

Oversized Bypass Clutch Control Valve Kit



Part No.

73840-BK

- Bypass Clutch Control Valve
- Plunger Valve
- Bypass Clutch Sleeve
- Lubrication Plugs (4) 1 Extra
- Rivets (3) Not Shown

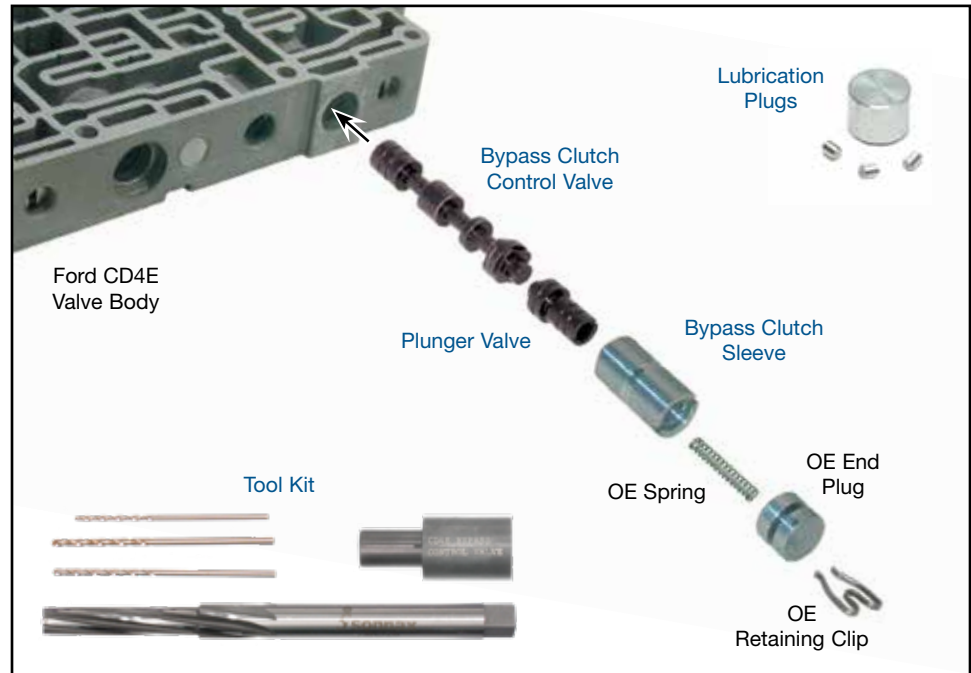
Tool Kit

Part No.

73840-BTL

- Reamer
- Reamer Jig
- Drill Bits (3)

Ford CD4E; Mazda LA4A-EL



1. Disassembly

- a. Remove OE retainer and end plug. Set aside for reuse.
- b. Remove OE spring. Set aside for reuse.
- c. Remove and discard OE bypass sleeve and plunger valve.
- d. Remove and discard OE bypass clutch control valve.

2. Bore Reaming

Ream bypass clutch control bore (for reaming instructions/reamer care, please visit www.sonnax.com). Sonnax reaming tool kit **73840-BTL** is required for this operation.

3. Installation & Assembly

- a. Thoroughly clean debris from valve bore and body.
- b. Install Sonnax bypass clutch control valve as pictured.
- c. Install Sonnax bypass clutch control plunger valve and sleeve.
- d. Reinstall OE spring and end plug.
- e. Secure with OE retainer.

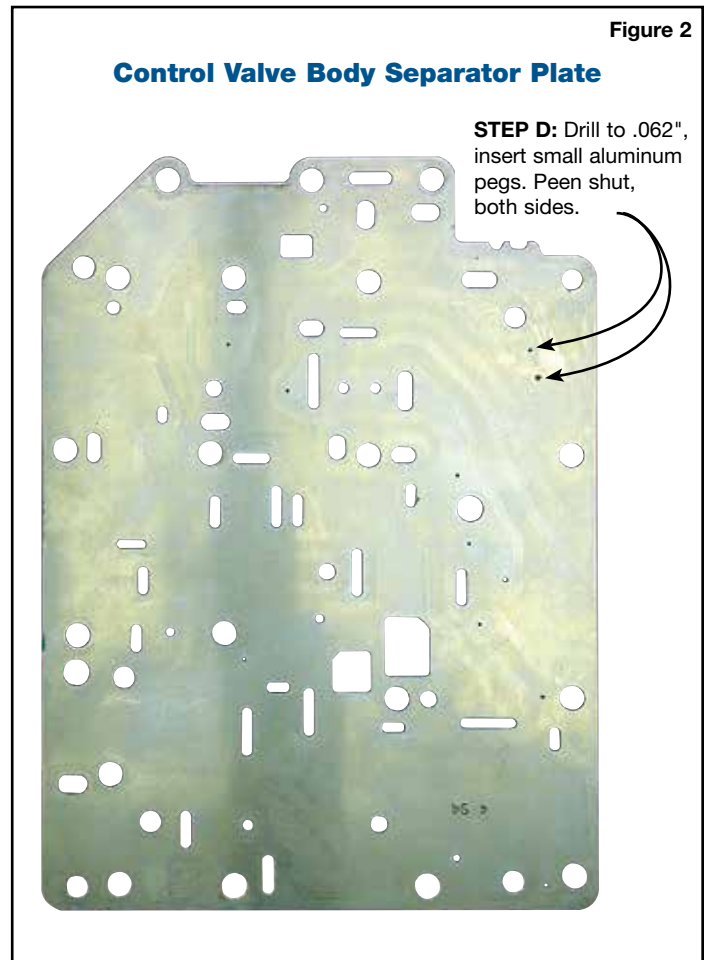
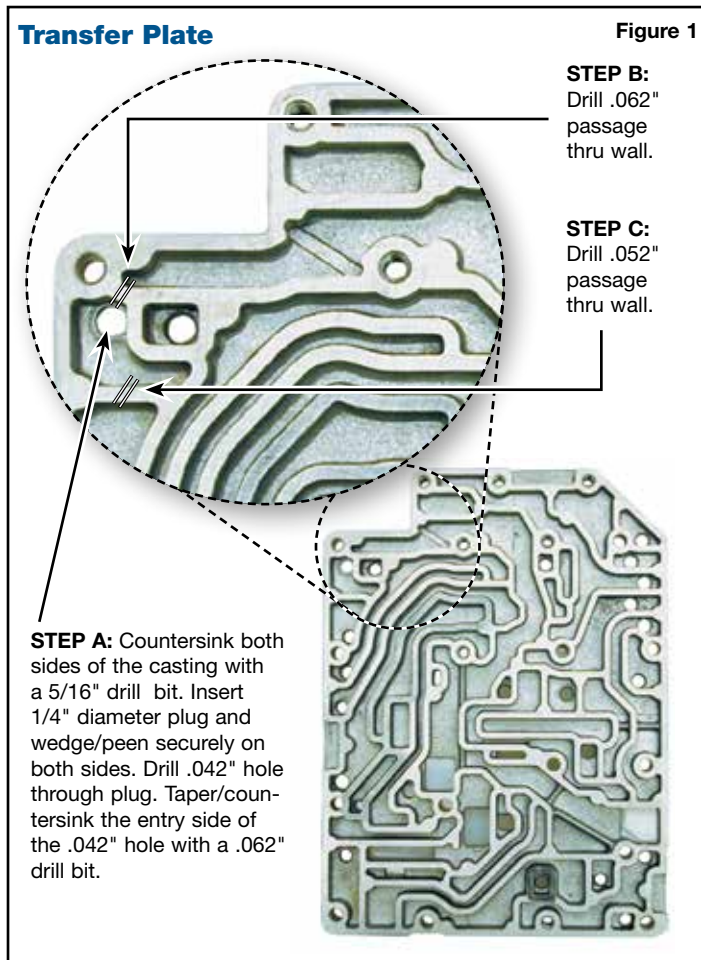
4. Lube Circuit Modification

Though not required for Sonnax kit to operate correctly, the following modifications are recommended to increase lube and converter pressure. Drill bits are included in tool kit for this purpose.

4. Lube Circuit Modification continued

- a. Lightly countersink (**Figure 1**) the CCX (regulated converter charge) hole approximately 1/32" deep on both sides of the transfer plate with included 5/16" drill bit. This will create a shoulder to wedge Sonnax aluminum plug onto. Insert the 1/4" diameter x .225" long aluminum Sonnax plug and drive into hole then peen into counter sink on both sides tightly. Verify case side of plate is flush, and stone or file if necessary. Drill a .042" orifice hole in this plug. Use Sonnax .062" drill bit to taper/countersink the entry side of the .042" hole.
- b. On the transfer plate (**Figure 1**), drill a .062" hole through the indicated wall. This will connect the line pressure circuit to the differential lube circuit.

- c. On the transfer plate (**Figure 1**), drill a .052" hole through the indicated wall. This will connect the differential and front lube circuits.
- d. Drill orifices "S" and "T" on the control valve body separator plate (**Figure 2**) to .062".
- e. If using straight plug, insert into orifice and peen on both sides of plate.
- f. If using optional small rivet, insert into orifice and using wire cutters, snip the stem end of the rivet if/as necessary to provide for a small head once peened in place. Peen the rivet in place on head side of plate also.
- g. After peening on both sides of the plate, ensure plate will still fit flush on mating surfaces.



Oversized Pressure Regulator & Converter Regulator Valve Kit



Part No.
73840-RK

- Converter Regulator Valve
- Oversized Pressure Regulator Valve
- Converter Regulator Spring
- Lubrication Plugs (4) 1 Extra
- Rivets (3) Not Shown

NOTE: Patent Nos. 6,543,472 and 6,585,002.

Tool Kit

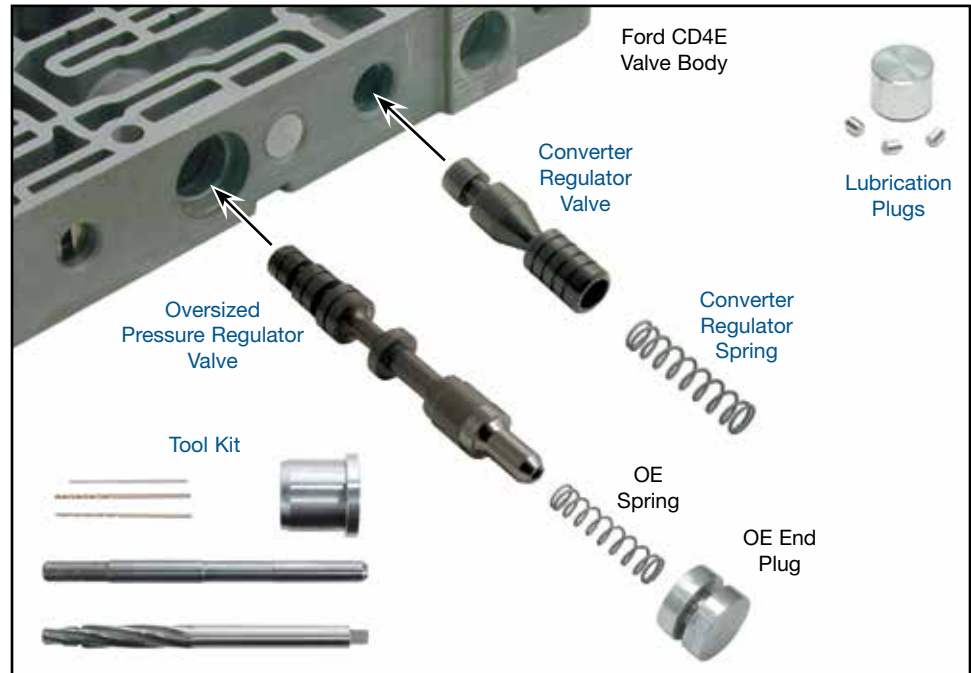


Part No.
F-73840-TL

- Reamer
- Reamer Jig
- Guide Pin
- Drill Bits (3) For Lube Modification

NOTE: Sonnax "F-Tool" kits designed to service a specific bore require the VB-FIX, a self-aligning valve body reaming fixture. More information and instructions can be found online at www.sonnax.com.

Ford CD4E; Mazda LA4A-EL



1. Disassembly

- Remove OE converter regulator retainer and set aside for reuse.
- Remove and discard OE converter regulator spring and valve.
- Remove OE pressure regulator retainer, end plug and spring; set aside for reuse.
- Remove and discard OE pressure regulator valve.

2. Bore Reaming

Ream pressure regulator bore (for reaming instructions/reamer care, please visit www.sonnax.com). Sonnax reaming tool kit **F-73840-TL** and **VB-FIX** are required for this operation.

3. Installation & Assembly

- Ensure all debris has been removed from valve bore and body.
- Install Sonnax oversized pressure regulator, spring stem facing outward.
- Reinstall OE pressure regulator spring.
- Reinstall OE end plug and secure with OE retainer.
- Install Sonnax converter regulator valve, spring pocket facing outward.
- Install Sonnax OE spring, ensuring it seats in valve spring pocket.
- Secure with OE retainer.

4. Lube Circuit Modification

Though not required for Sonnax kit to operate correctly, the following modifications are recommended to increase lube and converter pressure. Drill bits are included in tool kit for this purpose.

- a. Lightly countersink (**Figure 1**) the CCX (regulated converter charge) hole approximately 1/32" deep on both sides of the transfer plate with included 5/16" drill bit. This will create a shoulder to wedge Sonnax aluminum Sonnax plug onto. Insert the 1/4" diameter x .225" long aluminum plug and drive into hole then peen into counter sink on both sides tightly. Verify case side of plate is flush, and stone or file if necessary. Drill a .042" orifice hole through this plug. Use Sonnax .062" drill bit to taper/countersink the entry side of the .042" hole.
- b. On the transfer plate (**Figure 1**), drill a .062" hole through the indicated wall. This will connect the line pressure circuit to the differential lube circuit.

- c. On the transfer plate (**Figure 1**), drill a .052" hole through the indicated wall. This will connect the differential and front lube circuits.
- d. Drill orifices "S" and "T" on the control valve body separator plate (**Figure 2**) to .062".
- e. If using straight plug, insert into orifice and peen on both sides of plate.
- f. If using optional small rivet, insert into orifice and using wire cutters, snip the stem end of the rivet if/as necessary to provide for a small head once peened in place. Peen the rivet in place on head side of plate also.
- g. After peening on both sides of the plate, ensure plate will still fit flush on mating surfaces.

