

BEARING CLEARANCE & OIL VISCOSITY RECOMMENDATIONS

Engine bearings and motor oil go hand in hand. An oil film protects and cools the engine bearings, and that oil film is formed by a combination of crankshaft speed, oil viscosity and engine load. Because all motor oils get thinner as they get hotter, it is important to choose the correct viscosity grade motor oil for the operating temperature of the engine. Specific bearing clearance require a specific viscosity motor oil to support oil film formation and proper cooling. The chart below provides recommendations on combinations of bearing clearances (both rod and main bearings) and motor oil viscosity grades. When a combination of main and rod bearing clearances call for two different motor oil viscosity grades, go with the heavier of the two viscosity grade recommendations. Also, this chart is based on naturally aspirated engines using gasoline. Because Methanol/E85 fuels call for a richer air/fuel ratio, it is important to go up one viscosity grade to compensate for the increased fuel dilution. The same applies for boosted applications. For turbocharged or supercharged engines, go up one viscosity grade from what is listed below. For boosted engines running Methanol or E85, go up two viscosity grades. If you have any questions, feel free to contact our tech department.



IRON BLOCK (RECOMMENDED VISCOSITY GRADE)			
Main Bearing Clearance	Under 160F Oil Temp	160F to 220F Oil Temp	Over 220F Oil Temp
.0034 to .0039	10W-40 or 15W-40	15W-50 or 20W-50	20W-60 or Straight 60
.0028 to .0033	5W-30 or 10W-30	10W-40 or 15W-40	15W-50 or 20W-50
.0022 to .0027	0W-20 or 5W-20	5W-30 or 10W-30	10W-40 or 15W-40
.0016 to .0021	0W-10	0W-20 or 5W-20	5W-30 or 10W-30
.0010 to .0015	0W-5	0W-10	0W-20 or 5W-20

ALUMINUM BLOCK (RECOMMENDED VISCOSITY GRADE)			
Main Bearing Clearance	Under 160F Oil Temp	160F to 220F Oil Temp	Over 220F Oil Temp
.0029 to .0034	10W-40 or 15W-40	15W-50 or 20W-50	20W-60 or Straight 60
.0023 to .0028	5W-30 or 10W-30	10W-40 or 15W-40	15W-50 or 20W-50
.0018 to .0022	0W-20 or 5W-20	5W-30 or 10W-30	10W-40 or 15W-40
.0012 to .0017	0W-10	0W-20 or 5W-20	5W-30 or 10W-30
.0006 to .0011	0W-5	0W-10	0W-20 or 5W-20

STEEL ROD (RECOMMENDED VISCOSITY GRADE)			
ROD Bearing Clearance	Under 160F Oil Temp	160F to 220F Oil Temp	Over 220F Oil Temp
.0028 to .0033	5W-30 or 10W-30	10W-40 or 15W-40	15W-50 or 20W-50
.0022 to .0027	0W-20 or 5W-20	5W-30 or 10W-30	10W-40 or 15W-40
.0016 to .0021	0W-10	0W-20 or 5W-20	5W-30 or 10W-30
.0010 to .0015	0W-5	0W-10	0W-20 or 5W-20

ALUMINUM ROD (RECOMMENDED VISCOSITY GRADE)			
ROD Bearing Clearance	Under 160F Oil Temp	160F to 220F Oil Temp	Over 220F Oil Temp
.0023 to .0028	5W-30 or 10W-30	15W-50 or 20W-50	20W-60 or Straight 60
.0018 to .0022	0W-20 or 5W-20	10W-40 or 15W-40	15W-50 or 20W-50
.0012 to .0017	0W-10	5W-30 or 10W-30	10W-40 or 15W-40