CAST ALUMINUM BELLHOUSING
Installation Instructions

Congratulations on your purchase of the finest quality cast aluminum bellhousing available today. Please understand that Lakewood bellhousings are not vehicle specific. They are designed to adapt specific engines to specific transmissions and may require you to do some minor work to make it fit your particular vehicle.

WORK SAFELY! Installation of this bellhousing requires working underneath the vehicle. USE EXTREME CAUTION WHEN WORKING UNDERNEATH THE VEHICLE. Never get near or underneath the vehicle until you are confident that it is safely supported and will not move or fall from its raised position. DO NOT USE A BUMPER JACK!

Bellhousing kits (part numbers ending in "K") include fasteners to mount the bell to the engine, and transmission to the bellhousing clutch fork pivot ball or pivot brackets where required, and containment hardware to fasten the applicable block plate, dust cover or inspection cover to the bell. Additional parts such as adapter/reducer rings and brackets are included in many of our bellhousings kits due to various applications, but might not be needed in your particular installation.

STARTER MOTORS:

Bellhousings are designed to be used with factory OE starters or equivalent except where noted in our catalog.

FLYWHEELS:

Most Lakewood bellhousings are designed for use with factory size flywheels.

IMPORTANT: Always check and confirm fitment before final installation. It is recommended to check fit the transmission into the bellhousing before mounting it to the engine.

PREPARATION FOR INSTALLATION:

1. Place the vehicle on a solid, level surface such as a garage floor to ensure safe installation.
2. Raise the vehicle using appropriate lifting device and support it using automotive approved support stands having adequate load capacity.
3. Disconnect the negative (–) cable from the battery.

CAUTION: DO NOT BEGIN THIS INSTALLATION UNTIL YOU ARE CONFIDENT THAT THE VEHICLE IS SECURE AND SAFELY SUPPORTED!

INSTALLATION INSTRUCTIONS:

1. Remove driveshaft, starter motor, transmission, and stock bellhousing.
2. Remove pressure plate and clutch disc from flywheel.
3. At this point, we recommend that you check your Lakewood Bellhousing for proper alignment with the crankshaft. This is not a difficult procedure. Detailed instructions outlining the necessary steps along with recommendations for correcting any misalignment are included in these instructions.
4. After checking and correcting bellhousing alignment, remove the flywheel.
5. Thoroughly clean the engine mounting face. Properly remove any burrs if they exist and wipe the mounting surface again. Inspect the mating surface of the bellhousing for any nicks and burrs and address those as well.
6. For Ford applications, install the blockplate over the crankshaft flange and place over dowel pins in the block.
7. Reinstall the flywheel and clutch assembly. Be sure to tighten fasteners using manufacturer's recommended torque specifications.

NOTE: We recommend the use of Mr. Gasket premium fasteners for clutch and flywheel installation.

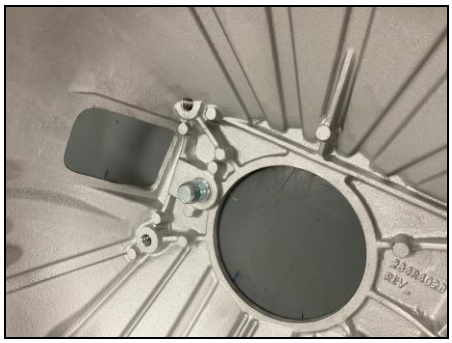
THIS KIT INCLUDES HARDWARE FOR PIVOT BALL AND PIVOT BRACKETS

8. Determine if your installation requires a pivot ball or pivot bracket for the clutch fork. If you are using a hydraulic bearing release set up, proceed to step number 8.

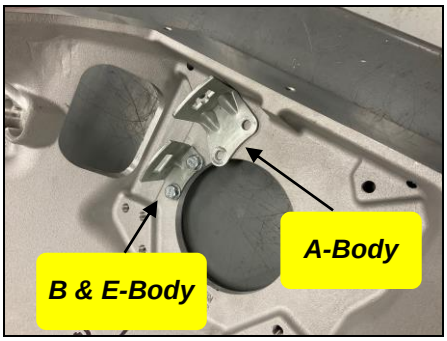
GM APPLICATIONS (Chevy, Pontiac, Oldsmobile, Buick): Most bellhousings for GM applications include a pivot ball for the clutch fork located in the bellhousing on the driver's side.

CHRYSLER/MOPAR APPLICATIONS: Most bellhousings for Chrysler applications include two-pivot brackets for the clutch fork. One for "A" body vehicles and one for "B" or "E" body vehicles. Select the bracket that is correct for your application and mount inside the bellhousing using the two socket head cap screws supplied.

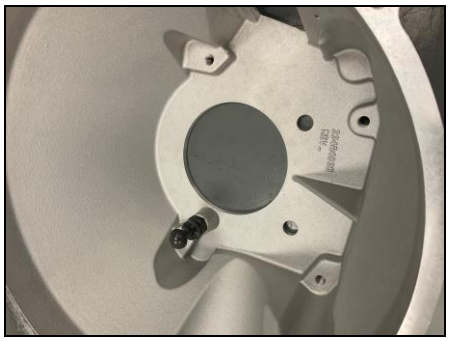
FORD APPLICATIONS: Included in this kit for Ford applications is a pivot ball for cable operated clutch forks.



GM APPLICATIONS



CHRYSLER/MOPAR APPLICATIONS



FORD APPLICATIONS

SBC/BBC – HAS INSPECTION COVER
LS/LT – HAS INSPECTION COVER FOR USE WITH FABRICATED OIL PANS
FORD – HAS BLOCKPLATE
CHRYSLER – HAS INSPECTION COVERS AND ADAPTER/REDUCING RING
HAS PIVOT BALLS FOR BOTH SBC/BBC, LS/LT, AND FORD
HAS PIVOT BRACKETS FOR CHRYSLER

ADAPTER/REDUCER RINGS:

9. MOPAR APPLICATIONS: Adapter/reducer rings are included. Determine the correct adapter/reducer ring required for your installation by fitting it onto the transmission bearing collar and then inserting it into the bellhousing transmission mounting flange.

10. Position your bellhousing over the flywheel/clutch assembly and slide onto dowel pins in engine block. Make sure the fasteners supplied have the same thread size/pitch as the factory threads. Fasten the bellhousing to the engine block using the grade 8 bolts supplied. Torque in a criss cross pattern. Secure the block plate or inspection cover to the bellhousing using the grade 8 bolts, lock washers, and nuts supplied.

NOTE: All fasteners for the engine side or transmission side should be torqued between 35 and 45 ft/lbs to maintain parallelism. It is more important that they are all torqued the same more than whether it is 35 or 45 ft/lbs.

BELLHOUSING ALIGNMENT PROCEDURE:

Due to manufacturers' machining tolerances of engine blocks in relationship to dowel pin location, it is quite possible for the crankshaft centerline and bellhousing bore to be misaligned.

With the transmission installed in a misaligned condition, several problems can occur, such as pilot bearing and main shaft bearing wear, difficulty in shifting, and in extreme cases, breakage of transmission gears and case.

While most bellhousings will fall within the allowable limits, it is good practice to check for register bore run out whenever any bellhousing or engine block is installed.

Should you need them, offset dowel pins are available from Lakewood & Quicktime to ensure correct bellhousing installation. For checking, you will need a dial indicator (preferably with a magnetic base), a few simple tools and close attention to detail to give you accurate installation results.

1. Remove clutch assembly from flywheel

2. Thoroughly clean the mounting surface of the engine block and of the new bellhousing; be sure to smooth out any rough areas, burrs or other surface imperfections prior to installing bellhousing.

3. Install bellhousing on engine block. (Checking alignment is easier when you leave the clutch assembly off the flywheel.)Install dial indicator base securely to the crank flange or the flywheel and adjust plunger to contact the register bore of the housing. Dial should be as parallel to the mounting face as possible. Slowly rotate the crankshaft and ensure the dial does not interfere with the bellhousing.

4. After checking for interference, rotate the crankshaft and note indicator reading. Note the location where the largest reading is, mark that location and zero the indicator. Check and note the reading every 90° of rotation, divide the opposing measurement by 2. If the result is >.005" then an off center condition exists and should be corrected. Misalignment is one-half of the indicator reading (maximum suggested allowable misalignment is .005").

5. 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).

6. Remove stock dowel pins by driving out from back side or pulling out with gripper pliers.

7. Clean engine block dowel holes and coat lightly with lubricant.

8. Note the position of the offset and mark the dowel for reference. Lubricate dowel pins and install in block. They should be installed in the direction the bellhousing needs to be adjusted, parallel to one another and in pairs (both .007", .014" and .021").

9. Install and tighten bellhousing securely. Remount the dial indicator and recheck the register bore run-out (Repeat step 3).

10. To make small corrections or adjustments to the alignment, you will need to remove the bellhousing and drive the offset dowels out of the block. Reposition the dowels and re-check register bore run-out. Repeat this procedure until the register bore is within limits.

NOTE: Always be careful when removing bellhousing from engine block so that offset dowel pins do not move or change position.

Total Indicator Reading	**One-Half Total Indicator Reading**	**Size Dowel To Be Used**	**Lakewood Offset Dowel Part Number**		**Quick Time Part# for Ford Mod Engines**
			GM .625" dia.	Ford/Mopar .500" dia.	
.012" to .020"	.006" to .010"	.007"	#15920	#15950LKW	RM-140
.022" to .034"	.011" to .017"	.014"	#15930	#15960LKW	RM-141
.036" to .052"	.018" to .026"	.021"	#15940	#15970	RM-142

Technical Service: 1-866-464-6553
Phone: 1-270-781-9741
For online help, please refer to the Tech Service section of our website: www.holley.com

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