Maserati Technical Bulletin

Date: November 29th, 2016
Bulletin No. MAS001052 – Rear Differential Inspection_US
Recall Campaign - 328
Supersedes: N/A

MASERATI

Model: Quattroporte (M156) and Ghibli (M157)
Model Year: 2017
Subject: Vehicle Safety Recall Campaign 328 – Rear Differential Inspection

MASERATI SAFETY RECALL BULLETIN

PERFORM THE PROCEDURE OUTLINED IN THIS TECHNICAL BULLETIN ON ALL AFFECTED NEW VEHICLES BEFORE CUSTOMER DELIVERY OR FOR VEHICLES ALREADY SOLD AND DELIVERED THE NEXT TIME THE VEHICLE IS IN THE SHOP FOR MAINTENANCE OR REPAIRS.

Maserati dealers must ensure recalls are completed after having been notified by Maserati North America, Inc. (MNA) that a safety-related defect or noncompliance exists in any motor vehicle or item of replacement equipment in the dealer's possession at the time of notification. In MNA's case, this notification would typically be made by the issuance of a recall notification in the form of a Technical Bulletin.

Under the National Traffic and Motor Vehicle Safety Act of 1966, as amended, if a recall campaign is announced by MNA, dealers must ensure that all recalls on new vehicles and new items of replacement equipment are completed BEFORE delivery to the consumer. This means that dealers may not legally deliver new motor vehicles or new items of replacement equipment to consumers with an open recall.

The Safety Act also prohibits dealers from selling or leasing the motor vehicle or item of replacement equipment, unless and until the open recall has been completed BEFORE delivery. This also pertains to vehicles in the Certified Pre-Owned program, and to items of replacement equipment.

Finally, MNA dealers should not sell or use parts that have been recalled by MNA. Please follow the specific instructions provided by MNA on the return or disposition of any parts.

Description of Vehicle Safety Recall 328

Maserati S.p.A. and MNA have determined that the above described vehicles were manufactured with a rear differential unit pinion nut that was not torqued correctly. The function of the pinion nut is to provide the axial force required for proper location of the pinion within the differential unit bearing assemblies. A loose pinion nut will result in a reduction or total loss of axial force, as well as, insufficient orientation of the pinion itself. A loose pinion nut will potentially have an adverse effect on noise, vibration and harshness (NVH) performance, reduced gear, and bearing life, and can cause a differential fluid leak at the pinion seal. In the most severe cases of a loose pinion nut, axial loads could force the pinion into a differential gear binding condition, which can result in blocking the rotation of the ring gear, and potentially locking the rear wheels, thereby increasing the risk of a vehicle crash.

Which Vehicles Are Affected

Please refer to ModisCS+ and the attached VIN list at the end of this bulletin for the affected vehicles in the U.S.

Vehicle Remedy Information

1. Check that the vehicle is included in this Recall campaign, and that this repair has not been previously performed.
2. Inspect the rear differential pinion nut torque. If a replacement differential is needed, see attachment “A” at the end of this bulletin.
3. The recall procedure is now complete.

This repair procedure will be performed free of charge to the customer.

Parts Needed For The Recall

For this Recall campaign, the rear differential P/N: 670039125 (if needed), must be ordered from the Maserati Parts Department.

OPERATING PROCEDURE

1. Drive the vehicle on to a lift.

2. Set the parking brake to lock the rear wheels.

3. Disengage the gearbox parking lock release by pulling the cable as shown in section 03.02.018 – 02 of the Workshop Manual and below in Fig.1.

Fig.1

4. Disconnect the battery (08.20.001 – 02 of the Workshop Manual).
5. Lift the vehicle.
6. Remove the r/s and l/s exhaust tailpipes as shown below and in section 01.81.004 – 00 and 01.81.005 – 00 of the Workshop Manual.
   a. Remove the spacer bar (Fig.2)

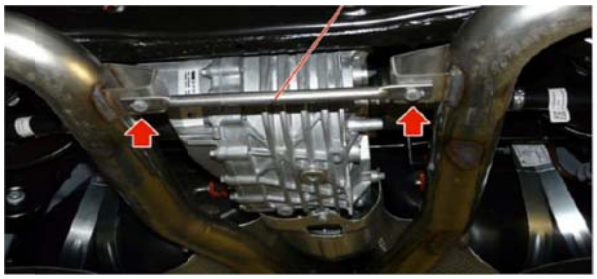

Fig.2

   b. Loosen the exhaust clamps (Num.1, in Fig.3)

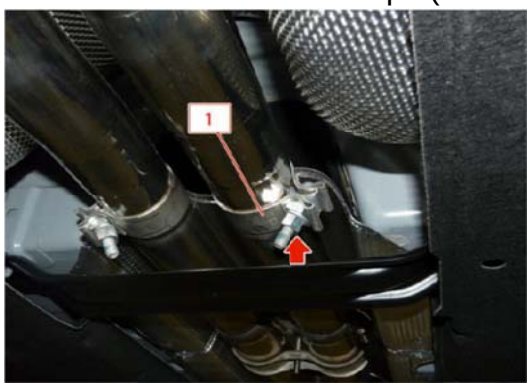

Fig.3

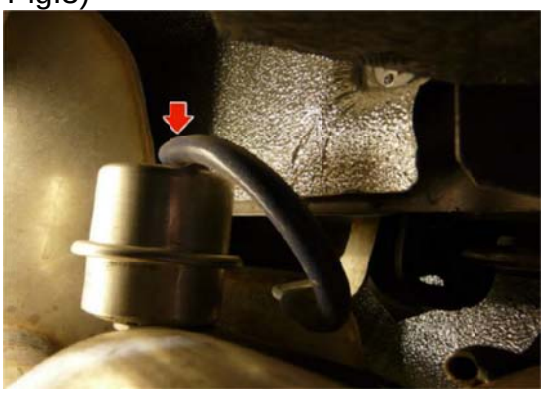

Fig.4

   c. Remove the vacume hose from the exhaust change-over valve (Fig.4)

d. Remove the hanger bolt from the front of the silencer (Fig.5)

Fig.5

Fig.6

e. Slide the pipe bracket out of the vibration dampener (Fig.6)

f. Remove the hanger bolt from the rear of the silencer (Fig.7)

Fig.7

g. Repeat the above procedures (Fig's. 3 thru 7) to remove the other silencer

7. Remove the three screws (red arrows) and then remove the heat shield off of the rear differential (1 in Fig.8).

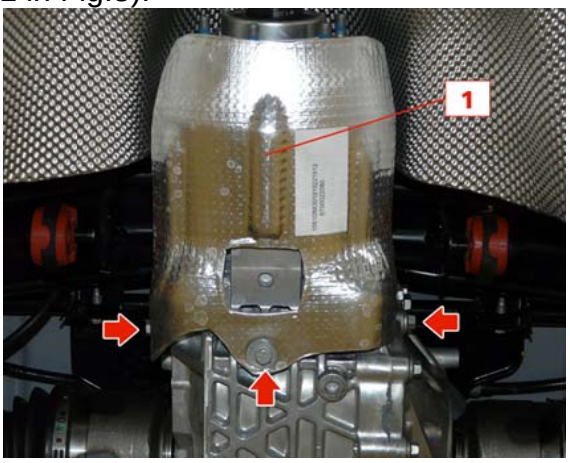

Fig.8

8. Using a marker, make a reference mark position (Red line, Fig.9 and 9a) on the differential flange (1), the drive shaft and the mass dampener (2). Then make notes of the position of the balancing nuts (for re-assembly). Remove the 6 bolts fastening the drive shaft to the differential.

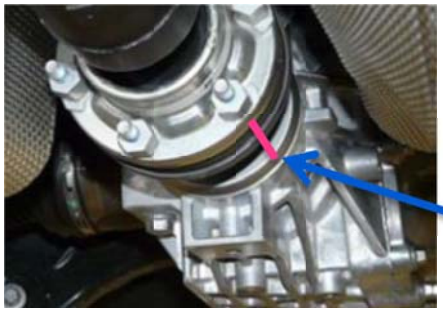

Fig.9

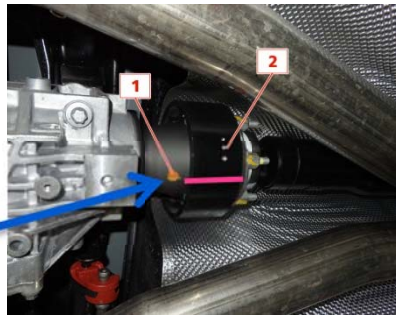

Fig.9a

9. Remove the driveshaft from the differential and support it on a hydraulic lift as shown in Fig.10

Fig.10

10. With a marker, draw a line from one side of the lock nut to the other side as shown in Fig.11. Take a picture of the nut before moving to the next step.

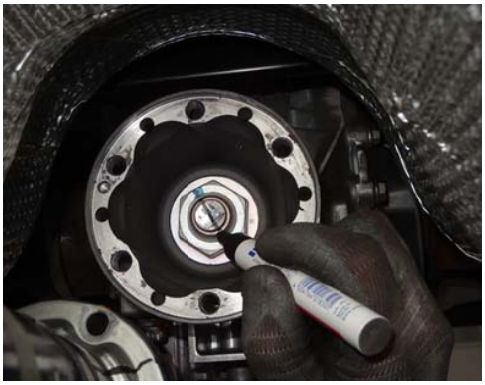

Fig.11

11. With a calibrated torque wrench, tighten the lock nut to 245 Nm. (Fig.12)
NOTE: Make sure the axles / wheels do not turn during this stage.

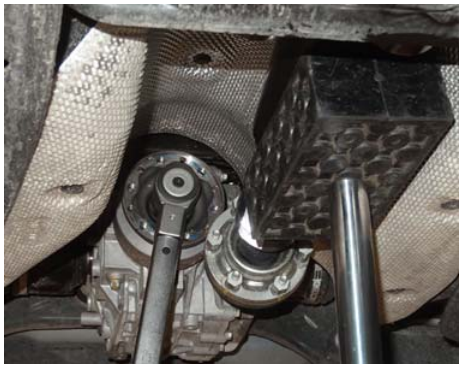

Fig.12

12. Perform a visual inspection of the nut to **make sure it has not moved** (Fig.13). Compare it with the picture taken in step 10. If there was any movement of the nut, the differential must be replaced. Refer to section 3.21.001 – 00 of the Workshop Manual and attachment “A” in this bulletin.

Fig.13

NOTE: Only perform step 13 if the nut moved and the differential has to be replaced.

13. Perform a visual inspection of the drive shaft cover to make sure there are no bumps or protrusions that may alter the smoothness of the cover (Fig.14).
If any bumps or protrusions are found, the drive shaft must be replaced.
If replacing the drive shaft, refer to section 3.30.001 of the Workshop Manual.

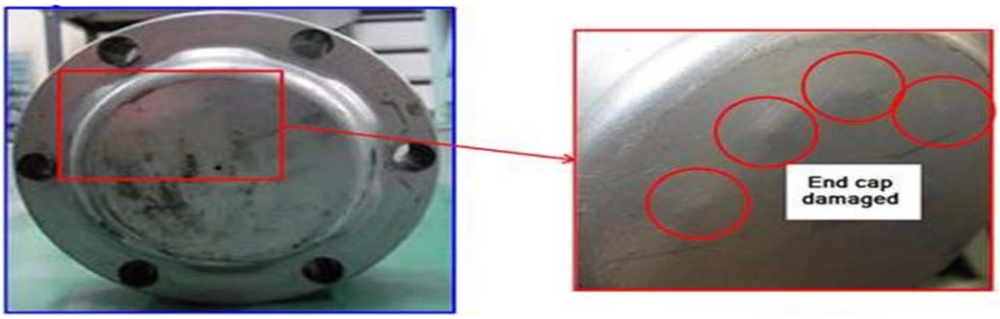

Fig.14

14. Reassembly - after Inspection only. (No parts replaced.)
    a. Re-install the drive shaft making sure the reference mark made in Fig. 9 is aligned with the drive shaft, the mass dampener and the differential. (Fig.15)

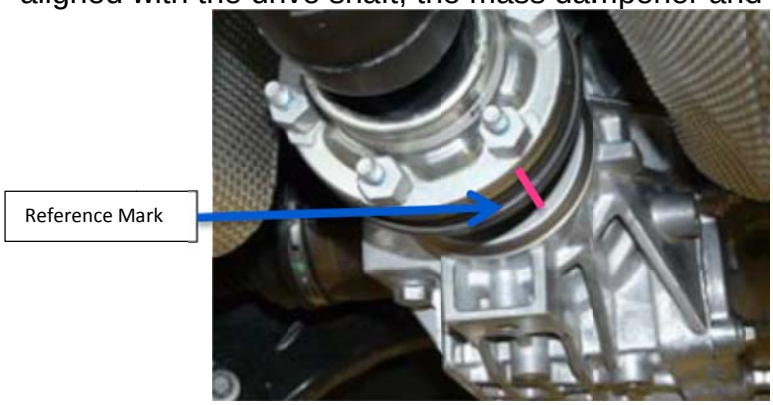

Fig.15

    b. Install the drive shaft bolts in their original positions and torque to **30** Nm (+ 90°).

    c. Re-install all of the parts previously removed.

Entering A Warranty Claim

Complete the warranty claim as follows:

- CampaignNumber 328
- Warranty Code 24
- Defect Code 063
- Component Code 3.21.001
- Operation Code for Inspection only 3.21.001.9 (1.1h)
- Operation Code for Inspection and Replacement Differential 3.21.001.8 (2.1h)
- Operation Code for Inspection and Replacement Differential and Drive shaft 3.21.001.7 (2.7h)
- Component Code See Parts section

Attachment “A”
(Replacing the Differential)

1. Replacing the rear differential

a. Position a lift and place a block between the lift and differential. (Fig.1)

Fig.1

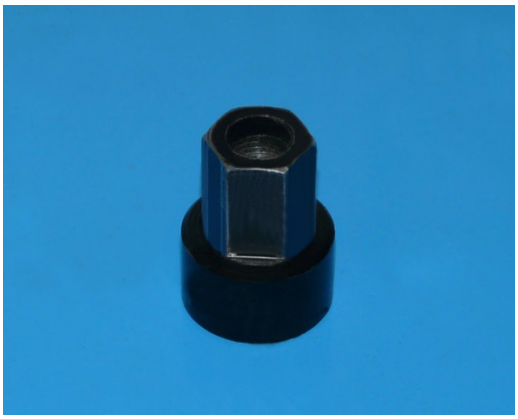

Fig.2

b. Using special tool p/n: 900000226 (Fig.2), remove the fastening bolts from the chassis to the differential. (Fig.3 and Fig.4)

Fig.3

Fig.4

c. Remove the lower bolt from the differential to the rear frame. (Fig.5)

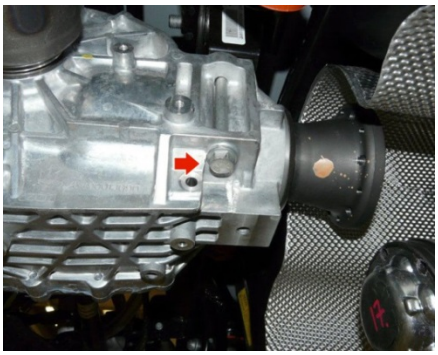

Fig.5

d. Lower the lift just enough so that you can carefully pry out the axles as shown in Fig.6 and Fig.7.

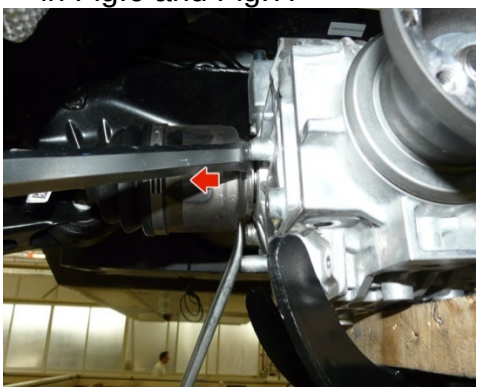

Fig.6

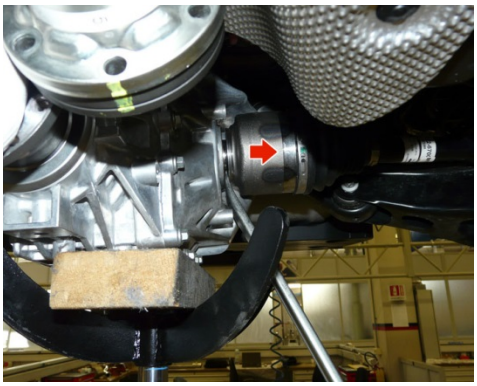

Fig.7

e. Slowly lower the lift while at the same time removing the axles. (Fig's. 8 and 9)

Fig.8

Fig.9

3. Installing the rear differential
   a. Re-install all of the parts removed following the removal procedure in reverse order.
   b. Torque the lower bolt on the differential to the rear frame to **65** Nm. (Fig.10)

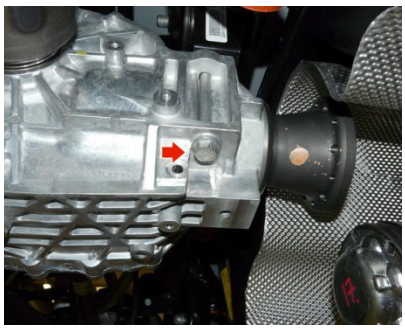

Fig.10

c. Torque the rear fastening bolts (Fig.11 and Fig.12) between the differential and chassis to **190** Nm.

Fig.11

Fig.12

d. Place the drive shaft in the differential flange and align the reference marks made during removal (Fig.13 and 13a) along with the mark on the new differential (Num. 1 in Fig.13a) and the mass dampener. (Num.2 in Fig.13a)

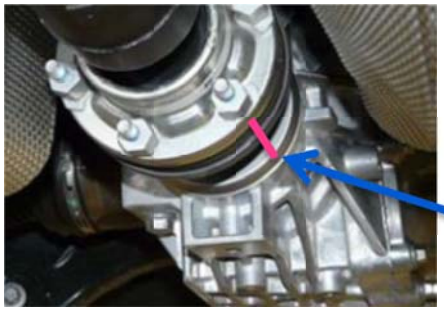

Fig.13

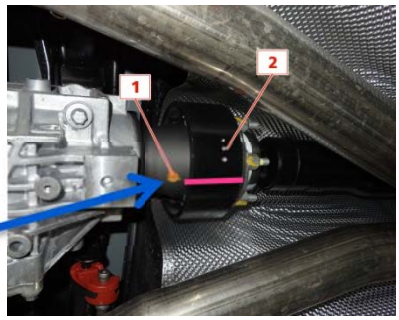

Fig.13a

e. Install the drive shaft bolts in their original positions and torque to **30** Nm (+ 90°). (Fig.14)

Fig.14

c. Re-install rest of the parts previously removed.
d. After road testing, if any vibrations are observed, balance the drive shaft.
e. To balance the drive shaft, reffer to Section 3.30.001-35 of the Workshop Manual.

VIN List U.S.

195381	197793	203447	206039	211665	213701	216962
195393	197885	203452	206042	211669	213711	216991
195395	197886	203489	206044	211693	213713	216993
195558	197892	203496	206053	211698	213742	216998
195563	197901	203498	206054	211704	213745	217002
196317	197902	203515	206129	211709	213759	217003
196320	197909	203519	206136	211714	213761	217055
196333	197920	203524	206150	211734	213764	217164
196338	198635	203527	206153	212588	213765	217167
196347	198639	203536	206156	212598	213768	217182
196402	198640	203544	206173	212602	213773	217190
196447	198643	203556	206189	212627	213781	217249
196462	198644	204279	206194	212633	213809	217254
196484	198768	204345	206229	212645	213889	217315
196487	198832	204386	206234	212653	213893	217352
196489	198834	204389	206237	212744	215468	217356
196493	198839	204401	206246	213117	215470	217360
196544	198868	204409	206248	213140	215481	217373
196571	198887	204415	206257	213154	215482	217388
197069	198894	204434	206266	213160	215511	217393
197091	198899	204438	206268	213170	215517	217406
197174	198902	204452	206288	213172	215524	217407
197229	198912	204454	206297	213188	215532	218644
197261	198917	204468	206365	213191	216131	218654
197263	198924	204486	206369	213200	216180	218675
197272	198928	204488	206396	213250	216186	218707
197278	198961	204494	206426	213258	216209	218836
197280	198963	204500	206436	213272	216211	218839
197315	198974	204502	206474	213415	216432	218936
197362	198985	204504	206569	213429	216567	218939
197376	198986	204526	206573	213575	216647	218974
197393	198988	204665	206606	213583	216648	218979
197495	198989	204694	206665	213585	216684	219011
197500	198995	204742	206684	213587	216689	219026
197508	199102	204963	211137	213601	216708	219051
197531	199107	205115	211139	213618	216734	219062
197536	199108	205443	211350	213625	216735	219074
197543	199155	205900	211365	213630	216783	219115
197568	199173	205916	211366	213642	216834	219116
197584	199191	205935	211390	213644	216839	219122
197590	200985	205938	211468	213647	216841	219179
197592	201808	205976	211496	213648	216872	219183
197700	202932	205992	211499	213652	216880	220443
197701	203416	206010	211501	213662	216883	220444
197709	203429	206017	211511	213672	216919	220975
197772	203438	206021	211513	213690	216923	
197774	203441	206035	211662	213698	216961	