



## 3" ELECTRIC START INSTALLATION FOR 1970-78 SHOVELHEAD

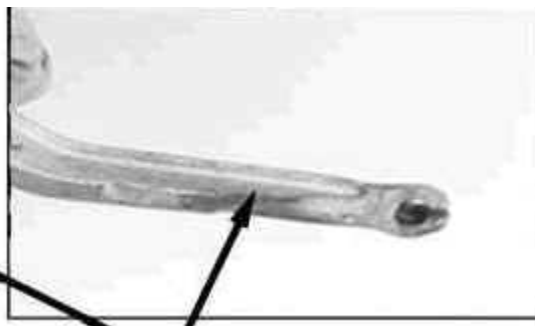


**NOTE THIS DRIVE REQUIRES A STOCK 1991 UP STARTER. THIS KIT WAS DESIGNED AROUND A STOCK FX. AFTER MARKET STARTERS WILL NOT FIT WITH A STOCK OIL TANK AND BATTERY BOX. A 1979 CLUTCH RELEASE ARM WILL ALSO BE NEEDED OEM # 37054-79 AND THIS ARM WILL NEED SLIGHT MODIFICATIONS TO WORK. SEE INSTRUCTIONS BELOW.**

1. Be sure to read the [Warranty](#), [Introduction](#), [belt tracking and starter gear problems](#), [alignment procedure](#) and **disconnect battery**.
2. Remove outer primary cover, chain or belt drive and inner primary.
3. Loosen transmission completely.
4. Modify stock oil tank support bracket by notching it as illustrated below. This will allow clearance to the back side of the starter.



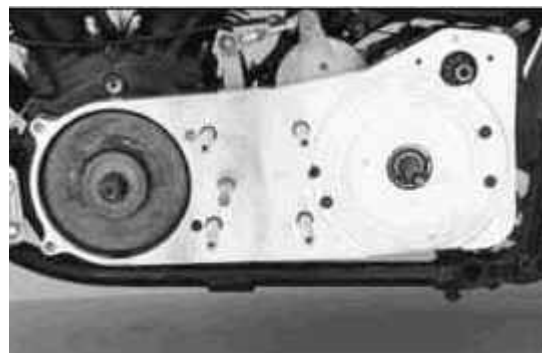
Cut a notch in oil tank support bracket as pictured above for clearance on the back side of the starter



Grind side of arm to allow maximum travel against starter when installed

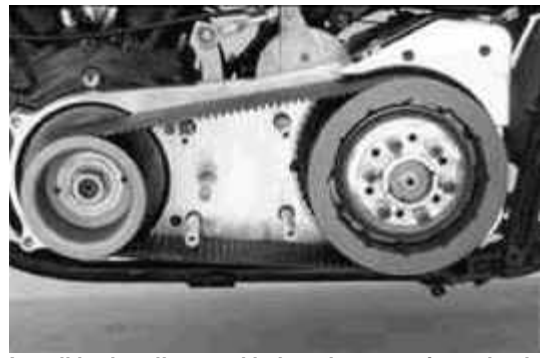
5. BE SURE BATTERY IS DISCONNECTED.
6. Install starter pinion gear, supplied with kit, onto starter shaft. Apply red loctite and install starter bolt.
7. Install cables on to starter and place starter on transmission for later installation.
8. The clutch release arm must be clearanced to achieve maximum travel of the arm against the starter. See diagram above.

9. Install motor plate and tighten bolts to motor and transmission. Check clearances between transmission plate and frame, (shim if necessary, plug fit). Torque all bolts down to HD specifications.



Install motor plate, you can install hexagon extensions at this time and check for proper movement of starter pinion gear.

10. Check to be sure that mainshaft woodruff key fits properly into the clutch hub slot. Turn mainshaft so that the slot faces 9 o'clock for installation. Shim front pulley if necessary then install front pulley, rear pulley assembly and belt at the same time. Install engine nut and stock HD hub nut with seal (not supplied with kit) but do not tighten at this time.



Install both pulleys and belt at the same time, check all clearances.

11. Rotate the motor by hand to be sure belt tracks straight and away from motor. Be sure that belt is not dragging on any part of the motor plate. If installation is correct then remove engine and transmission nut, apply red loctite, re- install and torque to HD specifications.

12. Bolt starter to motor plate, grease starter housing bushing and install over starter gear. Tighten front bolt first then lift up on housing while tightening rear bolt. This should allow proper alignment of starter gear.

13. Install clutch pack, refer to schematic (below) spline steel first, 1/2 sided friction plate with fiber facing out, then alternate steel and two sided fiber plates ending with the other 1/2 sided friction plate with fiber facing in. Install pressure plate, springs and shoulder bolts. To install shoulder bolts apply red loctite to a bolt and install it one turn, go on to the next bolt with same procedure until all 6 bolts are in place, then tighten them all the way down until they bottom out. There is no adjustment to the spring pressure, this is all pre-determined with the length of the shoulder bolt and exact dimensions of our pressure plate.



Spline Steel  
EDP-200  
1 each

5 steels alternately ERDS-100  
with 4-2 sided fictions ECP-200  
First 1/2 fiber facing out  
ECP-100

Last 1/2 fiber  
facing in  
ECP-100

Our pressure plate, EPP-100, is supplied with 9 springs, ECS-100 and 9 bolts, ESB-100. It is not necessary to use more than 6 springs for a stock application, for larger motors it may be necessary to use 8 or 9 springs.

14. Install the 4 hexagon extensions into motor plate, shim if necessary with washers supplied and mount side guard with the 4 buttonhead allen bolts. Note: one hole is countersunk so that this bolt will not interfere with the midshifter.

15. Clutch screw adjustment. should be 3/4 to 1 turn loose from lightly seated. (Note when clutch is hot the adjustment screw should not be seated). Tighten jam nut when adjustment is complete.

### **3" kick start kits using BDL clutch**

1. Follow steps 1, 2, 3, 5, 10, 11, 13, and 15 above.