Bulletin No.: PIT5501F
Published date: 06/8/2017

Preliminary Information

PIT5501F Steering Feels Loose / Excessive Lash / Fluid Leak At Lash Adjuster

Product Investigation Review Required

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Chevrolet	Silverado 2500/3500	2016	All	All	All	All
GMC	Sierra 2500/3500	2016	All	All	All	All

Supersession Statement

This PI was superseded to remove the 2017 model year. Please discard PIT5501E.
The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in this PI.

Condition / Concern

Some owners may comment of the following:
- **The steering feels loose**
- **There is excessive play in the steering**
- **A small power steering fluid leak from the steering gear lash adjuster stud/nut area**

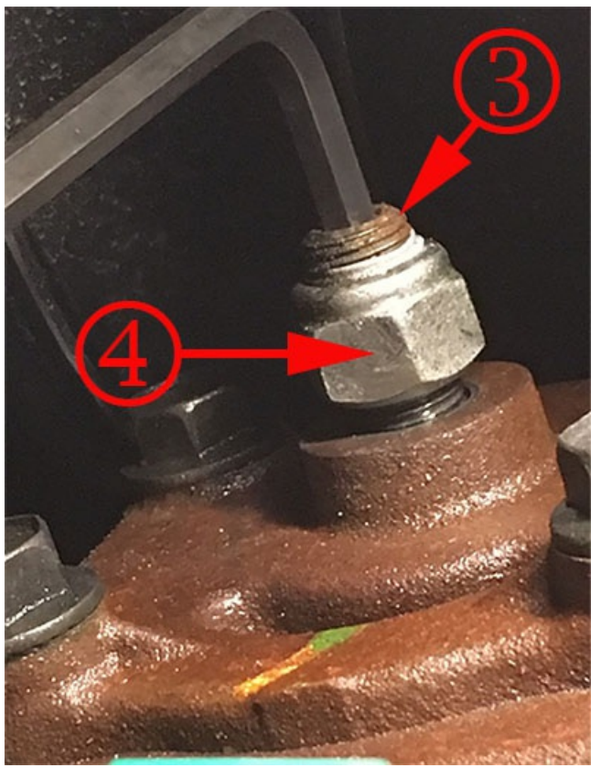
These concerns could be caused by the pitman shaft adjuster stud (3) unthreading up/out of the cover plate, which can cause excessive lash in the steering gear. This issue is NOT caused by the lock nut (4) turning on the adjuster stud (3), shown below.

Inspect the pitman shaft adjuster stud for being loose. This will be obvious after inspecting the pitman shaft adjuster stud/nut as follows:
- **The adjuster stud nut (4) will not be seated up against the cover plate, shown below.**
- **The adjuster stud (3) can easily be turned in or out by hand using an Allen wrench.**

If it is found that the pitman shaft adjuster stud (3) has unthreaded up/out AND there is NO reason to believe someone has previously turned the adjuster stud nut (4) on the adjuster stud (3), continue to the recommendations section to apply thread locker on the adjuster stud threads.

If the adjuster stud has NOT unthreaded up/out of the cover plate, but it is suspected the issue is caused by excessive lash in the steering gear, the following test can be performed to determine if there is excessive lash in the steering gear:
1. Disconnect the Relay Rod/Center link from the steering gear pitman arm and idler arm. Allow the relay rod/center link to drop down and clear the pitman arm.
2. With the steering gear in the centered position (wheels straight forward), have an assistant hold the steering wheel from turning.
3. While the steering wheel is being held in the centered position, wiggle the pitman arm and feel for any lash/play.

If any lash/play is found, OR there IS reason to believe someone has turned the adjuster stud nut (4) on the adjuster stud (3), follow the SI procedure titled "Steering Gear Pitman Shaft Over-Center Preload Adjustment - Off Vehicle (Heavy Duty)".

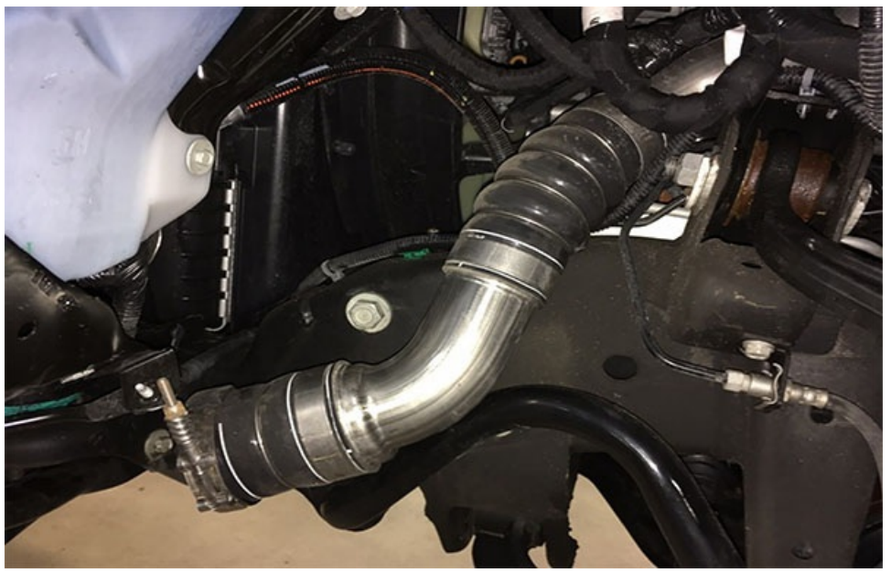


Recommendations / Instructions

Do NOT REMOVE the steering gear from the vehicle.

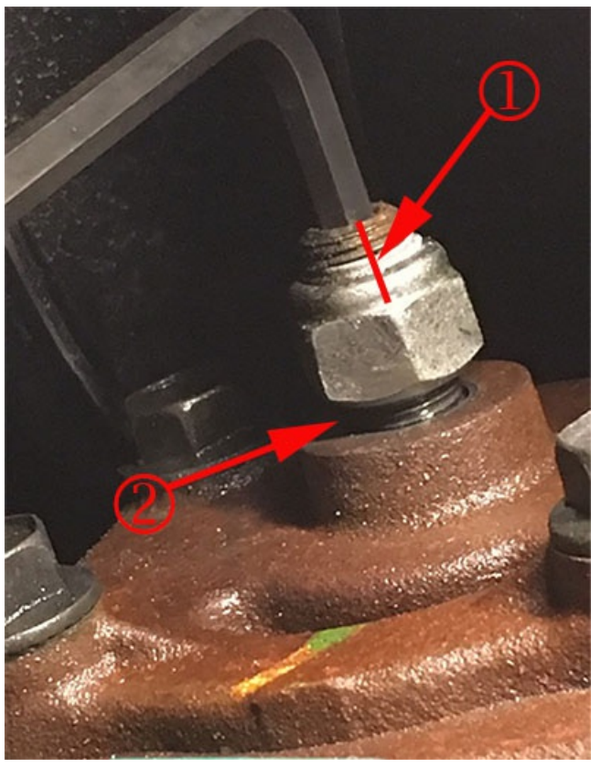
To correct this concern, use the following procedure to apply blue thread locker GM P/N 19333511 (Canada 10953489) to the adjuster stud threads, which will secure it to the cover plate:

1. Position the steering wheel in the centered position so the wheels are pointed straight ahead. Following SI, remove the left front wheel, left front wheelhouse liner, and charge air cooler inlet pipe (if equipped), as shown below.



2. Using a marker or scribe, mark the adjuster stud in relation to the adjuster stud nut, as shown below (1). This is just in case the nut is turned on the adjuster stud when performing the following repairs.

3. Using an Allen wrench, loosen the adjuster stud (turning it counter clockwise) until it is fully backed off, typically 2 threads will be shown (2). Note: Do NOT turn the nut relative to the adjuster stud.

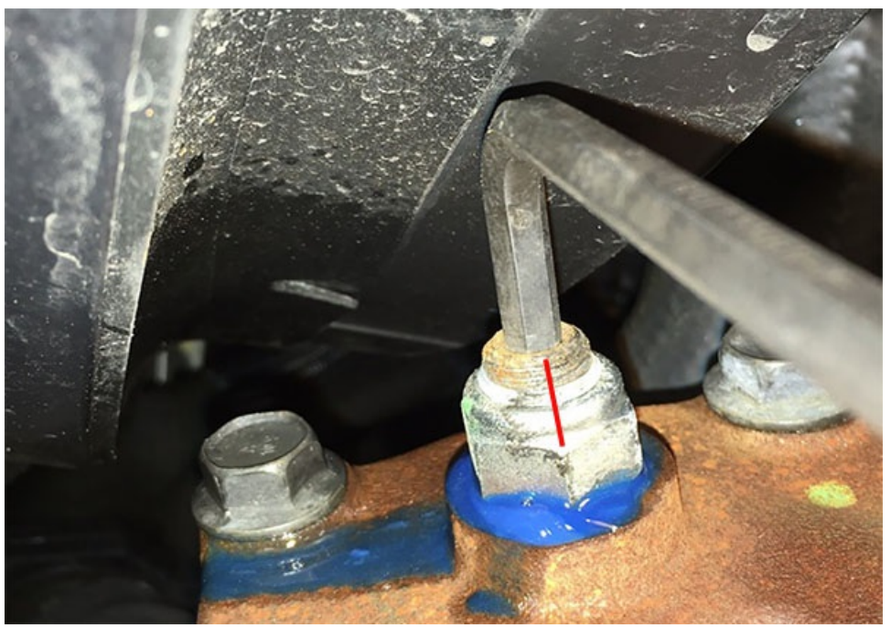


4. Using brake cleaner, spray the threads to remove any oil residue. Then, blow the remaining brake cleaner off with compressed air.

5. Apply a thick layer of blue thread locker GM P/N 19333511 (Canada 10953489) around the adjuster stud threads, shown below.

6. Using an Allen wrench, tighten the adjuster stud (turning clockwise) until the nut bottoms out on the cover plate, shown below.

Note: DO NOT hold the nut. Doing so could cause the adjuster stud to seat at the incorrect depth, therefore changing the lash adjustment.



7. Using a torque wrench with crow foot & Allen wrench, turn the adjuster stud and nut simultaneously while torquing to 68 lb ft (92 Nm). Make sure the mark or scribe on the adjuster stud and nut (made during step 2) are still in alignment. If not, slightly loosen the nut, realign the marks, and retorque.

8. Following SI, reinstall the charge air cooler inlet pipe (if equipped), the left front wheelhouse liner, and left front wheel.

Note: Ensure the charge air cooler inlet pipe is fully installed and the clamp is fully torqued.

9. Before test driving, allow the thread locker (Loctite) to dry for at least 4 hours. The vehicle can be removed from the hoist to a holding position.
Trucks withOUT Active Hydraulic Assist system (RPO NV8) test drive to verify customer complaint is corrected.
Trucks with the Active Hydraulic Assist system (RPO NV8) continue with the following steps.
10. Reprogram the Power Steering Control module with the latest calibrations in Tis2Web.
11. Using the scan tool perform a Steering Angle Sensor Centering procedure listed in SI (example doc id 3970641).
12. Next, with the ignition ON, engine OFF, steering wheel straight forward and NO steering wheel input, use the scan tool and go into the Power Steering Control Module/ Configuration and Reset Functions and perform a "Power Steering Pressure Sensor Learn".

13. Test drive the truck and make sure the steering wheel is level and the "Steering Wheel Angle" parameter is 0 degrees (+/-3 degrees) while driving the truck on a flat level straight road at slower speeds (approximately 25 mph). To view the "Steering Wheel Angle" parameter, using the scan tool and go into the Power Steering Control Module/Data Display.
14. Complete test drive to verify customer complaint is corrected.

If customer compliant is not corrected, perform SI “Steering Gear Pitman Shaft Replacement - DOC ID 4165698.”

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
7480288*	Clean threads, apply thread lock and torque pitman shaft stud adjuster	1.2 hr.
Add ONLY WITH RPO NV8	Perform GDS2 SAS and Pressure Sensor Relearns	0.3 hr.
Add ONLY WITH RPO NV8	If Necessary Reprogram the Power Steering Control Module	0.3 hr.
* This is a unique labor operation for bulletin use only. This will not be published in the Labor Time Guide.		

Please follow this diagnostic or repair process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

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