



TECHNICAL BULLETIN
JTB00230NAS2
28 JAN 2013

© Jaguar Land Rover North America, LLC

NOTE: The information in Technical Bulletins is intended for use by trained, professional Technicians with the knowledge, tools, and equipment required to do the job properly and safely. It informs these Technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by 'do-it-yourselfers'. If you are not a Retailer, do not assume that a condition described affects your vehicle. Contact an authorized Jaguar service facility to determine whether this bulletin applies to a specific vehicle.

This reissue replaces all previous versions. Please destroy all previous versions. Only refer to the electronic version of this TSB in TOPIx.

SECTION: 307-05

Transmission Control Switch Module DTC Diagnostics

AFFECTED VEHICLE RANGE:

XF (X250)	Model Year:	2009 Onwards
	VIN:	R00001 Onwards
XJ Range (X351)	Model Year:	2010 Onwards
	VIN:	V00001 Onwards
XK Range (X150)	Model Year:	2010 Onwards
	VIN:	B32753 Onwards

MARKETS:

NAS

CONDITION SUMMARY:

Situation:

The Transmission Control Switch (TCS) may fail to rise, fail to rotate out of Park (P), and/or fail to rotate between gears. This bulletin is to aid in diagnosing of Diagnostic Trouble Codes (DTC) for the Transmission Control Switch (TCS) module.



NOTE: The Transmission Control Switch (TCS) may also be referred to as:

- Electronic Transmission Switch (ETS)
- Gear Selector Module (GSM)
- JaguarDrive Selector
- Transmission Range Selector (TRS)
- Transmission Rotary Switch (TRS)
- Transmission Shift Module (TSM)



NOTE: Use the table below to assist with the diagnosing of the various Diagnostic Trouble Codes (DTC).

 **NOTE: Repairs to be carried out as a separate claim.**

Cause: These may be caused by various issues which make the TCS fail to operate.

Action: In the event of a customer concern of the above, refer to the Diagnostic Procedure outlined below.

PARTS:

No Parts Required

TOOLS:

IDS with latest IDS-DVD and Calibration File
Jaguar Land Rover-approved Midtronics Vehicle Power Supply

WARRANTY:

 **NOTE: Repairs to be carried out as a separate claim.**

 **NOTE: Repair procedures are under constant review, and therefore times are subject to change; those quoted here must be taken as guidance only. Always refer to TOPIx to obtain the latest repair time.**

 **NOTE: DDW requires the use of causal part numbers. Labor only claims must show the causal part number with a quantity of zero.**

DESCRIPTION	SRO	TIME (HOURS)	CONDITION CODE	CAUSAL PART
Transmission Control Switch Module - DTC Diagnostics - XF	10.10.99	0.20	42	C2Z22516
Transmission Control Switch Module - DTC Diagnostics - XJ	10.10.99	0.20	42	C2D17959
Transmission Control Switch Module - DTC Diagnostics - XK	10.10.99	0.20	42	C2P20671

 **NOTE: Normal Warranty policies and procedures apply.**

DIAGNOSTIC PROCEDURE:

Use the Diagnostic Trouble Codes (DTC) table below for the Transmission Control Switch (TCS) module fault diagnosis.

 **NOTE: 'X' = DO NOT REPLACE TCS module - Perform the diagnostics specified in SDD/TOPIx Workshop Manual section 100-00 Diagnostics.**

 **NOTE: 'Y' = Replace the TCS module.**

 **NOTE: '0' = Step 1: Perform diagnostics specified in SDD/TOPIx Workshop Manual section 100-00 Diagnostics. Step 2: clear all DTCs; cycle the ignition; engage Drive (D); return to the Park (P) position; test with SDD. Step 3: If Steps 1 and 2 do not resolve issue, replace TCS module.**

Diagnostic Trouble Code (DTC)	Transmission Control Switch (TCS) Module - Intermittent DTC	Transmission Control Switch (TCS) Module - Permanent DTC	Transmission Control Module (TCM) - Intermittent DTC	Transmission Control Module (TCM) - Permanent DTC
P176A-01	X	Y	X	X
P176A-13	X	Y	X	X
P176A-19	X	Y	X	X

P176A-94	X	Y	X	X
P176C-07	X	0	X	X
P176C-11	X	Y	X	X
P176C-12	X	Y	X	X
P176B-71	X	Y	X	X
P176C-73	X	0	X	X
B1087-87	X	X	X	0
U101B-87	X	X	X	0
P0814-01	X	Y	X	X
P0850-02	X	X	X	X
P1707-07	X	X	X	X
P1707-77	X	X	X	X
P1707-72	X	X	X	X
P0606-47	X	X	X	X
P0919-93	X	X	X	X
C1B00-68	X	X	X	X
P0850-29	X	X	X	X
P081C-64	X	X	X	X

The following DTCs may be generated by Brake Pedal pressure or Brake Pedal Switch DTCs. Follow the Diagnostic Procedure below for Brake Pedal Switch/Brake Pedal Pressure Diagnostics.



NOTE: The Diagnostic Procedure below does not apply to XF vehicles built prior to VIN R47154.



NOTE: X = DO NOT REPLACE TCS Module- Perform the diagnostics specified in SDD/TOPIx Workshop Manual Section 100-00 Diagnostics.

Diagnostic Trouble Codes (DTC)	Transmission Control Switch (TCS) Module - Intermittent DTC	Transmission Control Switch (TCS) Module - Permanent DTC	Transmission Control Module (TCM) - Intermittent DTC	Transmission Control Module (TCM) - Permanent DTC
C1D15-64	X	X	X	X
P1571-64	X	X	X	X
P0571-68	X	X	X	X
P0504-62	X	X	X	X

- CAUTION: Ensure all ignition 'ON' / ignition 'OFF' requests are carried out; failure to perform these steps may cause damage to control modules in the vehicle.**

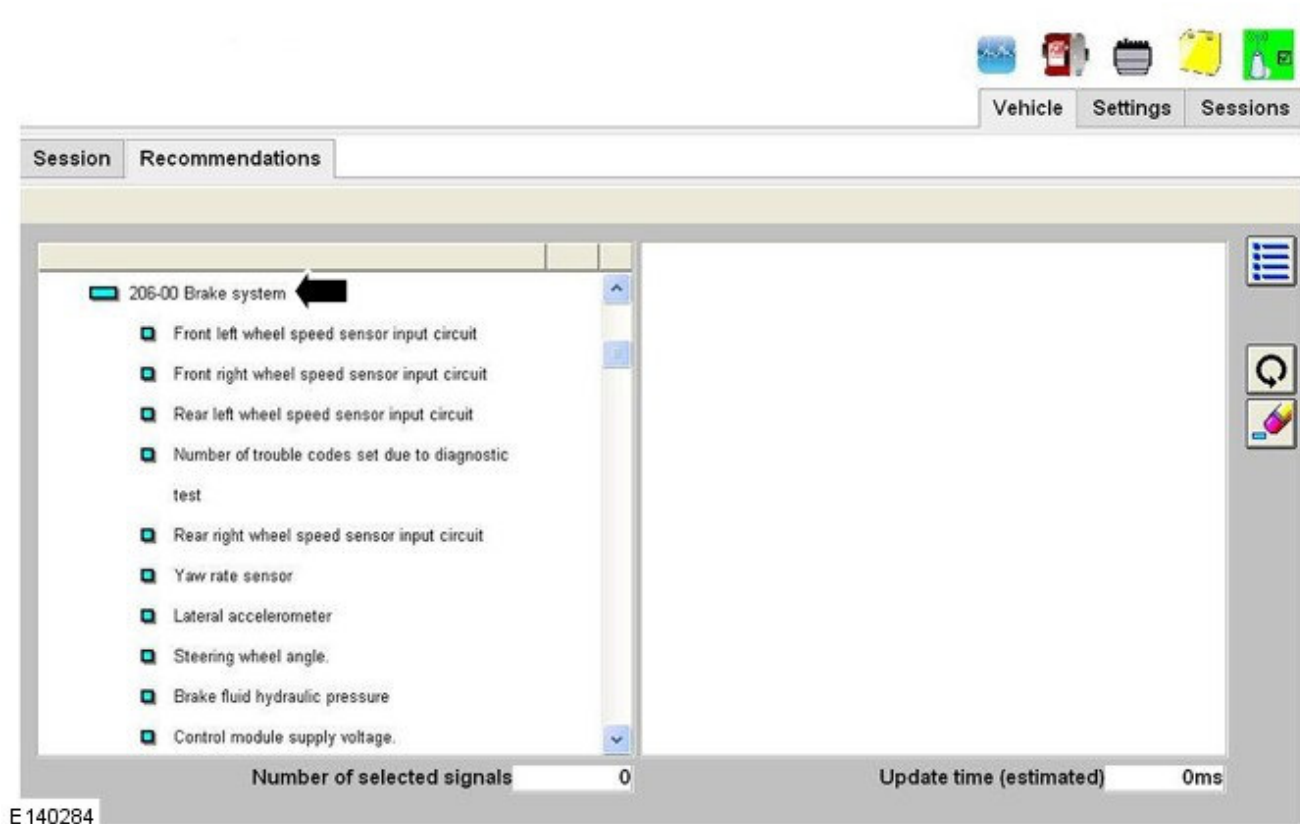


CAUTION: A Jaguar Land Rover-approved Midtronics Vehicle Power Supply must be connected to the vehicle battery during IDS/SDD diagnosis / module programming.

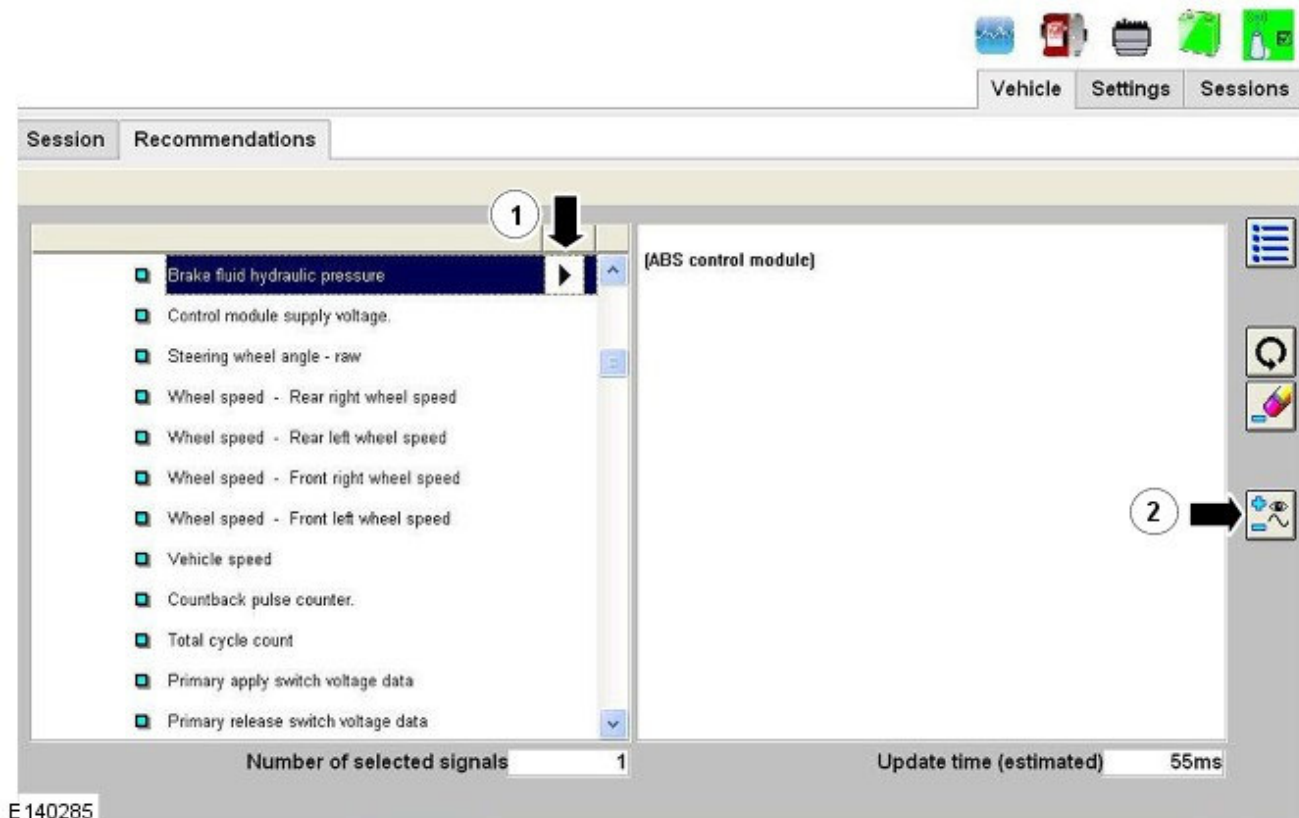
Connect a Jaguar Land Rover-approved power supply to the vehicle.

- Turn the ignition 'ON' (engine not running).
- Connect the Integrated Diagnostics System (IDS) to the vehicle and begin a new Symptom Driven Diagnostics (SDD) session.

4. Follow the on-screen prompts, allowing SDD to read the VIN and identify the vehicle.
5. From the Session Type selection screen, select 'Measurement Applications'.
6. Select the 'Recommendations' tab.
7. From the Recommendations tab run 'Complete data logger'.
8. Select / expand the '206-00 Brake system' tab.



9. Select 'Brake fluid hydraulic pressure' and click on the icon (1) shown.



10. Expand Engine system.

- Select 'Engine input/output parameter - Brake switch 2' then click on the icon shown (2).

The screenshot displays a diagnostic software interface. At the top right, there are icons for 'Vehicle', 'Settings', and 'Sessions'. Below these, the 'Session' and 'Recommendations' tabs are visible. The main area is divided into two panes. The left pane contains a list of engine parameters, with 'Engine input/output parameters - Brake switch 2' selected and highlighted. A circled '1' with a downward arrow points to this selection. The right pane shows the details for the selected parameter: 'Engine input/output parameters - Brake switch [Powertrain control module]' and 'No help currently available'. A circled '2' with a rightward arrow points to a specific icon in the right-hand toolbar. At the bottom of the interface, there are two status indicators: 'Number of selected signals' with a value of 3, and 'Update time (estimated)' with a value of 165ms. The ID 'E 140286' is located in the bottom left corner of the interface area.

11. Select 'Engine input/output parameter - Brake switch' (1) then click on the icon shown (2).

The screenshot displays a diagnostic software interface. At the top right, there are icons for 'Vehicle', 'Settings', and 'Sessions'. Below these, the 'Session' and 'Recommendations' tabs are visible. The main area is divided into two panes. The left pane contains a list of signals, with 'Engine input/output parameters - Brake switch' selected and highlighted in blue. An arrow labeled '1' points to this selected item. The right pane shows the details for the selected signal: 'Engine input/output parameters - Brake switch [Powertrain control module]' and 'No help currently available'. An arrow labeled '2' points to a gear icon in the right-hand toolbar. At the bottom, a status bar shows 'Number of selected signals' as 3 and 'Update time (estimated)' as 165ms. The identifier 'E 140287' is located at the bottom left of the interface.

Vehicle Settings Sessions

Session Recommendations

Engine input/output parameters - Brake switch 2

Engine input/output parameters - Brake switch

Stop start - Feature status - Driver's door

Stop start - Feature status - Flags - Driver's safety belt buckle

Boost pressure actuator - Bank 1 - Measured position

Boost pressure actuator - Bank 1 - Desired position

Particulate filter differential pressure - Measured

Exhaust gas recirculation cooler - Bypass valve

Engine input/output parameters - Brake switch [Powertrain control module]

No help currently available

Number of selected signals 3

Update time (estimated) 165ms

E 140287

12. Click on the icon shown.

SDD Comprehensive coverage of internet access

Vehicle Settings Sessions

Session Recommendations

- Engine input/output parameters - Compressor recirculation valve
- Engine input/output parameters - Compressor shut-off valve
- Engine input/output parameters - Starter enable high side
- Engine input/output parameters - Starter enable low side
- Engine input/output parameters - Kickdown
- Engine input/output parameters - Oil pressure lamp
- Engine input/output parameters - Glow lamp
- Engine input/output parameters - Cranking state
- Engine input/output parameters - E-box fan monitor
- Engine input/output parameters - Fuel lift pump
- Engine input/output parameters - Water in fuel
- Engine input/output parameters - Park/neutral switch
- Engine input/output parameters - Brake switch 2
- Engine input/output parameters - Brake switch

[Powertrain control module]

Description:
 Pid 041E: Engine input/output parameters - Brake switch
 Engine input/output parameters for the brake switch
 Expanded value(s)/behavior(s):

Note: Sample data for reference only

Typical
 0 = Not pressed
 1 = Pressed

Signal type:
 State value

Direction:
 Input

Signal source/destination:
 Brake switch - Engine control module

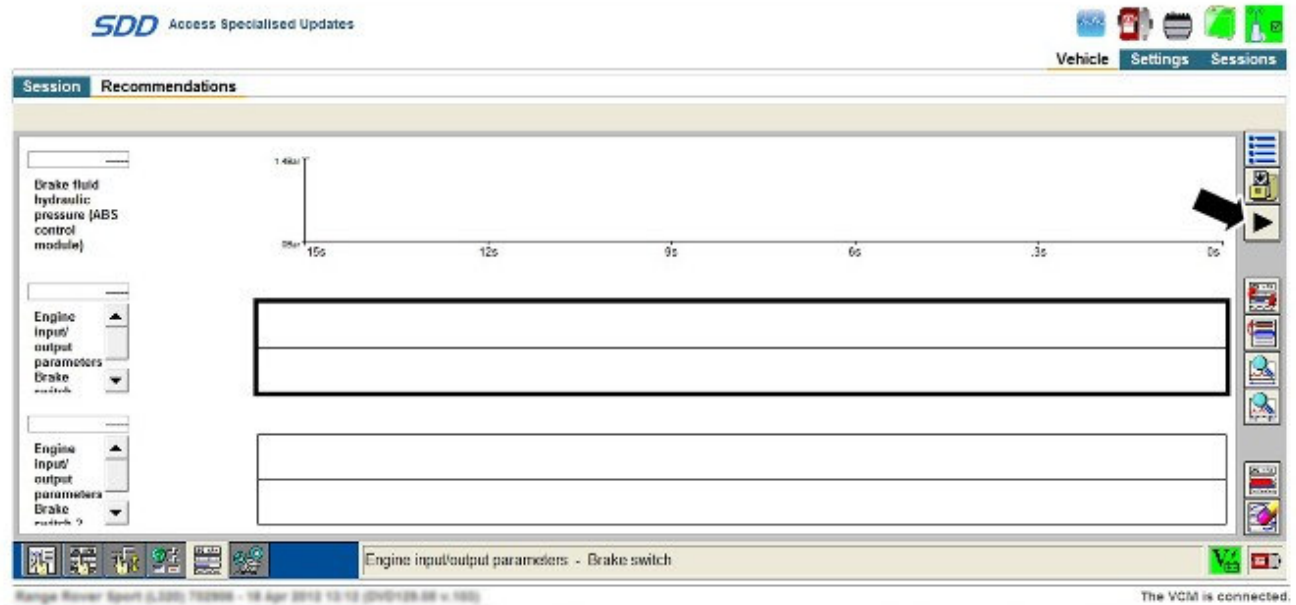
Number of selected signals 3 Update time (estimated) 165ms

Range Rover Sport (L322) 702008 - 18 Apr 2012 12:02 (240128.08 v. 100)

The VCM is connected

E 144838

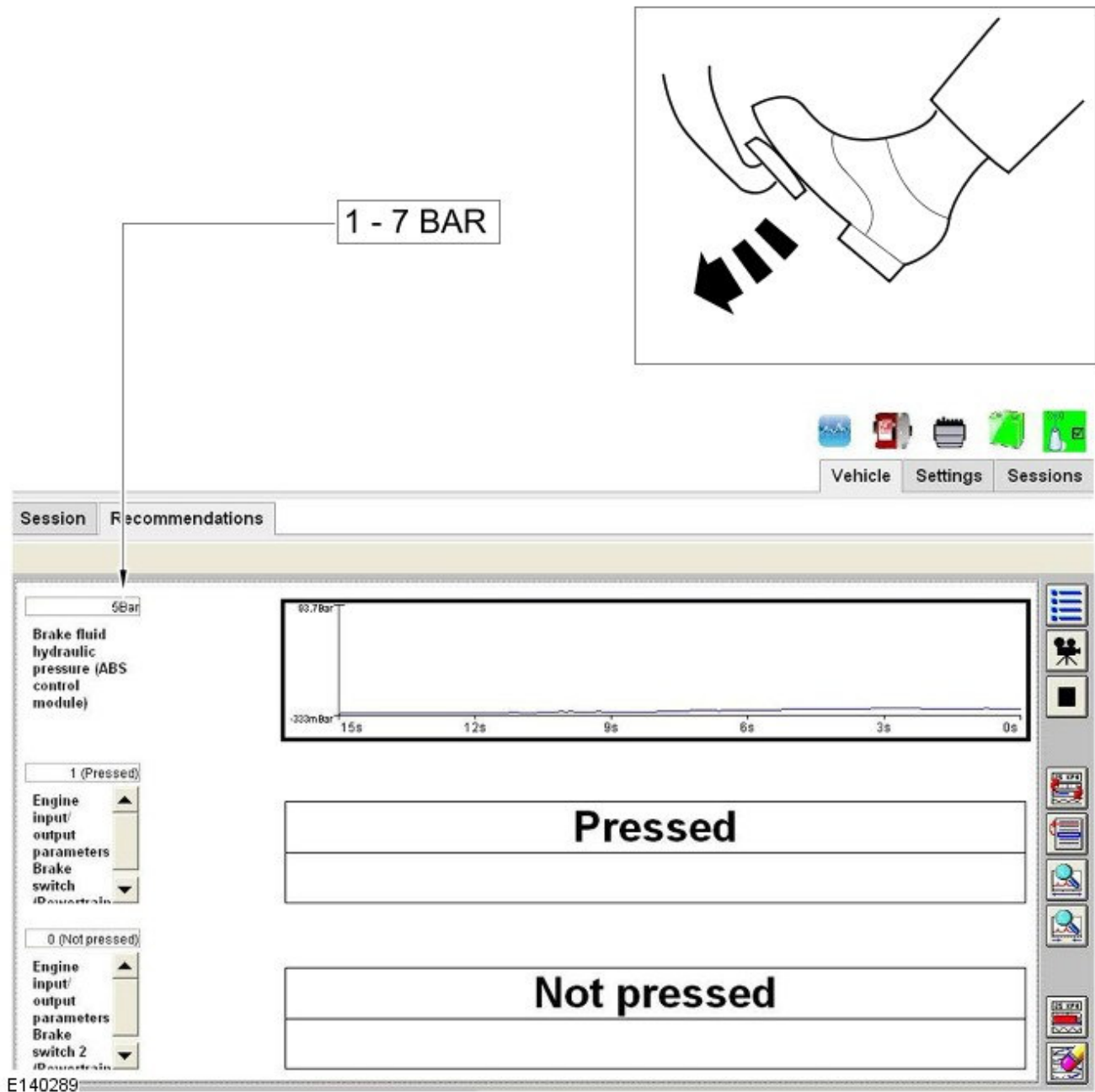
13. Click on the icon shown.



E144839

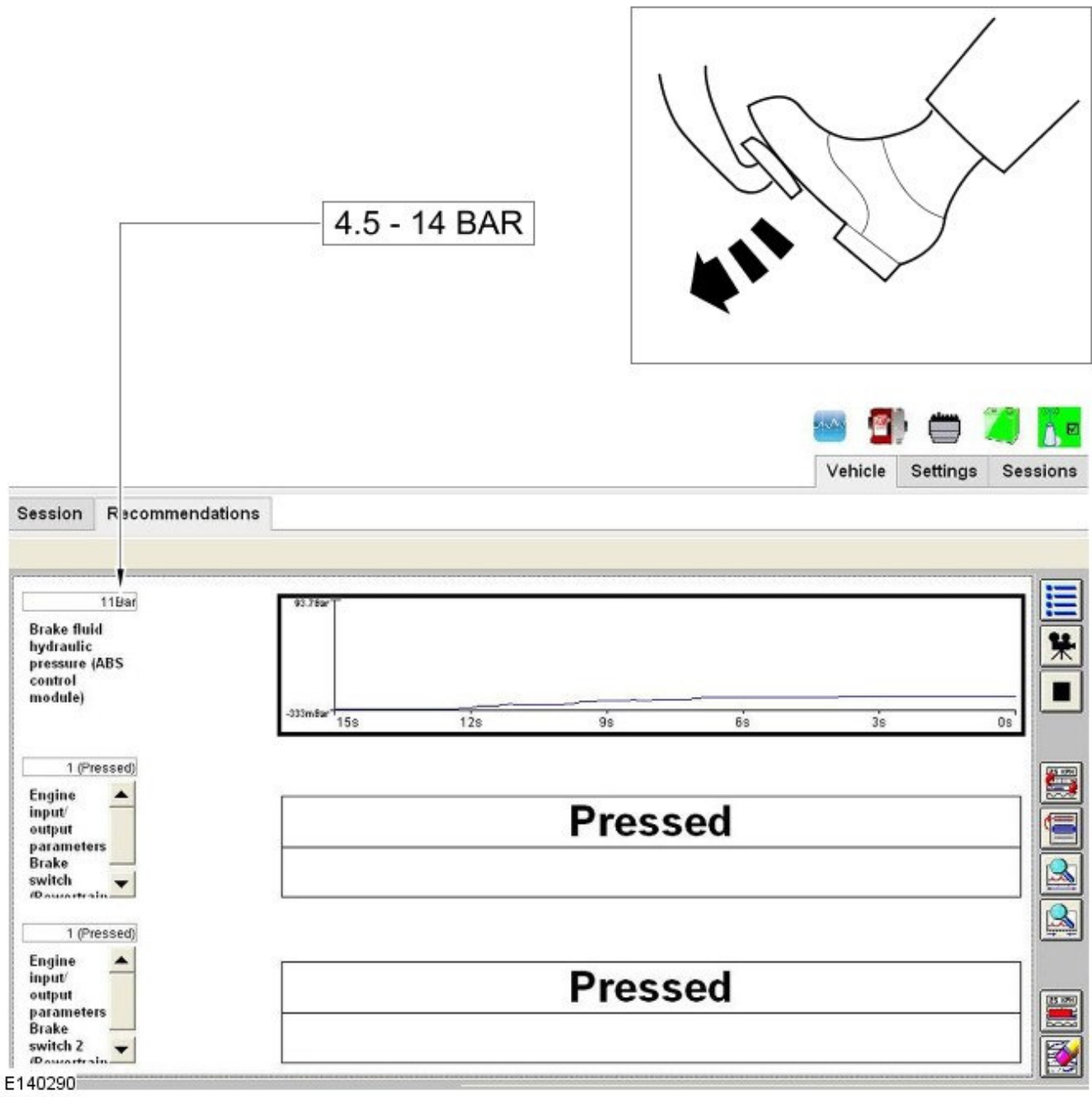
14. Press the brake pedal.

- The first graph to change must be the brake light switch (confirm by asking someone to watch brake lights come on). The brake pressure applied, shown in the top bar chart, should be between 1 and 7 BAR.



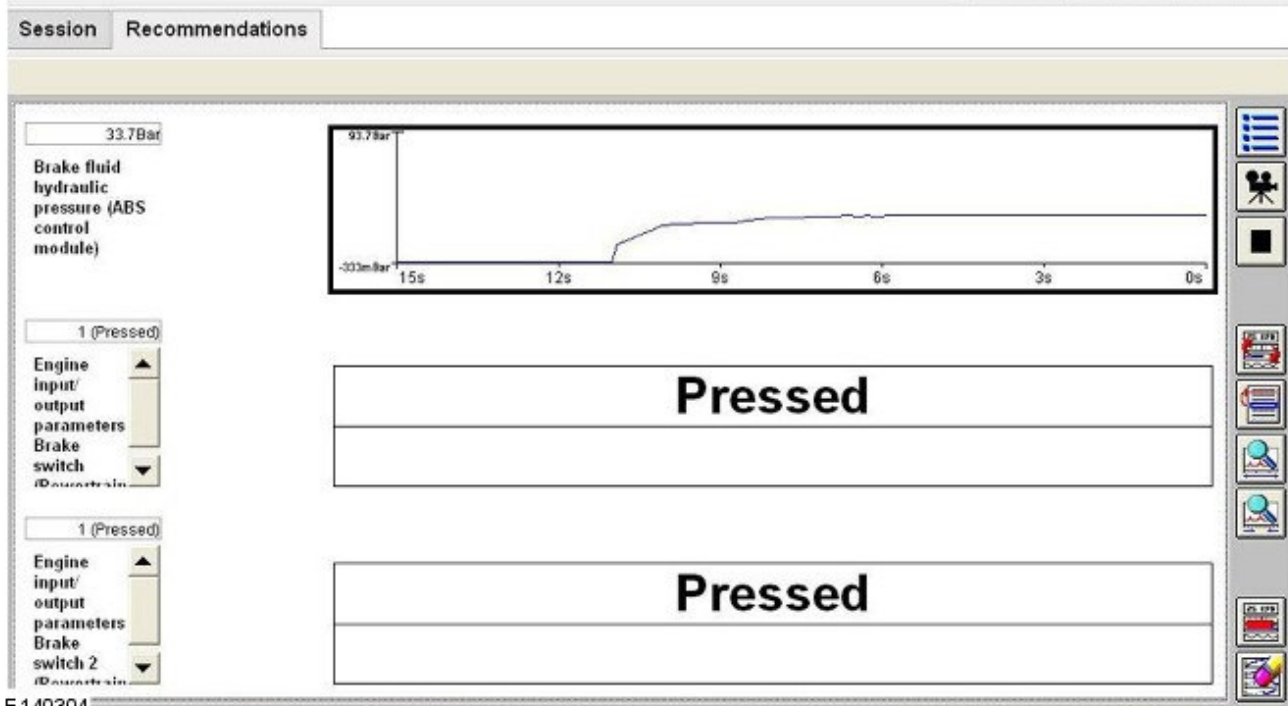
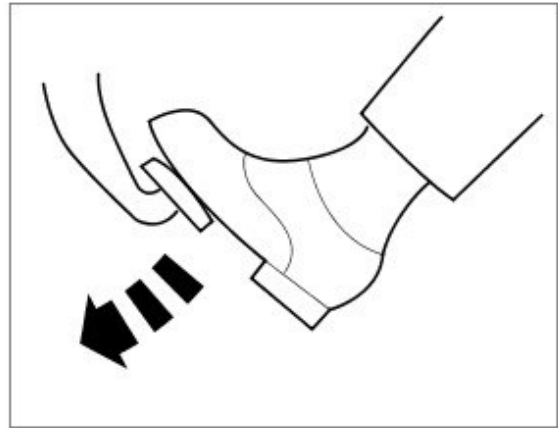
15. The next graph to change should be the cruise cancel switch.

- The brake pressure applied, shown in the top bar chart, should be between 4.5 and 14 BAR.



16. Last graph to move should be brake pressure.

- This reading will vary depending on whether the engine is running and foot pressure applied.



17. Switch the data logger off before disconnecting the SDD from the vehicle.

- If the results show that the brake pedal switch is working as expected do not replace the switch. It will be necessary to investigate the cause of the issue. Contact the Technical HelpLine for additional support if necessary.
- If the results show that the brake switch is not working correctly, remove the brake pedal switch and refit.
- Run the above tests again.
- If the results still show the brake switch is not working correctly the switch should be replaced.

18. Exit the current session.

19. Disconnect the IDS and the battery conditioner/power supply from the vehicle.