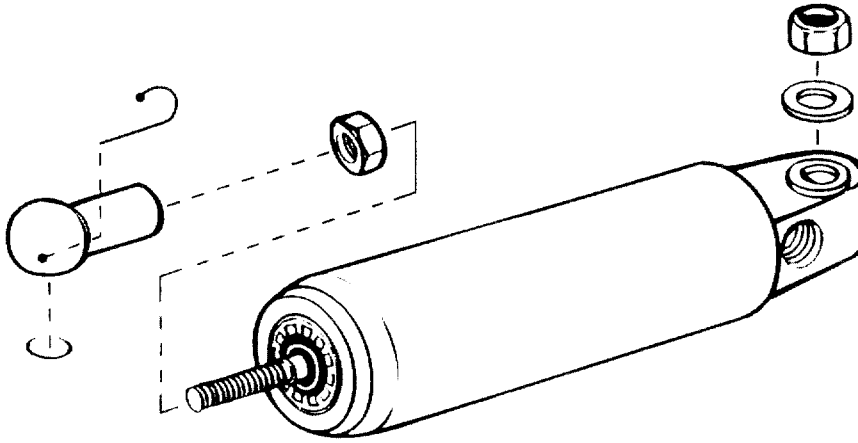




Jacobs Vehicle Systems™



Jacobs Exhaust Brake™

**Air Cylinder
Replacement Group**

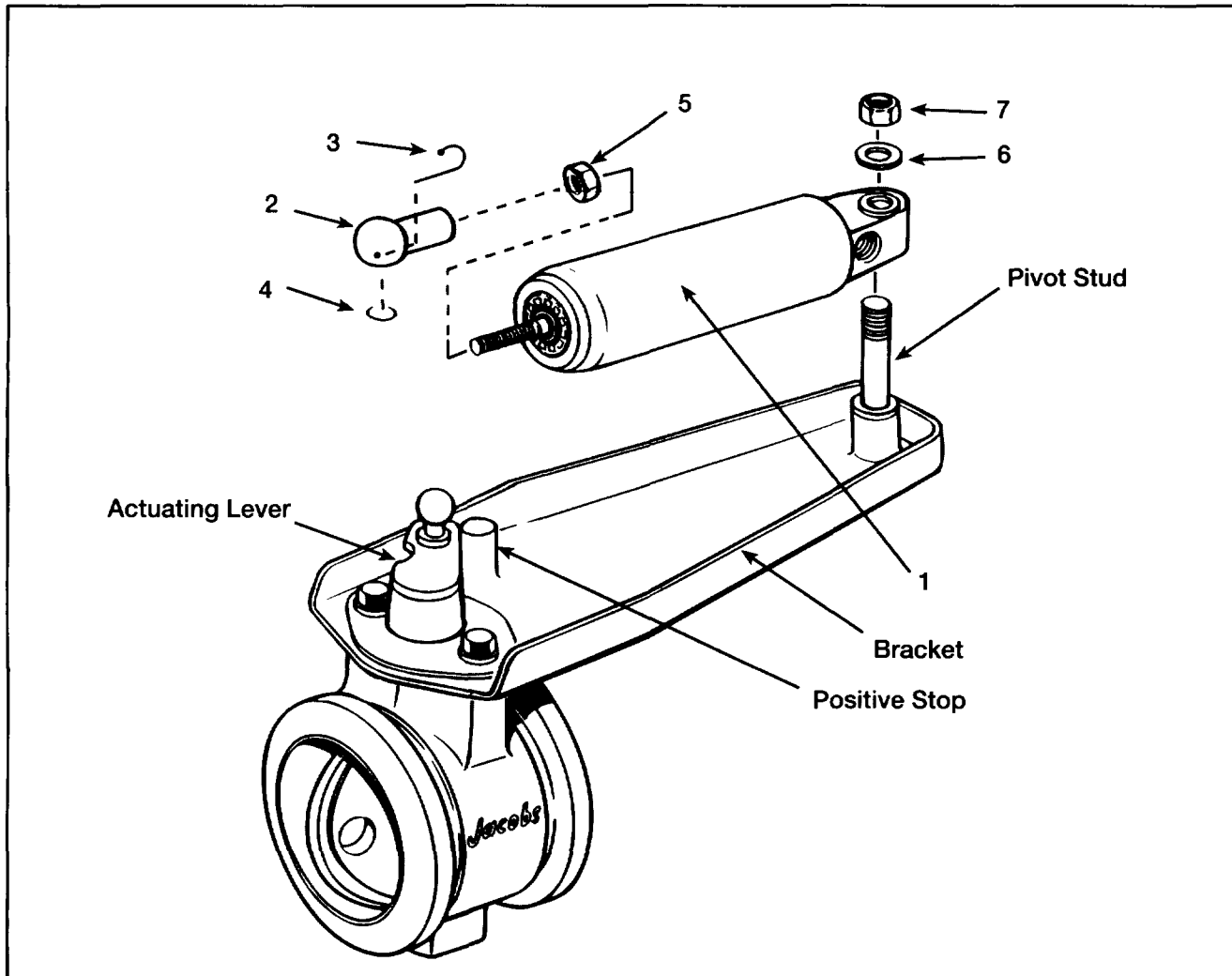
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PARTS/INSTALLATION

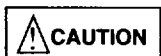
Parts Information:

Air Cylinder Replacement Group Contents:

Illus. No.	Description	Qty
1	Air Cylinder	1
	Socket Assembly	1
2	-Socket	
3	-Safety Clip (J-Clip)	
4	-Internal Snap Ring (C-Ring)	
5	Jam Nut - M8x1.25	1
6	Washer - M8	1
7	Lock Nut - M8x1.25	1
N.I.	Parts/Installation Manual	1



Replacement Procedure:



Care must be taken to ensure proper set-up of the Jacobs Exhaust Brake™ Air Cylinder. Improper adjustment can result in low performance or reduced durability of the exhaust brake assembly.

Removal of Old Air Cylinder

1. Park the vehicle, set the parking brake and shut down the engine. Chock the rear tires.



NORMALLY THE EXHAUST BRAKE AIR CYLINDER WILL NOT BE UNDER PRESSURE DURING THIS PROCEDURE. AS AN ADDED PRECAUTION, RELIEVE ANY AIR PRESSURE FROM THE VEHICLE AIR SYSTEM.

2. Disconnect the air supply line from the exhaust brake Air Cylinder (1).
3. If the configuration of your vehicle does not provide enough clearance to remove the air cylinder from the exhaust brake, remove the exhaust brake assembly from the vehicle.
4. Loosen the Jam Nut (5).
5. Remove the Safety Clip (3). Note the orientation of the clip.
6. Pry the Socket (2) off of the ball stud on the exhaust brake actuating lever.
7. Loosen and remove the Lock Nut (7) and the Washer (6).
8. Remove the Air Cylinder (1). Mark the orientation of the pressure supply port.
9. Remove the air supply fitting(s) from the Air Cylinder (1). Note the orientation of the air supply fittings.

Installation of New Air Cylinder

1. Install the Jam Nut (5) and Socket (2) onto the Air Cylinder (1). Do not tighten the nut and socket at this time.
3. Reinstall the air supply fitting(s) onto the Air Cylinder (1) in the orientation noted above.
4. Assemble the air cylinder assembly onto the pivot stud in the orientation marked above.
5. Install the Washer (6) and the Lock Nut (7). Do not tighten the nut at this time.
6. Adjust the Socket (2) as follows:

- a. Move the actuating lever clockwise until it contacts the positive stop and hold it in this position.
- b. Turn the Socket (2) onto the air cylinder shaft until its pocket aligns with the ball on the actuating lever.
- c. Turn the Socket (2) one additional turn onto the air cylinder shaft.

NOTE: THIS PROCEDURE MUST BE PERFORMED TO ENSURE THAT THERE IS A SLIGHT PRE-LOAD OF THE SPRING INSIDE THE AIR CYLINDER. IF THERE IS MORE THAN 1-1/2 TURNS OF PRE-LOAD THE EXHAUST BRAKE BUTTERFLY WILL NOT FULLY CLOSE, RESULTING IN POOR EXHAUST BRAKE PERFORMANCE.

- d. Snap the Socket (2) onto the ball stud on the actuating lever.

NOTE: AFTER ASSEMBLY OF THE BALL AND SOCKET JOINT, THE SPRING PRE-LOAD IN THE AIR CYLINDER MUST HOLD THE ACTUATING LEVER TIGHTLY AGAINST THE POSITIVE STOP.

- e. Verify that there is no free play in the actuating lever. Repeat Step 6. if required.
7. Install the Safety Clip (3) through the holes in the Socket (2) from the air cylinder side first. Snap the circular portion of the clip onto the groove in the body of the socket.
 8. Tighten the Jam Nut (5) against the Socket (2). Torque to 13 lb-ft (18 N-m).
 9. Tighten the Lock Nut (7). Tighten until there is no free play between the pivot stud and the bushing in the Air Cylinder (1).
 10. If the exhaust brake assembly was removed, reinstall it in the exhaust piping using new gaskets on all connections upstream of the exhaust brake assembly.
 11. Reconnect the air supply line to the Air Cylinder (1).
 12. Complete re-assembly of any vehicle components removed during the replacement process and conduct a road test to assure proper exhaust brake operation.

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Visit us on the Internet:
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