Performance Engineered Driveline Components

General Installation Instructions / Clutch Break-In Period

Thank You for your support of Mcleod Racing. Before installing your new McLeod clutch or flywheel there are some steps we recommend you should take to ensure that you have a proper running clutch. The first thing is to make sure that the flywheel is resurfaced with a new clean drive surface with a course surface texture. We call out an 80 -120 grit surface finish. You should see a cross hatch in the flywheel that you could run a finger nail across and the texture would catch your finger nail. This will ensure a proper seating of the disc against the flywheel and also combat against clutch chatter or judder. Make sure that the drive surface of the flywheel is clean and dry of any Anti-Rust Inhibitor before installation. Brake Cleaner is your friend! (Note: Clutch Chatter is NOT Warrantable)

The second thing we recommend doing is having the flywheel and new clutch assembly balanced together as a complete assembly. This step is a good practice to ensure that there are no issues with vibrations at specific RPM and is the same practice you would use if you are installing new wheels and tires or a new rotating assembly in your engine. Anything that rotates at high speed should be balanced as an assembly. We recommend a professional machine shop that has knowledge on balancing rotating assemblies. McLeod Racing also offers an in house service to balance your assembly. Give our tech and sales team a call at 714-630-2764 x 351 and schedule a RMA Number before you send the unit to us.

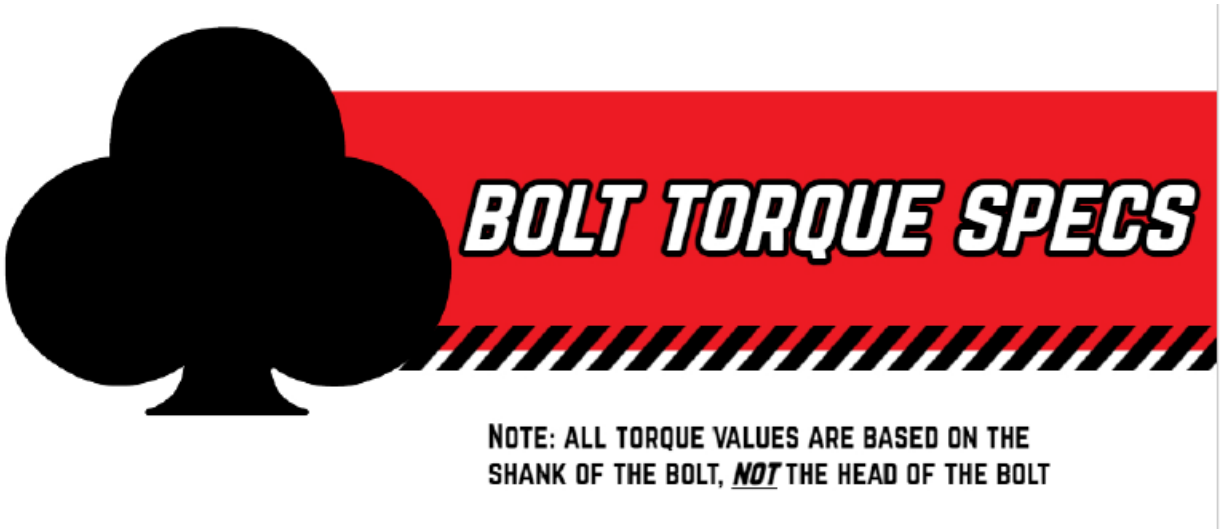
All McLeod street performance clutches require a Break-In period of 1200 to 1500 clutch cycles of street type driving before driving at wide open throttle. This procedure is required to properly seat the disc with the pressure plate and flywheel. You can drive 750 miles on the highway and not depress the clutch pedal enough times to properly seat a clutch disc.

Do not run the vehicle on a chassis dyno prior to full Break-In procedure (Will VOID Warranty)

Important: During performance driving, all traction control devices must be turned off or clutch slippage will occur!

McLeod Racing LLC. 1570 Lakeview Loop, Anaheim, CA 92807. USA
Phone 714.630.2764 . Fax 714.696.7303
www.mcleodracing.com

McLeod
Performance Engineered Driveline Components



Flywheel to Crank **Pressure Plate to Flywheel.**

Bolt Dia.	Ft/Lbs.	NM	Bolt Dia.	Ft/Lbs.	NM
10mm x 1.0	65	88	8mm x 1.0	25	34
10mm x 1.25	65	88	8mm x 1.25	25	34
11mm x 1.50	65	88	10mm x 1.5	35	47
12mm x 1.0	73	100	5/16-18	25	33
7/16-20	65	88	5/16-24	25	33
1/2 – 20	70	94	3/8-16	35	47

NOTE: DO NOT use an impact diver to tighten crankshaft bolts. Improper tightening can damage bolts.

McLeod Racing, LLC
1570 Lakeview Loop
Anaheim, Ca 92807
714-630-2764
info@mcleodracing.com

Throw Out Bearing Travel Tech Tip

This McLeod multi disc clutch assembly (RST, RXT or Street Twin) is designed to operate with the stock factory clutch linkage, regardless if it is mechanical or hydraulic. The amount of throw-out bearing travel is critical for proper clutch release and apply. Many later model vehicles are equipped with a hydraulic throw-out bearing and master cylinder assembly. Typically with OEM applications the throw-out bearing travel is .440" - .445". **This clutch is designed to operate within these factory tolerances!**

When installing an aftermarket conversion kit (mechanical linkage to hydraulic system) or replacing a factory clutch master cylinder you must be certain the amount of throw out bearing travel remains correct for your application. **Bore size on the clutch master cylinder is extremely important!!** Most factory hydraulic master cylinders are ¾" bore. Aftermarket conversion kits may be equipped with ¾", 13/16" or 7/8" diameter bores. While this does not seem to be a big difference it may cause clutch malfunction, inadequate release or too much release, increasing pedal effort as well as other problems. Keep in mind bigger is not always better. If your stock clutch master cylinder was ¾" and you change to a 7/8" clutch master cylinder you will end up with too much throw out bearing travel with the same pedal stroke. This will cause the throw out bearing to push the clutch fingers (or diaphragm) too far into the pressure plate assembly and damage the pressure plate components.

If mixing and matching aftermarket hydraulic throw out bearing components; be sure to check with the aftermarket manufacturer to be certain the components are compatible!

I0028

Important Clutch Installation Hints

The following check list is a reminder of the necessary inspection points and precautions required to insure a trouble-free clutch installation.

Installation / Do's

1) Determine cause of original clutch failure. Cause of first clutch failure (if not wear) MUST be found and corrected. If oil is present on clutch plate, cause of leak MUST be corrected before installation of new clutch unit.
2) Check splines on transmission input shaft for signs of abnormal wear or twisting. Slide new disc on spline by hand gently to check fit. Disc should move FREELY on splines.
3) Remove ALL oil or grease from friction surfaces on flywheel and cover assembly. Surfaces MUST be clean and dry. Also clean input shaft spline with a wire brush. Lubricate with dry graphite spray if needed.
4) To insure proper operation, friction surface of flywheel MUST be resurfaced. Check dowel pins, they must be smooth and straight.
5) If throw-out bearing is worn, replace it, better now than later.
6) Closely inspect pilot bearing or bushing for excessive wear to avoid transmission shaft misalignment. Replace it if any doubts.
7) Use clutch alignment tool to insure disc and cover are properly aligned with pilot bearing.
8) If using an aftermarket scatter shield/bell housing, checking center hole run-out is highly recommended.
9) Be sure all special type bolts, if any, are replaced in their proper locations.
10) Torque all clutch cover bolts evenly, to factory recommended spec, using a progressive "criss-cross" tightening pattern.
11) Before completing installation, inspect all clutch linkage parts (fork, clevis, pins, etc.) for signs of wear and replace ALL worn pieces. Grease all pivot points in linkage system.
12) Adjust clutch pedal "free play" to correct specifications. Throw-out bearing should not be tight against clutch fingers. 1/8" – ¼" is recommended, except cable linkage.

Installation / Don'ts

1) Don't let any grease or oil contact ANY friction Surface.
2) Don't use an impact (air gun) to tighten cover bolts.
3) Don't let transmission weight rest on input shaft during installation.

Torque Specs

5/16-18 Grade 8	*25 Ft/Lbs*
3/8-16 Grade 8	*35 Ft/Lbs*
7/16-20 Grade 8	*65 Ft/Lbs*
½-20 Grade 8	*75 Ft/Lbs*

Limited Warranty

McLeod Racing LLC, Products are warranted to be free from defects in material and workmanship for the period of ninety (90) days, from the date of purchase. McLeod does not warrant or make any representations concerning its products when not installed and used strictly in accordance with the manufacturer's instructions for such; installation and operation, and in accordance with good installation and maintenance practices of the automotive industry. McLeod will not be held liable for the labor charges and other intangible or consequent losses that might be claimed as a result of the failure of any part, nor shall it be liable for damages or injury to persons or property resulting from the misuse or improper installation of any part subject to this warranty.

No merchandise may be returned for any reason unless prior return merchandise authorization number (RMA) has been obtained from McLeod.

McLeod reserves the right to examine all parts returned for warranty claim to determine whether or not any such part has failed because of a defect in material or workmanship. McLeod obligation under this warranty shall be limited to repairing, replacing or crediting, at its option, any part found to be so defective, regardless of whether any part must be prepaid by the customer under this warranty. There are no other warranties, either expressed or implied, which extend beyond those set forth in the preceding paragraphs.