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## Freightliner Business Class M2 Fault Codes List - Bulkhead Module

Bulkhead Module Fault Code Information

| J1587 SIDs for Bulkhead Module (BHM) MID 164 |                                                                                                     |              |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------|
| SID                                          | Description                                                                                         | Possible FMI |
| 000                                          | Backlighting Dimmer Switch Fault                                                                    | 7            |
| 001                                          | Clutch Switch Fault                                                                                 | 7            |
| 002                                          | Reserved for Future Use                                                                             | —            |
| 003                                          | Headlamp Switch Disagreement—Both park and on inputs are closed                                     | 7            |
| 004                                          | Multifunction Turn Signal Switch High Beam Input Fault                                              | 2            |
| 005                                          | Ignition Switch Fault                                                                               | 7            |
| 006                                          | Marker Interrupt Switch Fault                                                                       | 7            |
| 007                                          | Multifunction Turn Signal Switch Disagreement—Both wiper high and wiper low inputs are on.          | 2            |
| 008                                          | Multifunction Turn Signal Switch Disagreement—Wiper on/off is off and wiper high or low input is on | 2            |
| 009                                          | Wiper Park Input Fault                                                                              | 7            |
| 010                                          | ICU3-M2 Hazard Switch CAN Feedback Error                                                            | 2            |
| 011                                          | Multifunction Turn Signal Switch Left Turn Signal Input Fault                                       | 2            |
| 012                                          | Multifunction Turn Signal Switch Right Turn Signal Input Fault                                      | 2            |
| 013                                          | Multifunction Turn Signal Switch Washer Switch Input Fault                                          | 2            |
| 014                                          | Multifunction Turn Signal Switch Wiper On/Off Input Fault                                           | 2            |

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| <b>J1587 SIDs for Bulkhead Module (BHM) MID 164</b> |                                                               |                     |
|-----------------------------------------------------|---------------------------------------------------------------|---------------------|
| <b>SID</b>                                          | <b>Description</b>                                            | <b>Possible FMI</b> |
| 015                                                 | Multifunction Turn Signal Switch Wiper Low Input Fault        | 2                   |
| 016                                                 | Multifunction Turn Signal Switch Wiper High Input Fault       | 2                   |
| 017                                                 | Wheel-Based Vehicle Speed CAN Message Error                   | 2                   |
| 018                                                 | Wake-up Hardware Fault—Modules are kept awake                 | 7                   |
| 019                                                 | Unknown Keep Awake Fault—Modules are kept awake.              | 7                   |
| 020                                                 | Extra Smart Switch                                            | 7                   |
| 021                                                 | Duplicate Smart Switch                                        | 7                   |
| 022                                                 | Missing Smart Switch                                          | 7                   |
| 023                                                 | Fifth Wheel Solenoid Unexpected Pressure Feedback             | 7                   |
| 024                                                 | Fifth Wheel Solenoid No Pressure Feedback                     | 7                   |
| 025                                                 | End of Frame Air Unexpected Pressure Feedback                 | 7                   |
| 026                                                 | End of Frame Air No Pressure Feedback                         | 7                   |
| 027                                                 | Axle Lift Unexpected Pressure Feedback                        | 7                   |
| 028                                                 | Axle Lift No Pressure Feedback                                | 7                   |
| 029                                                 | Suspension Dump Unexpected Pressure Feedback                  | 7                   |
| 030                                                 | Suspension Dump No Pressure Feedback                          | 7                   |
| 031                                                 | Suspension Proportioning Unexpected Pressure Feedback         | 7                   |
| 032                                                 | Suspension Proportioning No Pressure Feedback                 | 7                   |
| 033                                                 | Cigar Lighter Output Fault                                    | 7                   |
| 034                                                 | BHM/ICU3-M2 Ignition Mismatch                                 | 7                   |
| 035                                                 | BHM/ICU3-M2 Hazard Switch Mismatch                            | 2                   |
| 036                                                 | BHM/ICU3-M2 Wiper Park Mismatch                               | 2                   |
| 037                                                 | Missing Transmission CAN Message                              | 9                   |
| 038                                                 | Missing Chassis Module CAN Message                            | 9                   |
| 039                                                 | Remote Bucket Switch Stuck Fault                              | 7                   |
| 040                                                 | Axle Lift 2 Unexpected Pressure Feedback                      | 7                   |
| 041                                                 | Axle Lift 2 No Pressure Feedback                              | 7                   |
| 042                                                 | PTO 1 Unexpected Pressure Feedback                            | 7                   |
| 043                                                 | PTO 1 No Pressure Feedback                                    | 7                   |
| 044                                                 | PTO 2 Unexpected Pressure Feedback                            | 7                   |
| 045                                                 | PTO 2 No Pressure Feedback                                    | 7                   |
| 046                                                 | CHM No PWM DRLs Fault                                         | 8                   |
| 047–049                                             | Reserved for Future Use                                       | —                   |
| 050                                                 | BHM B1.A—Fuel Level Input Fault (Not Used)                    | 3, 4                |
| 051                                                 | BHM B1.F, B1.P, B2.K, B2.L, B6.A8—Ignition Power Output Fault | 5, 6                |
| 052                                                 | BHM B1.J—Main BHM Power VBAT5 Input Fault                     | 3, 4                |

| J1587 SIDs for Bulkhead Module (BHM) MID 164 |                                                          |              |
|----------------------------------------------|----------------------------------------------------------|--------------|
| SID                                          | Description                                              | Possible FMI |
| 053                                          | BHM B1.K, B5.C—Tail/Clearance Lamp Output Fault          | 5, 6         |
| 054                                          | BHM B1.L—Left High Beam Output Fault                     | 5, 6         |
| 055                                          | BHM B1.N—Main BHM Power VBAT3 Input Fault                | 3, 4         |
| 056                                          | BHM B1.R—Left Low Beam Output Fault                      | 5, 6         |
| 057                                          | BHM B2.M—A/C Clutch Output Fault                         | 5, 6         |
| 058                                          | BHM B3.D—Main BHM Power VBAT1 Input Fault                | 3, 4         |
| 059                                          | BHM B3.E—Horn Output Fault                               | 3, 4, 5, 6   |
| 060                                          | BHM B3.F—Wiper High Speed Output Fault                   | 5, 6         |
| 061                                          | BHM B3.G—Washer Pump Output Fault                        | 5, 6         |
| 062                                          | BHM B3.H—Wiper Low Speed Output Fault                    | 5, 6         |
| 063                                          | BHM B4.B—Starter Relay Output Fault                      | 5, 6         |
| 064                                          | BHM B4.E, B4.F—Spare Output Fault                        | 3, 4, 5, 6   |
| 065                                          | BHM B4.G—Main BHM Power VBAT2 Input Fault                | 3, 4         |
| 066                                          | BHM B4.K—Main BHM Power VBAT4 Input Fault                | 3, 4         |
| 067                                          | BHM B4.M, B5.E—Spare Output Fault                        | 3, 4, 5, 6   |
| 068                                          | BHM B5.A, B7.A12—Dome Lamp Battery Power Output Fault    | 5, 6         |
| 069                                          | BHM B6.A9, B6.A10—HVAC/Radio Ignition Power Output Fault | 5, 6         |
| 070                                          | BHM B5.B—Dome Lamp Switched Power Output Fault           | 5, 6         |
| 071                                          | BHM B5.D—ICU Wake Output Fault                           | 5, 6         |
| 072                                          | BHM B5.F—Cigar Light Output Fault                        | 3, 4, 5, 6   |
| 073                                          | BHM B5.G—Spare Ignition Power Output Fault               | 3, 4, 5, 6   |
| 074                                          | BHM B5.H, B7.A1—Panel Lamps Output Fault                 | 3, 4, 5, 6   |
| 075                                          | CHM C1.A, C1.H, C1.J—Backup Lamps/Alarm Output Fault     | 5, 6         |
| 076                                          | CHM C1.G, C2.H, C3.N—Left Turn Signal Output Fault       | 5, 6         |
| 077                                          | CHM C1.L—Right Stop Lamp Output Fault                    | 5, 6         |
| 078                                          | CHM C1.N—Left Stop Lamp Output Fault                     | 5, 6         |
| 079                                          | CHM C1.P, C2.E, C3.R—Right Turn Signal Output Fault      | 5, 6         |
| 080                                          | CHM C2.A—Trailer Power Relay Output Fault                | 3, 4         |
| 081                                          | CHM C2.F, C4.C, C4.D, C4.L, C4.M—Park/Marker Lamp Output | 3, 4, 5, 6   |
| 082                                          | CHM C3.A—Spare Output Fault                              | 3, 4, 5, 6   |
| 083                                          | CHM C3.C, C3.D—Spare Output Fault                        | 5, 6         |
| 084                                          | CHM C3.E—Low Air Pressure Input Fault                    | 3, 4         |
| 085                                          | CHM C3.F—Park Brake Input Fault                          | 3, 4         |
| 086                                          | CHM C3.J—Main CHM Power VBAT2 Input Fault                | 3, 4         |
| 087                                          | CHM C3.K—Right DRL Output Fault                          | 5, 6         |
| 088                                          | CHM C3.L—Right Low Beam Output                           | 5, 6         |

| J1587 SIDs for Bulkhead Module (BHM) MID 164 |                                              |              |
|----------------------------------------------|----------------------------------------------|--------------|
| SID                                          | Description                                  | Possible FMI |
| 089                                          | CHM C4.F—Left DRL Output Fault               | 5, 6         |
| 090                                          | CHM C4.J—Main CHM Power VBAT3 Input Fault    | 3, 4         |
| 091                                          | CHM C4.K—Right High Beam Output              | 5, 6         |
| 092                                          | CHM C4.P—Main CHM Power VBAT1 Input Fault    | 3, 4         |
| 093                                          | CHM C5.A—Solenoid #0 Pressure Feedback Fault | 3, 4         |
| 094                                          | CHM C5.B—Solenoid #1 Pressure Feedback Fault | 3, 4         |
| 095                                          | CHM C5.F—Solenoid #2 Pressure Feedback Fault | 3, 4         |
| 096                                          | CHM C5.G—Solenoid #3 Pressure Feedback Fault | 3, 4         |
| 097                                          | CHM C5.H—Solenoid #0 Output Fault            | 3, 4         |
| 098                                          | CHM C5.J—Solenoid #1 Output Fault            | 3, 4         |
| 099                                          | CHM C5.L—Solenoid #2 Output Fault            | 3, 4         |
| 100                                          | CHM C5.M—Solenoid #3 Output Fault            | 3, 4         |
| 101                                          | EXM Fault (Fault in one of the EXM Outputs)  | 3, 4, 5, 6   |

| J1939 SPNs for Bulkhead Module (BHM) SA 33 |                                       |              |
|--------------------------------------------|---------------------------------------|--------------|
| SPN                                        | Description                           | Possible FMI |
| 70                                         | Parking Brake Switch                  | 2            |
| 80                                         | Washer Fluid Level                    | 2            |
| 84                                         | Wheel-based Vehicle Speed             | 19           |
| 96                                         | Fuel Level                            | 19           |
| 97                                         | Water In Fuel Indicator               | 19           |
| 163                                        | Transmission Current Range            | 12, 19       |
| 177                                        | Transmission Oil Temperature Sensor   | 3, 4         |
| 523                                        | Transmission Current Gear             | 12, 19       |
| 524                                        | Transmission Selected Gear            | 12, 19       |
| 597                                        | ABS Service Brake Switch              | 2            |
| 598                                        | Clutch Switch                         | 7            |
| 879                                        | Front Left Turn Signals Output Fault  | 5, 6         |
| 880                                        | Trailer Stop Lamp Relay Output Fault  | 4            |
| 881                                        | Front Right Turn Signals Output Fault | 5, 6         |
| 882                                        | Park/Marker Lights Output Fault       | 4, 5, 6      |
| 973                                        | Engine Retarder Selection             | 19           |
| 1487                                       | Backlighting Dimmer Switch Fault      | 7            |
| 1550                                       | A/C Clutch Output Fault               | 5, 6         |
| 2003                                       | Missing Transmission CAN Message      | 9            |

| J1939 SPNs for Bulkhead Module (BHM) SA 33 |                                                                                                           |              |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------|
| SPN                                        | Description                                                                                               | Possible FMI |
| 2071                                       | Missing Chassis Module CAN Message                                                                        | 9            |
| 6890                                       | CHM No PWM DRLs Fault                                                                                     | 8            |
| 6897                                       | Fuel Water Separator Heater Output Fault                                                                  | 6            |
| 6898                                       | Brake Air Dryer Output Fault                                                                              | 6            |
| 6906                                       | PTO 2 No Pressure Feedback                                                                                | 7            |
| 6907                                       | PTO 2 Unexpected Pressure Feedback                                                                        | 7            |
| 6908                                       | PTO 1 No Pressure Feedback                                                                                | 7            |
| 6909                                       | PTO 1 Unexpected Pressure Feedback                                                                        | 7            |
| 6910                                       | Axle Lift 2 No Pressure Feedback                                                                          | 7            |
| 6911                                       | Axle Lift 2 Unexpected Pressure Feedback                                                                  | 7            |
| 6912                                       | Remote Bucket Switch Stuck Fault                                                                          | 7            |
| 6915                                       | Lamp and Gauge Ignition Output Fault                                                                      | 4, 5, 6      |
| 6916                                       | BHM/ICU3-M2 Wiper Park CAN Message Mismatch                                                               | 2            |
| 6917                                       | BHM/ICU3-M2 Hazard Switch CAN Message Mismatch                                                            | 2            |
| 6918                                       | Missing Smart Switch                                                                                      | 7            |
| 6919                                       | Duplicate Smart Switch                                                                                    | 7            |
| 6920                                       | Extra Smart Switch                                                                                        | 7            |
| 6921                                       | Unknown Keep Awake Fault—Modules are kept awake                                                           | 7            |
| 6922                                       | Wake-up Hardware Fault—Modules are kept awake                                                             | 7            |
| 6923                                       | Wiper Parked Input Fault                                                                                  | 7            |
| 6924                                       | Multifunction Turn Signal Switch Disagreement—Wiper on/off input is off and wiper high or low input is on | 2            |
| 6925                                       | Multifunction Turn Signal Switch Disagreement—Both wiper high and wiper low inputs are on                 | 2            |
| 6926                                       | Marker Interrupt Switch Fault                                                                             | 7            |
| 6927                                       | Utility Lamp Output Fault                                                                                 | 3, 4, 5, 6   |
| 6928                                       | Suspension Proportioning No Pressure Feedback                                                             | 7            |
| 6929                                       | Suspension Proportioning Unexpected Pressure Feedback                                                     | 7            |
| 6930                                       | Suspension Proportioning Solenoid Output Fault                                                            | 3, 4, 5, 6   |
| 6931                                       | Suspension Dump No Pressure Feedback                                                                      | 7            |
| 6932                                       | Suspension Dump Unexpected Pressure Feedback                                                              | 7            |
| 6933                                       | Suspension Dump Solenoid Output Fault                                                                     | 3, 4, 5, 6   |
| 6934                                       | Spotlights Output Fault                                                                                   | 3, 4, 5, 6   |
| 6935                                       | Snow Plow Relay Output Fault                                                                              | 3, 4, 5, 6   |
| 6936                                       | Rear 2 Differential Lock Pressure Feedback Fault                                                          | 7            |
| 6937                                       | Rear 2 Differential Lock Solenoid Output Fault                                                            | 3, 4, 5, 6   |
| 6938                                       | Rear 1 Differential Lock Pressure Feedback Fault                                                          | 7            |

| J1939 SPNs for Bulkhead Module (BHM) SA 33 |                                                           |              |
|--------------------------------------------|-----------------------------------------------------------|--------------|
| SPN                                        | Description                                               | Possible FMI |
| 6939                                       | Rear 1 Differential Lock Solenoid Output Fault            | 3, 4, 5, 6   |
| 6940                                       | Optional Feature Output Fault                             | 3, 4, 5, 6   |
| 6941                                       | Heated Mirrors Output Fault                               | 3, 4, 5, 6   |
| 6942                                       | Interaxle Pressure Feedback Fault                         | 7            |
| 6943                                       | Interaxle Solenoid Output Fault                           | 3, 4, 5, 6   |
| 6944                                       | Fuel Water Separator Heater Output Fault                  | 4, 5, 6      |
| 6945                                       | Front Differential Lock Pressure Feedback Fault           | 7            |
| 6946                                       | Front Differential Lock Solenoid Output Fault             | 3, 4, 5, 6   |
| 6947                                       | Fog Lamp Output Fault                                     | 5, 6         |
| 6949                                       | Fire Pump Pressure Feedback Fault                         | 7            |
| 6950                                       | Fire Pump Solenoid Output Fault                           | 3, 4, 5, 6   |
| 6951                                       | Fifth Wheel Slide No Pressure Feedback                    | 7            |
| 6952                                       | Fifth Wheel Slide Unexpected Pressure Feedback            | 7            |
| 6953                                       | Fifth Wheel Slide Solenoid Output Fault                   | 3, 4, 5, 6   |
| 6954                                       | End of Frame Air No Pressure Feedback                     | 7            |
| 6955                                       | End of Frame Air Unexpected Pressure Feedback             | 7            |
| 6956                                       | End of Frame Air Solenoid Output Fault                    | 3, 4, 5, 6   |
| 6957                                       | Daytime Running Lights (DRL) Output Fault                 | 5, 6         |
| 6958                                       | Brake Line Air Dryer Output Fault                         | 3, 4, 5, 6   |
| 6959                                       | Axle Shift Pressure Feedback Fault                        | 7            |
| 6960                                       | Axle Shift Solenoid Output Fault                          | 3, 4, 5, 6   |
| 6961                                       | Axle Lift No Pressure Feedback                            | 7            |
| 6962                                       | Axle Lift Unexpected Pressure Feedback                    | 7            |
| 6963                                       | Axle Lift Solenoid Output Fault                           | 3, 4, 5, 6   |
| 6964                                       | Air Horn Solenoid Output Fault                            | 5, 6         |
| 6965                                       | BHM VBAT 5 Input Fault                                    | 3, 4         |
| 6966                                       | BHM VBAT 4 Input Fault                                    | 3, 4         |
| 6967                                       | BHM VBAT 3 Input Fault                                    | 3, 4         |
| 6968                                       | BHM VBAT 2 Input Fault                                    | 3, 4         |
| 6969                                       | BHM VBAT 1 Input Fault                                    | 3, 4         |
| 6970                                       | Wiper High Output Fault                                   | 5, 6         |
| 6971                                       | Wiper Low Output Fault                                    | 5, 6         |
| 6972                                       | Multifunction Turn Signal Switch Wiper High Input Fault   | 2            |
| 6973                                       | Multifunction Turn Signal Switch Wiper Low Input Fault    | 2            |
| 6974                                       | Multifunction Turn Signal Switch Wiper On/Off Input Fault | 2            |

|      |                                       |   |
|------|---------------------------------------|---|
| 6975 | ICU3-M2 Wiper Park CAN Feedback Error | 2 |
|------|---------------------------------------|---|

| J1939 SPNs for Bulkhead Module (BHM) SA 33 |                                                                  |              |
|--------------------------------------------|------------------------------------------------------------------|--------------|
| SPN                                        | Description                                                      | Possible FMI |
| 6976                                       | Washer Pump Output Fault                                         | 5, 6         |
| 6977                                       | Multifunction Turn Signal Switch Washer Switch Input Fault       | 2            |
| 6978                                       | Multifunction Turn Signal Switch Right Turn Signal Input Fault   | 2            |
| 6979                                       | Multifunction Turn Signal Switch Left Turn Signal Input Fault    | 2            |
| 6980                                       | Right Stop Lamp Output Fault                                     | 5, 6         |
| 6981                                       | Left Stop Lamp Output Fault                                      | 5, 6         |
| 6982                                       | Wake Up Hardware Fault                                           | 5, 6         |
| 6983                                       | Starter Relay (mag switch) Output Fault                          | 5, 6         |
| 6984                                       | Ignition System, Accessory Power Outputs Fault                   | 5, 6         |
| 6985                                       | Ignition System, Ignition Power Outputs Fault                    | 2, 5, 6      |
| 6986                                       | Ignition Switch Fault                                            | 7            |
| 6987                                       | Taillights, Clearance Lights, License Plate Lights Output Fault  | 5, 6         |
| 6988                                       | Left Low Beam Output Fault                                       | 5, 6         |
| 6989                                       | Right Low Beam Output Fault                                      | 5, 6         |
| 6990                                       | Left High Beam Output Fault                                      | 5, 6         |
| 6991                                       | Right High Beam Output Fault                                     | 5, 6         |
| 6992                                       | Multifunction Turn Signal Switch High Beam Input Fault           | 2            |
| 6993                                       | Headlamp Switch Disagreement—Both park and on inputs are closed. | 7            |
| 6994                                       | ICU3-M2 Hazard Switch CAN Feedback Error                         | 19           |
| 6995                                       | Horn Output Fault                                                | 3, 4, 5, 6   |
| 6996                                       | Dome Lamps Switched Power Output Fault                           | 5, 6         |
| 6997                                       | Cigar Lighter Output Fault                                       | 3, 4, 5, 6   |
| 6998                                       | Dome Lamps Battery Power Output Fault                            | 5, 6         |
| 6999                                       | Backup Lamps/Alarm Output Fault                                  | 5, 6         |
| 7000                                       | Panel Lamp Backlighting PWM Output Fault                         | 3, 4, 5, 6   |
| 524280                                     | Component ID Mismatch                                            | 31           |
| 524281                                     | Application to Parameter Incompatibility                         | 31           |
| 524282                                     | Parameter Checksum Failure                                       | 12           |
| 524283                                     | Application Checksum Failure                                     | 12           |
| 524284                                     | Boot Block Checksum Failure                                      | 12           |
| 524285                                     | Boot Hold Line is Active                                         | 4            |
| 524286                                     | Ram Failure                                                      | 12           |

| Failure Mode Identifiers |                                                                       |                                                                             |
|--------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| FMI                      | J1939 Description                                                     | J1587 Description                                                           |
| 00                       | Data valid but above normal operational range—Most severe level       | Data valid but above normal operational range (engine overheating)          |
| 01                       | Data valid but below normal operational range—Most severe level       | Data valid but below normal operational range (engine oil pressure too low) |
| 02                       | Data erratic, intermittent, or incorrect                              | Data erratic, intermittent, or incorrect                                    |
| 03                       | Voltage above normal or shorted high                                  | Voltage above normal or shorted high                                        |
| 04                       | Voltage below normal or shorted low                                   | Voltage below normal or shorted low                                         |
| 05                       | Current below normal or open circuit                                  | Current below normal or open circuit                                        |
| 06                       | Current above normal or grounded circuit                              | Current above normal or grounded circuit                                    |
| 07                       | Mechanical system not responding or out of adjustment                 | Mechanical system not responding properly                                   |
| 08                       | Abnormal frequency, pulse width, or period                            | Abnormal frequency, pulse width, or period                                  |
| 09                       | Abnormal update rate                                                  | Abnormal update rate                                                        |
| 10                       | Abnormal rate of change                                               | Abnormal rate of change                                                     |
| 11                       | Root cause not known                                                  | Failure mode not identifiable                                               |
| 12                       | Bad intelligent device or component                                   | Bad intelligent device or component                                         |
| 13                       | Out of Calibration                                                    | Out of Calibration                                                          |
| 14                       | Special Instructions                                                  | Special Instructions                                                        |
| 15                       | Data valid but above normal operational range—Least severe level      | Reserved for future assignment by the SAE Subcommittee                      |
| 16                       | Data valid but above normal operational range—Moderately severe level | —                                                                           |
| 17                       | Data valid but below normal operational range—Least severe level      | —                                                                           |
| 18                       | Data valid but below normal operational range—Moderately severe level | —                                                                           |
| 19                       | Received network data in error                                        | —                                                                           |
| 31                       | Condition Exists                                                      | —                                                                           |

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