M-6013-B347
Crank Kit
INSTALLATION INSTRUCTIONS

Please visit www.fordracingparts.com for the most current instruction information

! ! ! PLEASE READ ALL OF THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION. AT ANY TIME YOU DO NOT UNDERSTAND THE INSTRUCTIONS, PLEASE CALL THE FORD RACING TECHLINE AT 1-800-367-3788 ! ! !

INSTRUCTION SHEET FOR CRANK KIT:

The M-6013-B347 crank kit can be used with a production or an Ford Racing Performance Part 302 cylinder block to build a 347 CID engine.

The kit contains includes:

(1) M-6303-B340 Cast 3.40" stroker crank.
(8) 4.030" Cast, hypereutectic aluminum alloy piston & pin assemblies. Valve clearance notches accommodate Ford Racing Performance Parts GT-40 heads.
(8) M-6200-D50 SAE 4130 forged steel 5.400" long connecting rods. Rods are bushed for floating pins and feature ARP 3/8" 190,000 psi bolts.
(1) Grant CC4000H030 1/16", 1/16", 3/16" ring set.
(1) Set 8-2600CP Federal Mogul rod bearings.
(1) Set 129M Federal Mogul main bearings.
(1) F1SZ-6701-A one-piece rear main seal.

Instructions/Notes:

- Inspect all parts for shipping damage or defects before use.
- Check main and rod journal clearances using micrometers and a dial bore gage. Also check rod side clearance. If you need help with these procedures please call the Ford Racing Tech Line (800) 367-3788. Recommended clearances are shown below. Extra clearance main and rod bearings are available from Federal Mogul if required.
- Pistons and rods have been weight matched but, it is a good idea to double-check the weights. If you find significant variations call your dealer or the Ford Racing Tech Line (800) 367-3788.
- Take the kit to a qualified race engine shop or crank grinder to have the crank balanced. They will need all the parts weighed to determine the bobweight for balancing. If the crank is to be externally balanced, they will also need your crank damper and flywheel. Note: the end counterweight radius can be reduced when using external balancing. Internal balancing will be more expensive, sometimes considerably.
- Recommended crank damper and flywheel (all meet SFI specs):
  a) External balance - M-6316-C351 Damper, M-6375-A302 flywheel (28.2 oz.-in. imbalance, early 302 system)
  b) Internal balance - M-6316-C351 Damper with weight removed or M-6316-D351 Lightweight (aluminum hub) damper, M-6375-D302 neutral balance flywheel.
  c) Auto transmission applications use appropriate flexplate. The M-6375-E302 157-tooth, rebalanced to 28.2 oz.-in. imbalance C-4 non-SFI flexplate is available from Ford Racing Performance Parts. Flexplates that meet SFI specs for the C-4 and Powerglide transmissions are available from aftermarket sources.
- Mock-up the crank and block with a piston and rod assembly to check rod clearance to the oil pan rail and bottom of the cylinder bores. Hand grind clearance notches as required to obtain .050" minimum clearance.
- Also double check piston-to-crank CW clearance. It should be OK but, it doesn't hurt to check.
- Minimum piston-to-head clearance is .040". Ford Racing head gaskets provide this clearance with .000" piston-to-deck clearance.

- The piston rings are gapped at the factory and ready for installation. The top ring end gap should be .025"-.027", second ring should have .014"-.016" gap. For nitrous applications add .004" to these values. File one end of the ring as required to meet the spec. Ring filing tips are as follows:
    1. Place the butt end of a small, sharp flat file in a vise.
    2. File from the outside face toward the inside diameter.
    3. Remove sharp corners by stoning gap edges.
- Instructions for installation of the piston pin locks and piston rings are included with the pistons. Be sure to properly gap the bottom oil ring rail to straddle the pin in the oil ring groove.
- Number all pistons, rods and caps. Assemble pistons and rods using 30-weight oil or engine assembly lube. Check that the pin can rotate in the piston and rod.
- Thoroughly clean all parts before final assembly.
- Use a good quality tapered sleeve ring compressor to install the piston and rod assemblies in the block. Rod journal chamfer toward the crank CW. Torque the rod bolts to 50 ft./lbs. with 30-weight engine oil. Back off and retorque the rod bolts two times on initial use to "seat" the bolts.

Recommended Clearances:

Piston to bore -	See piston instructions
Ring end gap -	See ring instructions
Piston pin to piston or rod -	.0008" - 0010"
Crank end play -	.004" - .008"
Main bearing -	.0020" - .0030"
Con rod bearing -	.0020" - .0030"
Rod side clearance -	.010" - .015"
Piston to deck -	.000"

Valve to piston -.100" int., .125" exh., .060" radial (to edge of notch)