

# IMPORTANT

The six enclosed pressure plate bolts **MUST** be used with this new Centerforce® clutch assembly. These special shouldered pressure plate bolts are designed to properly locate and fasten your new clutch assembly to the flywheel. Please **DO NOT** use any other pressure plate bolts with this clutch. If your current flywheel utilizes the **GM TWO DOWEL PIN** method to locate the pressure plate assembly, please remove and do not use the dowel pins.

This pressure plate assembly is **NOT** designed to work in conjunction with the **TWO DOWEL PIN** method.

**NOTE: If using a resurfaced flywheel, please be sure all six flywheel pressure plate bolt holes are chamfered.**

## **Centerforce GM 10mm x 1.50 Metric pressure plate bolt instructions!**

A small amount of thread-locking compound is recommended on all clutch fasteners.

**DO NOT** use a washer with these pressure plate bolts.

Tighten the six bolts evenly, 1/4 turn at a time in a crisscross pattern until the pressure plate is completely drawn-up to the flywheel.

Torque in 3 steps; first 20 ft/lbs, second 40 ft/lbs, and third 50 ft/lbs

For more information please contact our Tech Line at:  
**(800) 932-5882**



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## ***CENTERFORCE FLYWHEELS***

### **ALL FLYWHEELS**

All CENTERFORCE flywheels have a preservative on them to help prevent rust. We recommend that you use BRAKE CLEAN to remove all traces of the preservative prior to installing the clutch assembly.

**Failure to do so may cause slippage and premature clutch failure**

**NOTE:** Replacement of any Dual-Mass flywheel with a Single-Mass Flywheel may result in unwanted gear noise from the transmission.



CENTERFORCE  
**DUAL** FRICTION



**DYAD**  
QUALITY ENGINEERED MULTI DISC CLUTCH SYSTEMS



**LMC**  
SERIES

**CENTERFORCE**  
FLYWHEELS

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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).

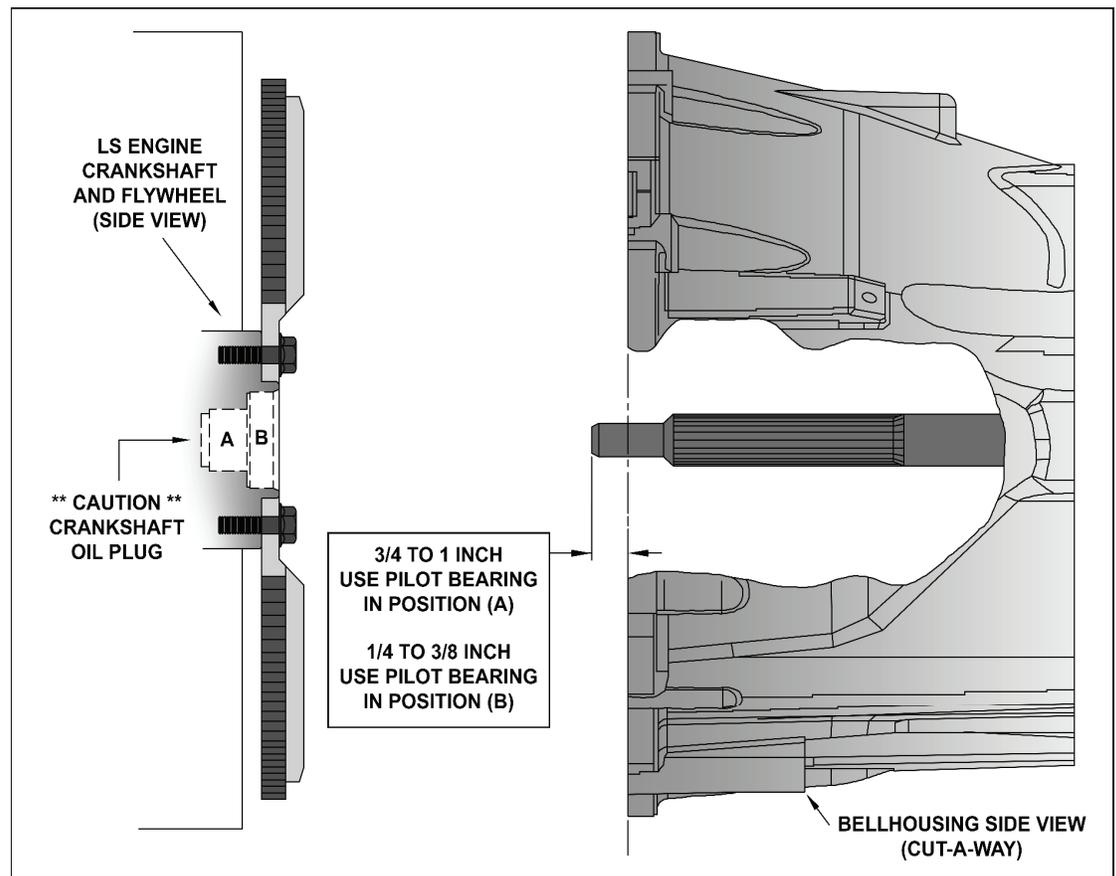
In most cases, you can dimensionally match the old pilot bearing to one of the new enclosed pilot bearings. (IMPORTANT NOTE: many GM LS engines use a press-in oil plug deep inside the crankshaft flange, DO NOT move or disturb this plug when removing or installing a pilot bearing. Your old pilot bearing 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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***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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