




# **BOLT TORQUE SPECS**

**NOTE: ALL TORQUE VALUES ARE BASED ON THE SHANK OF THE BOLT, NOT THE HEAD OF THE BOLT**

**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](mailto:info@mcleodracing.com)



## ***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!**



## Street Twin Clutch Installation Instructions

*All assemblies should be balanced to the flywheel you are replacing. Street Twin assemblies are not Pre-Balanced from the factory. Allow 500 city miles (1200 shift cycles) break-in period before hard driving.*

**When performance driving, all traction control devices must be turned off or clutch slippage will occur.**

- 1) Inspect clutch assembly before disassembly. See Figure. 1. Note alignment marks.

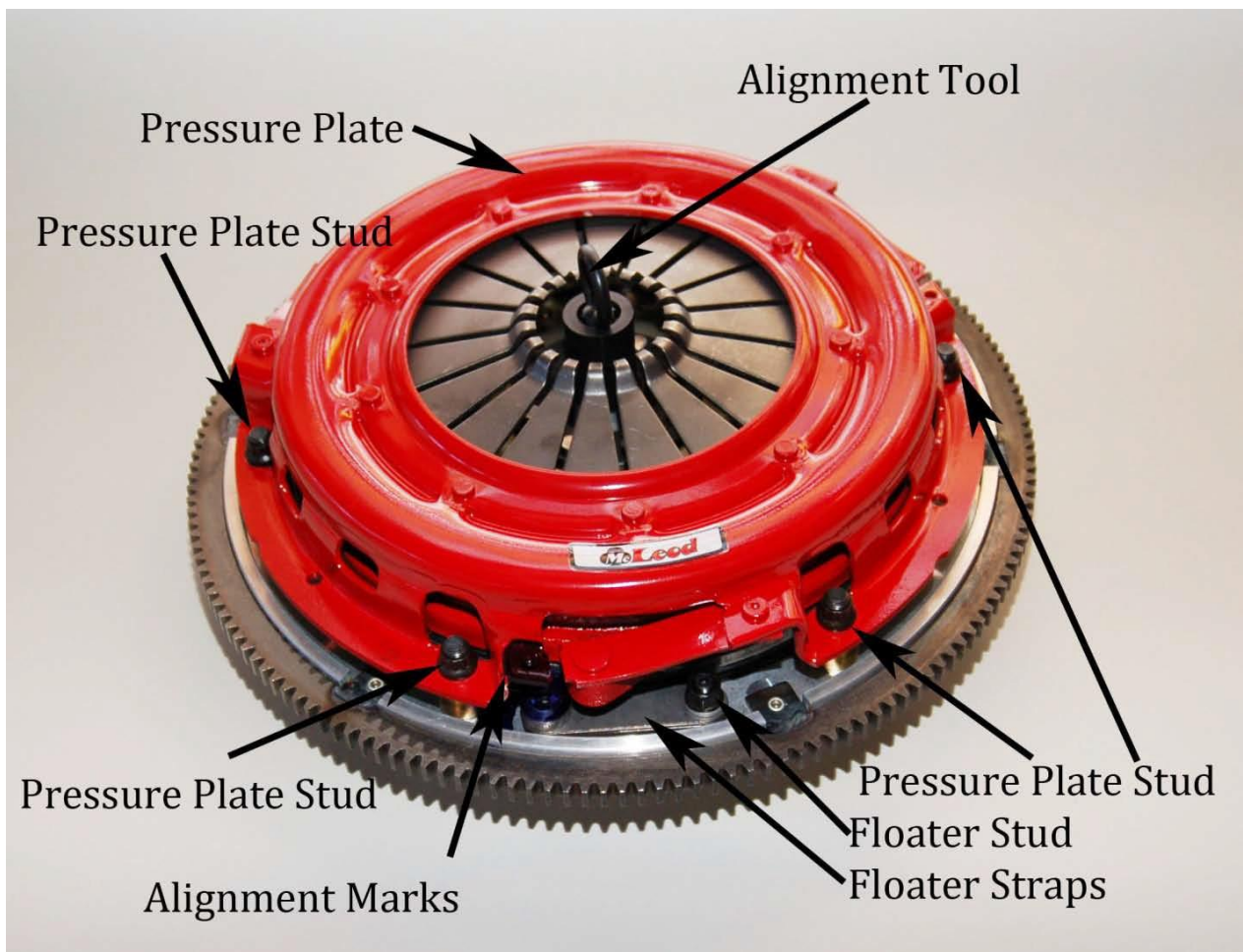


Figure 1

- 2) Unbolt pressure plate by removing six nuts. **Note alignment mark (blue paint) on pressure plate, floater and flywheel. These must be in same position when re-assembling components.**

- 3) Remove top disc and alignment tool. Notice the hub on the disc is cupped toward the transmission. Also note the "Flywheel Side" sticker on the disc center. See Figure 2

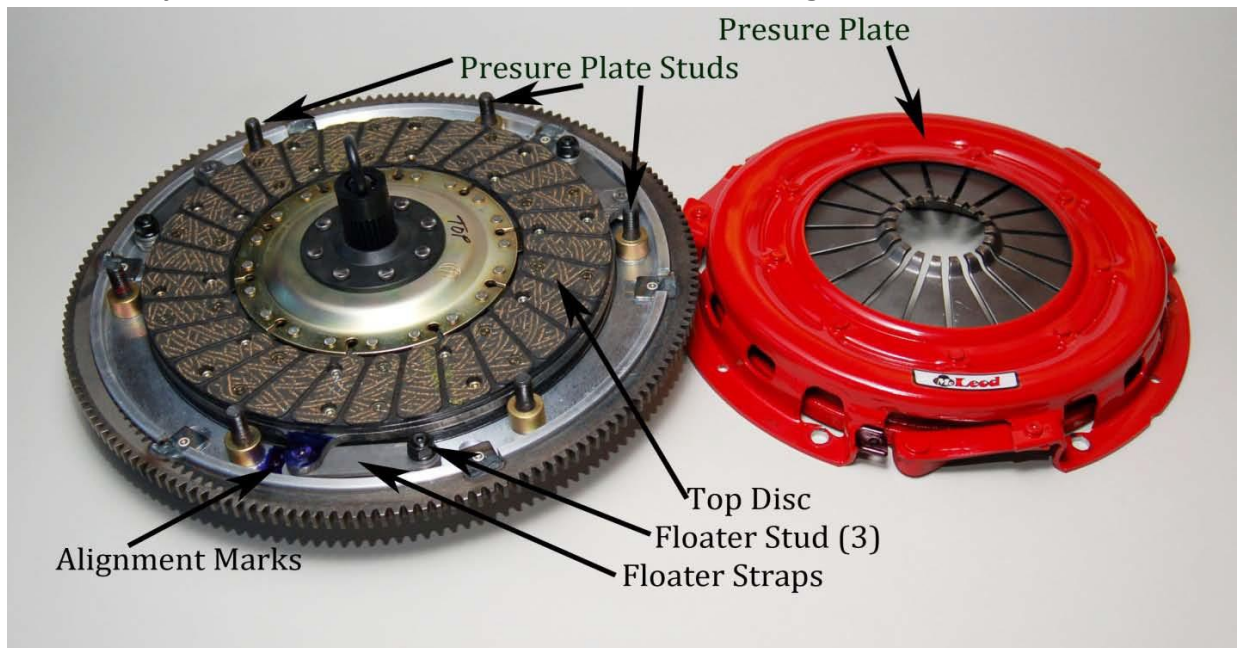


Figure 2

- 4) Remove the three nuts that hold the floater straps onto the flywheel. Remove the floater assembly. Note the straps on the floater are on the flywheel side. Do not remove the straps from the floater! There are six large studs and three small studs in the flywheel. There is a series of spacers (stands) and shims on these studs. Do not mix these parts. Install nuts onto studs to prevent the spacers and shims from falling off the studs during flywheel installation!
- 5) Remove the bottom disc. Notice the hub on the disc is cupped toward the transmission. Also note the "Flywheel Side" sticker on the disc center. See Figure 3

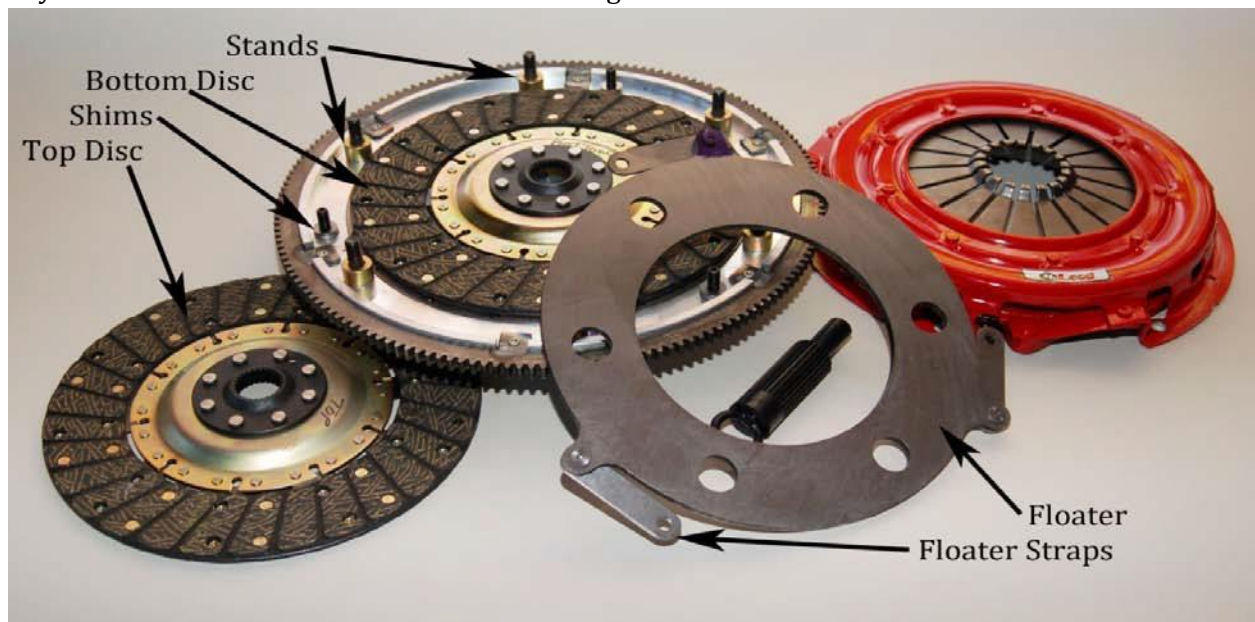
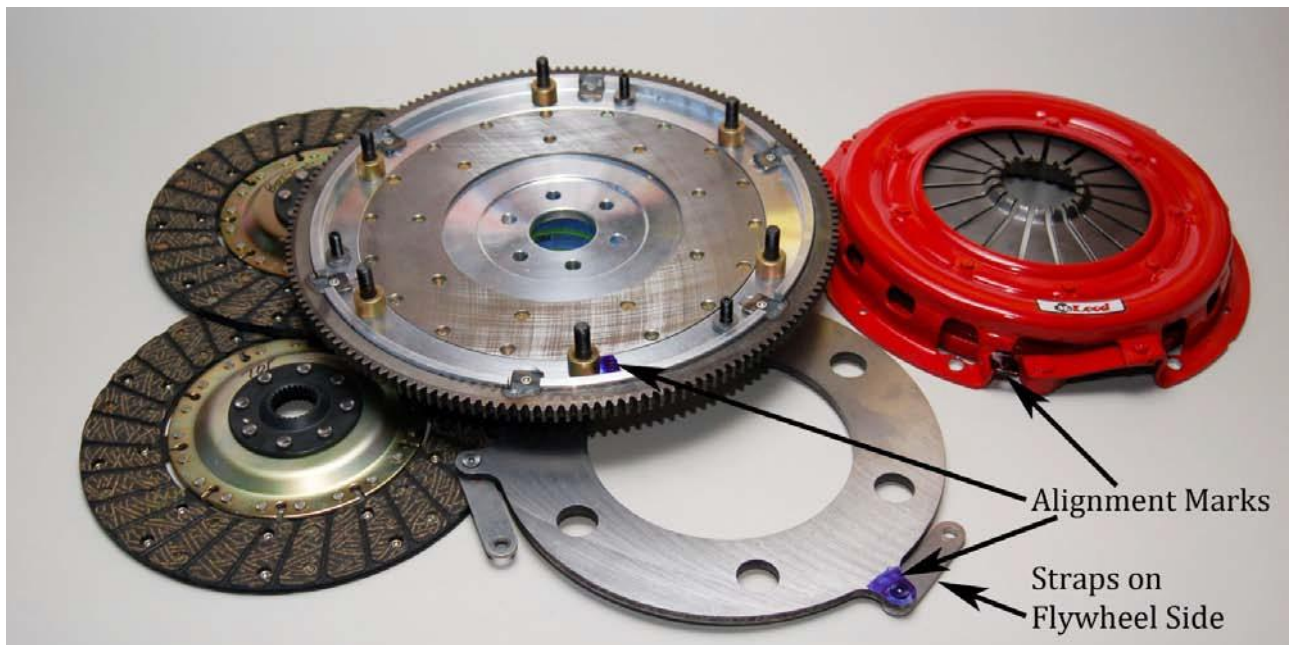


Figure 3

- 6) Inspect the crankshaft at this time. Remove any dirt from the crank and clean the pilot hole. A wire brush can be used. Inspect the pilot bushing; if worn or damaged replace it at this time. Install flywheel onto crank using high quality crank bolts. Torque bolts to factory specifications.
- 7) Remove the three small nuts from the floater studs. Be sure the shims do not fall off the studs. Install the bottom disc with the sticker on the flywheel side to the front.
- 8) Install the floater onto the studs. Be sure to note the alignment marks. Floater straps must be on flywheel side. Install the three nuts and tighten to 25 ft. lbs. Check disc clearance at this time. You should have .020" - .025" clearance. Insert the pilot tool and rotate the disc. There should be a slight amount of front to back movement. If there is more than .025" clearance the floater will push the top disc into the pressure plate, resulting in no clutch release. If the clearance is less than .020" the bottom disc will drag on the flywheel and the floater resulting in no clutch release. If there is too much or too little clearance you may have dropped some of the shims or placed them on the wrong stud. Call the factory tech line before you proceed further. If all is correct re-tighten the three floater nuts on each stud to 25 ft. lbs. **Do not use Loctite on these nuts!**



- 9) Install top disc. Be sure the "Flywheel Side" sticker on the disc is to the front. Insert and rotate the pilot tool all the way into the pilot bushing to align both discs. Remove the nuts from the six large studs. Do not allow the stands or shims to fall off the studs.
- 10) Install the pressure plate onto the six studs. Be certain to note the alignment marks. Install lock washers and then nuts onto the studs and tighten to 35 ft. lbs. **Do not use Loctite on these six pressure plate studs!**
- 11) Complete the bell housing, transmission and driveline installation.

Chrysler Applications: If helper spring is mounted under the dash on the clutch pedal, remove it. Allow more free play at throw-out bearing than normal. When engaging transmission into reverse from neutral it should not grind into gear. If grinding occurs there may be insufficient clutch release, caused by too little throw-out bearing travel.

## 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" - 1/4" 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
1/2-20 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 defective. All products returned to McLeod for warranty inspection 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.

Visit us at [www.mcleodracing.com](http://www.mcleodracing.com) for additional information and our Limited Warranty

McLeod Racing LLC (714) 630-2764

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Lever Block Removal  
Lever Blocks MUST be removed after installation



Lever Blocks are used to block down the fingers of the pressure plate, which relieves the stress on the bolts as you tighten them to the flywheel during installation. These blocks MUST be removed after the pressure plate has been installed over the disc and the bolts have been torqued to their final value. Fig 1 shows the three lever blocks installed between the fingers and the pressure plate.

Fig 2 shows how to remove the lever blocks while installed on the vehicle or on a bench prior to final assembly. By Placing a handle of a small hammer under the edge of the red stamped cover and the body of the handle is over the tip of the lever, you can apply pressure with your hand and remove the lever block. CAUTION!!! Should be taken not to place your fingers between the lever and the stamped steel cover at any time during this exercise. The handle could slip and catch your finger between the lever and cover incurring injury to or others.

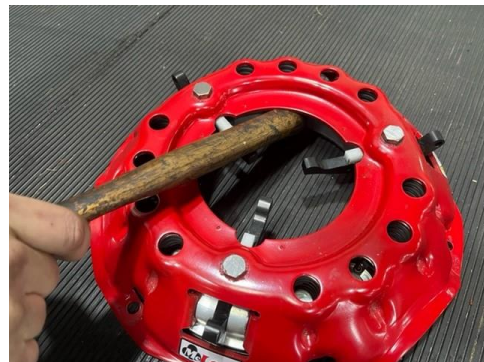


Fig 3 shows lever blocks being removed and the handle letting the lever up. Do this to all three levers and put them in your toolbox or discard them in the trash if you never intend to use them again. Again CAUTION!!! Should be taken not to place your fingers between the lever and the stamped steel cover at any time during this exercise. The handle could slip and catch your finger between the lever and cover incurring injury to or others.



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