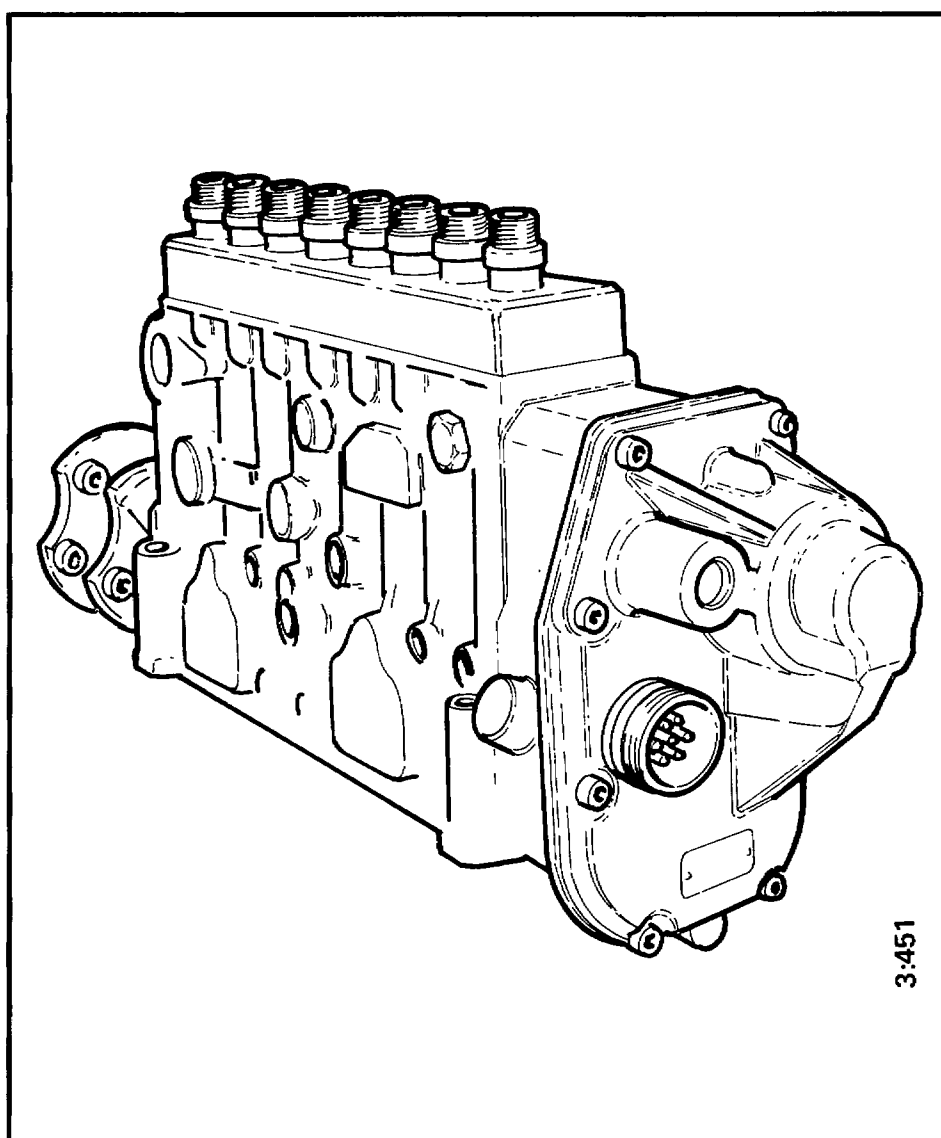


**EDC**  
**Function and work descriptions**  
**DSC14 04**



3:451



## EDC

### Function and work descriptions

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## Function description

### GENERAL

This description applies to trucks with DSC14 04 engine.

EDC (Electronic Diesel Control) is an electronic system for balancing the fuel volume. With EDC the engine is given the correct fuel volume in every operation situation. EDC provides the manufacturer possibilities to create new functions such as intermediate speed control, cruise control and cold-start program in the system.

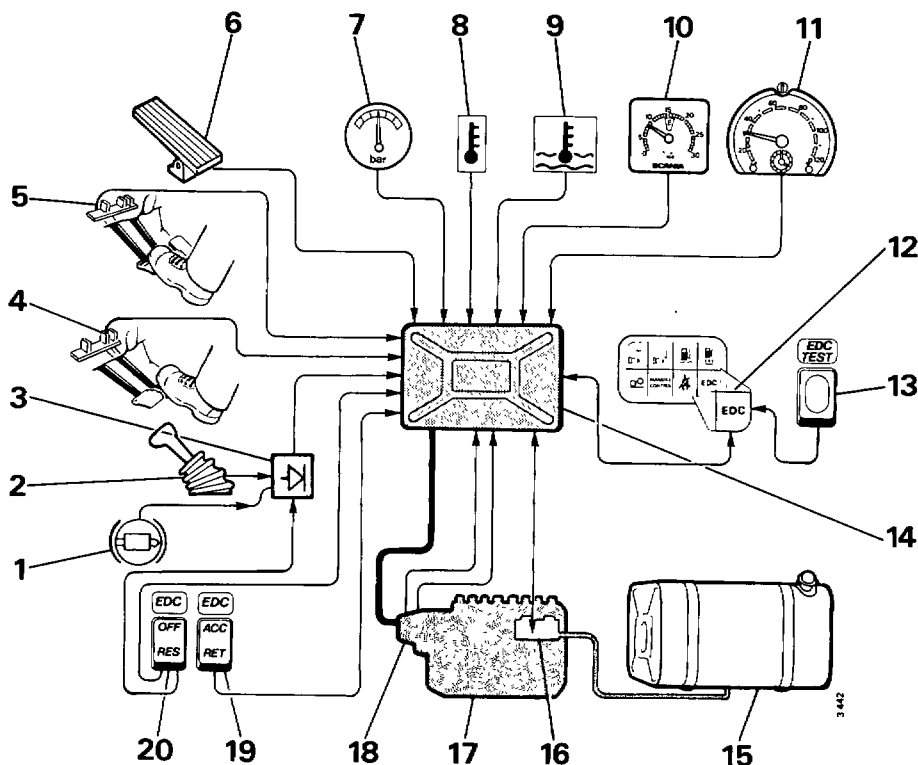
An electronic control unit, micro-processor, controls the EDC system functions. It is provided with information from various sensors and switches on the truck. The input information is processed into a signal which controls the setting solenoid on the injection pump and fuel valve.

Charge pressure and charge temperature sensors provide information for the smoke limiter function, the coolant temperature sensor for the cold-start function.

The cruise control obtains information from the tachograph and from the buttons on the panel. It can be disengaged with clutch, brake, trailer brake or accelerator pedal as well as the OFF button.

The engine is started and stopped with the key.

The fuel valve stops the fuel supply to the injection pump when the power is switched off and in case of failure in the EDC system. The valve is opened when the key is turned to drive position.

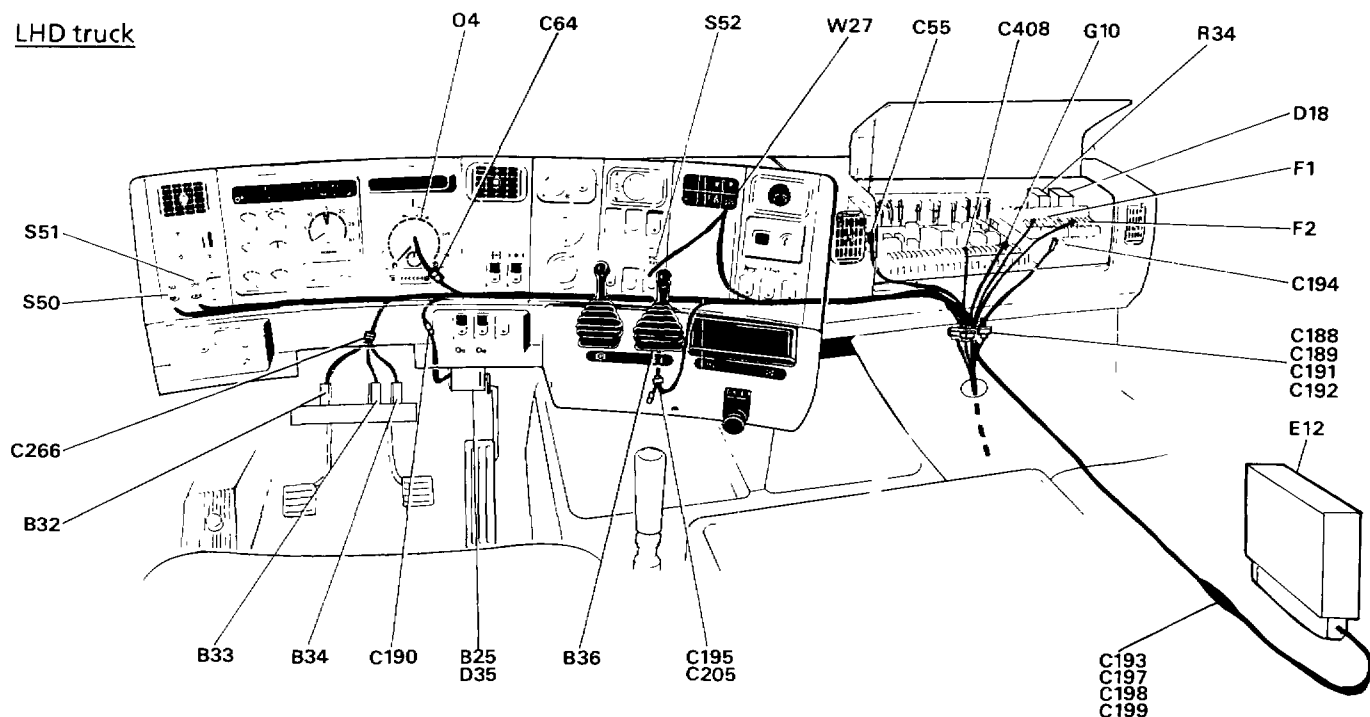


- |                               |                       |
|-------------------------------|-----------------------|
| 1. Exhaust brake              | 13. Switch, EDC test  |
| 2. Trailer brake              | 14. Control unit      |
| 3. Diode unit                 | 15. Fuel tank         |
| 4. Brake switch, 2 pcs        | 16. Fuel valve        |
| 5. Clutch switch              | 17. Injection pump    |
| 6. Accelerator pedal sensor   | 18. CR setting unit   |
| 7. Charge pressure sensor     | - Speed sensor        |
| 8. Charge temperature sensor  | - CRT sensor          |
| 9. Coolant temperature sensor | - CR setting solenoid |
| 10. Speed sensor/alternator   | 19. Switch, ACC/RET   |
| 11. Speed sensor              | 20. Switch, OFF/RES   |
| 12. EDC test light            |                       |

EDC system function

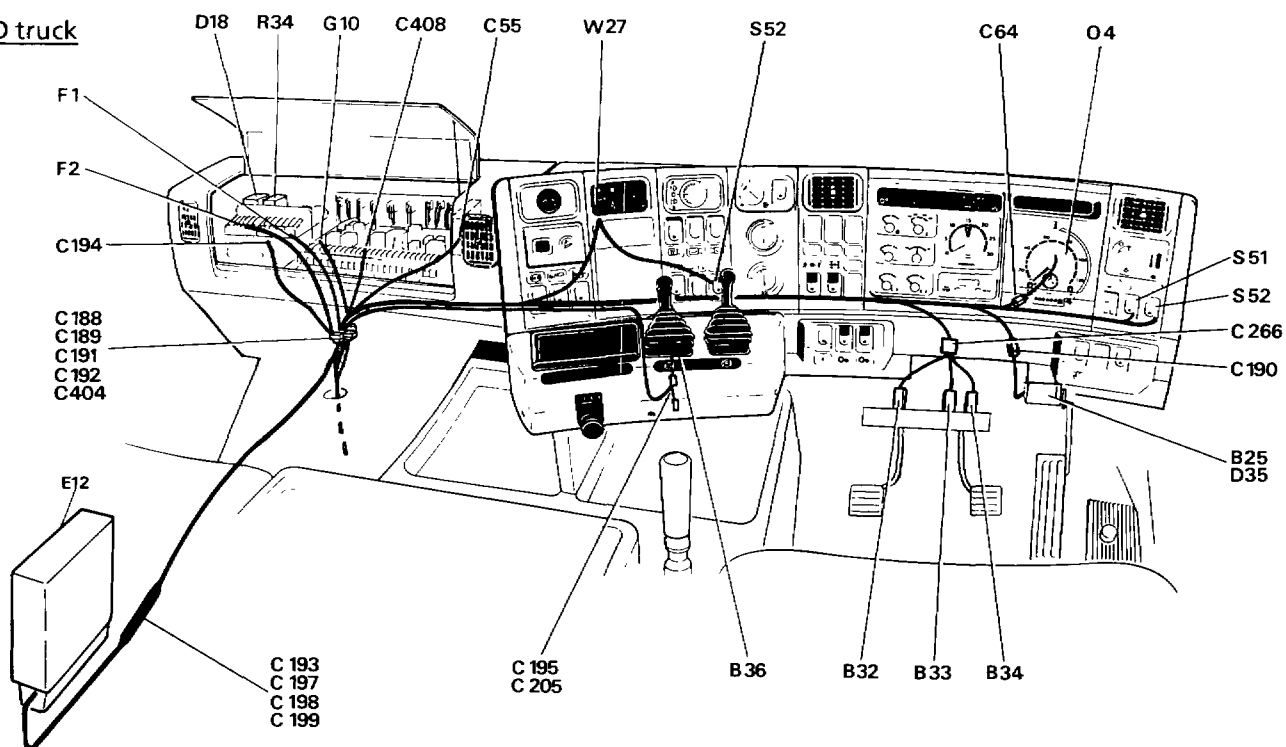
**Components**

LHD truck

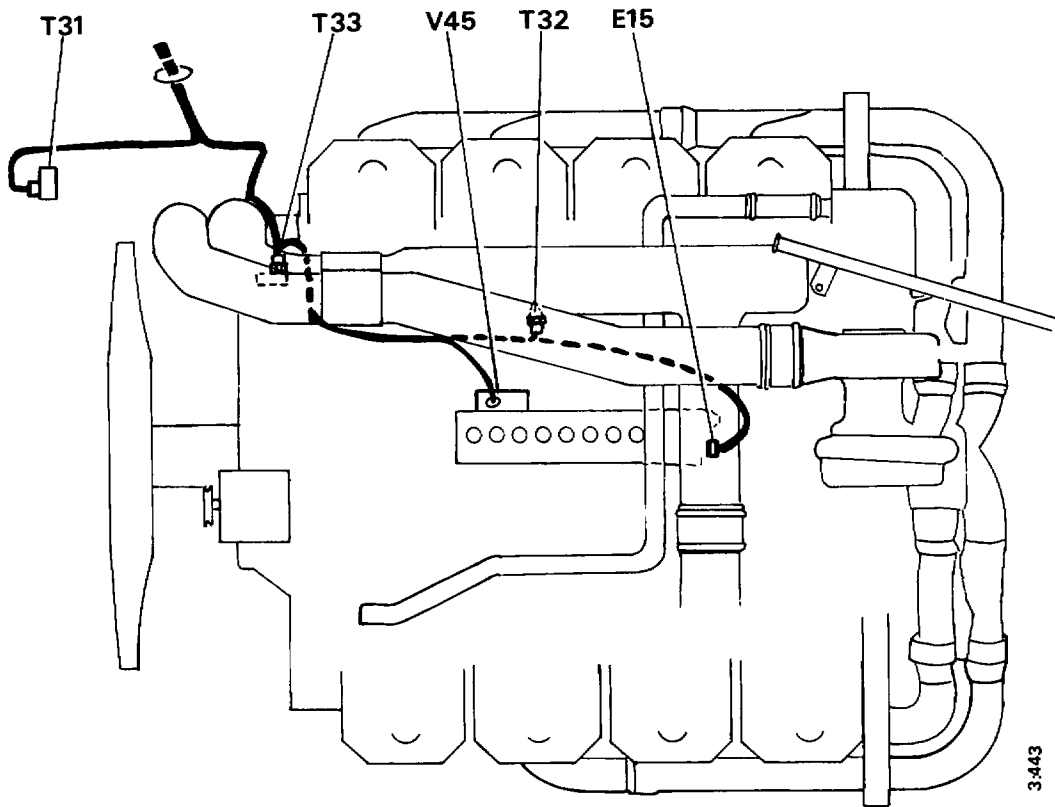


- |      |                                  |      |            |     |   |
|------|----------------------------------|------|------------|-----|---|
| B25  | Switch, accelerator pedal idling | C193 | Connector  | D35 | Switch, accelerator pedal potentiometer |
| B32  | Clutch switch                    | C194 | "          | E12 | Control unit                            |
| B33  | Brake switch                     | C195 | "          | F1  | Fuse holder                             |
| B34  | Brake switch                     | C196 | "          | F2  | Fuse holder                             |
| B36  | Trailer brake switch             | C197 | "          | G10 | Vehicle ground                          |
| C55  | Junction block                   | C198 | "          | O4  | Tachograph                              |
| C64  | Connector                        | C199 | "          | R34 | Relay                                   |
| C189 | "                                | C205 | "          | S50 | Switch, ACC/RET                         |
| C190 | "                                | C266 | "          | S51 | Switch, OFF/RES                         |
| C191 | "                                | C404 | "          | S52 | Switch, EDC test                        |
| C192 | "                                | C408 | "          | W27 | Test light, EDC test                    |
|      |                                  | D18  | Diode unit |     |   |

RHD truck



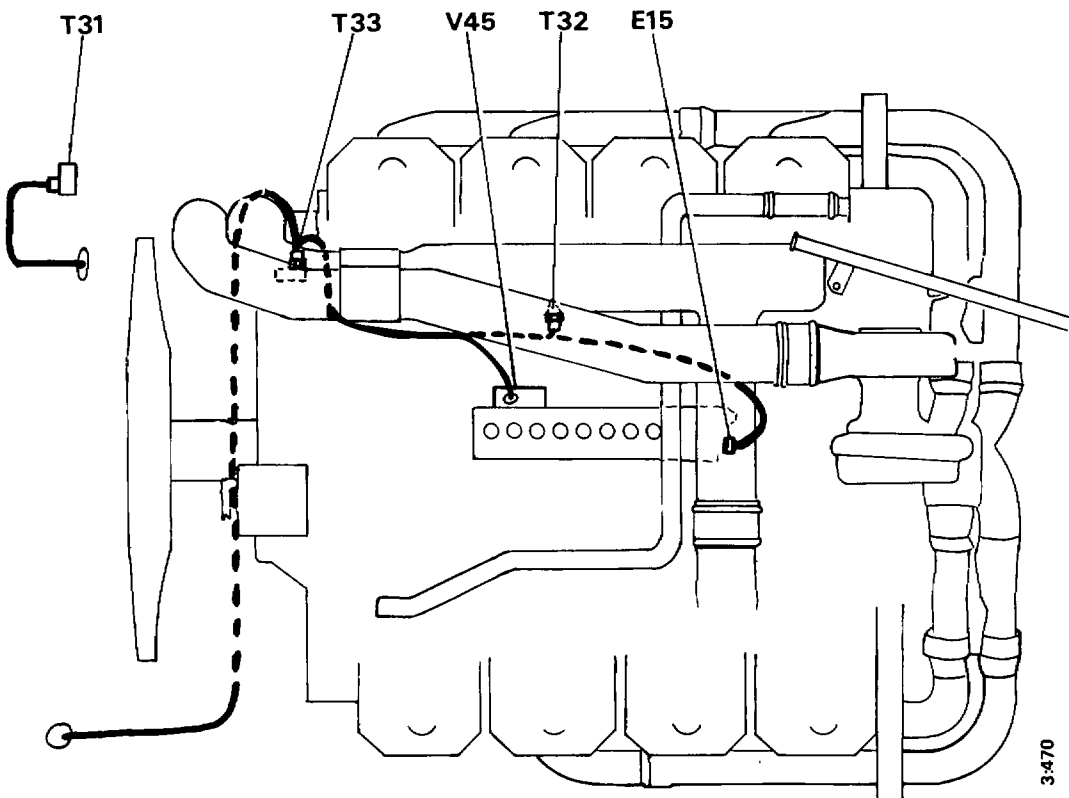
LHD truck



3443

- E15** CR setting unit, injection pump
- T31** Charge pressure sensor
- T32** Charge temperature sensor
- T33** Coolant temperature sensor
- V45** Fuel valve

RHD truck



3470

**COMPONENTS IN EDC SYSTEM**

**CR setting unit**

CR setting solenoid

A solenoid sets the control rack in an EDC injection pump. The solenoid operates against spring tension. With broken circuit 0 feed is always obtained.

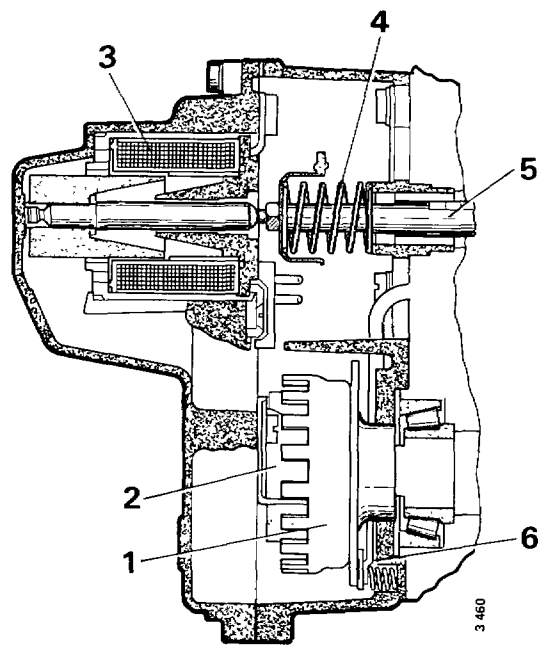
Speed sensor

The main speed sensor in the CR setting unit on the injection pump consists of an inductive sensor and a toothed wheel fitted on the camshaft of the injection pump. Speed checking takes place eight times per engine revolution (the wheel has 16 teeth).

The 7-pin connector indicates that it is an EDC injection pump.

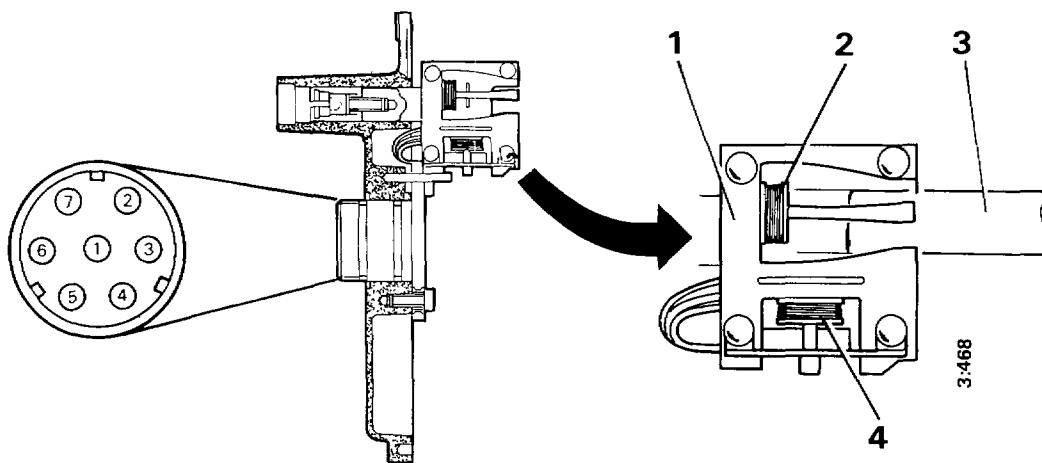
CRT sensor

The EDC pump has no adjusting screw for maximum control rack travel. This function is programmed in the control unit. Adjusting the CRT sensor is carried out as per special instructions and in an EDC test bench.



- |                     |                  |
|---------------------|------------------|
| 1. Toothed wheel    | 4. Return spring |
| 2. Inductive sensor | 5. Control rack  |
| 3. Linear solenoid  | 6. Oil pump      |

CR setting unit on the injection pump



- |                                  |                               |
|----------------------------------|-------------------------------|
| 1. CRT position sensor reference | 5. CRT position sensor        |
| 2. Solenoid                      | 6. CRT position re-connection |
| 3. Speed signal                  | 7. System voltage U +         |
| 4. System ground                 |                               |

7-pin connector, injection pump

CRT sensor