



Nomad Lock-Up Kit Installation Instructions

Suitable for:



Toyota LandCruiser 80 Series with A442F 4 Speed Auto

WITH THE FOLLOWING ENGINES:

1HD-T (1992 - 1998)

1HD-FT (1995 - 1998)

1FZ-FE (1992 - 1998)

Please read through all of the instructions carefully before proceeding. If any of the information does not appear correct or the diagrams don't match your vehicle, please contact Wholesale Automatic Transmissions or your place of purchase.

Table of Contents

1. Parts List.....	3
2. Information to note prior to starting.....	4
2.1. Electrical Safety.....	4
3. Installing the Nomad Lock-Up Kit	7
3.1. Recommended Mounting Location	7
3.2. Accessing OEM Wiring	7
3.3. Installing the Nomad Harness - 1HD-T & 1HD-FT 4.2L Diesel 1992 - 1998, and 1FZ- FE Petrol 1992 - 1994	8
3.4. TCM Wiring - Diesel 1992 - 1998 & Petrol 1992 - 1994	9
3.5. Installing the Nomad Harness - 1FZ-FE 4.5L Petrol 1995 - 1998	14
3.6. TCM Wiring - 1FZ-FE 4.5L Petrol 1995 - 1998	15
3.7. Mounting Nomad Module and Resistor	20
3.8. Installing the Harness in the Cabin - OEM Switch	21
3.9. Final Tidy Up	21
3.10. Lock-Up Module Bypass.....	22
3.11. Installing the Nomad LockUp app on Apple Devices	23
3.12. Troubleshooting Installation on Apple Devices.....	25
3.13. Installing the Nomad LockUp app on Android™ Devices	27
3.14. Troubleshooting Installation on Android Devices	29
4. Setup Wizard	31
4.1. First Connection and Firmware Update	31
4.2. Vehicle Configuration.....	33
4.3. Throttle Position Sensor Calibration	37

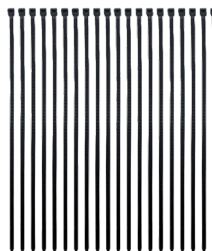
1. Parts List

Nomad Lock-Up
ModuleNomad Lock-Up
Main HarnessLC80 OEM Style
Momentary SwitchNomad OEM Switch
Loom Adapter

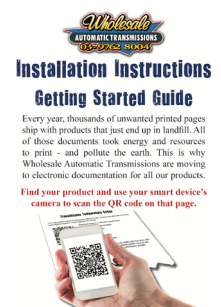
Resistor Loom - 12P

Nomad Analogue Interface
LoomModule Bypass
Connector2 x Long Metal Self
Tapping Screws2 x Short Metal Self
Tapping Screws4 x 30mm Pieces of
Black Heatshrink

20 x Cable Ties



Getting Started Manual



Estimated Install Time: 2 Hours

2. Information to note prior to starting

- 2.0.1 These instructions have all the information necessary to install the Nomad Lockup Kit in the Diesel and Petrol variants of the 80 Series LandCruiser.
 - 2.0.1.1 The wiring diagrams for 1HD-T & 1HD-FT 4.2L Diesel vehicles with a build date between 1992 - 1998, and 1FZ-FE Petrol vehicles with a build date between 1992 - 1994 start on page 8.
 - 2.0.1.2 The wiring diagrams for 1FZ-FE 4.5L Petrol vehicles with a build date between 1995 - 1998 start on page 14.
- 2.0.2 Once the module is wired up the setup instructions for both vehicles are the same.

2.1. Electrical Safety

- 2.1.1 Disconnect all vehicle power sources including batteries, chargers and solar systems before starting the installation process.
- 2.1.2 The Load Resistor **MUST** be mounted to a metal surface clear of carpet, plastic or any material that could be damaged by heat. This resistor can reach temperatures over 50°C while in operation.



- 2.1.3 You can mount the Nomad module anywhere inside or outside the vehicle. The Nomad Module is IP68 rated so it can be mounted in the engine bay, however it must be away from heat sources such as turbos, exhausts and the engine block. Also, take into consideration that the further away from the driver the module is mounted the lower the Bluetooth signal strength will be.

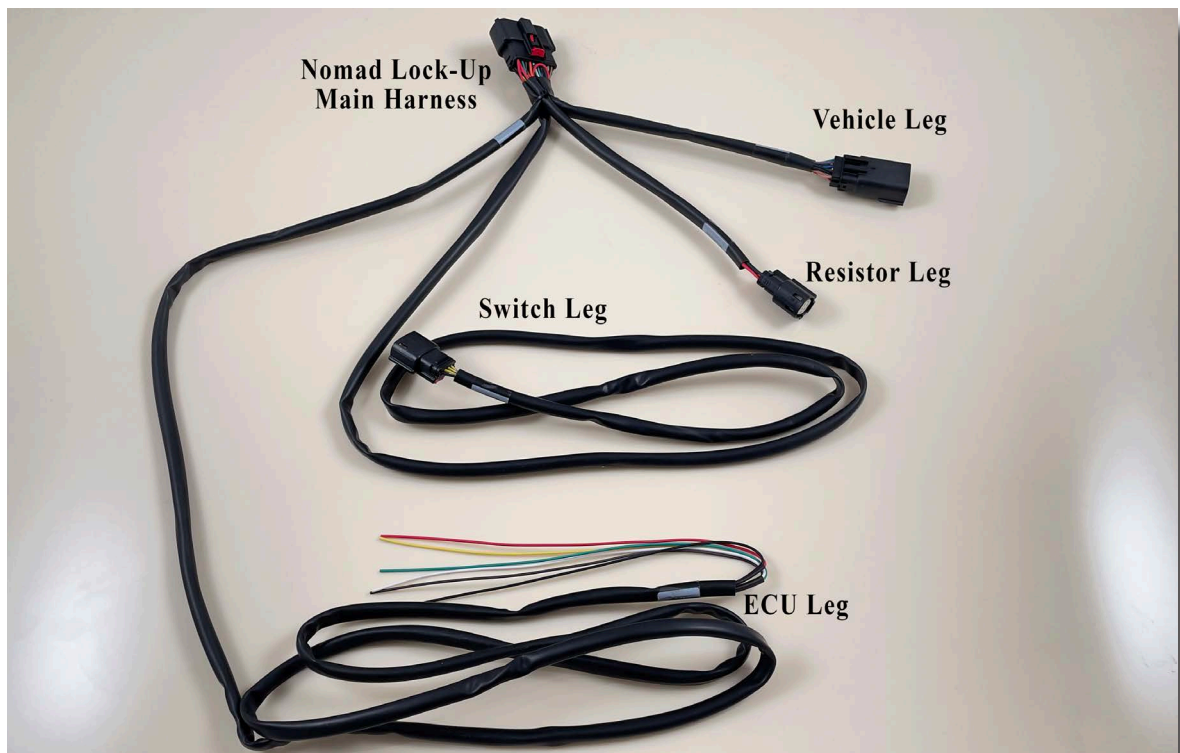
We recommend mounting the Nomad module inside the cabin.



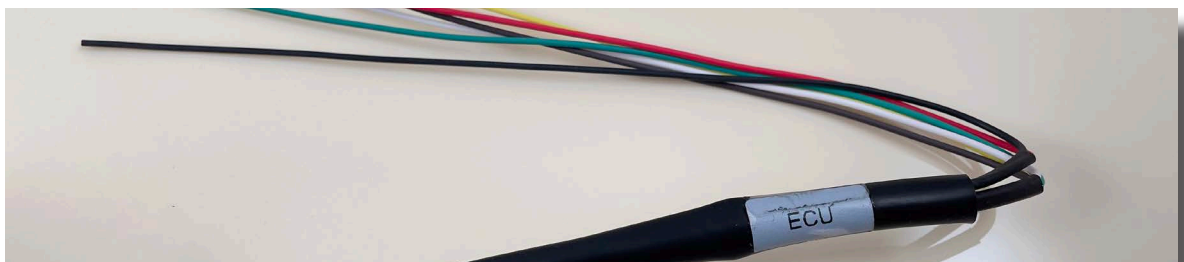
- 2.1.4 The installation of this kit requires the fitter to have good knowledge of 12 volt wiring, an understanding of wiring schematics and good experience with soldering wires together. If you don't feel comfortable doing any of these tasks please contact one of our local Authorised Fitting Agents or your local Auto Electrician to have the unit installed professionally.

2.1.5 Identifying the Nomad Lock-Up Kit Parts

- 2.1.6 There are four (4) legs on the Nomad Lock-Up Harness (TCLU-HARNESS) that you need to be aware of. These legs define the purpose of the wires contained within.

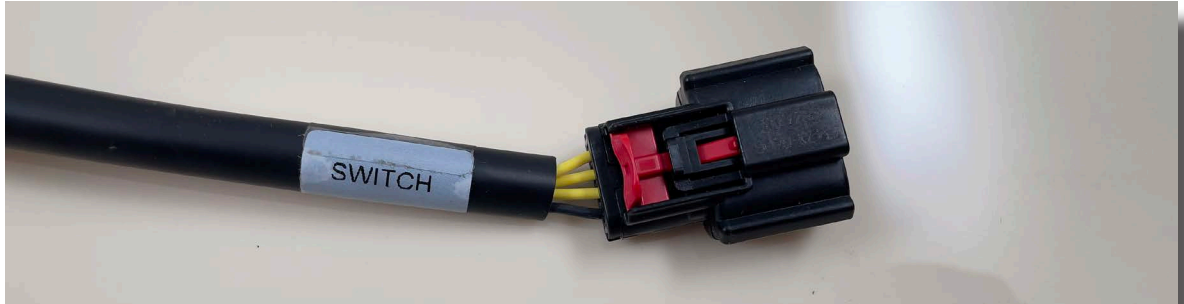


- 2.1.7 **ECU Leg**
This leg contains the wires that will be wired into the OEM Transmission Control Module (TCM). These wires connect to the Lock-Up Solenoid inside the transmission as well as picking up 12v+ Switched Power and Ground. If you feel there is too much wire on the ECU leg it can be trimmed back to a more suitable length. Just be conservative with your trimming as we don't recommend extending these wires.



2.1.8 Switch Leg

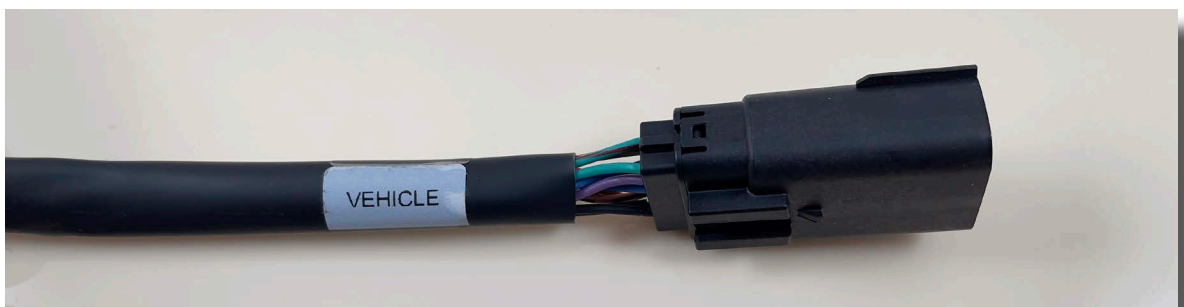
This leg runs to where you plan to install the manual lock-up switch. This may use either a OEM style push switch or a Carling style rocker switch, depending on your vehicle's dash configuration.

**2.1.9 Resistor Leg**

The resistor leg is one of the smaller legs of the Nomad harness. It provides a universal connection to the load resistor. This load resistor will vary depending on the transmission the Nomad Lock-Up Kit is controlling.

**2.1.10 Vehicle Leg**

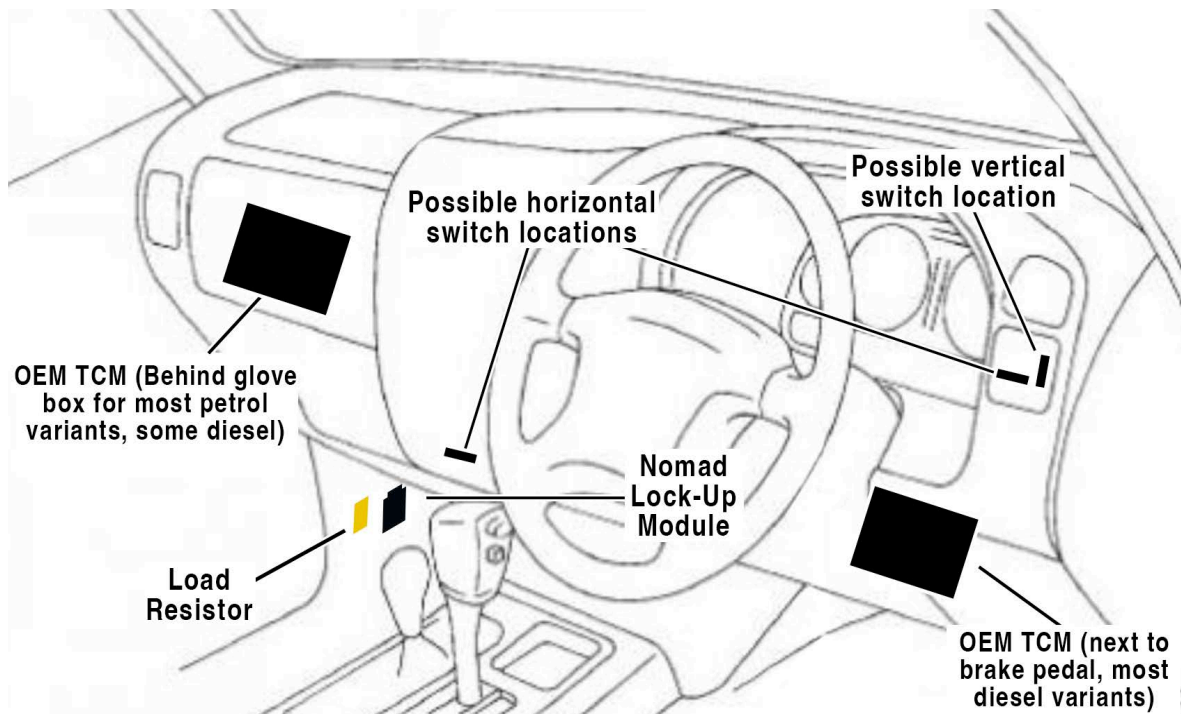
Lastly, the vehicle leg. This leg is for the wires that will connect to various signals in your vehicle, depending on what vehicle you are installing the Nomad Lock-Up kit into. This may include Throttle Position Sensors (TPS), Vehicle Speed Sensors (VSS), or the vehicle's internal CAN bus.



3. Installing the Nomad Lock-Up Kit

3.1. Recommended Mounting Location

- 3.1.1 While you are free to mount the various parts of the Nomad Lock-Up kit anywhere in your vehicle that you feel is the most appropriate, the installation instructions will assume you are mounting the parts in our recommended locations.



3.2. Accessing OEM Wiring

****Disconnect all vehicle power sources including starting and auxiliary batteries, chargers and solar systems before starting the installation process.****

- 3.2.1 There are two different possible locations for the Transmission Control Module (TCM), depending on your vehicle configuration.

Most Petrol vehicles have the TCM hidden behind the glove box; in order to access the factory wiring you will need to remove the glove box and the plastic cover behind it.

Most Diesel vehicles have the TCM next to the brake pedal, in the area where the clutch pedal would be if the vehicle was equipped with a manual transmission.

However, there are many variants to these vehicles, so if you aren't able to find the TCM in the expected location then please check the other location.

3.3. Installing the Nomad Harness - 1HD-T & 1HD-FT 4.2L Diesel 1992 - 1998, and 1FZ-FE Petrol 1992 - 1994

3.3.1 This section applies to all the earlier 80 Series variants, as well as the later 1HD-FT diesel powered 80 Series.

3.3.1.1 Skip to page 14 if you have a petrol fueled vehicle with a build date from 1995 to 1998, with the 1FZ-FE engine.

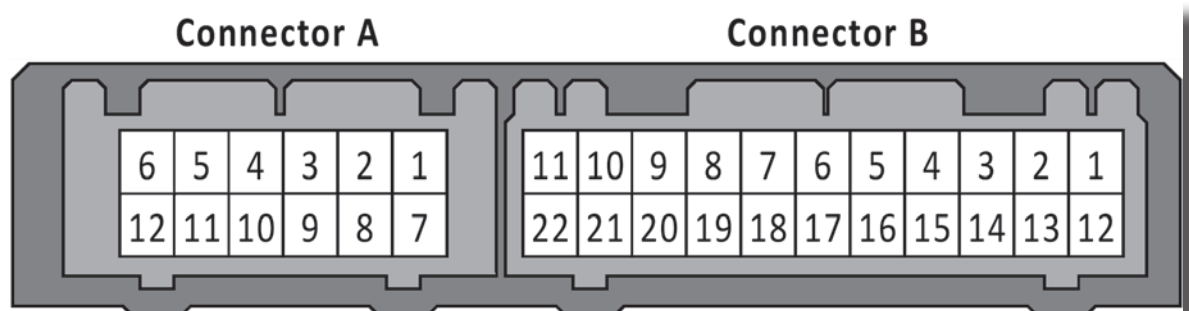
3.3.2 Some vehicle variants, especially the earlier ones, may use slightly different wire colours than what is shown on the wiring diagram on the following page. These vehicles all have the same TCM pinout for connections that the Nomad Lockup Kit requires, so it is important to match the pin locations shown even if the wire colours are slightly different.

Please contact Wholesale Automatics technical support team if you require assistance identifying the correct wires to tap into.

3.3.3 The TCM is most likely mounted next to the brake pedal in these vehicle variants, on the driver's side of the vehicle with 2 connectors plugged into it. However, we have seen some vehicles with the TCM mounted behind the glove box, so if you can't find it near the brake pedal in your vehicle we would recommend checking there.

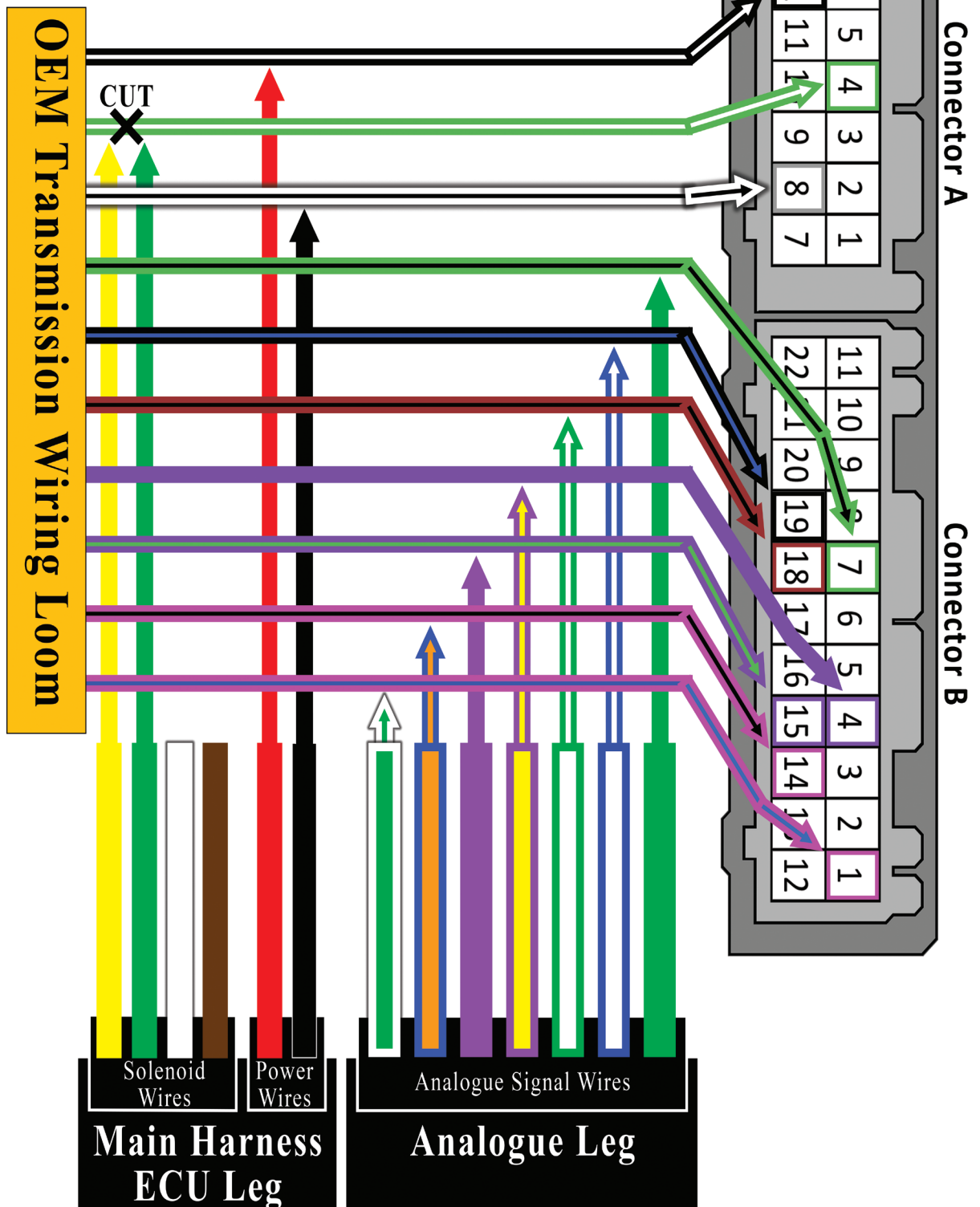
Make sure there are no power sources connected to the vehicle (including auxiliary batteries and solar panels) before removing any of these connectors.

The wiring diagram on the following page shows the TCM connectors when looking at them from the harness side.



3.4. TCM Wiring - Diesel 1992 - 1998 & Petrol 1992 - 1994

Some vehicle variants, especially earlier ones, may have different wire colours but the pinout is the same. It is important to match the pin locations shown. Please contact Wholesale Automatics if you require assistance.

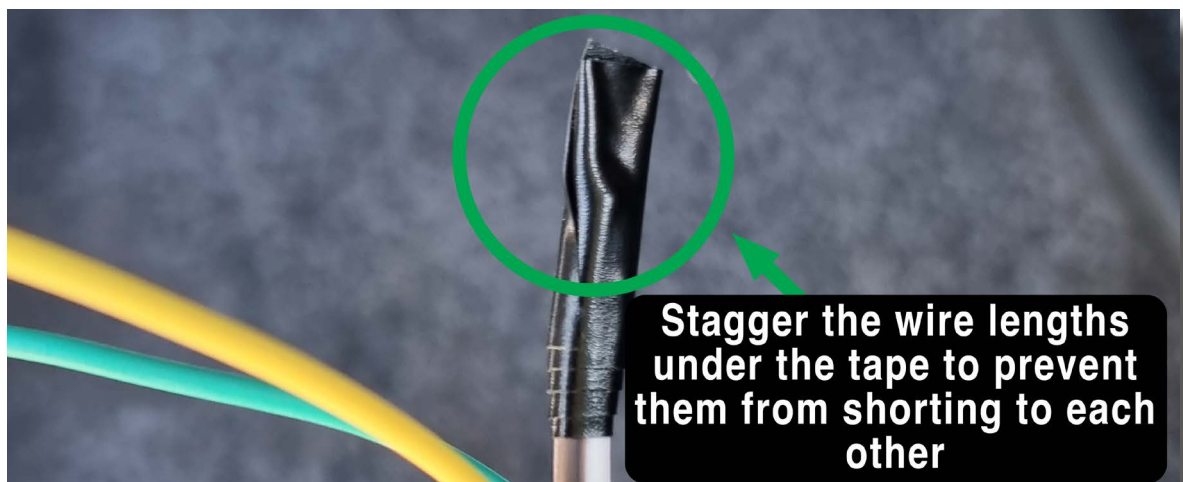


- 3.4.1 We suggest working on the TCM wiring one connector at a time. You can do these in any order, but make sure all power sources in the vehicle are disconnected before unplugging any of the connectors.
- 3.4.2 Please DO NOT use wire splicers, quick connects or scotch locks to join these wires. They MUST be soldered for reliable operation.



- 3.4.3 The Brown and White wires from the Solenoid Wires group are not required for controlling the Torque Converter Clutch (TCC) in these vehicle variants. These need to be secured in such a way that they cannot short to ground or to each other.

Our recommended way of doing this is to cut back these two wires at slightly different lengths, then use a piece of electrical tape to keep these wires together and prevent them from shorting.



3.4.4 **Soldering to Ground wire in pin A8**

- 3.4.4.1 Select the OEM wire in pin A8. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.4.2 Select the Black wire from the Power Wires group. Solder this wire to the OEM wire in pin A8.
- 3.4.4.3 Use electrical tape to insulate the join and prevent shorting.

3.4.5 Soldering to Power wire in pin A12

- 3.4.5.1 Select the OEM wire in pin A12. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.5.2 Select the Red wire from the Power Wires group. Solder this wire to the OEM wire in pin A12.
- 3.4.5.3 Use electrical tape to insulate the join and prevent shorting.

3.4.6 Soldering to Solenoid Wire in pin A4

- 3.4.6.1 Select the OEM wire in pin A4 and cut it approximately 5cm from the connector. Strip about 1cm of insulation from each end to expose the copper.
- 3.4.6.2 Locate the Green wire in the Solenoid Wires group and slide one (1) piece of 2mm black heat shrink onto the wire. Solder the Green wire to the TCM side of the OEM cut wire in pin A4. Slide the heat shrink over the join and use a heat source to shrink it.
- 3.4.6.3 Locate the Yellow wire in the Solenoid Wires group and slide one (1) piece of 2mm black heat shrink onto the wire. Solder the Yellow wire to the transmission side of the OEM cut wire in pin A4. Slide the heat shrink over the join and use a heat source to shrink it.

3.4.7 Soldering to Signal wire in pin B1

- 3.4.7.1 Select the OEM wire in pin B1. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.7.2 Select the White-Green wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B1.
- 3.4.7.3 Use electrical tape to insulate the join and prevent shorting.

3.4.8 Soldering to Signal wire in pin B4

- 3.4.8.1 Select the OEM wire in pin B4. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.8.2 Select the Violet-Yellow wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B4.
- 3.4.8.3 Use electrical tape to insulate the join and prevent shorting.

3.4.9 Soldering to Signal wire in pin B7

- 3.4.9.1 Select the OEM wire in pin B7. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.9.2 Select the Green wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B7.
- 3.4.9.3 Use electrical tape to insulate the join and prevent shorting.

3.4.10 Soldering to Signal wire in pin B14

- 3.4.10.1 Select the OEM wire in pin B14. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.10.2 Select the Blue-Orange wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B14.
- 3.4.10.3 Use electrical tape to insulate the join and prevent shorting.

3.4.11 Soldering to Signal wire in pin B15

- 3.4.11.1 Select the OEM wire in pin B15. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.11.2 Select the Violet wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B15.
- 3.4.11.3 Use electrical tape to insulate the join and prevent shorting.

3.4.12 Soldering to Signal wire in pin B18

- 3.4.12.1 Select the OEM wire in pin B18. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.12.2 Select the Green-White wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B18.
- 3.4.12.3 Use electrical tape to insulate the join and prevent shorting.

3.4.13 Soldering to Signal wire in pin B19

- 3.4.13.1 Select the OEM wire in pin B19. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.4.13.2 Select the Blue-White wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B19.
- 3.4.13.3 Use electrical tape to insulate the join and prevent shorting.

3.4.14 Reinstall all connectors into the TCM.**3.4.15 Use electrical tape and the included cable ties to secure the Nomad Harness ECU Leg and Analogue Interface Loom to the TCM wiring harness.**

3.5. Installing the Nomad Harness - 1FZ-FE 4.5L Petrol 1995 - 1998

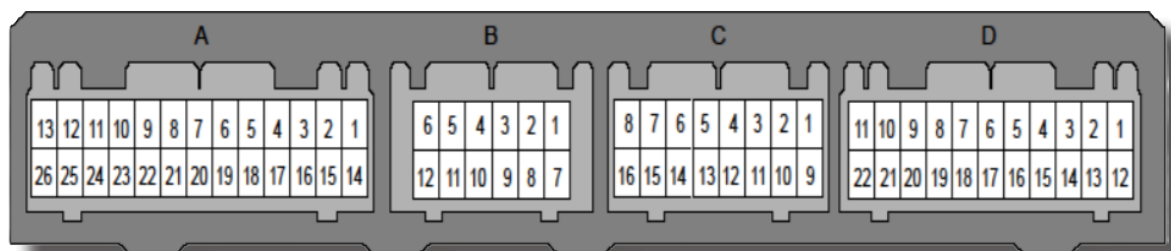
3.5.1 **This section applies to the 1FZ-FE powered 80 Series LandCruiser**
This covers petrol fueled vehicles with build dates from 1995 to 1998.

3.5.1.1 Go back to page 8 if you have a diesel vehicle with the 1HD-T or 1HD-FT engine, or a petrol vehicle with the 1FZ-FE engine and a build date from 1992 - 1994.

3.5.2 The TCM is most likely mounted behind the glove box in this vehicle variant, hidden behind the plastic panel with 4 connectors plugged into it. However, we have seen some petrol vehicles with the TCM mounted next to the brake pedal under the dashboard, so if you can't find it behind the glove box in your vehicle we would recommend checking there.

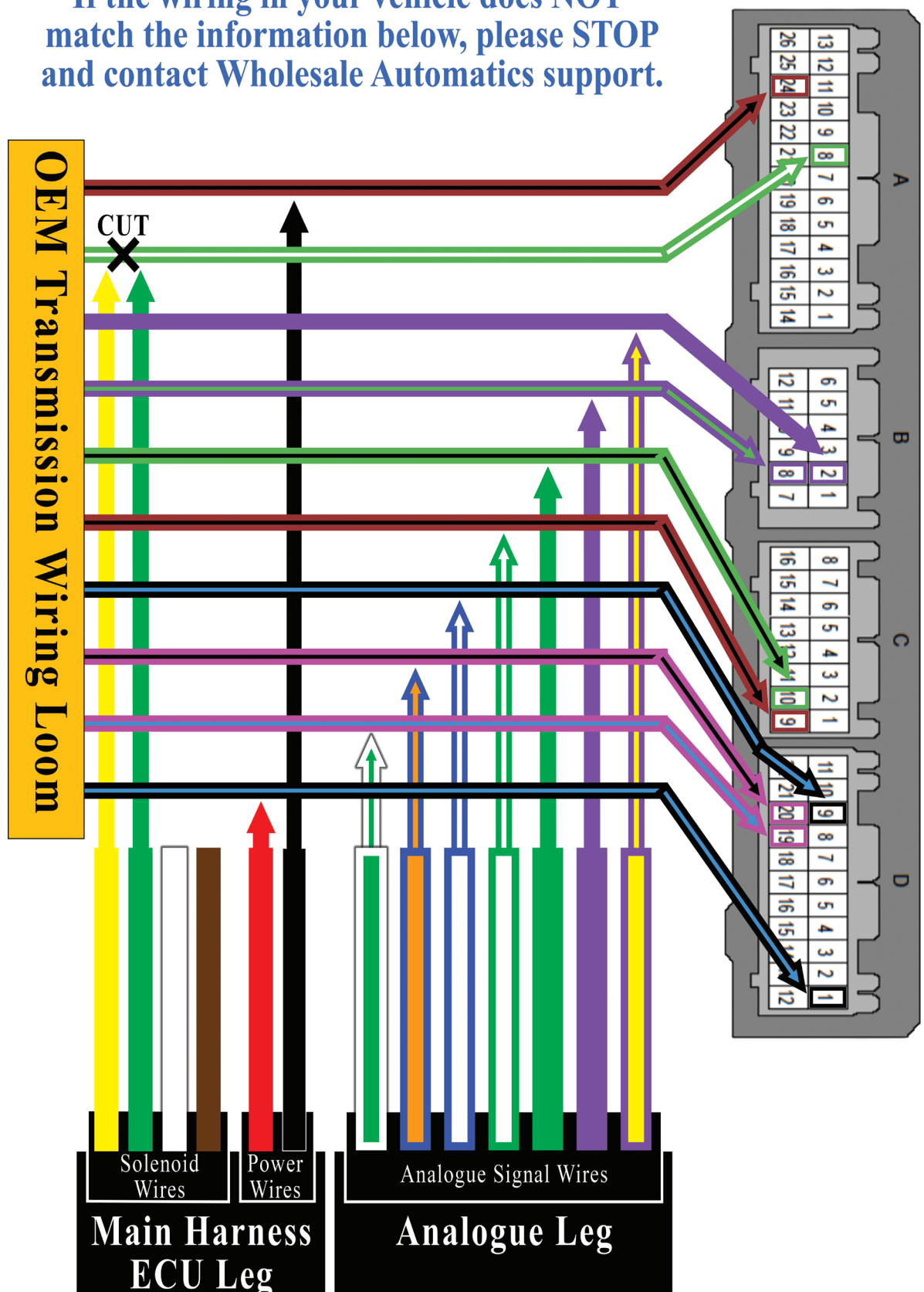
Make sure there are no power sources connected to the vehicle (including auxiliary batteries and solar panels) before removing any of these connectors.

The wiring diagram on the following page shows the TCM connectors when looking at them from the harness side.



3.6. TCM Wiring - 1FZ-FE 4.5L Petrol 1995 - 1998

If the wiring in your vehicle does NOT match the information below, please STOP and contact Wholesale Automatics support.

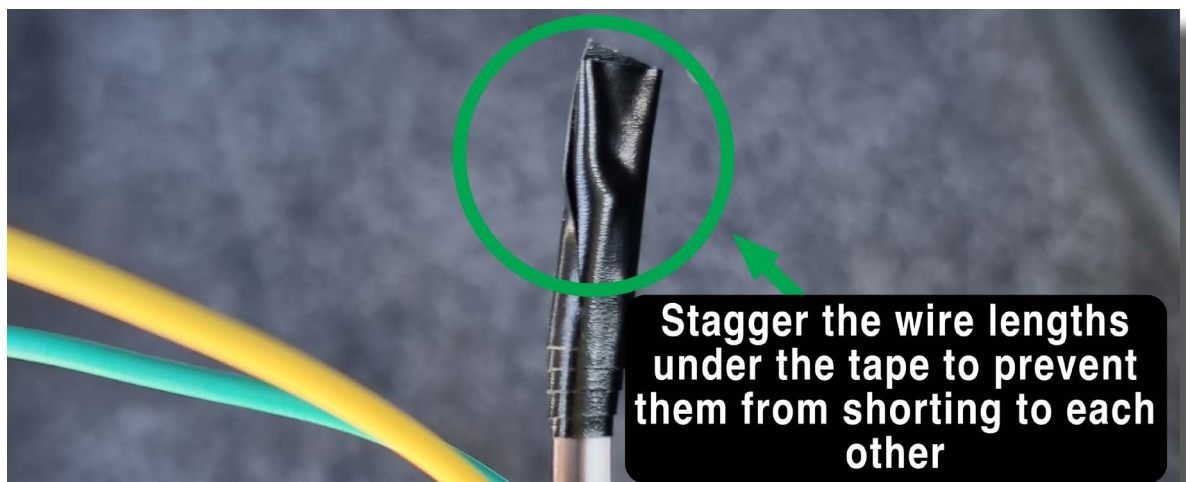


- 3.6.1 We suggest working on the TCM wiring one connector at a time. You can do these in any order, but make sure all power sources in the vehicle are disconnected before unplugging any of the connectors.
- 3.6.2 Please DO NOT use wire splicers, quick connects or scotch locks to join these wires. They MUST be soldered for reliable operation.



- 3.6.3 The Brown and White wires from the Solenoid Wires group are not required for controlling the Torque Converter Clutch (TCC) in this vehicle variant. These need to be secured in such a way that they cannot short to ground, or to each other.

Our recommended way of doing this is to cut back these two wires at slightly different lengths, then use a piece of electrical tape to keep these wires together and prevent them from shorting.



3.6.4 **Soldering to Ground wire in pin A24**

- 3.6.4.1 Select the OEM wire in pin A24. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.4.2 Select the Black wire from the Power Wires group. Solder this wire to the OEM wire in pin A24.
- 3.6.4.3 Use electrical tape to insulate the join and prevent shorting.

3.6.5 Soldering to Solenoid Wire in pin A8

- 3.6.5.1 Select the OEM wire in pin A8 and cut it approximately 5cm from the connector. Strip about 1cm of insulation from each end to expose the copper.
- 3.6.5.2 Locate the Green wire in the Solenoid Wires group and slide one (1) piece of 2mm black heat shrink onto the wire. Solder the Green wire to the TCM side of the OEM cut wire in pin A8. Slide the heat shrink over the join and use a heat source to shrink it.
- 3.6.5.3 Locate the Yellow wire in the Solenoid Wires group and slide one (1) piece of 2mm black heat shrink onto the wire. Solder the Yellow wire to the transmission side of the OEM cut wire in pin A8. Slide the heat shrink over the join and use a heat source to shrink it.

3.6.6 Soldering to Signal wire in pin B2

- 3.6.6.1 Select the OEM wire in pin B2. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.6.2 Select the Violet-Yellow wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B2.
- 3.6.6.3 Use electrical tape to insulate the join and prevent shorting.

3.6.7 Soldering to Signal wire in pin B8

- 3.6.7.1 Select the OEM wire in pin B8. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.7.2 Select the Violet wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin B8.
- 3.6.7.3 Use electrical tape to insulate the join and prevent shorting.

3.6.8 Soldering to Signal wire in pin C9

- 3.6.8.1 Select the OEM wire in pin C9. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.8.2 Select the Green-White wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin C9.
- 3.6.8.3 Use electrical tape to insulate the join and prevent shorting.

3.6.9 Soldering to Signal wire in pin C10

- 3.6.9.1 Select the OEM wire in pin C10. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.9.2 Select the Green wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin C10.
- 3.6.9.3 Use electrical tape to insulate the join and prevent shorting.

3.6.10 Soldering to Power wire in pin D1

- 3.6.10.1 Select the OEM wire in pin D1. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.10.2 Select the Red wire from the Power Wires group. Solder this wire to the OEM wire in pin D1.
- 3.6.10.3 Use electrical tape to insulate the join and prevent shorting.

3.6.11 Soldering to Signal wire in pin D9

- 3.6.11.1 Select the OEM wire in pin D9. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.11.2 Select the Blue-White wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin D9.
- 3.6.11.3 Use electrical tape to insulate the join and prevent shorting.

3.6.12 Soldering to Signal wire in pin D19

- 3.6.12.1 Select the OEM wire in pin D19. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.12.2 Select the White-Green wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin D19.
- 3.6.12.3 Use electrical tape to insulate the join and prevent shorting.

3.6.13 Soldering to Signal wire in pin D20

- 3.6.13.1 Select the OEM wire in pin D20. Remove approximately 1cm of the wire sheath to expose the copper conductors about 5cm away from the connector. DO NOT cut this wire.
- 3.6.13.2 Select the Blue-Orange wire from the Nomad Analogue Interface Loom. Solder this wire to the OEM wire in pin D20.
- 3.6.13.3 Use electrical tape to insulate the join and prevent shorting.

3.6.14 Reinstall all connectors into the TCM.**3.6.15 Use electrical tape and the included cable ties to secure the Nomad Harness ECU Leg and Analogue Interface Loom to the TCM wiring harness.**

3.7. Mounting Nomad Module and Resistor

The Nomad module is water resistant, but we do recommend mounting it in the cabin to ensure a strong Bluetooth connection. The resistor simply needs to be mounted to something metal to help it dissipate the heat it generates during operation.

The resistor is used to dissipate energy from the TCM. As such, the resistor will get hot when the Nomad Lock-Up system is operating. This is expected behavior. The resistor **MUST** be mounted to a flat, metal surface to aid in heat dissipation. It may cause damage to plastic or carpet if these materials come in contact with the resistor.

In the 80 Series we have found a good location for the load resistor is under the kick panel on the outer wall of the passenger footwell. There is ample space in this area to mount the load resistor without having to worry about its heat damaging anything. There is also space in this area to mount the Nomad module. Ultimately, however, this decision will be up to the installer as we are not able to account for accessories or slight variations in your model.

- 3.7.1 Feed the Nomad harness and Analogue Interface Loom to your chosen mounting location. Ensure the harnesses cannot get caught in the HVAC controls or the steering column.
- 3.7.2 Secure the resistor to a flat piece of metal using the two short self tapping screws provided. Make sure there is clearance around the resistor to prevent it from damaging any of the surrounding mechanisms.
- 3.7.3 Mount the Nomad module to a flat surface. Ensure there is adequate clearance between it and the load resistor to prevent it from being affected by the hot resistor. Secure with the two long self tapping screws provided.
- 3.7.4 Plug the resistor into the resistor leg of the Nomad harness and secure the red Connector Position Assurance (CPA).
- 3.7.5 Plug the Nomad Analogue Interface Loom into the Vehicle leg of the Nomad harness and secure the red CPA.
- 3.7.6 Plug the main connector of the Nomad harness into the Nomad module and secure the red CPA.
- 3.7.7 Route the Switch leg of the Nomad harness to your chosen switch location.

3.8. Installing the Harness in the Cabin - OEM Switch

- 3.8.1 There are a few different locations the OEM switch can be mounted, including next to the steering wheel or near the shifter. Plug the Nomad OEM Switch Loom Adapter into the Switch leg of the Nomad harness and route this leg of the harness to your chosen manual lockup switch location. We normally recommend mounting the switch near the steering wheel for easy access while driving.
- 3.8.2 Remove the necessary trim pieces to gain access to the rear of your chosen switch location. Remove a switch blanking plate from your chosen switch location and replace it with the new OEM-style TCC switch.
- 3.8.3 Plug the Green OEM-style switch connector into the TCC switch and then reinstall any trim pieces removed for the installation of your switch.

3.9. Final Tidy Up

- 3.9.1 Secure any loose wires with electrical tape and any remaining supplied cable ties. Make sure the wires are clear of any moving parts, especially near the steering column.
- 3.9.2 Reconnect the battery terminals and any other connectors that were removed.
- 3.9.3 We recommend running through the Nomad Setup Wizard to verify that everything is connected correctly and working properly before re-installing any removed panels, just in case any wiring needs to be corrected.
- 3.9.4 Once the Nomad module has been confirmed to be wired correctly and the setup wizard has completed, reinstall all removed trim pieces and kick panels.

We do not recommend driving the vehicle before the setup wizard is complete.

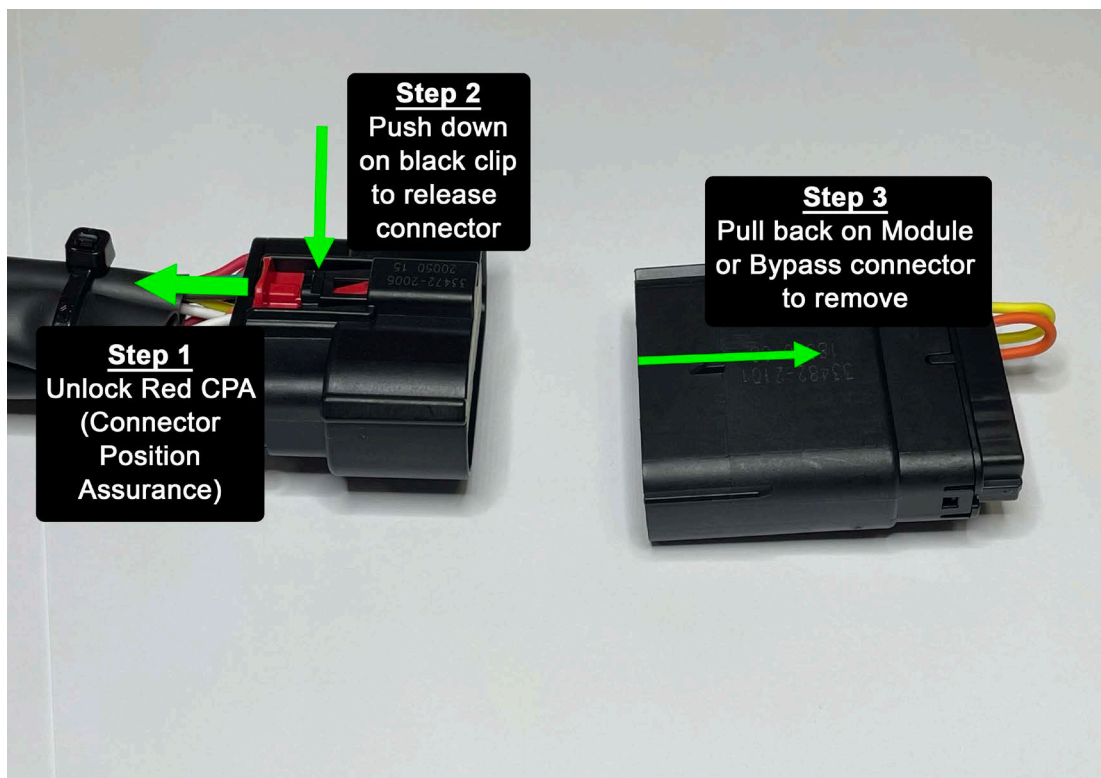
3.10. Lock-Up Module Bypass

- 3.10.1 If you need to remove the Nomad Lock-Up Module at any stage we have supplied a bypass connector that can take the place of the module so that your vehicle will not have faults come up while driving. Fitting this bypass will revert control of the torque converter clutch back to the OEM TCM.

If you are fitting this unit on behalf of a customer please leave this connector in the bag along with the QR code to access the User Guide. Please highlight this to your customer during handover.



- 3.10.2 To remove the Nomad Lock-Up Module or Bypass Connector, unlock the red CPA. Press down on the black clip to release. Then pull the two connectors apart.



3.11. Installing the Nomad LockUp app on Apple Devices

This chapter will cover finding, downloading and confirming that the Nomad LockUp app is ready to communicate with your Nomad LockUp Module using an Apple mobile device.

The Nomad Lock-Up App is a free to download app available from the Apple App Store. You will 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 Nomad LockUp App are:

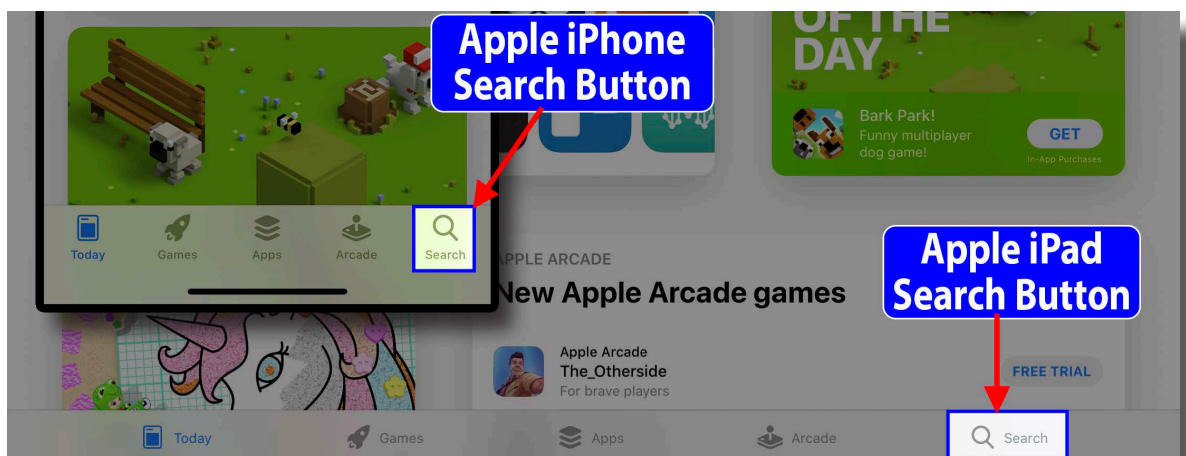
- Apple iPhone mobile digital device with iOS version 11 or later
- Apple iPad mobile digital device with iPadOS version 11 or later
- Internet Access (only required to download the application and for firmware updates)

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 device's operating system first then try downloading the Nomad LockUp app again.

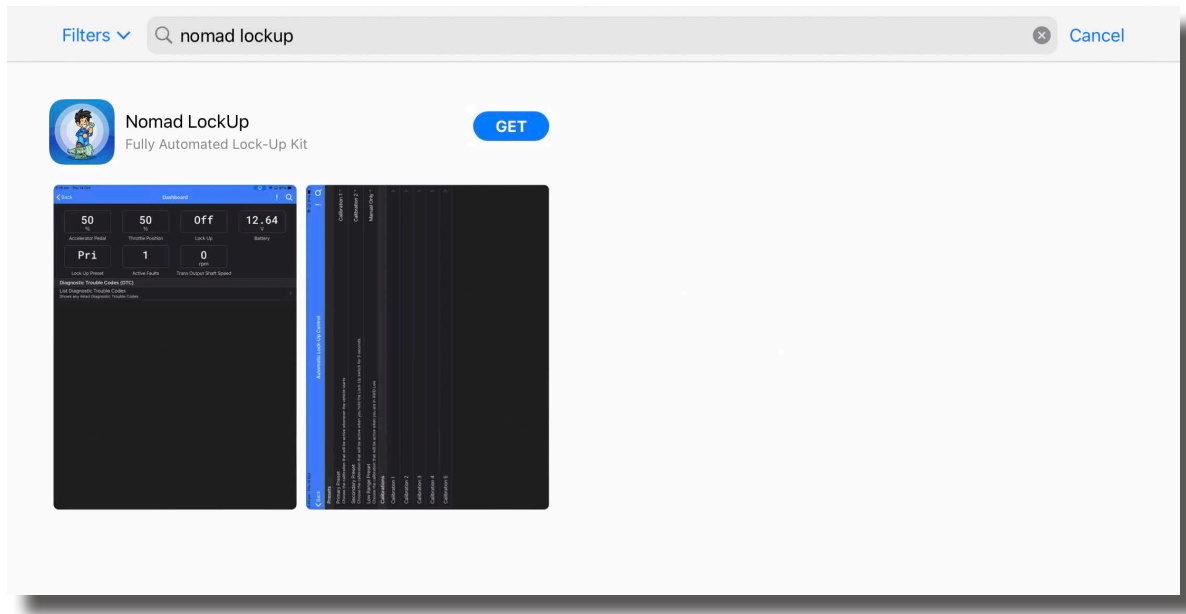
3.11.1 On your Apple device, open the **App Store** application.



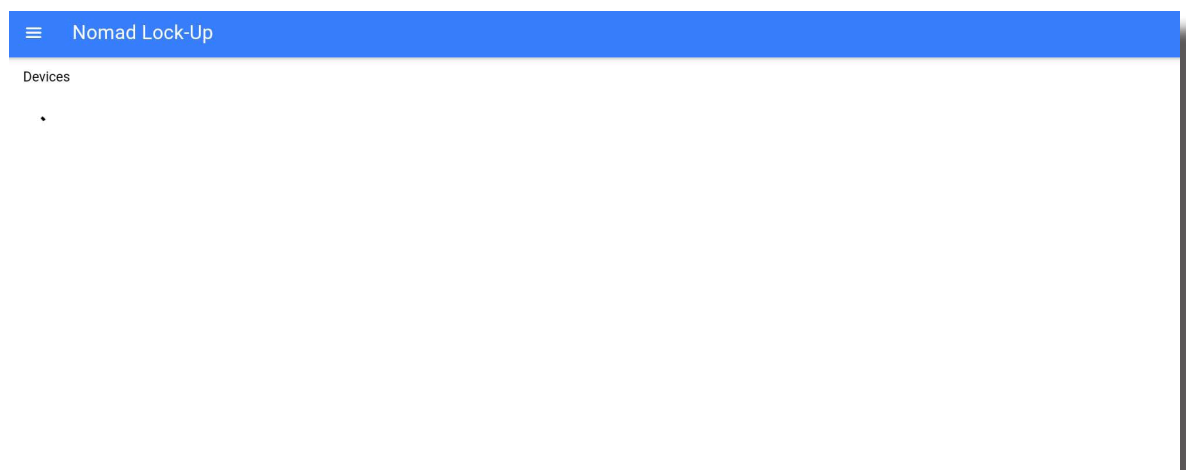
3.11.2 Tap on the **Search** button at the bottom of the App Store screen.



- 3.11.3 In the search field type “nomad lockup” and press enter/search. Locate the app called **Nomad LockUp** in the results and tap on ‘Get’. You may be asked to enter your Apple ID username and password.



- 3.11.4 Once the app has finished downloading, tap on the icon to open. The first time you open the Nomad LockUp app it will ask permission to use the device's Bluetooth® communication system to access the Nomad Lock-Up Module. Please select OK.
- 3.11.5 The app will now search for any Nomad Lock-Up Modules within range that are powered up. If you are not in range of your Nomad Lock-Up Module or it is not powered up, then the app will only show a spinning wheel indicating that there is no module in range.

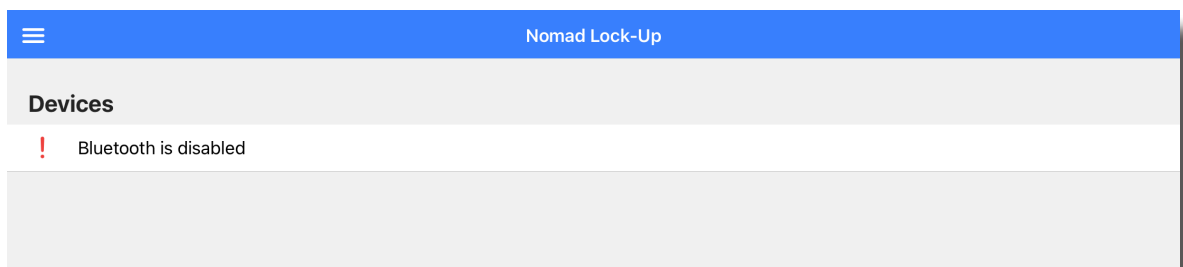


- 3.11.6 If you have reached this step then the app is installed and ready to connect to your Nomad Lock-Up Module. You can now skip to step 4.

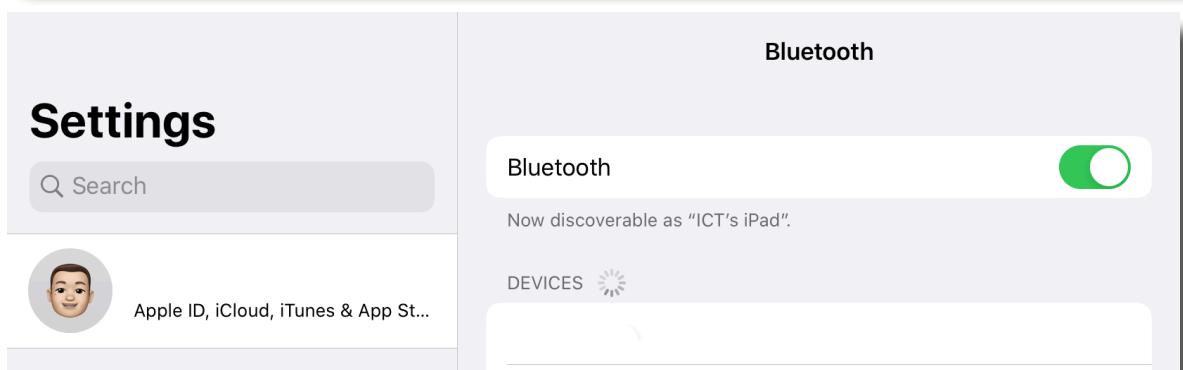
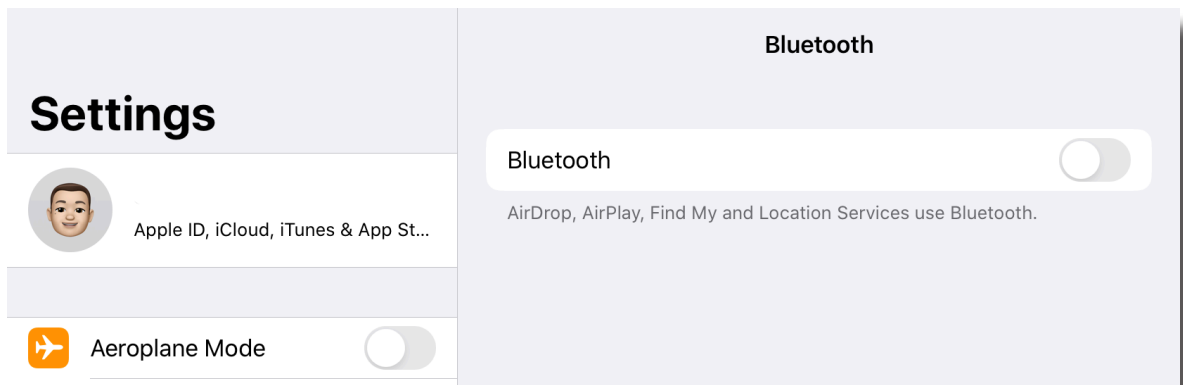
3.12. Troubleshooting Installation on Apple Devices

This chapter will cover some basic troubleshooting steps you can follow if you have not been able to connect your Apple device to the Nomad Lock-Up module.

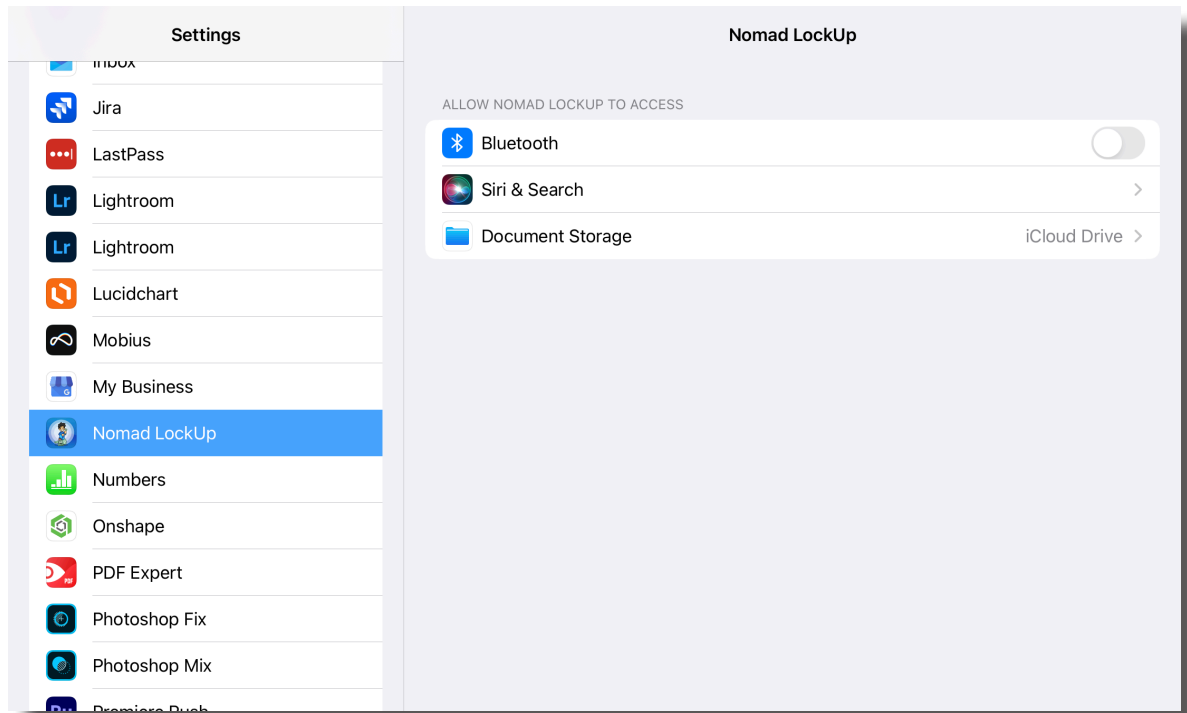
- 3.12.1 If the app says '**! Bluetooth is disabled**' then it means that the Bluetooth communication in your smart device is not set up correctly. Most commonly this is due to the Bluetooth being turned off completely or it could be that the Nomad LockUp app has not been authorised to use Bluetooth yet.
- 3.12.2 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.



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



- 3.12.4 If you are still seeing the '**! Bluetooth is disabled**' message, open the Settings app and scroll down the menu to Nomad LockUp. Tap on Nomad LockUp and verify that the Bluetooth access is enabled for the app. If not, switch access on. Return to the Nomad Lock-Up app and check you are no longer seeing the '**! Bluetooth is disabled**' message, instead you should be seeing the spinning wheel.



- 3.12.5 If none of these items have worked, please close the app. Tap and hold on the Nomad Lock-Up app icon and select Delete app. Then power your device off and reboot. Start from the beginning and download the app again. Make sure you allow the app all the permissions it requests.
- 3.12.6 If you are still unable to get rid of the '**! Bluetooth is Disabled**' message please contact Wholesale Automatic Transmissions for further assistance.

3.13. Installing the Nomad LockUp app on Android™ Devices

This chapter will cover finding, downloading and confirming that the Nomad LockUp app is ready to communicate with your Nomad Lock-Up Module using an Android mobile device.

The Nomad LockUp app is a free to download app available from the Google Play Store. You will require a Google Account in order to download applications from the Google Play Store.

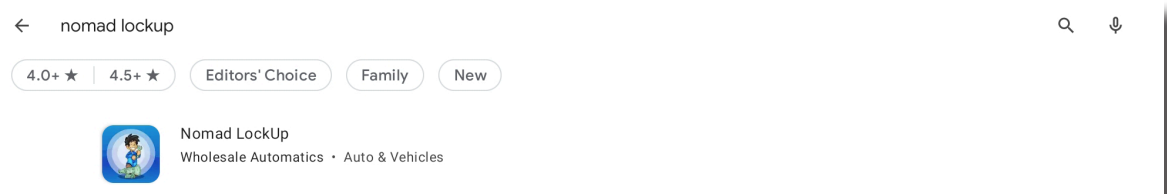
Minimum system requirements for your Android mobile device to run the Nomad LockUp app are:

- Android operating system version 4.4 or later
- Internet access (only required to download the application and for firmware updates)

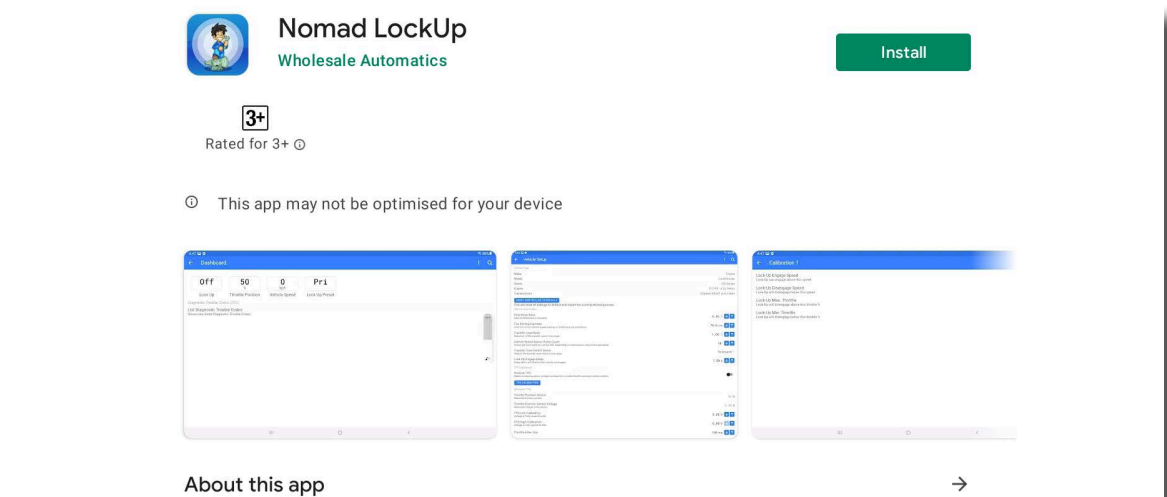
If your Android mobile device operating system does not meet these requirements you may not be able to download the app. Please follow the instructions provided by your device manufacturer to update your device's operating system first then try downloading the Nomad LockUp app again.

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.

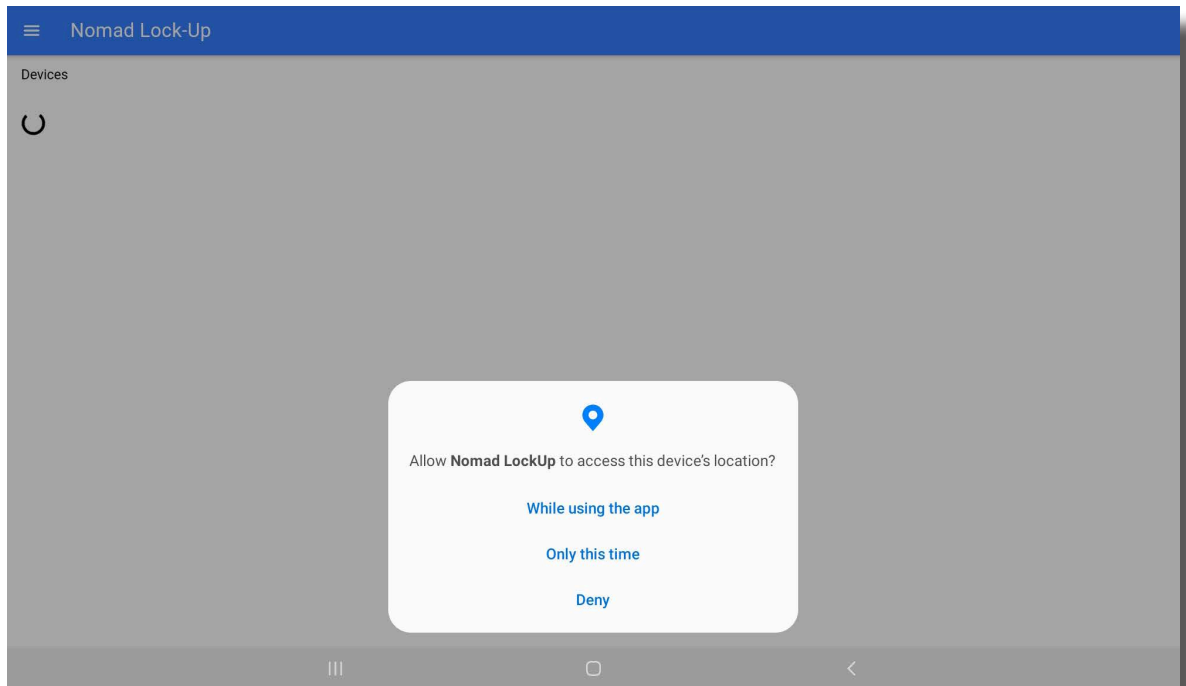
- 3.13.1 On your Android device, open the **Google Play Store** application. Tap on the **Search** field at the top of the Google Play Store screen and type "nomad lockup". Tap on the Nomad LockUp app to show the app page.



- 3.13.2 On the app page, tap on Install to download and install the app.



- 3.13.3 When the app opens for the first time you will be asked for permission for the app to access the devices location. Tap on 'While using the app' to continue. This permission is required for the Bluetooth functionality.



- 3.13.4 You should now see the devices page and a list of any Nomad Lock-Up Modules that are powered up and within range. If you are not in range of your Nomad Lock-Up Module or it is not powered up then the app will only show a spinning wheel indicating that there is no module in range.

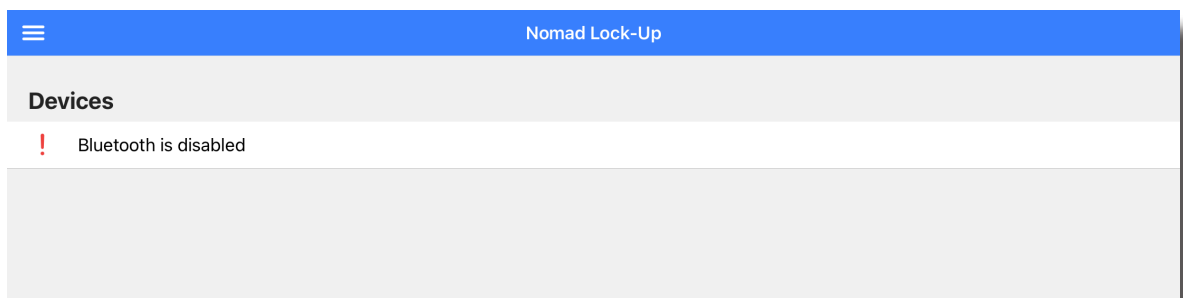


- 3.13.5 If you have reached this step the app is installed and ready to connect to your Nomad Lock-Up Module. You can now skip to step 4.

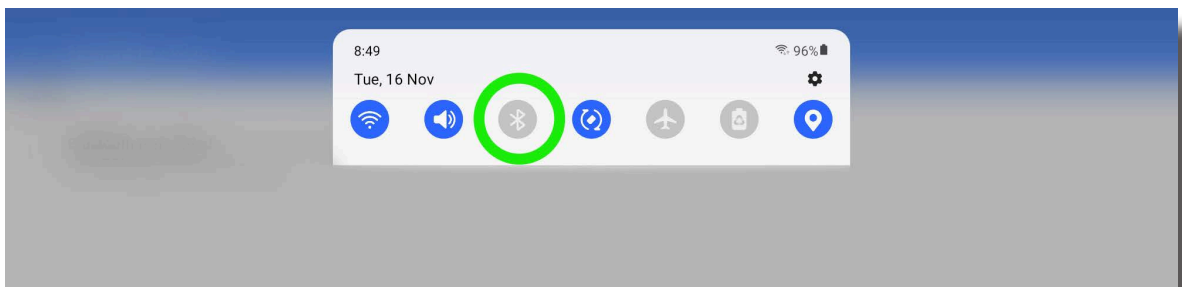
3.14. Troubleshooting Installation on Android Devices

This chapter will cover some basic troubleshooting steps you can follow if you have not been able to connect your Android device to the Nomad Lock-Up module.

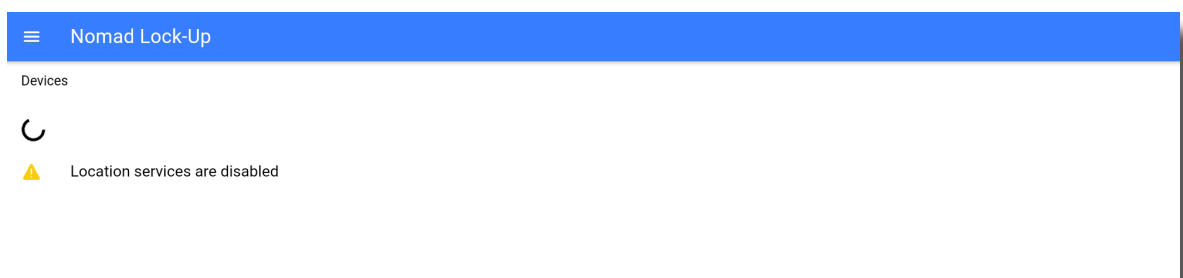
- 3.14.1 If the app says '**! Bluetooth is Disabled**' then it means that the Bluetooth communication in your smart device is not set up correctly. This could be because your app did not recognise that it has access to your Bluetooth system, Bluetooth is turned off completely or it could be that the Nomad LockUp app does not have the required Bluetooth permissions.
- 3.14.2 First, close the app and close it from the multitasking menu. Re-open the app. If the '**! Bluetooth is Disabled**' message still remains continue to the next step.



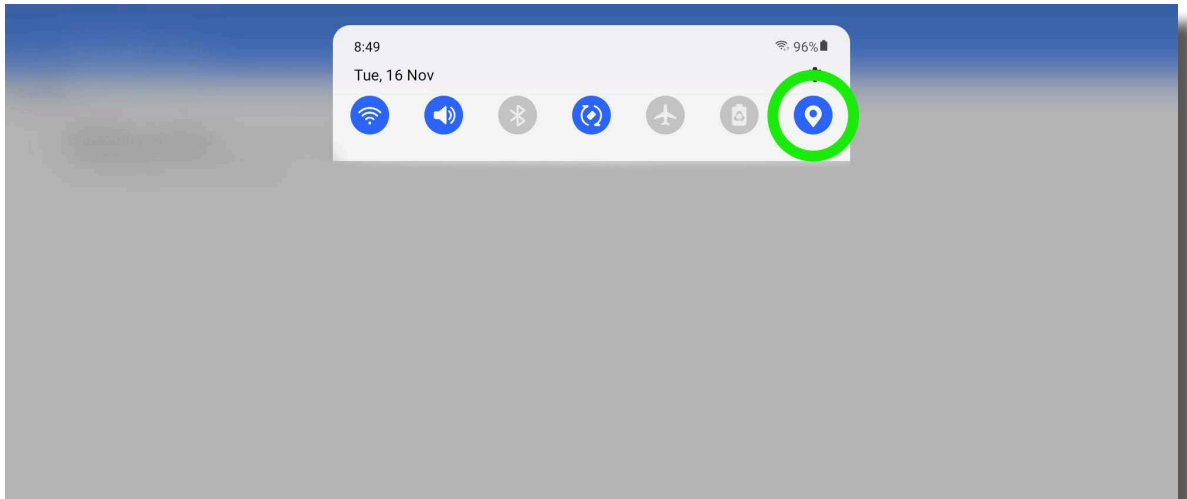
- 3.14.3 Swipe down from the top of the screen and tap on the grayed out Bluetooth icon. Close the settings window and force close the Nomad LockUp App. Re-open the Nomad LockUp app, you should no longer see the '**! Bluetooth is disabled**' message, instead it should be replaced with the spinning wheel.



- 3.14.4 If you are seeing the '**Location services are disabled**' message, this means that you have locations services switch off. This service is required for the app to function correctly.



- 3.14.5 Swipe down from the top of the screen and tap on the grayed-out location icon. This will turn locations service on. Close the settings window and force close the Nomad LockUp app. Re-open the Nomad LockUp app, you should no longer see the '**Location services are disabled**' message. It instead should be replaced with the spinning wheel.

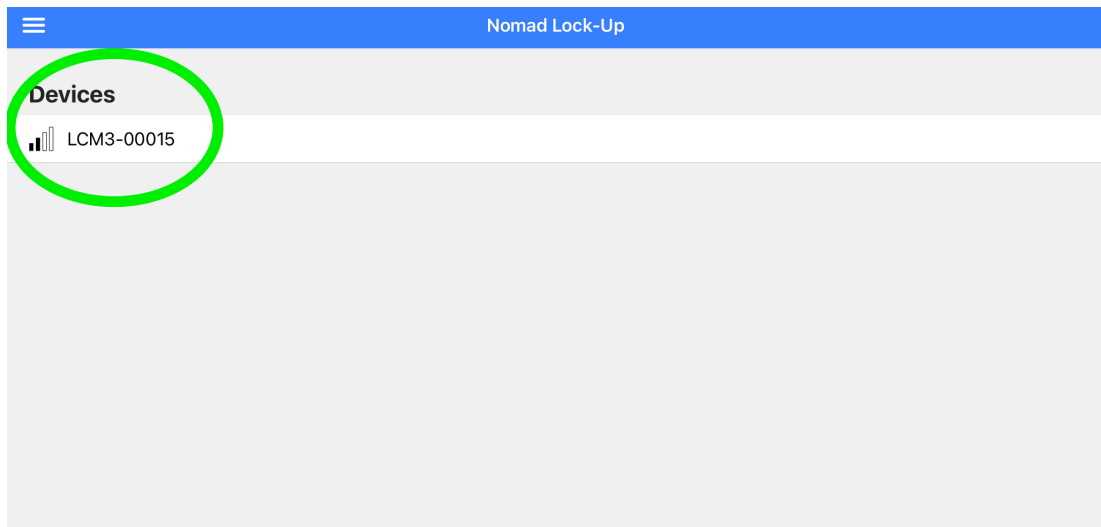


- 3.14.6 If none of these items have worked, please close the app. Tap and hold on the Nomad LockUp app icon and tap on Uninstall. Then power your device off and reboot. Start from the beginning and download the app again.
- 3.14.7 If you are still seeing the '**! Bluetooth is disabled**' message or the '**Location services are disabled**' message please contact Wholesale Automatic Transmissions for further assistance.

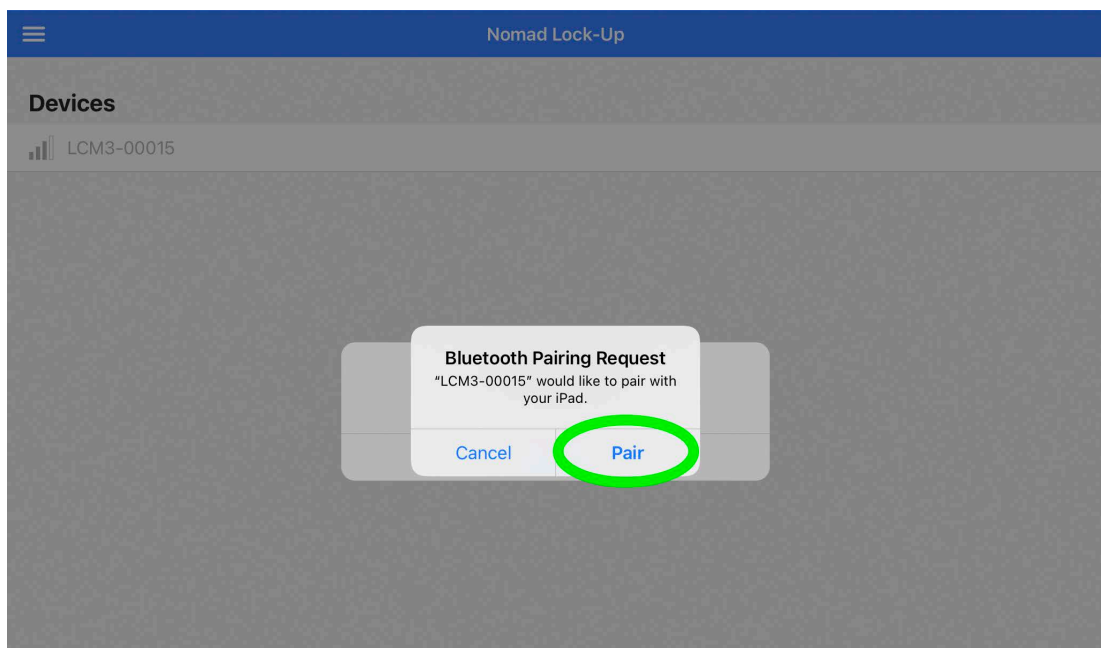
4. Setup Wizard

4.1. First Connection and Firmware Update

- 4.1.1 Turn your vehicle's ignition on, but do not start the engine.
- 4.1.2 Open the Nomad Lock-Up application
- 4.1.3 Tap on your Nomad Lock-Up module from the Devices list.

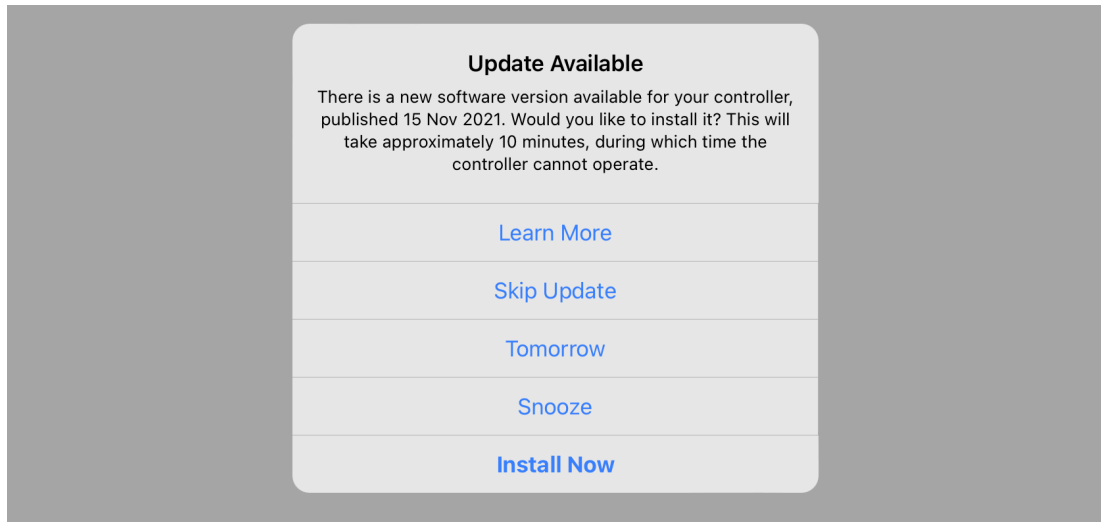


- 4.1.4 If this is the first time you have connected to your Nomad module you will be prompted to pair your device. Tap Pair.

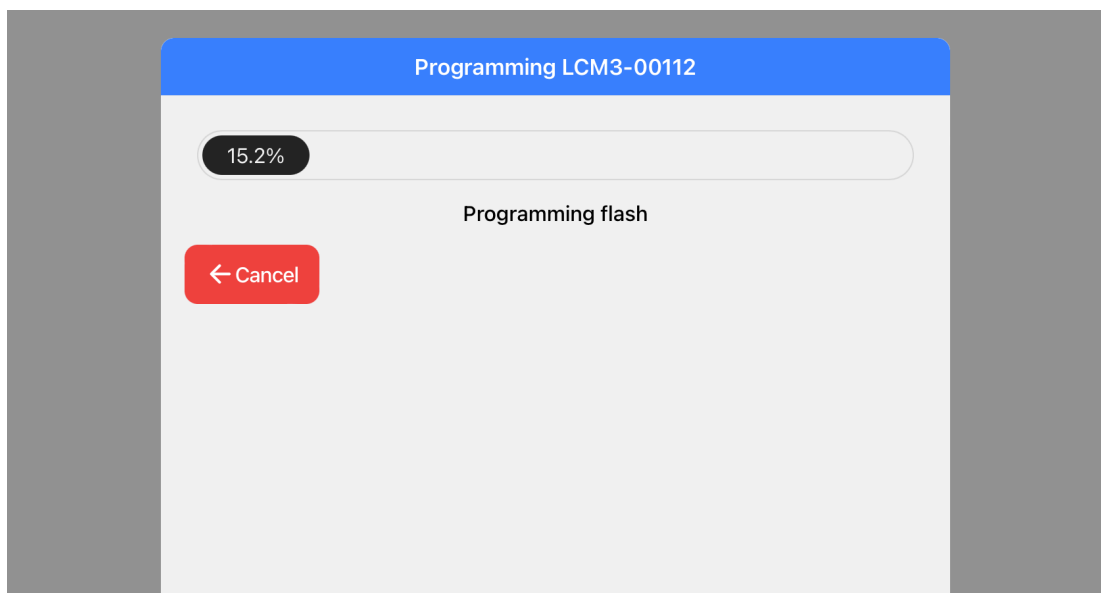


- 4.1.5 Upon initial connection the Nomad LockUp app will check if there is a new version of firmware for the module. As we develop new vehicles and add features we will provide the ability to update firmware as needed.

You will see the following prompt if there is new firmware available for your Nomad module. If your Nomad Lock-Up module is running the latest firmware, you can skip to the vehicle setup step.



- 4.1.6 Tap on Install Now. This will take approximately 10 minutes to download and install the latest firmware to ensure your Nomad Lock-Up module is up to date.
- 4.1.7 Please ensure your device does not go to sleep during this process. Additionally, if you are using a phone, do not answer a call during this process as it may cause the update to fail.



- 4.1.8 Once your module's firmware has been updated you will be returned to the devices page. Tap on your device once more to connect to continue the Setup Wizard.

4.2. Vehicle Configuration

4.2.1 The Setup Wizard will ask you to select your vehicle configuration. In some cases we may prefill the following values due to them being the only option.

4.2.1.1 If you have a vehicle with the 1FZ-FE 4.5L Petrol engine, choose the 1FZ-FE - 4.5L Petrol Engine Type.

4.2.1.2 If you have a vehicle with the 1HD-T or 1HD-FT 4.2L Turbo Diesel Engine, choose the 1HD-FT - 4.2L Diesel Engine Type.

4.2.2 Select “Apply Changes and Restart” to continue.

The screenshot shows the 'Setup Wizard' screen with the title 'Select Vehicle Type'. It contains a list of vehicle specifications with dropdown menus for each: Make (Toyota), Model (LandCruiser), Series (80 Series), Engine (1HD-FT - 4.2L Diesel), and Transmission (4 Speed A442F with Cable). Below the list, a message states: 'Once all settings are complete, please press Apply Changes and Restart to save the vehicle configuration to the Nomad Lock-Up controller and restart the controller with the new settings.' A blue button labeled 'Apply Changes and Restart' is positioned to the right of this message. At the bottom left, there is a blue button labeled '< Back'. In the center, there are four dots, with the first one being filled, indicating the current step in the wizard.

4.2.3 Wait while the Nomad Lock-Up Module restarts.

The screenshot shows a screen with the text 'Restarting controller, please wait' and a loading spinner icon on the right. Below the text, there are four dots, with the first one being filled, indicating the current step in the process.

4.2.4 After the Nomad Lock-Up Module has rebooted tap “Continue”.

The screenshot shows a screen with the text 'Configuration is set. To move to the next step of the setup wizard, please press Continue.' Below the text, there are four dots, with the first one being filled, indicating the current step in the process. A blue button labeled 'Continue →' is positioned to the right of the text.

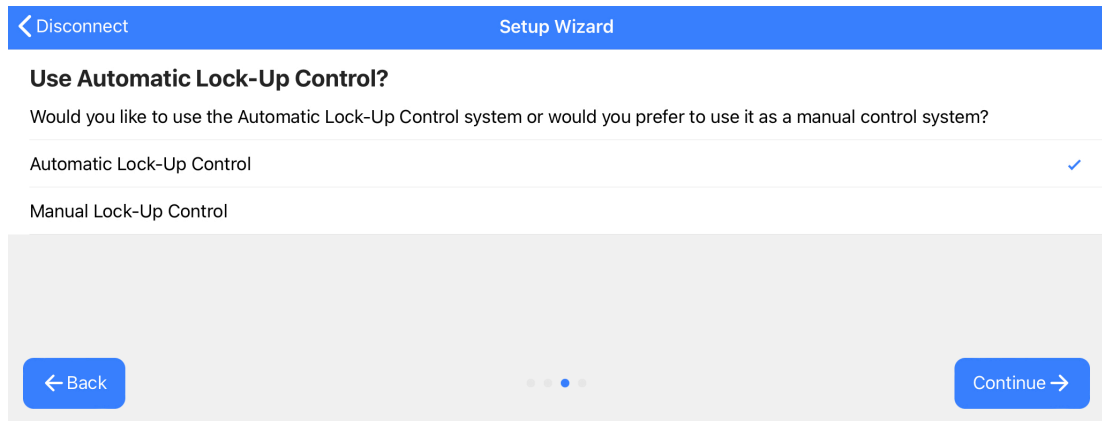
- 4.2.5 The Check Sensor Inputs page allows you to verify that the signals the Nomad Lock-Up module requires to operate are being decoded correctly. Check these signals with the engine off.

Setup Wizard	
Check Sensor Inputs	
Please verify that the Nomad Lock-Up Controller is receiving signals from your vehicle. If you can safely do so, activate or move the items listed below to see the signal values change. Make sure they look reasonable before proceeding.	
Throttle	50 %
Manual Switch	Off
Overdrive Cancel Switch	Off
Power Mode	Off
Low Range	Off

← Back Continue →

- 4.2.5.1 **Throttle**
This value won't be correct until the Throttle Position Sensor calibration is completed in a later step.
- 4.2.5.2 **Manual Switch**
Push the Lock-Up switch to check that the Manual Switch value will change from "Off" to "On". You may need to hold the switch in for a second or so in order for this value to change.
- 4.2.5.3 **Overdrive Cancel Switch**
Change the state of the Overdrive Cancel switch on the shifter assembly and make sure the reported value changes accordingly.
- 4.2.5.4 **Power Mode**
Activate the transmission Power Mode to check that the Power Mode value changes from 'Off' to 'On'. If Power Mode is already on, pressing the switch should change this value to 'Off'.
- 4.2.5.5 **Low Range**
Move the transfer case lever into the low range position to check that the Low Range value changes from 'Off' to 'On'.
- 4.2.6 Once all signals are confirmed, tap "Continue". If any of these show incorrectly this likely indicates a problem with the Vehicle Leg wiring at the TCM.

- 4.2.7 Choose if you would like the Nomad Lock-Up Module to operate in Automatic or Manual Mode. Then tap continue.



4.2.7.1 **Automatic mode**

The torque converter lock-up will automatically engage and disengage at predetermined speeds and loads that we have configured for you. These values can be modified at any time to suit your driving style. In Low Range the lock-up is still controlled manually via the switch.

This is the recommended setting for most people.

For more information about configuring the Nomad Lock-Up system, please check out our Nomad Lock-Up Users Guide. Link below.



4.2.7.2 **Manual mode**

You decide when the lock-up is engaged by toggling lock-up on and off via the manual switch. This will make the Nomad Lock-Up Module operate the same way as our previous GEN2 Lock-Up Kit.

- 4.2.8 Tap Continue once you have made your selection.

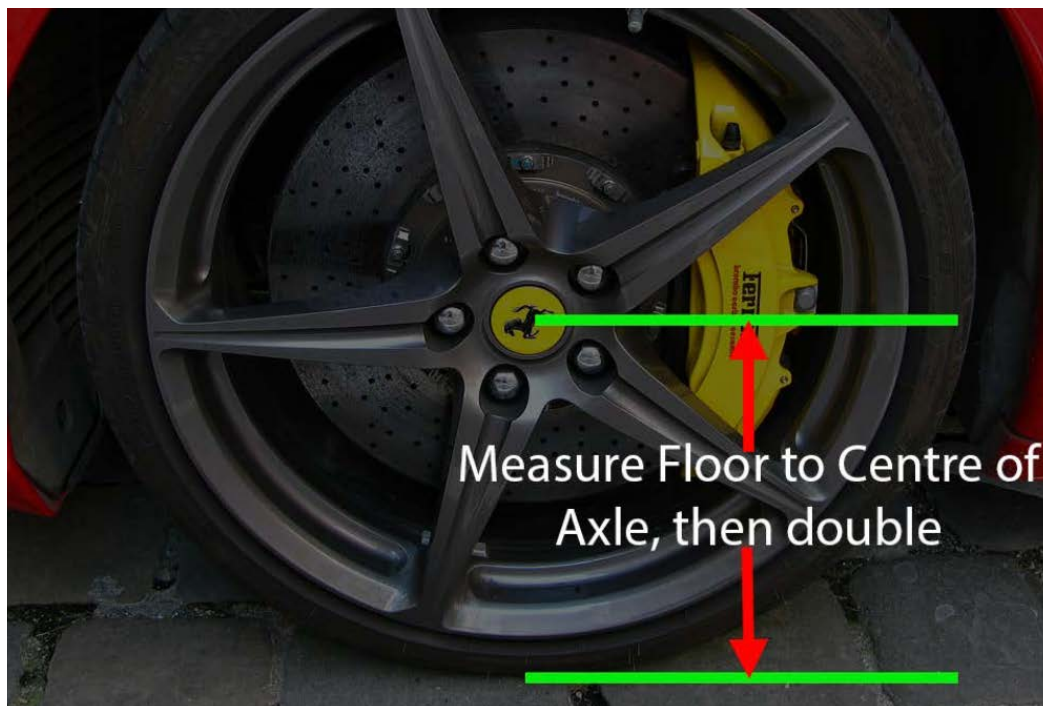
- 4.2.9 Next set the Rolling Tire Diameter for your vehicle. To find the Rolling Diameter measure from the ground to the centre of the axle, then double this measurement and enter it into the app.

Disconnect
Setup Wizard

Set Tire Size

Please enter the vehicle's tire rolling diameter.

Tire Diameter
Measure from ground to centre of axle, then double.
79.0 cm
↓
↑



- 4.2.10 Tap "Finish" to complete the Setup Wizard

Disconnect
Setup Wizard

Setup Wizard is Complete

You have now completed the Nomad Lock-Up Kit Setup Wizard. Please test drive the vehicle and check the operation of the Nomad Lock-Up Kit.

Thank you for choosing the Nomad Lock-Up Kit by Wholesale Automatic Transmissions.

Finish

Back

- 4.2.11 Turn your ignition off and then back on again to power cycle the Nomad module.

4.3. Throttle Position Sensor Calibration

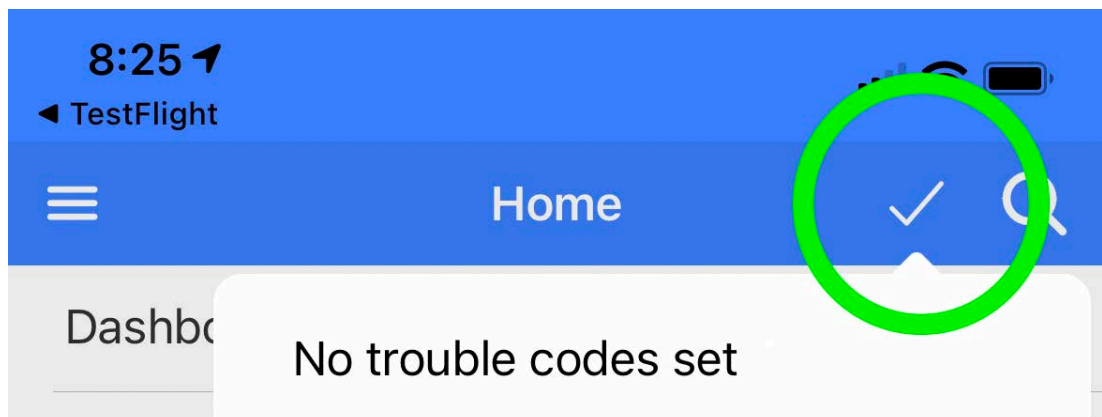
- 4.3.1 Once you reconnect to your module you will likely have trouble codes related to the Throttle Position Sensor (TPS). You will need to perform a TPS Calibration in order for the Nomad module to function correctly.
- 4.3.2 Ensure the engine is not running but the ignition is switched on. Navigate to the Vehicle Setup page and tap on TPS Calibration.

The screenshot shows the 'Vehicle Setup' app interface. At the top is a blue header with a back arrow, the title 'Vehicle Setup', an exclamation mark icon, and a search icon. Below the header are four settings, each with a description, a value, and two blue buttons with down and up arrows:

- Tire Rolling Diameter**: Enter for correct vehicle speed reading on dashboard and calibration. Value: 81.0 cm.
- Transfer Case Ratio**: Reduction of the transfer case in low range. Value: 2.49 :1.
- Vehicle Speed Sensor Pulse Count**: Pulses per drive shaft turn on the VSS. Depending on transmission, may not be adjustable. Value: 18.
- Lock-Up Engage Delay**: Delay after a shift before the Lock-Up will engage. Value: 2.50 s.

Below these settings is a section titled 'TPS Calibration' which is separated by a horizontal line. It contains a toggle switch for 'Reverse TPS' (currently off) with the description: 'Makes increasing sensor voltage correspond to smaller throttle opening or pedal position.' Below the toggle is a blue button labeled 'TPS CALIBRATION', which is circled in green. At the bottom of the screen is the text 'Advanced TPS'.

- 4.3.3 With your foot off the throttle pedal, tap Start. You will have 5 seconds to press the throttle pedal as hard as you can to the floor, then release it completely. Try and do this 2 or 3 times before the timer runs out. Make sure there is nothing preventing you from reaching full throttle, especially things like thick floor mats.
- 4.3.4 Tap OK once the TPS calibration is complete.
- 4.3.5 Turn your ignition off and then back on again to power cycle the Nomad module.
- 4.3.6 Allow time for the app to reconnect to the Nomad Lock-Up Module. Confirm there are no DTCs (Diagnostic Trouble Codes) set. If you see the tick at the top right, you have completed the installation.



- 4.3.7 You can now take the vehicle for a test drive to confirm the Nomad Lock-Up kit is operating as expected. At this point, we recommend re-installing any dash panels or parts removed during the installation process of the Nomad Lockup Module.
- 4.3.8 After the test drive, before switching off the vehicle, connect to the Nomad Lock-Up Module with the app to confirm you still see the tick at the top right.

This completes the Installation of the Nomad Lock-Up Kit

If you would like further information
on how to adjust all of the
calibration settings, please see
User Guide documentation on our
website using the QR code below or
tapping on the QR code.



Please provide us with feedback

If you have a minute to provide us with some feedback about your experience with Wholesale Automatic Transmissions and our products, that would be greatly appreciated.

Use your device's camera app to scan the QR code below. This will take you straight to our feedback page for you to choose the most appropriate feedback method.

