











Engine (12.41.01.99)

Installation

- 1 . Install the engine.
 - ▶ Install the lifting chains.
 - ▶ Raise the engine.
 - ▶ Clean the component mating faces.
 - ▶ Clean the locating dowels.
- 2 . Carefully lower the engine until approximately 35mm above engine mounts.
- 3 . Install the engine front mount bracket.
 - ▶ Tighten the bolts to 45 Nm (33 lb.ft).
 - ▶ Connect the engine ground cable and tighten the bolt to 25 Nm (18 lb.ft).
- 4 . Clean the component mating faces.
- 5 . Install the starter motor.
 - ▶ Tighten the bolts to 45 Nm (33 lb.ft).
- 6 . Connect the electrical connectors.
 - ▶ Tighten the starter motor nut to 10 Nm (7 lb.ft).
- 7 . Secure the brake hose to the upper arm.
 - ▶ Tighten the bolt to 23 Nm (17 lb.ft).
- 8 . Connect the upper arm and wheel knuckle.
 - ▶ Install a new nut and tighten to 70 Nm (52 lb.ft).
- 9 . Secure the stabilizer bar link.
 - ▶ Tighten the nut to 115 Nm (85 lb.ft).
- 10 . Connect the height sensor link arm.
- 11 . With assistance align the engine to the transmission and engine mounts.
 - ▶ Install the transmission retaining bolts.
 - ▶ Tighten the bolts to 45 Nm (33 lb.ft).
 - ▶ Tighten the engine mount nuts to 90 Nm (66 lb.ft).
- 12 . Install the transmission heat shield.

- 13 . Disconnect the lifting chains.
- 14 . Remove the special tools.
 - Remove the lifting brackets.
- 15 . Position the EGR valve to the EGR pipe, fit the bolts and tighten to 25 Nm (18 lb.ft).
 - Install and align new gasket.
- 16 . Install the upper suspension arm and brake line heat shields.
 - Install the bolts and tighten to 10 Nm (7 lb.ft).
 - Tighten the nuts to 10 Nm (7 lb.ft).
- 17 . Connect the fuel line to the fuel rail.
 - Clean the component mating faces.
 - Secure with the clips.
- 18 . Connect the engine wiring harness.
 - Connect the ground cable.
 - Connect the electrical connectors.
 - Install the cassette.
- 19 . Connect the evaporative emission hose to the intake manifold.
- 20 . Connect the battery positive cable to the BJB.
 - Tighten the bolt to 10 Nm (7 lb.ft).
- 21 . Attach the flexplate to the torque converter.
 - Rotate the crankshaft to access the retaining bolts.
 - Tighten the bolts evenly and progressively in 2 stages.
 - Tighten the bolts to 15 Nm (11 lb ft).
 - Tighten the bolts to 110 Nm (81 lb.ft).
 - Install the grommet.
- 22 . Install the transmission cooler pipes.
 - Clean the component mating faces.
 - Install new O-ring seals.
 - Install the clamp.
 - Tighten the bolt to 25 Nm (18 lb.ft).
- 23 . Install the A/C compressor assembly.
 - Tighten the bolts to 25 Nm (18 lb.ft).

- 24 . Install the power steering pump.
 -  Tighten the bolts to 25 Nm (18 lb.ft).
- 25 . Install the differential extension.
 -  Clean the component mating faces.
 -  Install a new O-ring seal.
 -  Tighten the bolts to 45 Nm (33 lb.ft).
- 26 . Install the RH halfshaft. For additional information, refer to [Halfshaft RH \(47.10.02\)](#) (Section 205-04)
- 27 . Connect and secure the coolant hoses.
- 28 . Install the radiator. For additional information, refer to [Radiator \(26.40.01\)](#) (Section 303-03)
- 29 . Install the exhaust system. For additional information, refer to [Exhaust System \(30.10.08\)](#) (Section 309-00)
- 30 . Install the fender splash shields. For additional information, refer to [Fender Splash Shield \(76.10.48\)](#) (Section 501-02)
- 31 . Install the accessory drive belt tensioner.
 -  Tighten the bolt to 45 Nm (33 lb.ft).
- 32 . Install the accessory drive belt. For additional information, refer to [Accessory Drive Belt \(86.10.03\)](#) (Section 303-05)
- 33 . Install the air cleaner assembly. For additional information, refer to [Air Cleaner \(19.10.01\)](#) (Section 303-12)
- 34 . Install the auxiliary battery tray. For additional information, refer to [Auxiliary Battery Tray \(76.10.31\)](#) (Section 414-01)
- 35 . Install the battery tray. For additional information, refer to [Battery Tray \(76.10.30\)](#) (Section 414-01)
- 36 . Align the engine oil cooler to the fitted position.
 -  Tighten the Allen bolt to 60 Nm (44 lb.ft).
- 37 . Fill the engine with oil. For additional information, refer to [Engine Oil Draining and Filling \(12.60.05\)](#) (Section 303-01)
- 38 . With assistance install and align the hood.
 -  Tighten the bolts to 25 Nm (18 lb.ft).
 -  Secure the hood in the service position.
- 39 . Connect the heated washer jet hose and wiring harness.

- ▶ Connect the heated windshield electrical connectors.
- ▶ Connect washer jet hose.
- ▶ Secure the clips.

40 . Install the under hood pad.

- ▶ Carefully secure the clips.

41 . Lower the hood and check for alignment.

- ▶ Connect the hood support struts.

42 . Connect the battery ground cable. For additional information, refer to [Specifications](#) (Section 414-00)