

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.

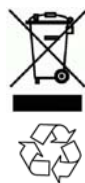
Installation instructions for **kit number 9008015**

SYNOPSIS:

This kit contains the parts needed to install a cylindrical scrub head on a T16 scrubber.
Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 2.5 hours)



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. Remove the brushes from the scrub head. Refer to the *INSTALLATION* section of the *OPERATORS MANUAL* for instruction how to remove the brushes for the scrub head.
2. Park the machine on a clean level surface, completely lower the scrub head, turn off the machine, and remove the key.

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

3. Disconnect the battery cables from the batteries.

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

*NOTE: Complete Step 4 through Step 8 only if removing an existing scrub head from the machine. Proceed to *INSTALLATION* section if the machine does not have a scrub head installed.*

4. Disconnect all solution hoses and the main wire harness from the existing scrub head.
5. Disconnect both scrub head lift arms from the scrub head. Set all mounting hardware (cotter pins, clevis pins, and washers) aside. (Fig. 1)

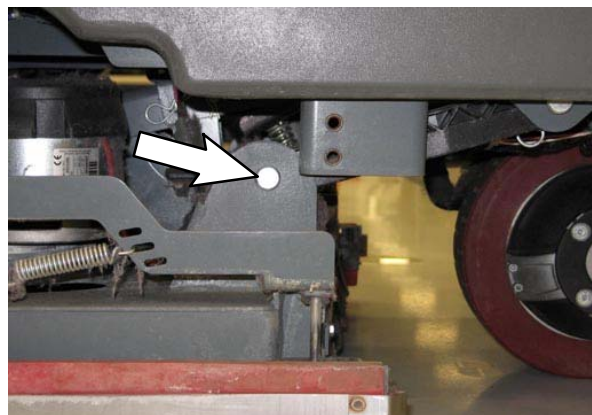


FIG. 1

6. Disconnect the actuator from the scrub head. Set mounting hardware aside. (Fig. 2)

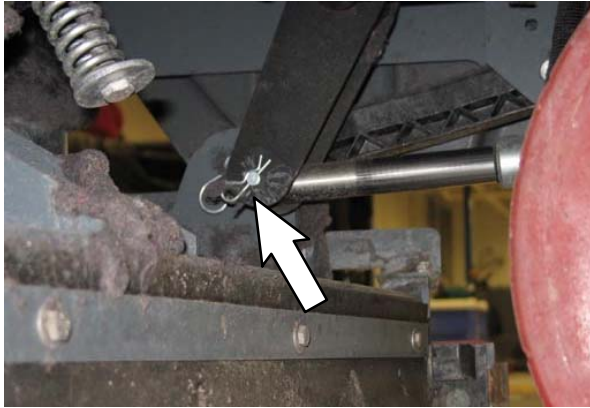


FIG. 2

7. Disconnect the rear head lift channel and front head lift bracket from the scrub head. Set mounting hardware aside. (Fig. 3)

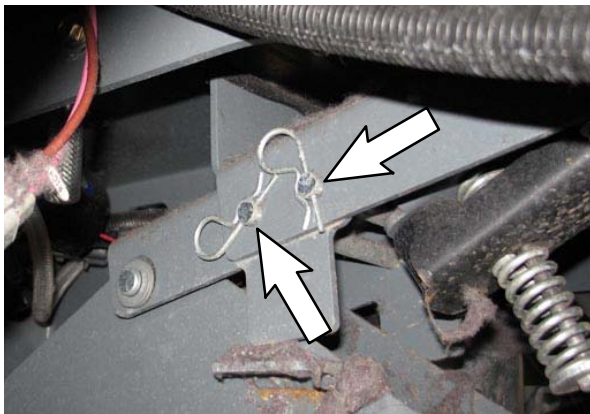


FIG. 3

8. Pull the scrub head from under the machine.

INSTALLATION:

1. Slide the new scrub head (1) underneath the machine.
2. Connect the main wire harness to both brush motors. (Fig. 4 / Fig. 5)
3. Connect the solution hoses to the scrub head.
4. Connect the rear head lift channel and front head lift bracket to the scrub head.
5. Connect the actuator to the scrub head.
6. Connect both scrub head lift arms to the scrub head.
7. Reconnect the battery cables to the batteries.
8. Start the machine and raise the scrub head.
9. Install both brushes into the scrub head. Refer to the MAINTENANCE section of the Operators Manual for instructions how to install brushes.

RECONFIGURE MACHINE:

1. Press and hold the *Configuration mode button* while turning on the key to the on position. Continue holding the *Configuration mode button* until CONFIG MODE appears on the LCD display. Release the configuration mode button. (Fig. 6)



FIG. 6

2. Press the *Brush pressure button* to enter the machine configuration mode. (Fig. 7)

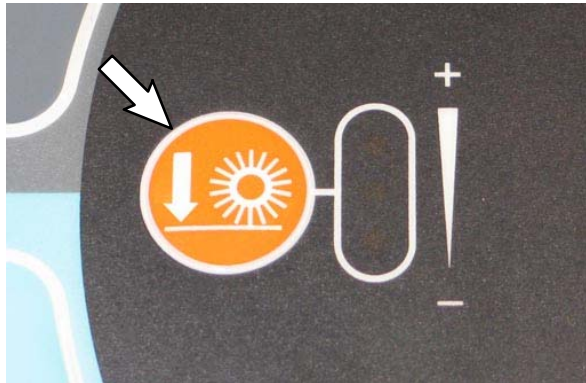


FIG. 7

C1: Disk/Cyl should appear in the LCD display. (Fig. 8)



FIG. 8

NOTE: If Disk appears below C1: Disk/Cyl proceed to the following step to reconfigure the machine for the new scrub head. If Cyl appears below C1: Disk/Cyl no changes to the machine configuration are necessary. Proceed to Step 8 to exit the configuration mode.

3. Press the *Brush pressure button* to select the mode setting. (Fig. 9)



FIG. 9

The < symbol will appear in front of the setting. (Fig. 10)



FIG. 10

- Use the *Contrast control button* to scroll down the cylindrical brush setting. (Fig. 11)



FIG. 11

- Press the *Brush pressure button* to select and save the setting. (Fig. 12)

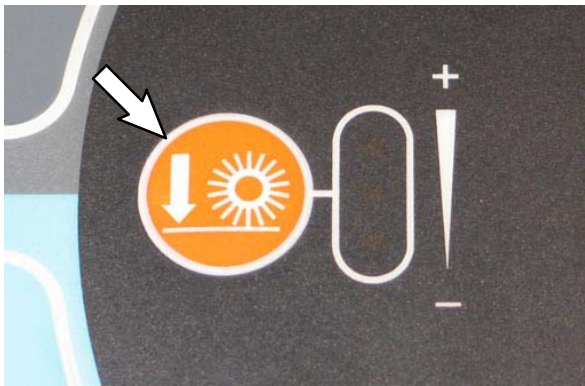


FIG. 12

The < symbol longer appears in front of the setting after it is saved. (Fig. 13)



FIG. 13

- Turn the key switch to the off position to exit the configuration mode when finished changing the scrub head setting.

CHECKING CYLINDRICAL SCRUB BRUSH PATTERN

- Apply chalk, or a similar marking material, to a smooth and level section of floor.

NOTE: If chalk or other material is not available, allow the brush to spin on the floor for two minutes. A polish mark will remain on the floor.

- Park the machine several feet behind the chalked area and shut off the machine.
- Press and hold the *configuration mode button* while turning on the key to the on position. Continue holding the *Configuration mode button* until CONFIG MODE appears on the LCD display. Release the *Configuration mode button*. (Fig. 14)



FIG. 14

4. Press the *Brush pressure button* to enter the machine configuration mode. (Fig. 15)



FIG. 15

C1: Disk/Cyl will appear in the LCD display. (Fig. 16)



FIG. 16

5. Press the *Contrast control button* once to scroll to **C16: Dwn Pres Tst Disabled** (Down Pressure Test Disabled). (Fig. 17)



FIG. 17

6. Press the *Brush pressure button* to enter the down pressure test selection mode. (Fig. 18)



FIG. 18

C16: Dwn Pres Tst <Disabled (Down Pressure Test Disabled) should appear on the LCD display. The < symbol will appear in front of **Disabled**. (Fig. 19)



FIG. 19

7. Press the *Contrast control button* once to select **C16:Dwn Pres Tst <Enabled** (Down Pressure Test Enabled). The < symbol will appear in front of **Enabled**. (Fig. 20)



FIG. 20

- Press the the *Brush pressure button* to enable the brush pressure test. (Fig. 21)



FIG. 21

C16: Dwn Pres Tst Enabled should appear on the LCD display. The < symbol will no longer appear in front of **Enabled**. (Fig. 22)



FIG. 22

- Turn the key to the off position to save the Down Pressure Test Enabled mode and then turn the key back to the on position to continue with the procedure.

NOTE: Do Not turn off the machine second time after the Down Pressure Test Enabled mode has been saved. The entire procedure to get the machine into the Down Pressure Test Mode will need to be repeated if the machine is turned off a second time.

- Press the *1-STEP button* and then immediately press one of the *Solution on / off buttons* to shut off the solution supply and prevent the brushes from getting wet. (Fig. 23 / Fig. 24)



FIG. 23



FIG. 24

- Observe the solution flow indicator lights. None of the indicator lights should be lit. (Fig. 25)

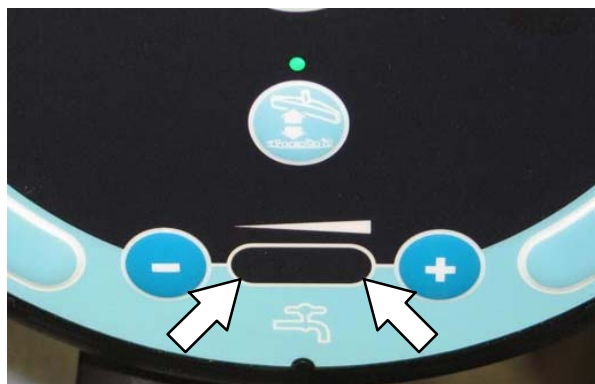


FIG. 25

12. Press the *1-STEP* button to raise the scrub head. (Fig. 26)



FIG. 26

13. Position the machine over the chalked area.
14. Press the *1-STEP* button to lower the scrub head and allow the brushes to operate for 15 to 20 seconds. Keep the scrub head in one spot in the chalked area.

NOTE: If necessary, press the Brush pressure button to set the brush pressure to the medium setting. (Fig. 27)



FIG. 27

15. Press the *1-STEP* button to raise the scrub head and drive the machine away from the chalked area.

16. Observe the brush patterns. If the brush pattern is the same width across the entire length of each brush and both brushes are the same width, no adjustment is necessary. (Fig. 28)

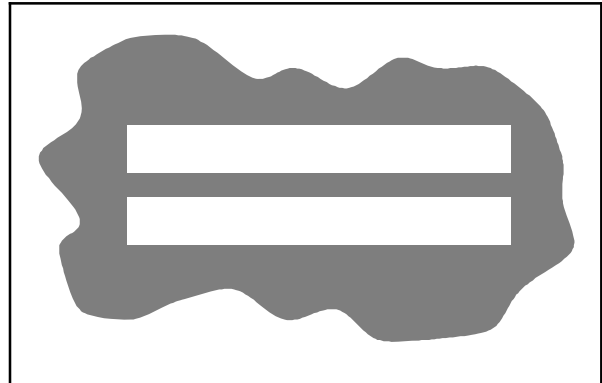


FIG. 28

17. If the brush patterns are tapered, see *ADJUSTING THE CYLINDRICAL BRUSH TAPER*. (Fig. 29)

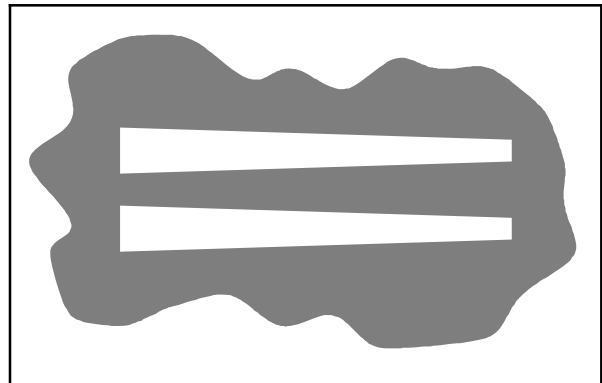


FIG. 29

18. Both brush patterns should be 25 to 38 mm (1 to 1.5 in) wide and the same width. If the width of the brushes is not the same, see *ADJUSTING THE CYLINDRICAL BRUSH WIDTH*. (Fig. 30)

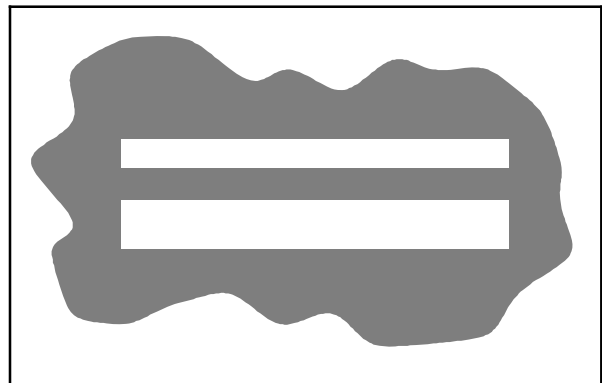


FIG. 30

19. Turn the key switch to the off position to exit brush down pressure test mode.

ADJUSTING CYLINDRICAL BRUSH TAPER

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

1. Open the side squeegee support door.
2. Loosen the mounting screw on the idler door. (Fig. 31)

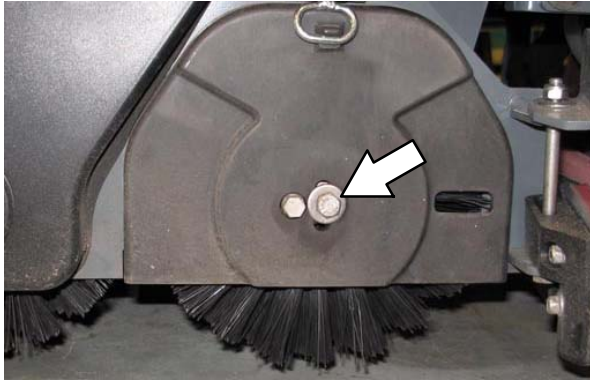


FIG. 31

3. Raise or lower the end of the brush with the smaller brush adjustment screw to straighten the brush pattern. (Fig. 32)

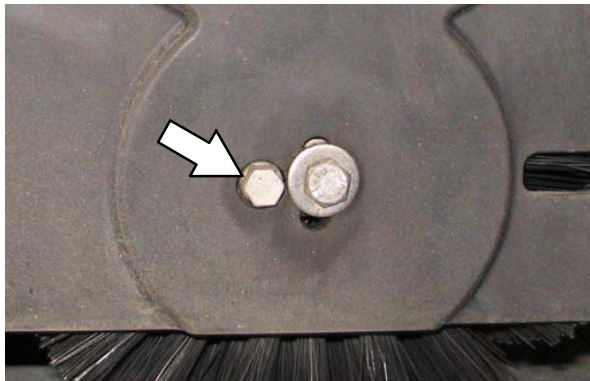


FIG. 32

4. Retighten the mounting screw on the idler door.
5. Close the side squeegee support door.
6. Recheck the pattern. Readjust if necessary.
7. Repeat procedure for the other brush located on other side of the scrub head.

ADJUSTING CYLINDRICAL BRUSH WIDTH

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

1. Start the machine, completely lower the scrub head, and turn off the machine.
2. Open the side squeegee support door.
3. Remove the debris trough
4. Loosen the lock nut located behind the bracket. (Fig. 33)

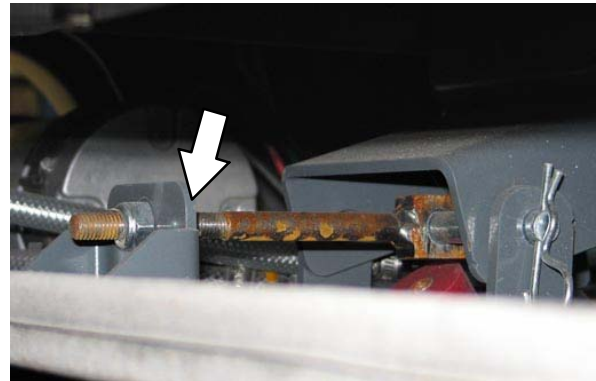


FIG. 33

5. Turn the adjustment nut to adjust the cylindrical brush width. Lengthen the scrub head link to increase the rear brush pattern width. Shorten the scrub head link to increase the front brush pattern. (Fig. 34)

NOTE: Two full turns of the scrub head link adjustment bolt change the brush pattern approximately 25 mm (1 in).

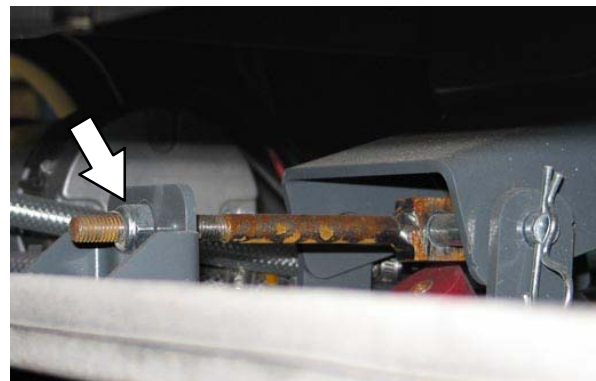


FIG. 34

6. Retighten the lock nut located against the bracket.
7. Recheck the pattern. Readjust if necessary.

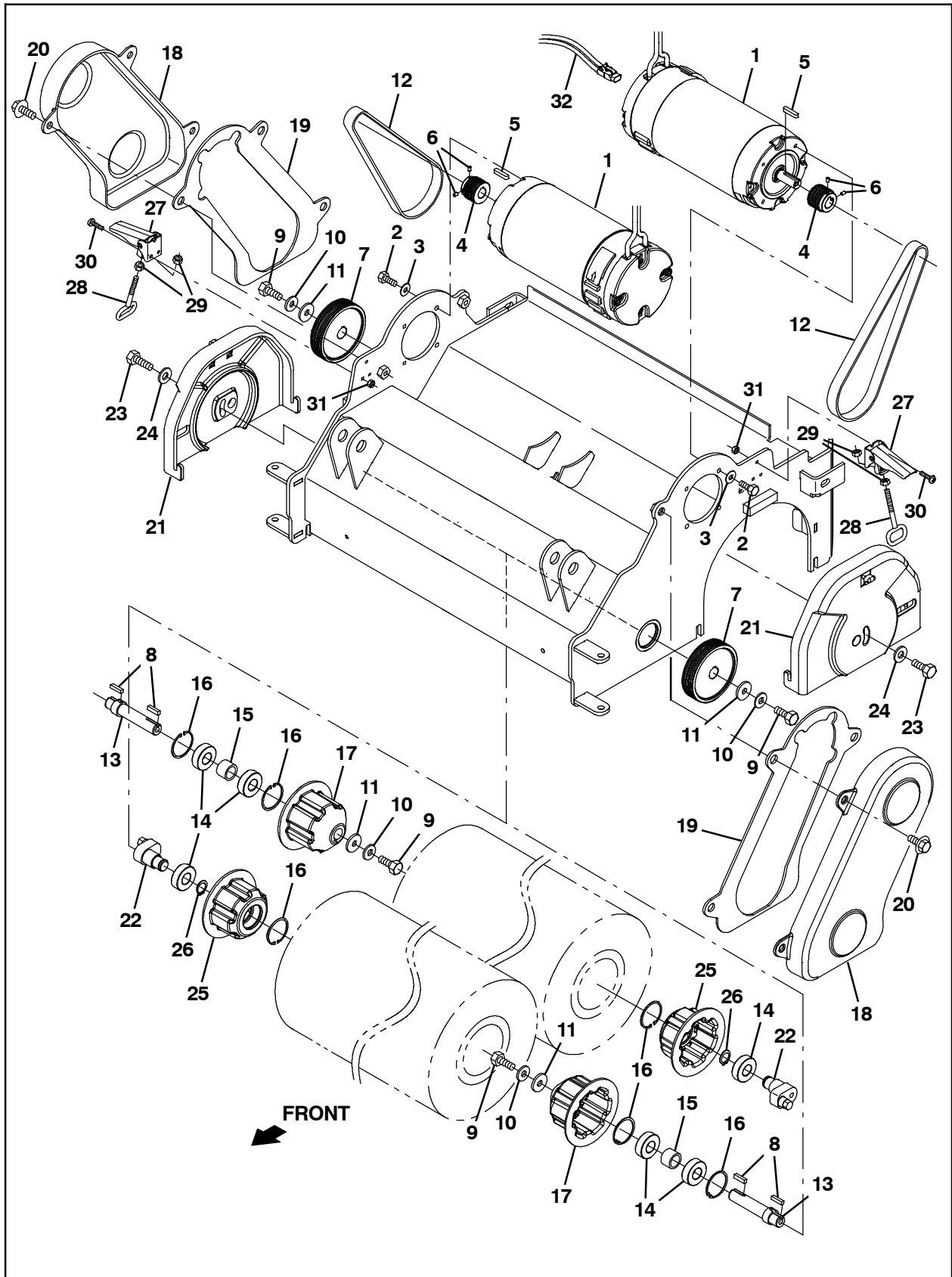


FIG. 35

Bill Of Materials For Head Kit, Cylrc1, 900MM, DI [T16] - 9008015 (Fig. 35)

Ref.	Tennant- Part No.	Description	Qty.
1	1053342	Motor, Ele, 36vdc 1750rpm 1.00hp 22.0a	2
2	15678	Screw, Hex, M6 X 1.00 X 16, SS	8
3	01684	Washer, Flat, 0.27b 0.69d .05, SS	8
4	1054581	Sheave, 07grv, 1.22pd 0.55b [PJ]	2
5	1014328	Key, Sq, 05mm X 05mm, 25mml	2
6	222818	Screw, Set, Soc, 08- 32 X 0.25, NI	4
7	1054591	Sheave, 07grv, 03.3pd 0.63b [PJ]	2
8	00911	Key, Sq, 0.19 X 0.19, 0.75l	4
9	09740	Screw, Hex, M8 X 1.25 X 20, SS	4
10	41186	Washer, Flat, Belleville, .31	4
11	1017218	Washer, Flat, 0.32b 1.00d .12, SS	4
12	9007853	Belt Kit, W/Tool, Afrmkt [Qty 2]	2
13	1054633	Shaft, Drive	2
14	28010	Bearing, Ball, 0.62b 1.38d 0.43w	6
15	1055051	Spacer, Brg	2
16	01513	Ring, Retaining, Int,	6
17	1056155	Plug, Drive, Brush	2
18	1054844	Cover, Belt	2
19	1054843	Gasket, Cover, Belt	2
20	1020341	Screw, Hex, M8 X 1.25 X 20, SS, SEMS	6
21	1054849	Cover, Idler	2
22	1057083	Cam, Adj, Brush [15.9WB]	2
23	09010	Screw, Hex, M8 X 1.25 X 25, SS	2
24	01685	Washer, Flat, 0.38b 0.88d .08, SS	2
25	1057124	Plug, Idler, Brush	2
26	18136	Ring, Retaining, Ext, 0.62d, Basic	2
27	386257	Latch	2
28	386274	Hook Wldt, Latch	2
29	50335	Nut, Hex, Std, M5 X 0.80, 8	4
30	24265	Screw, Pan, Phl, M4 X 0.70 X 16, SS	6
31	33932	Nut, Hex, Lock, M4 X 0.70, NI, SS	6
32	1059170	Harness, Wire, Adapter	1

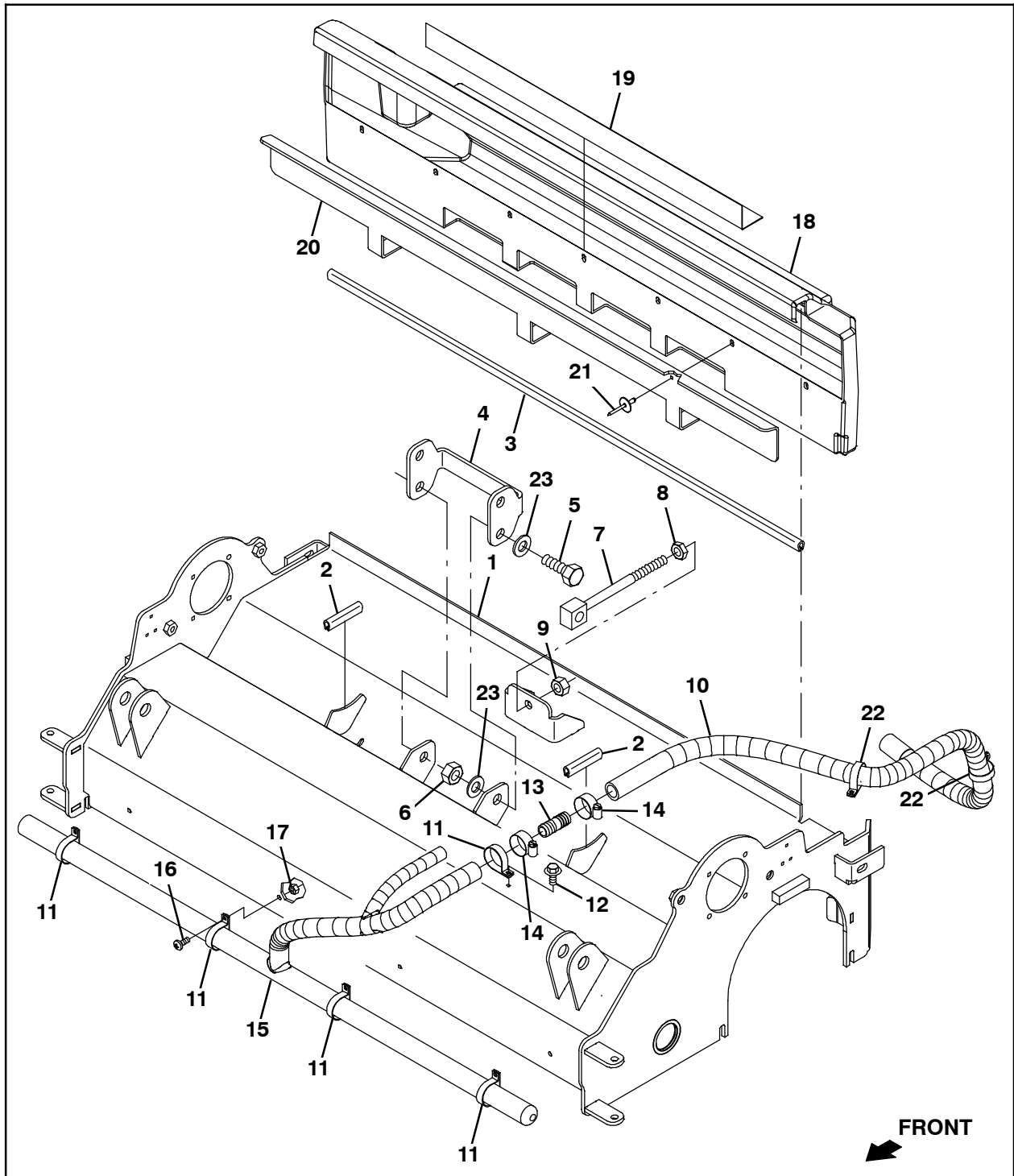


FIG. 36

Bill Of Materials For Head Kit, Cylrc1, 900MM, DI [T16] - 9008015 (Fig. 36)

Ref.	Tennant Part No.	Description	Qty.
1	1053743	Head Wldt, Scb, Cyl	1
2	1020168	Molding, Afmkt, Trim, Pvc, .08 .11, 01ft	2
3	1020174	Molding, Afmkt, Trim, Pvc, .08 .11, 03ft	1
4	1067768	Channel, Lift, Head, Cyl	2
5	09029	Screw, Hex, M12 X 1.75 X 40, SS	1
6	09741	Nut, Hex, Lock, M12 X 1.75, NI, SS	1
7	1053993	Bolt, Eye, M10 X 1.50 X 140mm, 13.00 Eye	1
8	41430	Nut, Hex, Lock, M10 X 1.5, NI	1
9	763064	Nut, Hex, Jam, M10 X 1.5, [Din439]	1
10	1015026	Hose, Afmkt, Pvc, Brd, 0.62id, 03ft, Clr	1
11	50544	Clamp, Cable, SS, 1.12d X 0.38w, 1hole	4
12	74455	Screw, Hex, M6 X 1.00 X 12, Fmg	3
13	365164	Fitting, Plstc, Str, Bm10/Bm10	1
14	63810	Clamp, Hose, Wormdrive, 0.56- 1.06d, .56w	2
15	1059700	Manifold, Bar, Spray, 33.7inch	1
16	09200	Screw, Pan, Phl, M5 X	4
17	09739	Nut, Hex, Lock, M5 X 0.80, NI, SS	4
18	9008665	Hopper, Debris, Afmkt [T16]	1
19	1062730	Angle, Stl, Perforated .03 1.4 1.4 26.0l	1
20	1055962	Lip, Tray, Debris	1
21	32548	Rivet, Blind, .188d X 0.45 X .62d, Alm	7
22	58366	Clamp, Cable, Stl, 1.25d X 1.00w, 1hole	2
23	32486	Washer, Flat, 0.50, SAE	4

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