



## Fault effects and warning indications

| Fault code,<br>OBD II<br>(TestBook) | Fault description                                                                       | Effect                                                                                                                      | Warning lamp illumination |                  |
|-------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------|
|                                     |                                                                                         |                                                                                                                             | MIL                       | Sport/<br>Manual |
| P0705<br>(14, 23)                   | * Gear position switch, incorrect outputs                                               | Maintains current gear in low range, limp home mode in high range. Shift pressure to maximum, harsh gear shifts/engagement. | On                        | On               |
| P0721<br>(21)                       | * Downshift safety monitor prevented downshift which would have caused engine overspeed | Maintains current gear in low range, limp home mode in high range. Shift pressure to maximum, harsh gear shifts/engagement. | On                        | On               |
| P0722<br>(22)                       | * Torque converter slipping                                                             | Maintains current gear in low range, limp home mode in high range. Shift pressure to maximum, harsh gear shifts/engagement. | On                        | On               |
| P0731<br>(29)                       | * Ratio monitoring, implausible 1st gear ratio                                          | No apparent effect                                                                                                          | On                        | On               |
| P0732<br>(30)                       | * Ratio monitoring, implausible 2nd gear ratio                                          | No apparent effect                                                                                                          | On                        | Off              |
| P0733<br>(31)                       | * Ratio monitoring, implausible 3rd gear ratio                                          | No apparent effect                                                                                                          | On                        | Off              |
| P0734<br>(32)                       | * Ratio monitoring, implausible 4th gear ratio                                          | No apparent effect                                                                                                          | On                        | Off              |
| P0741<br>(5)                        | * Torque converter lock-up clutch fault                                                 | May affect driveability.                                                                                                    | On                        | Off              |
| P0743<br>(7, 25)                    | * Torque converter lock-up solenoid (MV 3), open or short circuit                       | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |
| P0748<br>(10, 28)                   | * Pressure regulating solenoid (MV 4), open or short circuit                            | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |
| P0753<br>(8, 26)                    | * Shift solenoid (MV 1), open or short circuit                                          | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |
| P0758<br>(9, 27)                    | * Shift solenoid (MV 2), open or short circuit                                          | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |
| P1562<br>(24)                       | * Battery supply below 9V while engine running                                          | Maintains current gear in low range, limp home mode in range. Shift pressure to maximum, harsh gear shifts/engagement.      | Off                       | On               |
| P1601<br>(4)                        | * ECU, EEPROM checksum                                                                  | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |
| P1606<br>(3)                        | * EEPROM                                                                                | No apparent effect                                                                                                          | On†                       | Off              |
| P1606<br>(6)                        | * Watchdog                                                                              | No apparent effect                                                                                                          | On                        | On               |
| P1612<br>(2)                        | * Solenoid valves power supply relay, sticking closed or open circuit                   | Limp home mode in low and high ranges. Shift pressure to maximum, harsh gear shifts/engagement.                             | On                        | On               |

## AUTOMATIC GEARBOX - ZF4HP22 - 24

| Fault code,<br>OBD II<br>(TestBook)                                                                                                                                           | Fault description                                                             | Effect                                                                                                                            | Warning lamp<br>illumination |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------|
|                                                                                                                                                                               |                                                                               |                                                                                                                                   | MIL                          | Sport/<br>Manual |
| P1613<br>(1)                                                                                                                                                                  | * Solenoid valves<br>power supply relay,<br>sticking open or short<br>circuit | Limp home mode in low and high ranges. Shift<br>pressure to maximum, harsh gear shifts/<br>engagement.                            | On                           | On               |
| P1705<br>(39)                                                                                                                                                                 | Transmission high/low<br>range, implausible<br>input                          | No apparent effect                                                                                                                | On                           | Off              |
| P1810<br>(12, 13)                                                                                                                                                             | Sport/Manual warning<br>lamp circuit fault                                    | Lamp fails bulb check or is permanently<br>illuminated. No effect on gearbox operation.                                           | On                           | Off              |
| P1841<br>(16)                                                                                                                                                                 | * CAN bus fault                                                               | Maintains current gear in low range, limp<br>home mode in high range. Shift pressure to<br>maximum, harsh gear shifts/engagement. | On                           | On               |
| P1842<br>(15)                                                                                                                                                                 | * CAN level monitoring                                                        | Maintains current gear in low range, limp<br>home mode in range. Shift pressure to<br>maximum, harsh gear shifts/engagement.      | On                           | On               |
| P1843<br>(17)                                                                                                                                                                 | * CAN time-out<br>monitoring                                                  | Maintains current gear in low range, limp<br>home mode in high range. Shift pressure to<br>maximum, harsh gear shifts/engagement. | On                           | On               |
| P1884<br>(11)                                                                                                                                                                 | * CAN message:<br>Engine friction invalid                                     | No apparent effect.                                                                                                               | On                           | Off              |
| P1884<br>(18)                                                                                                                                                                 | * CAN message:<br>Throttle position invalid                                   | Substitute throttle angle of 50% adopted. No<br>kickdown. Operates in economy modes only.                                         | On                           | On               |
| P1884<br>(19)                                                                                                                                                                 | CAN message: Engine<br>temperature invalid                                    | Substitute engine temperature derived from<br>other inputs. No apparent effect.                                                   | On                           | Off              |
| P1884<br>(20)                                                                                                                                                                 | CAN message: Road<br>speed invalid                                            | No apparent effect                                                                                                                | On                           | Off              |
| P1884<br>(33, 34)                                                                                                                                                             | * CAN message:<br>Engine torque invalid                                       | Substitute engine torque of derived from other<br>inputs. May affect shift quality.                                               | On                           | Off              |
| P1884<br>(35)                                                                                                                                                                 | * CAN message:<br>Engine speed invalid                                        | Maintains current gear in low range, limp<br>home mode in high range. Shift pressure to<br>maximum, harsh gear shifts/engagement. | On                           | On               |
| P1884<br>(37)                                                                                                                                                                 | CAN message: Engine<br>air intake temperature<br>invalid                      | No apparent effect.                                                                                                               | On                           | Off              |
| P1844<br>(38)                                                                                                                                                                 | Altitude shift control<br>invalid                                             | No reduced torque compensation, possible<br>reduction in performance/ driveability at<br>altitude or high ambient temperatures.   | On                           | Off              |
| * = Emissions (OBD II) relevant<br>†On = MIL illuminates immediately (in all other faults, MIL On = illuminates in the 2nd consecutive drive cycle if<br>fault still present) |                                                                               |                                                                                                                                   |                              |                  |