

Diagnostic Troubleshooting Manual

ABS

The information contained in this publication is based on the latest information available at the time of printing. Triumph reserves the right to make changes at any time without prior notice, or obligation.

Not to be reproduced wholly or in part without the written permission of Triumph Motorcycles Limited.

© Copyright 09.2023 Triumph Motorcycles Limited, Hinckley, Leicestershire, England.

Contents

C1015 - PUMP MOTOR FAILURE	4
C1017 - PUMP MOTOR FAILURE	4
C1016- PUMP MOTOR SUPPLY FAILURE	7
C1019- VALVE CIRCUIT FAILURE.....	10
C1021- ABS ECU FAILURE.....	13
C1024- WHEEL SPEED SENSOR GENERIC FAILURE	16
C1033- FRONT WHEEL SPEED SENSOR OHMIC FAILURE	19
C1031- REAR WHEEL SPEED SENSOR OHMIC FAILURE	19
C1034- FRONT WHEEL SPEED SENSOR PLAUSIBILITY FAILURE.....	22
C1032- REAR WHEEL SPEED SENSOR PLAUSIBILITY FAILURE	22
C1036- FRONT WHEEL SPEED SENSOR MONITORING FAILURE.....	25
C1037- REAR WHEEL SPEED SENSOR MONITORING FAILURE	25
C1048- REAR OUTLET VALVE FAILURE	28
C1049- FRONT OUTLET VALVE FAILURE.....	28
C1052- REAR INLET VALVE FAILURE	31
C1054- FRONT INLET VALVE FAILURE	31
C1058- POWER SUPPLY UNDER VOLTAGE	34

C1059- POWER SUPPLY OVER VOLTAGE	37
C1100- INVALID VARIANT CODE IN NVM	40
C1200- VARIANT CODE OUT OF RANGE.....	41
U2921- CAN BUS GENERIC FAILURE	42
U2922- CAN BUS OFF	43
U2930- NET UNDER-VOLTAGE	45
U2931- NET OVER-VOLTAGE.....	46
U2944- CAN METER TIMEOUT	47
U2924- CAN ENGINE TORQUE FRAME FAILURE	49
U2925- CAN ENGINE RPM/ TORQUE SIGNAL FAILURE	51
U2932- CAN GEAR/ CLUTCH SIGNAL FAILURE.....	53
U2941- OFF ROAD ENABLE/DISABLE SIGNAL STUCK.....	55
U2940- MTC ON/OFF SIGNAL STUCK.....	57

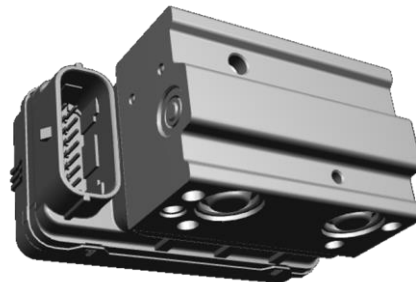
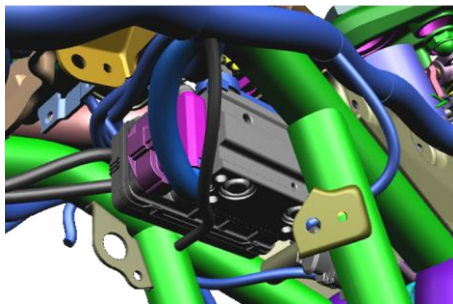
C1015 - Pump Motor Failure

C1017 - Pump Motor Failure

Overview:

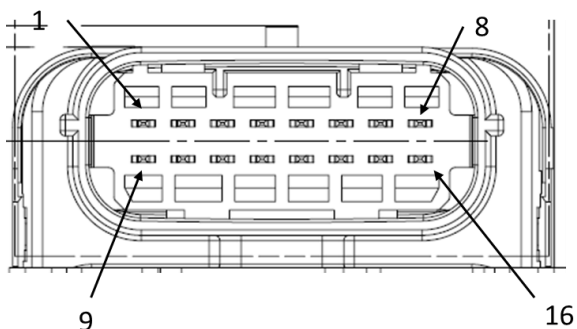
DTC	C1015/ C1017
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale ON
Fault detection condition	C1015: If motor voltage is detected as abnormal level outside a motor actuation, and no motor actuation happened for last 2 sec then this failure code is stored into non-volatile memory. C1017: If motor voltage is detected as abnormal level for 150ms this fault is reported. It can get healed if conditions recovers for 300 ms.
Probable trouble area	ABS Unit, Harness
Healing condition	Replacement of part

Component Location & Image:

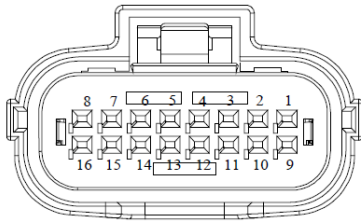


Connector View & Information:

Component Side:



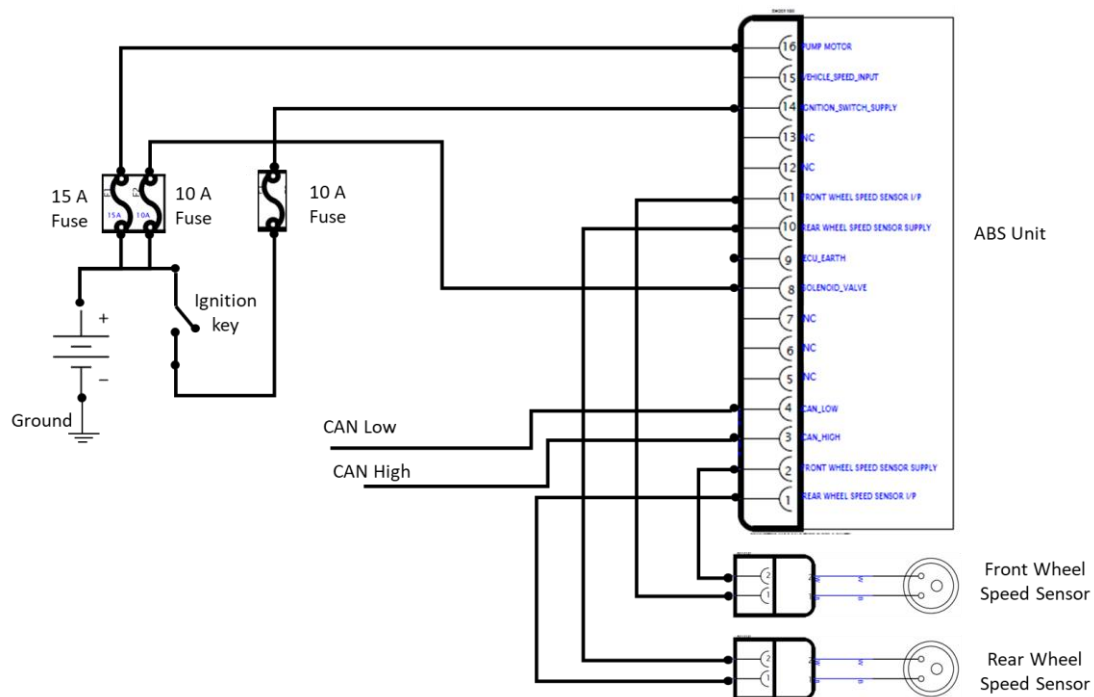
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

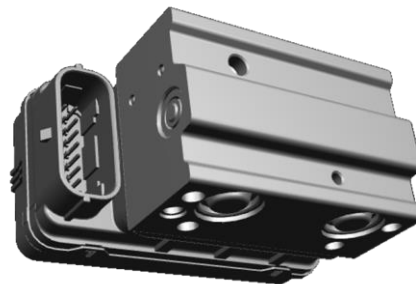
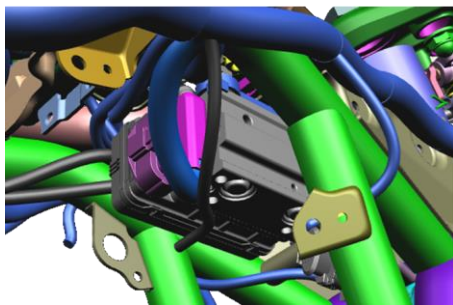
Step	Checkpoint	If Yes	If No
1	Check voltage at pin no 16. Is voltage equal ≥ 12.8 ?	Go to Step 2	Check wiring harness continuity
2	Check 15A fuse for pump motor. Is fuse blown?	Replace with new fuse and check	Go to Step 3
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1016- Pump Motor Supply failure

Overview:

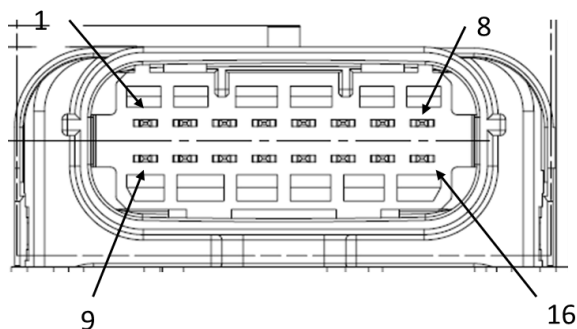
DTC	C1016
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale ON
Fault detection condition	Pump motor supply voltage is monitored by system IC. When the failure flag is set for 150ms, the failure is detected. If the failure condition is not met for 300ms, a failure is set as recovered.
Probable trouble area	ABS Unit, Harness
Healing condition	<ol style="list-style-type: none"> 1. If the failure condition is not met for 300ms, a failure is set as recovered. 2. If not recovered, replacement of part

Component Location & Image:

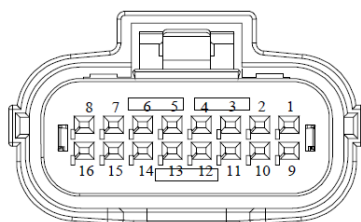


Connector View & Information:

Component Side:



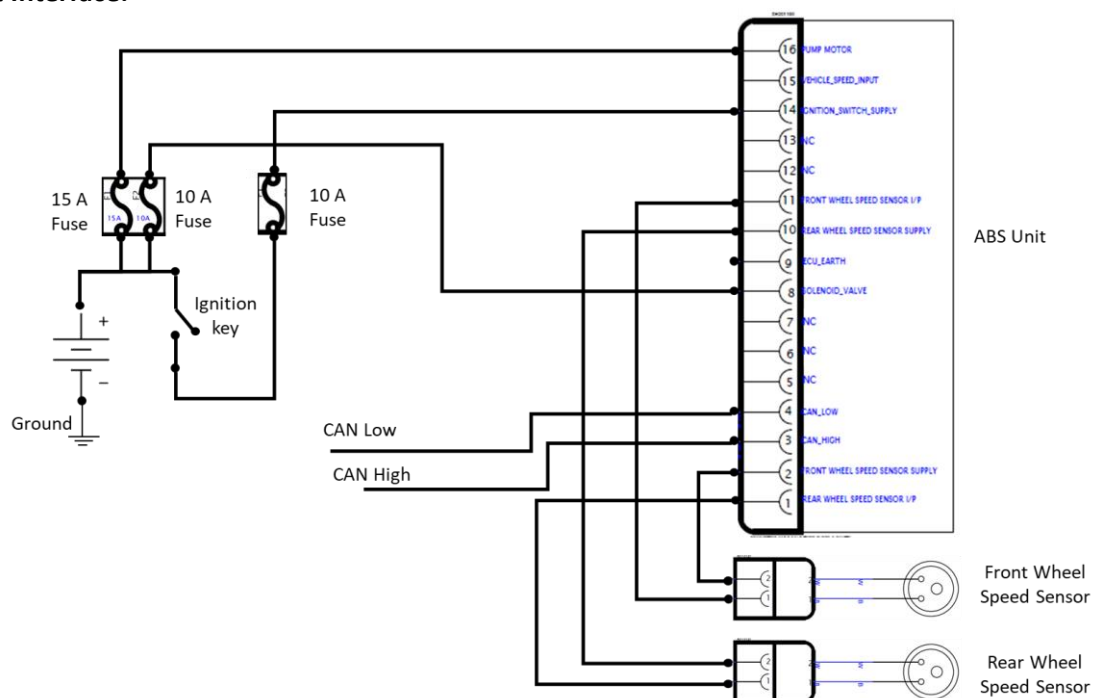
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

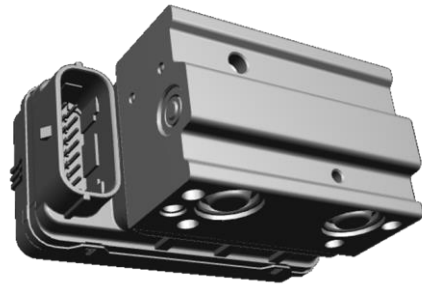
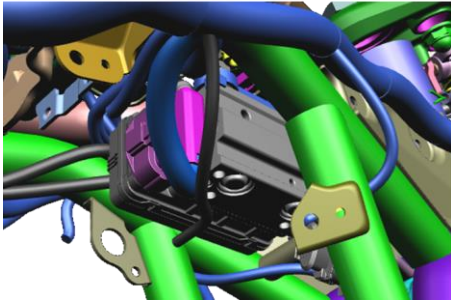
Step	Checkpoint	If Yes	If No
1	Check voltage at pin no 16. Is voltage equal ≥ 12.8 ?	Go to Step 2	Check wiring harness continuity
2	Check 15A fuse for pump motor. Is fuse blown?	Replace with new fuse and check	Go to Step 3
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1019- Valve Circuit failure

Overview:

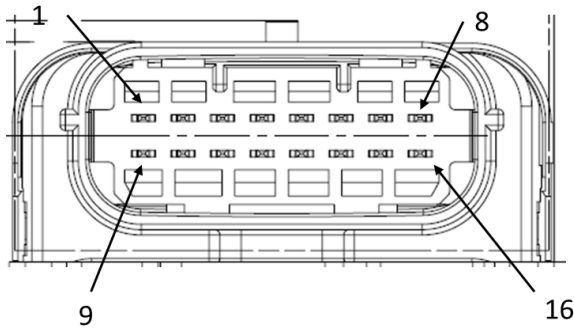
DTC	C1019
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale ON
Fault detection condition	<ol style="list-style-type: none"> 1. Valve relay functions are tested during startup. If the valve relay remains in off position when it is turned on and vice versa. 2. Valve relay is stuck ON (electrically ON) 3. Valve relay is stuck OFF (electrically OFF) 4. Valve relay is short to ground.
Probable trouble area	ABS Unit, Harness
Healing condition	Replacement of part

Component Location & Image:

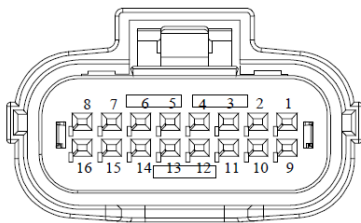


Connector View & Information:

Component Side:



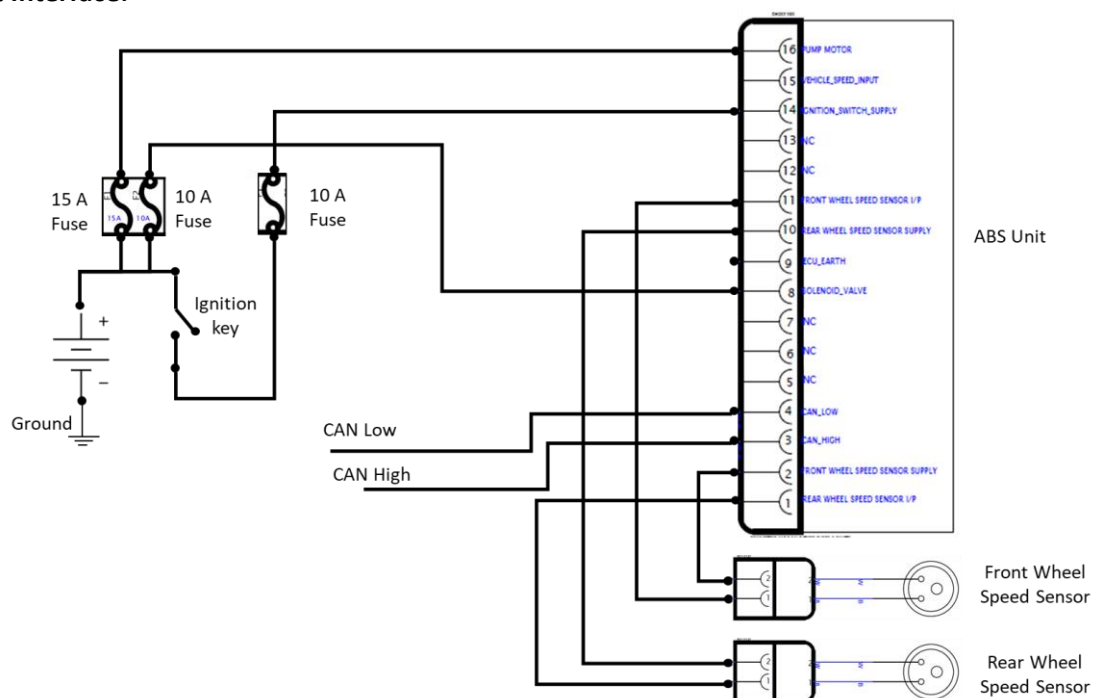
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

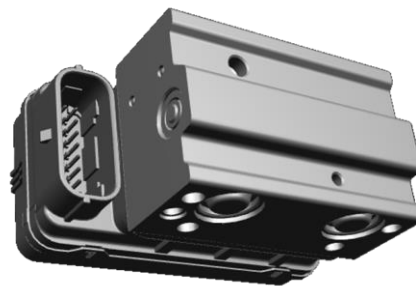
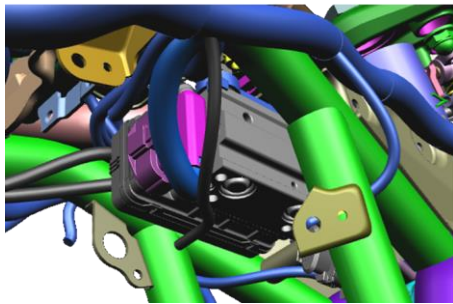
Step	Checkpoint	If Yes	If No
1	Check voltage at pin no 8. Is voltage equal ≥ 12.8 ?	Go to Step 2	Check wiring harness continuity
2	Check 10A fuse for valve. Is fuse blown?	Replace with new fuse and check	Go to Step 3
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1021- ABS ECU failure

Overview:

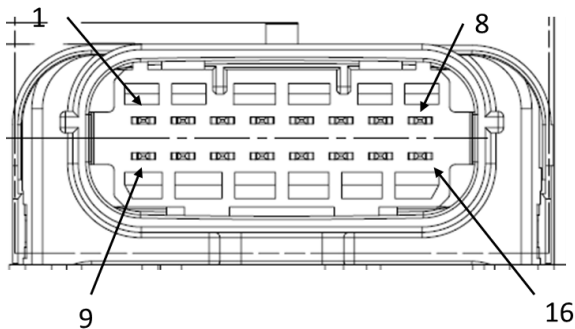
DTC	C1021
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration. No CAN communication with peripheral devices.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	The electronic control unit components (microcontroller and peripheral integrated circuits) are continuously monitored for proper operation. If any fault is detected this error code is reported.
Probable trouble area	ABS Unit
Healing condition	Replacement of part

Component Location & Image:

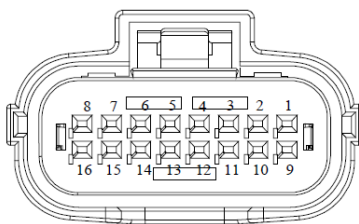


Connector View & Information:

Component Side:



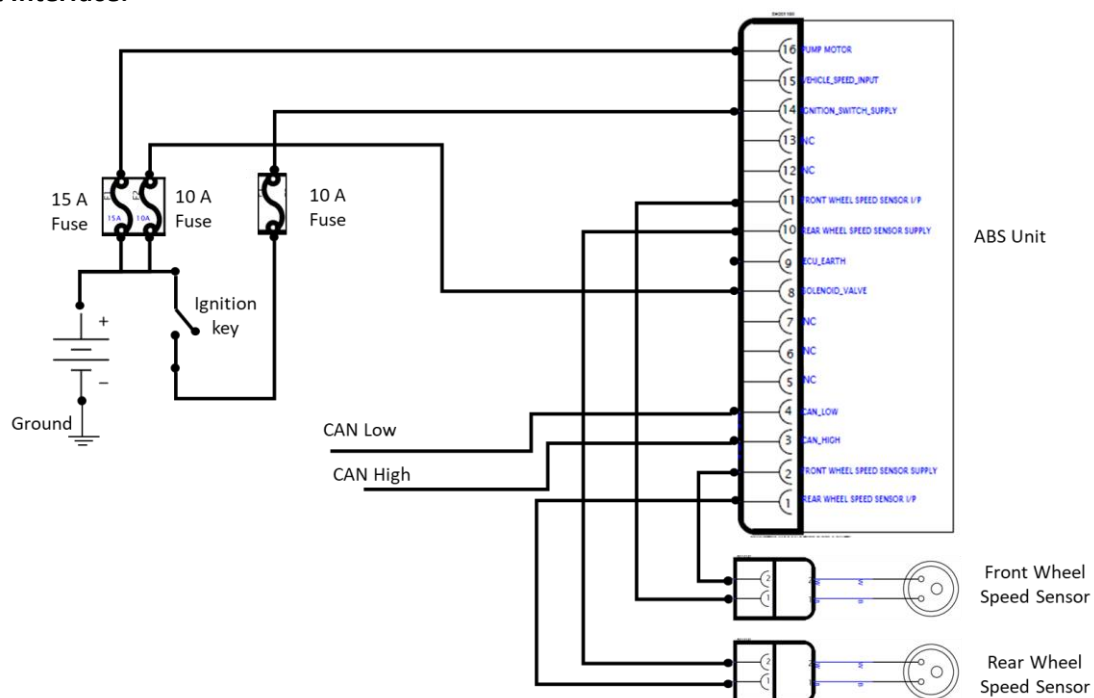
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

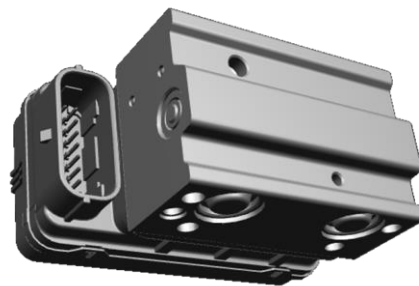
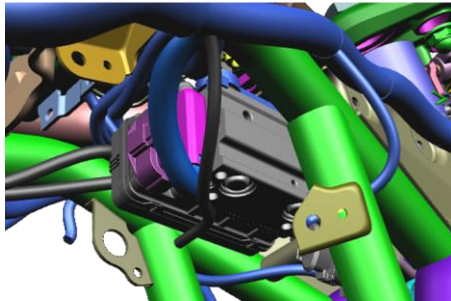
Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1024- Wheel speed sensor generic failure

Overview:

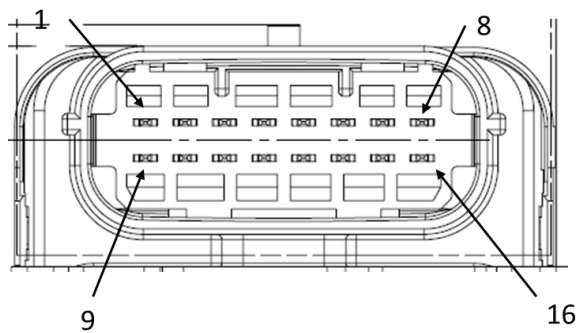
DTC	C1024
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	This fault is set if exact wheel specific error codes can not be set due to certain riding conditions.
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

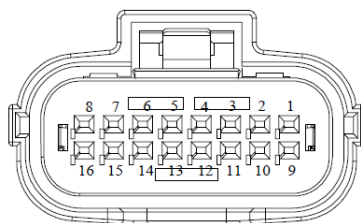


Connector View & Information:

Component Side:



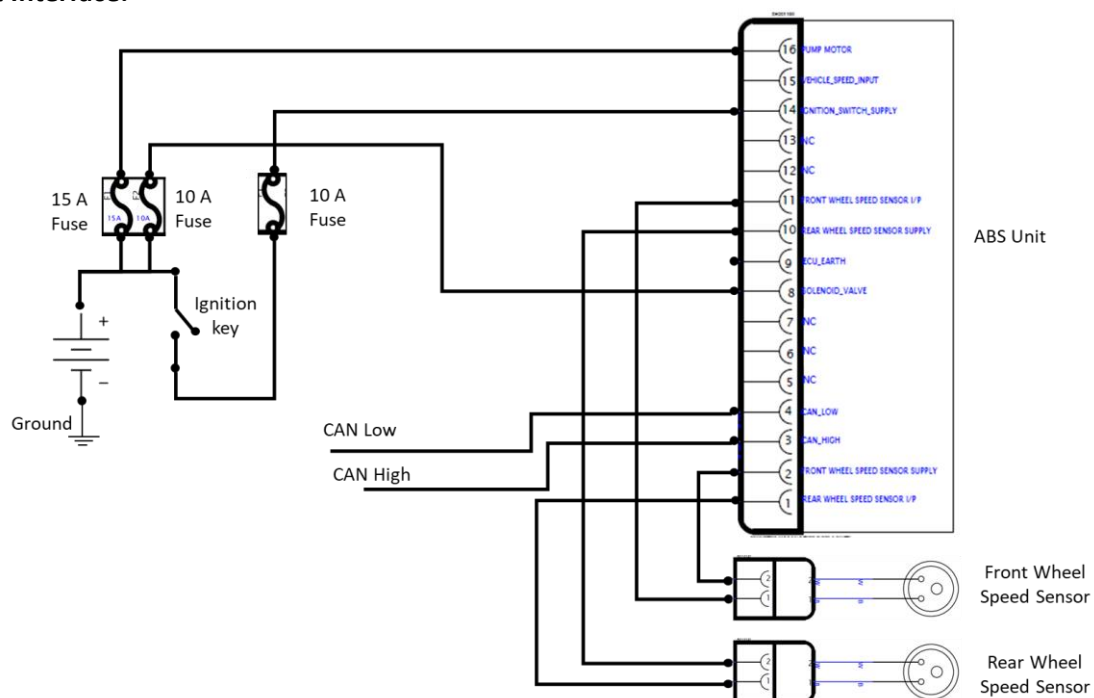
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

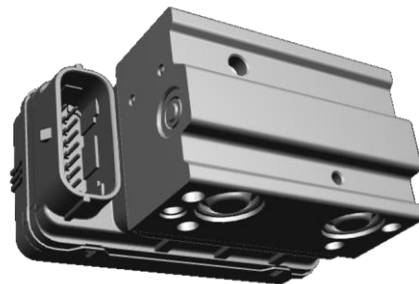
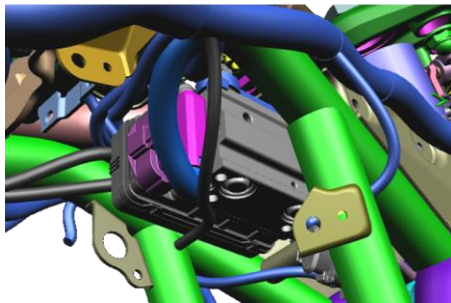
C1033- Front Wheel Speed Sensor ohmic Failure

C1031- Rear Wheel Speed Sensor ohmic Failure

Overview:

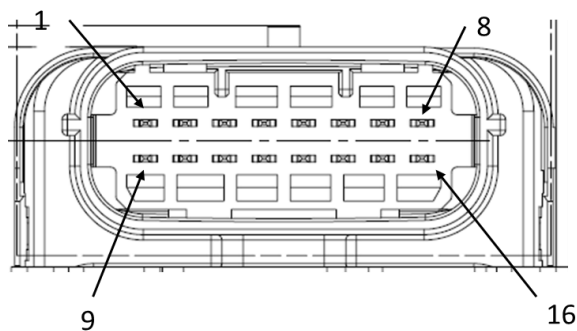
DTC	C1033 or C1031
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	This fault is set if exact wheel specific error codes can not be set due to certain riding conditions.
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

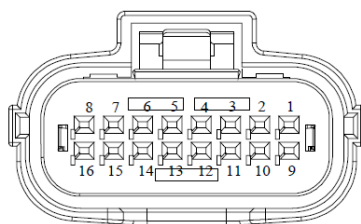


Connector View & Information:

Component Side:



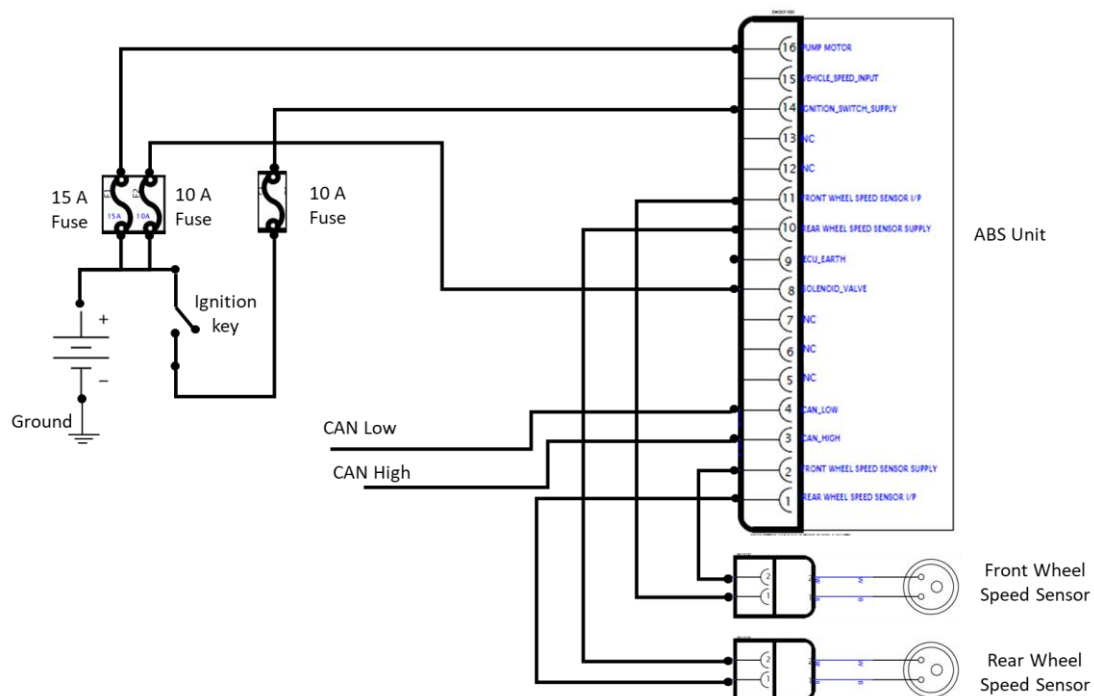
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

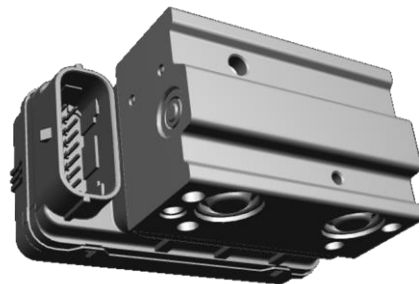
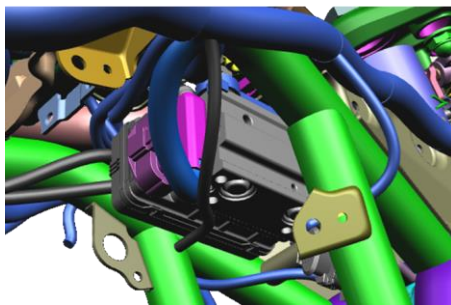
C1034- Front Wheel Speed Sensor Plausibility Failure

C1032- Rear Wheel speed sensor Plausibility Failure

Overview:

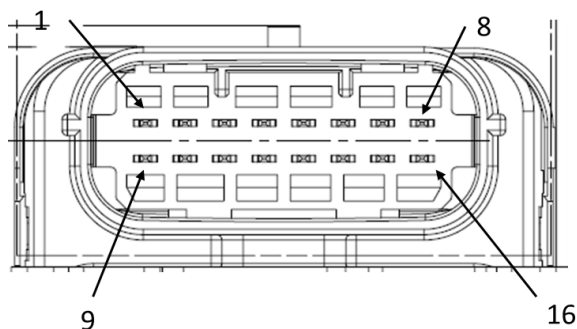
DTC	C1034 & C1032
Customer Symptom	ABS function disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	This fault is set if exact wheel specific error codes can not be set due to certain riding conditions.
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

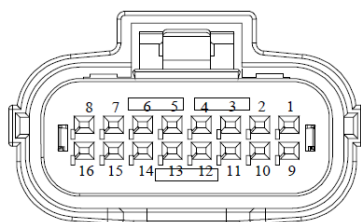


Connector View & Information:

Component Side:



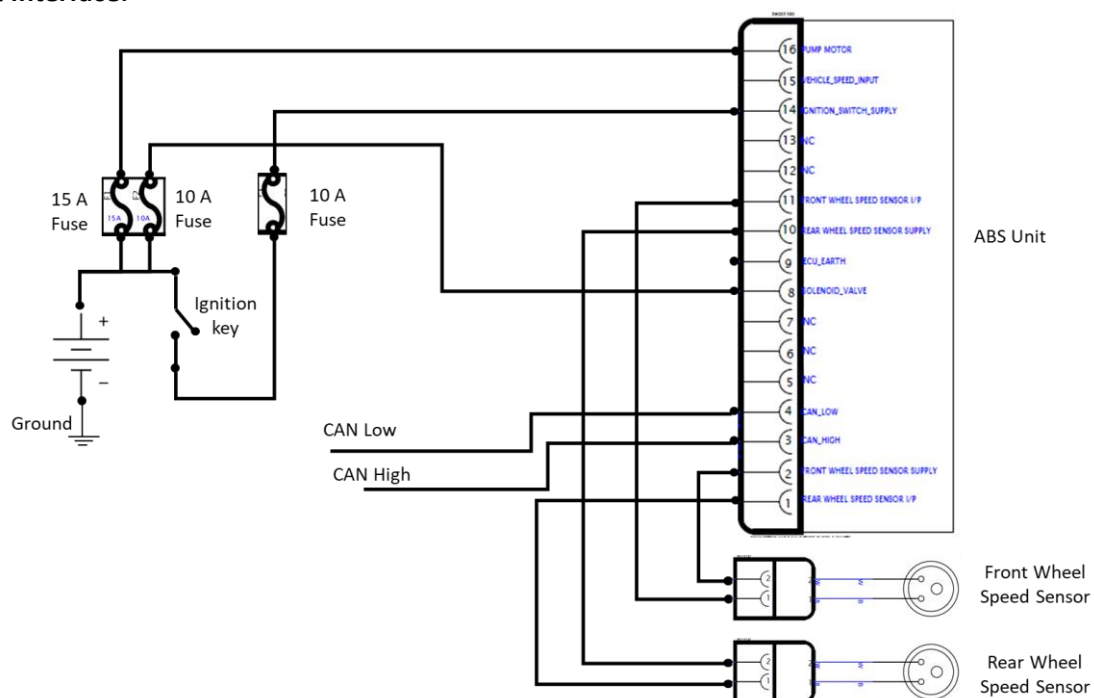
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

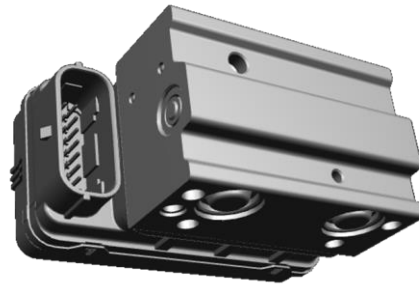
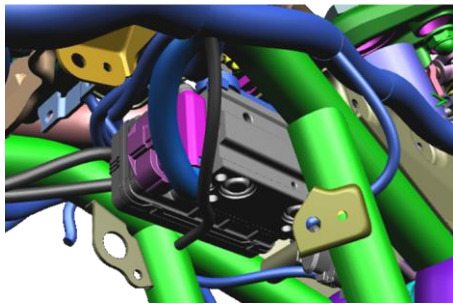
C1036- Front Wheel Speed Sensor Monitoring Failure

C1037- Rear Wheel Speed Sensor Monitoring Failure

Overview:

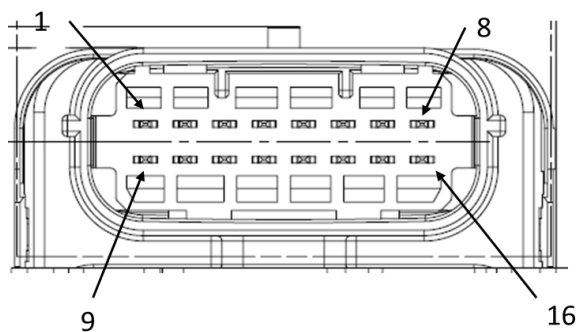
DTC	C1036 or C1037
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if Non-plausible high frequency is received Non- plausible high wheel acceleration is detected Non-plausible high frequent and intense signal distortion is detected
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

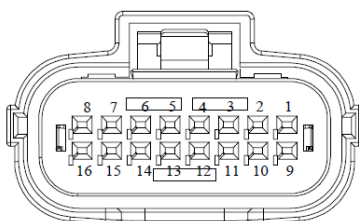


Connector View & Information:

Component Side:



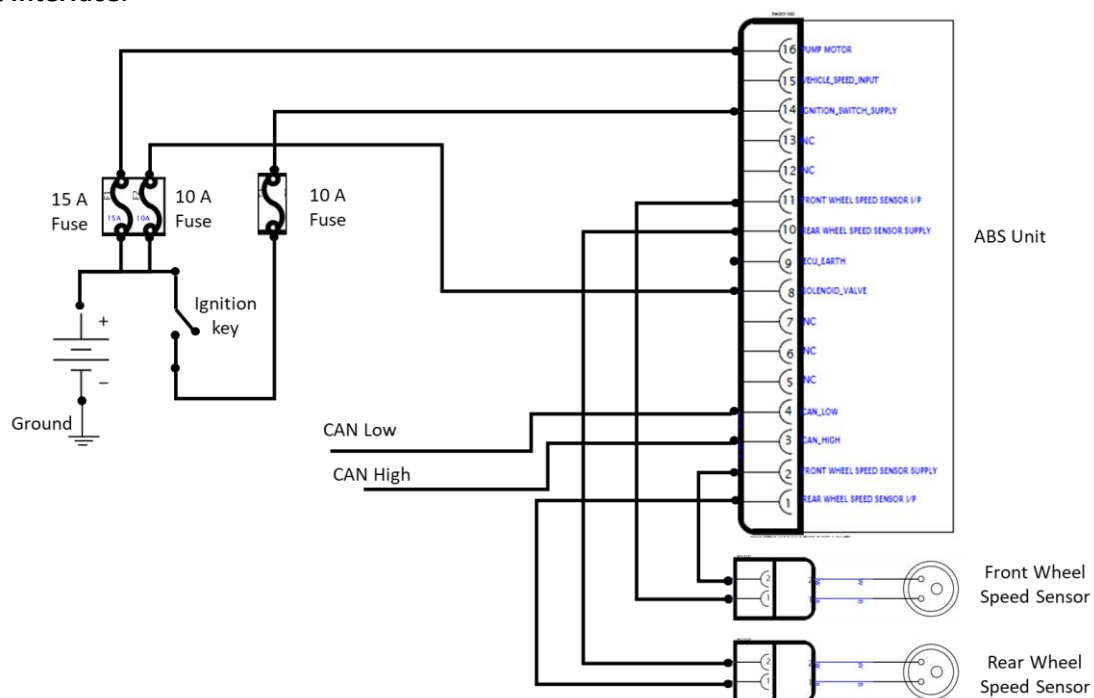
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
5	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

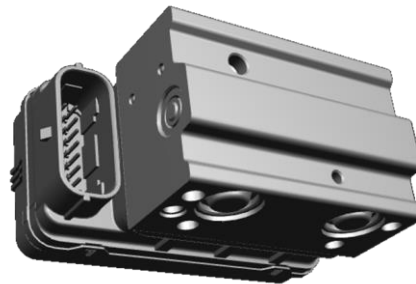
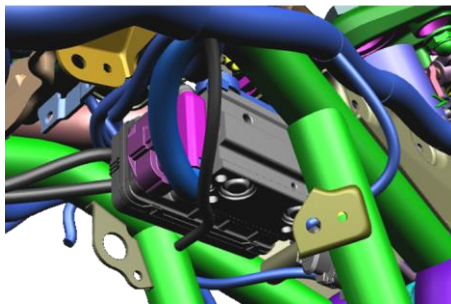
C1048- Rear Outlet valve failure

C1049- Front Outlet valve failure

Overview:

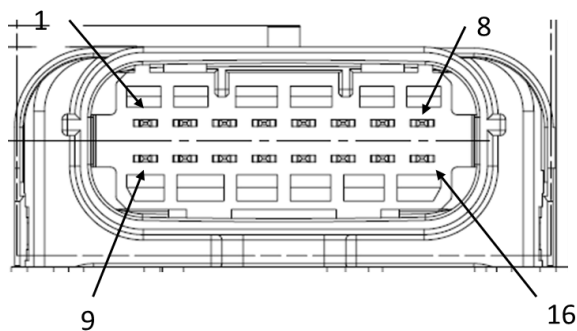
DTC	C1048 or C1049
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if the electrical feedback signal does not match the actuation signal for the corresponding valve for 30ms, the corresponding valve failure is stored into FEE/NVM.
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

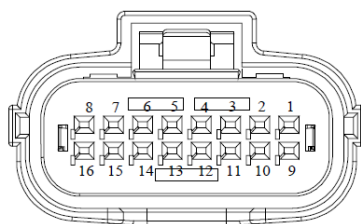


Connector View & Information:

Component Side:



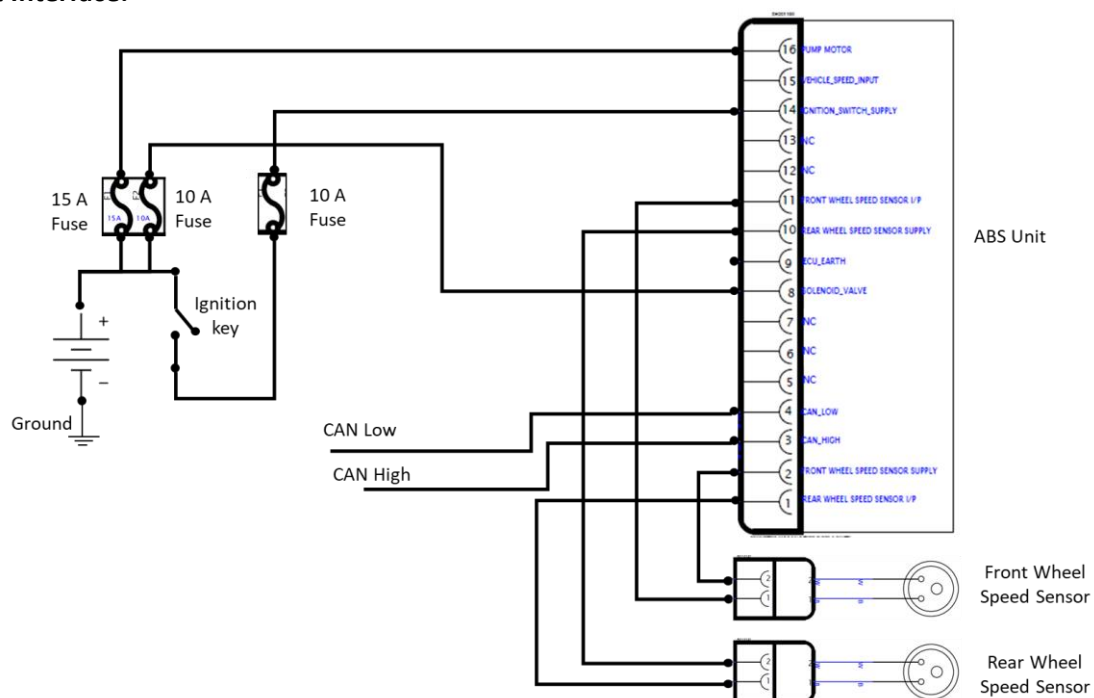
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

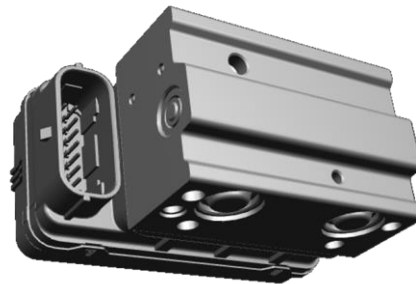
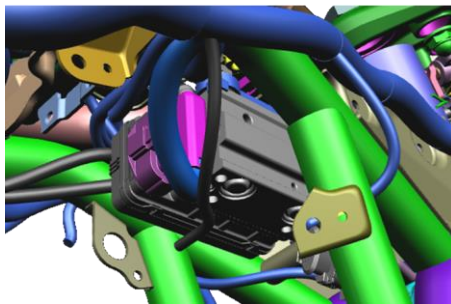
C1052- Rear Inlet valve failure

C1054- Front Inlet valve failure

Overview:

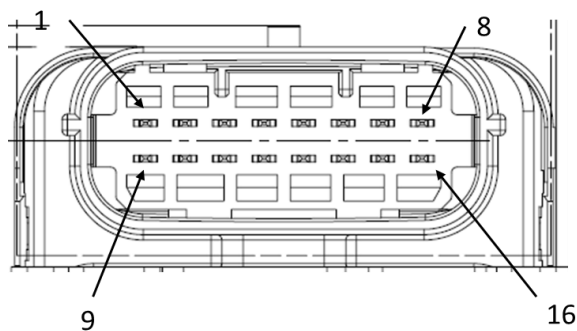
DTC	C1052 or C1054
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if the electrical feedback signal does not match the actuation signal for the corresponding valve for 30ms, the corresponding valve failure is stored into FEE/NVM.
Probable trouble area	ABS Unit, Wheel speed sensors, Wiring harness
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

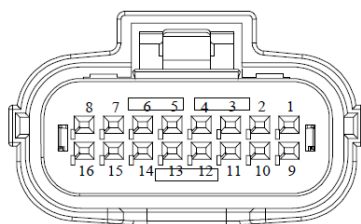


Connector View & Information:

Component Side:



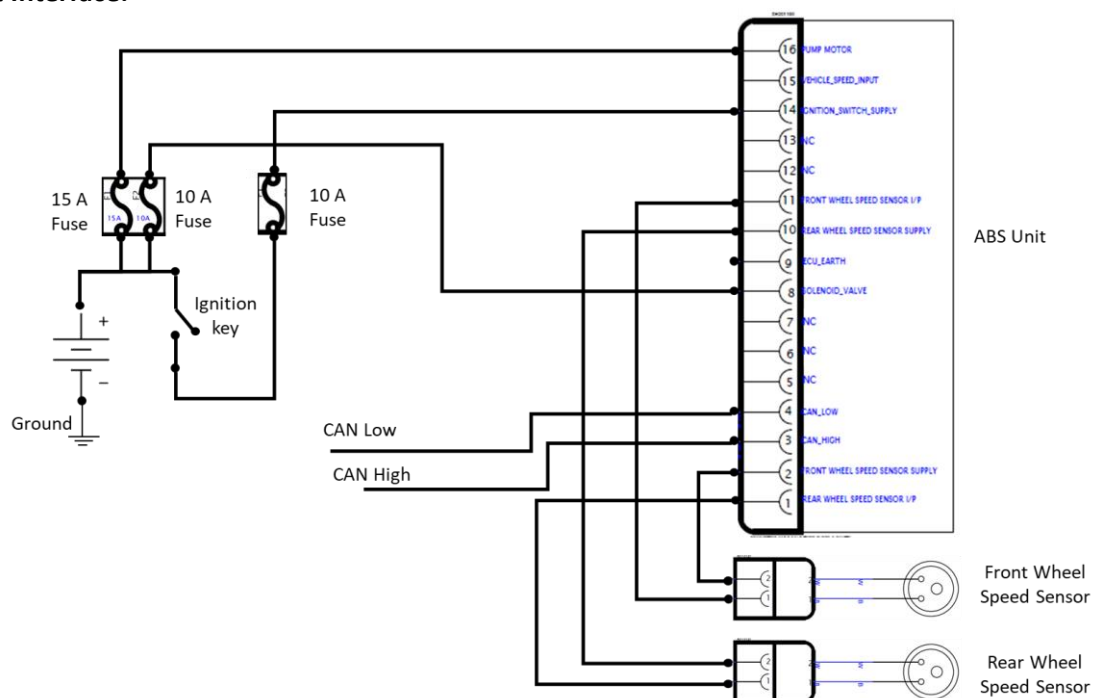
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

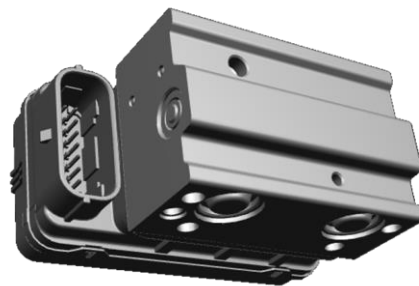
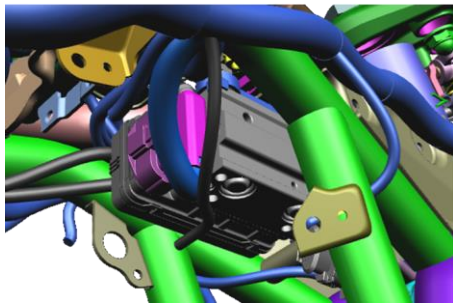
Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1058- Power Supply Under voltage

Overview:

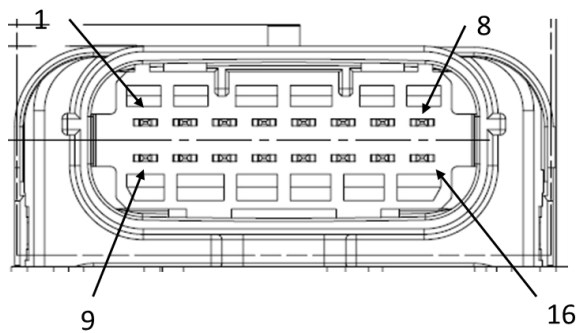
DTC	C1058
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if battery voltage is less than 9.6V for 1s.
Probable trouble area	ABS Unit, Wiring harness, Battery
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

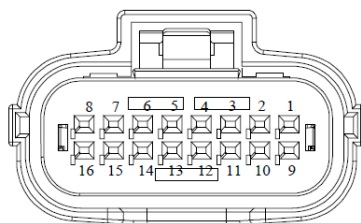


Connector View & Information:

Component Side:



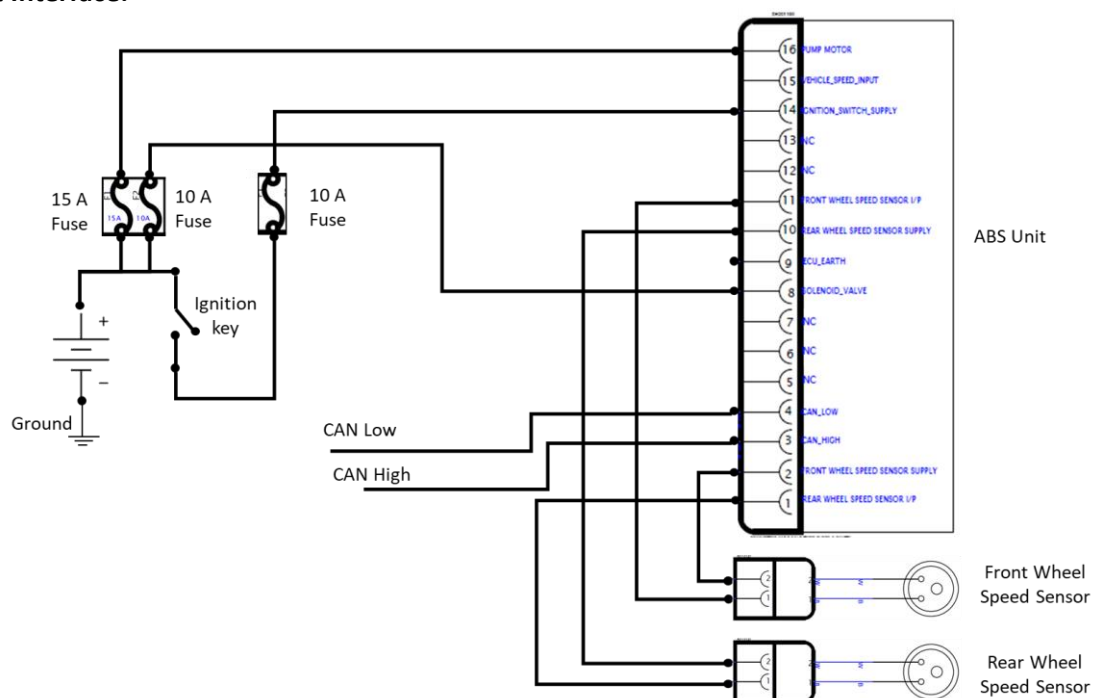
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

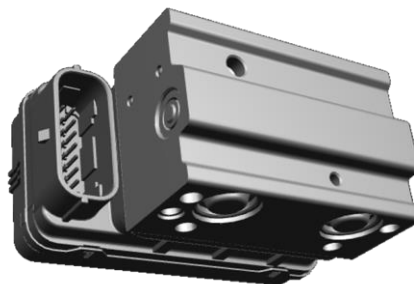
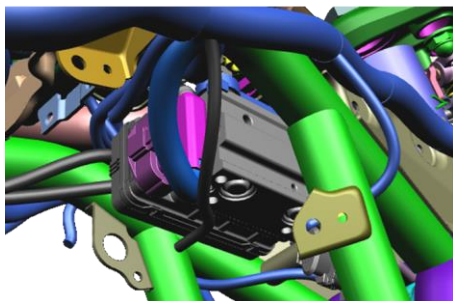
Step	Checkpoint	If Yes	If No
1	Check if Pin 14 or Pin 16 are short circuited to ground?	Check/ Replace wiring harness	Go to Step 2
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1059- Power Supply Over voltage

Overview:

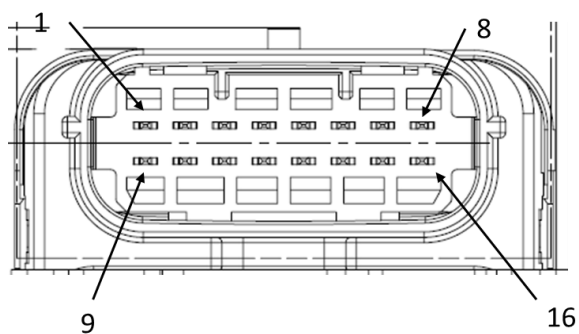
DTC	C1059
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if battery voltage is greater than 16.5V for 1s.
Probable trouble area	ABS Unit, Wiring harness, Battery
Healing condition	Electrical rectification, Replacement of part

Component Location & Image:

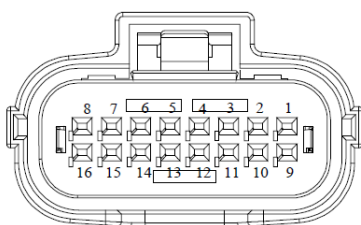


Connector View & Information:

Component Side:



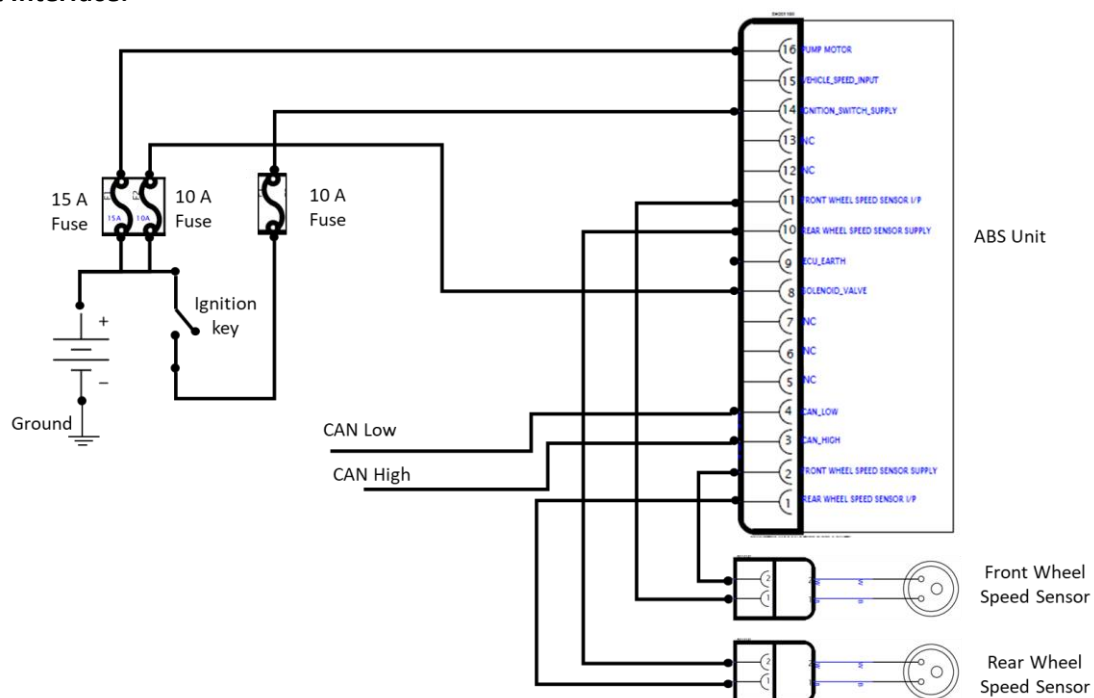
Wiring Harness Side:



Pin configuration:

Pin number	Pin Description
1	Rear WSS input
2	Front WSS supply
3	CAN High
4	CAN Low
5	NC
6	NC
7	NC
8	Solenoid valve
9	Ground
10	Rear WSS supply
11	Front WSS input
12	NC
13	NC
14	Ignition switch supply
15	NC
16	Pump motor supply

Circuit Interface:



Troubleshooting:

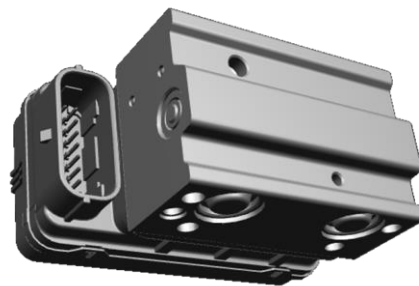
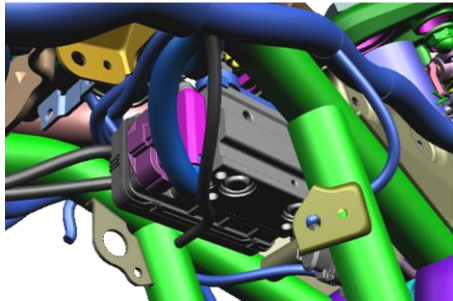
Step	Checkpoint	If Yes	If No
1	Check battery voltage during 1. Engine OFF 2. Engine idling, 3. Engine full throttle In any of the above conditions, ss voltage going beyond 16.5V?	Check/ Replace regulator rectifier	Go to Step 2
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1100- Invalid variant code in NVM

Overview:

DTC	C1100
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if microcontroller is not able to read variant code written in memory.
Probable trouble area	ABS Unit
Healing condition	Write correct variant code using tester tool

Component Location & Image:



Troubleshooting:

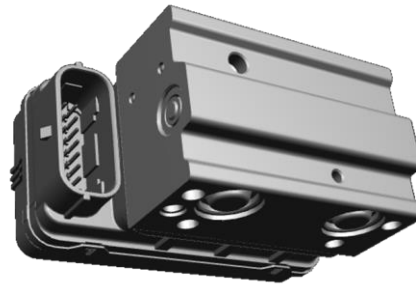
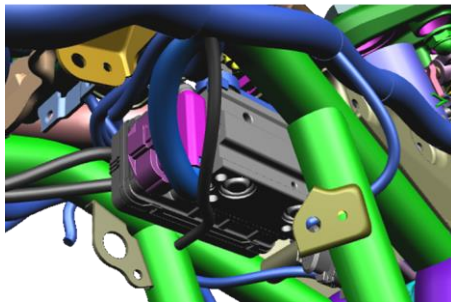
Step	Checkpoint	If Yes	If No
1	Using tester tool write defined variant & check. Is fault still active?	Go to Step 2	Clear DTC & check.
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

C1200- Variant code out of range

Overview:

DTC	C1200
Customer Symptom	ABS control disabled
Fault effects (On vehicle)	Brakes work as non- ABS configuration.
Lamp Status (If any)	ABS warning tell-tale turns ON
Fault detection condition	This fault is set if <ol style="list-style-type: none"> 1. Variant code is not set in ABS 2. Variant code value and variant code received from CAN are different. 3. Variant code value received from CAN is invalid. 4. Variant code value is not received from CAN for 1.2 s from ignition ON.
Probable trouble area	ABS Unit
Healing condition	Write correct variant code using tester tool

Component Location & Image:



Troubleshooting:

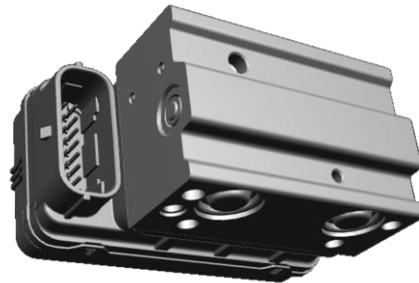
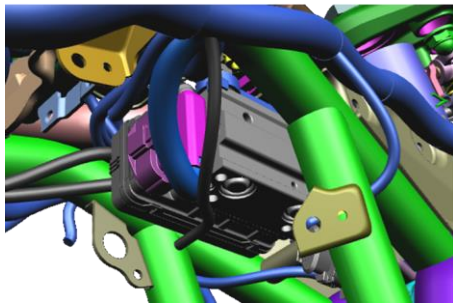
Step	Checkpoint	If Yes	If No
1	Using tester tool write defined variant & check. Is fault still active?	Go to Step 2	Clear DTC & check.
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2921- CAN bus generic failure

Overview:

DTC	U2921
Customer Symptom	Speed indication not working
Fault effects (On vehicle)	ABS control is active, CAN communication not working.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	This fault is set if in the initializing process the microcontroller couldn't receive the expected response from the CAN controller after trying to configure it.
Probable trouble area	ABS Unit
Healing condition	Replace part

Component Location & Image:



Troubleshooting:

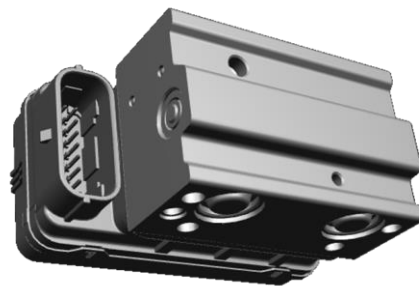
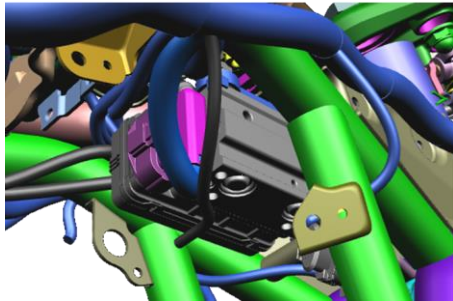
Step	Checkpoint	If Yes	If No
1	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2922- CAN bus OFF

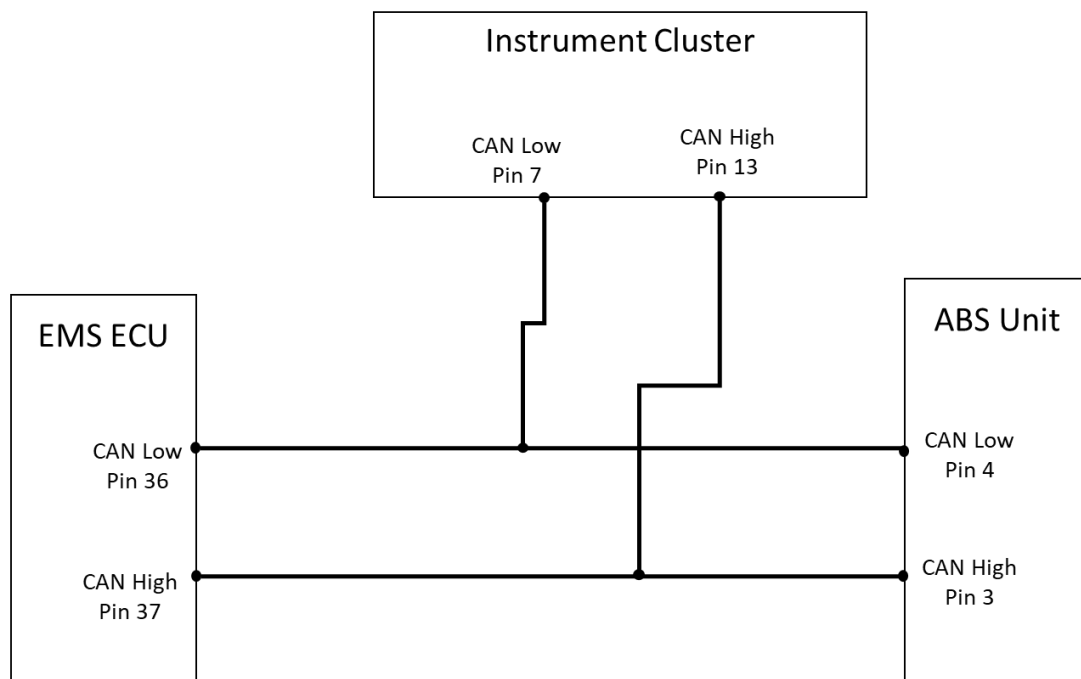
Overview:

DTC	U2922
Customer Symptom	Speed indication not working
Fault effects (On vehicle)	ABS control is active, CAN communication not working.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	This fault is set if CAN wires (CAN Low & CAN High) are either short circuit to each other or with ground or supply.
Probable trouble area	ABS Unit, Wiring harness
Healing condition	Electrical rectification of fault, Part replacement

Component Location & Image:



Circuit Interface:



Troubleshooting:

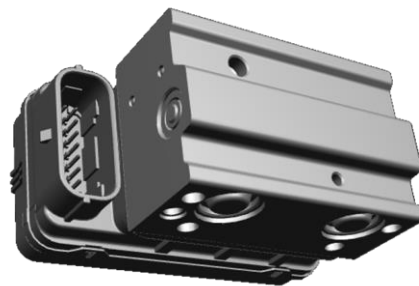
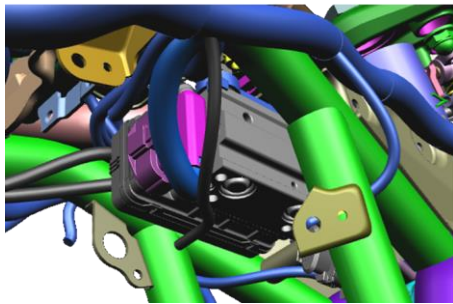
Step	Checkpoint	If Yes	If No
1	Check wiring harness continuity between CAN wires as shown in "Circuit Interface" Are any wires short circuited to ground/ power supply/ between CAN high & CAN low?	Check / Replace wiring harness	Go to Step 2
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2930- NET Under-voltage

Overview:

DTC	U2930
Customer Symptom	ABS control not active/ off
Fault effects (On vehicle)	ABS control is not active
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	The monitor checks the power supply voltage. When it becomes less than 8.5V for 70ms, this state is judged as Net under-voltage and a failure is stored if the vehicle speed is 6km/h or faster.
Probable trouble area	ABS Unit, Wiring harness
Healing condition	Replace part

Component Location & Image:



Troubleshooting:

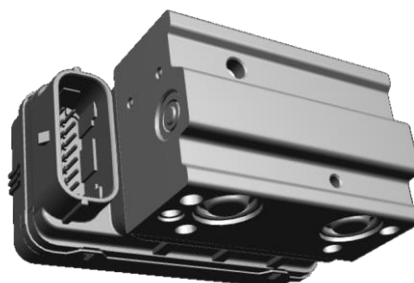
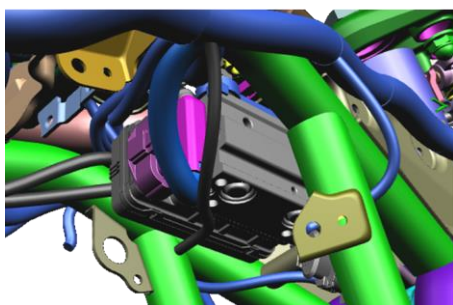
Step	Checkpoint	If Yes	If No
1	Check if Pin 14 or Pin 16 are short circuited to ground?	Check/ Replace wiring harness	Go to Step 2
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2931- NET Over-voltage

Overview:

DTC	U2931
Customer Symptom	ABS control not active/ off
Fault effects (On vehicle)	ABS control is not active
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	The monitor checks the power supply voltage. When it becomes greater than 16.5V for 70ms, this state is judged as Net under-voltage and a failure is stored if the vehicle speed is 6km/h or faster.
Probable trouble area	ABS Unit, Wiring harness
Healing condition	Replace part

Component Location & Image:



Troubleshooting:

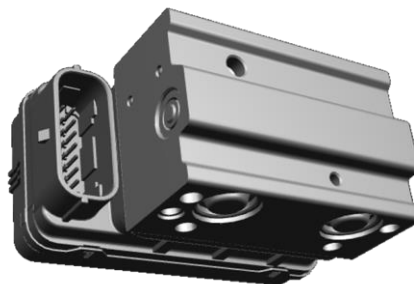
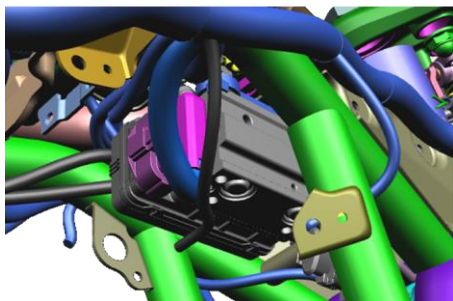
Step	Checkpoint	If Yes	If No
1	Check battery voltage during 4. Engine OFF 5. Engine idling, 6. Engine full throttle In any of the above conditions, ss voltage going beyond 16.5V?	Check/ Replace regulator rectifier	Go to Step 2
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2944- CAN meter timeout

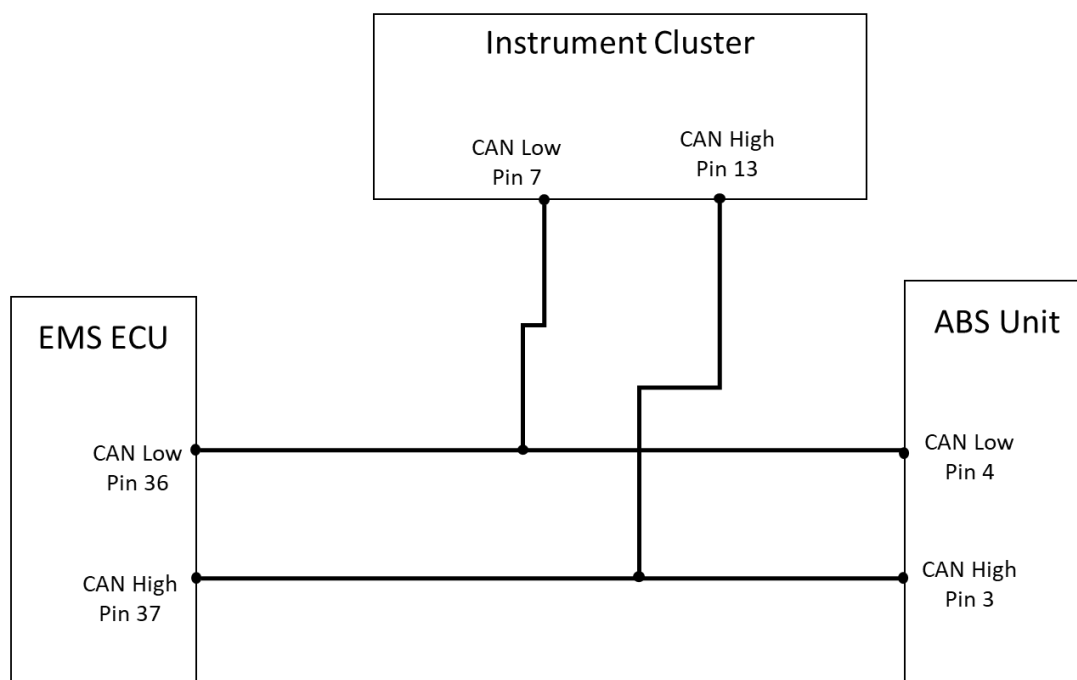
Overview:

DTC	U2944
Customer Symptom	ABS control not active/ off
Fault effects (On vehicle)	ABS control is not active
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If CAN messages are not received for defined CAN frames for more than 520 msec then this fault is set.
Probable trouble area	ABS Unit, Engine ECU, Instrument cluster
Healing condition	Replace part

Component Location & Image:



Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 2	Check/ Replace wiring harness
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

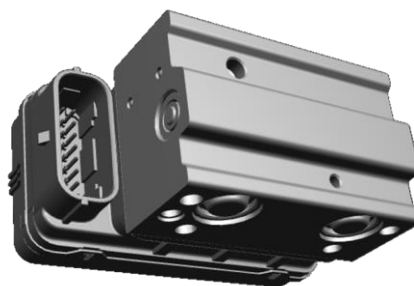
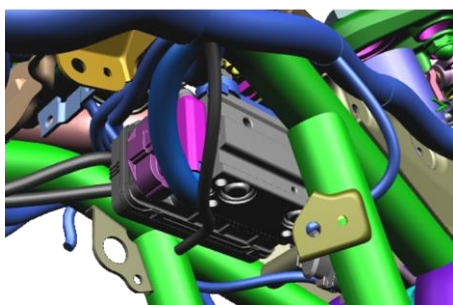
Diagnostic Trouble Code Troubleshooting

U2924- CAN engine torque frame failure

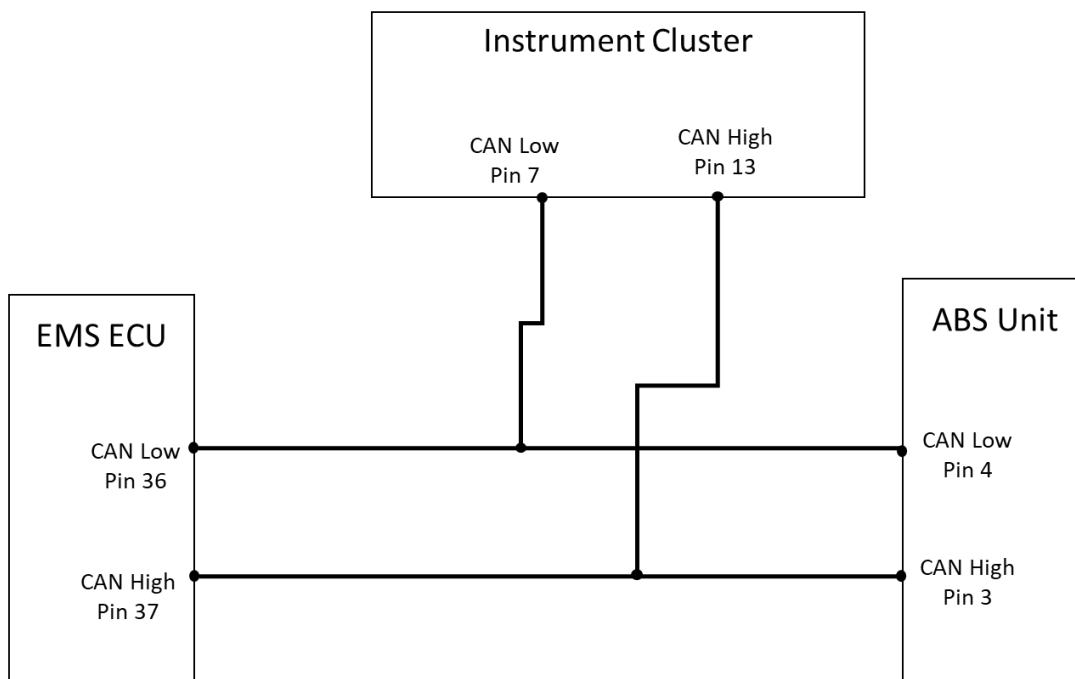
Overview:

DTC	U2924
Customer Symptom	Traction control not working.
Fault effects (On vehicle)	ABS control is active. Traction control may not work.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If the calculated checksum does not match the received checksum for a defined time duration then this fault is set. This is applicable from frames 0x25B, 0x25D, 0x25A, 0x540
Probable trouble area	ABS Unit, Engine ECU
Healing condition	Rectification after electrical diagnosis, Replacement of part

Component Location & Image:



Circuit Interface:



Troubleshooting:

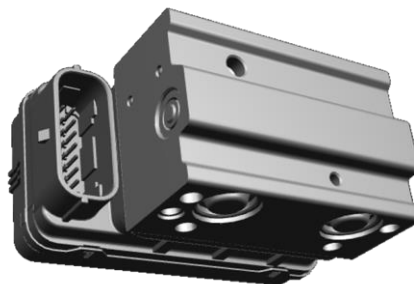
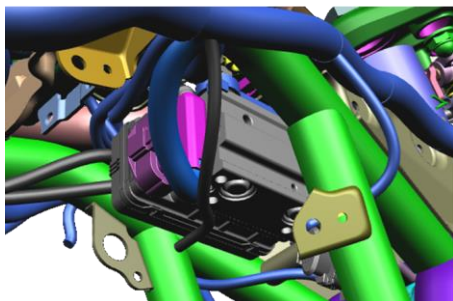
Step	Checkpoint	If Yes	If No
1	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 2	Check/ Replace wiring harness
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2925- CAN engine RPM/ torque signal failure

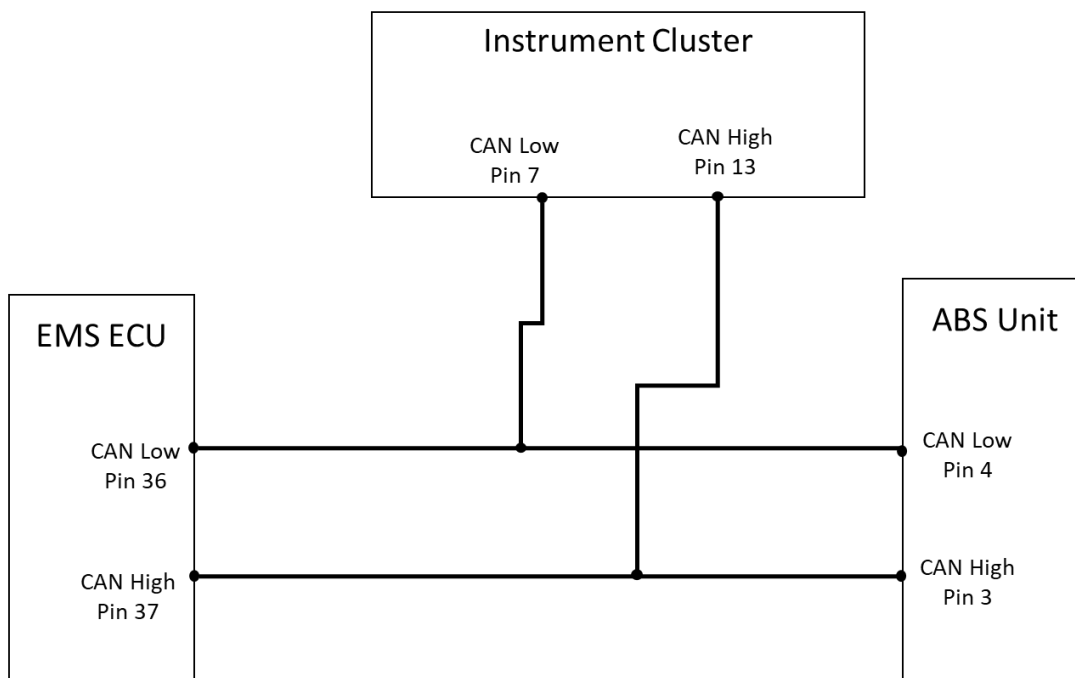
Overview:

DTC	U2925
Customer Symptom	Traction control not working.
Fault effects (On vehicle)	ABS control is active. Traction control may not work.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If engine RPM and engine torque signals are not in valid range then this fault is reported.
Probable trouble area	ABS Unit, Engine ECU
Healing condition	Rectification after electrical diagnosis, Replacement of part

Component Location & Image:



Circuit Interface:



Troubleshooting:

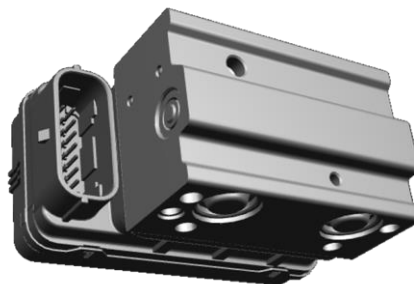
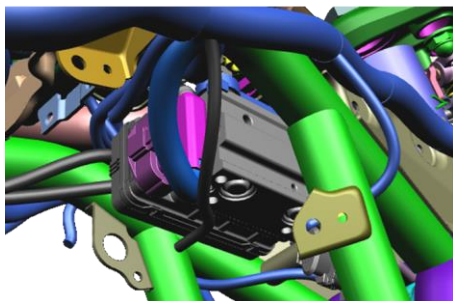
Step	Checkpoint	If Yes	If No
1	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 2	Check/ Replace wiring harness
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2932- CAN gear/ clutch signal failure

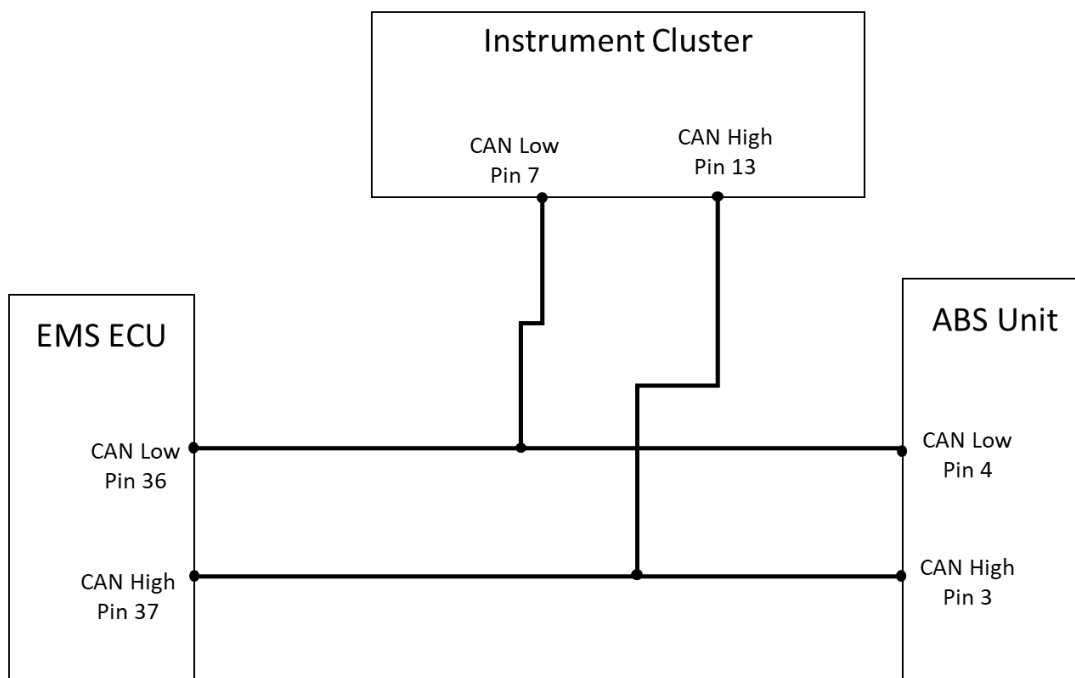
Overview:

DTC	U2932
Customer Symptom	Traction control not working.
Fault effects (On vehicle)	ABS control is active. Traction control may not work.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If gear position signal is received out of range or failure then this fault is reported.
Probable trouble area	ABS Unit, Engine ECU
Healing condition	Rectification after electrical diagnosis, Replacement of part

Component Location & Image:



Circuit Interface:



Troubleshooting:

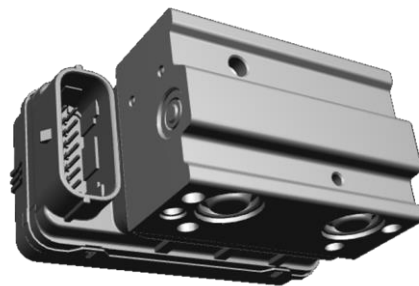
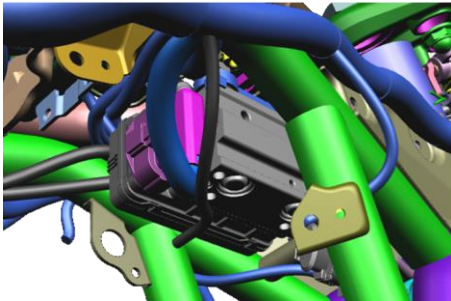
Step	Checkpoint	If Yes	If No
1	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 2	Check/ Replace wiring harness
2	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2941- OFF road enable/disable signal stuck

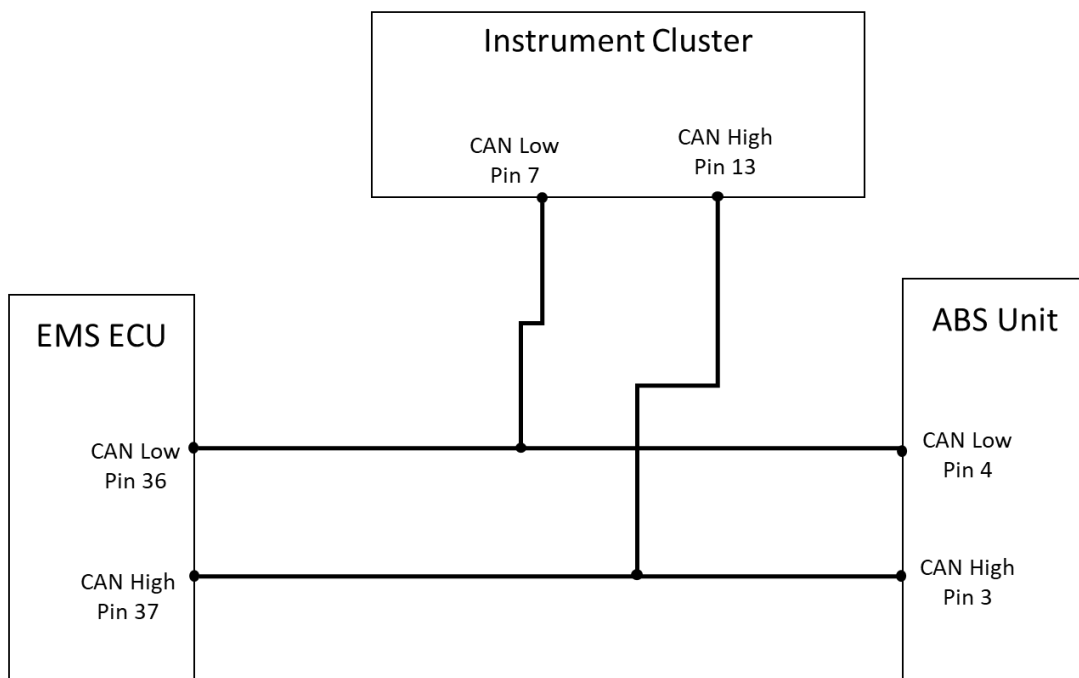
Overview:

DTC	U2941
Customer Symptom	Off road selection not possible/ intermittent
Fault effects (On vehicle)	ABS control is active. Off road selection may not work.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If Off road switch press signal is continuously high (0x01) for more than 30 sec then this fault is reported.
Probable trouble area	ABS Unit, Instrument cluster
Healing condition	Rectification after electrical diagnosis, Replacement of part

Component Location & Image:



Circuit Interface:



Troubleshooting:

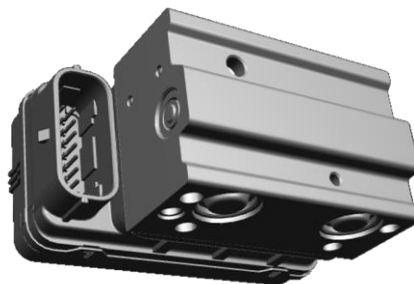
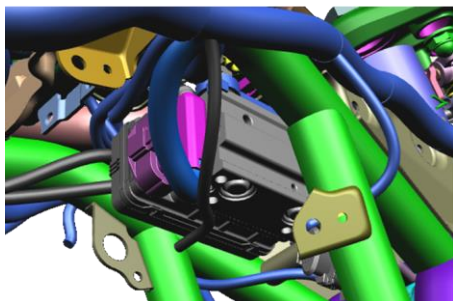
Step	Checkpoint	If Yes	If No
1	Check instrument cluster menu option for “off-road” mode. Is control switch LH “i” button stuck?	Check/ replace instrument cluster or control switch LH	Go to Step 2
2	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 3	Check/ Replace wiring harness
3	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

U2940- MTC ON/OFF signal stuck

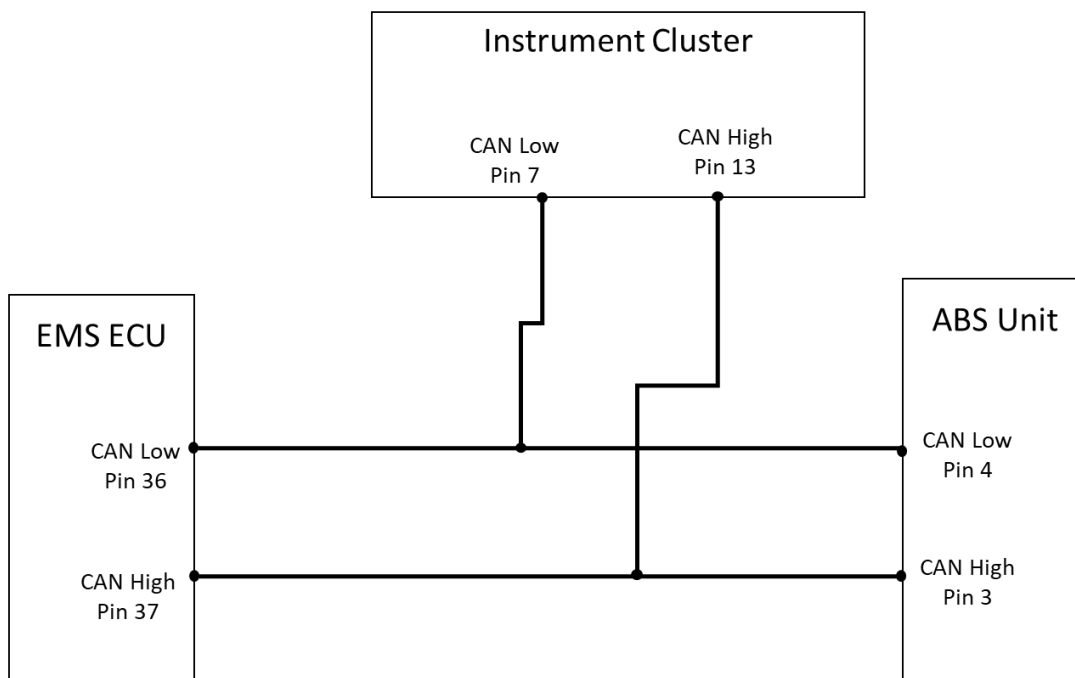
Overview:

DTC	U2940
Customer Symptom	Traction control On/Off not possible or works intermittently.
Fault effects (On vehicle)	ABS control is active. MTC selection may not work.
Lamp Status (If any)	ABS warning tell-tale may not turn ON
Fault detection condition	If MTC selection switch press signal is continuously high (0x01) for more than 30 sec then this fault is reported.
Probable trouble area	ABS Unit, Instrument cluster
Healing condition	Rectification after electrical diagnosis, Replacement of part

Component Location & Image:



Circuit Interface:



Troubleshooting:

Step	Checkpoint	If Yes	If No
1	Check instrument cluster menu option for “off-road” mode. Is control switch LH “i” button stuck?	Check/ replace instrument cluster or control switch LH	Go to Step 2
2	Check wiring harness continuity for CAN wires. Is continuity OK for all ECUs?	Go to Step 3	Check/ Replace wiring harness
3	Clear DTC and check again for same fault. Is the same fault still registered?	Replace ABS unit	Check vehicle by riding and ABS actuation.

End of Document