

# StarSCAN™

## Quick Reference Guide

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## ECU View

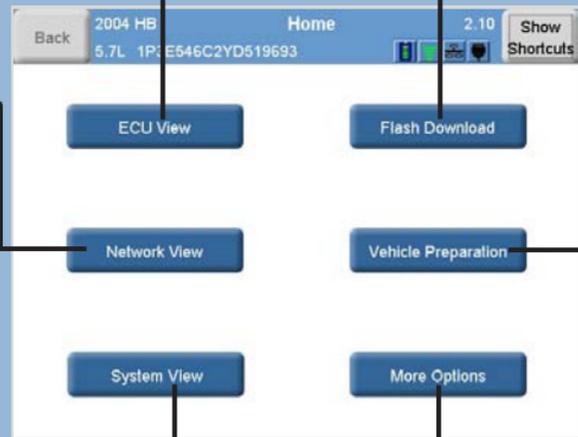
Shows list of all ECUs on connected vehicle. Indicates if an ECU is responsive, if DTCs are set, and if ECU is located on the CAN B or CAN C Bus.

## Network View

Shows graphical representation of vehicle's network. Red buttons indicate trouble spots such as loss of communication or DTCs.

## System View

Shows the vehicle organized by system, such as Climate Control or Security. Data from many different ECUs might be shown in each system display.



## Flash Download

Find and download any available flash updates. Search using a connected vehicle or manually entered criteria: VIN, ECU part #, TSB #, or Year / Model / Engine combination.

## Vehicle Preparation

Perform common pre-delivery routines, such as setting customer preferences like "Program Key".

## More Options

Access additional features, such as creating a custom data display, creating data recording templates, or viewing TSB's.

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Home Screen Diagram

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## Print Screen

Print paper copy of current screen

## Home

Display Home screen

## Hide Shortcuts

Closes the Shortcuts toolbar



Tool Menu

Update Tool

Help

Print Screen

Home

Hide Shortcuts

## Tool Menu

Adjust tool settings

## Update Tool

Download and install software updates

## Help

View electronic user manual

## StarSCAN

Touch to display StarSCAN status. Turns red to indicate a serious malfunction in the StarSCAN tool itself.

## Diag CAN C

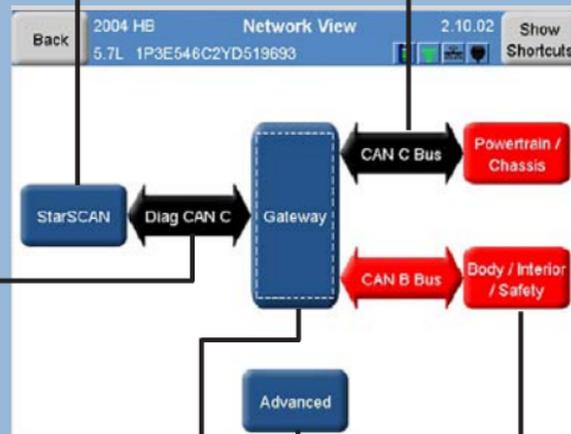
Touch to display vehicle communication status. Turns red to indicate CAN electrical faults such as short to grounds, power, and opens.

## Gateway

Touch to display a list of the connected vehicle's ECUs and other configuration information. Turns red to indicate that StarSCAN can't communicate with the gateway.

## Advanced

Touch to display detailed network communication DTC's report.



## CAN B / CAN C Bus

Touch to display CAN B or CAN C Bus status. Turns red to indicate electrical faults such as short to grounds, power, and opens.

## Powertrain / Chassis

Touch to display a list of problem ECUs. Turns red to indicate problem ECUs such as non-responsive ECUs or ECUs with DTCs set.

## Body / Interior / Safety

Touch to display a list of problem ECUs. Turns red to indicate problem ECUs such as non-responsive ECUs or ECUs with DTCs set.

# 4 Read and Clear DTCs

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## STEP 1

Touch **ECU View**

**ECU View** shows a list of ECUs.

If not on Home screen, touch **Show Shortcuts**, then **Home**, then **ECU View**.



## STEP 2

Touch an ECU

Touch scroll arrows to browse list.

Touch column names to sort list.

The screenshot shows the ECU View screen with a blue header bar containing 'Back', '2004 HB', 'ECU View', '2.10', and 'Show Shortcuts'. Below the header, there is a table with columns: Controller Name, Active, DTCs, and Bus. A hand icon is pointing to the 'TCM' row.

	Controller Name	Active	DTCs	Bus
▲	ABS Anti Lock Brakes / Electronic Stability	<input checked="" type="checkbox"/>	0	CAN C
	PCM NGC III Engine	<input checked="" type="checkbox"/>	2	CAN C
	TCM NGC III Transmission (EATX)	<input checked="" type="checkbox"/>	1	CAN C
	AMP Amplifier	<input checked="" type="checkbox"/>	---	CAN B
	CCN Cabin Compartment	<input checked="" type="checkbox"/>	---	CAN B
	DDM Driver Door	<input checked="" type="checkbox"/>	---	CAN B
▼	EOM Electronic Overhead	<input checked="" type="checkbox"/>	1	CAN B

## STEP 3

Touch **View DTCs**

**View DTCs** displays a list of Active, Stored and Pending DTCs in the ECU.



## STEP 4

Read DTC information

Touch a DTC, then touch **Environ. Data** to display environmental data for highlighted DTC.

The screenshot shows the DTCs - TCM screen with a blue header bar containing 'Back', '2004 HB', 'DTCs - TCM', '2.10', and 'Show Shortcuts'. Below the header, there is a table with columns: Status and Description. A hand icon is pointing to the 'Environ. Data' button on the right side of the screen.

	Status	Description
P0122	Pending	Throttle Position Sensor 1 Low
P0123	Active	Throttle Position Sensor 1 High

Continued on back

**STEP 5**

Touch **Clear Stored DTCs**

**Clear Stored DTCs** shows a Confirm message box.

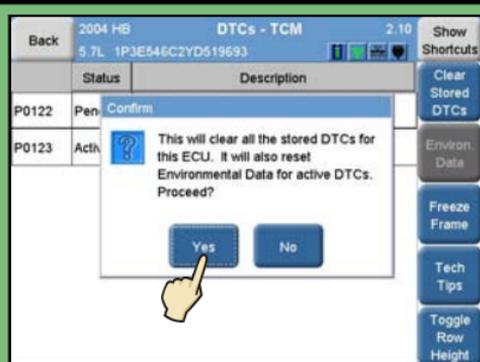
Active and Pending DTCs will not be cleared.

**STEP 6**

Touch **Yes**

Touching **Yes** clears DTCs.

Touch **No** to keep stored DTCs and return to list.



## STEP 1

Touch **ECU View**

**ECU View** shows a list of ECUs.

If not on Home screen, touch **Show Shortcuts**, then **Home**, then **ECU View**.



## STEP 2

Touch an ECU

Touch scroll arrows to browse list.

Touch column names to sort list.

The screenshot shows the ECU View screen with a blue header bar containing '2004 HB', 'ECU View', '2:10', and 'Show Shortcuts'. Below the header is a table with columns: Controller Name, Active, DTCs, and Bus. A hand cursor is pointing to the 'TCM' row.

	Controller Name	Active	DTCs	Bus
▲	ABS Anti Lock Brakes / Electronic Stability	<input checked="" type="checkbox"/>	0	CAN C
	PCM NGC III Engine	<input checked="" type="checkbox"/>	2	CAN C
	TCM NGC III Transmission (FATX)	<input checked="" type="checkbox"/>	1	CAN C
	AMP Amplifier	<input checked="" type="checkbox"/>	---	CAN B
	CCN Cabin Compartment	<input checked="" type="checkbox"/>	---	CAN B
	DDM Driver Door	<input checked="" type="checkbox"/>	---	CAN B
▼	EOM Electronic Overhead	<input checked="" type="checkbox"/>	1	CAN B

## STEP 3

Touch **Data Display**

**Data Display** shows a list of status and sensor values for the selected ECU.

Most recent DTC set is at bottom of screen.

The screenshot shows the ECU Overview - TCM screen with a blue header bar containing '2004 HB', 'ECU Overview - TCM', '2:10', and 'Show Shortcuts'. Below the header, there are four buttons: 'Data Display', 'Actuators', 'Misc. Functions', and 'More Options'. A hand cursor is pointing at the 'Data Display' button. At the bottom, there are status indicators: 'Active: 0', 'Stored: 1', and 'Pending: 0'.

## STEP 4

Read data

Touch scroll arrows to browse list.

Touch column names to sort list.

The screenshot shows the Data Display - TCM screen with a blue header bar containing '2004 HB', 'Data Display - TCM', 'Development', and 'Show Shortcuts'. Below the header is a table with columns: Name, Value, and Unit. A hand cursor is pointing to the 'Trans Temperature Voltage' row. At the bottom, there is a message: 'Unable to read DTCs.'.

	Name	Value	Unit
▲	UD Clutch Fill Volume Index	---	
	Throttle Position Sensor Voltage	0.0	Volts
	Switched Battery Voltage	0.0	Volts
	Pressure Switch Error Counter	---	
	Trans Temperature Voltage	0.14	Volts
▼	Autostick Voltage	2.812	Volts

Continued on back

# 5 View and Graph Data

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## STEP 5

Touch a row

**Isolate Row** shows a graph of selected row.

Touch **Un-isolate Row** to return to Data Display.

Name	Value	Unit
UD Clutch Fill Volume Index	---	
Throttle Position Sensor Voltage	0.0	Volts
Switched Battery Voltage	0.0	Volts
Pressure Switch Error Counter	---	
<b>Trans Temperature Voltage</b>	0.14	Volts
Autostick Voltage	2.812	Volts

## STEP 6

Touch **Add to Graph**

Touch another row, then touch **Add to Graph** for each row on graph.

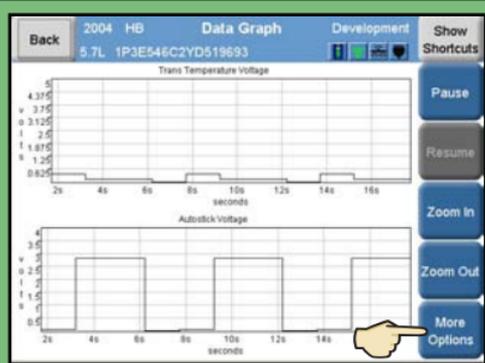
Touch **Show Graph** to view graph.

Name	Value	Unit
UD Clutch Fill Volume Index	---	
Throttle Position Sensor Voltage	0.0	Volts
Switched Battery Voltage	0.0	Volts
Pressure Switch Error Counter	---	
Trans Temperature Voltage	0.14	Volts
Autostick Voltage	2.812	Volts

## STEP 7

Touch **More Options**

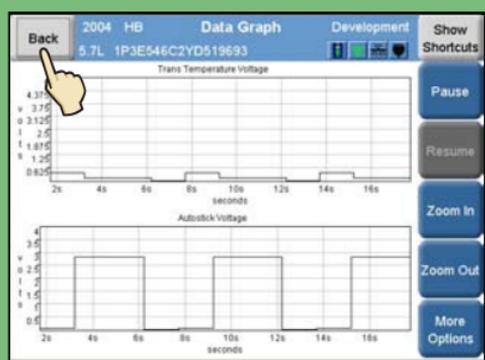
To show all rows on one graph, touch **More Options**, then **Merge Graphs**.



## STEP 8

Touch **Back**

**Back** returns to Data Display.



Begins on back

# 6 Start an Actuator

6

## STEP 1

Touch **ECU View**

**ECU View** shows a list of ECUs.

If not on Home screen, touch **Show Shortcuts**, then **Home**, then **ECU View**.



## STEP 2

Touch an ECU name

Touch scroll arrows to browse list.

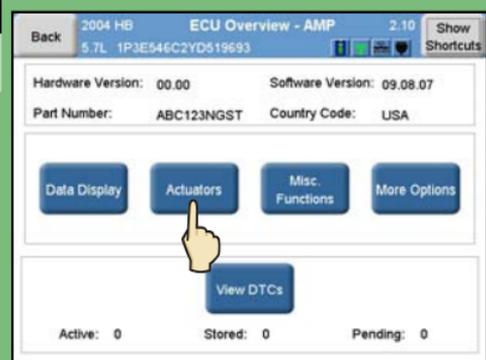
Touch column names to sort list.

	Controller Name	Active	DTCs	Bus
▲	ABS Anti Lock Brakes / Electronic Stability	<input checked="" type="checkbox"/>	2	CAN C
	PCM NGC III Engine	<input checked="" type="checkbox"/>	2	CAN C
	TCM NGC III Transmission (EATX)	<input checked="" type="checkbox"/>	1	CAN C
	AMP Amplifier	<input checked="" type="checkbox"/>	---	CAN B
	CCN Cabin Compartment	<input checked="" type="checkbox"/>	---	CAN B
	DDM Driver Door	<input checked="" type="checkbox"/>	---	CAN B
▼	EOM Electronic Overhead	<input checked="" type="checkbox"/>	1	CAN B

## STEP 3

Touch **Actuators**

**Actuators** displays available actuators for the ECU.



## STEP 4

Touch an actuator

Touch scroll arrows to browse list.

Actuator Name	Start Actuator	Stop Actuator	View Data	Tech Tips	Toggle Row Height
Mute Output Channel#1					
Mute Output Channel#2					
Mute Output Channel#3					
Mute Output Channel#4					
Mute Output Channel#5					
Mute Output Channel#6					

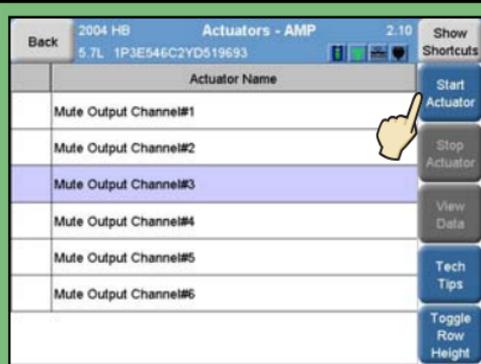
Continued on back

## STEP 5

Touch **Start Actuator**

**Start Actuator** shows a Select an Option message box.

Touch **Cancel** to return to list.



## STEP 6

Touch an option

Select a way to start the actuator.

Sparkplug icon shows that actuator has started.



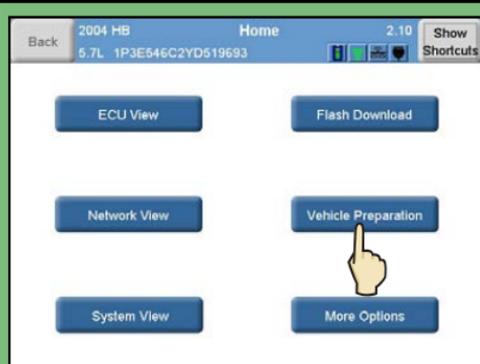
# 7 Set Customer Preferences 7

## STEP 1

Touch **Vehicle Preparation**

**Vehicle Preparation** shows a list of preparations.

If not on Home screen, touch **Show Shortcuts**, then **Home**, then **Vehicle Preparation**.

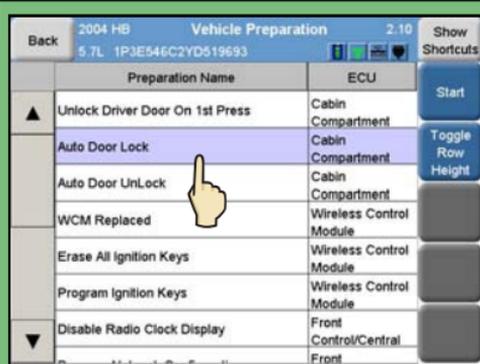


## STEP 2

Touch a preparation name

Touch scroll arrows to browse list.

Touch column names to sort list.



## STEP 3

Touch **Start**

**Start** shows the preparation wizard.

Touch **Cancel** to stop and return to list.

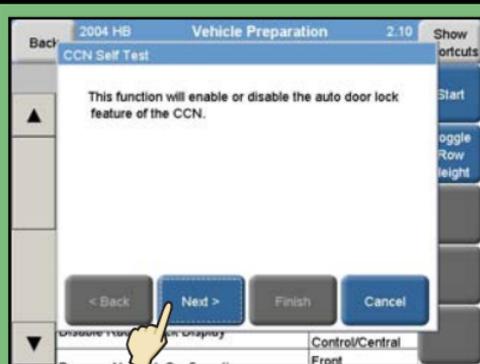


## STEP 4

Follow wizard steps

Touch **Next** after completing each step.

Touch **Finish** after completing last step.

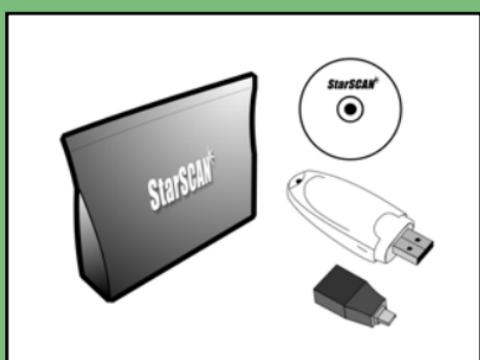


# 8 Download Flash Updates 8

## STEP 1

### Obtain Update Kit

The StarSCAN update kit contains a CD-ROM, a USB storage device, and a USB adapter. You can use the kit with TechCONNECT or a PC.



## STEP 2

### Insert CD-ROM

Insert CD-ROM into TechCONNECT or PC. Software starts automatically.

### Click **Controller Flash**.

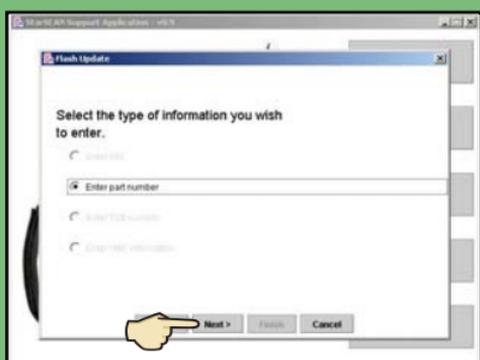


## STEP 3

### Follow wizard steps

Wizard downloads update and stores it on USB device.

Click **Next** after completing each step. Touch **Finish** after completing last step.

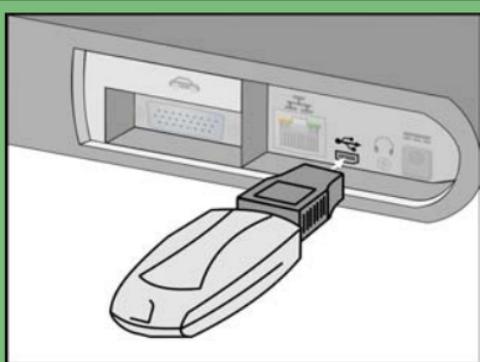


## STEP 4

### Connect USB device

Remove USB device from TechCONNECT / PC.

With tool powered off, connect USB device to StarSCAN tool using supplied adapter.



Continued on back 

# 8 Download Flash Updates 8

## STEP 5

Turn on StarSCAN tool

Turn on StarSCAN tool with USB storage device connected.

Touch **Flash Download** to start flash file wizard.

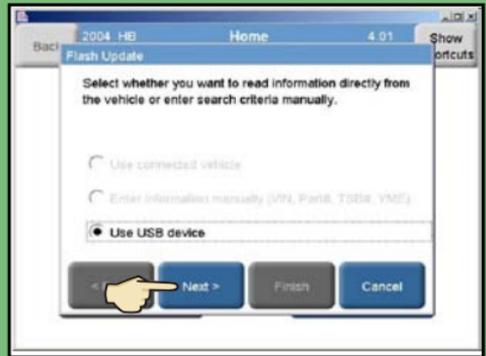


## STEP 6

Follow wizard steps

Touch **Next** after completing each step.

Touch **Finish** after completing last step.



## STEP 7

Download file to scan tool

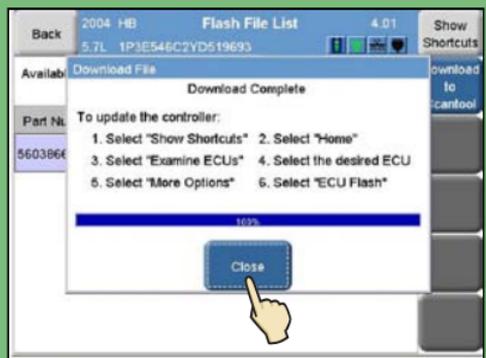
Touch a flash file, then touch **Download to Scantool**.



## STEP 8

Touch **Close**

Wait for download to finish, then touch **Close**.



Begins on back



## STEP 1

Touch **ECU View**

**ECU View** shows a list of ECUs.

If not on Home screen, touch **Show Shortcuts**, then **Home**, then **ECU View**.

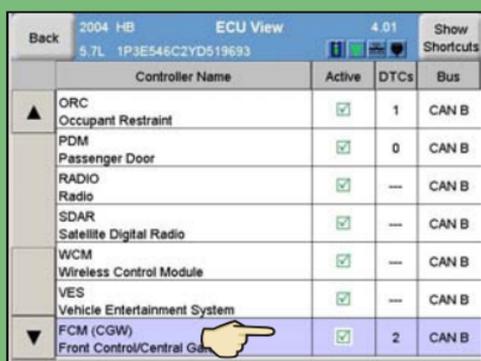


## STEP 2

Touch an ECU

Touch scroll arrows to browse list.

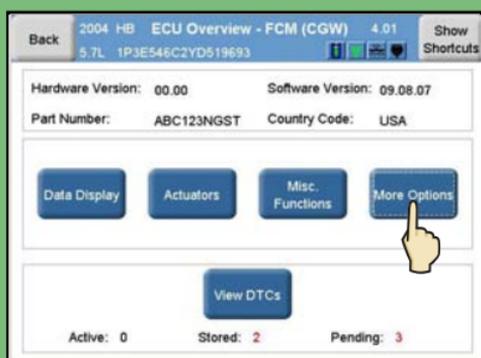
Touch column names to sort list.



## STEP 3

Touch **More Options**

**More Options** shows a list of buttons.



## STEP 4

Touch **ECU Flash**

**ECU Flash** shows a list of available flash files for the current ECU.



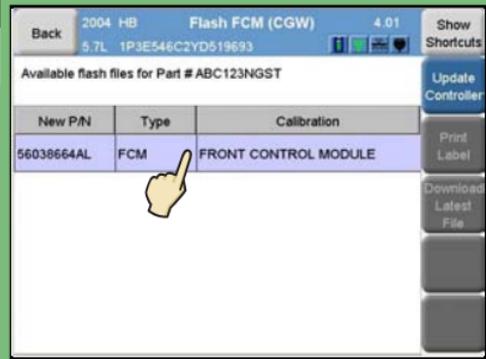
Continued on back



## STEP 5

Touch a flash file

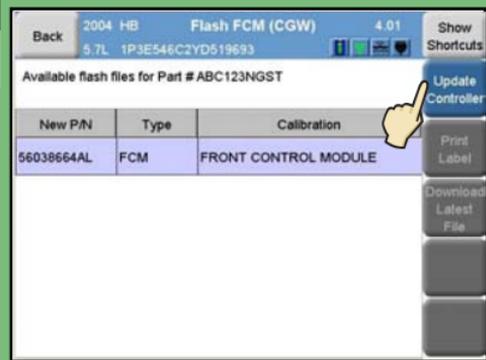
Touch the flash file you want to use to update the ECU.



## STEP 6

Touch **Update Controller**

Update Controller begins the process of updating the ECU with the flash file you selected.



## STEP 7

Touch **OK**

**OK** shows the list of flash files.



# 10 Create a Custom Display 10

## STEP 1

Touch **More Options**

**More Options** shows a list of buttons.

If not on Home screen, touch **Show Shortcuts**, **Home**, then **More Options**.



## STEP 2

Touch **Custom Display**

**Custom Display** shows a list of custom display choices.

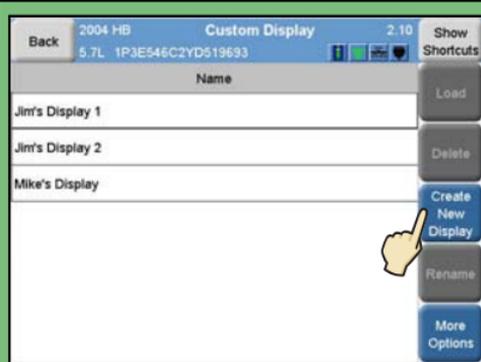
Touch column names to sort list.



## STEP 3

Touch **Create New Display**

**Create New Display** displays a list of ECUs.



## STEP 4

Touch an ECU

ECU shows a list of DDEs (data elements) within that ECU.

Touch column names to sort list.



Continued on back

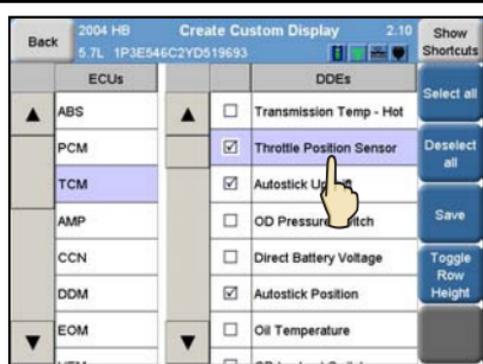
# 10 Create a Custom Display 10

## STEP 5

Touch desired DDEs

Checkmarks indicate DDEs to display.

Repeat Steps 4 and 5 for all desired ECUs and DDEs.

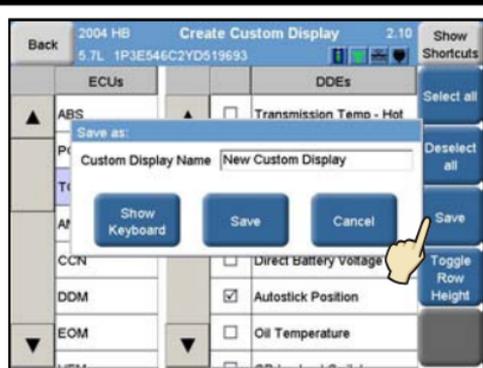


## STEP 6

Touch **Save**

Touch **Show Keyboard** to enter name of new custom display.

Touch **Save** to confirm name.



## STEP 7

Type name of new display

Touch **Backspace** to delete letters.

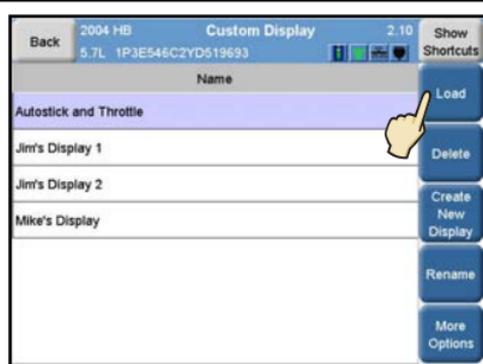
Touch **Enter**, then **Save** to close keyboard and save name.



## STEP 8

Touch a custom display

Touch **Load** to view display.



Begins on back



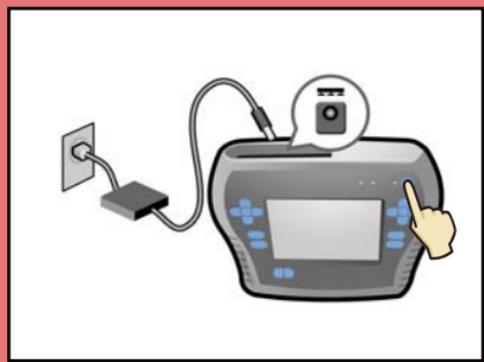
# 11 Cable Connections Diagram 11

## PART 1

### Connect power cable

Connect power cable to charge battery or use tool when not connected to vehicle.

Battery will not charge with tool power off. Battery may need up to 4 hours to charge fully.

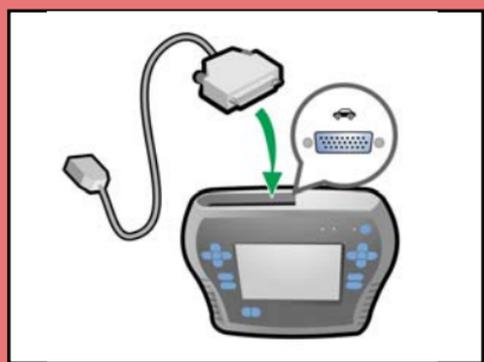


## PART 2

### Connect vehicle cable

Press vehicle cable connector firmly into jack.

Tighten screws on connector to lock cable into place.

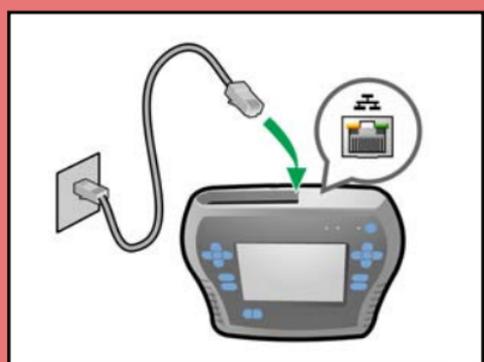


## PART 3

### Connect network cable

Use network (Ethernet) cable to connect scan tool to dealership network.

Press network cable into network jack until it clicks.

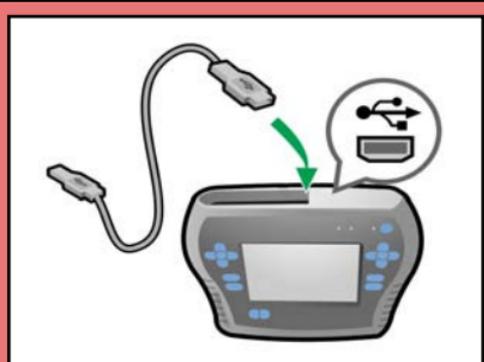


## PART 4

### Connect USB cable

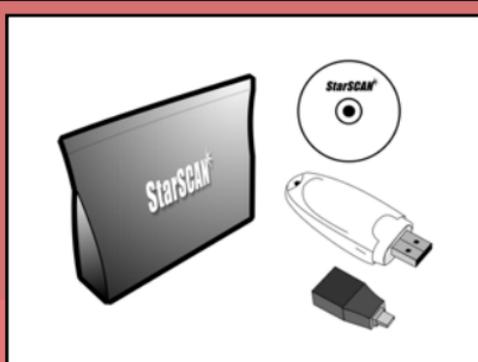
Use USB cable to connect scan tool to PC or other peripheral devices.

Press USB cable firmly into USB jack.



**STEP 1****Obtain Update Kit**

The StarSCAN Update Kit contains a CD-ROM, a USB storage device, and a USB adapter. The kit works with TechConnect or a PC.

**STEP 2****Insert CD-ROM**

Insert the CD-ROM into TechConnect or PC. The StarSCAN software starts automatically.

Click **Software Updates**.

**STEP 3****Follow wizard steps**

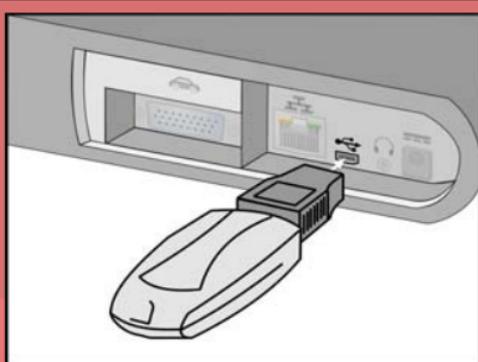
Wizard downloads update and stores it on USB device.

Click **Next** after completing each step. Click **Finish** after completing last step.

**STEP 4****Connect USB device**

Remove USB device from TechConnect / PC.

With tool powered off, connect USB device to StarSCAN tool using supplied adapter.

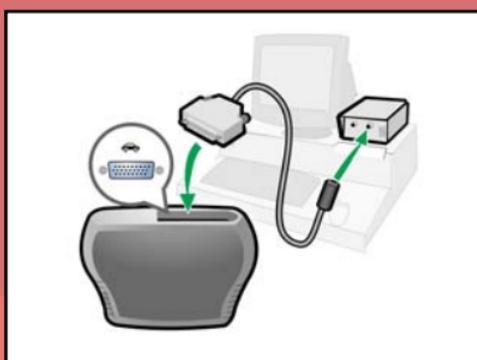


Continued on back 

**STEP 5**

Connect DIN cable

Connect DIN cable to the scan tool and your shop's MDS2 power supply

**STEP 6**

Turn on StarSCAN tool

Turn on StarSCAN tool with USB storage device connected.

Software will update automatically.

**STEP 7**

Turn off StarSCAN tool

After software update finishes, press and hold power button for 5 seconds.

Remove USB storage device.



# 13 Calibrate Touch Screen 13

## STEP 1

Press both **SHIFT** buttons

Pressing both **SHIFT** buttons at same time shows the System Menu.

Remember to turn on scan tool before beginning.



## STEP 2

Touch **V (down arrow)**

**V (down arrow)** moves menu cursor to Calibrate touchscreen.

Press **ENTER** to start calibration.

### System Menu

Run self-tests

--> Calibrate touchscreen

Restart main application

Shutdown system

Scripts

Done

## STEP 3

Follow calibration steps

Touch red crosshairs as instructed on screen.

Use stylus for better precision, but finger also may be used.

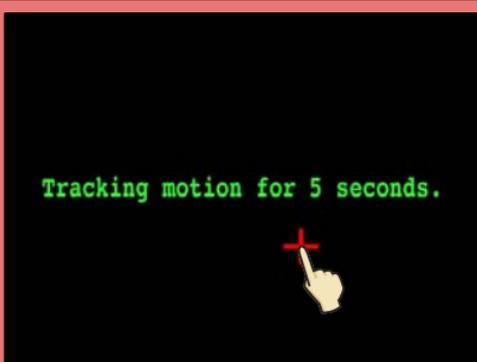


## STEP 4

Check motion tracking

Drag stylus or finger around screen.

Calibration is complete at end of 5-second countdown.



## PART 1

### Follow standard guidelines

The StarSCAN tool has been designed to operate in a typical shop environment, but treating it with care will ensure its long life.

Clean the tool regularly and avoid long-term contact with harsh materials or temperatures.

Avoid using StarSCAN tool for long periods in temperatures above 104° F (40° C).

## PART 2

### Care of the touch screen

Use a clean (damp) non-abrasive cloth towel and glass cleaner (such as Mopar Window Cleaner) to clean the touchscreen surface when necessary.

Apply the cleaning solution to the towel rather than directly to the touchscreen.

## PART 3

### Care of the enclosure

Use a clean (damp) non-abrasive cloth towel and a mild cleaning solution to clean the enclosure's surface.

Apply cleaning solutions to the towel rather than directly to the tool enclosure.

## PART 4

### Cautions and warnings

Do not allow the StarSCAN tool to come into contact with strong solvents such as throttle body cleaner, brake cleaner, contact cleaner, xylene, or acetone.

Avoid exposure to brake fluid, antifreeze, and petroleum products. If exposed, remove all traces of the chemical as described above.

Avoid contact of the tool's case with high temperatures.