

SERVICE BULLETIN

Reference number:	SB-03-1640	Issued: 02 August, 2022
Subject:	EVAP Diagnostic and Repair Process	
Model(s):	DB11, Vantage, DBS Superleggera	
Applicable to:	AMTA, China	
Distribute to:	After Sales Manager Executive Manager Service Manager Sales Manager	Warranty Staff Technician(s) Parts Staff

Reason for this Service Bulletin

Aston Martin has found that some vehicles have had evaporative system faults incorrectly diagnosed which can lead to multiple component failures. This can result in unnecessary repairs and customer dissatisfaction.

An Evaporative System Repair Kit has been introduced to make sure a "Right First Time" repair of evaporative leaks and leak detection system faults.

Refer to the workshop procedures that follow to correctly diagnose leaks in the EVAP system and, if necessary, install a new part or an EVAP kit.

- Part A – Do a Smoke Test for the EVAP System/Remove and Install a New Part
- Part B – Flush the EVAP System and Install an EVAP Kit

Workshop Procedure

CAUTIONS: CONNECT THE AMDS 2.0 EQUIPMENT TO AN ELECTRICAL SUPPLY WHEN YOU DO THE PROCEDURE THAT FOLLOWS. IF THE LAPTOP BATTERY VOLTAGE DECREASES DURING THE SOFTWARE UPDATE, THE UPDATE CAN FAIL AND CAN CAUSE DAMAGE TO THE MODULE.

YOU MUST CONNECT A BATTERY CHARGER TO THE VEHICLE BEFORE YOU DO DIAGNOSTIC PROCEDURES. IF THE VEHICLE BATTERY VOLTAGE DECREASES DURING THE PROCEDURE, THE SOFTWARE UPDATE CAN FAIL AND CAN CAUSE DAMAGE TO THE MODULE.

Notes: *Make sure that the AMDS 2.0 software has updated to the latest version. The AMDS 2.0 software will need a good Internet connection (minimum broadband speed of 2 Mbit/second) to make sure that the software is updated correctly.*

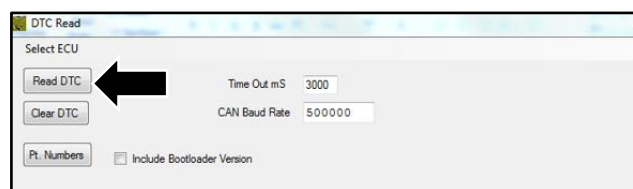
A high output battery charger (minimum of 80 A) is necessary to meet the demand of the radiator cooling fan. The battery charger must also be compatible with Absorbent Glass Mat (AGM) type batteries.

Part A – Do a Smoke Test for the EVAP System/Remove and Install a New Part

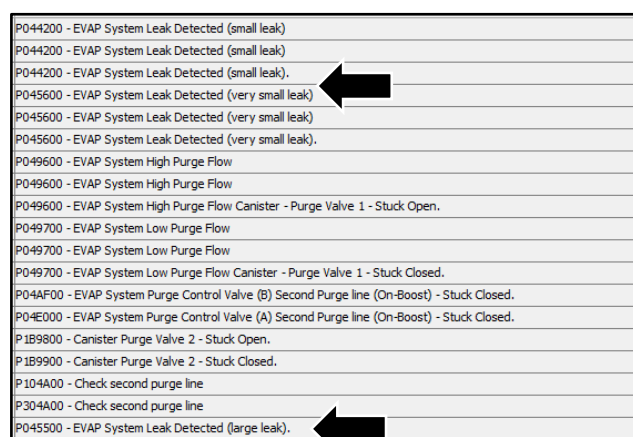
1. Set the ignition to on but do not start the engine.
2. Connect the Vehicle Communication Interface (VCI) to the vehicle with the Diagnostic Link Cable (DLC).
3. Start the AMDS 2.0 software and, if necessary, update to the latest version.
4. Click “DTC/OBD” (refer to Figure 1).

**Figure 1**

5. Click “Read DTC” and do a check for diagnostic trouble codes (DTC's) (refer to Figure 2).

**Figure 2**

6. If an “EVAP System Leak Detected” DTC is shown, do a smoke test of the EVAP system (refer to Figure 3).

**Figure 3**

7. If a leak is found from any of the areas that follow, you must remove and install a new part and continue to step 9.
 - Tank flange
 - Filler neck
 - Hoses

Note: Refer to the parts catalogue for the applicable part number necessary.

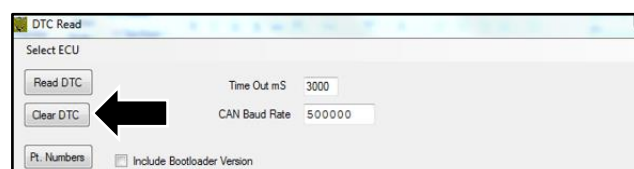
8. If a leak is found from any of the areas that follow, or no leak is found refer to: Part B – Flush the EVAP System and Install an EVAP Kit.
 - Charcoal canister
 - Purge valves
 - DMTL pump

9. When a new part is installed, do a smoke test of the EVAP system and clear DTC's (refer to Figure 4).

**Figure 4**

Part B – Flush the EVAP System and Install an EVAP Kit

1. Remove and discard the charcoal canister and the DMTL pump (refer to Workshop Manual Procedure 10.01.GC).
2. Remove and discard the purge valves:
 - For V8 Engines (refer to Workshop Manual Procedure 10.01.AJ).
 - For V12 Engines (refer to Workshop Manual Procedure 03.04.AG).
3. Flush the EVAP system hoses / lines. This can be done with an AC line flusher or similar device or aerosol.
4. Install the new charcoal canister and new DMTL pump (refer to Workshop Manual Procedure 10.01.GC).
5. Install the new purge valves:
 - For V8 Engines (refer to Workshop Manual Procedure 10.01.AJ).
 - For V12 Engines (refer to Workshop Manual Procedure 03.04.AG).
6. When the EVAP Kit is installed, do a smoke test of the EVAP system and clear DTC's (refer to Figure 9).

**Figure 9**

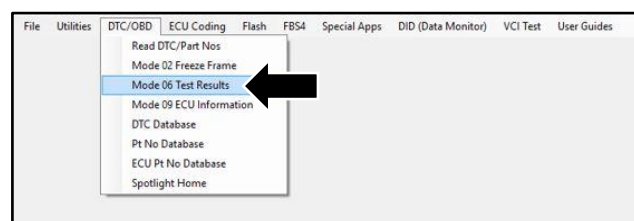
7. Disconnect the VCI from the vehicle and shut down AMDS 2.0.
8. Road test the vehicle from a cold start and make sure the engine reaches normal operating temperature. To complete the vehicle road test, all applicable systems must complete self-diagnosis.

Note: During the road test, do not let the fuel level go below one-quarter full.

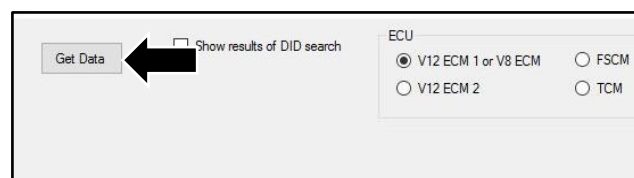
Operate the engine for a minimum period of 10 minutes and do the steps that follow:

- The engine must run at idle speed for a period of more than 30 seconds. Do not change the speed of the engine during this period.
- The vehicle speed must be held at more than 25 mph, (40 kph), for a period of more than 5 minutes.

9. Connect the VCI to the vehicle with the DLC.
10. Click “DTC/OBD” then click “Mode 06 Test Results” (refer to Figure 10).

**Figure 10**

11. Select the applicable ECU then click “Get Data” (refer to Figure 11).

**Figure 11**

12. Make sure the results for the Evap Monitor 40 and Evap Monitor 20 results are: **0** (refer to Figure 12).

Requesting MID: 3B, Evap Monitor 40				
3B86FE0000000000				
Result	Minimum	Maximum	Units	
TID: 86, 0.040 thou leak check				
0	0	0	Pa	

Requesting MID: 3C, Evap Monitor 20				
3C843E0000000000				
Result	Minimum	Maximum	Units	
TID: 84, 0.020 thou leak check				
0	0	0	mm^2	

Figure 12

13. Make sure the results for the Purge flow monitor are between the “Minimum” and “Maximum” range (refer to Figure 13).

Requesting MID: 3D, Purge flow monitor				
3D8B17023600FAFF3DC817018000FAFF3D8F1700000000003DCF170000000000				
Result	Minimum	Maximum	Units	
TID: 89, TID Not Found				
5.66	2.5	655.35	Kpa	
TID: CF, TID Not Found				
4.45	2.5	655.35	Kpa	
TID: 8F, TID Not Found				
0	0	0	Kpa	
TID: CF, TID Not Found				
0	0	0	Kpa	

Figure 13

14. Disconnect the VCI from the vehicle and shut down AMDS 2.0.
15. Set the ignition to off.

Warranty Data

Procedure and Labour Time

Description	Labour Time
Evaporative System Repair Kit – V8	3.4 hours
Evaporative System Repair Kit – V12	5.5 hours

Part Data

Description	Part Number	Quantity
EVAP Kit V8	JY53-34-10184	1
EVAP Kit V12	HY53-34-10183	1

If you have any questions related to this document, please refer to the 'Contact Us' link on this webpage, or contact your local Dealer or After Sales Manager.

The English version of this document is written in Simplified Technical English to ASD-STE100™.