BCS

BODY CONTROL SYSTEM

Diagnostic Manual

Latest versions of BCS User, Installation and Diagnostic Manuals are available at:
https://cruisemaster.com.au/bcs-resources/

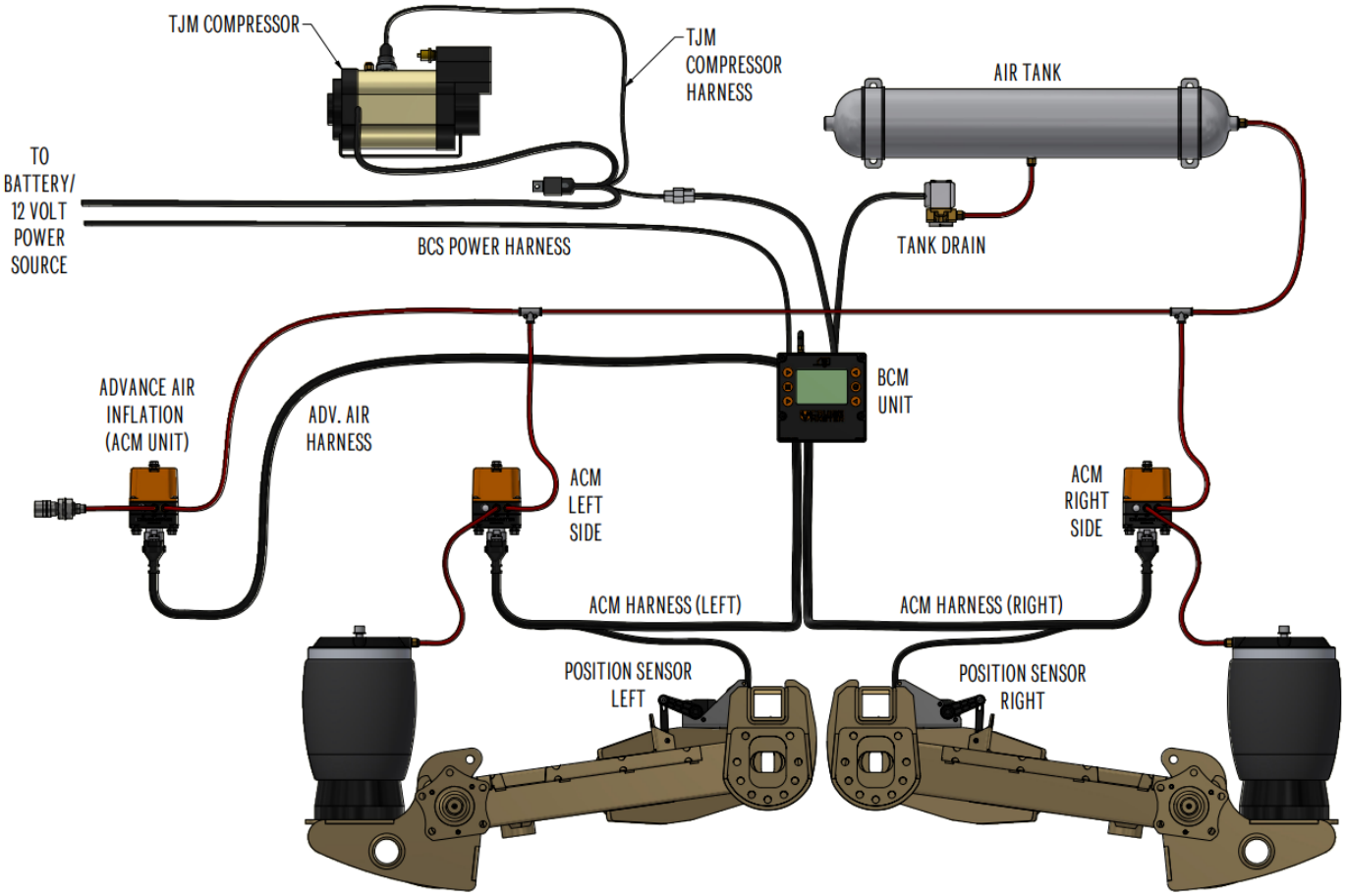
Revision	Revision Detail	Date
1	Initial Release to support Fault Detection function	10/09/2025

The Cruisemaster Body Control System

The Cruisemaster Body Control System (BCS) is a fully electronic control system for the Cruisemaster Air suspension system fitted to your trailer or caravan. The Cruisemaster BCS allows automatic setting of ride height when setting off, and levelling of the trailer when setting up on uneven ground.

The Cruisemaster BCS has Bluetooth™ capability, allowing you to use the Cruisemaster BCS App to remotely control the system and access new features and usability improvements as the product evolves.

The Cruisemaster BCS consists of the *Body Control Module (BCM)* which is the user interface, *Air Control Modules (ACM)* which control air flow, *Air Compressor*, *Air Tank* and Air *Tank Drain Solenoid*. The BCS can be optioned with the *Advanced Inflation* kit which allows automatic tyre inflation and deflation, and an *Wheel Speed Sensor* kit to keep track of travel distances and maintenance.



Warnings And Safety Instructions

SAVE THIS GUIDE: Before commencing installation or use of the Cruisemaster Body Control System (BCS), please ensure you have read, understood and saved this Installation and User Guide. Also ensure that all the components listed in this guide are supplied.
DISCLAIMER: Cruisemaster accepts no liability for injury, loss or property damage which may occur due to improper or unsafe installation and/or use of the Cruisemaster Body Control System.

WARNING

1. Compressed air can be dangerous. This system must only be operated by a competent person, in compliance with the operating procedures and recognizing the risks outlined in this document.
2. Always operate the system in a safe manner.
3. Keep all persons and pets clear of the trailer during operation.
4. Always be aware of the surroundings of yourself and the trailer prior to operation.
5. Ensure all persons and pets are clear before releasing air from the tank drain valve.
6. Do not use any function of the system on or toward people, children or pets.
7. Do not use any function with the trailer stabiliser legs down. Only use the stabiliser legs after the function is complete.
8. Air venting from the system (via Quick Connect port, ACM exhaust or Air Tank Drain solenoid exhaust) may be loud.
9. Ensure you have read and fully understood the instructions in the Error! Reference source not found. section prior to using the inflation function.
10. Ensure installation or repair of the system or any of its components is carried out by a competent person.
11. ALWAYS use jack stands and ensure the trailer is safely secured and wheels chocked prior to installation, repair and operation. DO NOT work under insecure loads.
12. Do not remove, modify or bypass the pressure relief valve. Pressure relief valve may only be replaced by an equivalent rated (155psi) valve.
13. All Air Control Modules (ACM) MUST be vented to external atmosphere.
14. Use the supplied airline cutter for cutting all airline in the system.

CAUTION

1. Ensure a fuse is installed at the power supply source for the Body Control System (BCS) (5A) and air compressor (refer to the manufacturers user manual for fuse size).
2. Ensure all electrical connections are insulated.
3. Ensure all harnesses/cables are secured at regular intervals and are protected from sharp edges to prevent chafing and wear.
4. DO NOT use thread tape on any fittings or components as it may result in component failure. Cruisemaster recommends the correct use of thread sealant. Wear the correct PPE and follow the manufacturers specifications and procedures for correct application.
5. Periodically check the safety relief valve (usually installed on compressor) by ensuring air is released when the manual override is pulled.
6. Periodically check all airlines and fittings for leaks.
7. Periodically check all fasteners and mounting hardware are securely installed.
8. Follow the manufacturer's instructions for the installation and use of the air compressor. ALWAYS use the appropriate fuse for the application and ensure the compressor is properly mounted to reduce vibration and noise.
9. Exercise caution when performing water crossings to not submerge the air compressor (if it is mounted externally or beneath the trailer)
10. Do not replace the Bluetooth antenna with an alternate part.

PERSONAL SAFETY MEASURES: Please follow the preceding measures to ensure the safe installation and use of the BCS.

1. Use the appropriate PPE for the task being completed while using the BCS.
2. Use eye protection whenever there is a risk of dust being blown into the vicinity of the user and bystanders. Dirt particles can irritate the eyes, skin and respiratory system.
3. Use heat-proof gloves when working with hot equipment. The air compressor may get very hot during use.
4. Parts of the system may create loud noise and vibration. Use hearing protection if exposed to loud noise.

Contents

System Specifications

Operating Temperature	-20°C to 60°C
Operating Voltage	12V Nominal, 10V Minimum, 15V Maximum.
Idle Current	~50mA
Operating Current	0.15-2.50A
Maximum Current on Compressor Output	2A (positive switched)
Maximum Current on Tank Drain Output	2A (positive switched)
Operating Pressure	110-130psi (set by Pressure Switch). Do not exceed 130psi.
Overpressure Relief Pressure	155psi (set by Pressure Relief Valve). Do not exceed 155psi.
BCM Dimensions	130x130x18.5 (excludes Bluetooth antenna)
BCM LCD	3.4” Backlit Sunlight Readable
Tubing	¼” Polyurethane or Nylon

Servicing

Wheel Alignment

Due to the movement of the control arm relative to the position sensors during wheel alignment operations, it is recommended to perform Sensor Calibration for best performance.

Component Removal

Removing Air Components

To relieve all air pressure from the BCS prior to servicing:

1. Select MANUAL Mode from the Home screen.
   - Lower each side of the trailer until air can no longer be heard venting from the ACM and the pressure value shown for both sides is zero.
2. If Advanced Inflation is installed, navigate to Inflator menu>Manual
   - Press the down ▼ arrow key to relieve any air pressure between the Inflator ACM and the Quick Connect fitting.
3. Activate the Tank Drain function (Tools menu>Air Tank Drain) until air can no longer be heard venting. Activate the Tank Drain for a further 10 seconds.

Troubleshooting

Fault Indicator is present

Refer **Control System Diagnostics** on page 8.

DRIVE or LEVEL function does not work

- If the Air Compressor is running, wait a few minutes for the Air Tank to fill and try again. The Air Tank may have been depleted.
- If the Air Compressor is not running, refer **Compressor Does Not Run** on page 9.
- Sensor Calibration has not been performed.
- Faults have been detected in the system that inhibit automatic control functions.

Trailer is not level after performing the LEVEL function.

- If a switch has been installed to isolate the compressor, ensure it is wired to only isolate the signal from the BCM. The compressor should not be controlled exclusively by the switch. The BCM will briefly pause the compressor to quell vibration and read the trailer angle accurately. If the Sensor Calibration process has been performed with the compressor controlled exclusively by a switch, the Sensor Calibration process may need to be performed once the switch issue is rectified.
- Perform Set Level Position function.

Suspension does not maintain position

- Refer **Air System Diagnostics** on page 7

BCM display is blank

- BCM may be in sleep mode, press any key to power on.
- Check the state of charge of the battery.
- Press and hold the ☰ key to reboot
- Check fuse at the power source
- Check fuse on the back of the BCM
- Check battery voltage is sufficient and present at the BCM power connector.
- Contact Cruisemaster Technical Support.

Compressor runs when uncommanded

- Ensure the latest firmware is installed.
- If a switch has been installed to isolate the compressor, ensure it is wired to only isolate the signal from the BCM. The compressor should not be controlled exclusively by the switch.

Air System Diagnostics

Suspension lowers over time uncommanded

One or both sides of the suspension lowers over time without user input.

Diagnostic Guidance

If the change in suspension height is large, rapid, confined to one side, and not explained by the below factors, it is likely due to an air leak.

- Changing temperature. If the suspension height is set at high ambient temperature, as the ambient temperature decreases a decrease in height of both sides is expected.
- Changing weight or weight distribution. If the trailer is loaded or water tanks filled, a decrease in height on both sides is expected (depending on distribution of weight added)

Leak Testing

Use soapy water spray to check the following components:

- ACM
  - Fittings
  - Housing vent
  - Exhaust port (unscrew silencer and put a film of soapy water across the port)
- Components downstream of the ACM
  - Air line fittings
  - Airbag fitting/s
  - Airbag upper mount threads
  - Airbag lower mountings

If no leaks are found with soapy water testing:

- Remove the air line from the OUT port of the ACM and replace with a manual inflation valve. Inflate the airbag/s manually to normal ride height and monitor the ride height over time.
  - If ride height is maintained, the ACM is likely at fault. Contact Cruisemaster Technical Support.
  - If ride height is not maintained, conduct further testing of the system downstream of the ACM.
    - Add a manual inflation valve to each airbag (if tandem) and inflate to normal ride height and monitor ride height and the appearance of each airbag.

Suspension raises over time uncommanded

One or both sides of the suspension raises over time without user input.

Diagnostic Guidance

If the change in suspension height is large, rapid, confined to one side, and not explained by the below factors, it is likely due to an internal leak in the ACM. Contact Cruisemaster Technical Support.

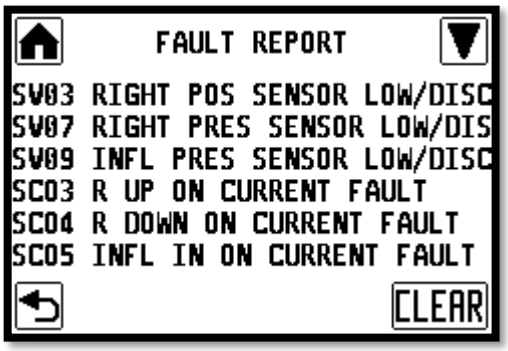
- Changing temperature
  - If the height is set at low ambient temperature, as the ambient temperature increases an increase in height of both sides is expected.
  - If Active Ride Control is not in use, movement of the airbag when towing will heat the airbag and cause an increase in height of both sides.
- Changing weight or weight distribution. If the trailer is unloaded or water tanks emptied, an increase in height of both sides is expected (depending on distribution of weight removed).

Control System Diagnostics

- Install the latest firmware to ensure the latest automatic fault detection is available.
- Check Fault Report
- Make a record of faults shown before clearing the fault report.
- Refer to the Fault Code reference in this document for more information on any faults reported.

Fault Report

This screen displays any faults that have been detected in the system. The report will show up to 12 faults over 2 pages, press the upper right button to switch between pages.



About Fault Detection

- Fault Detection does not run until 10 seconds after the BCM powers up.
- Faults are not stored between power cycles, so recorded faults may be lost if there are power supply issues or the BCM is restarted.
- Faults do not automatically clear, allowing intermittent faults to be seen.
- Sensor Value (SV##) faults identify sensor values outside of the sensor's output range.
    - Checks are performed continuously
    - If the fault is still present when the faults are cleared, the fault will not clear.
- Sensor Plausibility (SP##) faults identify inputs that are within the measuring range, but unlikely to be correct based on other information.
    - For faults checked continuously, if the fault is still present when the fault report is cleared, the fault will not clear.
    - For faults checked during certain conditions of operation, the fault will not reappear unless those conditions are met, so the ability to clear the fault report does not indicate the fault is rectified.
- Calibration Value (CV##) faults identify Sensor Calibration issues
    - Checks are performed continuously
    - If the fault is still present when the faults are cleared, the fault will not clear.
    - Faults can only be cleared by correcting the issues and performing a valid Sensor Calibration.
- Solenoid Control (SC##) faults:
    - Can only be checked by the system when the outputs are operated, such as when using Drive, Level, Manual or Solenoid Test functions.
    - When the BCM powers up, no faults will be present, as the outputs have not yet been operated. To check for Solenoid Control faults, use the Solenoid Test function.
- Fault Detection cannot detect every possible fault in the system, some examples are:
    - Air leaks
    - Air compressor faults
        - Power supply to the air compressor
        - Control circuit to the air compressor relay
    - Some sensor failures where the sensor outputs a valid but incorrect reading
    - Power supply transients/glitches
    - Keypad or LCD display faults

Control System Faults

The following diagnostic information is provided as a guide. It does not consider every possible mode of failure, or multiple points of failure. If you suspect that the issue is more complex, contact Cruisemaster Technical Support.

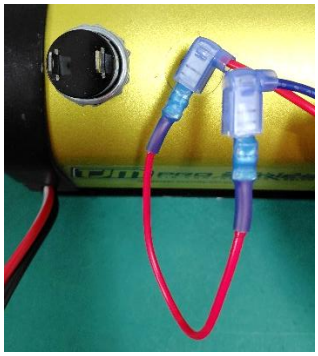
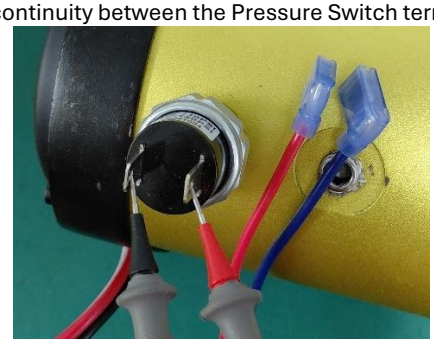
Compressor Does Not Run

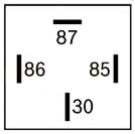
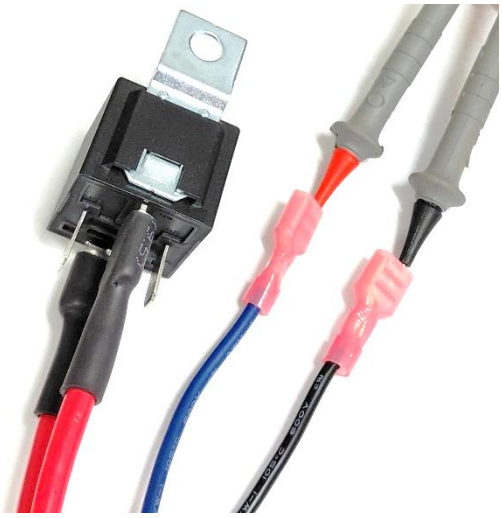
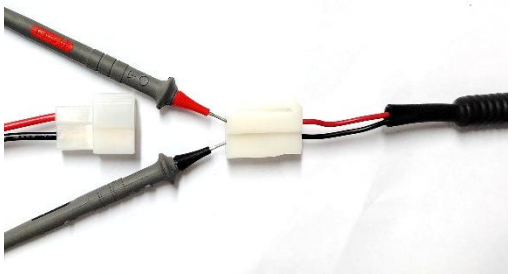
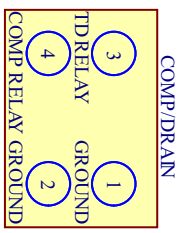
The Air Compressor does not run when operating the system.

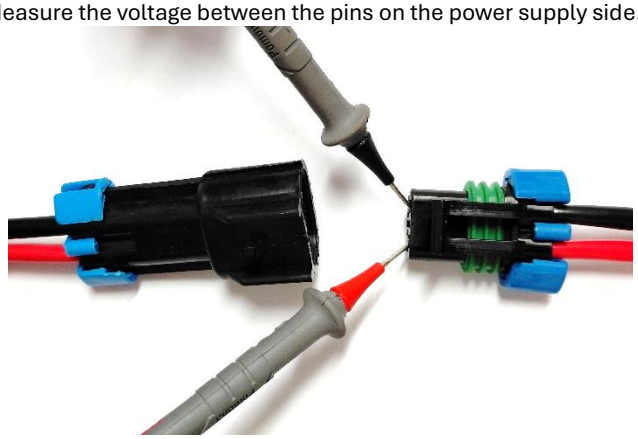
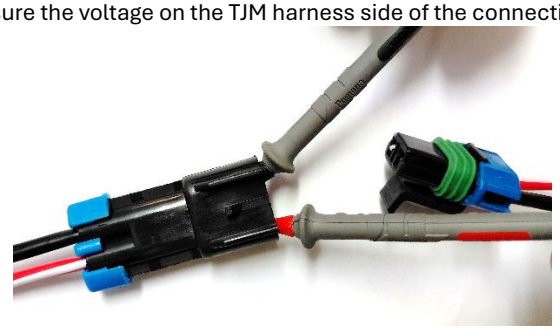
The measured current value to the Air Compressor Relay can be viewed in Tools Menu>Solenoid Test, labelled **AIR COMP**.

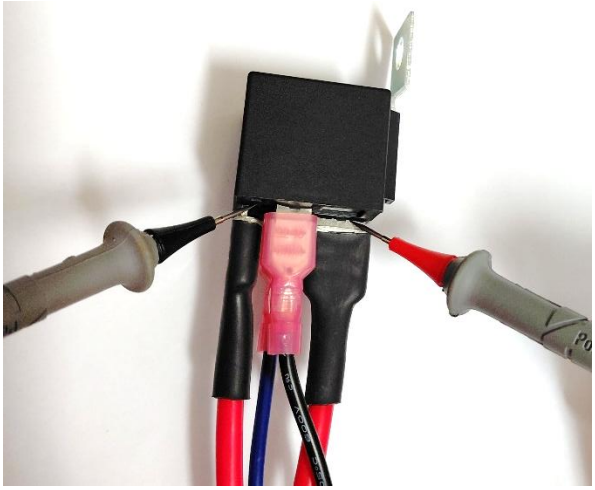
As the BCM does not control the compressor motor directly, automatic fault detection is not possible.

Diagnostic Process

Step	Action	If Yes	If No
1	Activate the Tank Drain function (Tools menu>Air Tank Drain) until air can no longer be heard venting. Use Home>Manual mode to activate the Compressor output. Does the compressor run?	System OK.	Go to Step 2
2	If a switch has been installed to isolate the compressor, is it set correctly? Are all cables and connectors between the BCM and the Compressor Harness firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 4	Go to Step 3
3	Rectify any issues found in Step 2 then return to Step 1.		
4	Activate the Tank Drain function (Tools menu>Air Tank Drain) until air can no longer be heard venting. Run a Solenoid Test (Tools menu>Solenoid Test). Check the result for **AIR COMP**, is the value less than 0.05?	Go to Step 5 or 6	Go to Step 17
5	Disconnect the cable connectors from the Pressure Switch. Use Home>Manual mode to activate the Compressor output. Briefly bridge the cable connectors on the TJM Harness side.  Does the compressor run?	Go to Step 7	Go to Step 8 or 9
6	Disconnect the cable connectors from the Pressure Switch. Check for continuity between the Pressure Switch terminals.  Is continuity present?	Go to Step 8 or 9	Go to Step 7
7	Replace Pressure Switch		
8	Reconnect the cables to the Pressure Switch. Temporarily swap in a known good relay. Use Home>Manual mode to activate the Compressor output. Does the compressor run?	Go to Step 10	Go to Step 11

Step	Action	If Yes	If No
9	Reconnect the cables to the Pressure Switch. Disconnect the connectors for pins marked 85 and 86 in the diagram below from the relay. Measure the resistance across the relay pins marked 85 and 86.  Is resistance greater than 240 ohm?	Go to Step 10	Go to Step 11
10	Replace Relay		
11	Use Home>Manual mode to activate the Compressor output. Measure the voltage between the relay connector pins that correspond with relay pins marked 85 and 86 in the diagram below.  Is the voltage greater than 10V?	Contact Cruisemaster Technical Support.	Go to Step 12
12	Disconnect the Compressor/Tank Drain cable (32C-060) from the TJM supplied compressor harness (F-37749). Use Home>Manual mode to activate the Compressor output. Measure the voltage across the connector pins shown.  Is the voltage greater than 10V?	Go to Step 13	Go to Step 14
13	Replace TJM compressor harness (F-37749).		
14	Disconnect the Compressor/Tank Drain cable (32C-060) from the BCM. Use Home>Manual mode to activate the Compressor output. Measure the voltage across the BCM output pins 2 and 4. Is the voltage greater than 10V?  *Compressor/Tank Drain connector on BCM, as viewed from rear of BCM*	Go to Step 15	Go to Step 16

Step	Action	If Yes	If No
15	Replace the Compressor/Tank Drain cable (32C-060).		
16	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
17	Check the Compressor fuse (40A) Is the fuse intact?	Go to Step 19	Go to Step 18
18	Replace fuse. Use Home>Manual mode to activate the Compressor output. Does the compressor run? If the fuse blows again, contact Cruisemaster Technical Support.	System OK	Go to Step 19
19	Disconnect the power supply (red and black cables) from the TJM harness (F-37749) Measure the voltage between the pins on the power supply side.  Is Battery voltage present?	Go to Step 21	Go to Step 20
20	Rectify wiring upstream to the battery.		
21	Reconnect the power supply to the TJM harness (F-37749). Disconnect the connector between the TJM harness (F-37749) and the Compressor (red/white and black cables). Use Home>Manual mode to activate the Compressor output. Measure the voltage on the TJM harness side of the connection.  Is Battery voltage present?	Go to Step 22	Go to Step 23 or 24
22	Replace Compressor		
23	Temporarily swap in a known good relay. Use Home>Manual mode to activate the Compressor output. Does the compressor run?	Go to Step 25	Go to Step 26

Step	Action	If Yes	If No
24	Use Home>Manual mode to activate the Compressor output. Check for continuity between pins 87 and 30 on the relay connector.  Is continuity present?	Go to Step 26	Go to Step 25
25	Replace Relay		
26	Replace TJM harness (F-37749)		

H01 - Bluetooth Module Fault

The BCM microprocessor cannot communicate with the internal Bluetooth module. Check is performed when the BCM is powered up.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Process

Step	Action	If Yes	If No
1	Restart BCM by pressing and holding the Menu ☰ button. Check Fault Report. Does the fault remain?	Go to Step 2	System OK
2	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

H02 - Accelerometer Fault

The BCM microprocessor cannot communicate with the internal IMU module. Communication is checked continuously.

Actions taken by the BCS

- Fault Indicator shown on home screen
- ~~Inhibit Horizon Level, Active Ride Control and Sensor Calibration functions.~~

Diagnostic Process

Step	Action	If Yes	If No
1	Restart BCM by pressing and holding the Menu ☰ button. Check Fault Report. Does the fault remain?	Go to Step 2	System OK
2	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

H03 - Barometer Fault

The BCM microprocessor cannot communicate with the internal Barometer module. Communication is checked continuously.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Process

Step	Action	If Yes	If No
1	Restart BCM by pressing and holding the Menu ☰ button. Check Fault Report. Does the fault remain?	Go to Step 2	System OK
2	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

H04 - Odometer Memory Fault

The BCM microprocessor cannot write new values to the internal Odometer memory module. Each write attempt is validated.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Process

Step	Action	If Yes	If No
1	Restart BCM by pressing and holding the Menu ☰ button. Check Fault Report. Does the fault remain?	Go to Step 2	System OK
2	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

H05 - Application Memory Fault

The BCM microprocessor cannot communicate with the internal firmware storage memory module. Check is performed when the BCM is powered up.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Process

Step	Action	If Yes	If No
1	Restart BCM by pressing and holding the Menu ☰ button. Check Fault Report. Does the fault remain?	Go to Step 2	System OK
2	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

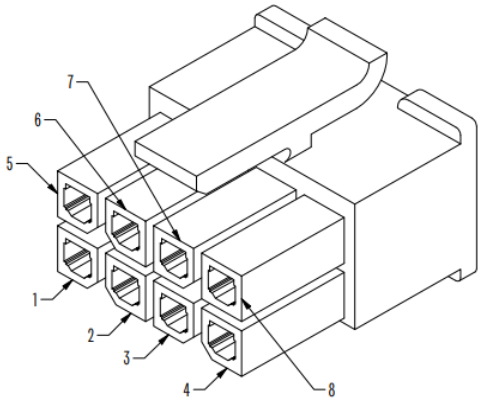
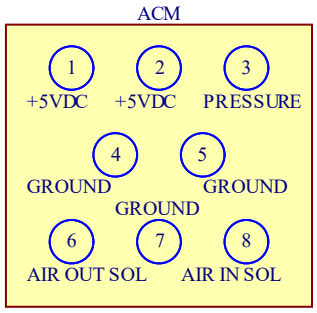
H06 - 5V Supply Fault

The BCM has detected the internally generated 5-volt sensor supply has deviated from the acceptable range (between 4.85V and 5.15V). This will cause all position and pressure sensor values to be erratic and unusable, fault codes for these values may also be present. The measured value can be viewed in Tools Menu>Diagnostics, labelled **5V REG**. This fault can occur due to the sensor supply being overloaded, connected to ground or connected to a 12V supply.

Actions taken by the BCS

- Fault Indicator shown on home screen
- ~~Inhibit Drive, Horizon Level, Active Ride Control, Inflation and Sensor Calibration functions~~

Diagnostic Process

Step	Action	If Yes	If No
1	Clear the Fault Report, does the Fault remain?	Go to Step 2	System OK
2	Disconnect LEFT ACM, RIGHT ACM and INFLATOR cables from the BCM, is the **5V REG** value between 4.85V and 5.15V?	Go to Step 5	Go to Step 3
3	Disconnect the ACMs from each ACM and INFLATOR cable. On the ACM Cable side of the connection to the BCM: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check for continuity between: ○ Pin 5 and Pin 7 ○ Pin 6 and Pin 7  *ACM Cable BCM Connector* At each ACM: • Check for continuity between: ○ Pin 1 and Pin 6 ○ Pin 1 and Pin 8  *ACM Connector with air connections pointing upward* Is continuity present on any of the ACM cables or ACMs?	Go to Step 4	Contact Cruisemaster Technical Support.
4	Replace BCM (Contact Cruisemaster Technical Support for confirmation) and any components exhibiting continuity in Step 3.		

Step	Action	If Yes	If No
5	Disconnect all the ACMs and Position Sensors from the ACM and INFLATOR cables. Connect each of the ACM and INFLATOR cable connectors to the BCM individually while checking the **5V REG** values. Do any of the connections cause the **5V REG** value to deviate from the 4.85V to 5.15V range?	Go to Step 6	Go to Step 7
6	Replace the cable/s that cause the deviation. Have you replaced the cables?	Go to Step 7	
7	Connect all of the ACM/INFLATOR cable connectors to the BCM. Connect each ACM to its ACM/INFLATOR cable individually while checking the **5V REG** values. Do any of the connections cause the **5V REG** value to deviate from the 4.85V to 5.15V range?	Go to Step 8	Go to Step 9
8	Replace the ACM/s that cause the deviation. Have you replaced the ACM/s?	Go to Step 9	
9	Connect all of the ACMs to their ACM/INFLATOR cables. Connect each Position Sensor to it's ACM cable individually while checking the **5V REG** values. Do any of the connections cause the **5V REG** value to deviate from the 4.85V to 5.15V range?	Go to Step 10	Go to Step 11
10	Replace the Position Sensors that cause the deviation. Clear the Fault Report, does the Fault remain?	Contact Cruisemaster Technical Support.	System OK
11	Connect all Position Sensors to their ACM cables. Clear the Fault Report, does the Fault remain?	Contact Cruisemaster Technical Support.	System OK

H07 - Input Voltage Low

The BCM has detected the battery/supply voltage was less than 10.5V. The measured value can be viewed in Tools Menu>Diagnostics, labelled **BATTERY**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- If the battery voltage is or has been low, charge the battery then clear the faults.
- If a DC to DC voltage converter powers the BCM (such as from a 48V electrical system) the converter may be undersized.
- Ensure cables between the battery/power converter and the BCM don't produce excessive voltage drop in operation, positive and negative cable voltage drops should be less than 0.5V combined.
    - To draw maximum current for voltage drop testing, enter Manual Mode, then lower both sides of the suspension by holding both down buttons ▼ at the same time.
- Clear fault report once rectified.

H08 - Input Voltage High

The BCM has detected the battery/supply voltage was greater than 15.0V. The measured value can be viewed in Tools Menu>Diagnostics, labelled **BATTERY**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Check battery/power converter voltage.
- Clear fault report once rectified.

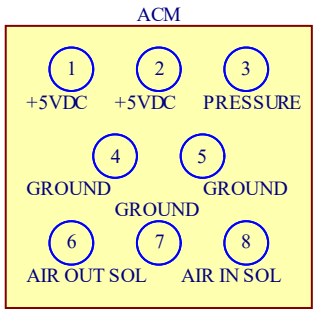
SV01 - Left Position Low

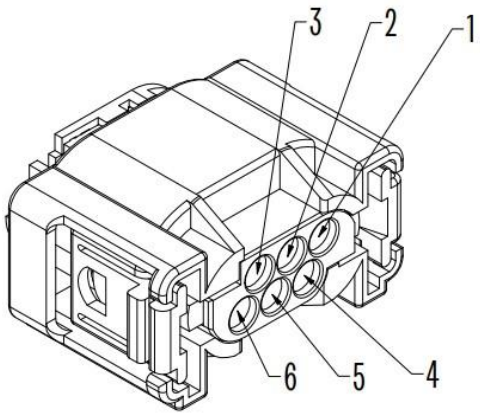
The BCM has detected the left position sensor voltage is below the operating range of the sensor (less than 0.5V). This can occur due to disconnected sensor connector, sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the first value labelled "**POS**".

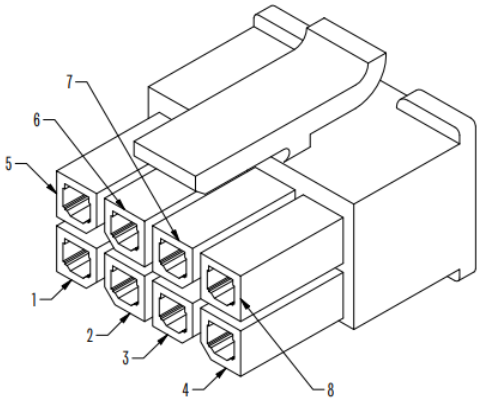
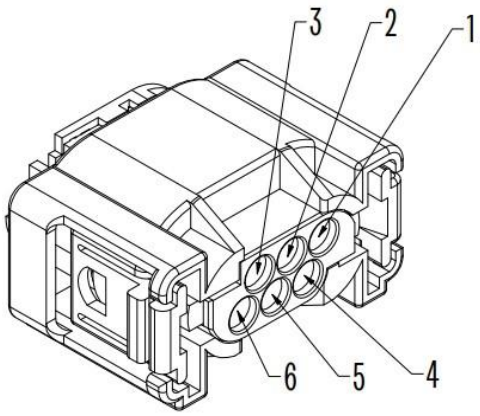
Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen position value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 or SV05 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 or SV05 fault first.		
3	Check the measured value **POS**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, left ACM and left Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7 or 8	Go to Step 6
6	Rectify any issues found in Step 5. Clear the Fault Report. Does the fault remain?	Go to Step 7 or 8	System OK
7	Temporarily replace the left ACM with a known good ACM. Clear the Fault Report. Does the fault remain?	Go to Step 10	Go to Step 9
8	Disconnect the ACM cable from the ACM. On the ACM side, check for electrical continuity between pins 1 and 2, and between pins 4 and 5. Reconnect the ACM cable to the ACM. Is continuity present in both checks?  *ACM Connector with air connections pointing upward*	Go to Step 10	Go to Step 9
9	Replace ACM		
10	Temporarily replace the left Position Sensor with a known good Position Sensor. Clear the Fault Report. Does the fault remain?	Go to Step 12 or 13	Go to Step 11
11	Replace Sensor		
12	Temporarily replace the left ACM Cable with a known good ACM Cable. Clear the Fault Report. Does the fault remain?	Contact Cruisemaster Technical Support.	Go to Step 15

Step	Action	If Yes	If No
13	Disconnect the Position Sensor from the ACM Cable. On the ACM Cable side: • Check the voltage at the position sensor connector between pin 1 (negative) and pin 5 (positive) is between 4.5V and 5.5V • Ensure the connector terminals are fully seated in the correct positions and undamaged. Are both conditions above met?  *ACM Cable Position Sensor Connector*	Go to Step 14	Go to Step 15

Step	Action	If Yes	If No
14	Disconnect the BCM and Position Sensor from the ACM Cable. On the ACM Cable side: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check that continuity exists between 1. BCM connector pin 4 (Position Sensor signal)  *ACM Cable BCM Connector* 2. Position Sensor connector pin 4 (Position Sensor signal)  *ACM Cable Position Sensor Connector* Are both conditions above met?	Contact Cruisemaster Technical Support.	Go to Step 15
15	Replace ACM Cable		

SV02 - Left Position High

The BCM has detected the left position sensor voltage is above the operating range of the sensor (greater than 4.5V). This can occur due to sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the first value labelled "**POS**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen position value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **POS**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, left ACM and left Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 3. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Disconnect the Position Sensor from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 8	Go to Step 9
8	Replace Position Sensor		
9	Disconnect the ACM from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 10	Go to Step 11
10	Replace ACM		
11	Disconnect the BCM from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 12	Go to Step 13
12	Replace Cable		
13	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

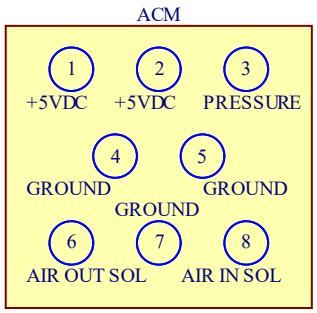
SV03 - Right Position Low

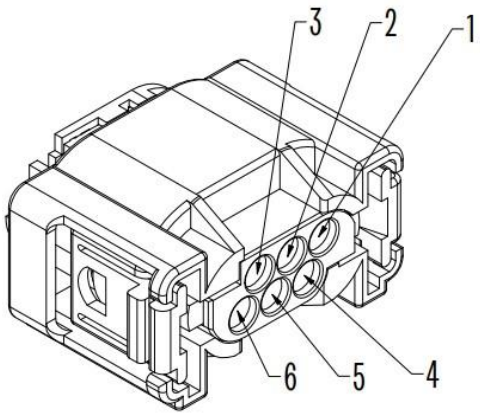
The BCM has detected the right position sensor voltage is below the operating range of the sensor (less than 0.5V). This can occur due to disconnected sensor connector, sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the second value labelled "**POS**".

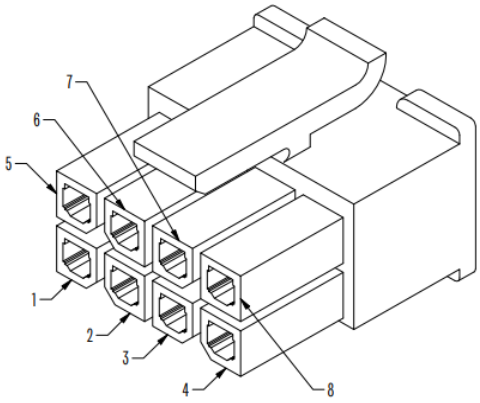
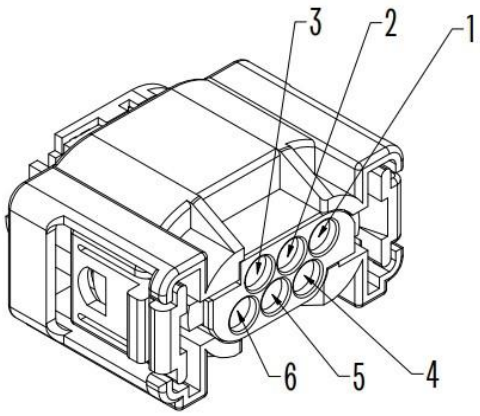
Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen position value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 or SV05 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 or SV05 fault first.		
3	Check the measured value **POS**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, right ACM and right Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7 or 8	Go to Step 6
6	Rectify any issues found in Step 5. Clear the Fault Report. Does the fault remain?	Go to Step 7 or 8	System OK
7	Temporarily replace the right ACM with a known good ACM. Clear the Fault Report. Does the fault remain?	Go to Step 10	Go to Step 9
8	Disconnect the ACM cable from the ACM. On the ACM side, check for electrical continuity between pins 1 and 2, and between pins 4 and 5. Reconnect the ACM cable to the ACM. Is continuity present in both checks?  *ACM Connector with air connections pointing upward*	Go to Step 10	Go to Step 9
9	Replace ACM		
10	Temporarily replace the right Position Sensor with a known good Position Sensor. Clear the Fault Report. Does the fault remain?	Go to Step 12 or 13	Go to Step 11
11	Replace Sensor		
12	Temporarily replace the right ACM Cable with a known good ACM Cable. Clear the Fault Report. Does the fault remain?	Contact Cruisemaster Technical Support.	Go to Step 15

Step	Action	If Yes	If No
13	Disconnect the Position Sensor from the ACM Cable. On the ACM Cable side: • Check the voltage at the position sensor connector between pin 1 (negative) and pin 5 (positive) is between 4.5V and 5.5V • Ensure the connector terminals are fully seated in the correct positions and undamaged. Are both conditions above met?  *ACM Cable Position Sensor Connector*	Go to Step 14	Go to Step 15

Step	Action	If Yes	If No
14	Disconnect the BCM and Position Sensor from the ACM Cable. On the ACM Cable side: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check that continuity exists between 3. BCM connector pin 4 (Position Sensor signal)  *ACM Cable BCM Connector* 4. Position Sensor connector pin 4 (Position Sensor signal)  *ACM Cable Position Sensor Connector* Are both conditions above met?	Contact Cruisemaster Technical Support.	Go to Step 15
15	Replace ACM Cable		

SV04 - Right Position High

The BCM has detected the right position sensor voltage is above the operating range of the sensor (greater than 4.5V). This can occur due to sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the second value labelled "**POS**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen position value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **POS**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, right ACM and right Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 3. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Disconnect the Position Sensor from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 8	Go to Step 9
8	Replace Position Sensor		
9	Disconnect the ACM from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 10	Go to Step 11
10	Replace ACM		
11	Disconnect the BCM from the ACM Cable. Does the **POS** value change to less than 0.5V?	Go to Step 12	Go to Step 13
12	Replace Cable		
13	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

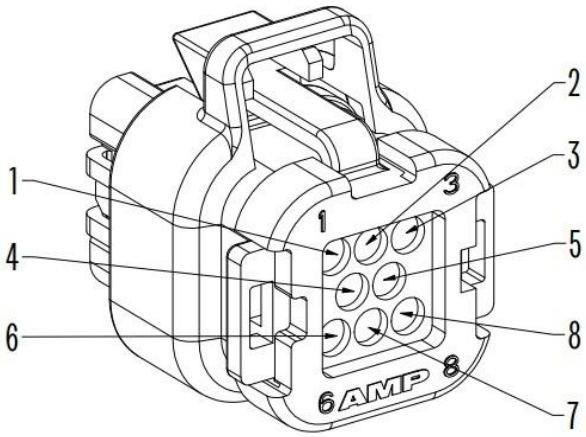
SV05 - Left Pressure Low

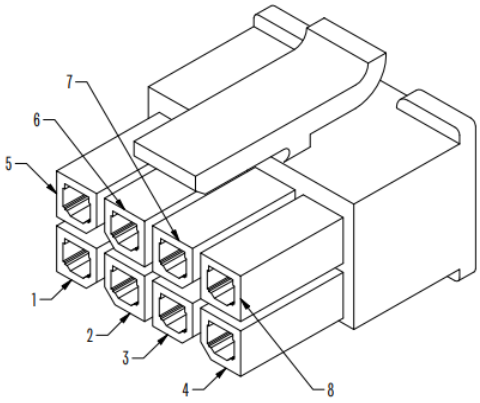
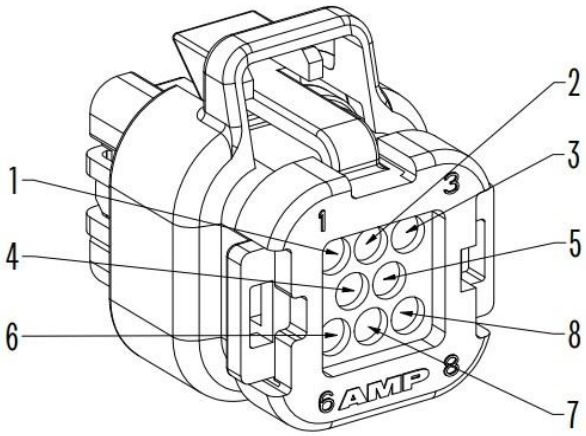
The BCM has detected the left pressure sensor voltage is below the operating range of the sensor (less than 0.5V). This can occur due to disconnected sensor connector, sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the first value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, left ACM and left Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 5. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Temporarily replace the left ACM with a known good ACM. Clear the Fault Report. Does the fault remain?	Go to Step 9 or 10	Go to Step 8
8	Replace ACM		
9	Temporarily replace the left ACM Cable with a known good ACM Cable. Clear the Fault Report. Does the fault remain?	Contact Cruisemaster Technical Support.	Go to Step 12
10	Disconnect the ACM from the ACM Cable. On the ACM Cable side: • Check the voltage at the ACM connector between pin 1 (positive) and pin 4 (negative) is between 4.5V and 5.5V • Ensure the connector terminals are fully seated in the correct positions and undamaged. Are both conditions above met?  *ACM Cable ACM Connector*	Go to Step 11	Go to Step 12

Step	Action	If Yes	If No
11	Disconnect the BCM and ACM from the ACM Cable. On the ACM Cable side: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check that continuity exists between 5. BCM connector pin 8 (Pressure signal)  *ACM Cable BCM Connector* 6. ACM connector pin 3 (Pressure signal)  *ACM Cable ACM Connector* Are both conditions above met?	Contact Cruisemaster Technical Support.	Go to Step 12
12	Replace ACM Cable		

SV06 - Left Pressure High

The BCM has detected the left pressure sensor voltage is above the operating range of the sensor (greater than 4.5V). This can occur due to sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the first value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, left ACM and left Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 3. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Disconnect the ACM from the ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 8	Go to Step 9
8	Replace ACM		
9	Disconnect the BCM from the ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 10	Go to Step 11
10	Replace Cable		
11	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

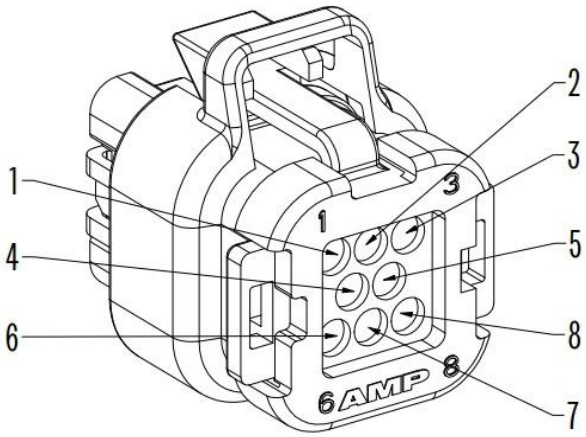
SV07 - Right Pressure Low

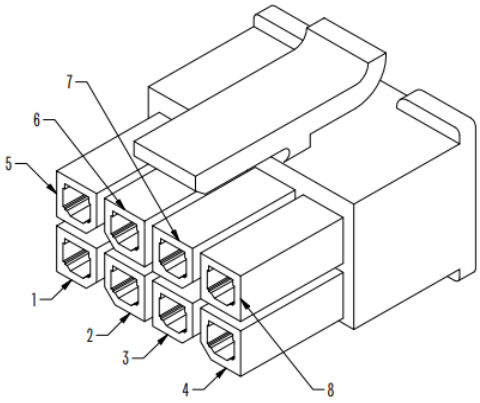
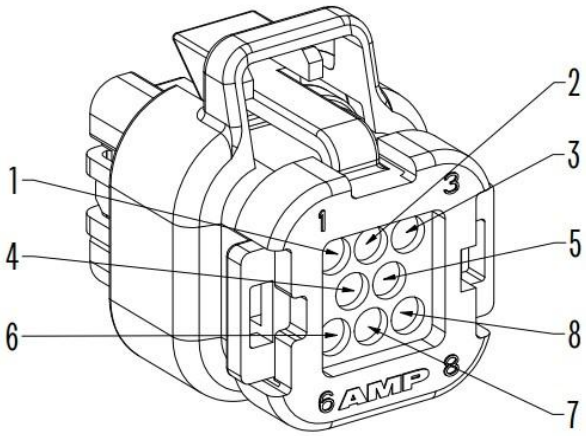
The BCM has detected the right pressure sensor voltage is below the operating range of the sensor (less than 0.5V). This can occur due to disconnected sensor connector, sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the second value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, right ACM and right Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 5. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Temporarily replace the right ACM with a known good ACM. Clear the Fault Report. Does the fault remain?	Go to Step 9 or 10	Go to Step 8
8	Replace ACM		
9	Temporarily replace the right ACM Cable with a known good ACM Cable. Clear the Fault Report. Does the fault remain?	Contact Cruisemaster Technical Support.	Go to Step 12
10	Disconnect the ACM from the ACM Cable. On the ACM Cable side: • Check the voltage at the ACM connector between pin 1 (positive) and pin 4 (negative) is between 4.5V and 5.5V • Ensure the connector terminals are fully seated in the correct positions and undamaged. Are both conditions above met?  *ACM Cable ACM Connector*	Go to Step 11	Go to Step 12

Step	Action	If Yes	If No
11	Disconnect the BCM and ACM from the ACM Cable. On the ACM Cable side: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check that continuity exists between 7. BCM connector pin 8 (Pressure signal)  *ACM Cable BCM Connector* 8. ACM connector pin 3 (Pressure signal)  *ACM Cable ACM Connector* Are both conditions above met?	Contact Cruisemaster Technical Support.	Go to Step 12
12	Replace ACM Cable		

SV08 - Right Pressure High

The BCM has detected the right pressure sensor voltage is above the operating range of the sensor (greater than 4.5V). This can occur due to sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the second value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM, right ACM and right Position Sensor firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 3. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Disconnect the ACM from the ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 8	Go to Step 9
8	Replace ACM		
9	Disconnect the BCM from the ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 10	Go to Step 11
10	Replace Cable		
11	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

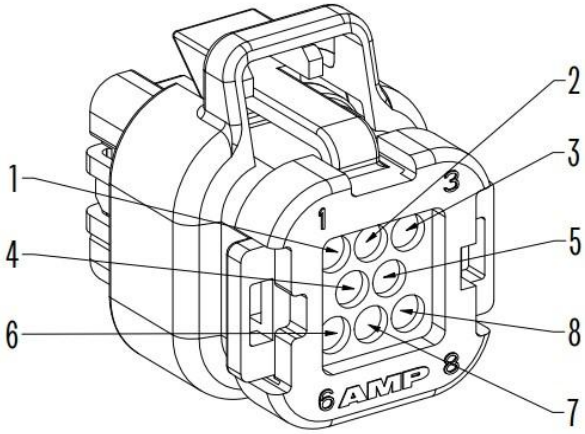
SV09 - Inflator Pressure Low

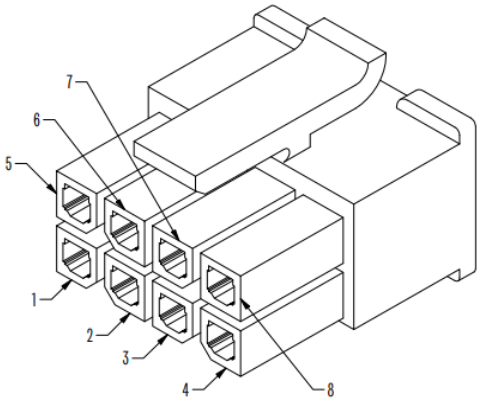
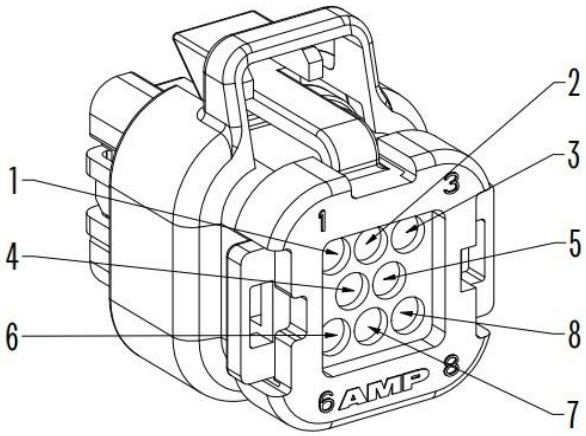
The BCM has detected the Inflator pressure sensor voltage is below the operating range of the sensor (less than 0.5V). This can occur due to disconnected sensor connector, sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the third value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM and Inflator ACM firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 5. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Temporarily replace the Inflator ACM with a known good ACM. Clear the Fault Report. Does the fault remain?	Go to Step 9 or 10	Go to Step 8
8	Replace Inflator ACM		
9	Temporarily replace the Inflator ACM Cable with a known good Inflator ACM Cable. Clear the Fault Report. Does the fault remain?	Contact Cruisemaster Technical Support.	Go to Step 12
10	Disconnect the Inflator ACM from the Inflator ACM Cable. On the Inflator ACM Cable side: • Check the voltage at the Inflator ACM connector between pin 1 (positive) and pin 4 (negative) is between 4.5V and 5.5V • Ensure the connector terminals are fully seated in the correct positions and undamaged. Are both conditions above met?  *Inflator ACM Cable ACM Connector*	Go to Step 11	Go to Step 12

Step	Action	If Yes	If No
11	Disconnect the BCM and Inflator ACM from the Inflator ACM Cable. On the Inflator ACM Cable side: • Ensure the connector terminals are fully seated in the correct positions and undamaged. • Check that continuity exists between 9. BCM connector pin 8 (Pressure signal)  *Inflator ACM Cable BCM Connector* 10. Inflator ACM connector pin 3 (Pressure signal)  *Inflator ACM Cable ACM Connector* Are both conditions above met?	Contact Cruisemaster Technical Support.	Go to Step 12
12	Replace Inflator ACM Cable		

SV10 - Inflator Pressure High

The BCM has detected the Inflator pressure sensor voltage is above the operating range of the sensor (greater than 4.5V). This can occur due to sensor failure or cable failure. The measured value can be viewed in Tools Menu>Diagnostics, as the third value labelled "**PRE**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- On screen pressure value shows "XX"
- ~~Inhibit Drive, Horizon Level, Active Ride Control and Sensor Calibration functions~~

Diagnosis

Step	Action	If Yes	If No
1	Is H06 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06 fault first.		
3	Check the measured value **PRE**, is the value between 0.5 and 4.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Contact Cruisemaster Technical Support.	System OK
5	Are all cables and connectors between the BCM and Inflator ACM firmly connected, undamaged and installed in accordance with the Installation Manual?	Go to Step 7	Go to Step 6
6	Rectify any issues found in Step 3. Clear the Fault Report. Does the fault remain?	Go to Step 7	System OK
7	Disconnect the Inflator ACM from the Inflator ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 8	Go to Step 9
8	Replace ACM		
9	Disconnect the BCM from the Inflator ACM Cable. Does the **PRE** value change to less than 0.5V?	Go to Step 10	Go to Step 11
10	Replace Cable		
11	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

SV11 - Wheel Speed Sensor Current Low

The BCM has detected the Wheel Speed Sensor Current is below the operating range of the sensor. This can occur due to disconnected sensor connector, sensor failure, cable failure or incorrect cable installed. It can also be caused by the Bosch TSC system being in a sleep state (if installed). The measured value can be viewed in Tools Menu>Diagnostics, labelled "**WS**".

Actions taken by the BCS

- Active Ride Control and Odometer may not function.

Diagnosis

Step	Action	If Yes	If No
1	Is a Bosch TSC system also installed?	Go to Step 2	Go to Step 13
2	Activate the Bosch TSC. Is the measured value **WS** between 5 and 17mA? Note: Bosch TSC can be activated with a brake signal or breakaway signal, once activated the Bosch TSC fault lamp will be illuminated.	System OK	Go to Step 3
3	Are all cables and connectors firmly secured, undamaged and installed in accordance with the Installation Manual?	Go to Step 5	Go to Step 4
4	Rectify any issues found in Step 3.		
5	Is the correct Wheel Speed Sensor patch cable fitted, part 32C-031?	Go to Step 7	Go to Step 6
6	Replace the Wheel Speed Sensor patch cable with part 32C-031. Activate the Bosch TSC. Is the measured value **WS** between 5 and 17mA?	System OK	Go to Step 7
7	Disconnect the Wheel Speed Sensor from the Wheel Speed Sensor cable 32C-030. Activate the Bosch TSC. On the cable side, check the voltage between the pins. Is the voltage measured greater than 10V?	Go to Step 8	Go to Step 9
8	Replace Wheel Speed Sensor		
9	Disconnect the Wheel Speed Sensor cable 32C-030 from the Bosch TSC axle harness. Activate the Bosch TSC. At the Bosch TSC cable connector, check the voltage between the pins. Is the voltage measured greater than 10V?	Go to Step 11	Go to Step 10
10	Refer Bosch guidance to rectify fault.		
11	Replace Patch Cable part 32C-031. Activate the Bosch TSC. Is the measured value **WS** between 5 and 17mA?	System OK	Go to Step 12
12	Replace Main Cable part 32C-030. Activate the Bosch TSC. Is the measured value **WS** between 5 and 17mA?	System OK	Contact Cruisemaster Technical Support.
13	Are all cables and connectors firmly secured, undamaged and installed in accordance with the Installation Manual?	Go to Step 15	Go to Step 14
14	Rectify any issues found in Step 11.		
15	Is the correct Wheel Speed Sensor patch cable fitted, part 32C-032?	Go to Step 17	Go to Step 16
16	Replace the Wheel Speed Sensor patch cable with part 32C-032. Is the measured value **WS** between 5 and 17mA?	System OK	Go to Step 17
17	Disconnect the Wheel Speed Sensor from the Wheel Speed Sensor cable. On the cable side, check the voltage between the pins. Is the voltage measured greater than 10V?	Go to Step 18	Go to Step 19
18	Replace Wheel Speed Sensor		
19	Replace Patch Cable part 32C-032. Is the measured value **WS** between 5 and 17mA?	System OK	Go to Step 20
20	Replace Main Cable part 32C-030. Is the measured value **WS** between 5 and 17mA?	System OK	Contact Cruisemaster Technical Support.

SV12 - Wheel Speed Sensor Current High

The BCM has detected the Wheel Speed Sensor Current is above the operating range of the sensor. This can occur due to sensor failure, cable failure or poor BCM grounding (if Bosch TSC is installed). The measured value can be viewed in Tools Menu>Diagnostics, labelled "**WS**".

Actions taken by the BCS

- Fault Indicator shown on home screen
- Active Ride Control and Odometer may not function.

Diagnosis

Step	Action	If Yes	If No
1	Is Bosch TSC installed?	Go to Step 2	Go to Step 5
2	Activate the Bosch TSC. Is the measured value **WS** between 5 and 17mA? Note: Bosch TSC can be activated with a brake signal or breakaway signal, once activated the Bosch TSC fault lamp will be illuminated.	Go to Step 3	Go to Step 5
3	Check the voltage drop between BCM power connector negative and the battery negative while drawing maximum current (enter Manual Mode, then lower both sides of the suspension by holding both down buttons ▼ at the same time). Does it exceed 0.20V?	Go to Step 4	Go to Step 5
4	Rectify ground wiring to reduce voltage drop to <0.20V.		
5	Disconnect Wheel Speed Sensor from the Wheel Speed Sensor Cable. Does the **WS** value decrease to <1mA?	Go to Step 6	Go to Step 7
6	Replace Wheel Speed Sensor		
7	Disconnect Wheel Speed Sensor Cable from the BCM. Does the **WS** value decrease to <1mA?	Go to Step 8	Go to Step 9
8	Replace the Wheel Speed Sensor Cable		
9	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

CV01 - Left Minimum Position out of range

The BCM has detected the Left Minimum Position value is outside the measuring range of the sensor. This value is captured from the left-hand side Position Sensor, when the suspension is at the lowest height (0 PSI in airbag) during the Sensor Calibration process. The result is that the system is unable to measure the full range of suspension travel, this can cause the drive height function to be inaccurate and reduces the angle range of the levelling function. This can occur due to improper installation or damaged components. The captured value can be viewed in Tools Menu>Diagnostics, labelled **LEFT RH MIN**, the allowable range is between 460 and 3636. The current sensor position can be viewed in Tools Menu>Diagnostics, labelled **LEFT RAW**. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are any SV## faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the SV## faults first, then perform Sensor Calibration again.		
3	Is the orientation and position of the following left-hand side components in accordance with the BCS Installation Manual? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Bump Stop (refer Suspension Installation Guide)	Go to Step 5	Go to Step 4
4	Rectify the installation of the components, then perform Sensor Calibration again.		
5	Are any of the following left-hand side components damaged? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Bump Stop	Go to Step 6	Go to Step 7
6	Replace damaged components, then perform Sensor Calibration again.		
7	Perform Sensor Adjustment: • Lower the suspension to its lowest position in Manual Mode, by reducing airbag pressure to 0 PSI. • Support the trailer with jack stands. • Loosen the bolts on the chassis side sensor bracket, move the sensor end of the bracket as upward as possible, then tighten the bolts. • Loosen the bolts on the linkage, move the ends of the linkage in the bolt holes such that the sensor lever arm is closest to the level position, then tighten the bolts. • Check the value for **LEFT RAW** Is the value for **LEFT RAW** greater than 460?	Go to Step 8	Contact Cruisemaster Technical Support.
8	Perform Sensor Calibration, does the fault resolve?	System OK	Contact Cruisemaster Technical Support.

CV02 - Left Maximum Position out of range

The BCM has detected the Left Maximum Position value is outside the measuring range of the sensor. This value is captured from the left-hand side Position Sensor, when the suspension is at the maximum height during the Sensor Calibration process. The result is that the system is unable to measure the full range of suspension travel, this can cause the drive height function to be inaccurate and reduces the angle range of the levelling function. This can occur due to improper installation or damaged components. The captured value can be viewed in Tools Menu>Diagnostics, labelled **LEFT RH MAX**, the allowable range is between 460 and 3636. The current sensor position can be viewed in Tools Menu>Diagnostics, labelled **LEFT RAW**. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are any SV## faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the SV## faults first, then perform Sensor Calibration again.		
3	Is the orientation and position of the following left-hand side components in accordance with the BCS Installation Manual? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Rebound Strap (ATX suspension only, refer Suspension Installation Guide)	Go to Step 5	Go to Step 4
4	Rectify the installation of the components, then perform Sensor Calibration again.		
5	Are any of the following left-hand side components damaged? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Shock Absorber • Rebound Strap (ATX suspension only)	Go to Step 6	Go to Step 7
6	Replace damaged components, then perform Sensor Calibration again.		
7	Perform Sensor Adjustment: • Raise the suspension to its highest position in Manual Mode, where increasing the pressure does not further increase the height. • Support the trailer with jack stands. • Loosen the bolts on the chassis side sensor bracket, move the sensor end of the bracket as downward as possible, then tighten the bolts. • Loosen the bolts on the linkage, move the ends of the linkage in the bolt holes such that the sensor lever arm is closest to the level position, then tighten the bolts. • Check the value for **LEFT RAW** Is the value for **LEFT RAW** less than 3636?	Go to Step 8	Contact Cruisemaster Technical Support.
8	Perform Sensor Calibration, does the fault resolve?	System OK	Contact Cruisemaster Technical Support.

CV03 - Left Span out of range

The BCM has detected the total measured travel of the left side suspension is out of the expected range. This value is calculated from the maximum position value minus the minimum position value, during the Sensor Calibration process. It is an indication that something is limiting the suspension travel or allowing excessive suspension travel. The captured value can be viewed in Tools Menu>Diagnostics, labelled **LEFT RH SPAN**, the allowable range is between 1500 and 3000. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are CV01 or CV02 faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the CV01 or CV02 faults first.		
3	Check the following then perform Sensor Calibration: • Retract corner steadies • Adjust jockey wheel so the trailer is pitched level at minimum height • Ensure Position Sensors, Sensor Linkages and Sensor Brackets are securely fastened. • Orientation of Position Sensor and Sensor Linkage is correct • Nothing impeding the movement of the trailer • Shock absorber, rebound strap and bump stop are the correct components and undamaged. Is the fault rectified?	System OK	Contact Cruisemaster Technical Support.

CV04 - Right Minimum Position out of range

The BCM has detected the Right Minimum Position value is outside the measuring range of the sensor. This value is captured from the right-hand side Position Sensor, when the suspension is at the lowest height (0 PSI in airbag) during the Sensor Calibration process. The result is that the system is unable to measure the full range of suspension travel, this can cause the drive height function to be inaccurate and reduces the angle range of the levelling function. This can occur due to improper installation or damaged components. The captured value can be viewed in Tools Menu>Diagnostics, labelled **RIGHT RH MIN**, the allowable range is between 460 and 3636. The current sensor position can be viewed in Tools Menu>Diagnostics, labelled **RIGHT RAW**. Refer to the BCS User Manual for guidance on Sensor Calibration process. When working under the vehicle

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are any SV## faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the SV## faults first, then perform Sensor Calibration again.		
3	Is the orientation and position of the following right-hand side components in accordance with the BCS Installation Manual? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Bump Stop (refer Suspension Installation Guide)	Go to Step 5	Go to Step 4
4	Rectify the installation of the components, then perform Sensor Calibration again.		
5	Are any of the following right-hand side components damaged? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Bump Stop	Go to Step 6	Go to Step 7
6	Replace damaged components, then perform Sensor Calibration again.		
7	Perform Sensor Adjustment: • Lower the suspension to its lowest position in Manual Mode, by reducing airbag pressure to 0 PSI. • Support the trailer with jack stands. • Loosen the bolts on the chassis side sensor bracket, move the sensor end of the bracket as upward as possible, then tighten the bolts. • Loosen the bolts on the linkage, move the ends of the linkage in the bolt holes such that the sensor lever arm is closest to the level position, then tighten the bolts. • Check the value for **RIGHT RAW** Is the value for **RIGHT RAW** greater than 460?	Go to Step 8	Contact Cruisemaster Technical Support.
8	Perform Sensor Calibration, does the fault resolve?	System OK	Contact Cruisemaster Technical Support.

CV05 - Right Maximum Position out of range

The BCM has detected the Right Maximum Position value is outside the measuring range of the sensor. This value is captured from the right-hand side Position Sensor, when the suspension is at the maximum height during the Sensor Calibration process. The result is that the system is unable to measure the full range of suspension travel, this can cause the drive height function to be inaccurate and reduces the angle range of the levelling function. This can occur due to improper installation or damaged components. The captured value can be viewed in Tools Menu>Diagnostics, labelled **RIGHT RH MAX**, the allowable range is between 460 and 3636. The current sensor position can be viewed in Tools Menu>Diagnostics, labelled **RIGHT RAW**. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are any SV## faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the SV## faults first, then perform Sensor Calibration again.		
3	Is the orientation and position of the following right-hand side components in accordance with the BCS Installation Manual? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Rebound Strap (ATX suspension only, refer Suspension Installation Guide)	Go to Step 5	Go to Step 4
4	Rectify the installation of the components, then perform Sensor Calibration again.		
5	Are any of the following right-hand side components damaged? • Position Sensor • Sensor Linkage • Position Sensor Brackets • Shock Absorber • Rebound Strap (ATX suspension only)	Go to Step 6	Go to Step 7
6	Replace damaged components, then perform Sensor Calibration again.		
7	Perform Sensor Adjustment: • Raise the suspension to its highest position in Manual Mode, where increasing the pressure does not further increase the height. • Support the trailer with jack stands. • Loosen the bolts on the chassis side sensor bracket, move the sensor end of the bracket as downward as possible, then tighten the bolts. • Loosen the bolts on the linkage, move the ends of the linkage in the bolt holes such that the sensor lever arm is closest to the level position, then tighten the bolts. • Check the value for **RIGHT RAW** Is the value for **RIGHT RAW** less than 3636?	Go to Step 8	Contact Cruisemaster Technical Support.
8	Perform Sensor Calibration, does the fault resolve?	System OK	Contact Cruisemaster Technical Support.

CV06 - Right Span out of range

The BCM has detected the total measured travel of the right-side suspension is out of the expected range. This value is calculated from the maximum position value minus the minimum position value, during the Sensor Calibration process. It is an indication that something is limiting the suspension travel or allowing excessive suspension travel. The captured value can be viewed in Tools Menu>Diagnostics, labelled **RIGHT RH SPAN**, the allowable range is between 1500 and 3000. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are CV01 or CV02 faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the CV01 or CV02 faults first.		
3	Check the following then perform Sensor Calibration: • Retract corner steadies • Adjust jockey wheel so the trailer is pitched level at minimum height • Ensure Position Sensors, Sensor Linkages and Sensor Brackets are securely fastened. • Orientation of Position Sensor and Sensor Linkage is correct • Nothing impeding the movement of the trailer • Shock absorber, rebound strap and bump stop are the correct components and undamaged. Is the fault rectified?	System OK	Contact Cruisemaster Technical Support.

CV07 – Roll Span out of range

The BCM has detected the total roll angle change is out of the expected range of 3° to 9°. This value is calculated from the maximum roll angle minus the minimum roll angle, during the Sensor Calibration process. It can be caused by insufficient suspension travel during calibration, incorrect system installation or incorrect configuration. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are CV03 or CV06 faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the CV03 or CV06 faults first.		
3	Is CV08 fault also reported?	Go to Step 6	Go to Step 3
4	Is the following condition correct: • ACM cables are connected to the correct sides, left and right. The buttons on the left side of the BCM should operate the left side airbags, when facing the direction of travel.	Contact Cruisemaster Technical Support.	Go to Step 5
5	Connect the ACM cables to left and right sides correctly then perform Sensor Calibration. Is the fault rectified? Note: ACM cables can be most easily swapped where they connect to the BCM.	System OK	Contact Cruisemaster Technical Support.
6	Are the following conditions both correct: • ACM cables are connected to the correct sides, left and right. The buttons on the left side of the BCM should operate the left side airbags, when facing the direction of travel. • Orientation setting (Configuration Menu>Orientation) is set correctly for how the BCM is mounted to the trailer.	Contact Cruisemaster Technical Support.	Go to Step 7
7	Repair the incorrect condition/s from Step 6 and perform Sensor Calibration. Is the fault rectified? Note: ACM cables can be most easily swapped where they connect to the BCM.	System OK	Contact Cruisemaster Technical Support.

CV08 – Pitch Span out of range

The BCM has detected the total pitch angle change is out of the expected range of 0.5° to 3°. This value is calculated from the maximum pitch angle minus the minimum pitch angle, during the Sensor Calibration process. It can be caused by insufficient suspension travel during calibration, incorrect system installation or incorrect configuration. Refer to the BCS User Manual for guidance on Sensor Calibration process.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Are CV03 or CV06 faults also reported?	Go to Step 2	Go to Step 3
2	Rectify the CV03 or CV06 faults first.		
3	Is CV07 fault also reported?	Go to Step 4	Go to Step 5
4	Refer the CV07 fault diagnosis first.		
5	Are the following conditions both correct: • ACM cables are connected to the correct sides, left and right. The buttons on the left side of the BCM should operate the left side airbags, when facing the direction of travel. Orientation setting (Configuration Menu>Orientation) is set correctly for how the BCM is mounted to the trailer.	Contact Cruisemaster Technical Support.	Go to Step 6
6	Repair the incorrect condition/s from Step 6 and perform Sensor Calibration. Is the fault rectified? Note: ACM cables can be most easily swapped where they connect to the BCM.	System OK	Contact Cruisemaster Technical Support.

CV09 – Level position roll offset out of range

The BCM has detected the level position roll axis offset is out of the expected range of -15° to 15°.

This value is captured at Drive height during the Sensor Calibration process. It can also be set by the user using Configuration Menu>Set Level Position. It can be caused by excessive mounting angle of the BCM relative to the vertical axis. Refer to the BCS User Manual for guidance on Sensor Calibration process. The captured value can be viewed in Tools Menu>Diagnostics, labelled **ROLL ZERO**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Ensure the BCM is mounted aligned with the vertical, longitudinal and lateral axes of the trailer.
- Clear fault report once rectified.

CV10 – Level position pitch offset out of range

The BCM has detected the level position pitch axis offset is out of the expected range of -15° to 15°.

This value is captured at Drive height during the Sensor Calibration process. It can also be set by the user using Configuration Menu>Set Level Position. It can be caused by excessive mounting angle of the BCM relative to the vertical axis. Refer to the BCS User Manual for guidance on Sensor Calibration process. The captured value can be viewed in Tools Menu>Diagnostics, labelled **PITCH ZERO**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Ensure the BCM is mounted aligned with the vertical, longitudinal and lateral axes of the trailer.
- Clear fault report once rectified.

CV11 – Lateral acceleration offset out of range

The BCM has detected the level position lateral acceleration force offset is out of the expected range of -0.25g to 0.25g.

This value is captured at Drive height during the Sensor Calibration process. It can be caused by excessive mounting angle of the BCM relative to the vertical axis. Refer to the BCS User Manual for guidance on Sensor Calibration process. The captured value can be viewed in Tools Menu>Diagnostics, as the second value under label **LAT-G,** labelled **OFFSET**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Ensure the BCM is mounted aligned with the vertical, longitudinal and lateral axes of the trailer.
- Clear fault report once rectified.

CV12 – Longitudinal acceleration offset out of range

The BCM has detected the level position longitudinal acceleration offset is out of the expected range of -0.25g to 0.25g.

This value is captured at Drive height during the Sensor Calibration process. It can be caused by excessive mounting angle of the BCM relative to the vertical axis. Refer to the BCS User Manual for guidance on Sensor Calibration process. The captured value can be viewed in Tools Menu>Diagnostics, as the second value under label **LONG-G,** labelled **OFFSET**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Ensure the BCM is mounted aligned with the vertical, longitudinal and lateral axes of the trailer.
- Clear fault report once rectified.

CV13 – Vertical acceleration offset out of range

The BCM has detected the level position vertical acceleration offset is out of the expected range of 0.95g to 1.05g.

This value is captured at Drive height during the Sensor Calibration process. It can be caused by excessive mounting angle of the BCM relative to the vertical axis. Refer to the BCS User Manual for guidance on Sensor Calibration process. The captured value can be viewed in Tools Menu>Diagnostics, as the second value label **VERT-G**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnostic Guidance

- Ensure the BCM is mounted aligned with the vertical, longitudinal and lateral axes of the trailer.
- Clear fault report once rectified.

CV14 - Uncalibrated

The BCM has detected that Sensor Calibration has not been performed or is invalid. Refer to the BCS User Manual for guidance on Sensor Calibration process. The status value can be viewed in Tools Menu>Diagnostics, labelled **CALIBRATED**.

Actions taken by the BCS

- Fault Indicator shown on home screen.
- Inhibit Drive, Horizon Level and Active Ride Control functions.

Diagnostic Guidance

- This can be caused by:
    - Sensor Calibration process has never been performed.
    - Sensor Calibration process started but not completed, leading to an invalid mixture of old and new values saved in memory. This can be caused by:
        - Faults in the system preventing the Sensor Calibration process completing.
        - The user cancels the Sensor Calibration process after it has commenced.
    - Sensor Calibration has been performed on an old firmware version, but the values saved in memory are not within an acceptable range.
- To rectify the fault perform the Sensor Calibration process.

SC01 – Left Up ON Current out of range

The BCM has detected the current drawn by the Left ACM Up Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **LEFT AIR IN**.

Actions taken by the BCS

- Fault Indicator shown on home screen
- Sensor Calibration function blocked

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run a Solenoid Test and check the result for **LEFT AIR IN**, is the value between 0.5 and 1.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Go to Step 18	System OK
5	Run a Solenoid Test and check the result for **LEFT AIR IN**, is the value greater than 1.5?	Go to Step 6	Go to Step 11
6	Disconnect the Left ACM from the ACM Cable and run the Solenoid Test, is the **LEFT AIR IN** value less than 0.05?	Go to Step 7	Go to Step 8
7	Replace ACM		
8	Disconnect the Left ACM Cable from the BCM and run the Solenoid Test, is the **LEFT AIR IN** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM Cable		
10	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
11	Is the **LEFT AIR IN** value less than 0.05?	Go to Step 12 or 13	Contact Cruisemaster Technical Support.
12	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **LEFT AIR IN** value between 0.5 and 1.5?	Go to Step 14	Go to Step 15
13	Disconnect the ACM from the ACM Cable. Check the resistance between pins 7 and 8 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 14	Go to Step 15
14	Replace ACM		
15	Temporarily swap the ACM Cables from left to right at the BCM, does the value less than 0.05 move to **RIGHT AIR IN**?	Go to Step 16	Go to Step 17
16	Replace the ACM Cable.		
17	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
18	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

SC02 – Left Down ON Current out of range

The BCM has detected the current drawn by the Left ACM Down Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **LEFT AIR OUT**.

Actions taken by the BCS

- Fault Indicator shown on home screen
- Sensor Calibration function blocked

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run a Solenoid Test and check the result for **LEFT AIR OUT**, is the value between 0.5 and 1.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Go to Step 18	System OK
5	Run a Solenoid Test and check the result for **LEFT AIR OUT**, is the value greater than 1.5?	Go to Step 6	Go to Step 11
6	Disconnect the Left ACM from the ACM Cable and run the Solenoid Test, is the **LEFT AIR OUT** value less than 0.05?	Go to Step 7	Go to Step 8
7	Replace ACM		
8	Disconnect the Left ACM Cable from the BCM and run the Solenoid Test, is the **LEFT AIR OUT** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM Cable		
10	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
11	Is the **LEFT AIR OUT** value less than 0.05?	Go to Step 12 or 13	Contact Cruisemaster Technical Support.
12	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **LEFT AIR OUT** value between 0.5 and 1.5?	Go to Step 14	Go to Step 15
13	Disconnect the ACM from the ACM Cable. Check the resistance between pins 6 and 7 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 14	Go to Step 15
14	Replace ACM		
15	Temporarily swap the ACM Cables from left to right at the BCM, does the value less than 0.05 move to **RIGHT AIR OUT**?	Go to Step 16	Go to Step 17
16	Replace the ACM Cable.		
17	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
18	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

SC03 – Right Up ON Current out of range

The BCM has detected the current drawn by the Right ACM Up Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **RIGHT AIR IN**.

Actions taken by the BCS

- Fault Indicator shown on home screen
- Sensor Calibration function blocked

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run a Solenoid Test and check the result for **RIGHT AIR IN**, is the value between 0.5 and 1.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Go to Step 18	System OK
5	Run a Solenoid Test and check the result for **RIGHT AIR IN**, is the value greater than 1.5?	Go to Step 6	Go to Step 11
6	Disconnect the Right ACM from the ACM Cable and run the Solenoid Test, is the **RIGHT AIR IN** value less than 0.05?	Go to Step 7	Go to Step 8
7	Replace ACM		
8	Disconnect the Right ACM Cable from the BCM and run the Solenoid Test, is the **RIGHT AIR IN** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM Cable		
10	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
11	Is the **RIGHT AIR IN** value less than 0.05?	Go to Step 12 or 13	Contact Cruisemaster Technical Support.
12	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **RIGHT AIR IN** value between 0.5 and 1.5?	Go to Step 14	Go to Step 15
13	Disconnect the ACM from the ACM Cable. Check the resistance between pins 7 and 8 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 14	Go to Step 15
14	Replace ACM		
15	Temporarily swap the ACM Cables from left to right at the BCM, does the value less than 0.05 move to **LEFT AIR IN**?	Go to Step 16	Go to Step 17
16	Replace the ACM Cable.		
17	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
18	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

SC04 – Right Down ON Current out of range

The BCM has detected the current drawn by the Right ACM Down Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **RIGHT AIR OUT**.

Actions taken by the BCS

- Fault Indicator shown on home screen
- Sensor Calibration function blocked

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run a Solenoid Test and check the result for **RIGHT AIR OUT**, is the value between 0.5 and 1.5?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Go to Step 18	System OK
5	Run a Solenoid Test and check the result for **RIGHT AIR OUT**, is the value greater than 1.5?	Go to Step 6	Go to Step 11
6	Disconnect the Right ACM from the ACM Cable and run the Solenoid Test, is the **RIGHT AIR OUT** value less than 0.05?	Go to Step 7	Go to Step 8
7	Replace ACM		
8	Disconnect the Right ACM Cable from the BCM and run the Solenoid Test, is the **RIGHT AIR OUT** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM Cable		
10	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
11	Is the **RIGHT AIR OUT** value less than 0.05?	Go to Step 12 or 13	Contact Cruisemaster Technical Support.
12	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **RIGHT AIR OUT** value between 0.5 and 1.5?	Go to Step 14	Go to Step 15
13	Disconnect the ACM from the ACM Cable. Check the resistance between pins 6 and 7 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 14	Go to Step 15
14	Replace ACM		
15	Temporarily swap the ACM Cables from left to right at the BCM, does the value less than 0.05 move to **LEFT AIR OUT**?	Go to Step 16	Go to Step 17
16	Replace the ACM Cable.		
17	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
18	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

SC05 – Inflator In ON Current out of range

The BCM has detected the current drawn by the Inflator ACM In Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **INFL AIR IN**. This fault is only checked when the Inflator is enabled under Configuration Menu>Install Options.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Is the Inflator ACM installed in this BCS?	Go to Step 5	Go to Step 4
4	Disable Inflator in Configuration Menu>Install Options		
5	Run a Solenoid Test and check the result for **INFL AIR IN**, is the value between 0.5 and 1.5?	Go to Step 6	Go to Step 7
6	Note the fault for future reference. Is the fault recurrent?	Go to Step 20	System OK
7	Run a Solenoid Test and check the result for **INFL AIR IN**, is the value greater than 1.5?	Go to Step 8	Go to Step 13
8	Disconnect the Inflator ACM from the ACM Cable and run the Solenoid Test, is the **INFL AIR IN** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM		
10	Disconnect the Inflator ACM Cable from the BCM and run the Solenoid Test, is the **INFL AIR IN** value less than 0.05?	Go to Step 11	Go to Step 12
11	Replace ACM Cable		
12	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
13	Is the **INFL AIR IN** value less than 0.05?	Go to Step 14 or 15	Contact Cruisemaster Technical Support.
14	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **INFL AIR IN** value between 0.5 and 1.5?	Go to Step 16	Go to Step 17
15	Disconnect the ACM from the ACM Cable. Check the resistance between pins 7 and 8 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 16	Go to Step 17
16	Replace ACM		
17	Temporarily swap the ACM Cables from the Inflator ACM and the Right ACM at the BCM, does the value less than 0.05 move to **RIGHT AIR IN**?	Go to Step 18	Go to Step 19
18	Replace the ACM Cable.		
19	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
20	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

SC06 – Inflator Out ON Current out of range

The BCM has detected the current drawn by the Inflator ACM Out Solenoid output when commanded ON is out of the expected range of 0.5A to 1.5A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by ACM failure, ACM cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **INFL AIR OUT**. This fault is only checked when the Inflator is enabled under Configuration Menu>Install Options.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Is the Inflator ACM installed in this BCS?	Go to Step 5	Go to Step 4
4	Disable Inflator in Configuration Menu>Install Options		
5	Run a Solenoid Test and check the result for **INFL AIR OUT**, is the value between 0.5 and 1.5?	Go to Step 6	Go to Step 7
6	Note the fault for future reference. Is the fault recurrent?	Go to Step 20	System OK
7	Run a Solenoid Test and check the result for **INFL AIR OUT**, is the value greater than 1.5?	Go to Step 8	Go to Step 13
8	Disconnect the Inflator ACM from the ACM Cable and run the Solenoid Test, is the **INFL AIR OUT** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace ACM		
10	Disconnect the Inflator ACM Cable from the BCM and run the Solenoid Test, is the **INFL AIR OUT** value less than 0.05?	Go to Step 11	Go to Step 12
11	Replace ACM Cable		
12	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
13	Is the **INFL AIR OUT** value less than 0.05?	Go to Step 14 or 15	Contact Cruisemaster Technical Support.
14	Temporarily replace the ACM with a known good ACM, and run the Solenoid Test, is the **INFL AIR OUT** value between 0.5 and 1.5?	Go to Step 16	Go to Step 17
15	Disconnect the ACM from the ACM Cable. Check the resistance between pins 6 and 7 on the ACM side of the connector, is the value greater than 220ohms?	Go to Step 16	Go to Step 17
16	Replace ACM		
17	Temporarily swap the ACM Cables from the Inflator ACM and the Right ACM at the BCM, does the value less than 0.05 move to **RIGHT AIR OUT**?	Go to Step 18	Go to Step 19
18	Replace the ACM Cable.		
19	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
20	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

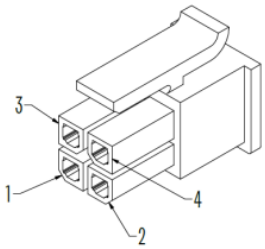
SC07 – Tank Drain ON Current out of range

The BCM has detected the current drawn by the Tank Drain Solenoid output when commanded ON is out of the expected range of 0.1A to 2.0A. This value is measured and checked each time the output switches from OFF to ON. It can be caused by Tank Drain Solenoid failure, Tank Drain cable failure, very low input voltage or very high input voltage. The measured value can be viewed in Tools Menu>Solenoid Test, labelled **TANK DRAIN**.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run a Solenoid Test and check the result for **TANK DRAIN**, is the value between 0.1 and 2.0?	Go to Step 4	Go to Step 5
4	Note the fault for future reference. Is the fault recurrent?	Go to Step 17	System OK
5	Run a Solenoid Test and check the result for **TANK DRAIN**, is the value greater than 2.0?	Go to Step 6	Go to Step 11
6	Disconnect the Tank Drain Solenoid from the Tank Drain Cable and run the Solenoid Test, is the **TANK DRAIN** value less than 0.05?	Go to Step 7	Go to Step 8
7	Replace Tank Drain Solenoid		
8	Disconnect the Tank Drain Cable from the BCM and run the Solenoid Test, is the **TANK DRAIN** value less than 0.05?	Go to Step 9	Go to Step 10
9	Replace Tank Drain Cable		
10	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		
11	Is the **TANK DRAIN** value less than 0.05?	Go to Step 12	Contact Cruisemaster Technical Support.
12	Disconnect the Tank Drain solenoid from the Tank Drain cable, then check the resistance between the pins on the Tank Drain solenoid side of the connector, is the value greater than 220ohms?	Go to Step 13	Go to Step 14
13	Replace Tank Drain Solenoid		
14	Reconnect the Tank Drain solenoid to the Tank Drain cable. Disconnect the Tank Drain cable from the BCM, then check the resistance between pins 1 & 3 on the Tank Drain cable side of the connector, is the value greater than 220ohms?  *Compressor/Tank Drain Cable connector*	Go to Step 15	Go to Step 16
15	Replace the Tank Drain Cable.		
16	Replace BCM (Contact Cruisemaster Technical Support for confirmation).		
17	Check all connectors and cables for poor connection, corrosion and looseness; replace components as required. Is the issue solved?	System OK	Contact Cruisemaster Technical Support.

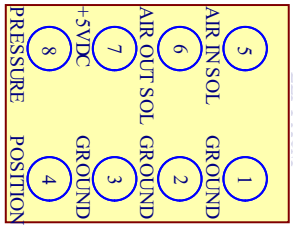
SC09 – Left Up OFF Current out of range

The BCM has detected the current drawn by the Left ACM Up Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Left ACM cable from the BCM. Check voltage across pins 1 and 5 on the BCM. Is the voltage greater than 1.0V?  *ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

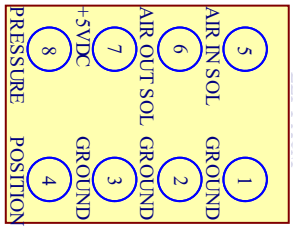
SC10 – Left Down OFF Current out of range

The BCM has detected the current drawn by the Left ACM Down Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Left ACM cable from the BCM. Check voltage across pins 1 and 6 on the BCM. Is the voltage greater than 1.0V?  *ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

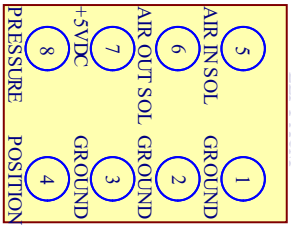
SC11 – Right Up OFF Current out of range

The BCM has detected the current drawn by the Right ACM Up Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Right ACM cable from the BCM. Check voltage across pins 1 and 5 on the BCM. Is the voltage greater than 1.0V?  *ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

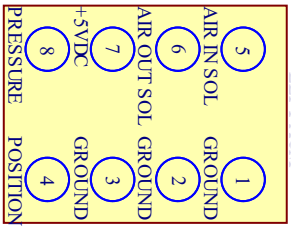
SC12 – Right Down OFF Current out of range

The BCM has detected the current drawn by the Right ACM Down Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Right ACM cable from the BCM. Check voltage across pins 1 and 6 on the BCM. Is the voltage greater than 1.0V?  *ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

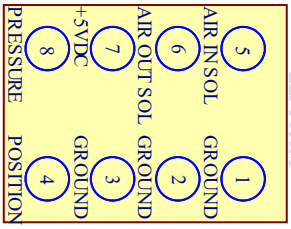
SC13 – Inflator In OFF Current out of range

The BCM has detected the current drawn by the Inflator ACM In Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Inflator ACM cable from the BCM. Check voltage across pins 1 and 5 on the BCM. Is the voltage greater than 1.0V?  *Inflator ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

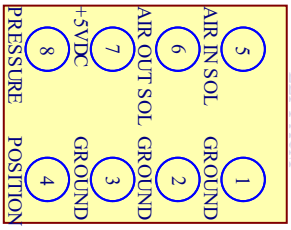
SC14 – Inflator Out OFF Current out of range

The BCM has detected the current drawn by the Inflator ACM Out Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Inflator ACM cable from the BCM. Check voltage across pins 1 and 6 on the BCM. Is the voltage greater than 1.0V?  *Inflator ACM connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

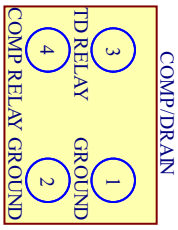
SC15 – Tank Drain OFF Current out of range

The BCM has detected the current drawn by the Tank Drain Solenoid output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Tank Drain cable from the BCM. Check voltage across pins 1 and 3 on the BCM. Is the voltage greater than 1.0V?  *Tank Drain connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

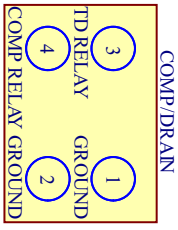
SC16 – Air Compressor OFF Current out of range

The BCM has detected the current drawn by the Air Compressor Relay output when commanded OFF is above the expected value of 0.05A. This value is measured and checked each time the output switches from ON to OFF. It can be caused by BCM failure.

Actions taken by the BCS

- Fault Indicator shown on home screen

Diagnosis

Step	Action	If Yes	If No
1	Is H06, H07 or H08 fault also reported?	Go to Step 2	Go to Step 3
2	Rectify H06, H07 or H08 faults first.		
3	Run Solenoid Test (Tools Menu>Solenoid Test) Clear Fault Report Does the fault remain?	Go to Step 4	System OK
4	Disconnect Air Compressor cable from the BCM. Check voltage across pins 2 and 4 on the BCM. Is the voltage greater than 1.0V?  *Air Compressor connector on BCM, as viewed from rear of BCM*	Go to Step 5	Contact Cruisemaster Technical Support.
5	Replace BCM (Contact Cruisemaster Technical Support for confirmation)		

Control System Diagnostic Values Guide

Diagnostics Page

Value	Description	Typical Value	Acceptable Values (Fault Detection Limits)
BATTERY	Power Supply Voltage to BCM	11.0 to 14.2V	10.5 to 15.0V
5V REG	Internal Supply Voltage	4.90 to 5.10V	4.85 to 5.15V
PRE	Pressure Sensor Signal Voltages (Left, Right, Inflator)	0.75 to 3.5V (~0.86V @ 0 PSI)	0.35 to 4.65V
POS	Position Sensor Signal Voltages (Left, Right, Inflator)	Left and Right Signal: 0.5 to 4.5V Inflator Signal: 0 to 0.5V	Left and Right Signal: 0.35 to 4.65V
WS	Wheel Speed Sensor Current	~7mA or ~14mA if fitted. If not fitted ~0mA. If Bosch TSC is in sleep mode ~0mA	5mA to 17mA
SW VER	Current Firmware Version		
PITCH BOT	Maximum Pitch Angle recorded in “Sensor Calibration”	0° ±3° ~1.5° greater than PITCH TOP	
PITCH TOP	Minimum Pitch Angle recorded in “Sensor Calibration”	0° ±3° ~1.5° less than PITCH BOT	
ROLL LEFT	Minimum Roll Angle recorded in “Sensor Calibration”	-3° ±5° ~5° less than ROLL RIGHT	
ROLL RIGHT	Maximum Roll Angle recorded in “Sensor Calibration”	3° ±5° ~5° greater than ROLL RIGHT	
ROLL ZERO	Angle Offset stored in “Set Level Position”	-5° to 5°	-15° to 15°
PITCH ZERO	Angle Offset stored in “Set Level Position”	-5° to 5°	-15° to 15°
LEFT RH MIN / MAX	Left Position Minimum and Maximum value recorded in “Sensor Calibration”	MIN: 460 to 1687 MAX: 2410 to 3636	460 to 3636
LEFT RH SPAN	Difference between Left Position Minimum and Maximum value	1800 to 2500	1500 to 3000
RIGHT RH MIN / MAX	Right Position Minimum and Maximum value recorded in “Sensor Calibration”	MIN: 460 to 1687 MAX: 2410 to 3636	460 to 3636
RIGHT RH SPAN	Difference between Right Position Minimum and Maximum value	1800 to 2500	1500 to 3000
LEFT RAW	Current Left Position Sensor value	Depends on current position, within LEFT RH MIN & MAX. [INV] should also be shown, indicating that the sensor is inverted.	
RIGHT RAW	Current Right Position Sensor value	Depends on current position, within RIGHT RH MIN & MAX. [INV] should not be shown.	
PITCH	Current Pitch Angle	-20° to 20°, depending on ground slope and suspension position.	
ROLL	Current Roll Angle	-20° to 20°, depending on ground slope and suspension position.	
AT PRESSURE	Atmospheric Pressure	7 to 15 PSI, depending on altitude	7 to 17 PSI
TEMPERATURE	Unit Temperature	~0 to 20°C above ambient temperature	
EEPROM CYCLES	Number of times the internal memory has been written.	<1000	
WHEEL DIAMETER	Wheel diameter value stored in memory in millimetres.	600 to 900	
LAT-G	The current lateral G force, and level ground offset as recorded in “Sensor Calibration”	Less than 0.1 depending on ground slope. Offset less than 0.25 depending on BCM mounting angle.	Offset -0.25 to 0.25

LONG-G	The current longitudinal G force, and level ground offset as recorded in "Sensor Calibration"	Less than 0.1 depending on ground slope. Offset less than 0.25 depending on BCM mounting angle.	Offset -0.25 to 0.25
VERT-G	The current vertical G force, and level ground offset as recorded in "Sensor Calibration"	Less than 0.1, depending on ground slope. Offset 0.95 to 1.00.	Offset 0.95 to 1.05.
RCL	The value learned by the Active Ride Control learning function.	150 to 200 for most caravans. Trailers with lower centre of gravity will show a lower value. Trailers with higher centre of gravity will show a larger value. This value will be dynamic as the Active Ride Control learning function operates.	
CALIBRATED	A value indicating if the Sensor Calibration has been performed.	If a valid Sensor Calibration has been completed the value is 1, otherwise 0.	1 to 1

Solenoid Test Page

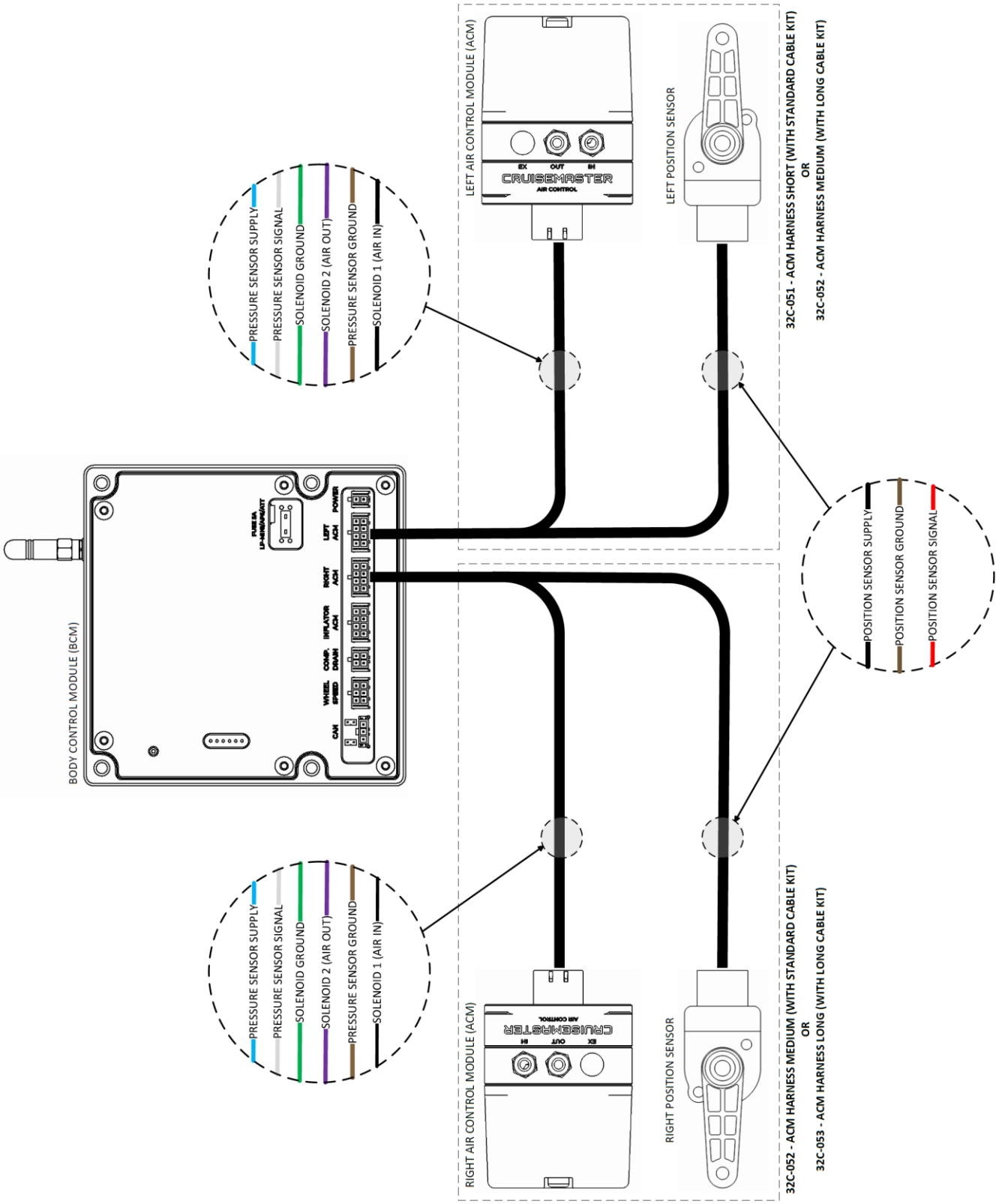
Value	Description	Typical Value	Acceptable Values (Fault Detection Limits)
LEFT AIR IN	Current drawn by the Left ACM Up Solenoid output when commanded ON	1.0A	0.5 to 1.5A
LEFT AIR OUT	Current drawn by the Left ACM Down Solenoid output when commanded ON	1.0A	0.5 to 1.5A
RIGHT AIR IN	Current drawn by the Right ACM Up Solenoid output when commanded ON	1.0A	0.5 to 1.5A
RIGHT AIR OUT	Current drawn by the Right ACM Up Solenoid output when commanded ON	1.0A	0.5 to 1.5A
INFL AIR IN	Current drawn by the Inflator ACM In Solenoid output when commanded ON	1.0A	0.5 to 1.5A
INFL AIR OUT	Current drawn by the Inflator ACM Out Solenoid output when commanded ON	1.0A	0.5 to 1.5A
TANK DRAIN	Current drawn by the Tank Drain Solenoid output when commanded ON	0.3A	0.5 to 2.0A
AIR COMP	Current drawn by the Air Compressor Relay output when commanded ON	0.15A	N/A (See Note below)

Note

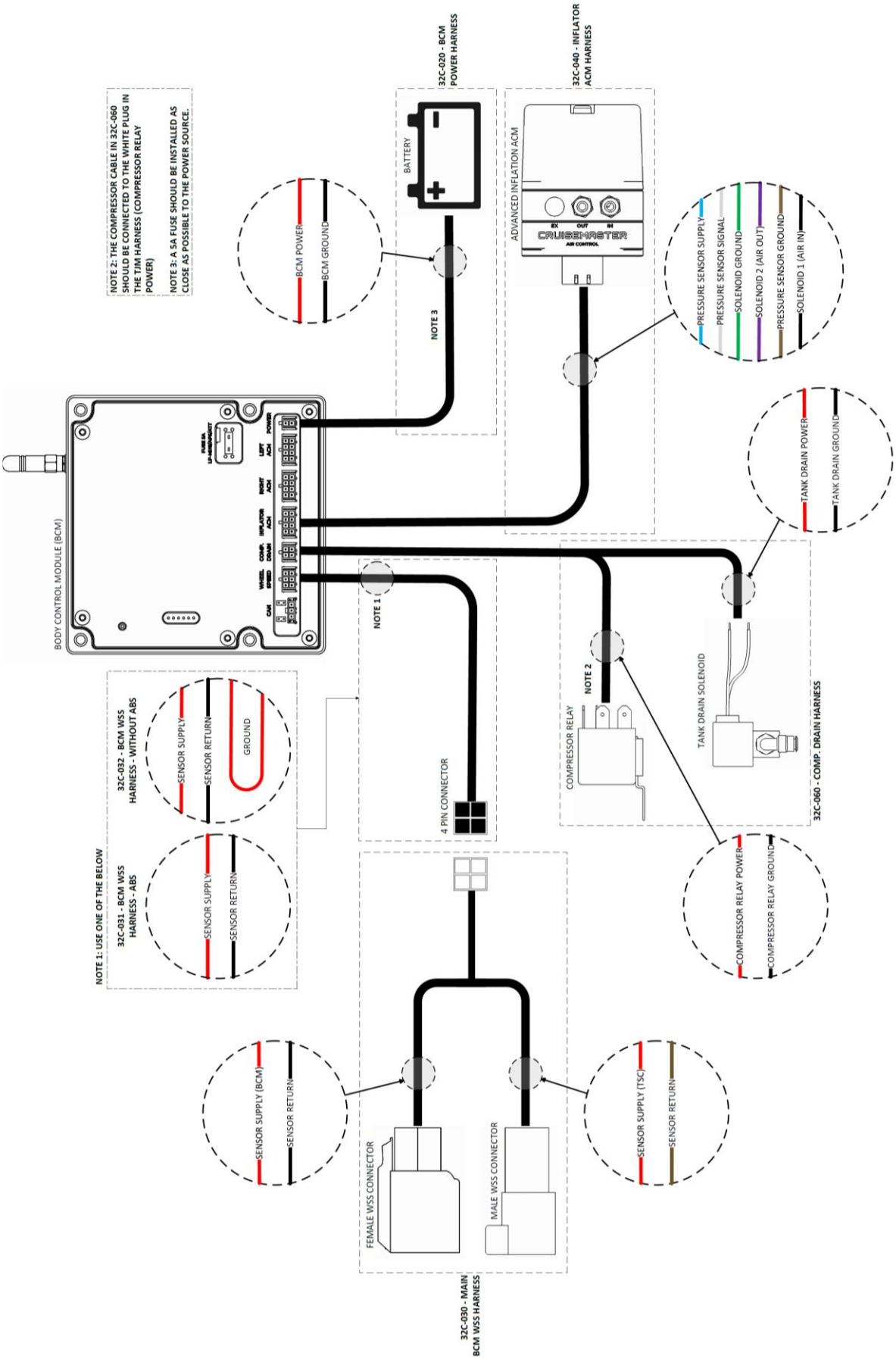
The Pressure Switch is wired between the Air Compressor Relay output and the Air Compressor Relay. When the air tank is full, the pressure switch opens the circuit, so the current on the output will be zero, even when the output is commanded ON. This prevents automatic testing of the output.

Electrical Schematics

Air Control Module Cabling



Power and Accessory Cabling



Air System Schematic