



INSTRUCTION BULLETIN

No. 9016244
Machine: M20 / M30 /
T20
Published: 01-2018
Rev. 00

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in the machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save the cost of ordering an entire kit.

NOTE: Numbers in parenthesis () are reference numbers for parts listed in Bill of Materials.

Installation instructions for **kit number 9016241**

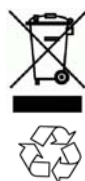
SYNOPSIS:

This kit contains the parts needed to replace scrub vacuum fan motor on M20 sweeper scrubbers (serial numbers 006878-), M30 sweeper scrubbers (serial numbers 006878-), and T20 scrubbers (serial numbers 005893-).
Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS:

(Estimated time to complete: 5- 7 hours (5 hours if hydraulic system is vacuumed down, 7 hours if hydraulic fluid is removed))

1. Thoroughly clean outside of hydraulic components **before** disconnecting hydraulic hoses or fittings and flush hoses and fittings with air, solvent, or hydraulic fluid and cap disconnected hoses or open ports to prevent contaminants from entering system.
2. Mark hydraulic hoses with locations of where they are attached. Markings make it easier to reconnect hoses to proper locations.
3. Discard all hydraulic fluid drained from the system. Use only new approved hydraulic fluid to replenish hydraulic reservoir. Hydraulic fluid is potentially dangerous to the environment. Obey all federal, state, and local laws/regulations governing the disposal of environmentally hazardous materials when disposing hydraulic fluid.



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, used machine components such as batteries and fluids in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.

PREPARATION:

1. Park the machine on a clean level surface, turn off the machine, engage the parking brake, and remove the key.

FOR SAFETY: Before leaving or servicing machine, stop on level surface, turn off machine, and remove key.

2. Disconnect the battery cables from the battery.



WARNING: Always disconnect battery cables from machine before working on electrical components.

3. Remove the engine cover from the machine. Set the engine cover aside.

4. Remove the coolant reservoir from the bracket and move the reservoir away from the scrub vacuum fan. (Fig. 1)

NOTE: If necessary, unplug spark plug wires before moving the coolant reservoir.



FIG. 1

5. Remove the hardware holding the air cleaner bracket to the machine and move the air cleaner / air cleaner bracket away from the scrub vacuum fan. (Fig. 2)

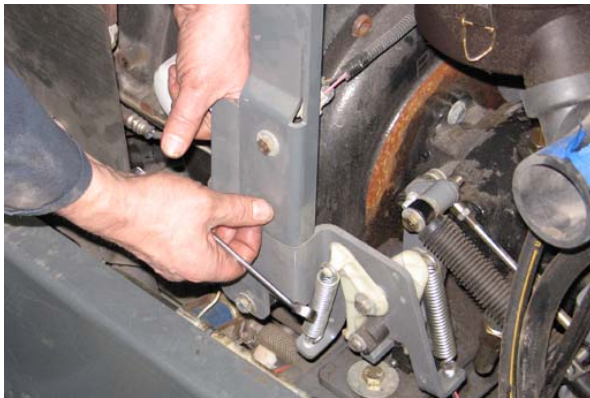


FIG. 2

6. Drain hydraulic fluid from the system.

NOTE: It is not necessary to drain hydraulic fluid if a hydraulic vacuum is used to vacuum down the hydraulic system.

INSTALLATION:

1. Disconnect the hose attached to location P1 on the scrub valve. (Fig. 3)



FIG. 3

2. Disconnect all main wire harness leads from the scrub valve.
3. Remove the support bracket. Set the support bracket and hardware aside. (Fig. 4)

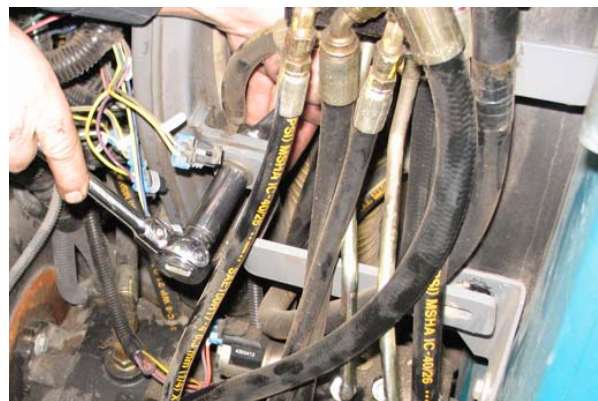


FIG. 4

- Loosen the hardware holding the scrub valve bracket to the solution tank. (Fig. 5)



FIG. 5

- Lift the scrub valve assembly up from the hardware and away from the solution tank. (Fig. 6)

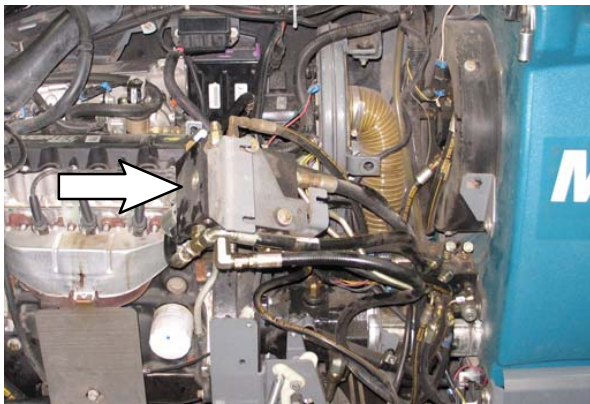


FIG. 6

- Disconnect the four hydraulic hoses from the fittings on the scrub fan hydraulic motor. Leave fitting installed on the scrub fan motor. (Fig. 7)

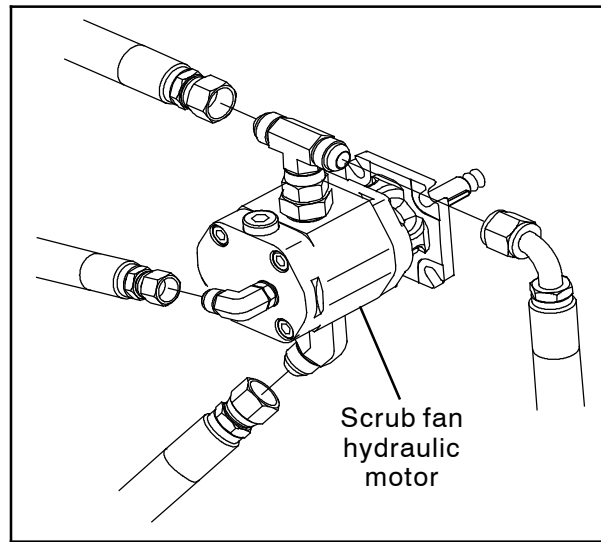


FIG. 7

NOTE: If working on an LP machine, the fuel tank can be removed to make access to scrub vacuum fan easier. Refer to Operators Manual for instructions how to remove LP tank.

NOTE: If working on a diesel or gasoline machine without FaST, ES, or spray hose options, the operator station removable panel can be removed to make access to scrub fan easier. Set the panel and hardware aside. (Fig. 8)

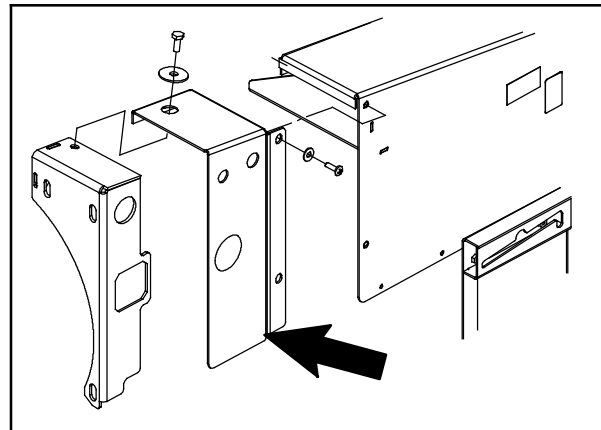


FIG. 8

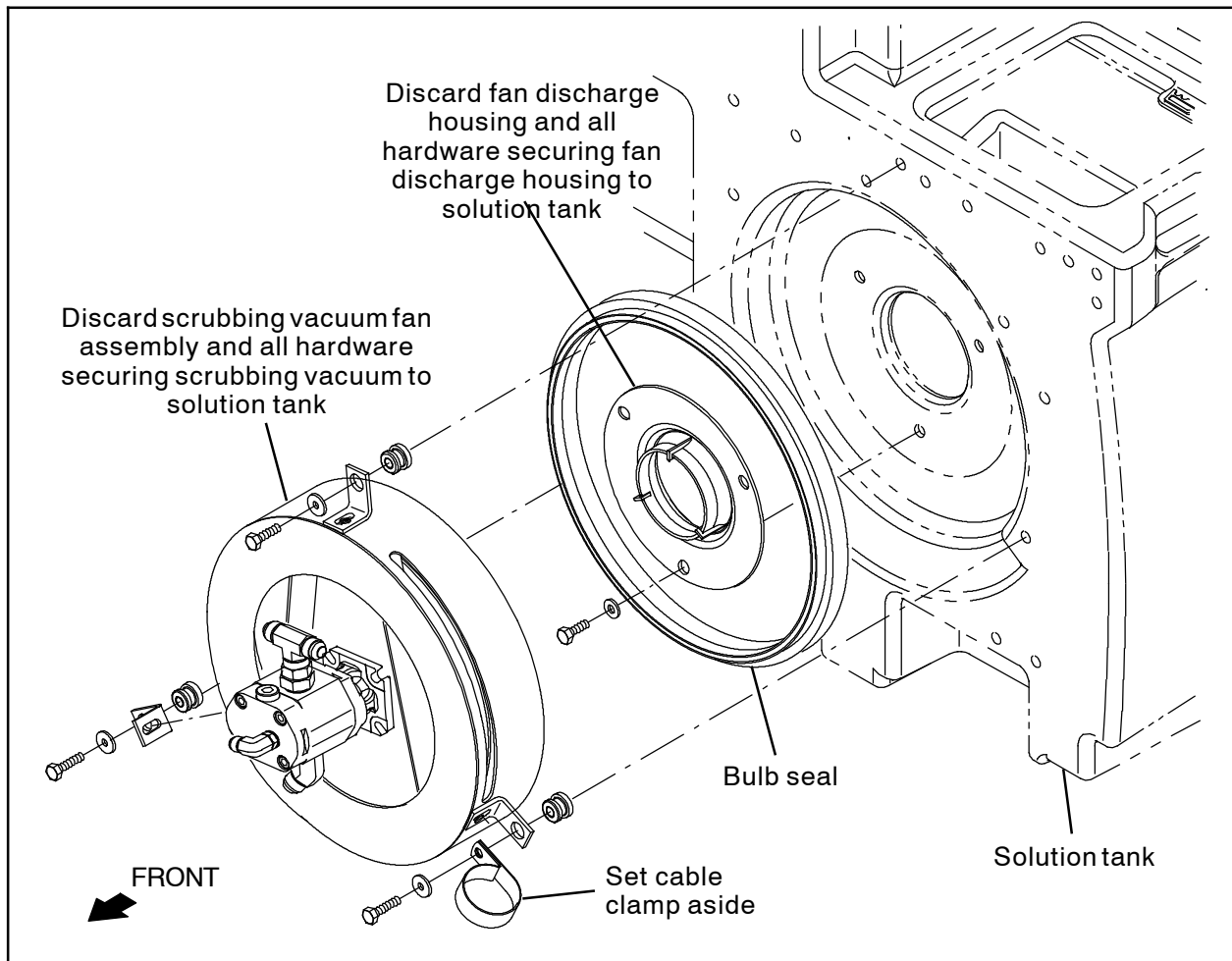


FIG. 9

7. Remove the scrubbing vacuum fan assembly from the solution tank. Set the cable clamp aside. Discard the scrubbing vacuum fan assembly and all hardware. (Fig. 9)
8. Remove the hardware securing the fan discharge housing to the solution tank. Discard the fan discharge housing and all hardware. (Fig. 9)
9. Use three M8 hex screws (17) and three flat washers (7) to install the fan discharge housing (19) onto the solution tank. (Fig. 11)

10. Apply adhesive onto the edges of the scrubbing vacuum fan assembly and install the bulb seal (14). (Fig. 10)



FIG. 10

11. Install the straight fitting (12) and t-fitting (9) onto the scrubbing fan hydraulic motor (4). Note location of Allen screw on the scrubbing fan hydraulic motor. (Fig. 12)
12. Install the 90° fitting (11) onto the scrubbing fan hydraulic motor (4). (Fig. 12)
13. Install the 45° fitting (10) onto the scrubbing fan hydraulic motor (4). (Fig. 12)
14. Use an M8 hex screw (15) and flat washer (16) to install each of the three fan support angles (13) onto the scrubbing vacuum fan assembly. Do not completely tighten hardware. Hardware is tightened in later adjustment. (Fig. 11)

15. Hold the scrubbing vacuum fan assembly up onto the solution tank and use two M8 hex screws (20), two flat washers (16), and two vibration isolator bushings (3) to install the scrubbing vacuum fan assembly onto the solution tank. (Fig. 11)
16. Use an M8 hex screws (21), flat washer (16), and vibration isolator bushing (3) to install the saved cable clamp and the scrubbing vacuum fan assembly onto the solution tank. (Fig. 11)
17. Tighten all hardware to fully secure the three fan support angles (13) to the scrubbing vacuum fan assembly. (Fig. 11)
18. Connect the hydraulic hoses previously disconnected from the removed scrubbing vacuum fan assembly to the new scrubbing vacuum fan assembly. (Fig. 12)

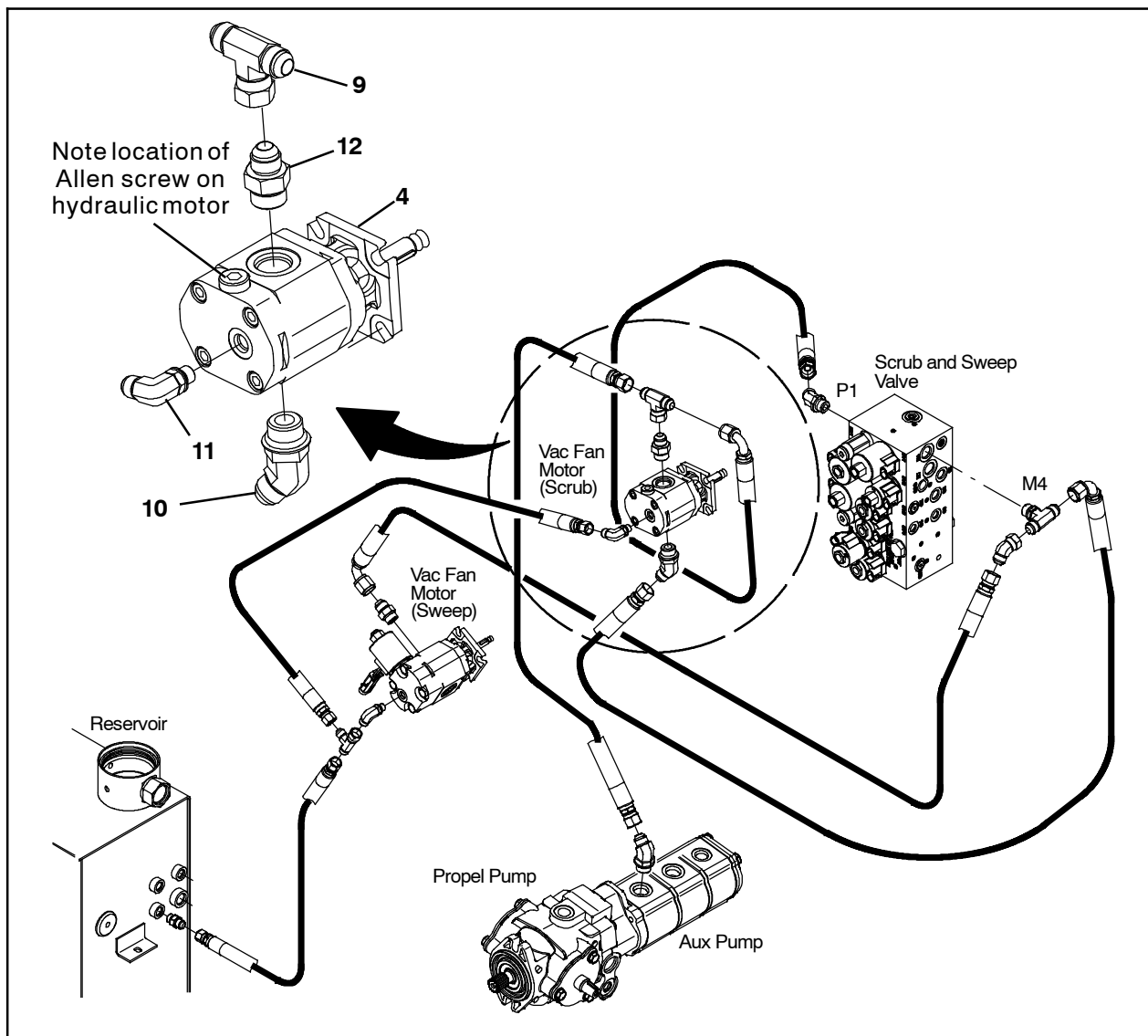


FIG. 12

19. Reinstall the scrub valve assembly onto the solution tank. (Fig. 13)

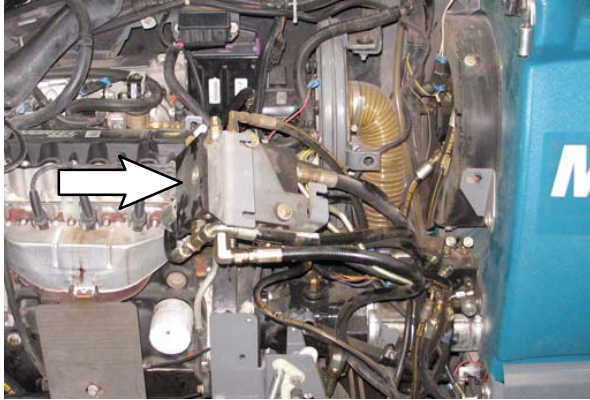


FIG. 13

20. Reconnect the hose removed from location P1 on the scrub valve. (Fig. 14)



FIG. 14

21. Reconnect the main wire harness leads to the scrub valve.

22. Reinstall the support bracket. (Fig. 15)

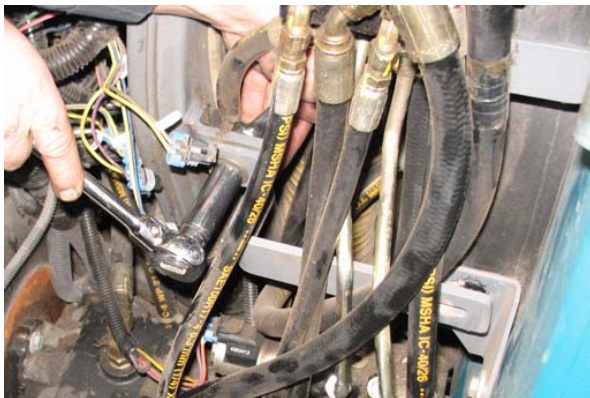


FIG. 15

23. Reinstall the air cleaner assembly / air cleaner assembly bracket onto the machine. (Fig. 16)

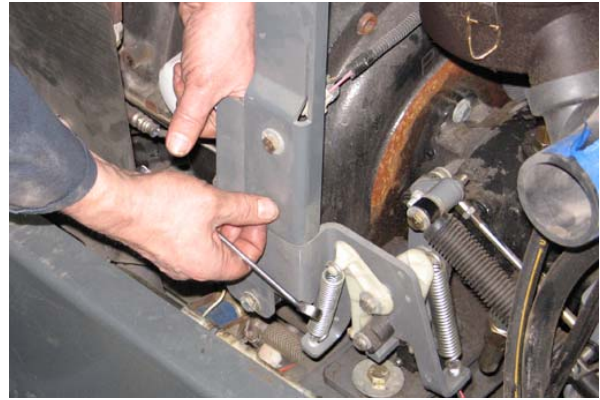


FIG. 16

24. Reinstall the coolant reservoir onto the bracket. (Fig. 17)



FIG. 17

25. If hydraulic fluid was drained to install this kit, replenish the hydraulic system with Tennant approved hydraulic fluid. Refer to the Operators Manual for additional information.

26. Reinstall the LP tank, operator station removable panel, and other parts/ components removed to install the new vacuum fan motor kit onto the machine.

27. Reconnect the battery cables to the battery.

28. Start and test the machine. Observe the scrub vacuum fan and other hydraulic components that had fittings / hoses removed / replaced for leaks. Operate the scrub vacuum fan to ensure it is functioning properly.

Bill of Materials for Fan Kit, Scb, Replmt [M20/T20/M30] - 9016241

Ref.	Tennant Part No.	Description	Qty.
1	1068611	Plate Wldt, Mtg, Fan	1
2	1062033	Impeller, 11.81d X 0.500b	1
3	54274	Isolator, Vib, Bshg, 1.1d 0.6l .4b 0.78h	3
4	1071253	Motor, Hyd, Gear, Ext 0.17 Lh 3000	1
5	07788	Nut, Hex, Std, M12 X 1.75, SS	1
6	09010	Screw, Hex, M8 X 1.25 X 25, SS	4
7	01685	Washer, Flat, 0.38b 0.88d .08, SS	7
8	08713	Nut, Hex, Lock, M8 X 1.25, NI, SS	4
9	76315	Fitting, Hyd, Tee, Jf08/Jm08/Jm08, Br	1
10	47513	Fitting, Hyd, E45, Jm08/Om10	1
11	77098	Fitting, Hyd, E90, Jm06/Om04	1
12	56692	Fitting, Hyd, Str, Jm08/Om10	1
13	1068644	Angle, Sppt, Fan	3
14	1031617	Seal, Afmkt, Bulb, Str, .75d F/07ga 08ft	1
15	39277	Screw, Hex, M8 X 1.25 X 25, 8.8	3
16	1017218	Washer, Flat, 0.32b 1.00d .12, Ss	6
17	09740	Screw, Hex, M8 X 1.25 X 20, Ss	3
18	1059100	Housing, Fan, Radial Discharge, Sq Inlet	1
19	36328	Washer, Flat, Belleville, .50	1
20	09011	Screw, Hex, M8 X 1.25 X 30, SS	2
21	09023	Screw, Hex, M8 X 1.25 X 35, FI, SS	1

TENNANT COMPANY
P. O. Box 1452
Minneapolis, MN 55440-1452