

TAB 9

## DTC CODES SUMMARY CHART--REQUEST NO. 9\_OPTIMA/ OPTIMA HYBRID (TF/QF/TF HEV)

| Diagnostic Trouble Code or Fault Code Identified (e.g., DTC code) | Module or Other Hardware Containing Code | Description of the DTC                                         | Description of the Conditions Which Result in the Code Being Set | Tools, software, and procedures required to download the code |
|-------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------|
| (a)                                                               | (b)                                      | (c)                                                            | (d)                                                              | (d)                                                           |
| B1101                                                             | Ignition                                 | Ignition voltage high                                          | Battery voltage >16V                                             | GDS Scan Tool<br>KDS Scan Tool                                |
| B1102                                                             | Ignition                                 | Ignition voltage low                                           | Battery voltage <9V                                              | ↑                                                             |
| B1328                                                             | FIS<br>(Front Impact Sensor)             | FIS Driver defect                                              | FIS send defect code, FIS output is not expected value           | ↑                                                             |
| B1329                                                             | FIS<br>(Front Impact Sensor)             | FIS Driver communication error                                 | FIS no acceleration data, and line voltage is ok                 | ↑                                                             |
| B1333                                                             | FIS<br>(Front Impact Sensor)             | FIS Passenger defect                                           | FIS send defect code, FIS output is not expected value           | ↑                                                             |
| B1334                                                             | FIS<br>(Front Impact Sensor)             | FIS Passenger communication error                              | FIS no acceleration data, and line voltage is ok                 | ↑                                                             |
| B1346                                                             | DAB<br>(Driver airbag)                   | 1st Stage Driver airbag resistance too high                    | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1347                                                             | DAB<br>(Driver airbag)                   | 1st Stage Driver airbag resistance too low                     | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1348                                                             | DAB<br>(Driver airbag)                   | 1st Stage Driver airbag resistance circuit short to ground     | Squib line voltage is ground                                     | ↑                                                             |
| B1349                                                             | DAB<br>(Driver airbag)                   | 1st Stage Driver airbag resistance circuit short to battery    | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1352                                                             | PAB<br>(Passenger airbag)                | 1st Stage Passenger airbag resistance too high                 | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1353                                                             | PAB<br>(Passenger airbag)                | 1st Stage Passenger airbag resistance too low                  | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1354                                                             | PAB<br>(Passenger airbag)                | 1st Stage Passenger airbag resistance circuit short to ground  | Squib line voltage is ground                                     | ↑                                                             |
| B1355                                                             | PAB<br>(Passenger airbag)                | 1st Stage Passenger airbag resistance circuit short to battery | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1361                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Driver resistance too high                  | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1362                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Diver resistance too low                    | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1363                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Driver resistance circuit short to ground   | Squib line voltage is ground                                     | ↑                                                             |
| B1364                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Driver resistance circuit short to battery  | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1367                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Passenger resistance too high               | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1368                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Passenger resistance too low                | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |

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| (a)                                                               | (b)                                      | (c)                                                                  | (d)                                                                                    | (d)                                                           |
| B1369                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Passenger resistance circuit short to ground      | Squib line voltage is ground                                                           | ↑                                                             |
| B1370                                                             | PT<br>(Pretensioner)                     | Pretensioner front-Passenger resistance circuit short to battery     | Squib line voltage is Batt (When Batt 7.8~18V)                                         | ↑                                                             |
| B1378                                                             | SAB<br>(Side airbag)                     | Side airbag front-Driver resistance too high                         | Squib resistance $\geq 6.7\Omega$                                                      | ↑                                                             |
| B1379                                                             | SAB<br>(Side airbag)                     | Side airbag front-Driver resistance too low                          | Squib resistance $\leq 1.1\Omega$                                                      | ↑                                                             |
| B1380                                                             | SAB<br>(Side airbag)                     | Side airbag front-Driver resistance circuit short to ground          | Squib line voltage is ground                                                           | ↑                                                             |
| B1381                                                             | SAB<br>(Side airbag)                     | Side airbag front-Driver resistance circuit short to battery         | Squib line voltage is Batt (When Batt 7.8~18V)                                         | ↑                                                             |
| B1382                                                             | SAB<br>(Side airbag)                     | Side airbag front-Passenger resistance too high                      | Squib resistance $\geq 6.7\Omega$                                                      | ↑                                                             |
| B1383                                                             | SAB<br>(Side airbag)                     | Side airbag front-Passenger resistance too low                       | Squib resistance $\leq 1.1\Omega$                                                      | ↑                                                             |
| B1384                                                             | SAB<br>(Side airbag)                     | Side airbag front-Passenger resistance circuit short to ground       | Squib line voltage is ground                                                           | ↑                                                             |
| B1385                                                             | SAB<br>(Side airbag)                     | Side airbag front-Passenger resistance circuit short to battery      | Squib line voltage is Batt (When Batt 7.8~18V)                                         | ↑                                                             |
| B1395                                                             | Squib                                    | Squib Interconnection Fault                                          | Squib lines are cross coupled, Make other line sink, and then other squib line answers | ↑                                                             |
| B1400                                                             | SIS<br>(Side Impact Sensor)              | SIS front-Driver defect                                              | SIS no acceleration data, and line voltage is ok                                       | ↑                                                             |
| B1403                                                             | SIS<br>(Side Impact Sensor)              | SIS front-Passenger defect                                           | SIS no acceleration data, and line voltage is ok                                       | ↑                                                             |
| B1409                                                             | SIS<br>(Side Impact Sensor)              | SIS front-Driver communication error                                 | SIS send defect code, SIS output is not expected value                                 | ↑                                                             |
| B1410                                                             | SIS<br>(Side Impact Sensor)              | SIS front-Passenger communication error                              | SIS send defect code, SIS output is not expected value                                 | ↑                                                             |
| B1473                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-driver resistance too high                 | Squib resistance $\geq 6.7\Omega$                                                      | ↑                                                             |
| B1474                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Driver resistance too low                  | Squib resistance $\leq 1.1\Omega$                                                      | ↑                                                             |
| B1475                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Driver resistance circuit short to ground  | Squib line voltage is ground                                                           | ↑                                                             |
| B1476                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-driver resistance circuit short to battery | Squib line voltage is Batt (When Batt 7.8~18V)                                         | ↑                                                             |

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| (a)                                                               | (b)                                      | (c)                                                                     | (d)                                                              | (d)                                                           |
| B1477                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Passenger resistance too high                 | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1478                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Passenger resistance too low                  | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1479                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Passenger resistance circuit short to ground  | Squib line voltage is ground                                     | ↑                                                             |
| B1480                                                             | CAB<br>(Curtain airbag)                  | Inflatable Curtain airbag-Passenger resistance circuit short to battery | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1481                                                             | DAB(2nd)                                 | 2nd Stage Driver airbag resistance too high                             | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1482                                                             | DAB(2nd)                                 | 2nd Stage Driver airbag resistance too low                              | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1483                                                             | DAB(2nd)                                 | 2nd Stage Driver airbag resistance circuit short to ground              | Squib line voltage is ground                                     | ↑                                                             |
| B1484                                                             | DAB(2nd)                                 | 2nd Stage Driver airbag resistance circuit short to battery             | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1485                                                             | PAB(2nd)                                 | 2nd Stage Passenger airbag resistance too high                          | Squib resistance $\geq 6.7\Omega$                                | ↑                                                             |
| B1486                                                             | PAB(2nd)                                 | 2nd Stage Passenger airbag resistance too low                           | Squib resistance $\leq 1.1\Omega$                                | ↑                                                             |
| B1487                                                             | PAB(2nd)                                 | 2nd Stage Passenger airbag resistance circuit short to ground           | Squib line voltage is ground                                     | ↑                                                             |
| B1488                                                             | PAB(2nd)                                 | 2nd Stage Passenger airbag resistance circuit short to battery          | Squib line voltage is Batt (When Batt 7.8~18V)                   | ↑                                                             |
| B1490                                                             | ODS<br>(Occupant Detection System)       | ODS sensor defect                                                       | ODS defect message received form WCS                             | ↑                                                             |
| B1493                                                             | ODS<br>(Occupant Detection System)       | ODS communication error                                                 | ODS CAN message time-out                                         | ↑                                                             |
| B1494                                                             | ODS<br>(Occupant Detection System)       | ODS (Wrong ID)                                                          | wrong ID received from ODS                                       | ↑                                                             |
| B1511                                                             | Buckle Sensor                            | Driver Seat Buckle Switch open or short to Battery                      | Sensor line current $< 3\text{mA}$                               | ↑                                                             |
| B1512                                                             | Buckle Sensor                            | Driver Seat Buckle Switch short or short to Ground                      | Sensor line current $> 22\text{mA}$                              | ↑                                                             |
| B1513                                                             | Buckle Sensor                            | Passenger Seat Buckle Switch open or short to Battery                   | Sensor line current $< 3\text{mA}$                               | ↑                                                             |
| B1514                                                             | Buckle Sensor                            | Passenger Seat Buckle Switch short or short to Ground                   | Sensor line current $> 22\text{mA}$                              | ↑                                                             |
| B1515                                                             | Buckle Sensor                            | Driver Seat Buckle Switch Defect                                        | $8.9\text{mA} < \text{Sensor line current} < 9.5\text{mA}$       | ↑                                                             |
| B1516                                                             | Buckle Sensor                            | Passenger Seat Buckle Switch Defect                                     | $8.9\text{mA} < \text{Sensor line current} < 9.5\text{mA}$       | ↑                                                             |
| B1620                                                             | ACU                                      | Internal fault - Replace ECU                                            | Internal Fault                                                   | ↑                                                             |
| B1650                                                             | Crash                                    | Crash recorded in 1st Stage only                                        | Front Crash with 1st Stage only                                  | ↑                                                             |
| B1651                                                             | Crash                                    | Crash recorded Side Airbag front-Driver                                 | Driver Side Crash                                                | ↑                                                             |
| B1652                                                             | Crash                                    | Crash recorded Side Airbag front-Passenger                              | Passenger Side Crash                                             | ↑                                                             |
| B1670                                                             | Crash                                    | Crash recorded in Full stage                                            | Front Crash with Full stage                                      | ↑                                                             |

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| (a)                                                               | (b)                                      | (c)                                                                     | (d)                                                                         | (d)                                                           |
| B1683                                                             | ACU                                      | Exceed Maximum Coding Number                                            | ACU Coding Error exceed 255 times.                                          | ↑                                                             |
| B1684                                                             | ACU                                      | ACU configuration is different                                          | After ACU coding, ACU configuration is different with Vehicle configuration | ↑                                                             |
| B1730                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Driver resistance too high                    | Squib resistance $\geq 6.7\Omega$                                           | ↑                                                             |
| B1731                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Driver resistance too low                     | Squib resistance $\leq 1.1\Omega$                                           | ↑                                                             |
| B1732                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Driver resistance circuit short to Ground     | Squib line voltage is ground                                                | ↑                                                             |
| B1733                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Driver resistance circuit short to Battery    | Squib line voltage is Batt (When Batt 7.8~18V)                              | ↑                                                             |
| B1734                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Passenger resistance too high                 | Squib resistance $\geq 6.7\Omega$                                           | ↑                                                             |
| B1735                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Passenger resistance too low                  | Squib resistance $\leq 1.1\Omega$                                           | ↑                                                             |
| B1736                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Passenger resistance circuit short to Ground  | Squib line voltage is ground                                                | ↑                                                             |
| B1737                                                             | APT<br>(Anchor Pretensioner)             | Anchor Pretensioner front-Passenger resistance circuit short to Battery | Squib line voltage is Batt (When Batt 7.8~18V)                              | ↑                                                             |
| B1739                                                             | PSIS<br>(Pressure Side Impact Sensor)    | P-SIS Driver defect                                                     | P-SIS send defect code<br>P-SIS output is not expected value                | ↑                                                             |
| B1742                                                             | PSIS<br>(Pressure Side Impact Sensor)    | P-SIS Driver communication error                                        | P-SIS no data, and line voltage is ok                                       | ↑                                                             |
| B1745                                                             | PSIS<br>(Pressure Side Impact Sensor)    | P-SIS Passenger defect                                                  | P-SIS send defect code<br>P-SIS output is not expected value                | ↑                                                             |
| B1748                                                             | PSIS<br>(Pressure Side Impact Sensor)    | P-SIS Passenger communication error                                     | P-SIS no data, and line voltage is ok                                       | ↑                                                             |
| B1762                                                             | ACU                                      | ACU Coding Error                                                        | When ACU coding, ACU configuration is different with Vehicle configuration  | ↑                                                             |
| B2500                                                             | AWL<br>(ACU Warning Lamp)                | SRS Warning lamp Failure                                                | Warning lamp failure Ground short or Battery short                          | ↑                                                             |
| B2502                                                             | TTL<br>(Telltale Lamp)                   | Passenger airbag tell tale Lamp fail                                    | Passenger Telltale Lamp failure Ground short or Battery short               | ↑                                                             |