

13 31 Fuel Pump with Drive and Pipes

Tightening Torques

	Type	thread	tightening specification	Torque
1AZ Fuel pump to engine	All			12 Nm
2AZ Fuel pipe coupling bolt	All / with K-Jetr.	M8		9 Nm
3AZ Fuel pipe coupling bolt	All / with K-Jetr.	M12		20 Nm
4AZ Fuel pipe to pressure regulator	All / with L-Jetr.			30 Nm
5AZ Return pipe connector to pressure regulator	All / with L-Jetr.			27 Nm

cardiagn.com



1332 Overview of tightening torques

Fuel filter on vehicle underbody	
M6 Renew nuts.	Tightening torque 6Nm

cardiagn.com



1351 Overview of tightening torques

Bracket to high-pressure pump and cylinder head		
M8x33	Observe torque specification	19Nm
Central bolt of high pressure pump to camshaft sprocket		
M12x1	Tightening torque	65Nm
High pressure pump and timing case cover		
M8x33		19Nm
High pressure pump to crankcase		
M8x33	Tightening torque	19Nm
Holder of high pressure pump to crankcase		
M8x33	Tightening torque	19Nm
Screw plug to end cover		
M34x1.5	Tightening torque	20Nm
Screw plug to timing case cover		
M34x1.5 Renew screw plug with O-ring.		20Nm



1352 Overview of tightening torques

Camshaft sprocket on high pressure pump

M12

Tightening torque

65Nm

Chain tensioner to crankcase

M6x22

Tightening torque

10Nm

High pressure pump on camshaft sprocket

M12x1

65Nm

cardiagn.com



1353 Overview of tightening torques

Clamping claw facing to cylinder head cover		
M6	Tightening torque	10Nm
Fuel hose clamp to fuel line		
Clamp 15-19	Tightening torque	3,4Nm
Fuel preheating on fuel filter		
	Tightening torque	2Nm
High pressure lines between high pressure pump and rail		
High-pressure pipe	Tightening torque	24.5Nm
High pressure lines between injector and rail		
High-pressure pipe	Tightening torque	24.5Nm
Holder on intake plenum		
TS6X20	Tightening torque	5Nm
Injector to cylinder head cover		
M8	Tightening torque	8Nm
	Angle of rotation	120°
Rail pressure regulating valve to rail		
	Initial tightening torque	80Nm
	Release	90°
	Tightening torque	85Nm
Rail pressure sensor to rail		
Grease thread lightly.	Tightening torque	70Nm
Rail to cylinder head cover		
M8	Tightening torque	19Nm



1354 Overview of tightening torques

Throttle body to intake plenum			
6x50		Tightening torque	7Nm

Throttle body to intake plenum			
6x50		Tightening torque	8Nm

cardiagn.com



1362 Overview of tightening torques

Banjo bolt for exhaust pressure pipe to exhaust manifold

Hollow bolt
Renew sealing rings.

Tightening torque

30Nm

Camshaft sensor to cylinder head cover

TS5x20

Tightening torque

4Nm

Charging pressure sensor to compressor bypass

Hexagon screw M6x20

Tightening torque

8Nm

Charging pressure sensor to intake plenum

Torx screw 6x20

Tightening torque

5Nm

Hexagon bolt 6X20

Tightening torque

8Nm

Charging pressure sensor to intake plenum

TS6X20

Tightening torque

5Nm

Clamp for the pressure hose on the differential pressure sensor

Clamp 1519mm

Tightening torque

3Nm

Coolant temperature sensor at cylinder head

Temperature sensor

Tightening torque

3,5Nm

Coolant temperature sensor at cylinder head

Sensor

Tightening torque

3,5Nm

Crankshaft sensor

4,6Nm

Crankshaft sensor to timing case cover

M5

Tightening torque

5Nm

Diesel particulate sensor to exhaust system

Sensor

Tightening torque

50Nm



Differential pressure sensor of diesel particulate filter on cylinder head cover

TS5x20

Tightening torque

4Nm

Differential pressure sensor to holder

Screw

Tightening torque

4Nm

Engine wiring set to cylinder head cover

5Nm

Evaluation electronics of diesel particulate sensor to holder

Hexagon nut

Tightening torque

8Nm

Exhaust gas pressure pipe to sensor system holder

TS6x20

Tightening torque

5,7Nm

Exhaust gas pressure sensor

M14x1.5

Tightening torque

13,5Nm

Exhaust temperature sensor for EGR**Tightening torque**

21,7Nm

Exhaust temperature sensor for EGR

Sensor

Tightening torque

21,7Nm

Exhaust temperature sensor for the exhaust system after catalytic converter before diesel particulate filter

Sensor

Tightening torque

30Nm

Exhaust-gas temperature sensor to diesel particulate filter

Sensor

Tightening torque

30Nm

Exhaust-gas temperature sensor upstream of SCR catalytic converter

Sensor

Tightening torque

30Nm

Front oxygen sensor to top of diesel particulate filter

Sensor

Tightening torque

50Nm



Hot film air mass meter to intake silencer

Screw TS 4x16

Tightening torque

1,5Nm

Hot film air-mass meter to intake filter housing

TS4x16

1,5Nm

Monitoring oxygen sensor

Sensor

Tightening torque

50Nm

Nitrogen oxide sensor before SCR catalytic converter

Sensor

Tightening torque

50Nm

Nitrogen oxide sensor downstream of SCR catalytic converter

Sensor

Tightening torque

55Nm

Oxygen sensor

Oxygen sensor

Tightening torque

50Nm



1364 Overview of Technical Data

Cleaning of injectors with the ultrasonic cleaning unit	
	Cleaning temperature
	60 °C
	Cleaning time
	30 min
	Quantity of SPX special cleaner per cleaning cycle
	1000 ml

cardiagn.com



1371 Overview of tightening torques

Clean air pipe to exhaust turbocharger

M6X20

Tightening torque

8Nm

Clean air pipe to upper section of intake filter housing

Clamp

Tightening torque

3Nm

Resonator to intake filter housing

Clamp

Tightening torque

3Nm

cardiagn.com



1611 Overview of tightening torques

Filling hose on fuel tank		
Hose clamp Replace hose clamp.	Tightening torque	4Nm
Fuel filler hose to fuel filler pipe		
Hose clamp	Tightening torque	3,5Nm
Fuel tank retaining strap to body		
M8 screw Renew screws.	Tightening torque	19Nm
Fuel tank to body		
Nut M8 Renew nut.	Tightening torque	19Nm
Plastic nut to fuel filler pipe		
Plastic nut Renew nut.	Tightening torque	3,5Nm



1613 Overview of tightening torques

Carbon canister to body

Renew screws / nuts.

Tightening torque

8Nm

Diagnostic module for tank leaks on body

Plastic nut

Tightening torque

2,6Nm

cardiagn.com



1614 Overview of tightening torques

Control unit for electrical fuel pump control on body

Renew plastic nut.

Tightening torque

4Nm

cardiagn.com



1619 Overview of tightening torques

Filling hose SCR reservoir		
Hose clamp Replace hose clamp.	Tightening torque	3Nm
Fuel filler pipe on upper body		
Nut M6 Renew nut.	Tightening torque	8Nm
Hose clamp		
Hose clamp	Tightening torque	3.5Nm
Pre-supply pump to pump body		
M4 screw Renew screws.		2Nm
SCR filler pipe to body		
Nut M6	Tightening torque	8Nm
SCR reservoir to body		
NutM6 Replace nuts.		8Nm
Service cap on the SCR tank		
M4 screw Renew screws and service cap.	Tightening torque	2Nm

