

Performance Converter Kit

Part No.

FD-RK-23

- Front Cover 6-Stud
- Clutch Plate with Internal Splines
- Clutch Plate with External Splines
- Damperless Piston
- Thrust Bearing
- Seal PTFE
- Energizer Ring
- Rivets (10)
- Turbine Hub

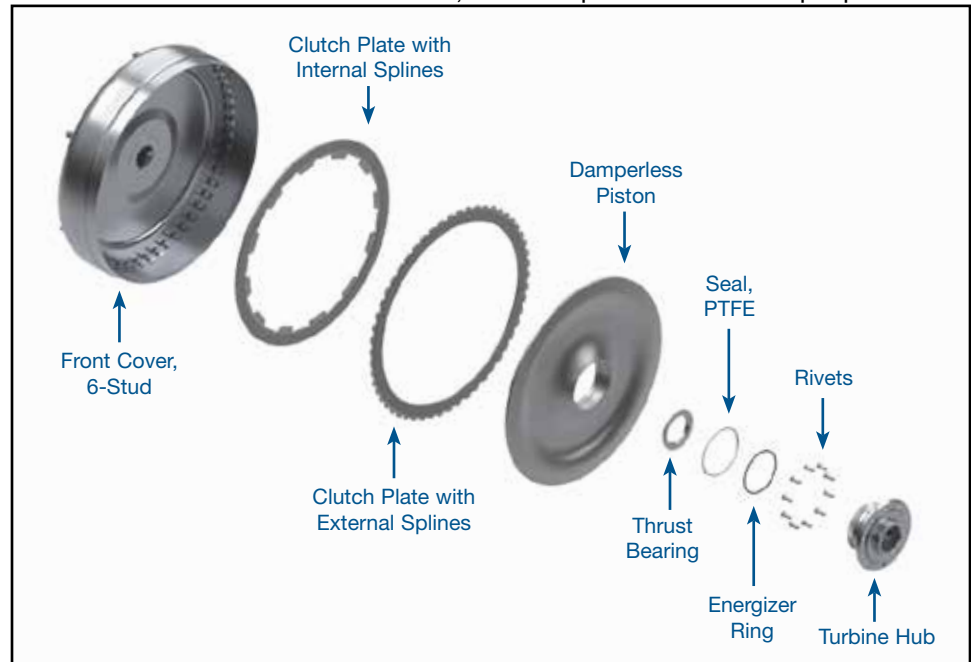
Patent No. 7,770,704

Additional Upgrades Available:

- Impeller Hub: **FD-90-59G**
- Impeller-Side Bearing Adapter: **FD-WA-24**
- Snap Ring for Sonnax Bearing: **FD-SR-2**
- Thrust Bearing: **JA-N-13**
- Bearing Adapter/Stator Cap: **FD-WA-18**
- Thrust Bearing: **CH-N-1**

Ford 4R100, 6-Stud, Multi-Plate

Unit Size: 12.5" • Core: Ford 4R100, 6-Stud • Dampered: No • Turbine Hub Input Spline Count: 31



1. Impeller Assembly

- Clean and inspect OE impeller.
- If impeller blades are loose, repair by brazing/welding or locate a defect-free impeller.

2. Stator Assembly

- Disassemble OE stator assembly.
- Clean and inspect the stator.

3. Turbine Assembly

- Remove rivets and separate turbine hub and reinforcement ring from OE turbine.
- Clean and inspect turbine. If any blades are loose, repair by brazing/welding or locate a defect-free turbine.
- Install Sonnax turbine hub and rivets from front cover side.
- Place reinforcing ring over rivets on the opposite side of turbine and peen rivets.



NOTE: On high-torque applications, turbine hub can be welded for extra security.

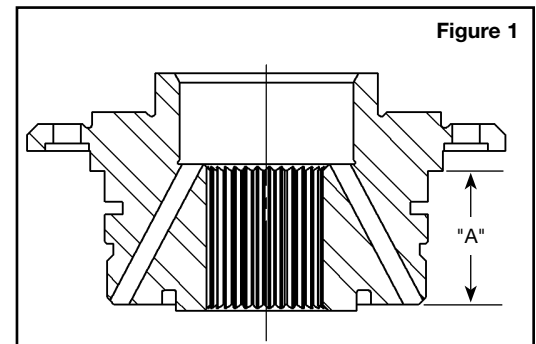
- Install Sonnax energizer ring (O-ring) into groove on turbine hub. Install Sonnax PTFE seal into the same groove.
- Install Sonnax thrust bearing onto the turbine hub.

4. Measure & Set Clutch Release Clearance



WARNING: Clutch release clearance must be measured and adjustments made if necessary.

- Measure from shoulder of turbine hub to thrust face of bearing ("A" in Figure 1).



4. Measure & Set Clutch Release Clearance (continued)

- b. Place clutch plates and piston into the front cover (**Figure 2**). Measure from inner lip of piston bore to the thrust face on front cover ("**B**" in **Figure 2**).
- c. The difference between the two measurements (A-B) is the amount of clutch release clearance.

NOTE: Clutch release clearance specification is .040 – .060".

- d. If there is too much clutch release clearance, machine thrust surface of the front cover to bring clearance into specification (**Figure 3**). Maintain a RA 32 surface finish and keep the thrust surface parallel to the mounting pads within .002".

If increasing clearance is necessary, machine lockup surface of the front cover by the amount necessary (**Figure 3**). Make sure to keep the surface finish better than RA 20 and parallel to the mounting pads within .003".

- e. After machining front cover, remeasure dimensions "A" and "B" to verify correct clutch release clearance.

5. Cover Assembly

Clean inside of cover.

6. Final Assembly

- a. Install Sonnax internally-splined (dual friction) clutch plate into front cover (**Figure 4**).
- b. Install Sonnax externally-splined (single friction) clutch plate into front cover, friction side facing out, steel side toward cover (**Figure 4**).
- c. Install piston and rotate to engage the internally splined clutch plate.
- d. Continue converter assembly. Endplay should be between zero and .010" and internal clearance should be between .100–.110" for maximum efficiency after welding. The stator should be able to turn freely. Pressure check, then balance finished unit.

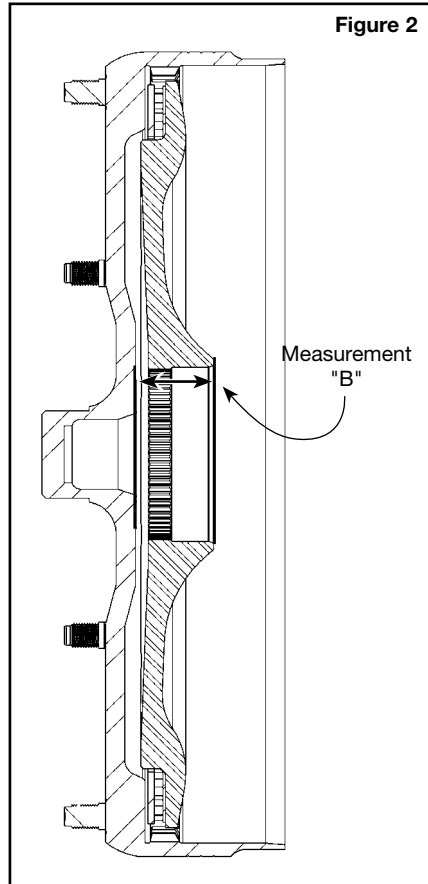


Figure 2

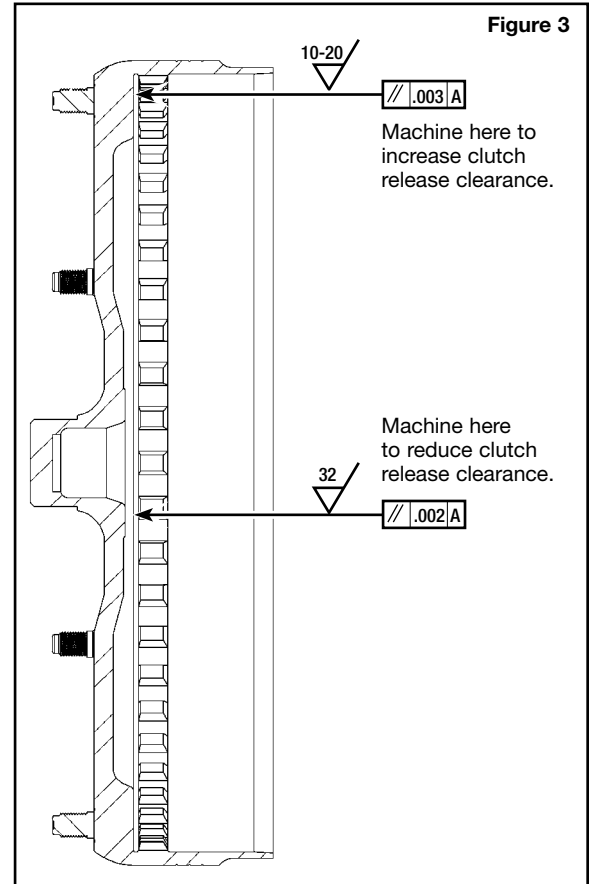


Figure 3

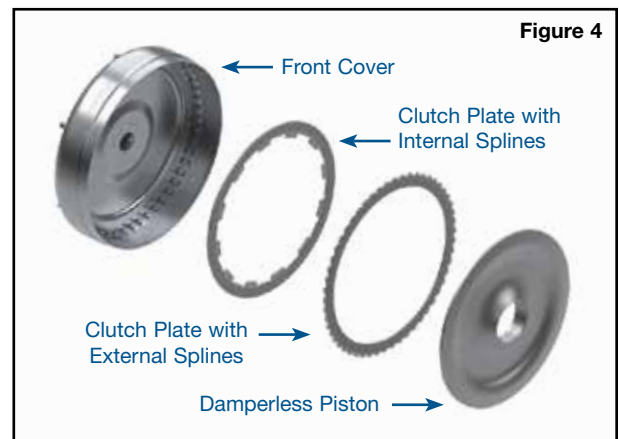


Figure 4