



M-6007-F50 Long Block Engine Assembly INSTRUCTIONS SHEET

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF
FORD RACING PERFORMANCE PARTS

Please contact the Tech "Hot Line" for the most current instruction information (586) 468-1356

!!! READ ALL INSTRUCTIONS PRIOR TO INSTALLING ENGINE ASSEMBLY !!!

PARTS INCLUDED:

1986-93 5.0L HO Mustang Production Engine Assembly

GENERAL INFORMATION:

This engine assembly is built with the Production 5.0L crankshaft, rods and hypereutectic pistons, resulting in a 50 oz.-in. unbalance factor. The damper and flywheel/flexplate included are compatible with this balance specification. The damper and flywheel/flexplate combination for your particular application may need to be re-balanced or modified for compatibility. (See #1 and 2 for more details on balance).

Although this engine is intended to be a direct replacement for 1979-93 5.0L Mustang, it can be adapted to any 289/302 situation. Consult your Ford Racing dealer or call the Ford Racing Tech "Hot Line" @ (586) 468-1356 for advice regarding your specific application.

ACCESSORY COMPONENTS:

1. Front Accessory Drive

Must be selected for your particular application. This engine is equipped with a short serpentine reverse rotation water pump, timing cover and damper with an unbalance factor of 50 oz.-in. designed to be used with 1979-93 Mustang front accessory drive components. If your application calls for the use of later model short serpentine or "V" belt components, consult the additional parts list for help.

2. Transmission

- A. Engines designed for use with **Manual Transmissions** are shipped with a 157-tooth (13-1/4" dia.) flywheel with a 50 oz.-in. unbalance factor.
- B. Engines for use with **Automatic Transmissions** with a 164-tooth (14-1/4" dia.) flexplate with a 50 oz.-in. unbalance factor use. These flexplates fit AOD or C-4 transmission applications. For C-4 transmission applications with a 157-tooth (13 1/4" dia.) flexplate with a 50 oz.-in. unbalance factor, use Ford Racing part M-6375-E302. The supplied flexplate **will not fit C-6 applications**. For use with a C-6 the flexplate needs to be removed and replaced with Ford Racing part M-6375-J302.

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Factory Ford shop manuals are available from Helm Publications, 1-800-782-4356

IS-1850-0015



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5.0L H.O. SPECIFICATIONS

Displacement:	302 CID
Bore:	4.0"
Stroke:	3.0"
Nominal Compression Ratio	9.0:1
Deck Height:	8.206"
Piston to Deck:	.0075" below - .0135" above
Camshaft:	Hydraulic Roller (1995 Mustang Production) (3) Maximum Valve Lift .444" Duration adv. 276I/266E Centerline 116°In/115°Ex
Lifters:	Production Hydraulic roller
Valves:	Production 1.74" Intake, 1.45" exhaust
Valve Springs:	Production (not compatible with aftermarket cams)
Rocker Arms:	--
Combustion Chamber Volume:	64.0cc Nominal
Firing Order:	1-3-7-2-6-5-4-8
Torque Specs	
Main Bearing Bolts:	60-70 ft./lbs.
Rod Connecting Bolts:	19-24 ft./lbs.
Cam Sprocket Bolt:	40-45 ft./lbs.
Damper Bolts:	70-90 ft./lbs.
Flywheel Bolts:	75-85 ft./lbs.
Rocker Arm Fulcrum Bolts:	18-25 ft./lbs.
Head Bolts: torque to yield type	1 st : 35-55 ft./lbs. 2 nd : 65-72 ft./lbs.
Intake:	16-20 ft./lbs.

NOTES:

1. This engine utilizes a 50 oz. external balance Flywheel/Damper combination which is the same for all 1981-01 302 engines. Be sure to properly identify any parts you may change for your application. All 289, 1968-80 302, and 351W utilize external 28 oz.-in. unbalance factor.
2. This engine is supplied with a reverse rotation "serpentine" water pump and timing cover.
3. This cam is not compatible with non-Mustang/or Truck EFI systems. A mass air conversion kit will be needed, or install a stock cam for the vehicle.

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!!! IMPORTANT INFORMATION !!!

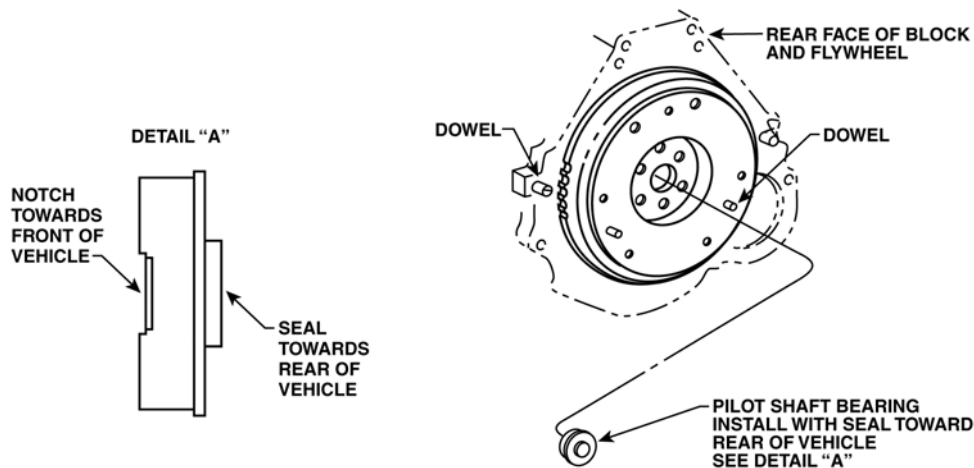
READ THIS PAGE BEFORE YOU START THE LONG BLOCK INSTALLATION PROCEDURES.

DO NOT USE PILOT SHAFT BEARING WITH AN AUTOMATIC TRANSMISSION.

THE PILOT SHAFT BEARING IS FOR MANUAL TRANSMISSION APPLICATIONS ONLY.

THE PILOT SHAFT BEARING MUST BE INSTALLED WITH THE SEAL FACING THE REAR OF THE VEHICLE.

- STEP 1: Sparingly lubricate the transmission front bearing retainer with long life lubricant (pn CIAZ-19590-BA).
- STEP 2: Install the Pilot shaft Bearing (pn D4DZ-7600-A) with the seal facing the rear of vehicle. (See Detail "A").
- STEP 3: Install the clutch, pressure plate and bellhousing as recommended in shop manual.



NO PARTS WARRANTY:

Competition parts are sold "as is" without any warranty whatsoever. Implied warranties, including warranties of merchantability or fitness for a particular purpose, are excluded. The entire risk as to the quality and performance of such parts is with the buyer. Should such parts prove defective following their purchase, the buyer and not the manufacturer, distributor or retailer, assumes the entire cost of all necessary servicing or repair.

Ford Motor Company vehicle and parts warranties are voided if the vehicle or part is used for competition or if they fail as a result of modification.

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