



INSTRUCTION BULLETIN

No. 9007158
Machine: S20
Published: 03-2010
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 9007153**

SYNOPSIS:

This kit contains the parts needed to install the hopper support kit onto S20 sweepers.
Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 1 hour)

PREPARATION:

1. Park the machine on a clean level surface, raise the hopper, engage the hopper support bar, turn off the machine, remove the key, and set the parking brake.



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

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.

*NOTE: **Do Not** discard components removed from the machine to install the hopper support kit unless instructed to do so. Most parts must be reinstalled after the hopper support kit is installed onto the machine.*

INSTALLATION:

1. Disconnect one of the tension springs from the hopper back panel. Refer to Fig. 1.

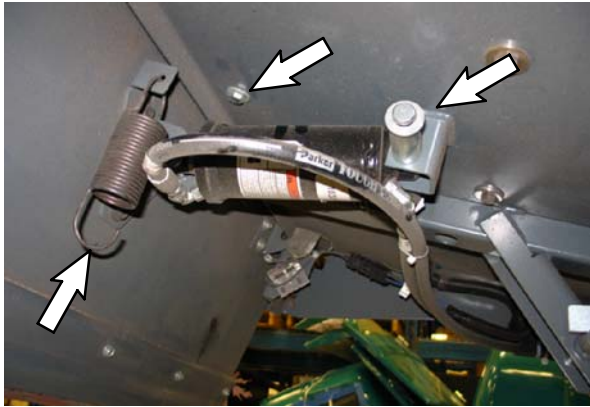


FIG. 1

2. Remove the M8 SEMS screw from the hopper. Discard the removed nut. Refer to Fig. 1.
3. Install a hex screw (6) and a flat washer (7) where the M8 SEMS nut was previously installed on the hopper. Refer to Fig. 2.



FIG. 2

4. Reconnect the tension spring to the hopper back panel. Refer to Fig. 1.
5. Disengage the hopper support bar and push the hopper raise / lower lever forward to lower the hopper. The engine does not need to be started to lower the hopper.
6. Open the hopper cover and lock the cover completely open.

7. Disconnect the vacuum hoses and the main wire harness from the hopper assembly. Refer to Fig. 3.

NOTE: Label the vacuum hoses with locations before disconnecting them from the hopper filter cover / cyclone assembly cover. The hoses must be reconnected to the proper locations for the machine to function properly

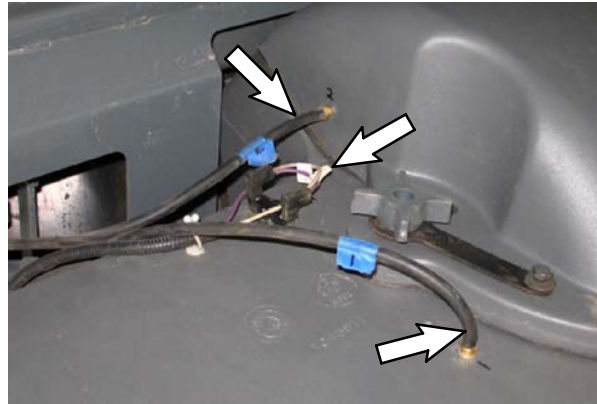


FIG. 3

8. Remove the filter cover from the hopper assembly. Set the filter cover aside.
9. Remove the filter from the hopper assembly. Set the filter aside.
10. Remove the cyclone cover from the cyclone assembly.
11. Remove the clamps holding the main harness to the cyclone assembly and disconnect the main harness from the cyclone assembly. Set the removed parts aside. Refer to Fig. 4.

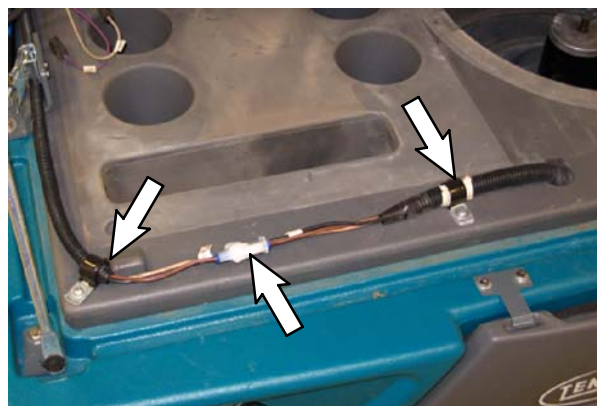


FIG. 4

12. Remove the hardware securing the cyclone assembly inside the hopper and remove the cyclone assembly from the hopper. Set the removed parts aside. Refer to Fig. 5.

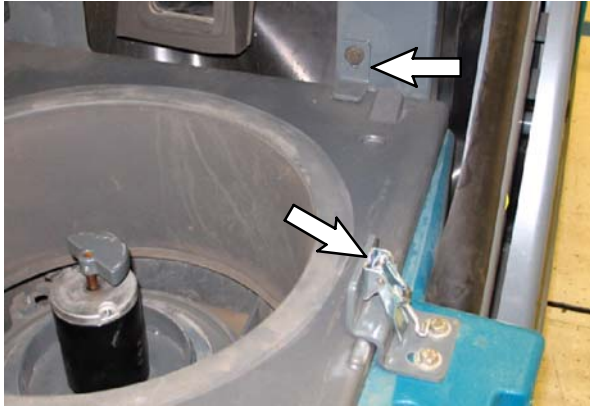


FIG. 5

13. Cut all cable ties securing the harness inside the hopper.
14. Orient the hopper back lip support (5) so the bent portion of the support is against the inner lip of the hopper when the support is installed in the following step. Refer to Fig. 6.



FIG. 6

15. Place the hopper back lip support (5) up against the inner lip of the hopper and pry the hopper back lip support (5) up against the back lip. Use another flat washer (7), a hex nut (8), and the previously installed hex screw (6) to secure the support in the hopper. Refer to Fig. 7.



FIG. 7

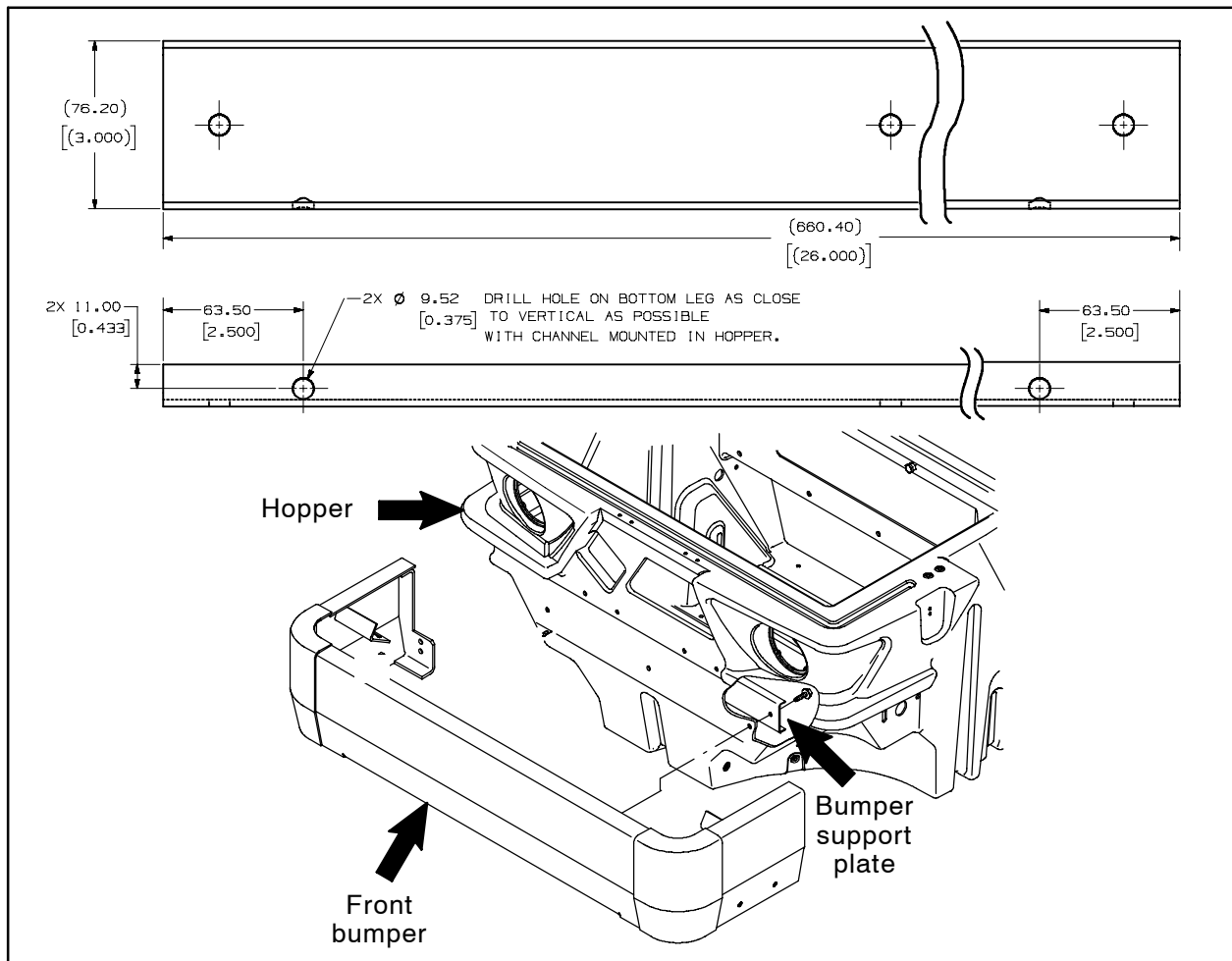


FIG. 8

16. Drill two 0.375" (9.52 mm) holes into the bumper support plate located inside and to the front of the hopper. Refer to Fig. 8.

NOTE: Be sure the wire harness is always positioned between the inner surface of the hopper and the hopper lip supports before installing the lip supports.

NOTE: Be sure to orient the hopper front lip supports (4) so the bent portion of the supports is against the inner lip of the hopper when the supports are installed in the following step.

17. Position the tops of both hopper front lip supports (4) against the front lip of the hopper and align the tabs on the bottom of each support with the holes drilled into the bumper support plate and pry the supports onto the bumper support plate. Refer to Fig. 9.

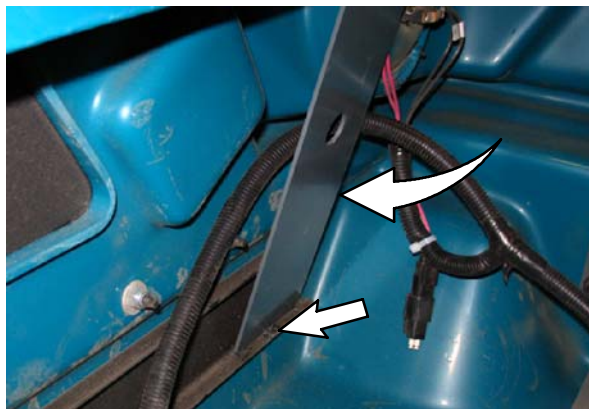


FIG. 9

*NOTE: **Do Not** pinch the harness or wires between the hopper front lip supports (4) and the front lip of the hopper or the bumper support plate.*

18. Drill a 0.375" (9.52 mm) hole into each pivot plate. Refer to Fig. 11.
19. Install a hex screw (9) and nut (10) into each the hole drilled in each pivot weldment. Refer to Fig. 10 and Fig. 11.
20. Use two hex screws (3) to connect each hopper top lip support (1) onto a hopper bottom lip support (2). Do not completely tighten the hex screws.

21. Place a hopper lip support assembly from the previous step onto the pivot weldment on either side of the hopper. Position the bottom of the hopper bottom lip support (2) between the hex screw (9) installed in the previous step and the pivot weldment plate. Refer to Fig. 10.

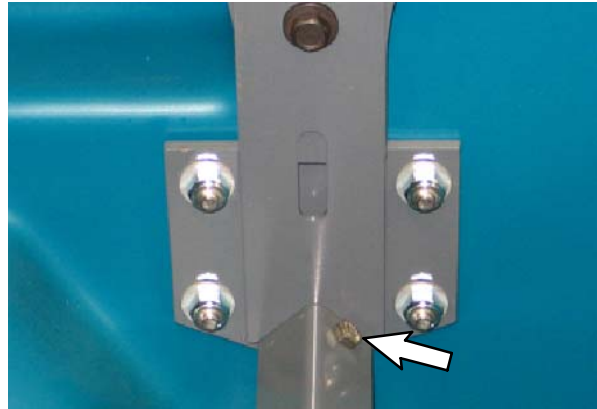


FIG. 10

Note: The 0.375" (9.52 mm) hole can be drilled on either flat surface of the pivot plate

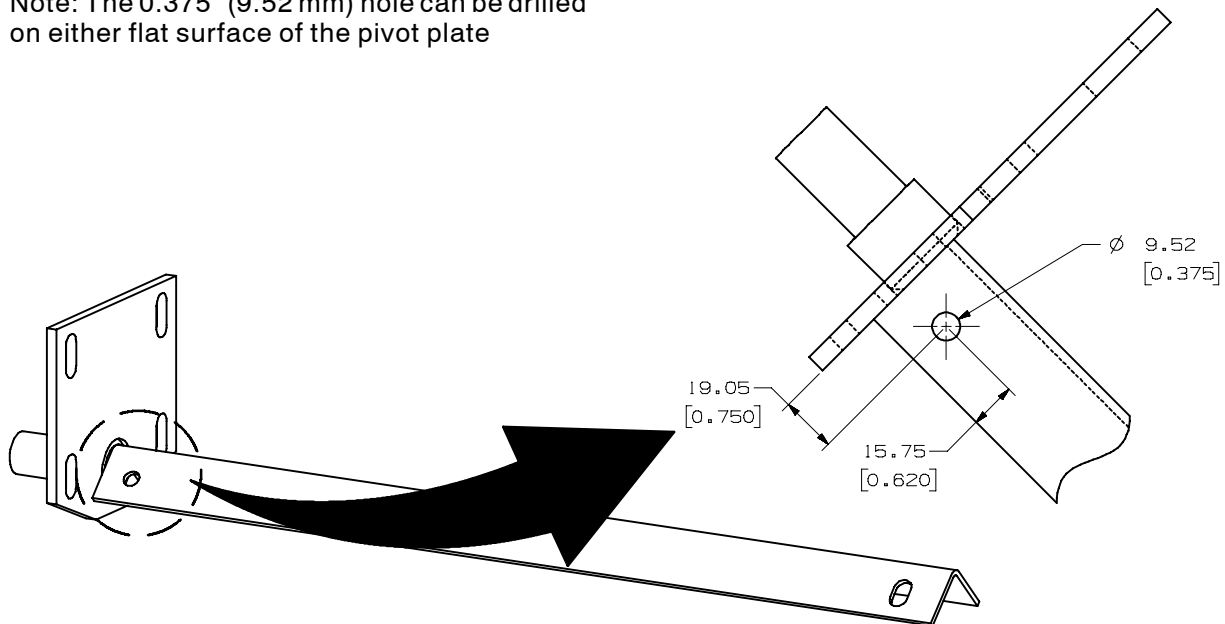


FIG. 11

22. Pry the hopper top lip support (1) up against the hopper lip and tighten the hex screws (3) to secure hopper top lip support firmly against the hopper lip. Refer to Fig. 12.



FIG. 12

23. Install the remaining hopper lip support assembly onto the other side of the hopper.

24. Use cable ties to secure the wire harness inside the hopper. Refer to Fig. 13.

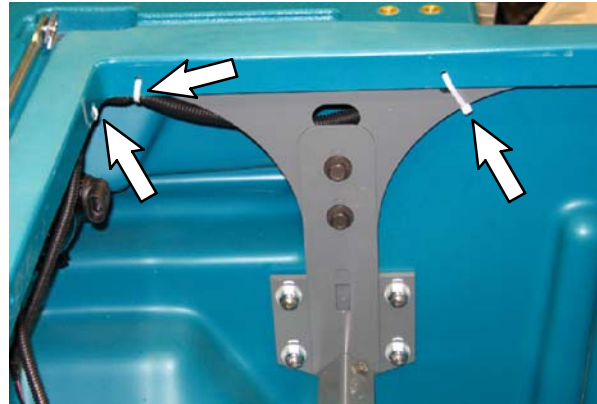


FIG. 13

25. Reinstall all previously removed parts onto the hopper. Reconnect all hoses and harness connections.
26. Reconnect the battery cables to the batteries.

Bill of Materials for Hopper Kit, Repair - 9007153

Ref.	Tennant Part No.	Description	Qty.
▽	9005173	Hopper Kit, Repair	1
▲	1	1059398 Support, Hppr, Lip, 11GA, Top	2
▲	2	1059399 Support, Hppr, Lip, 11GA, Bottom	2
▲	3	1037358 Screw, Hex, M10 X 1.50 X 35, 9.8, SEMS	4
▲	4	1059119 Support, Hppr, Lip, Front	2
▲	5	1059158 Support, Hppr, Lip, Back	1
▲	6	04375 Screw, Hex, M8 X 1.25 X 40, 8.8, FL	1
▲	7	32491 Washer, Flat, 0.31, STD	2
▲	8	08709 Nut, Hex, Lock, M8 X 1.25, NL	1
▲	9	15675 Screw, Hex, M8 X 1.25 X 16, SS	2
▲	10	07791 Nut, Hex, Flng, M8 X 1.25	2

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