

Technical Service Bulletin

Date: 11/11/2004

Product Description: AMS-Oiler™ (AMK-01 and AMK-02)

Subject: AMS-Oiler™ Operation, Specifications, Benefits

OBJECTIVE:

Describe the operation, specifications, and benefits of the AMS-Oiler™ AMK-01 and AMK-02 units.

ISSUES:

It is common knowledge that start up, even after remaining idle for a short period of time, is a large contributor to engine wear. The AMS-Oiler™ is a unique, relatively low cost engine pre-oiler designed to reduce engine wear at start up.

TECHNICAL DISCUSSION:

Benefits

The AMS-Oiler™ is designed to reduce most of this initial wear by injecting approximately 160 cc (5.41 oz) of oil into key wear areas within the engine. It can function on engines that are 500 cubic inches (8.2L) or less in displacement. The relative small size of both models and the ability of the AMK02 to mount at any angle are also attractive attributes of this product. The AMK-01 is designed to be mounted on Dual Remote By-Pass Systems BMK-13, 15, 16, 17, and 18 models

Operation

Unlike other pre-oilers on the market, the AMS-Oiler™ utilizes spring pressure to deliver it's oil to the engine. When a new AMS-Oiler™ is installed, the internal spring extends the piston in the unit's cylinder. Upon starting the engine, the oil pressure from the engine will push the AMS-Oiler™'s piston back in the cylinder and fill the cylinder with oil. A



AMK-02 Stand Alone System



AMK-01 Mounted on Dual Remote By-Pass Filtration System

check valve will enable the piston to remain retracted, even under the most adverse conditions. The AMS-Oiler™ is now ready to release its oil upon the next start up. To deliver the oil into the

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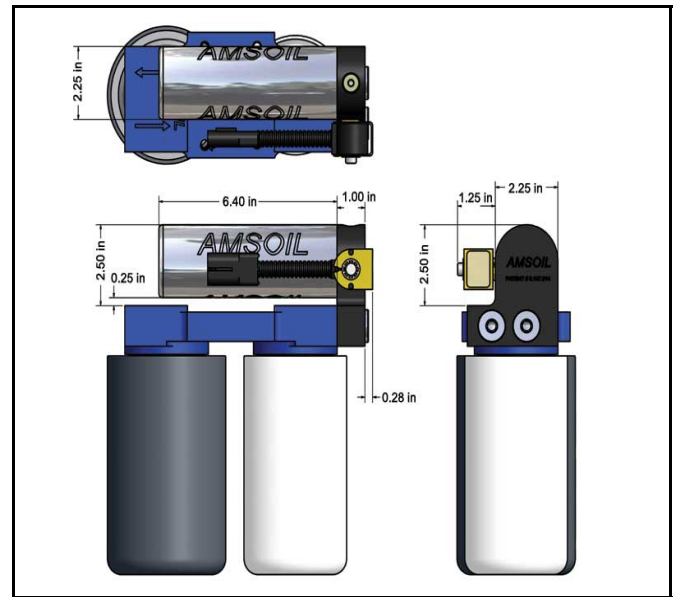
engine, the operator must turn the ignition switch to the run position. As a result, a 95 db audible signal will sound for about two seconds informing the user the AMS-Oiler™ is dispensing it's oil. In many cases the operator can notice the oil pressure gauge increase in pressure when the AMS-Oiler™ delivers it's oil. After the signal has ceased, the operator can start the engine. Upon starting the engine, the AMS-Oiler™ will be charged with oil, ready for the next lubrication cycle.

Construction

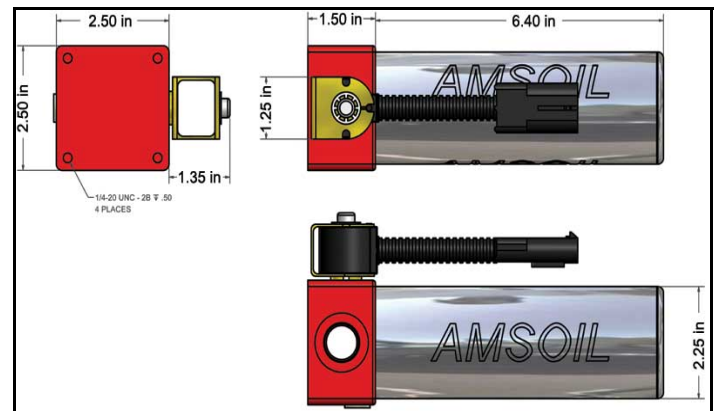
The AMS-Oiler™ is constructed of quality carbon steel with an anodized aluminum base. The unit is self-lubricated and has over-pressure protection in excess of 65 psi. The device is designed to exceed one million starts in the most harsh conditions. A number of prototypes being field tested for over ten years without any failure. Testing of the AMS-Oiler™ was focused on two areas, life cycle and temperature testing. The AMS-Oiler™ passed all the tests. During bench testing the device showed no noticeable wear or degradation of performance after 100,000 cycles. The AMS-Oiler™ is basically a closed system, which means that external contaminants can not enter the oil system when this device is installed.

Technical Data

Voltage.....12 VDC
 Current Draw.....1 AMP
 Spring Force.....Fully Retracted 100 lbs. Fully extended 15 lbs.
 Solvent Compatibility:.....Gasoline: Yes, Diesel: Yes, Soot Rich Oil: Yes
 Oil Discharge Volume.....160 cubic centimeters (5.41 ounces)
 Recommended Viscosity.....All motor oil grades
 Operating Temperatures.....-30°F to 120°F
 Warranty.....One year on any and all manufacturing defects



AMK-01 Dimensions



AMK-02 Dimensions

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Pictures of Competitive Products

Competitive Products

As stated earlier, both AMS-Oiler™ models are relatively small and can fit easily under the hood of most vehicles (see dimension diagrams). Master Lube and Moroso are two common competitors of the AMS-Oiler™. Both systems utilize compressed air to deliver oil to the engine. Compressed air systems can contaminate the engine oil if the tank or the air is not clean. In addition, using compressed air may be unsafe in many applications. Both models have to be mounted at the exact angles prescribed or the equipments would not function properly. Finally, the size of the Master Lube and Moroso units are quite large. The Master Lube product measures 20.5 inches long and four inches in diameter, while the Moroso unit is 17.75 inches long and four inches in diameter. It would be quite difficult to permanently mount these units under the hood of most of today's modern vehicles.

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