



# Preliminary Information

## PIP5898B Rear Axle Leak

Product Investigation Review Required

### Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Cadillac	ATS	2013 - 2019	All	All	LTG, LCV, LFX, LGX	MYA, M5T, M5N
Cadillac	CTS	2014 - 2019	All	All	LTG, LCV, LFX, LGX	MYA, MGG, M5N

Involved Region or Country	North America
Additional Options (RPO)	195 MM Axle For ATS only with FE2
Condition	Some customers may comment that the rear differential carrier assembly is leaking.
Cause	This condition may be caused by the side bearing retaining ring on one or both sides blocking the rear axle shaft seal oil feed port. The oil feed port being blocked causes the seal to not receive proper lubrication and thus fail prematurely.

### Correction:

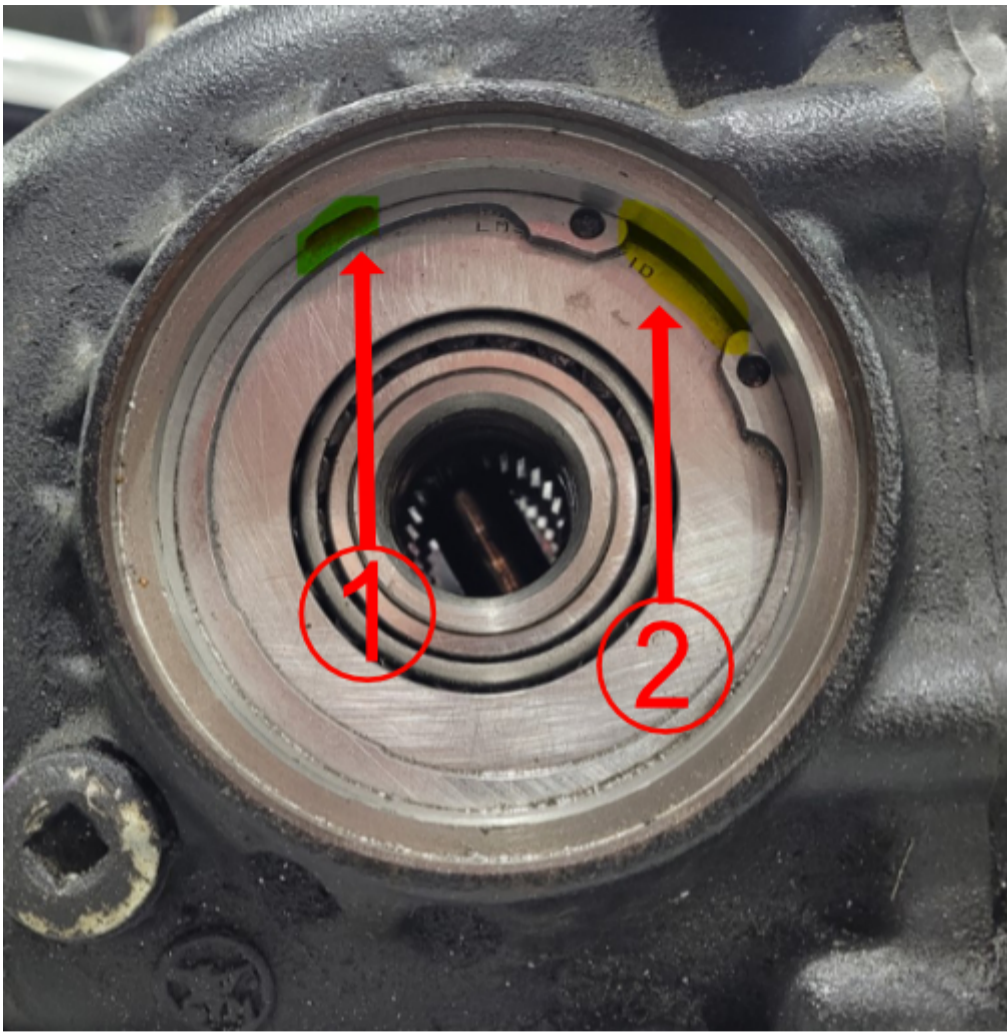
After removing the faulty seal, the technician will inspect the position of the side bearing retaining ring and re orientate the ring as necessary. The technician will also inspect the shaft of the wheel drive shaft flange to ensure it does not also require replacement. Please refer to the below for the proper inspection and service procedures.

**NOTE: If the leak has been present long enough to damage the axle due to low lubrication and caused bearing or gear set distress please make that determination prior to repairing a leak on an axle that would require replacement anyway. Customer complaints including noise or leaks where a rear axle assembly is replaced for the concern listed below should also use the labor op provided.**

### Service Procedure:

- 1) Remove rear axle shaft seal using existing procedure in SI - Rear Axle Shaft Seal Replacement (195mm Axle)
- 2) Inspect the orientation of the side bearing retaining ring.

If the lube passage (1) is blocked by the snap ring as pictured below continue on to step 4. If the opening in the snap ring (2) is properly lined up with the lube passage (1) proceed to step 3.



3) Install a new axle shaft seal and remove the other seal and verify correct location. For example if leak is from the left side and you remove the left side seal to replace the seal and inspect orientation you also want to verify the right side to prevent a possible comeback.

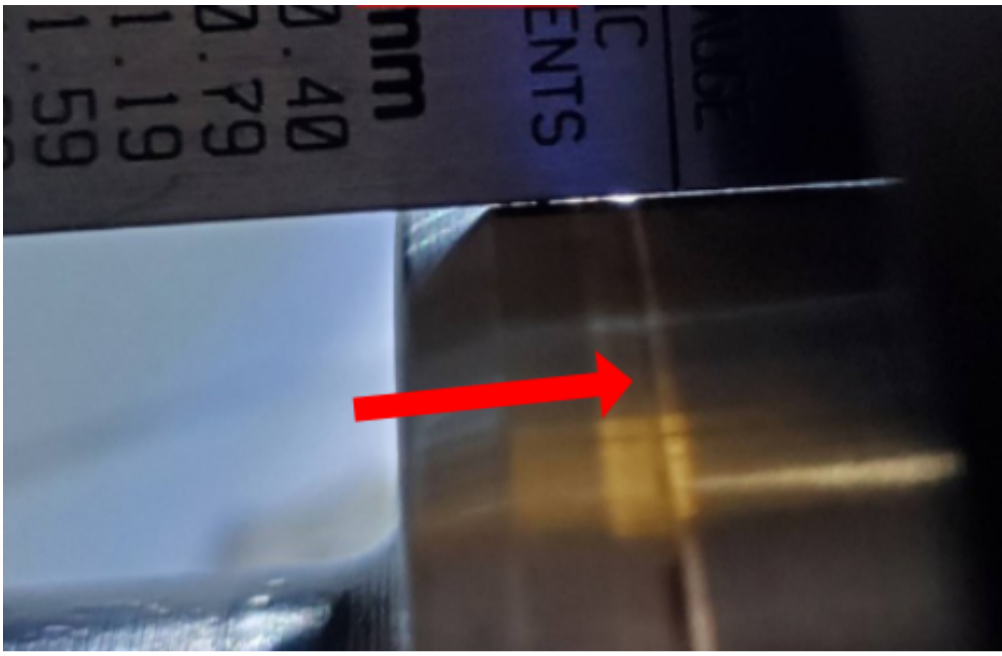
4) If the snap rings are in the proper orientation replace the seals, inspect the flange sealing surface, install new seals, fill to proper level and verify no further leaks. Only proceed to next steps if EITHER snap ring is out of position. If the snap rings are in the correct location then use labor operation 3030120.

5) If either side the snap ring is blocking the lube passage you will need to remove the differential assembly to move the snap ring to the correct orientation. Repositioning of the snap ring should NOT be attempted in vehicle. See Differential Carrier Assembly Replacement and If either snap ring is out of position then use labor operation 3087998 below.

6) Since the seals are removed put the differential on the bench on its side so the snap ring faces up. Using a pair of large snap ring pliers reposition the snap ring to unblock the oil feed port. J-45126 was used and it was easier to compress the snap ring and tap it lightly to loosen it in the groove, rotate the snap ring so that the opening in the snap ring (2) lines up with the lube passage (1) to allow lube to get to the seal. make sure the snap ring is fully seated in the groove once the proper orientation is achieved. Repeat for one or both sides as needed.

7) Inspect the shaft of the wheel drive shaft flange for any damage caused by the seal. Top is a flange needing replacement, Bottom is a flange that is showing normal wear.

Worn



Good



8) Replace the wheel drive shaft flange as necessary.

For Axles that are being replaced for internal damage to include bearing noise/failure or gear noise and the units had a leak from either side axle seal, Remove the seals and inspect snap ring orientation.

If either snap ring is out of position then use labor operation 3087998 below.

If the snap rings are in correct orientation then use labor operation 3031160.

### Parts Information

See EPC for parts based on year and application.

### Warranty Information

For vehicles repaired under the Bumper-to-Bumper coverage (Canada Base Warranty coverage) or for vehicles repaired under the Powertrain coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
3087998*	Differential Carrier Assembly Inspection and Rear Axle Shaft Seal Replacement	3.5 HRS.
3031160	Differential Carrier Assembly Replacement	Use published labor time
3030120	Rear Axle Shaft Seal Replacement - Both Sides	Use published labor time
*This is a unique Labor Operation for Bulletin use only.		

### Version History

Version	
	3

Modified

01/27/2023 - Created on.

02/08/2023 - Updated labor codes, added photos of flange, added instructions for axle assembly replacements.

03/13/2024 - Updated to clarify labor op usage.



GENERAL MOTORS

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