



Repair-10x09x01-01x37-1-125-1.xml



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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.) [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view\)](#) .

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 [\(see 12A, Fuel mixture, Air inlet assembly: Exploded view\)](#) ,

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](#) ,

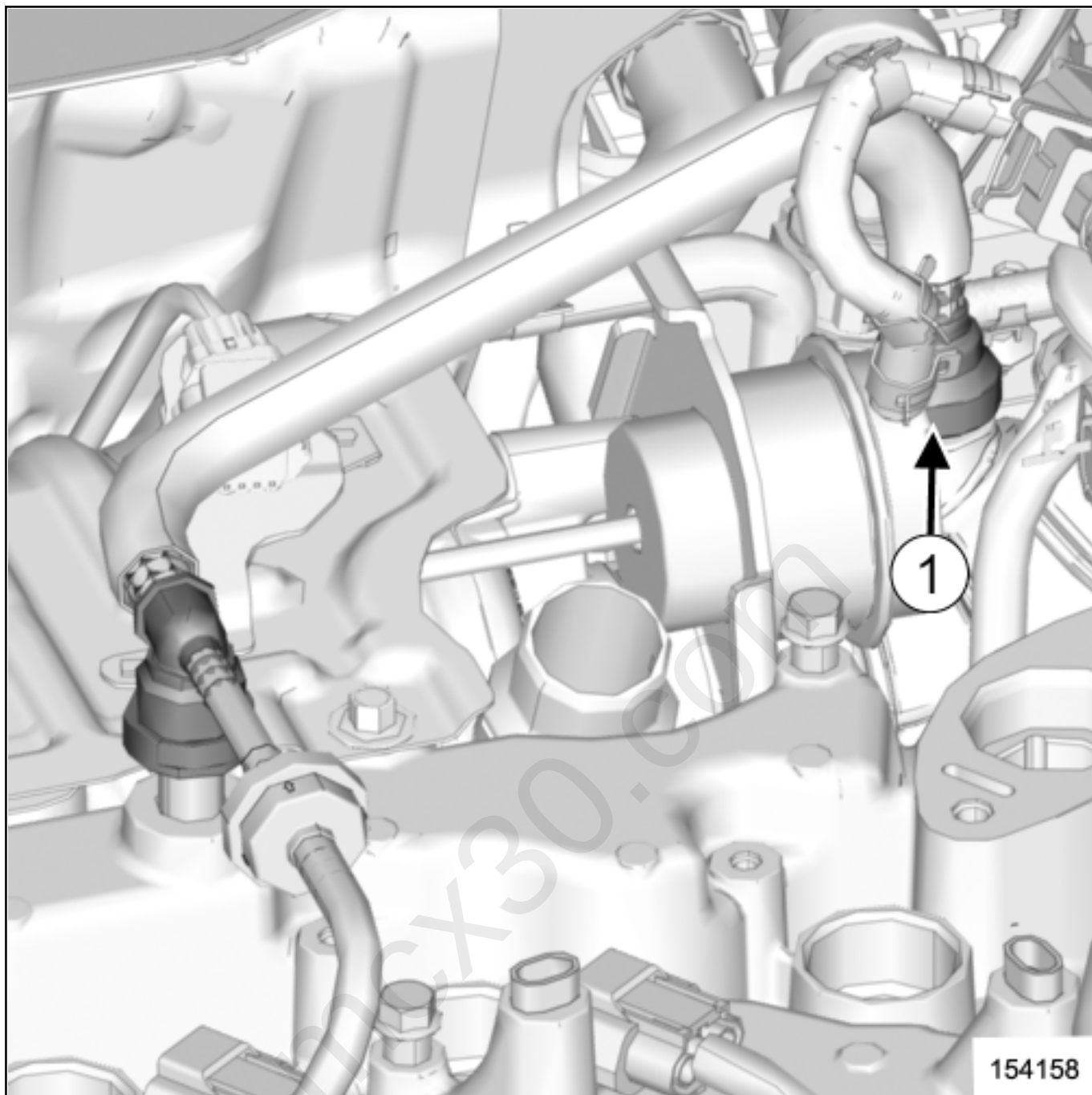
■ the lower engine tie-bar [Engine-gearbox unit support assembly: Exploded view](#) ,

■ the upstream oxygen sensor,

■ the catalytic pre-converter [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view \)](#) ,

■ the turbo-manifold oil supply pipe [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view \)](#) ,

the turbo-manifold oil return pipe [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view \)](#) .



■ Disconnect the petrol vapour rebreathing pipe(1) .

■ Move the clip from the exhaust gas pressure sensor pipe([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .

■ Disconnect the exhaust gas pressure sensor pipe([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .

■ Move the clip from the exhaust gas pressure take-off pipe([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .

■ Disconnect the exhaust gas pressure take-off pipe([see 19B, Exhaust, 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](#)) ([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .

■ Disconnect the high pressure discharge pipe([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .

2. REMOVAL OPERATION

■ Fit the toolPipe clamps.([Ms. 583](#)) on the turbo-manifold coolant hoses.

■ Move the clips from the turbo-manifold coolant hoses using the toolRemote operation pliers for hose clips.([Mot. 1448](#)) ([see 19A, Cooling, Coolant circuit assembly: Exploded view](#)) .

■ Disconnect the turbo-manifold coolant hoses([see 19A, Cooling, Coolant circuit assembly: Exploded view](#)) .

■ Loosen the clip from the turbo-manifold air inlet pipe([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .

■ Disconnect the turbo-manifold air inlet pipe([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .

■ Remove ([see 19B, Exhaust, 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([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .



Disconnect the turbo-manifold air inlet pipe from the air filter unit([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .



Remove the turbo-manifold air inlet pipe([see 12A, Fuel mixture, Air inlet assembly: Exploded view](#)) .



Remove ([see 19B, Exhaust, 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([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .

REFITTING

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 ([see 19B, Exhaust, 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).



Refit the turbo-manifold cooling pipes([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .

2. REFITTING OPERATION



Refit ([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) :



the new turbo-manifold seal,



the turbo-manifold.



Torque tighten in the order the turbo-manifold nuts([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .



Refit the lower turbo-manifold heat shield([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .



Torque tighten the lower turbo-manifold heat shield bolts([see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view](#)) .



Proceed in the reverse order to removal.



Top up and bleed the cooling system([see 19A, Cooling, Cooling system: Draining - Refilling](#)) .



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

