



**Quality Petroleum Equipment
Solutions for Over 20 Years**

Date: January 17, 2008

Subject: ARM-4073 Compatibility with MLLD's

To Whom It May Concern:

ARM-4073

AST-4010

AST-4012

ISM-4080

ISM-4081

LD-2000

LD-2000E

LD-2200

LD-2200I75

LD-3000

LD-3000E

LD-3000FL

LDT-890

LDT-890AF

OFF-211

OFF-212

OFF-311

OFF-312

PLC-5000

SUMP-300

STM-4201

A leaking check valve in the turbine, defective submersible pump pressure relief, or a defective bypass valve will allow the line system to depressurize, resetting the leak detector. Drain-back into the tank and thermal contraction cause vapor pockets to form. Vapor pockets increase the length of time it takes for a leak detector to open to full flow. Problems such as those described result in dispenser slow flow and technical support calls. When false alarms are a regular experience, store personnel forget the leak detection message and only remember the false alarm message. The 99 LD-2000 and 99 LD-3000, with their integrated check valves and pressure relief valves, are the only MLLD's on the market that hold line pressure with the pump off, even with pump component wear or failure. Sometimes though, thermal contraction and idle pump time still combine to reset the MLLD and allow vapor pockets to form, resulting in chronic slow flow.

In the year 2000, Vaporless Manufacturing, Inc. released the Automatic Repressurization Module (ARM-4073), a solution for thermal contraction induced slow flow. The ARM-4073 is programmed at installation to perform catastrophic testing on a regular schedule even if there are no authorizations. Dispenser slow flow problems caused by extreme thermal contraction, long pipe runs, flexible pipe, and high bleed-back are automatically compensated for. Since its introduction, the ARM-4073 has been compatible with the 99 LD-2000 and 99 LD-3000 series of MLLD's produced by Vaporless Manufacturing, Inc.

The question has been asked as to whether the ARM-4073 is compatible with any MLLD on the market. The ARM-4073 was designed and is approved for use only with Vaporless Manufacturing, Inc. 99 LD-2000 and 99 LD-3000 series of MLLD's.

The use of the ARM-4073 with non- **Vmi** MLLD's has not been tested by Vaporless Manufacturing Inc. to meet US EPA standards or criteria. It is possible other manufactured equipment may not perform as originally certified by the manufacturer and per the (original) certification guidelines.

Use of the ARM-4073 with a **Vmi** 99 LD-2200 is not recommended.

For thermal contraction and other line leak detection issues, engineering staff should also evaluate the **Vmi** ISM-4080 and the PLC-5000.

Please contact me if you have any questions.

Sincerely,
Gabe Messerly
Vaporless Manufacturing, Inc.

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