, 0.040" Oversize, 12-7

- Piston, 0.060" Oversize, 12-7
- Piston, Servo, 11-11
- Piston, Standard, 12-7
- Pivot, Adjuster, 6-90
- Pivot, Door Hinge, 6-85, 6-87, 9-13, 9-17
- Pivot, Headlock, 6-13
- Pivot, Shaft, 6-83
- Plate, Adapter, Pump, 13-19
- Plate, Bumper, 6-89
- Plate, Cam, 11-9
- Plate, Camshaft Thrust, 12-4, 13-7, 14-8, 15-8
- Plate, Cover, 11-11
- Plate, Door, 6-85, 6-87, 9-13
- Plate, Front End, 12-5
- Plate, Lower Door, 9-17
- Plate, Motor Mounting, 6-27
- Plate, Mounting, 6-13, 9-3, 10-8
- Plate, Pivot, 6-90
- Plate, Pump Mounting, 6-31, 6-35, 9-5
- Plate, Seat Mount, 6-7
- Plate, Side, 6-79
- Plate, Throttle, 6-30, 6-33, 6-34
- Plate, Upper Door, 9-17
- Plate, Valve Mounting, 6-15, 9-7
- Plate, Valve, 11-17, 11-19, 11-21
- Plate, Wand Hose Adaptor Storage, 10-13
- Plate, Wear, 11-26
- Plate, 6-13, 6-25, 6-87, 8-5, 9-14, 9-17
- Plug #4, 11-21
- Plug #8, 11-11
- Plug Assembly Cl, 11-17, 11-19
- Plug Assembly Ph, 11-17, 11-19
- Plug Assembly, 11-21
- Plug Button, 0.50" (13 mm), 6-80
- Plug Button, 1.25" (32 mm), 6-80
- Plug S/A, 11-11
- Plug, Brush Drive, 6-20, 6-23
- Plug, Brush Idler, 6-21, 6-22
- Plug, Core, 14-7, 15-7
- Plug, Crankcase, 13-3
- Plug, Cup, 13-3, 13-5, 14-3, 14-7, 15-3, 15-7
- Plug, Drain, 9-11, 9-13, 13-3, 14-3, 15-3
- Plug, Expansion, Crankcase at Rear Camshaft Bearing, 12-3
- Plug, Expansion, 13-3, 14-3, 15-3
- Plug, Flushing, 6-15
- Plug, Glow, 14-5, 15-5
- Plug, Hose, 15-5
- Plug, Pipe, 10-15
- Plug, Piston, 12-7
- Plug, Plastic, 6-20, 6-21, 6-22, 6-23
- Plug, Sealing, 8-6
- Plug, Shaft Ends, 13-7, 14-8, 15-8
- Plug, Spark, 12-10
- Plug, Tube, 6-15
- Plug,#12 O-Ring Ph, 11-11
- Plug, 6-29, 6-85, 9-11, 9-13, 11-13, 11-15, 13-3, 13-15, 13-16, 14-3, 14-5, 14-16, 15-3, 15-16
- Plugbutton, 2.0" (50 mm), 6-80
- Plugbutton, 6-37, 9-9
- Point Set, 6-3
- Pointer, Engine Timing, 13-11, 14-12, 15-12
- Pointer, Timing, 12-5
- Poppet, 11-13
- Pouch, Operator's Manual, 13.6 in (345mm), 6-7
- Pouch, Operator's Manual, 7.5 in (190mm), 6-7
- Priority Valve Assembly, 11-8
- Probe, Liquid Level, 10-25, 10-29
- Pulley, Alternator, 6-35, 8-3, 12-12
- Pulley, Crankshaft, 12-7, 13-8, 14-9, 15-9
- Pulley, Water Pump, 12-9, 13-14
- Pulley, 14-15, 15-15
- Pump (Replaced by none), 11-8
- Pump and Gasket, Fuel, 13-19
- Pump and Gasket, Water, 13-14, 14-15, 15-15
- Pump Assembly, Fuel, 12-9
- Pump Assembly, Solution, 11-5, 11-6
- Pump Cover, 11-3
- Pump Kit, Charge, 11-9
- Pump Replacement Kit, 13-19
- Pump, Fuel Injection (Replaced by none), 14-5
- Pump, Fuel Injection, 15-5
- Pump, Fuel, 13-19, 14-5, 15-5
- Pump, Hyd Piston V 2.48, 11-11, 11-13
- Pump, Hydraulic (See Breakdowns), 6-55

CROSS REFERENCE

Pump, Hydraulic, 11-8, 11-9, 11-22
Pump, Hydraulic (See Breakdowns), 6-56, 6-57
Pump, Hydraulic, 6-57
Pump, Metering (See Breakdowns), 9-5
Pump, Metering Solution, 11-7
Pump, Oil (For Engine 16850), 14-11
Pump, Oil (For Engine 34910), 14-11
Pump, Oil, Complete, 12-8
Pump, Oil, 13-10, 15-11
Pump, Solution (See Breakdowns), 9-5
Pump, Solution, 11-4
Pump, Water (Replaced by 48787) (See Breakdowns), 9-5
Pump, Water (See Breakdowns), 10-15
Pump, Water, Service (Less Pulley), 12-9
Pump, Water, 13-14, 14-15, 15-15
Pump, 11-8

R

Race, Bearing, 11-11, 11-25, 11-26
Race, Thrust, 11-23, 11-24
Radiator, 6-37
Rear Squeegee Assembly, 6-90
Regulator, Voltage, 6-35, 8-3
Relay, Horn, 6-80
Relay, Power, 8-5
Relay, Rear Squeegee Lift, 6-80
Relay, 9-7
Relief Valve Assembly, 11-8
Relief Valve Sa, 11-13
Relief Valve, 11-28
Repair Info. Cl, 11-17, 11-19
Repair Info,Pmp, 11-13
Repair Info,Scu, 11-25, 11-26
Repair Kit, Brake Pad, 6-28
Repair Kit, Brake, 6-29
Repair Kit, Carburetor, 12-11
Repair Kit, Fan Assembly, 6-77, 6-79
Repair Kit, Fuel Filter Lock, 7-3
Repair Kit, Master Cylinder, 6-29
Repair Kit, Oil Pump, 12-8
Repair Kit, Vaporizer, 7-3, 12-11

Repair Kit, Water Pump, 12-9, 13-14, 14-15, 15-15
Replacement Kit, Alternator, 8-3
Replacement Kit, Bellows, 11-7
Replacement Kit, Brush, 11-4, 11-5, 11-6
Replacement Kit, Detergent Tank, 9-15
Replacement Kit, Fuel Pump, 12-9
Replacement Kit, Headlock, 6-13
Replacement Kit, Horn Relay, 6-80
Replacement Kit, Oil Pressure Gauge, 6-80
Replacement Kit, Pump Body, 11-5, 11-6
Replacement Kit, Pump Head, 11-5, 11-6
Replacement Kit, Tank, SRSr, 9-11
Replacement Kit, Tank, 6-85
Replacement Kit, Thumbscrew, 6-4, 6-85, 6-87, 9-11, 9-15
Replacement Kit, V-Belt, 6-75, 6-77, 6-79
Replacement Kit, Water Pump, 9-3
Replacement Kit, Water Valve, 10-15
Replenishing Valve Assembly, 11-8
Reservoir Assembly, Hydraulic, 6-53
Resistor, 9-9
Restistor (replaced by 79092), 13-19
Retainer, Ball, 6-85
Retainer, Blade, 10-30
Retainer, Brush, 6-17, 6-19
Retainer, Chk, 11-25, 11-26
Retainer, Deflector Skirt, 6-11
Retainer, Frt Cl, 11-17, 11-19
Retainer, Frt, 11-21
Retainer, Hopper Lip, 6-11
Retainer, Hose, Water, 10-15
Retainer, Screw, 9-15
Retainer, Seal, 9-15
Retainer, Squeegee, 10-17
Retainer, Valve Spring, Intake, 12-4
Retainer, Valve Spring, 13-5, 14-7, 15-7
Rim, Tire, 6-26, 6-81
Ring Gear (For Engine 16850), 14-13
Ring Gear (For Engine 34910), 14-13
Ring Gear, 13-12, 15-13
Ring Kit, Re-Ring, 0.020" Oversize, 12-7
Ring Kit, Re-Ring, 0.030" Oversize, 12-7
Ring Kit, Re-Ring, 0.040" Oversize, 12-7

Ring Kit, Re-Ring, 0.060" Oversize, 12-7
 Ring Kit, Re-Ring, 0.50 mm Oversize, 13-9, 14-10, 15-10
 Ring Kit, Re-Ring, 0.75 mm Oversize, 13-9, 14-10, 15-10
 Ring Kit, Re-Ring, 1.00 mm Oversize, 13-9, 14-10, 15-10
 Ring Kit, Re-Ring, Standard, 12-7, 13-9, 14-10, 15-10
 Ring, Retainer, 11-25, 11-26
 Ring, Retaining, Piston Pin, 14-10, 15-10
 Ring, Retaining, 6-21, 6-22, 6-75, 6-77, 6-78, 6-83, 11-9, 11-13, 11-15, 12-11, 13-9
 Ring, Thermostat Adapter, 12-3
 Ring, 11-17, 11-19, 11-21
 Rivet, Pop, 6-7
 Rivet, Steel, 8-4
 Rivet, Timing Pointer to Gear Cover, 14-12, 15-12
 Rivet, 13-11
 Rivnut, 10-6, 10-10, 10-11, 10-13, 10-25
 Rod and Link, 6-54
 Rod Assembly, Connecting, 13-9, 14-10, 15-10
 Rod End, 6-65
 Rod, Adjustment, 6-28
 Rod, Brake, 6-29
 Rod, Connecting, Less Bearings, Cast (Replace in Sets Only), 12-7
 Rod, Connecting, Less Bearings, Forged (Replace in Sets Only), 12-7
 Rod, Connecting, 11-3
 Rod, Control, Governor to Carburetor, 12-9
 Rod, Control, 13-16
 Rod, Door Latch, 6-85, 6-87, 9-13, 9-17
 Rod, End, 6-63
 Rod, Oil Gauge, 12-3, 13-3, 14-3, 15-3
 Rod, Push, Brake, 6-29
 Rod, Push, 13-7, 14-8, 15-8
 Rod, Shock, 6-63
 Rod, Threaded, 6-79
 Rod, Throttle Control, 6-30, 6-31
 Rod, Throttle, 6-33, 8-3, 8-4
 Rod, Trip, 6-91
 Rod, Upper, 6-33
 Rod, Vertical Throttle, 8-3
 Rod, 6-91

Roll Pin, 11-13
 Roll, Pin, 6-63
 Rotating Group Kit, 11-8
 Rotating Kit, 11-11
 Roto Coil, Exhaust, 12-4
 Roto-Coil, Exhaust, 13-5
 Rotor, 6-3, 12-10, 13-18

S

Screen, Debris, 9-11, 9-13
 Screen, 6-87, 10-16
 Screw Set, 11-25, 11-26
 Screw, Cap Cl, 11-17, 11-19
 Screw, Cap, 11-11, 11-13, 11-21
 Screw, Crankshaft, 13-8
 Screw, Flat, 9-5
 Screw, Flywheel to Crankshaft (special), 12-7
 Screw, Fuel Pump Mounting, 12-9
 Screw, Governor Spring, 13-16
 Screw, Hex, (30 mm), 10-15
 Screw, Hex, (50 mm), 10-15
 Screw, Hex, 10 - 24 x 0.75", 10-25
 Screw, Hex, M10, 6-33, 6-35, 8-3
 Screw, Hex, M14, 8-3
 Screw, Hex, M8, 6-35, 6-37, 7-3, 8-3
 Screw, Hex, Mounting, 12-9
 Screw, Hex, 6-9, 6-13, 6-17, 6-19, 6-83, 10-29
 Screw, Horn Button, Wood, 6-25
 Screw, Pulley to Crankshaft, 12-7
 Screw, Pump Coupling, 6-31
 Screw, Set, 6-61, 10-15, 11-15
 Screw, Shoulder, 6-75, 6-77
 Screw, Socket, M10, 6-35
 Screw, Socket, Metric, 8-4
 Screw, Socket, 6-21, 6-22, 6-25
 Screw, Special, Cylinder Head to Crankcase (4, 5, 10, 11, & 15), 12-3
 Screw, Thumb, 6-90
 Screw, 13-3, 13-5, 13-7, 14-3, 14-7, 14-8, 14-9, 15-3, 15-7, 15-8, 15-9
 Seal Kit, Pump, 11-11, 11-13
 Seal Kit, Rear, 11-17, 11-19, 11-21
 Seal Kit, Relief Valve, 11-28

CROSS REFERENCE

- Seal Kit, Scu, 11-26
- Seal Kit, Shaft Cl, 11-17, 11-19
- Seal Kit, Shaft, 11-21
- Seal Kit, Tank Door, SRSr, 6-4
- Seal Kit, Tank Door, 6-4
- Seal Kit,Cntrl, 11-15
- Seal Kit,Stg, 11-25
- Seal Kit, 11-3, 11-8, 11-9, 11-22, 11-23, 11-24, 11-27, 11-28, 11-30, 11-31, 11-32
- Seal, Adhesive Backed, 10-13
- Seal, Door, 6-4, 9-15
- Seal, Float Flange, 6-85
- Seal, Inner Wheel Bearing, 6-81
- Seal, O-Ring, 6-53, 6-55, 6-56, 6-57
- Seal, Oil And Felt, 12-5
- Seal, Oil, Crankshaft (For Engine 16850), 14-12
- Seal, Oil, Crankshaft (For Engine 34910), 14-12
- Seal, Oil, Crankshaft, 15-12
- Seal, Oil, 12-9, 13-3, 13-11, 14-3, 15-3
- Seal, Rear Bearing, Oil, 12-3
- Seal, Rear Suction Tube, 10-13
- Seal, Shaft Oil, 13-11
- Seal, Shaft, 13-11
- Seal, Suction Tube, 6-85, 9-15, 9-17
- Seat, Chk Ball, 11-25, 11-26
- Seat, Exhaust Valve, 0.025 mm oversize, 13-5
- Seat, Exhaust Valve, 13-5
- Seat, 6-7
- Sending Unit, Fuel Tank, 6-41
- Sending Unit, Temperature, 6-35, 8-3
- Sending Unit, Water Temperature, 6-31
- Service Kit, Cleanout Door, 6-85, 6-87, 9-11, 9-15
- Service Kit, Pivot Shaft, 6-83
- Shaft Assembly, Brush, 6-20, 6-21, 6-22, 6-23
- Shaft Kit, 11-8
- Shaft S/A, 11-21
- Shaft, Assy Cl, 11-17, 11-19
- Shaft, Brush, 6-20, 6-23
- Shaft, Control, 6-61, 6-63, 6-65
- Shaft, Distributor to Drive, 12-10
- Shaft, Drive Sp, 11-11
- Shaft, Fan (Replaced by 61694), 6-79
- Shaft, Fan, 6-77, 6-79
- Shaft, Idler, 6-75
- Shaft, Input, 11-15
- Shaft, Oil Pump Drive, 12-8
- Shaft, Output, 11-23, 11-24
- Shaft, Pivot, 6-13
- Shaft, Rocker Arm, 13-7, 14-8, 15-8
- Shaft, Squeegee Lift, 6-91
- Shaft, 11-9
- Sheave, Crankshaft, 6-31
- Sheave, Fan, 6-77, 6-79
- Sheave, Idler Shaft, 6-75
- Sheave, 6-33, 6-35, 8-3
- Sheet, Top Sandblast, 6-4, 9-11, 9-13
- Shield, Bearing, 6-21, 6-22
- Shield, Heat, 14-5, 15-5
- Shield, Starter, 6-33, 6-35, 8-4
- Shim, 0.003" (0.07 mm), 6-79
- Shim, 0.005" (0.12 mm), 6-79
- Shim, 0.010" (0.25 mm), 6-79
- Shim, 0.020" (0.50 mm), 6-79
- Shim, 0.060" (1.52 mm), 6-79
- Shim, 16 Ga., 6-27
- Shim, 20 Ga., 6-27
- Shim, Bearing Bracket, 0.06" (1.5 mm), 6-21
- Shim, Bearing Bracket, 0.12" (3 mm), 6-21
- Shim, Bracket, 0.06" (1.5 mm), 6-20
- Shim, Bracket, 0.12" (3 mm), 6-20
- Shim, 6-77, 6-78, 6-83
- Shims, 11-13
- Shock, Absorber, 6-63
- Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrust Plate, Cam Gear, Gear, Oil Pump, Oil Gauge Support, and Gasket Set, 15-3
- Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrustplate, Cam Gear,Gear, Oil Pump, Oil Gauge Support, and Gasket Set, 13-3

- Short Block Assembly, R, Includes: Block, Tappets, Camshaft, Crankshaft, Main Bearings, Bearing Caps, Pistons, Piston Pins, Piston Rings, Connecting Rods, Rod Bearings, Thrust Plate, Cam Gear, Gear, Oil Pump, Oil Gauge Support, and Gasket Set, 14-3
- Short Block Assembly, S, Includes: R ShortBlock Assembly Plus – Head, Guides, Valves and Associated Parts, Rocker Arm Shaft Assembly, Pushrods, Head Cover, Gear Cover, Oil Pan, Oil Filler Cap, and Gasket Set, 14-3, 15-3
- Shroud, Engine Compartment, L.H., 6-9
- Shroud, Engine Compartment, R.H., 6-9
- Shroud, Fan, 6-37
- Shroud, Front, 6-8
- Skirt, Deflector, 6-11
- Skirt, 6-3
- Sleeve and Seal Kit, 11-3
- Sleeve, Bearing, 6-90, 6-91
- Sleeve, Brake Lever, 6-28
- Sleeve, Hose, 6-47, 6-49, 6-51
- Sleeve, Nylon, 6-83
- Sleeve, Tube Assembly, 15-5
- Sleeve, 6-7, 6-11, 6-13, 6-20, 6-25, 6-35, 6-63, 6-75, 6-77, 6-79, 6-91, 8-3, 8-4
- Slide, L.H., 6-23
- Slide, R.H., 6-22
- Slinger, Oil, 13-8, 14-9, 15-9
- Solenoid, Anti-Runon, 6-35
- Solenoid, Fuel Shut-Off, 14-5
- Spacer Plate, 11-25
- Spacer, Alternator to Bracket, Rear, 12-12
- Spacer, Between Alternator Pulley and Fan, 12-12
- Spacer, Brake Arm, 6-28
- Spacer, Brake, 6-28
- Spacer, Fan, 6-37
- Spacer, Isolator, 6-23
- Spacer, P.C. Board, 10-29
- Spacer, Rotor, 13-18
- Spacer, Seat Adjuster, 6-7
- Spacer, Spring, 6-63
- Spacer, Switch, 9-7
- Spacer, Throttle Control, 6-31, 6-33
- Spacer, 6-63, 6-79, 8-5, 10-25, 11-25, 11-26
- Spark Plug, Gasoline, 13-18
- Spark Plug, LPG, 13-18
- Spark Plug, 6-3
- Spindle, Adjusting, 10-13, 10-21
- Sprayer Kit, High Pressure, 10-15
- Sprayer, High Pressure, 11-3
- Spring Kit, Scu, 11-25, 11-26
- Spring Set, Advance, 13-18
- Spring, Brake Cable, 6-28
- Spring, Cntr, 11-15
- Spring, Compression, 6-31, 6-33, 6-34
- Spring, Governor Bumper, 13-11
- Spring, Governor, 12-9, 13-16
- Spring, Oil Pressure Relief Valve, 12-3
- Spring, Propel, Centering, 6-65
- Spring, Pump Lever Centering, 6-61, 6-63
- Spring, Rocker Arm Shaft, 13-7, 14-8, 15-8
- Spring, Rocker Shaft Ends (For Engine 16850), 14-8
- Spring, Tension, 6-77, 6-79
- Spring, Throttle, 6-30
- Spring, Valve, Intake and Exhaust, 12-4
- Spring, Valve, 13-5, 14-7, 15-7
- Spring, Retainer, 11-15
- Spring, 6-11, 6-13, 6-20, 6-23, 6-25, 6-61, 6-63, 6-65, 6-91, 11-13, 11-17, 11-19, 11-21
- Squeegee Assembly, Left Side, 6-19
- Squeegee Assembly, Right Side, 6-17
- Squeegee Blades Kit, Rear, 6-4
- Squeegee Blades Kit, Side, 6-3
- Squeegee Wand Kit, 10-13
- Squeegee, 10-17
- Starter (For Engine 16850), 14-13
- Starter (For Engine 34910), 14-13
- Starter, 12-12, 13-12, 15-13
- Steer Control, Hyd #4 05.9 150, 11-26
- Steer Control, Hyd 3 6.2 1000, 11-25
- Strainer, Fuel, 6-41
- Strainer, Suction, 6-11, 6-53
- Strainer, Water, 10-16
- Strap, Adjuster, 6-63
- Strap, Adjusting, Alternator, 13-16
- Strap, Alternator, Adjusting, 12-12
- Strap, Alternator, 14-17, 15-17
- Strip, Backup, 6-17, 6-19, 10-30
- Strip, Cable Mounting, 6-15

CROSS REFERENCE

- Strip, Cover, 6-19
Strip, Mounting, 6-37
Strip, Oil Cooler Mounting, L.H., 6-31
Strip, Oil Cooler Mounting, R.H., 6-31
Strip, Oil Cooler Mounting, 6-31
Strip, Rear Backup, 6-4
Strip, Rear, Backup, 6-91
Strip, Spring, 6-91
Strip, 6-28, 9-7, 9-15
Stud, Alternator Bracket to Crankcase, 12-12
Stud, Carburetor to Manifold, 12-11
Stud, Caster, 6-91
Stud, Distributor to Head, 12-10
Stud, Door Latch, 6-85, 6-87, 9-13, 9-17
Stud, Exhaust and Intake Manifold to Crankcase, 12-11
Stud, Exhaust Manifold Outlet, 12-11
Stud, Oil Pump Body to Center Bearing Cap, 12-8
Stud, Oil Pump Idler Gear, 12-8
Stud, Valve Chamber Cover To Crankcase, 12-3
Stud, Water Outlet, 12-10, 12-11
Stud, Wheel, 6-81
Stud, 6-13, 6-27, 6-39, 6-60, 6-61, 6-63, 6-65, 13-13, 13-15, 13-16, 14-14, 14-16, 15-14, 15-16
Support Assembly, Lower Bearing, 6-83
Support, 10 in (254mm), 10-24
Support, 13 in (330mm), 10-24
Support, Brace, 6-9
Support, Light, 10-23
Support, Lower Bearing, 6-83
Support, LPG Tank, 7-3
Support, Oil Gauge Rod, 12-3
Support, Rocker Arm Shaft, Rear, 13-7, 14-8
Support, Rocker Arm Shaft, 13-7, 14-8, 15-8
Support, Shaft, 6-75
Support, 10-6, 10-7
Switch Assembly, 11-29
Switch, Brake Light Sending, 10-2, 10-22
Switch, Cleaning Solution Metering, 9-9
Switch, Flow (See Breakdowns), 6-52
Switch, Flow, 11-29
Switch, Ignition, 6-80
Switch, Oil Pressure, 7-3
Switch, On-Off, Squeegee Lift, 6-80
Switch, Pressure, 10-5
Switch, Roller, 6-91
Switch, Toggle, 10-2, 10-7, 10-8, 10-22, 10-24
Switch, 6-91, 9-7, 10-6, 10-23
- T**
- Taillight, 10-2, 10-22
Tank Assembly, LPG, 10-9, 10-10
Tank Kit, Reserve LPG, 10-10
Tank Mounting Kit, Reserve LPG, 10-11
Tank, Detergent, 9-15, 9-17
Tank, Fuel, 6-41
Tank, LPG, with Filler Gauge, 7-3
Tank, Solution and Recovery, SRSr, 9-13
Tank, Solution and Recovery, 6-85
Tappet, Valve, 0.001" Oversize, 12-4
Tappet, Valve, 0.003" Oversize, 12-4
Tappet, Valve, 0.005" Oversize, 12-4
Tappet, Valve, 0.010" Oversize, 12-4
Tappet, Valve, 0.015" Oversize, 12-4
Tappet, Valve, 0.020" Oversize, 12-4
Tappet, Valve, Standard, 12-4
Tappet, Valve, 13-7, 14-8, 15-8
Tee, Barbed, 10-15
Tee, Plastic, 6-15
Tee, 6-29, 10-27, 12-9, 13-16, 14-5, 15-5
Terminal, Male, 11-5, 11-6
Terminal, Quick-Disconnect, 8-4, 8-5
Terminal, Ring, 8-5, 10-22
Terminal, Starter, 8-5
Terminal, 8-5
Thermostat and Gasket, 13-15, 14-16, 15-16
Thermostat, 180_F (82.2_c), 12-3
Thermostat, 12-11, 13-15, 14-16, 15-16
Thumbscrew, Filter Hold Down, 9-15, 9-17
Thumbscrew, 9-15
Tie, Cable, 6-83, 7-6, 9-5, 10-2, 10-22
Tip, Nozzle, 14-5, 15-5
Tire (Replaced by 48910), 6-26, 6-81
Tire & Wheel Assembly (Replaced by 48911), 6-26
Tire & Wheel Assembly, 6-26

Tire and Wheel Assembly, Rear (Replaced by 48911), 6-81
 Tire and Wheel Assembly, Rear, 6-81
 Tire, 6-26, 6-81
 Tool Assembly, Sludge Removal, 10-17
 Trim, Plastic, Steering Column Housing, 6-9
 Tube Assembly, Fuel Injection #1, 14-5
 Tube Assembly, Fuel Injection #2, 14-5
 Tube Assembly, Fuel Injection #3, 14-5
 Tube Assembly, Fuel Injection #4, 14-5
 Tube Assembly, Hydraulic, 6-37
 Tube Assembly, L.H., 6-29
 Tube Assembly, Oil Pump Inlet, 13-10, 14-11, 15-11
 Tube Assembly, R.H., 6-29
 Tube Assembly, 8-6, 14-5, 15-5
 Tube Set, Fuel Injection, 15-5
 Tube, Front Suction, 9-13
 Tube, Air Cleaner, 6-38, 6-39, 7-5, 8-8
 Tube, Air Intake, 8-3
 Tube, Brake Line, 6-29
 Tube, Connector, 6-15
 Tube, Exhaust, 6-36
 Tube, Front Suction, 6-85, 9-11
 Tube, Fuel (for Engines 16860/16870), 13-19
 Tube, Fuel (for Engines 34920/34930) (Replaced by none), 13-19
 Tube, Fuel (for Engines 34920/34930), 13-19
 Tube, Fuel Pump to Carburetor, 12-9
 Tube, Hydraulic, 7-3, 10-16
 Tube, Inlet, 6-79
 Tube, Intake, 6-79
 Tube, Manifold to Tee, 12-9
 Tube, Oil Cooler, 13-17, 14-18, 15-18
 Tube, Oil Filler, 14-3, 15-3
 Tube, Oil Gauge, 13-3
 Tube, PCV, 13-16
 Tube, Rear Squeegee Suction, 6-87, 9-15, 9-17
 Tube, Rear Suction, 10-13
 Tube, Spreader, 6-15
 Tube, Vacuum, 13-18

U

U-Bolt, 6-13

V

V-Belt, 6-31, 6-35, 6-75, 6-79, 8-3
 V-Bolts, 10-8
 Vacuum Advance, 13-18
 Valve Assembly, Check, 11-9
 Valve Assembly, Relief (Includes Bearing), 11-9
 Valve CI, 11-17, 11-19
 Valve Kit, Discharge, 11-3
 Valve Kit, Pump, 11-7
 Valve Plate Assembly, 11-8
 Valve Plate, 11-13
 Valve Replacement Kit, Water, 6-15, 9-7
 Valve Section, Manual, 11-27
 Valve Section, 11-27
 Valve Spool, 11-15
 Valve, Check, 14-5
 Valve, Cylinder Water Drain, 12-3
 Valve, Exhaust, 12-4, 13-5, 14-7, 15-7
 Valve, Hydraulic (See Breakdowns), 6-54, 6-60
 Valve, Hydraulic, Solenoid, 11-27
 Valve, Hydraulic, 11-28, 11-31
 Valve, Intake, 12-4, 13-5, 14-7, 15-7
 Valve, Pressure Relief, 7-3
 Valve, Relief, Hydraulic, 10-15
 Valve, Relief, Oil Pressure, 12-3
 Valve, Relief, 11-9
 Valve, Shut-off, 10-16
 Valve, Tire, Air, 6-26, 6-81
 Valve, Water Pressure, 10-16
 Valve, Water, Drain, 10-27
 Valve, Water, 6-15, 9-7
 Valve, 11-17, 11-19, 11-21
 Vaporizer, LPG, 7-3, 12-11
 Video, Operator, 550, 10-31

W

Wand Kit, Squeegee, 10-21
 Wand, Spray, 10-15
 Warning Kit, Brush Pressure, 10-5
 Washer, Wavy, 6-63, 6-65
 Washer, Belleville, 6-21, 6-22, 6-35, 6-92, 8-4
 Washer, Copper, 14-5

CROSS REFERENCE

Washer, Dished, 10-2, 10-22
Washer, Drain Plug, 13-3, 14-3, 15-3
Washer, Engine Mounting, 6-31
Washer, Fiberglide, 6-91
Washer, Flat, 6-81, 6-83, 6-90, 13-7, 14-7, 14-8, 15-7, 15-8
Washer, Lock, 6-83
Washer, Nylon, 6-9, 6-15, 6-39, 9-7
Washer, Plain, 13-5, 13-8, 14-7, 14-9, 15-8, 15-9
Washer, Pulley to Crankshaft, 12-7
Washer, Rocker Arm Shaft, 14-8, 15-8
Washer, Rubber Seal, 9-13, 9-17
Washer, Rubber Backed, 10-13
Washer, Rubber Seal, 9-11, 9-15
Washer, Rubber, (Located Inside Tank), 6-87
Washer, Rubber, 10-9
Washer, Sealing, 6-85, 8-6, 10-2, 10-23, 14-5
Washer, Spacer, 6-83
Washer, Spherical, 10-2, 10-22
Washer, Thrust, 6-90
Washer, Wavy Spring, 6-33
Washer, Wavy, 6-31, 6-77, 6-79, 13-7, 14-8
Washer, 6-13, 6-17, 6-19, 6-20, 6-21, 6-22, 6-23, 6-25, 6-35, 6-83, 6-91, 6-92, 11-11, 11-13, 14-5, 15-7
Watertrap, Fuel, 8-6
Weights Set, Advance, 13-18
Wheel Assembly, Foam Filled, 10-27
Wheel, Steering, 6-25
Wire Assembly, Headlight, 10-2, 10-22
Wire Assembly, No. 46, 8-4
Wire Assembly, Replaced by none, 8-5
Wire Harness, Auto Squeegee, 6-66
Wire Harness, Control Box, 9-8
Wire Harness, Main, Gasoline and LPG, 6-66
Wire Harness, Tractor, Auto Squeegee, 6-66
Wire Harness, 10-2, 10-22, 10-25, 10-29
Wire Kit, Instrument Panel, 6-80
Wire Kit, Operating Lights, 10-2, 10-22
Wire Kit, 10-5, 10-6, 10-8, 10-23, 10-25, 10-29
Wire Set, Spark Plug, 13-18
Wire, Coil, 13-18
Wire, Distributor to Coil (14" Long), 12-10
Wire, Distributor to Plugs (10" Long), 12-10
Wire, Glow Plug, 14-5, 15-5
Wire, Jumper, 6-33, 8-3
Wire, Lead, 6-9
Wire, Spark Plug #1, #2, 13-18
Wire, Spark Plug, #3, #4, 13-18
Wrap, Hose, 7-6
Wrap, L.H., Replaced by none, 6-8
Wrap, R.H., Replaced by none, 6-8

Y

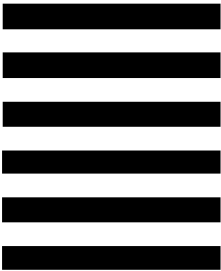
Yoke, 11-8



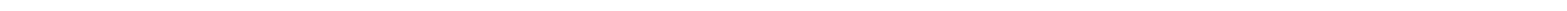
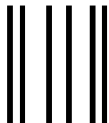
TENNANT COMPANY
 Technical Publications #15
 701 North Lilac Drive
 P.O. Box 1452
 Minneapolis, MN 55440-9947

POSTAGE WILL BE PAID BY ADDRESSEE

BUSINESS REPLY MAIL
 FIRST CLASS MAIL PERMIT NO. 94 MINNEAPOLIS, MN

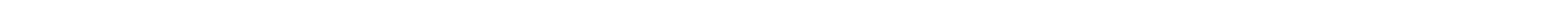


NO POSTAGE
 NECESSARY
 IF MAILED
 IN THE
 UNITED STATES



Fold along dotted lines

Tape here

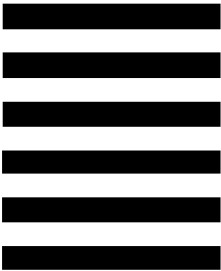




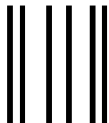
TENNANT COMPANY
 Technical Publications #15
 701 North Lilac Drive
 P.O. Box 1452
 Minneapolis, MN 55440-9947

POSTAGE WILL BE PAID BY ADDRESSEE

BUSINESS REPLY MAIL
 FIRST CLASS MAIL PERMIT NO. 94 MINNEAPOLIS, MN



NO POSTAGE
 NECESSARY
 IF MAILED
 IN THE
 UNITED STATES



Fold along dotted lines

Tape here

