



Hydraulic Cylinder Kit Groundsmaster® 455-D

Part No. 106-1062

Part No. 106-1097

Form No. 3329-605 Rex A

Installation Instructions

Note: Determine the left and right sides of the machine from the normal operating position.

Loose Parts

Note: Use the chart below to identify parts used for assembly.

Description	Qty.	Use
Hydraulic cylinder	1	Install the hydraulic cylinder
Hose assembly	1	

1. Lower the cutting units, engage the parking brake, stop the engine and remove the ignition key.
2. Remove the deck covers.
3. Disconnect the hydraulic hoses from the 90° fitting and the tee fitting on the hydraulic lift cylinder (Fig. 1). Right hand hydraulic cylinder is shown in figures.
4. Loosen and remove the 2 nuts securing the hydraulic cylinder ball joints to the deck frames (Fig. 1). Remove the nuts, the washers and the ball joint. Retain the washers and the nuts for reassembly.

Note: To ease removal of the cylinder from the frames, loosen and unthread the ball joint nuts until they are flush with the ends of the ball joint threads. Tap on the nuts, with a hammer, to loosen the ball joints from the frame. Remove the nuts, the washers and the ball joints. Retain the washers and the nuts for reassembly. Remove the cylinder from the decks.

5. Rotate the compression spring until it is off the roll pin in ball joint (Fig. 1).
6. Remove the roll pin from the ball joint (Fig. 1). Retain the roll pin.
7. Loosen the jam nuts securing the ball joints to the cylinder rod and the cylinder body. Remove the ball joints and compression spring (Fig. 1). Retain the ball joints and spring.
8. Remove the 90° fitting w/O-ring from the cylinder body (Fig. 1). Retain the fitting w/O-ring.
9. Discard the cylinder body and the remaining fittings installed on cylinder.
10. Disconnect the hydraulic hose that was connected to the tee fitting on cylinder (Fig. 1). Discard hose.

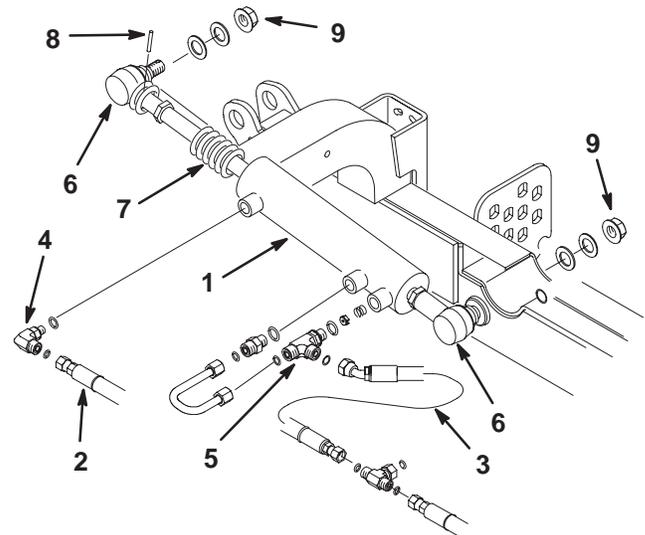


Figure 1

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|-----------------------------|-----------------------|
| 1. Hydraulic lift cylinder | 6. Ball joint |
| 2. Hydraulic hose (retain) | 7. Compression spring |
| 3. Hydraulic hose (discard) | 8. Roll pin |
| 4. 90° Fitting | 9. Ball joint nuts |
| 5. Tee fitting | |

11. Install the previously removed 90° fitting w/O-ring to the new cylinder (Fig. 2). The fitting is to be positioned in the same direction as the permanent fitting is on cylinder body. Torque fitting to 34-36 ft-lb.
12. Insert the compression spring onto the cylinder rod and thread the ball joint all the way onto cylinder rod (Fig. 2). The ball joint is to face away from the fittings. Tighten the jam nut.

13. Thread the other ball joint all the way into cylinder body (Fig. 2). The ball joint is to face away from the fittings. Do not tighten the jam nut at this time.
14. Press the roll pin into the ball joint (Fig. 2).
15. Rotate the compression spring onto the roll pin in the ball joint (Fig. 2).
16. Mount the cylinder to the decks.
17. Secure the ball joints to the deck frames with the washers and nuts previously removed (Fig. 2). Torque the nuts to 152–198 ft–lb.
18. Mount the existing hose to the 90° fitting on the cylinder (Fig. 2). Torque the fitting to 24–29 ft–lb.
19. Mount the new hose to the tee fitting and the permanent 90° fitting on the cylinder (Fig. 2). Torque the fitting to 24–29 ft–lb.
20. Tighten the jam nut securing the ball joint to the cylinder body.
21. Grease the ball joint fittings.
22. Refurbish any of the hydraulic fluid that may have been lost during installation.
23. Start the engine. Raise and lower the wing deck several times to purge any air from the system.

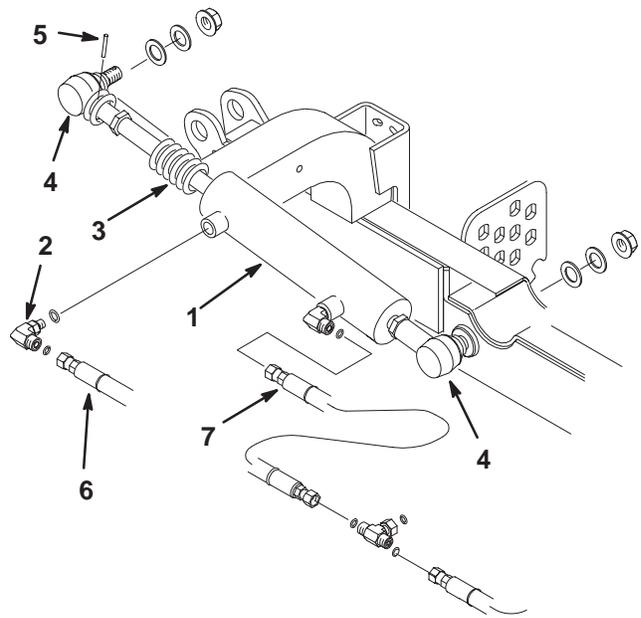


Figure 2

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|-------------------------|------------------------------|
| 1. Hydraulic cylinder | 5. Roll pin |
| 2. 90° Fitting (reused) | 6. Hydraulic hose (existing) |
| 3. Compression spring | 7. Hydraulic hose (new) |
| 4. Ball joint | |