

## INJECTORS (SL-1 Series "H")

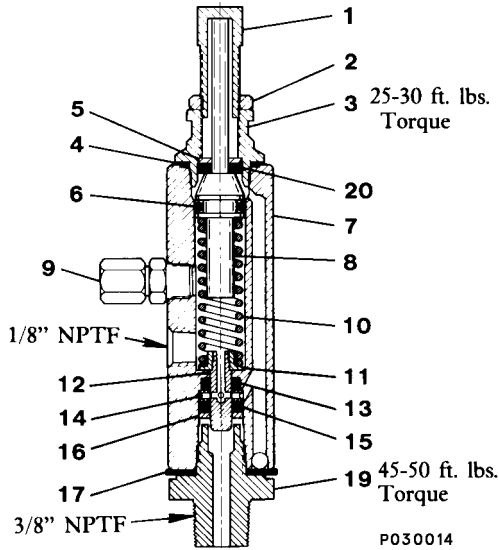


FIGURE 3-8. TYPE SL-1 INJECTOR (SINGLE)

- |                        |                   |
|------------------------|-------------------|
| 1. Adjusting Screw     | 11. Spring Seat   |
| 2. Locknut             | 12. Plunger       |
| 3. Piston Stop Plug    | 13. Viton Packing |
| 4. Gasket              | 14. Inlet Disc    |
| 5. Washer              | 15. Viton Packing |
| 6. Viton O-Ring        | 16. Washer        |
| 7. Injector Body Assy. | 17. Gasket        |
| 8. Piston Assembly     | 18. Adapter Bolt  |
| 9. Fitting Assembly    | 19. Adapter       |
| 10. Plunger Spring     | 20. Viton Packing |

**NOTE:** The Piston Assembly (8) has a visible indicator pin at the top of the assembly to verify the injector operation.

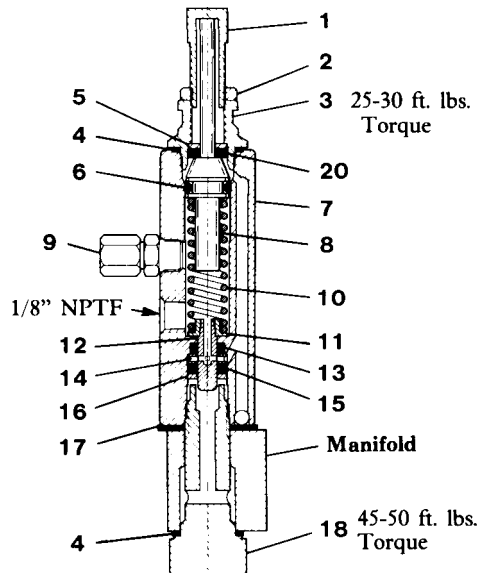


FIGURE 3-8A. INJECTOR (MANIFOLD TYPE)

## Injector Specifications

- Each lube injector services only one grease point. In case of pump malfunction, each injector is equipped with a covered grease fitting to allow the use of external lubricating equipment.
- Injectors are available in banks of two, three, four and five as well as single replacement units.
- Injector output is adjustable:  
Maximum output = 1.31 cc (0.08 in<sup>3</sup>).  
Minimum output = 0.13 cc (0.008 in<sup>3</sup>).
- Operating Pressure:  
Minimum - 130 kg/cm<sup>2</sup> (1850 psi)  
Maximum - 246 kg/cm<sup>2</sup> (3500 psi)  
Recommended - 176 kg/cm<sup>2</sup> (2500 psi)  
Maximum Vent Pressure - (Recharge)  
42 kg/cm<sup>2</sup> (600 psi)

## Injector Adjustment

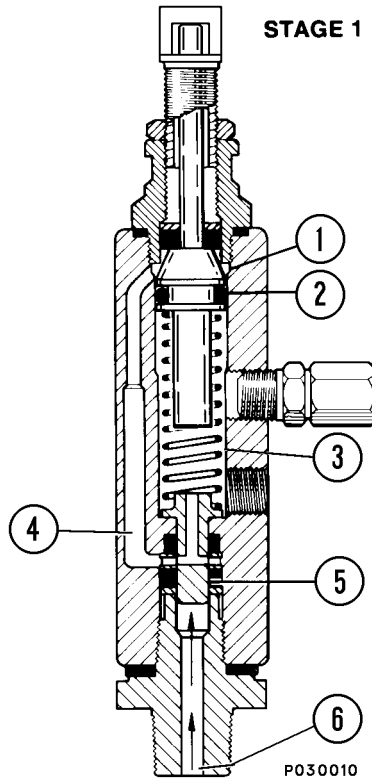
The injectors may be adjusted to supply from 0.13 to 1.31 cc (0.008 in<sup>3</sup> to 0.08 in<sup>3</sup>) of lubricant per injection cycle. The injector piston travel distance determines the amount of lubricant supplied. This travel is in turn controlled by an adjusting screw in the top of the injector housing.

Turn the adjusting screw (1, Figure 3-8) counter-clockwise to increase lubricant amount delivered and clockwise to decrease the lubricant amount.

When the injector is not pressurized, maximum injector delivery volume is attained by turning the adjusting screw (1) fully counterclockwise until the indicating pin (8) just touches the adjusting screw. At the maximum delivery point, about 9.7 mm (0.38 in.) adjusting screw threads should be showing. Decrease the delivered lubricant amount by turning the adjusting screw clockwise to limit injector piston travel. If only half the lubricant is needed, turn the adjusting screw to the point where about 4.8 mm (0.19 in.) threads are showing. The injector will be set at minimum delivery point with about 0.22 mm (0.009 in.) thread showing.

**NOTE:** The above information concerns adjustment of injector delivery volume. The timer adjustment should also be changed, if overall lubricant delivery is too little or too much. Injector output should NOT be adjusted to less than one-fourth capacity.

## Injector Operation

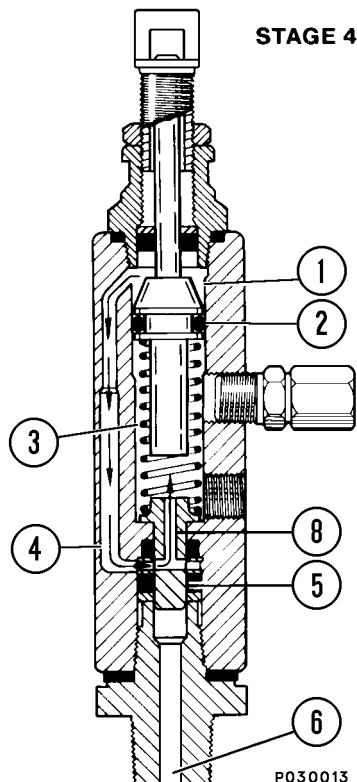
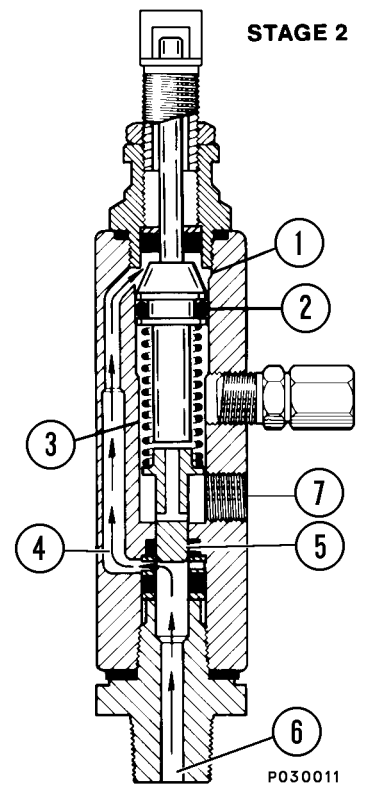


### Stage 1.

The injector piston (2) is in its normal or "rest" position. The discharge chamber (3) is filled with lubricant from the previous cycle. Under the pressure of incoming lubricant (6), the slide valve (5) is about to open the passage (4) leading to the measuring chamber (1) above the injector piston (2).

### Stage 2.

When the slide valve (5) uncovers the passage (4), lubricant (6) is admitted to the measuring chamber (1) above the injector piston (2) which forces lubricant from the discharge chamber (3) through the outlet port (7) to the bearing.



### Stage 3.

As the injector piston (2) completes its stroke, it pushes the slide valve (5) past the passage (4), cutting off further admission of lubricant (6) to the passage (4) and measuring chamber (1). The injector piston (2) and slide valve (5) remain in this position until lubricant pressure in the supply line (6) is vented.

### Stage 4.

After venting, the injector spring expands, causing the slide valve (5) to move, so that the passage (4) and discharge chamber (3) are connected by a valve port (8). Further expansion of the spring causes the piston to move upward, forcing the lubricant in the measuring chamber (1) through the passage (4) and valve port (8) to refill the discharge chamber (3).

The injector is now ready for the next cycle.

