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TURBOCHARGER:REMOVAL-REFITTING



Note, one or more warnings are present in this procedure



Special tooling required

Remote operation pliers for hose clips.

Mot. 1448

Pipe clamps.

Ms. 583



WARNING

Wear heat protective gloves during the operation.



CAUTION

The turbocharger pressure regulator rod must not be adjusted.



CAUTION

Metal objects may enter the oil and air circuits as a result of a broken turbocharger.

Failure to observe the following instructions will lead to the turbocharger breaking again.



CAUTION

Following a turbocharger fault, check that the intercooler and air circuit assembly are not full of oil. If they are, remove them and clean them with a cleaning tray or station and dry them with a compressed air gun.



CAUTION

To prevent the surrounding components from overheating, do not damage (tear, pierce, bend, etc.) a heat shield.

Any damaged heat shields must be replaced.

Locations and specifications (tightening torques, parts always to be replaced, etc.) [Exhaust assembly in engine compartment: Exploded view](#) .

REMOVAL

1. REMOVAL PREPARATION OPERATION

■ Position the vehicle on a two-post lift [Vehicle: Towing and lifting](#) .



Disconnect the battery [Battery: Removal - Refitting](#) .



Remove:



the engine undertray,



the turbocharger air outlet pipe [Air inlet assembly: Exploded view](#) ,



the front right-hand wheel [Front hub carrier assembly: Exploded view](#) .



Drain the automatic gearbox [Automatic gearbox oil: Draining - Filling](#)



Remove the front right-hand wheel driveshaft [Front right-hand driveshaft: Removal - Refitting](#) .



Remove:



■ the right-hand differential output seal [Differential output seal: Removal - Refitting](#) ,

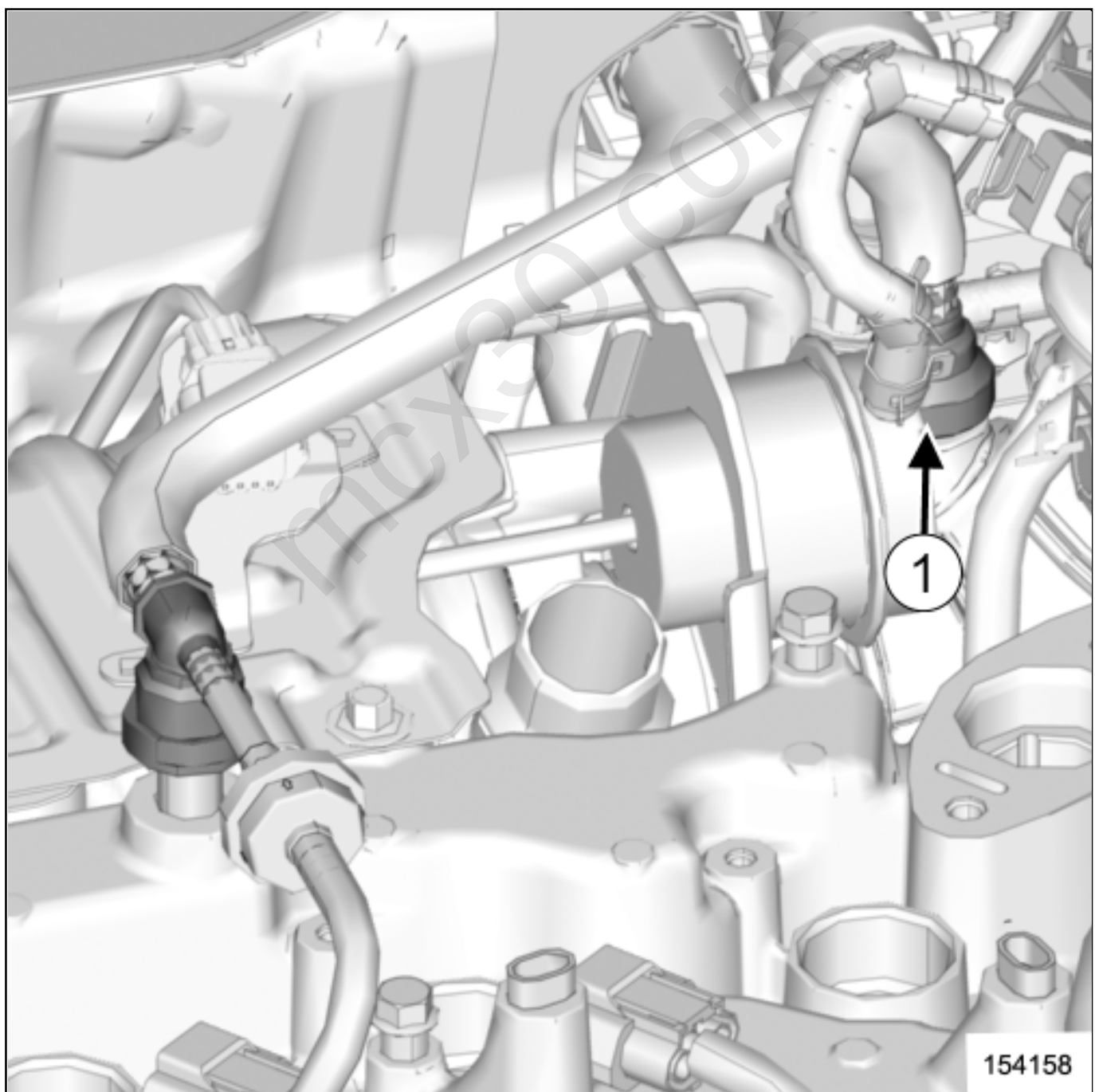
■ the lower engine tie-bar [Engine-gearbox unit support assembly: Exploded view](#) ,

■ the upstream oxygen sensor,

■ the catalytic pre-converter [Exhaust assembly in engine compartment: Exploded view](#) ,

■ the turbo-manifold oil supply pipe [Exhaust assembly in engine compartment: Exploded view](#) ,

the turbo-manifold oil return pipe [Exhaust assembly in engine compartment: Exploded view](#) .



Disconnect the petrol vapour rebreathing pipe(1) .

Move the clip from the exhaust gas pressure sensor pipe [Exhaust assembly in engine compartment: Exploded view](#) .

Disconnect the exhaust gas pressure sensor pipe [Exhaust assembly in engine compartment: Exploded view](#) .

Move the clip from the exhaust gas pressure take-off pipe [Exhaust assembly in engine compartment: Exploded view](#) .

Disconnect the exhaust gas pressure take-off pipe [Exhaust assembly in engine compartment: Exploded view](#) .

Move the high pressure discharge pipe clip from the turbo-manifold air inlet pipe using the tool Remote operation pliers for hose clips.(Mot. 1448) [Air inlet assembly: Exploded view](#) .

Disconnect the high pressure discharge pipe [Air inlet assembly: Exploded view](#) .

2. REMOVAL OPERATION

Fit the tool Pipe clamps.(Ms. 583) on the turbo-manifold coolant hoses.

Move the clips from the turbo-manifold coolant hoses using the tool Remote operation pliers for hose clips.(Mot. 1448) [Coolant circuit assembly: Exploded view](#) .

Disconnect the turbo-manifold coolant hoses [Coolant circuit assembly: Exploded view](#) .

Loosen the clip from the turbo-manifold air inlet pipe [Air inlet assembly: Exploded view](#) .

Disconnect the turbo-manifold air inlet pipe [Air inlet assembly: Exploded view](#) .

Remove [Exhaust assembly in engine compartment: Exploded view](#) :

-
- the lower turbo-manifold heat shield bolts,
- the lower turbo-manifold heat shield.

Loosen the turbo-manifold air inlet pipe clip from the air filter unit [Air inlet assembly: Exploded view](#) .

Disconnect the turbo-manifold air inlet pipe from the air filter unit [Air inlet assembly: Exploded view](#) .

Remove the turbo-manifold air inlet pipe [Air inlet assembly: Exploded view](#) .

Remove [Exhaust assembly in engine compartment: Exploded view](#) :

-
- the turbo-manifold nuts,
- the turbo-manifold,
- the turbo-manifold seal.

1- IF REPLACING THE TURBOCHARGER

Remove the turbo-manifold cooling pipes [Exhaust assembly in engine compartment: Exploded view](#) .

1. REFITTING PREPARATION OPERATION

Parts always to be replaced:

- the turbo-manifold seal.

Use grey abrasive pads [Vehicle: Parts and consumables for the repair](#) to clean the gasket face:

- of the turbo-manifold if reused,

- of the cylinder block.

Use surface cleaner [Vehicle: Parts and consumables for the repair](#) to clean and degrease the joint faces:

- of the turbo-manifold if reused,

- of the cylinder block.

Note:



If a stud becomes loose during the removal, replace it with a new stud and coat it with high strength thread lock [Vehicle: Parts and consumables for the repair](#) .

Torque tighten the new studs of the turbo-manifold [Exhaust assembly in engine compartment: Exploded view](#) .

CAUTION



Ensure that no foreign bodies enter the turbine or compressor during the refitting operation.

Check that the turbocharger oil return pipe is not partially or completely blocked by scale. Check that there are no leaks. If there are, replace the part.



CAUTION

To ensure proper sealing, the gasket surfaces must be clean, dry and not greasy (avoid any finger marks).

1- IF REPLACING THE TURBOCHARGER



Refit the turbo-manifold cooling pipes [Exhaust assembly in engine compartment: Exploded view](#) .

2. REFITTING OPERATION



Refit [Exhaust assembly in engine compartment: Exploded view](#) :



the new turbo-manifold seal,



the turbo-manifold.



Torque tighten in the order the turbo-manifold nuts [Exhaust assembly in engine compartment: Exploded view](#) .



Refit the lower turbo-manifold heat shield [Exhaust assembly in engine compartment: Exploded view](#) .



Torque tighten the lower turbo-manifold heat shield bolts [Exhaust assembly in engine compartment: Exploded view](#) .



Proceed in the reverse order to removal.



Top up and bleed the cooling system [Cooling system: Draining - Refilling](#) .



Refill the automatic gearbox oil [Automatic gearbox oil: Draining - Filling](#) .