Document Title:	Function Group:	Information Type:	Date:
Engine, description	**200**	**Service Information**	**2014/7/18**
Profile: **ART, A25E [GB]**			

Engine, description

Engine D9B, description

D9B is a straight, six-cylinder, direct-injected diesel engine with 9.4 litre displacement, turbocharger, intercooler and electronically controlled fuel injection. The valve mechanism receives its movement from the camshaft via rocker arms.
The engine has an overhead camshaft and unit injectors, which are centred above the pistons and controlled by the camshaft and a control unit (E-ECU). The control unit is located on the engine's left side.

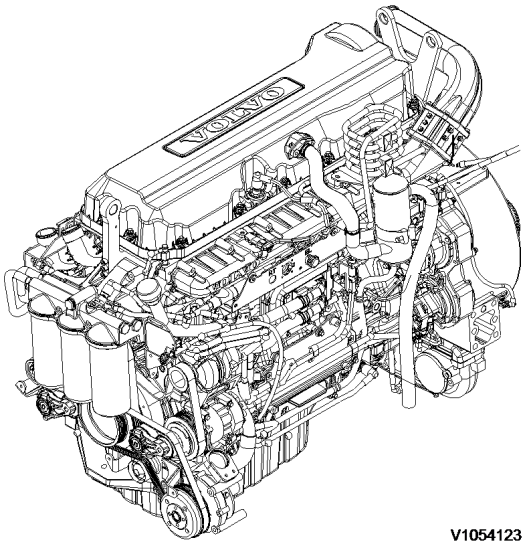


Figure 1

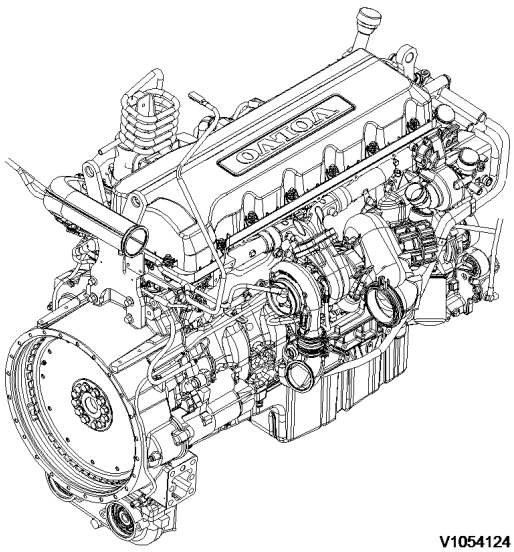


Figure 2

VOLVO
Construction Equipment

Service Information

Document Title:	Function Group:	Information Type:	Date:
Engine, sensor positions	**200**	**Service Information**	**2014/7/18**
Profile: **ART, A25E [GB]**			

Engine, sensor positions

Control unit sensors

The following is a brief summary of the parts on the engine. There are a number of other parts that affect the system, for example, the throttle pedal sensor.

The central part of the system, the control unit is positioned on the left side of the engine. All cable connectors for the engine's sensors are of DIN–standard and are connected in a so-called cable box.

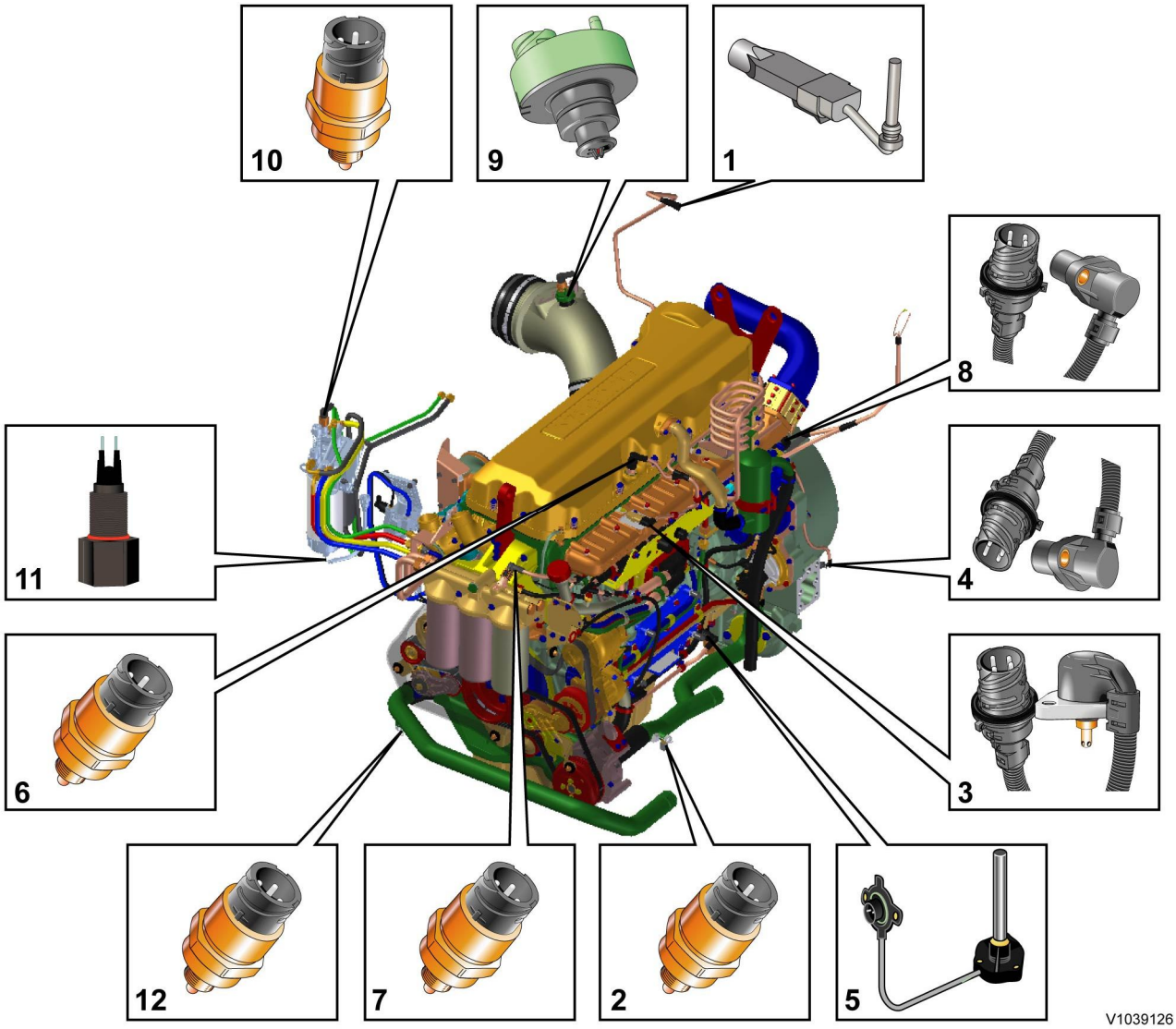


Figure 1
Engine D9, sensors (some have double functions)

1. Sensor for coolant level, SE2603
2. Sensor for coolant temperature, cooling circuit converter, SE2601
3. Sensor for charge air pressure/temperature, SE2507/SE2508
4. Tachometer sensor, flywheel, SE2701

5. Sensor for oil level/temperature, SE2205/SE2202
6. Sensor for crankcase pressure, SE2509
7. Sensor for oil pressure, SE2203
8. Camshaft sensor, engine position, SE2703
9. Sensor for air pressure/temperature, SE2501/SE2502
10. Sensor for feed pressure, fuel, SE2301
11. Sensor for water indicator, SE2302
12. Sensor for coolant temperature, cooling circuit engine/retarder, SE2602

Document Title:	Function Group:	Information Type:	Date:
Engine, identification	**200**	**Service Information**	**2014/7/18**
Profile: **ART, A25E [GB]**			

Engine, identification

Identification plate 1

Engine designation, serial number, part number and assembly plant are stamped in one field on the engine block's left front edge.

Identification plate 2

A decal with the software's ID-number, the engine's serial number and assembly plant is located on the valve cover to ensure installation of correct ECU on the engine in production. On the back of the ECU, there is a decal indicating its hardware number. The E-ECU is located on the engine's left side.

Assembly plants:
A = Skövde, Sweden
E = Curitiba, Brazil
F = Flen, Sweden
L = Lyon, France

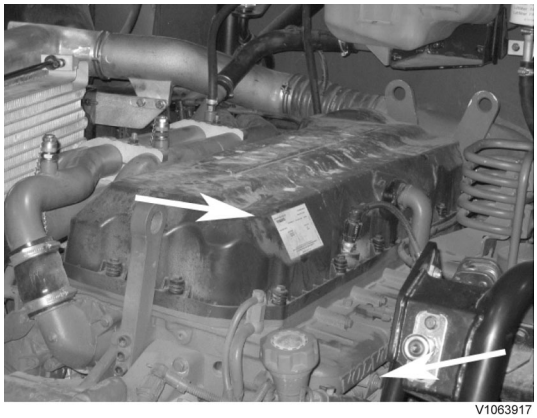

V1063917

Figure 1

Identification plate 3

The certification decal is located on the valve cover as well as on the left side, at the back of the machine's front frame inside of the steps.

V1063918

Figure 2

Document Title: **E-ECU, MID 128, changing pre-programmed ECU**	Function Group: **200**	Information Type: **Service Information**	Date: **2014/7/18**
Profile: **ART, A25E [GB]**			

E-ECU, MID 128, changing pre-programmed ECU

Op nbr 200-070

This operation also includes required tools and times for applicable parts of the following operations:

- 200 E-ECU, MID 128, changing non-programmed ECU

1. Connect VCADS Pro computer and perform 17030-3 Parameter, programming.
   - Use the function: Save all read parameters to job card.
2. Perform 200 E-ECU, MID 128, changing non-programmed ECU step 2–14.
3. Connect VCADS Pro computer and perform 17030-3 Parameter, programming.
   - Program earlier read-out parameters according to the job card.

VOLVO
Construction Equipment

Service Information

Document Title: **E-ECU, MID 128, changing non-programmed ECU**	Function Group: **200**	Information Type: **Service Information**	Date: **2014/7/18**
Profile: **ART, A25E [GB]**			

E-ECU, MID 128, changing non-programmed ECU

Op nbr 200-068

1. Connect VCADS Pro computer and perform 28423-3 MID 128 ECU, programming
   - When instructed to connect the new control unit, perform steps 2–15.

   Removing E–ECU

   CAUTION
   Always follow instructions according to Electrical system, work instructions, electronic components

   3001 Electrical system, special instructions for servicing, electronic components

CAUTION
Always follow instructions according to Electrical system, work instructions, electronic components

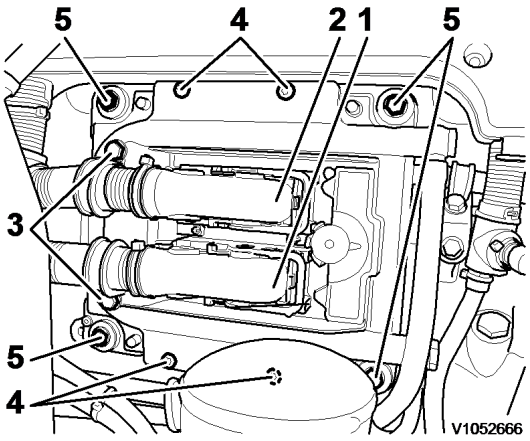
2. 

   Figure 1
   E-ECU

   1. Connector EA
   2. Connector EB
   3. Screw for clamp
   4. Screw for cooler
   5. Screw for ECU

   Place the machine in service position.

3. Open the engine hood.

   NOTICE
   Turn off the electric power with the battery disconnect switch before starting any work. Also remove the

fuse for respective component.

4. Remove the three screws (3) that disconnect the clamps from the E-ECU.
5. Unplug the connectors EA and EB from the E-ECU.
6. Remove th screws (4) (6 pcs.) that hold the cooler (3).
7. Remove the screws (5) (4 pcs.) that hold the E-ECU.
8. Carefully move aside the cooler and remove the E-ECU.
   NOTE!
   Work carefully so that hoses for the cooler are not damaged.

   Mounting E–ECU

9. Lift in the E-ECU inside of the cooler.
10. Install the screws (5) (4 pcs.) that hold the E-ECU against the engine block.
11. Install the screws (4) (6 pcs.) that hold the cooler against the E-ECU.
12. Plug in the connectors EA and EB for the E-ECU.
13. Install the screws (3 pcs.) that hold the clamps against the E-ECU.
14. Close the engine hood.
    NOTE!
    When changing pre-programmed ECU, return to 200 E-ECU, MID 128, changing pre-programmed ECU step 3.
15. Finish VCADS Pro operation 28423-3 MID 128 ECU, programming.