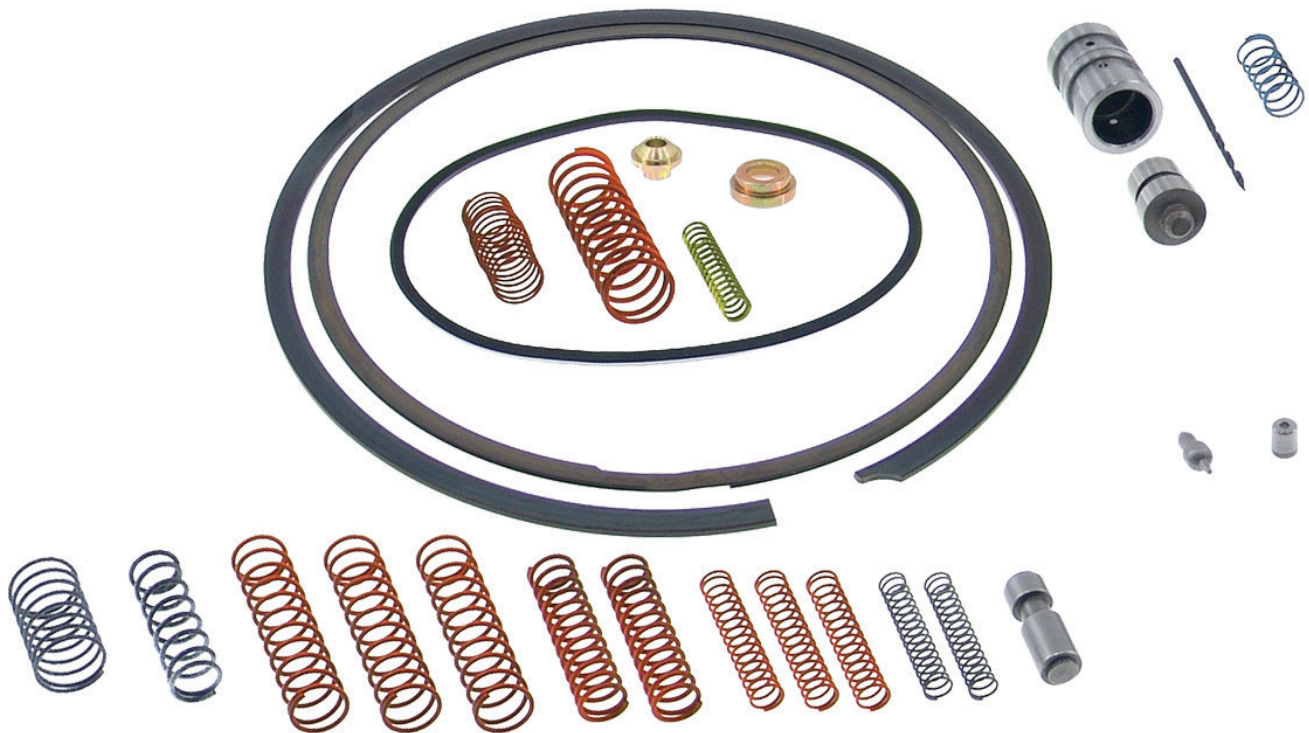


# Shift Kit

555-60937

1989-Up | Ford E40D & 4R100



# Introduction

We would like to take this opportunity to thank you for purchasing this JEGS 1989-Up Ford E40D, 4R100 Shift Kit. We welcome any comments or feedback you might have. If you have any questions about this product or about the installation procedure, please feel free to contact us at 1.800.345.4545.

## Features

- Smoother shifting
- Reduced TCC (Torque Converter Clutch) slip codes
- Increased cooling and lubrication

This kit is designed to address the following:

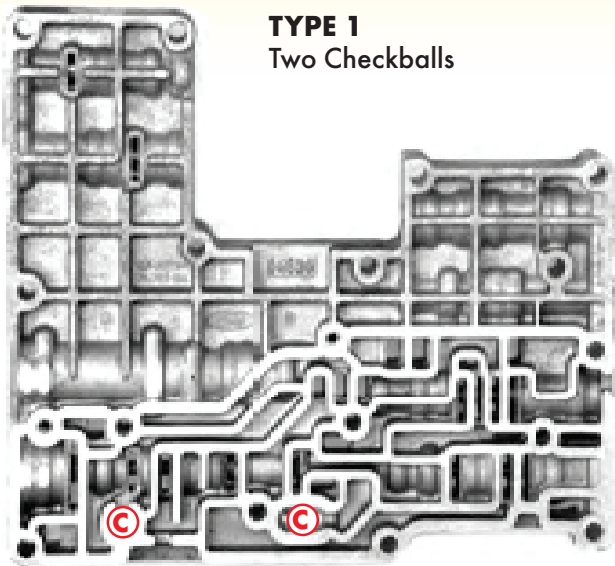
- Codes
  - 628
  - P1740
  - P1744
- Soft shifts
- 2<sup>nd</sup>-3<sup>rd</sup> burn-up
- Converter burn-up
- Reverse delay
- No reverse when hot
- Converter Shutter
- Pump buzz

## NOTE

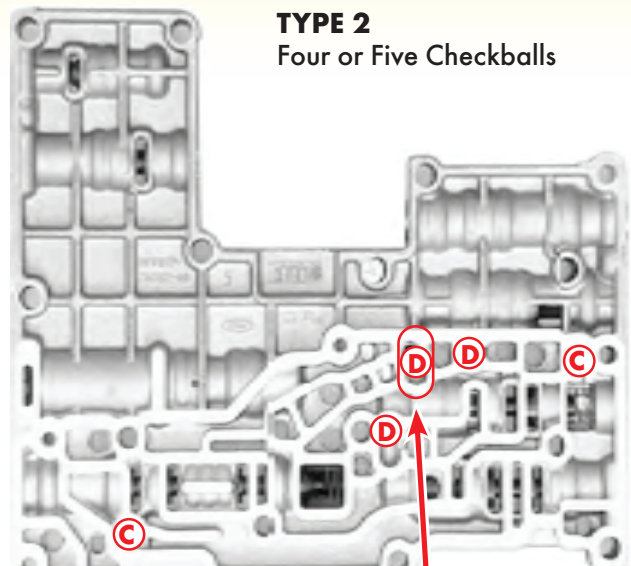
**PARTIAL INSTALLATION DOES NOT REQUIRE REMOVAL OF THE TRANSMISSION.**

**INSTALLATION OF THE ENTIRE KIT, INCLUDING DIRECT CLUTCH SEAL, AND NEW CONVERTER REGULATOR AND PRESSURE REGULATOR SPRINGS, REQUIRES THAT THE TRANSMISSION MUST BE REMOVED AND DISASSEMBLED.**

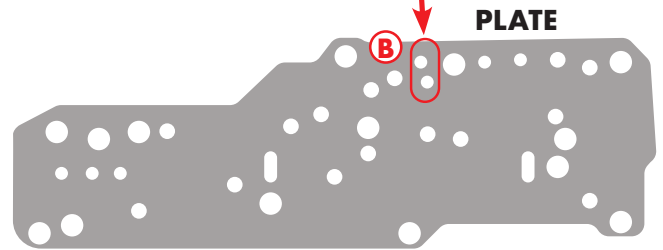
# Valve Body Identification



**TYPE 1**  
Two Checkballs



**TYPE 2**  
Four or Five Checkballs



**PLATE**

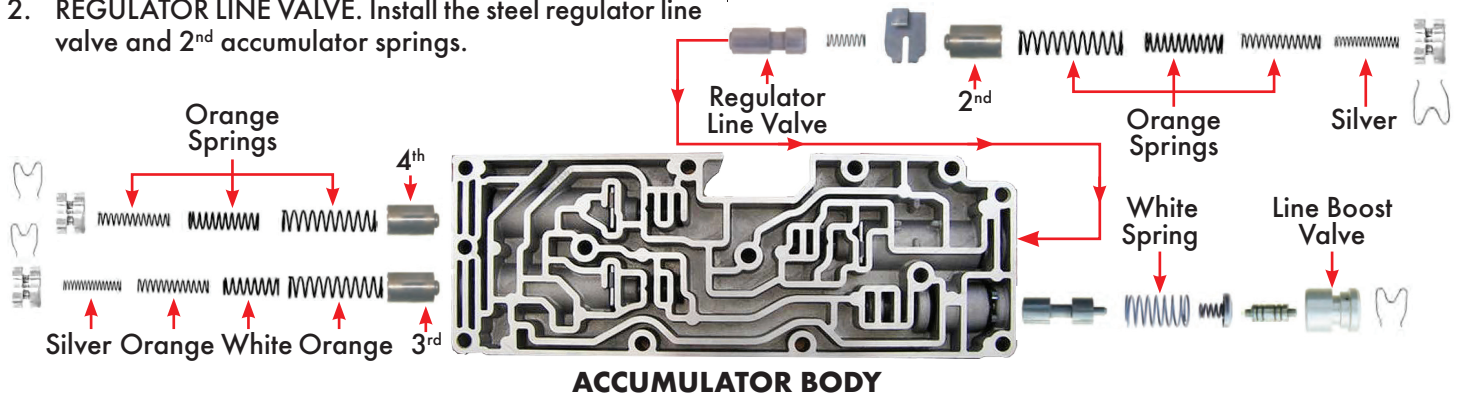
## CHECKBALL USAGE **B**

- 1 Hole - Don't install checkball
- 2 Holes - Install checkball

**KEY:** **C**  $5/16$  in. Checkball **D**  $1/4$  in. Checkball

# Installation (Valve Body)

1. **ACCUMULATOR PISTONS.** Install the new springs onto the 3<sup>rd</sup> and 4<sup>th</sup> accumulator pistons.
2. **REGULATOR LINE VALVE.** Install the steel regulator line valve and 2<sup>nd</sup> accumulator springs.
3. **LINE BOOST VALVE.** Install the white line boost spring if your vehicle shifts hard on light throttle and slow speeds.



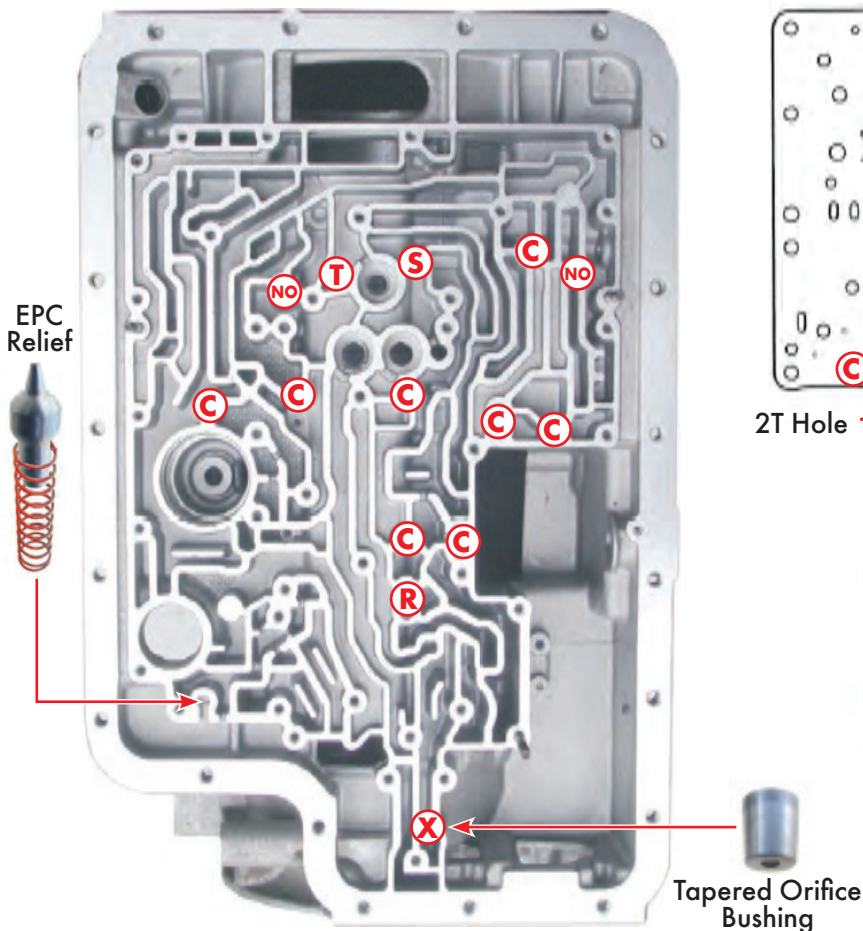
# Installation (Ball Location)

1. Enlarge three "D" holes with the 0.081 in. drill bit.
  - No action is necessary if the holes are already bigger or not there.
  - Don't drill any new holes.
2. EPC RELIEF. Reuse the original spring. Install with the new poppet valve.
3. Install tapered orifice bushing at "X".
4. Ensure the gaskets don't cover any holes on the plate.

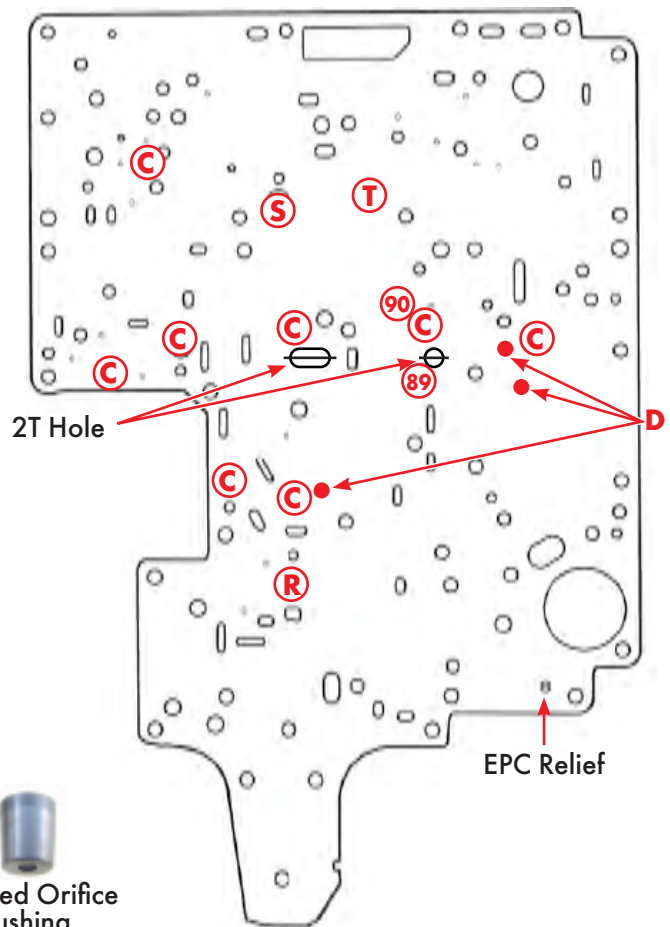
## CHECKBALL DETAILS

- Plate has 89 hole - Install "T" plastic checkball
- This application will use all 11 checkballs
- Plate has 90 hole - Don't use "S & T" checkballs
- Plate has 2T hole - Don't use "R, S, & T" checkballs
- All checkballs are  $\frac{5}{16}$  in.
- See key at bottom of page.

**CHECKBALL LOCATION  
TRANSMISSION ON BENCH**



**CHECKBALL LOCATION  
TRANSMISSION IN VEHICLE**



**KEY:** (C) Plastic Checkball (S) Steel Checkball (NO) No Checkball (R) 1989-95 Only (S) (T) 1989 Only

# Installation (Front Pump)

REQUIRES TRANSMISSION REMOVAL

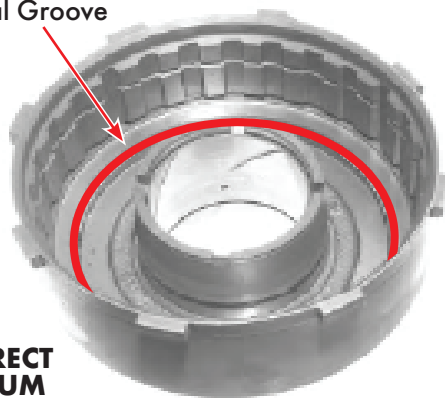
1. Install direct clutch seal into the direct drum.
  - Before installing the seal, clean any debris out of the groove
  - Roll the seal inside out as you install it.
  - Install the seal with the stripe showing.
2. Check location "A" on the pump cover. If there is no hole here, leave it alone. If you cover has a hole, it needs to be plugged.
3. LOCKUP FIRMNESS. This step is only for transmissions with an orifice cup plug at "B" on pump cover
  - Normal: 0.076 in.
  - Firm: 0.086 in.
  - Firmest: 0.093 in.
4. Install yellow spring with the converter regulator.
5. When reassembling the boost valve, replace the original spring seat, springs, and boost valve with the new kit components.

Roll inside out during installation



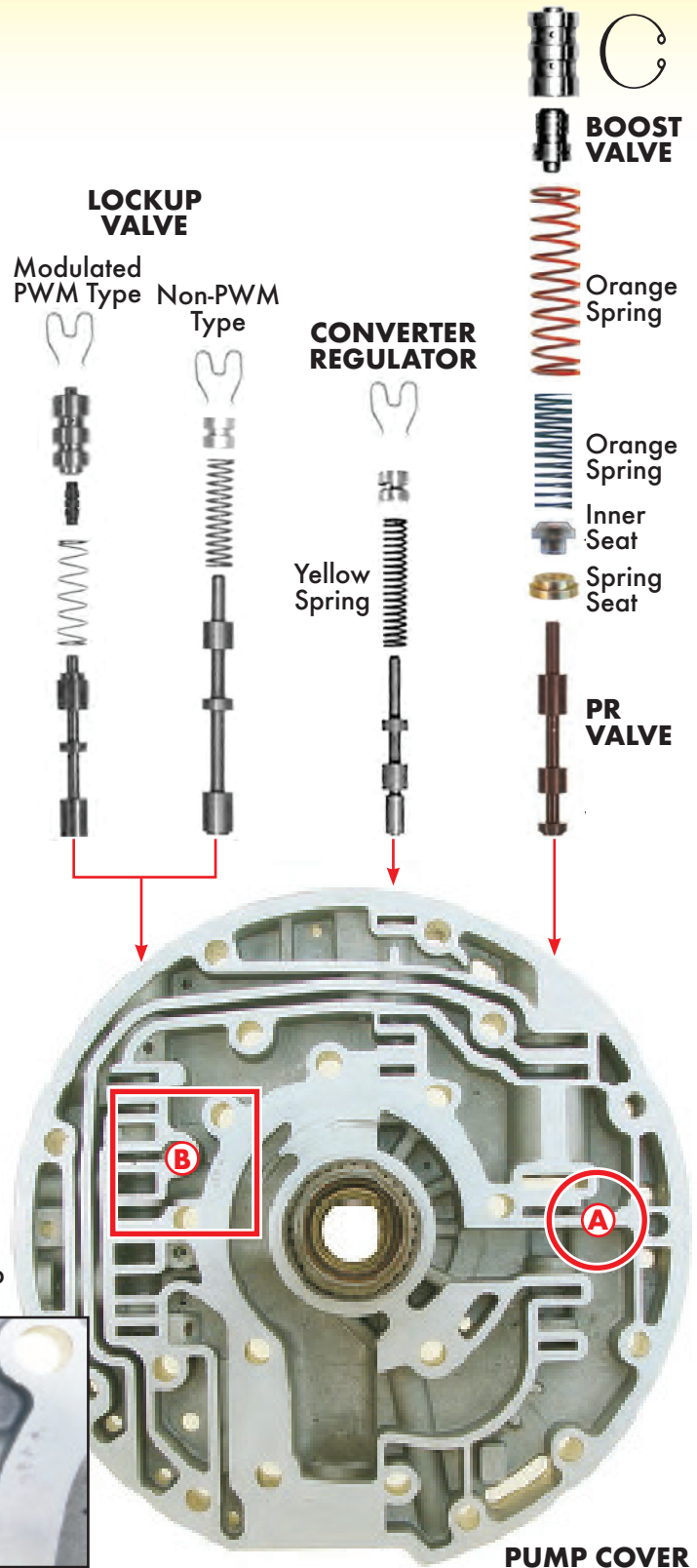
**DIRECT CLUTCH SEAL**

Seal Groove



**DIRECT DRUM**

Orifice Cup



# Additional Information

- 2<sup>ND</sup> GEAR CLUTCH. Stacking the clutch plates incorrectly will result in no 2nd gear. The thick backing plate goes in the case first.
- EPC SOLENOID. Don't adjust.
- SPRAG ROTATION. See diagram below for assembly.
- CASE CONNECTOR. Follow the shift solenoid sequence in the chart below.
- SOLENOID PACK. If the casting has hole "B", install the solenoid pack as it is. No drilling required.
  - If there is no hole "B", drill six size 1/8 in. holes "C". Drill a seventh hole through the partition at "D".

**CASE CONNECTOR**

**SHIFT SOLENOID APPLY SEQUENCE**

GEAR	SS1	SS2
1st	ON	OFF
2nd	ON	ON
3rd	OFF	ON
4th	OFF	OFF

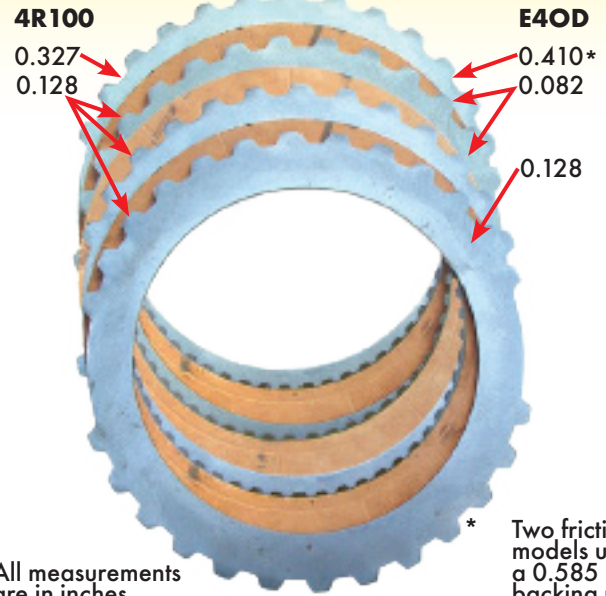
**SPRAG ROTATION**

Turn  
Hold at center  
Lock  
Intermediate  
Overdrive

**EPC SOLENOID**

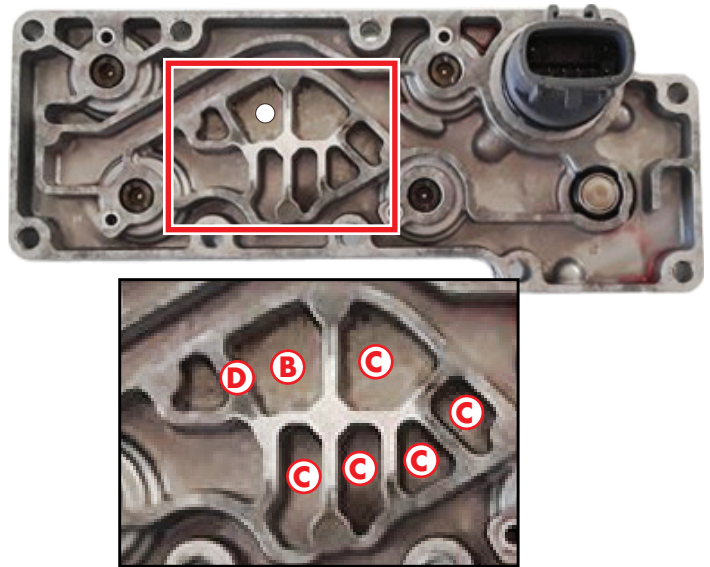
Adjuster

## 2<sup>ND</sup> GEAR CLUTCH



All measurements are in inches.

## SOLENOID PACK



**NOTE**

Solenoid packs with a "B" hole ceased production in the late 1990s. These packs should be replaced to ensure long term durability.