



## FORD 5R55N, 5R55W, 5R55S DELAYED OR NO ENGAGEMENT

**COMPLAINT:** Before and/or after overhaul, the vehicle exhibits an intermittent delayed engagement, or no engagement in either direction. The frequency and severeness of this concern may increase in lower ambient temperatures, and may engage when the throttle is snapped to the wide open position and back to idle. The vehicle may then operate normally until the following morning after cool down and it is restarted.

**CAUSE NO. 1:** The above concern could be oil leaking past the o-ring that belongs on the relief valve sleeve between the pump plate and sleeve, as shown in Figure 1, or the "O" ring totally missing. This "O"-ring is very thin with minimal compression against the pump plate.

**CAUSE NO. 2:** The cause may be, the Line Pressure Relief Valve Assembly (Flow Control Valve) located in the pump stator, as shown in Figure 1, stuck in the open position due to extreme bore wear in the relief valve sleeve. Figure 2 shows the area prone to wear causing the valve to stick in the open position, and lodged onto the ridge at the end of the worn area. The partial hydraulic schematic in Figure 3, will show that if the valve were to stick in the open position, the oil from the pressure side of the pump would follow the path of least restriction and return to the suction side of the pump. The oil pressure would then be severely compromised through out the rest of the unit.

**Caution:** *If this valve assembly is disassembled for inspection, it "Must" be re-assembled with the tab on cap opposite the exhaust holes, as shown in Figure 2.*

### **CORRECTION NO. 1:**

Adding an A4LD pump bolt washer in the pocket of the pump under the sleeve would help raise the sleeve up to compress the o-ring tighter creating a better seal (See Figure 1).

**Caution:** Be careful not to raise the sleeve above the pump surface, **"Only"** the o-ring.

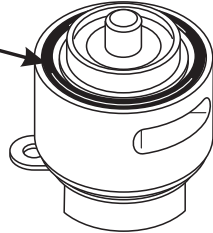
### **CORRECTION NO. 2:**

At the time of this printing, a complete pump assembly will be necessary, as Ford does not service the relief valve assembly separately. These are available from OEM or from many aftermarket Hard Parts Suppliers, or you could rob one from another pump if you happen to have one. Keep in mind though, it may be in the same shape.

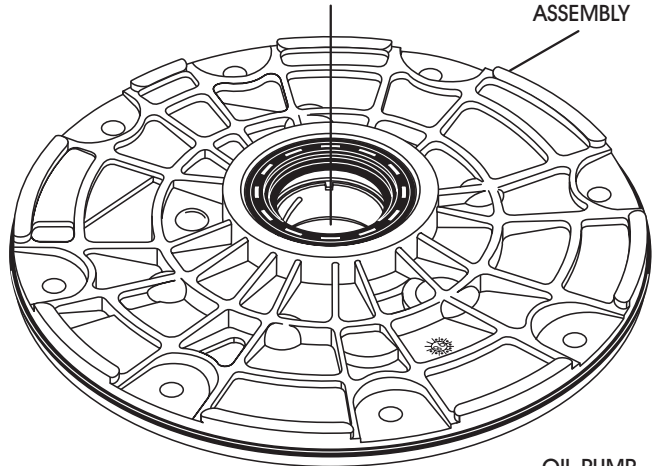
Aftermarket manufacturers are aware of the problem and are working on a replacement relief valve assembly, that should be available soon.

**CAUTION: The Pump Relief Valve Assembly "Must" Have The "O" Ring In Place As Shown Below**

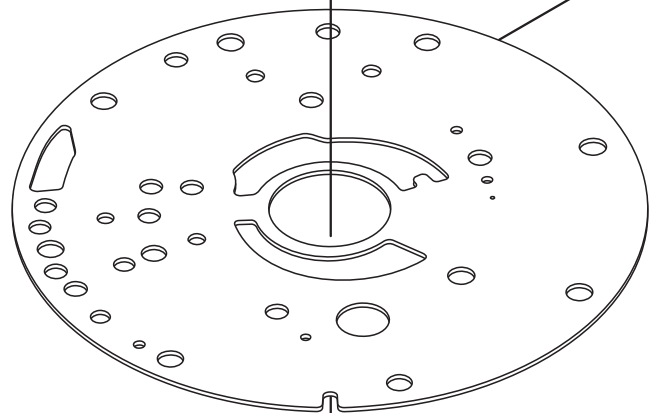
"O" RING IN PLACE ON RELIEF VALVE



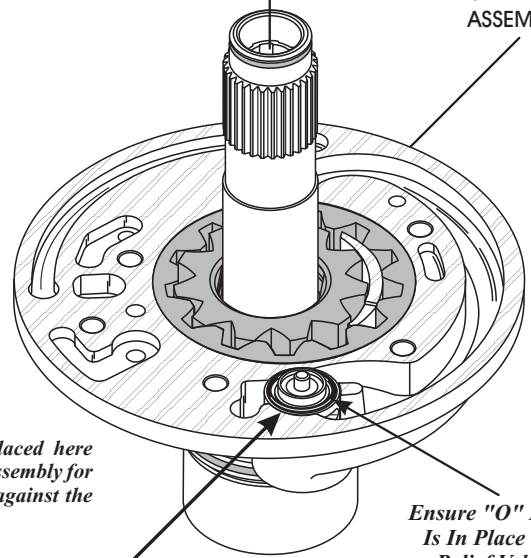
OIL PUMP COVER ASSEMBLY



OIL PUMP SPACER



PUMP BODY ASSEMBLY



Ensure "O" Ring Is In Place On Relief Valve

INNER PUMP GEAR "O" RING

INNER PUMP GEAR

OUTER PUMP GEAR

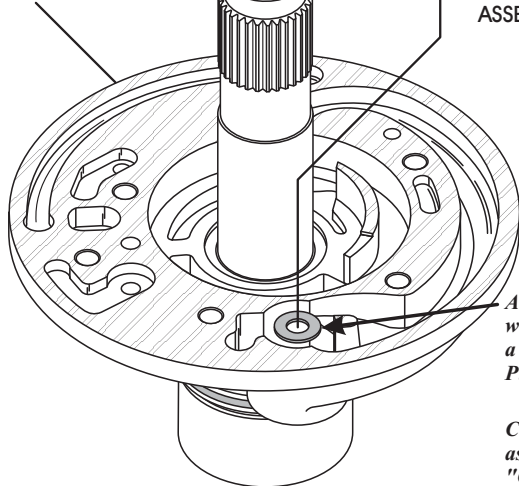
**CAUTION:**  
Install Pump Gears With "Dots" Facing Down

RELIEF VALVE "O" RING

"SOLID" SEAL RING FOR TCC

LINE PRESSURE RELIEF VALVE ASSEMBLY

PUMP BODY



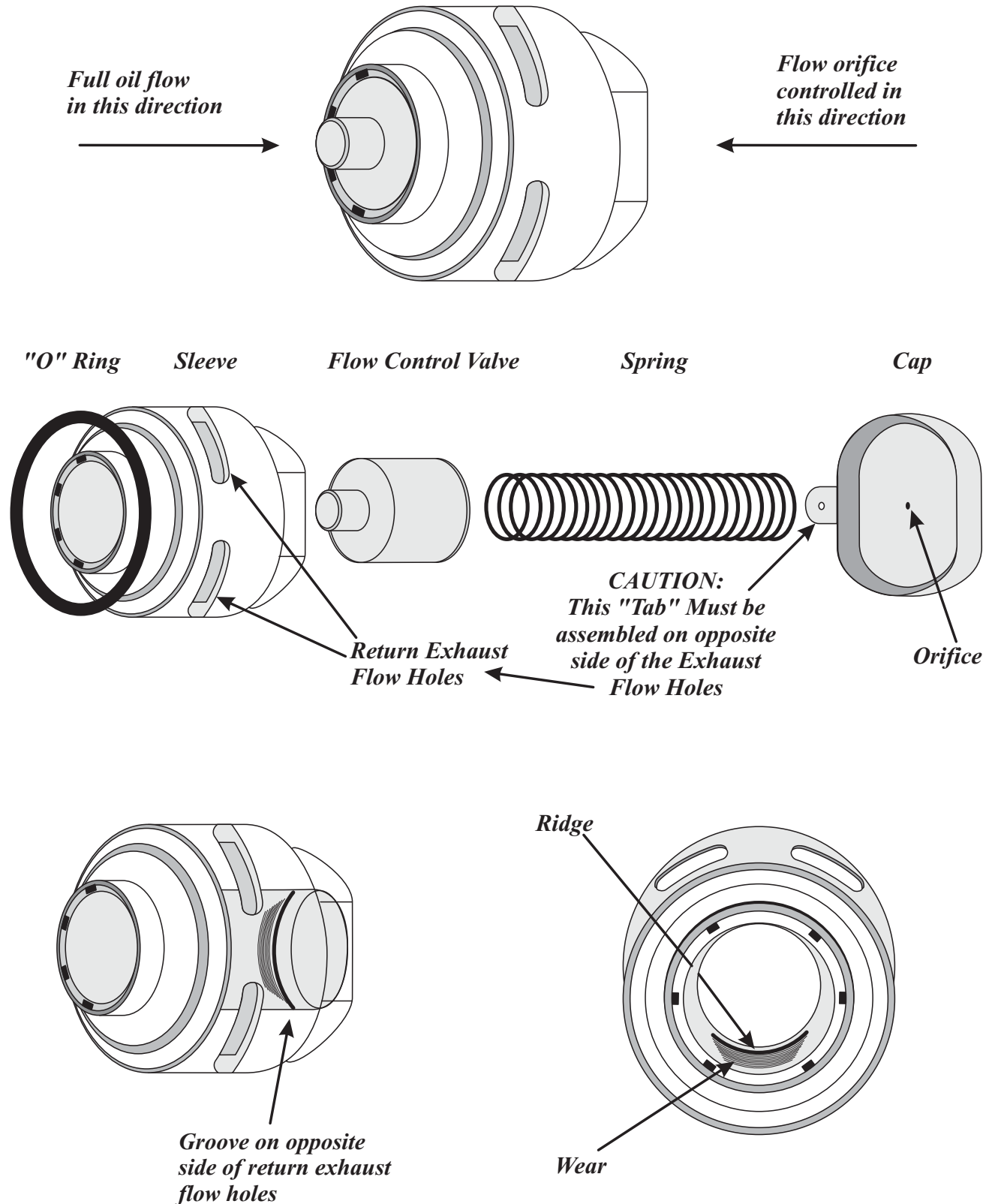
A4LD pump washer placed here will raise Relief Valve Assembly for a better "O" ring seal against the Pump Spacer Plate.

Caution: Do not raise the sleeve assembly above the pump surface, "Only" the "O" ring.

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Figure 1

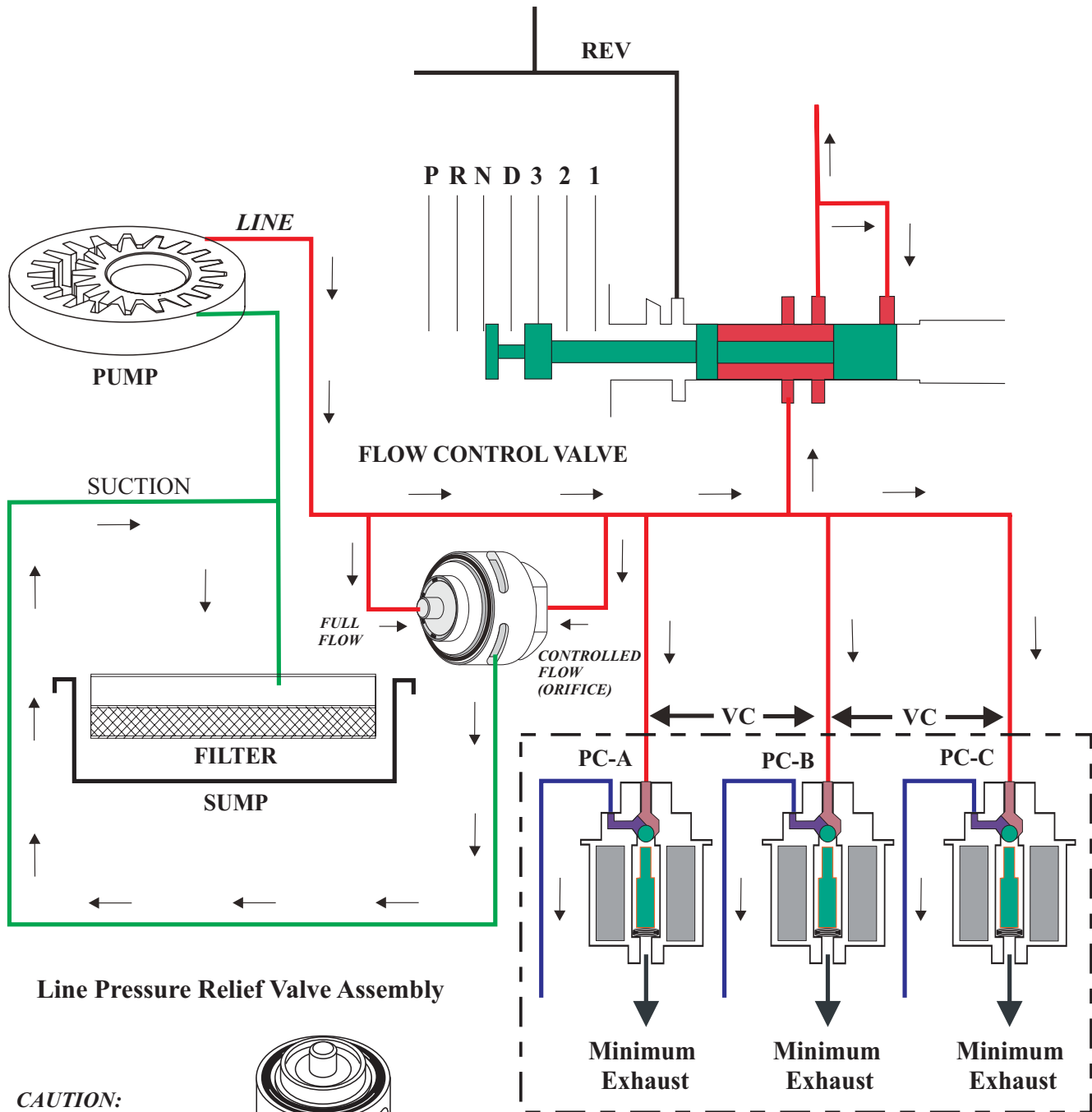
## LINE PRESSURE RELIEF VALVE ASSEMBLY



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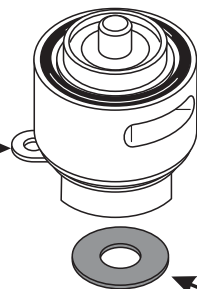
Figure 2

## Line Pressure Relief Valve Assembly Oil Flow



Line Pressure Relief Valve Assembly

**CAUTION:**  
This "Tab" Must be  
assembled on opposite  
side of the Exhaust  
Flow Holes



Add A4LD  
Pump Bolt Washer  
Here As Needed

PWM SOLENOID BLOCK  
SHOWN IN "D" 1st GEAR

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Figure 3