

South Bend Ford 6.0 & 6.4 DD Installation Instructions

Torque specifications:

Flywheel to crank 45-49 ft. lbs. torque

Pressure plate to flywheel is 18-20 ft. lbs. torque

Unbolt pressure plate from flywheel in a star pattern with quarter turns.

Check discs on input shaft for free movement before installation.

Bolt flywheel to crank with provided specs.

Line up paint marks on pressure plate, center plate, and flywheel.

Install discs according to sticker (located on disc) for correct hub direction.

Install pressure plate bolts in crossing pattern, one quarter turn at a time (do not use air powered tools for this step).

Refer to Important Information Form (included) for more installation information.

Removal and Installation

Removal

1. Disconnect battery negative cable.
2. Shift transmission into Neutral.
3. Remove screws attaching shift boot to floor pan. Then slide boot upward on the shift lever.
4. Remove the bolts holding the shift tower to the isolator plate and transmission gear case.
5. Remove the shift tower and isolator plate from the transmission gear case.
6. Raise and support vehicle.
7. Mark propeller shaft and axle yokes for alignment reference. Use paint, scribe, or chalk to mark yokes.
8. Remove universal joint strap screws and remove straps.
9. Remove propeller shaft.
10. Disconnect and remove exhaust system as necessary.
11. Disconnect wires at backup light switch.
12. Support engine with adjustable safety stand and wood block.
13. If transmission is to be disassembled for repair, remove drain bolt at bottom of PTO cover and drain lubricant from trans.
14. Remove bolts/nuts attaching transmission to rear mount.
15. Support transmission with a transmission jack. Secure transmission to jack with safety chains. NOTE: It is recommended that a heavy duty, scissors style transmission jack be used to remove and install the NV5600 transmission.
16. Remove rear cross member.
17. Remove bolts attaching clutch slave cylinder to clutch housing. Then move cylinder aside for working clearance.
18. Remove wire harness from clips on transmission.
19. Remove bolts attaching transmission clutch housing to the engine block.
20. Slide transmission and jack rearward until input shaft clears clutch disc and pressure plate.
21. Lower transmission jack and remove transmission from under vehicle.

Installation

1. Apply light coat of MOPAR high temperature bearing grease to contact surfaces of following components:
 - o input shaft splines and pilot bearing hub.
 - o release bearing slide surface of front retainer.
 - o pilot bearing.
 - o release bearing bore.
 - o release fork.
 - o release fork ball stud.
 - o propeller shaft slip yoke.
1. Apply sealer to threads of bottom PTO cover bolt and install bolt in case.
2. Mount transmission on jack and position transmission under vehicle. NOTE: It is recommended that a heavy duty, scissors style transmission jack be used to remove and install the NV5600 transmission.
3. Raise transmission until input shaft is centered in clutch disc hub.
4. Move transmission forward and start input shaft in clutch disc and pilot bushing/bearing.
5. Work transmission forward until seated against engine block. Do not allow transmission to remain unsupported after input shaft has entered clutch disc.
6. Install and tighten transmission-to-engine block bolts.
7. Install clutch slave cylinder.
8. Connect backup light switch wires.
9. Fill transmission with recommended lubricant. Correct fill level is bottom edge of fill plug hole.
10. Position transmission harness wires in clips on transmission.
11. Install transmission mount on transmission or rear cross member.
12. Install rear cross member.
13. Remove transmission jack and engine support fixture.
14. Align and install propeller shaft.
15. Lower vehicle.
16. Shift transmission into third gear.
17. Clean the mating surfaces of shift tower and isolator plate with suitable wax and grease remover.
18. Apply MOPAR Gasket Maker, or equivalent, to the sealing surface of the transmission case. Do not over apply sealant.
19. Install the isolator plate onto the transmission case, metal side down.
20. Install the shift tower onto the isolator plate. No sealant is necessary between the shift tower and top of the isolator plate.
21. Verify that the shift tower, isolator plate, and the shift socket are properly aligned.
22. Install the bolts to hold the shift tower to the isolator plate and the transmission case. Tighten the shift tower bolts to 10.2 - 11.25 Nm (7.5 - 8.3 ft. lbs.) .
23. Install shift boot and bezel.
24. Connect battery negative cable.

SOUTH BEND CLUTCH

INSTALLATION INSTRUCTIONS - READ CAREFULLY

NEVER

- ▶ Force the input shaft into the disc hub. It will bend the disc or scar the splines.
- ▶ Allow the weight of the transmission to hang on the disc.
- ▶ Touch The friction surface of the disc with greasy hands.
- ▶ Use an impact wrench to tighten the pressure plate mounting bolts.
- ▶ Install a new disc without replacing the pressure plate and release bearing.
- ▶ Use the proper alignment tool.
- ▶ Check the fit of the disc hub splines to the input shaft BEFORE installation.
- ▶ Resurface or replace the flywheel.
- ▶ Tighten pressure plate bolts in a "star" or criss-cross pattern, one turn at a time.

ALWAYS

FAILURE TO FOLLOW THE ABOVE INSTRUCTIONS WILL NEGATIVELY AFFECT THE PERFORMANCE OF YOUR CLUTCH AND MAY VOID YOUR WARRANTY.

THIS UNIT MAY APPEAR DIFFERENT THAN YOUR OLD PART DUE TO THE DESIGN DIFFERENCES OF VARIOUS MANUFACTURES. IT WILL FUNCTION PROPERLY IN YOUR VEHICLE.

SOM PRYING MAY BE REQUIRED TO LEVEL THE FINGERS OF THE CLUTCH. USE A SMALL PRY BAR POSITIONED BETWEEN THE COVER AND THE DIAPHRAM SPRING TO FORCE THE HIGH FINGERS DOWN TO A UNIFORM POSITION

Bolt Torque Specifications

Pressure plate to flywheel, 20 ft. lbs. torque & flywheel to crank, 95-105 ft. lbs. (Threadlock recommended)

Flywheel Resurfacing

Flywheels should NOT be lathe cut. OEM taper on flywheel runs approximately 2/1000 to 3/1000" from outside to inside. This does NOT need to be matched. Flat is preferred with our clutch. Flywheels should be resurfaced with a grinder specifically built for grinding flywheels. Do not try for a rough finish, the smoother the better. Make sure pressure plate bolts holes are thoroughly cleaned after resurfacing is done. Running a thread chaser or tap will ensure threads are clear of all debris.

ATTENTION!!

High performance clutches require a break-in period. 200 miles of normal city driving (stop and go driving) should properly break in your clutch. If slipping occurs, resume normal driving for 50 miles

For technical assistance please call 800-988-4345

Warranty Policy

South Bend Clutch, Inc. warrants that our Clutches are free from defects in workmanship and material under normal use and service. The obligation of South Bend Clutch, Inc. under this warranty is limited to repair or replacement of the defective products, which fails within 12 months or 12,000 miles. We will not be liable for losses that might be claimed as a result of the failure of any part, nor shall we be liable for damages or injury to any persons or property resulting from the misuses or improper installation of any part subject to this warranty.

South Bend Clutch, Inc. 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. Our obligation under this warranty shall be limited to repairing, replacing, or crediting, at our discretion, any part found to be defective.

The Limited Warranty will not be valid under the following express conditions:

- When proper break-in procedure was not followed. To receive proper break-in procedure for your application please call 1-800-988-4345.
- When Flywheel was not replaced with new or resurfaced to specification.
- Clutches which have been altered, improperly installed, or damaged by accident, negligence or misuse.

PRODUCTS USED FOR HIGH PERFORMANCE AND/OR RACING PURPOSES WHICH THEY WERE NOT ORIGINALLY ENGINEERED FOR, WILL NOT BE COVERED.

Return Policy

No returned product for warranty, repair, or replacement will be accepted without a return authorization number. Please call and speak to our warranty department at 1-800-988-4345.