

NAVISTAR[®]

KL5007NAV

COOLANT MANAGEMENT TOOL



OPERATING INSTRUCTIONS

INTRODUCTION:

This manual contains information to help you to learn about the safe and proper use of the KL5007NAV Coolant Management Tool. The instructions included in this manual are not necessarily all-inclusive. K-Line® cannot anticipate all conceivable or unique situations. You must make sure all conditions and procedures do not jeopardize your personal safety.

DISCLAIMER: All information, images, and specifications contained in this manual are based on the latest information available at the time of publication. K-Line® reserves the right to make changes at any time without notifying any person or organization of such revisions or changes. K-Line® is not liable for incidental or consequential damages (including lost profits) in connection with the furnishing, performance, or use of this material. If necessary, obtain additional information from the vehicle and coolant manufacturers.

SAFETY PRECAUTIONS:



Before using the KL5007NAV Coolant Management Tool, read, understand, and follow the safety precautions and operating instructions outlined in this manual. This equipment must be operated by qualified personnel. The operator must be familiar with vehicle cooling systems, coolants, and the dangers they present.

- If the operator cannot read English, operating instructions and safety precautions must be read and discussed in the operator's native language.
- Si el operador no puede leer inglés, las instrucciones de operación y las precauciones de seguridad deberán leerse y comentarse en el idioma nativo del operador.
- Si l'utilisateur ne peut lire l'anglais, les instructions et les consignes de sécurité doivent lui être expliquées dans sa langue maternelle.



Do not drink antifreeze or solution. Avoid inhaling mist or hot vapors. (Ethylene glycol base.) If swallowed, drink two glasses of water; induce vomiting; and call a physician. If inhaled, move to fresh air and call a physician. Use the unit in locations with mechanical ventilation that provides at least four air changes per hour. If accidental system discharge occurs, ventilate the work area before resuming work.



Do not store ethylene glycol based solutions in open or unlabeled containers. Ethylene glycol causes birth defects in laboratory animals; solution may taste pleasant to animals, but is poisonous to them.



Contact with antifreeze/coolant may cause injury. Hot antifreeze/coolant can burn skin and injure eyes. Wear protective equipment, including safety goggles and gloves, when operating this equipment. If contact with eyes occurs, call a physician immediately, and flush eyes with cold water for 30 minutes. If contact with skin occurs, thoroughly wash area with soap and water.



Vehicle cooling systems which are hot, are under pressure — opening a hot system, except as described in this manual, can cause an uncontrolled release of engine coolant. Do not open the radiator cap, and do not remove hoses from a hot system except as directed in this manual.

Do not pressurize the vehicle cooling system above its pressure rating. Doing so may result in cooling system failure and the release of engine coolant.

OBJECTIVE:

The KL5007NAV Coolant Management Tool accomplishes several important tasks.

1. Prevents unwanted mixing of coolant types.
 - Shell Ultra-Life Coolant (Yellow) for 2010 MaxxForce 11 & 13 should NOT be mixed with other coolants.
2. Reduces the time required to drain and refill cooling systems.
3. Fills the cooling system so that unwanted air pockets in the engine are reduced or eliminated.
 - Trapped air can damage EGR coolers and cause comebacks and low coolant level complaints after a truck is released to the customer.
4. Allows the cooling systems to be pressure tested BEFORE the cooling system is refilled with coolant.
5. Reduces coolant spills and waste.

CONTENTS:

KL5007NAV INCLUDES:

PART #	DESCRIPTION	QTY
KL5003NAV	20 Gal Tank and Cart Assembly *	1
KL5004NAV	Coolant Reservoir Cap Adapter	1
KL5005NAV	Vacuum Module	1
KL5006NAV	Pressure Module	1

OPTIONAL ACCESSORIES:

PART #	DESCRIPTION
KL5008NAV	24" Quick Connect Ext. for Cap Adapter
KL5009NAV	Steel Surge Tank Cap Adapter

GENERAL USE AND INSTRUCTIONS:



WARNING: Coolant may be HOT. Follow vehicle manufacturer's instructions for removing cooling system cap.



CAUTION: Safety glasses must be worn when using this tool.

BEFORE PROCEEDING:

1. A special male quick-connect fitting will replace the coolant drain petcock on 2010 emissions vehicles starting in 2011. Vehicles not built with this fitting are easily retrofitted. The fitting part number is 3688493C2. Please ensure that this fitting is installed on the vehicle before using the tool. If the truck is not equipped with the fitting, connect the Vacuum Module to the surge tank, follow steps 1- 4 under the Vacuum Procedure to draw partial vacuum and swap the cooling system drain-cock with the Male Quick Connect Fitting.
2. Inspect the cleanliness and coolant level of the storage tank.
3. Note the coolant level of the engine.
4. If there is a known leak in the system a Gravity Drain must be performed using Drain Procedure Steps 1 and 2. After necessary repairs have been made proceed to the Pressure Test Procedure on page 5.
5. Periodically check the screen in the Y-Strainer on the Tank Valve for debris.

DRAIN PROCEDURE:

1. Turn tank valve to DRAIN.
2. Attach hose to the quick connect fitting on the bottom of the cooling system.

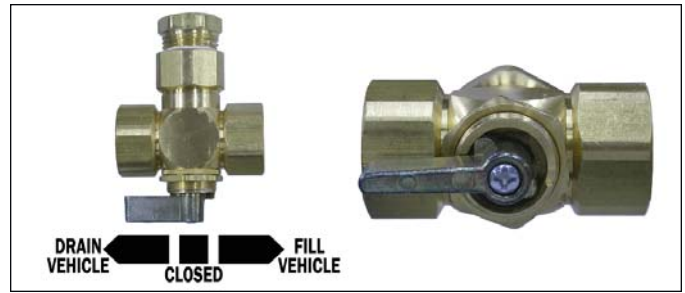


Image 1: Steps 1- 2

WARNING: Follow vehicle manufacturer's instructions for removing the cooling system cap.

3. Install the Cap Adapter (KL5004NAV) on the surge tank.
4. Attach Pressure Module (KL5006NAV) to the Cap Adapter.



Image 2: Steps 3 - 4

5. Connect CLEAN, DRY SHOP AIR to the Pressure Module, open valve and drain system.

NOTE: If system is not draining, check to ensure Tank Valve is set to DRAIN.

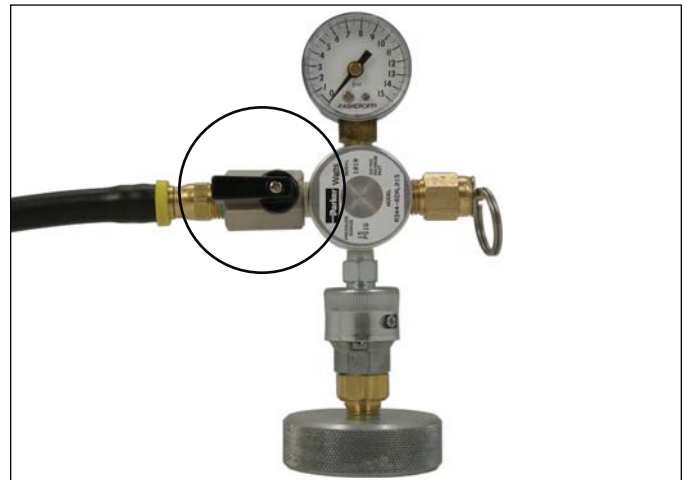


Image 3: Step 5

6. When finished draining system, close air valve and make necessary repairs.

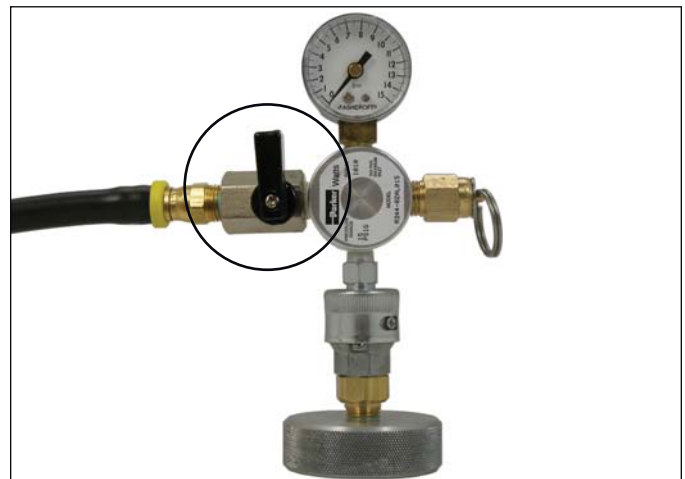


Image 4: Step 6

PRESSURE TEST PROCEDURE:

1. Set Tank Valve to the CLOSED position.

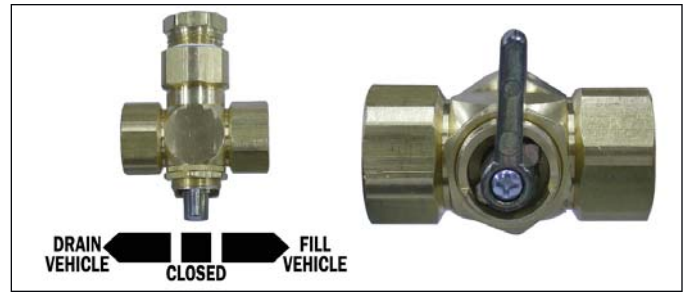


Image 5: Step 1

2. Open Air Valve on Pressure Module until gauge stabilizes.

3. Close Air Valve. System is now pressurized with air. Take note of the gauge reading and check for pressure decay. If no decay is detected, continue the procedure. If decay is evident, locate and repair leak.

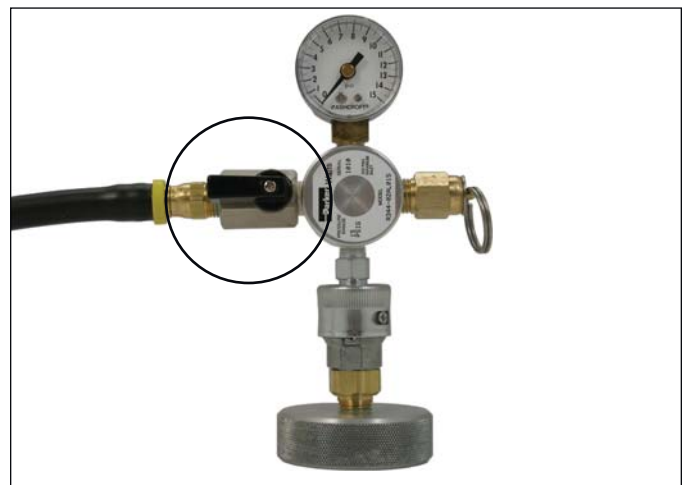


Image 6: Steps 2-3

4. Turn the Tank Valve to DRAIN to vent air. Disconnect shop air and remove Pressure Module.



Image 7: Step 4

VACUUM PROCEDURE:

1. Set the Tank Valve to the CLOSED position.

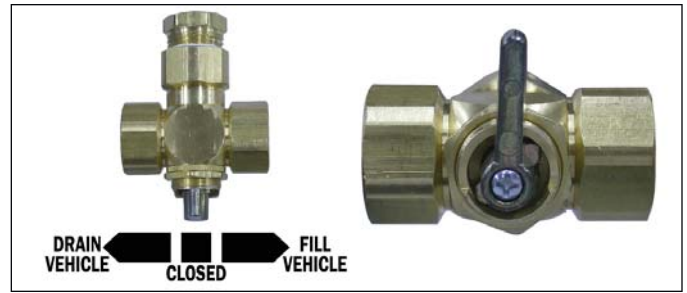


Image 8: Step 1

2. Connect the Vacuum Module (KL5005NAV) to the Cap Adapter (KL5004NAV).

3. Turn the Blue Vent Valve to the CLOSED position and attach CLEAN, DRY SHOP AIR.

NOTE: Clear Exhaust Hose must be directed to an appropriate location because air and coolant mist will exit hose.



Image 9: Steps 2-3

4. Open Air Valve on the Vacuum Module.

5. Allow the Vacuum to draw 20"-25"hg on the cooling system.

NOTE: Some engine manufacturers do not permit this depth of vacuum on the cooling system. Check with the engine manufacturer before drawing vacuum into the green zone.



Image 10: Steps 4-5

6. Once Vacuum Module reaches the green zone, set Tank Valve to FILL position.

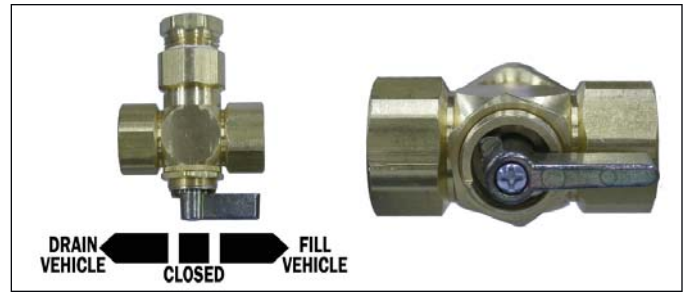


Image 11: Step 6

7. Watch coolant level in Storage Tank. When Tank is nearly empty turn Tank Valve to the CLOSED position and turn off the Air Valve.

IMPORTANT: Never allow the storage tank to completely empty and thereby allowing air to enter the cooling system.

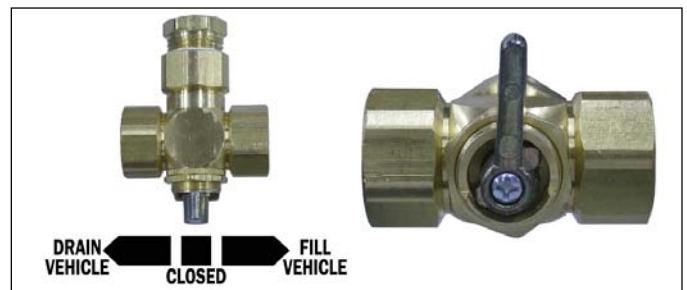


Image 12: Steps 7

8. Open Blue Vent Valve to release vacuum. Disconnect the Vacuum Module and remove the Cap Adapter.
9. Add coolant and fill to proper level. Replace surge tank cap.



Image 13: Step 8-9



K-Line[®]
Special Service Tools

For product information or
to purchase replacement parts
CALL CUSTOMER SERVICE AT
1-800-824-K-LINE (5546)

Local (616) 396-3564

FAX 1-800-528-9138 or (616) 396-8974

cservice@klineind.com

www.klineind.com