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Coding Information

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Title: LeakLocator Diagnostic Procedures - Medium Duty

Applies To: EPA 2007 and 2010 MaxxForce® 7, DT, 9, 10, N9, N10

CHANGE LOG

- 2015/11/04 - Added N9 and N10 to the "applies to"
- 2015/01/28 - Removed Tool number 19-700-01-01-26. It is not available outside the main kit number 19-700-01.
- 2015/01/12 - Added SRT Information
- 2014/12/22 - Edited important notes section
- 2014/10/09 - Initial Article Release

DESCRIPTION

This document will aid a user in effective use of the Navistar Leak Locator tool. When used properly, the Leak Locator will significantly reduce diagnostic time for air leaks (including the intake, exhaust, and aftertreatment systems) leading to regen, power and/or exhaust odor concerns.

The following information has been tailored to the 2007 + Emissions MaxxForce® 7, DT, 9 and 10.

NOTE: For heavy duty (11 and 13L), please reference [IK1201216](#).

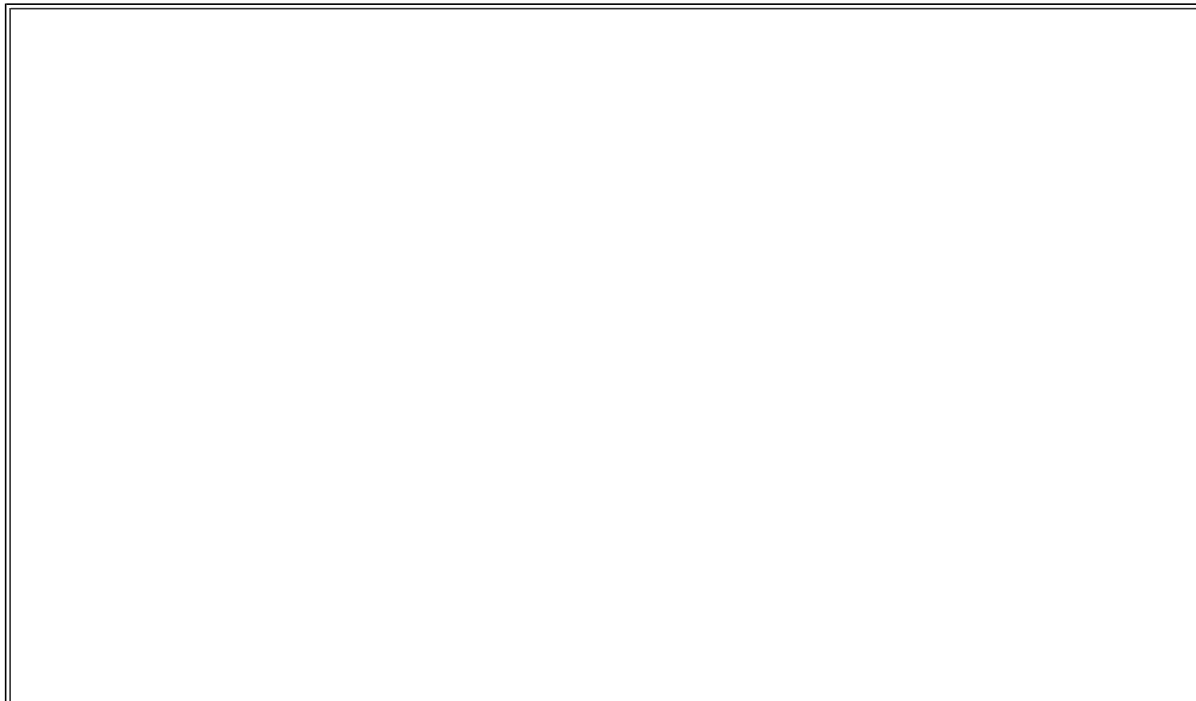




Figure 1: Navistar Leak Locator and accessory kit

SYMPTOMS

- Low power or performance concerns
- Frequent regens or aftertreatment problems
- Unwanted cabin odors

SPECIAL TOOLS

Tool Description	Tool Number
Navistar® LeakLocator	19-700-01
Tool Instruction Sheet	4328229R1

OVERVIEW



To prevent personal injury or death, read all safety instructions in the "Safety Information" section of the Engine Diagnostic Manual or Engine Service manual.

IMPORTANT NOTES:

- Due to the size of some engine components (as well as wide temperature ranges encountered during normal operation), "pinhole" leaks can occur at some sealing surfaces. Generally, pinhole leaks do not result in odors or performance issues-- focus on large leaks.
- Do not exceed 5 psi pressure, with the tool. Higher smoke pressures can obscure test results as the fast-moving smoke can be difficult to see. At lower pressures, smoke trails "curl" out smoothly and remain visible much longer.
- If testing a long exhaust system pre-DPF and post-DPF must be tested separately. The smoke machine test is **NOT** to be used to evaluate the condition of a DPF.
- Some components (for example the High Pressure Charge Air Cooler-HPCAC) have slight air leaks acceptable by design. For these components, it is necessary to perform a leak decay test (outlined in the Diagnostic Manual) to deem the part non-conforming.

DIAGNOSTIC PROCEDURE

The diagnostics are split into three sections; Intake, [Exhaust](#) and [Aftertreatment](#), and are hyperlinked accordingly. Perform the necessary diagnostics relative to the customer/performance concern.

INTAKE TESTING:

1. Remove intake piping/air cleaner
2. Install intake adapter into air intake piping
3. Using air intake piping clamp, tighten clamp around adapter
4. Connect Navistar Leak Locator line to intake adapter

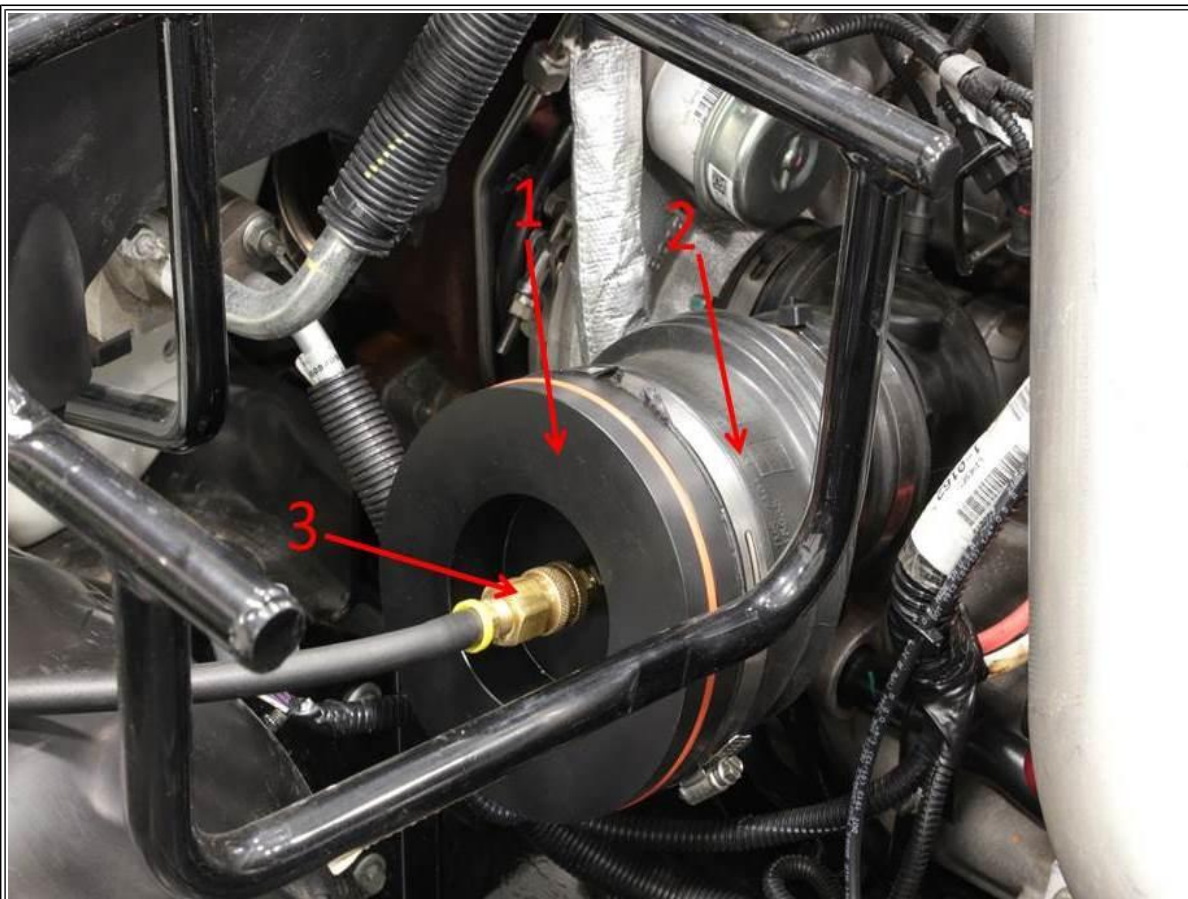


Figure 2: Maxxforce 7, DT, 9 and 10 Intake adapter installed

Item 1: Intake Adapter
Item 2: Air intake piping

Item 3: Navistar leak locator line

5. Initiate pressurized smoke (3-5 psi is recommended)
6. Carefully inspect entire intake system for leaks
7. Once leak is found, remove tooling, repair leak and install removed items. Follow the service manual for correct repair procedures.

EXHAUST and AFTERTREATMENT TESTING

1. Remove intake piping/air cleaner
2. Install intake adapter into air intake piping
3. Using air intake piping clamp, tighten clamp around intake adapter
4. Install plug/block off onto the intake adapter

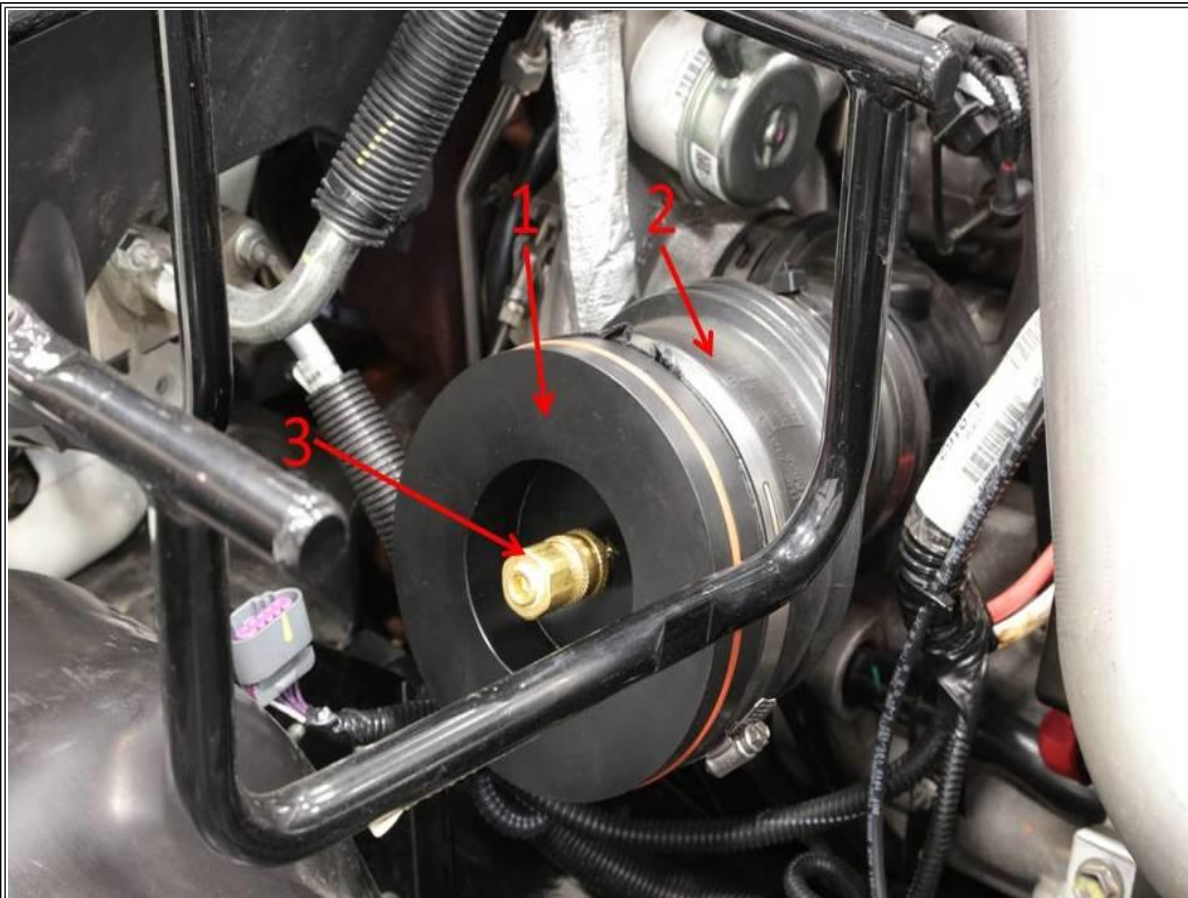


Figure 3: Plug installed on intake adapter

Item 1: Intake Adapter
Item 2: Air intake piping
Item 3: Plug/block off

5. Remove DOC inlet temperature sensor and install temperature sensor port adapter
6. Connect Navistar Leak Locator supply line to temperature sensor port adapter

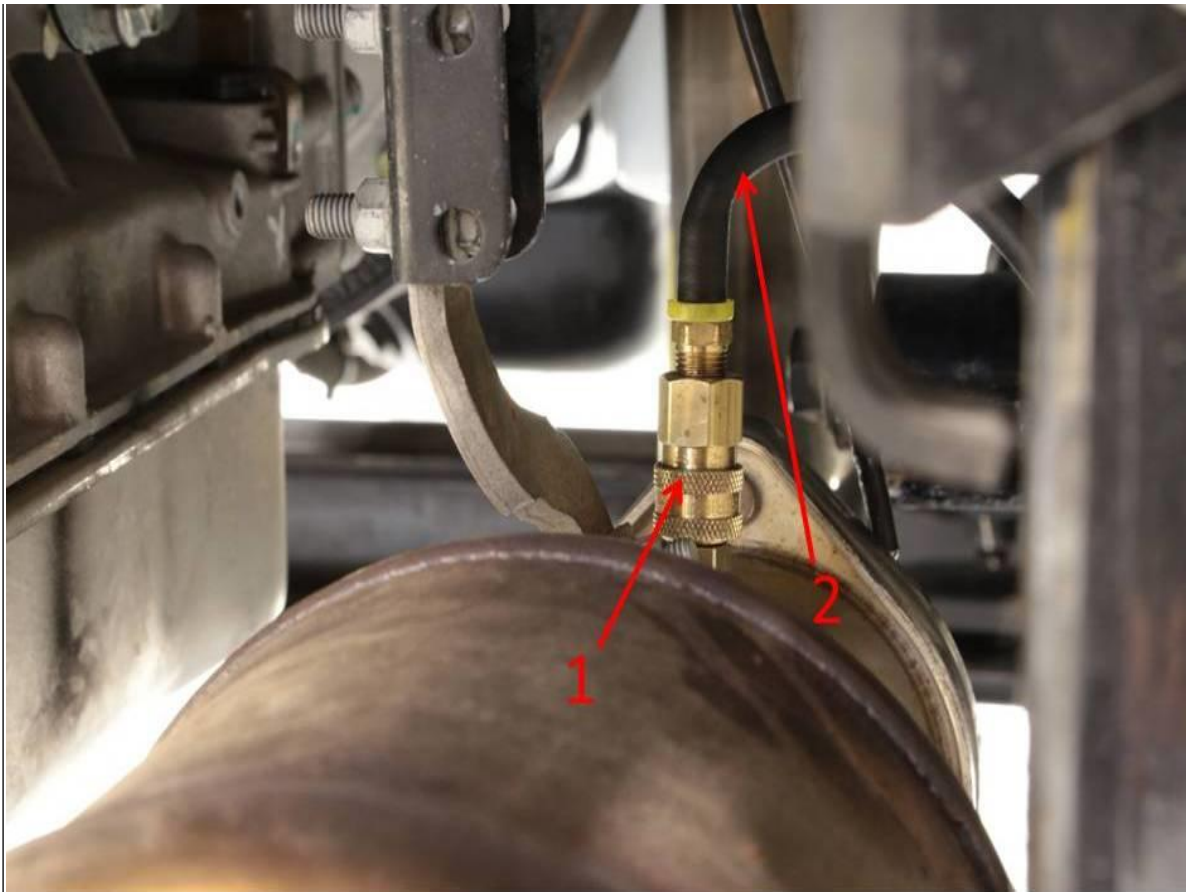


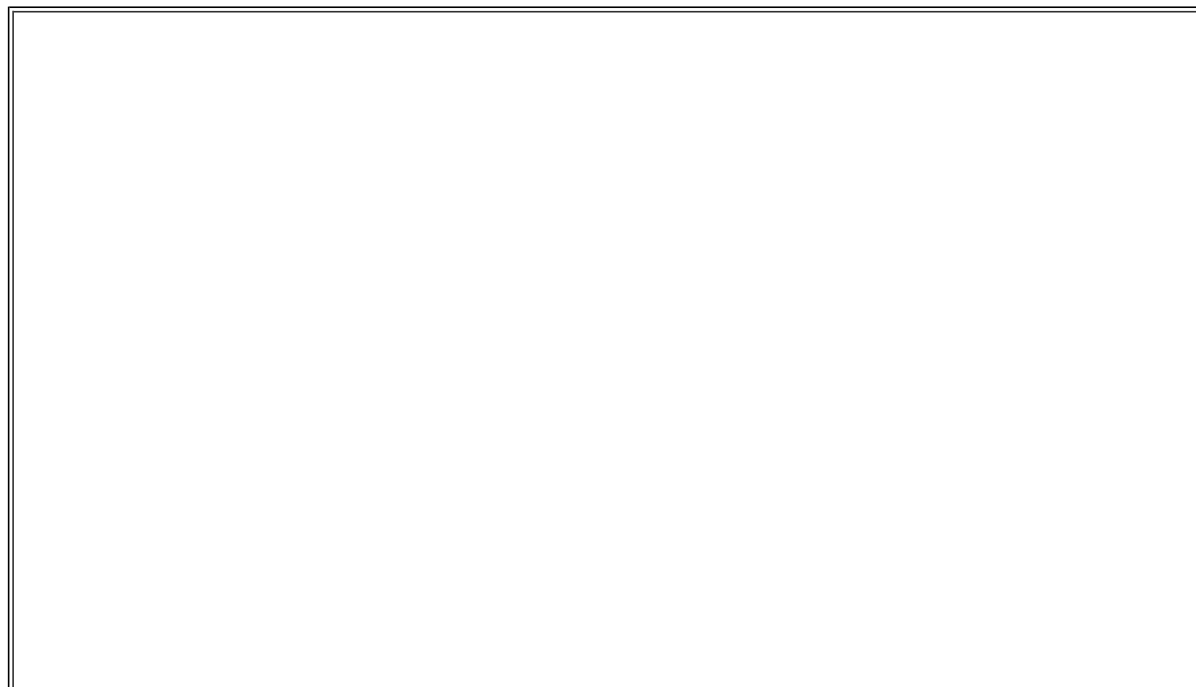
Figure 4: Temperature sensor port adapter installed

Item 1: Temperature sensor port adapter

Item 2: Navistar Leak Locator supply line

7. Remove exhaust diffuser

8. Remove DPF outlet temperature sensor



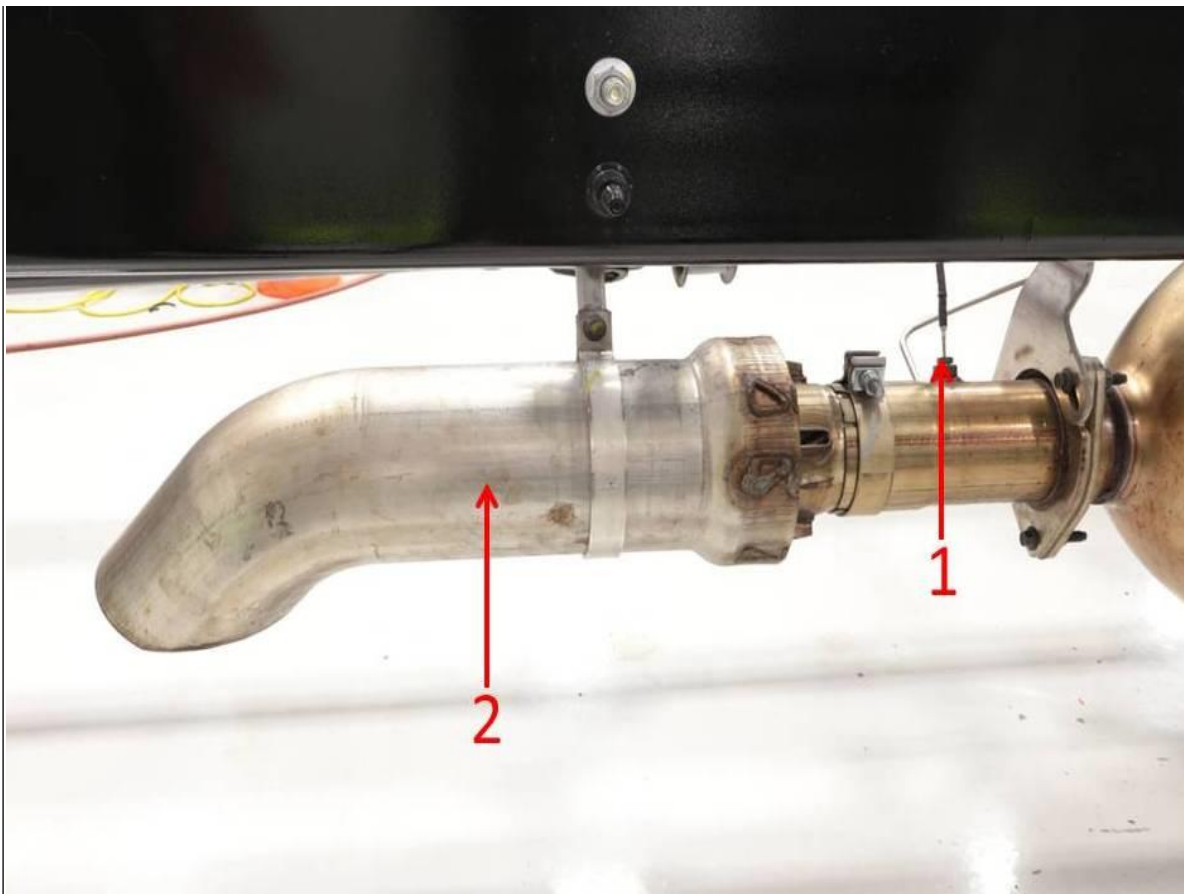


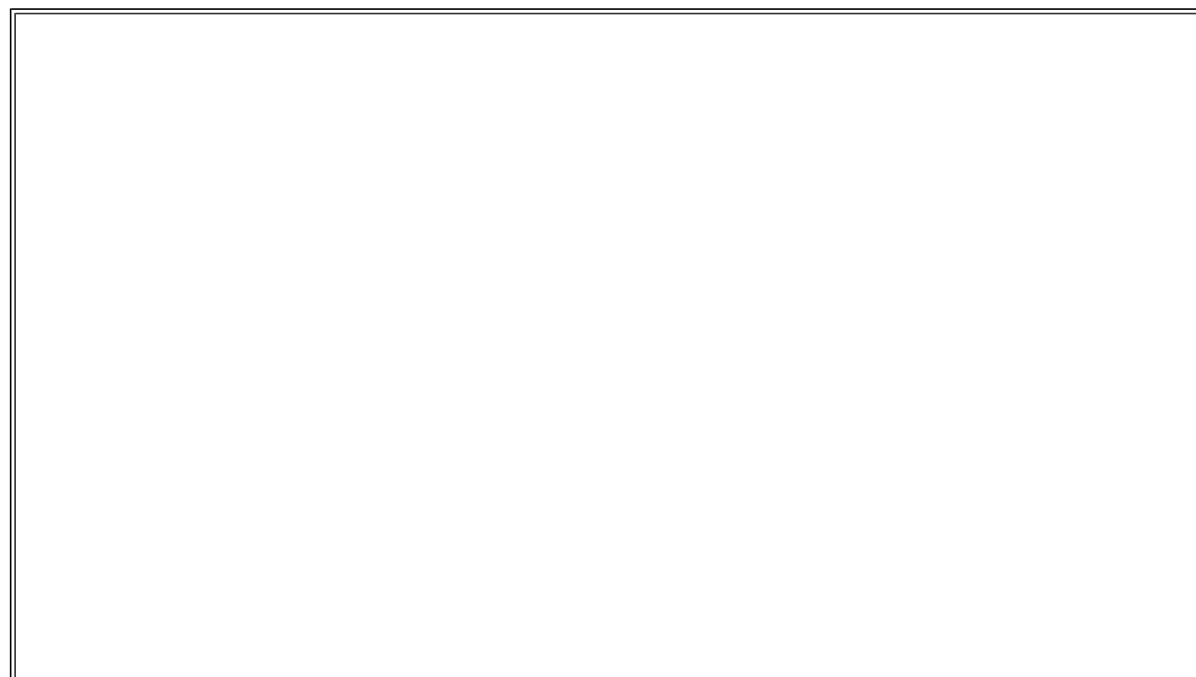
Figure 5: Tail pipe

Item 1: DPF (Diesel Particulate Filter) outlet temperature

Item 2: Exhaust diffuser

9. Install power smoke adapter 2.9in into end of tail pipe and inflate

10. Install block-off coupler onto Navistar Leak Locator supply line



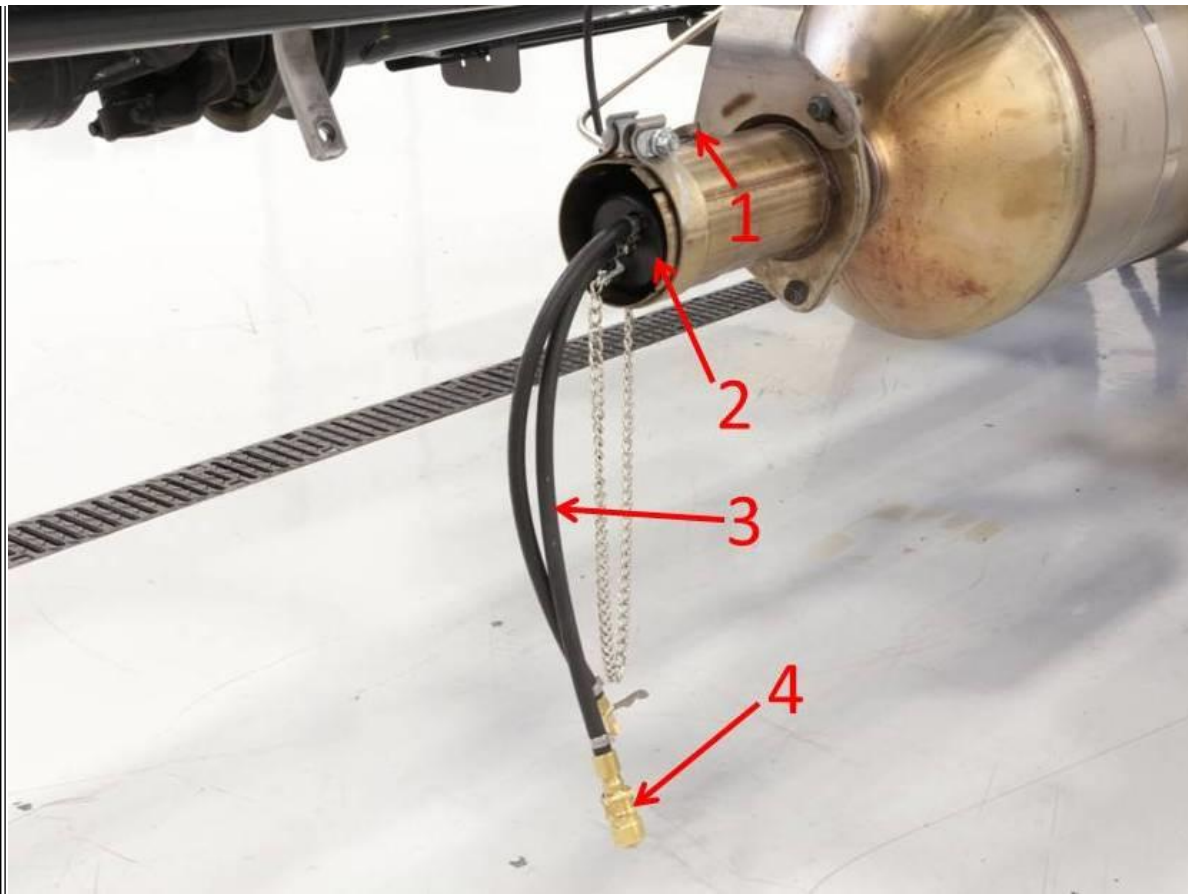


Figure 6: Power smoke adapter (2.9inch) in Tailpipe

- Item 1:** DPF outlet temperature sensor removed
- Item 2:** Power smoke adapter (2.9 inch) inserted into tail pipe
- Item 3:** Navistar Leak Locator supply line
- Item 4:** Block-off coupler



WARNING:

To prevent personal injury or death, connect the chain on the Powersmoke Adapter to a secure location.

11. Initiate pressurized smoke (3-5 psi is recommended)
12. Carefully inspect entire exhaust system for leaks
13. Once leak is found, remove tooling, repair leak and install removed items. Follow the service manual for correct repair procedures.

WARRANTY INFORMATION

Warranty Claim Coding:

Due to the amount of components this repair can diagnose, please reference the coding manual for claim coding guidelines.

STANDARD REPAIR TIMES:

Step	Description	Chassis	Engine	SRT	Hours
All	Smoke Machine Testing, Perform	All	All	A12-2999A	1.1

OTHER RESOURCES

[Master Service Information](#)

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