



Countries: CANADA, MEXICO, UNITED STATES **Document ID:** IK1201501
Availability: ISIS, NotSIR **Revision:** 7
Major System: ENGINE **Created:** 1/6/2025
Current Language: English **Last Modified:** 8/6/2026
Other Languages: NONE **Author:** Gintarus Andriusis
Viewed: 9456

[Less Info](#)

Hide Details

Coding Information

Copy Link 	Copy Relative Link 	Bookmark View My Bookmarks	Add to Favorites 	Print 	Provide Feedback 	Helpful 24	Not Helpful 2
---------------	------------------------	---	----------------------	-----------	----------------------	-------------------	----------------------

Title: S13 Gear Housing Leak (By The Air Compressor)

Applies To: S13 Integrated Powertrain LT RH HX

Change Log

Please refer to the change log text box below for recent changes to this article:

05/21/2025 - Updated tools availability
05/14/2025 - Adding figures under warranty information to clarify on claiming this repair
05/06/2025 - Added parts catalog part number for the installation tool
04/15/2025 - Added warranty information, added clarification on tools
02/17/2025 - Added repair instruction steps.
01/23/2025 - Initial Article Release.

Description

The purpose of this document is to properly identify and repair a leak at the rear gear housing boss.

Symptoms

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
No Faults or Warning Lights	

Customer Observations or Concerns:

- Oil drip at the bottom of the rear gear housing near the compressor

Special Tools / Software

Tool Description	Tool Number	Parts Catalog Part #	Comments
Punch and Extension Handle tool	12-573-01	1257301	Field repair installation tool

International shipped tools at NO COST to the main Dealer locations on the week of 4/29/2025. **Additional tools are available for purchase through tools catalog.** Tool availability for purchase through Parts Catalog - timing TBD

Service Parts Information

Kit Description	Part Number	Quantity Required	Notes
-----------------	-------------	-------------------	-------

Ribbed Sleeve	7109504C1	1	
Plug	7109506C1	1	
Loctite 603	acquire locally		

Diagnostic Steps

WARNING! To prevent property damage, personal injury, and / or death, park vehicle on a hard, flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.

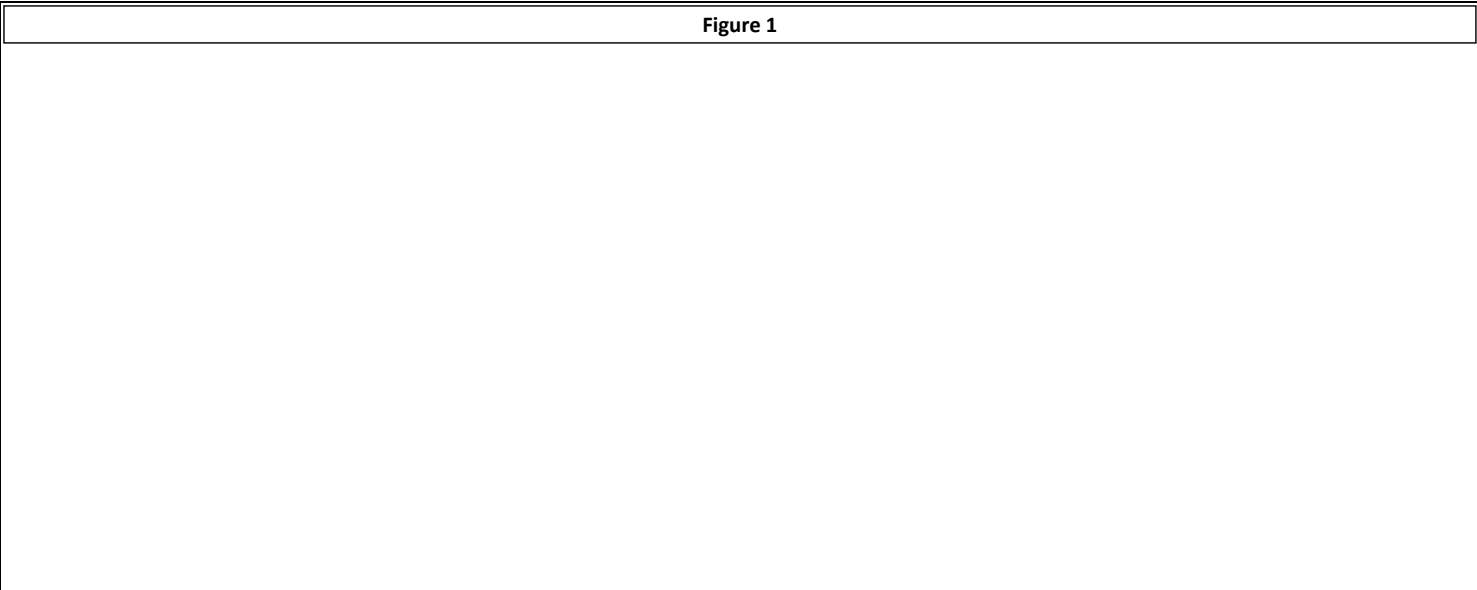
WARNING! To prevent property damage, personal injury, and / or death, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.

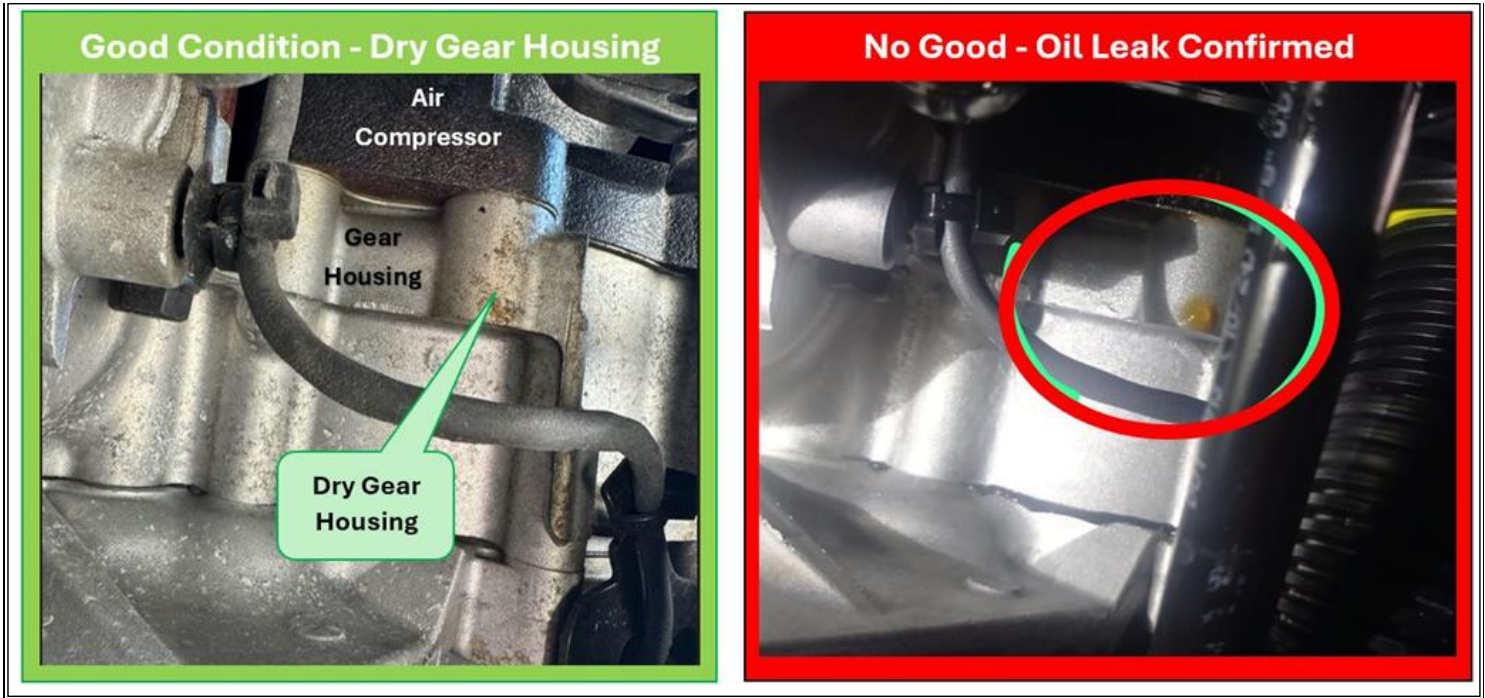
WARNING! To prevent personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

WARNING! To prevent property damage, personal injury, and / or death, keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.

WARNING! To prevent property damage, personal injury, and / or death, remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last.

Step	Action	Decision
1	DIAGNOSTIC:	Yes: Go to step 2
	Per Figure 1 below, inspect for oil being present at the bottom of the gear housing near the air compressor	
	YES/NO QUESTION? Is oil present at the bottom of the gear housing at the area as shown in Figure 1?	No: Reference IK1201505 for other leak locations





Step	Action	Decision
2	DIAGNOSTIC: Use Figure 2, Figure 3, and Figure 4 below to assist in inspecting for oil seeping past the machined exposed boss surface *NOTE* The International S13 engine has oil dye added from the plant *NOTE* If oil is noticed, clean it using a degreaser and verify that the oil is coming through the machined surface *NOTE* For the highest likelihood of identifying the leak source, inspect the engine while it is warm or operating at normal temperature YES/NO QUESTION? Is there oil leaking at the machined boss area?	Yes: Go to Repair Steps
		No: Reference IK1201505 for other leak locations

Figure 2 - Using a mirror to inspect between the lower compressor stud and the block

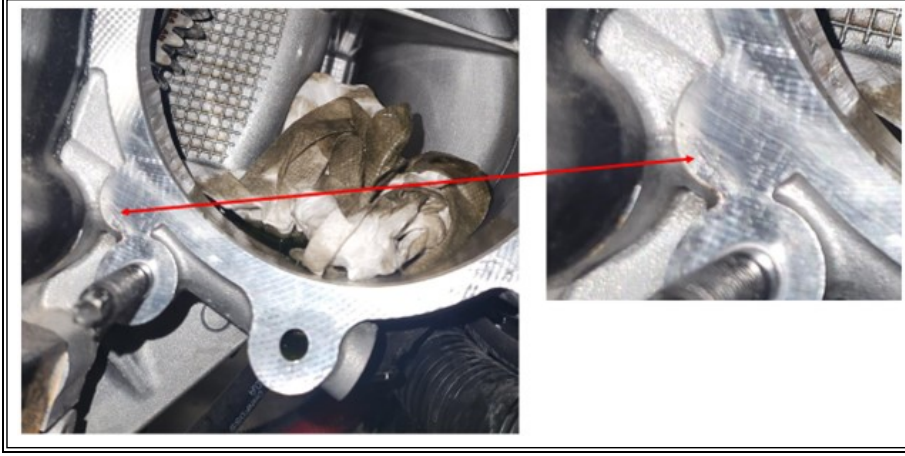


Figure 3 - Using a mirror to inspect between the lower compressor stud and block



NOTE - Below Figure 4, the air compressor is removed to assist in showing the area in question; the compressor does not need to be removed to inspect for the boss leak

Figure 4



Repair Step(s)

The steps below are specific to repairing a leak at the exposed machined boss as described above

1. Bring the vehicle to a level surface, wheels chocked, and let the vehicle run until the engine reaches operating temperatures

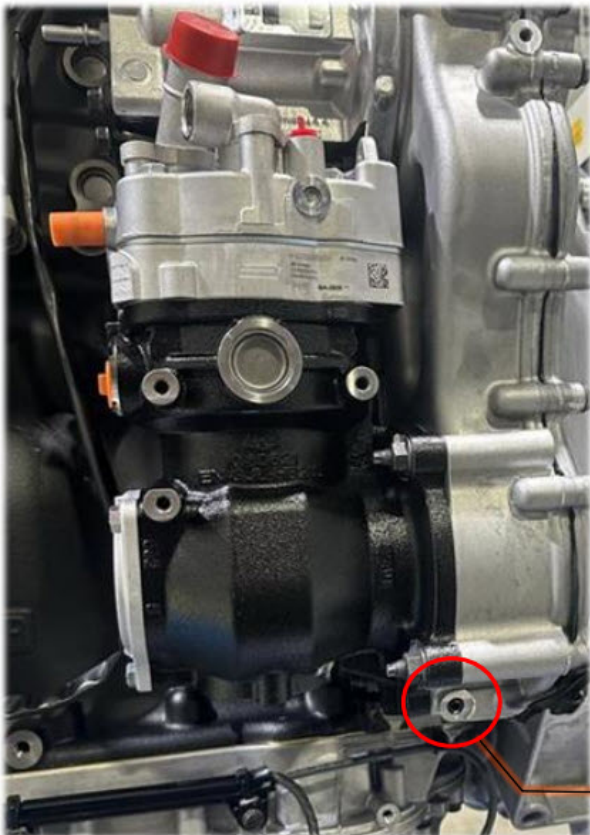
2. Shut the engine off - let it sit for approximately 15 minutes

NOTE: For repair effectiveness, this repair needs to be completed with the engine still warm/hot after shutting the vehicle off - do not let it sit for an extended period of time before performing the repair

3. Clean off the area around the cap screw (reference Figure 5) with engine degreaser to ensure no debris could be introduced into open oil system

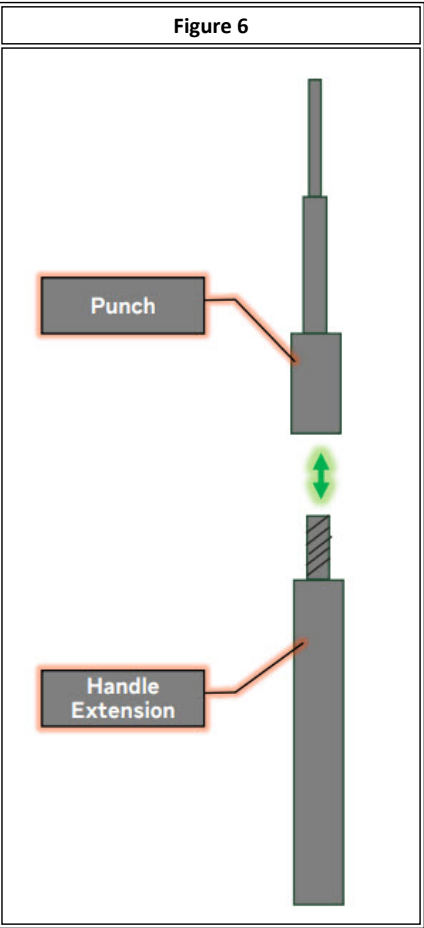
4. Remove the cap screw at the bottom of the gear housing (reference Figure 5) to expose the oil galley and allow the residual oil to drain

Figure 5

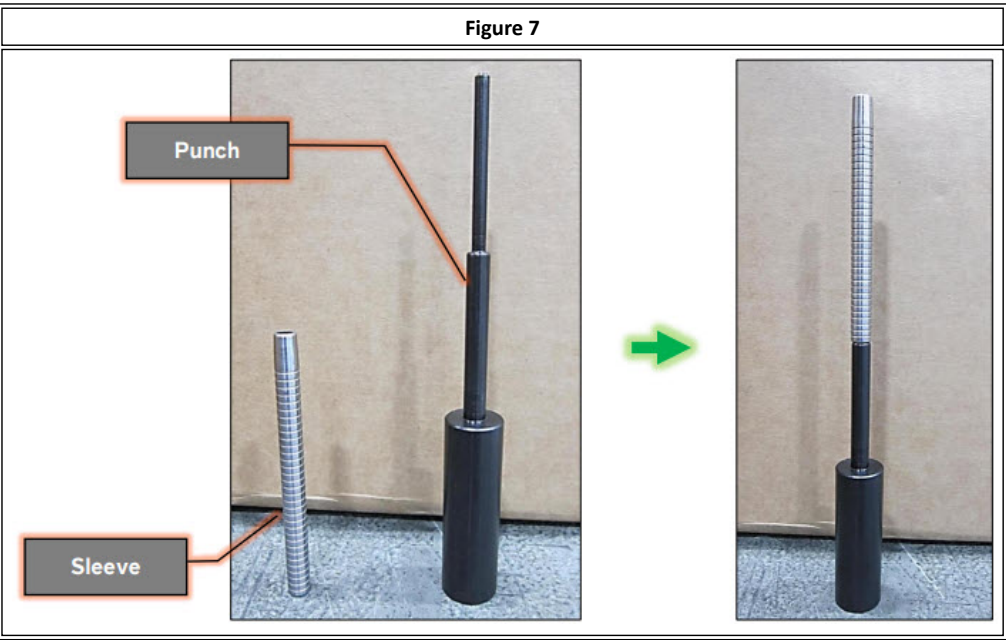


Cap Screw

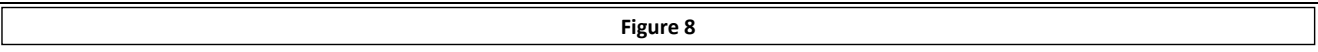
5. Assemble the tool by installing the extension handle onto the sleeve and installing punch (reference Figure 6)

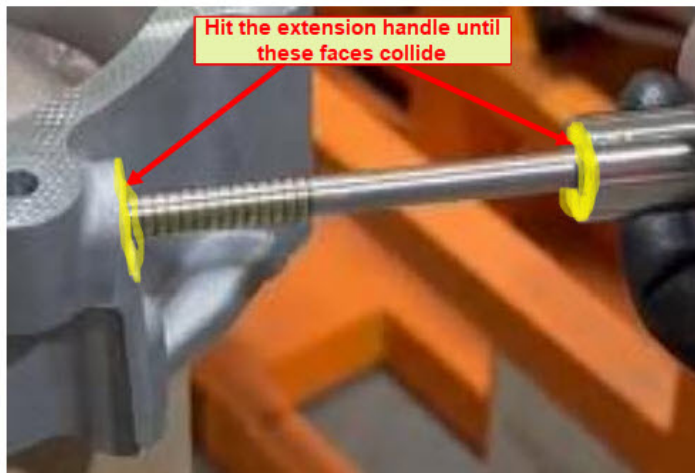


6. Take the sleeve, spray it with a degreaser to ensure it is clean, and install the sleeve onto the tool with the tapered end facing away from the tool (reference Figure 7)



7. Align the sleeve with the oil gallery and use a hammer to hit the extension handle until the 3rd step of the tool makes contact with the housing (reference Figure 8)

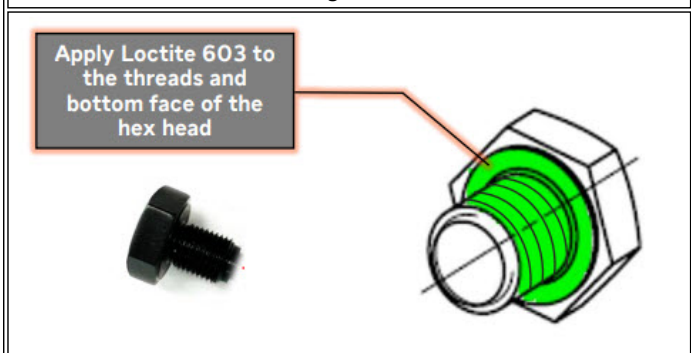




8. Remove the tool from the galley

9. Take the new plug, spray it with degreaser, apply Loctite 603 onto the threads and inner face of the hex head, using a torque wrench, install and tighten the plug into the oil galley to 25Nm (reference Figure 9)

Figure 9



10. Using a degreasing spray, ensure all the oil has been cleaned off in the area

11. Verify that the leak is no longer present at the exposed machined boss

NOTE If the leak is still present, open a Technical Service case file for further direction

Warranty Information

Follow **GUIDE**

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

Other Resources

[Master Service Information Site](#)

Viewed: 9455	
Helpful: 24	
Not Helpful: 2	
No Feedback Found	