

DESCRIPTION:

Running In Lubricant. Designed to “Bed” new motors in. API CD/CC, API SE, MIL-L-2144B. Available in SAE 30

CHARACTERISTICS:

High quality base oil with viscosity improvers using only low slip additives to ensure “Bedding In”. Available in SAE 30.

Mainlube 197 Is Only For Use When “Bedding In” New Engines.

All new piston rings must be “bedded in” or the piston rings will not seal on to the cylinder walls correctly and the engine will experience excessive blow by and higher than normal oil consumption.

In a new engine any high oil consumption coupled with the excessive blow by will result in glazed bores prematurely damaging the new engine.

The only way to correct a glazed bore with out damaging the engine further is to dismantle the engine and mechanically deglaze the bore and “rebed” the rings in again, this time correctly.

Bedding in an engine without glazing is serious business, a mistake during the first hours of an engines life can take many thousands of dollars and time to correct. The following instructions shows the correct sequence for running in new engines so the piston rings “bed in” without glazing.

Procedure For “Bedding In” New Petrol And Small Diesel Engines.

Before starting your new engine for the first time the engine should be either fitted to the car or to a Dynamometer.

Fill the engine with Mainlube 197 Running in Lubricant to the correct level and crank engine over with ignition disconnected (Petrol) or engine stop on (Diesel) until oil pressure is observed on the gauge. Allow engine to start and fast idle, 800-1000 RPM, for 3-5 minuets tune and adjust the engine while checking for oil pressure, unusual noises, leaks etc. Shut down engine and check and correct oil and coolant levels as necessary. The engine must then be on the road in driving conditions or correctly set up on a Dynamometer to allow correct loading during the run in period. Make sure provision is made to dissipate any extra engine heat generated during the initial “bedding in” period.

In A Vehicle

To give the engine the first correct run, warm the engine up at 45-60 kph until the temperature gauge is at normal and thermostat is open.

Next travel at 80 kph for 2 hours varying the engine revs and load up and down as often as practical. This prevents the engine from being bedded in at one rpm which could result in poor bedding in making your new motor burn oil from new.

As the bedding in procedure continues the load should be increased on the engine until at the end of 2 hours, the bedding in time, the engine is being held at full throttle around it's mid rev range for 10 to 30 seconds at a time. After this initial run in change the oil and filter. (Keep the filter, cut it open and check for any unusual debris.)

1st change max 1000 kilometres or less, replace with fresh Mainlube 197 Running in Lubricant and continue to operate the vehicle as normal on 197 until the engine stops using oil for over one thousand kilometres, then change the 197 for the correct grade of Mainlube Engine Lubricant.

Bedding In Large Diesel Engines or High Performance Race Motors.

Large diesel engines must have the initial running in period done on a Dynamometer either directly linked or in the truck on the Dynamometer rollers. Fill the engine with Mainlube 197 Running in Lubricant to the correct level and crank engine over with engine stop on until oil pressure is observed on the gauge. Release stop and allow engine to start and idle, 800-1000 RPM, for 3-5 minutes while checking for oil pressure, unusual noises, leaks etc. Shut down engine and check and correct oil and coolant levels as necessary..

Connect the blow by gauge to the engine and use the limits set by the OEM as to what reading would be acceptable during the initial break in period. Make sure the engine is correctly set up to dissipate any extra engine heat generated during the initial "bedding in" period.

Load the engine to 10% and allow the engine to warm up to running temperature. Over the next 20 minutes progressively bring the engine up to 50% load, over the next 20 minutes continue on up to 75% load then over the next 20 minutes continue on to 100% load and hold at full load for five to ten minutes. While the break in procedure is progressing if the blow by gauge climbs over the limits set by the OEM, immediately stop and restart the break in procedure from where the last acceptable blow by gauge reading was recorded. Continue on through the break in procedure ensuring the blow by gauge reading is acceptable throughout. After this initial run in change the oil and filter (Keep the filter, cut it open and check for any unusual debris.)

Put the vehicle into service, a 1000 kilometre trip with 75% load.

1st change 1000 kilometres, replace with fresh Mainlube 197 Running in Lubricant and continue to operate the vehicle as normal on 197 until the engine stops using oil for a thousand kilometres, then change the 197 for the correct grade of Mainlube Engine Lubricant.

The following bad operating procedures could damage your new motor if allowed during the first 10,000 kilometres of running.

Never Idle Your New Engine For Longer Than 2 Minutes.

Never Labour A New Engine

Never Over Rev A New Engine

Never Over Heat A New Engine

Change Period.

1st change 1000 kilometres. Next change 1,000 kilometres or until the engine stops using oil for over one thousand kilometres.

Maximum designed life of lubricant in petrol engines 3,000 kilometres.

Maximum designed life of lubricant in Diesel engines 1,000 kilometres.

API CC\SE

Note: To achieve maximum life from your equipment and full life from Mainlube Lubricants, Run in conjunction with Mainlube 255 Fuel Additive.

SPECIFICATIONS

TEST	ASTM TEST METHOD	SAE 30
Specific Gravity @15.0 °C	D-1298	0.898
Viscosity @40.0 °C, cSt	D-445	103
Viscosity @100.0 °C, cSt	D-445	12.0
Viscosity Index	D-2270	102
Flash Point, COC, °C	D-92	220
Pour Point, °C	D-97	-18
Foaming Characteristics, All Sequences	D-892	Pass
Total Base Number, mg KOH/g	D-664	5.5
Ash, Sulphated, % mass	D-874	0.70
Calcium, % mass	AA	0.15
Magnesium, % mass	AA	0.05
Nitrogen, % mass	Kjeldahi	0.04
Phosphorous % Mass	D-1091	0.05
Zinc, % mass	AA	0.07

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