



INSTRUCTION BULLETIN

No. 9021884
Machine: M20, T20,
M30
Published: 01-2024
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 9021860**

Kit installation must be performed by TennantTrue[®] service or an authorized service provider.

SYNOPSIS:

This kit contains the parts needed to replace the scrub head on M20/M30/T20 machines equipped with cylindrical scrub heads.

Please follow step-by-step instructions.

SPECIAL TOOLS/CONSIDERATIONS: NONE

(Estimated time to complete: 6- 7 hours)

When assembling/disassembling hydraulic components:

1. Thoroughly clean outside of hydraulic components **before** disconnecting hydraulic hoses or fittings, flush hoses and fittings with air, solvent, or hydraulic fluid, and cap disconnected hoses and 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, old machine components, and hazardous fluids in an environmentally safe manner according to local waste disposal regulations.



Always remember to recycle.

PREPARATION:

1. Start the machine, completely lower the scrub head, and turn off the machine.
2. Park the machine on a clean level surface, turn off the machine, remove the key, and set the parking brake.

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

INSTALLATION:

1. Disconnect the main return tube hydraulic hose and scrub valve hydraulic hose from the main scrub head hydraulic lines. (Fig. 1)

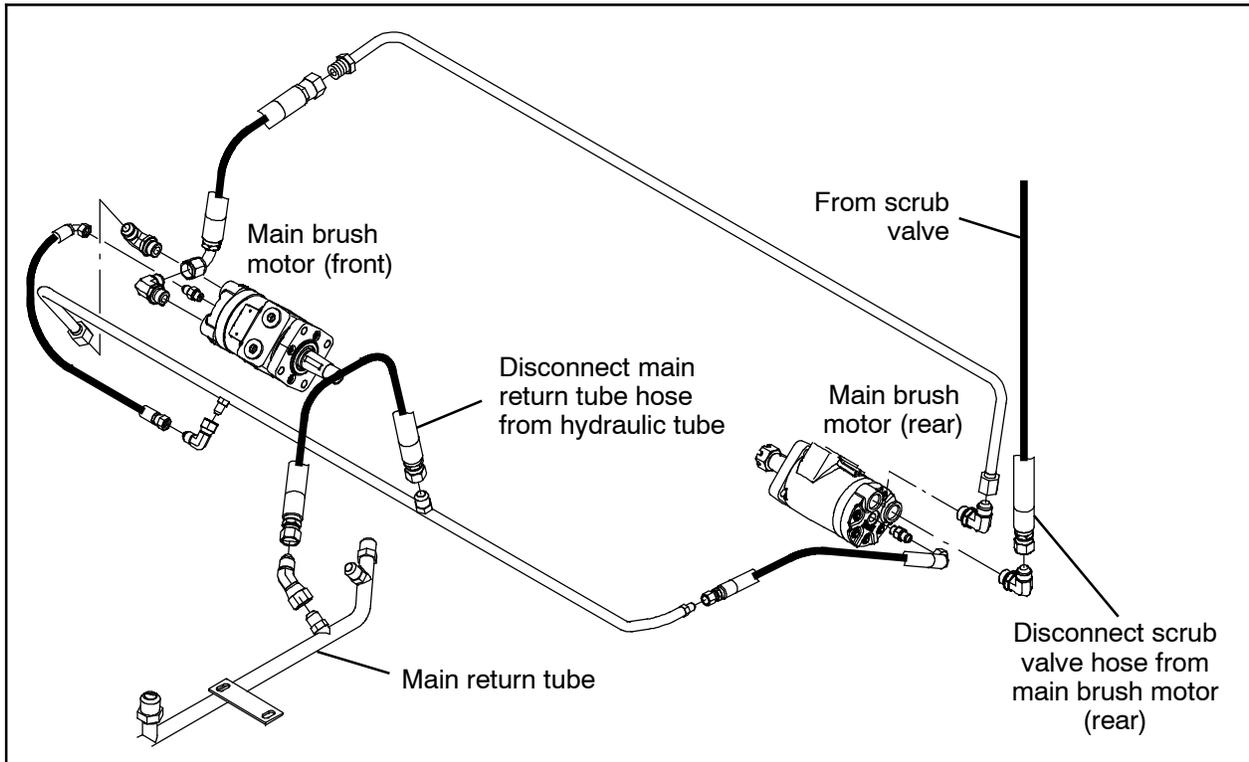


FIG. 1

2. Disconnect the water supply hose from the main scrub head. Set the hose clamp aside. (Fig. 2)

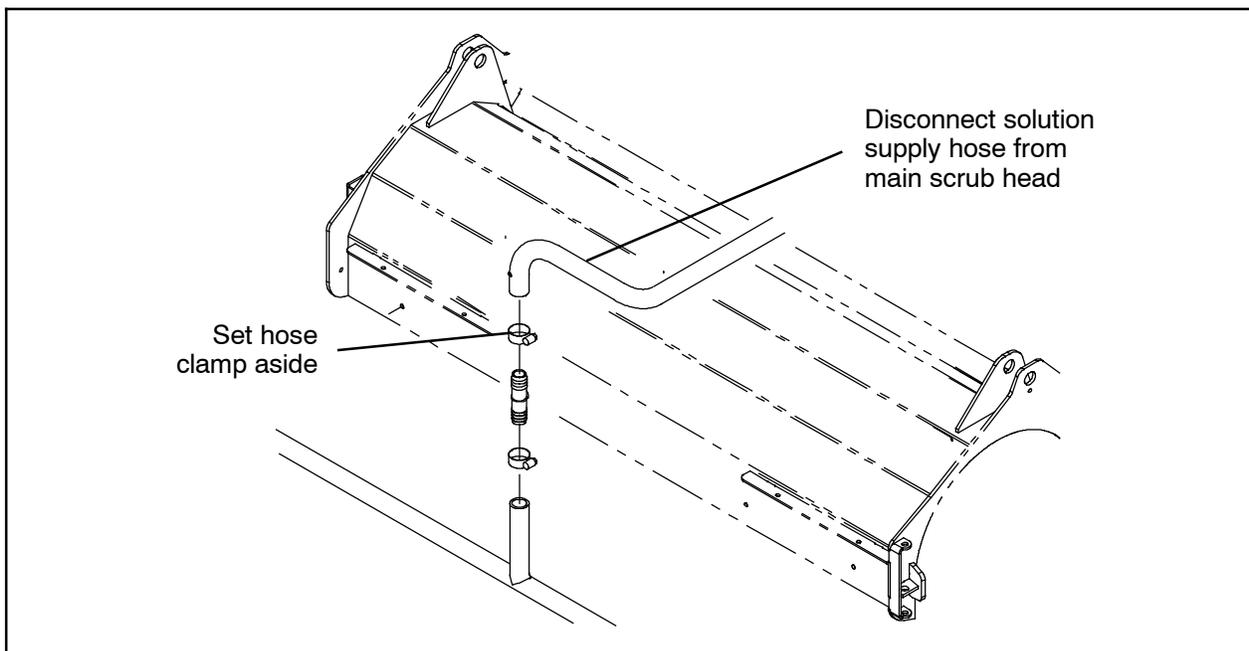


FIG. 2

3. Disconnect both drag links from the main scrub head. Set the hex screws aside. (Fig. 3)
4. Disconnect the torque tube from the main scrub head. Set cotter pins, clevis pins, and hex screws aside. (Fig. 3)
5. Disconnect the torque tube from the main scrub head. Set cotter pins, clevis pins, and hex screws aside. (Fig. 3)
6. Disconnect the extension spring from the torque tube and bracket. Discard the extension spring. (Fig. 3)

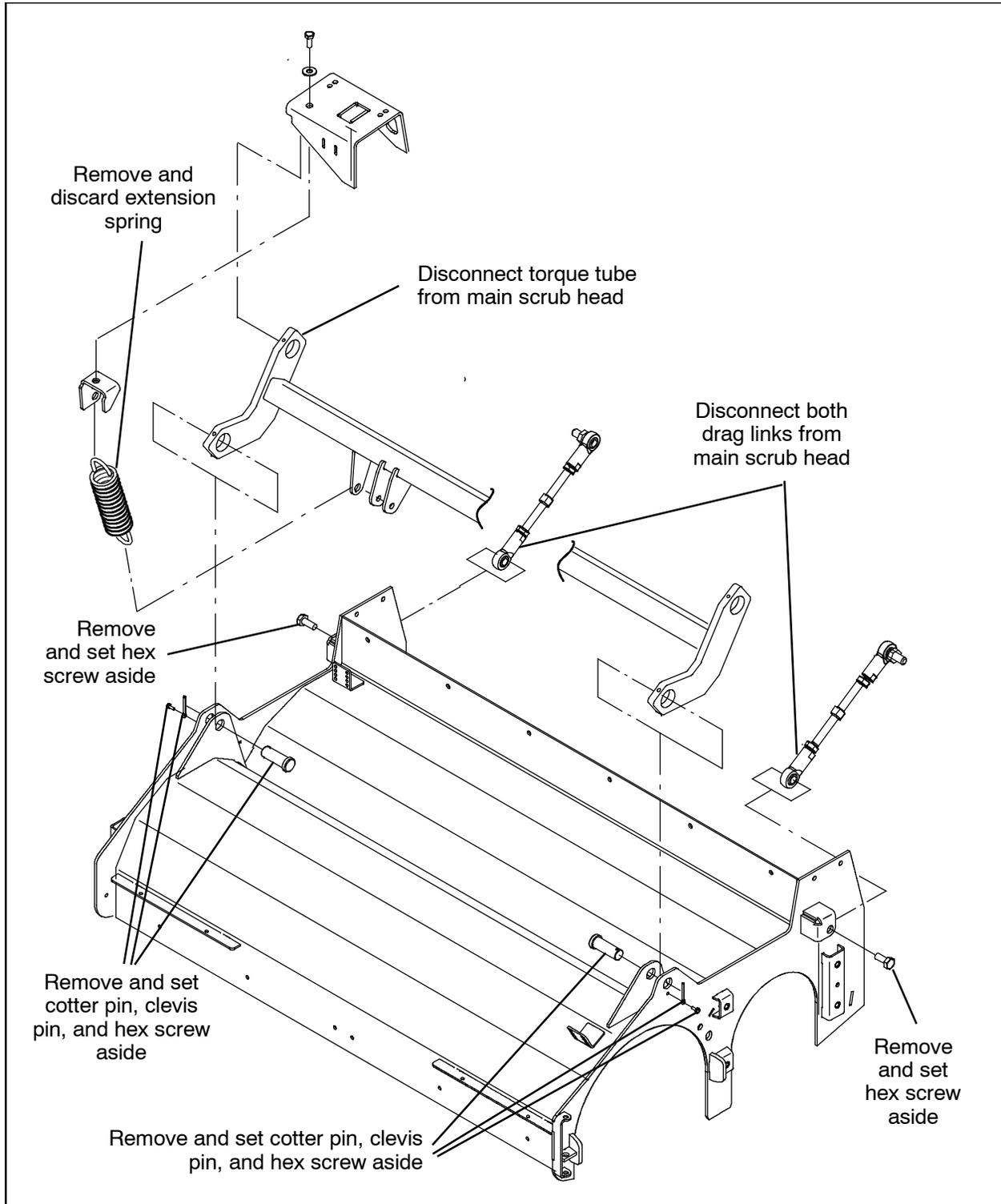


FIG. 3

7. Chock the back of the rear tires and jack up the front end of the machine. Refer to *MACHINE JACKING* in the *MAINTENANCE* section of the Operators Manual for additional instructions and safety information.
8. Position two jack stands at the designated locations under the front of the machine and lower the machine onto the jack stands.

FOR SAFETY: When servicing machine, block machine tires before jacking machine up. Use a hoist or jack that will support the weight of the machine. Jack machine up at designated locations only. Support machine with jack stands.

9. Pull the scrub head from under the machine.

10. Remove the brushes from the scrub head. Set both brushes and both brush idler plates aside. Refer to *REPLACING OR ROTATING THE MAIN BRUSHES* in the *MAINTENANCE* section of the Operators Manual for instructions how to remove the brushes from the scrub head.

11. Disconnect the metal hydraulic tubes from both hydraulic drive motors. (Fig. 4)

12. Remove the four M8 hex screws and flat washers securing the hydraulic drive motor to the main scrub head and carefully set the hydraulic drive motor on the floor, away from the main scrub head. Discard the two M8 hex screws and flat washers. Set the two M8 hex screws and flat washers aside. (Fig. 4)

NOTE: Repeat Step 12 to remove the other hydraulic drive motor from the main scrub head.

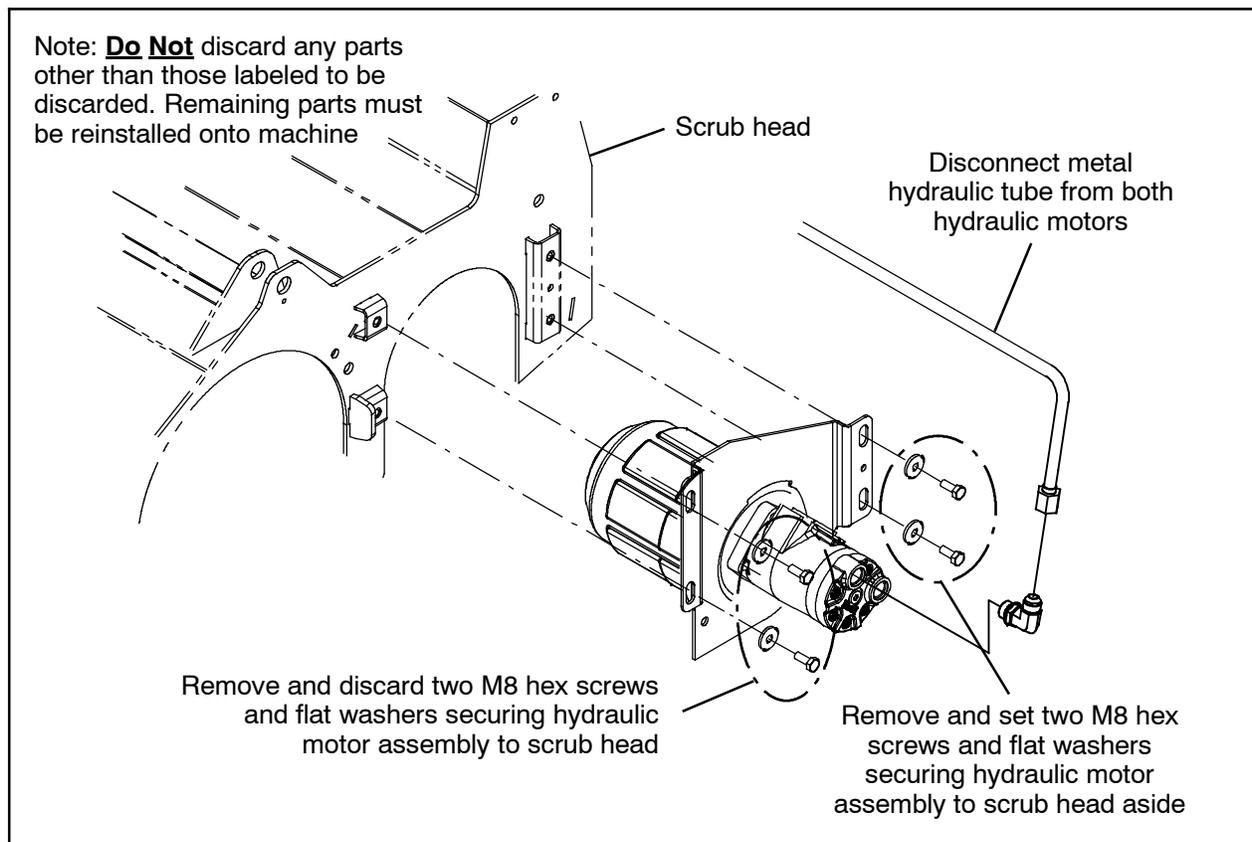


FIG. 4

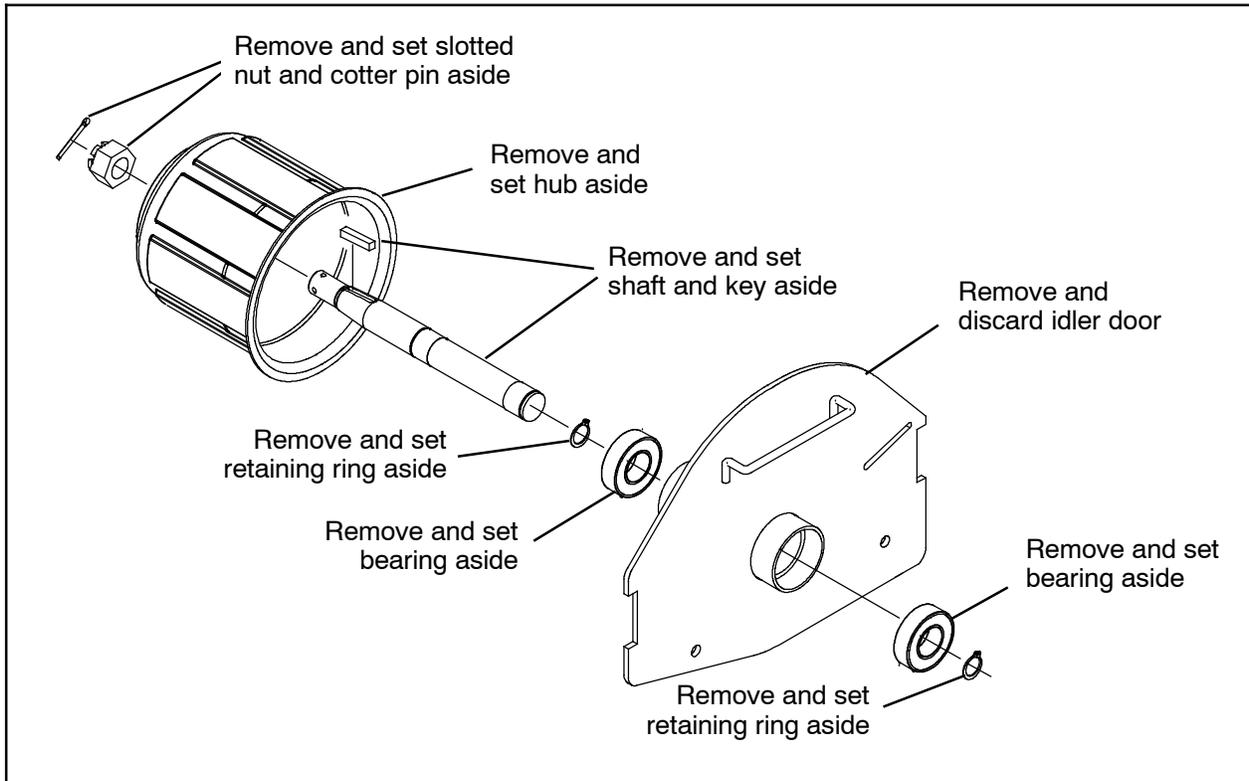


FIG. 5

NOTE: Repeat Step 13 through Step 15 to disassemble the other idler assembly.

13. Remove the cotter pin securing the slotted nut onto the idler assembly and remove the slotted nut and hub from the idler assembly. Set the slotted nut, hub, and cotter pin aside. (Fig. 5)
14. Remove the retaining rings holding the shaft in the idler door and remove the shaft from the idler door. Set the shaft and retaining rings aside. (Fig. 5)
15. Carefully remove the bearings from inside the idler door. Do not damage the bearings. Set both bearings aside. Discard the idler door. (Fig. 5)

16. Remove all components (solution supply components, squeegees, skirts, etc...) from the main scrub head. Set all items removed from main scrub head aside. Discard the main scrub head. (Fig. 6 / Fig. 7)

Remove and set squeegees/skirts and related brackets/hardware aside.

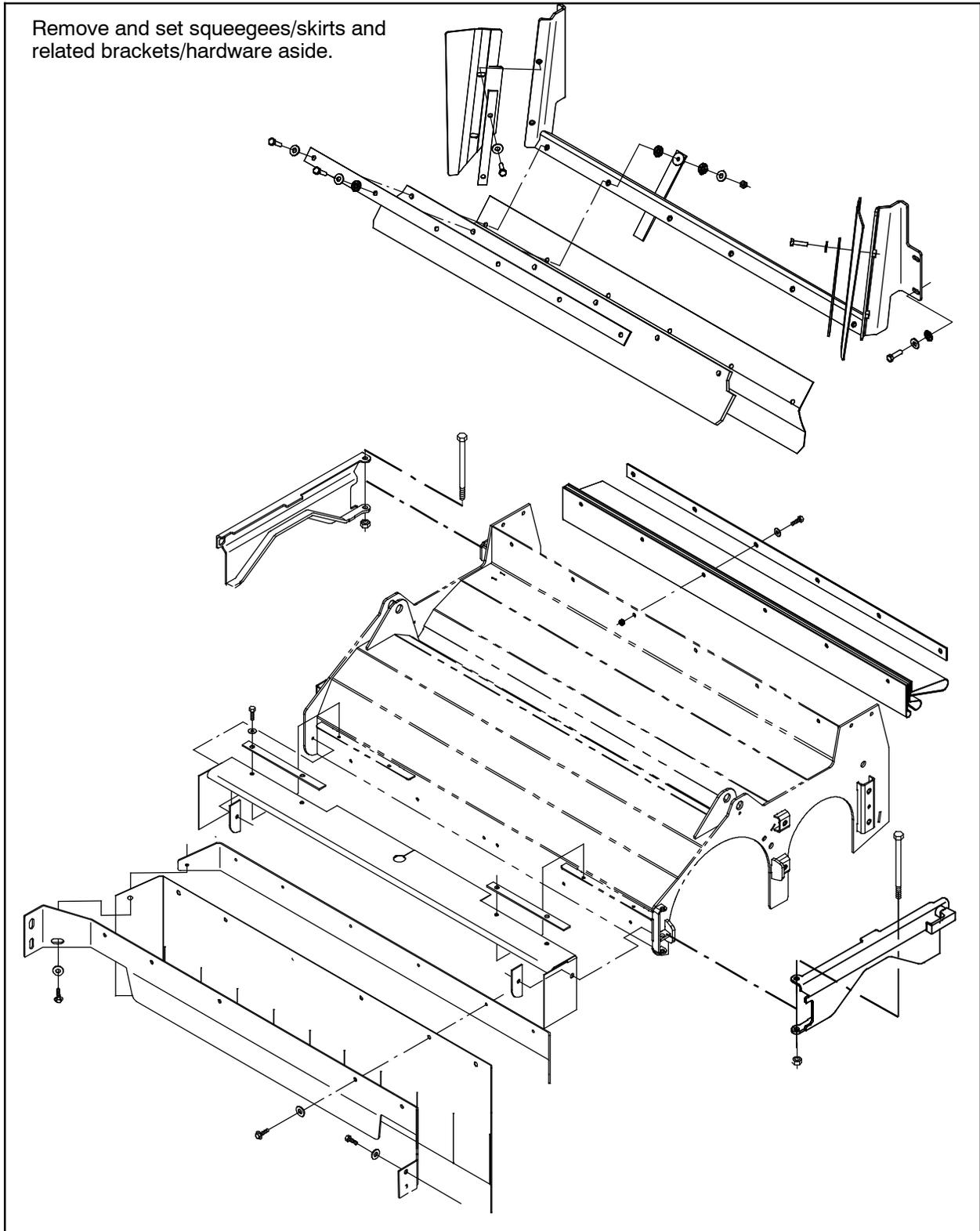


FIG. 6

Remove and set solution
supply components/hardware
aside.

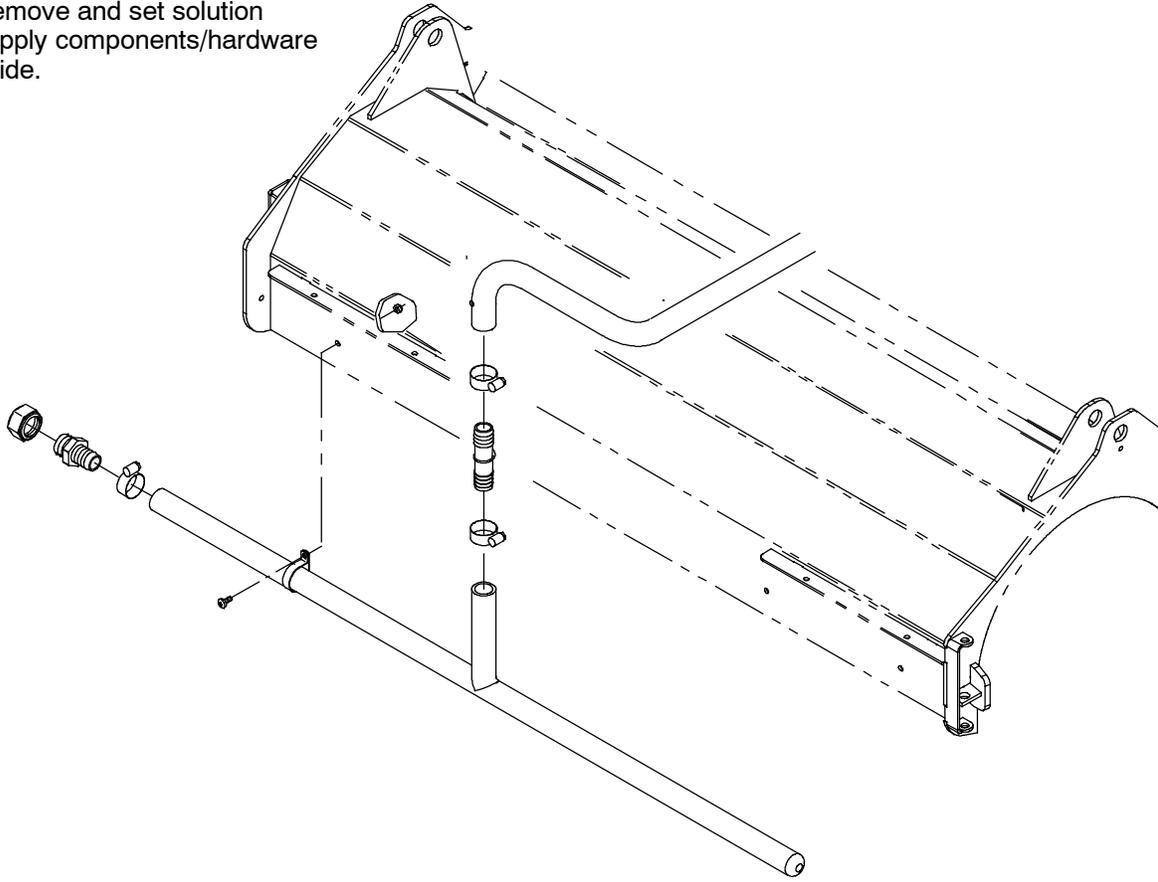


FIG. 7

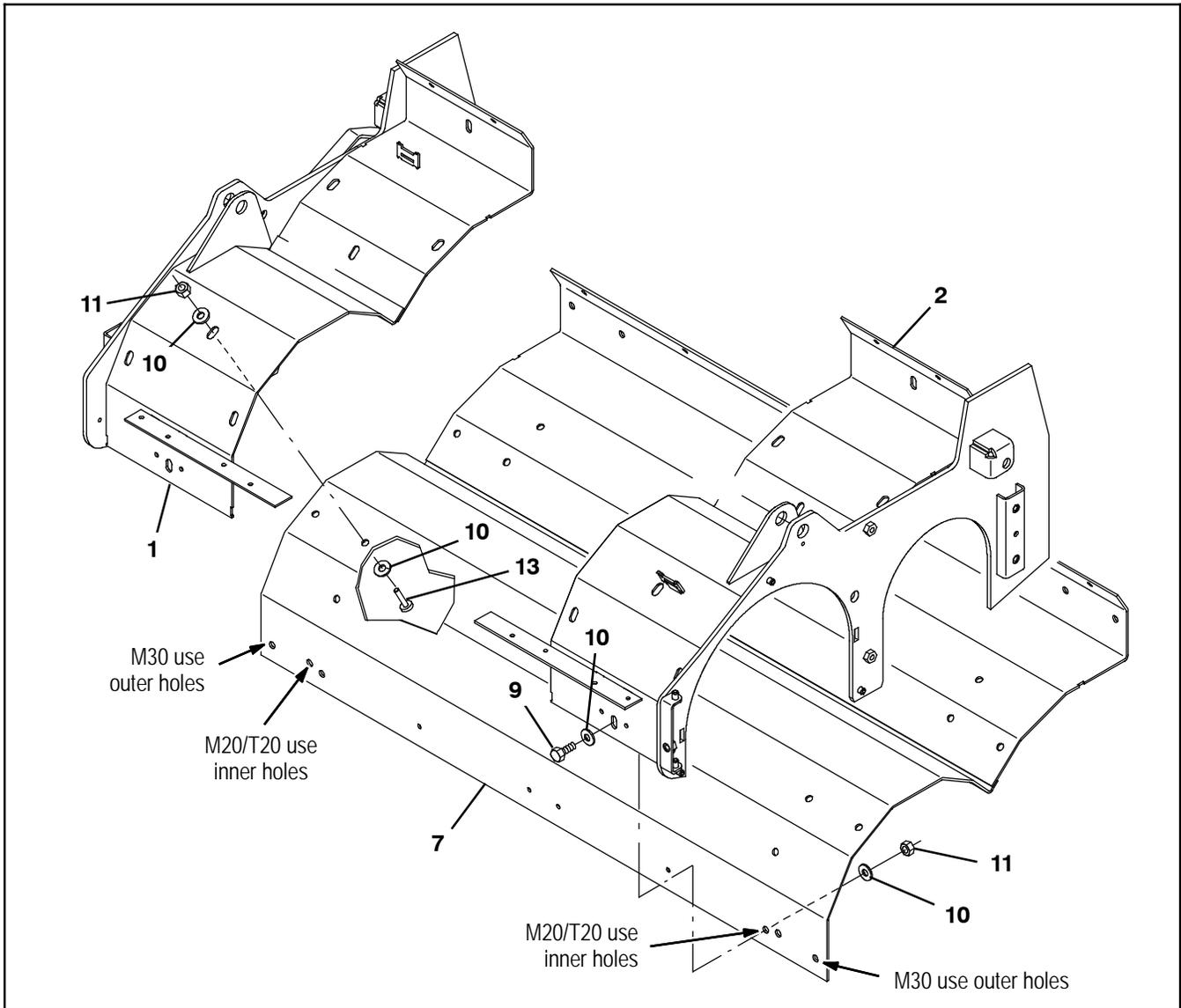


FIG. 8

17. Use five M8 button screws (13), ten flat washers (10), and five M8 hex nuts (11) to install the right brush wrap bracket (1) and left brush wrap bracket (2) onto the brush wrap plate (7). (Fig. 8)
18. Use two M8 hex screws (12) and two flat washers (10) to install a support bracket (3) onto the right brush wrap bracket (1) and left brush wrap bracket (2). (Fig. 9)
19. Use one M8 hex screw (9) and one flat washer (10) to install the right retainer (4) onto the right brush wrap bracket (1). (Fig. 9)
20. Use one M8 hex screw (9) and one flat washer (10) to install the left retainer (5) onto the left brush wrap bracket (2). (Fig. 9)
21. Press two bearings into each brush idler plate (6). (Fig. 9)
22. Insert a key into each shaft. (Fig. 9)
23. Insert a shaft into each brush idler plate (6) and use two retaining rings to secure each shaft in the idler plate. (Fig. 9)
24. Install the hub onto each brush idler plate (6) and use a crown nut and cotter pin to secure the hub onto each brush idler plate. (Fig. 9)
25. Use two saved M8 hex screws, two M8 hex screws (9), two saved flat washers, and two flat washers (10) to install each hydraulic motor assembly onto the scrub head. (Fig. 9)
26. Reconnect the metal hydraulic tubes to both hydraulic motor assemblies.

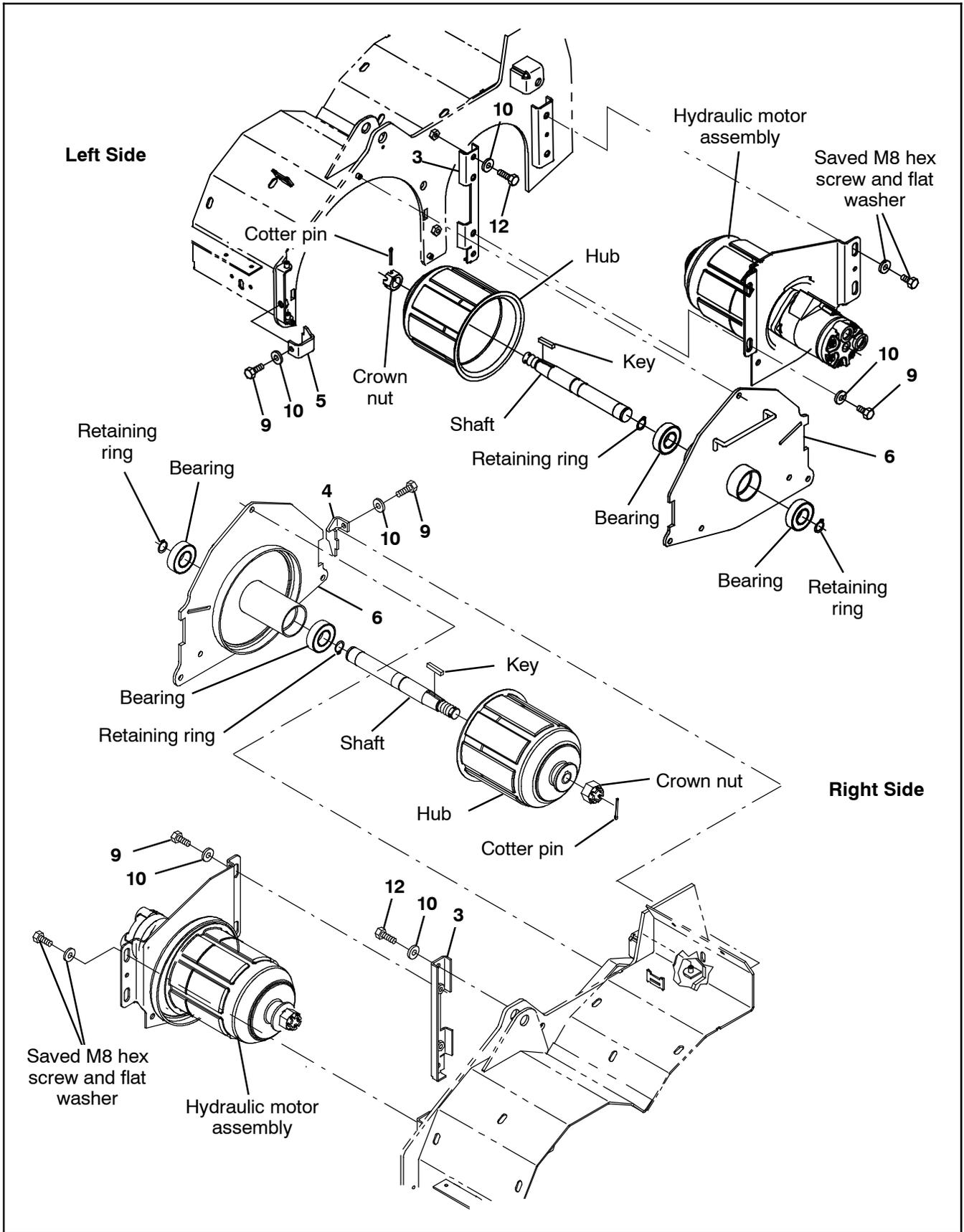


FIG. 9

- 27. Install the brushes into the main scrub head.
- 28. Position the scrub head assembly underneath the machine.
- 29. Connect the torque tube to the scrub head.
(Fig. 10)

- 30. Connect both drag links to the scrub head.
(Fig. 10)
- 31. Connect the solution supply hose from the solution tank to the main scrub head.

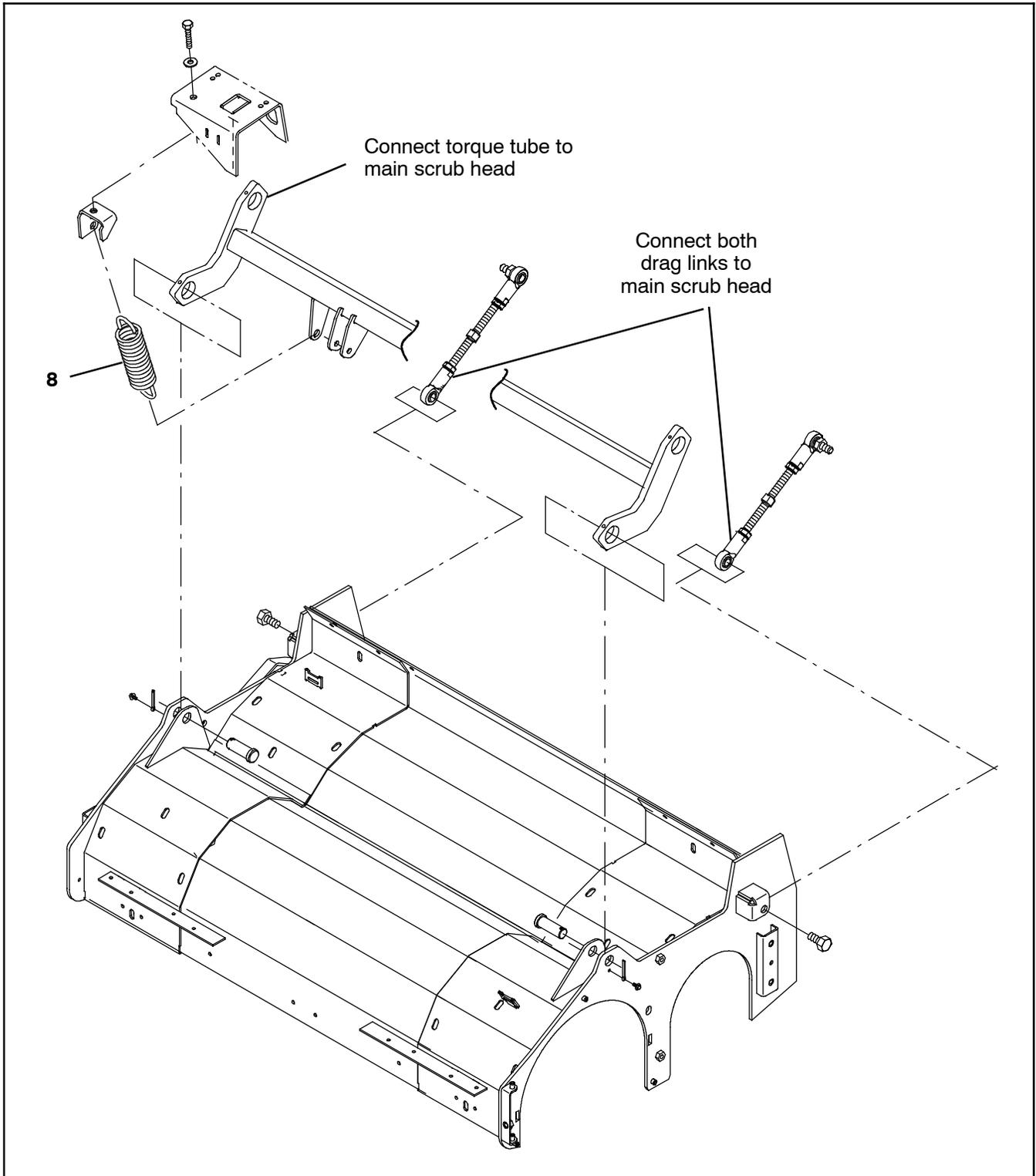


FIG. 10

32. Reconnect the hydraulic hoses to the hydraulic tubes.
33. Install the extension spring (8) onto the torque tube and bracket. (Fig. 10)
34. Raise the machine off the jack stands, remove the jack stands from under the machine, and lower the machine to the floor.
35. Check the hydraulic fluid level. If necessary, add hydraulic fluid. Refer to HYDRAULICS in the MAINTENANCE section of the Operator Manual for instructions how to check hydraulic fluid level/add hydraulic fluid.
36. Start machine and check the brush pattern. Refer to CHECKING THE MAIN BRUSH PATTERN in the MAINTENANCE section of the Operator Manual for instructions how to check the main brush pattern.
37. If necessary, adjust the main scrub head. Refer to ADJUSTING THE MAIN BRUSH TAPER and ADJUSTING THE MAIN BRUSH WIDTH in the MAINTENANCE section of the Operator Manual for instructions how to adjust the main brushes.

Bill Of Materials For Scrub Kit, Conversion M20/T20/M30 - 9021860

Ref.	Tennant Part No.	Description	Qty.
1	1052124	Bracket Wldt, Brush Wrap Mtg, RH	1
2	1052342	Bracket Wldt, Brush Wrap, LH	1
3	1054575	Bracket, Sppt	2
4	1054610	Bracket, Retainer, RH	1
5	1054682	Bracket, Retainer, LH	1
6	1054857	Door Wldt, Brush, Idler	2
7	1077002	Plate Wldt, Wrap, Brush	1
8	1042686	Spring, Extn, 2.00od 0.25wir 07.5l	1
9	09740	Screw, Hex, M8 X 1.25 X 20, SS	8
10	32491	Washer, Flat, 0.31, Std	32
11	08713	Nut, Hex, Lock, M8 X 1.25, NI, SS	10
12	09010	Screw, Hex, M8 X 1.25 X 25, SS	4
13	223470	Screw, Btn, M8 X 1.25 X 25, SS	10

TENNANT COMPANY
10400 Clean Street
Eden Prairie, MN 55344- 2650