COMPUSHIFT **SPORT/PRO**

INSTALLATION GUIDE

Congratulations on your purchase of a COMPUSHIFT – HGM Automotive Electronics' next-generation precision shift controller.

The sturdy COMPUSHIFT housing is water resistant to 3' / 1m. Though we prefer you mount *inside* the vehicle, the controller can be mounted in the engine compartment or even under the vehicle, provided it is away from heat sources. Plug-and-play connections and versatile factory tuning make installation a breeze.

This guide takes you through the basic steps for installing your transmission controller.

For more details, including How-To videos, specifications, pinout information and more, go online: http://manuals.hgmelectronics.com.

For vehicle specific technical support, contact:

Wholesale Automatic Transmissions

2/4 Melrich Road
Bayswater, VIC, 3153

03 9762 8004
techsupport@askorto.com.au

Before You Begin

1. Check the Invoice

Check the invoice to confirm you've received the correct components for your vehicle.

2. Inspect Your Transmission

Before beginning the installation, make sure your transmission is in good mechanical condition; a malfunctioning transmission may damage the unit and void your warranty. If you're in doubt, see a qualified transmission repair shop for a full inspection.

3. Inspect Your Harness

Remove all components of the COMPUSHIFT kit from the box and inspect. Look for any damaged parts, connectors or wires. Check the labels for the wire tails and connectors to confirm you understand what each wire/connector does.

For most transmissions, the OEM connectors are already fitted and will connect directly to the OEM transmission connectors. For all other connections to the vehicle, there will be a mix of wire tails and connectors depending on the purpose.

4. Assemble Your Tools

Here's all you'll need for most installations.

- No. 2 Phillips screwdriver
- 1/8" or 3/16" flat blade screwdrivers
- Drill and small drill bit assortment
- Soldering iron

- Socket / open-end wrench assortment
- Wire cutters / wire stripping pliers
- Wire crimping pliers
- Wire insulating tape

4. Download the App

You will setup, calibrate and tune your COMPUSHIFT transmission controller from the convenience of your smartphone. Refer to the COMPUSHIFT Setup App instructions for further information.

5. Register Your COMPUSHIFT Transmission Controller

To register, start the COMPUSHIFT Setup app and tap the menu in the top left corner. Select the option for registration and scan the serial number bar code on the upper left corner of your controller.

Then, when prompted, enter the rest of your contact information and submit the form.

Install the Controller

1. Mount the Controller

The sturdy COMPUSHIFT housing is water resistant to 3'/1m, so you can mount the controller inside the cabin, in the engine compartment or even under the vehicle – but AWAY from exhaust system and other sources of heat.

We recommend mounting the *inside* the cabin – on a kick panel, under a seat, or on the floor pan – and cutting a hole in the firewall for the cables.

Select a spot away from direct heat. Keep in mind:

- You may want to be able to see the status lights on the controller.
- Your controller and smartphone connect via Bluetooth, so avoid mounting the unit inside a metal enclosure.

Use the built-in flanges to secure the controller in place with screws or use hook-and-loop type fasteners to attach it to a flat surface.

There's a small pinhole in the center of the rear cover that allows a little air flow to equalize pressure inside the case when you go from sea level to higher elevations. Water cannot pass through the Gore-Tex® liner. This hole should not be covered.

> **The controller is a sealed assembly.**
> **Opening the case will void the warranty.**

2. Attach the Main Cable Assembly

The main harness assembly includes all the cables needed for most applications – as well as some you may not use. For those cables not in use, leave them in place and secure the stripped end with insulating tape.

To Install the connector:

- With the cable tail pointing towards the LED window on the module, carefully align the connector to the 80-pin assembly on the controller.
- Press in place, then pull the lever down until it locks in place with a click.
- To prevent accidental release of the lever, push the red connector position assurance tab in.
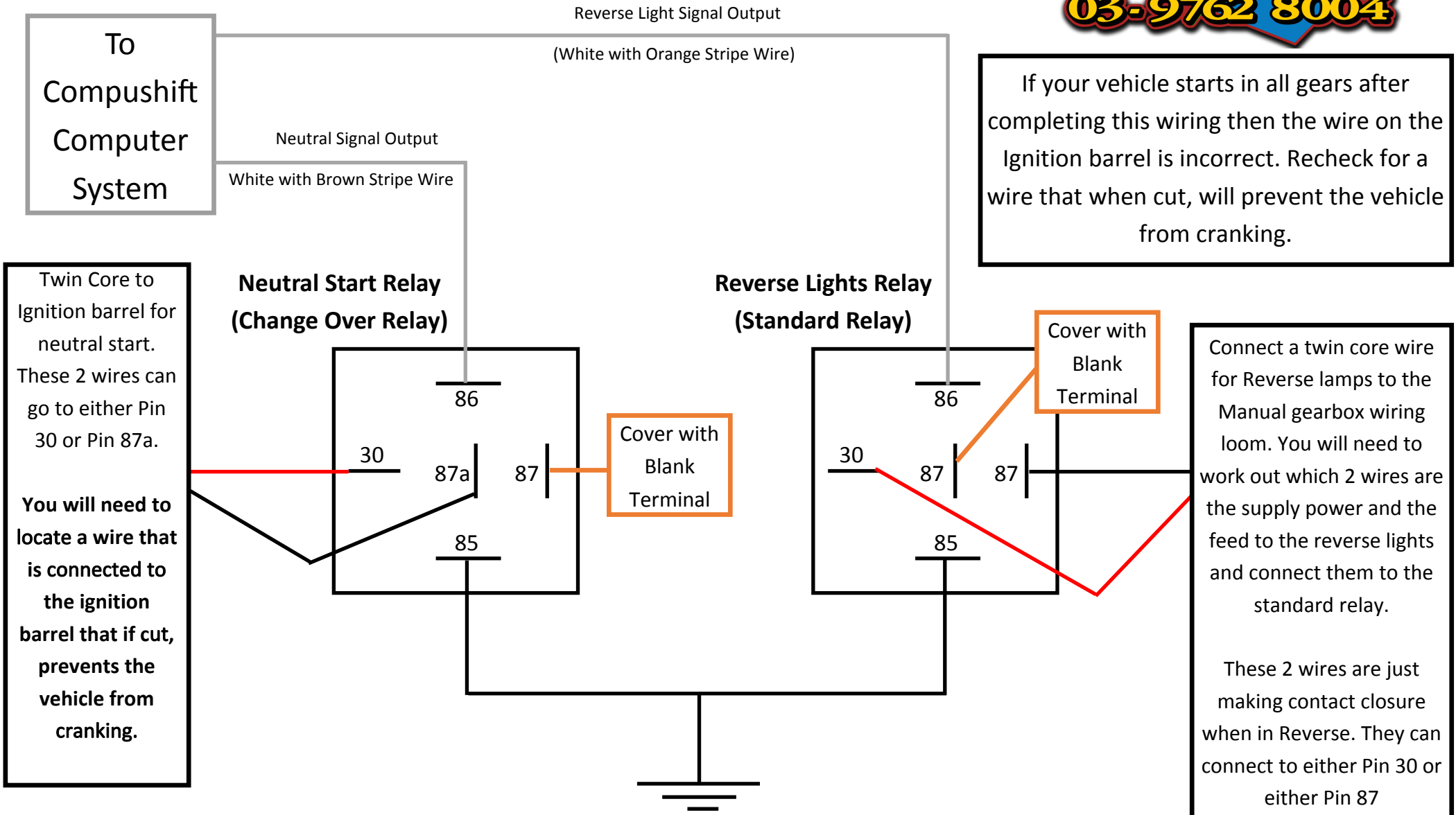
To remove the connector:

- Push the red connector position assurance tab out
- Press down on the release button in front of the red connector position assurance tab.
- Pull the lever up and away from the harness wires to the unlocked position.
- Gently lift to remove the connector from the 80-pin assembly.

Manual to Automatic
Relay Wiring Schematic

Does not suit GM 4L60 & 4L80 Transmissions

Wholesale AUTOMATIC TRANSMISSIONS 03-9762 8004

To Compushift Computer System

Reverse Light Signal Output

(White with Orange Stripe Wire)

Neutral Signal Output

White with Brown Stripe Wire

If your vehicle starts in all gears after completing this wiring then the wire on the Ignition barrel is incorrect. Recheck for a wire that when cut, will prevent the vehicle from cranking.

Twin Core to Ignition barrel for neutral start. These 2 wires can go to either Pin 30 or Pin 87a.

You will need to locate a wire that is connected to the ignition barrel that if cut, prevents the vehicle from cranking.

Neutral Start Relay
(Change Over Relay)

86

30

87a

87

85

Cover with Blank Terminal

Reverse Lights Relay
(Standard Relay)

86

30

87

87

85

Cover with Blank Terminal

Connect a twin core wire for Reverse lamps to the Manual gearbox wiring loom. You will need to work out which 2 wires are the supply power and the feed to the reverse lights and connect them to the standard relay.

These 2 wires are just making contact closure when in Reverse. They can connect to either Pin 30 or either Pin 87

This switch is designed to momentarily connect the activation wires coming from the HGM COMPUSHIFT Module to ground to activate the TCC Manual Lockup function.
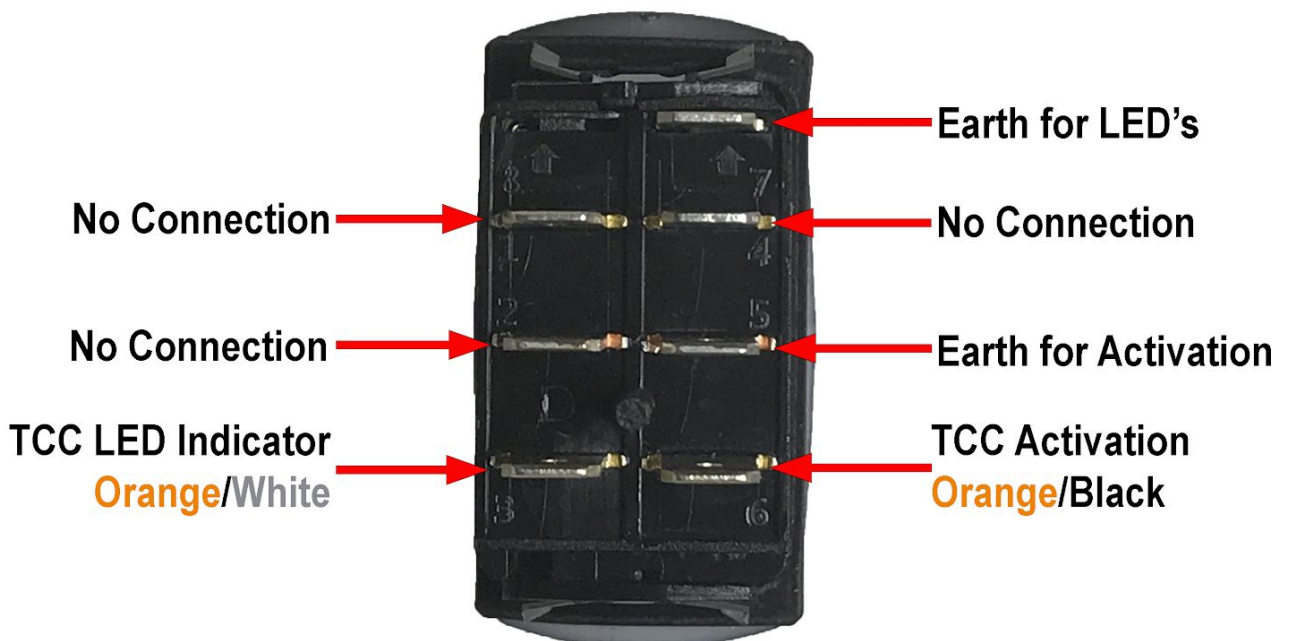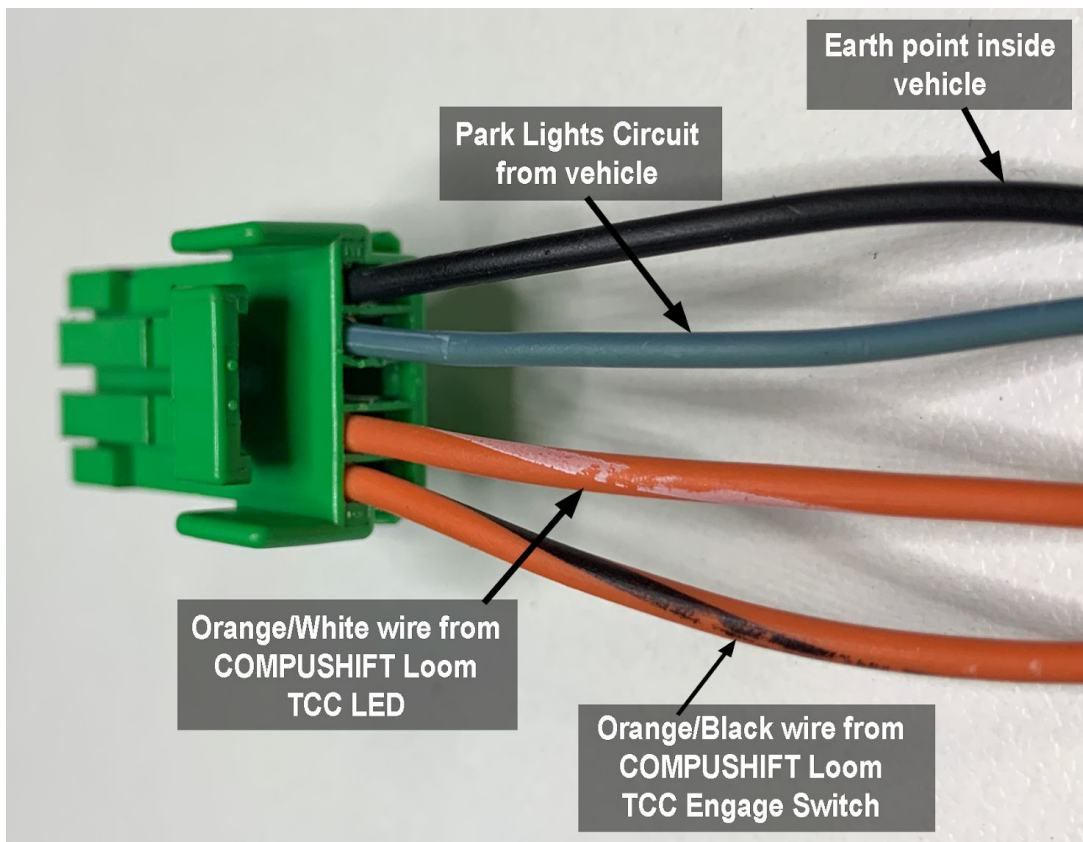
To activate the Manual Lockup function press and release the top portion of the switch labelled LOCK-UP. You will see the Light behind the LOCK-UP text illuminate when the Lock-up function is engaged.
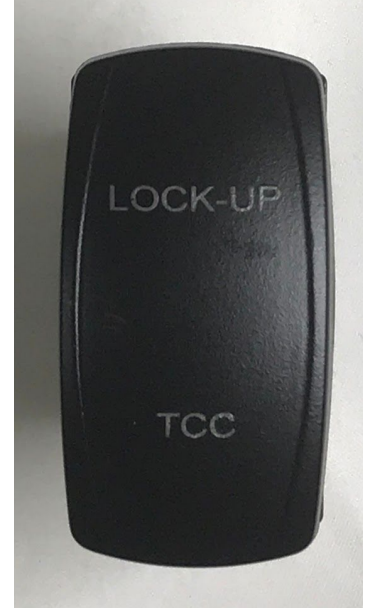
The wires in the COMPUSHIFT Loom are indicated as the following:

Wire Purpose	Wire Colour
TCC Activation	Orange/ Black Stripe Wire (Blue/Orange on older looms)
TCC LED Indicator	Orange/White Stripe Wire (Solid Blue on older looms)

On the rear of the switch is 7 terminals. Please use the below image to connect to the correct wire.

![Wholesale Automatic Transmissions 03-9762 8004]

Switch Identification and Wiring for COMPUSHIFT Pro/Sport
OEM Style Conversion Switch direct wired
Part # CS3-SW-OEM-DIRECT

This switch is designed to momentarily connect the activation wires coming from the HGM COMPUSHIFT Module to ground to activate the TCC Manual Lockup function.

To activate the Manual Lockup function push and release the switch. You will then see the Light behind the LOCK-UP text illuminate when the Lock-up function is engaged. The Lower Light Labelled TCC is for connection to park lights to aid in locating the switch in low light situations.

The COMPUSHIFT Loom wires are terminated directly into the green connector. If for some reason you need to change this or are wanting to add a remote LED to notify when the Lockup Clutch is engaged then use the table below to wire this correctly.

Wire Purpose	COMPUSHIFT Loom Wire	Additional LED Connection
TCC Activation	Orange/Black Stripe Wire	
TCC ON LED Indicator	Orange/White Stripe Wire	LED Positive Connection
Switch Illumination	Park lights circuit in vehicle	
Earth	Common Earth in Loom	LED Negative Connection

Earth point inside vehicle

Park Lights Circuit from vehicle

Orange/White wire from COMPUSHIFT Loom TCC LED

Orange/Black wire from COMPUSHIFT Loom TCC Engage Switch

Test Driving

1. The initial test driving must be done very carefully to begin with and then slowly work up to heavy throttle. An automatic transmission that is low on fluid or not calibrated correctly can burn out very quickly resulting in a very costly repair bill.

2. The beginning of the first test drive should be around 10-20% throttle and I recommend driving in the Manual/Sports mode to be able to know when the gear change is commanded and how long it takes to shift. It also allows you to get into higher gears at a much slower speed.

3. In a safe manner, slowly shift up and down through the gears giving it at least 5 seconds in each gear to ensure that each gear engages and that there is no slipping.

4. Choose any gear while moving and check the operation of the TCC switch. You will want to be moving at least 20km/h and have the engine RPM's over 1500 to make sure you don't stall the engine or cause vibrations. You should feel the engine RPM's pull down when you engage the TCC Lockup switch and it will also hold the Engine RPM's up similar to that of a Manual Gearbox.

5. If no DTC's appear or slipping occurs then repeat test at 30-40% throttle again in Manual/Sports mode slowly shifting up and down through all of the gears.
    Note: Depending on your test area, you may not be able to maintain 30-40% throttle (or higher) through out the shift range without going over the speed limit. I recommend after waiting the 5 seconds after each shift, to then slow down to a safe speed and make each gear change at a that slower speed but still applying the 30-40% throttle each time

6. If no DTC's appear or slipping occurs then repeat test at 50-60% throttle again in Manual/Sports mode.

7. If no DTC's appear or slipping occurs then repeat test at full throttle again in Manual/Sports mode.

8. By this stage the transmission should be up to at least 60˚c. Please re-check the fluid level of the transmission to ensure that it is at the correct level.

9. Once the fluid level is correct, you can now do a more thorough and lengthy road test. Try putting the vehicle through as many situations as possible looking for DTC's to appear or slipping to occur. Situations to include but not limited to:

    9.1. Light Throttle Acceleration

    9.2. Medium Throttle Acceleration

    9.3. Full Throttle Acceleration

    9.4. No throttle engine braking down shifts in Manual/Sports Mode

    9.5. Steep uphill acceleration and gear changes

    9.6. Steep downhill no throttle engine braking down shifts in Manual/Sports Mode

    9.7. Light throttle driving as you would in carparks/traffic

    9.8. Freeway driving to check automatic Torque Converter Lockup functionality

    9.9. If Fitted: Check that Cruise Control manipulates the torque signal when in use.
    IT IS IMPERATIVE THAT THE TORQUE SIGNAL MOVES UP AND DOWN AS THE CRUISE CONTROL IS APPLYING THE VIRTUAL THROTTLE TO MAINTAIN THE SPEED. IF THE TORQUE SIGNAL STAYS ON 0% DURING CRUISE CONTROL USE THEN STOP USING THE CRUISE CONTROL IMMEDIATELY AND REVISE YOUR TPS WIRING.

10. Check low range operation (if wired). Check that the COMPUSHIFT has detected low range by looking for the letter "L" after the Current Gear Parameter. Then move the transmission shifter through the gears to confirm you are in Low Range and you can shift correctly. This should give you a readout such as GEAR 1L or GEAR S1L for Sequential Mode or GEAR M1L for Manual Mode.

Torque Convertor Lock-Up Manual Control Switch - Recommended Use

Please hand this to the customer for their records

On Road:

- For Towing Only, If you are not towing then you will simply not need to use the Lock-Up Manual Control.
- Perfect for Towing where you cannot maintain enough speed for the factory lock-up to stay engaged or the extra weight has a side effect of blocking the lock-up function completely.
- The Lock-Up Manual Control can be used as an aid to improve engine braking down steep descent's while changing down through the gears manually. This can be used when towing also.

Off Road:

- The Lock-Up Manual Control can be used to gain 100% engine braking, eliminating all torque convertor runaway for steep downhill descent's in "both" low and high range.
- The Lock-Up Manual Control can also be used for beach work where the sand is firm and you are not going fast enough to have reached a speed that the factory lock-up would normally work. This would aid in keeping your transmissions temperature low and also may help with fuel economy.
- Perfect for the never-ending corrugated roads where once again you cannot maintain enough speed for the factory lock-up to be maintained. Using your Lock-Up Manual Control under these circumstances would once again prove to be the best way of keeping your transmission temperature down and aid in improving your fuel economy.

DO NOT's

- Do not use the Lock-Up Control for crawling over rough terrain
- Do not use the Lock-Up Control for uphill climbs or overtaking
- Do not use the Lock-Up Control with more than 50% throttle
- Do not use the Lock-Up Control on soft sand or mud

The use of the Lock-Up Control under these applications prevents the Torque Convertor from doing it's job of multiplying the torque of the engine and from absorbing the shock from the drive train under heavy throttle.

Please remember that if you have the Lock-Up Control engaged and you come to a complete stop, the vehicle could stall. Always remember to disengage the Lock-Up Control as you are coming to a stop.

Please Contact Us:

As every situation is unique we cannot account for every circumstance you may come up with without obtaining more information from you. If you have any inquiries or wish to discuss specific circumstances the lock-up kit maybe useful for, please do not hesitate to contact Wholesale Automatics on 03- 97628004.

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03-9762 8004

Celsius

Fahrenheit

In the images above you can see we are using analogue gauges to assist in understanding the information by showing the temperatures in three distinct ranges on the gauges. Please apply the temperature readout of the COMPUSHIFT labelled 'TEMP' to the following information.

Green Zone (Good) indicates temperatures of 50°C to 110°C (120°F to 230°F)
Orange Zone (Warm) indicates temperature of 110°C to 130°C (230°F to 265°F)
Red Zone (Hot) indicates temperatures of 130°C to 150°C (265°F to 300°F)

During normal operation of the vehicle, you should find temperatures to be within the Green Zone. This includes when towing on flat ground and minor 4WDing activity. If the temperature keeps within the Green Zone, this generally indicates that your transmission and cooling system are operating correctly.

If you are in a heavy load situation such as towing a caravan up a long steep hill or you are in soft sand, you may find your transmission temperatures will enter the orange zone, without reaching the Red Zone. This is normal to see and nothing to be concerned about as long as the needle drops back to the Green Zone once you have reached the top of the hill or made your way through the sand.

If your transmission is regularly sitting in the Orange Zone or continually approaching the Red Zone, then you may have an issue with your cooling system, with your transmission or you may just be overworking the transmission. You should seek professional advice to check if there is an issue with your transmission or cooling system.

If you are normally in the Green Zone but due to a heavy load situation you have moved through the Orange Zone and are approaching the Red Zone we recommend that you shift the transmission into a lower gear IE: if you are in 4th, shift down into 3rd. This will reduce the load on the transmission and hopefully stop the transmission temperature from rising. If this is still not enough to stop the transmission temperature from rising, then you need to find a suitable and safe location to pull over BEFORE REACHING THE RED ZONE to allow the transmission to cool down.

If your vehicle is fitted with one of our manual Torque Converter Lockup switches, as a last resort, back off the accelerator, apply the Torque Converter Lockup and then continue up the hill. Remember to disengage the manual Torque Converter Lockup once you are over the hill to go back to normal driving. If you are in S-Mode due to downshifting, with the manual Torque Converter Lockup on, shifting from S-Mode to Drive will also automatically disable the manual Torque Converter Lockup and return to normal operation.

Should you reach the Red Zone for any period, we highly recommend seeking a transmission service and flush. This will flush out and replace any transmission fluid that may have been degraded due to the high temperatures.

COMPUSHIFT Sport and Pro Transmission Control Systems

Wholesale AUTOMATIC TRANSMISSIONS

+613-9762 8004

COMPUSHIFT Setup App

Download - Install - Connect

Instruction Booklet

Chapter List

1. How to read this Instruction Booklet

The COMPUSHIFT Transmission Control System is a complex product capable of transforming the way your automatic transmission performs. However, we understand that not everyone speaks our language. This page goes over the basics of understanding the layout of the parameter sections so you have an understanding of how to read this instruction booklet. If you situation doesn't fit within this booklet or your still not quite sure, drop us an email at techsupport@askorto.com.au and we will gladly help you out.

4.1.10 TPS Ground

Applies to: All Non CANBUS connected Engines

Stand alone TPS require a stable 5volt reference voltage from the COMPUSHIFT to power the TPS where as an EFI engine that uses a Throttle-by-Wire pedal is already powering the TPS from the Engine ECU.

1.0.0.1 OFF

EFI Throttle-by-Wire or existing TPS systems. For these system you will only connect the TPS Signal wire and the TPS Ground wire.

1.0.0.2 ON

For a TPS that does NOT connect to anywhere else - only to the COMPUSHIFT. You will use TPS Signal, TPS Ground and TPS 5v Ref.

In the above example we are referring to the Parameter call "**TPS Ground**". You will see this parameter in "**Chapter 4.1 - Vehicle Setup Menu**".

Directly below the name of the parameter, we have provided a guide to which transmission or engine types this parameter may apply to in *italics.* In this example you can see "*All Non CAN-BUS connected Engines*". This is because when using a CAN-BUS connection the COMPUSHIFT will get the Throttle Position Signal from the engine management system, therefor this parameter will not be visible when using a CAN-BUS engine type. For all other engine types, this parameter will be visible.

Below the *Applies to*:, we have provided a description of what this parameter does or how it may apply to your configuration.

Lastly, for parameters that have set options, we provide the possible options with the description for why you would choose that option. For example, if you were running an engine that is throttle-by-wire, and you have tapped into the pedal signal, then you would choose the **OFF** option for this parameter.

3

2. Apple Mobile Devices

2.1. Installing COMPUSHIFT Setup onto Apple Devices

This chapter will cover finding, downloading and confirming that the COMPUSHIFT Setup App is ready to communicate with your COMPUSHIFT Module using an Apple® mobile device. This applies to the COMPUSHIFT Pro, COMPUSHIFT Sport and the COMPUSHIFT Mini modules.

The COMPUSHIFT Setup App is a free to download app available from the Apple® App Store®. You may require an Apple ID in order to download applications from the Apple® App Store®.

Minimum system requirements for your Apple mobile device to run the COMPUSHIFT Setup App are:

• Apple® iPhone® mobile digital device with iOS version 11 or later

• Apple® iPad® mobile digital device with iPadOS® version 11 or later

• Internet Access (only required for Firmware Update)

If your Apple mobile device operating system does not meet these requirements, you may not be able to download the app. Please follow the instructions provided by Apple® to update your devices operating system first then try downloading the COMPUSHIFT Setup app again.

2.1.1   On your Apple device, open the **App Store®** application.
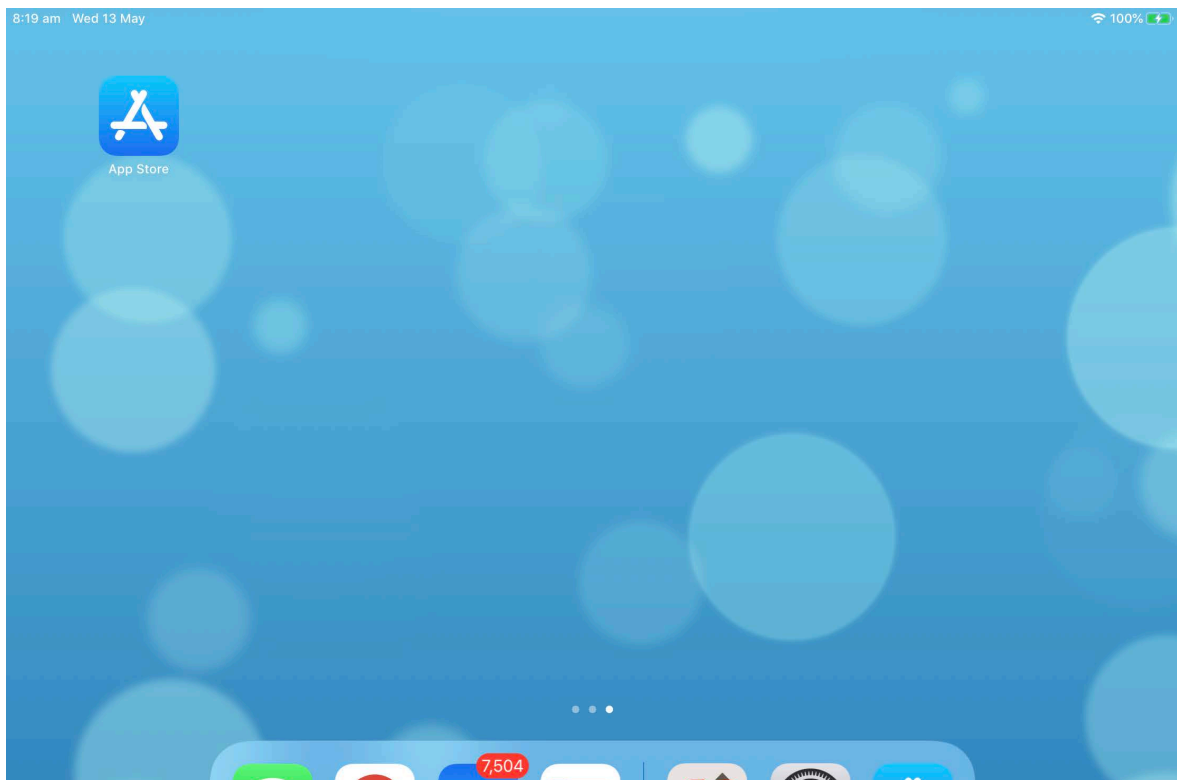
2.1.2   Tap on the **Search** button at the bottom of the App Store screen.

2.1.3   In the search field type "compushift" and press enter/search.
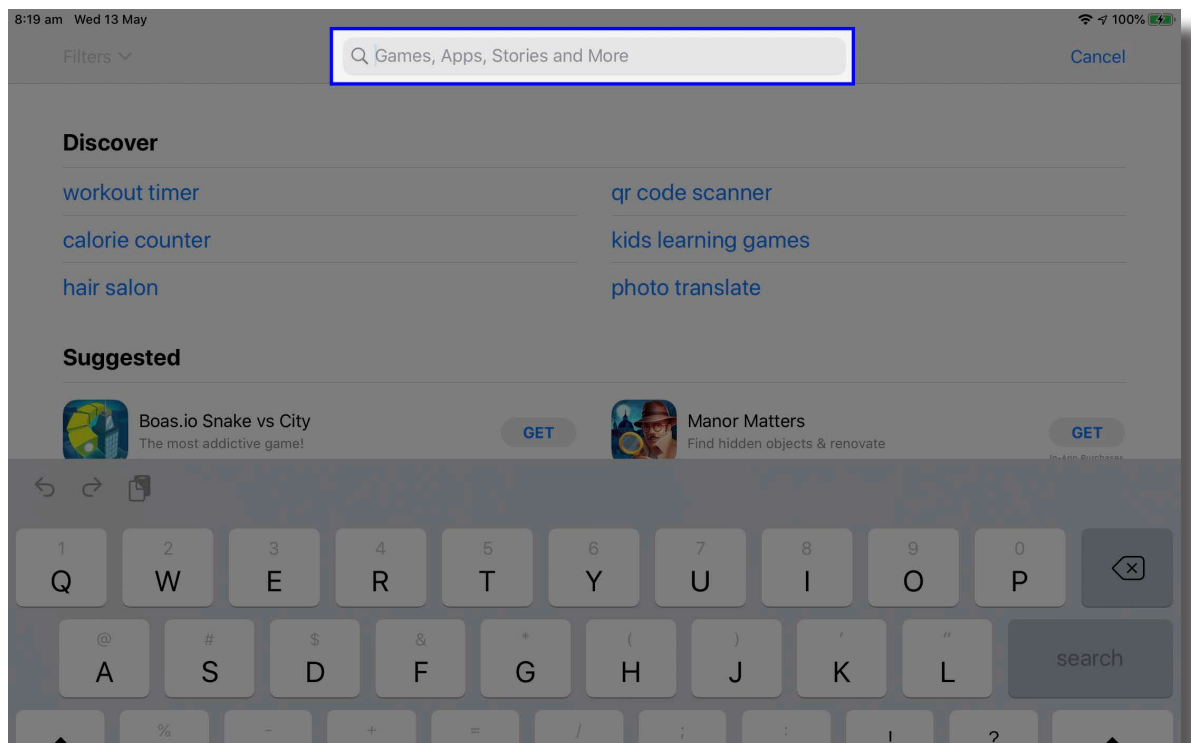
2.1.4   Locate the app called **COMPUSHIFT Setup** in the results and tap on Get. You may be asked to enter your Apple ID® username and password details to download. This is a free app, you will not be charged.
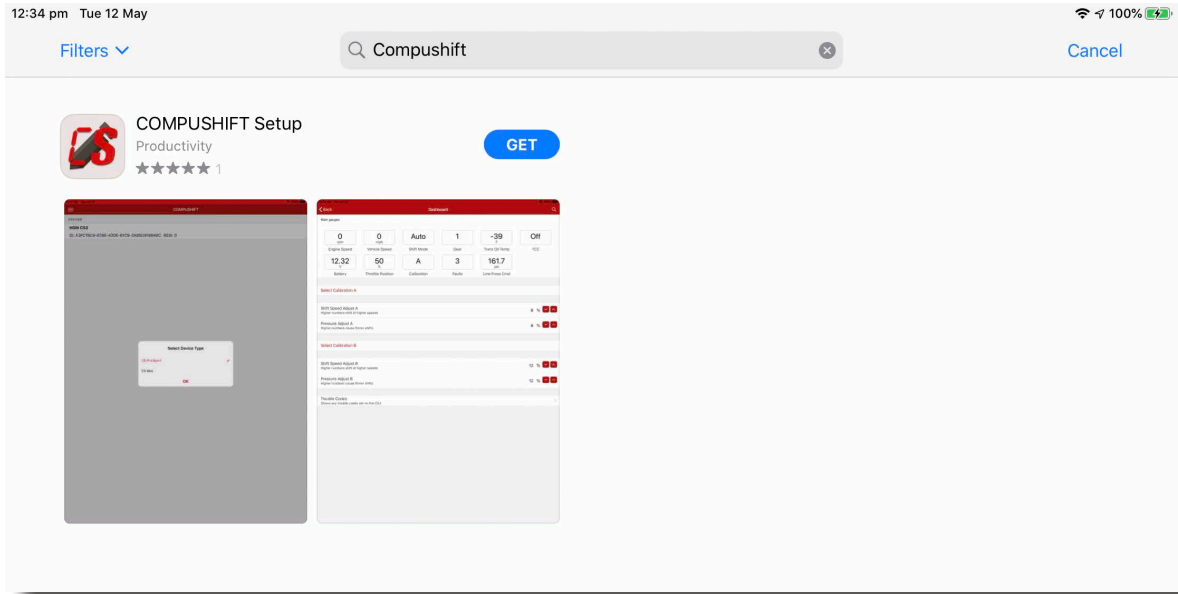

2.1.5   Once the App has finished downloading, tap on the icon to open. The first time you open the COMPUSHIFT Setup app, it will ask permission to use the devices Bluetooth® communication system to access the COMPUSHIFT Module. Please select OK.

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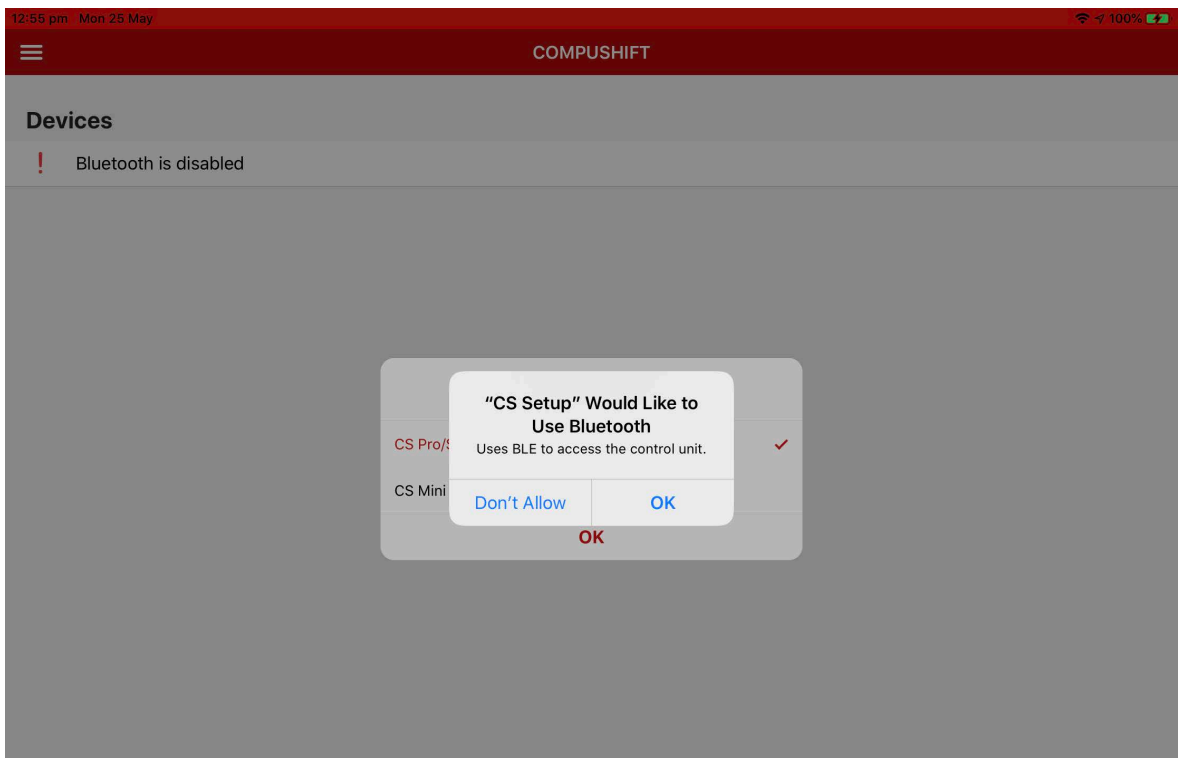
2.1.6   Next the COMPUSHIFT App will ask you to select which type of module you wish to communicate with. For COMPUSHIFT Pro or COMPUSHIFT Sport Modules, select 'CS Pro/Sport' then tap OK

If you are using one of the COMPUSHIFT Mini Systems, please choose - 'CS Mini' then tap OK
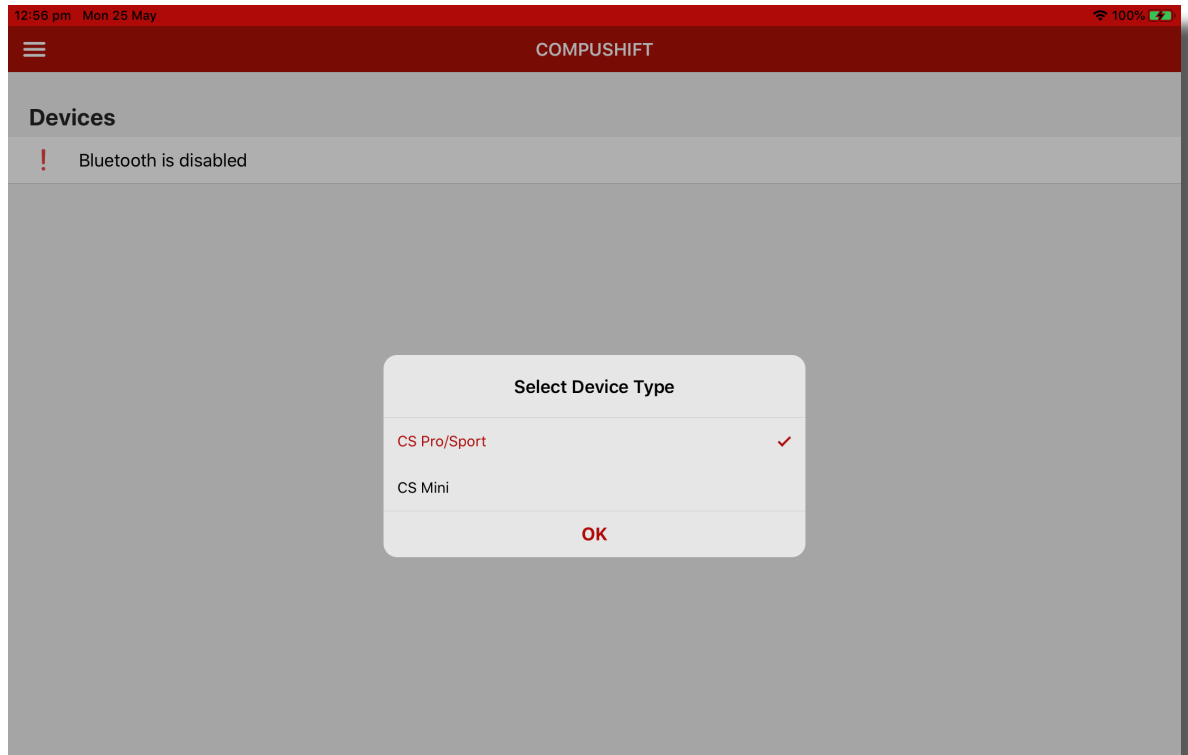
2.1.7   The App will now search for any COMPUSHIFT Modules within range that are powered up. If you are not in range of your COMPUSHIFT Module or it is not powered up, then the app will only show a spinning wheel indicating that there is no module in range.
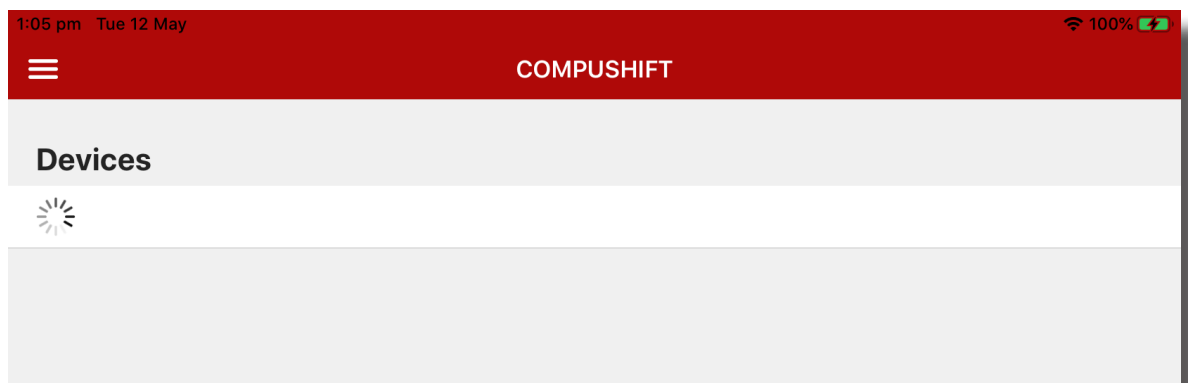
2.1.8   If you have reached this step, then the app is installed and ready to connect to a COMPUSHIFT Module.

2.2. Troubleshooting Installation on Apple Devices

If you have not made it to the final steps for the installation process, the following chapter will cover some basic troubleshooting steps to get you sorted.

2.2.1 If the App says '**! Bluetooth is Disabled**' then it means that the Bluetooth communication in your smart device is not functioning correctly. Most commonly this is due to the Bluetooth being turned off completely or it could be that the COMPUSHIFT Setup App has not been authorised to use Bluetooth yet.

2.2.2 First, close the app down and then quit the app by swiping up from the bottom or double pressing the home button and then swipe up on the app. Re-open the App. If the '**! Bluetooth is Disabled**' message still remains continue to the next step.

2.2.3 Open the Settings App and select Bluetooth. If Bluetooth is switched off, please turn it on. Close the settings app and re-open the COMPUSHIFT Setup App. You should no longer see the '**! Bluetooth is Disabled**' message, instead it should be replaced with the spinning wheel.

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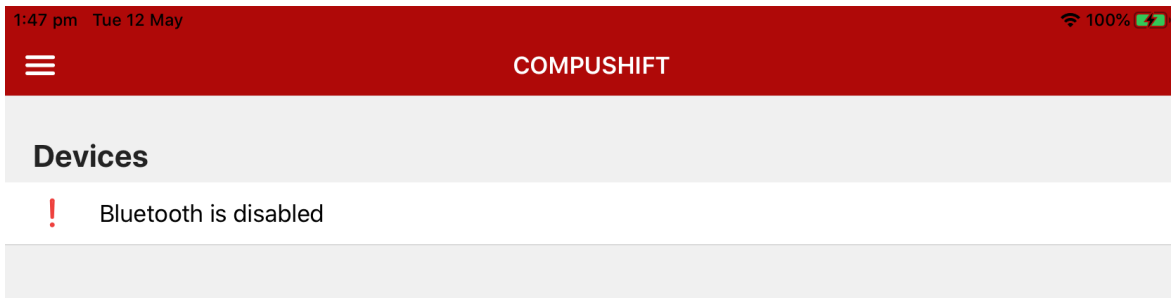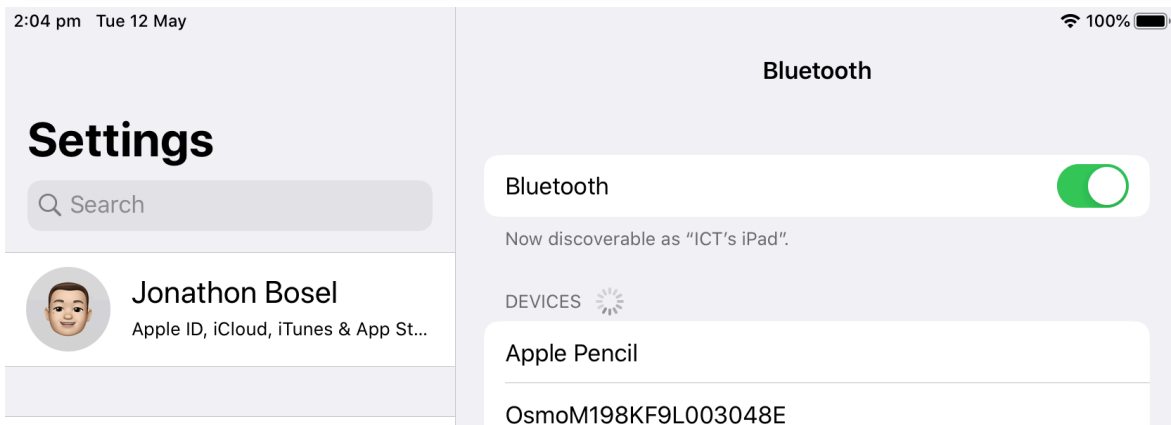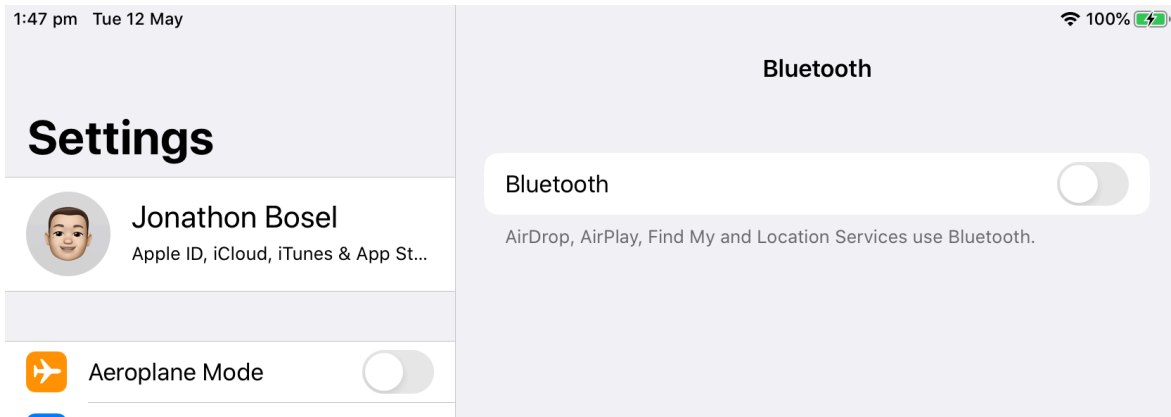
2.2.4   If you are still seeing the '**! Bluetooth is Disabled**' message, open the Settings App and scroll down the menu to CS Setup. Tap on CS Setup and verify that the Bluetooth access is enabled for the App. If not, switch access on. Return to the CS Setup App and check you are no longer seeing the '**! Bluetooth is Disabled**' message, instead you should be seeing the spinning wheel.
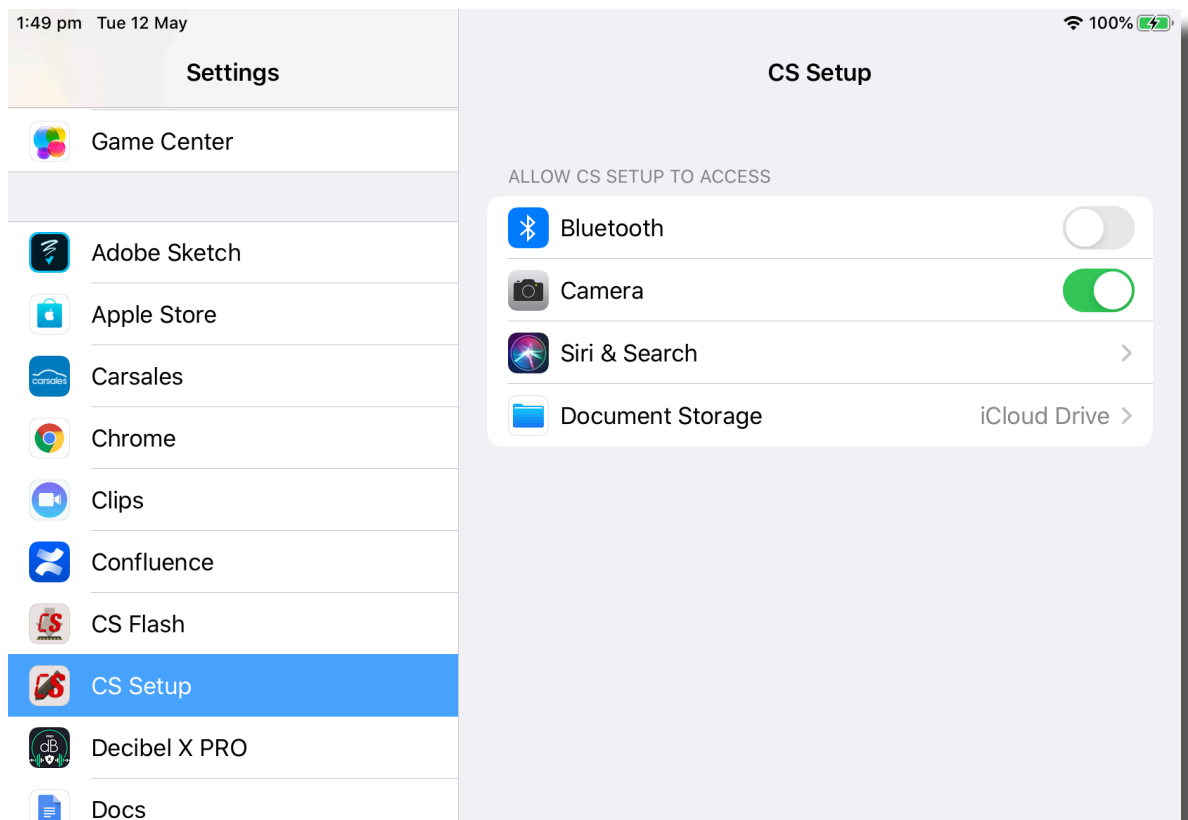
2.2.5   If none of these items have worked, please close the App. Tap and hold on the CS Setup app icon and select Delete App. Then power your device off then on. Start from the beginning and download the app again.

2.2.6   If you are still unable to get rid of the '! Bluetooth is Disabled' message, please contact Wholesale Automatic Transmissions for further assistance.

3. Android Mobile Devices

3.1. Installing COMPUSHIFT Setup onto Android Devices

This chapter will cover finding, downloading and confirming that the COMPUSHIFT Setup App is ready to communicate with your COMPUSHIFT Module using an Android® mobile device. This applies to the COMPUSHIFT Pro, COMPUSHIFT Sport and the COMPUSHIFT Mini modules.

The COMPUSHIFT Setup App is a free to download app available from the Google Play Store®. You may require a Google Account in order to download applications from the Google Play Store®.

Minimum system requirements for your Android® mobile device to run the COMPUSHIFT Setup App are:

• Android™ operating system version 4.4 or later

• Internet Access (only required for Firmware Update)

If your Android mobile device operating system does not meet these requirements, you may not be able to download the app. Please follow the instructions provided by your device manufacturer to update your devices operating system first then try downloading the COMPUSHIFT Setup app again.

If the operating system on your Android mobile device is unable to be updated to a compatible version, you will need to locate an alternative smart device that does meet the requirements.

You will require Internet access on your Android mobile device to download the COMPUSHIFT Setup app.
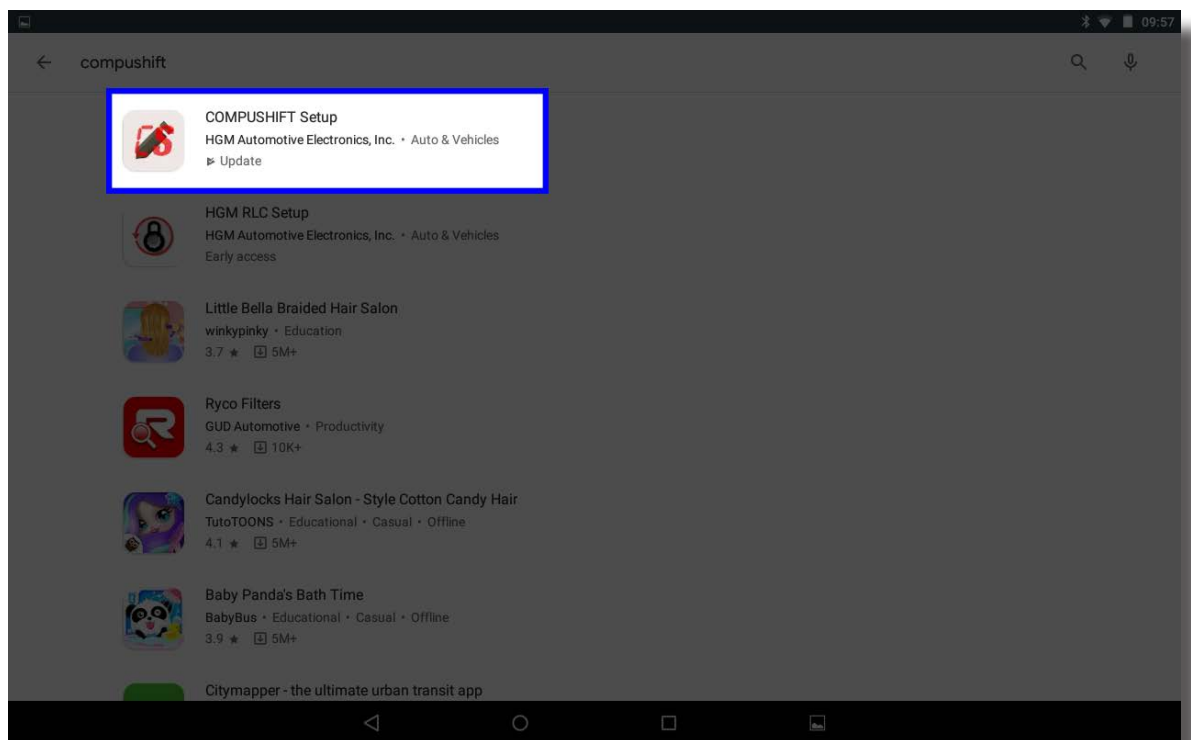
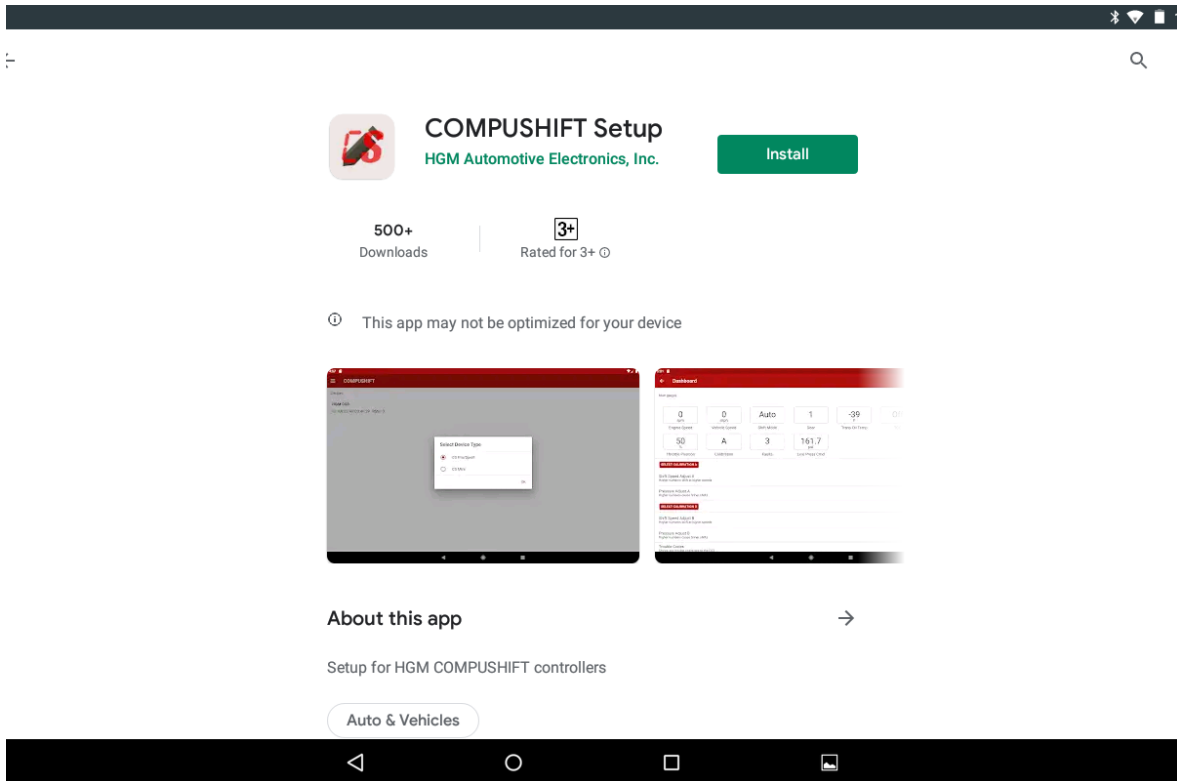 3.1.1   On your Android device, open the **Google Play Store®** application.
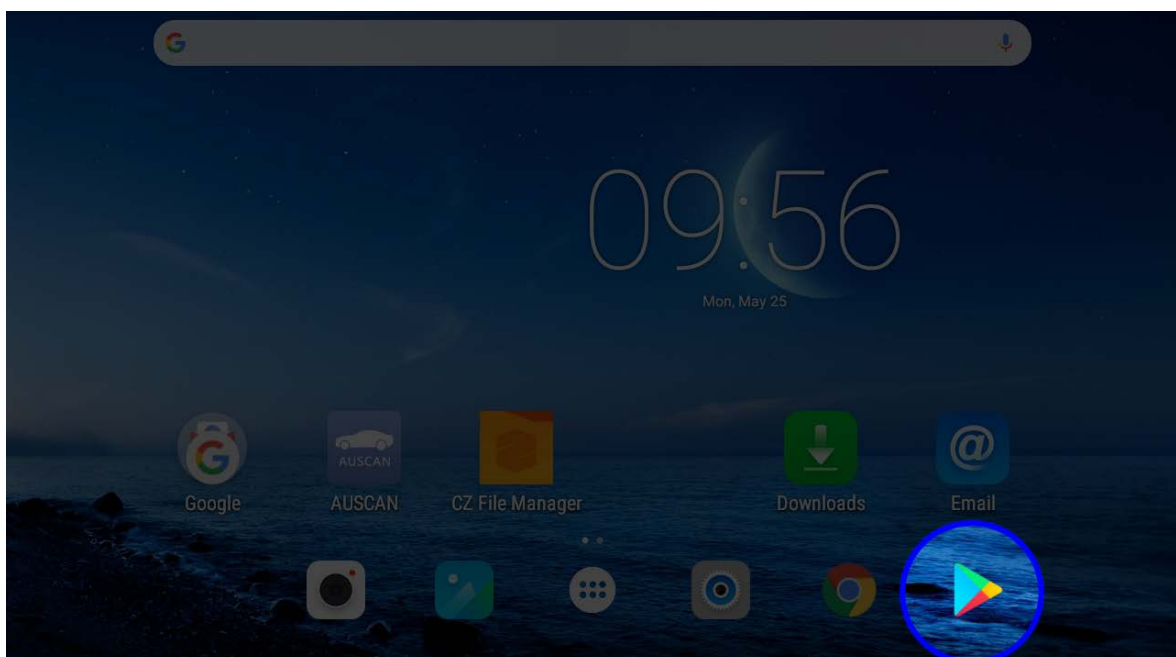
3.1.2   Tap on the **Search** field at the top of the Google Play Store screen.
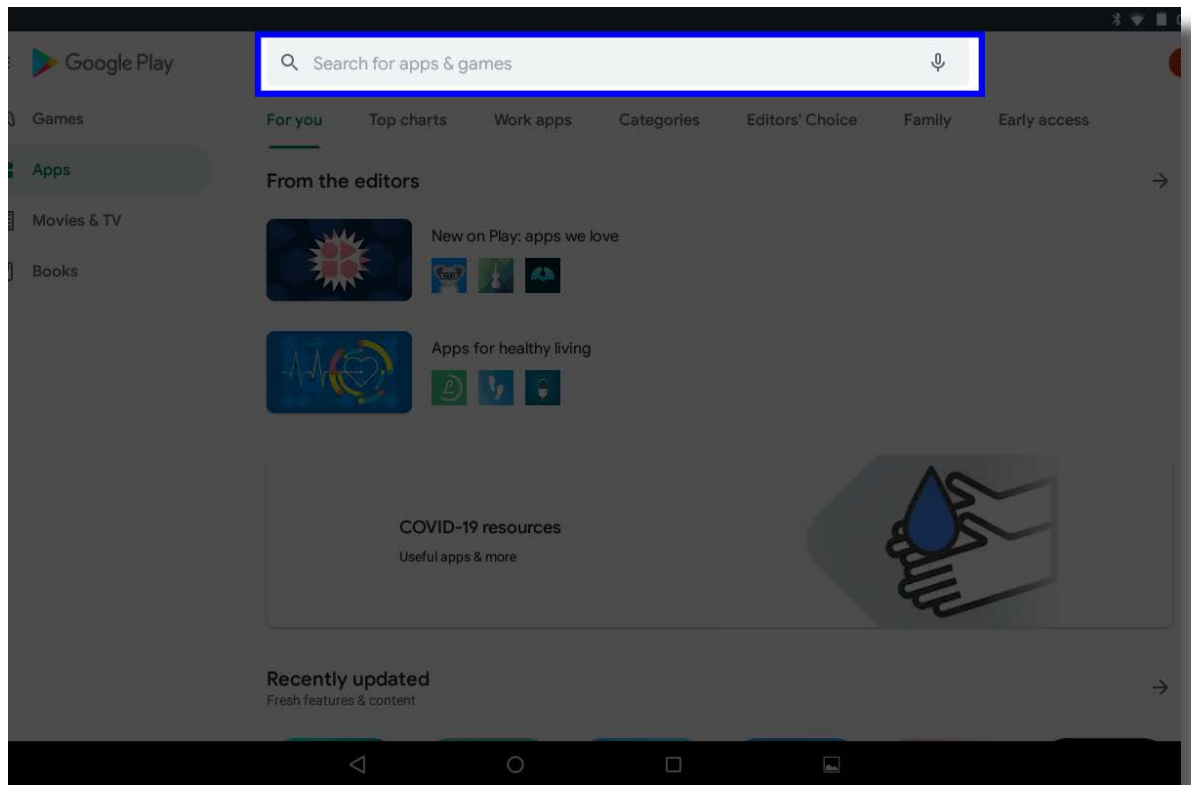
3.1.3   In the search field type "compushift". The results will show the COMPUSHIFT Setup app at the top. Tap on this to show the App page.

3.1.4   On the App page, tap on Install. This is a free app, you will not be charged.

3.1.5   There will be a small window pop up for the COMPUSHIFT App to ask permission to use parts of the Android device to operate correctly. Tap Accept to commence the installation process.

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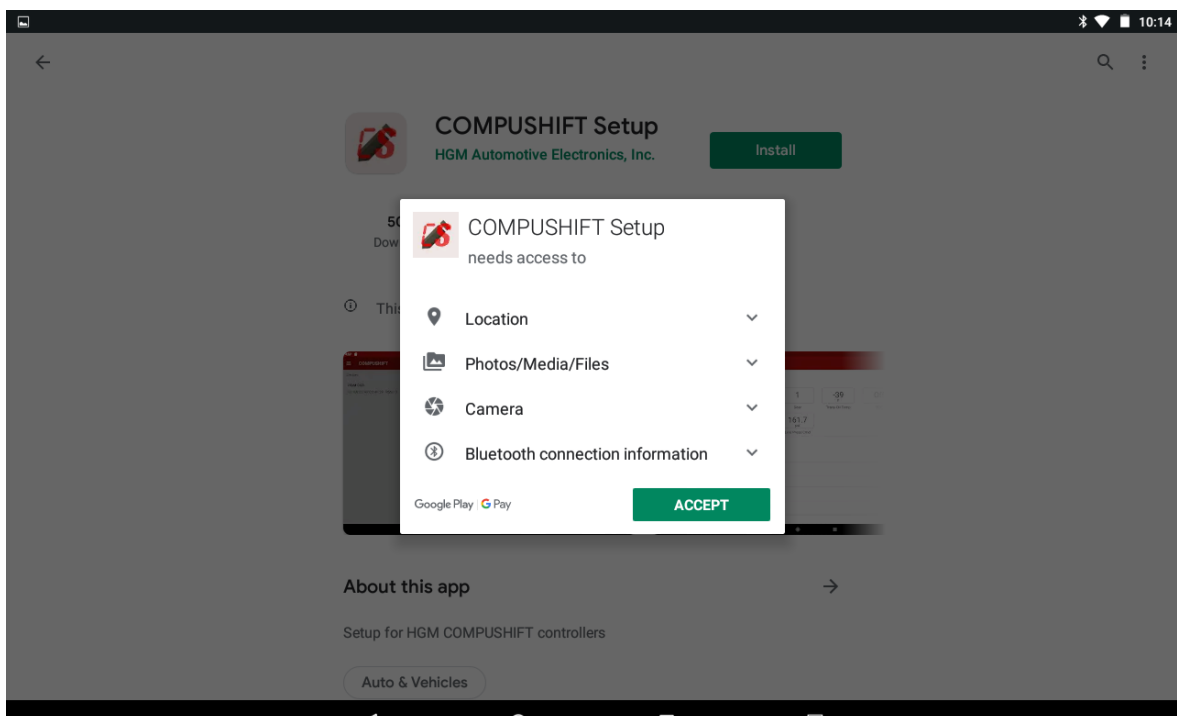
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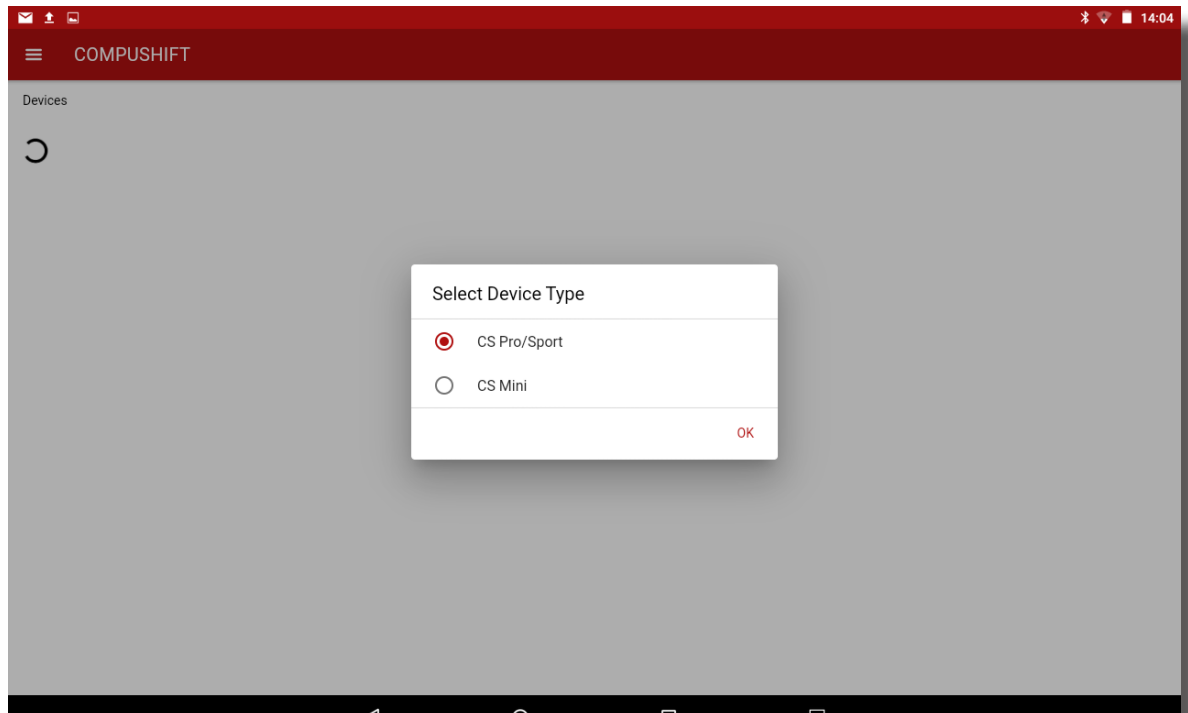
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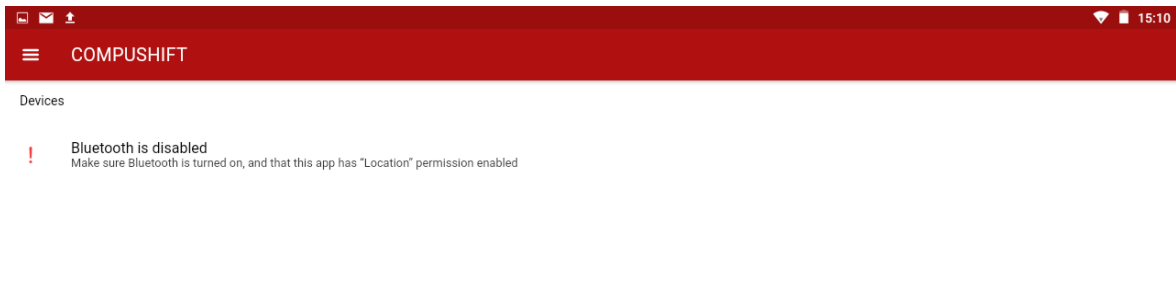

3.1.8   If you have reached this step, then the app is installed and ready to connect to a COMPUSHIFT Module.

3.2. Troubleshooting Installation on Android Devices

If you have not made it to the final steps for the installation process, the following chapter will cover some basic troubleshooting steps to get you sorted.

3.2.1 If the App says '**! Bluetooth is Disabled**' then it means that the Bluetooth communication in your smart device is not functioning correctly. This could be because you app did not recognise that it has access to your Bluetooth system, Bluetooth is turned off completely or it could be that the COMPUSHIFT Setup App has not been authorised to use Bluetooth yet.

3.2.2 First, close the app down completely by quiting the App. Re-open the App.
If the '**! Bluetooth is Disabled**' message still remains continue to the next step.

3.2.3 Open the Settings App and select Bluetooth. If Bluetooth is switched off, please turn it on. Close the settings app and re-open the COMPUSHIFT Setup App. You should no longer see the '**! Bluetooth is Disabled**' message, instead it should be replaced with the spinning wheel.

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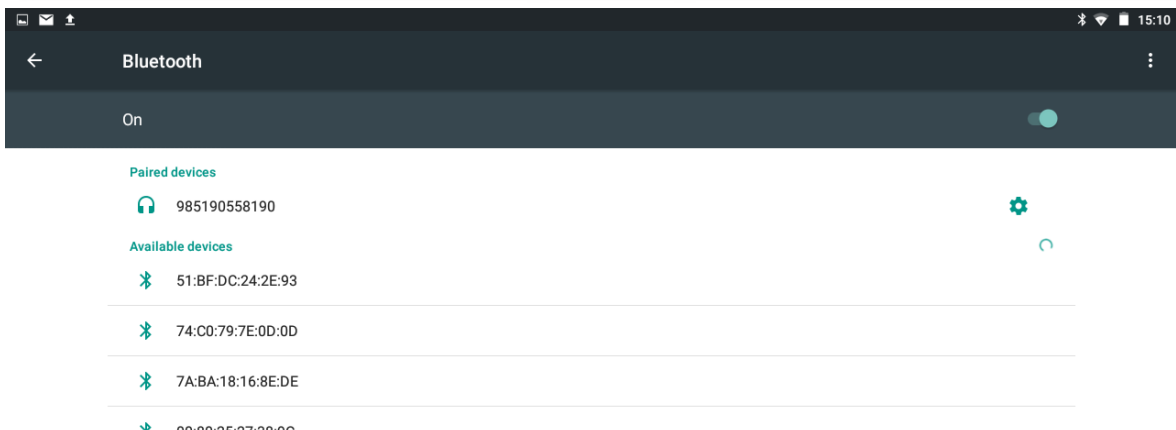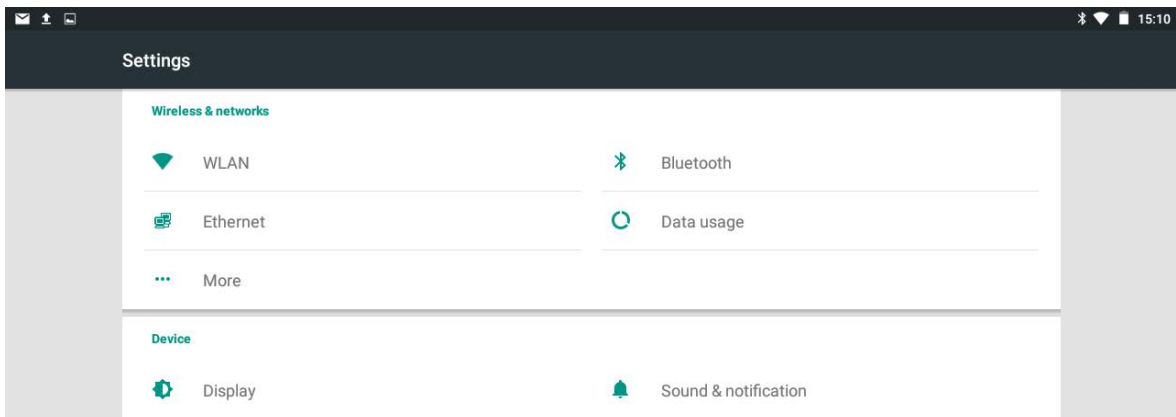
3.2.4   If you are seeing the '**Location services are Disabled**' message, open the Settings App and look for Location. If Location is currently Off, please turn it On. Return to the CS Setup App and check you are no longer seeing the '**Location services are Disabled**' message, instead you should be seeing only the spinning wheel.
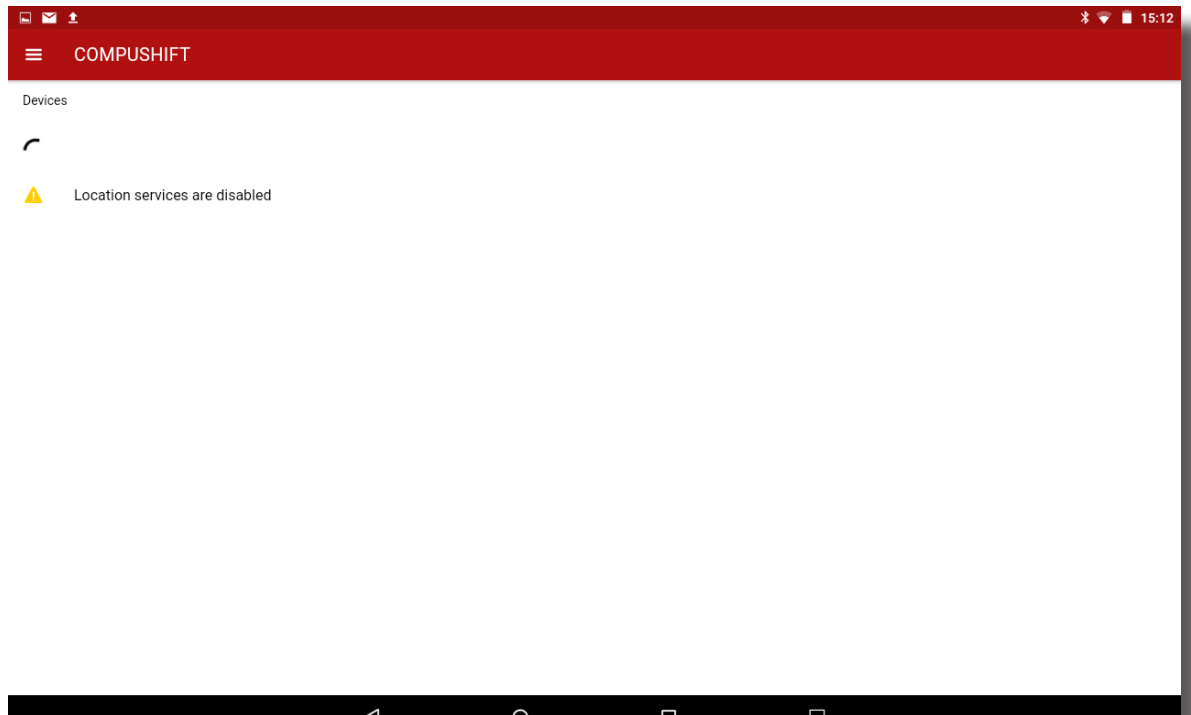
3.2.5   If none of these items have worked, please close the App. Tap and hold on the CS Setup app icon and drag to the trash. Then power your device off then on. Start from the beginning and download the app again.

3.2.6   If you are still seeing the '**! Bluetooth is Disabled**' message or the '**Location services are Disabled'** message, please contact Wholesale Automatic Transmissions for further assistance.

4. COMPUSHIFT Module Firmware Update

It is always good practice to ensure that you COMPUSHIFT Module and COMPUSHIFT Setup App are up to date before setting up a transmission. As we find ways to improve the system, new transmissions and the occasional bug fix, we will release new versions for customers to update using their own mobile device and the COMPUSHIFT Setup App.

The COMPUSHIFT Setup App is also regularly updated with new functionality and improvements. It is also recommended that you check with your appropriate device application store for any updates available.

4.0.1   Switch the vehicle power to Ignition which will power up the COMPUSHIFT Module.

4.0.2   The App should then search for any COMPUSHIFT Modules within range. If your COMPUSHIFT Module is not displayed, check that the controller is powered up and has either a Red or Green light flashing. If your module shows up in the list, tap on the device to connect.
On older software, the device may show as 'HGM-CS3' while on COMPUSHIFT Mini Modules, the device will show as 'HGM-CSM' or as 'CSM-00xxx'.
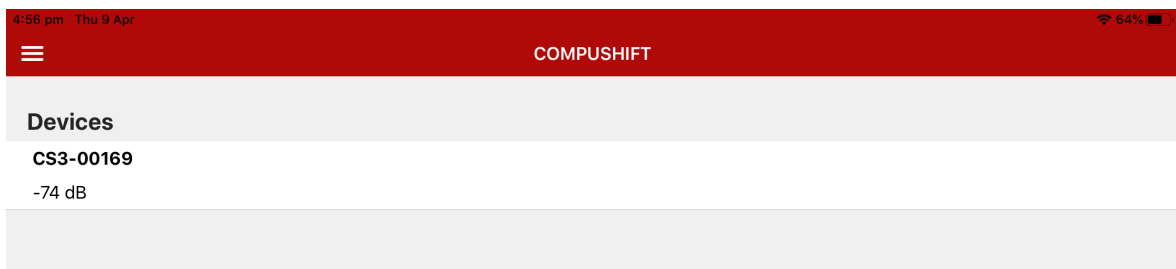
4.0.3   If this is the first time you have connected your device to the COMPUSHIFT Module, there will be a popup window asking to Pair the HGM CS3 via Bluetooth. Select **Pair**
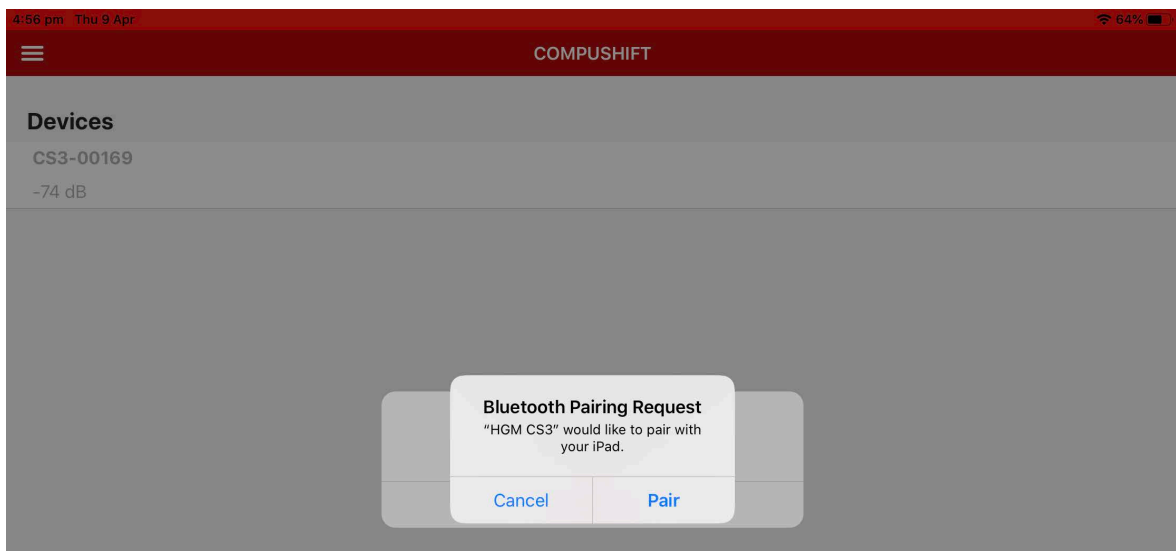
4.0.4   The App will now show you the Home Menu. Select the 3 x horizontal lines at the top left of the screen.
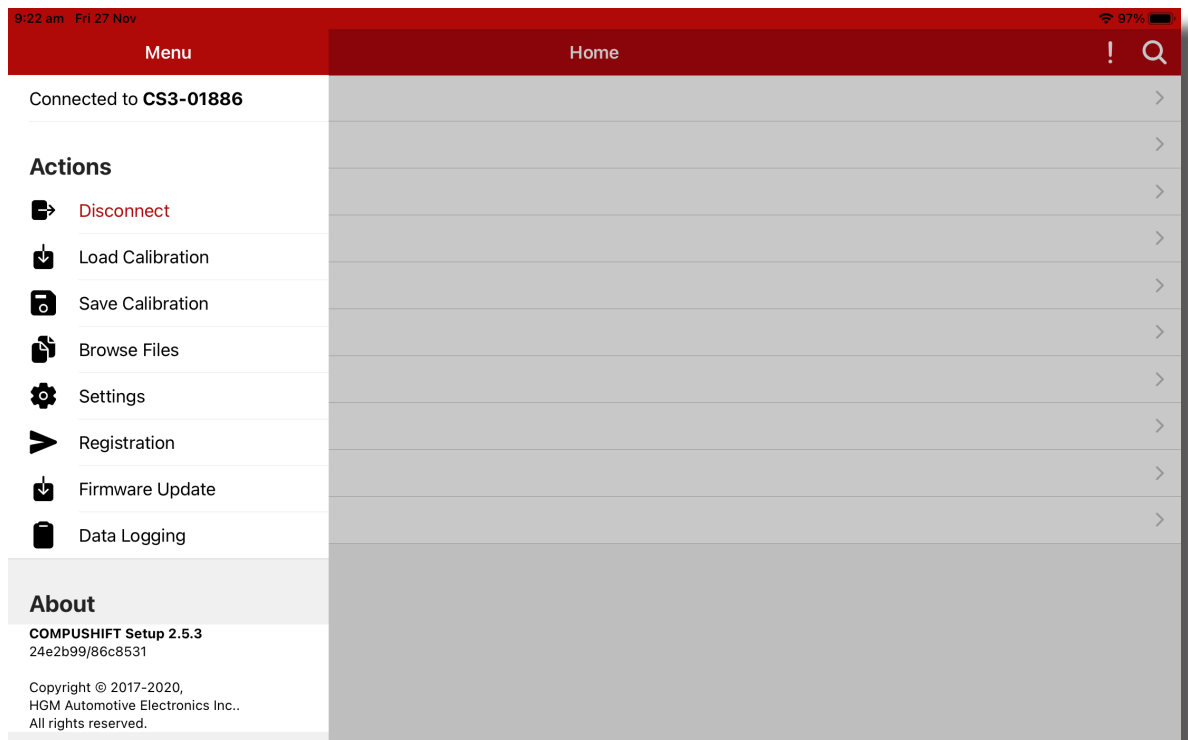

4.0.5   Select Firmware Update. The App will now check for any Firmware updates for your Module.

If there is NO software update available the App will say "Device firmware is up to date".
Select **< Back** at the top of the screen and skip to the next Chapter.

If there IS a software update available, the app will say "Online Update Available" with an Install button beside it. Tap on Install. The progress screen will show during the update progress. This will take approx. 10-15 mins to complete. Please keep the app open and keep the screen active during update. It is also recommended that you switch airplane mode on and then switch Bluetooth back on so that you prevent any incoming phone calls from disrupting the firmware update.
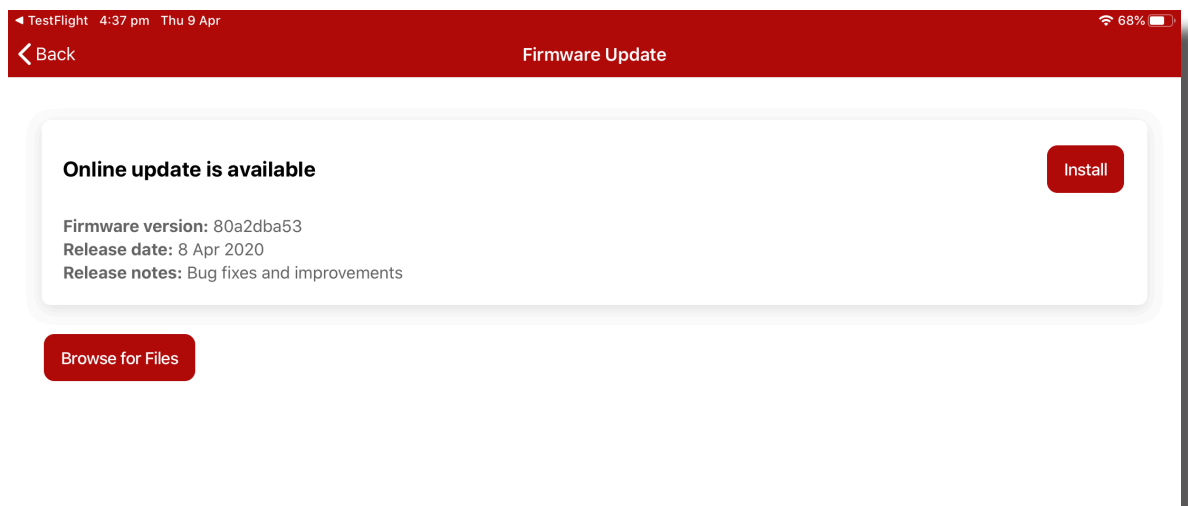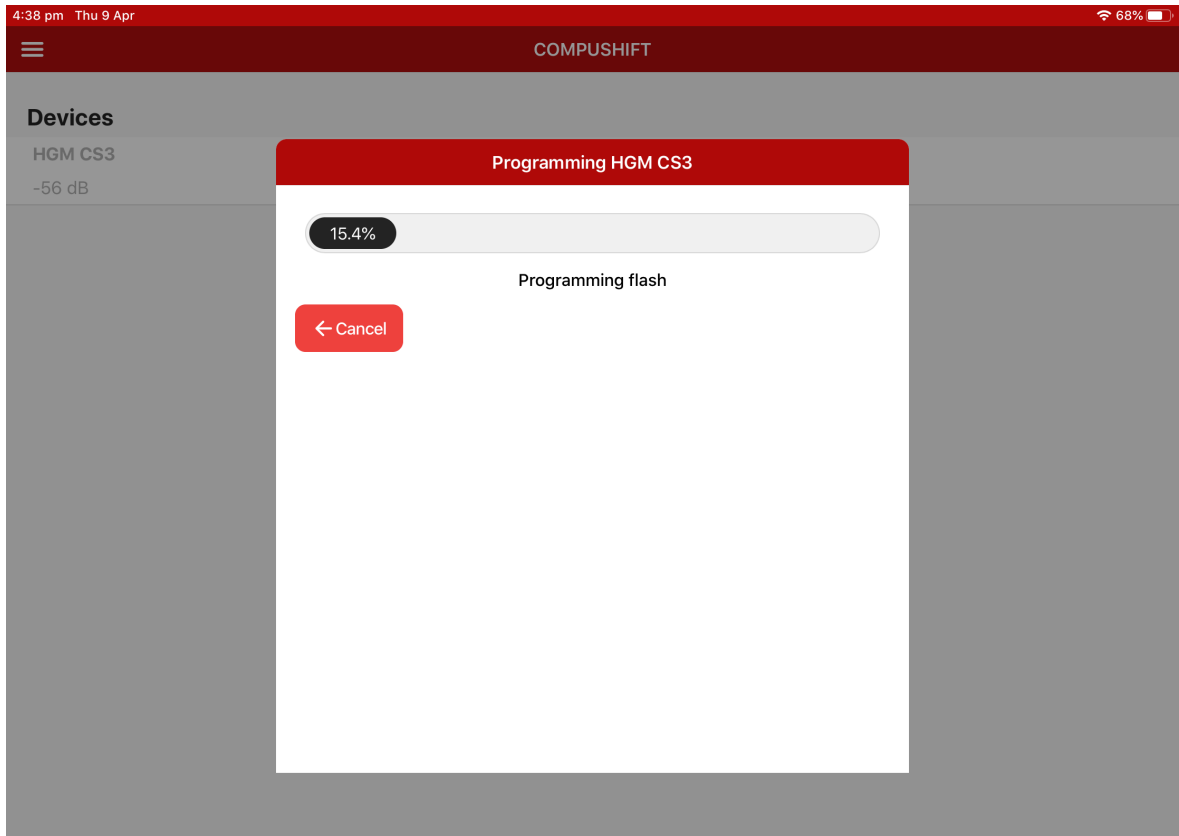
4.0.6   When it's finished, select **OK. Cycle the power to the Module by turning the key off and back to ignition to ensure the COMPUSHIFT module has been rebooted.**

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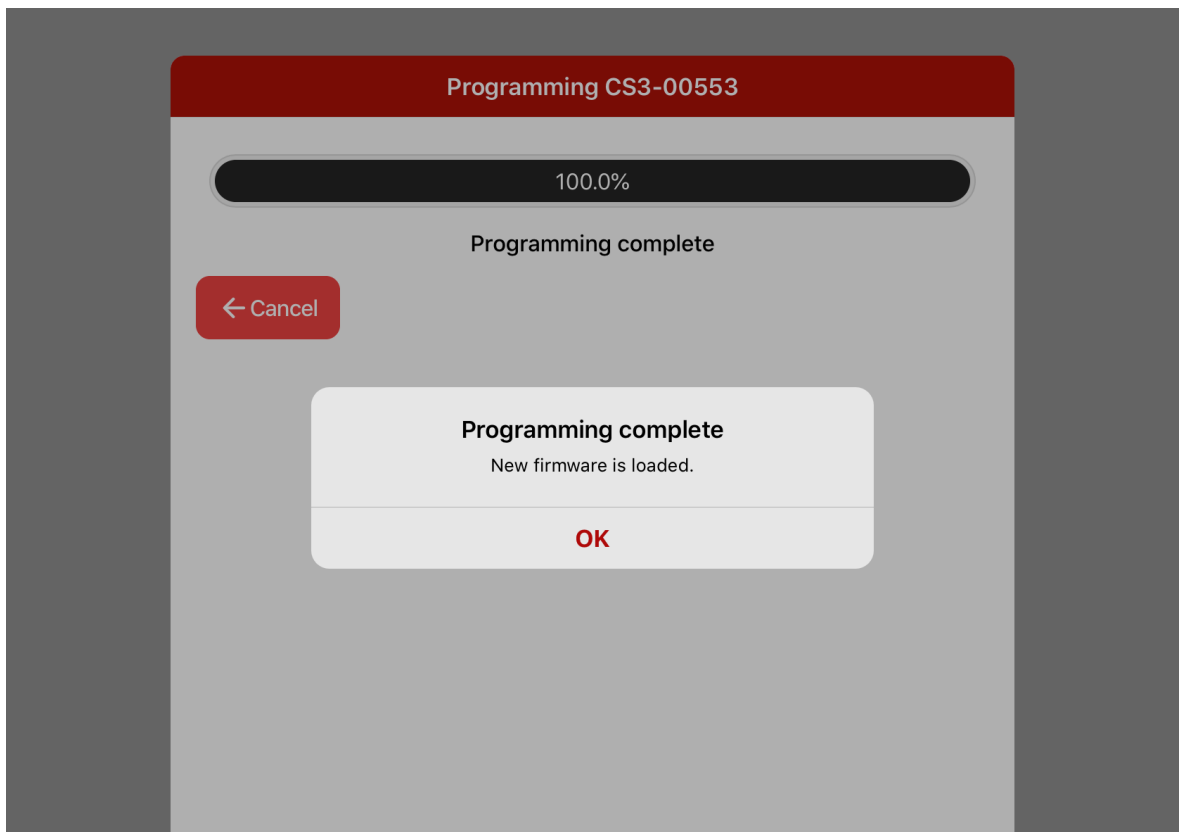
4.0.7   Once the controller has rebooted and the app has reconnected to the controller, you should now be in the Home Menu Screen - If not, keep pressing the **< Back** button located at the top left of the screen.

4.0.8   If you receive a phone call or your device goes to sleep during the Firmware Update process, the Firmware Update may fail. If this happens, it is possible the COMPUSHIFT Module may get locked into the Firmware Loading mode which will prevent normal operation.

To solve this, power cycle the COMPUSHIFT Module to check if that resets to normal operation. If not, start the Firmware Update process again. Take care not to allow the device to go to sleep or exit the app while the Firmware Update process is happening. It is recommended to put the phone into airplane mode first, then switch Bluetooth on only so that you prevent incoming phone calls from disrupting the firmware update process.

5. Configuring the Module for your Vehicle

Open the COMPUSHIFT Setup App and connect to your module, then navigate to the Home Menu
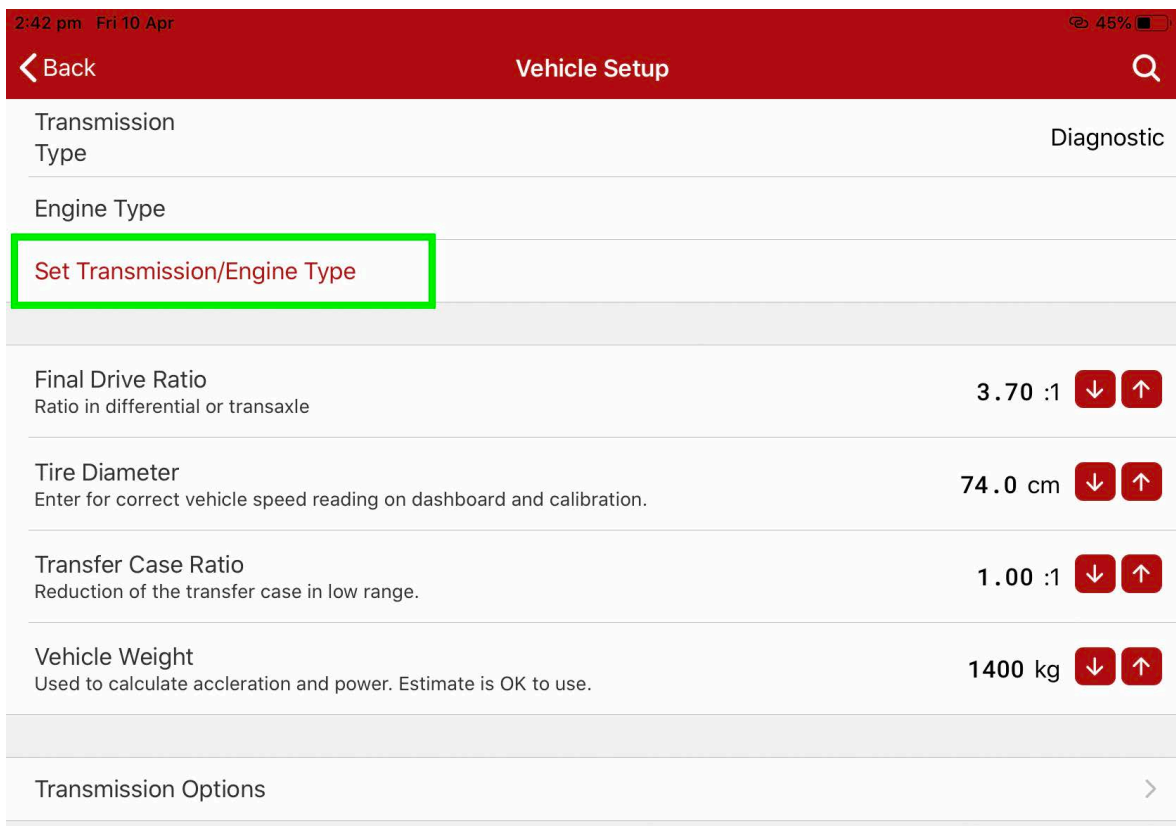
5.1. Vehicle Setup Menu

5.1.1   From the **Home** menu, select **Vehicle Setup**

5.1.2   If the transmission type or engine type listed does not suit your vehicle configuration, then tap on **Set Transmission/Engine Type**

IMPORTANT NOTE - CHANGING EITHER TRANSMISSION TYPE OR ENGINE TYPE WILL DELETE ANY ADJUSTMENTS OR CALIBRATIONS YOU HAVE PREVIOUSLY SET TO ANY PARAMETERS

If you are doing the initial setup of a new COMPUSHIFT, please disregard this warning as you have not set any configuration data as yet. However, if you have previously setup the COMPUSHIFT Module, but need to intentionally change either of these values, we recommend that you "Save the Calibration" to a file first so that you can Load the Calibration with your changes later should you need to.

2:42 pm Fri 10 Apr		45%
‹ Back	**Vehicle Setup**	Q
Transmission Type		Diagnostic
Engine Type		
Set Transmission/Engine Type		
Final Drive Ratio Ratio in differential or transaxle		3.70 :1 ↓ ↑
Tire Diameter Enter for correct vehicle speed reading on dashboard and calibration.		74.0 cm ↓ ↑
Transfer Case Ratio Reduction of the transfer case in low range.		1.00 :1 ↓ ↑
Vehicle Weight Used to calculate accleration and power. Estimate is OK to use.		1400 kg ↓ ↑
Transmission Options		›

5.1.3   In the pop up window, If your Transmission Type or Engine Type does not match, select which one you wish to change.
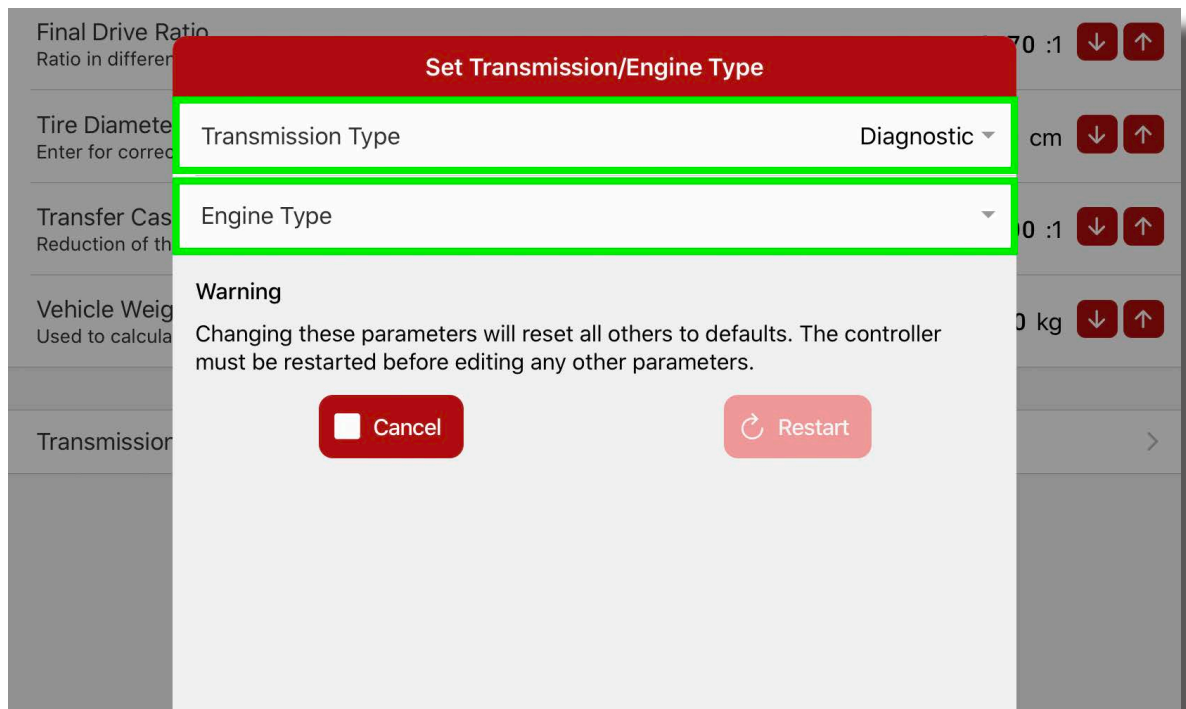
5.1.4   If you tapped on **Transmission Type**, then a list of all of the transmissions that the COMPUSHIFT can control will be displayed. Please scroll through the list to locate **YOUR** correct transmission. Some transmission have different versions based on shifter, solenoid configuration, or MLPS configuration. In this example, we have selected **Toyota A750 Switch Lever.**
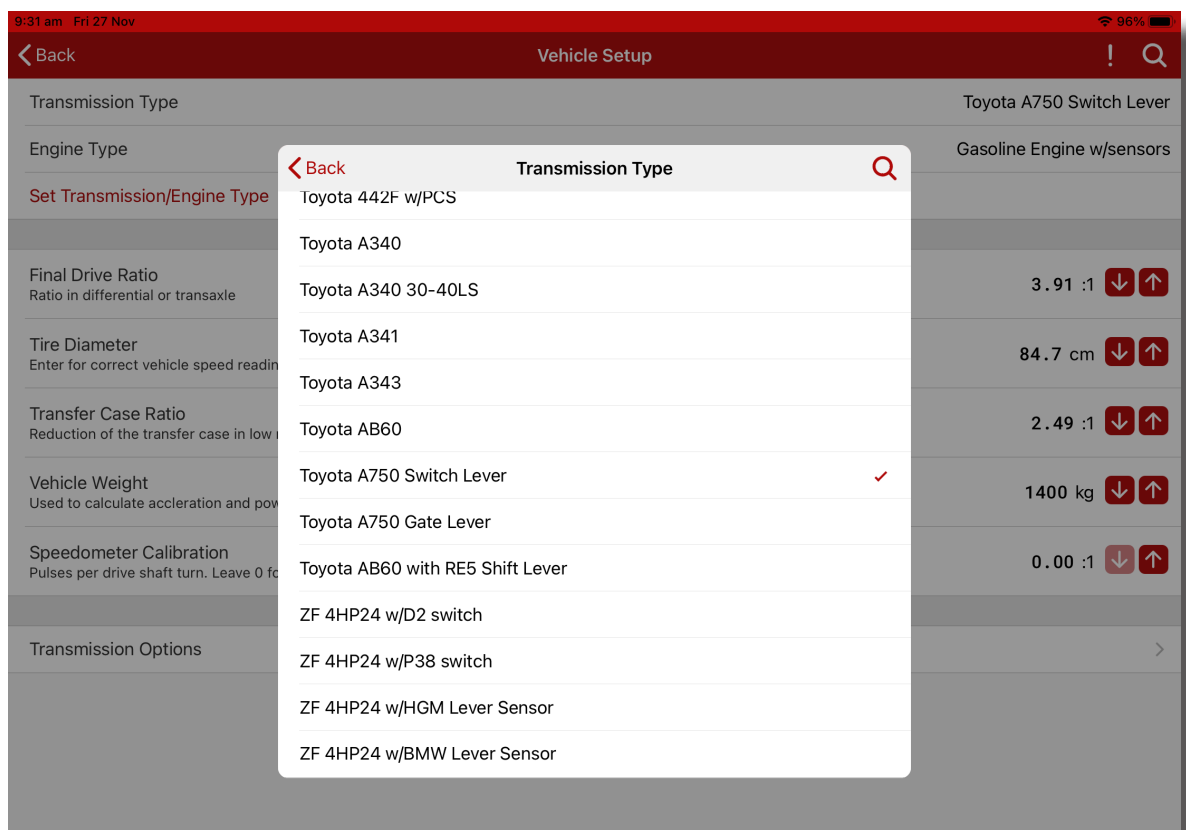
5.1.5 If you tapped on **Engine Type**, then the list of all the supported engines will be displayed. If you are using one of the Engine Management Systems listed and the COMPUSHIFT Module is connected to that Engine Management System via a CAN connection, then select the appropriate option in the list.

If you are **NOT** using one of the listed Engine Management Systems or are picking up tacho, and TPS signals via the analogue inputs, then you will need to use one of the universal engine types.

Universal Engine Types:
- Gasoline Engine w/sensors (used for all Gasoline/Petrol Engines)
- High Speed Diesel w/sensors (for Diesel engines that red-line above 3500rpm)
- Low Speed Diesel w/sensors (for Diesel engines that red-line below 3500rpm)
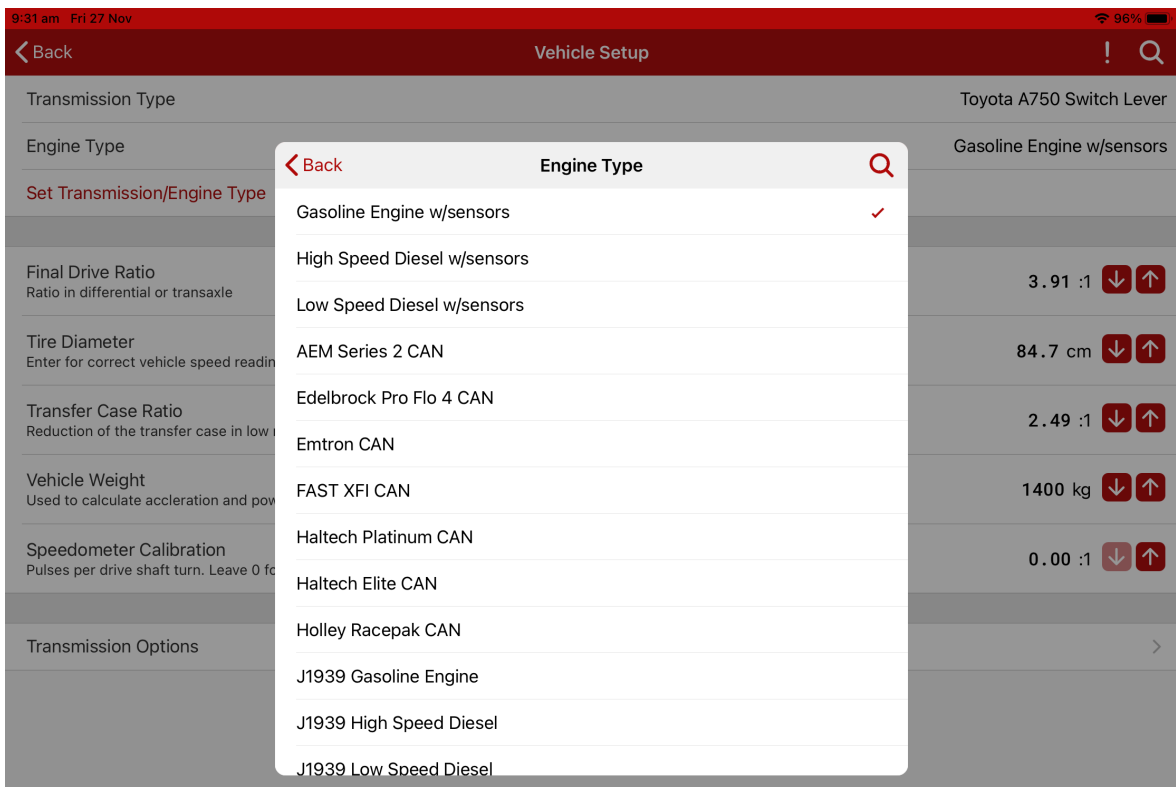
5.1.6 Confirm the **Transmission Type** and **Engine Type** have been set to your vehicle configuration, then tap **Restart**. The COMPUSHIFT will reboot with the new setup.

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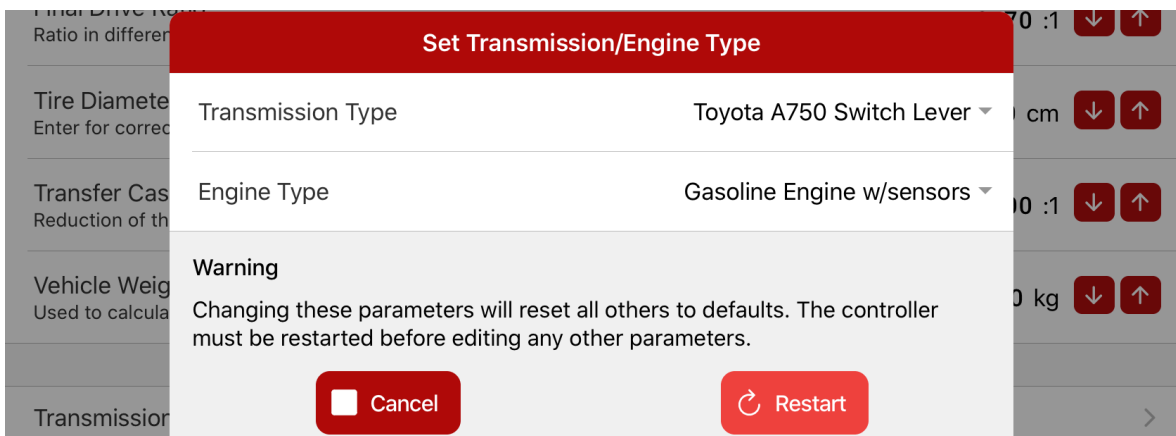
5.1.7   Once the App reconnects, it will return you to the Vehicle Setup page where you can confirm the changes have saved by checking that the **Transmission Type** and **Engine Type** are still set to the Transmission Type and Engine Type you set.

2:43 pm Fri 10 Apr		45%
‹ Back	**Vehicle Setup**	🔍

Transmission Type	Toyota A750 Switch Lever
Engine Type	Gasoline Engine w/sensors
Set Transmission/Engine Type	

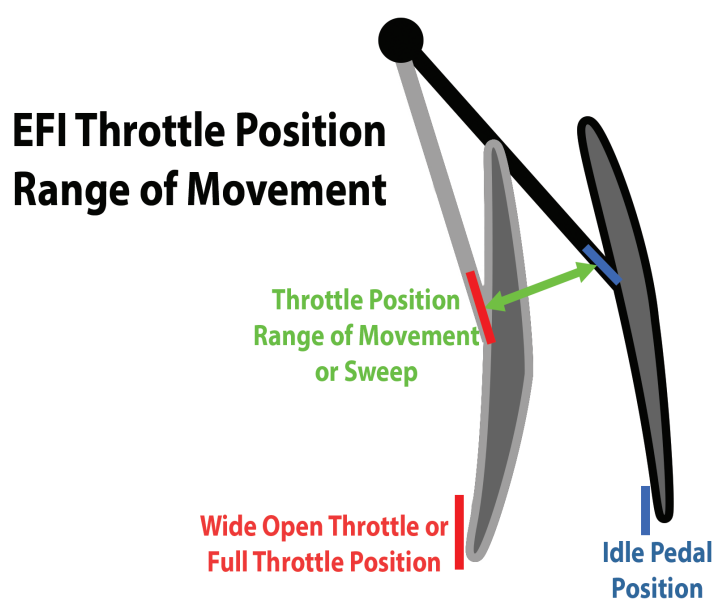|		
Final Drive Ratio Ratio in differential or transaxle	3.91 :1	↓ ↑
Tire Diameter Enter for correct vehicle speed reading on dashboard and calibration.	84.7 cm	↓ ↑
Transfer Case Ratio Reduction of the transfer case in low range.	2.49 :1	↓ ↑
Vehicle Weight Used to calculate accleration and power. Estimate is OK to use.	1400 kg	↓ ↑
Speedometer Calibration Pulses per drive shaft turn. Leave 0 for transmission default.	0.00 :1	↓ ↑
Transmission Options		›

5.1.8 A Note about the importance of a TPS: Throttle Position Sensor

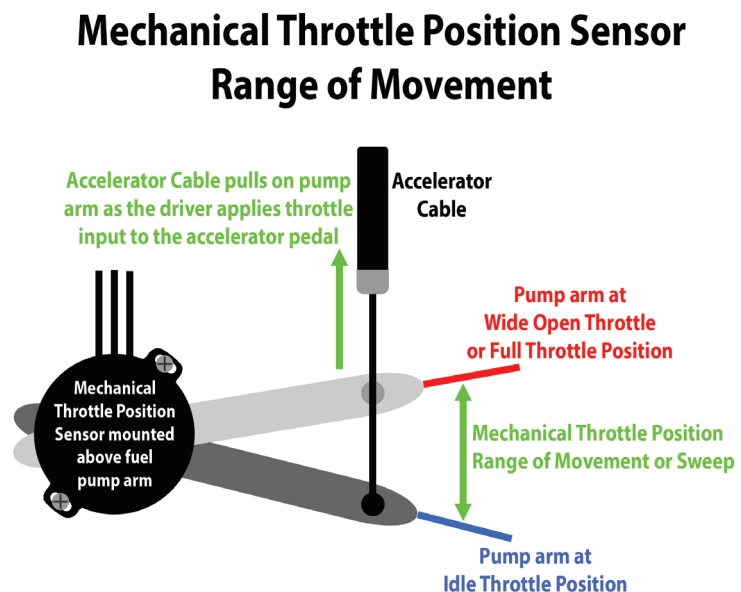_Applies to: All Engines and Transmissions_

For the COMPUSHIFT Transmission Controller to operate correctly, it **MUST** know the position of your Throttle. It does this by monitoring the voltages throughout the TPS range movement.

A TPS unit can output a range of voltages between 0.00 V and 5.00 V, and each TPS will use a different voltage range for minimum and maximum. TPS voltages can also be shown in both directions, Low to High - in line with throttle input or the voltages can be High to Low - reverse of the throttle input.

Throttle-by-wire engines (EFI) will generally have a consistent voltage for idle position and for wide open throttle positions.

**EFI Throttle Position
Range of Movement**

Throttle Position
Range of Movement
or Sweep

Wide Open Throttle or
Full Throttle Position

Idle Pedal
Position

Whereas a TPS on a mechanical engine can vary the voltage range as the TPS has the ability to be physically adjusted or twisted.

**Mechanical Throttle Position Sensor
Range of Movement**

Accelerator Cable pulls on pump
arm as the driver applies throttle
input to the accelerator pedal

Accelerator
Cable

Pump arm at
Wide Open Throttle
or Full Throttle Position

Mechanical
Throttle Position
Sensor mounted
above fuel
pump arm

Mechanical Throttle Position
Range of Movement or Sweep

Pump arm at
Idle Throttle Position

Then you have CAN-BUS Engine Management Systems that the COMPUSHIFT can integrate with that will send the TPS information via CAN to the COMPUSHIFT.

No matter the configuration, it is **IMPERATIVE** that the COMPUSHIFT knows the position and range of YOUR TPS in order to operate correctly. If the COMPUSHIFT does not show the TPS or TRQ % parameter rising and falling as you are stepping down on the throttle, then it has not been setup correctly.

If you have not calibrated the TPS voltage range or the TPS is not operating within the calibrated range, the COMPUSHIFT will fall into a Failsafe mode indicated by an F showing on the GEAR parameter readouts or 'FailSafe' in the Shift Mode Parameter on the COMPUSHIFT Setup App (See images below). This is because the COMPUSHIFT Transmission Control System can not function without a correctly operating TPS signal.
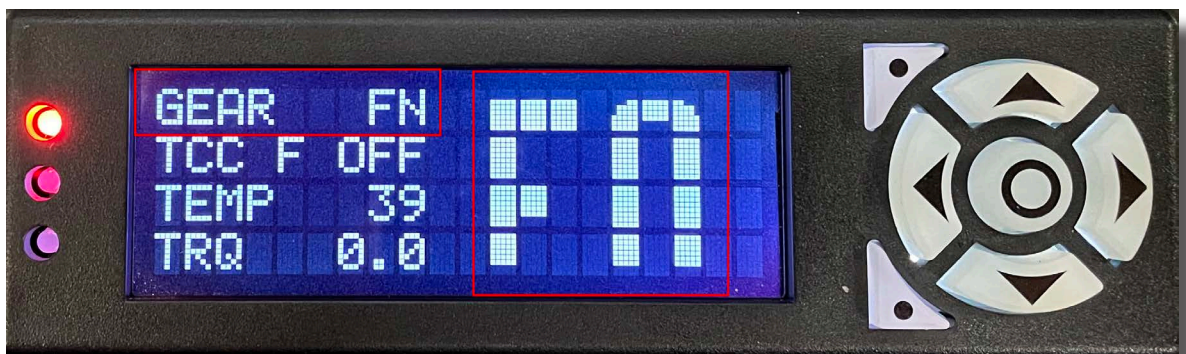
Main gauges

Fail safe

Shift Mode

5.1.9 **Performance Systems and Pedal Boosters using TPS Manipulation**

Applies to: All EFI Engines and Transmissions

Performance systems such as a UniChip or Safari Armax, as well as plug in pedal boosters or throttle controller system, can be programmed to manipulate the throttle signal to achieve the feeling of better response.

Any manipulation of the throttle signal going to the ECU needs to be fed into the COMPUSHIFT system so that we know what the engine torque output is likely to be. If the COMPUSHIFT is reading the physical TPS at 30%, but the TPS is manipulated and the engine ECU sees the TPS signal at 50%, then the COMPUSHIFT may run the transmission at pressures too low for your engine torque output. This can also result in clutches slipping due to low pressures. You need to ensure that the COMPUSHIFT can read the manipulated signal.

We have also seen issues with manipulated TPS signals. These systems manipulate the voltages going to the ECU faster and further than you do physically with your foot. This manipulation causes the COMPUSHIFT to react with unnecessary downshifts because the TPS signal is essentially "over-reacting". If you experience this, and whatever system you have has adjustable manipulation levels, try using their lowest setting or switch them off. If that fixes the erratic shifts, then that indicates the manipulation was causing the erratic shifting.

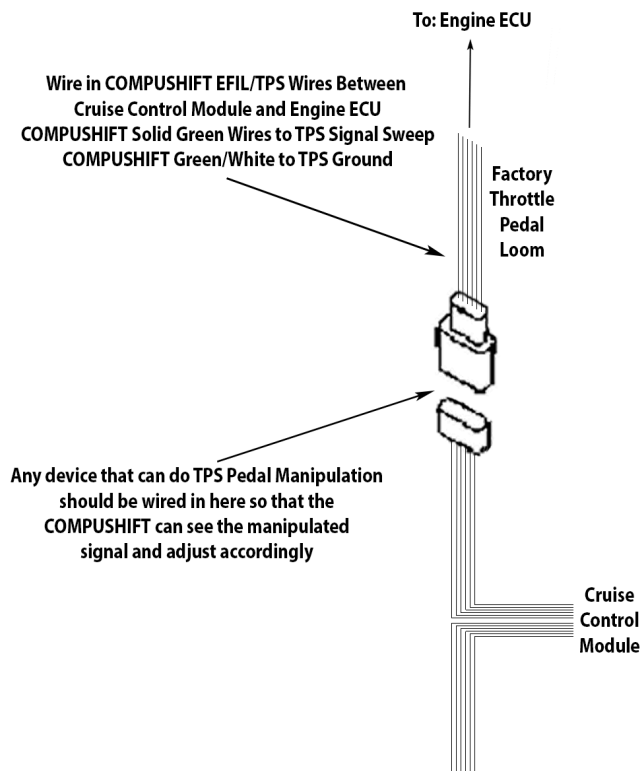5.1.10 **A Note about using a Cruise Control Systems**

Applies to: All Engines and Transmissions

When using a cruise control system you need to ensure that the COMPUSHIFT can monitor the TPS signal from the cruise control system as well as the pedal. For mechanical engines that use a TPS directly connected to the fuel pump arm, this is not an issue as the cruise control manipulates the arm in the same way the physical pedal does.

With EFI or Throttle-by-Wire engines, you may have a built in OEM ECU based cruise control system. This means there is no easy way to read the virtual cruise control pedal signal when the OEM cruise control is operating. In many cases, if you have changed from manual to auto or changed from the auto originally fitted, the OEM cruise control may not operate correctly as the ratios that the cruise control expects between Engine RPM compared to wheel speed won't match the original ratios. This will mean the cruise control may only engage for a second or two, then switch off as it thinks clutches are slipping. Or it may only engage in one gear such as 3rd or 4th which is usually the direct 1:1 gear.

For these vehicles, we recommend purchasing an aftermarket cruise control system that will allow you to wire it in a way that the COMPUSHIFT will be able to monitor the physical pedal signal as well as the aftermarket cruise control signal. We recommend contacting Autostrada in Brisbane QLD for aftermarket cruise control systems that may work with your OEM buttons/stalk so that you maintain an OEM look.

When you wire the cruise control system or the COMPUSHIFT system in, make sure the COMPUSHIFT TPS wires are positioned between the cruise control and the ECU. Not between the cruise control and the pedal.

To: Engine ECU

Wire in COMPUSHIFT EFIL/TPS Wires Between
Cruise Control Module and Engine ECU
COMPUSHIFT Solid Green Wires to TPS Signal Sweep
COMPUSHIFT Green/White to TPS Ground

Factory Throttle Pedal Loom

Any device that can do TPS Pedal Manipulation should be wired in here so that the COMPUSHIFT can see the manipulated signal and adjust accordingly

Cruise Control Module

5.1.11 What happens when I use an OEM Cruise Control or the aftermarket cruise control is not wired in correctly?

Applies to: All Engines and Transmissions

Failure to ensure that a cruise control system is compatible with the COMPUSHIFT has and will cause the transmission to fail very quickly.

When the cruise control is either not compatible or has not been wired correctly, the COMPUSHIFT will show the TPS at 0% while the cruise control is operating. This means that the COMPUSHIFT will only command idle pressures inside the transmission while the engine is providing torque as it accelerates. Low pressures inside the transmission will cause the clutches to slip, overheat and eventually fail. We have seen this happen in a matter of hours.

Having the TPS or TRQ parameter at 0% will also result in up-shifting too early as it COMPUSHIFT thinks you are only coasting instead of accelerating.

During your test driving, once you have confirmed the transmission operates correctly using the physical pedal, we recommend testing the cruise control to make sure HGM COMPUSHIFT TPS or TRQ signal rises and falls with the virtual cruise control signal.

5.1.12 TPS Calibration

Applies to: All Non CANBUS connected Engines

Throttle Position Sensor (TPS) Calibration is required when using an analogue TPS connection. Analogue TPS signals are a sweeping voltage that must be between 0.00v and 5.00v.

Calibrating the TPS allows the COMPUSHIFT to learn the idle and WOT (Wide Open Throttle) voltages which it will then represent the voltage sweep as a percentage value.

Before running the TPS Calibration, you need to be aware of the requirements or variables that pertain to the TPS system. The three main areas of focus are:
- Voltage Direction
- Standalone TPS or Existing System
- Voltage sweep of no less than 2 volts

Voltage direction is about how the Voltage is handled through the TPS. If the Voltage at idle is low (eg 1.50v) and the voltage at WOT is high (eg. 4.50v) then this is considered normal direction. However if you configuration has higher voltage at idle and lower voltage at WOT, then this is considered Revere Direction and you need to set the Reverse TPS to ON. If this setting is not switched on, the COMPUSHIFT will not accept the TPS calibration.

If the TPS is only connected to the COMPUSHIFT and no other system, the TPS Ground setting needs to be switched on so the COMPUSHIFT knows that it is powering the TPS. If the TPS is connected to the existing system and the vehicle is supplying power to the TPS, then this setting needs to be off.

If the difference in voltage between idle and WOT is less than 2 volts, the COMPUSHIFT will not accept the calibration. You will need to rectify the TPS setup to achieve the 2 volt sweep correctly before trying the calibration again.

Tap on TPS Calibration and look at the real-time TPS voltage readout on the screen (Circled below). If your Start button is grayed out, you may need to check the Engine Running Detection Speed parameter. If the real-time voltage moves at least 2 volts when stepping down on the throttle, you are ready for calibration.

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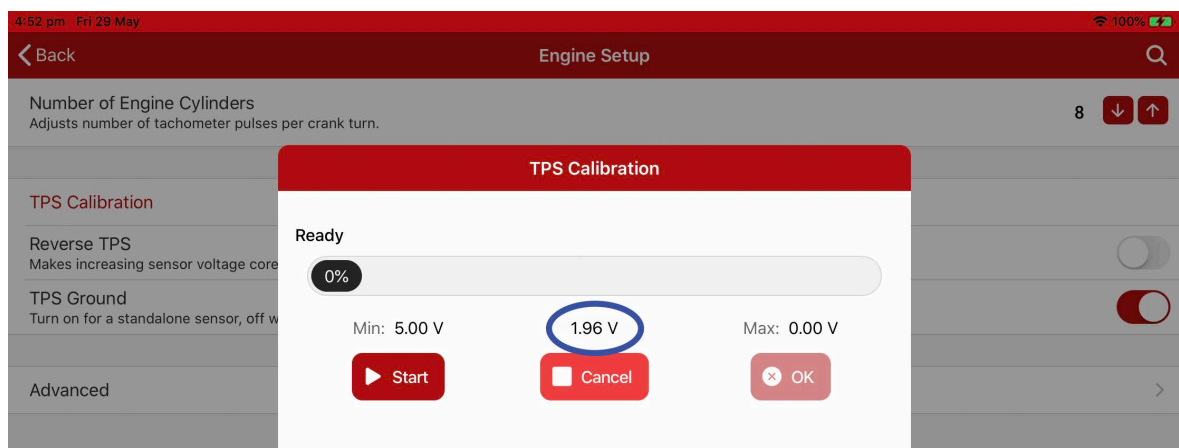
Make sure there are no mats or carpet that may hinder pushing the throttle all the way down. Also make sure that when you push to full throttle that you push hard on the pedal - like you are trying to push the accelerator pedal through the firewall.

To start calibration, tap Start. You will have 5 seconds to depress the Throttle through the full range for the COMPUSHIFT to detect the minimum and maximum voltages automatically. We recommend depressing the throttle 3 x times in total. Once complete, you will see the Min: and Max: numbers on each side of the real-time voltage reflect the new calibrated minimum and maximum TPS voltages. When the new voltages are accepted by the COMPUSHIFT, the OK button will no longer be grayed out. Tap OK to save the calibration.

If for some reason the TPS is not functioning properly or the TPS parameters are not set correctly, the app may not allow you to save the calibration. Please check the TPS settings and try again.

5.1.13 **Reverse TPS**
Applies to: All Non CANBUS connected Engines
This parameter allows you to reverse the direction of the TPS voltage sweep.

5.1.13.1 **OFF**
Lower voltage at idle throttle and higher voltage at WOT.

5.1.13.2 **ON**
Higher voltage at idle throttle and lower voltage at WOT

5.1.14 **TPS Ground**
Applies to: All Non CANBUS connected Engines
Stand alone TPS require a stable 5volt reference voltage from the COMPUSHIFT to power the TPS where as an EFI engine that uses a Throttle-by-Wire pedal is already powering the TPS from the Engine ECU.

5.1.14.1 **OFF**
EFI Throttle-by-Wire or existing TPS systems. For these system you will only connect the TPS Signal wire and the TPS Ground wire.

5.1.14.2 **ON**
For a TPS that does NOT connect to anywhere else - only to the COMPUSHIFT. You will use TPS Signal, TPS Ground and TPS 5v Ref.

5.2.   Advanced Engine Setup

5.2.1   TPS: Throttle Position Sensor
Applies to: All Engines

This is a readout only of the calibrated or measured throttle position in a percentage format. You will be see this number raise and fall with application of the throttle with your foot.

If you have not calibrated the TPS, not connected the TPS or there is an issue with the TPS then this may show either 0% or 50% all the time or will not rise and fall with throttle application.

For CAN Bus connected engines, this will be the percentage reported by the Engine Management System.

5.2.2   TPS: Throttle Position Sensor Voltage
Applies to: All Non CAN-BUS Engines

This is a readout only of the actual voltage as measured by the COMPUSHIFT to whatever TPS it is connected to. You will be see this number raise and fall with application of the throttle with your foot.

If you have not calibrated the TPS, not connected the TPS or there is an issue with the TPS then this may show either 0.00 V or 2.50 V all the time or will not rise and fall with throttle application.

For CAN Bus connected engines, this will parameter will not be visible.

5.2.3   TPS Low Calibration
Applies to: All Non CAN-BUS Engines

This is the lower of the calibrated voltage range detected from the TPS. This setting can also be adjusted manually by using the Up/Down arrows or tapping on the value and entering your desired voltage.

5.2.4   TPS High Calibration
Applies to: All Non CAN-BUS Engines

This is the higher of the calibrated voltage range detected from the TPS. This setting can also be adjusted manually by using the Up/Down arrows or tapping on the value and entering your desired voltage.

5.2.5   Throttle Filter Size
Applies to: All Non CAN-BUS Engines

Filtering the throttle signal smooths out the signal from electrical interference or potentially the bouncing up/down of your foot. The higher the number the more smoothing that is applied but the slower the response to throttle application. Lower the number and the quicker the response but may result in erratic shifting due to the signal 'bouncing'.

5.2.6 **A note about MAP (Manifold Absolute Pressure) Sensor**

Applies to: All Engines

Proper support for MAP signals is still in it's infancies. At this stage, we would prefer that you discuss using a MAP sensor with us first as we have found some customers experiencing erratic shift results when the MAP sensor is connected and used.

5.2.7 **Engine Maximum Torque**

Applies to: All Engines

This is your torque output of your engine. It can be entered using Newton-meters(Nm) or Foot-Pounds (ft lb). If you don't know your actual torque output, then an estimated number will be sufficient.

5.2.8 **Engine Running Detection Speed**

Applies to: All Engines

When the COMPUSHIFT believes that the engine is off, it will not try to operate the solenoids as there is no oil circulating to keep them cool. It will wait for the engine RPM to be equal to or greater than this value before engaging the solenoids.

This parameter will also disable the ability to do a TPS Calibration if the Engine RPM is above this parameter. To do a TPS calibration, stop the engine and switch to ignition only without engine running to do the calibration.

In the case of your Engine not having an RPM signal or having an incompatible signal for the COMPUSHIFT, set this value to 0 so that the COMPUSHIFT will engage solenoids without an RPM signal. However, setting this value to 0 will also disable the TPS calibration to show 'Calibration not allowed right now' to show on the screen. To get around this, temporarily set the Engine Running Detection Speed parameter to 1, run the TPS Calibration, then change this setting back to 0.

6. Calibration Files

6.1.   Load Calibration File

The process to load the calibration file is very similar for both iOS and Android devices. The difference being where the calibration file needs to be located. If you haven't already Downloaded the COMPUSHIFT Setup App, please see the Installing Setup App sections for your device first.

If you continue past this point, it is expected that you have downloaded the COMPUSHIFT Setup App and Firmware Updated the Module software.

6.1.1   If you have received an email with the calibration file, on your smart device, first go to the email that was sent to you and save the file calibration file (*.hcp) to the following folder locations on your device.

Android - Save to the Downloads Folder - Don't open the file from here as it will load into the Setup App and force it to disconnect from the module.

Apple iPhone - Save to 'On My iPhone/CS Setup'
Apple iPad - Save to 'On My iPad/CS Setup'

6.1.2   Close your emails and then open the COMPUSHIFT Setup App and switch your vehicle on to ignition - Don't start the vehicle.

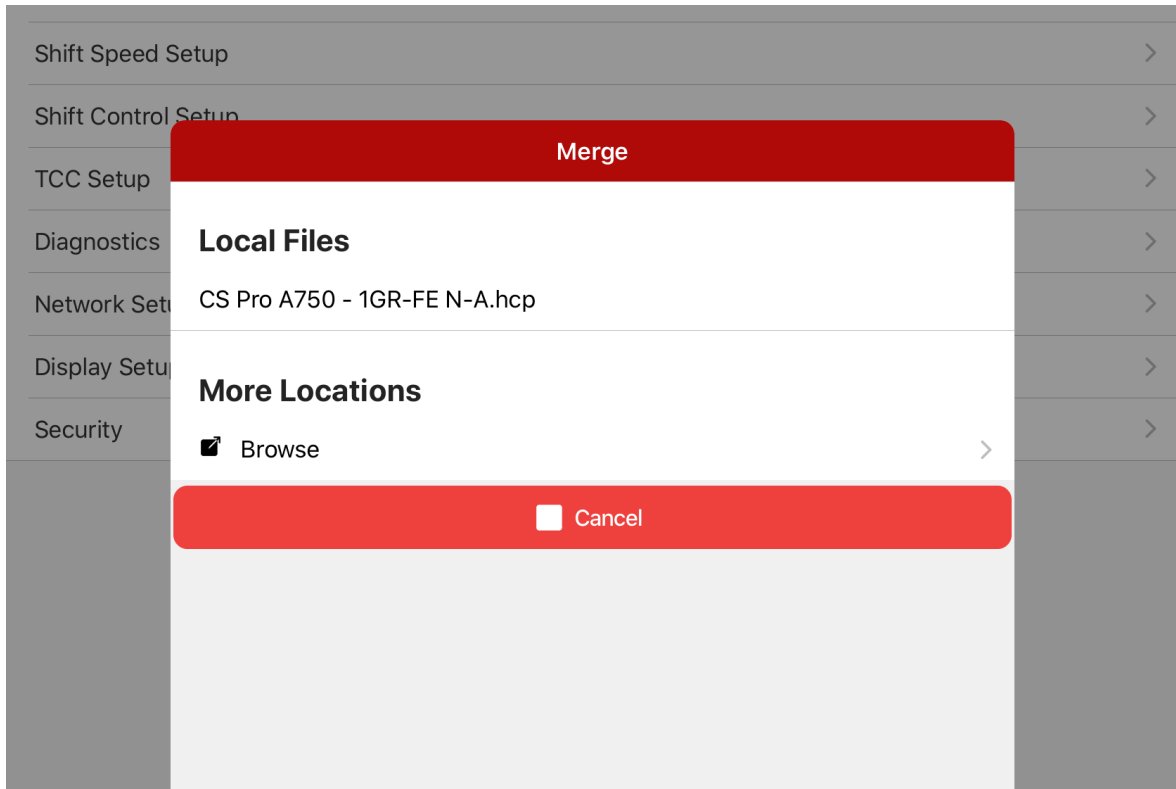6.1.3   Connect to the COMPUSHIFT Module by selecting your device.

4:56 pm Thu 9 Apr		🌐 64% 🔋
≡	**COMPUSHIFT**	

Devices

CS3-00169
-74 dB

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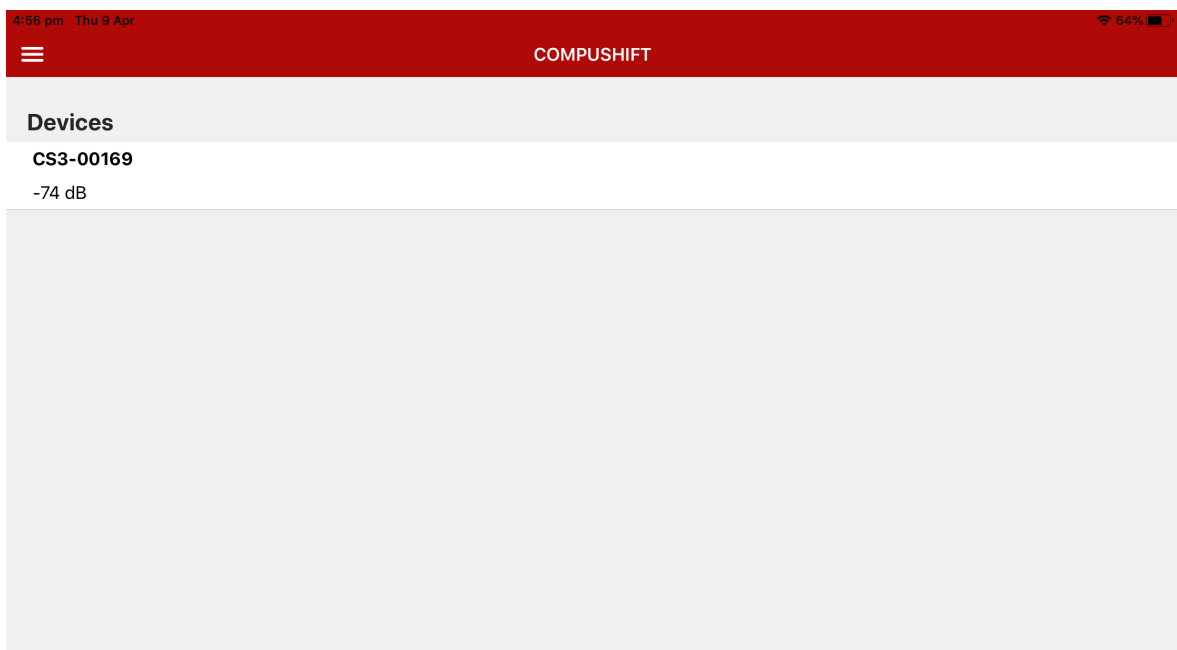
6.1.4 If not on the Home menu, navigate **< Back** at the top left until you see the 3 horizontal lines at the top left of the screen.
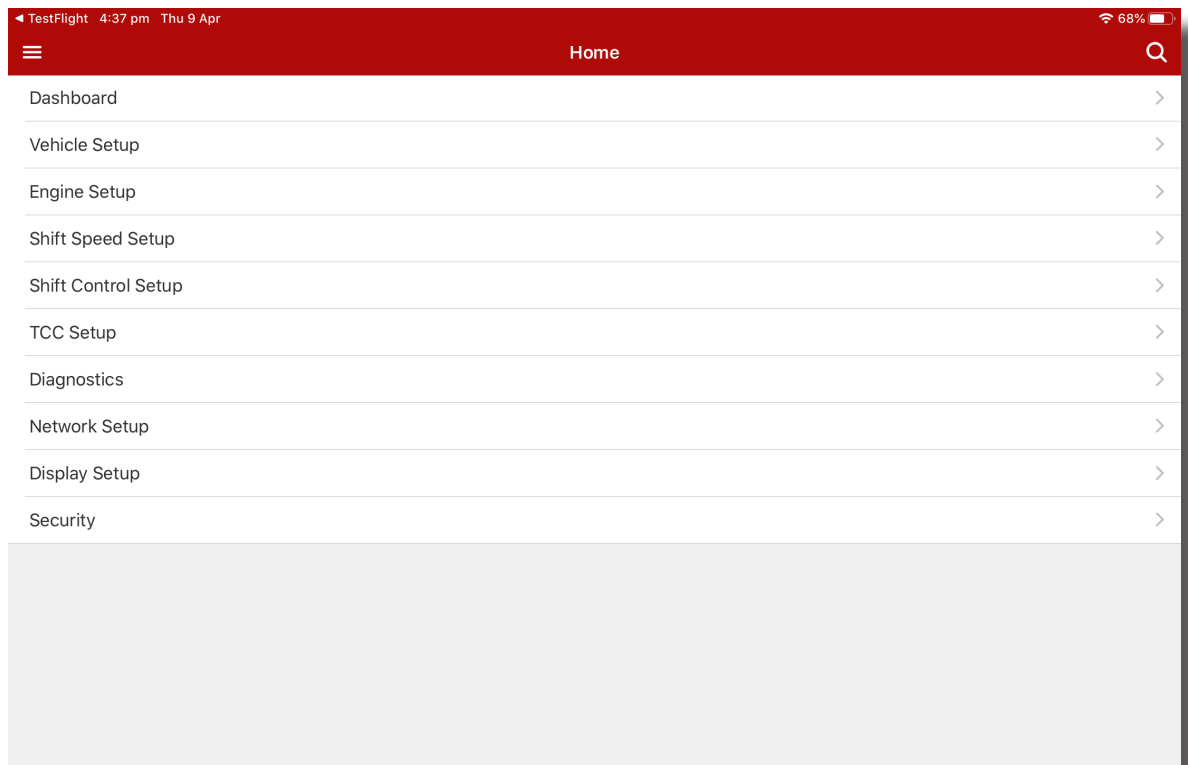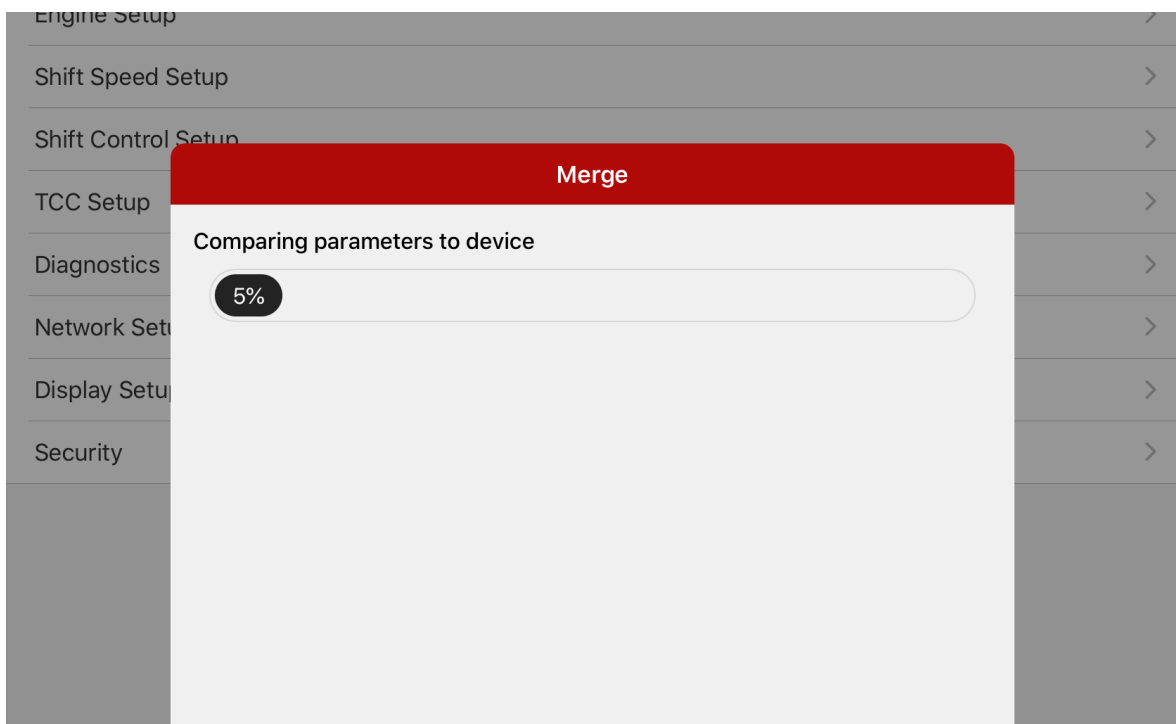

6.1.5 Tap on the 3 Horizontal lines to reveal the options menu and select **Load Calibration**
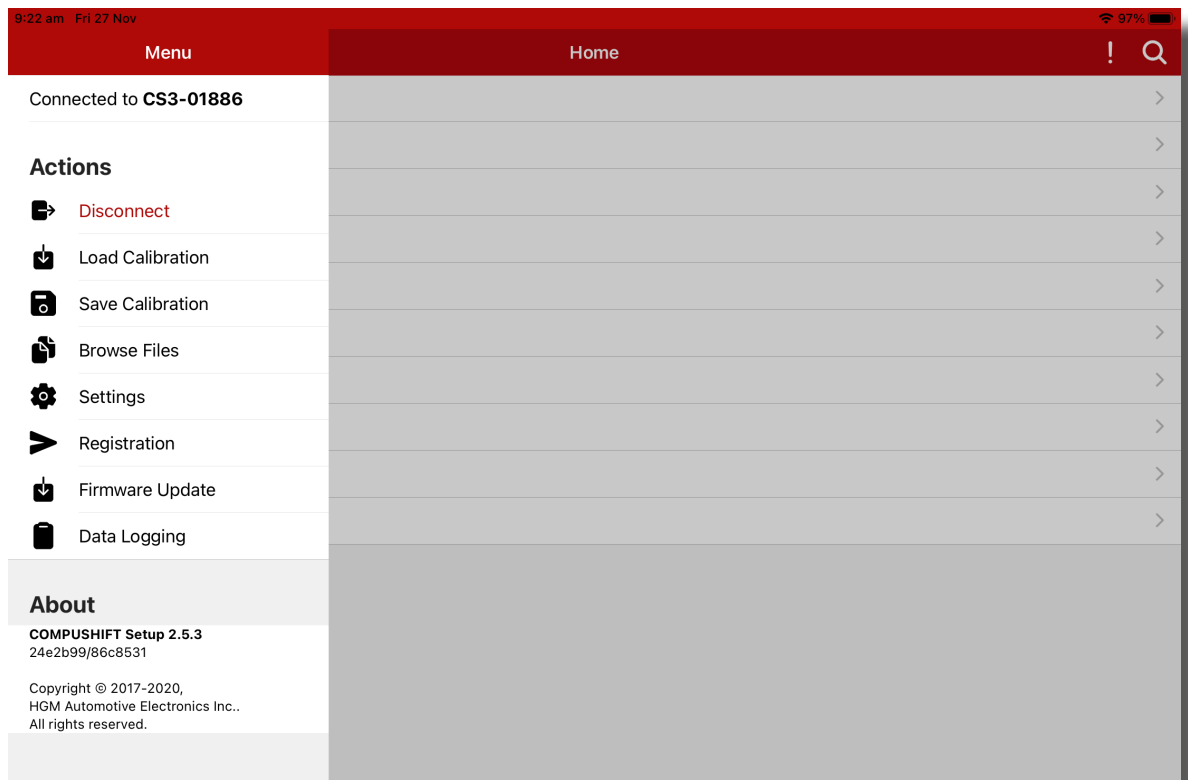
6.1.6   Select the File that you want to Load into your Module:
On Apple iOS - The file should be listed already in the App under Local Files
On Android - Select Browse - Your file will be located in the Downloads Folder

| Shift Speed Setup | > |
| Shift Control Setup | |

Merge

TCC Setup

Local Files

CS Pro A750 - 1GR-FE N-A.hcp

More Locations

Browse   >

Cancel

6.1.7   The App will now show a progress bar while it loads the file onto the COMPUSHIFT
Module. Once complete there will be a pop up message on the screen to indicate
the load was successful. If you do not receive this message, the loading was NOT
successful. Please try again.

Engine Setup

Shift Speed Setup

Shift Control Setup

Merge

TCC Setup

Comparing parameters to device

5%

Diagnostics

Network Setup

Display Setup

Security

6.1.8   Once successful, the app will show a window confirming the Load is Complete. Close the App and cycle the power to the Module.
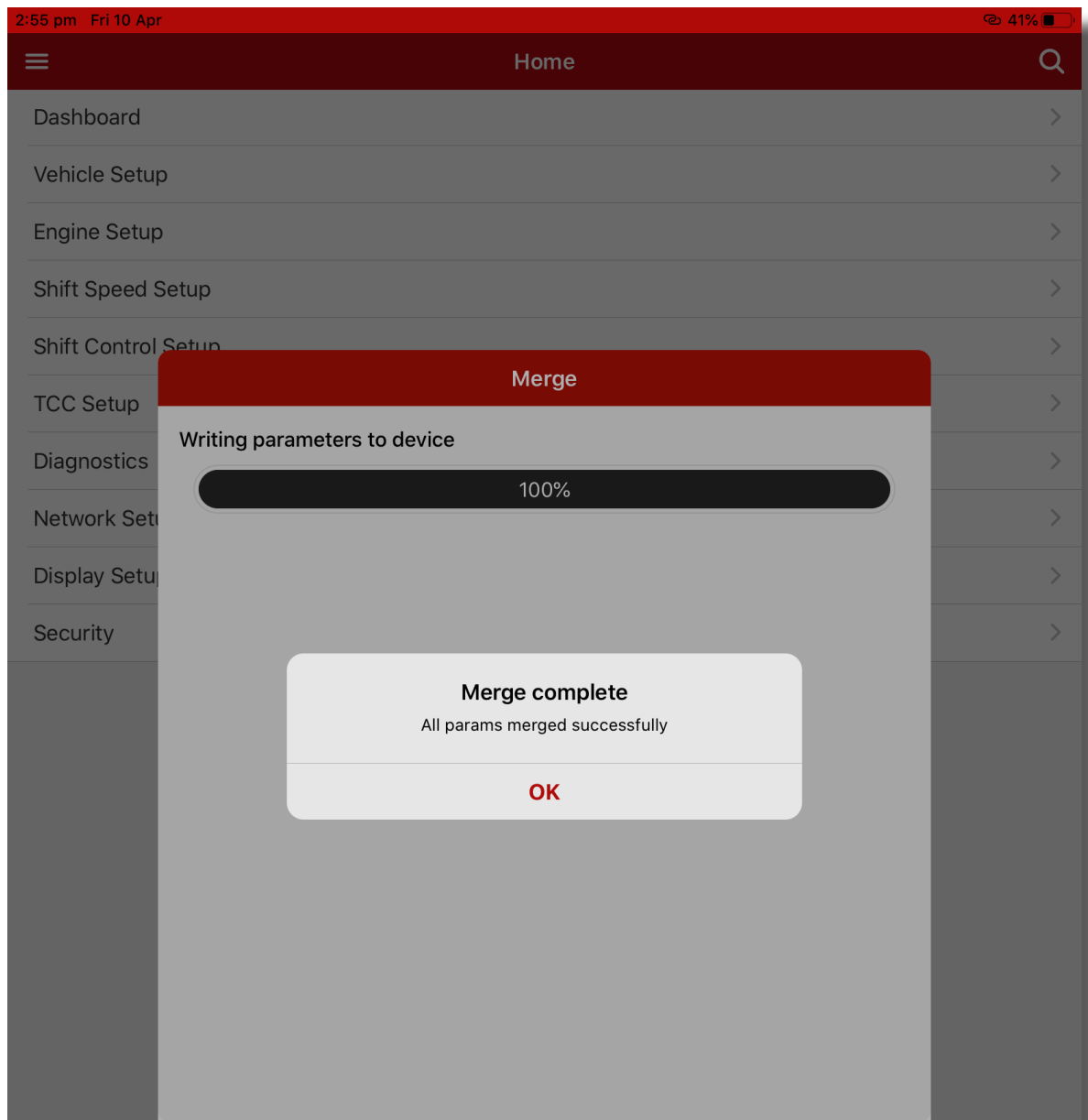

6.1.9   If you loaded a calibration file that has been supplied to you by Wholesale Automatics or from another vehicle, you may need to make adjustments to the various parameters in the Vehicle Setup menu or the Engine Setup menu.

This is because not all vehicles and engines are configured or setup the same way. Two vehicles that may look the same, may have different axle ratios, tire sizes or the TPS voltage ranges are different. Even if you believe the vehicles are similar enough, you need to ensure that the parameters on your COMPUSHIFT match your vehicle and engine to operate correctly.

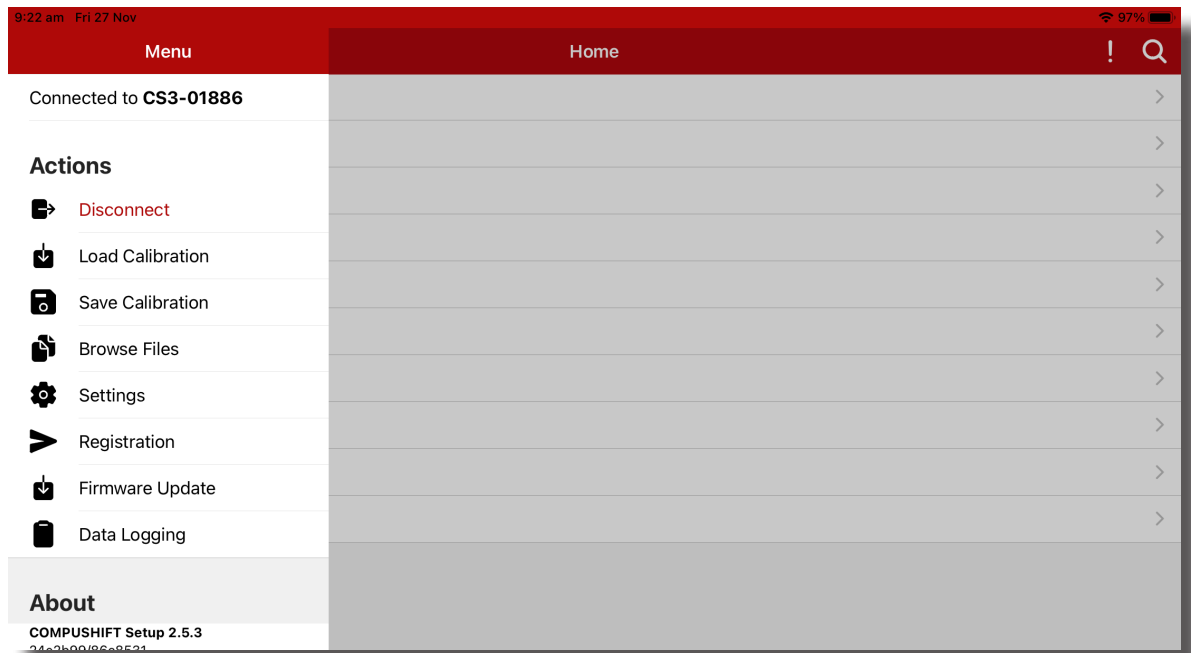Check the chapters covering Vehicle Setup and Engine Setup for more information.

6.2.   Save Calibration to a File

6.2.1   Open the COMPUSHIFT Setup app and connect to the COMPUSHIFT Module by selecting your device.
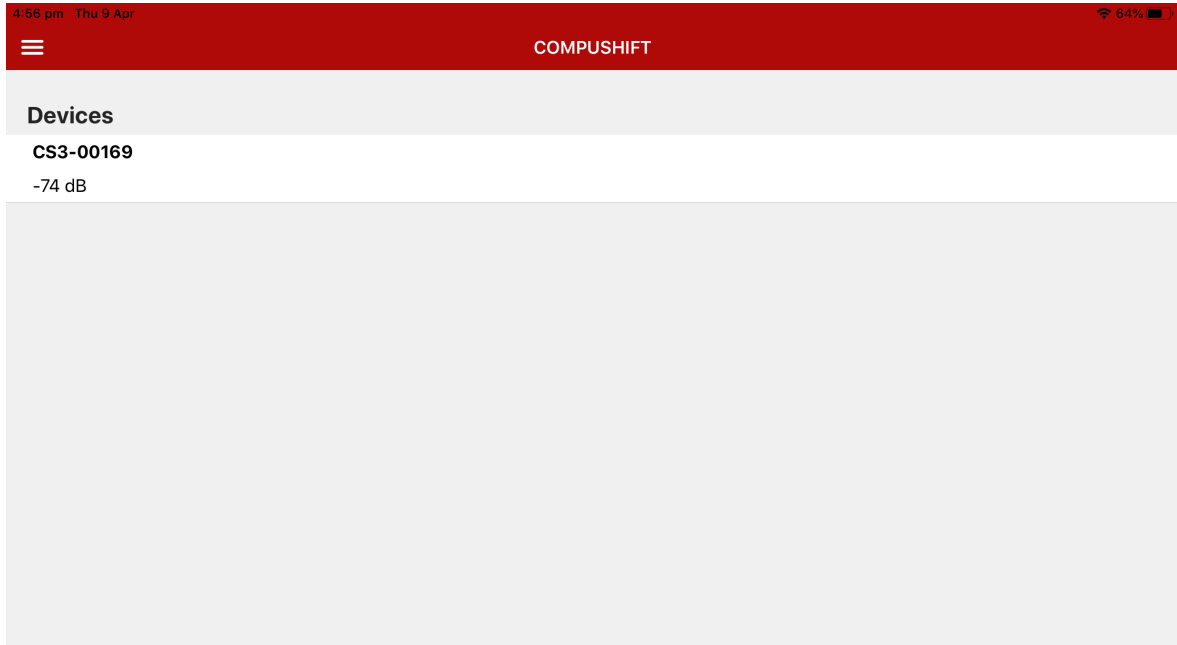
4:56 pm Thu 9 Apr		64%
☰	**COMPUSHIFT**	🛜 64% ▮

Devices

CS3-00169

-74 dB

6.2.2   If not on the Home menu, navigate < Back at the top left until you see the 3 horizontal lines at the top left of the screen.

◀ TestFlight 4:37 pm Thu 9 Apr		🛜 68% ▮
☰	**Home**	🔍

Dashboard	›
Vehicle Setup	›
Engine Setup	›
Shift Speed Setup	›
Shift Control Setup	›
TCC Setup	›
Diagnostics	›
Network Setup	›
Display Setup	›
Security	›
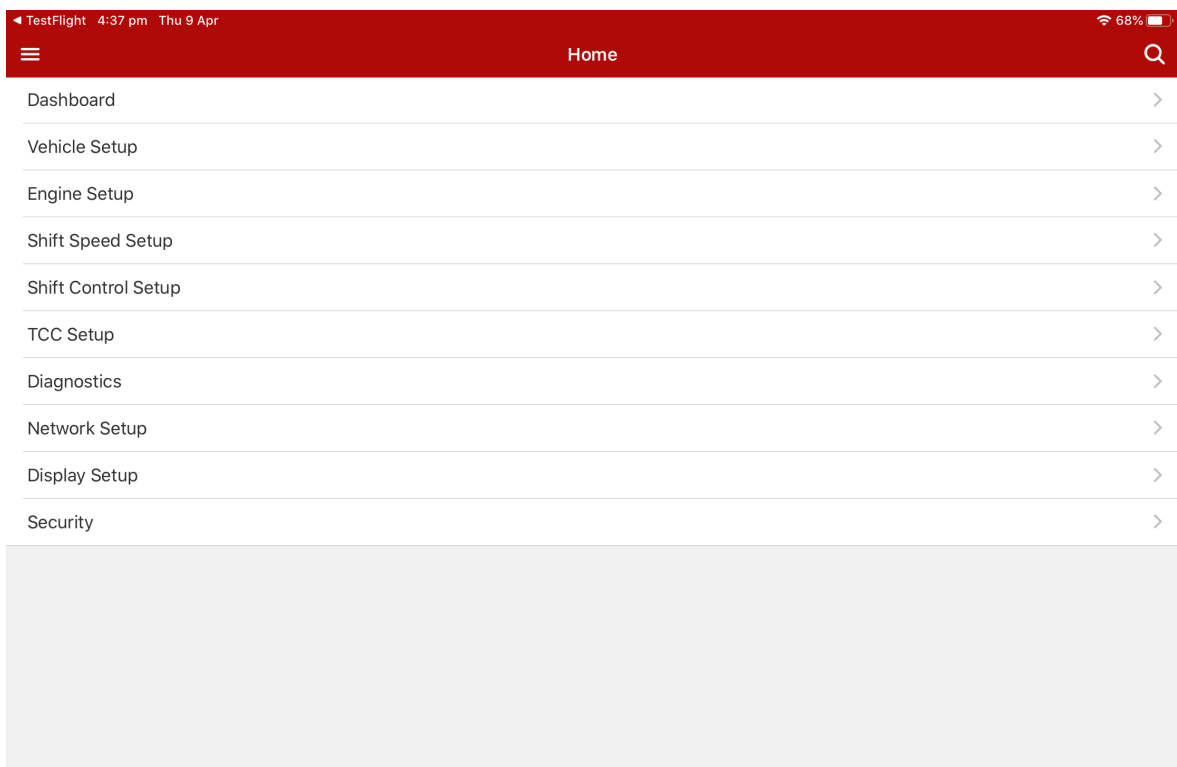
6.2.3   Tap on the 3 Horizontal lines to reveal the options menu and tap **Save Calibration**

6.2.4   The app will now read out all of the calibration data from the COMPUSHIFT Module. This may take up to a minute. During this time you will see a progress bar on the screen.
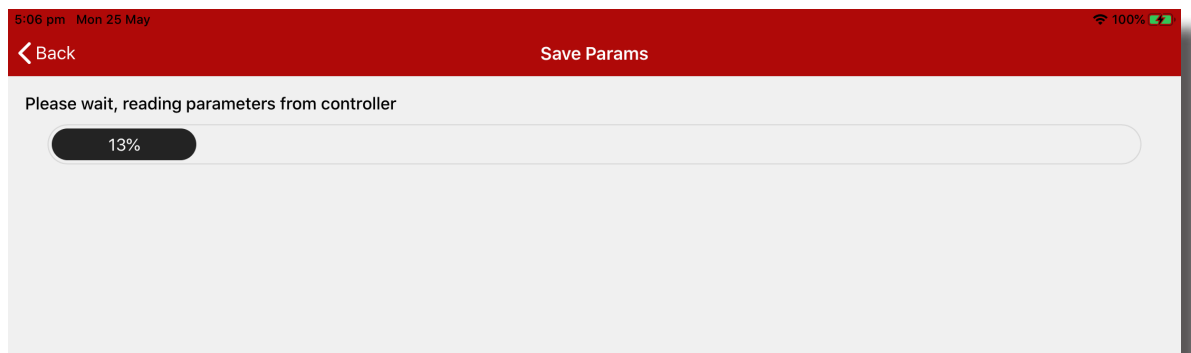
6.2.5   When all of the data has been read out, the app will prompt you to either Create New File or Overwrite and existing file. Overwrite option will only show if you already have a calibration file saved previously.
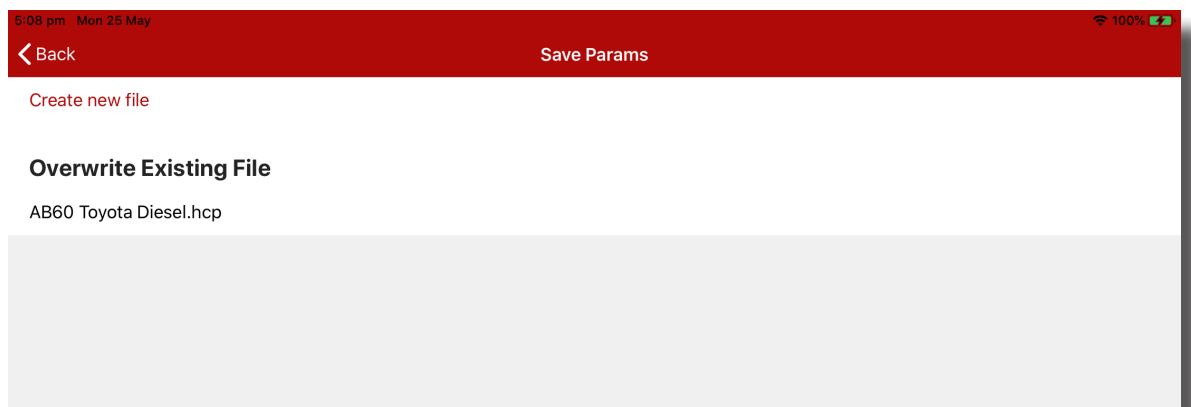
6.2.6 If you select Create new file, a window will appear for you to enter a name for the file. If you are sending the file to Wholesale Automatics for assistance, please use something descriptive such as your transmission model, engine model, vehicle type and your name. Then tap OK.
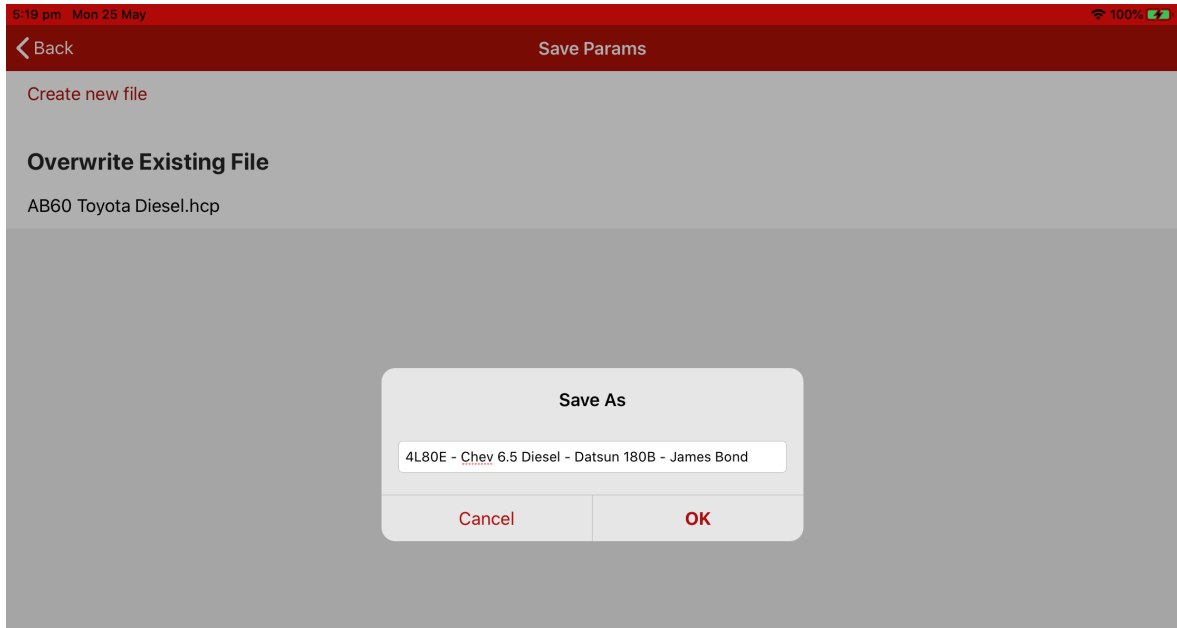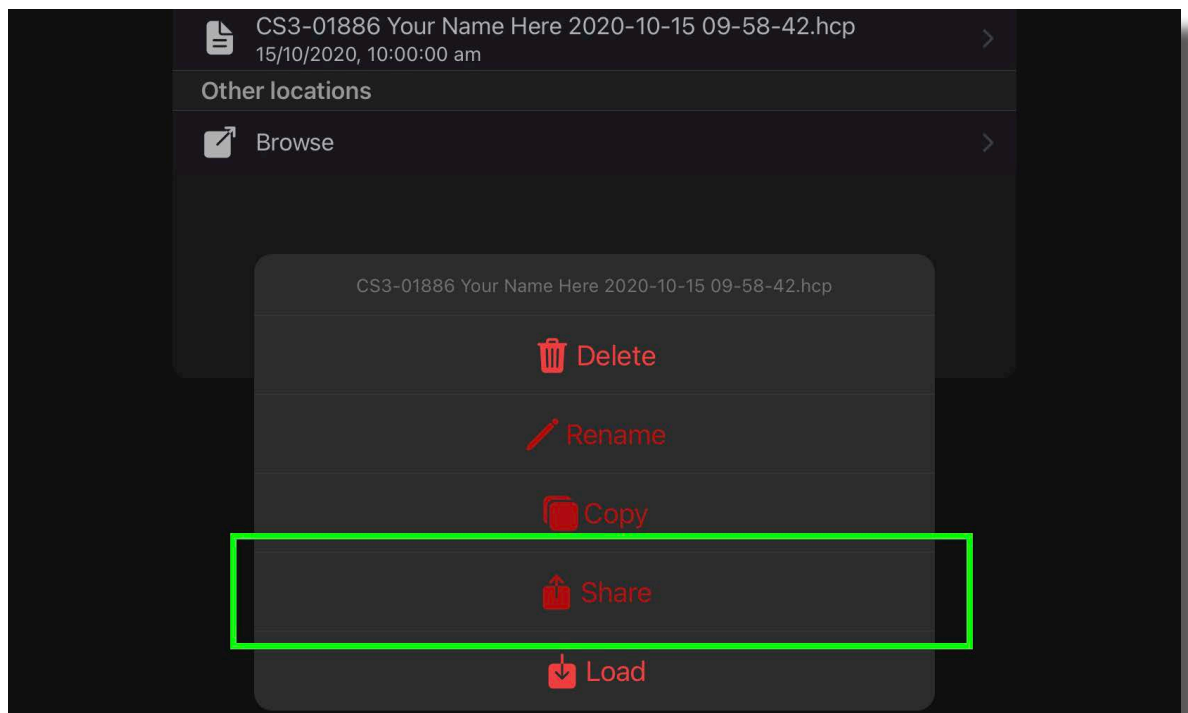

6.2.7 To email the calibration file, tap on the three horizontal lines and then tap on Browse Files.

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Wholesale Automatic Transmissions Pty Ltd
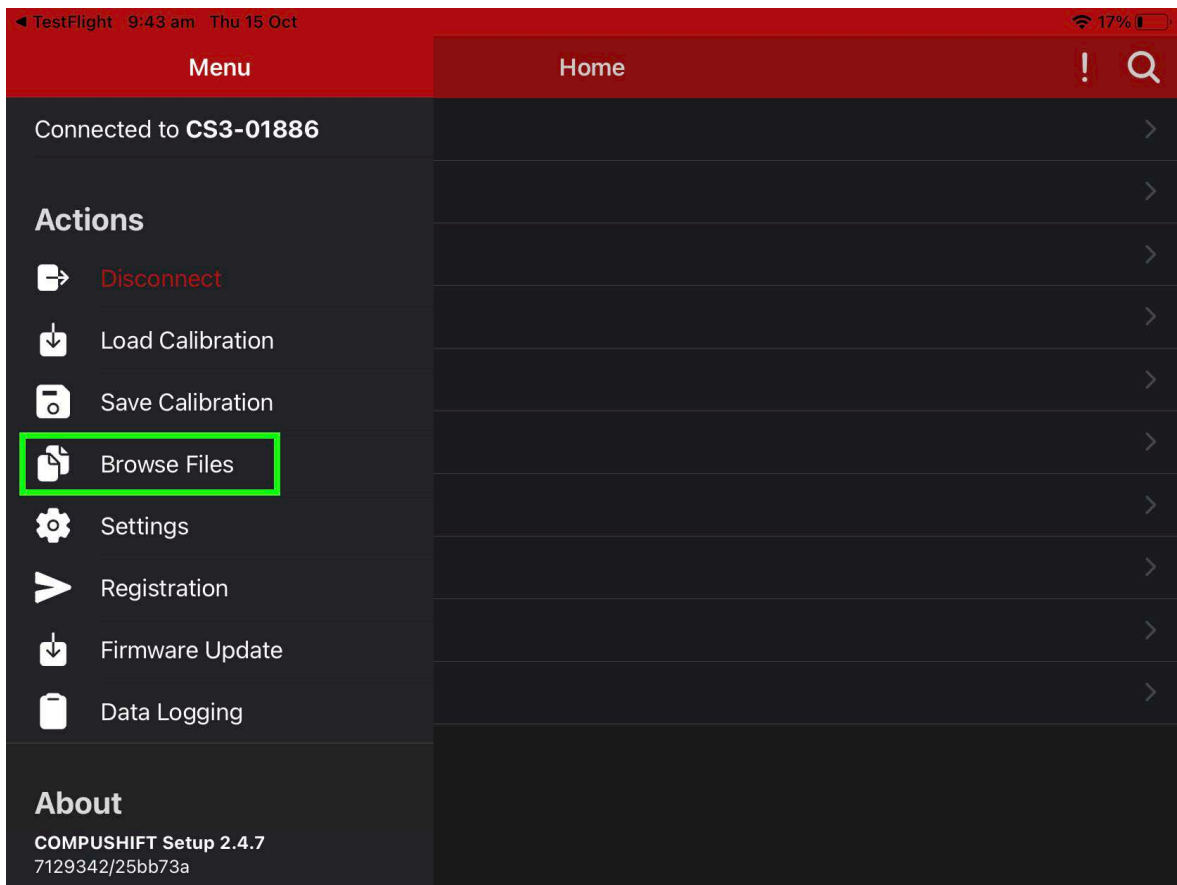
6.2.8   Locate the file in the list that you wish to email and tap on it once to bring up the action menu at the bottom of the screen.
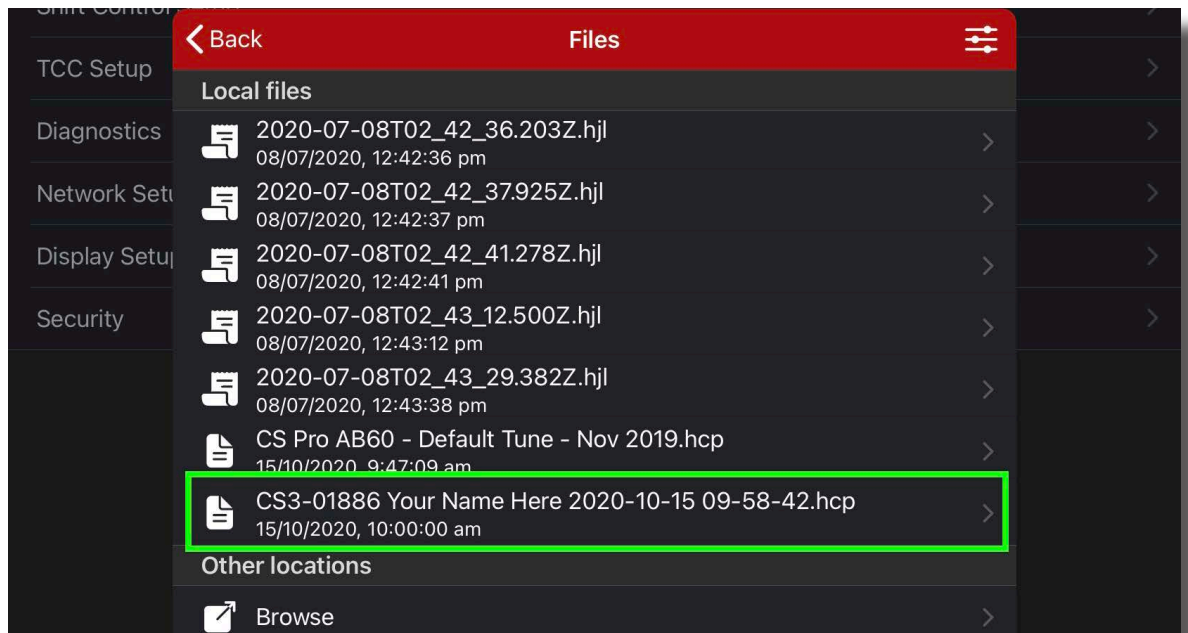
6.2.9   Tap on Share

6.2.10 Select the Email App you wish to use to email the file. This will open the email app and create a new email with the file as an attachment. Enter the email address of the recipient and any other relevant information required.
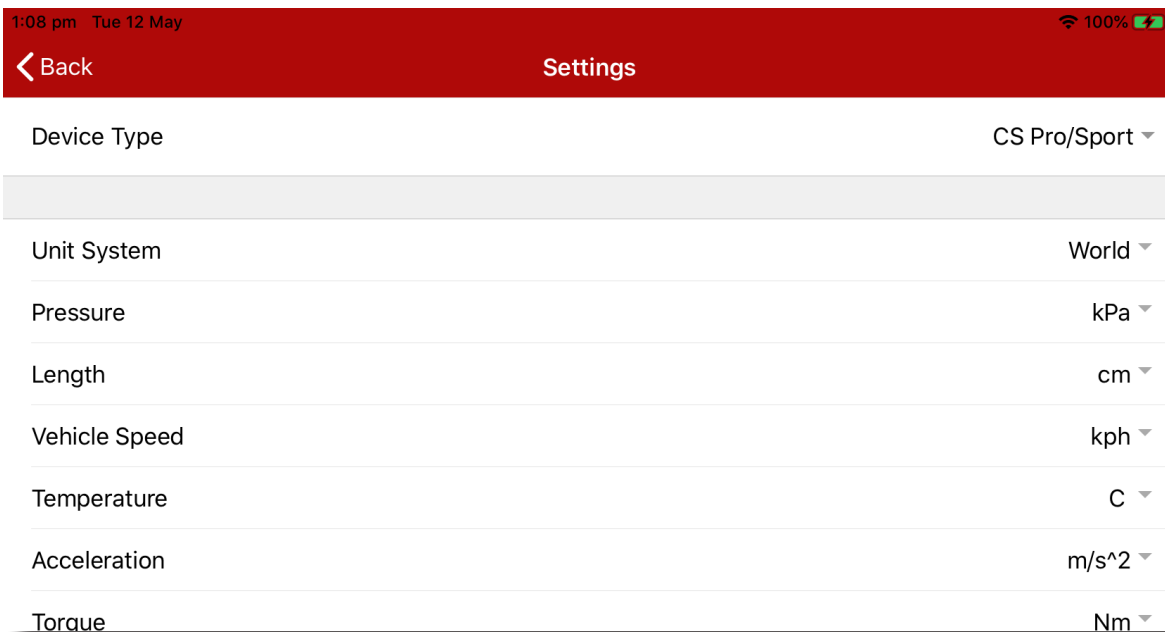
7. Adjusting the Measurement Units

This chapter covers making adjustments to the measurement units used throughout the COMPUSHIFT Setup App. The adjustments in this area won't affect the measurement units used on the COMPUSHIFT Display. For more information or to make adjustments to the display, see the chapter COMPUSHIFT Display Configuration.

1. Open the COMPUSHIFT Setup App and connect to your module

2. Select the 3 x horizontal lines at the top left of the screen once again and select **Settings**

9:22 am Fri 27 Nov		🛜 97% ▬
Menu	Home	! Q
Connected to **CS3-01886**		›
		›
Actions		›
➡️ Disconnect		›
⬇️ Load Calibration		›
💾 Save Calibration		›
📑 Browse Files		›
⚙️ Settings		›
➤ Registration		›
⬇️ Firmware Update		›
📋 Data Logging		›

3. Scroll down to Unit System

1:08 pm Tue 12 May	🛜 100% 🔋
‹ Back Settings	
Device Type	CS Pro/Sport ▾
Unit System	World ▾
Pressure	kPa ▾
Length	cm ▾
Vehicle Speed	kph ▾
Temperature	C ▾
Acceleration	m/s^2 ▾
Torque	Nm ▾

4. Here you can select a Unit System, which will configure all of the units for that given system.
    This unit systems we currently have pre-set are:

    World - All Metric measurements
    US - All Imperial measurements
    UK - Combination of Metric and Imperial
    SI - International System of Units

    If none of these systems suit your particular needs, you can tap on each parameter and choose the unit of measure for each value type. If at any stage you want to return to a specific unit of measure, simply tap on Unit System and select the system you wish to use. This will reset all units back to this system.

    Reminder that these settings only apply to the COMPUSHIFT Setup App and have no affect on the COMPUSHIFT Display.

Unit System	World ▾
Pressure	kPa ▾
Length	cm ▾
Vehicle Speed	kph ▾
Temperature	C ▾
Acceleration	m/s^2 ▾
Torque	Nm ▾
Mass	kg ▾
Current	mA ▾

5. Here we have a list of the possible units of measure available for each unit type.

Unit Type	Imp.	Metric	Other
Pressure	PSI	kPa or Bar	
Length	inch	cm	
Vehicle Speed	mph	kph or m/s	
Temperature	F	C	
Acceleration	ft/s^2	m/s^2	g
Torque	ft-lb	Nm	
Mass	lb	kg	
Current			mA or A

# 8. COMPUSHIFT Display Configuration

The primary purpose of the COMPUSHIFT Display is to provide a quick and easy readout of the transmission information so that you know what your transmission is doing while you are driving. While it is helpful while driving, quite often it can also satisfy Australian Road Regulations.

The COMPUSHIFT Display can access all the same information available to the COMPUSHIFT Setup App. The primary difference being you don't have to touch your mobile device in order to see the information about your transmission.

We will be discussing configuring the dashboard layout and the unit system for the COMPUSHIFT Display from the COMPUSHIFT Setup App. Please refer to the Installation guide for how to use the COMPUSHIFT Display.

In some cases, your layout may be pre-configured by a calibration file that has been supplied to you. If you are not using a calibration file or wish to alter some of the layout, please open the COMPUSHIFT Setup App on your mobile device and connect to the COMPUSHIFT Module and navigate to the Home Page.

8.0.1 Tap on Display Setup

Copyright © 2021
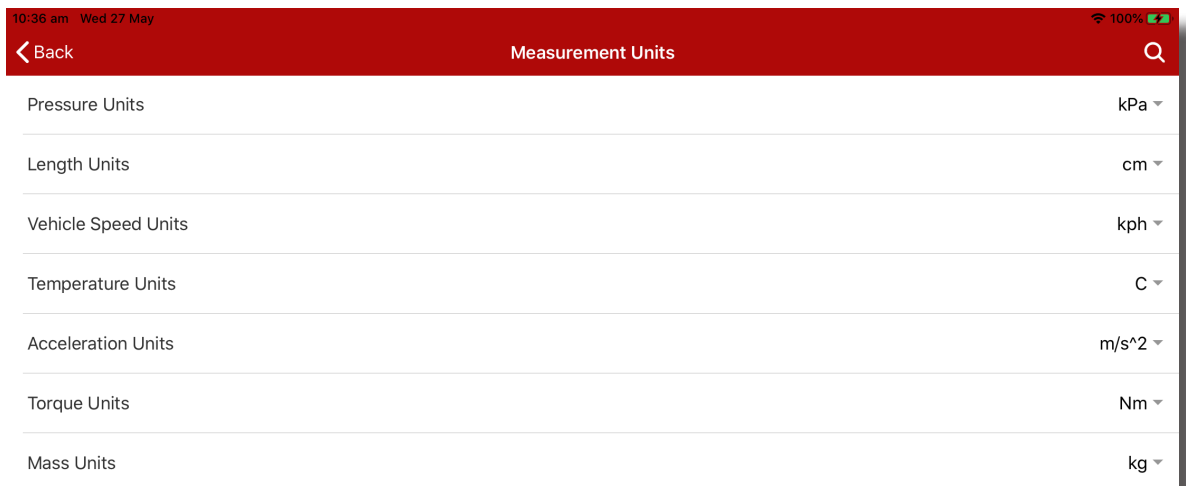Wholesale Automatic Transmissions Pty Ltd
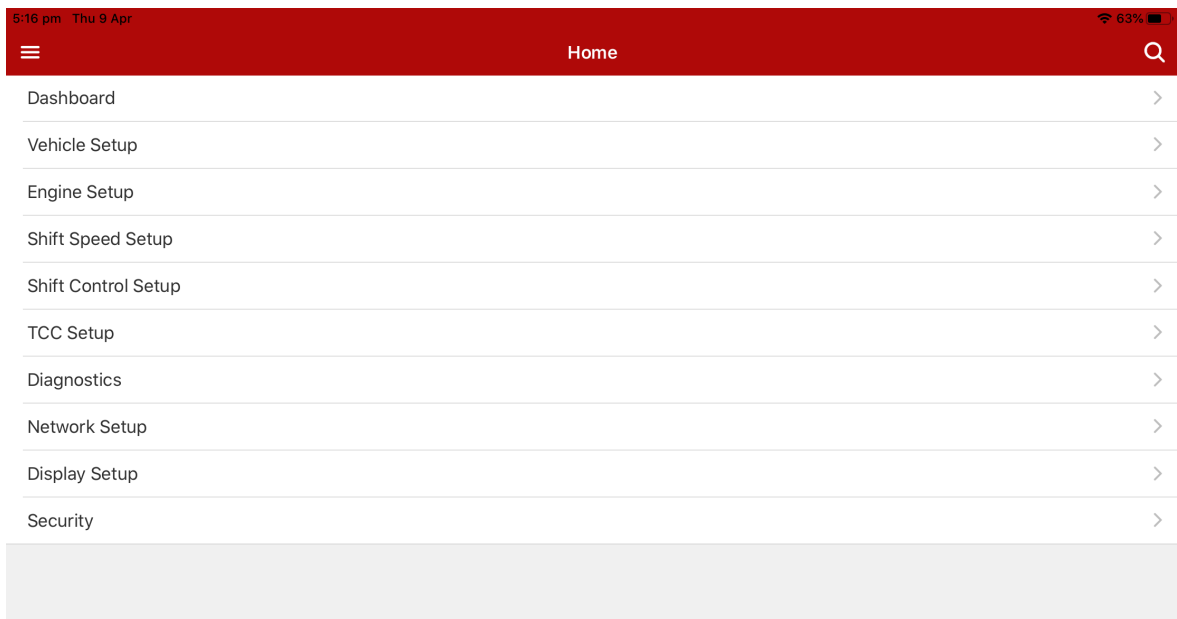
8.0.2   This page provides the ability to adjust the Brightness and Contrast of the COMPUSHIFT Display. You can also adjust the Red, Green, Blue levels to achieve a colour that might suit you better.

10:36 am Wed 27 May	📶 100% 🔋
Back	**Display Setup** 🔍
Brightness	100 % ⬇️ ⬆️
Contrast	50 % ⬇️ ⬆️
Red Level	100 % ⬇️ ⬆️
Green Level	100 % ⬇️ ⬆️
Blue Level	100 % ⬇️ ⬆️
Measurement Units Set metric or imperial units for the display	›
Gauge Screens Setup Configure gauges on each screen	›
Reset Display Resets display to factory settings.	
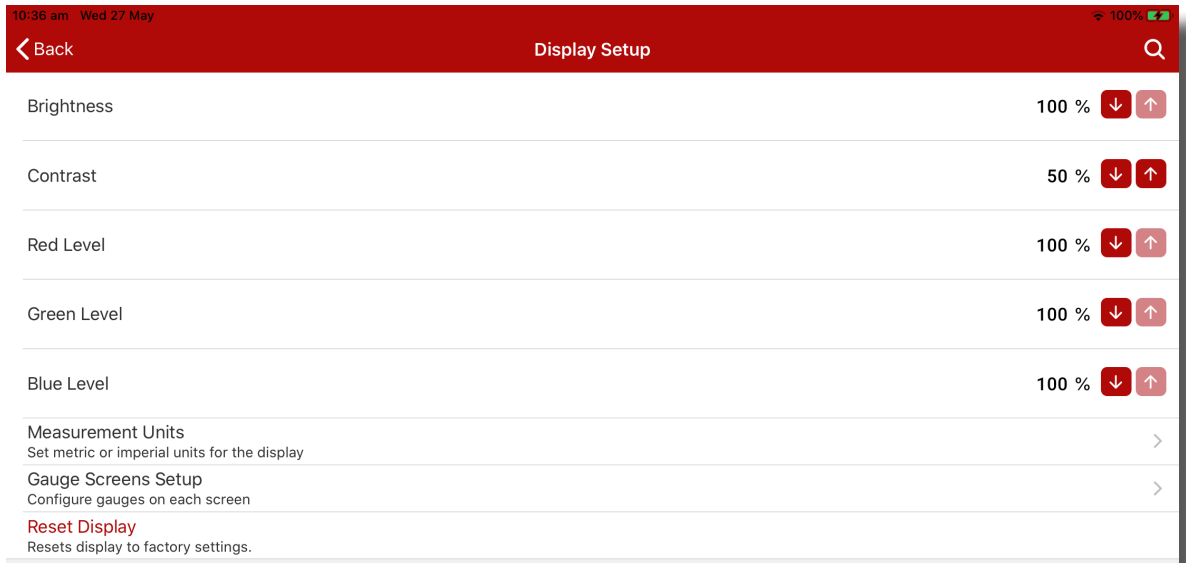
8.0.3   Tap on Measurement Units to show the list of possible units that the COMPUSHIFT Display can show and the unit of measure that the value will be displayed as. Tap on any of the unit types to bring up the list of units available for that type. Tap on the unit of measure you wish to use.

Unit Type	Imp.	Metric	Other
Pressure	PSI	kPa or Bar	
Length	inch	cm	
Vehicle Speed	mph	kph or m/s	
Temperature	F	C	
Acceleration	ft/s^2	m/s^2	g
Torque	ft-lb	Nm	
Mass	lb	kg	

10:36 am Wed 27 May	📶 100% 🔋
Back	**Measurement Units** 🔍
Pressure Units	kPa ▾
Length Units	cm ▾
Vehicle Speed Units	kph ▾
Temperature Units	C ▾
Acceleration Units	m/s^2 ▾
Torque Units	Nm ▾
Mass Units	kg ▾

8.0.4 Tap < Back to return to Display Setup screen. Tap on Gauge Screens Setup. Here you can alter the layout of the COMPUSHIFT Display. There are 4 possible screens on the Display, with Screen 1 being the default screen when the COMPUSHIFT is first powered up.
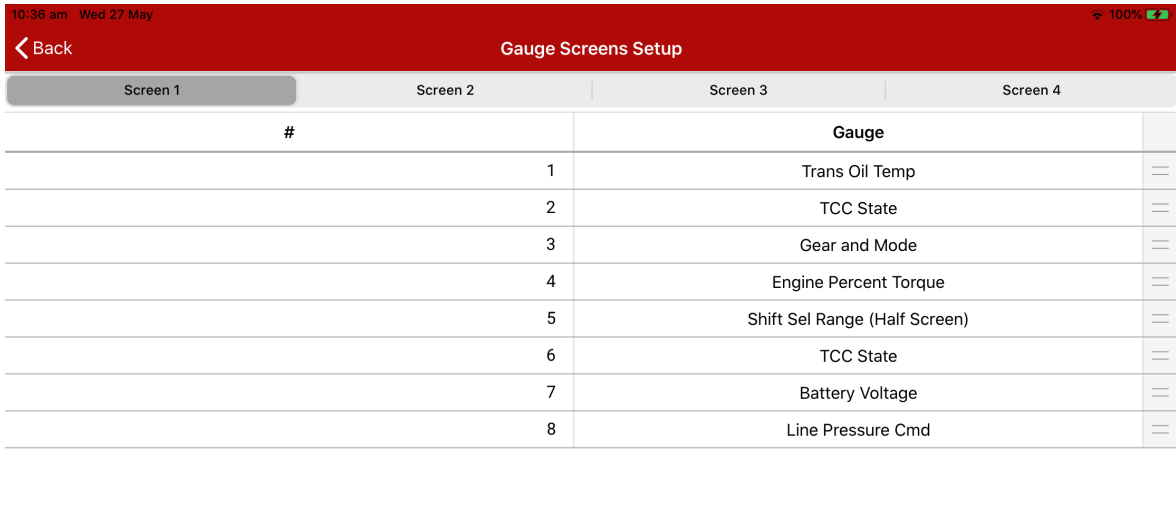
**8.0.5** Tap on each layout location (1 to 8) to show a list of parameters to choose from.
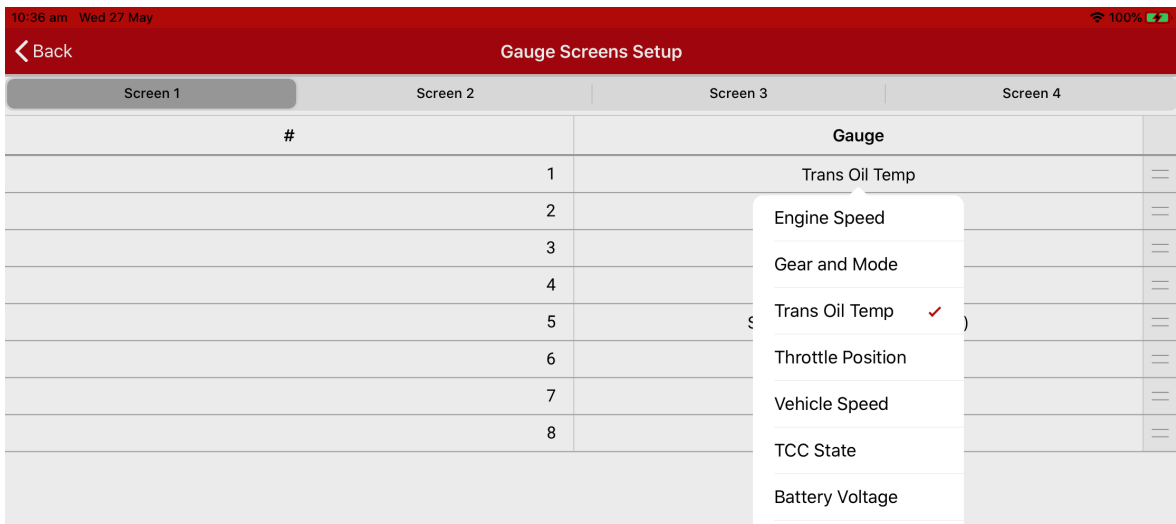
8.0.6 The parameter labeled Shift Sel Range (Half Screen) will show the Shifter Position in large letters making it easier to see. This parameter can only be selected in position 1 or 5. When location 1 is selected, parameters in 2, 3, and 4 will be ignored. When location 5 is selected, parameters in 6, 7 and 8 will be ignored.

8.0.7 There are three parameters that can be viewed as full screen readouts. These parameters are Engine Speed (Full Screen), Trans Oil Temp (Full Screen), Vehicle Speed (Full Screen).

8.0.8 An example of the 3 ways the screens can be configured:
8 x Parameter Readout

4 x Parameter Readout plus Half Screen Shifter Selected Range
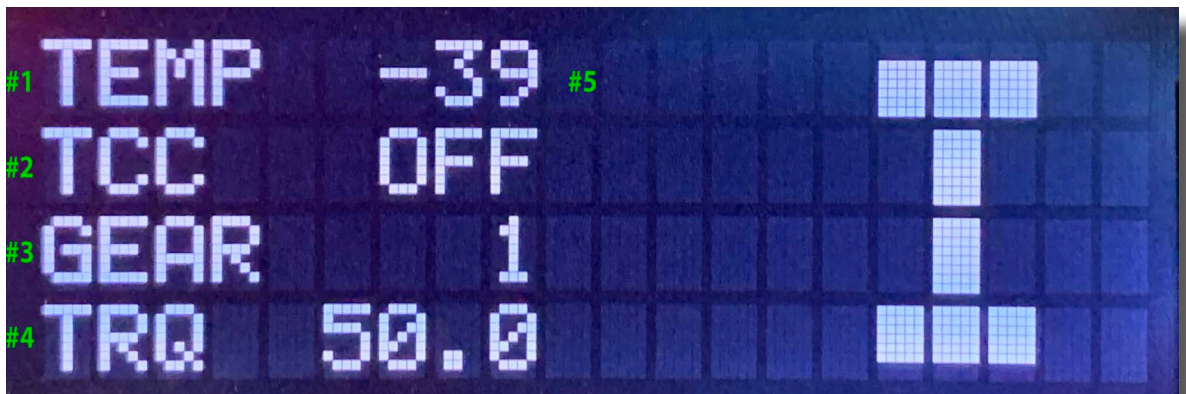
1 x Full Screen Parameter Readout (Engine Speed, Trans Oil Temp, Vehicle Speed)
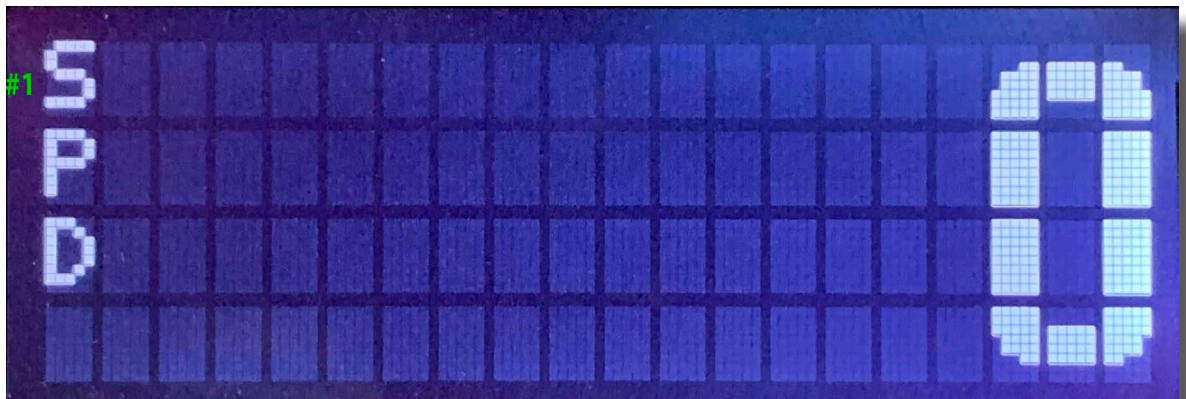
Index of Terms - Page Location

Also available via our website are a range of COMPUSHIFT Tutorial Videos. These videos also cover installation and inital setup of the various transmissions compatible with the HGM COMPUSHIFT Transmission Control System.

Point your camera at the QR code below to follow the link to the COMPUSHIFT Tutorial Videos page. If for some reason the link doesn't work, you can type into your browser https://automatictransmission.com.au/technical-support/compushift-tutorials/