

# *AX4N*

## *Harsh 1-2 Shift*

There are a number of problems related to this symptom including:

- *Wrong Gaskets*
- *Wrong Separator Plate*
- *Damaged Accumulator Piston*
- *Wrong Accumulator Spring*
- *Valve Body Wear*

# AX4N

## *Harsh 1-2 Shift*

### *Seperator Plate and Gasket*

Lincoln 1995-97 .....	(stamped 11)	part #F50Z-7Z490-A
Lincoln 1998.....	(stamped 84)	part #F80Z-7Z490-AA
Lincoln 1999-00.....	(stamped 90)	part #FX3Z-7Z490-AA
Taurus/Sable 1994-95 w/3.0L .....	(no stamp)	part #F5DZ-7Z490-A
Taurus/Sable 1996-97 w/3.0L 2V ....	(stamped 13)	part #F6DZ-7Z490-B
Taurus/Sable 1998-99 w/3.0L 2V ....	(stamped 87)	part #F8DZ-7Z490-BA
Taurus/Sable 1996-97 w/3.0L 2V ....	(stamped 14)	part #F6DZ-7Z490-A
Taurus/Sable 1998-99 w/3.0L 4V ....	(stamped 86)	part #F8DZ-7Z490-AA
Taurus SHO 1996-97 w/3.4L.....	(stamped 15)	part #F6DZ-7Z490-D
Taurus SHO 1998-99 w/3.4L.....	(stamped 85)	part #F8DZ-7Z490-CA
Taurus/Sable 2000 .....	(stamped 03)	part #YF1Z-7Z490-CA
Taurus/Sable 2001-03 .....	(stamped 05)	part #1F1Z-7Z490-AA



# *AX4N*

## *Harsh 1-2 Shift*

### *Damaged Accumulator Piston*

A Damaged Accumulator Piston assembly can cause a number of shifting problems from late, early, harsh, soft and more. When reassembling this unit pay close attention to the housing and piston areas. If the piston is worn or the housing scored the chances of the piston cocking in the bore are increased.



*Check the Piston housing for wear, grooves, or scoring*

*Check the Piston and Rod assembly for wear*



# AX4N

## *Harsh 1-2 Shift*

### *Wrong Accumulator Spring*

VEHICLE	1-2 ACCUMULATOR	COLOR
95-02	F5DZ-7G267-A	ORANGE
95-96 SHO ONLY	F6DZ-7G267-A	PURPLE
97-01 SHO ONLY	F7DZ-7D397-AA	PLAIN

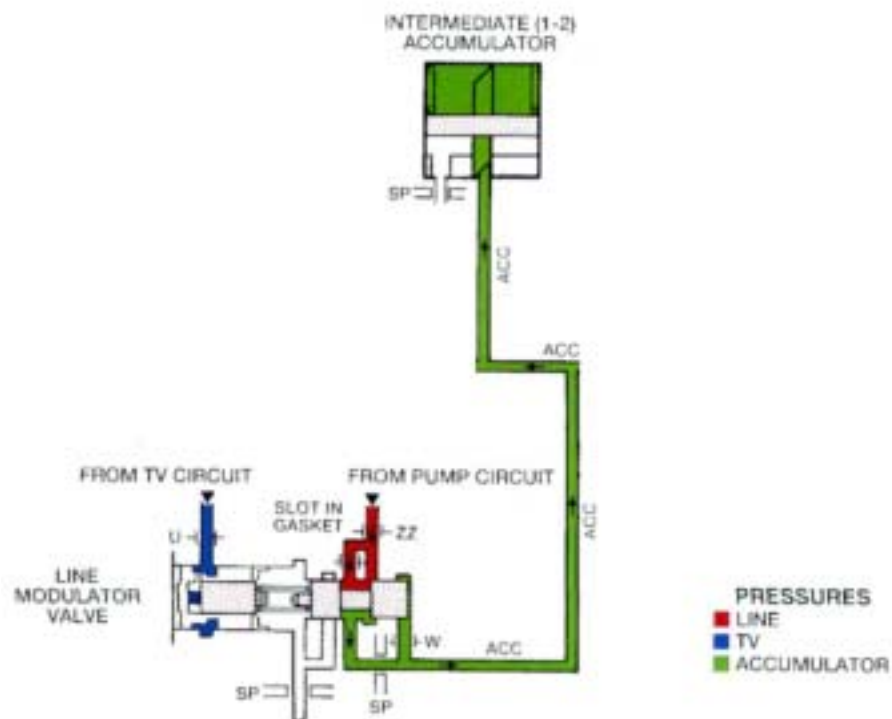


# AX4N

## Harsh 1-2 Shift

### Accumulator Hydraulic Circuit s

Fluid under pressure in the pump circuit moves to the line modulator valve, where it enters the accumulator circuit. The accumulator circuit provides variable hydraulic backpressure to the accumulators for five apply components. The variable pressure of fluid in the TV circuit is controlled by the pcm and changes the position of the line modulator valve. When TV pressure is lower, accumulator circuit pressure is lower. The results in softer shift feel provided by the accumulators during shifts when engine input torque is lower. When TV pressure is higher, accumulator circuit pressure is higher. This results in firmer shift feel provided by the accumulators during shifts when engine torque is higher. Damage to the Line Modulator Valve can result in no modulation of the valve and allowing direct line oil to influence the Accumulator.



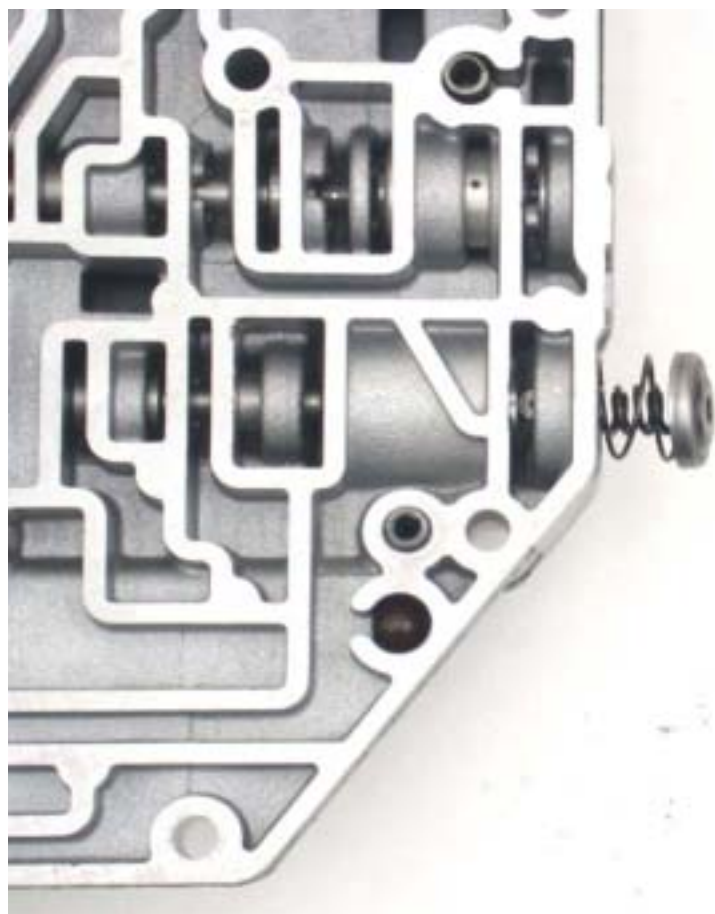
# AX4N

## *Harsh 1-2 Shift*

### *Valve Body Wear*

Check for wear at the Line Pressure Modulator valve and sleeve assembly. If the sleeve is damaged you can replace it with an E4OD Line Pressure Modulator Valve and Sleeve assembly. The E4OD Line Pressure Modulator valve is smaller in size and allows less oil to the back side of the Accumulator apply side during operation resulting in a softer shift.

Damage to the Line Modulator Valve may result in a Slide Bump, Harsh Shift, or dragging shifts.



**E4OD Line Pressure Modulator Valve and Sleeve**



# AX4N

## *Harsh 1-2 Shift*

### *Incorrect Clutch Pack Clearance*

#### **1995-96**

Forward Clutch (.040-.059) wave spring

Direct Clutch (.050-.069)

Intermediate (.050-.069) wave spring

Reverse (.038-.064) wave spring

Low-intermediate clutch (.050-.075) wave spring

#### **1997-98**

Forward Clutch (.050-.059) wave spring

Intermediate Clutch (.050-.069) no wave spring SHO

Direct Clutch (.050-.069)

Reverse 97 all (.038-.064) wave spring

Reverse 98 SHO (.049-.072) wave spring

Reverse 98 except SHO (.040-.063) wave spring

Low-intermediate clutch (.050-.075) wave spring

#### **1999**

Forward Clutch (.050-.069) wave spring

Intermediate (.050-.069) no wave spring SHO

Direct Clutch (.050-.069)

Reverse Clutch SHO (.050-.072) wave spring

Reverse Clutch except SHO (.040-.063) wave spring

Low-intermediate Clutch (.050-.075) wave spring

#### **2000-03**

Forward Clutch (.040-.059) wave spring

Intermediate Clutch (.050-.069) wave spring

Direct Clutch (.050-.069)

Reverse Clutch (.050-.072) wave spring

Low-intermediate clutch (.050-.075) wave spring