AD07.61-P-4000-11A	ME-SFI fault code description, misfire		

1	Fault code	P0300 Misfire, amount P0301 Misfire, cylinder 1 P0302 Misfire, cylinder 2 P0303 Misfire, cylinder 3 P0304 Misfire, cylinder 4 P0305 Misfire, cylinder 5 P0306 Misfire, cylinder 6 P0460 Fuel level too low P0462 Fuel level too low
2	Error storage Activation of engine diagnostics malfunction indicator lamp (EURO3/4) or CHECK ENGINE (MIL) (USA)	after expiry of test duration and fault **A Misfire (emission level)** The malfunction indicator lamp is activated after two successive faulty driving cycles **B Misfire "damaging TWC"** Malfunction indicator lamp immediately activated on case of misfiring
3	Frequency of test	Continuously
4	Checked signal or status	Number of recognized misfires (detection through smooth operation analysis)
5	Limit values	**A** Maximum of 20 misfires within 1000 engine revolutions **B** Maximum of 4-35 misfires within 200 engine revolutions (map dependent on engine speed and load; e.g. 4 misfires as from medium engine speed and load, 35 misfires in neutral without load)
6	Test prerequisites	- Engine speed approx. 450 - 6000 rpm - Engine speed change less than 1900 rpm per second - Load change less than 50% per second - Engine started up at least 5 s earlier - No ESP control intervention function - Pulse-generator wheel adaptation in deceleration has taken place - No road bumps detected (via CAN by ASR/ESP control module, determined by comparing wheel speeds) No fault signal from camshaft Hall sensor - No inertia fuel shutoff
7	i	If too many misfires occur at a cylinder, the cylinder is cut off (cylinder-selective fuel cutoff). **Misfires caused by ignition system faults** If ignition does not take place misfiring occurs. If in addition to the misfiring faults ignition system faults are also stored, then start troubleshooting in the ignition system. Maximum permissible smooth-operation deviation on a cylinder approx. 3 ms2. If this value is exceeded, through switching off the ignition circuit, determine the ignition circuit causing it in the following manner: 1. Switch off an ignition circuit (a or b) using STAR DIAGNOSIS/HHT. 2. Observe the smooth operation value at the affected cylinder. - Value alters insignificantly (up to approx. 2 ms2): The still switched on ignition circuit is fully operational. - Value alters significantly (more than approx. 2 ms2): The still switched on ignition circuit is faulty. Check spark plugs, ignition cable and ignition coil. **Misfiring through fuel starvation** If misfires are detected, and the fuel level is too low the fault codes P0460 or P0462 are issued. This information indicates misfiring is occurring due to fuel starvation. **Misfiring because of miscellaneous causes** Misfiring can be caused by many faults in the injection system. Usually, the misfiring fault is stored along with faults to other components or functions. Faults in the engine mechanics may also be the cause of misfiring.

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