



# INSTRUCTION BULLETIN

No. 340396  
Machine: 7300 / 8300  
Published: 07-2015  
Rev. 03

**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 386862 / 9006932**

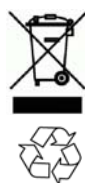
## SYNOPSIS:

This kit contains parts needed to install a MaxPro 1000 cylindrical scrub head on 7300 / 8300 machines.

Please follow step-by-step instructions.

## SPECIAL TOOLS / CONSIDERATIONS: NONE

(Estimated time to complete: 2 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:

(Refer to Fig. 1 through Fig. 8)

1. Raise and latch up both the side squeegees on the installed scrub head.
2. Move the solution flow lever in the operator compartment to the off position.
3. Lower the scrub head to the floor with pressure setting #2. Shut the machine off.

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

4. Remove the debris tray from the right side of the machine. (Fig. 5)
5. Locate the upper head lift roller on top, in the center of the scrub head and remove the M8 bolt and upper head lift roller from between the mounting tabs. (Fig. 3)
6. Note locations prior to removal, then remove any plastic ties holding the wires and solution lines to the scrub head.

7. Disconnect the two scrub brush motors from the main harness. (Fig. 1)
8. Disconnect the water flow solenoid from the main harness. (Fig. 4)
9. Disconnect the solution line from the water flow solenoid.
10. Release the spring clip holding the side shift gas spring to the scrub head. (Fig. 3)
11. Disconnect the end of the side shift gas spring from the scrub head. (Fig. 3)
12. Disconnect the end of the side shift cable from the scrub head. (Fig. 3)
13. Remove the cotter pins and slotted hex nuts securing scrub head drag links to the frame of the machine. Only disconnect the drag links from their frame end mounting points. Set the cotter pins and slotted hex nuts aside. (Fig. 2)

14. Chock both rear tires. Raise the front end of the machine with a machine jack, and place jack stands under the front corners of the machine frame.

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

15. Connect the battery cables to the machine. Turn the machine on. The head lift bracket will raise up and out from between the lift tabs on the scrub head. Turn the machine off.
16. Slide the scrub head forward until it is clear from the machine. Push or pull the scrub head out the right side (operators compartment side) of the machine.



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

#### **INSTALLATION:** (Refer to Fig. 1 through Fig. 8)

1. Install the scrub brushes onto the scrub head, and temporarily remove the debris tray to allow for easy scrub head maneuvering.
2. Measure the adjustable upper links on the old scrub head, from center to center of the ball joints. Adjust the new links on the new head to the same dimensions.
3. Latch the side squeegees up into the raised double scrub position. (Fig. 6 / Fig. 7)
4. Be sure the head lift bracket is in the raised position under the machine and the solution control valve is in the off position.
5. IF A HOIST IS AVAILABLE: Raise the front of the machine, and place jack stands under the corners of the machine frame.
6. Push or pull the scrub head under the machine from the right side of the machine. Position the lift tabs, with the upper roller removed, directly below the lift rail.
7. Position the four scrub head drag links into the frame mounting holes. (Fig. 2)
8. Reinstall the castle nuts onto the ends of the scrub head drag links where they attach to the machine frame. Tighten the castle nuts tight. Reinstall the cotter pins. (Fig. 2)
9. Use the manual electronic controls to carefully lower the lift rail down on the lower roller between the lift tabs. Install the upper head lift roller using the M8 bolt. Tighten the roller mount screw to 18 to 24 Nm (15- 20 ft- lbs). (Fig. 3)

**Manual Mode:** The operator can turn on and off accessories individually and manually without regard to inputs or interlocks in the manual mode.

To initiate the manual mode:

- A. Turn off the machine.
- B. Press and hold the logo button.
- C. Turn on the machine.
- D. Hold the logo button for 15 seconds.
- E. Release the logo button.
- F. Select the manual mode.

Access the various functions to troubleshoot by reactivating the Logo button when manual mode is selected from the maintenance 1 screen. Scroll to the appropriate screen with the Logo button to manually operate the scrub head. Press the scrub button while in the manual mode to turn on and lower the main scrub head. The brush head actuator will continue to lower until the scrub button is released. Reactivate the scrub button to turn off the scrub brushes and raise the scrub head.

**NOTE: DO NOT hold the scrub button down long. damage to the actuator and the scrub head could occur.**

10. Connect the water flow solenoid to the main harness.
11. Reconnect the solution line to the water flow solenoid.
12. Connect the electrical wire harness to the connections at the shunt and the scrub brush motors. (Fig. 8)

**NOTE: When connecting the cylindrical brush motors, connect the adaptor harness (363468), to the left brush motor, between 11/GRN and 15/BRN for correct brush direction rotation.**

*Check that the correct shunt is being installed for each individual scrub head.*

*Shunt 363236- (2) 1.0 HP Disk motors  
1.25MV/1AMP (BLACK)*

*Shunt 363237- (2) 1.5 HP Disk or Cylindrical motors 1.0MV/1AMP (RED)*

*Shunt 363238- (3) 1.0 HP Disk motors  
Single- 1.25MV/1AMP (YELLOW)  
Dual- 0.625MV/1AMP (YELLOW)*

13. Secure wires and solution lines in place with plastic ties.
14. Connect the side shift cable and gas spring to the scrub head with the set aside ball stud and nut. (Fig. 3)
15. Reconnect the kick in guard to the scrub head with the set aside clevis pin. (Fig. 2)
16. Install the debris tray on the right hand side of the machine. (Fig. 5)
17. Lower both of the side squeegees. (Fig. 6 / Fig. 7)
18. Install the debris tray on the right hand side of the machine. (Fig. 5)

**CHECK AND ADJUST THE CYLINDRICAL BRUSH PATTERN:**  
(Refer to Fig. 9)

1. Apply chalk (or another material that will not easily blow away), to a smooth, level section of the floor.
2. Drive the machine onto the chalked area, and set the machine parking break.
3. Lower the scrub head in the chalked area. Allow the machine to scrub in the same place for 15 to 20 seconds.

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

4. Raise the scrub head, and drive the machine away from the chalked area. Turn the machine power off.
5. Observe the shape of the brush patterns. If the brush patterns have parallel sides, the brushes do not need adjustment. (Fig. 9A / Fig. 9F)
6. If one, or both of the brush patterns are tapered, the brushes need adjustment to straighten the brush pattern. (Fig. 9B)
7. Open the side squeegee support door with the latch. Swing the support door outward to access the idler support cover. (Fig. 9C)
8. Loosen the larger mounting screw on the outside of the idler door. (Fig. 9D)

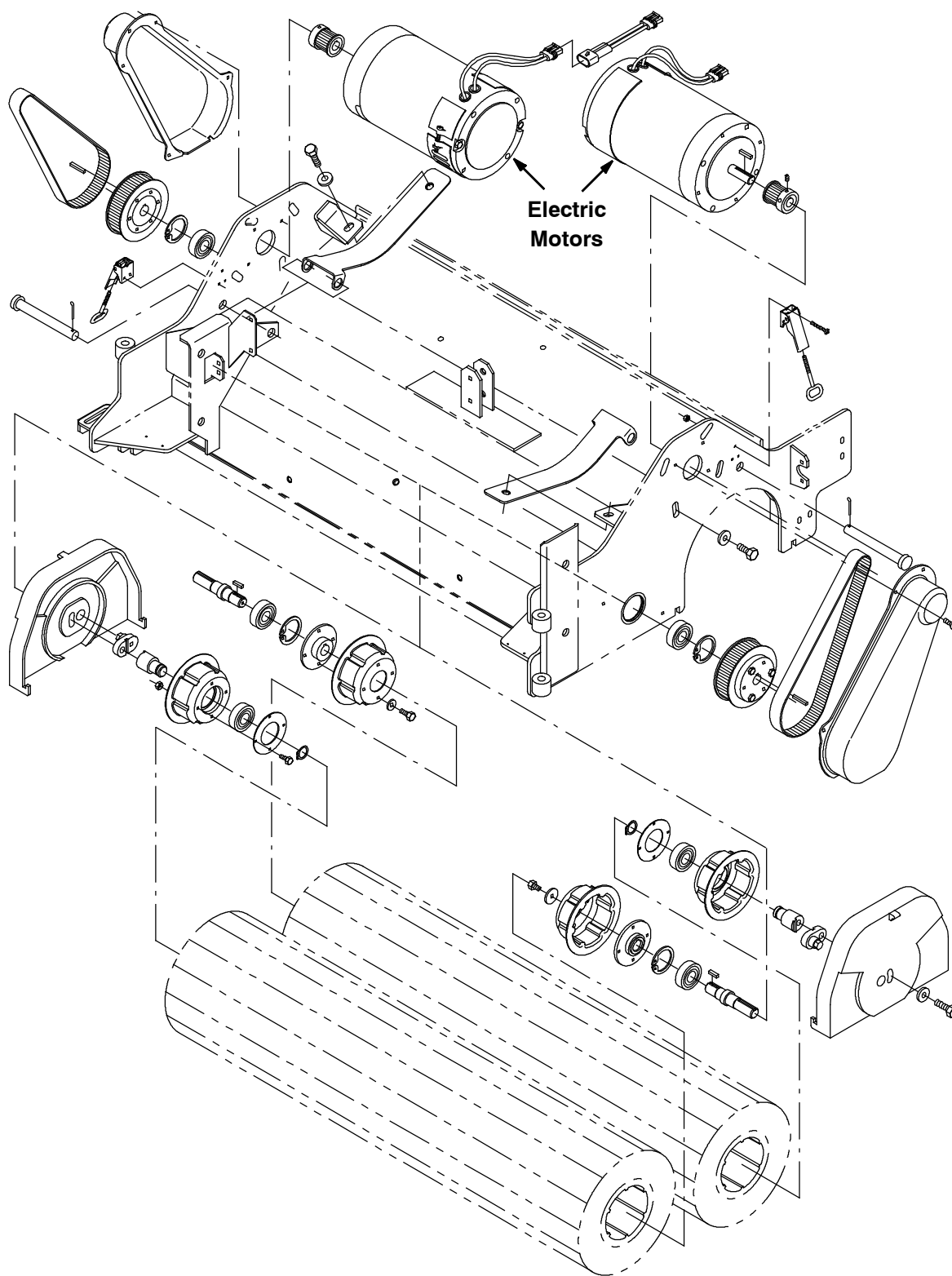
9. Raise or lower the end of the brush with the smaller brush adjustment screw as needed to straighten the brush pattern. (Fig. 9E)
10. Tighten the mounting screw to secure the brush.
11. Close the side squeegee support door. Check the brush patterns again and readjust as necessary until both patterns are the same.
12. If one brush pattern is wider than the other, the scrub head needs to be leveled. (Fig. 9F)
13. Level the scrub head by turning the top scrub head drag link arm on both sides of the scrub head. (Fig. 2)

*NOTE: Turn drag link arms on both sides of the scrub head an equal number of times to keep the scrub head at proper level.*

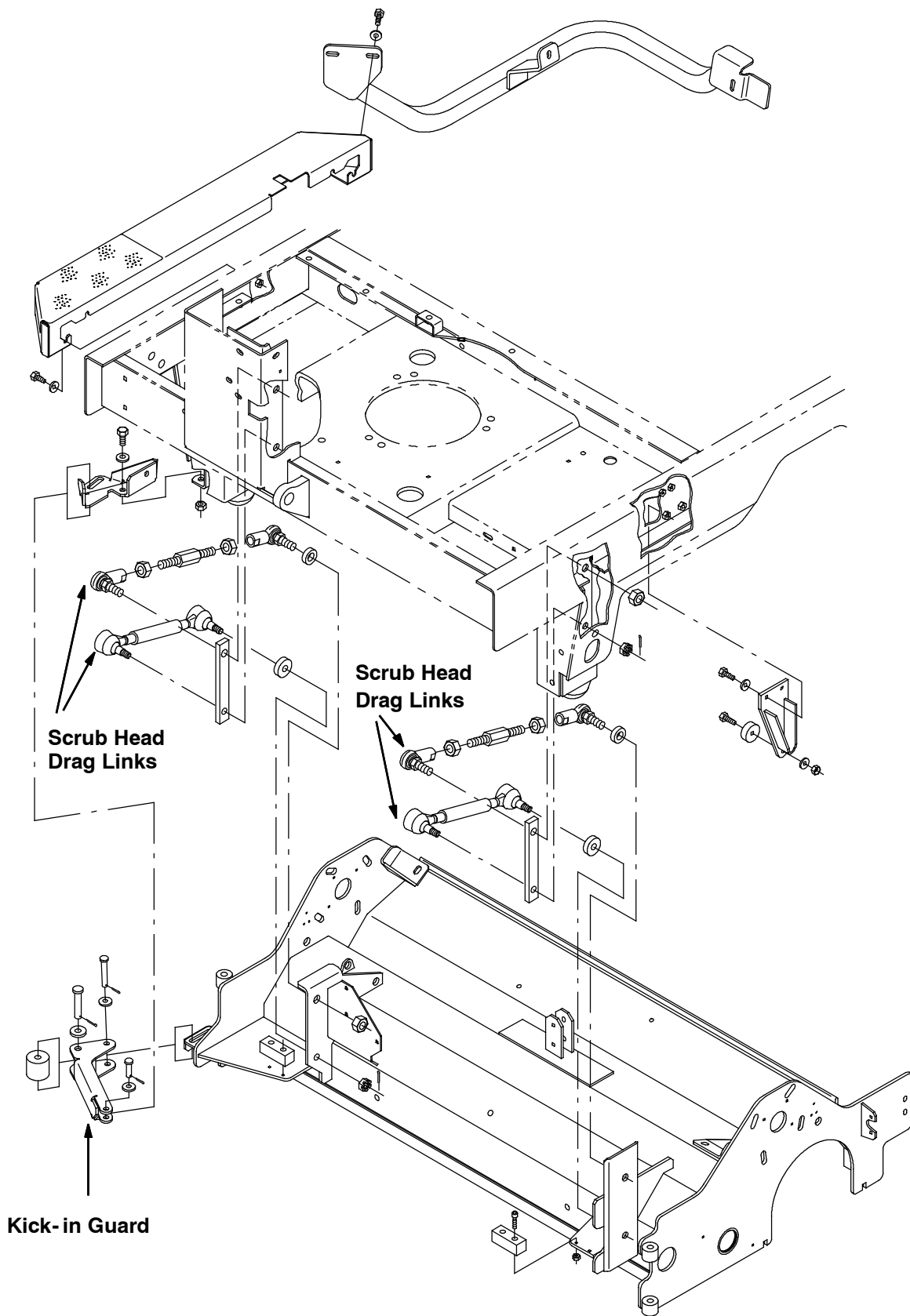
14. Check the brush patterns again and readjust as necessary until both patterns are the same. (Fig. 9A)

**ALTERNATIVE CYLINDRICAL BRUSH PATTERN ADJUSTMENT METHOD::**  
(Refer to Fig. 9)

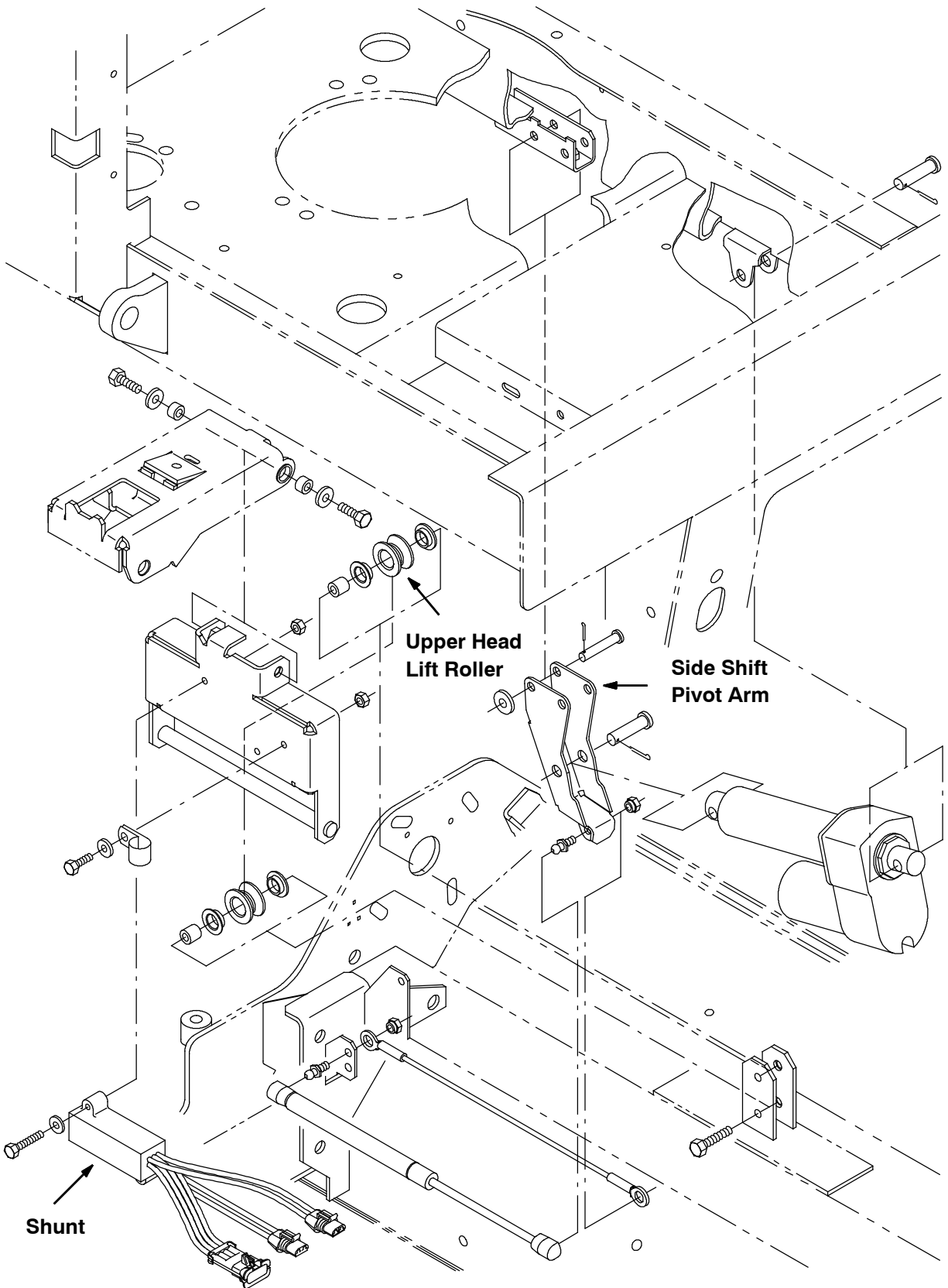
1. Check the dimensions of the pattern in the chalk. The fixed end of the brush should be 2", and the same as the last 6-9" on the opposite end of the pattern. (Fig. 9B)
2. If the ends are not equal, level the head until they match.
3. After the heads are leveled, check the brushes for taper, and adjust as shown. (Fig. 9D / Fig. 9E)



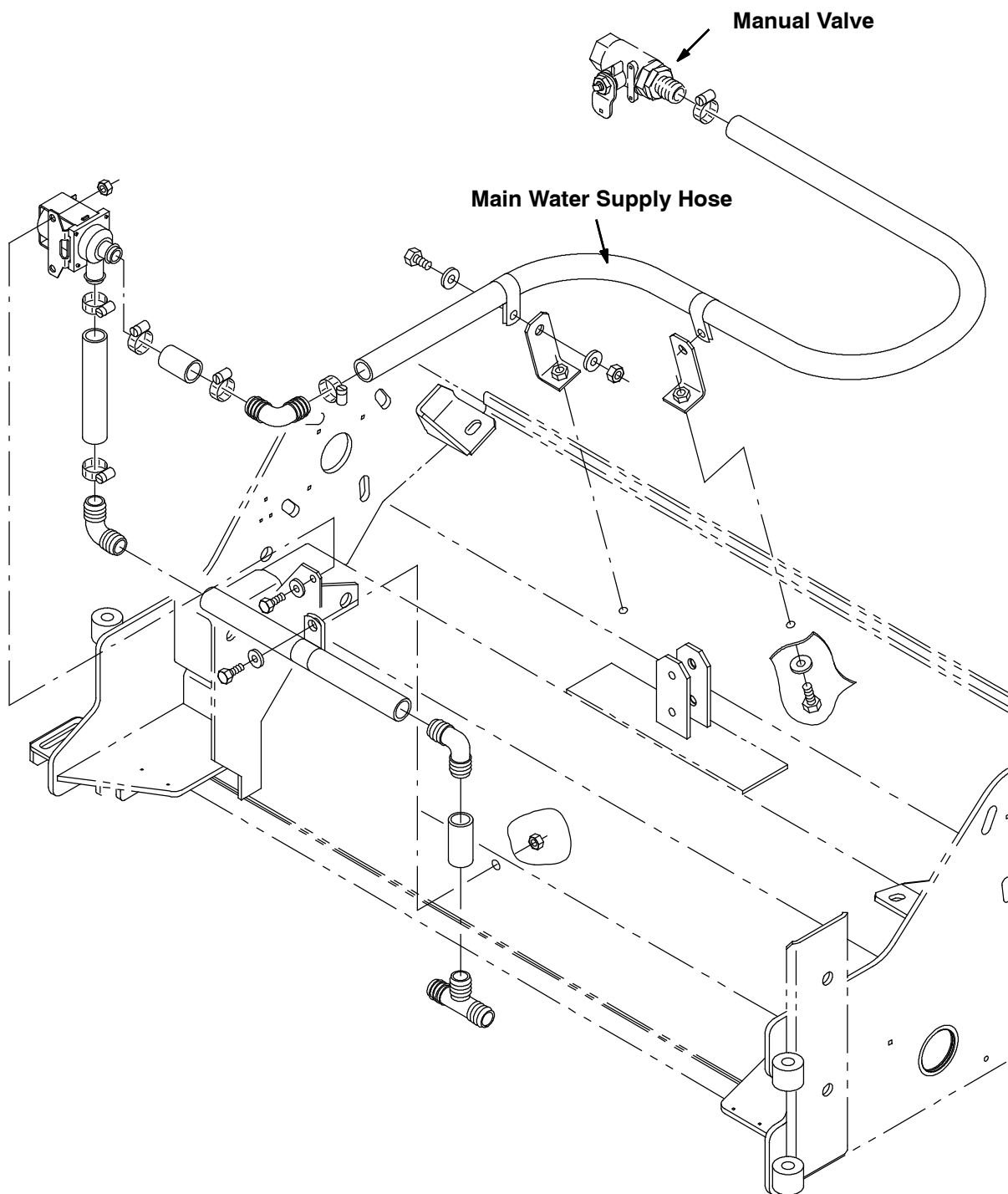
**FIG. 1 - MaxPro 1000 Cylindrical Scrub Head Drive Group**



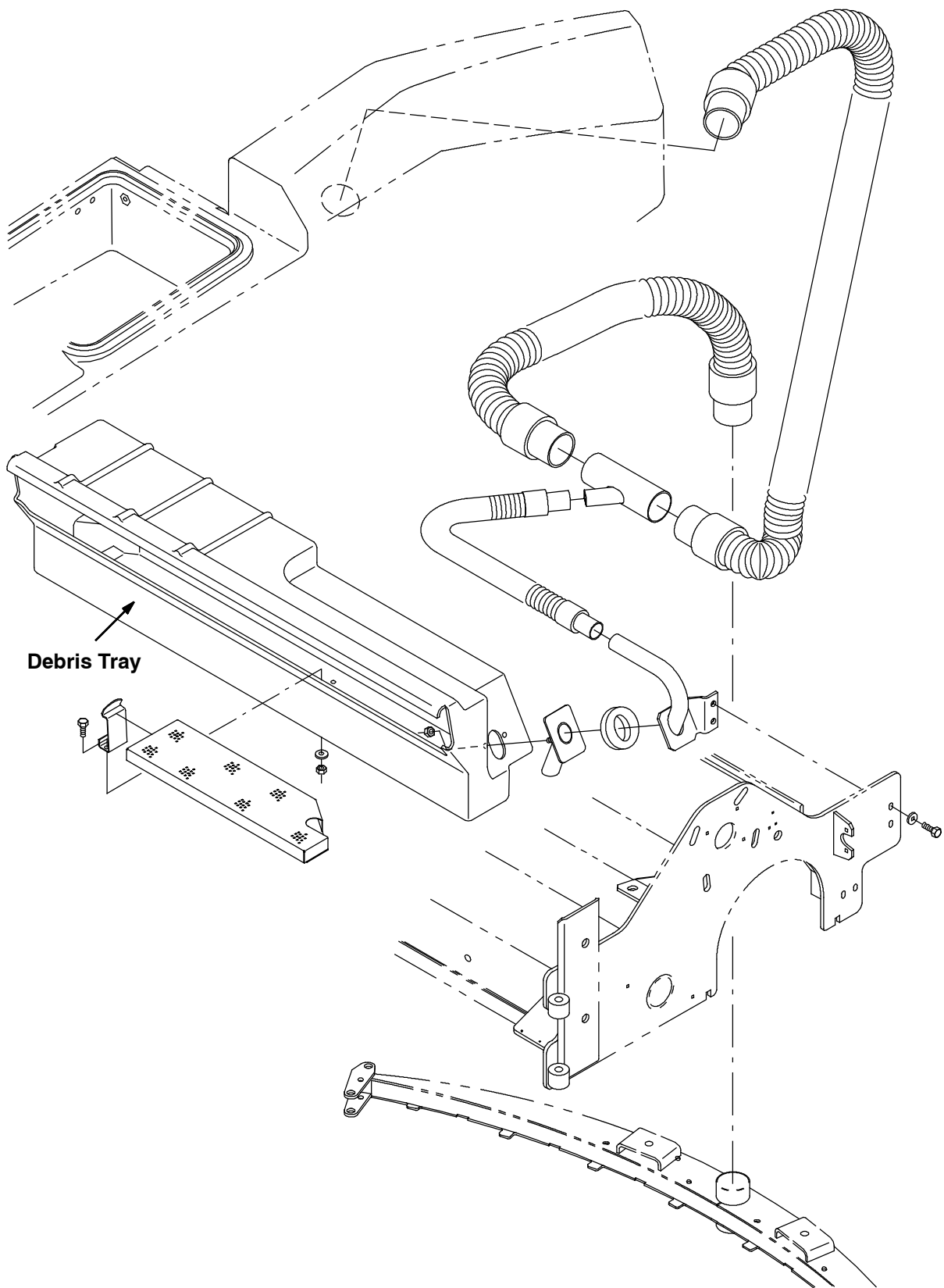
**FIG. 2 - MaxPro 1000 Cylindrical Scrub Head Frame And Linkage Group**



**FIG. 3 - MaxPro 1000 Cylindrical Scrub Head Lift Group**

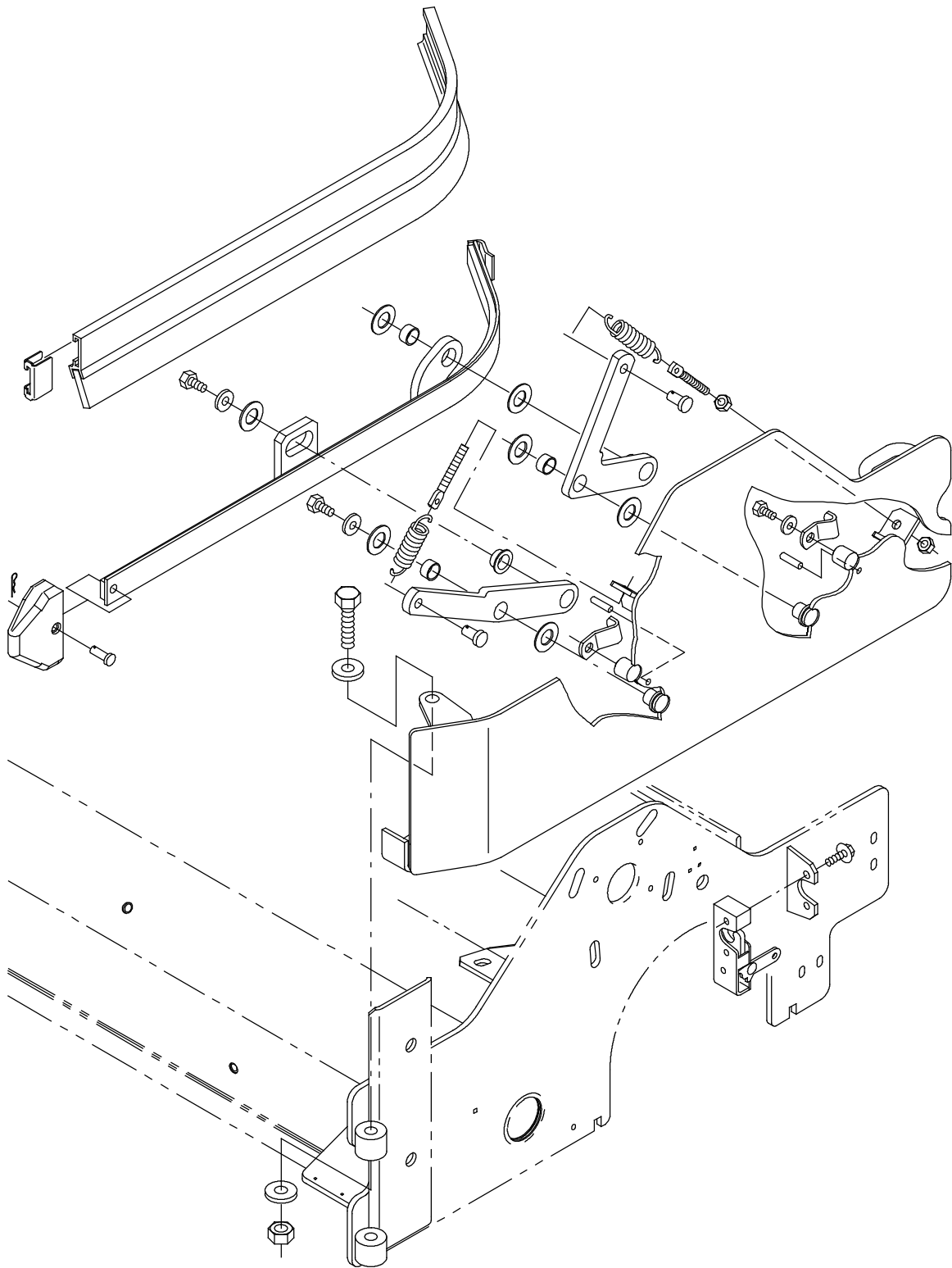


**FIG. 4 - MaxPro 1000 Cylindrical Scrub Head Solution Valve Group**

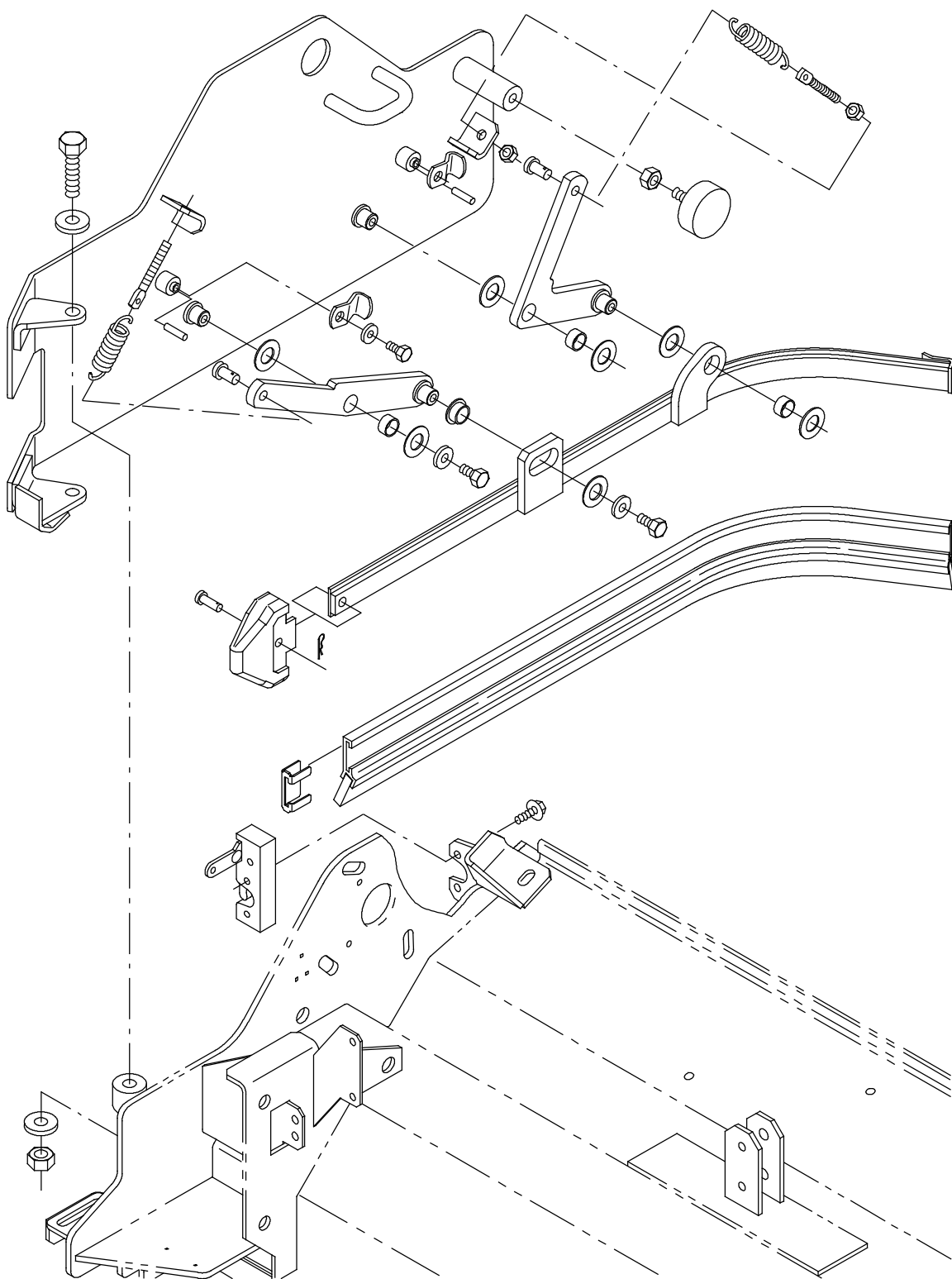


**FIG. 5 - MaxPro 1000 Cylindrical Scrub Head Debris Tray Group**

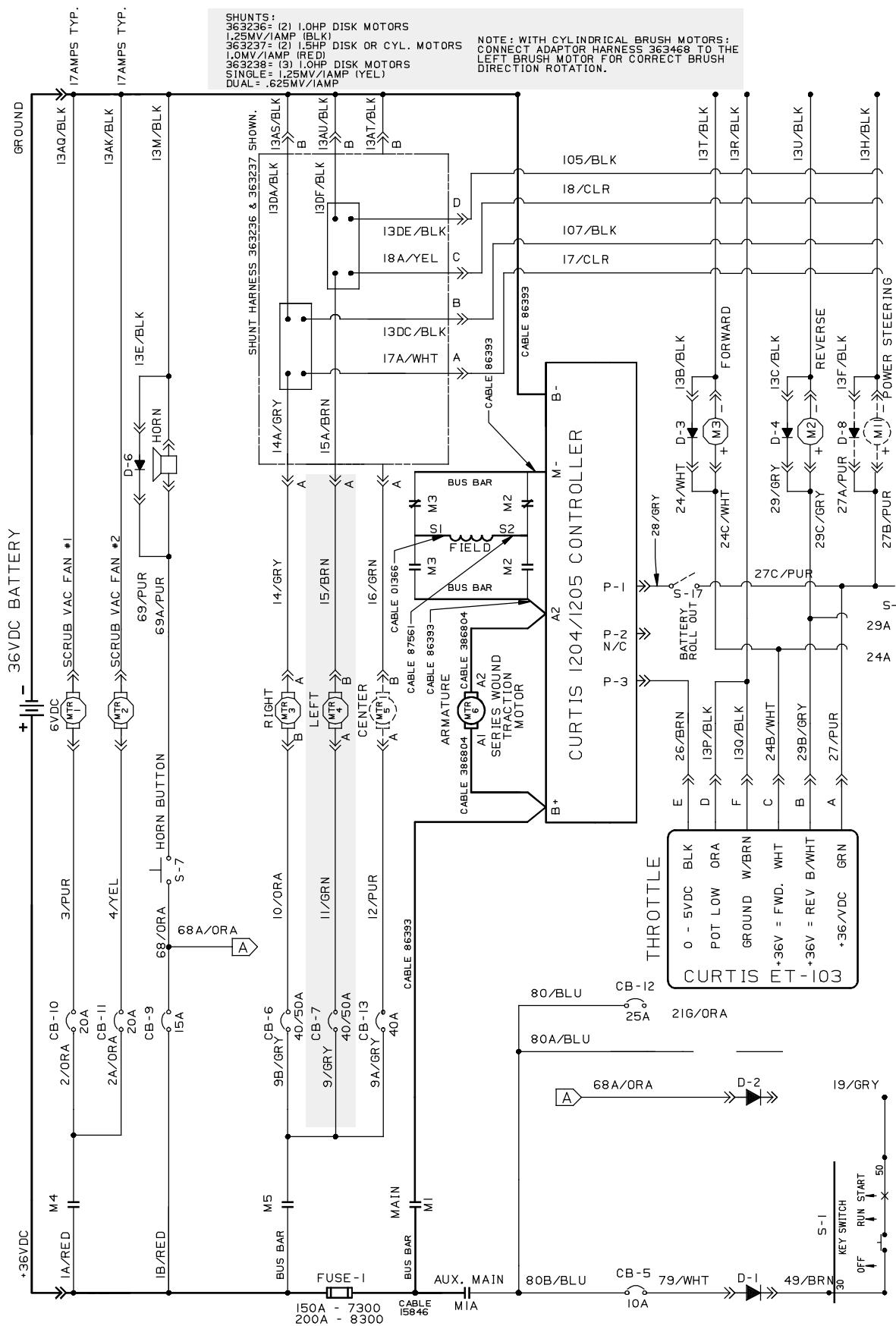


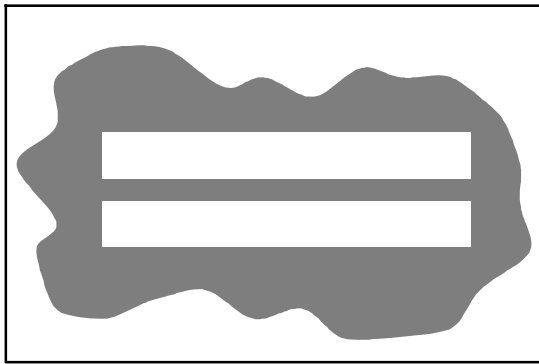


**FIG. 6 - MaxPro 1000 Cylindrical Brush Left Side Squeegee Group**



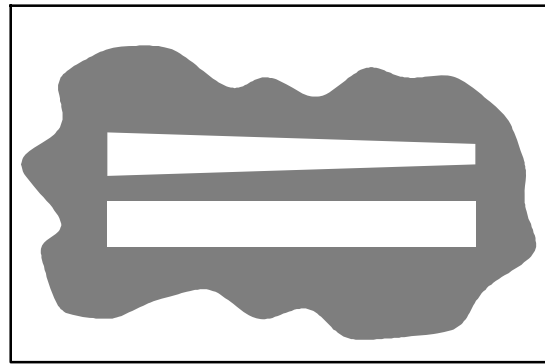
**FIG. 7 - MaxPro 1000 Cylindrical Brush Right Side Squeegee Group**





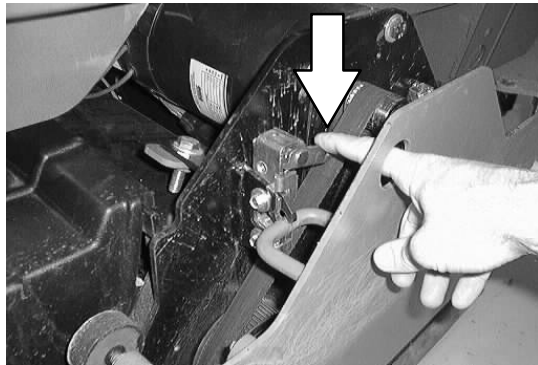
**FIG. 9A**

10355

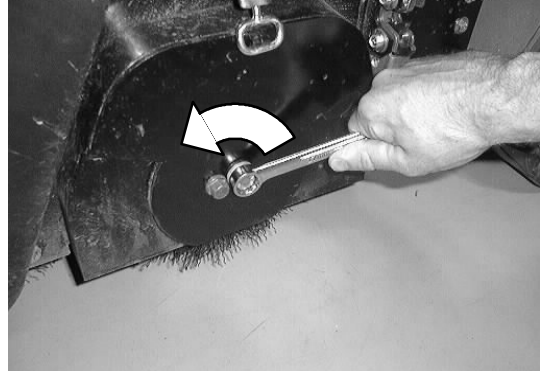


**FIG. 9B**

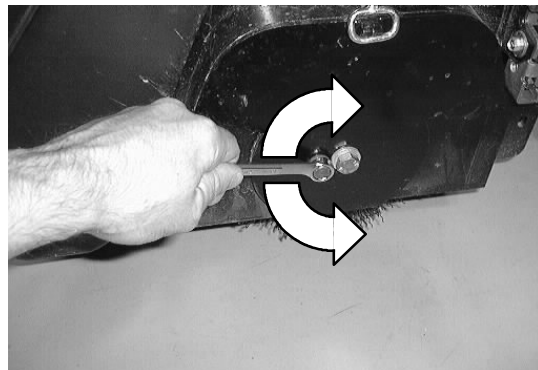
10356



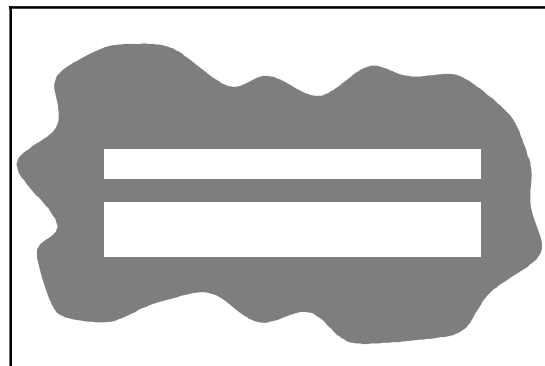
**FIG. 9C**



**FIG. 9D**



**FIG. 9E**



**FIG. 9F**

350630

**FIG. 9 - MaxPro 1000 Cylindrical Brush Adjustment**

**Bill Of Materials for MaxPro1000 Cylindrical Scrub Head Kit - 386862**

<b>Ref.</b>	<b>TENNANT Part No.</b>	<b>Description</b>	<b>Qty</b>
1	387169	Scrbr head assy, cyl, MaxPro 1000	1
2	386493	Plate wldt, stop	1
3	386040	Rail wldt, lift,	1
4	222556	Sleeve	2
5	12333	Screw, hex, M08- 1.25 X 25, SS	2
6	01685	Washer, flat, .31 SS	2
7	363237	Shunt	1
8	33930	Screw, hex, M06- 1.0 X 40, SS	2
9	01684	Washer, flat, .25 SS	4
10	08712	Nut, hex, lock, M06- 1.0, NL,SS	3
11	363152	Actuator, 36 VDC, 02.7 stroke, 500lb.	1
12	08716	Screw, hex, M06 X 1.0 X 20, SS	1
13	01686	Washer, flat, .38 SS	2
14	12459	Screw, hex, M06 X 1.0 X 20 FMG	1
15	09010	Screw, hex, M08- 1.25 X 25, SS	2
16	15023	Bumper, Poly- E	1
17	08713	Nut, hex, lock, M08- 1.25, NL, SS	1
18	63147	Pin, clevis, 0.50D X 1.87L	2
19	39005	Pin, cotter, 0.125D X 1.00L	2
20	58494	Stud	1
21	14725	Nut, retainer, .31- 18	1
22	67767	Clamp, cable, stl, 0.69D X 0.62W, 1H	2
23	08182	Pin, cotter, .125 X 1.00	2
24	29584	Pin, clevis, 0.37D X 2.00L	1
25	01686	Washer, flat, 0.44B 1.00D .08, SS	1

**Bill Of Materials for MaxPro1000 Cylindrical Scrub Head Kit - 9006932**

<b>Ref.</b>	<b>TENNANT Part No.</b>	<b>Description</b>	<b>Qty</b>
1	387169	Scrbr head assy, cyl, MaxPro 1000	1
2	1056494	Plate wldt, stop, iron gray	1
3	1056843	Rail wldt, lift, cyl head, iron gray	1
4	222556	Sleeve	2
5	12333	Screw, hex, M08- 1.25 X 25, SS	2
6	01685	Washer, flat, .31 SS	2
7	363237	Shunt	1
8	01684	Washer, flat, .25 SS	4
9	08712	Nut, hex, lock, M06- 1.0, NL,SS	3
10	33930	Screw, hex, M06- 1.0 X 40, SS	2
11	363152	Actuator, 36 VDC, 02.7 stroke, 500lb.	1
12	08716	Screw, hex, M06 X 1.0 X 20, SS	1
13	01686	Washer, flat, .38 SS	2
14	12459	Screw, hex, M06 X 1.0 X 20 FMG	1
15	09010	Screw, hex, M08- 1.25 X 25, SS	2
16	15023	Bumper, Poly- E	1
17	08713	Nut, hex, lock, M08- 1.25, NL, SS	1
18	63147	Pin, clevis, 0.50D X 1.87L	2
19	39005	Pin, cotter, 0.125D X 1.00L	2
20	58494	Stud	1
21	14725	Nut, retainer, .31- 18	1
22	67767	Clamp, cable, stl, 0.69D X 0.62W, 1H	2
23	08182	Pin, cotter, .125 X 1.00	2
24	29584	Pin, clevis, 0.37D X 2.00L	1
25	01686	Washer, flat, 0.44B 1.00D .08, SS	1

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