SERVICE BULLETIN			
То:	All Dealers		
For the attention of:	After Sales Manager	Reference	
Please copy to:	Executive Manager	SB-19-0392V2	
	Service Manager		
	Sales Manager	Issued:	
	Warranty	02 March 2015	
	Technician(s)		
	Parts		
Model:	Vanquish, Rapide, DB9, DBS and Virage (Automatic Transmission only).		
VIN Range:	All		
Subject:	Ground Cable Modification for the Automatic Transmission	Page 1 of 43	

#### Reason for Version 2 of this Service Bulletin (SB-19-0392)

Version 2 of this Service Bulletin has been issued because we found the connectors in step 72 had the incorrect connector number. Some text errors have also been corrected. Amendments to this document have a black line against them in the left-side margin. Please destroy all copies of SB-19-0392 that you have and replace them with this Service Action SB-19-0392V2.

### **Reason for this Service Bulletin**

If a Customer has one of the vehicles that follow with the 6-speed automatic transmission:

- DB9 (all)
- DBS
- Virage
- Rapide (including 'S')
- Vanquish 13MY onwards,

And the Customer complains that one of the problems that follow has occurred on their vehicle:

- Warning Message "GEARBOX FAULT SERVICE REQUIRED"
- Cannot easily select gears when parked or driving, by use of the PRND switches
- The transmission changes to a different gear or neutral when the PRND switches are used to select a gear
- Unexpected gear change when the switches or paddles have not been operated,

Do the steps that follow:

- **1.** Connect the AMDS to the vehicle.
- **2.** Do a check for fault codes.
- **3.** If you find a condition that follows:
  - There is only a P1712 code logged,
  - There are no codes logged,
  - The problem only occurs when the paddles are used for gear selection,

Do the usual diagnostic procedures to find the fault.

#### Note: In these conditions, you do not need to do the workshop procedure that follows.

- **4.** If you find one or more of the the codes that follow:
  - P0705, P2805, P1921, P1797 or P0863.

and it is known or proven that the fault codes have not been caused by an incomplete or edge-push of a PRND switch, do the test that follows in "PRND Voltage Measurement".

#### PRND Voltage Measurement

- 5. Set the AMDS datalogger to monitor the signal voltages on PRND1 and PRND2.
- **6.** Set the ignition to On.
- 7. Refer to Table 1. Push and release each PRND button and look at the AMDS to make sure that there is the correct change in the PRND signal values. If the voltage is 0.02 volts or more higher than the value shown in Table 1, do the Workshop Procedure that follows below. This procedure will install a new ground wire connection from the right Powertrain Control Module (PCM) to the Centre Console Module (CCM).

Button	PRND1 - Ground	PRND2 - Ground	
Park (P)	0.45V	2.26V	
Neutral (N)	1.08V	2.26V	
Drive (D	1.74V	2.26V	
Reverse	2.16V	2.26V	
None	2.62V	3.71V	

Table 1	
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Note: Refer to Parts Data for the kit of parts that is available to do this modification.

# Workshop Procedure

# Part A – Remove the Powertrain Control Module (PCM)

# All Models:

- 1. Do the battery disconnect procedure (refer to Workshop Manual procedure 14.01.CA).
- 2. Do a check of the harness ground points (refer to Service Bulletin SB-18-0385).
- **3.** Examine the bulkhead ground stud and eyelet assembly.
- 4. Undo and remove the ground eyelet attachment nut. Make sure that there is no insulation material near or around the ground stud or ground eyelets.
- 5. Install a new attachment nut for the ground eyelet.
- 6. Remove the front right side wheel arch liner (refer to Workshop Manual procedure 01.02.GB).

7. Release the bases of the three fir-tree cable ties that attach the Powertrain Control Module (PCM) harness to the PCM bottom bracket (refer to Figure 1). Do not cut the cable ties.



Figure 1

8. Release the base of the fir-tree cable tie that attaches the forward harness to the PCM bottom bracket (refer to Figure 2). Do not cut the cable tie.



Figure 2



Figure 3

**9.** Release the electrical connector for the side repeater, from the clip that attaches it to the PCM bracket (refer to Figure 3).

**10.** Disconnect the electrical connector from the indicator side repeater (refer to Figure 4).

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Figure 4



Figure 5



Figure 6

**11.** Release the forward harness from the fir-tree clip that attaches it to the body (refer to Figure 5).

**12.** Remove the three bolts that attach the PCM bottom bracket and PCM to the PCM top bracket (refer to Figure 6).

**13.** Remove the bolt that attaches the check-arm bracket for the front door, to the PCM bottom bracket (refer to Figure 7).



Figure 7

**14.** Release the PCM bottom bracket (refer to Figure 8).

Disconnect the three electrical connectors from

the PCM (refer to Figure 9).



Figure 8

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Figure 9

15.

**16.** Remove the PCM (refer to Figure 10).



Figure 10

### Part B – Remove the Centre Stack

### DB9, DBS and Virage Only:

- **17.** Apply protective tape to the leather trim that surrounds the centre stack.
- **18.** Use the special tool to release the veneer panel for the instrument panel (refer to Figure 11).



Figure 11

# CAUTION: DURING THE STEP THAT FOLLOWS, BE CAREFUL WHEN YOU RELEASE THE VENEER BEZEL FOR THE IP. THE SURFACE FINISH CAN BE EASILY DAMAGED.

**19.** Release the veneer bezel from the four clips that attach it to the IP (refer to Figure 12).





**20.** Disconnect the electrical connectors from each of the four transmission control switches (refer to Figure 13).



Figure 13



Figure 14



Figure 15

Note: Steps 23 and 24 that follow apply to 2014 Model Year onwards vehicles.

**21.** Disconnect the electrical connector from the ignition switch module (refer to Figure 14).

Disconnect the electrical connector from the ignition switch module (refer to Figure 15).

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22.

**23.** Disconnect the two electrical connectors from the navigation display screen (refer to Figure 16).



Figure 16

**24.** Remove the screw that attaches the two tethers to the veneer bezel (refer to Figure 17).



Figure 17

**25.** Remove the veneer bezel (refer to Figure 18).



Figure 18

26. Remove the centre console (refer to Workshop Manual procedure 01.12.DN).

**27.** Remove the four screws that attach the centre stack assembly to the IP (refer to Figure 19.



Figure 19

**28.** Move the centre stack assembly to get access to the electrical connectors (refer to Figure 20.



Figure 20

**29.** Disconnect the two electrical connectors from the Infotainment Control Module (ICM) (refer to Figure 21).



Figure 21

- **30.** Disconnect the two electrical connectors from the HVAC control module (refer to Figure 22).

Figure 22

- **31.** Disconnect the four electrical connectors from the control switches (refer to Figure 23).

Figure 23

**32.** Remove the centre stack assembly (refer to Figure 24).



Figure 24

# **Rapide Only:**

**33.** Apply protective tape to the leather trim that surrounds the centre stack.

**34.** Use the special tool to release the veneer bezel for the Instrument Panel (IP) (refer to Figure 25).



Figure 25

# CAUTION: DURING THE STEP THAT FOLLOWS, BE CAREFUL WHEN YOU RELEASE THE VENEER BEZEL FOR THE IP. THE SURFACE FINISH CAN BE EASILY DAMAGED.

**35.** Release the veneer bezel from the four clips that attach it to the IP (refer to Figure 26).



Figure 26

**36.** Disconnect the electrical connectors from each of the four transmission control switches (refer to Figure 27).



Figure 27

**37.** Disconnect the electrical connector from the ignition switch module (refer to Figure 28).



Figure 28



Figure 29



Figure 30

**38.** Disconnect the electrical connector from the ignition switch module (refer to Figure 29).

**39.** Disconnect the two electrical connectors from the navigation display screen (refer to Figure 30).

**40.** Remove the screw that attaches the two tethers to the veneer bezel (refer to Figure 31).



Figure 31

**41.** Remove the veneer bezel (refer to Figure 32).



Figure 32

**42.** Remove the two rubber base inserts from the cup holders (refer to Figure 33).



Figure 33

**43.** Remove the two screws that attach the rear centre stack assembly to the body (refer to Figure 34).



Figure 34

**44.** Release the console panel and rear centre stack assembly from the centre console (refer to Figure 35).



Figure 35

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**46.** Remove the rear console panel and rear centre stack assembly from the centre console (refer to Figure 37).





**45.** Disconnect the three electrical connectors from the rear centre stack assembly (refer to

Figure 36).

**47.** Open the door for the rear stowage compartment (refer to Figure 38).



Figure 38

**48.** Remove the rubber insert from the rear stowage compartment (refer to Figure 39).



Figure 39

**49.** Remove the two nuts that attach the top panel assembly for the rear console to the body (refer to Figure 40).



Figure 40

F-01-12-DG-07



**50.** Open the door for the front stowage compartment (refer to Figure 41).

**51.** Remove the rubber insert (2) from the front stowage compartment of the console (refer to Figure 42).



Figure 42

- **52.** Remove the four Torx screws that attach the top panel assembly for the rear console, to the body (refer to Figure 43).

Figure 43

- **53.** Remove the two screws (1) that attach the front auxiliary plate (2) for the rear console to the top panel assembly for the rear console (refer to Figure 44).
- **54.** Move the auxiliary plate assembly (2), to get access to the attachment nuts (3) for the centre console panel (4).
- **55.** Remove the two nuts (3) from the studs that attach the centre console panel (4) and the console lower sides, at the front.



Figure 44

**56.** Carefully release the tabs (1) of the console side panels (2) from the two mounting studs (3 and 4) and move the side panels away (refer to Figure 46).



Figure 45

**57.** Move the centre console assembly to get access to the electrical connectors (refer to Figure 46).

Note: The stowage box is shown removed in the figure for visual aid only.



Figure 46

**58.** Release the electrical connector from the clip that attaches it to the centre console (refer to Figure 47).



Figure 47

**59.** Disconnect the electrical connector from the park brake switch (refer to Figure 48).



Figure 48

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Figure 49



Figure 50

**60.** Disconnect the electrical connector from the driver's console assembly (refer to Figure 49).

**61.** Remove the centre console (refer to Figure 50).

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**62.** Remove the four screws that attach the centre stack assembly to the IP (refer to Figure 51).



Figure 51

**63.** Move the centre stack assembly to get access to the electrical connectors (refer to Figure 52).



Figure 52

**64.** Disconnect the two electrical connectors from the Infotainment Control Module (ICM) (refer to Figure 53).



Figure 53

**65.** Disconnect the two electrical connectors from the Centre Console Module (CCM) (refer to Figure 54).



Figure 54

- **66.** Disconnect the four electrical connectors from the control switches (refer to Figure 55).
- **67.** Remove the centre stack assembly.



Figure 55

# Vanquish Only:

**68.** Remove the centre stack (refer to Workshop Manual procedure 15.01.CB).

# Part C – Install the New Ground Wire onto the Engine Harness

#### All Models:

- 69. Under the front right wheel arch, cut and remove the fir-tree clip that attaches the PCM harness.
- **70.** Remove the protective tape from the area of the harness (1) shown in Figure 56 to get access to the black/purple ground wire.
- **71.** Remove the section of conduit from the harness.





#### DURING THE STEP THAT FOLLOWS, MAKE SURE YOU HOLD THE CONNECTOR AS **CAUTION:** SHOWN. THE BLACK MOULDING CAN BE EASILY DAMAGED.

Use an applicable tool to remove the anti 72. backout retainer from connector number Y51AT (13MY onward vehicles) or C0634 (all other models) (refer to Figure 57).



Figure 57

73. Use terminal removal tool 418-595 to remove terminal pin 41 from the connector housing (black/purple wire) (refer to Figure 58.



Figure 58

Remove a 10 mm section of insulation from the black/purple wire at the position shown in

Figure 59

- Put the piece of heat shrink tube that was supplied in the kit, over the terminal onto the cable. 75.
- 76. Remove 8 mm of insulation from one end of the new ground wire.

74.

Figure 59.

SA-19-0243-23

**77.** Use the crimp from the kit to attach the new ground wire to the black/purple wire (1) (refer to Figure 60).



Figure 60

- d joint (1) (refer to
- **78.** Apply solder to the crimped joint (1) (refer to Figure 61).



- **79.** Move the heat shrink tube along wire to cover the joint (refer to Figure 62).
- **80.** Use an applicable tool to shrink the heat-shrink tube (1) to protect the joint.



Figure 62

- 81. Fully install pin 41 back into position in the connector housing.
- 82. Fully install the anti-backout retainer into the connector housing.

- **83.** Put the new overlay wire (1) along the harness in the direction of the bulkhead (refer to Figure 63).
- **84.** Wind harness tape (2) around the harness to hold the new ground wire.





- **85.** Install the section of conduit over the harness that you removed in step 71.
- 86. Wind self-amalgamating tape around the conduit and harness to seal the harness.
- **87.** Remove the screw (1) that attaches the bracket for the harness electrical connector (2) to the body (refer to Figure 64).
- **88.** Move the harness and electrical connector (3) to get access.



Figure 64

# DB9, DBS, Virage and Vanquish:

- **89.** Make a hole (1) in the harness grommet that is the correct diameter for the new ground wire (2) (refer to Figure 65).
- **90.** Put the new overlay wire (2) through the grommet into the cabin.





### **Rapide Only:**

91. Put the grommet from the kit over the new ground wire.

- **92.** Find the hole in the bulkhead shown in Figure 66. If necessary, remove insulation material to get access.
- **93.** Put the end of the new ground wire (1) through the hole in the bulkhead into the cabin
- **94.** Install the grommet into the hole in the bulkhead.



Figure 66

### All Models:

**95.** Use cable ties (1) at approximately 75 mm intervals to attach the new ground wire (2) to the harness (refer to Figure 67).



Figure 67

- 96. Apply an applicable sealant to the grommet to seal the new ground wire.
- **97.** Install the screw (2) to attach the bracket for the harness electrical connector (1) to the body (refer to Figure 68).



Figure 68

**98.** Put the PCM back into the correct position (refer to Figure 69).



Figure 69

**99.** Connect the three electrical connectors to the PCM (refer to Figure 70).



Figure 70

F-03-14-HB-12

Figure 71

**100.** Align the PCM with the top bracket (refer to

Figure 71).

**101.** Install the bolt that attaches the check arm bracket for the front door to the PCM bracket. Torque the bolt to 23 Nm (refer to Figure 72).



Figure 72

**102.** Install the three bolts that attach the PCM bottom bracket and PCM to the PCM top bracket. Torque the three bolts to 9 Nm (refer to Figure 73).



Figure 73

**103.** Install the forward electrical harness into the fir-tree clip that attaches it to the body (refer to Figure 74).



Figure 74

**104.** Connect the electrical connector to the indicator side repeater (refer to Figure 75).



Figure 75

**105.** Install the electrical connector for the indicator side repeater into the clip that attaches it to the PCM bracket (refer to Figure 76).



Figure 76

Install the fir-tree cable tie that attaches the forward harness, to the PCM bottom bracket (refer to Figure 77).

Figure 77

106.

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**107.** Install the three fir-tree cable ties that attach the PCM harness to the PCM bottom bracket (refer to Figure 78).



Figure 78

# Part D – Install the New Ground Wire into the Centre Stack Harness

### All Models:

- **108.** Remove the footwell insulation pad to get access to the electrical harness in the footwell.
- **109.** Put the new ground wire (1) along the harness inside the cabin towards the console. Use cable ties (2) to attach the wire (refer to Figure 79).



Figure 79

**110.** Put the new ground wire (1) through into the console/Central Control Module (CCM) area (2) (refer to Figure 80).



Figure 80

**111.** Put the footwell insulation pad back into position.

112. Find the black/purple wire (pin 8) in electrical connector C0430. Remove the tape from the harness that attaches the wire into the harness (refer to Figure 81).



Figure 81



Figure 82

- Remove a 10 mm section of insulation from 113. the black/purple wire at the position shown (1) in Figure 82.
- Remove 8 mm of insulation from the end of 114. the new ground wire.
- 115. Use the crimp from the kit to attach the new wire to the black/purple wire.
- 116. Apply solder to the crimped joint.
- 117. Wind self-amalgamating insulation tape around the soldered joint (refer to Figure 83).



Figure 83

# Part E – Install the Centre Stack

### DB9, DBS and Virage

**118.** Put the centre stack loosely into position (refer to Figure 84).



Figure 84

**119.** Connect the four electrical connectors to the control switches (refer to Figure 85).



Figure 85

**120.** Connect the two electrical connectors to the HVAC control module (refer to Figure 86).



Figure 86

**121.** Connect the two electrical connectors to the ICM (refer to Figure 87).



Figure 87

**122.** Put the centre stack assembly into position (refer to Figure 88).



Figure 88

**123.** Install and tighten the four screws that attach the centre stack assembly to the IP (refer to Figure 89).



Figure 89

**124.** Put the veneer bezel for the IP loosely in position (refer to Figure 90).



Figure 90

**125.** Connect the larger electrical connector to the ignition switch module (refer to Figure 91).



Figure 91

**126.** Connect the smaller electrical connector to the ignition switch module (refer to Figure 92).



Figure 92

**127.** Connect the two electrical connectors to the navigation display screen (refer to Figure 93).



Figure 93

**128.** Connect the electrical connectors to each of the four transmission control switches (refer to Figure 94).

Install the screw that attaches the two tethers to the veneer bezel (refer to Figure 95).



Figure 94

R-07-0018-02

Figure 95

**130.** Make sure the air vents are correctly aligned with the air ducts.

129.

**131.** Engage the four clips to attach the veneer bezel (refer to Figure 96).



Figure 96

**132.** Install the centre console (refer to Workshop Manual procedure 01.12.DN).

# **Rapide:**

**133.** Put the centre stack loosely into position (refer to Figure 97).



Figure 97

**134.** Connect the four electrical connectors to the control switches (refer to Figure 98).



Figure 98

**135.** Connect the two electrical connectors to the CCM (refer to Figure 99.



Figure 99

**136.** Connect the two electrical connectors to the Infotainment Control Module (ICM) (refer to Figure 100).



Figure 100

**137.** Put the centre stack into its installed position (refer to Figure 101).



Figure 101

**138.** Install and tighten the four screws that attach the centre stack assembly to the IP (refer to Figure 102).



Figure 102

**139.** Engage the tabs (1) on the console side panels (2) onto the mounting studs (3 and 4) (refer to Figure 104).



Figure 103

- **140.** Install and tighten the attachment nuts for the side panels.
- **141.** Put the centre console (1) loosely into position (refer to Figure 104).
- **142.** Connect the two electrical connectors (2) to the centre console (1).



Figure 104

**143.** Install and Torque the four Torx screws that attach the top panel assembly for the rear console to the body to 9 Nm (refer to Figure 105).



Figure 105

**144.** Install the rubber panel into the front stowage compartment (refer to Figure 106).



Figure 106

**145.** Close the door for the front stowage compartment (refer to Figure 107).



Figure 107

**146.** Install and tighten the two nuts that attach the top panel assembly for the rear console to the body (refer to Figure 108).



Figure 108

**147.** Install the rubber panel for the rear stowage compartment (refer to Figure 109).

Close the door for the rear stowage compartment (refer to Figure 110).



Figure 109

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**149.** Put the rear centre stack assembly in position into the centre console (refer to Figure 111).

148.

**150.** Connect the three electrical connectors to the rear centre stack assembly (refer to Figure 112).



Figure 112

**151.** Put the rear centre stack assembly into its installed position in the centre console (refer to Figure 113).



Figure 113

**152.** Install the two screws that attach the rear centre stack assembly to the body (refer to Figure 114).





**153.** Install the two rubber base inserts into the cup holders (refer to Figure 115).





**154.** Put the veneer bezel for the IP loosely in position (refer to Figure 116).



Figure 116

**155.** Connect the larger electrical connector to the ignition switch module (refer to Figure 117).



Figure 117

**156.** Connect the smaller electrical connector to the ignition switch module (refer to Figure 118).



Figure 118

158.

**157.** Connect the two electrical connectors to the navigation display screen (refer to Figure 119).



Figure 119



Figure 120



Figure 121

**160.** Make sure the air vents are correctly aligned with the air ducts.

to Figure 120).

**159.** Install the screw that attaches the two tethers to the veneer bezel (refer to Figure 121).

Connect the electrical connectors to each of

the four transmission control switches (refer

**161.** Engage the four clips to attach the veneer bezel (refer to PRND Voltage Measurement).



Figure 122

### Vanquish:

162. Install the centre stack (refer to Workshop Manual procedure 15.01.CB).

### Part F – Complete the Procedure

#### All models:

- 163. Install the front right wheel arch liner (refer to Workshop Manual procedure 01.02.GB).
- **164.** Do the battery connection procedure (refer to Workshop Manual procedure 14.01.CA).
- **165.** Do the PRND Voltage Measurement test again. If the values are still not correct, speak to AMTech.

#### Part Data

Description	Model	Part Number	Quantity
Transmission Ground Cable Modification Kit	DB9, DBS, Virage, Rapide and Vanquish	FD33-37-10095	1

# Note: For information, the contents of the modification kit are shown in the list below. You do NOT need to order these parts separately.

#### Contents of the Kit

Description	Part Number	Quantity
Wire, Yellow, 0.5 mm <sup>2</sup> .	706413	2 metres
Bulkhead Grommet (Rapide Only)	706414	1
Cable Ties	706415	10
Crimps	706411	2
Heat shrink tube	706412	1
"Fir-Tree" Cable Tie	706416	1
Bulkhead Ground Stud Nuts	703164	2

#### Warranty Data

Description	Model	Labour Time
Engine harness to contro concele new ground connection	Vanquish	2.20 hours.
engine namess to centre console – new ground connection	Rapide	3.00 hours.

DB9, DBS and	2.30 hours.
Virage	

# Failure Mode Description

Select the failure modes that follow when you make a claim through the Warranty system:

Subsystem	Location	Component	Mode of Failure
POWERTRAIN	- DRIVETRAIN - TRANSMISSION - AUTO	- SWITCH / CONTROL - GEAR SELECT - HARNESS (PRND)	- INOPERATIVE

If you have any questions related to this Service Bulletin, please speak to: Aston Martin Technical Services on: +44 (0) 1926 644720, E-mail: amtech@astonmartin.com or speak to your After Sales Manager.

The English version of this Service Bulletin is written in Simplified Technical English to ASD-STE100<sup>™</sup>.