

# **INSTRUCTION BULLETIN**

No. 9008705 Machine: S20 Published: 12-2012 Rev. 01

## 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 9006307** 

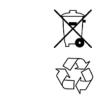
#### SYNOPSIS:

This kit contains parts needed to install a soft cab kit onto S20 machines equipped with overhead guards.

Please follow step-by-step instructions.

# SPECIAL TOOLS / CONSIDERATIONS: Crane or lift capable of safely holding the weight of the overhead guard assembly

(Estimated time to complete: 7 hours)



### PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components, and hazardous fluids in an environmentally safe manner according to local waste disposal regulations.

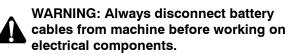
Always remember to recycle.

#### **PREPARATION:**

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

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

2. Disconnect the battery cables from the battery.



#### INSTALLATION: Assemble Cab Door

NOTE: Refer to Fig. 1 for assembling the door portion of the soft cab kit.

- Use two M5 pan screws (4), two flat washers (6), and two M5 hex nuts (5) to install the door handle (3) onto the cab door (1).
- 2. Use two hex screws (12) and two Belleville washers (11) to install the latch (10) onto the latch mounting angle (7).
- Insert the M6 hex screw (14) into the latch (10) and thread one M6 hex nut (15) onto the M6 hex screw to secure the M6 hex screw firmly onto the latch.
- 4. Slide the door latch bracket (13) onto the M6 hex screw (10) installed onto the latch (10) in and use another M6 hex nut (15) to secure the door latch bracket to the latch.
- 5. Install the bulb seal (2) onto the cab door (1).
- 6. Install the VELCRO<sup>®</sup> hook tape (23) onto the cab door (1).

VELCRO® is a registered trademark of Velcro Industries B. V.

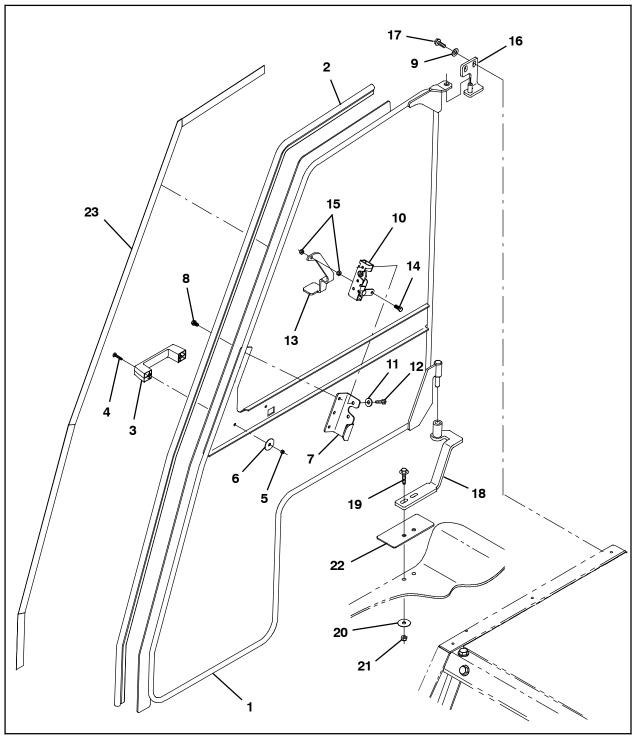


FIG. 1

NOTE: Door portion of Cab Kit (For machines already equipped with OHG), Tennant Part Number 9006307, Refer to Fig. 1.

Ref.	Part No.	Description	Qty.
1	1045404	Door Wldt, Cab	1
2	1048166	Seal, Afmkt, Bulb, Str, 0.58D 08Ft	1
3	1023920	Handle, Door	1
4	06935	Screw, Pan, Phl, M5 X 0.80 X 25, 4.8	2
5	06549	Nut, Hex, Lock, M5 X 0.80, NI	2
6	41178	Washer, Flat, 0.25, Fendr	4
7	1052808	Angle, Mtg, Latch	1
8	74455	Screw, Hex, M6 X 1.00 X 12, Fmg	3
9	32485	Washer, Flat, 0.38, SAE	2
10	59661	Latch	1
11	41186	Washer, Flat, Belleville, .31	2
12	25046	Screw, Hex, .25-20 X 1.00, G5	2
13	1053068	Bracket, Latch, Door	1
14	06942	Screw, Hex, M6 X 1.00 X 16, 8.8	1
15	08708	Nut, Hex, Lock, M6 X 1.00, NI	2
16	1049687	Angle Wldt, Mtg, Door	1
17	763045	Screw, Hex, M8 X 1.25 X 20, Fmg	2
18	1047728	Bracket Wldt, Mtg, Door	1
19	1037355	Screw, Hex, M8 X 1.25 X 35, 9.8, SEMS	2
20	30013	Washer, Flat, 0.31, Fendr	2
21	08709	Nut, Hex, Lock, M8 X 1.25, NI	2
22	1048161	Plate, Sppt, Hinge	1
23	314012	CS, Tape, Hook, 1.0w [Velcro]	9

INSTALLATION: Replace Overhead Guard Top Panel

- 1. Machines equipped with optional backup alarm and flashing light only: Disconnect the harness from the backup alarm and flashing light assembly and remove the harness from the vinyl duct on the overhead guard assembly.
- 2. Remove the existing overhead guard from the machine. Set all mounting hardware and components aside. These parts are used to reinstall the overhead guard onto the machine.
- 3. Remove the mirrors from the overhead guard. Set mirrors and all hardware aside. (Fig. 2)
- 4. Machines equipped with optional backup alarm and flashing light only: Remove the backup alarm and flashing light assembly from the overhead guard top panel. Set the backup alarm and flashing light assembly aside.

- 5. Remove the overhead guard top cover from the overhead guard. Discard the overhead guard top cover. Set remaining components and mounting hardware aside. (Fig. 2)
- 6. Use isopropyl alcohol to clean the surfaces of the new overhead guard top panel (36) where the insulation (37) and (38) will be installed. (Fig. 2)
- Install both pieces of insulation (37) and insulation (38) onto the overhead guard top panel (36). (Fig. 2)

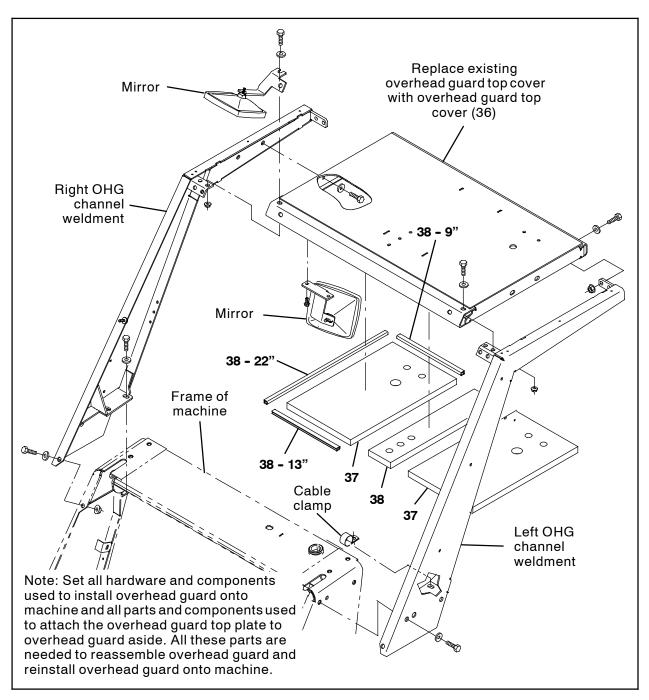


FIG. 2

- Use two M6 hex screws (11) to install each cab panel mounting bracket (10) onto the overhead guard. (Fig. 6)
- 9. Insert the three plastic plug holes (34) into the overhead guard top cover (36).
- Machines without optional backup alarm / flashing light only: Insert the two plastic hole plugs (34) and plastic hole plug (35) into holes for backup alarm / flashing light in the overhead guard top cover (36).
- Install the overhead guard top cover (36) onto the left and right overhead guard channel weldments. (Fig. 2)
- 12. Install all components removed from the old overhead guard top cover onto the new overhead guard top cover (36).
- 13. Cut two 10" lengths of vinyl duct (31).
- 14. Use isopropyl alcohol to clean the surfaces of the overhead guard top cover (36) where the 10" lengths of vinyl duct (31) will be installed. (Fig. 6)
- 15. Install both 10" vinyl ducts (31) onto the overhead guard assembly. Refer to Fig. 6.
- 16. Reinstall the overhead guard onto the machine.
- 17. Use three M4 hex screws (28) and three M4 hex nuts (9) to install the defroster fan (27) onto the fan mounting bracket (29). (Fig. 6)
- 18. Install the terminals (4) onto the defroster fan (27) wires.
- 19. Use two M8 hex screws (5) to install the defroster fan assembly onto the overhead guard top cover (36). (Fig. 6)
- 20. Use two M8 hex screws (5) to install the defroster fan assembly onto the overhead guard top cover (36). (Fig. 6)
- 21. Connect the fan harness (32) to the defroster fan (27).

- 22. Route the fan harness (32) through the 10" vinyl duct (31), down through the 28" vinyl duct, and into the operator compartment. (Fig. 6)
- 23. Machines with optional backup alarm / flashing light only: Insert the flashing light / backup alarm harness into the 10" vinyl duct (31) and the 28" vinyl duct and plug the harness back into the backup alarm / flashing light assembly. (Fig. 6)
- 24. Install the bulb seal (16) onto the windshield assembly (14). (Fig. 6)
- 25. Install the bulb seal (15) onto the windshield assembly (14). (Fig. 6)
- 26. Use sixteen SEMS M8 hex screws (19) to install the left window mounting angle (17), right window mounting angle (18), and windshield assembly (14) onto the overhead guard assembly. (Fig. 6)
- 27. Remove the nut, spacer, and one rubber washer from the wiper motor assembly (21). (Fig. 6)
- Use one M5 hex screw (22), two flat washers (23), and a M5 hex nut to secure the wiper motor assembly (21) to the windshield assembly (14). (Fig. 6)
- Reinstall the nut, spacer, and rubber washer to completely secure the wiper motor assembly (21) to the windshield assembly (14). (Fig. 6)
- 30. Install the windshield wiper blade (26) onto the windshield wiper arm (25). (Fig. 6)
- Install the windshield wiper blade (26) I windshield wiper arm (25) onto the wiper motor assembly (21). (Fig. 6)
- 32. Connect the windshield wiper harness (33) to the windshield wiper motor assembly (21). (Fig. 6)
- Route the windshield wiper harness (33) through the 10" vinyl duct (31), down through the 28" vinyl duct, and into the operator compartment. (Fig. 6)

- Use three M6 hex screws (11) to install each top shield plate (13) onto the overhead guard assembly. (Fig. 6)
- 35. Use three M6 hex screws (11) to install the rear cab angle (2) onto the overhead guard assembly. (Fig. 6)
- 36. Use three M6 hex screws (11) to install the side cab angle (3) onto the overhead guard assembly. (Fig. 6)
- 37. Install the seal lip (4) onto the overhead guard assembly. (Fig. 6)
- 38. Apply RTV seal in the groove between the inner edge of both top shield plates (13) and the top cover (36). (Fig. 3)

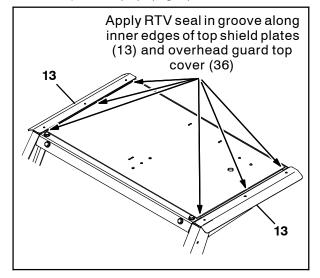


FIG. 3

39. Remove the relay panel cover from t he relay / fuse panel to access fuses. (Fig. 4)

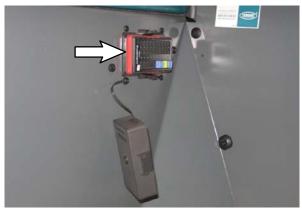


FIG. 4

40. Plug the 5 Amp fuses (30) into locations F6 and F10 in the relay panel and reinstall the relay panel cover onto the relay / fuse panel. (Fig. 5)

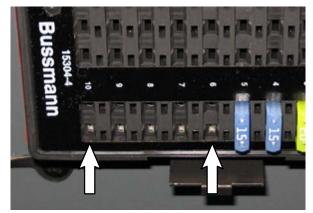


FIG. 5

- Route the fan harness (32) and windshield wiper harness (33) through and the cable clamp and hole in the lintel with the grommet . (Fig. 6)
- 42. Reconnect the battery cables to the battery.
- 43. Start the machine, raise the hopper, turn off the machine, and engage the hopper support.



WARNING: Lift arm pinch point. Stay clear of hopper lift arms.



WARNING: Raised hopper may fall. Engage hopper support bar.

- 44. Connect the fan harness (32) and windshield wiper harness (33) to the main wire harness. (Fig. 6 / Fig. 7)
- 45. Start the machine, lower the hopper, and turn off the machine.

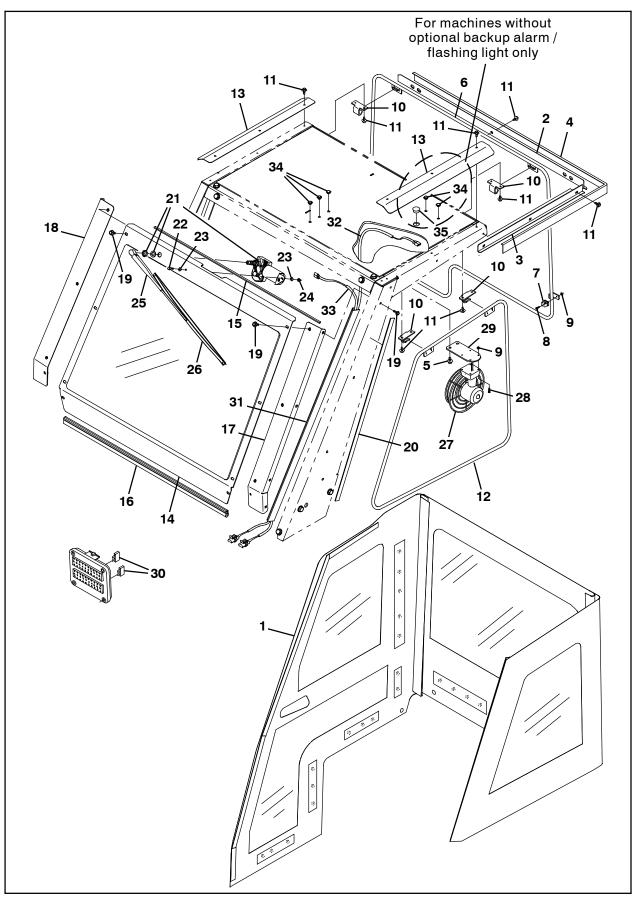


FIG. 6

NOTE: Cab portion of Cab Kit, Tennant Part Number 9006307. Refer to Fig. 6.

Ref.	Part No.	Description	Qty.
1	1049702	Panel Assy, Cab	1
2	1064550	Angle, Cab, Rear [Drip Ledge, S20]	1
3	1064551	Angle, Cab, Side [Drip Ledge, S20]	1
4	312584	Seal, Lip [76038ddur]	1
5	763045	Screw, Hex, M8 X 1.25 X 20, Fmg	2
6	1047690	Panel Wldt, Frame, Rear	1
7	1047592	Clip, Grip, Pipe, 0.50, Plstc	1
8	06927	Screw, Pan, Phl, M4 X 0.70 X 16, 4.8	1
9	02850	Nut, Hex, Lock, M4 X 0.70, NI	4
10	1047653	Bracket, Mtg, Panel, Cab	4
11	361339	Screw, Hex, M6 X 1.00 X 16, Fmg	18
12	1047456	Panel Wldt, Frame, Cab	1
13	1047706	Plate, Shield, Top	2
14	1048849	Pane Assy, Windshield	1
15	1055606	Seal, .19, .25w 39.2l, Adh	1
16	1031617	Seal, Afmkt, Bulb, Str, .75d F/07ga 08ft	1
17	1045567	Angle, Mtg, Wndw, Lh	1
18	1045569	Angle, Mtg, Wndw, Rh	1
19	1037346	Screw, Hex, M8 X 1.25 X 25, 9.8, SEMS	16
20	314012	Cs, Tape, Hook, 1.0w [Velcro]	9
21	1048222	Motor Assy, Ele, Wiper, 12vdc 85deg	1
22	09252	Screw, Hex, M5 X 0.80 X 20, 8.8	1
23	19066	Washer, Flat, 10	2
24	06549	Nut, Hex, Lock, M5 X 0.80, NI	1
25	1048640	Arm, Wiper, Windshield 16.0l	1
26	1048639	Blade, Wiper, Windshield, 22.0l	1
27	55041	Fan, Defroster, 12vdc, 07.3d	1
28	09228	Screw, Hex, M4 X 0.70 X 20, 8.8	3
29	1049781	Bracket, Mtg, Fan	1
30	1049734	Fuse, Blade, 005a, 32vdc [Mini]	2
31	55034	Duct, Vyl, 0.74 X 1.50 .75d Max 48.0l	1
32	1050162	Harness, Fan, Ic [S20]	1
33	1048522	Harness, Wiper, Windshield, IC [S20]	1
34	361346	Plug, Hole, Rnd, 0.38h .3l, Plstc	5
35	1053385	Plug, Hole, Rnd, 1.00h .1425, Blk Nyl	1
36	1044075	Panel Wldt, Top, OHG	1
37	1049937	Insulation, Acstc	2
38	1049938	Insulation, Acstc	1
39	55272	Terminal, Bullet, Mal, .157D, 12GA	2

# INSTALLATION: Install Door and Cab Panel Assembly onto the Machine

NOTE: Refer to both of the previous Bills of Material and the Figure (Fig.) referenced in the step for locations and nomenclature for parts assembled.

- 1. Install the rear frame panel weldment (6) and cab frame panel weldment (12) into the cab panel assembly (1). (Fig. 6)
- 2. Install the door assembly into the cab panel assembly (1). (Fig. 1 / Fig. 6)
- Install the cab panel assembly (1) onto the machine. Hook the rear frame panel weldment (6) and cab frame panel weldment (12) onto the cab panel mounting brackets (10) installed onto the overhead guard. (Fig. 6)
- 4. Pull the cab panel assembly (1) snugly onto the overhead guard and drill 3/32" (2.40 mm) holes through the existing snap holes in the cab panel assembly and into the rear shroud.
- 5. Install the snaps onto the cab panel assembly (1) and the rear shroud.
- 6. Snap the cab panel assembly (1) onto the rear shroud.
- Use two M8 hex screws (17) and two flat washers (9) to install the door mounting angle (16) onto the right overhead guard channel. Do not completely tighten the hardware. The hardware is tightened during later adjustment. (Fig. 1)
- Install the hinge support plate (22) onto the door assembly, close the cab panel assembly (1) door, and align the door with the rest of the cab panel assembly. (Fig. 1)
- Mark the locations of the two holes in the hinge support plate (22) onto the rear shroud. (Fig. 1)

- Drill two 1/4" (6.50 mm) holes through the outer and inner walls of the rear shroud. (Fig. 1)
- Use a 1" (25 mm) hole saw to cut larger holes into the inner wall of the rear shroud. <u>Do Not</u> cut into the outer wall of the rear shroud.
- Use a 3/8" (9.50 mm) drill bit to expand the 1/4" (6.50 mm) holes already drilled into the outer wall of the rear shroud.
- Use two M8 hex screws (19), two flat washers (20), and two M8 hex nuts to install the hinge support plate (22) and door mounting bracket (18) onto the machine. (Fig. 1)
- 14. Tighten all loose hardware to fully secure the overhead guard / cab panel assembly / door assembly to the machine.
- 15. Test the door to ensure it closes securely. Make any necessary adjustments.
- 16. Start the machine and test the windshield wipers and defroster fan to ensure they function properly.

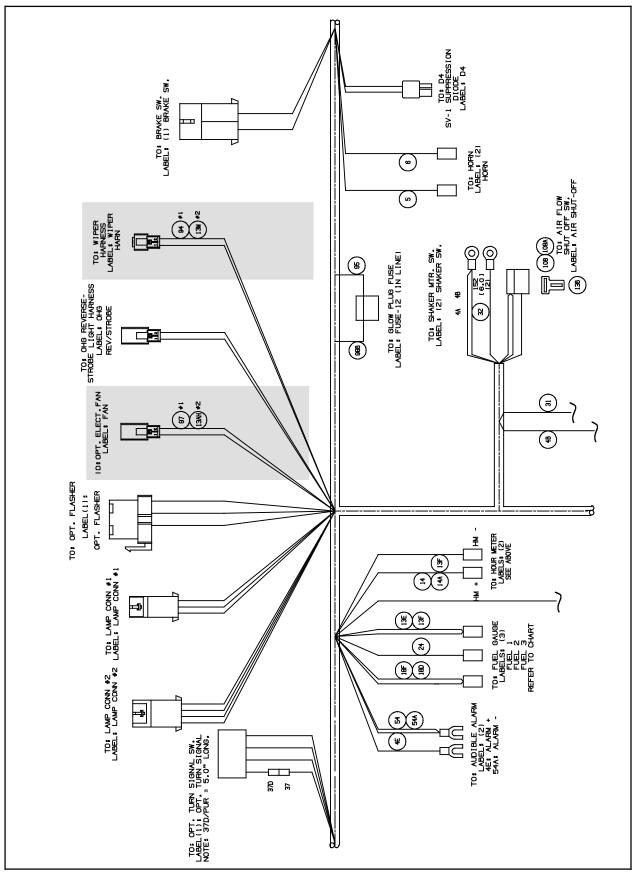


FIG. 7

		Tennant		
	Ref.	Part No.	Description	Qty.
$\nabla$		9006307	Cab Kit, Soft, W/O OHG, IC, CI [S20]	1
	1	1048222	Motor Assy, Ele, Wiper, 12VDC 85DEG	1
	2	09252	Screw, Hex, M5 X 0.80 X 20, 8.8	1
	3	19066	Washer, Flat, 0.25B 0.56D .05, PL, 10	2
	4	06549	Nut, Hex, Lock, M5 X 0.80, NL	1
	5	1048640	Arm, Wiper, Windshield 16.0L	1
	6	1048639	Blade, Wiper, Windshield, 22.0L	1
	7	55041	Fan, Defroster, 12VDC, 07.3D	1
	8	09228	Screw, Hex, M4 X 0.70 X 20, 8.8	3
	9	02850	Nut, Hex, Lock, M4 X 0.70, NL	3
	10	1049781	Bracket, Mtg, Fan	1
	11	763045	Screw, Hex, M8 X 1.25 X 20, Fmg	2
	12	1048522	Harness, Wiper, Windshield, IC [S20]	1
	13	1049734	Fuse, Blade, 005A, 32VDC [Mini]	2
	14	1050162	Harness, Fan, IC [S20]	1
	15	55272	Terminal, Bullet, Mal, .157D, 12GA	2
	16	9006018	Parts Phantom, Cab , Soft-Sided [S20]	1

### Bill Of Materials For Cab Kit, Soft, W/O OHG, IC, CI [S20] - 9006307

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