



INSTRUCTION BULLETIN

No. 3801
Machine: 510E
Published: 2-97/01
System: SCRUBBING

NOTE: DO NOT DISCARD the Parts List from the Instruction Bulletin. Place the Parts List in the appropriate place in your machine manual for future reference. Retaining the Parts List will make it easier to reorder individual parts and will save you 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 23297

SYNOPSIS / PROBLEM:

This kit contains the parts needed to replace the edge scrub actuator on the model 510E scrubber.

Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: Hand drill and 5/8 in. drill bit or 5/8 in. hole saw.
(Estimated Time to complete: 2 hours)

PREPARATION:

(Refer to Figures 1, 2, 3, and 4)

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

1. In work area turn scrub brushes on and touch forward propelling to engage. When brushes touch floor surface, turn machine off.
2. Disconnect battery cables from machine.



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

3. Disconnect existing switch from four-prong connector and cut cable tie from actuator body.
(Refer to Fig. 1 and 2)
4. Remove gas spring from bracket by placing a small flat blade screwdriver in slot and turning to pop spring loose. (Refer to Fig. 2 and 4)
5. Remove gas spring from right side of scrubber head frame. (Refer to Fig. 2 and 4)
6. Disconnect cable from bracket by removing stud and retainer nut with 1/2 inch socket wrench for stud and 3/4 inch wrench on nut. Retain for installation of new parts.
(Refer to Fig. 2 and 4)
7. Remove existing cotter pin and clevis pin from actuator and gas spring bracket.
(Refer to Fig. 2, 3, and 4)
8. Remove gas spring bracket from pivot bracket. (Refer to Fig. 2, 3, and 4)
9. Remove the actuator mounting bracket, pivot bracket, and switch assembly from machine with a 13 mm wrench. Retain hardware for installation of new parts. (Refer to Fig. 2)

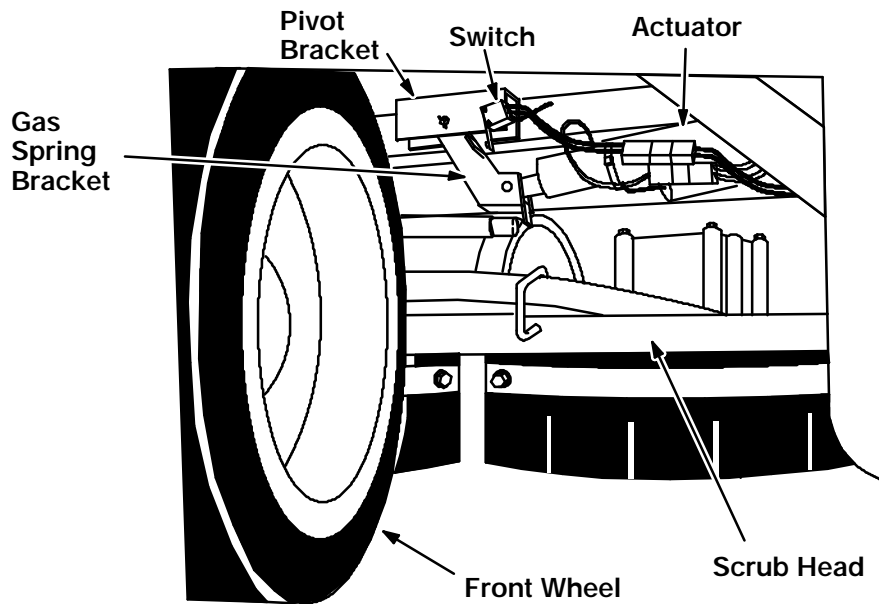


FIG. 1 - Existing Bracket Assembly Location

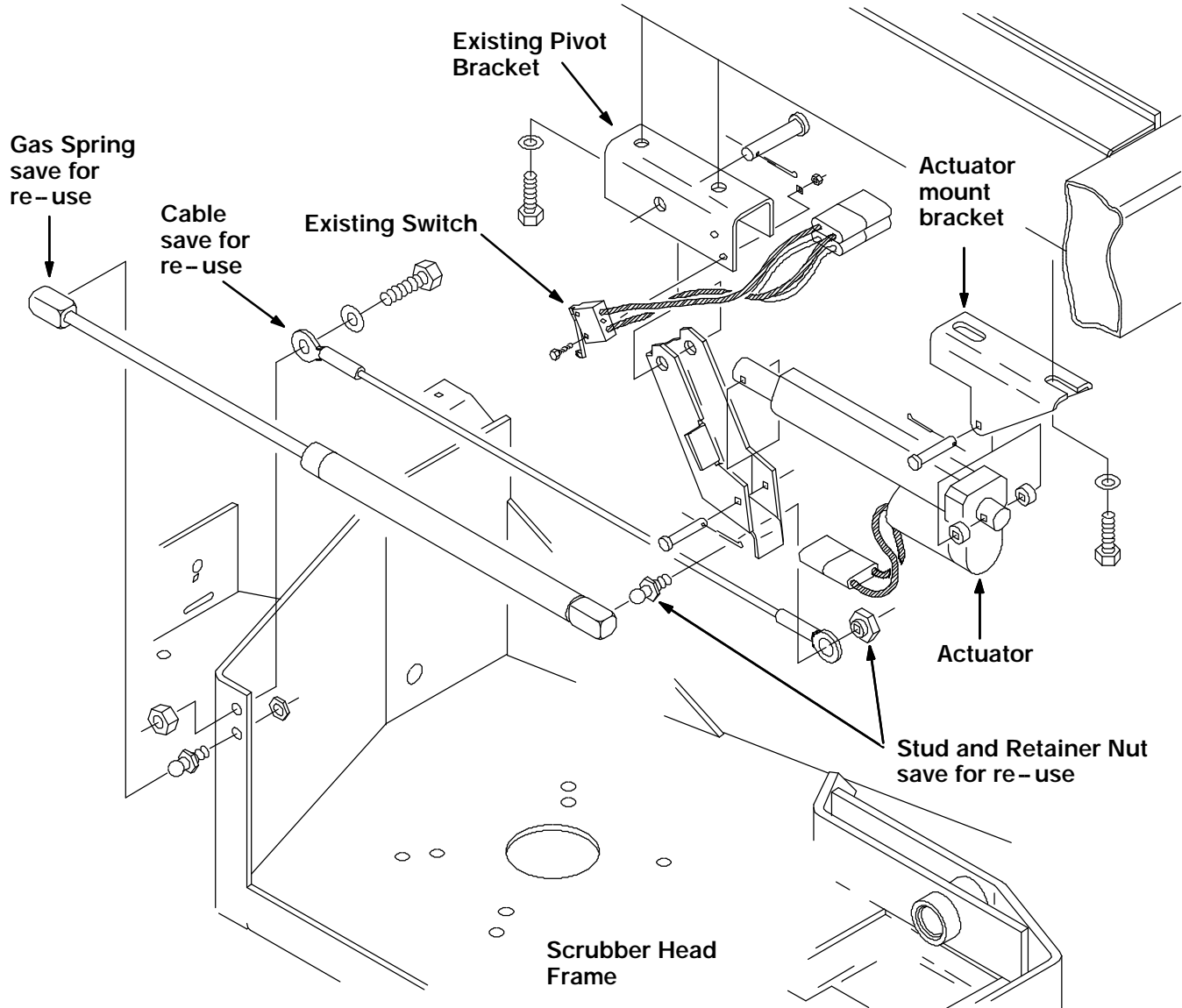


FIG. 2 - Existing Bracket Assembly

INSTALLATION:

(Refer to Figures 3, 4, and 5)

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

1. Install the hex stop bolt and hex nut on the new pivot bracket (7). Leave loose for now. Use the hardware from the old bracket. (Refer to Fig. 3)
2. Install the new switch assembly (14) on the new pivot bracket (7). Use the two hex screws (15), flat washers (16), and flange nuts (17). Leave loose for now. (Refer to Fig. 3)
3. Install the new gas spring bracket (10) on the new pivot bracket (7) using the clevis pin (8) and the hair cotter pin (9). (Refer to Fig. 3 and 4)

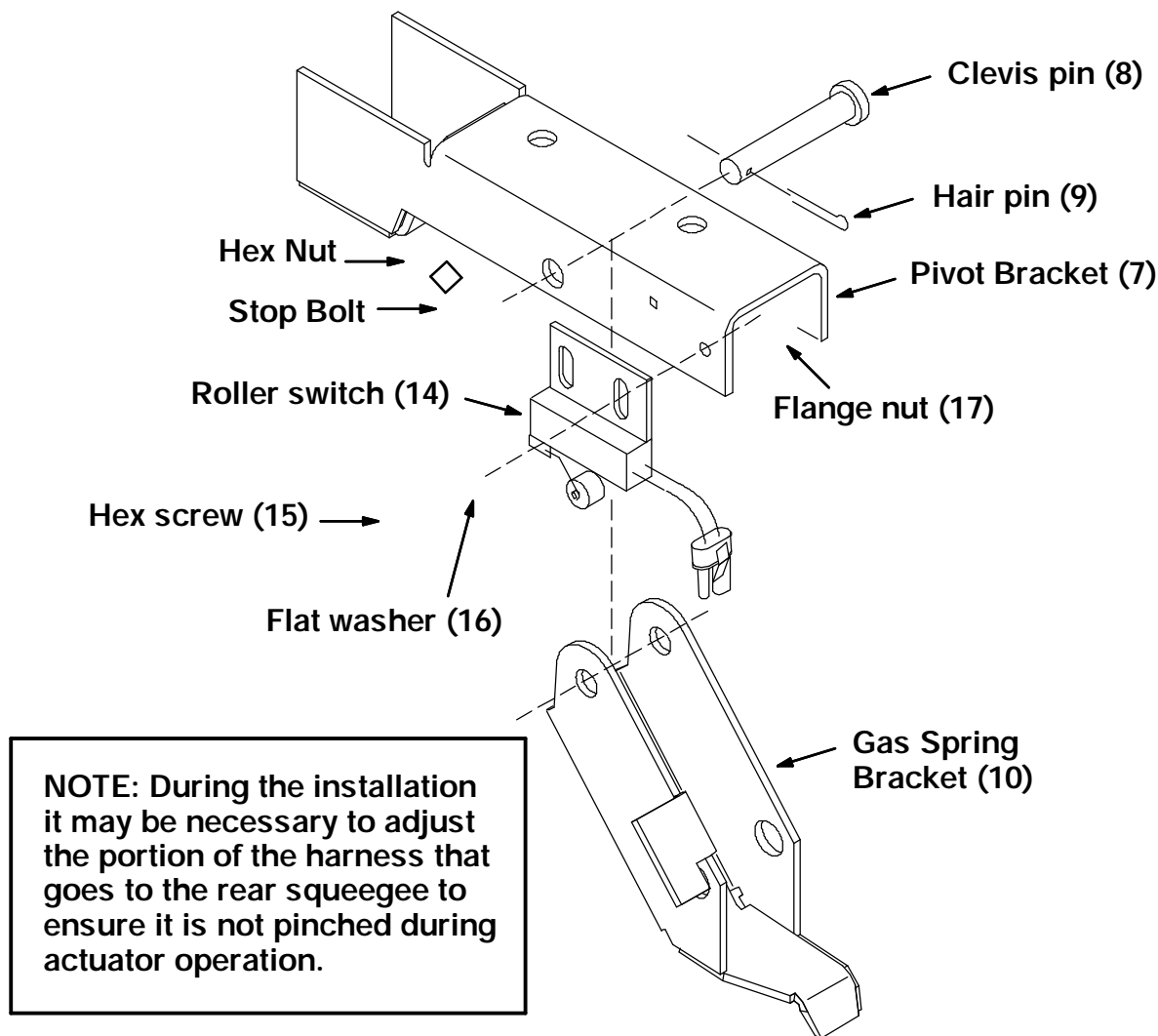


FIG. 3 - New Pivot Bracket and Switch Assembly

4. Install the pivot bracket assembly on the machine frame using the hardware removed earlier. Tighten to 18 - 24 Nm (15 - 20 ft lb). (Refer to Fig. 3 and 4)
5. Install the actuator mount bracket (1) on the machine frame using the hardware removed earlier. Tighten to 18 - 24 Nm (15 - 20 ft lb). (Refer to Fig. 3 and 4)
6. Install the ball stud and nut on the new gas spring bracket (10). Tighten firmly. (Refer to Fig. 3 and 4)

7. Install the new actuator (4) on the actuator mount bracket (1) and gas spring bracket (10) using two clevis pins (5), one hair cotter pin (6), and one cotter pin. (Refer to Fig. 4)
8. Open the front cover and locate the circuit breakers on the side of the machine frame near the vacuum fans. (Refer to Fig. 5)



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

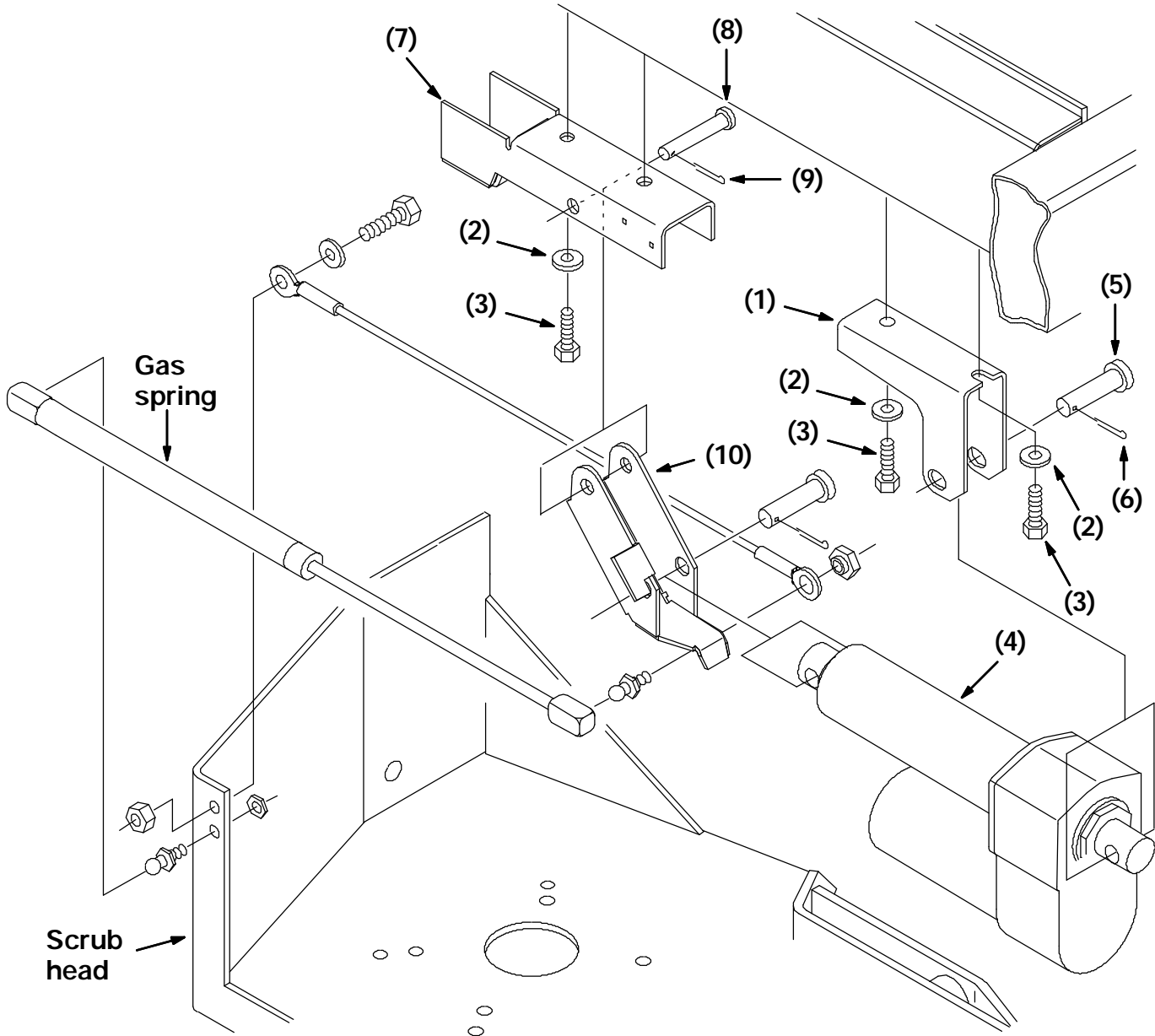


FIG. 4 - New Actuator And Mount Assembly

9. Disconnect battery cables from machine.
10. Mark and center punch a spot above the existing circuit breakers. Use a 5/8 inch hole saw or 5/8 inch drill bit to drill a hole for the new circuit breaker (12). (Refer to Fig. 5)

NOTE: Cover the vacuum fans before drilling to keep any shavings out of the motors.

11. Install the new circuit breaker (12), lock ring, and boot (13) in the new hole. (Refer to Fig. 5)
12. Route the wires from the new actuator (4) along the existing harness up to the new circuit breaker (12). Connect the terminals. (Refer to Fig. 4 and 5)
13. Use the 5 cable ties (11) to secure the new wires to the existing harness.
14. Install the existing side shift return cable to the new gas spring bracket (10) using the existing hardware. Tighten only to the point where the cable can still swivel. (Refer to Fig. 4)

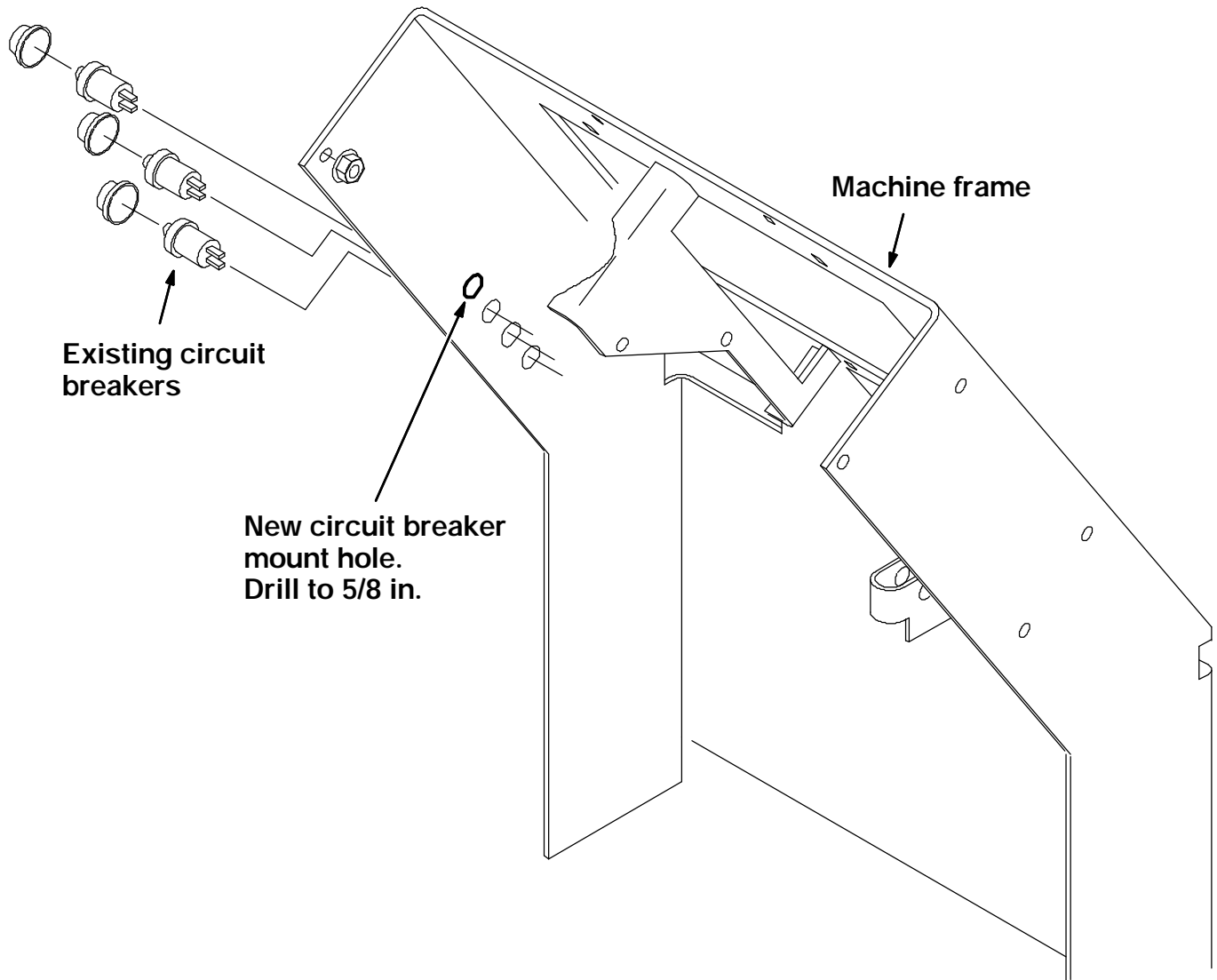


FIG. 5 - New Circuit Breaker Hole Location

15. Plug the new roller switch (14). into the existing electrical harness. (Refer to Fig. 3)
16. Adjust and tighten the head stop bolt and nut. (Refer to Fig. 3)
17. Adjust the roller switch and lightly hand tighten the hardware. (Refer to Fig. 3)
18. Reconnect the battery and operate the machine. Check the scrub head side shift for proper operation.

BILL OF MATERIALS FOR EDGE SCRUB ACTUATOR REPLACEMENT KIT 23297

Ref.	TENNANT Part No.	Description	Qty.
1	23300	Mount bracket	1
2	01685	Washer, flat, 5/16	4
3	15675	M8 hex screw	4
4	23288	Actuator	1
5	63147	Clevis pin	2
6	02942	Pin, hair, cotter	1
7	363290	Pivot bracket	1
8	51813	Clevis pin, 3/8x2-1/8	1
9	44906	Pin, hair, cotter	1
10	363293	Gas spring bracket	1
11	49266	Cable tie	10
12	87583	Circuit breaker, 2.5 amp	1
13	57751	Circuit breaker boot	1
14	48672	Roller switch assembly	1
15	09244	Screw, M5	2
16	19066	Washer, flat, #10	2
17	07789	Flange nut, M5	2

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