Exhaust gas recirculation (EGR) valve leaking or not closing properly

Topic number	LI14.20-N-051286
Version	2
Design group	14.20 Exhaust gas recirculation
Date	06-21-2017
Validity	OM611 and OM612 in MODEL 901-905
Reason for change	Distribution revised
Reason for block	

Complaint:

1. The customer complains that the engine sometimes enters reduced power output, the engine temporarily has no output or throttle response. The diagnosis fault code P1403 is stored in the engine control unit.

2. The EDC indicator lamp lights up while the vehicle is being driven. The fault codes P0100 and/or P1470 are stored in the engine control unit.

Cause:

The fault codes P1403-016 and P1403-032 may have been set as a result of brief overvoltage or undervoltage in the on-board electrical system.

The fault codes P1403-004 and 1403-008 may have been set as a result of short-term dirt particles in the EGR valve.

The fault codes P0100-064 and/or P1470-016 are usually caused by irregularities in the air supply (charge air hose leaking, air intake or grille of charge air cooler clogged).

Remedy:

Erase fault memory. After erasing the fault memory, warm up the vehicle for approx. 10 minutes.

With automatic transmissions: With the vehicle stationary, engage the drive range "D" while simultaneously depressing the foot brake and applying the hand brake. I M P O R T A N T : Risk of accident if the brakes are not applied! Run the engine for approx. 2-3 minutes in this condition. Finally engage "N" (neutral) and, over a period of approx. 1 minute, periodically apply full throttle for approx. 0.5 seconds at approx. 1500 to 2000 rpm.

With manual transmissions: Warm up the vehicle for 10 minutes while shifting gear frequently. Then, with the vehicle in neutral and stationary, periodically apply full throttle for approx. 0.5 seconds at approx. 1500 to 2000 rpm for a period of approx. 1 minute.

These test steps produce high pressure differentials at the EGR valve with simultaneous, rapid valve position changes from closed to the approx. 3/4 open state. If, following this check, no fault is set in the fault memory of the engine control unit, the EGR valve is electrically and mechanically OK.

Replacement of the EGR valve is then not permitted.

N O T E:

At present, 80% of the EGR valves submitted for inspection are found to be OK. The fault memories of these OK parts only contained indications of temporary fault entries. These had been set prior to the repair work due to short-term cir-

cumstances arising during normal operation (on-board electrical system undervoltage, dirt, etc.). The faults entered in the control unit were definitely no longer current at the time of replacement.

By performing the check described above, you can help to prevent OK parts from being removed in future.

Symptoms
Power generation / Engine management / Engine running / Cuts out intermittently
Power generation / Engine management / Engine running / Runs rough/shakes
Power generation / Engine management / Engine running / RPM reduces with delay
Power generation / Engine management / Indicator lamp / Engine diagnosis / lit
Power generation / Engine management / Indicator lamp / Electronic diesel control / lit
Power generation / Engine management / Engine performance / Goes into limp-home mode
Power generation / Engine management / Engine performance / Cuts off
Power generation / Engine management / Engine performance / Poor acceleration