Technical Information
FROM: Maserati TSO
TO: Maserati Network

Maserati
PERSONAL SERVICE LAB
MASTERS OF CARE

TECHNICAL SERVICE OPERATIONS

Tech Tips 74D - Engine Replacement BOL Requirements

ATTENTION! This bulletin supersedes MAS001891 "Tech Tips 74C" released on May 5, 2019. Please discard/remove all copies of the previous bulletin.

DATE: December 12, 2024

This Technical bulletin serves as a guideline and outlines requirements when considering a possible engine replacement on Maserati vehicles. Please refer to Bulletin *"MAS004175 PNP 24-01 Light Engine - Long Block Repairs Under Warranty"* for further information.

MODELS: All MY.

CUSTOMER CONCERN: MIL on with misfire DTCs, abnormal engine noise, knocking noise, or unable to rotate.

1) Capture a video of the anomaly, with sound; ensure it is no larger than 4.5 Mb in file size.
   a. If the engine runs, capture the video with sound when the noise is present.
   b. If the engine will not rotate, capture a video showing the technician attempting to rotate the engine from the front crankshaft bolt.

2) Attach a complete vehicle scan of ALL modules in PDF format that includes DTCs and Parameters.

3) Attach copies of all maintenance repair orders/invoices. If the maintenance was not performed at your dealer then the records must be obtained from the customer.

   i. These records must be legible and in numerical sequence. Also, the records must clearly identify the VIN; the part number for the oil filter installed, and the brand, grade, and quantity of the engine oil.

   ii. Provide pictures of the warranty booklet showing the "stamps" for each completed service. Photo showing the service due displaced in the ICS screen.

4) Submit a picture, in "jpeg" format, of the oil level and condition on the oil level dipstick.

5) Remove the oil filter from the vehicle's engine and capture the following pictures:
   ATTENTION! DO NOT cut apart the oil filter.

   a. Part number markings, ie: Ferrari 11V06NOV14-17, SOGEFI L983 298939.
   b. Condition of the exterior of the oil filter.

6) Each attachment must be labeled as such (Below are some Examples):
   a. Vin#_ "content".
   b. 12345_ECMPara.
   c. 12345_OilFilterMarkings.
   d. 12345_Engine Noise, etc.

7) Due to our new "*MAS004175 PNP 24-01 Light Engine - Long Block Repairs Under Warranty*" Policy. You'll be required to use a light engine/longblock when available which does not come with turbos and accessories. Subsequently, you will have to follow the instructions below to determine if turbochargers can be reused.

FILTER Conditions to determine if turbos need further inspection:

- **OK ►** *Filter intact = Turbos OK - No additional inspections need to be performed on the turbo's.*
- **NOT OK ►** *Filter element damaged/collapsed = Inspect the integrity of both turbo's including the oil delivery pipe for signs of metal debris.* *Continue with turbo inspection on the next page.*

Ordering a light (long block) or complete engine assembly

Always use a "Light Engine" as the 1st option unless Turbo's are also required then use a "Complete Engine"

NOTE: If a Complete engine is authorized via BOL yet unavailable to order then a "Light Engine/Long Block & Turbo's will need to be ordered.

*Light turbos and "Complete Engines" have to be authorized in the BOL by Maserati Technical Support

- In all cases where a Light Engine or Long Block Engine is available in the catalog, it is mandatory to use it for all interventions for which there is a financial contribution from Maserati.
- Refer to MAS004175 for policy requirements.

NOTE: As a reminder, engines replaced MUST be drained of all fluids, and seal all openings before being shipped. All openings must be sealed with the relevant caps/plugs taken from the new engine assembly received as a spare part.

Turbocharger inspection guidelines

Both Turbochargers on the engine must be inspected during the initial inspection before engine replacement. For proper inspection of the following turbocharger components, Remove the charge pipe and the catalytic converter for a clear view of both compressor and turbine (exhaust side) areas.

1) Check for possible compressor blade damage to both the compressor and turbo side.

Take pictures and attach to the BOL

2) Physically Check for excessive Radial/axial free-play of the turbocharger shaft.

Excessive shaft freeplay Examples (See attached videos included with this bulletin)

Compressor wheel excessive freeplay

Turbine wheel excessive freeplay

Without reviewing the video demo included with bulletin. The above screencapture clearly demonstrates excessive shaft free play which is not perfectly centered in the bore.

Capture a short video and attach to the BOL

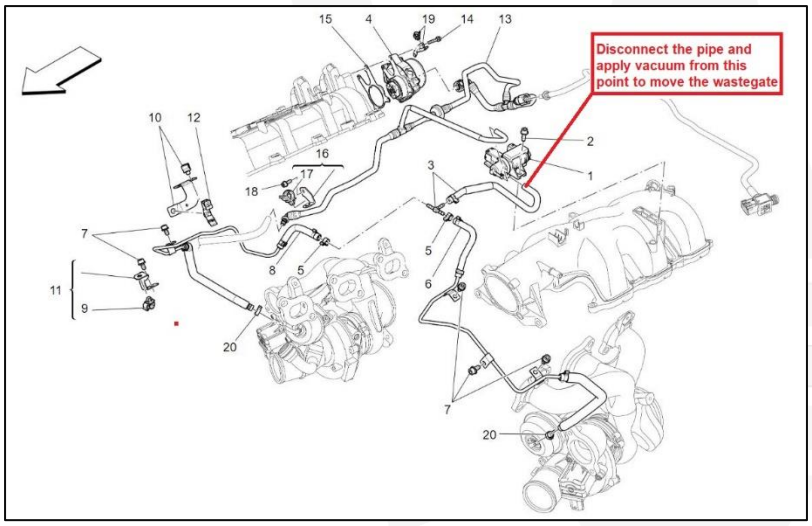
3) Check and make sure the turbo wheels spin freely and are not binding.

Video Examples included with this bulletin

5) Correct moving of waste-gate valves

a. Remove the catalyst to have a correct view of turbine outlet and Waste-gate valve.
b. Visually check the integrity of the wastegate.
c. For F160 V6 and F154 V8: check the correct movement of the wastegate applying vacuum from the point suggested in the picture below using a vacuum pump.
d. For T4 and V6 Nettuno: check the correct movement of the wastegate performing the active diagnosis through the MD EVO tool.
e. Check if the wastegate valve plate on the turbine outlet side is completely closing

Correct wastegate movement Examples (See attached videos included with this bulletin)



Capture a short video and attach to the BOL