

Authorized Field Change



AFC 11928

Date: February 2012

Subject File: ENGINE

Subject: Heater Supply Pipe Change

Vehicle Population: Certain vehicles repaired before 12/01/2011 under AFC 10924 or AFC 10926, or vehicles built after these AFCs with the single-piece pipe per the date ranges below are included in this campaign.

NOTE: Vehicles that have NOT been repaired under AFC 10924 or 10926 will be repaired under those two revised AFCs. Those procedures will include the new three-piece heater pipe.

Model: WorkStar® – Springfield Assembly Plant
 Start Date: 01/10/2011 End Date: 06/27/2011

Model: WorkStar® – Garland Assembly Plant
 Start Date: 12/03/2010 End Date: 06/29/2011

DESCRIPTION

Certain WorkStar® vehicles built with MaxxForce® 11 or 13 2010-emission engines may experience leaks in the single-piece water pipe. The purpose of this AFC is to replace the single-piece water pipe with the three-piece water pipe on WorkStar® models.


PARTS INFORMATION


Table 1 [Parts Information](#)


Part Number	Description	Quantity
8000932R91	Three-piece water pipe kit	1

NOTE – It is very important to use the Navistar Coolant Management tool when draining and refilling the cooling system.


SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE

 **WARNING** – To prevent vehicle damage, personal injury or death, park the vehicle on a flat, level surface. Make sure the engine ignition is in the off position, and the transmission is in neutral or in the park position, if the vehicle is equipped with an automatic transmission. Set the parking brake, block the wheels to prevent the vehicle from moving in both directions, and disconnect the batteries at the negative terminal before doing any service procedures on the vehicle.

 **WARNING** – To prevent personal injury or death, remove ground cable from negative terminal of main battery before disconnecting electrical components. Always connect ground cable last.

 **WARNING** – To prevent personal injury or death, always wear safe eye protection when performing vehicle maintenance.

 **WARNING** – To prevent personal injury or death, make sure that the engine has cooled before removing components.

 **WARNING** – To prevent personal injury or death, do not let engine fluids stay on your skin. Clean skin and nails using hand cleaner and wash with soap and water. Wash or discard clothing and rags contaminated with engine fluids.

SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE (CONT.)

1. Park vehicle on a flat surface, shift transmission to park or neutral, set parking brake, and block wheels to prevent the vehicle from moving in both directions.
2. Raise hood assembly.
3. Drain the coolant using the Navistar Coolant Management tool.
4. Remove engine housing cover. (NOTE: It may be necessary to remove trim panels on some models and trim levels.) On ProStar® and TransStar® models with the deluxe interior, removal of the driver and passenger seat and floor mats is necessary.
5. From inside cab, locate EGR crossover pipe (coolant manifold) (See Figure 1, page 3) at the rear of the engine.

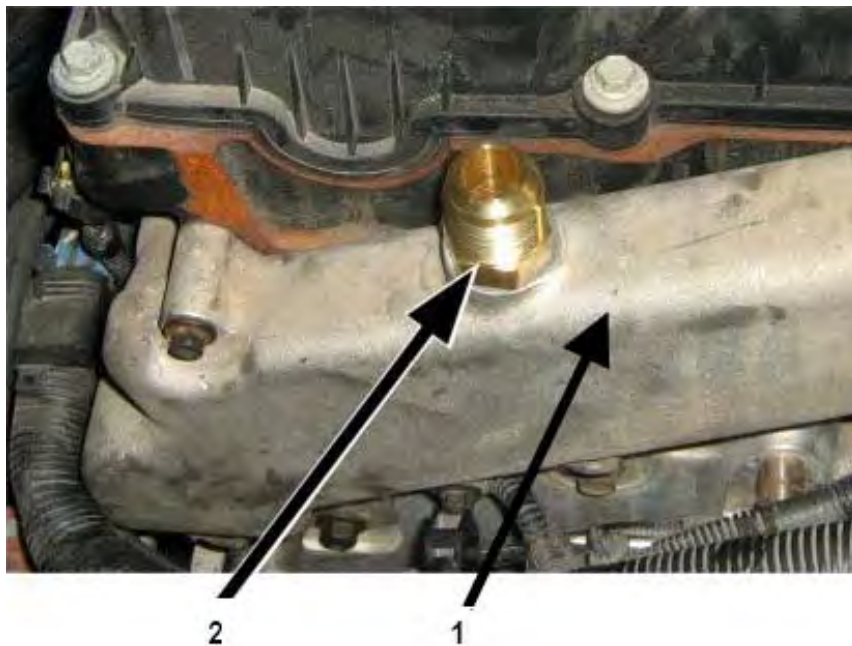


Figure 1 EGR Crossover Pipe (Rear of Engine)

1. EGR crossover pipe (coolant manifold)
2. M18 fitting

6. Remove the single-piece water pipe at the flare fitting end leaving the brass fitting in place in the EGR crossover. NOTE: Hold the brass fitting with a wrench when removing the flare fitting as this is an O-ring seal. The torque on the O-ring fitting should be maintained at 15-18 ft-lb (20-25 N•m). The torque on the flare nut should be 44-55 ft-lb (60-75 N•m). Remove the two fasteners holding the pipe to the EGR cooler housing. Disconnect the front end of the single-piece water pipe from the heater supply hose.

NOTE – When installing threaded fittings note whether the fitting is supplied with sealant applied to the threads. If no sealant is present, apply sealant during installation.

7. Install new heater supply hose as follows (See Figure 2, page 4).

SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE (CONT.)



Figure 2 Three-Piece Heater Supply Hose

1. Top of engine-side of heater pipe
 2. 15 in. (380 mm) section of 0.75 in. (19 mm) heater hose (supplied hose may need to be cut to 15 in. length)
 3. Flare side of heater pipe
 4. 2 x Mubea #27 clamps
8. Remove the nipple or shut-off valve from the single-piece pipe and install the nipple or shut-off valve to the new heater supply pipe BEFORE installing on the engine (See Figure 3, page 5).

SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE (CONT.)



Figure 3 Adding Nipple to Assembly Heater Front Supply Pipe

9. Add the 15 in. (380 mm) hose section onto the rear end of the curved pipe that mounts to top of the engine BEFORE installing on engine. Use P80® lubricant on hose and pipe for assembly. Install hose approximately 1 in. over the raised flare on the pipe.
10. Add the Mubea #27 clamp to the step 9 assembly.
11. Install step 10 assembly onto engine and fasten down using the 2 M6 Hex Flange Nuts (See Figure 4, page 6) that were removed in step 6.

SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE (CONT.)

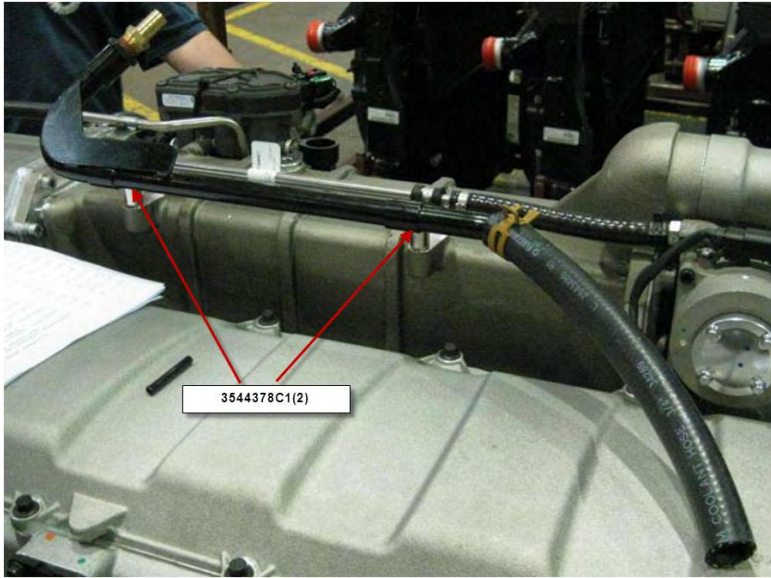


Figure 4 Attaching Supply Heater Pipe to Engine

12. Install the rear pipe and hand-tighten the flare nut on the heater pipe. The tube should align up with the top engine heater pipe and torque to 44-55 lb-ft (60-75 N•m) (See Figure 5, page 6) while holding the brass fitting in the EGR X-over with a back-up wrench.



Figure 5 Aligning Heater Supply Tube

13. Add the Mubea clamp #27 to the hose and use P80 to attach the hose end to step 12 assembly.
14. Review the procedure and verify that all connections are tight and properly secured.
15. Inspect the front heater return hose to make sure the hose on the elbow is not contacting the cowl drain.

SERVICE PROCEDURE FOR HEATER SUPPLY PIPE CHANGE (CONT.)

16. If the hose or elbow is contacting the cowl drain, slide the hose down farther on the metal tube to gain clearance.
17. Refill the cooling system using the Navistar Coolant Management tool.
18. Start engine and check for coolant leaks.
19. Stop engine.
20. Install engine cover and any trim panels removed earlier. Install the driver and passenger seats and floor mats.

Operation number must appear on all claims.

Table 2 Labor Information

Operation No.	Description	Time
A40-11928-1	Three-piece heater hose installation – WorkStar®	1.5 hrs

ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number G-11928.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Manual, Section 7-1. Special attention should be given to Items 39 through 44.

To assure this important improvement is made in a timely manner, all claims for G-11928 activity must be submitted by February 28, 2013 or within the normal warranty period for the vehicle, if after February 28, 2013.

GROUP				NOUN		C	WARR.	TP	PAD

GROUP Enter number G—

NOUN Leave blank

C (CAUSE) Enter either 1, 2, 3. (see below)

- 1. Inspected (No repair required).
- 2. Inspected and repaired.
- 3. Defective part from parts stock.

WARRANTY (Warranty Code) Enter 40.

TYPE PART Enter P for type part causing failure.

PAD Enter 100

Distribution: All except J-81
 Reproduction: Not required.