Rail Cylinder Sprocket Replacement - 1600 and 2000 lb Railgate Series

Preparing the Railgate

1. **Place** 6" or larger blocks under the platform sliders (Figure 1).
   This positions the cylinder correctly inside the gate.
2. **Unlatch** and **Lower** the platform until it rests on the blocks.
3. **Remove** the box cover nuts and box cover (Figure 1).
4. **Hold** the toggle in the lower position and **Push** the cylinder in to release the roller chain tension.
5. **Disconnect** the #4 power cable from the positive side of the battery or manually trip the circuit breaker (Figure 2).

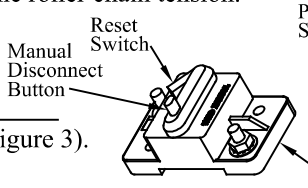

Figure 2: Circuit breaker.

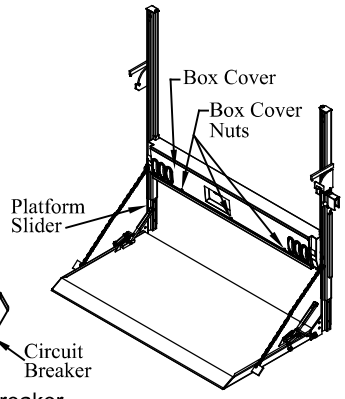

Figure 1: Railgate.

Removing the Cylinder

6. **Remove** the roller chain cotter pins on the back side of the chain clevis (Figure 3).
7. **Remove** the roller chain clevis pins (Figure 3).
8. **Remove** the roller chains from the cylinder sprockets only (Figure 3).
9. **Remove** the cylinder hold down clamp (Figure 3).
10. **Remove** the cylinder pivot pin and keeper (Figure 3).
11. **Do Not** disconnect the hydraulic hose (Figure 3).
12. **Identify** the style of pin holding the sprocket you are replacing (Figure 3).
13. If the railgate has a bolt-in style pin and keeper, **Remove** the pin and keeper, sprocket, and washers and **Go To** step (27), otherwise continue on to step (14).

Removing the Welded Rivet Pin

(14). **Rotate** the cylinder rod so that you can access the back side of the sprocket rivet pin.
15. **Cover** and **Protect** the vehicle, liftgate, roller chains, and liftgate wiring.
16. **Grind** the welds (two per rivet pin) of the pin/sprocket to be replaced.
17. **Remove** the pin, sprocket, and washers.
18. The new pin and keeper can be welded in or bolted in. **Go To** the appropriate option below.

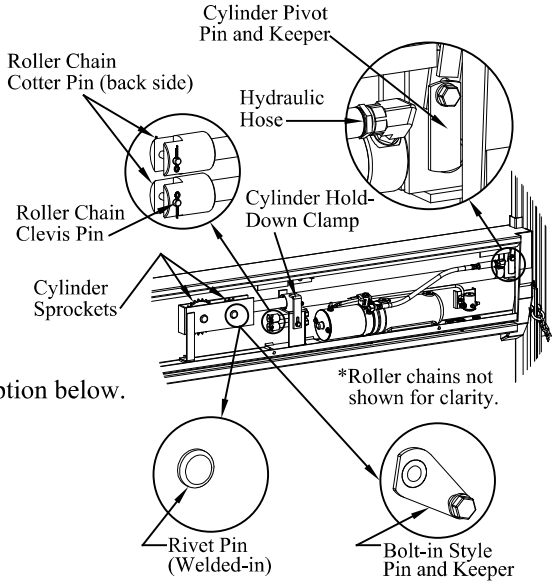

Figure 3: Railgate Mainframe.

Welding in the Sprocket Pin (Option #1)

Note: Use this section only if you want to weld the sprocket pin in place.

19. **Install** the new washers, sprocket, and pin and keeper (Figure 4).
    This works best with the cylinder plates oriented horizontally.
20. **Weld** the pin and keeper with two 1/8" fillet welds 1/2" in length (Figure 4).
21. **Go To** step (29).

Bolting in the Sprocket Pin (Option #2)

Note: Use this section if you want to bolt the sprocket pin in place.

22. **Position** the pin and keeper in the cylinder sprocket hole (Figure 4).
23. **Mark** the location to be drilled with a punch (center of keeper slot).
24. **Remove** the pin and keeper.
25. **Drill** a 5/16" hole in the location previously marked.
26. **Tap** the 5/16" hole with a 3/8-16 UNC-2B tap (Figure 4).
(27). **Install** the new washers, sprocket, and pin and keeper (Figure 4).
    This works best with the cylinder plates oriented horizontally.
28. **Install** and **Tighten** a 3/8" x 1/2" hex head bolt and 3/8" lock washer in the keeper slot (Figure 4).

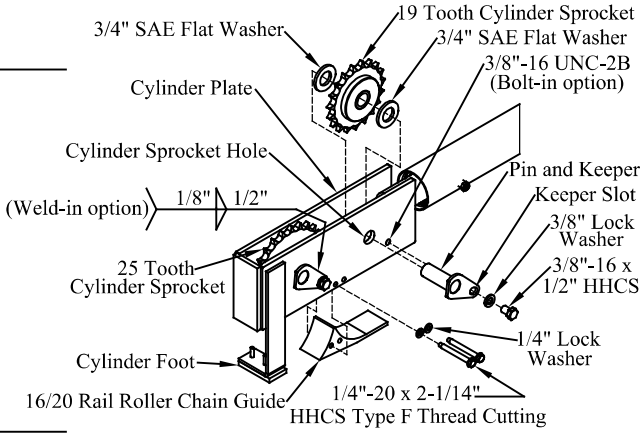

Figure 4: Sprocket Assembly.

Installing the Cylinder

(29). **Rotate** the cylinder rod so that the cylinder plates are verticle and the cylinder foot rests on the bottom of the mainframe (Figure 4).
30. **Install** the cylinder pivot pin and keeper (Figure 3).
31. **Install** the cylinder hold down clamp (Figure 3).
32. **Install** the roller chains on the cylinder sprockets (Figure 5).
33. **Install** the roller chain clevis pins (Figure 5).
34. **Install** the new cotter pins in the roller chain clevis pins (Figure 5).

Finishing the Install

35. **Install** the box cover.
36. **Connect** the #4 power cable to the positive side of the battery or manually engage the circuit breaker.
37. **Raise** and **Close** the platform.

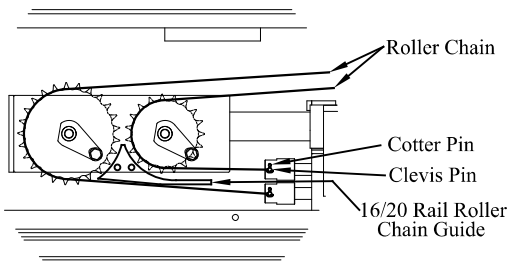

Figure 5: Roller Chain Assembly.