

Authorized Field Change

NAVISTAR[®]

AFC 12943R1

Date: July 2013

Subject File: Engine

Subject: Certain LoneStar[®] Models with Cummins[®] ISX15 Engines May Experience Incorrect Sealing on Air Cleaner Intake Pipes

Model: LoneStar[®] built with Cummins[®] ISX15 engine

Start Date: 14 November 2007 End Date: 21 February 2011

Engine Family: Cummins[®] ISX15

DESCRIPTION

Certain LoneStar[®] models built with Cummins[®] ISX15 engines may experience incorrect sealing on air cleaner intake pipes, which can allow dirt or dust to be ingested by the engine. This repair will require replacement of the air induction system.

NOTE: There has been a change in the parts information of this AFC. Please refer to the Parts Information section below.

PARTS INFORMATION

Table 1. Tools Required

Tool Number/Type	Description
KL5007NAV	Navistar Coolant Management Tool

Table 2. Parts Information

Part Number	Description	Quantity
8000954R91	LoneStar [®] Intake with Lights	1
8000955R91	LoneStar [®] Intake without Lights	1
864450R1 or Equivalent	Fitting, Elbow 45 Degree 1/2" NPT X 3/4" Hose	1
3596975C1 or Equivalent	Bolt M8 X 50	4

PARTS INFORMATION (CONT.)

NOTE: Some of the original kits contained extra parts that are shown in Table 3 and are not required for this repair.

Table 3. [Extra Parts](#)

Part Number	Description
3927382C2	Support
3885637C3	Hose,Air Cleaner
3931226C1	Pipe, Air Clean Air Duct ASM
3931201C1	Hose, Air Cleaner

SERVICE PROCEDURE



WARNING: Park vehicle on hard flat surface, turn the engine off, set the parking brake, and block the wheels to prevent the vehicle from moving in both directions. Failure to do so may result in property damage, personal injury, and / or death.



WARNING: If the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over, potentially resulting in property damage, personal injury, and / or death.



WARNING: Always wear safe eye protection when performing vehicle maintenance. Failure to do so may result in personal injury and / or death.



WARNING: Keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases. Failure to do so may result in property damage, personal injury, and / or death.



WARNING: Remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last. Failure to do so may result in property damage, personal injury, and / or death.

1. Bring truck into shop and park on flat surface.
2. Shift transmission to Park or Neutral, set parking brake, and install wheel chocks.
3. Unlatch and open hood.
4. Remove air cleaner covers and filters.
5. Remove both air cleaner housings and disconnect electrical harness for air cleaner-mounted marker lights, if equipped.
6. Remove and save filter minder for reinstallation on new air induction system.
7. Remove all intake piping down to and including turbocharger inlet elbow. Discard piping.
8. Install cover cap onto turbocharger to protect it from foreign material.

SERVICE PROCEDURE (CONT.)



0000054435

Figure 1. Air Intake Duct Dirt Trails.

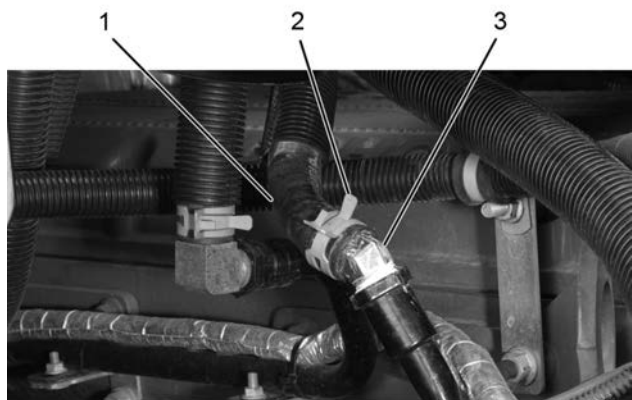
9. Inspect air intake duct for dirt trails (Figure 1).

- If no evidence of dirt trails is present, proceed to Step 10.
- If evidence of dirt trails is present, create an iKNow case file for further instructions (pictures of the dirt trails must be attached to the case file), and proceed to Step 10.

SERVICE PROCEDURE (CONT.)

10. Install Coolant Management Tool and apply maximum vacuum at deaeration tank. Leave vacuum attached. Refer to TSI 12-12-01 for additional information about Coolant Management Tool.

NOTE: Apply vacuum to deaeration tank only. Do not drain coolant.



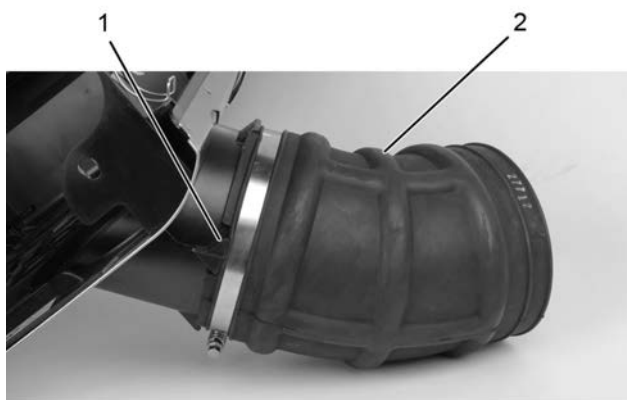
0000041936

Figure 2. Hose and Attachments.

- 1. Upper heater hose
- 2. Hose clamp
- 3. 45° fitting

11. Install hose pinch plier to upper heater hose (Figure 2, Item 1).
12. Remove hose clamp (Figure 2, Item 2) from straight fitting in area next to valve cover on right side of engine.
13. Remove upper heater hose (Figure 2, Item 1) from straight fitting.
14. Remove straight fitting.
15. Install new 45° fitting (Figure 2, Item 3). Orient fitting toward rear of engine.
16. Install upper heater hose (Figure 2, Item 1) to 45° fitting (Figure 2, Item 3).
17. Install hose clamp (Figure 2, Item 2) to upper heater hose (Figure 2, Item 1).
18. Remove hose pinch plier from upper heater hose (Figure 2, Item 1).
19. Remove Coolant Management Tool and vacuum.

SERVICE PROCEDURE (CONT.)

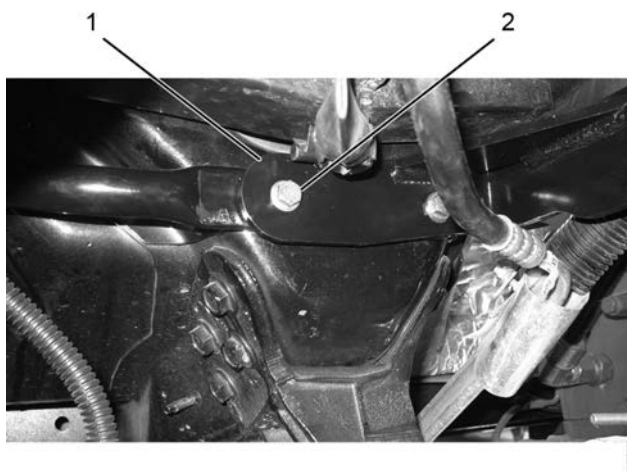


0000041932

Figure 3. Rubber Elbow.

1. Locator notch
2. Rubber elbow

20. Install new rubber elbow (Figure 3, Item 2) on new right-side filter housing, and torque hose clamp to 60 lb-in (7.5 N·m). Observe locator notch (Figure 3, Item 1).



0000041935

Figure 4. Steel Support Bracket.

1. Steel support bracket assembly
2. Bolt (2)

21. Remove two bolts (Figure 4, Item 2) from steel support bracket (Figure 4, Item 1) at right-side cab-mount reinforcement brace on lower front of cab.

SERVICE PROCEDURE (CONT.)

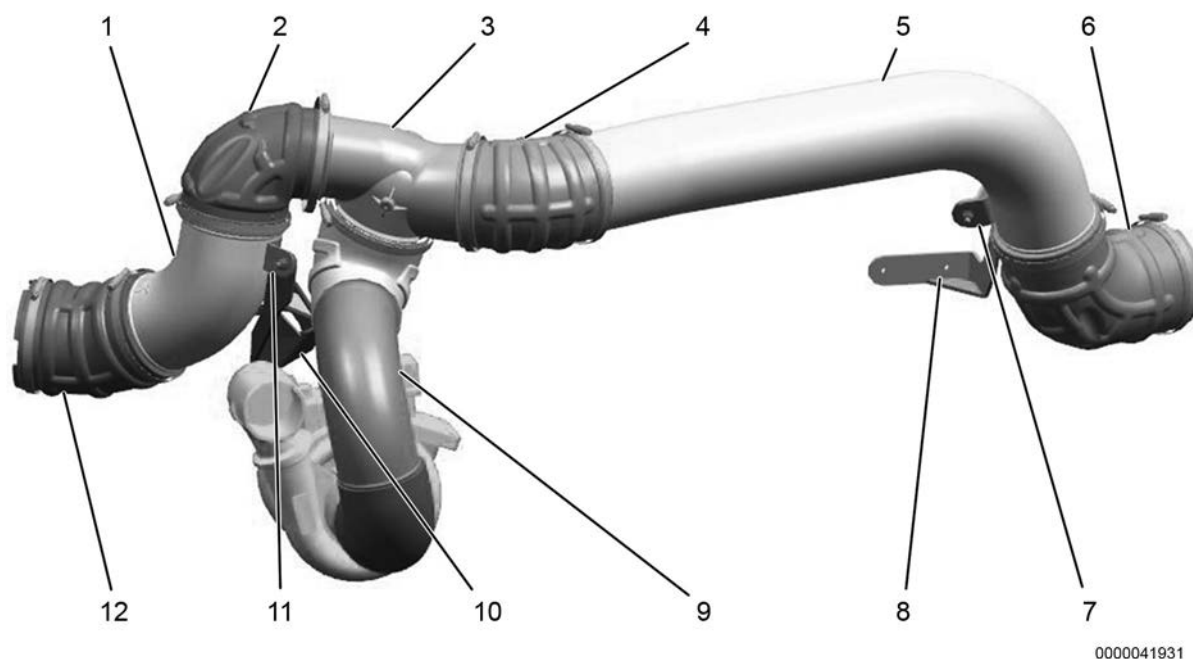


Figure 5. New Intake Assembly.

1. Right-side metal elbow
 2. Right-side upper rubber elbow
 3. Inlet tee section
 4. Upper inlet rubber elbow (45°)
 5. Left-side metal elbow
 6. New rubber elbow
 7. Left-side pipe mounting tab
 8. Left-side mounting bracket
 9. Turbocharger inlet assembly
 10. Right-side mounting bracket
 11. Right-side pipe mounting tab
 12. New rubber elbow
22. Install right-side mounting bracket (Figure 5, Item 10) onto cab-mount reinforcement brace at lower front of cab. Use 8 mm x 1.25 x 40 flange head bolts (not supplied). Leave bolts loose.
 23. Install new right side filter housing with elbow attached (Figure 3). Insert elbow through opening in side of cab and maneuver into position over mounting studs.
 24. Torque six filter housing nuts to 18 lb-ft (25 N·m).
 25. Torque two mounting bracket bolts (Figure 4, Item 2) to 18 lb-ft (25 N·m).
 26. Install new right-side metal elbow (Figure 5, Item 1) into rubber elbow (Figure 5, Item 12) from filter housing.
 27. Align right-side pipe mounting tab (Figure 5, Item 11) to right-side mounting bracket (Figure 5, Item 10) and secure using lockwasher and nut. Leave lockwasher and nut loose.

SERVICE PROCEDURE (CONT.)

28. Install new right-side upper rubber elbow (Figure 5, Item 2).
29. Install new rubber elbow (Figure 5, Item 6) on new left-side filter housing, and torque hose clamp to 60 lb-in (7.5 N·m). Observe locator notch.
30. Remove two bolts (Figure 4, Item 2) from steel support bracket (Figure 4, Item 1) at left-side cab-mount brace on lower front of cab.
31. Install left-side mounting bracket (Figure 5, Item 8) onto cab-mount reinforcement brace at lower front of cab. Use 8 mm x 1.25 x 40 flange head bolts (not supplied). Leave bolts loose.
32. Install new left-side filter housing with elbow through opening in cab and maneuver into position over mounting studs.
33. Torque six filter housing nuts to 18 lb-ft (25 N·m).
34. Torque two mounting bracket bolts (Figure 4, Item 2) to 18 lb-ft (25 N·m).
35. Install new left-side metal elbow (Figure 5, Item 5) into rubber elbow (Figure 5, Item 6) from filter housing.
36. Align left-side pipe mounting tab (Figure 5, Item 7) to left-side mounting bracket (Figure 5, Item 8) and secure using lockwasher and nut. Leave lockwasher and nut loose.
37. Install new rubber elbow upper inlet section (Figure 5, Item 4).
38. Install inlet tee section (Figure 5, Item 3). Adjust pipes and snug clamps.

SERVICE PROCEDURE (CONT.)

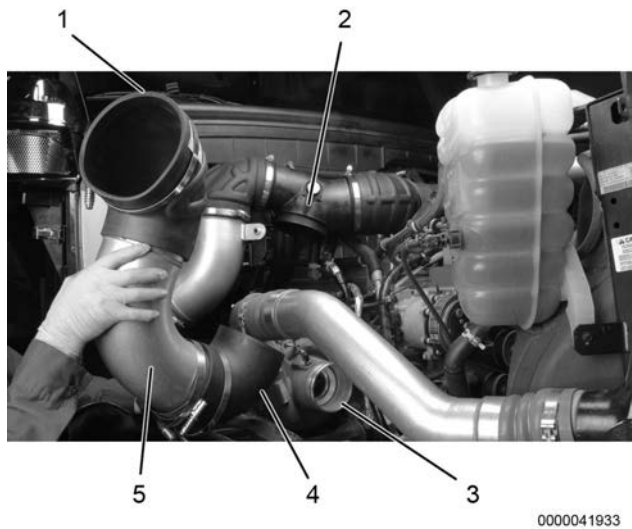
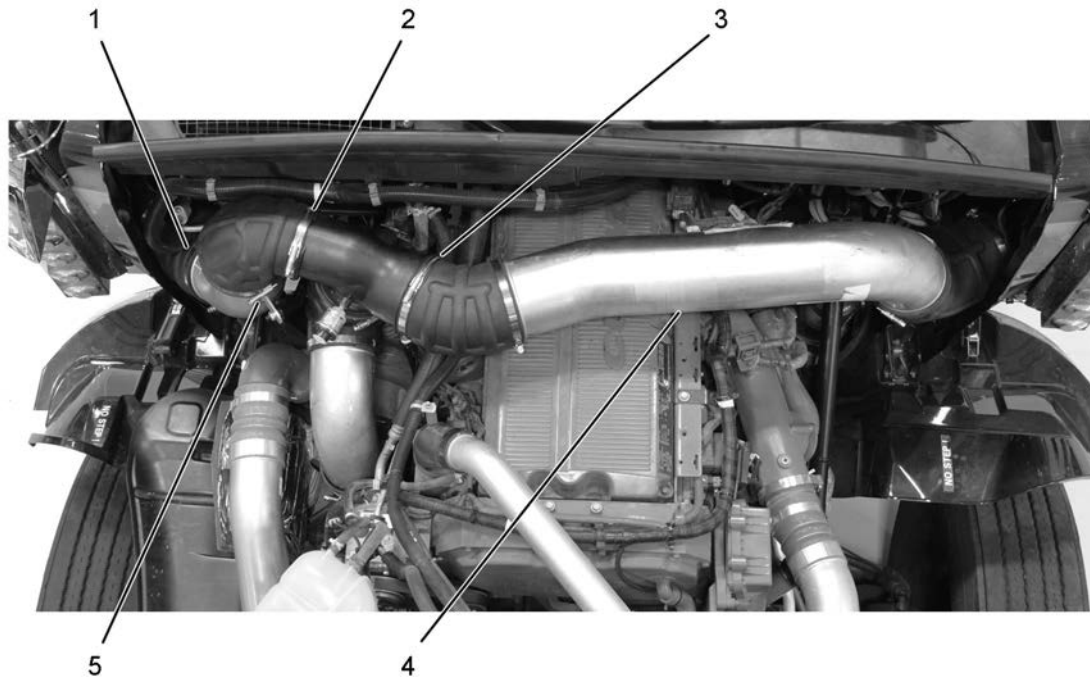


Figure 6. Turbocharger Inlet Assembly.

1. Reducer
2. Inlet tee section
3. Turbocharger inlet
4. Rubber elbow
5. Metal elbow

39. Assemble rubber elbow (Figure 6, Item 4), metal elbow (Figure 6, Item 5), and reducer elbow (Figure 6, Item 1) connecting inlet tee section (Figure 6, Item 2) to turbocharger inlet (Figure 6, Item 3).
40. Remove cover cap from turbocharger.
41. Install turbocharger inlet assembly to inlet tee section.

SERVICE PROCEDURE (CONT.)



0000041927

Figure 7. Correct Installation.

1. Rubber elbow
2. Clamp
3. Clamp
4. Intake pipe
5. Clamp

42. Adjust all pipes according to locator notches. Torque all clamps to 60 lb-in (7.5 N·m).

43. When correctly installed, new system should appear as shown (Figure 7).

44. Install filter minder on new inlet tee section.

45. If equipped, connect left-side electrical harness for air cleaner-mounted marker lights and install left-side air cleaner housing. Tighten both mounting bracket nuts to 37 lb-ft (50 N·m).

46. Install left-side air filter cartridge.

47. Observing locator notches, install left-side air cleaner cover to air cleaner housing.

48. If equipped, connect right-side electrical harness for air cleaner-mounted marker lights and install right-side air cleaner housing. Tighten both mounting bracket nuts to 37 lb-ft (50 N·m).

49. Install right-side air filter cartridge.

SERVICE PROCEDURE (CONT.)

50. Observing locator notches, install right-side air cleaner cover to air cleaner housing.

NOTE: Installation of new hood brace is required to achieve proper clearance to new components after hood is closed.

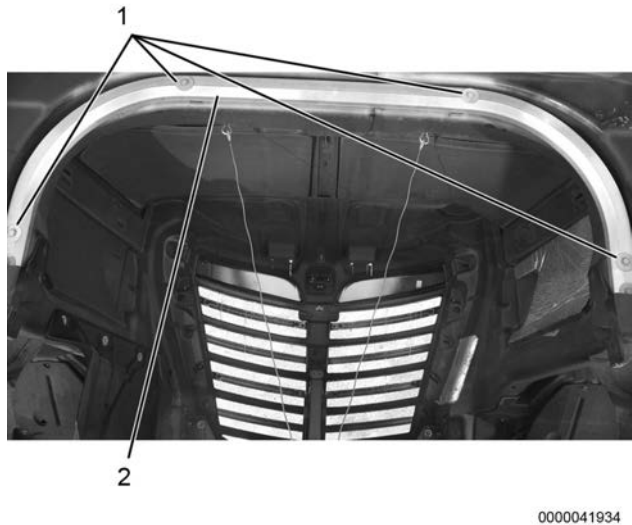


Figure 8. Rear Hood Brace.

- 1. Bolt (6)
- 2. Rear hood brace

51. Remove six mounting bolts (Figure 8, Item 1) from rear hood brace (Figure 8, Item 2).

52. Remove rear hood brace.

53. Install new rear hood brace.

54. Torque six rear hood brace mounting bolts to 17 lb-ft (23 N·m).

55. Run engine to verify proper operation, no leaks, and no fault codes present.

56. Close and latch hood.

57. Remove wheel chocks.

LABOR INFORMATION

Operation number must appear on all claims.

Table 4. Labor Information

Operation No.	Description	Time
A40-12943R1-1	Replace Current Air Induction System	2.5 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 12943R1.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the "Other Charges" tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To make sure this important improvement is made in a timely manner, all claims for 12943R1 activity must be submitted by 31 July 2014 or within the normal warranty period for the vehicle, if after 31 July 2014.

	GROUP	NOUN	C	WARR.	TP	PAD
GROUP — Enter number						
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						

0000047910