

## 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 AMK-02 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. Reports have indicated a reduction in engine noise when the AMS-Oiler™ has been installed in 5.3L and 8.1L General Motors engines.

#### 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 into the cylinder and fill the cylinder with oil. A 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 engine, the



AMS-Oiler™ AMK-01 Stand-alone Model



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

Submitted By: RH

Reviewed By: DY

Approval By: Alan Amatuzio

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Distribution: \_\_\_Internal \_\_\_All

Page 1 of 3

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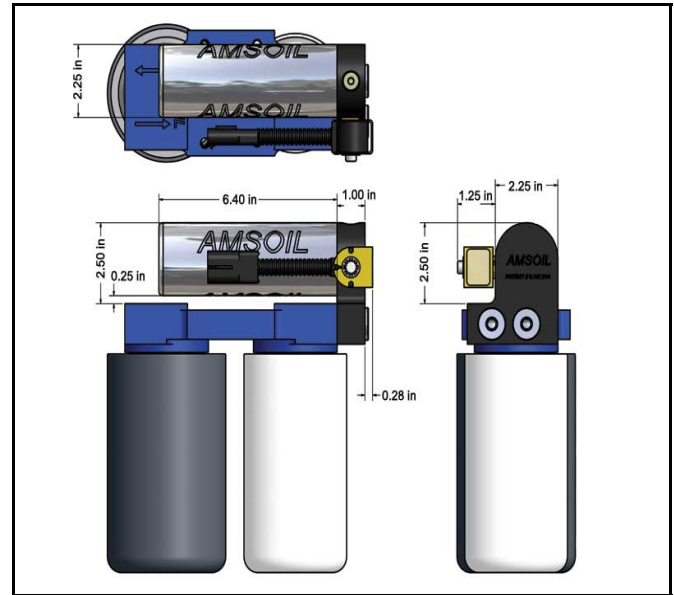
operator must turn the ignition switch to the run position. As a result, a 95 db audible signal will sound for about two seconds informing the user the AMS-Oiler™ is dispensing it's oil. In many cases the operator can notice the oil pressure gauge increase in pressure when the AMS-Oiler™ delivers it's 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

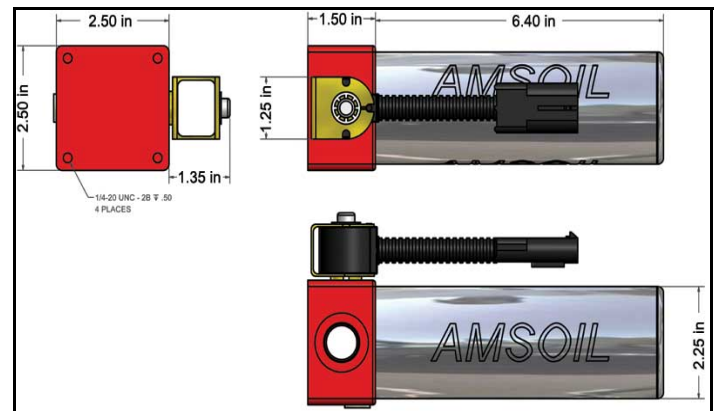
The AMS-Oiler™ is constructed of quality carbon steel with an anodized aluminum base. The unit is self-lubricated and has over-pressure protection in excess of 65 psi. The device is designed to exceed one million starts in the most harsh conditions with a number of prototypes being field tested for over 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 the 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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Competitive Products vs. the AMS-Oiler™

### Competitive Products

Master Lube and Moroso are two products that are designed to perform the same function as the AMS-Oiler™. This is where the similarity ends, however. Both brands are substantially larger than the AMS-Oiler™ (see dimension diagrams and picture above). 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. Both competitive models utilize compressed air to pre-lube the engine. Compressed air must be used to charge both systems, and it comes in contact with the oil in the pre-lube system. Compressed air can be dirty

plus it can introduce moisture, metal filings, and oil to your engine. These substances will contaminate the oil and enter the lubrication system, thus defeating the purpose and benefits of engine pre-lubrication.

Following is a list of significant differences between the Moroso, MasterLube, and the AMS-Oiler™ pre-lubrication units.

#### Moroso

- Large Size: Difficult to mount under hood.
- Must be manually activated under the hood.
- Fragile, temperature sensitive, exposed pressure gauge is easy to break off, resulting in loss of oil.
- Must exit vehicle to check system pressure.
- Must be charged with compressed air, a source for outside contamination that may damage your engine.

#### Master Lube

- Large Size: Difficult to mount under hood.
- Exposed gauge is easy to damage.
- Must exit vehicle to check system pressure.
- Must be charged with air, source of contamination.
- Must be mounted a maximum of 20 degrees from vertical, which limits mounting options and use.
- Must pre-charge with oil and pressurized air.
- Maximum allowable pressure is 100 psi. According to manufacturer, if 100 psi is exceeded, personal injury or equipment damage may occur. Warranty will be void.

#### AMS-Oiler™

- Small Size: Can mount in under the hood of most vehicles at any angle
- No gauges to damage.
- No need to exit vehicle, audible signal lets you know the unit discharges oil and prelubes engine.
- No pre-charging, operation fully automatic.
- Closed system, no external contamination risks.
- Low pressure system, minimal risk for equipment or personal injury.

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Page 3 of 3

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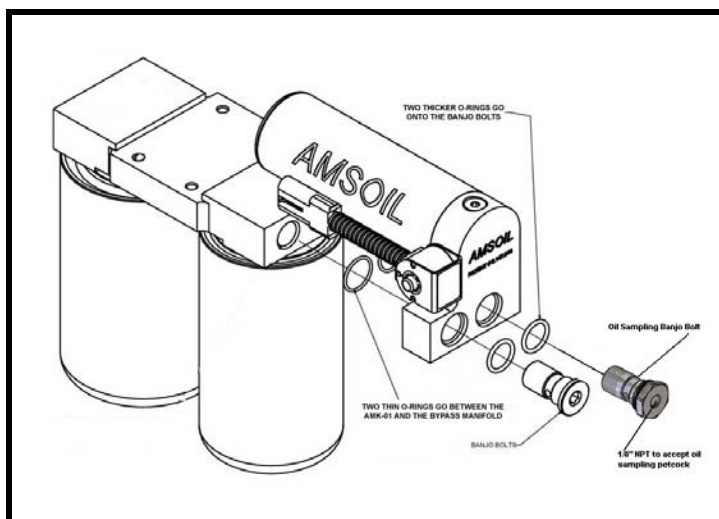
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### Accessories

The Oil Sampling Banjo Bolt (BP-255) is designed to provide an oil sampling port for the AMS-Oiler™ AMK-01 when mounted on AMSOIL Dual Remote Filtration System models BMK13, BMK15, BMK16, and BMK17 and the AMSOIL Marine Dual Remote Filtration System, BMK18. The right side banjo bolt of the AMS-Oiler/Dual Remote Filtration System can be replaced with the Oil Sampling Banjo Bolt. The Oil sampling Banjo Bolt has been tapped with a threaded hole to accept a 1/8" NPT petcock to retrieve the oil sample. Petcocks can be obtained from AMSOIL by purchasing (BP-47) or are found in the By-Pass Oil Sampling Kit (BK-13). (see diagram below)



Contact AMSOIL Technical Service or the AMSOIL website for recommendation pertaining to sample installations and fittings required for the installation of the AMS-Oiler™.

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Page 4 of 4