

TOYOTA

LANDCRUISER LC200

MY16 Update - 2015 on

6 SPEED AUTOMATIC

ON OFF ON Switch

Automatic Low Speed Lock Up

Automatic High Speed Lock Up

TORQUE CONVERTER LOCK UP KIT

AUTOMATIC LOCK UP CONTROLER

LC-200 4.5L V8 LOCK UP KIT - instructions

Check all components against list below.

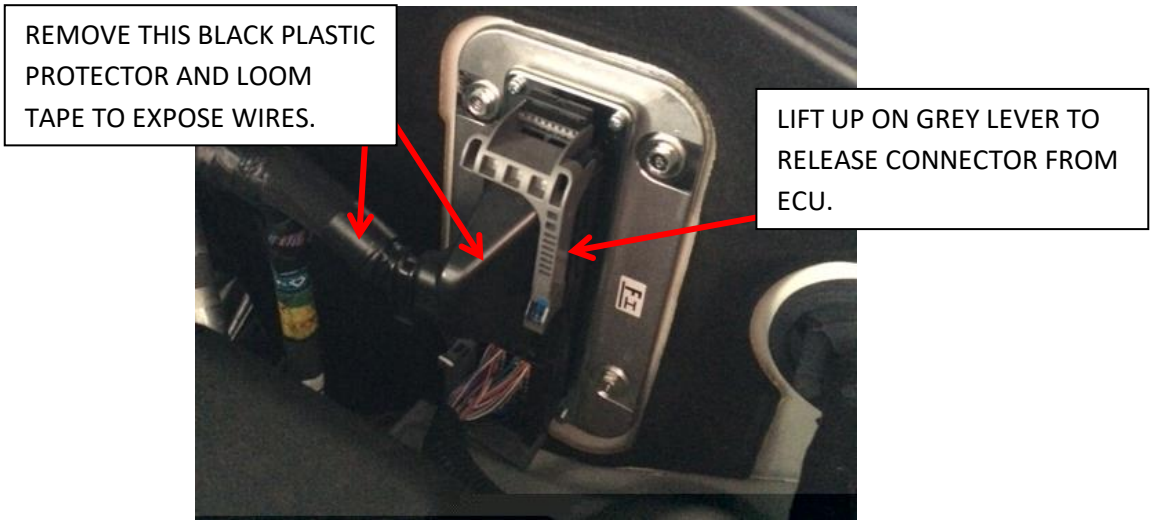
1. Relay block including 3x relays
2. Wiring loom
3. Switch
4. Zip Ties and self-drilling screw
5. Fuse and fuse holder
6. Installation Instructions.

Installation of Automatic and torque converter lock up controller.

Step 1: locate the ends of the red, black, white, brown, purple, orange and grey wires. Rout all seven of these wires through the passenger side firewall wiring grommet remembering to pass from inside the vehicle out.

Step 2: With the ignition OFF Remove ALL Negative battery Terminals from batteries and remove the key from vehicle.

Remove the top multi-pin plug from the ECU connector. This is on the passenger's side of the engine bay, against the firewall. This is done by releasing the grey lever and gently pulling the connector. See picture below.



Step 3: With connector removed, next remove the black plastic protector to exposing the wires entering the plug. Locate pin B15 (small solid blue wire) and pin B14 below it (small solid blue wire).

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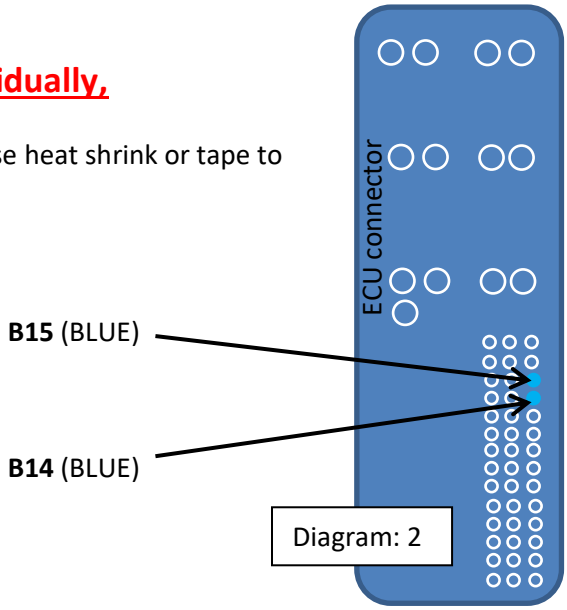
CUT AND TERMINATE ONE WIRE AT A TIME!

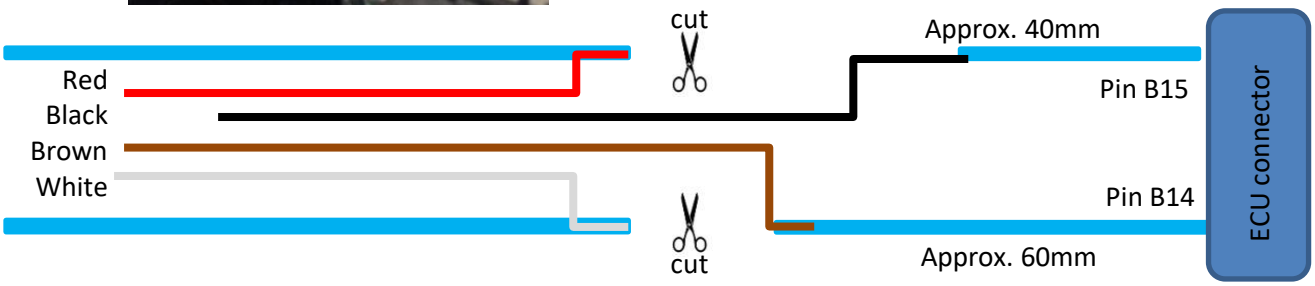
Step 4: CUT AND TERMINATE ONE WIRE AT A TIME. CUT B15 FIRST 40MM AWAY FROM THE CONNECTOR AND COMPLETE TERMINATION. CHECK WHEN CONFIRMED CORRECT THEN CUT B14 60MM AWAY FROM CONNECTOR AND COMPLETE TERMINATION. PLEASE CONFIRM CORRECT. The wires B15 and B14 are cut to length prior to entering the connector so you can join the cut ends as per diagram2 of the connector below.

REMEMBER Cut and solder each wire individually,

- Solder all joints to ensure secure connection. Use heat shrink or tape to insulate.



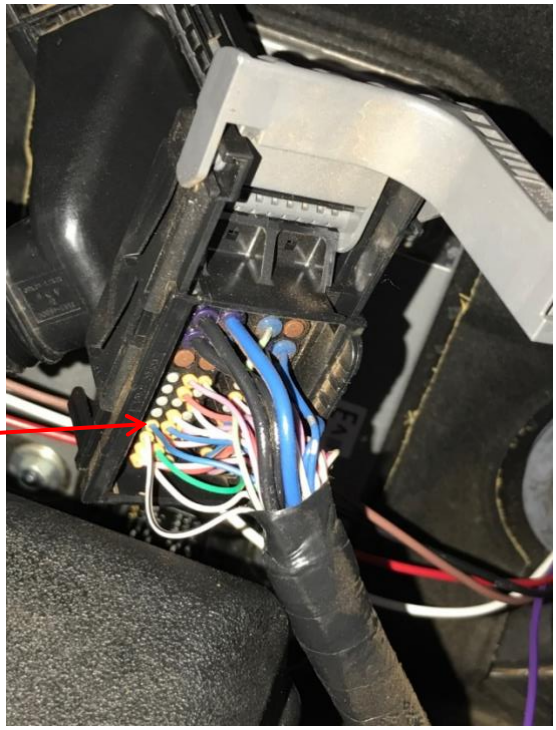




- Re-tape loom and Re install plastic protection cover to multi-pin plug.

BOTTOM ECU CONNECTOR – Purple speed wire

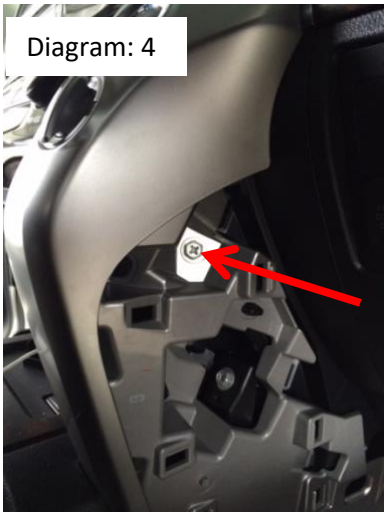
- Locate the lower connector on the computer.
- Remove connector by releasing grey leaver lock and swivelling down.
- Orientate connector as per picture to the right. (upside down)
- Isolate the thin **BLUE** speed signal wire from the others, marked by red arrow.
- Strip back a small section of the plastic insulation and solder the purple wire from our lockup kit to this wire. (Splice in) – tape over the connection.

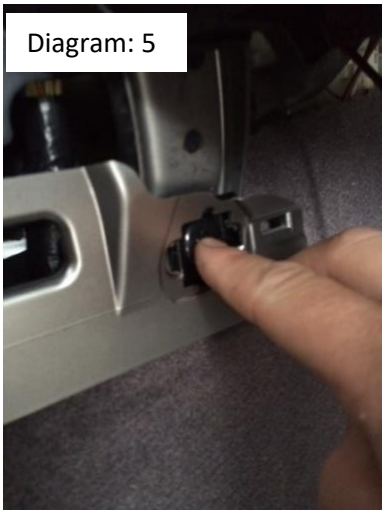


- Connect the ORANGE wire to the positive terminal of the passenger side battery using the inline fuse holder and yellow ring terminal provided.
- Connect GREY wire to Negative battery terminal of the passenger side battery using the red ring terminal provided.

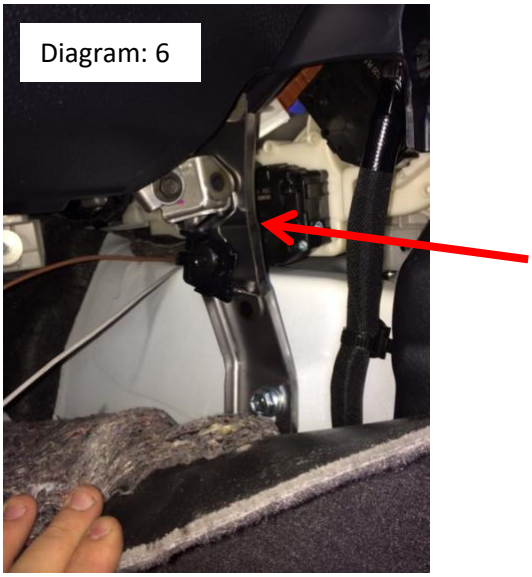
Step 5: Inside passenger's foot well, remove the centre dash trim to expose metal bracing.

- Start by removing black padded rest from LHS of centre dash, this is only clipped in so getting finger behind it and pulling will remove.
- Remove Philips head screw that holds plastic side on. Press black release clip to allow front to move, then you will need to pull directly toward you on the plastic trim to un-clip. See diagrams 4 & 5


Diagram: 4


Diagram: 5

- Once removed, fold carpet back slightly and mount the resistor to the exposed metal brace ensuring the resistor does not touch anything plastic as it can get quite hot. This should be done using supplied self-drilling screw. The control box and relays are then positioned behind the carpet against the centre tunnel. There is no need to secure these as the carpet will fold back over and hold them in place. (Can remove sound deadening padding for more room if needed behind the carpet, just pulls off the back of the carpet) See diagram 6.


Diagram: 6

Mount resistor here using self-drilling screw ensuring the resistor does not touch anything plastic, as it can get hot.

Step 6:

- Remove driver's side plastic trim as previously done for passenger side.
- Remove the switch from the loom. This helps to pass the loom through the dash panel.
- Run the switch and harness, over trans tunnel through space behind ashtray/cig lighter panel, to a suitable position by steering wheel and remove a blank to install switch. The Switch panel to the Left of Steering wheel is removable by getting behind it with pressure and releasing the clips holding it in.
- Orientate switch so that the AUTO is at the top and put in a switch blank convenient to you.

Step 7:

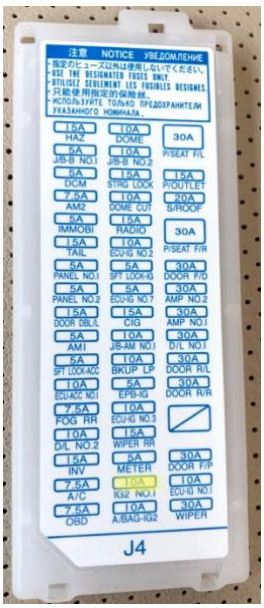
The Red wire with Fuse holder to be connected to 12V + Acc power. 3 options:

- Connect fuse adaptor into fuse box under the glove box passenger side. Find an accessory power fuse and replace with the adaptor joined to the red wire. We pick up fuse pictured normally. IG2 NO.1 (Lid won't close over fuse panel afterwards, suggest to store in service book in glove box)

- Cut off fuse adaptor & connect red wire to back of cig lighter +ve (can be difficult to get to)

- OR If you have a 12v ignition source elsewhere feel free to extend the red wire to wherever suits, cut off the fuse tap and join in.





Step 8:

Replace all dash panels in reverse order making sure to check all wires are clear behind ashtray panel. BE SURE TO RE-CONNECT ALL WIRES WHERE DISCONNECTIONS WERE MADE.

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Operation of Torque Converter AUTOMATIC LOCK UP CONTROLER **– Dual Speed Lock Up**

To activate the lock up in High Speed Auto Mode; press the top switch called AUTO. This will illuminate the Green Led light to show the Auto mode is active. When the vehicle is driven and the lock up speed is achieved (80km/h the torque converter will lock) the bottom switch led will change from blue to turquoise to show locked converter. The converter will remain locked until slowing to below the unlock speed, 75km/h.

When the switches are off and lights are both blue illuminated, the lock up controller is not active, the torque converter is controlled by the factory ECU signals only.

To activate the Low Speed Lock Up, press the bottom LOW switch. The switch will turn Green. The Torque Converted will automatically lock at 35km/h and then unlock below 30km/h. It is important that when driving in this Low Speed Setting you select the gears as if driving a manual vehicle. This prevents any lugging on the motor by the transmission being in a too higher gear.

DO NOT SWITCH BETWEEN HIGH AND LOW SPEED RAPIDLY DURING YOUR TEST DRIVE. PLEASE SELECT SPEED AS DISCRIBED ABOVE.

The controller is pre-configured out of the shop for automatic lock up at approx. 80km/h. We suggest this is the ideal speed when driving in the 'D' Mode with a locked converter. When slowing from speeds above 80 where the converter is locked, you do not have to dis-engage the converter as it is automatically un-locks the torque converter at approx. 75km/h.

These settings have been chosen through many processes and testing and allows the best control and subtle locking and unlocking actions. It also allows the vehicle to slow from highway speeds to 80km/h zones while maintaining a locked converter for accelerating back to highway speeds, i.e. traveling through country town.

We recommend when traveling at highway speeds with locked converter, use the 'S' mode for tip-tronic selection in gear S6. This can help to get the transmission to select 6th gear more frequently.

When installed DIY or not by a preferred installer, there is risk of engine lights appearing.

P2757 & P2759 are codes that the lock up will throw. These 2 codes will not throw your vehicle into limp mode and is safe to drive. Please use a scan gauge or similar to clear the codes. – We can program the ECU for the lock up kit at our workshop so these codes don't appear, via sending us the ECU or booking into the workshop.

If it is any other code please seek assistance by an auto electrician. As the lock up kit is possibly not at fault.

If you have any further queries please contact technical support on 08 8532 1411.

The Fitting of this kit is done so at your own risk. Richards Auto Electrical will not warrant any failures caused by modification to your vehicle. Warranty is offered on all components of the kit for 12 months.

HOW TO USE THE AUTOMATIC LOCKUP KIT DUAL SWITCH

AUTOMATIC MODE



To activate the lock up in High Speed Auto Mode; press the top switch called AUTO.

This will illuminate the Green Led light to show the Auto mode is active.

When the vehicle is driven and the lock up speed is achieved (80km/h the torque converter will lock) the bottom switch led will change colour to show locked converter. The converter will remain locked until slowing to below the unlock speed, 75km/h. We suggest driving in this mode at all times. When slowing from speeds above 80 where the converter is locked, you do not have to dis-engage the AUTO button as it is automatically un-locked.



FACTORY MODE

When the switches are off and lights are both blue illuminated, the lock up controller is not active, the torque converter is controlled by the factory ECU signals only.

LOW SPEED MODE



To activate the Low Speed Lock Up, press the bottom LOW switch. The switch will turn Green. Both switches will then be green. The Torque Converted will automatically lock at 35km/h and then unlock below 30km/h. It is important that when driving in this Low Speed Setting you select the gears as if driving a manual vehicle. This prevents any lugging on the motor by the transmission being in a too higher gear.

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These settings have been chosen through many processes and testing and allows the best control and subtle locking and unlocking actions. It also allows the vehicle to slow from highway speeds to 80km/h zones while maintaining a locked converter for accelerating back to highway speeds, i.e. traveling through country town.

We recommend when traveling at highway speeds with locked converter, use the 'S' mode for tip-tronic selection in gear S6. This can help to get the transmission to select 6th gear more frequently.

Simply depress the low speed button to go back to Auto mode.