15 36

P1341

174   Camshaft Adjustment, Bank 1 – Below Limit

P1341

174   Camshaft Adjustment, Bank 1 – Above Limit

P1341

174   Camshaft Adjustment, Bank 1 – Signal Implausible

Function

In order to increase torque and improve cylinder charging, the engine is equipped with two VarioCam actuators that are incorporated in the camshaft chain tensioners.
The actuators change the position of the inlet camshafts with respect to the outlet camshafts.
The position of the inlet camshafts is checked by the camshaft position sensors.

Diagnosis conditions

–   Time elapsed after start-up > 200 sec.

–   Engine oil temperature > 60 °C

–   Engine speed between 600 rpm and 4520 rpm

–   No fault with reference mark, camshaft position sensors and engine oil temperature

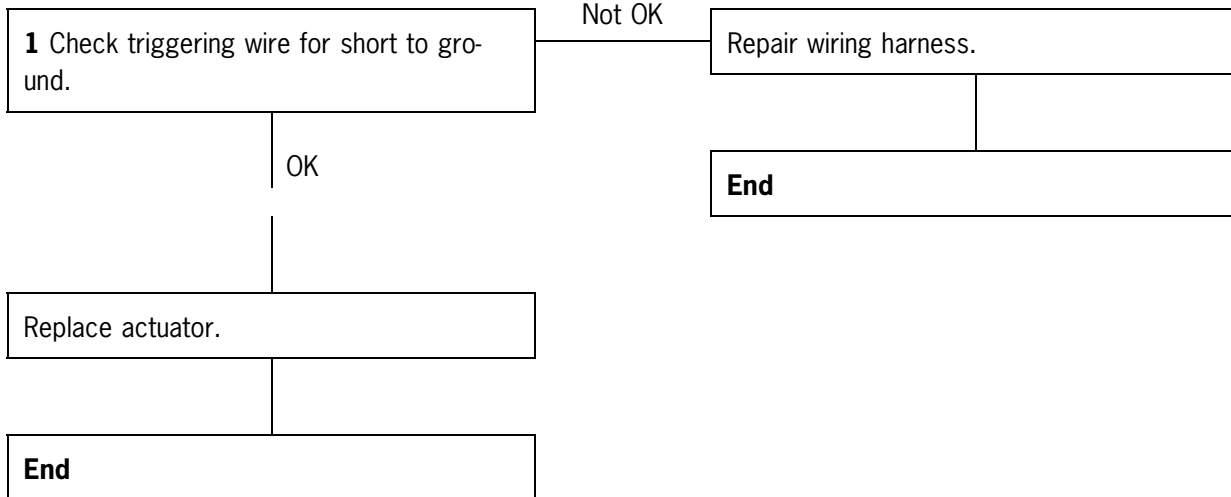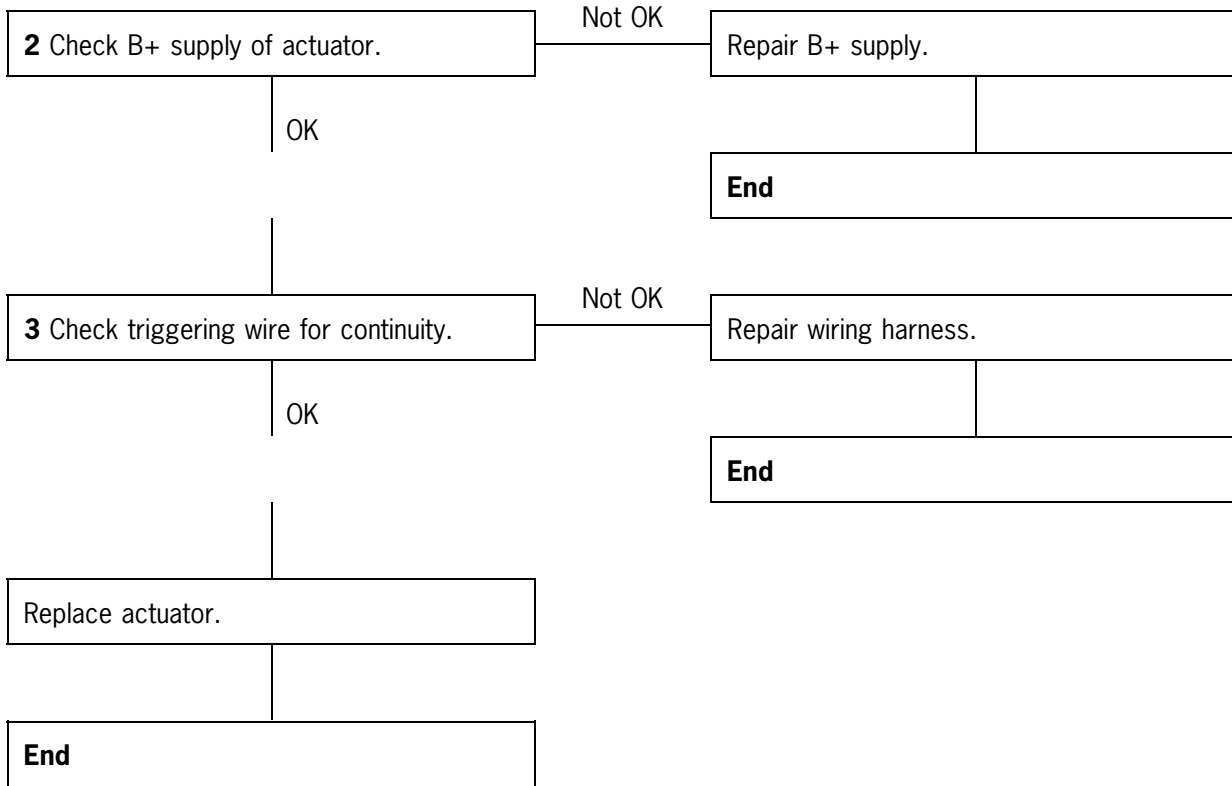| DTC No.	Fault conditions	Fault area
P1341	No triggering of the actuator, active position nevertheless.	– Short to ground – Actuator faulty
	Triggering of the actuator, no active position	– Open circuit in triggering wire – Open circuit in B+ supply – Actuator faulty
	No active or passive position is detected	– Actuator faulty

Wiring Diagram
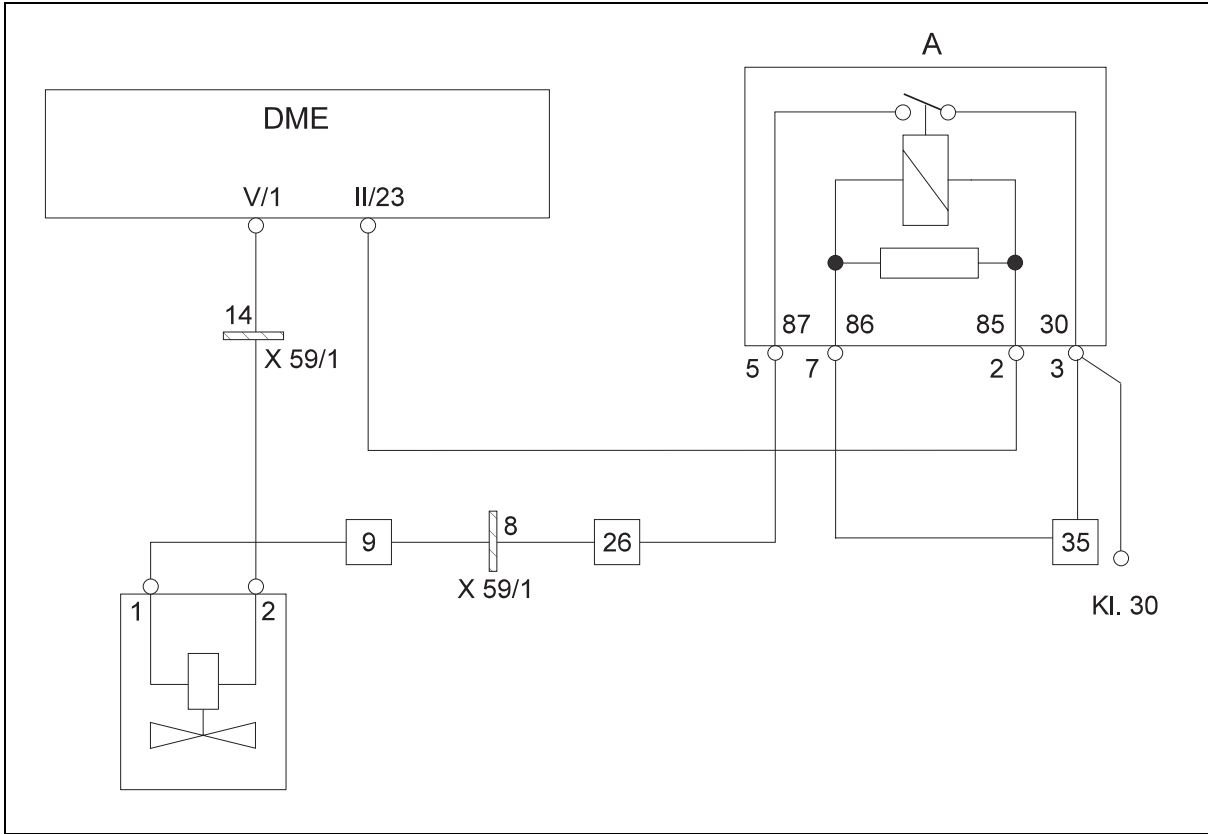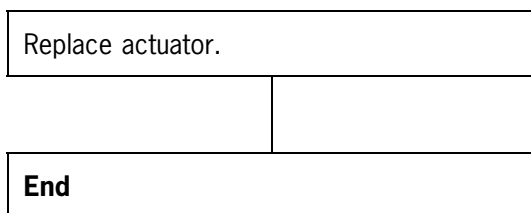

A – DME relay

B – Actuator

Diagnosis Procedure

Below limit

```
                                          Not OK
┌─────────────────────────────────┐             ┌──────────────────────────────┐
│ 1 Check triggering wire for short to gro- │─────────────│ Repair wiring harness.        │
│ und.                            │             └──────────────────────────────┘
└─────────────────────────────────┘                            │
                    │ OK                              ┌──────────────────────────────┐
                    │                                 │ End                           │
                    │                                 └──────────────────────────────┘
┌─────────────────────────────────┐
│ Replace actuator.               │
└─────────────────────────────────┘
                    │
┌─────────────────────────────────┐
│ End                             │
└─────────────────────────────────┘
```

Above limit

2 Check B+ supply of actuator.	—Not OK→	Repair B+ supply.

OK

End

3 Check triggering wire for continuity. —Not OK→ Repair wiring harness.

OK

End

Replace actuator.

End

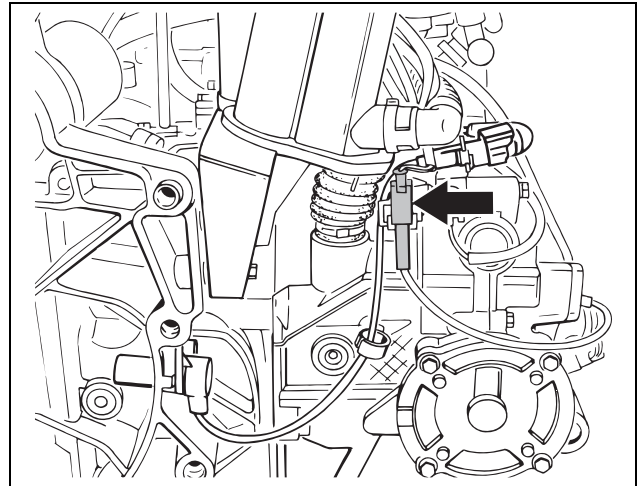**Signal implausible**

Replace actuator.

End

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1 Check triggering wire for short to ground.

1. Connect special tool 9637 to wiring harness
   (DME control module connector).

2. Remove connector of actuator.

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3. Connect ohmmeter to pin V/1 and ground.
   Display: $\infty \, \Omega$

If 0 - 5 Ω is displayed, check wiring for chafing and
pinching damage.

2 Check B+ supply of actuator.

1. Remove connector of actuator.

2. Connect voltmeter to connector, pin 1, and ground.
   Switch on the ignition.
   Display: battery voltage

3 Check triggering wire for continuity.

1. Connect special tool 9637 to wiring harness
   (DME control module connector).

2. Remove connector of actuator.

3. Connect ohmmeter to special tool 9637, pin V/1,
   and connector, pin 2.
   Display: 0 - 5 Ω

Note

The wire is routed via connector X 59/1.