

# SHIFT KIT™ CAST IRON FORD 1973-77

SK3-73

*This FMX Kit fits '73 and later passenger cars with single and dual diaphragm modulators. It also fits '73 and later F-350-600 trucks with single diaphragm modulator and MX transmission.*

During overhauls you will find some useful tips in the Additional Information Section at the end of the instructions.

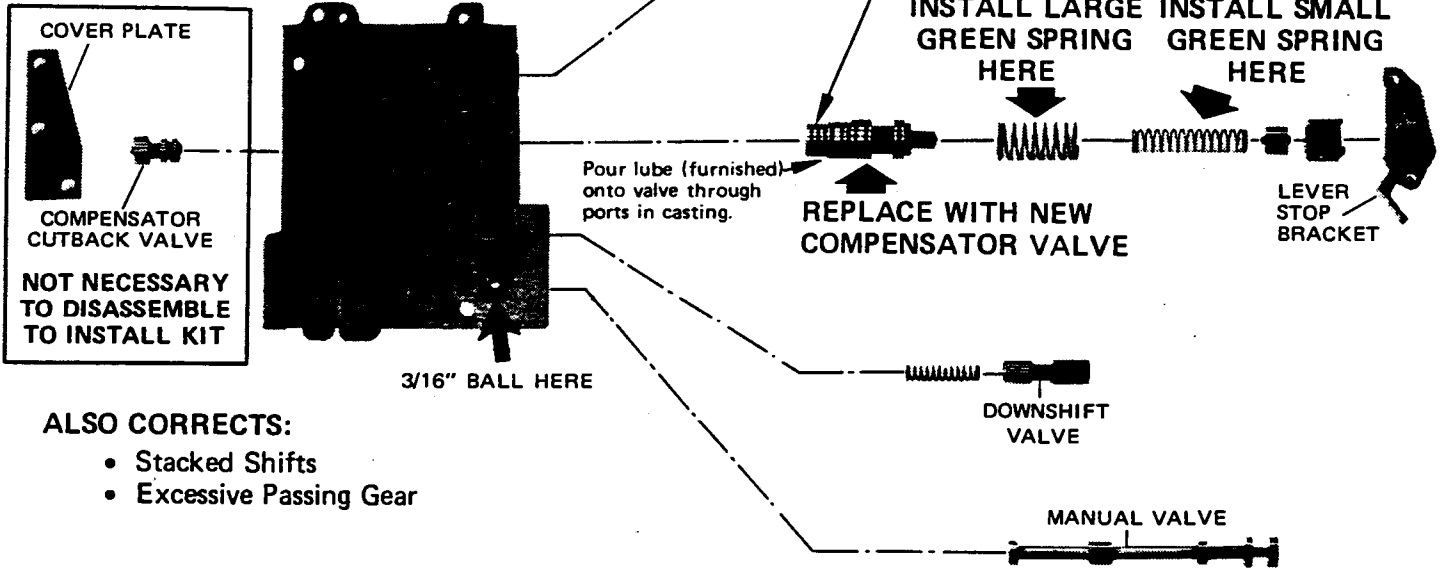
**THIS KIT IS DESIGNED TO IMPROVE THE PERFORMANCE AND DURABILITY OF:**

- Transmissions that are being overhauled.
- Transmissions that are still in good working condition.

It will reduce complaints of Soft Shifts, Late Shifts, Stacked Shifts, High Clutch and Band Failure.

**1.**

**FIGURE 1. UPPER VALVE BODY**

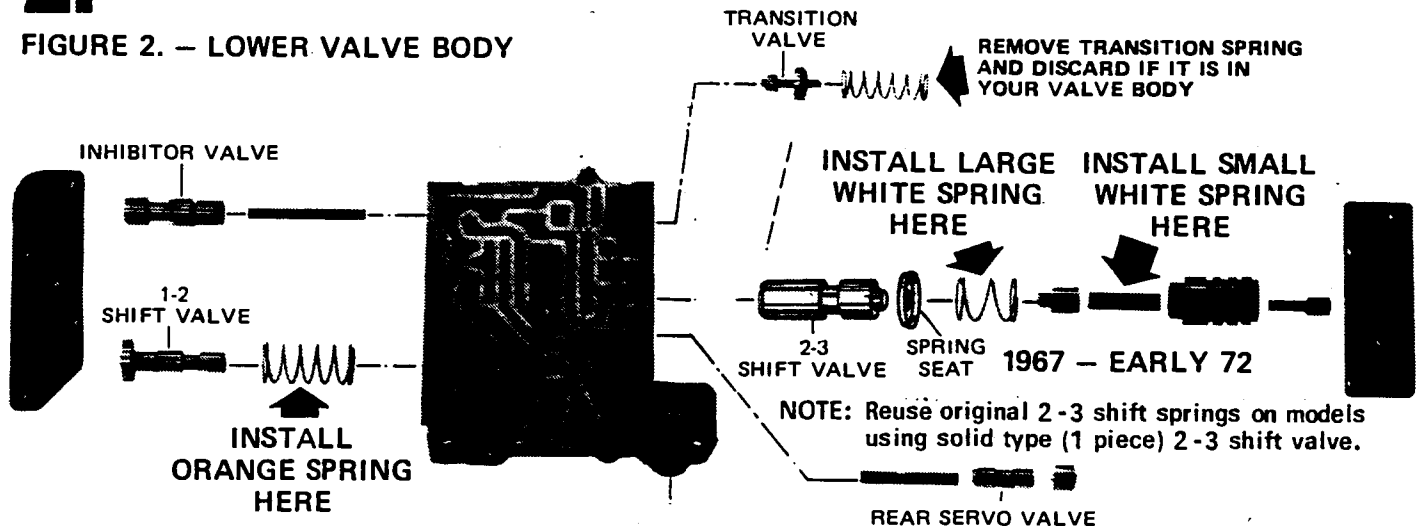


**ALSO CORRECTS:**

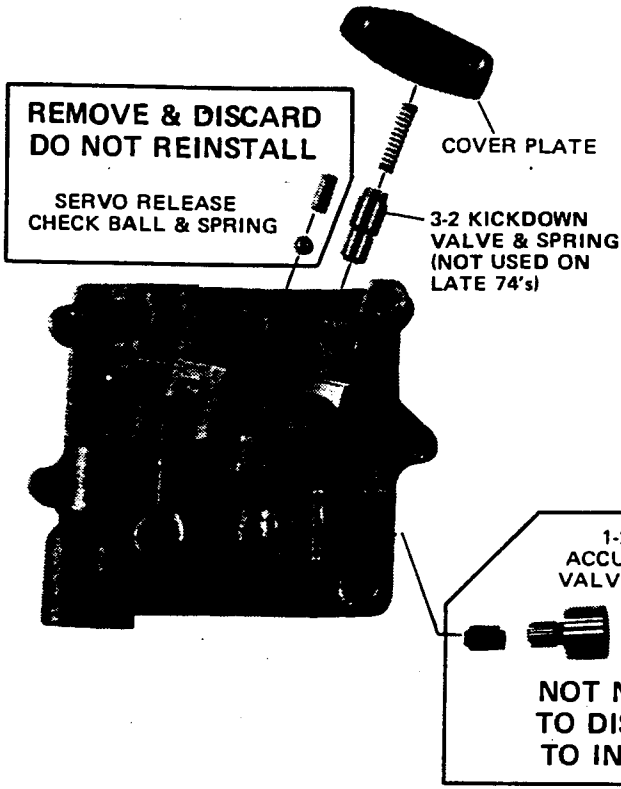
- Stacked Shifts
- Excessive Passing Gear

**2.**

**FIGURE 2. — LOWER VALVE BODY**

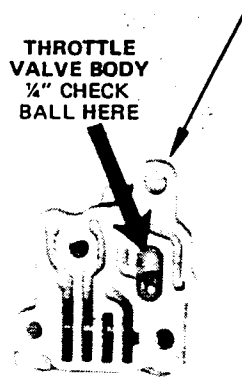


**3. FIGURE 3. - VALVE BODY COVER**

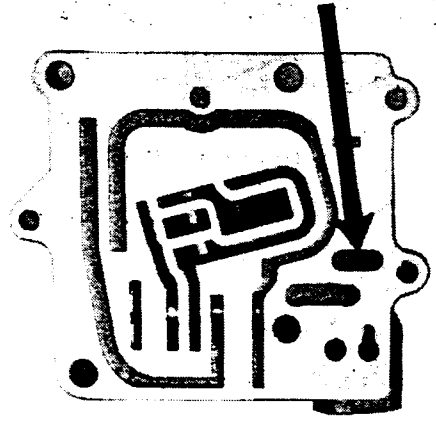


With this kit installed, valve body must contain two check balls:

Upper Valve Body - (See Figure 1.)  
Throttle Valve Body.

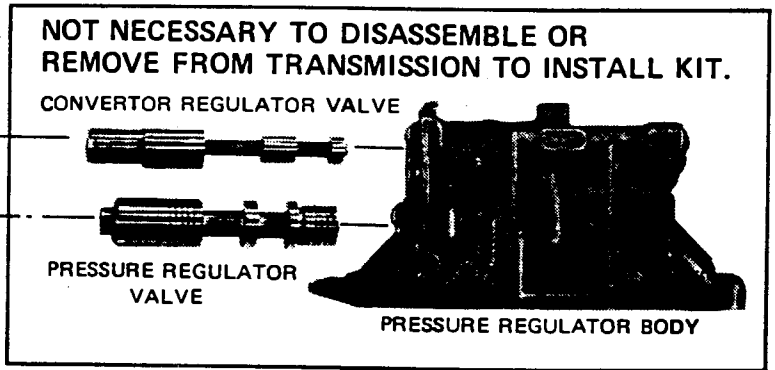
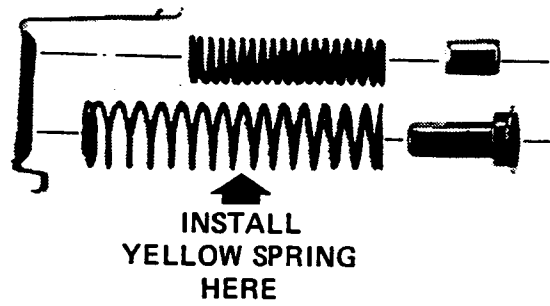


'73 & '74 MODELS  
DO NOT INSTALL  
CHECK BALL



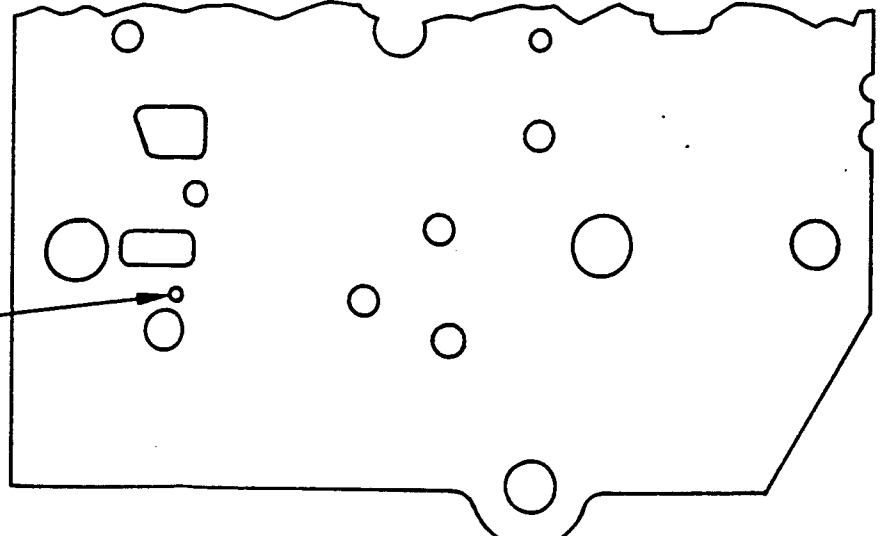
**ATTENTION:** LATE 74's HAVE A SINGLE SPRING TYPE REGULATOR ASSEMBLY. DO NOT INSTALL YELLOW SPRING. RE-USE ORIGINAL SPRING.

**4. FIGURE 4. - REGULATOR ASSEMBLY**



**5. FIGURE 5. - SEPARATOR PLATE**

ENLARGE THIS HOLE  
WITH DRILL (FURNISHED)



## 6. REVISED BAND ADJUSTMENTS

### Front Band (Intermediate Band)

Turn Adjusting Screw until 1/4" bolt will just pass between Servo Apply Rod and the end of Adjusting Screw with slight drag. (See figure 6) Then turn Adjusting Screw "IN" (Clockwise) one (1) Turn and tighten Lock Nut.  
(Use 1/4" bolt from valve body or any bolt that a 7/16" wrench will fit.)

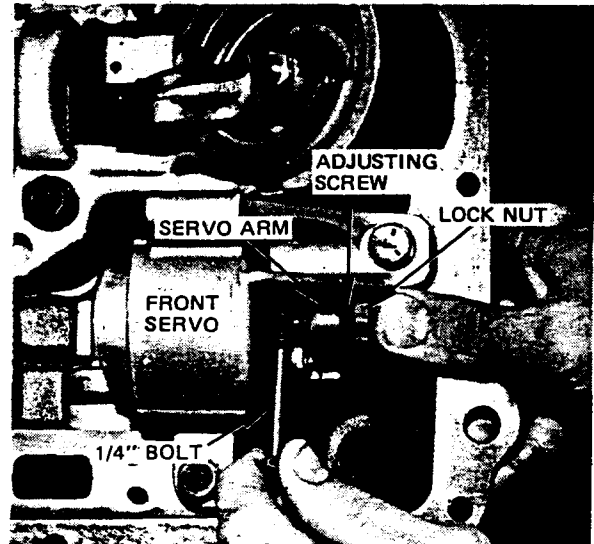


FIGURE 6.

1/4" bolt being inserted between Servo Rod and Band Adjusting Screw.

PULL BACK ON SERVO APPLY LEVER UNTIL ALL SLACK IS REMOVED FROM BAND APPLY LINKAGE.

## REAR BAND ADJUSTMENTS

### (Manual Low and Reverse Band)

EXTERNAL ADJUSTMENT      ADJUSTING SCREW

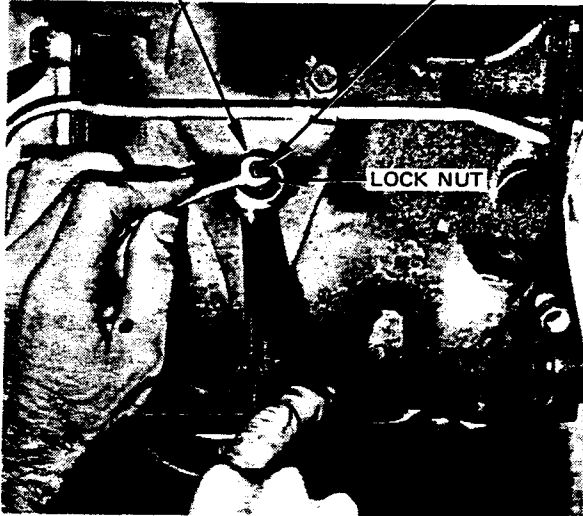
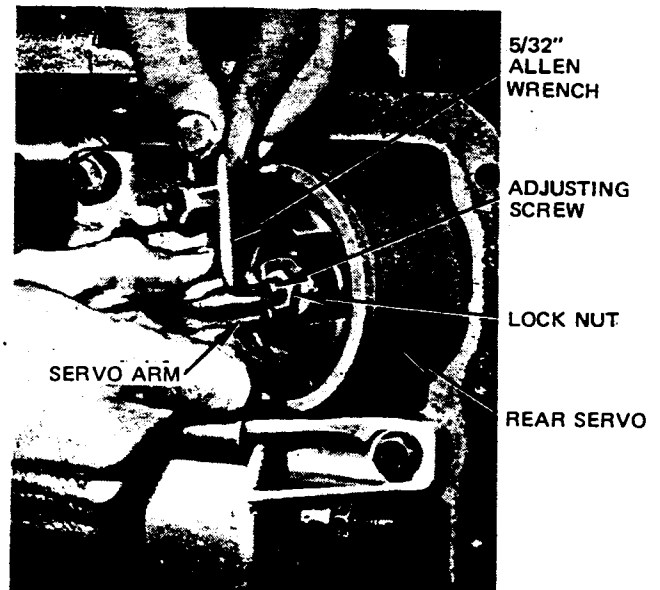


FIGURE 7. — EXTERNAL ADJUSTMENT:  
Tighten to 10-12 inch pounds (tight with a short wrench) and back off 1-1/2 turns.

### FIGURE 7. — INTERNAL ADJUSTMENT ON SERVO APPLY ARM:

(Only used on some models.) Loosen Lock Nut, pull Servo Arm by hand, as shown in Figure 7. Turn Adjusting Screw until clearance has just been removed, then back off 7 turns and tighten Lock Nut.



## 7. VACUUM MODULATOR:

If shifts are late or too firm, remove modulator and install thick gasket furnished along with standard gasket and re-install modulator.

If shifts are too early, E.G.R. System may be plugged, disconnected or malfunctioning (dual Diaphragm models). Disconnect front hose at modulator, plug it with a 1/4" bolt and road test. If shifts are O.K., E.G.R. must be repaired or bolt must be left in line and front tube on modulator left open.

## 8. KICKDOWN ADJUSTMENT

- Adjust linkage until there is **NO PASSING GEAR** between 45 to 50 on passenger cars and 40 to 45 on trucks. It may be necessary to bend Kick Down Rod to eliminate passing gear.
- Then adjust until you are **JUST ABLE** to get passing gear comfortably at wide open throttle. It is very important that passing gear does not happen before full throttle.

# ADDITIONAL REPAIR INFORMATION

## CAST IRON CRUISE-O-MATIC

### ATTENTION:- TRANSMISSION TECHNICIAN

Each type transmission has its particular weak points. Your personal touch applied to these weak points will put you "OUT AHEAD" in successful transmission repair. This information covers these points so that you can quickly and easily have a successful transmission repair.

1. The most common friction material failures are: The high clutches (rear clutches) and the 2nd gear band (front band).

These are three main causes of these failures.

**CAUSE A.** The 1-2 shift is softer than required for maximum durability. This often causes stacked shifts or 1-3 shifts at light throttle.

**CAUSE B.** Slow shifting action during the 2-3 up-shift. This allows the high clutches to apply *BEFORE* the front band is *RELEASED*. The spinning of the drum before the band has released it, polishes the drum, burns the band, and puts extra strain on the high clutches.

**CAUSE C.** Too much running in 1st and 2nd during normal driving.

These three causes of failure and soft and late shift complaints are easily prevented by installing a **SHIFT KIT** during service or overhaul.

2. **BANDS AND DRUMS.** Front and rear bands. If there is any black color on the lining, band must be replaced. The black color is carbon and will polish drum and cause soft shifts or slipping if not replaced. Soak all new bands in transmission fluid at least 15 minutes before installing. If the rear band has failed completely, the valve body must be replaced.

**REAR CLUTCH DRUM.** The portion of this drum that the front band applies on must be carefully inspected and replaced or repaired as necessary.

If the drum is scored from metal to metal contact with the band, it must be replaced. **ALWAYS** recondition the band surface on the drum as follows:

**CLUTCH DRUM:** Use 120-180 grit emery cloth and sand **AROUND** drum.

**REAR PLANETARY:** Use 40-60 grit emery and sand drum **FRONT** to **BACK**.

3. **CLUTCH PLATES.** Soak all friction plates 30 minutes before installing. Steel discs must be sanded all over with 120-320 grit sandpaper or emery cloth if they are to be re-used. (It is far cheaper, timewise, to install new steel plates.)

4. **GOVERNOR.** If the governor valve shows signs of fluid erosion (white appearance on edge of land) or is scratched, it should be replaced. A sticking governor can cause complete failure, as well as wrong gear starts, and erratic shifting.

### 5. REAR CASE SUPPORT AND OUTPUT SHAFT

Wear in this area can cause: bind-up (two gears on at once) --- slips in drive when hot --- soft shift to high gear when hot --- repeated clutch failure, both Front or Rear --- front band failure.

**Rear Support.** Inspect the bore in the support where 4 sealing rings ride in it. Absolutely **NO RIDGE** is permissible.

**Output Shaft.** Inspect the ring grooves in the output shaft for wear with new rings installed. .004 is maximum allowable side clearance.

6. **TORQUE CONVERTER.** The converter used with this transmission has a natural tendency to act as a dirt and metal particle collector. This dirt and metal collects in a "sludge pocket" between the housing and assembly shells. New oil or even just a hot trip will dissolve this sludge and release dirt and metal particles into the transmission. Your customer deserves a clean converter and we are sure that you don't need a comeback by re-using the dirty one.

7. **GENERAL.** This is not the easiest transmission to overhaul successfully. Most of the problems that can occur after overhaul are caused by sticking valves. These problems are: high gear starts, erratic upshifts, chatter, etc. Over 90% of the time these problems are caused by only two valves. They are the compensator valve and the governor valve.

A. A new, sharp compensator valve of self-cleaning design is furnished in a **SHIFT KIT**.



HAVE A NICE DAY!

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