

Repair Manuals

Turbocharger: removal/installation

Warnings and recommendations

Allow the engine to cool down

Before starting the removal, clean the area

Plug open connections with clean plugs

Remove each plug immediately before installing the component

Renew the seals

Renew the studs

Renew the nuts

Renew any damaged or deformed clips

Check the air hoses for damage and contamination

Check the intercooler for damage and contamination

Check the oil lines for clogging and contamination

Note the radio security codes

Removal

Disconnect the battery earth cable

Remove the engine upper cover

Remove the turbocharger heat shield

Remove the coolant reservoir cap

Drain the cooling system

Refit the coolant reservoir cap

Remove the engine lower cover

Disconnect the radiator fan wiring

Remove the cooling fan and shroud

Remove the turbocharger coolant hose

Remove the turbocharger bracket

Remove the turbocharger air inlet pipe

Disconnect the oxygen sensor connector

Remove the oxygen sensor

Remove the air hose between the turbocharger and the intercooler

Disconnect the front exhaust pipe from the catalytic converter


Disconnect the exhaust pipe from the rear silencer

Remove the exhaust pipe

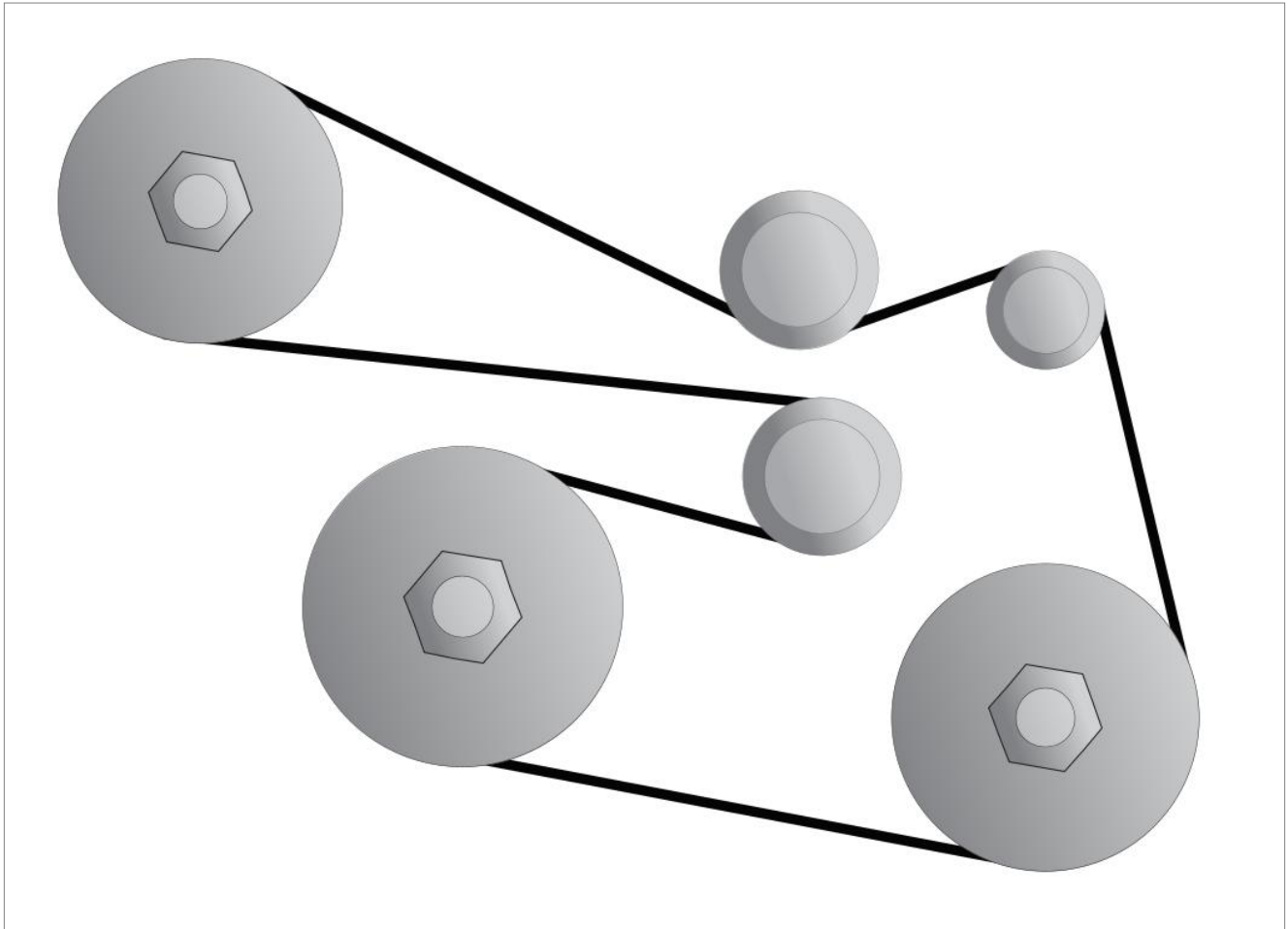
Disconnect the catalytic converter from the turbocharger

Remove the catalytic converter

Remove the ancillary drive belt

 Drive belt layout (With air conditioning)

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Remove the ancillary drive belt tensioner
 Remove the alternator upper bolt
 Disconnect the turbocharger oil return line
 Remove the turbocharger air outlet hose
 Remove the turbocharger oil supply line
 Remove the turbocharger and manifold together

Installation

Installation is in the reverse order of removal
 Fill the turbocharger with engine oil before connecting the oil supply line

Reconnect the battery earth cable
 Run the engine at idle speed for 1 minute
 Note: Do not press the accelerator pedal

Check the engine oil level
 Check the coolant level; top up if necessary

Torque settings

Exhaust manifold

i Exhaust manifold 25 (Nm)

Turbocharger oil return line

i Turbocharger oil return line (Renew the seals) 8 (Nm)

Turbocharger oil supply line

i Turbocharger oil supply line (To turbocharger) 30 (Nm)

i (Renew the seals)

i Turbocharger oil supply line (To timing case) 20 (Nm)

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- ⓘ (Renew the seals)

Ancillary drive belt tensioner

- ⓘ Ancillary drive belt tensioner (Lower)

ⓘ Stage 1	40 (Nm)
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ⓘ Stage 2	90 (°)
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ⓘ Ancillary drive belt tensioner (Upper)	23 (Nm)
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Alternator

ⓘ Alternator	23 (Nm)
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