

Gaskets and Bearings for the Ford 1.6L Engine

Engine Gaskets for 1.6L Ford Engines

Description	Part No.	Price
Cylinder Head Set <i>Includes head gasket, cork valve cover gasket, intake gasket, 3 piece exhaust manifold gasket, and water outlet gasket. Also includes a set of 8 standard Ford valve stem seals.</i>	164-02	\$159.99
Head Gasket Only, stock Ford	164-03	\$109.99
Cork Valve Cover Gasket	164-04	\$11.99
Reusable Silicone Valve Cover Gasket	GI-GFF-16L	\$25.99
Water Outlet Gasket	164-05	\$3.99
Water Pump Gasket	164-06	\$4.99
Oil Pan Gasket with cork end seals (for cast pan)	164-07	\$18.99
Oil Pan Gasket with rubber end seals (for steel pan)	164-34	\$42.99
Intake Manifold Gasket	164-08	\$10.49
Single Piece Exhaust Header Gasket by Ivey Engines	164-09	\$8.99
Single Piece Graphite Exhaust Header Gasket	164-16	\$19.49
Front Timing Chain Cover Gasket (with water pump gasket)	164-10	\$5.99
Rear Crank Cover Gasket	164-11	\$3.99
Fuel Pump Block	164-12	\$15.99
Fuel Pump Gasket only (not block)	164-15	\$2.49
Oil Pump Gasket	164-13	\$5.49
Phenolic Carb Spacer Plate with two gaskets	164-14	\$21.99
Carb Base Gasket only (not block)	1586-Gasket	\$3.49
Front Crank Seal, dry PTFE type	164-20	\$32.99
Front Crank Seal, rubber lip seal (narrow, fits all front covers) ..	164-19	\$24.99
Rear Crank Seal	164-21	\$67.99
PTFE Valve Seals, 8 pieces	164-22	\$39.99
Standard Ford Valve Stem Seals, 8 pieces	164-24	\$19.99
Bottom End Gasket Set	164-35	\$154.99
<i>Includes front cover gasket (with water pump gasket), rear cover gasket, front crank seal (lip seal type), rear crank seal, oil pump gasket, fuel pump block, oil pan gasket (with rubber end seals), and distributor O-ring.</i>		

Engine Bearings for Ford 1.6L

Description	Part No.	Price
1.6L Connecting Rod Bearings		
Standard ID (crank journal OD 1.9372")	1501-Std	\$84.99
.010" undersize ID (journal OD 1.9272")	1501-010	\$84.99
.020" undersize ID (journal OD 1.9172")	1501-020	\$84.99
.030" undersize ID (journal OD 1.9072")	1501-030	\$84.99
1.6L Main Bearings (standard OD)		
Standard ID (crank journal OD 2.1254")	1502-Std	\$99.99
.010" undersize ID (journal OD 2.1154")	1502-010	\$119.99
.020" undersize ID (journal OD 2.1054")	1502-020	\$119.99
.030" undersize ID (journal OD 2.0954")	1502-030	\$119.99
.040" undersize ID (journal OD 2.0854")	1502-040	\$119.99
1.6L Main Bearings (+.015 OD) These special bearings are designed for blocks that have been line-bored .015" oversize to correct alignment problems. Use these bearings if the main bearing bores in your block measure 2.286" (58.07mm) ID.		
Standard ID (crank journal OD 2.1254")	1504-Std/15	\$124.99
.010" undersize ID (journal OD 2.1154")	1504-010/15	\$124.99
.020" undersize ID (journal OD 2.1054")	1504-020/15	\$124.99
1.6L Thrust Bearing Washers Sold in pairs. .005" oversize is <i>per side</i> (.010" total). Specify Standard or .005" oversize thickness		
1505-Size		\$18.99
1.6L Miscellaneous Bearings		
Cam Bearings (all round style), set of 3	1506	\$39.99
Small End Bushing (wrist pin bushing), set of 4	1507	\$22.99

Most of our engine bearings are manufactured by ACL. These steel-backed bearings provide excellent strength and wear in Formula Ford engines.

Water Pump Drives and Tach Drives for the Ford 1.6L Engine

Water Pump Drive Belts and Pulleys for Ford 1.6L



44 tooth Water Pump Pulley, Part No. 166-02-.62 (left)
30 tooth Crankshaft Pulley, Part No. 166-03 (right)
and 180XL050 Drive Belt, Part No. 166-01-180

Our toothed-belt water pump pulleys feature a large setback to minimize the cantilevered load on the water pump. Combining a 44 tooth pump pulley with a 30 tooth crank pulley will slow the pump down to 68% of crankshaft speed. This reduces cavitation at high RPM operation. Standard water pump belts are 1/2 inch wide, but some older cars used narrower 3/8 inch wide belts.

Description (pump rpm = 68% of crank rpm)	Part No.	Price
44 tooth pump pulley for .62" dia. pump shafts	166-02-.62	\$134.99
30 tooth crankshaft pulley	166-03	\$199.99
180XL050 belt for above pulleys (90 teeth)	166-01-180	\$13.99

Some older Ford 1.6L's use shorter or narrower belts:

170XL050 (85 teeth), 1/2 inch belt width	166-01-170	\$11.49
150XL037 (75 teeth), 3/8 inch belt width	166-05-150	\$11.99
160XL037 (80 teeth), 3/8 inch belt width	166-05-160	\$12.99
170XL037 (85 teeth), 3/8 inch belt width	166-05-170	\$11.99
180XL037 (90 teeth), 3/8 inch belt width	166-05-180	\$11.99

Tach Drive Parts for Ford 1.6L

When using a side mounted oil pump, the tach is usually driven from the front of the camshaft by mounting the tach drive gearbox on the front timing chain cover. The tach drive gearbox must be accurately aligned or it will fail in a very short time. One alternative is to mount the tach drive directly on the 5 port oil pump. We also carry the parts needed to convert a pump to this option. When using the front mounted pump, the tach drive is mounted on the side of the block using a special adapter (Part No. 166-22, shown here).



Description	Part No.	Price
Tach drive mount for 5 port pump w/ 1" scavenge rotor	166-21	\$99.99
<i>Replaces the end cover on the standard Titan 5-port oil pump. This special plate lets you mount a tach drive gearbox (not included) on the pump. Requires extended pump shaft, Part No. 167-11-Tach (sold separately on page 71 under Service Parts).</i>		
Replacement seal for above	166-21-Seal	\$8.99
Tach drive mount for side of block, with gear	166-22	\$199.99
<i>Mounts in place of the side-mount oil pump. This assembly lets you mount a tach drive gearbox (not included) on the side of the block, driven by the scroll gear on the camshaft. For use with front mounted oil pump.</i>		

Technical Data for the Ford 1.6L Engine

Race Engine Specs

Main Bearing Clearance	0.002"
Connecting Rod Bearing Clearance	0.0015" - 0.002"
Camshaft Bearing Clearance	0.002" - 0.0023"
Piston to Cylinder Wall Clearance	0.004" - 0.0045"
Top Ring End Gap	0.015"
Crankshaft End Float	0.0005" - 0.011"
Camshaft End Float	0.004" - 0.0075"
Wrist Pin Clearance	0.0002" - 0.0003"
Intake Valve Stem Clearance	0.002"
Exhaust Valve Stem Clearance	0.0025"
Intake Valve Lash (hot)	0.010"
Exhaust Valve Lash (hot)	0.018"
Max. Intake Valve Lift @ 0° clearance	0.356"
Max. Exhaust Valve Lift @ 0° clearance	0.358"
Firing Order	1 - 2 - 4 - 3
Ignition Timing	38° - 40° BTDC
Points Gap, Bosch	0.020" - 0.022"
Points Gap, Autolite	0.024" - 0.025"

Recommended Race Engine Torque Specs

Head Bolts .....	.75 lbs. ft.	Front Cover Bolts .....	.7 lbs. ft.
Main Cap Bolts .....	.70 lbs. ft.	Rear Cover Bolts .....	.15 lbs. ft.
Rod Cap Bolts (standard) .....	.35 lbs. ft.	Water Pump Bolts .....	.7 lbs. ft.
Rod Cap Bolts (competition) .....	.43 lbs. ft.	Water Neck Bolts .....	.15 lbs. ft.
Flywheel Bolts .....	.55 lbs. ft.	Crankshaft Pulley Bolt	28 lbs. ft.
Pressure Plate Bolts (clutch cover) .....	.15 lbs. ft.	Fuel Pump Bolts .....	.15 lbs. ft.
Rocker Shaft Bolts .....	.30 lbs. ft.	Rocker Cover Screws	3.5 lbs. ft.
Camshaft Bolt .....	.15 lbs. ft.	Intake Manifold Bolts .....	.18 lbs. ft.
Thrust Plate Bolts	3.5 lbs. ft.	Intake Manifold Nut .....	.15 lbs. ft.
Chain Tensioner Bolts .....	.7 lbs. ft.	Exhaust Manifold Bolts .....	.15 lbs. ft.
Oil Pump Bolts .....	.15 lbs. ft.	Carb to Manifold Nuts .....	.15 lbs. ft.
Oil Sump Bolts .....	.8 lbs. ft.	Spark Plugs	25 lbs. ft.

Valve Adjusting Sequence

Valve Order:	1 EX	2 IN	3 IN	4 EX	5 EX	6 IN	7 IN	8 EX
When this valve is depressed:	1 EX	6 IN	4 EX	2 IN	8 EX	3 IN	5 EX	7 IN
Adjust this valve:	8 EX	3 IN	5 EX	7 IN	1 EX	6 IN	4 EX	2 IN