



Before installation

Proper release bearing preloading is essential to operation of this clutch. You **MUST** use the setup drawing located on the back of the quick start guide to check this before finishing the install. Please see the page 'Understanding factory hydraulics'.

The 'drill modification' **MUST** be performed for any LS application using the RAM Street Dual. Failure to perform this operation will result in premature slippage of the clutch system. There is an excellent tutorial on this at www.installuniversity.com. Click on 'LSX vehicles', then 'install documents'.

LS hydraulic systems are extremely finicky. When installing the new hydraulics, it is **ESSENTIAL** to flush the system of old fluid and re-bleed with new fluid. Small particles in the fluid can clog the return port on the master cylinder and cause premature slippage of the clutch system.

Bleeding MUST be done by vacuum method or using a power bleeder such as a mity-vac.

Test fit both discs on the input shaft of the transmission. Make sure they slide freely on the splines.

If you are using an aftermarket bellhousing, it **MUST** be dial indicated to the engine before installing the clutch. These bellhousings typically are not centered and can cause release issues if not addressed.

Clutch installation

Remove the 6 pressure plate attachment bolts from the flywheel. Notice the proper orientation of the pressure plate on the flywheel. Be sure the unit is installed this way. Lift the cover from the flywheel. The top disc is a sprung hub configuration. After removing the sprung hub disc you will see the floater plate.

The floater plate drives off of the three straps mounted to the flywheel, which are bolted in position. This is how the floater should fit when installing the unit in the car.

Remove the three 5/16-18 capscrews and lift the floater plate out of the assembly. The solid hub bottom disc can now be removed.

Install the flywheel loctite or similar thread locker on the flywheel bolts. Torque the flywheel bolts to 75-85 ft/lbs.

Slip the top clutch disc (sprung hub disc) onto the clutch alignment shaft followed by the floater plate and bottom clutch disc (solid hub). **Be sure the floater plate side that has the machined outer lip is facing the transmission** (i.e. the completely flat side towards the flywheel).

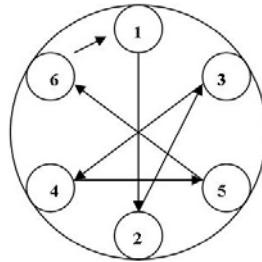
Slide the clutch alignment tool into the pilot bushing while positioning the floater plate over the drive lugs. The three retaining straps should line up with the three 5/16-18 holes on the flywheel surface.

Install the three 5/16-18 capscrews through the strap into the flywheel (note: the straps should line up without any repositioning). Use a threadlocker on the capscrews.

At this point make sure the floater plate should have a slight gap between the friction surface and the bottom disc.

Place the pressure plate over the stand bolts and **torque the cover nuts, tightening them in a star pattern as shown below so that the diaphragm is pulled down evenly**. Be sure the cover drive straps are **staggered with the floater straps** and that each stand has its shims between the cover and the stand.

COVER TORQUING SEQUENCE



STEP 1 – snug nuts down in a star pattern to 10 ft/lbs. STEP 2 – repeat star pattern tightening the nuts to 18 ft/lbs. STEP 3 – repeat star pattern tightening nuts to 25 ft/lbs. STEP 4 – repeat star pattern tightening nuts to 30 ft/lbs. NEVER USE POWER TOOLS TO PERFORM THIS PROCESS OR DAMAGE TO THE DIAPHRAGM CAN OCCUR.

The bellhousing and transmission can now be reinstalled. Be very careful not to let the transmission hang on the clutch disc spline during reassembly as this may bend the clutch disc carrier, which will cause release problems. **THIS IS CRITICAL!**

Adjustment

Mechanical & Cable linkages

Adjust your pivot ball to achieve a forward attitude (drivers side pivot) or rearward (pass. Side pivot) on the clutch fork when the bearing is just touching the fingers. Set the release low to the floor, maximum freeplay. If this is not comfortable then use a pedal stop to avoid excessive release.

LS1 hydraulic applications

RAM recommends using an adjustable master cylinder with this clutch assembly so you can limit the clutch travel and avoid shifting problems. Set the clutch pedal for minimum release, that is keep the pedal as low to the floor as possible.

RAM adjustable master for F-body 98-02 PN 510 RAM adjustable master for Corvette 97-04 PN 515

RAM slave cylinder for F-body 98-02 PN 520 RAM slave cylinder for Corvette 97-04 PN 525

Technical help

Please visit our website www.ramclutches.com for technical or product information.

IMPORTANT NOTICES

PROPER FLYWHEEL BOLT TORQUE IS CRITICAL WHEN INSTALLING YOUR RAM STREET DUAL CLUTCH SYSTEM. RAM STRONGLY RECOMMENDS AFTERMARKET FLYWHEEL BOLTS FOR YOUR APPLICATION.

7/16" BOLTS – 85 FT/LBS. ½" BOLTS – 135 FT/LBS. 10mm BOLTS – 65-70 FT/LBS. 11mm BOLTS – 80-85 FT/LBS.

USE A HIGH QUALITY AFTERMARKET BOLT SET AND RED LOCTITE ON THE THREADS. GO THROUGH THE TORQUE SEQUENCE 3 TIMES. RAM FLYWHEEL BOLT SET PART NUMBERS:

7/16 X 1 PN 575 ½ X 1 (8 BOLT) PN 596 10mm – 1 x 1 (4.6L Ford Modular 6 bolt) PN 529 10mm – 1 – 1 (Ford modular 8 bolt) 11mm – 1.5 x .880 (LS1) PN 528

RAM PROFESSIONAL STEEL ALIGNMENT TOOLS

GM 10 spline – PN 03-001 GM 26 spline – PN 03-013 Ford 10 1 1/16 10 spline – PN 03-004
Ford 26 spline – 03-048