

NZDG2G/1/1

| DSM Handbook_FAWSH_30-102351_CA4D2.8TC_C452V61_OBD |                                   |
|----------------------------------------------------|-----------------------------------|
| Customer                                           | FAWSH                             |
| Engine description                                 | CA4D28CRZ TC                      |
| Vehicle                                            | PK                                |
|                                                    |                                   |
| Name of the creator                                | Zou Yanhua                        |
| date / time                                        |                                   |
| dataset name                                       | 102351YZPKSH70E3_60_20-Jun-08_M07 |
| SAP No.                                            | 30-102351                         |

| Fault Path description |                                                                                                                     |     |      |                                                            |        |             |             |             |              | Error simulation & system reaction                                                          |                                                                                                                                                  |                                                                                                          |                                                 |  |
|------------------------|---------------------------------------------------------------------------------------------------------------------|-----|------|------------------------------------------------------------|--------|-------------|-------------|-------------|--------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------|--|
| Fault Path Name        | Description                                                                                                         | NO. | Type | Fault type description                                     | P-code | error class | error entry | system jump | MIL          | Enviromental Conditions                                                                     | Fid calibration                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDCmpr           | Fault path of air condition power stage                                                                             | 1   | Bit0 | Short Circuit Battery                                      | P0647  | 1           | YES         | OFF         | OFF          | ACCD_stLogicOut_OneToOne_DLen1<br>ACCD_stMnSwRawVal_OneToOne_DLen1<br>InjCil_qCurr__q_DLen1 | Fid_ACTrqC<br>Fid_FanCil_ACCmpr                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Short Circuit Ground                                       | P0646  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | No Load                                                    | P0645  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | Excess Temperature                                         | P0645  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDEvp            | Evaporator Temperature sensor                                                                                       | 2   | Bit0 | Voltage above upper limit                                  | P0538  | 0           | NO          | OFF         | OFF          |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P0537  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDPres           | Fault path 1 for air condition pressure                                                                             | 3   | Bit0 | Period Max error = SRC-High                                | P0531  | 1           | YES         | OFF         | OFF          | ACCD_stLogicOut_OneToOne_DLen1<br>ACCD_stMnSwRawVal_OneToOne_DLen1<br>InjCil_qCurr__q_DLen1 | Fid_ACTrqC                                                                                                                                       |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Period Min error = SRC-Low                                 | P0531  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | Duty Cycle Min error                                       | P0533  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | Duty Cycle Max error                                       | P0532  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDPres1          | Fault path 2 for air condition pressure                                                                             | 4   | Bit0 | entering the Special Operation sector                      | P0531  | 1           | YES         |             | OFF          | OFF                                                                                         | ACCD_stLogicOut_OneToOne_DLen1<br>ACCD_stMnSwRawVal_OneToOne_DLen1<br>InjCil_qCurr__q_DLen1                                                      | Fid_ACTrqC                                                                                               |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | PresDSMDeb1Type                                            | P0530  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDPresAna        | Fault path for analog air condition pressure                                                                        | 5   | Bit0 | Voltage above upper limit                                  | P2518  | 1           | YES         |             | OFF          | OFF                                                                                         | ACCD_stLogicOut_OneToOne_DLen1<br>ACCD_stMnSwRawVal_OneToOne_DLen1<br>InjCil_qCurr__q_DLen1                                                      | Fid_FanCil_pACAna                                                                                        |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P2517  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ACCDSwin           | Fault path of air condition power stage                                                                             | 6   | Bit2 | CAN Msg. TimeOut error                                     | P2519  | 1           | YES         | OFF         | OFF          | ACCD_stLogicOut_OneToOne_DLen1<br>ACCD_stMnSwRawVal_OneToOne_DLen1                          |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | Non-Plausible CAN Msg. Value                               | P2519  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_ADCMon             | Error status of ADC monitoring                                                                                      | 7   | Bit0 | SRC-High error of ADC reference voltage                    | P0608  | 12          | YES         | OFF         | ON           | BattCD_uLin__Carb_uBatt_DLen2<br>HWEMon_numRecovery__stLow_DLen1                            | Fid_APP1<br>Fid_APP2<br>Fid_AccPed<br>Fid_RailCDSubstVal                                                                                         |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | SRC-Low error of ADC reference voltage                     | P0608  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | Test impulse error                                         | P0608  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | ADC queue error                                            | P0608  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCDIdlAdjVal     | error path for checking the drift factors out of the range in the low-idle mode                                     | 8   | Bit0 | IdAdjVal above the maximum drift limit                     | P110D  | 0           | NO          | OFF         | OFF          |                                                                                             | Fid_AFSCD_PISetyDrft                                                                                                                             |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | IdAdjVal below the minimum drift limit                     | P110E  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCDLdAdjVal      | error path for checking the drift factors out of range in the load mode                                             | 9   | Bit0 | LdAdjVal above the maximum drift limit                     | P110F  | 0           | NO          | OFF         | OFF          |                                                                                             | Fid_AFSCD_PISetyDrft                                                                                                                             |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | LdAdjVal below the minimum drift limit                     | P110G  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_AirTemp      | Intake Air Temperature sensor                                                                                       | 10  | Bit0 | Voltage above upper limit                                  | P0113  | 8           | NO          |             | OFF          | OFF                                                                                         | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2                                                                                 | Fid_AFSCD<br>Fid_AFSCD_AirPerTime                                                                        |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P0112  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_AirTempDcyc  | error path for signal range check of duty cycle of air temperature signal                                           | 11  | Bit0 | SRC max error for the duty cycle                           | P1102  | 8           | YES         | OFF         | ON           | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2                            | Fid_AFSCD<br>Fid_AFSCD_PISetyDrft<br>Fid_AFSCD_SRCorAirm<br>Fid_AFSCD_SRCorAirm                                                                  | Fid_AirCil<br>Fid_CoEng_trqLimErr<br>Fid_AFSCD_PIOffsDrft<br>Fid_AFSCD_AirPerTime                        |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | SRC min error for the duty cycle                           | P1102  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_PIOffsDrft   | error path for plausibility check of offset drift of airmass                                                        | 12  | Bit0 | airmass ADC raw value > threshold high                     | P1101  | 9           | YES         | OFF         | ON after 2DC | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2                            | Fid_AFSCD<br>Fid_AirCil<br>Fid_CoEng_trqLimErr                                                                                                   | Fid_AFSCD_AirPerTime                                                                                     |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | airmass ADC raw value < threshold low                      | P1103  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_PISetyDrft   | fault path for plausibility check of sensitivity drift of airmass                                                   | 13  | Bit0 | airmass ratio is higher then threshold high                | P1104  | 9           | YES         | OFF         | ON after 2DC | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCil_qSet__q_DLen1    | Fid_AFSCD<br>Fid_AirCil<br>Fid_CoEng_trqLimErr                                                                                                   | Fid_AFSCD_AirPerTime                                                                                     |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | airmass ratio is lower then threshold low                  | P1105  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_SRCAirTemp   | error path for signal range check of air temperature; do not enter into fault code memory, always use fault class 0 | 14  | Bit0 | air temperature above upper Limit                          | P0113  | 8           | NO          | OFF         | OFF          |                                                                                             | Fid_AFSCD<br>Fid_AFSCD_PISetyDrft<br>Fid_AFSCD_SRCorAirm                                                                                         | Fid_AFSCD_SRCorAirm<br>Fid_AirCil<br>Fid_CoEng_trqLimErr<br>Fid_AFSCD_AirPerTime                         |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | air temperature below lower Limit                          | P0112  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_SRCBatt      | error path for signal range check of battery voltage; do not enter into fault code memory, always use fault class 0 | 15  | Bit0 | Voltage above upper Limit                                  | P1562  | 8           | NO          | OFF         | OFF          |                                                                                             | Fid_AFSCD<br>Fid_AFSCD_PISetyDrft<br>Fid_AFSCD_SRCorAirm<br>Fid_AFSCD_SRCorAirm                                                                  | Fid_AFSCD_PIOffsDrft<br>Fid_AFSCD_SRCRefSig<br>Fid_AFSCD_SRCDcyc<br>Fid_AFSCD_AirPerTime                 |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower Limit                                  | P1562  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_SRCorAirm    | error path for the raw air mass signal                                                                              | 16  | Bit0 | Signal range check high error                              | P0101  | 8           | YES         | OFF         | ON           | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCil_qSet__q_DLen1    | Fid_AFSCD<br>Fid_AFSCD_PIOffsDrft<br>Fid_AFSCD_PISetyDrft                                                                                        | Fid_AirCil<br>Fid_CoEng_trqLimErr<br>Fid_AFSCD_AirPerTime                                                |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Signal range check low error                               | P0101  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_SRCRawAirm   | error path for the raw air mass signal                                                                              | 17  | Bit0 | Signal range check high error                              | P0100  | 8           | YES         | OFF         | ON           | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCil_qSet__q_DLen1    | Fid_AFSCD<br>Fid_AFSCD_PIOffsDrft<br>Fid_AFSCD_PISetyDrft                                                                                        | Fid_AirCil<br>Fid_CoEng_trqLimErr<br>Fid_AFSCD_AirPerTime                                                |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Signal range check low error                               | P0100  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | signal cutoff or short circuit to either battery or ground | P0100  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AFSCD_SRCRefSigPer | error path for signal range check of reference signal                                                               | 18  | Bit0 | SRC max error for the time period                          | P1106  | 8           | YES         | OFF         | ON           | AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCil_qSet__q_DLen1    | Fid_AFSCD<br>Fid_AFSCD_PISetyDrft<br>Fid_AFSCD_SRCorAirm<br>Fid_AFSCD_SRCorAirm                                                                  | Fid_AFSCD_SRCorAirm<br>Fid_AirCil<br>Fid_CoEng_trqLimErr<br>Fid_AFSCD_PIOffsDrft<br>Fid_AFSCD_AirPerTime |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | SRC min error for the time period                          | P1107  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | signal error for the time period                           | P0110  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_APP1               | fault path of Accelerator Pedal 1                                                                                   | 19  | Bit0 | Voltage above upper limit                                  | P0123  | 2           | YES         | ON          | OFF          | APPCD_uRawAPP1__u_DLen1<br>APPCD_rLinAPP1__Carb_r_DLen1                                     | Fid_AccPed<br>Fid_CoVehtrqLimErr<br>Fid_CrClShutOffRev                                                                                           |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P0122  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | plausibility with APP2 violated                            | P2135  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_APP2               | fault path of Accelerator Pedal 2                                                                                   | 20  | Bit0 | Voltage above upper limit                                  | P0223  | 2           | YES         | ON          | OFF          | APPCD_uRawAPP2__u_DLen2<br>APPCD_rLinAPP2__Carb_r_DLen1                                     | Fid_AccPed<br>Fid_CoVehtrqLimErr<br>Fid_CrClShutOffRev                                                                                           |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P0222  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit3 | plausibility with APP1 violated                            | P2135  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_APSCD              | error path of atmospheric pressure sensor                                                                           | 21  | Bit0 | Voltage above upper limit                                  | P2229  | 8           | YES         | OFF         | ON           | APSCD_uRaw__u_DLen1<br>APSCD_pVal__p_DLen1<br>BPSCD_pOutVal__p_DLen1                        | Fid_AFSCD_PISetyDrft<br>Fid_AirCil<br>Fid_DIUMPRDenom                                                                                            | Fid_StSysAddCor<br>Fid_CoVeh_Prflm1                                                                      |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower limit                                  | P2228  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit2 | CAN signal defect                                          | P0000  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_APSOBD             | Error path for Atmospheric Pressure Sensor SRCPhy range error                                                       | 22  | Bit0 | Voltage above upper Physical range                         | P1406  | 0           | NO          | OFF         | OFF          |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
|                        |                                                                                                                     |     | Bit1 | Voltage below lower Physical range                         | P1407  |             |             |             |              |                                                                                             |                                                                                                                                                  |                                                                                                          |                                                 |  |
| Dfp_AccPedPlausBrk     | Error path for AccPed and Brake Plausibility                                                                        | 23  | Bit3 | AccPed signal not plausible                                | P2299  | 1           | YES         | YES         | OFF          | OFF                                                                                         | APPCD_rAPP1UnFit__r_DLen1<br>BrkCD_stMnSwRawVal_OneToOne_DLen1<br>BrkCD_siPressed_OneToOne_DLen1<br>InjCil_qSet__q_DLen1                         | Fid_HpTst<br>Fid_InjCrvShOffTst<br>Fid_CompTst                                                           | Fid_RunUpTst                                    |  |
| Dfp_AirCilGvnrDvtMax   | AirCil permanent positive governor deviation                                                                        | 34  | Bit0 | Positive governor deviation above limit                    | P0401  | 11          | YES         | YES         | OFF          | ON after 2DC                                                                                | EGRCd_rOut__Carb_r2_DLen1<br>AirCil_rTVA__dcyc_DLen2<br>AFSCD_dmAirRawPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCil_qSet__q_DLen1 | Fid_AFSCD_PISetyDrft<br>Fid_AirCilGvnrDvt<br>Fid_PCR                                                     | Fid_ZFCIbActv<br>Fid_CoVeh_Prflm1<br>Fid_AirCil |  |

|                       |                                                         |    |                              |                                                                                                                            |                                  |    |     |              |              |                                                                                                                                               |                                                                                                                                                            |                                                                                                                      |
|-----------------------|---------------------------------------------------------|----|------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------|----|-----|--------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Dfp_AirCtGvnrDvtMin   | AirCtI permanent negative governor deviation            | 25 | Bit1                         | negative governor deviation below limit                                                                                    | P0402                            | 11 | YES | OFF          | ON after 2DC | EGRCD_rOut__Carb_r2_DLen1<br>AirCtI_rTVA__doyc_DLen2<br>AFSCD_dmAirPerTime__Carb_mAirTim_DLen2<br>AFSCD_tAir__t_DLen2<br>InjCtI_qSet__q_DLen1 | Fid_AFSCD_PISetyDrft<br>Fid_AirCtGvnrDvt<br>Fid_AirCtI                                                                                                     |                                                                                                                      |
| Dfp_BPACD             | fault path for BPA power stage                          | 26 | Bit0<br>Bit1<br>Bit2<br>Bit3 | Short Circuit Battery<br>Short Circuit Ground<br>No Load<br>Excess Temperature                                             | P0048<br>P0047<br>P0045<br>P0046 | 0  | NO  | OFF          | OFF          | BPSCD_pLin__Carb_p1_DLen1<br>BPACD_rOut__doyc_DLen2<br>BattCD_u__uBatt_DLen1                                                                  |                                                                                                                                                            |                                                                                                                      |
| Dfp_BPSAPSPlausChk    | Error path for Plausibility Check                       | 27 | Bit3                         | Not plausible with atmospheric pressure sensor                                                                             | P0069                            | 0  | NO  | OFF          | OFF          | APSCD_pVal__p_DLen1<br>BPSCD_pOutVal__p_DLen1<br>AFSCD_dmAirPerTime__mAirTim_DLen1                                                            | Fid_APSCD                                                                                                                                                  |                                                                                                                      |
| Dfp_BPSCD             | Error path for Boost pressure sensor                    | 28 | Bit0<br>Bit1<br>Bit2         | Voltage above upper limit<br>Voltage below lower limit<br>CAN signal defect                                                | P0238<br>P0237<br>P0235          | 0  | NO  | OFF          | OFF          | BPSCD_uRawVal__u_DLen1<br>BPSCD_pOutVal__p_DLen1<br>APSCD_pLinVal__Carb_p_DLen1                                                               | Fid_AFSCD_AirPerTime<br>Fid_AFSCD_PISetyDrft<br>Fid_APSCD<br>Fid_AirCtI                                                                                    | Fid_AirCtIBPSCor<br>Fid_CoEng_trqLimErr<br>Fid_PCR                                                                   |
| Dfp_BPSOBD            | Error path for Boost pressure sensor SRCPhy range error | 29 | Bit0<br>Bit1                 | Voltage above upper Physical range<br>Voltage below lower Physical range                                                   | P1408<br>P1409                   | 0  | NO  | OFF          | OFF          |                                                                                                                                               |                                                                                                                                                            |                                                                                                                      |
| Dfp_BattCD            | battery voltage fault                                   | 30 | Bit0<br>Bit1                 | Voltage above upper limit<br>Voltage below lower limit                                                                     | P0563<br>P0562                   | 13 | YES | OFF          | OFF          | GlwCtI_stActrOut__OneToOne_DLen1<br>EngM_stSync__OneToOne_DLen1<br>BattCD_u__uBatt_DLen1                                                      | Fid_ZFCbActv                                                                                                                                               |                                                                                                                      |
| Dfp_BrkCD             | Error path for brake signal                             | 31 | Bit2<br>Bit3                 | brake signal is defective<br>brake signals not plausible                                                                   | P0571<br>P0504                   | 3  | YES | ON after 2DC | OFF          | BrkCD_stMrSwRawVal__OneToOne_DLen1<br>BrkCD_stRedSwRawVal__OneToOne_DLen1                                                                     | Fid_AccPed_Brk<br>Fid_CoCtIShuOIIRev<br>Fid_DReqCDOptReq<br>Fid_HpTst                                                                                      | Fid_InjCrvShOffTst<br>Fid_LiGovUtr<br>Fid_CompTst<br>Fid_RunUpTst                                                    |
| Dfp_CTSCD             | error path of coolant temperature sensor                | 32 | Bit0<br>Bit1<br>Bit2<br>Bit3 | Voltage above upper limit<br>Voltage below lower limit<br>Can Msg. value defect<br>plausibility defect between OTS and CTS | P0118<br>P0117<br>P0115<br>P0116 | 8  | YES | OFF          | ON           | CTSCD_uRaw__u_DLen1<br>AFSCD_tAir__t_DLen2                                                                                                    | Fid_AFSCD_PISetyDrft<br>Fid_ClgDynTst<br>Fid_CmbChb<br>Fid_CoEngShOffTst<br>Fid_DSM_Wuc<br>Fid_EngDiffTempMon<br>Fid_ExhVivCtI_TempEng<br>Fid_FanCtI_ICInt | Fid_FISysCTSSens<br>Fid_CoEng_trqLimErr<br>Fid_HpTst<br>Fid_OTSCD_MAX<br>Fid_OTSCD_MIN<br>Fid_ZFCbActv<br>Fid_AirCtI |
| Dfp_CTSCDOut          | error path of coolant temperature output                | 33 | Bit0<br>Bit1<br>Bit2<br>Bit3 | Short circuit to battery<br>Short circuit to ground<br>No load<br>Excess temp.                                             | P1601<br>P1602<br>P1603<br>P1604 | 1  | YES | OFF          | OFF          |                                                                                                                                               |                                                                                                                                                            |                                                                                                                      |
| Dfp_CTSOBD            | Error path for Coolant Temperature                      | 34 | Bit0<br>Bit1                 | Voltage above upper Physical range<br>Voltage below lower Physical range                                                   | P140A<br>P140B                   | 0  | NO  | OFF          | OFF          |                                                                                                                                               |                                                                                                                                                            |                                                                                                                      |
| Dfp_ClgAbsTst         | Coolant temperature sensor absolute test                | 35 | Bit3                         | Minimum temperature not reached within time limit                                                                          | P0116                            | 9  | YES | OFF          | ON after 2DC | CoEng_iNormal__Carb_i_DLen2<br>InjCtI_qSet__q_DLen1<br>Clg_dDynTst__Carb_dt_DLen2                                                             |                                                                                                                                                            |                                                                                                                      |
| Dfp_Clg_DynTst        | Coolant temperature sensor dynamic test                 | 36 | Bit3                         | Minimum temperature raise not reached within time limit                                                                    | P0116                            | 9  | YES | OFF          | ON after 2DC | CoEng_iNormal__Carb_i_DLen2<br>Clg_dDynTst__Carb_dt_DLen2<br>Clg_iDynTst__Carb_it_DLen2<br>InjCtI_qSet__q_DLen1                               |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire1    | error path for Misfire cylinder 1                       | 37 | Bit0                         | number of recognized misfire events above limit                                                                            | P0301                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire2    | error path for Misfire cylinder 2                       | 38 | Bit0                         | number of recognized misfire events above limit                                                                            | P0302                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire3    | error path for Misfire cylinder 3                       | 39 | Bit0                         | number of recognized misfire events above limit                                                                            | P0303                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire4    | error path for Misfire cylinder 4                       | 40 | Bit0                         | number of recognized misfire events above limit                                                                            | P0304                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire5    | error path for Misfire cylinder 5                       | 41 | Bit0                         | number of recognized misfire events above limit                                                                            | P0305                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfire6    | error path for Misfire cylinder 6                       | 42 | Bit0                         | number of recognized misfire events above limit                                                                            | P0306                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfireAvg1 | error path for Misfire cylinder 1                       | 43 | Bit0                         | Average number of misfire events above limit                                                                               | P1319                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfireAvg2 | error path for Misfire cylinder 2                       | 44 | Bit0                         | Average number of misfire events above limit                                                                               | P131A                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |
| Dfp_CmbChbMisfireAvg3 | error path for Misfire cylinder 3                       | 45 | Bit0                         | Average number of misfire events above limit                                                                               | P131B                            | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_DLen2<br>AFSCD_dmAirPerTime__mAirTim_DLen1<br>InjCtI_qSet__q_DLen1<br>EGRCD_rOut__Carb_r2_DLen1                                 |                                                                                                                                                            |                                                                                                                      |

|                       |                                                                   |    |      |                                                 |       |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|-----------------------|-------------------------------------------------------------------|----|------|-------------------------------------------------|-------|----|-----|--------------|-----|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Dfp_CmbChbMisfireAvg4 | error path for Misfire cylinder 4                                 | 46 | Bit0 | Average number of misfire events above limit    | P131C | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>AFSCD_dmAirPerTime__mAirTim_Dlen1<br>InjCtI_qSet__q_Dlen1<br>EGRCD_rOut__Carb_r2_Dlen1 |                                                                                      |                                                                    |
| Dfp_CmbChbMisfireAvg5 | error path for Misfire cylinder 5                                 | 47 | Bit0 | Average number of misfire events above limit    | P131D | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>AFSCD_dmAirPerTime__mAirTim_Dlen1<br>InjCtI_qSet__q_Dlen1<br>EGRCD_rOut__Carb_r2_Dlen1 |                                                                                      |                                                                    |
| Dfp_CmbChbMisfireAvg6 | error path for Misfire cylinder 6                                 | 48 | Bit0 | Average number of misfire events above limit    | P131E | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>AFSCD_dmAirPerTime__mAirTim_Dlen1<br>InjCtI_qSet__q_Dlen1<br>EGRCD_rOut__Carb_r2_Dlen1 |                                                                                      |                                                                    |
| Dfp_CmbChbMisfireMul  | error path for misfire in multiple cylinders                      | 49 | Bit0 | number of recognized misfire events above limit | P0300 | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>AFSCD_dmAirPerTime__mAirTim_Dlen1<br>InjCtI_qSet__q_Dlen1<br>EGRCD_rOut__Carb_r2_Dlen1 |                                                                                      |                                                                    |
| Dfp_CoVMDCSh          | physical plausibility DCS                                         | 50 | Bit0 | physical unplausibility of DCS-demand           | P0856 | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
| Dfp_CoVehPrIm         | Error path/status for Performance limitation logic                | 51 | Bit0 | degradation level 0                             | P1109 | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | degradation level 1                             | P110A |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit2 | degradation level 2                             | P110B |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit3 | degradation level 3                             | P110C |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_CompTst           | faultpath for compression test                                    | 52 | Bit0 |                                                 | P161F | 0  | NO  | OFF          | OFF |                                                                                                               | Fid_InjUnStrtPlsBlk                                                                  |                                                                    |
| Dfp_ConvCD            | diagnostic fault path signals errors of main clutch signal        | 53 | Bit2 | CAN clutch signal is not defined                | P0704 | 3  | YES | ON after 2DC | OFF | InjCtI_qSet__q_Dlen1<br>ConvCD_stRawVal__OneToOne_Dlen1                                                       | Fid_CmbChb<br>Fid_CoDT_GripDeb<br>Fid_CrClShuOffRev<br>Fid_DReqCDOptReq<br>Fid_HpTst | Fid_InjCrvShOffTst<br>Fid_LiGovUbr<br>Fid_ZFCbActv<br>Fid_RunUpTst |
|                       |                                                                   |    | Bit3 | clutch signal is not plausible                  | P0704 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_CrCCD             | Error path for cruise control plausibility                        | 54 | Bit3 | cruise control raw key status not plausible     | P0575 | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
| Dfp_CrSCDTach         | Error path for the Tachometer signal                              | 55 | Bit0 | Short Circuit Battery                           | P1605 | 1  | YES | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | Short Circuit Ground                            | P1606 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit2 | No Load                                         | P1600 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_EATSCD            | error path of environment air temperature sensor                  | 56 | Bit0 | Voltage above upper limit                       | P0073 | 0  | NO  | OFF          | OFF | EATSCD_tAirLin__Carb_t_Dlen1<br>AFSCD_tAir__t_Dlen2                                                           | Fid_IATSCD                                                                           |                                                                    |
|                       |                                                                   |    | Bit1 | Voltage below lower limit                       | P0072 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit2 | Signal error, only in case of CAN               | P0071 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_EATSOBD           | Error path for Intake Air sensor SRCPhy range error               | 57 | Bit0 | Voltage above upper Physical range              | P140C | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | Voltage below lower Physical range              | P140D |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ECBICD            | fault path 1 for Engine Compartment Stop Button                   | 58 | Bit2 | Button is Stucked                               | P2536 | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
| Dfp_EEPCD_VehConf     | error path for incompatible data value in EEPROM                  | 59 | Bit0 | Error in any element                            | P062F | 1  | NO  | OFF          | OFF | EEPCD_stErrVehConf__OneToOne_Dlen2                                                                            |                                                                                      |                                                                    |
| Dfp_EGRCD             | fault path for EGR power stage                                    | 60 | Bit0 | Short Circuit Battery                           | P0490 | 10 | YES | OFF          | ON  | AFSCD_tAir__t_Dlen2                                                                                           | Fid_AirCtI<br>Fid_AFSCD_PISetyDrft<br>Fid_ZFCbActv<br>Fid_CoEng_IrqLimErr            | Fid_PCR                                                            |
|                       |                                                                   |    | Bit1 | Short Circuit Ground                            | P0489 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit2 | No Load                                         | P0404 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit3 | Excess Temperature                              | P0403 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_EGRCD_CBV         | fault path of EGRCD-cooling bypass valve                          | 61 | Bit0 | Short Circuit Battery                           | P245D | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | Short Circuit Ground                            | P249C |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit2 | No Load                                         | P245A |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit3 | Excess Temperature                              | P245B |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_EGRSCD            | error path of exhaust gas recirculator valve position sensor      | 62 | Bit0 | Voltage above upper limit                       | P0406 | 0  | NO  | OFF          | OFF |                                                                                                               |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | Voltage below lower limit                       | P0405 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj1      | Errorpath for filtered energizing time of Cylinder 1              | 63 | Bit0 | above upper limit of filtered energizing time   | P1200 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P1201 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj2      | Errorpath for filtered energizing time of Cylinder 2              | 64 | Bit0 | above upper limit of filtered energizing time   | P1202 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P1203 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj3      | Errorpath for filtered energizing time of Cylinder 3              | 65 | Bit0 | above upper limit of filtered energizing time   | P1204 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P1205 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj4      | Errorpath for filtered energizing time of Cylinder 4              | 66 | Bit0 | above upper limit of filtered energizing time   | P1206 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P1207 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj5      | Errorpath for filtered energizing time of Cylinder 5              | 67 | Bit0 | above upper limit of filtered energizing time   | P1208 | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P1209 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBETfInj6      | Errorpath for filtered energizing time of Cylinder 6              | 68 | Bit0 | above upper limit of filtered energizing time   | P120A | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of filtered energizing time   | P120B |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBInj1         | Errorpath for energizing time calibration injection of Cylinder 1 | 69 | Bit0 | above upper limit of energizing time            | P120C | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of energizing time            | P120D |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBInj2         | Errorpath for energizing time calibration injection of Cylinder 2 | 70 | Bit0 | above upper limit of energizing time            | P120E | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of energizing time            | P120F |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBInj3         | Errorpath for energizing time calibration injection of Cylinder 3 | 71 | Bit0 | above upper limit of energizing time            | P1210 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of energizing time            | P1211 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBInj4         | Errorpath for energizing time calibration injection of Cylinder 4 | 72 | Bit0 | above upper limit of energizing time            | P1212 | 1  | YES | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of energizing time            | P1213 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |
| Dfp_ETCIBInj5         | Errorpath for energizing time calibration injection of Cylinder 5 | 73 | Bit0 | above upper limit of energizing time            | P1214 | 0  | NO  | OFF          | OFF | AFSCD_tAir__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                                                |                                                                                      |                                                                    |
|                       |                                                                   |    | Bit1 | below lower limit of energizing time            | P1215 |    |     |              |     |                                                                                                               |                                                                                      |                                                                    |

|                         |                                                                                                                  |     |      |                                                                                 |       |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------|-----|------|---------------------------------------------------------------------------------|-------|---|-----|--------------|-----|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Dfp_ETCblnJ6            | Errorpath for energizing time calibration injection of Cylinder 6                                                | 74  | Bit0 | below upper limit of energizing time                                            | P1217 | 0 | NO  | OFF          | OFF | AFSCD_IaIr__t_Dlen2<br>VSSCD_v__v_Dlen1<br>APSCD_pVal__p_Dlen1                               |                                                                                      |                                                                                            |
| Dfp_EVCD                | fault path for EVCD power stage                                                                                  | 75  | Bit1 | below lower limit of energizing time                                            | P1217 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit0 | Short Circuit Battery                                                           | P0478 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P0477 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P0475 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_EngCDFIConsumOut    | fault path for Eng power stage                                                                                   | 76  | Bit3 | Excess Temperature                                                              | P0476 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit0 | Short Circuit Battery                                                           | P163B |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P163C |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P163D |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_EngDiffTempMon      | Fault path for non plausibility between coolant and second temperature engine start, after a min. cool down time | 77  | Bit3 | Excess Temperature                                                              | P163E | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     |      | difference between coolant and second temperatures exceeds a max. value         | P1112 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_EngMCaS1            | error path of camshaft failure                                                                                   | 78  | Bit0 | no camshaft signal                                                              | P0340 | 8 | YES | OFF          | ON  | InjCtl_qSet__q_Dlen1<br>EngM_stSync__OneToOne_Dlen1                                          | Fid_DIUMPRDenom<br>Fid_DIUMPRIgn<br>Fid_EngMcCaSBackUp                               | Fid_EngM_ChkStrtSpd<br>Fid_InjUnStrtPlsBlk<br>Fid_SignalsTstNLim                           |
|                         |                                                                                                                  |     | Bit1 | wrong camshaft signal                                                           | P0341 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_EngMCRs1            | error path of crankshaft failure                                                                                 | 79  | Bit0 | no crankshaft signal                                                            | P0335 | 8 | YES | OFF          | ON  | InjCtl_qSet__q_Dlen1<br>EngM_stSync__OneToOne_Dlen1                                          | Fid_ASDDc<br>Fid_CmbChb<br>Fid_CoEng_Nml2Srt<br>Fid_CrClShutOffIr<br>Fid_DIUMPRDenom | Fid_DIUMPRIgn<br>Fid_EngMCRSBackUp<br>Fid_FBC<br>Fid_InjUnStrtPlsBlk<br>Fid_SignalsTstNLim |
|                         |                                                                                                                  |     | Bit1 | wrong crankshaft signal                                                         | P0336 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_EngMOfsCaScRs       | error path of offset between camshaft and crankshaft                                                             | 80  | Bit0 | offset between camshaft and crankshaft                                          | P0016 | 1 | YES | OFF          | OFF | InjCtl_qSet__q_Dlen1<br>EngM_stSync__OneToOne_Dlen1                                          | Fid_DIUMPRDenom<br>Fid_DIUMPRIgn<br>Fid_EngM_ChkStrtSpd                              | Fid_FBC                                                                                    |
| Dfp_ExhLpCD             | Error Path for Exhaust barke Lamp powerstage                                                                     | 81  | Bit0 | Short Circuit Battery                                                           | P1500 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P1501 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P1502 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess Temperature                                                              | P1503 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_ExhVlvCtl           | Error Path for Exhaust brake monitor                                                                             | 82  | Bit0 | Short Circuit Battery                                                           | P0000 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FMTCT_NonMonotonMap | fault FMTCT_trq2qBas MAP contains non strictly monotonus q curves                                                | 83  | Bit3 | Not plausible fault                                                             | P1007 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FTSCD               | Fuel Temperature sensor                                                                                          | 84  | Bit0 | Voltage above upper limit                                                       | P0183 | 0 | NO  | OFF          | OFF |                                                                                              | Fid_FISysFTSSens<br>Fid_InjVWVwCorOff<br>Fid_ZFCCbActv                               |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Voltage below lower limit                                                       | P0182 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FTSOBD              | Error path for Fuel temp sensor SRCPhy range error                                                               | 85  | Bit0 | Voltage above upper Physical range                                              | P140E | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Voltage below lower Physical range                                              | P140F |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FanCD               | fault path of fan control for PWM type relay                                                                     | 86  | Bit0 | Short Circuit Battery                                                           | P0692 | 3 | YES | ON after 2DC | OFF |                                                                                              | Fid_FanCD1                                                                           |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P0691 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P0480 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess Temperature                                                              | P0483 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FanCDPwrStg2        | fault path of fan control for digital power stage 2                                                              | 87  | Bit0 | Short circuit to battery                                                        | P0694 | 3 | YES | ON after 2DC | OFF |                                                                                              | Fid_FanCD2                                                                           |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short circuit to ground                                                         | P0693 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No load                                                                         | P0481 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess temperature                                                              | P0484 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FIFCD_Htg           | fault path for fuel filter heating output                                                                        | 88  | Bit0 | Short circuit to battery                                                        | P1008 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short circuit to ground                                                         | P1009 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No load                                                                         | P100A |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess temperature                                                              | P100B |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_FIFCD_WtLvl         | water level in fuel sensor                                                                                       | 89  | Bit0 | max error incase of water                                                       | P2267 | 2 | YES | ON           | OFF | InjCtl_qSet__q_Dlen1                                                                         | Fid_CoVeh_Prflm3_MAX<br>Fid_ZFCCbActv_MAX                                            |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | sensor not working normally                                                     | P2264 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_GearbXncMax         | physical plausibility TSC                                                                                        | 90  | Bit0 | physical unplausibility of TSC-demand                                           | U0404 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
| Dfp_GlwCD_Actr          | Error path for the glow control relay actuator                                                                   | 91  | Bit0 | Short Circuit Battery                                                           | P0384 | 8 | YES | OFF          | ON  | BattCD_u_uBatt_Dlen1<br>GwCtl_stActrOut__OneToOne_Dlen1                                      |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P0383 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P0670 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess Temperature                                                              | P0670 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_GlwCD_Lamp          | Error path for the glow display lamp                                                                             | 92  | Bit0 | Short Circuit Battery                                                           | P1610 | 1 | YES | OFF          | OFF | BattCD_u_uBatt_Dlen1<br>GwCtl_slLampOut__OneToOne_Dlen1                                      |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short Circuit Ground                                                            | P1609 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | No Load                                                                         | P160A |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | Excess Temperature                                                              | P160B |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_GlwCtl              | Errors of Glow control unit                                                                                      | 93  | Bit0 | failure of a glow plug, Relay failure, Short circuit in glow plug, over-current | P0380 | 8 | YES | OFF          | ON  | BattCD_u_uBatt_Dlen1<br>GwCtl_stActrOut__OneToOne_Dlen1<br>GwCD_slRawVal__OneToOne_Dlen1     |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Short circuit in glow plug, over-current, Relay got stuck                       | P0382 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_HWEMonCom           | error state communication - SPI                                                                                  | 94  | Bit0 | communication error of CJ940                                                    | P060A | 3 | YES | ON after 2DC | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HWEMonEEPROM        | error state of EEPROM                                                                                            | 95  | Bit1 | error during last read operation                                                | P062F | 3 | YES | ON after 2DC | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | error during last write operation                                               | P062F |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit3 | default value used                                                              | P062F |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_HWEMonRcyLocked     | error path for Recovery which is locked                                                                          | 96  | Bit3 | a recovery has occurred                                                         | P0607 | 1 | YES | OFF          | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HWEMonRcySuppressed | error path for Recovery which is suppressed                                                                      | 97  | Bit3 | a recovery has occurred                                                         | P0607 | 0 | NO  | OFF          | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HWEMonRcyVisible    | error path for Recovery which is visible                                                                         | 98  | Bit3 | a recovery has occurred                                                         | P0607 | 2 | YES | ON           | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HWEMonUMaxSupply    | error state supply voltage CJ940 upper limit                                                                     | 99  | Bit0 | internal supply voltage upper limit                                             | P1607 | 2 | YES | ON           | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HWEMonUMinSupply    | error state supply voltage CJ940 lower limit                                                                     | 100 | Bit1 | internal supply voltage lower limit                                             | P1608 | 2 | YES | ON           | OFF | BattCD_u_uBatt_Dlen1<br>HWEMon_numRecovery__stLow_Dlen1                                      |                                                                                      |                                                                                            |
| Dfp_HpTst               | HpTst                                                                                                            | 101 | Bit0 | HpTst deactivates rail pressure monitoring                                      | P160C | 0 | NO  | OFF          | OFF |                                                                                              | Fid_RailMeUn0Blk<br>Fid_RailMeUn1Blk<br>Fid_RailMeUn2Blk<br>Fid_ZFCCbActv            | Fid_RailMeUn3Blk<br>Fid_RailMeUn7Blk<br>Fid_ZFCCbActv<br>Fid_ZFCCbActv                     |
| Dfp_IATSCD              | error path of air temperature sensor                                                                             | 102 | Bit0 | Voltage above upper limit                                                       | P0098 | 0 | NO  | OFF          | OFF | AFSCD_IaIr__t_Dlen2<br>IATSCD_uRaw__u_Dlen1                                                  | Fid_AFSCD_AirPerTime<br>Fid_AFSCD_PISetDrft                                          | Fid_ZFCCbActv<br>Fid_ZFCCbActv                                                             |
|                         |                                                                                                                  |     | Bit1 | Voltage below lower limit                                                       | P0097 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_IATSOBD             | Error path for Intake Air sensor SRCPhy range error                                                              | 103 | Bit0 | Voltage above upper Physical range                                              | P1410 | 0 | NO  | OFF          | OFF |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Voltage below lower Physical range                                              | P1411 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_ImmCtl              | Used to indicate when security function is not through                                                           | 104 | Bit3 | indicates that the recieved pattern and the transmitted pattern is not correct  | P0513 | 2 | YES | ON           | OFF |                                                                                              |                                                                                      |                                                                                            |
| Dfp_InjCrv_InjLim       | Fault path of injection limitation                                                                               | 105 | Bit0 | Number of injections limited by charge balance                                  | P131F | 0 | NO  | OFF          | OFF | BattCD_u_uBatt_Dlen1<br>InjCrv_stInjCharActVal__OneToOne_Dlen1<br>InjVCD_slMI1ET_mp__t_Dlen2 |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | Number of injections limited by quantity balance                                | P1320 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit2 | Number of injections limited by software                                        | P1321 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |
| Dfp_InjCrv_InjLim       | Fault path of injection limitation                                                                               | 106 | Bit0 | short circuit                                                                   | P1223 | 0 | YES | OFF          | ON  | BattCD_u_uBatt_Dlen1<br>InjCrv_stInjCharActVal__OneToOne_Dlen1                               |                                                                                      |                                                                                            |
|                         |                                                                                                                  |     | Bit1 | short circuit on Low Side to ground                                             | P1224 |   |     |              |     |                                                                                              |                                                                                      |                                                                                            |

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|                   |                                                                         |     |      |                                                                                        |       |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|-------------------|-------------------------------------------------------------------------|-----|------|----------------------------------------------------------------------------------------|-------|----|-----|--------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Dfp_OPSCD         | error path of oil pressure sensor                                       | 131 | Bit0 | Voltage above upper limit                                                              | P0622 | 0  | NO  | OFF          | OFF          | OPSCD_uRaw__u_Dlen1<br>CTSCD_tCint__t_Dlen1                                                                                                             | Fid_OPSCD_MAX<br>Fid_OPSCD_MIN<br>Fid_OPSCD_SIG                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0622 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit2 | Hardware signal error                                                                  | P0620 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit3 | Plausibility check - oil pressure too high                                             | P0621 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_OPSCD1        | error path for oil pressure too low error                               | 132 | Bit3 | Plausibility check - oil pressure too low                                              | P0624 | 0  | NO  | OFF          | OFF          | OPSCD_uRaw__u_Dlen1<br>CTSCD_tCint__t_Dlen1                                                                                                             | Fid_CoEng_IrqLimErr                                                                                                                                |                                                                                                                                            |
| Dfp_OTSCD         | error path of oil temperature sensor                                    | 133 | Bit0 | Voltage above upper limit                                                              | P0198 | 0  | NO  | OFF          | OFF          | OTSCD_uRaw__u_Dlen2<br>CTSCD_tCint__t_Dlen1                                                                                                             | Fid_CTSCD_Plaus_NPL<br>Fid_OPSCD_MAX<br>Fid_OPSCD_MIN<br>Fid_OPSCD_SIG                                                                             |                                                                                                                                            |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0197 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit2 | signal error for CAN                                                                   | P0195 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit3 | Plausibility error between OTS and CTS                                                 | P100D |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_OvrMon        | Fault path for overrun monitoring                                       | 134 | Bit0 | Energising time exceeds limit of overrun monitoring                                    | P1613 | 3  | YES | ON after 2DC | OFF          | HWEMon_numRecovery__stLow_Dlen1                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_OvrMonSigA    | Fault path for redundant engine speed calculation in overrun monitoring | 135 | Bit0 | Plausibility error in engine speed check                                               | P1614 | 3  | YES | ON after 2DC | OFF          | HWEMon_numRecovery__stLow_Dlen1                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_PCRGvnrDvtMax | Permanent governor deviation in PCR                                     | 136 | Bit0 | positive governor deviation above limit                                                | P2263 | 0  | NO  | OFF          | OFF          | AFSCD_tAir__L_Dlen2<br>APSCD_pVal__p_Dlen1<br>InjCil_qSet__q_Dlen1                                                                                      | Fid_AirCil<br>Fid_PCRGvnrDvt<br>Fid_AFSCD_PISetYDrft                                                                                               |                                                                                                                                            |
| Dfp_PCRGvnrDvtMin | Permanent governor deviation in PCR                                     | 137 | Bit1 | negative governor deviation below limit                                                | P2263 | 0  | NO  | OFF          | OFF          | AFSCD_tAir__t_Dlen2<br>APSCD_pVal__p_Dlen1<br>InjCil_qSet__q_Dlen1                                                                                      | Fid_AirCil<br>Fid_PCRGvnrDvt<br>Fid_CoVeh_Prlm1                                                                                                    | Fid_AFSCD_PISetYDrft                                                                                                                       |
| Dfp_PSPCD_Actr    | error path of power stage pre-supply pump                               | 138 | Bit0 | Short Circuit Battery                                                                  | P0629 | 0  | NO  | OFF          | OFF          |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit1 | Short Circuit Ground                                                                   | P0628 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit2 | No Load                                                                                | P0627 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit3 | Excess Temperature                                                                     | P062A |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_RailCD        | error path of rail pressure                                             | 139 | Bit0 | Voltage above upper limit                                                              | P0193 | 5  | YES | OFF          | ON           | RailCD_uPeakRaw__u_Dlen2<br>BattCD_u__uBatt_Dlen1<br>EngM_stSync__OneToOne_Dlen1                                                                        | Fid_CoEngRevSys2<br>Fid_CoEngShOffTst<br>Fid_ZFCCLbActv<br>Fid_ETCIBCoActv                                                                         | Fid_HpTst<br>Fid_InjUnStrPisBik<br>Fid_InjVWVwCorOff<br>Fid_RailCtMode<br>Fid_RailSetPointLim                                              |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0192 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_RailCDOfsTst  | error path RPS offset monitoring                                        | 140 | Bit0 | RPS raw value is above maximum offset                                                  | P0191 | 7  | YES | OFF          | ON after 2DC | RailCD_uOfsAtRunMax__u_Dlen2<br>RailCD_uOfsAtRunMin__u_Dlen2<br>RailCD_uOfsStrtMax__u_Dlen2<br>RailCD_uOfsStrtMin__u_Dlen2<br>RailCD_uPeakRaw__u_Dlen2  | Fid_CoEngShOffTst<br>Fid_CoEng_IrqLimErr<br>Fid_ETCIBCoActv                                                                                        | Fid_InjVWVwCorOff<br>Fid_RailSetPointLim<br>Fid_ZFCCLbActv                                                                                 |
|                   |                                                                         |     | Bit1 | RPS raw value is below minimum offset                                                  | P0191 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_RailMeUn0     | faults for checks in MeUn controlled mode                               | 141 | Bit0 | maximum positive deviation of rail pressure exceeded                                   | P1011 | 5  | YES | OFF          | ON           | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 | Fid_RailMeUn1RIs<br>Fid_RailSetPointRed<br>Fid_InjCil_qLimErr                                                                                      | Fid_ZFCCLbActv                                                                                                                             |
| Dfp_RailMeUn1     | faults for checks in MeUn controlled mode                               | 142 | Bit0 | maximum positive deviation of rail pressure exceeded concerning set flow of fuel       | P1012 | 6  | YES | OFF          | ON           | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 | Fid_RailMeUn2Bik<br>Fid_RailMeUn3Bik<br>Fid_RailMeUn4Bik                                                                                           | Fid_CoEngRevSys2<br>Fid_ZFCCLbActv                                                                                                         |
| Dfp_RailMeUn2     | faults for checks in MeUn controlled mode                               | 143 | Bit0 | maximum negative rail pressure deviation with metering unit on lower limit is exceeded | P1013 | 5  | YES | OFF          | ON           | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 | Fid_RailMeUn0Bik<br>Fid_RailMeUn1RIs<br>Fid_InjCil_qLimErr                                                                                         | Fid_ZFCCLbActv                                                                                                                             |
| Dfp_RailMeUn3     | faults for checks in MeUn controlled mode                               | 144 | Bit0 | minimum rail pressure exceeded                                                         | P0087 | 5  | YES | OFF          | ON           | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 | Fid_RailMeUn0Bik<br>Fid_RailMeUn1Bik<br>Fid_RailMeUn2Bik                                                                                           | Fid_RailMeUn4Bik<br>Fid_CoEngRevSys2<br>Fid_ZFCCLbActv                                                                                     |
| Dfp_RailMeUn4     | faults for checks in MeUn controlled mode                               | 145 | Bit0 | maximum rail pressure exceeded                                                         | P0088 | 5  | YES | OFF          | ON           | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 | Fid_RailMeUn0Bik<br>Fid_RailMeUn1Bik<br>Fid_RailMeUn2Bik                                                                                           | Fid_RailMeUn3Bik<br>Fid_CoEngRevSys2<br>Fid_ZFCCLbActv                                                                                     |
| Dfp_RailMeUn7     | faults for checks in MeUn controlled mode                               | 146 | Bit0 | setpoint of metering unit in overrun mode not plausible                                | P1014 | 0  | NO  | OFF          | OFF          | Rail_dvolMeUnSet__dvol_Dlen2<br>MeUnCD_iActFit_mp__curr_Dlen2<br>InjCil_qSet__q_Dlen1<br>Rail_pSetPoint__RailPres_Dlen2<br>RailCD_pPeak__RailPres_Dlen2 |                                                                                                                                                    |                                                                                                                                            |
| Dfp_RunUpTst      | faultpath for runup test                                                | 147 | Bit3 | is set to deactivate misfire detection during runup test                               | P1615 | 0  | NO  | OFF          | OFF          |                                                                                                                                                         | Fid_AirCil<br>Fid_CmbChb<br>Fid_FBC                                                                                                                | Fid_ZFCCLbActv<br>Fid_PCR                                                                                                                  |
| Dfp_SOPTst        | Fault path for test of redundant shut off paths during initialization   | 148 | Bit1 | Watch dog switch off path defect                                                       | P1616 | 1  | YES | OFF          | OFF          | HWEMon_numRecovery__stLow_Dlen1                                                                                                                         | Fid_EcuBoot<br>Fid_CoEngRevSys2                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit2 | Voltage monitoring upper limit shut off path defect                                    | P1617 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
|                   |                                                                         |     | Bit3 | Voltage monitoring lower limit shut off path defect                                    | P1618 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_SSPMon1       | sensor supply voltage 1                                                 | 149 | Bit0 | Voltage above upper limit                                                              | P0643 | 12 | YES | OFF          | ON           | BattCD_u__uBatt_Dlen1                                                                                                                                   | Fid_ACCTl<br>Fid_AFSCD_PISetYDrft<br>Fid_APP1<br>Fid_AccPed                                                                                        | Fid_CoEng_IrqLimErr<br>Fid_CrCtShutOffRev<br>Fid_EngMCaS1                                                                                  |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0642 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_SSPMon2       | sensor supply voltage 2                                                 | 150 | Bit0 | Voltage above upper limit                                                              | P0653 | 12 | YES | OFF          | ON           | BattCD_u__uBatt_Dlen1                                                                                                                                   | Fid_AFSCD<br>Fid_AFSCD_AirPerTime<br>Fid_AFSCD_PIOtsDrft<br>Fid_AFSCD_PISetYDrft<br>Fid_CoEng_IrqLimErr<br>Fid_AFSCD<br>Fid_AirCil<br>Fid_BPSCDMon | Fid_CoEngRevSys2<br>Fid_CoEngShOffTst<br>Fid_PCR<br>Fid_RailSetPointLim<br>Fid_RailCDRPSErrChk<br>Fid_RailCtMode<br>Fid_APP2<br>Fid_AccPed |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0652 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |
| Dfp_SSPMon3       | sensor supply voltage 3                                                 | 151 | Bit0 | Voltage above upper limit                                                              | P0699 | 12 | YES | OFF          | ON           | BattCD_u__uBatt_Dlen1                                                                                                                                   | Fid_ACCTl<br>Fid_AFSCD_PISetYDrft<br>Fid_APP2<br>Fid_AccPed                                                                                        | Fid_CoVehIrqLimErr<br>Fid_CrCtShutOffRev<br>Fid_EGRSCDMon                                                                                  |
|                   |                                                                         |     | Bit1 | Voltage below lower limit                                                              | P0698 |    |     |              |              |                                                                                                                                                         |                                                                                                                                                    |                                                                                                                                            |

|                  |                                                                                                          |     |      |                                                                  |       |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|------------------|----------------------------------------------------------------------------------------------------------|-----|------|------------------------------------------------------------------|-------|----|-----|-----|-----|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dfp_ShOffTst     | faultpath for shut off test                                                                              | 152 | Bit0 | Short Circuit Battery                                            | P0617 | 0  | NO  | OFF | OFF |                                                                                         | Fid_CmbChb<br>Fid_ZFCClbActv                                                                                                                                   |                                                                                                                                                                                           |
| Dfp_StrtCD       | Error path starter power stage                                                                           | 153 | Bit1 | Short Circuit Ground                                             | P0616 | 0  | NO  | OFF | OFF | BattCD_u_uBatt_DLen1<br>T15CD_stRawVal_OneToOne_DLen1<br>ConvCD_stRawVal_OneToOne_DLen1 | Fid_GlwClt3                                                                                                                                                    |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit2 | No Load                                                          | P0615 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | Excess Temperature                                               | P0615 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit0 | Short Circuit Battery                                            | P1619 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_SysLamp      | Power Stage fault status for System lamp                                                                 | 154 | Bit1 | Short Circuit Ground                                             | P161A | 1  | YES | OFF | OFF |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit2 | No Load                                                          | P161B |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | Excess Temperature                                               | P161C |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit0 | Short Circuit Battery                                            | P2142 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_T15CD        | error path for terminal 15 - contains plausibility error (Sig) of T15                                    | 155 | Bit2 | No Terminal 15 signals detected                                  | P2533 | 1  | YES | OFF | OFF | T15CD_stRawVal_OneToOne_DLen1                                                           | Fid_CoEngShOffTst<br>Fid_GlwClt2                                                                                                                               |                                                                                                                                                                                           |
| Dfp_TPUMon       | TPU monitoring                                                                                           | 156 | Bit3 | Deviation between TPU and system time                            | P0607 | 2  | YES | ON  | OFF | HWEMon_numRecovery___stLow_DLen1                                                        |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_TVACD        | fault path for TVA power stage                                                                           | 157 | Bit0 | Short Circuit Battery                                            | P2142 | 0  | NO  | OFF | OFF |                                                                                         | Fid_AirCtI<br>Fid_ZFCClbActv<br>Fid_PCR<br>Fid_AFSCD_PISetyDrft<br>Fid_CoEng_trqLimErr                                                                         |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit1 | Short Circuit Ground                                             | P2141 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit2 | No Load                                                          | P0487 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | Excess Temperature                                               | P0488 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_ThrVvRglMode | error path of ThrVv regular mode                                                                         | 158 | Bit0 | maximum failures                                                 | P0638 | 0  | NO  | OFF | OFF |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_ThrVvStLine  | error path of ThrVv stateline                                                                            | 159 | Bit0 | maximum failures                                                 | P1412 | 0  | NO  | OFF | OFF |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_VSACD        | fault path for VSA power stage                                                                           | 160 | Bit0 | Short circuit to battery                                         | P0662 | 0  | NO  | OFF | OFF |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit1 | Short circuit to ground                                          | P0661 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit2 | No load                                                          | P0660 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | Power stage excess temperature                                   | P1620 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_VSSCD1       | fault path 1 for vehicle speed sensing                                                                   | 161 | Bit0 | exceeding of the maximum vehicle speed                           | P0501 | 13 | YES | OFF | OFF | VSSCD_v_v_DLen1<br>InjCtI_qSet__q_DLen1                                                 | Fid_ACCtI<br>Fid_CmbChb<br>Fid_CoDT_GripDeb<br>Fid_CoEngShOffTst<br>Fid_CoEngStop<br>Fid_CrCtIShutOffRev<br>Fid_DIUMPRDenom<br>Fid_DReqCDOptReq<br>Fid_EcuBoot | Fid_FIMngGearDet<br>Fid_FIMngVehSpdOK<br>Fid_Gearbx_GearDet<br>Fid_HpTst<br>Fid_InjCrvShOffTst<br>Fid_LiGovSetpDrvAway<br>Fid_LiGovUbr<br>Fid_RunUpTst<br>Fid_VehDaDist<br>Fid_ZFCClbActv |
|                  |                                                                                                          |     | Bit2 | HW signal for vehicle speed not valid                            | P0500 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | vehicle speed not plausible with injection mass and engine speed | P0501 |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_VSSCD2       | fault path 2 for vehicle speed sensing                                                                   | 162 | Bit2 | CAN signal for vehicle speed not valid                           | P2157 | 0  | NO  | OFF | OFF |                                                                                         | Fid_ACCtI<br>Fid_CmbChb<br>Fid_CoDT_GripDeb<br>Fid_CoEngShOffTst<br>Fid_CoEngStop<br>Fid_CrCtIShutOffRev<br>Fid_DIUMPRDenom<br>Fid_EcuBoot<br>Fid_FIMngGearDet | Fid_FIMngVehSpdOK<br>Fid_Gearbx_GearDet<br>Fid_HpTst<br>Fid_InjCrvShOffTst<br>Fid_LiGovSetpDrvAway<br>Fid_LiGovUbr<br>Fid_RunUpTst<br>Fid_VehDaDist<br>Fid_ZFCClbActv                     |
| Dfp_VarMngCodDs  | Errorpath for dataset variant coding. Npl=Requested variant could not be set, Sig=variant dataset defect | 163 | Bit2 | Signal fault                                                     | P161D | 1  | YES | OFF | OFF | HWEMon_numRecovery___stLow_DLen1                                                        |                                                                                                                                                                |                                                                                                                                                                                           |
|                  |                                                                                                          |     | Bit3 | Not plausible fault                                              | P161E |    |     |     |     |                                                                                         |                                                                                                                                                                |                                                                                                                                                                                           |
| Dfp_WdCom        | the fault path contains the supervision of the SPI-Handler                                               | 164 | Bit3 | Set, if SPI-communication failed                                 | U0073 | 2  | YES | ON  | OFF | HWEMon_numRecovery___stLow_DLen1                                                        |                                                                                                                                                                |                                                                                                                                                                                           |