

246mm Twin Disc Clutch Kit

Tilton's 246mm twin disc clutch has been engineered for ease of installation. Only a few basic steps are required to ensure correct function. The clutch and flywheel are balanced separately from each other, so there is no need to index the clutch to the flywheel.

BELLHOUSING ALIGNMENT

Be sure that the bellhousing is concentric and parallel within .010", and if a steel bellhousing is used, be sure the engine and transmission surfaces do not have excessive/uneven paint or powder-coating. Do not assume that a new bellhousing or engine is within spec.

Parallelism: Refer to Diagram 1 and bolt the clutch housing onto the engine block, attach a magnetic base dial indicator to the crankshaft flange and rotate the crankshaft. Sweep the indicator in a 6" circle on the back of the housing and verify that the total indicated runout does not exceed .010". If the value exceeds .010", machine the back of the bellhousing and or engine block so that it is perpendicular to the crankshaft centerline.

Concentricity: Refer to Diagram 2 and sweep the inner diameter of the clutch housing transmission register hole using a dial indicator. The total indicated runout should not exceed .010". If the value exceeds .010", you can correct block concentricity by using a bellhousing index plate.

INSTALLATION

Grease Input Shaft Splines: Use the supplied grease packet to LIGHTLY grease the splines of the input shaft. Excessive grease will ing into the friction material and reduce clutch performance. When in doubt, use less grease.

Install Flywheel: Use the supplied crank bolts and torque to the values specified below.



Diagram 1

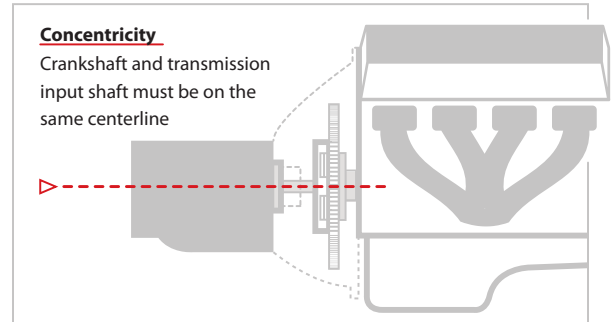
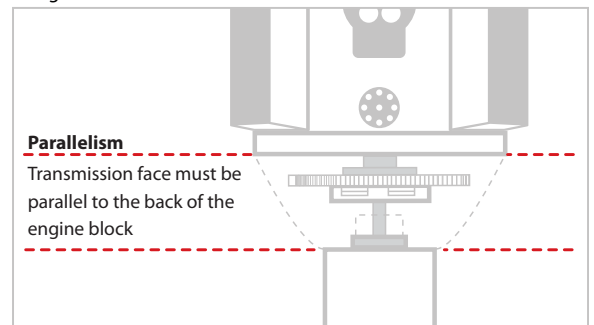


Diagram 2



APPLICATION	TORQUE SPEC*
Chevy LS/LSX/LT1/LT4	85 lb-ft
Chevy Small Block/Big Block	85 lb-ft
Dodge Hemi GEN3	70 lb-ft
Ford Coyote	70 lb-ft
Ford Small Block	85 lb-ft

*With thread locking compound

Align Clutch Discs: Using the supplied alignment tool, align the bottom (flywheel side) friction disc with pre-installed top friction disc. Both discs should be installed in the same orientation. Note that the top disc has already been aligned by the factory during clutch assembly (do not do anything to pull this disc out of alignment). If the top discs has moved during shipping, the disc can be realigned using the supplied alignment tool. Fit clutch with both discs installed to flywheel by hand-tightening the clutch bolts to the flywheel. Use supplied alignment to tool to realign the top disc. After the discs are aligned, torque clutch bolts to 35 lb-ft as described in the section below.

Apply Thread Lock Compound: Apply a small amount of medium strength threadlocker (blue Loctite 242 or equiv.) to each of the six supplied clutch bolts.

Install Clutch: Be sure that the alignment tool is fully engaged into the crankshaft pilot bearing and finger tighten the supplied clutch bolts. Due to the free-play between the plastic tool and hub splines, you might find it necessary to rotate the tool and/or bottom disc to take up the slack (try turning the tool clockwise to take up the slack against the top disc, then turn the bottom disc counter-clockwise to take up the slack against the tool).

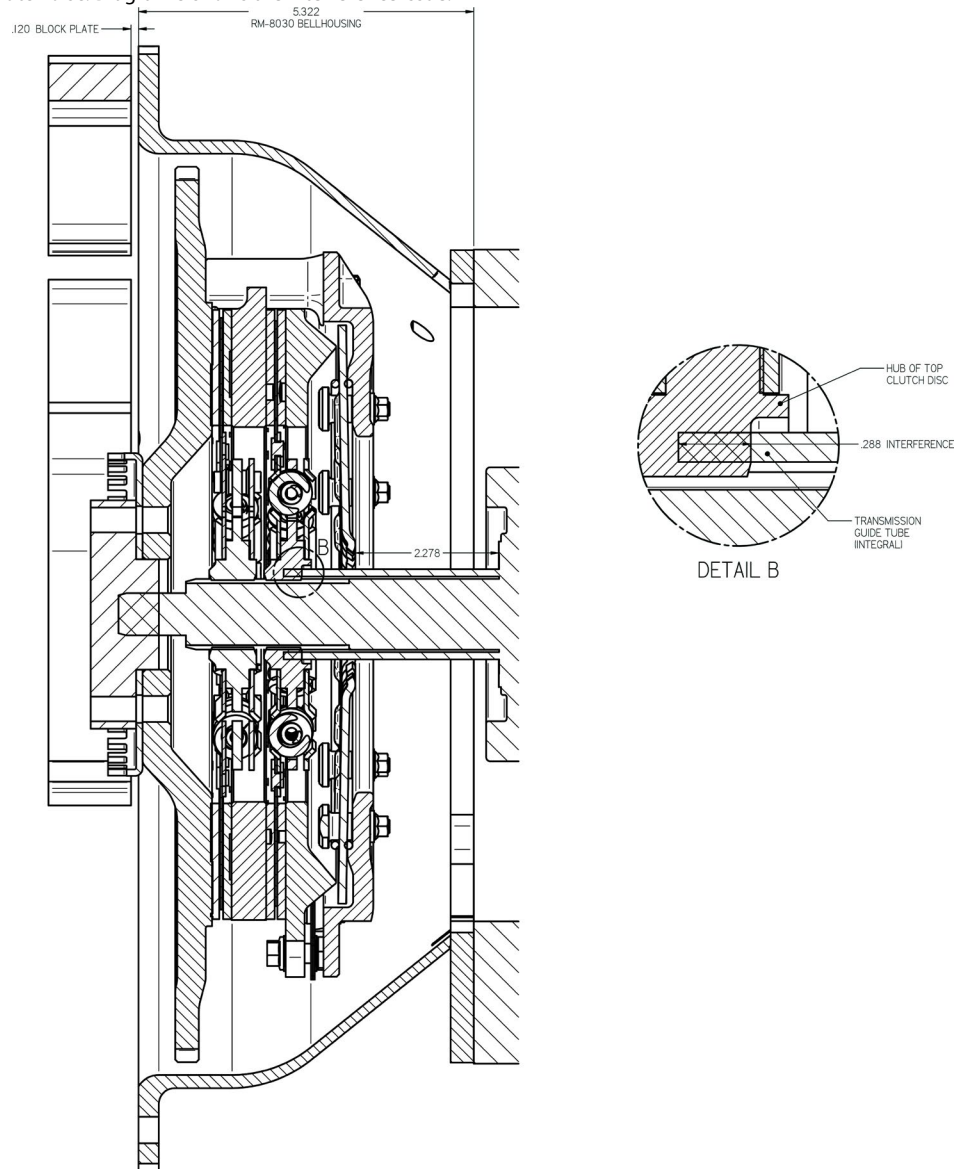
Tighten Clutch Bolts: While keeping the discs aligned, slowly tighten all six clutch bolts in a star pattern turning each bolt ¼ turn a time until the clutch cover legs are fully seated against the flywheel. Torque clutch bolts to 35 ft-lbs.

RELEASE (THROW OUT) BEARING

Type and Size: This clutch is designed to be used with a flat-faced release bearing. The outside diameter should not exceed 3.250".

Clearance: If using a Tilton hydraulic release bearing, such as the 6000 series, refer to the bearing installation instructions for proper clearance and adjustment. If using the factory release system, ensure that there is a minimum of .125" bearing clearance (measured with the hydraulics fully compressed). The travel of factory bearings vary, so keep in mind when determining maximum clearance that you will need approximately .250" of diaphragm spring travel to release the clutch (after the bearing contacts the fingers).

Pilot Tube Interference: For application using a version of the Tremec T56 with a steel pilot, such as Tremec P/N TUET11010, the pilot needs to be shortened by 1/2" to avoid it interfering with the top clutch disc. Diagram 3 shows the interference issue.



Limiting Travel/Clutch Pedal Stop: Depending on the release bearing system, master cylinder and clutch pedal stop may be needed to prevent over-stroking. Below is a simple means of setting a clutch pedal stop once the drivetrain is in place:

1. Support the rear of the car on jack stands.
2. With the engine off and the car in gear (without pressing on the clutch pedal), slowly depress the clutch pedal until the drive wheels just break free.
3. Give the pedal an additional .250" of travel (measured at the foot pad) and lock the pedal stop in place. This will allow the clutch to cleanly release itself without damage.



Scan to watch a video on Clutch Pedal Stop: How to Set a Clutch Pedal Stop or visit www.tiltonracing.com/technical/technical-videos/