



Quality Petroleum Equipment  
Solutions for Over 20 Years

**\*\* Install and Replace Vmi Mechanical Line Leak Detectors\*\***

Successful completion of this test certifies you to install Vmi leak detectors. It does not certify you to test Vmi leak detectors for the annual catastrophic performance test (3 GPH @ 10 PSI). Refer to “Operation of Vmi LDT-890(\AF) Leak Detector Tester for Catastrophic Leak Test” for leak detector annual testing certification.

**Circle the correct answer**

1. Before installing or replacing a leak detector you should identify and shut off (tag-out lock-out) circuit breakers associated with appropriate submersible pumps.

**True**

**False**

2. A safe alternative to tag-out lock-out is to lock down the dispenser handles.

**True**

**False**

3. If there is no shut-off valve immediately downstream of the leak detector, the product line should be purged of air before installation of a Vmi 99 LD-2000 or 99 LD-2200.

**True**

**False**

4. After installation of a leak detector, the system should be checked to insure the leak detector is opening and full pump pressure is achieved.

**True**

**False**

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5. The vent of the leak detector may be plugged if no appropriate fitting is available to connect the vent.

**True**

**False**

6. **Vmi** mechanical leak detectors may be used with

**A. Gasoline**

**B. Diesel**

**C. Ethanol / Methanol**

**D. Biodiesel**

**E. Aviation Fuel**

**F. All of the above**

7. Which **Vmi** mechanical line leak detector does not have an integrated check valve / pressure relief?

**A. 99 LD-3000**

**B. 99 LD-2200**

**C. 99 LD-2000**

8. The leak detector vent line should be unobstructed, leak tight and connected to headspace of tank, not to be subjected to pressure or vacuum.

**True**

**False**

9. The vent line should be connected to the

**A. tank test port of the submersible**

**B. line test port of the submersible**

**C. siphon port of the submersible**

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10. All **Vmi** leak detectors must be installed in the vertical position.

**True**

**False**

11. The 99 LD-3000 leak detector is shipped with the piston in the open position to allow fast purging of the product line. Having purged the line of air, what must you do to allow the leak detector to function properly?

**A. remove the hold-open screw from the top of the leak detector**

**B. install the LDT-890(\AF) leak detector tester at the nearest dispenser**

**C. install the LDT-890(\AF) leak detector tester at the farthest dispenser**

12. The ball valve on the discharge of the submersible must be closed before removing a leak detector from the turbine.

**True**

**False**

13. Apply a “UL Classified” (QLSR) pipe joint sealing compound (for use with petroleum products) to all threads before final assemble.

**True**

**False**

14. Teflon tape may be applied to the threads of the leak detector during installation.

**True**

**False**

15. After installation of the leak detector check all threads to assure there are no leaks.

**True**

**False**

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16. Upon completion of installation, all mechanical line leak detectors must be tested by a certified tester to assure they find a catastrophic leak.

**True**

**False**

17. An anti-siphon valve or normally closed solenoid valve should be installed between the submersible and the leak detector housing (tee) of the piping coming out of the submersible on above ground storage tank installations with a leak detector.

**True**

**False**

18. After installing a new **Vmi** leak detector you should fill out the warranty registration card and return it to the factory.

**True**

**False**

19. A **Vmi** 2-inch mechanical leak detector is warranted for

**A. 1 year from date of invoice**

**B. 18 months from date of installation**

**C. 2 years from date of installation**

20. A **Vmi** 3-inch mechanical leak detector is warranted for

**A. 1 year from date of invoice**

**B. 18 months from date of installation**

**C. 2 years from date of installation**

21. A **Vmi** leak detector may be used with variable and non-variable speed submersibles.

True

False

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22. After completion of installation of a leak detector, it must be tested to assure it will find a catastrophic leak before the station is put into service.

**True**

**False**

23. With a mechanical line leak detector installed, there is no way the submersible can start without authorization, potentially spraying fuel on the installer.

**True**

**False**

24. A leak detector can take longer than 3 seconds to step through to full flow for the following reasons:

**A. Thermal contraction**

**B. Leak in the line system**

**C. Large amount of bleed-back**

**D. Thermal expansion**

**E. Fuel running through the vent line in a steady stream**

**F. A, B, C, & E**

**G. All of the above**

25. When installing a 99 LD-2000 into a fuel system with an Ethanol or Methanol concentration over 20%, a Biodiesel concentration over 5%, or any Aviation Fuel, what modification is necessary?

**A. Installation of stainless steel fittings and tubing.**

**B. No modification necessary.**

**C. 99 LD-2000 not compatible with these fuels.**

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