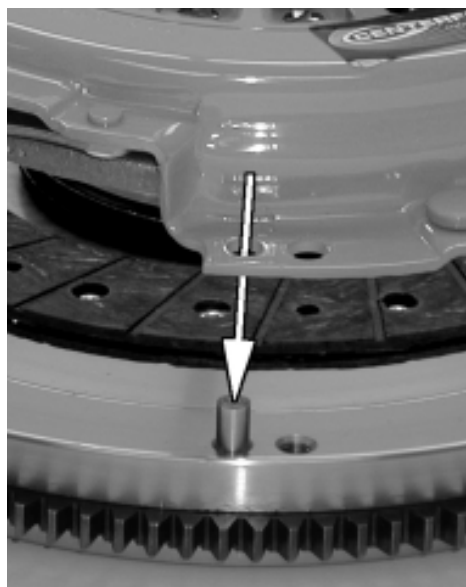


IMPORTANT

YOUR NEW CENTERFORCE® CLUTCH ASSEMBLY AND FLYWHEEL HAVE BEEN DESIGNED TO BE USED WITH LOCATING DOWEL PINS.

THE ALIGNMENT DOWEL PINS ARE USED TO PROPERLY LOCATE THE PRESSURE PLATE TO THE FLYWHEEL FOR BALANCE PURPOSES AS WELL AS TO ADD PRESSURE PLATE TO FLYWHEEL SHEAR STRENGTH. THE ALIGNMENT DOWEL PINS SHOULD ALWAYS BE REPLACED IF THEY ARE DAMAGED, BROKEN OFF, OR MISSING FROM THE FLYWHEEL.

FAILURE TO INSTALL OR REPLACE THE DOWEL PINS AS REQUIRED MAY RESULT IN CLUTCH VIBRATION, IMPROPER CLUTCH OPERATION, AND POSSIBLE CLUTCH FAILURE WHICH MAY VOID THE WARRANTY!



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GM "LS" Engine Pilot bearing instructions

Enclosed you will find **THREE GM pilot bearings with different OUTSIDE DIAMETERS**. It is **IMPERATIVE** that you follow these instructions and install the correct pilot bearing for your application.

* REFERENCE DRAWING BELOW *

Pilot bearing for crankshaft position "A" is a **SMALL** outside diameter (1.094") GM pilot bearing that fits into the inner most pocket of the crankshaft flange. This bearing is typically (but, **NOT ALWAYS**) used with Transmission/Bell housings on GM; LS1 powered vehicles from 1998 to 2002. (NOTE: if using the small GM pilot bearing, the internal O-ring seal faces the transmission when installed properly).

Pilot bearing for crankshaft position "B" is a **MEDIUM** outside diameter (1.652") GM pilot bearing that fits into the outer pocket of the crankshaft flange. This bearing is typically (but, **NOT ALWAYS**) used with Transmission/Bell housings on GM; LS3, LSA, LSX and LS9 powered vehicles from 2003 to 2012. (NOTE: This is a double sealed bearing and it may be installed either direction into the crankshaft).

Overize Pilot bearing for crankshaft position "B" is a **LARGER** outside diameter (1.705") GM pilot bearing that fits into the outer pocket of the crankshaft flange. This bearing can be used with **SOME** aftermarket crankshafts and/or GM CRATE engines where the crankshaft pilot bearing bore is oversized **AND** you are using a Transmission/Bell housing combination from a 2003 to 2012 GM vehicle. (NOTE: This is a double sealed bearing and it may be installed either direction into the crankshaft).

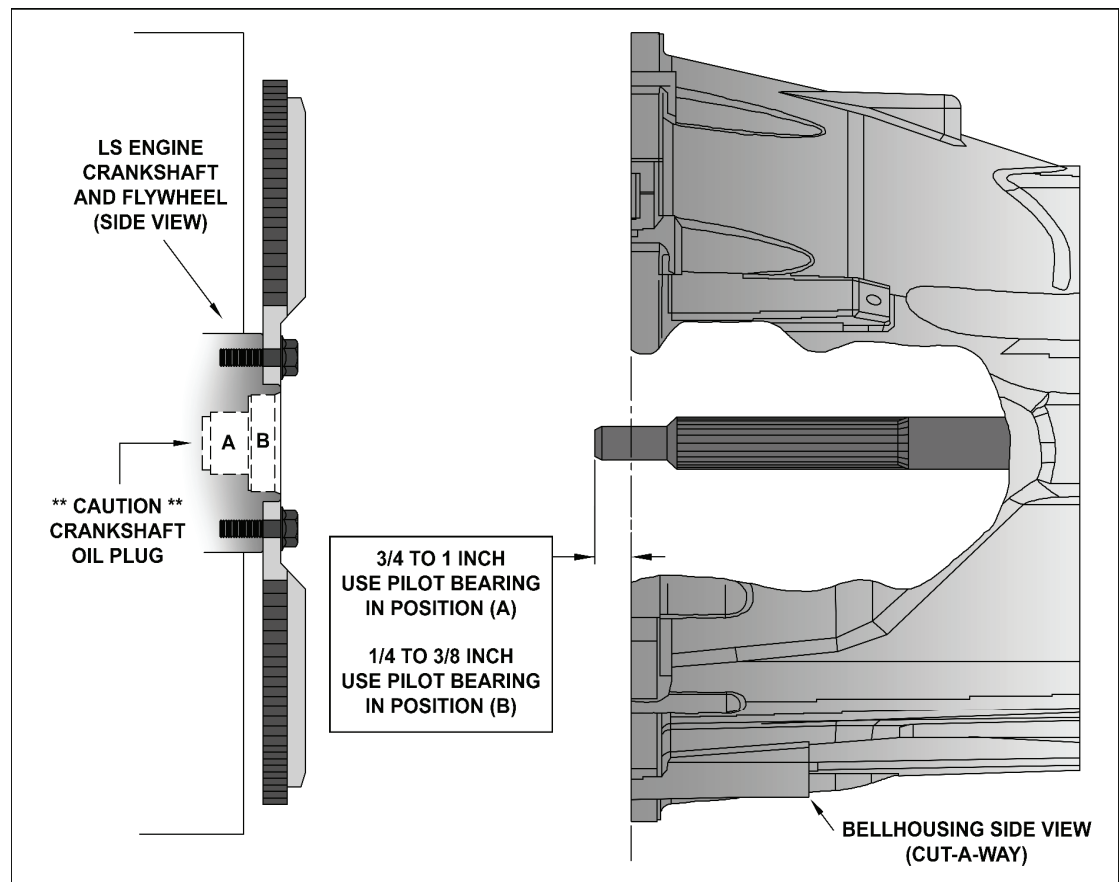
In most cases, you can dimensionally match the old pilot bearing to one of the new enclosed pilot bearings. (**IMPORTANT NOTE:** many GM LS engines use a press-in oil plug deep inside the crankshaft flange, **DO NOT** move or disturb this plug when removing or installing a pilot bearing. Your old pilot bearing must be removed by means of a mechanical pilot bearing puller – **DO NOT** attempt to use a "hydraulic" method to push-out or remove your old pilot bearing!).

The best method to determine the correct pilot bearing and pilot bearing position for your application is by using a straight edge or yard stick across the front of your transmission Bell housing and measure the distance that your transmission input shaft protrudes past the front of the Bell housing.

If your transmission input shaft dimension is between 3/4 to 1 inch (19mm to 25.4mm) use the **SMALL** diameter pilot bearing in crankshaft position (A) and disregard the remaining pilot bearings.

If your transmission input shaft dimension is between 1/4 to 3/8 inch (6.3mm to 9.5mm) test fit the **MEDIUM** outside diameter pilot bearing into crankshaft position (B). The pilot bearing should be a slight press fit into the crankshaft. If the **MEDIUM** diameter bearing is a loose fit, please use the **LARGE** outside diameter bearing for a slight press fit into the crankshaft.

Be sure to install your pilot bearing into the crankshaft by driving or pressing on the outer most part of the bearing **ONLY**. The pilot bearing must be straight and fully seated into the crankshaft... **DO NOT FORCE** the installation. Once installed, the inner portion of the bearing must spin free and smoothly.



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10mm Pressure Plate Bolts

Centerforce does not require you to use any type of thread locking compound for the Pressure Plate bolts. If you decide to use a thread locker compound on the Pressure Plate bolts, just one SINGLE drop is adequate.

DO NOT use a washer with this pressure plate bolt.

Tighten all bolts evenly, ¼ turn at a time in a crisscross pattern until pressure plate is completely drawn-up to the flywheel.

Final torque to: 47 - 52 ft/lbs.

Note: These specifications apply only to the fasteners supplied by Centerforce.

I21MI034 **CENTERFORCE TECH. LINE (928) 771-8422**

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IMPORTANT

Please follow these instructions to maintain the warranty of your Centerforce® product!

Flywheels: All Centerforce® clutches need to be installed on a clean, properly resurfaced or brand new flywheel. Flywheels must be within original equipment specifications. Centerforce clutches are designed to be used on flywheels made of cast iron, steel, or aluminum with steel inserts.

Break-In: All Centerforce clutches require a break-in period of 450-500 miles of stop-and-go street driving before applying full engine power. This period is required to properly seat the disc with the pressure plate and flywheel.

Balance: All Centerforce clutches are balanced from the factory to meet or exceed Original Equipment (O.E.) specifications. Balancing with the Centerforce weights installed on the clutch assembly may cause an out-of-balance condition. Removing the weights without permission from Centerforce may void the warranty.

Centrifugal Weight System: If your new Centerforce clutch is equipped with the patented centrifugal weight system, do not remove the ring, weights, or spring wire retaining the weight system to the diaphragm fingers. If your Centerforce clutch does not include the centrifugal weight system, it is because there is not sufficient clearance for Centerforce to safely & effectively install the centrifugal weight system.

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.

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

Questions? Please contact the Tech Department at Centerforce



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