



Repair-10x09x05x03-01x37-1-7-1.xml



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TURBOCHARGER COOLANT PIPE: REMOVAL - REFITTING

Special tooling required

Remote operation pliers for hose clips.

Mot. 1448

Pipe clamps.

Ms. 583



parts always to be replaced:



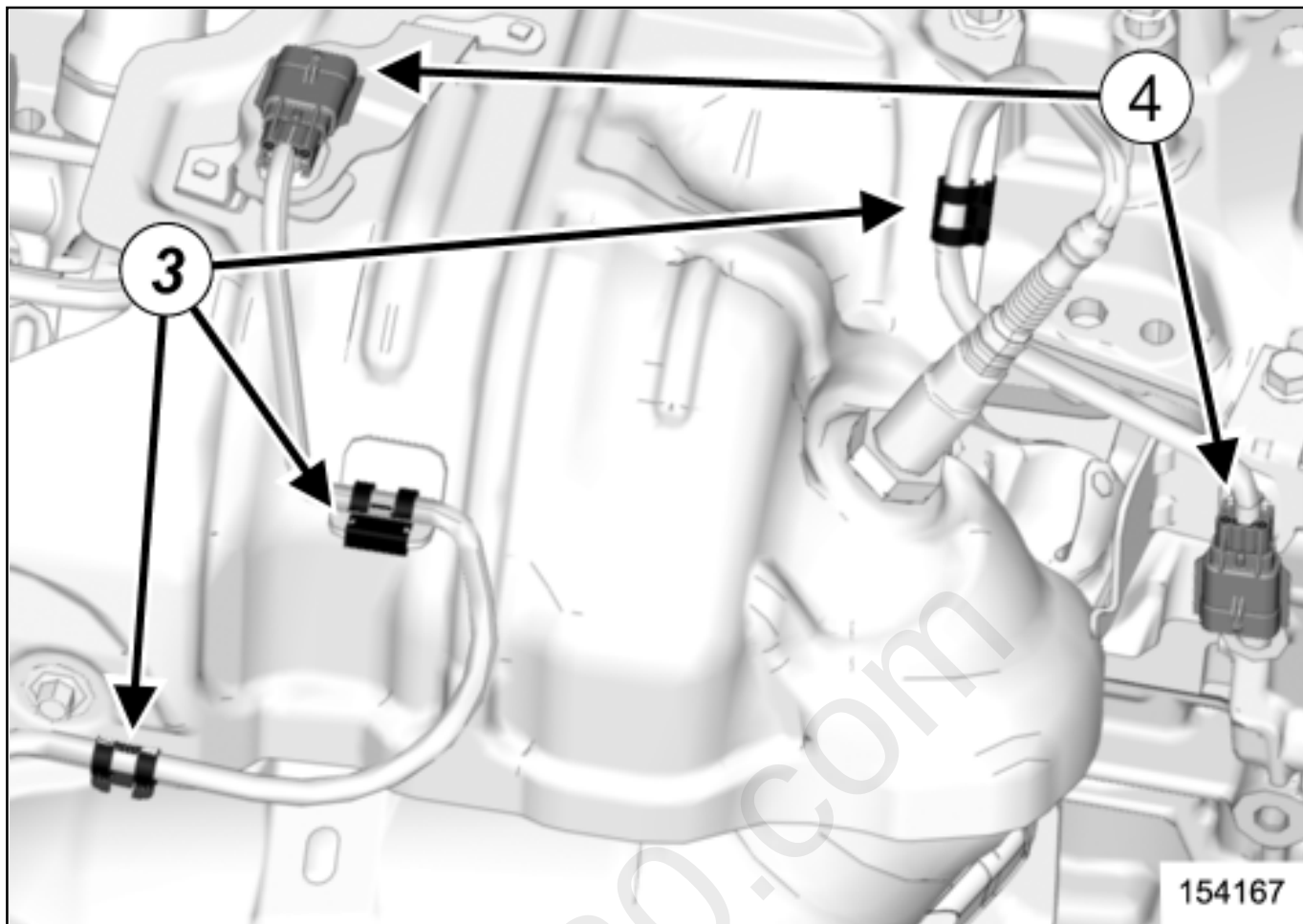
Turbocharger coolant pipe

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

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



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■ Unclip:

- the oxygen sensor wiring clips(3) ,
- the oxygen sensor connectors(4) .



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



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

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

2. REMOVAL OPERATION

Fit tools Pipe clamps. (Ms. 583) [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view\)](#) :

- on the turbo-manifold coolant pipe supply hose,

- on the turbo-manifold coolant pipe outlet hose.

Move the turbo-manifold coolant pipe hose clips using the tool Remote operation pliers for hose clips. (Mot. 1448) .

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

- the turbo-manifold coolant pipe supply hose,

- the turbo-manifold coolant pipe outlet hose.

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

- the turbo-manifold coolant pipe bolts,

- the turbo-manifold coolant pipe bracket bolt,

- the turbo-manifold coolant pipe.

REFITTING

1. REFITTING PREPARATION OPERATION



parts always to be replaced: Turbocharger coolant pipe .



Using surface cleaner Vehicle: Parts and consumables for the repair , clean and degrease the bearing faces of of the turbo-manifold.

2. REFITTING OPERATION



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

-
- the new turbo-manifold coolant pipe,
- the turbo-manifold coolant pipe bolts,
- the turbo-manifold coolant pipe bracket bolt.



Torque tighten (see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view) :

-
- the turbo-manifold coolant pipe bracket bolt,
- the turbo-manifold coolant pipe bolts.



Connect (see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view) v:

-
- the turbo-manifold coolant pipe supply hose,
- the turbo-manifold coolant pipe outlet hose.



Fit the turbo-manifold coolant pipe hose clips using the tool Remote operation pliers for hose clips. (Mot. 1448) .



Remove the toolsPipe clamps.(Ms. 583) [\(see 19B, Exhaust, Exhaust assembly in engine compartment: Exploded view \)](#) :



from the turbo-manifold coolant pipe supply hose,

from the turbo-manifold coolant pipe outlet hose.

3. FINAL OPERATION



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



the upper turbo-manifold heat shield.

the upper turbo-manifold heat shield bolts.



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



Proceed in the reverse order to removal.



Perform the following operations:



top up the coolant level,

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