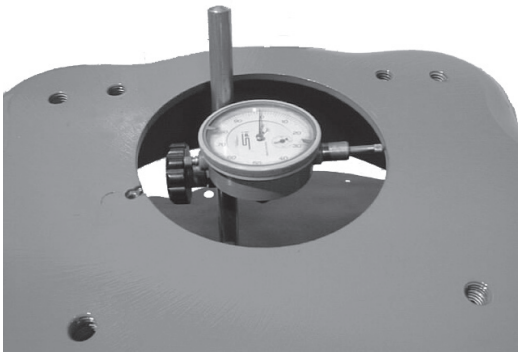
IMPORTANT

Dodge Trucks with the NV4500 Transmission
5.9L Turbo Diesels & 8.0L V-10 Engines
BELLHOUSING ALIGNMENT INSTRUCTIONS

BELLHOUSING ALIGNMENT IS CRUCIAL FOR PROPER CLUTCH FUNCTION AND RELIABILITY OF THE RELATED COMPONENTS. DUE TO MANUFACTURING TOLERANCES OF ENGINE BLOCKS AND BELLHOUSINGS, IT IS POSSIBLE FOR THE TRANSMISSION CENTERLINE AND CRANKSHAFT CENTERLINE TO BE MISALIGNED. THE RESULT OF THIS MISALIGNMENT MAY BE HARD SHIFTING, PILOT BEARING WEAR, TRANSMISSION MAIN SHAFT BEARING WEAR AND FAILURE OF CLUTCH DISC HUB.



FIRST CHECK BELLHOUSING FOR BORE CONCENTRICITY. INSTALL MAGNETIC BASE TO FLYWHEEL OR PRESSURE PLATE, THEN INSTALL THE INDICATOR TO MEASURE THE BELLHOUSING BORE (SHOWN ABOVE). ROTATE THE CRANKSHAFT AND MARK DOWN THE INDICATOR READINGS (MARKING THE BELLHOUSING WORKS WELL). THE MAXIMUM OUT OF CONCENTRICITY IS .005".



NEXT, THE BELLHOUSING FACE SHOULD BE CHECKED FOR PARALLELISM TO THE BACK OF THE BLOCK. INSTALL THE INDICATOR (AS SHOWN ABOVE). ROTATE THE CRANKSHAFT AND MARK DOWN THE READINGS (BE SURE TO PUSH THE CRANKSHAFT AGAINST THRUST BEARING FOR ACCURATE MEASUREMENT). THE MAXIMUM OUT OF PARALLELISM IS .002"

NOTE: INSPECT BLOCK SURFACE AND BELLHOUSING FOR DENTS, BURRS, PAINT, DEBRIS, ETC. BEFORE INSTALLING AND CHECKING BELLHOUSING ALIGNMENT.

"NOTE" Centerforce tip sheets are for general reference only. Please refer to your owners manual for vehicle specifications.

CONTINUED ON THE BACK SIDE

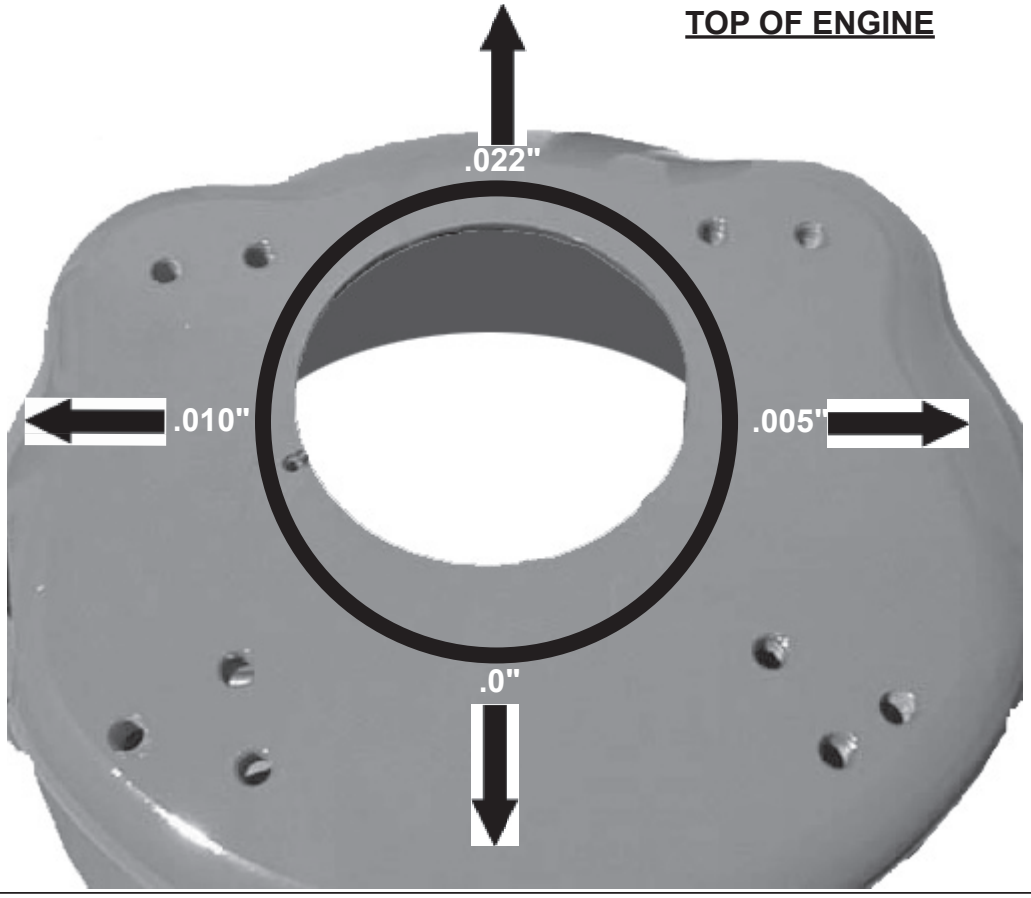
CONTINUED

TO CORRECT OFF-CENTER CONDITION, SELECT THE OFFSET DOWEL PIN PAIR THAT IS CLOSEST TO ONE-HALF OF THE INDICATOR READING (I.E., IF READING IS .016", 1/2R=.008" USE .007" DOWELS. IF READING IS .024", 1/2R=.012" USE .014 DOWELS).

NOTE: OFFSET DOWELS AVAILABLE FOR GAS ENGINES ONLY, DIESEL ENGINES MAY REQUIRE REPLACEMENT OF BELLHOUSING OR TRANSMISSION ADAPTER PLATE.

EXAMPLE

THE BELLHOUSING WAS OFFSET TOWARD TOP OF ENGINE AND SLIGHTLY TO THE LEFT (AS VIEWED FROM BEHIND). TO ALIGN THE BELLHOUSING, INSTALL TWO .014" OFFSET DOWEL PINS WITH THE MAXIMUM OFFSET POSITIONED ROUGHLY AT THE 5 O'CLOCK POSITION.



OFFSET DOWEL PIN CHART

TOTAL INDICATOR READING	ONE HALF TOTAL INDICATOR READING	SIZE DOWEL TO BE USED
.012" TO .020"	.006" TO .010"	.007"
.022" TO .034"	.011" TO .017"	.014"
.036" TO .052"	.018" TO .026"	.021"

CHRYSLER
LAKEWOOD
.007 - 15950 / .014 - 15960 / .021 - 15970

IMPORTANT

Dodge Truck Clutch Sets

Intermittent transmission issues are known to exist on some Dodge trucks. Hard shifting may occur from Neutral to 1st, 2nd or reverse gears. This is primarily due to the large diameter and heavy-duty nature of the transmission and clutch components. Normal operation calls for a 3 to 4 second “spin down time” in which the clutch pedal needs to be depressed and held before attempting to shift the transmission out of Neutral and into gear. This spin down time is NOT usually necessary when the vehicle is in motion (shifting from gear to gear). In order to minimize this hard shifting issue, we recommend customers to check/do following during the clutch change procedure:

1. Always install a new release bearing and new pilot bearing.
2. Properly resurface or replace the flywheel.
3. Check the transmission input shaft spline and pilot bearing surfaces – replace the input shaft if it is questionable.
4. Check the transmission input shaft for excessive “play” or wobble – this could signal a worn input shaft bearing.
5. Inspect the transmission release bearing collar, release bearing arm and pivot ball stud. Replace any questionable item.
6. Use only O.E. approved transmission and hydraulic clutch fluid.
7. Follow all other Centerforce supplied tech sheets and suggested procedures.

Also, please be advised; when upgrading from an O.E. Dual-Mass type flywheel and/or to a heavy-duty clutch set, it is not uncommon to experience increased transmission gear rattle (or “roll over noise”) when idling in Neutral.

"NOTE" Centerforce tip sheets are for general reference only. Please refer to your owners manual for vehicle specifications.

IMPORTANT

IMPORTANT

Please follow these instructions in regards to the installation and use of your new Centerforce DFX

Flywheels: Be sure to install your new Centerforce DFX clutch on a clean and properly resurfaced or brand new flywheel. Centerforce recommends DFX to be used in conjunction with an aftermarket Billet Steel or Billet Aluminum (with steel insert) flywheel. Nodular Cast Iron OE flywheels are also approved. Gray Cast Iron OE flywheels are NOT recommended for use with Centerforce DFX (If you are unsure of what type of cast flywheel you have please call the tech office).

Break-In: The Centerforce DFX series clutch will perform best after a minimum 100-mile break-in period. Stop and go type driving is best for this procedure. Please do not apply full engine power or excessively slip the clutch during the break-in period. This period is required to properly seat the disc with the pressure plate and flywheel friction surfaces.

Centrifugal Weight System: If your new Centerforce DFX clutch is equipped with the patented Centerforce centrifugal weight system, do not remove the ring, weights or retaining spring wire that attaches the weight system to the clutch diaphragm fingers. If your Centerforce DFX clutch does not include the centrifugal weight system, it is because there is not sufficient clearance for Centerforce to safely and effectively install the centrifugal weight system for your application. In these cases Centerforce has made other, internal modifications to improve the clutch holding capacity.

Aftermarket Hydraulic Release Bearings: When using an aftermarket hydraulic release bearing it is important to check for proper clearance between the bearing and the centrifugal weight system. Some aftermarket hydraulic bearings have an anti-rotator pin that may come into contact with the centrifugal weight system.

Due to its positive engagement characteristics, the Centerforce DFX clutch is designed primarily for competition use. However, DFX can also be used in high-powered street or dual-purpose vehicles with excellent results. Please be advised that the increased holding capacity of this clutch can contribute to clutch chatter and/or cause an audible noise during operation.

Failure to follow the above procedures will void your warranty and may result in decreased performance and/or premature wear!

CENTERFORCE® THE PERFORMANCE CLUTCH®

CENTERFORCE DUAL FRICTION®

"NOTE" Centerforce tip sheets are for general reference only. Please refer to your owners manual for vehicle specifications.

IMPORTANT

IMPORTANT

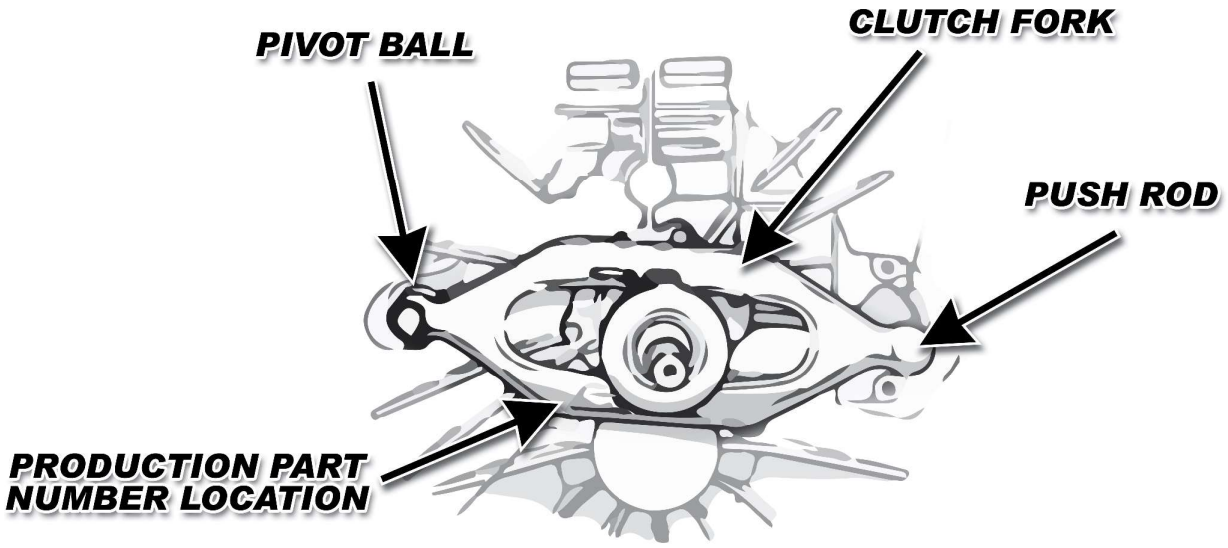
Dodge Trucks

When converting 1988-93 diesel trucks from the OEM 13'' clutch to Centerforce® P/N DF989966 or 315989966, use the supplied pressure plate mounting hardware.

On 1994-04, diesel trucks reuse the stock pressure plate bolts.

Note: 5.9L/6.7L Cummins Turbo diesel & 8.0L gas trucks. When servicing the release fork, be sure to install the clutch release fork properly. To ensure proper installation, the clutch fork production part number should be near the pivot ball (see diagram).

Failure to properly install the clutch release fork may cause a growling sound coming through the clutch pedal when depressed.



"NOTE" Centerforce tip sheets are for general reference only. Please refer to your owners manual for vehicle specifications.

IMPORTANT