FORM PS2001 RAM Pro Street Dual Disc LS GM Applications

Notice: Strap alignment

Alignment of the cover plate and floater plate are critical for proper operation of the RAM Street Dual. The pressure plate straps and floater plate straps must be oriented as in illustration below (staggered).

Before installation
2005 and up Corvette require the use of a RAM hydraulic release bearing 78170
2010 and up Camaro require the use of a RAM hydraulic release bearing 78180

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 Understanding factory hydraulics.

The 'drill modification' MUST be performed for any Gen 4 Camaro 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 should be done by vacuum method or using a power bleeder such as a mity-vac. The system can be pump bled by pushing the pedal and manually pulling it up until bleed is achieved. Pedal should be firm from top to bottom with no mushiness.

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 pressure plate attachment nuts from the flywheel stand bolts (3/8" 12-point nuts). Notice the proper orientation as noted above. 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 stands mounted to the flywheel with straps, which are bolted in position. This is how the floater should fit when installing the unit in the car. Note: the pressure plate stands each have shims on top of them. Be sure they are in place when the unit is installed.

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).

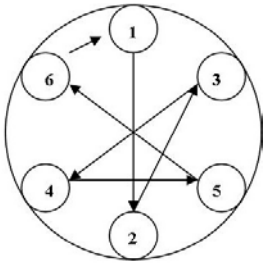
Slide the clutch alignment tool into the pilot bushing while positioning the floater plate over the drive lugs. The three retaining straps should line up with the three 5/16-18 holes/stands on the flywheel surface.

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 the 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	510	RAM adjustable master for Corvette 97-04	515
RAM slave cylinder for F-body 98-02	520	RAM slave cylinder for Corvette 97-04	525

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