INSTRUCTION BULLETIN

No. 3734
Machine: 8400
Published: 8-95/00
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 Squeegee Lift Cable and Bellcrank Replacement Kit 23009

SYNOPSIS / PROBLEM:
This kit contains parts needed to replace the lift cable, bellcrank, mount plate, rollers, and various other parts that make up the rear squeegee lift assembly on the machine listed above. Some early model machines may experience premature lift cable failure. The parts provided in this kit will correct this problem. Please follow step-by-step instructions.

SPECIAL TOOLS / CONSIDERATIONS: None

(Estimated Time to complete: **2** hours)

PREPARATION:
(Refer to Fig. 1)

1. Park the machine on a level surface. Lower the rear squeegee.

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.

2. Remove and discard the cotter pin and clevis pin holding the lift cable to the squeegee frame. Remove the lift cable from the squeegee frame. (Refer to Fig. 1)
3. Remove and retain the retaining ring holding the piston end of the rear squeegee lift cylinder to the old pin weldment. (Refer to Fig. 1)
4. Remove and discard the cotter pin and clevis pin holding the rod end of the rear squeegee lift cylinder to the top hole in the bellcrank weldment. (Refer to Fig. 1)
5. Remove the rear squeegee lift cylinder from the old pin weldment. (Refer to Fig. 1)

NOTE: Do not disconnect the hydraulic hoses from the rear squeegee lift cylinder. (Refer to Fig. 1)

6. Remove and discard the two hex screws holding the upper lift cable bracket to the old pin weldment. Disconnect the lift cable from the upper lift cable bracket. Remove and discard the upper lift cable bracket. (Refer to Fig. 1)

7. Remove the two hex screws and nyloc nuts holding the angle plate and two plastic rollers to the bracket on the machine frame. Discard hardware, plastic rollers, angle plate, and sleeves. (Refer to Fig. 1)

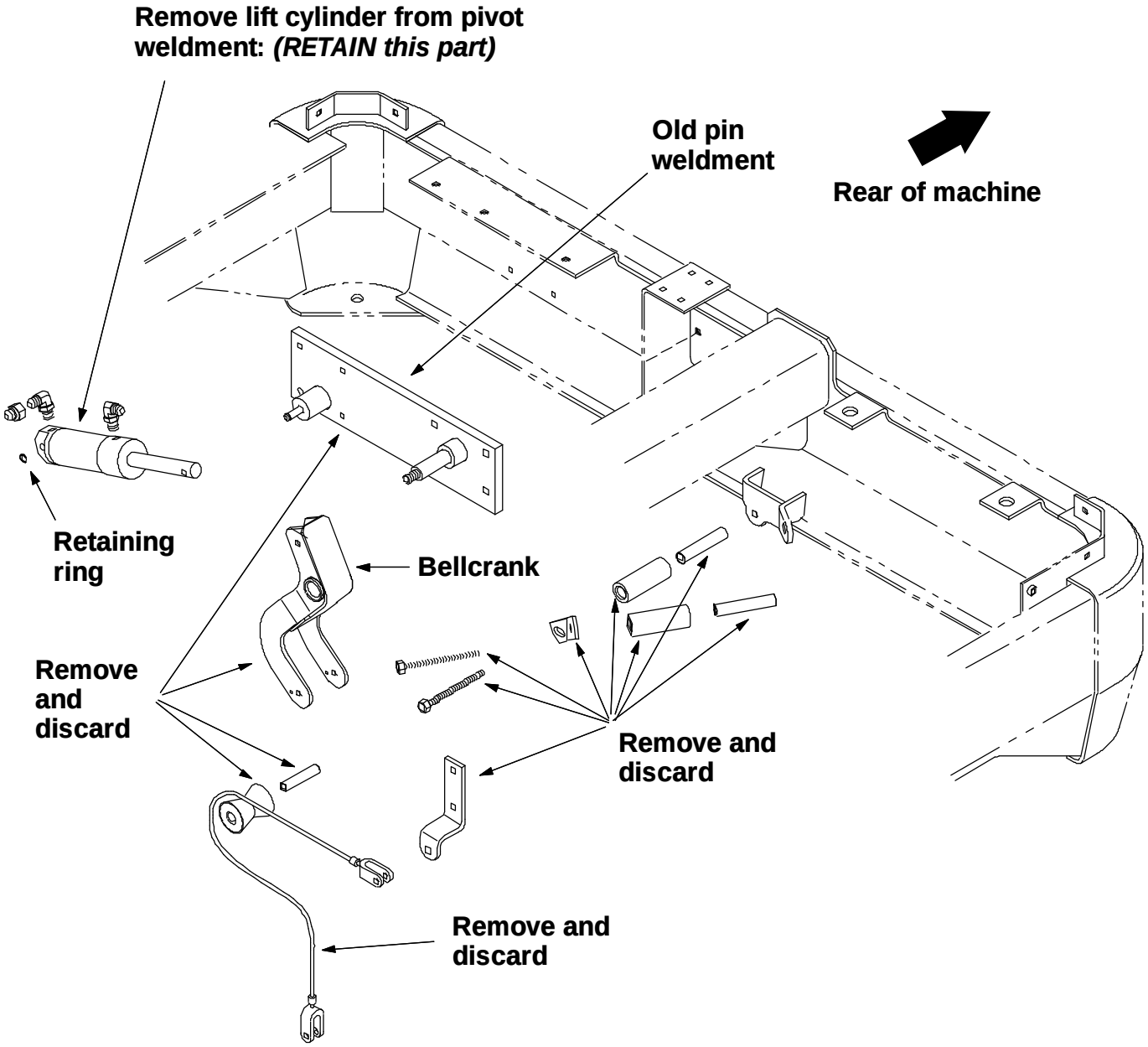

FIG. 1 – Remove And Discard The Parts Indicated

8. Remove and discard the six remaining hex screws holding the old pin weldment and bellcrank assembly to the machine frame. Remove and discard the old pin weldment. (Refer to Fig. 1)

INSTALLATION:

(Refer to Fig. 2, 3, 4, 5, 6, and 7)

1. Install the new pin weldment (23) on the machine. Use four of the six hex screws (21) and belleville washers (22) that are included in this kit. Do not install any hardware in the two holes in the far left or the far right of the new pin weldment (23). Leave this hardware loose. (Refer to Fig. 2 and 5)

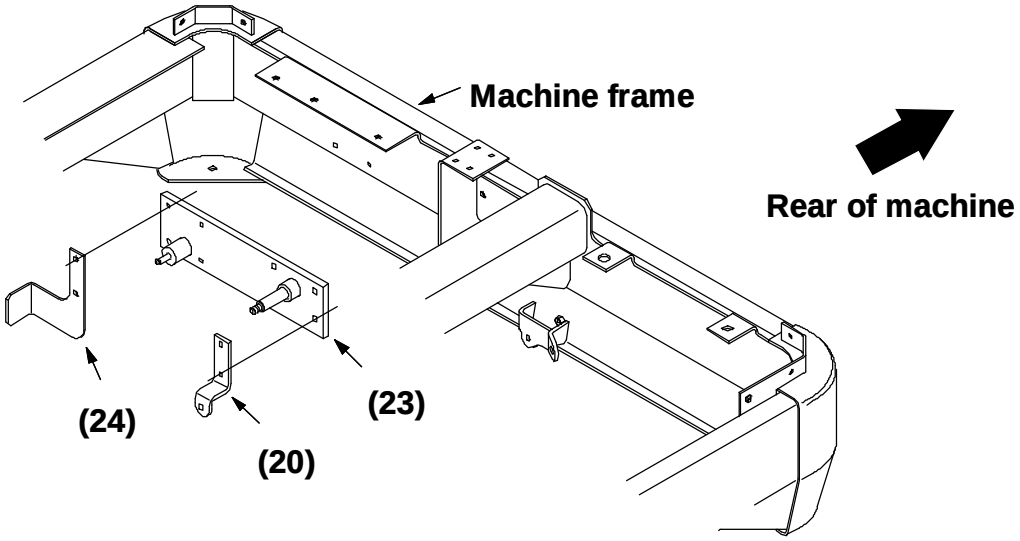

FIG. 2 – Pin Weldment

2. Install the new spring bracket (24) on top of the new pin weldment (23). This bracket is positioned to the outside of the lift cylinder mount pin. Use two hex screws (21) and belleville washers (22) from this kit. This hardware is installed in the two holes on the outside of the new pin weldment (23). The angle on the spring bracket (24) faces **down**. (Refer to Fig. 2 and 3)

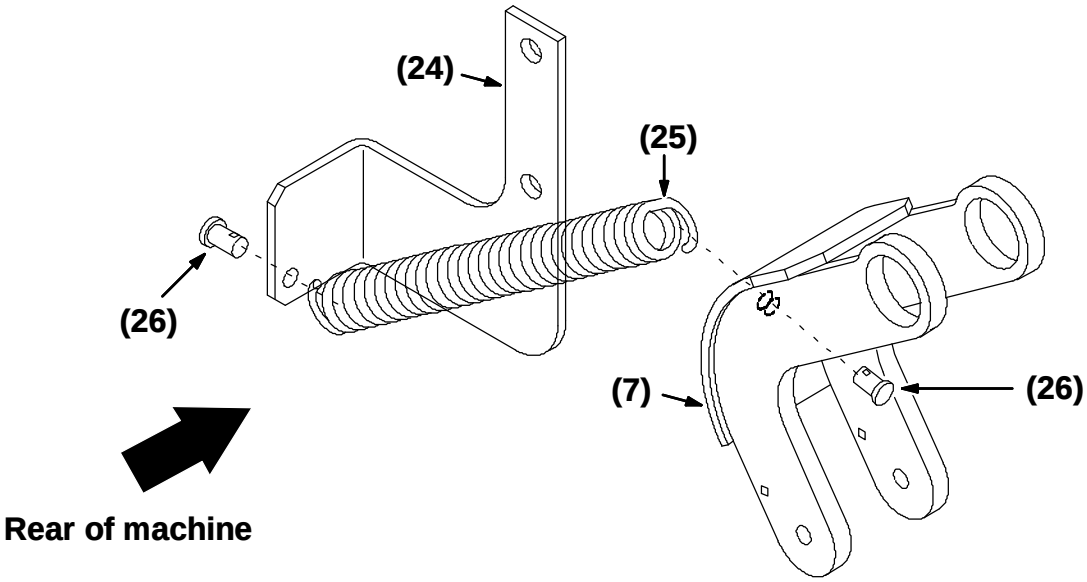

FIG. 3 – Spring Bracket

3. Install the new upper lift cable bracket (20) on top of the new pin weldment (23). This bracket is positioned to the right of the bellcrank assembly mount pin (toward the center of the machine). Use the two remaining hex screws (21) and belleville washers (22). This hardware is installed in the two holes nearest the center of the machine, on the far right of the new pin weldment (23). (Refer to Fig. 2 and 6)

4. All eight hex screws holding the new pin weldment (23) to the machine frame can now be tightened to 18 – 24 Nm (15 – 20 ft lb). (Refer to Fig. 2 and 5)

5. Install the two bearings (8) in the upper bellcrank (6) and the two remaining bearings (27) in the lower bellcrank (7). Use a mallet or hammer to push the bearings in the large hole inn each bellcrank. **Be careful not to bend the arms on the bottom bellcrank.** (Refer to Fig. 4)

NOTE: Make sure both bearings are pushed all the way in. (Refer to Fig. 4)

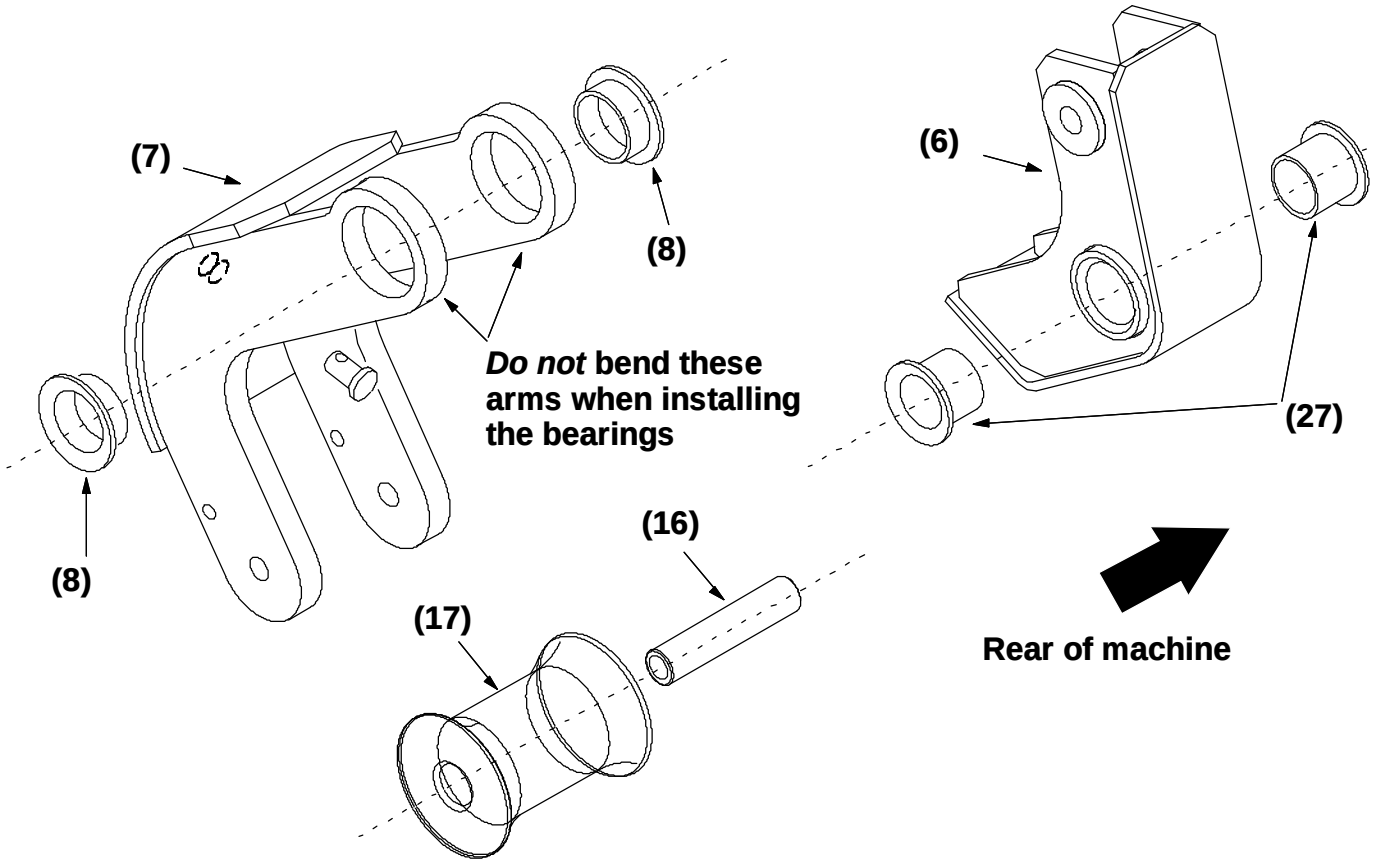

FIG. 4 – Bellcrank Assembly

6. Install a new roller (17) and sleeve (16) in the bottom hole of the new lower bellcrank (7). Install the M8 hex screw (18) and nyloc nut (19). Tighten to 18 – 24 Nm (15 – 20 ft lb). Make sure the roller rotates freely after installation. (Refer to Fig. 4)

7. Position the bellcrank assembly on the large pin on the pivot weldment (23). (Refer to Fig. 5)

8. Position the slotted end of the gusset bracket (11) over the top of the bellcrank assembly. (Refer to Fig. 5)

9. Install the M12 nyloc nut (10) and washer (9) on the pivot weldment pin over the top of the gusset bracket (11) and bellcrank assembly. Leave the nut loose for now. (Refer to Fig. 5)

10. The other end of the gusset bracket (11) is assembled to the machine frame using the M10 hex screw (14) and nyloc nut (15). The new roller (13) and sleeve (12) are positioned between the gusset bracket (11) and the machine frame. Use the hole in the **flat** that was left empty after the two rollers were removed in step 8 of the PREPARATION instructions. **Do not** use the hole on the angle. (Refer to Fig. 5)

11. Tighten the M12 nyloc nut holding the gusset bracket (11) and bellcrank assembly to 64 – 83 Nm (47 – 61 ft lb). Make sure the roller rotates freely after installation. (Refer to Fig. 5)

12. Tighten the M10 hex screw (14) and nyloc nut (15) holding the gusset (11), sleeve (12), and roller (13) to 37 – 48 Nm (26 – 34 ft lb). Make sure the roller rotates freely after installation. (Refer to Fig. 5)

13. Position the piston end of the lift cylinder on the small pin on the pivot weldment (23). Reinstall the retaining ring. (Refer to Fig. 5)

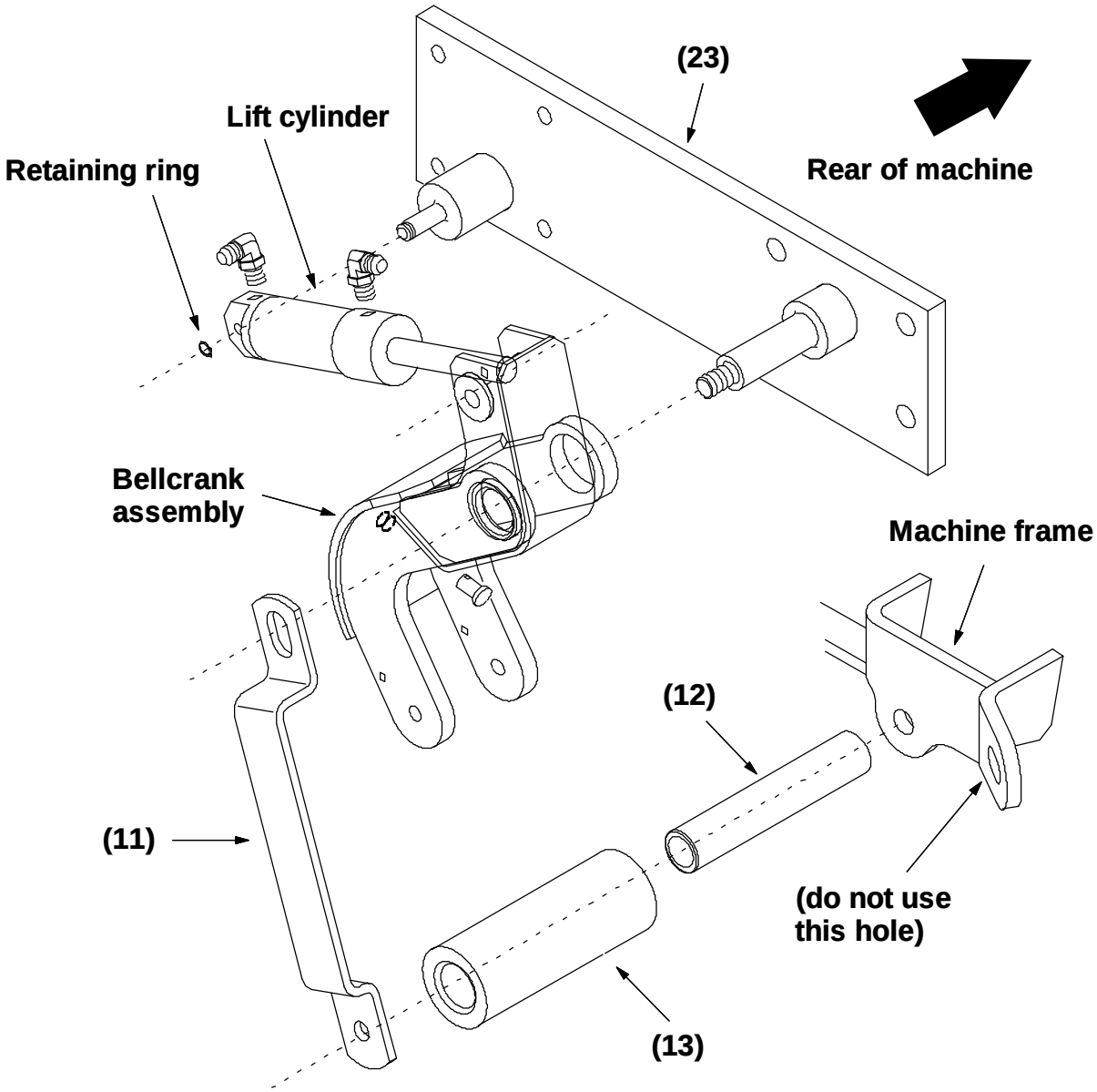

FIG. 5 – Squeegee Lift Assembly

14. Position the rod end of the lift cylinder in the upper bellcrank (6). Install the clevis pin (28), washer (29), and cotter pin (30) from this kit. (Refer to Fig. 5)

15. Install one end of the new lift cable (1) to the upper lift cable bracket using one clevis pin (2), one flat washer (3), and the hair pin (4). (Refer to Fig. 6)

16. Route the lift cable (1) over the top of the roller (17) in the lower bellcrank (7). (Refer to Fig. 6)

17. Route the cable over the top of the roller that was installed in step 10. (Refer to Fig. 5 and 6)

18. Attach the this end of the lift cable (1) to the squeegee frame using one clevis pin (2), one flat washer (3), and the cotter pin (5). (Refer to Fig. 6 and 7)

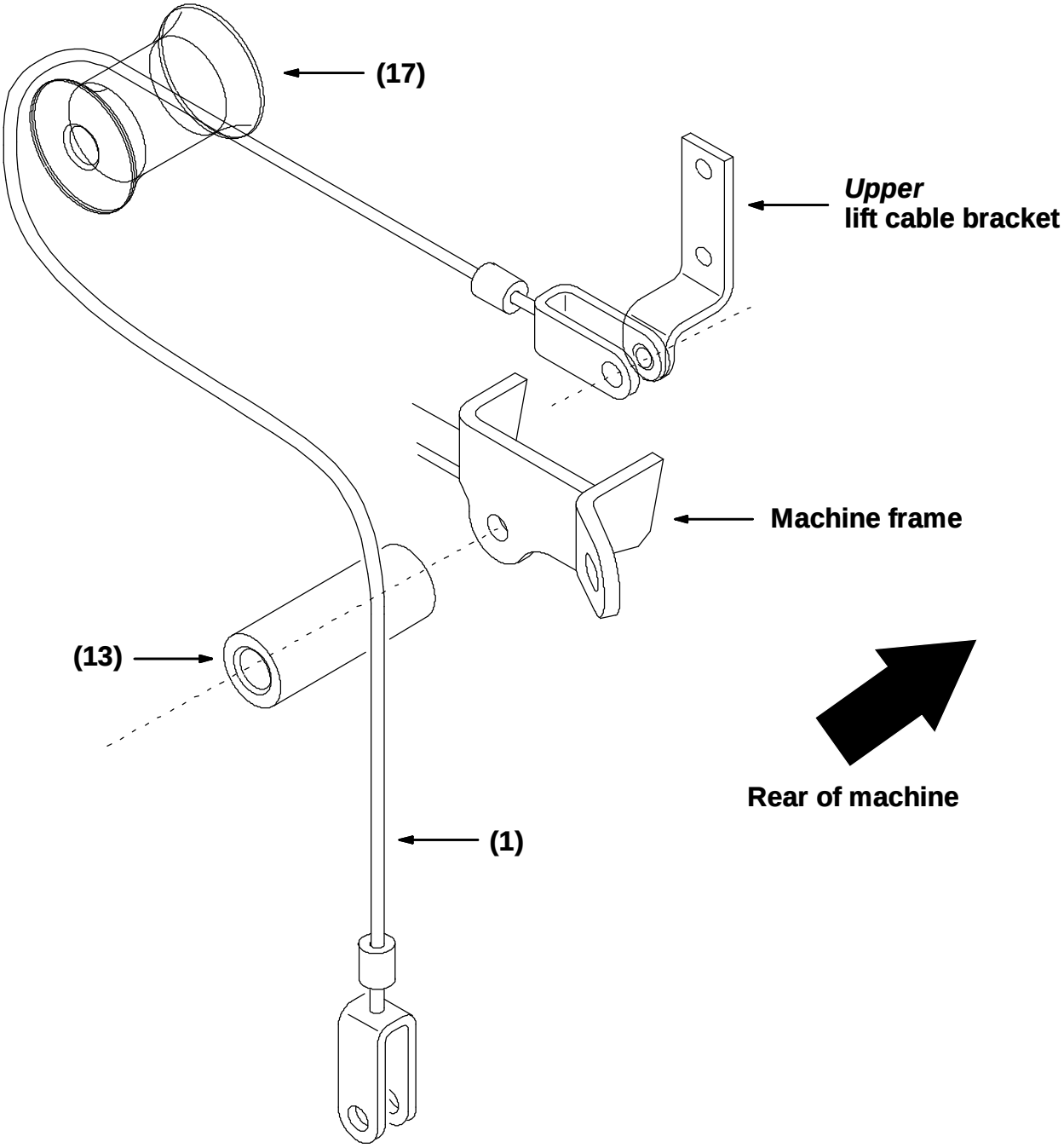

FIG. 6 – Lift Cable Assembly

19. Attach one end of the tension spring (25) to the clevis pin (26) which has been installed in the hole in the spring bracket (24). (Refer to Fig. 3 and 7)

20. Attach the other end of the tension spring (25) to the hole in the clevis pin (26) which has been installed in the hole in the bottom bellcrank (7). (Refer to Fig. 3 and 7)

21. Start the machine and raise and lower the squeegee assembly. Check for proper operation of the squeegee cable and lift assembly.

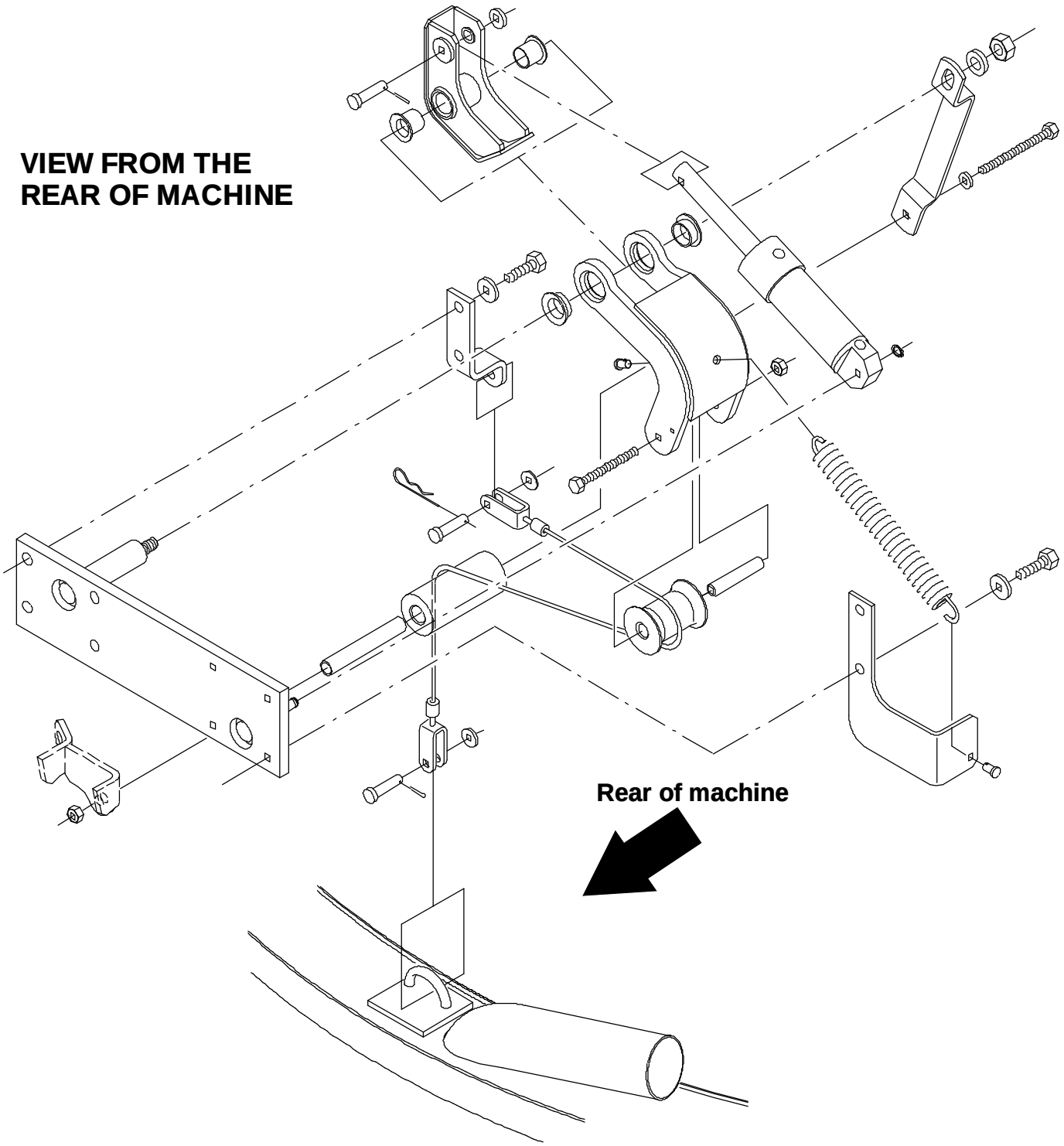

FIG. 7 – View From Rear

PARTS EXPLOSION WHEN ASSEMBLING FROM THE REAR OF THE MACHINE

BILL OF MATERIALS FOR REAR SQUEEGEE LIFT ASSEMBLY REPLACEMENT KIT 23009

Ref.	TENNANT Part No.	Description	Qty.
1	10542	Lift cable	1
2	86240	Clevis pin, 3/8 in. x 1–1/8 in.	2
3	32491	Washer, 5/16 in.	2
4	86866	Hair pin	1
5	08179	Cotter pin	1
6	83780	Bellcrank, upper	1
7	83781	Bellcrank, lower	1
8	83733	Bearing	2
9	32493	Washer, 1/2 in.	1
10	08711	M12 nyloc nut	1
11	23002	Bracket, gusset	1
12	23005	Sleeve	1
13	23006	Roller	1
14	07819	M10 hex screw, 130mm	1
15	08714	M10 nyloc nut	1
16	83756	Sleeve	1
17	83749	Roller	1
18	06959	M8 hex screw, 100mm	1
19	08713	M8 nyloc nut	1
20	72910	Cable bracket	1
21	06956	M8 hex screw, 45mm	8
22	41186	.31 belleville washer	8
23	23004	Pin weldment	1
24	23001	Bracket, spring	1
25	23007	Tension spring	1
26	41305	Clevis pin	2
27	83734	Bearing	2
28	222260	.38 x 2.25 in. clevis pin	1
29	01686	.38 flat washer	1
30	39005	Cotter pin	1

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

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