

*DSM# 821B*

## MICO LEVER LOCK MAINTENANCE

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### 1. GENERAL

**1.01** This section provides information on repairing the Model 8800 Mico Lever Lock. Section 649-040-105 provides operating instructions and other pertinent information.

### 2. DESCRIPTION

**2.01** The Model 8800 Mico Lever Lock is a hand operated device for locking the hydraulic brakes on a motor vehicle. Figures 1 and 2 show sectional views of it, give the names of its parts, and explain how it works.

### 3. BRAKES WON'T HOLD

**3.01** If there is a leak in the hydraulic system between the brake lock and the wheel cylinders, bleeding of the brake fluid and a loss of hydraulic pressure in the system will result. When this occurs it allows the brakes to release. The rate of release will depend upon the size of the leak. To test for a leak, move the hand lever down and hold the brake pedal down. If while holding the brake pedal down there is a

gradual downward pedal travel there is a leak in the system. A slight slow leak, however, may not be detected this way. If no leak is detected by this test, carefully examine the brake lines, especially at the joints, for the presence of moisture caused by leaking brake fluid. Repair any leaks immediately. A leak anywhere in an hydraulic braking system is a dangerous condition.

### 4. BRAKES WON'T RELEASE

**4.01** Repeated operation with a contaminated hydraulic system or a swollen "O" Ring can cause wear of the Cam and the end of the Push Rod. Such wear can develop to the extent that the Cam can no longer move the Push Rod far enough into the Lever Lock Body to unseat the Nylon Valve. If the Valve can not be unseated it will not permit the brake fluid to return from the wheel cylinders and release the brakes. Remove the Lever Lock from the vehicle. Remove the Push Rod Assembly and Operating Cam. Wash all parts with fresh clean hydraulic brake fluid, including the Lever Lock Body and examine them carefully. Replace any parts which appear unserviceable. Contamination and a swollen "O" Ring throw suspicion on the quality of the brake fluid used.

### 5. REMOVING LEVER LOCK FROM VEHICLE

**5.01** Disconnect the hydraulic lines at the Lever Lock. Loosen the Mounting Nut. Hold the hexagonal Lever Lock Body with a wrench and unscrew the Clevis by means of the Operating Handle. The Lever Lock can now be removed from the vehicle.

### 6. REMOVING PUSH ROD ASSEMBLY

**6.01** After the Clevis is removed, the Push Rod Assembly can be pulled out from the end of Lever Lock Body. If difficulty is encountered it can be pushed out from the opposite end after the Compression Spring and Nylon Valve are removed.

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### 7. REMOVING NYLON VALVE

**7.01** Place the Lever Lock Body in a vise and unscrew the End Plug. The Compression Spring and Nylon Valve can then be removed and the Push Rod Assembly pushed out through the opposite end.

### 8. REMOVING OPERATING CAM

**8.01** Drive out the Lever Pivot Pin. The Operating Lever with Operating Cam and the Latch Spring can now be removed. Unscrew the Operating Lever from the Operating Cam.

### 9. REASSEMBLING LEVER LOCK

**9.01** Before reassembling the Lever Lock, thoroughly wash with fresh clean hydraulic brake fluid all parts which are reused, including interior of the Lever Lock Body. Exercise great care to prevent any foreign material getting into the hydraulic system when reassembling.

**9.02** Hold the Lever Lock Body in a vise. Put the Nylon Valve followed by the Compression Spring into it and screw the End Plug with Copper Gasket in tight.

**9.03** Put the Push Rod Assembly into the Lever Lock Body from the Clevis end, carefully so as not to damage the "O" Ring. The nylon capped end of the push rod should be outside.

**9.04** Assemble the Operating Lever, Cam, Latch Spring and Lever Pivot Pin with the Clevis. Note that the Clevis is die-stamped "TOP." Also note that there is a groove on one side of the Operating Cam and a ridge on the Latch Spring. Make sure that the ridge on the Latch Spring is against the grooved side of the Cam. Then put them into the Clevis so that the Latch Spring is on the right-hand side of the slot when looking toward the slotted end of the Clevis with the side marked "TOP" faced upward.

### 10. REINSTALLING LEVER LOCK

**10.01** Before reinstalling Lever Lock, flush out the entire brake system.

**10.02** Put the reassembled Lever Lock Body with its Mounting Nut and Lock Washer in place on the vehicle. Put the Dash Plate in place and screw the Clevis on tight. Hold the hexagonal Lever Lock Body with a wrench when tightening the Clevis. See that the handle is on the side of the Clevis marked "TOP." Then hold the handle in the "UP" position and screw the mounting nut and lock washer tightly against the Angle Bracket. Reconnect the hydraulic lines.

**10.03** Refill the hydraulic system with SAE Standard Heavy Duty Brake Fluid.

**10.04** Bleed all air from the hydraulic brake system. A plug in the Lever Lock Body is provided for bleeding.

**10.05** Try the brakes and the lever lock to see that the braking system is working satisfactorily. Make sure that there are no leaks.

### 11. REPLACEMENT PARTS

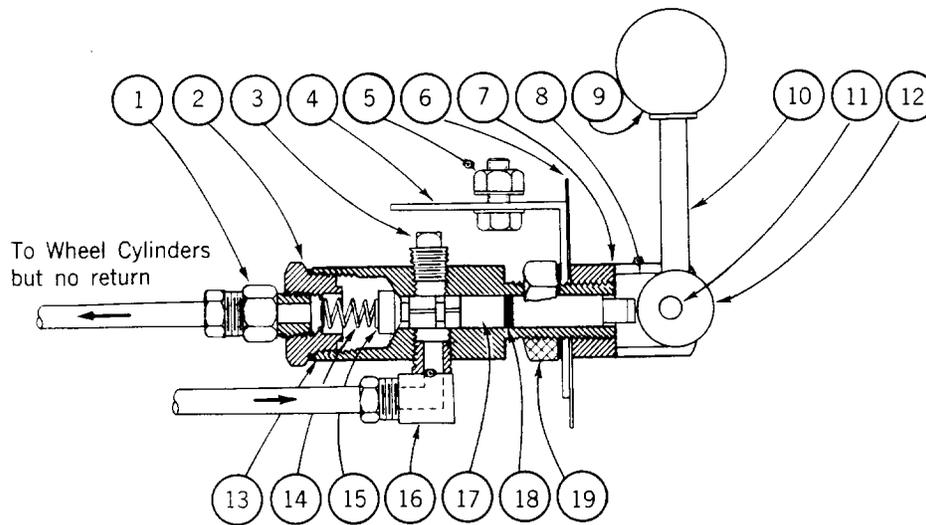
**11.01** The replacement parts most generally required are:

Push Rod Assembly (includes the "O" Ring)  
Nylon Valve  
Repair Kit

**11.02** The repair kit consists of the following:

Push Rod Assembly with "O" Ring  
Compression Spring  
Operating Cam  
Latch Spring  
Lever Pivot Pin  
Copper Gasket for End Plug

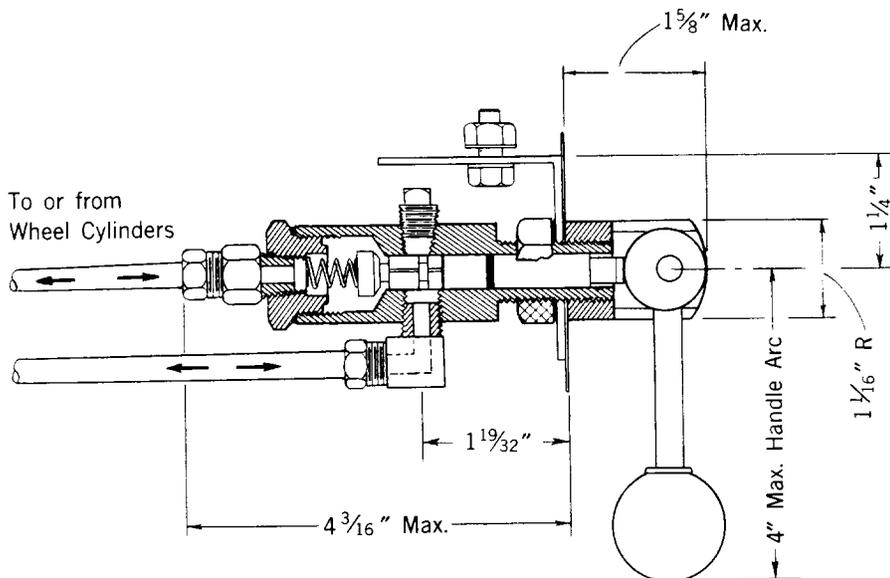
**11.03** Replacement parts should be obtained in accordance with the procedure established in your organization. In all cases, give the name of the part or the kit desired and state that it is for a Model 8800 MICO LEVER LOCK — Minnesota Automotive, Inc. Be sure to give the full name of the lever lock as shown above since the manufacturer also makes other kinds of brake locks with similar names.



When Operating Lever is up, Operating Cam allows Push Rod to move out and permits Compression Spring to push Nylon Valve against its seat. The brake lock now acts as a check valve. It prevents return of the brake fluid from the wheel cylinders and keeps brakes applied even after brake pedal is released.

- 1 - Male Connector, Inverted Seat and Tube Nut
- 2 - End Plug and Copper Gasket.
- 3 - Bleeder Plug.
- 4 - Angle Bracket (for under dash mounting).
- 5 - Mounting Screws with Nuts and Lock Washers.
- 6 - Dash Plate.
- 7 - Clevis.
- 8 - Latch Spring.
- 9 - Operating Knob.
- 10 - Operating Lever.
- 11 - Lever Pivot Pin.
- 12 - Operating Cam.
- 13 - Lever Lock Body.
- 14 - Compression Spring.
- 15 - Nylon Valve.
- 16 - 90° Elbow, Inverted Seat with Tube Nut.
- 17 - Push Rod.
- 18 - "O" Ring.
- 19 - Mounting Nut with Lock Washer.

Fig. 1



When Operating Lever is down, Operating Cam holds Push Rod in. This holds Nylon Valve off its seat so that it no longer acts as a check valve. Brake fluid is free to pass through brake lock in either direction and brakes will be applied only as long as pressure is applied to brake pedal.

Fig. 2