

Light My Bricks : Caterham LED Lighting Kit



Here is the instructions document for the LEGO Caterham LED lighting kit. Please read and follow the steps carefully to ensure this lighting kit is installed properly.

Package contents:

- 4x **White Bit Lights (with 30cm cable)**
- 6x **White Bit Lights (with 15 cm cable)**
- 1x **12-port Expansion Board**
- 1x **Flat Battery Pack (2x CR2032 Batteries Required)**

Extra LEGO Pieces

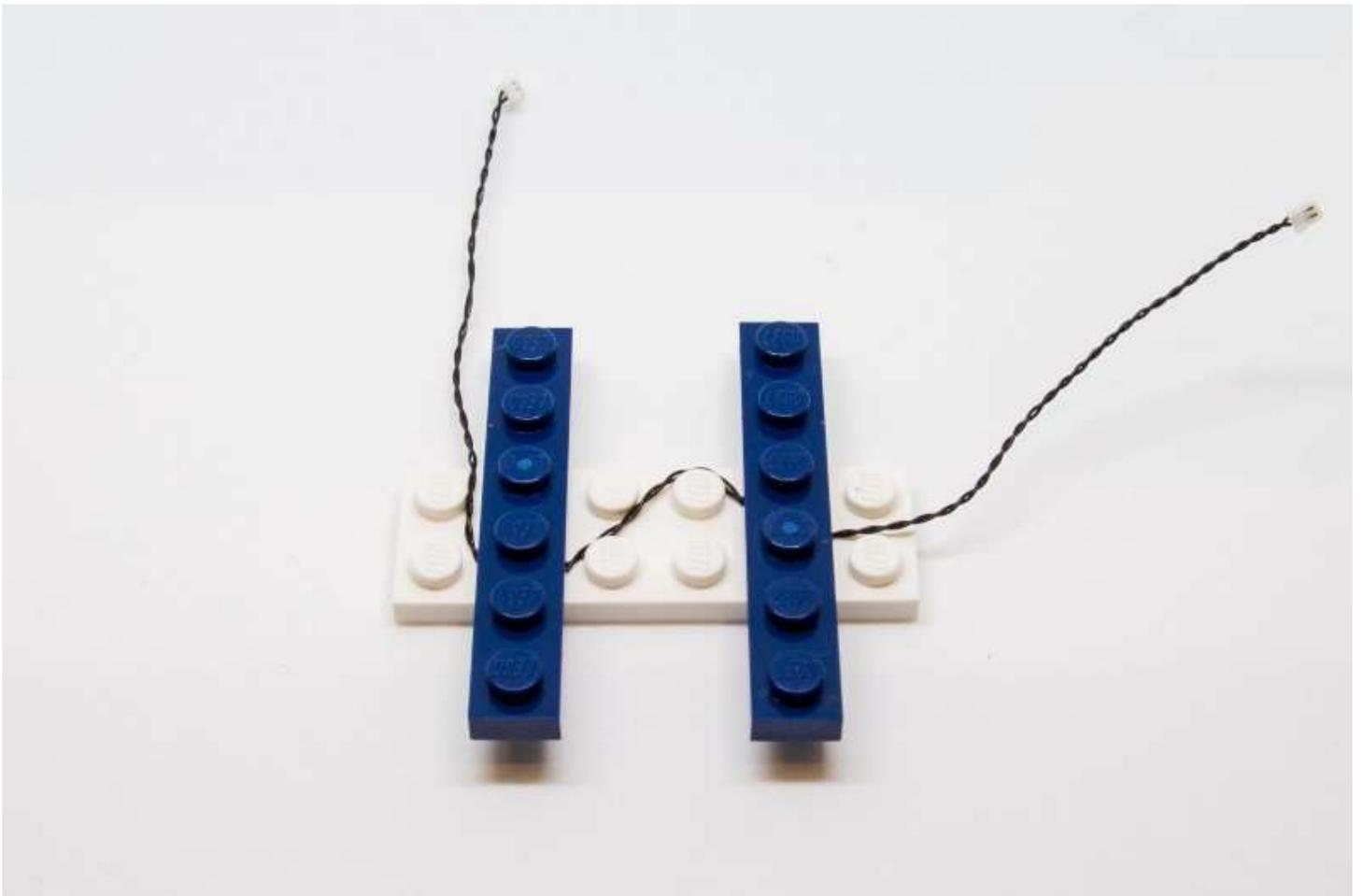
- 3x **LEGO Trans Red 1×1 plates**
 - 3x **LEGO Trans Clear 1×1 plates**
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Important things to note:

Laying cables in between and underneath bricks

Cables can fit in between and underneath LEGO® bricks, plates, and tiles providing they are laid correctly between the LEGO® studs. Do NOT forcefully join LEGO® together around cables; instead ensure they are laying comfortably in between each stud.



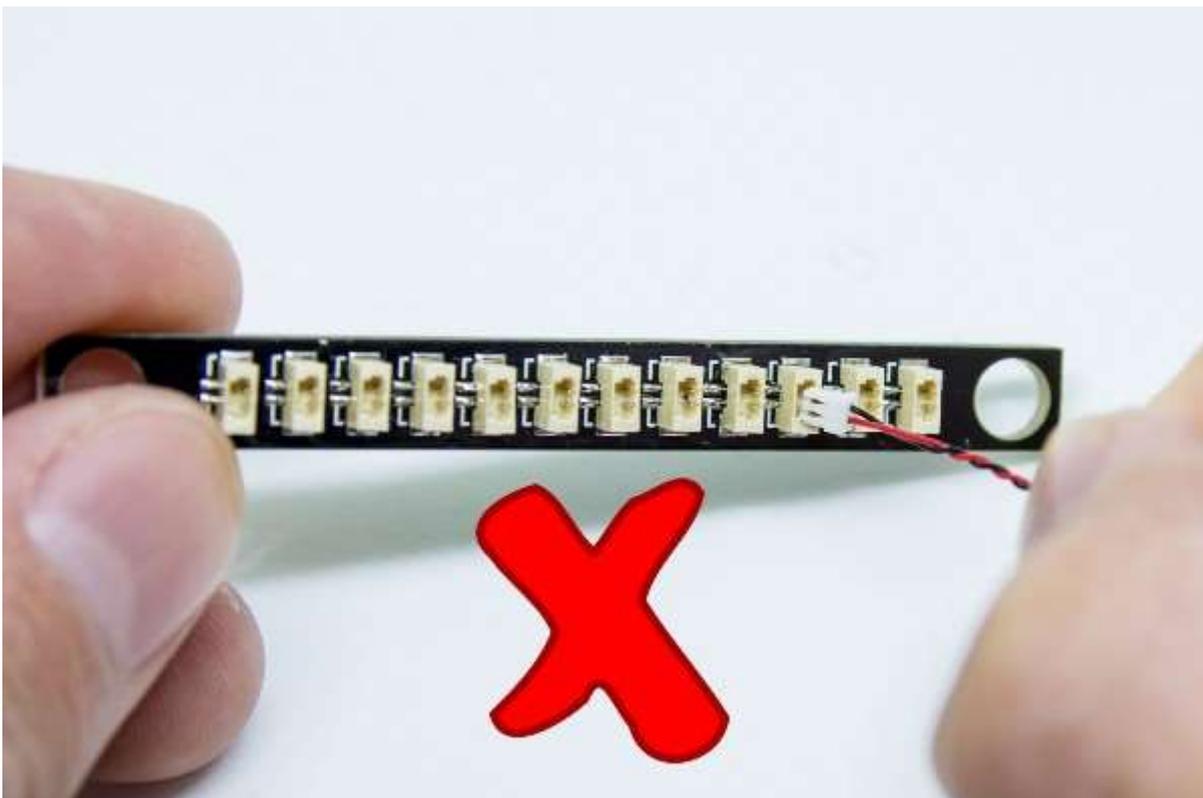
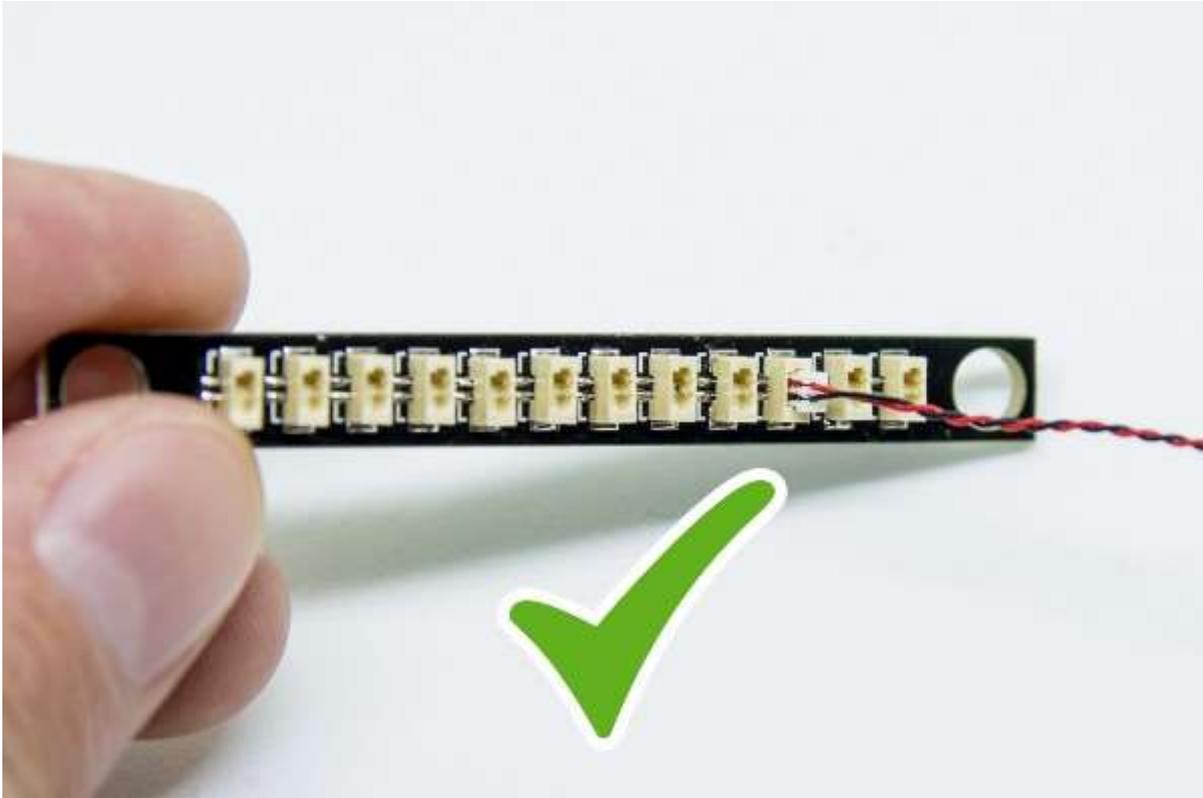


CAUTION: Forcing LEGO® to connect over a cable can result in damaging the cable and light.

Connecting cable connectors to Expansion Boards

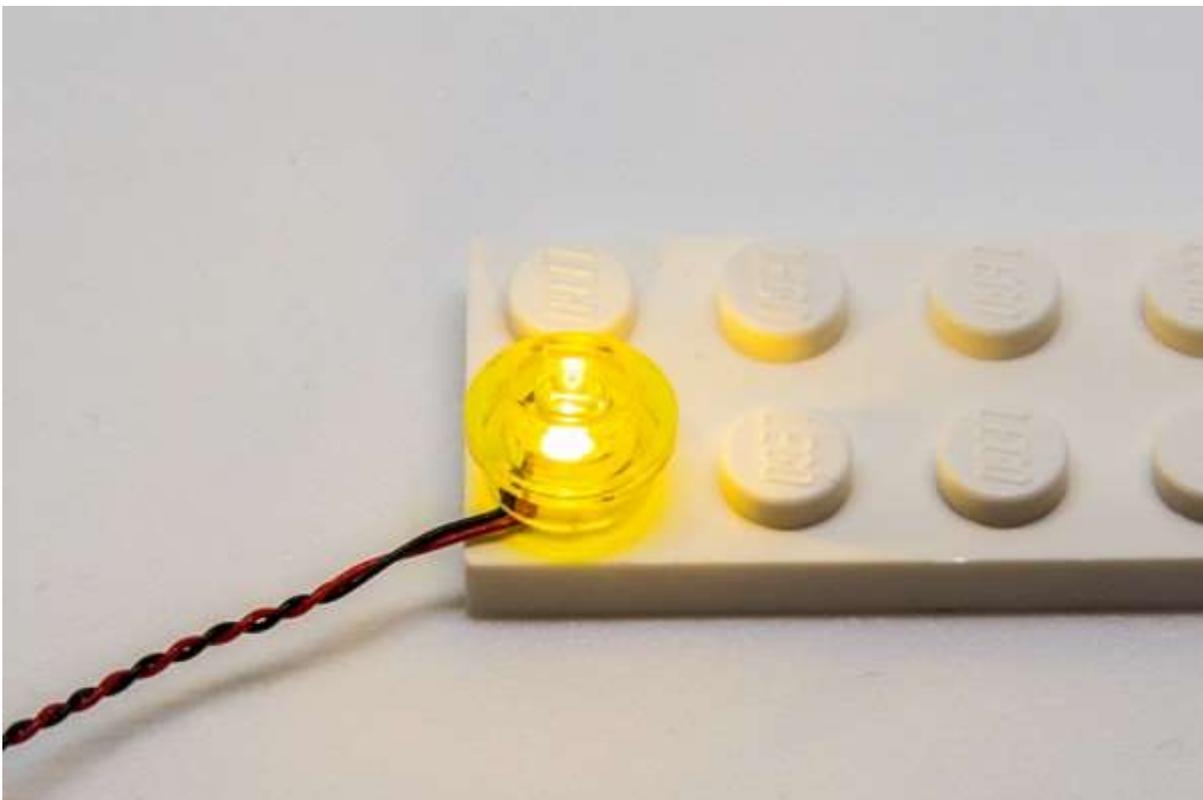
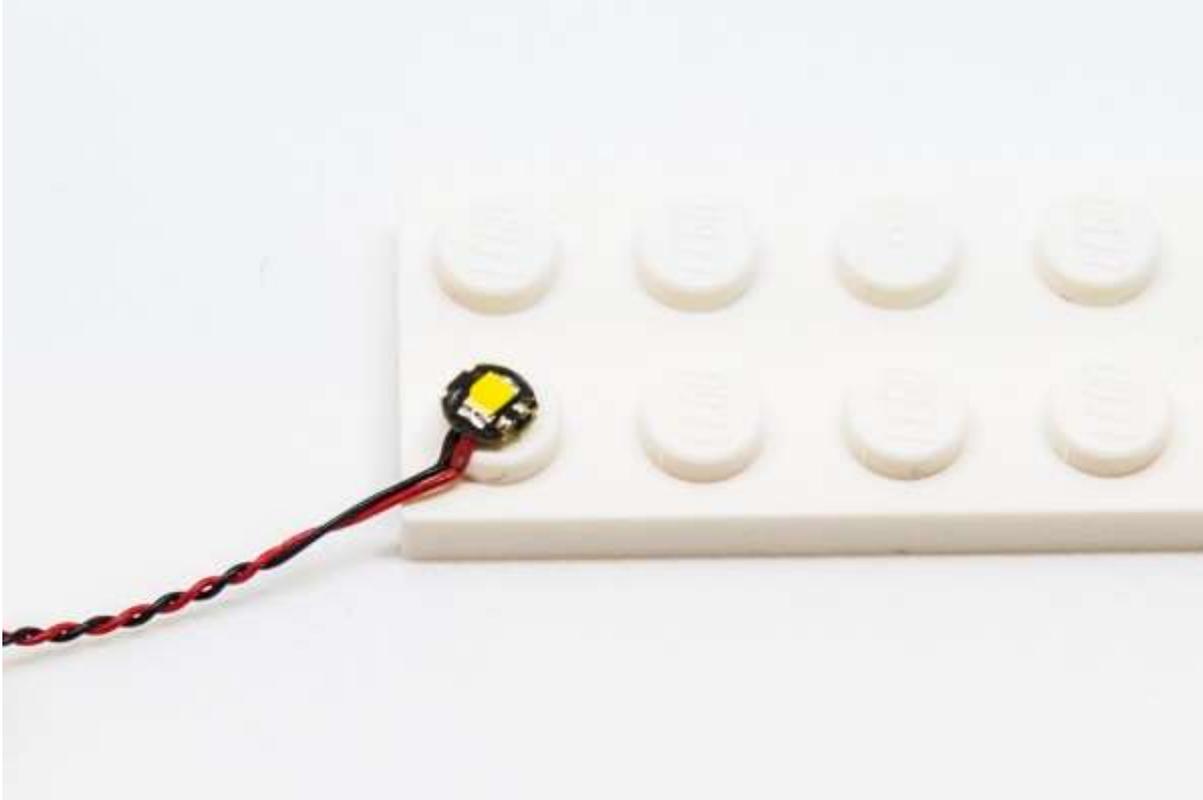
Take extra care when inserting connectors to ports of Expansion Boards. Connectors can be inserted only one way. With the expansion board facing up, look for the soldered “=” symbol on the left side of the port. The connector side with the wires exposed should be facing toward the soldered “=” symbol as you insert into the port. If a plug won't fit easily into a port connector, do not force it.

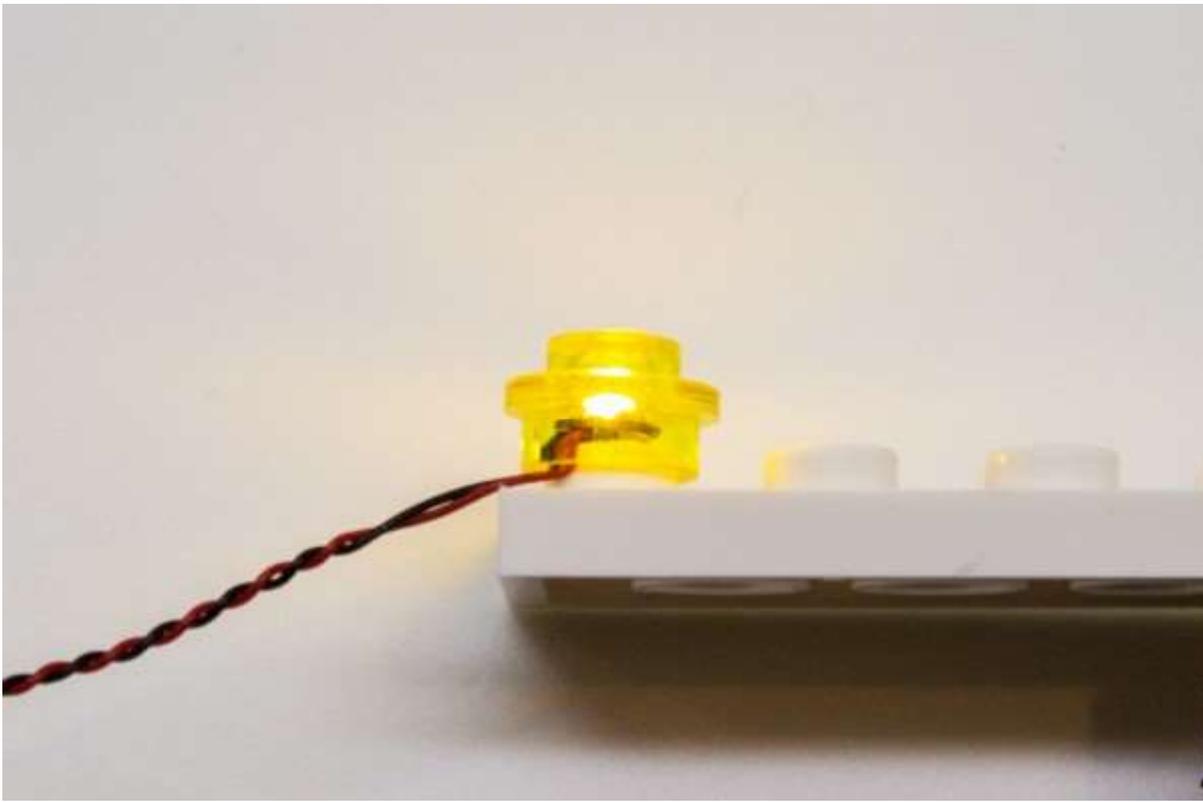
Incorrectly inserting the connector can result in bent pins inside the port or possible overheating of the expansion board when connected.



Installing Bit Lights under LEGO® bricks and plates.

When installing Bit Lights under LEGO® pieces, ensure they are placed the correct way up (Yellow LED component exposed). You can either place them directly on top of LEGO® studs or in between.



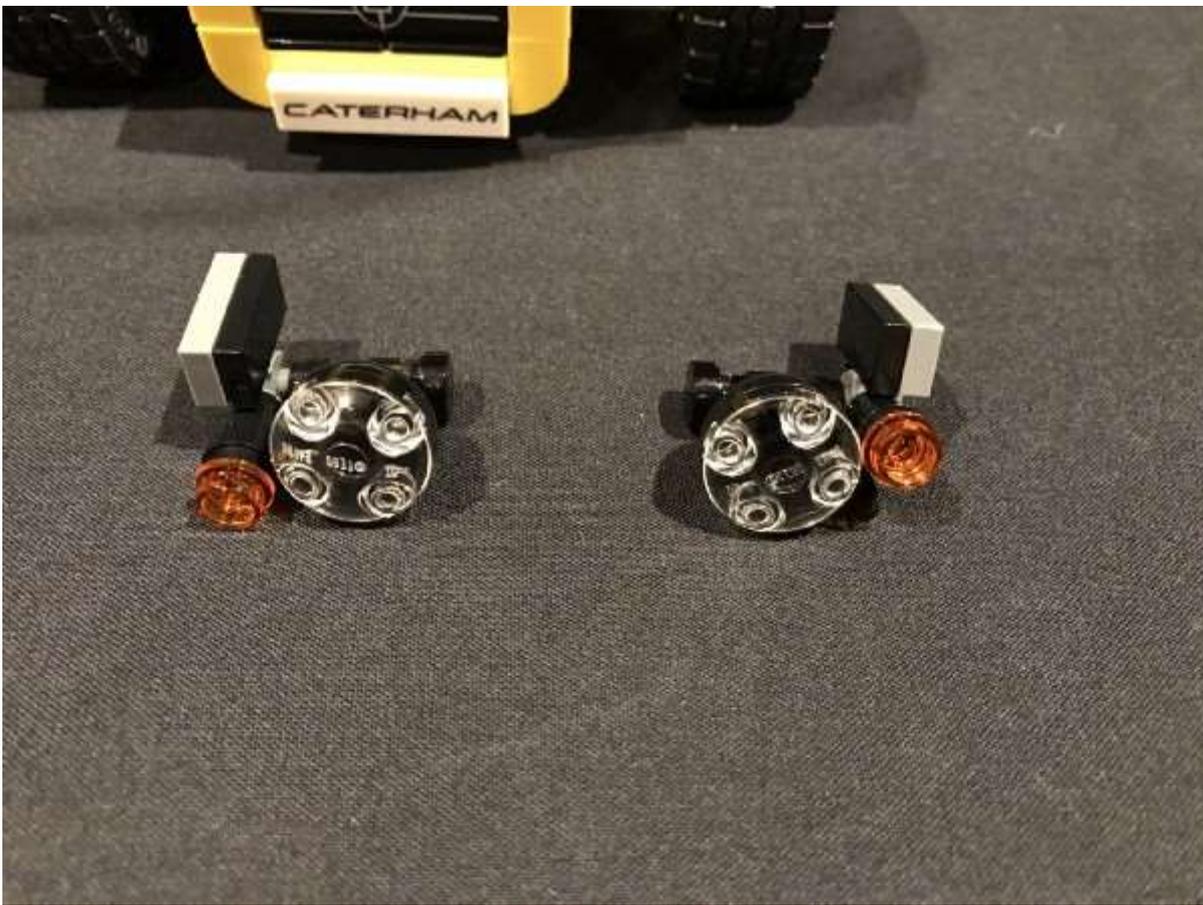


OK, Let's Begin!

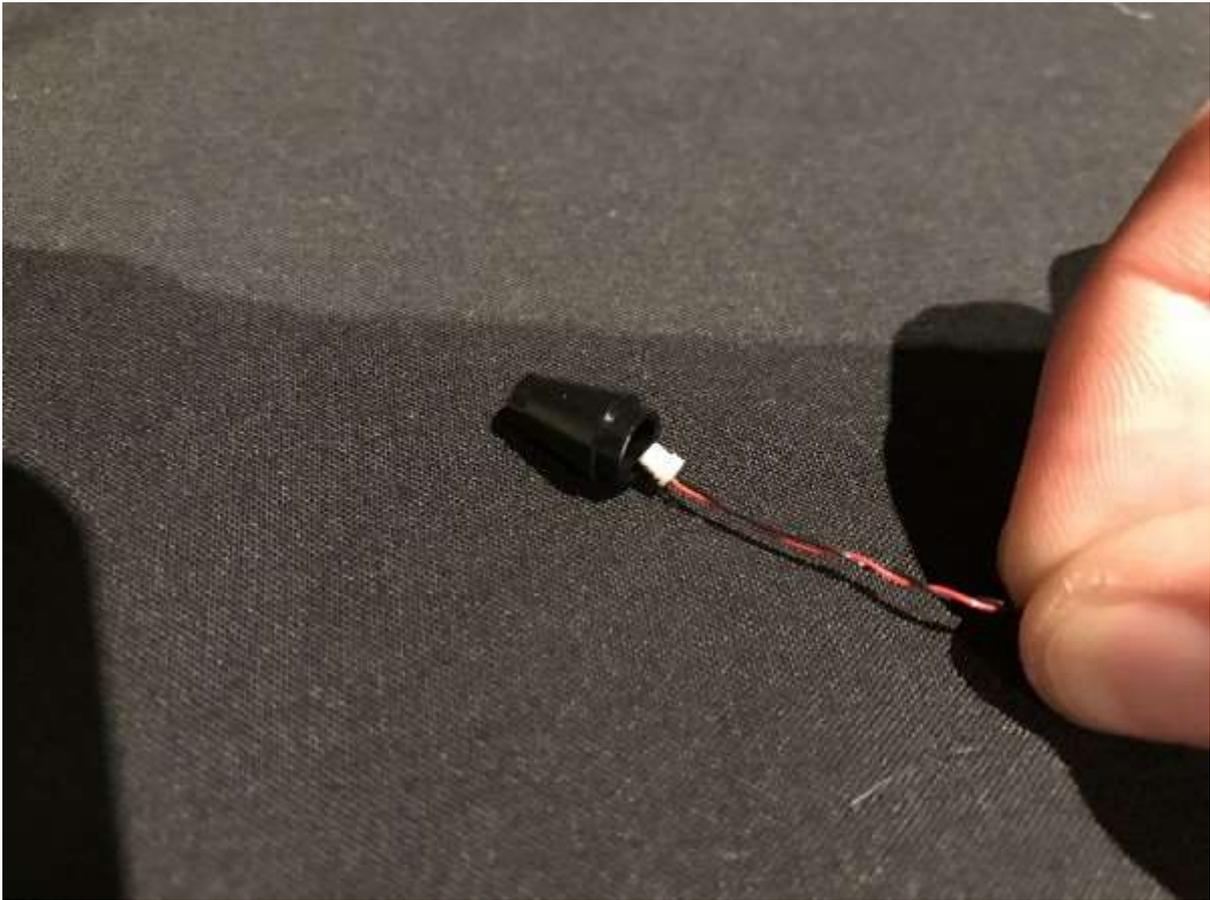
Instructions for installing this kit

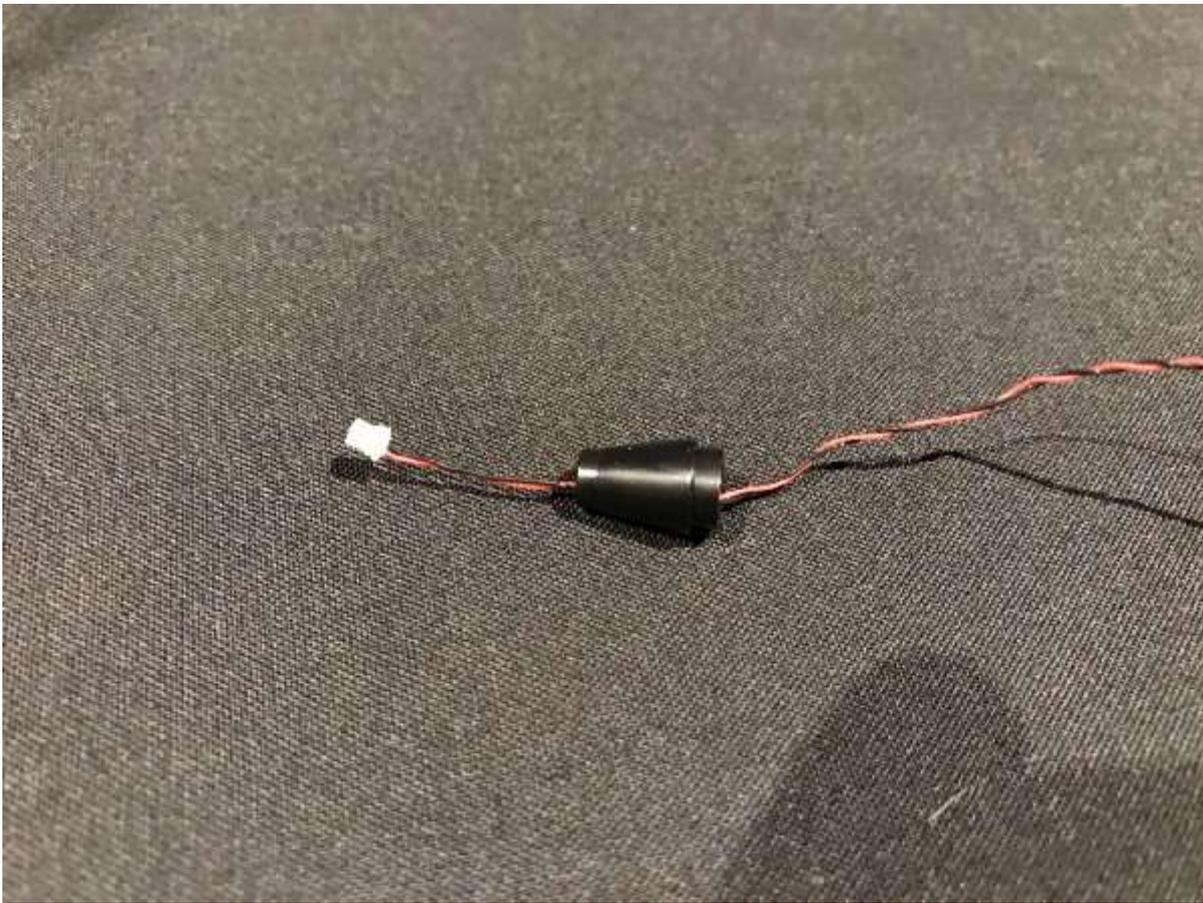
1.) We will install bit lights to the headlights and blinkers first. Start by removing the headlight sections and disassemble the pieces as per below:



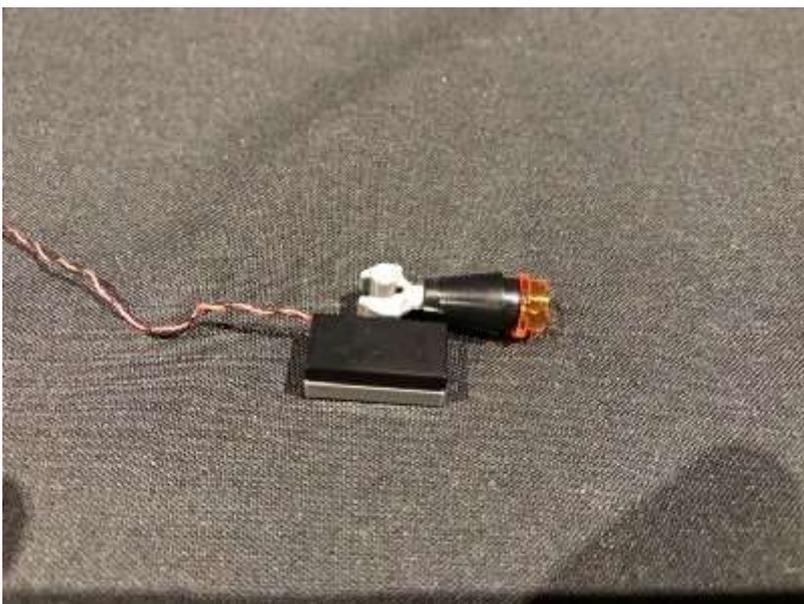
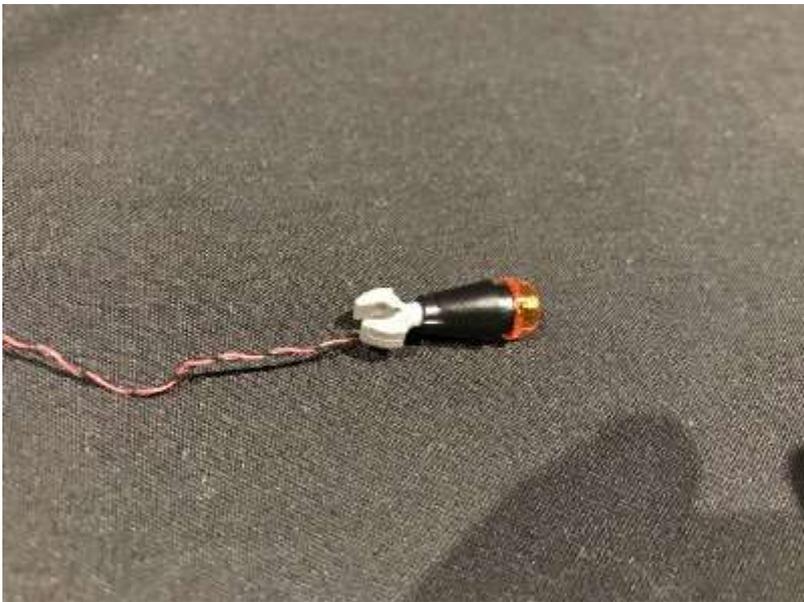


2.) We will first install lights to each blinker. Disassemble pieces of the blinkers and then take one **White Bit Light 30cm** and thread the connector side through the large hole of the black LEGO cone. Pull the cable all the way through from the other side until the LED component is right up inside the LEGO cone.



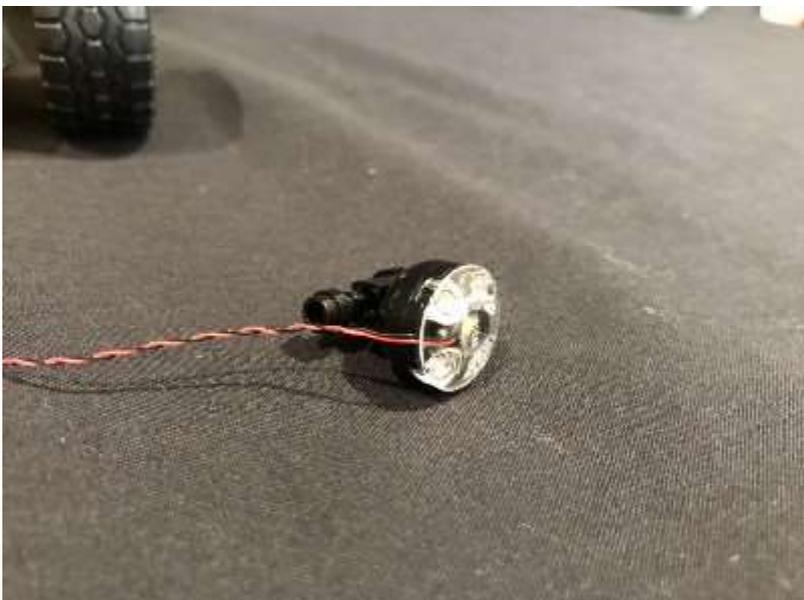
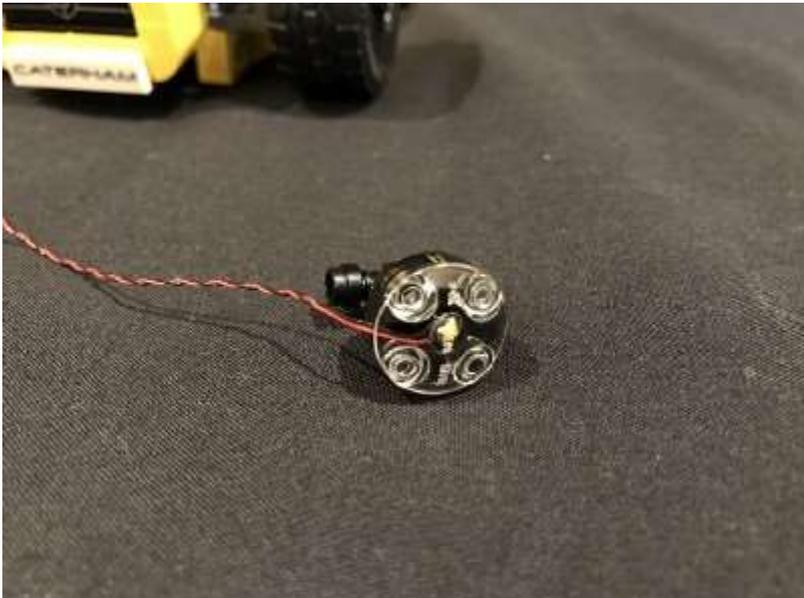
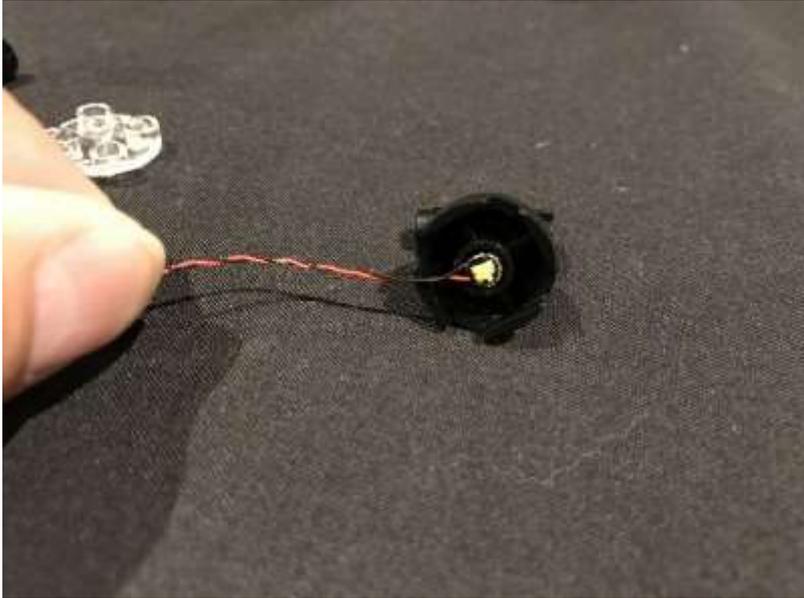


Secure the bit light in place by reconnecting the trans orange round plate. Reconnect the light grey LEGO piece to the other side and then reconnect this section back.



3.) Take another **White Bit Light 30cm** and place the LED component part in the centre of the black round LEGO piece. With the cable facing downward, reconnect the trans

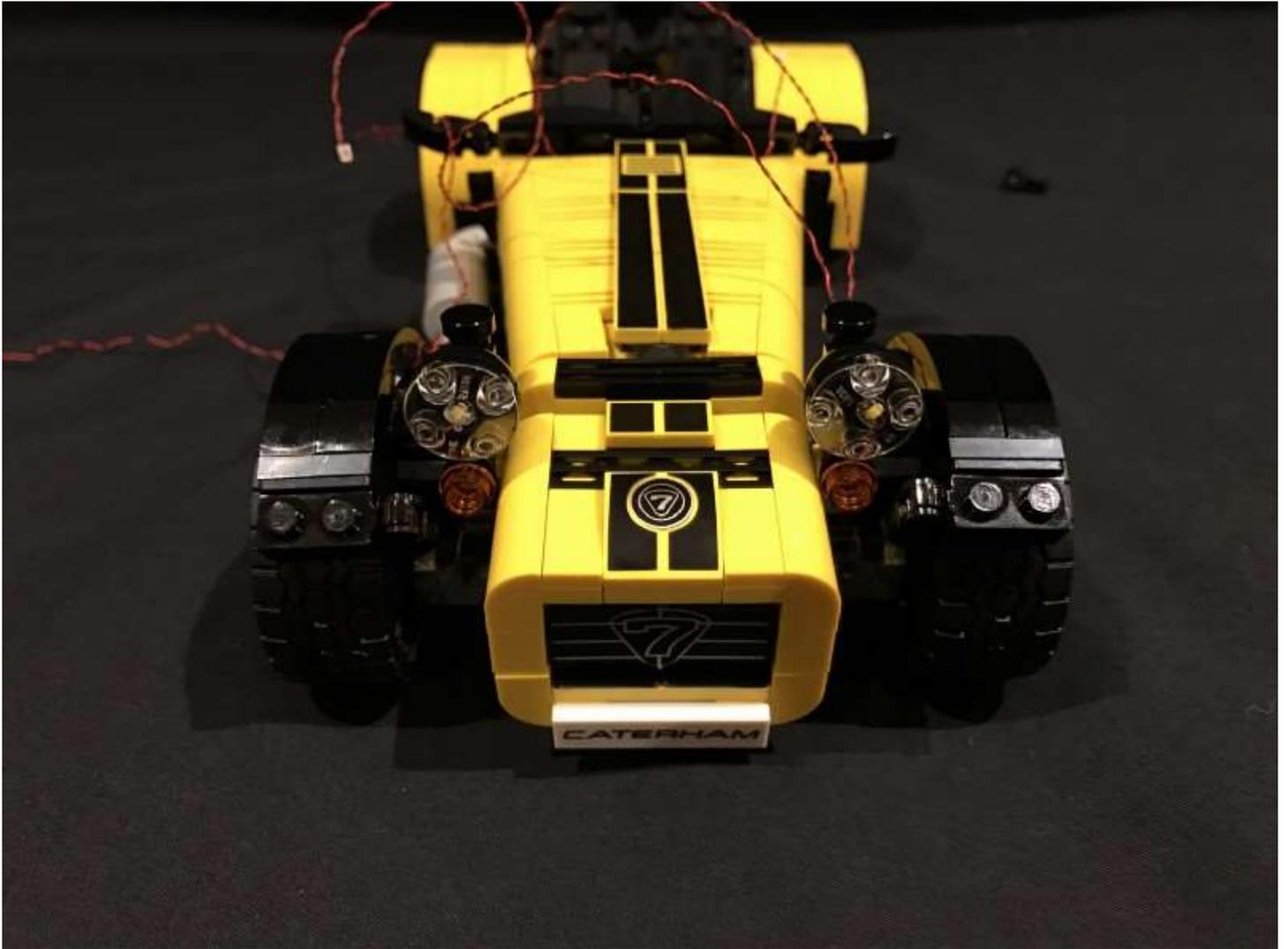
clear round LEGO piece over the top ensuring the LED component sits securely in the centre.



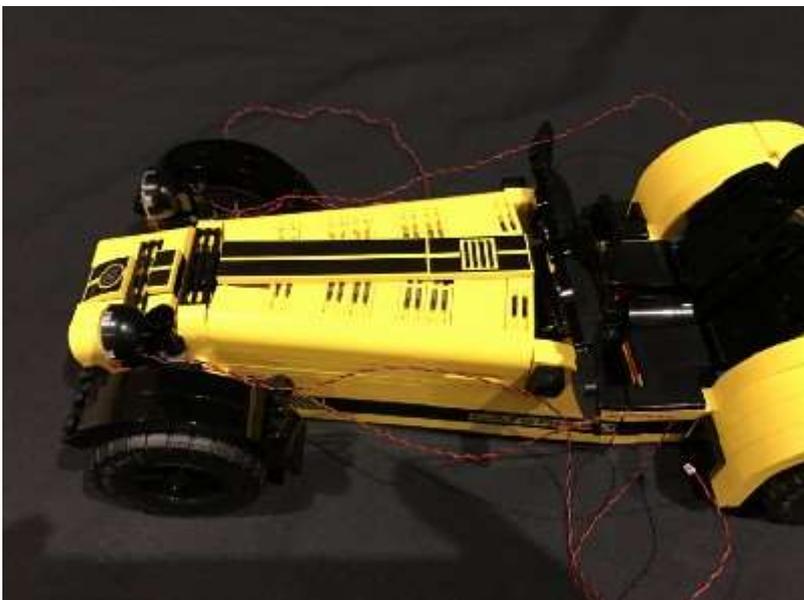
Reconnect the headlight section back on top of the blinker and then reconnect this whole section back to the left side of the Caterham.

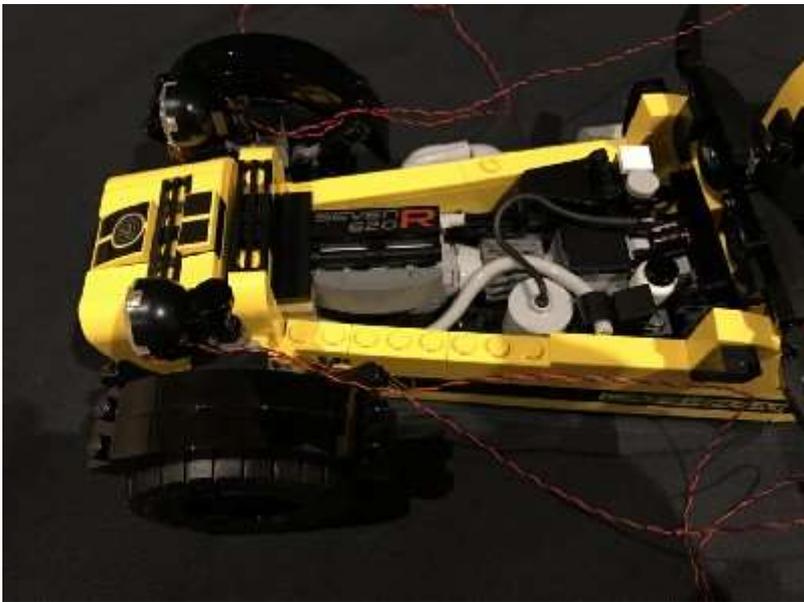
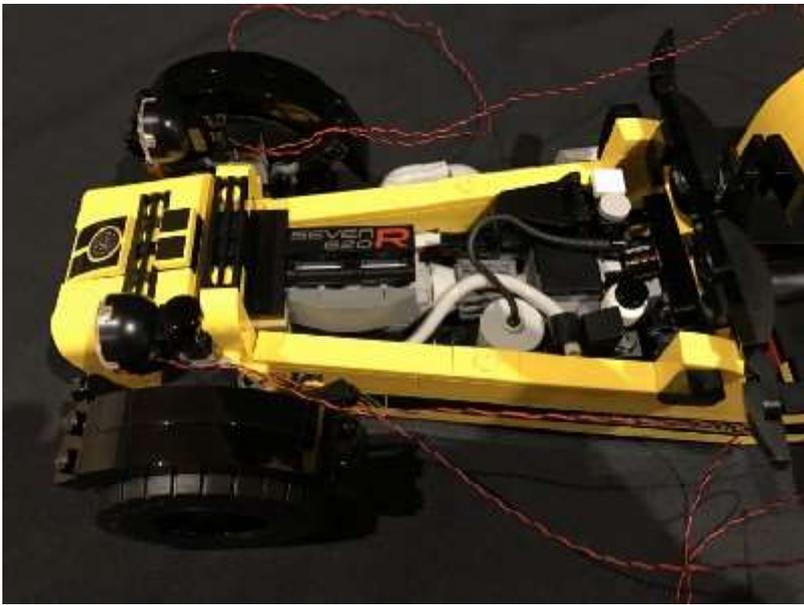


Repeats step 2 and 3 to install another 2x **White Bit Lights 30cm** to the other side's headlight and blinker.

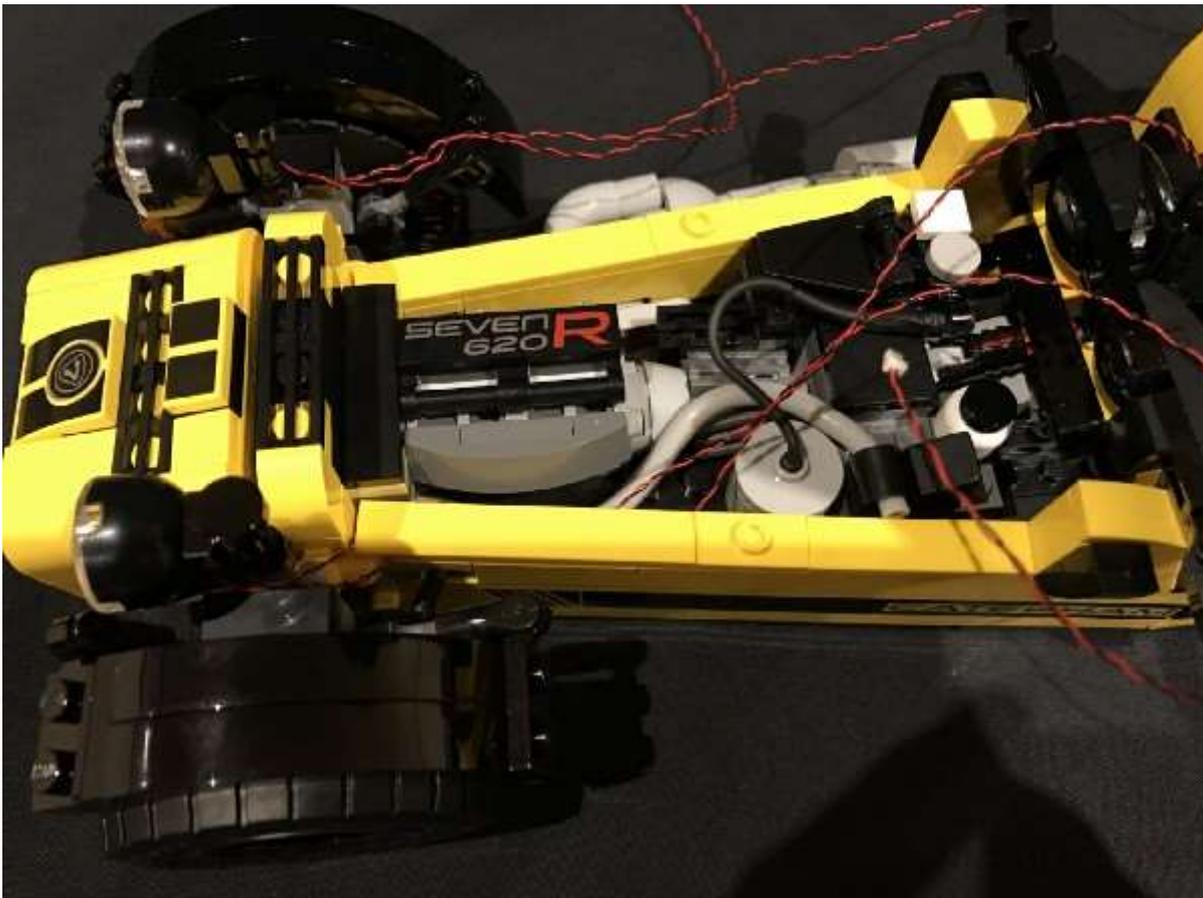
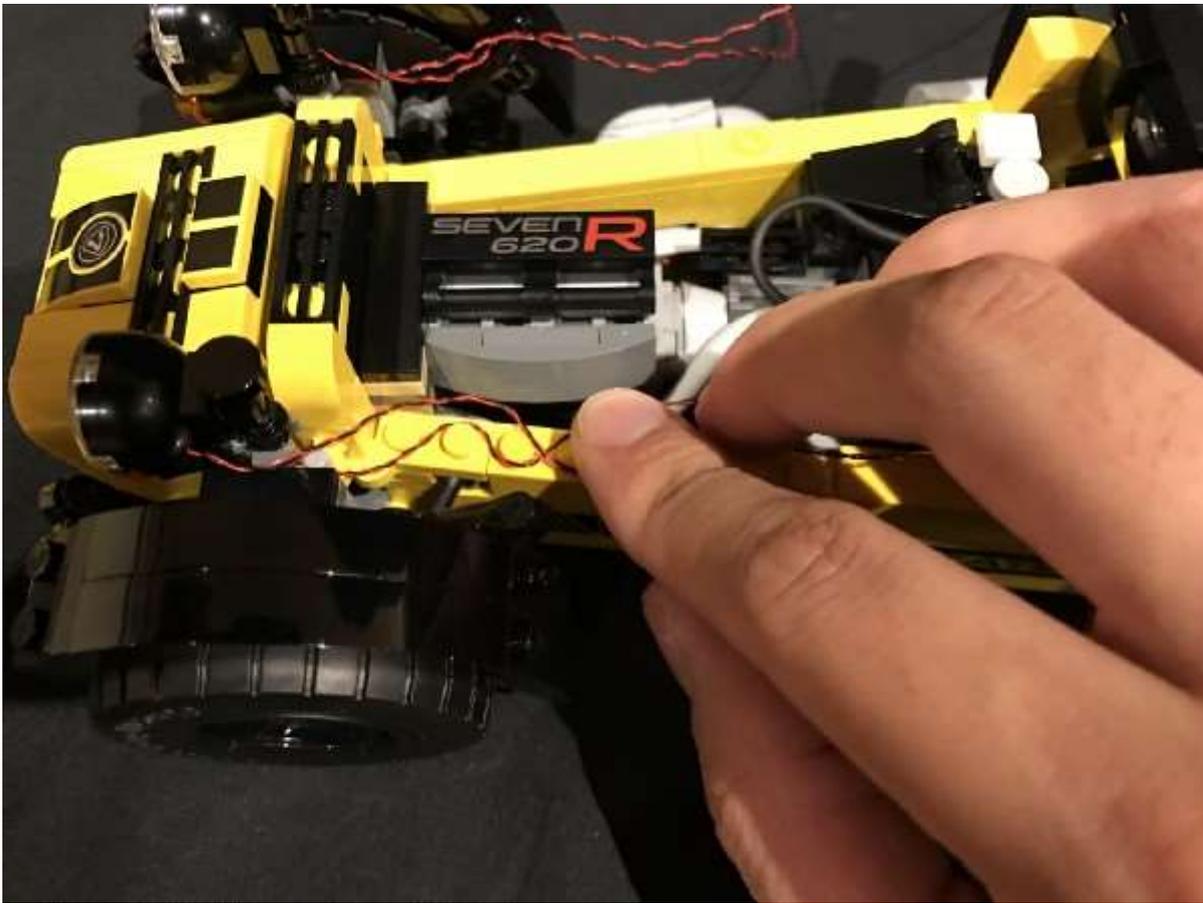


4.) We will now lay the cables through to the back of the vehicle. Start by removing the bonnet section as well as the yellow pieces along the side.

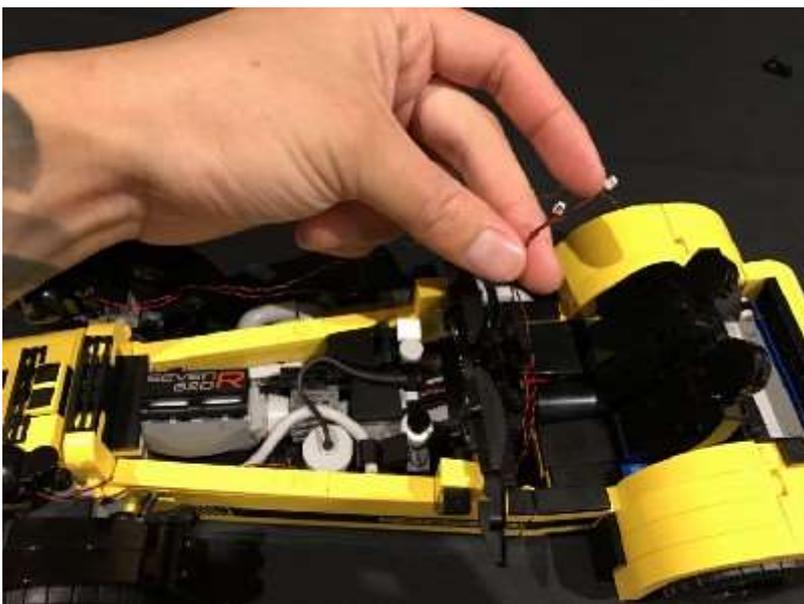
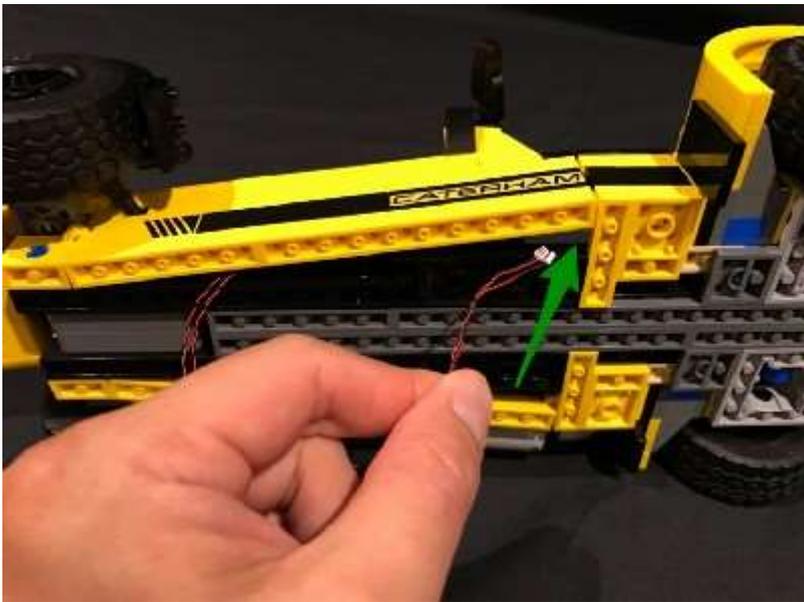
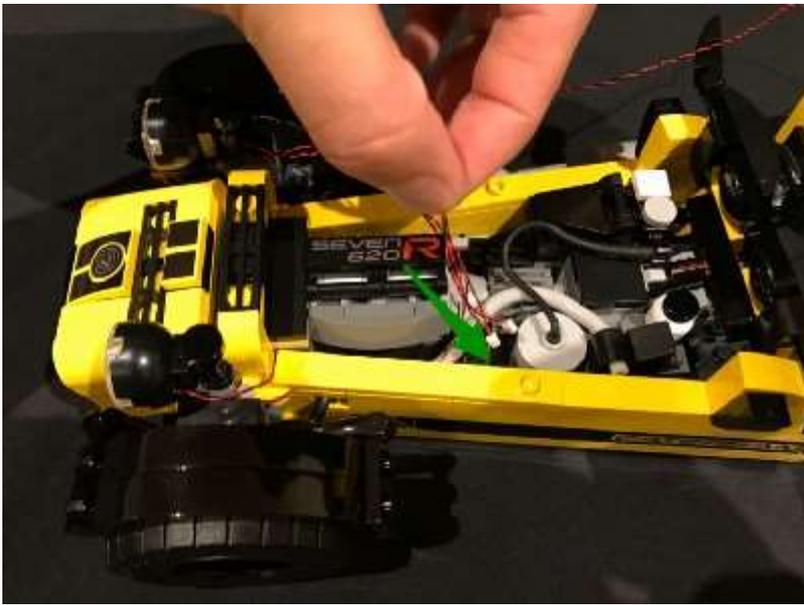




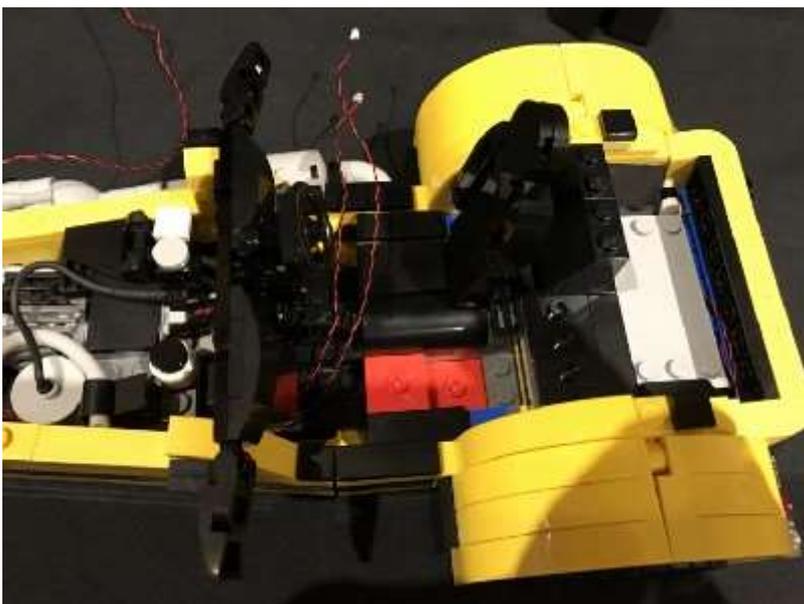
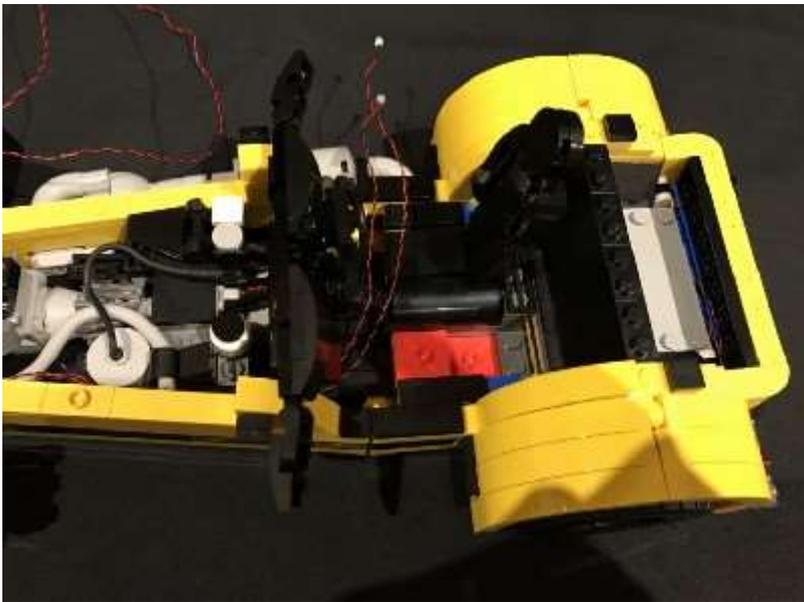
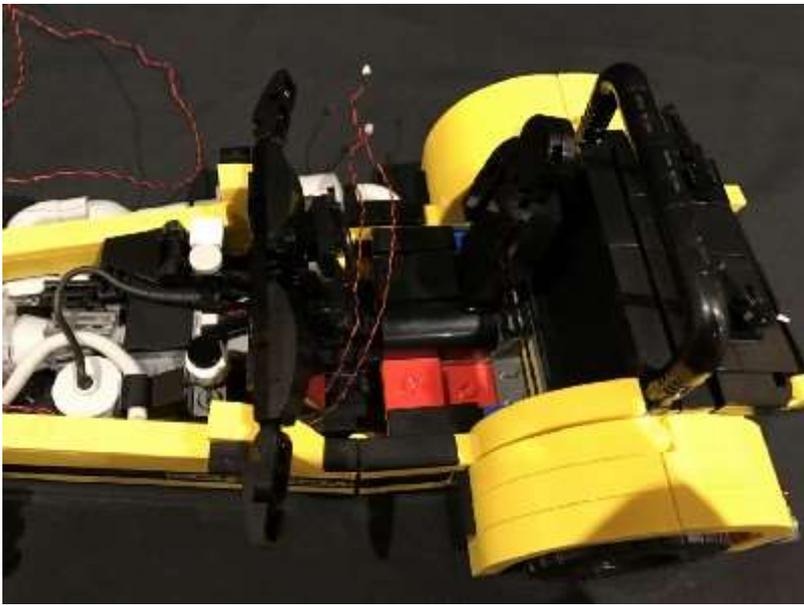
Carefully lay the cables in between studs and then secure them by reconnecting the yellow pieces over the top.



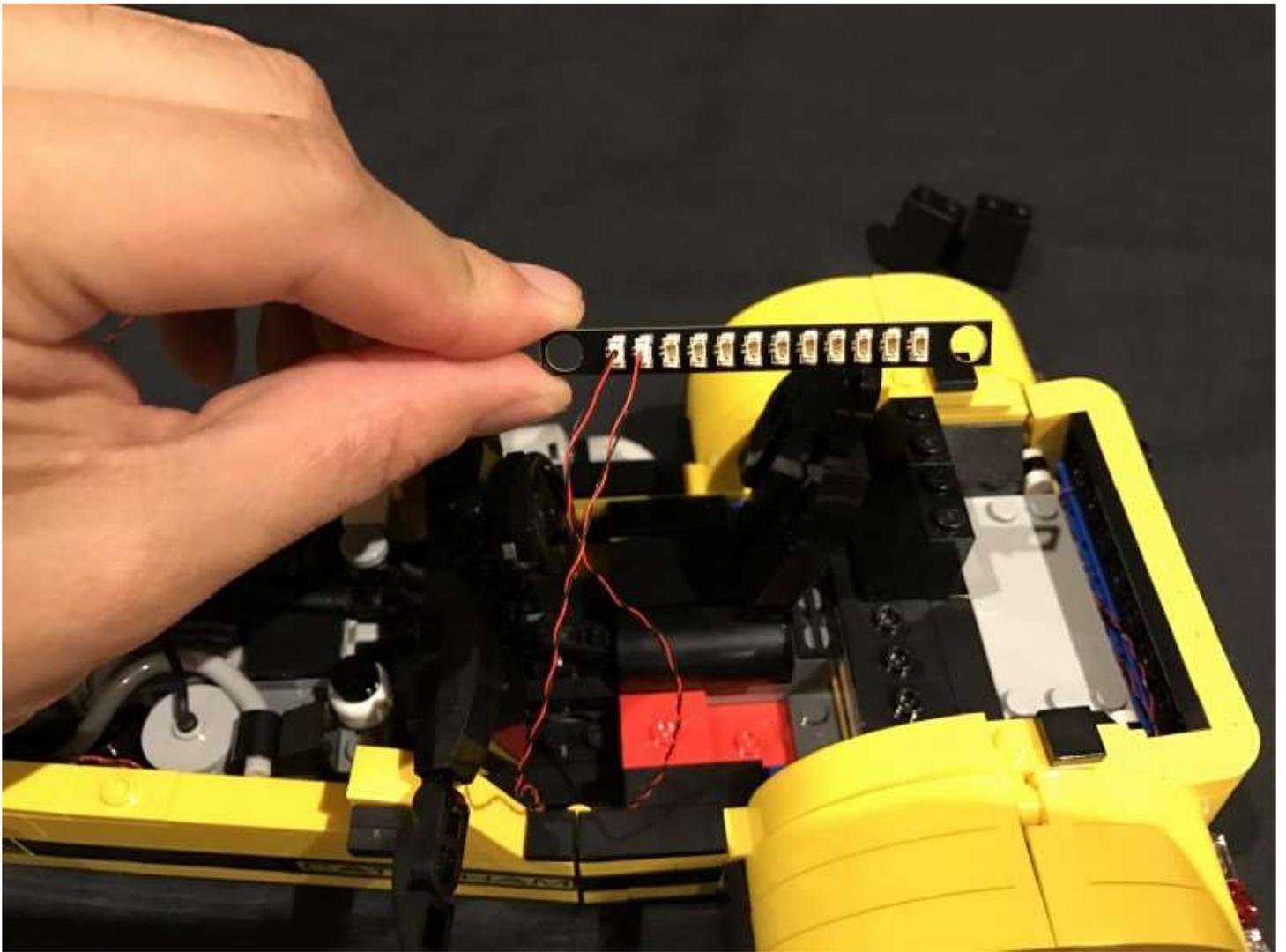
5.) Thread the cables down underneath the vehicle, and then thread the cable back up from underneath as per below.



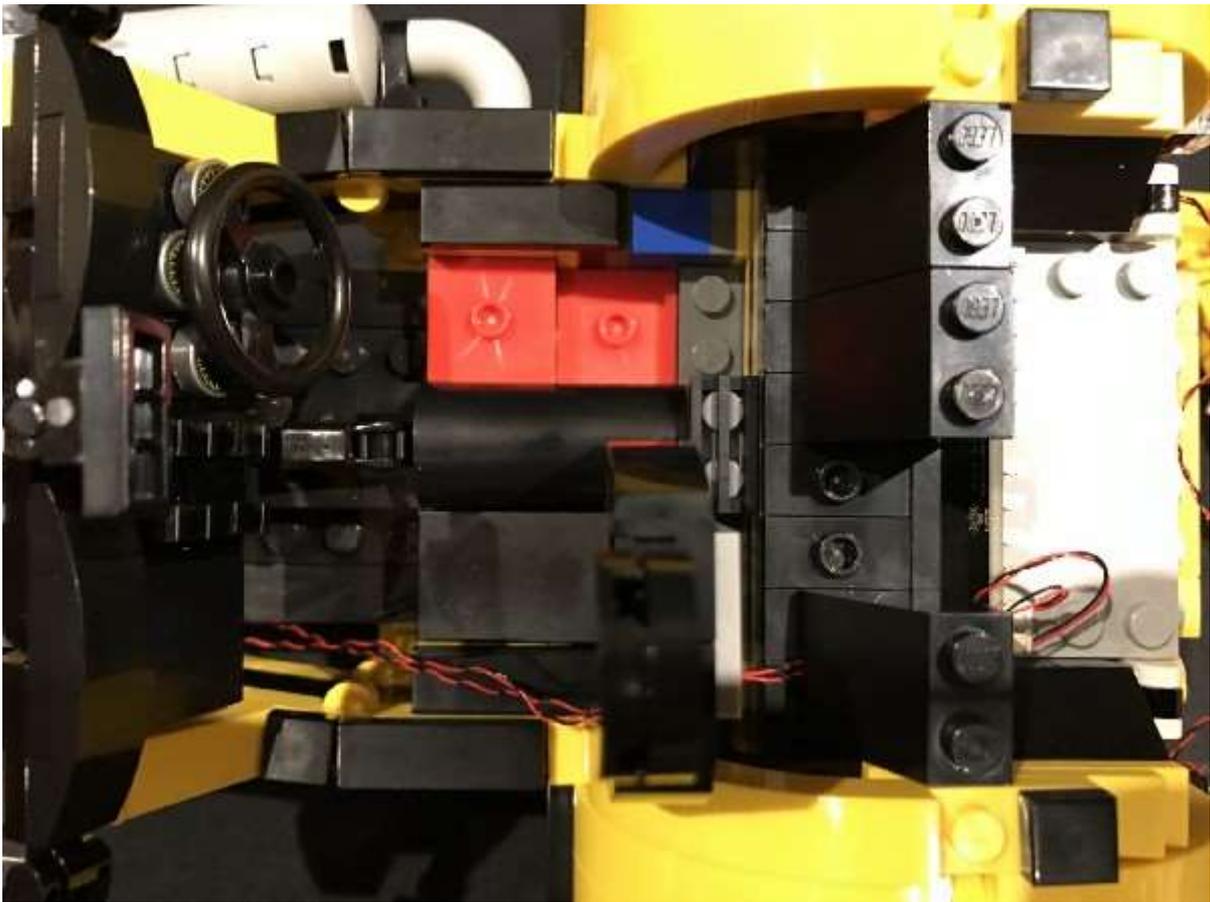
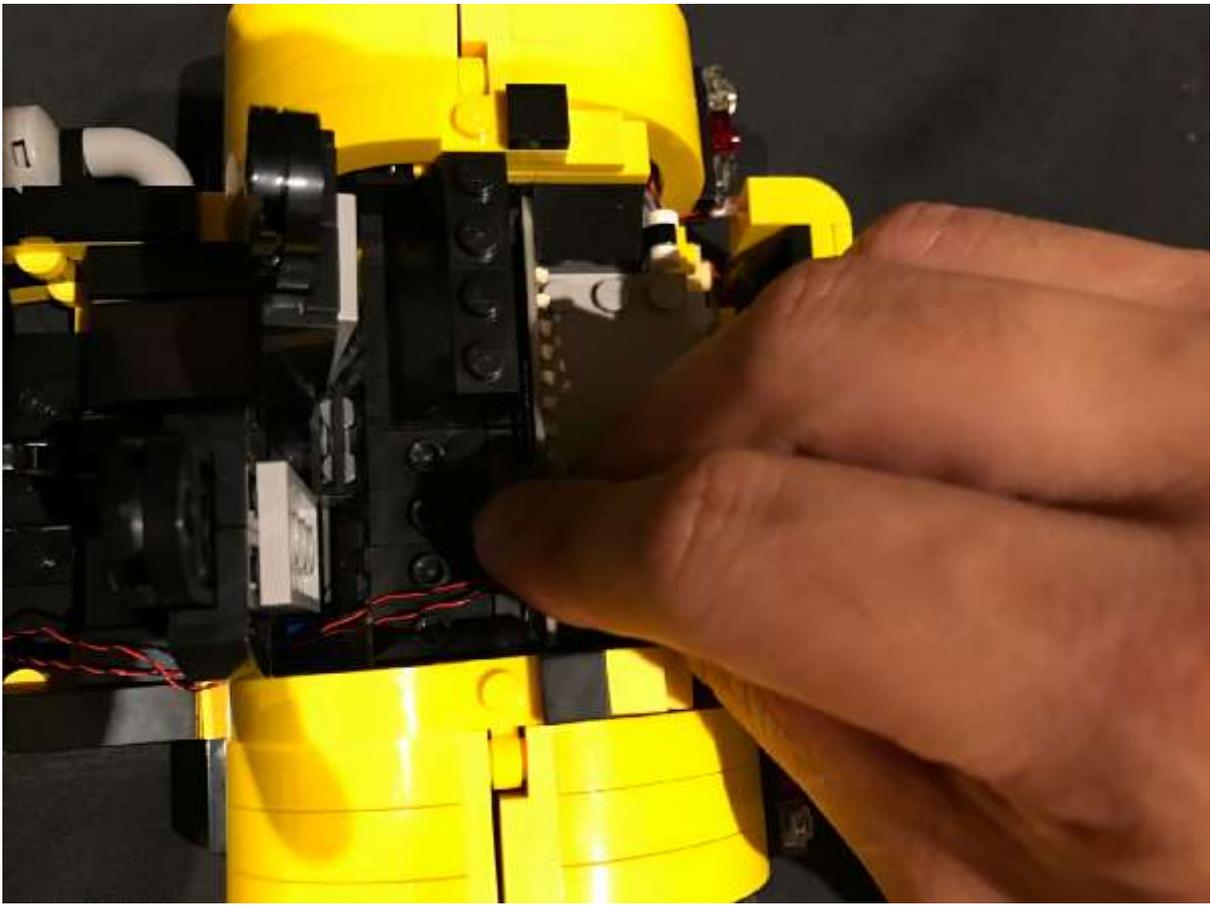
6.) Remove the passenger seat as well as the LEGO pieces behind to allow us to bring the cables to the back of the vehicle.

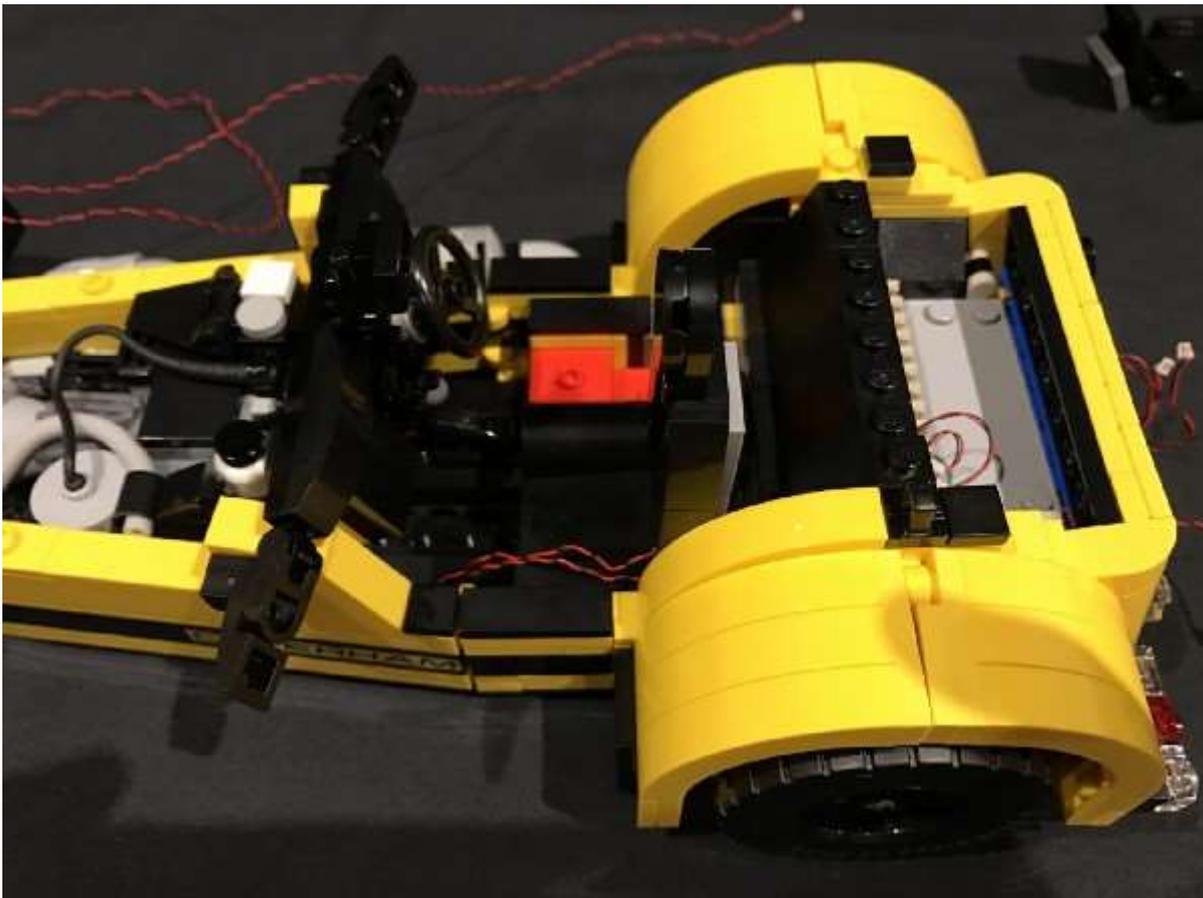
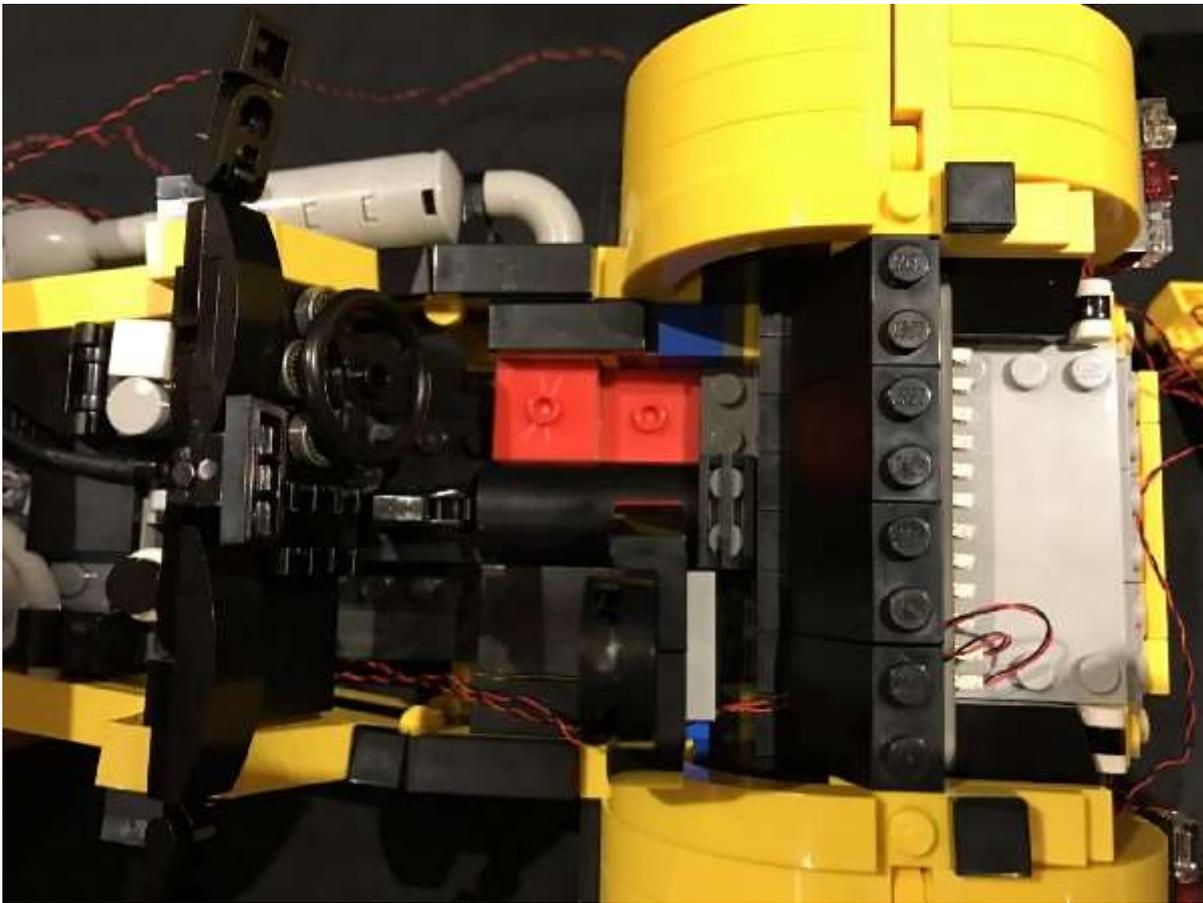


7.) Take the 12-port expansion board and connect the cables we have just brought over into the port closest to that side.

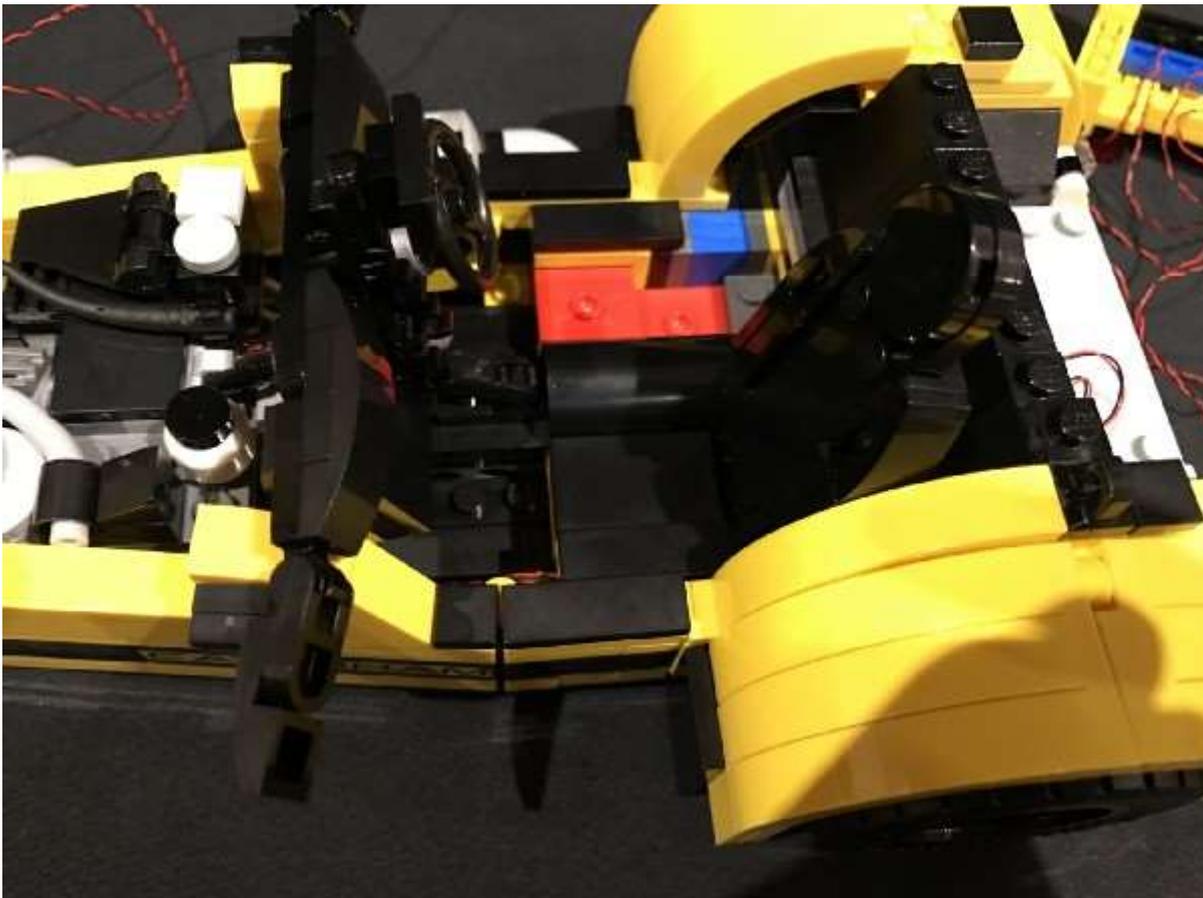
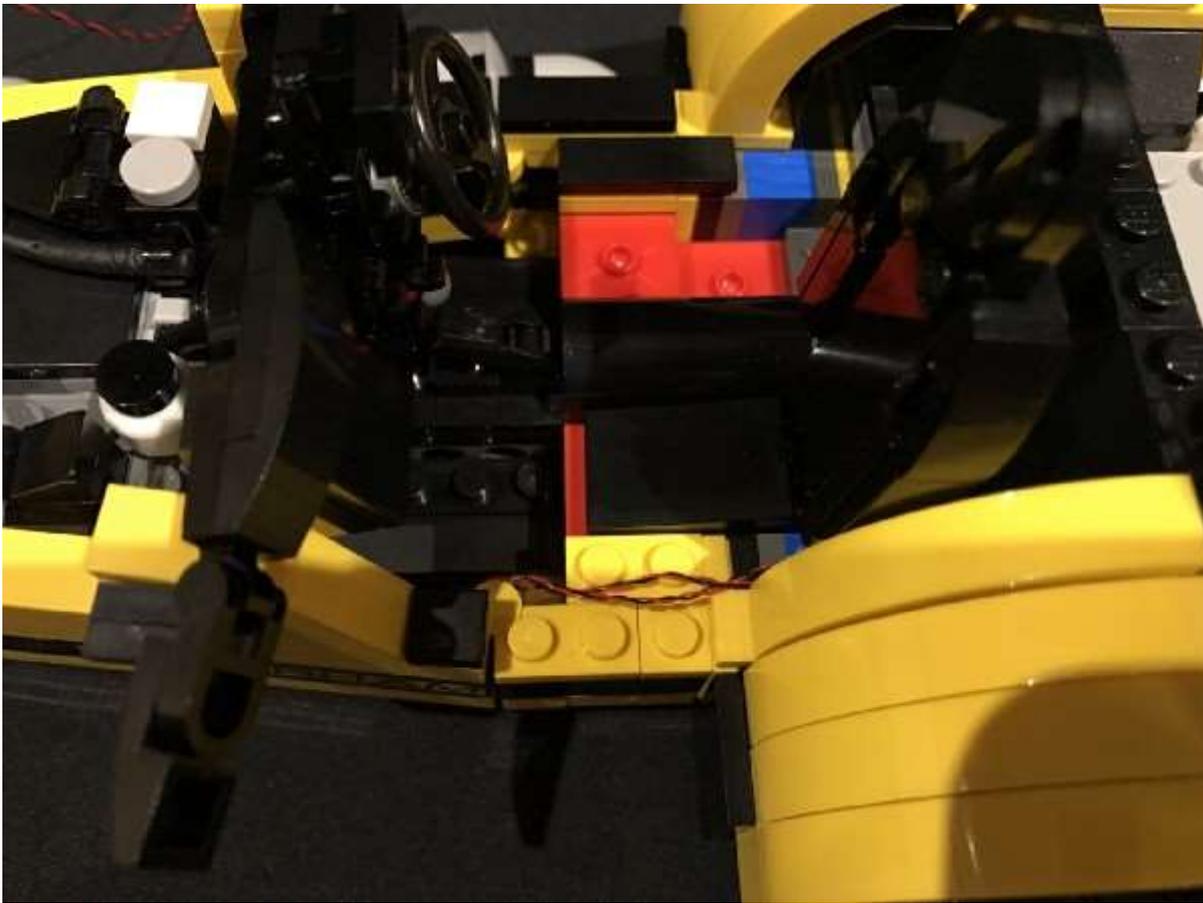


8.)Reconnect the seat and then lay the cables underneath and in between studs before then reconnecting pieces over the top.

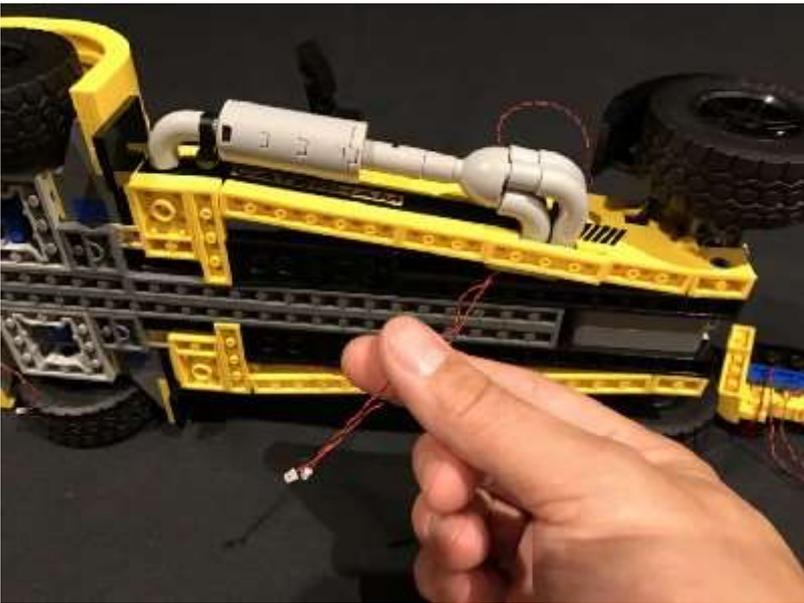
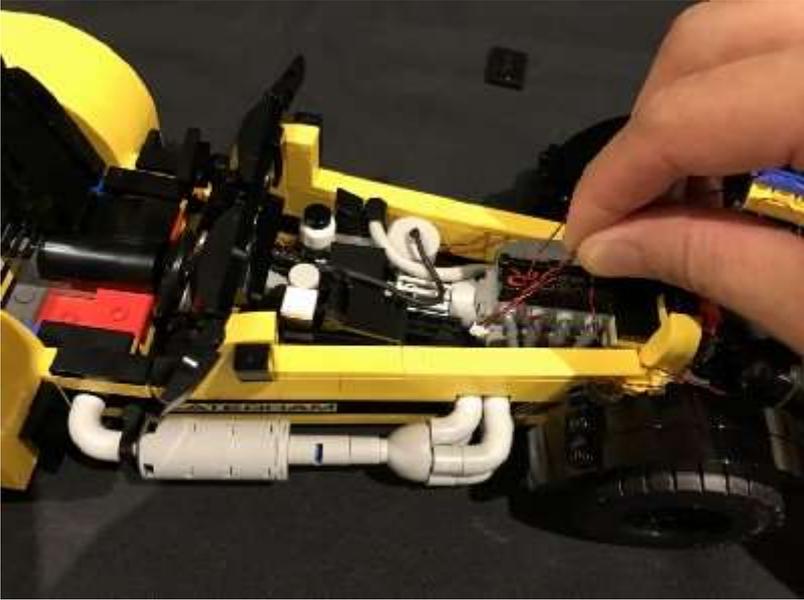
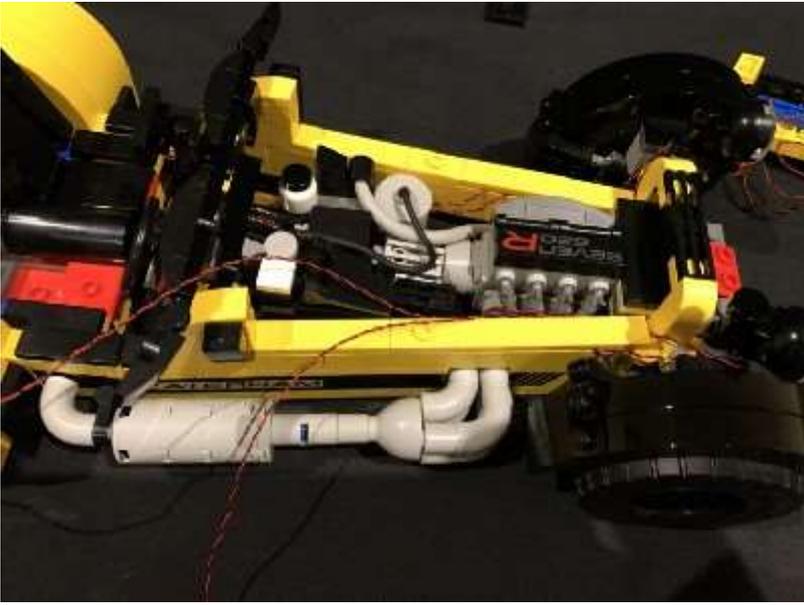


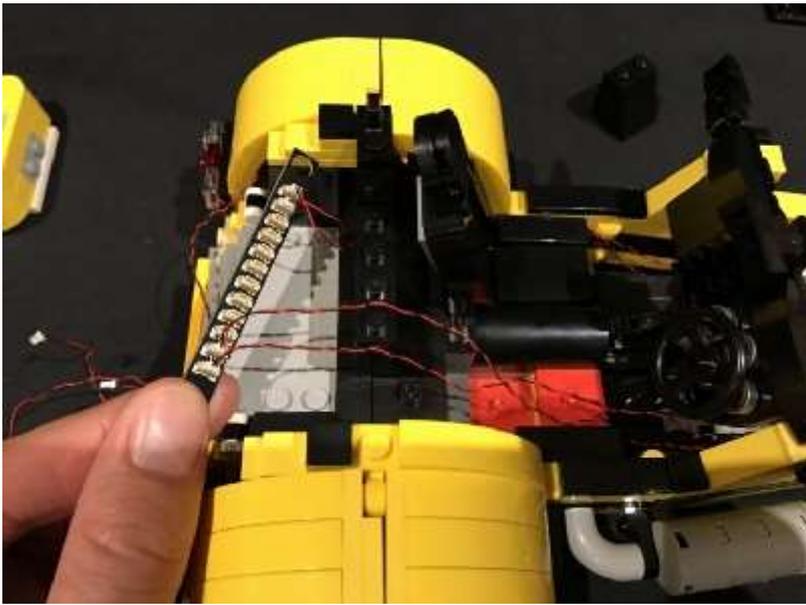
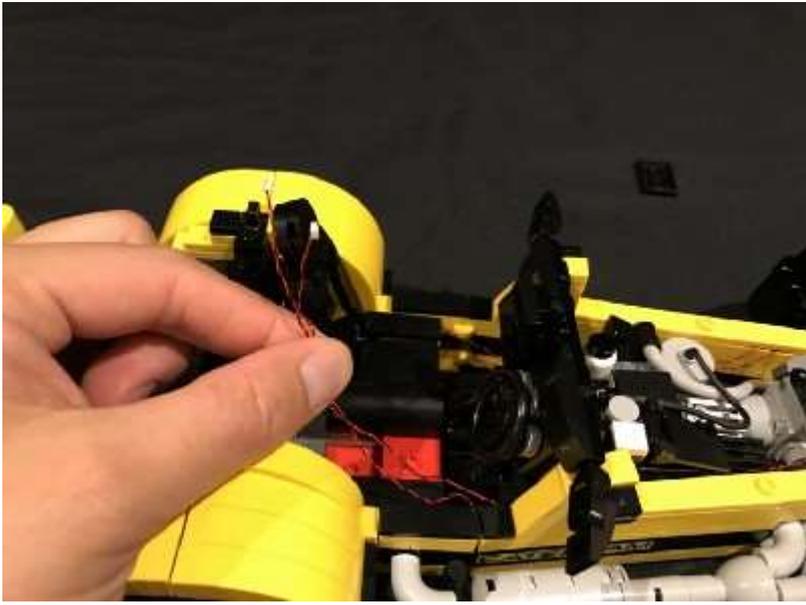
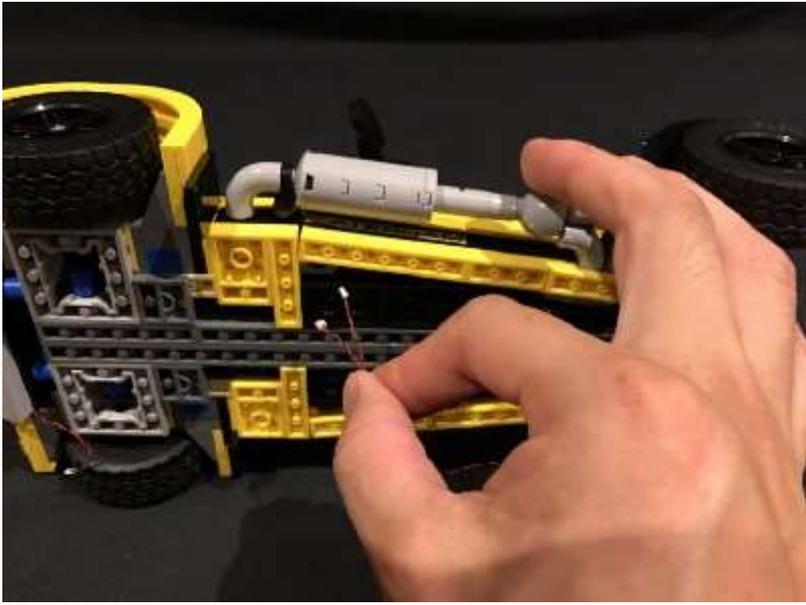


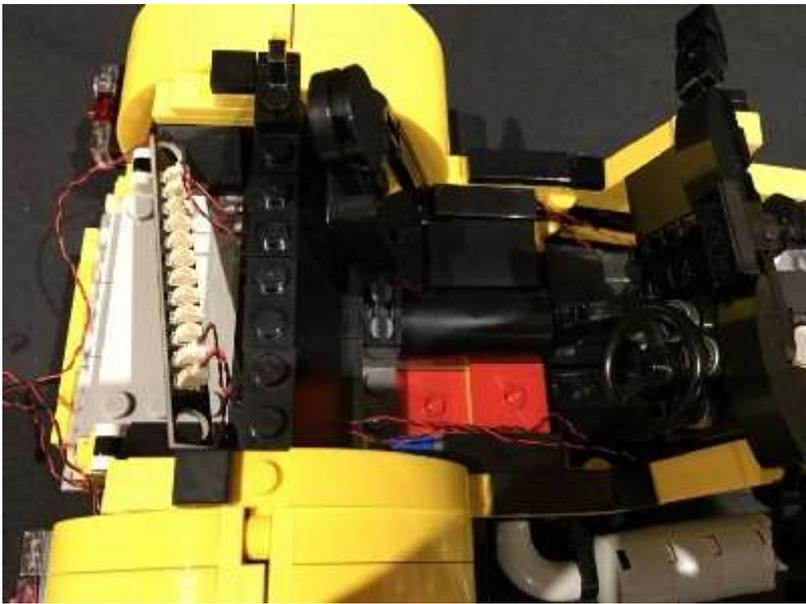
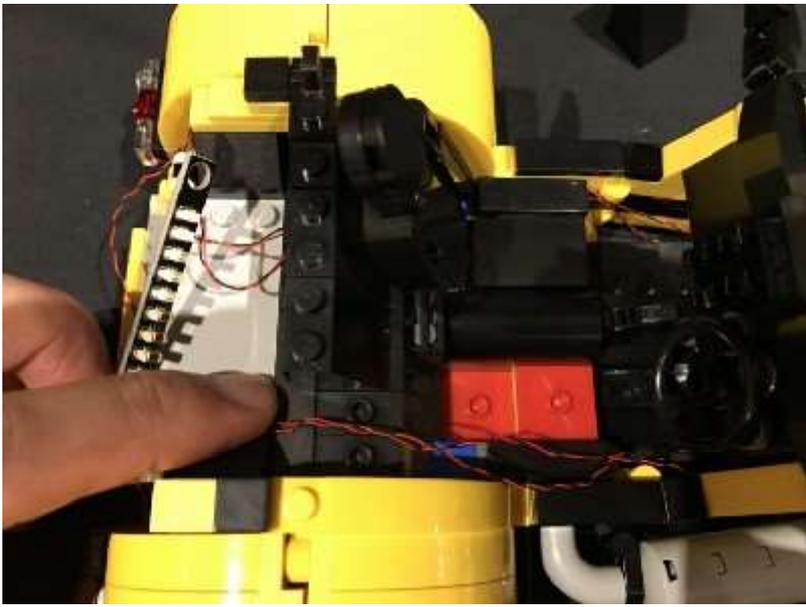
Hide the rest of the cables along the sides underneath the yellow and black LEGO pieces ensuring you lay them in between studs.

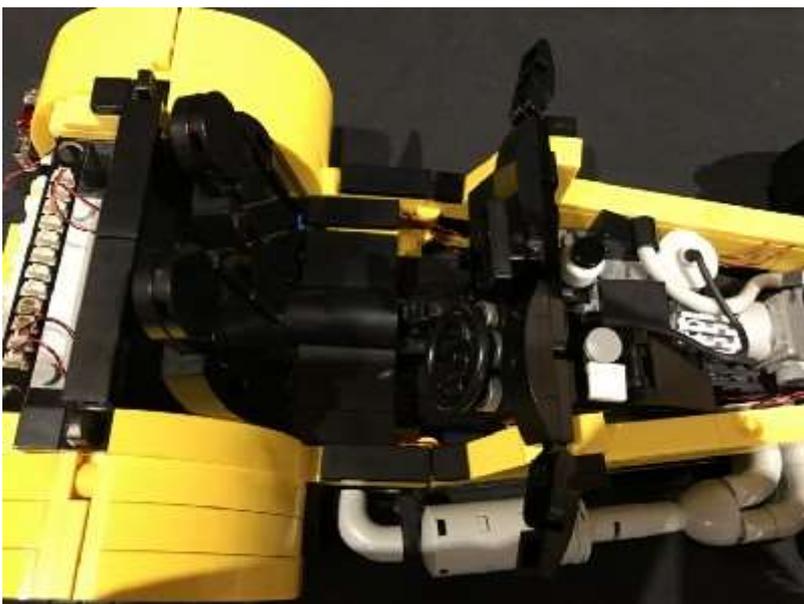
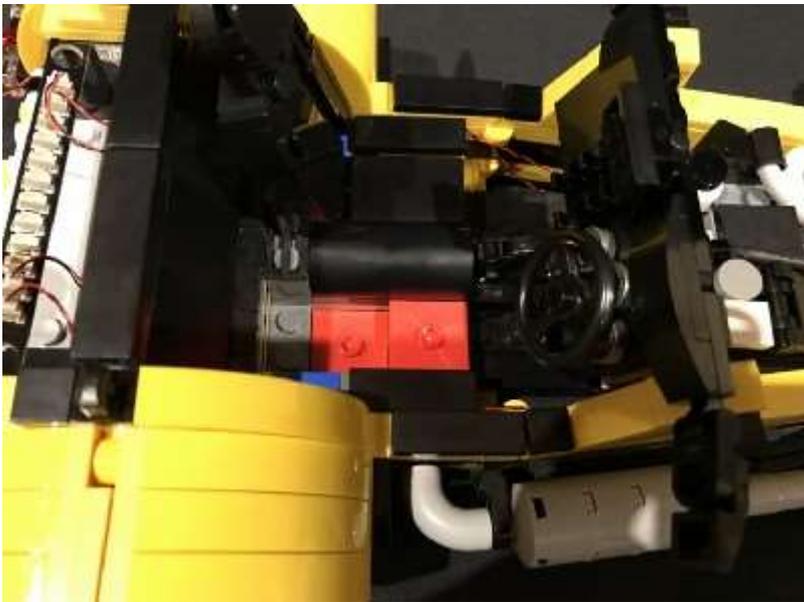
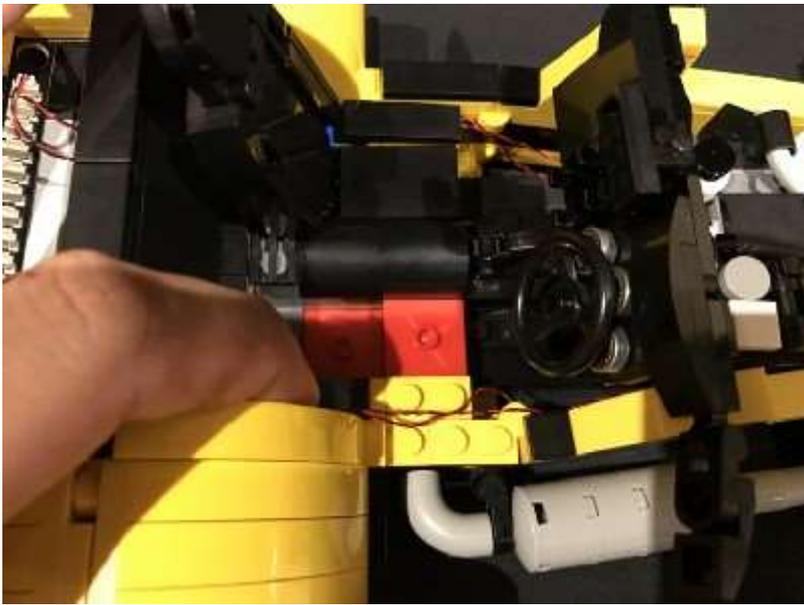


9.) Turn the vehicle around and do the same for the headlight and blinkers on the drivers side using the same method we did in the previous step.









10.)Reconnect the bonnet section of the Caterham

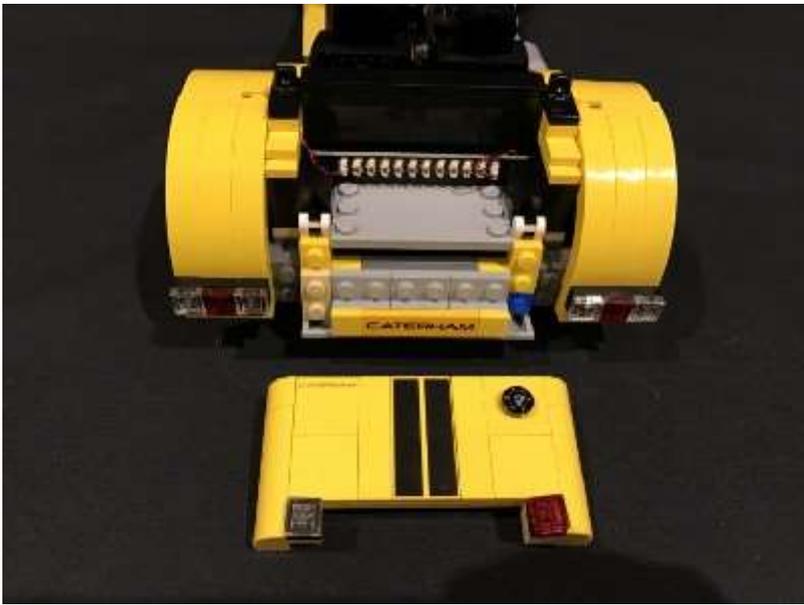


11.) We will now move onto installing lights to the back of the Caterham. *Note: We will be required to swap out a few of the LEGO tiles to enable us to install our bit lights underneath.*

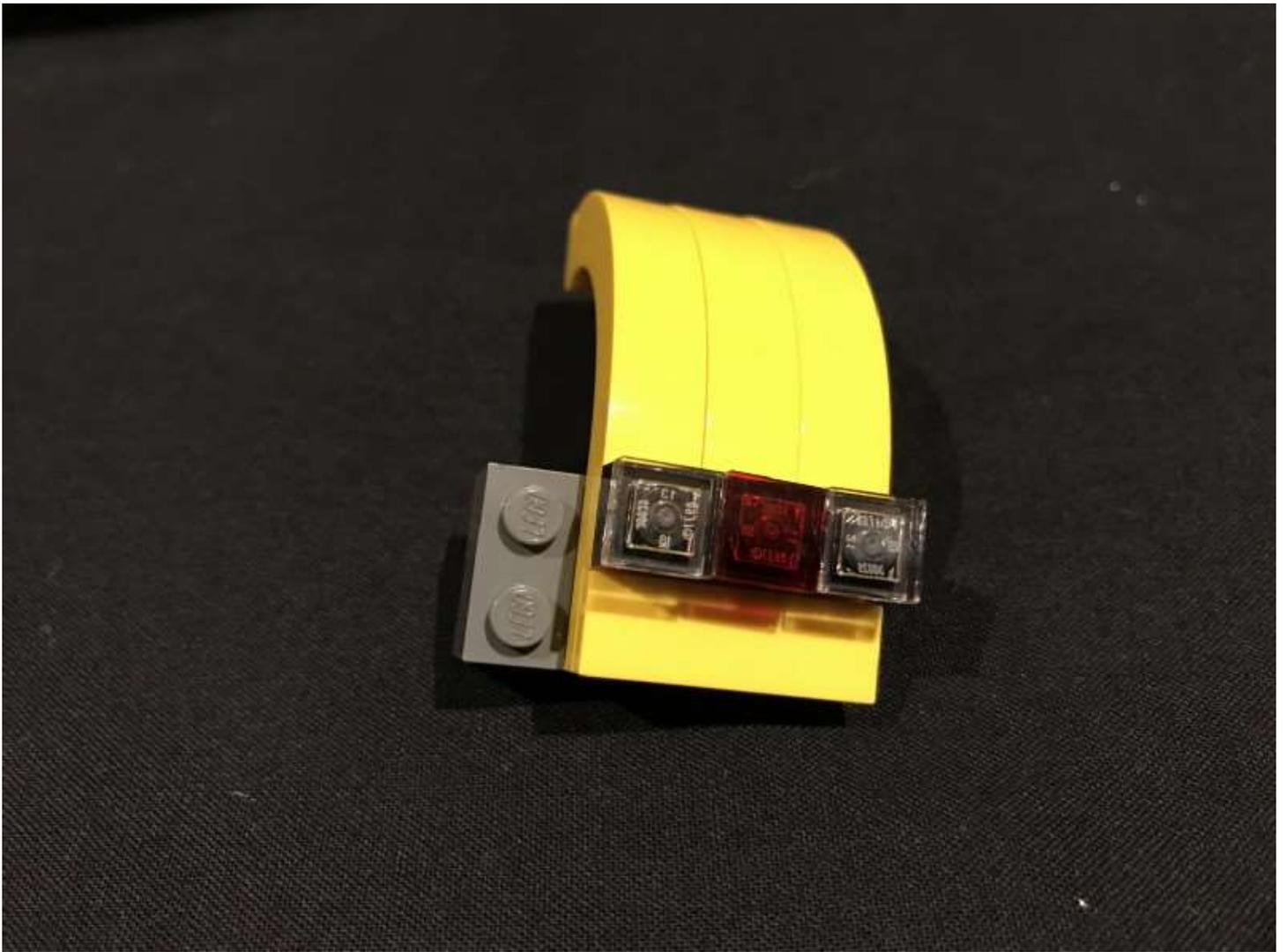


First remove the middle section as well as the 2 side sections as per below.

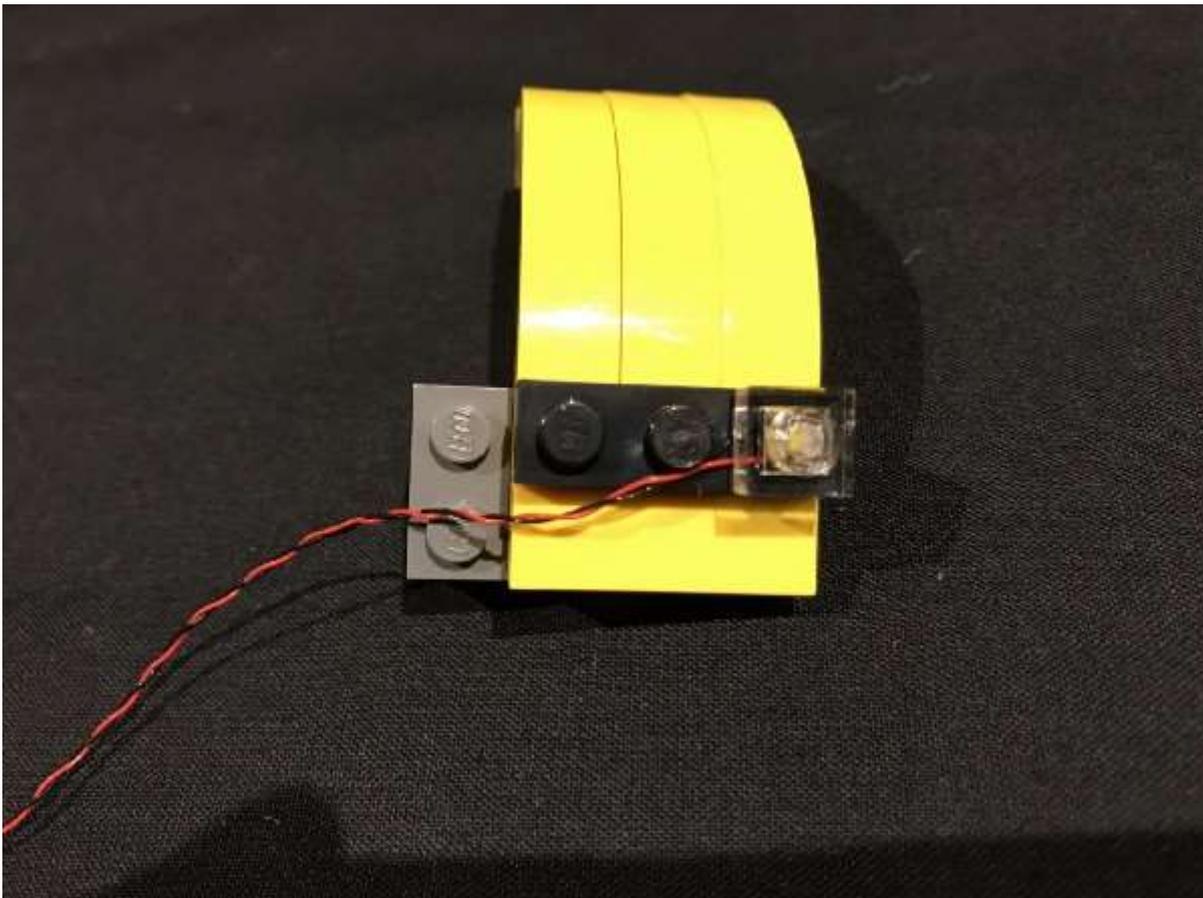
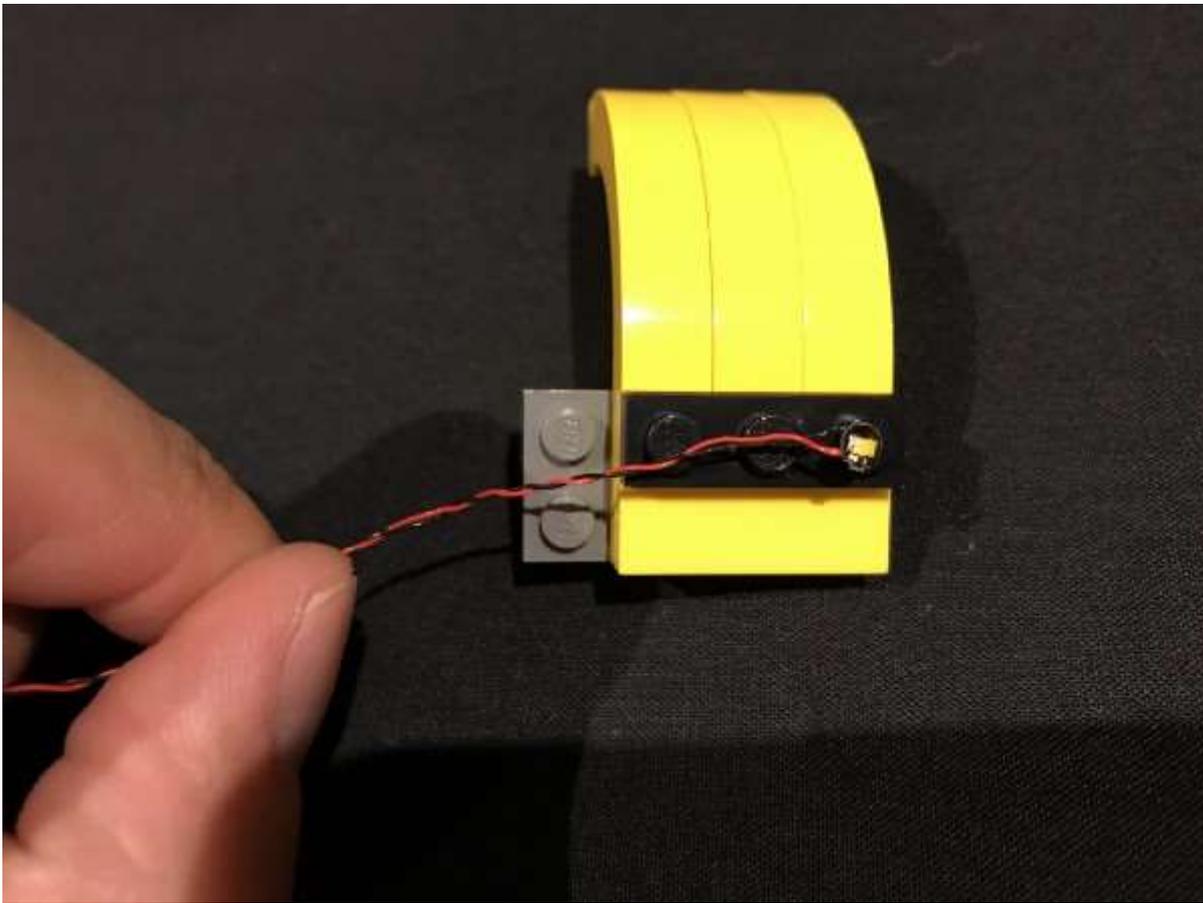




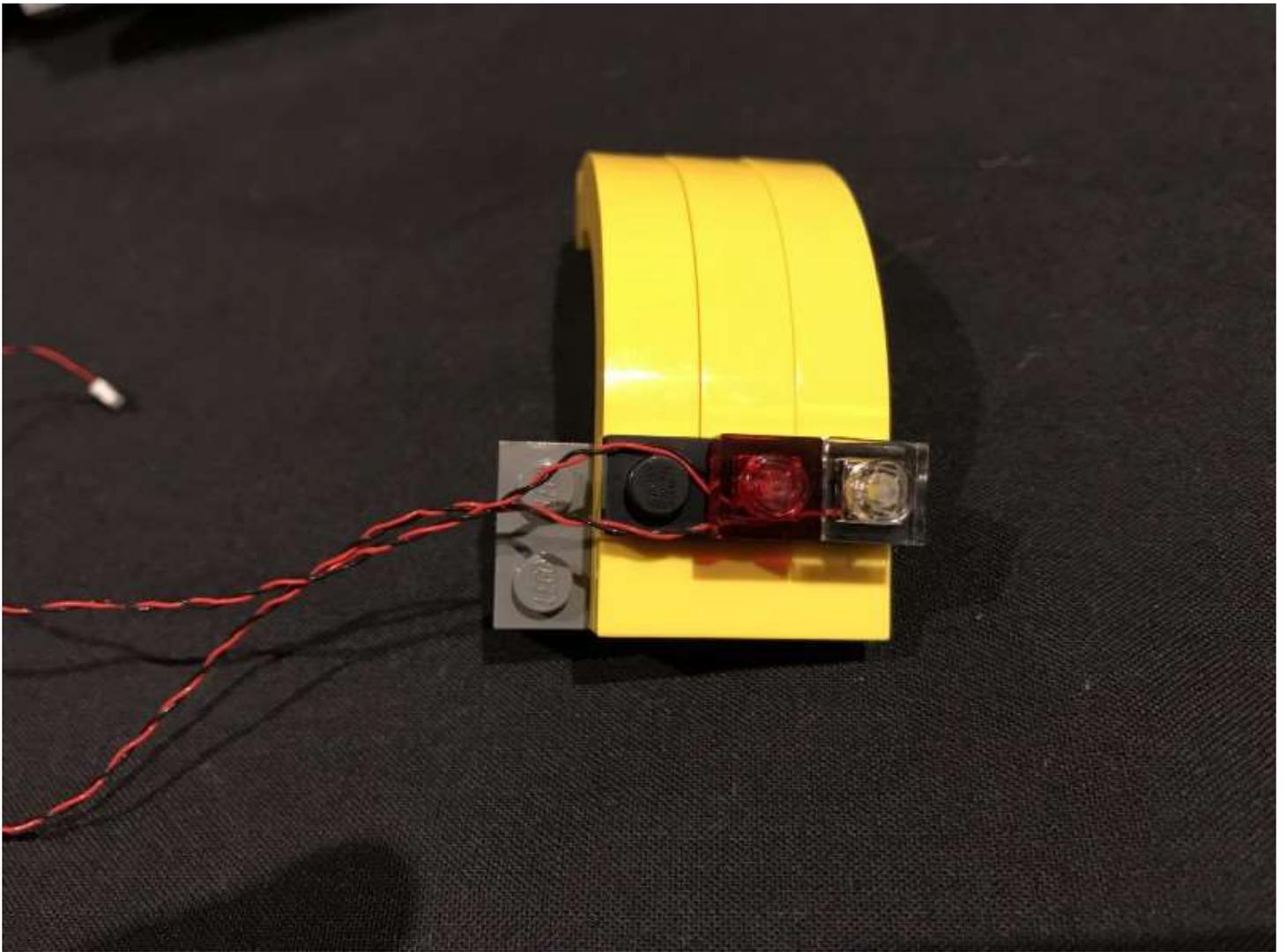
12.) We will start with the right side first. Remove the trans red and white tiles.



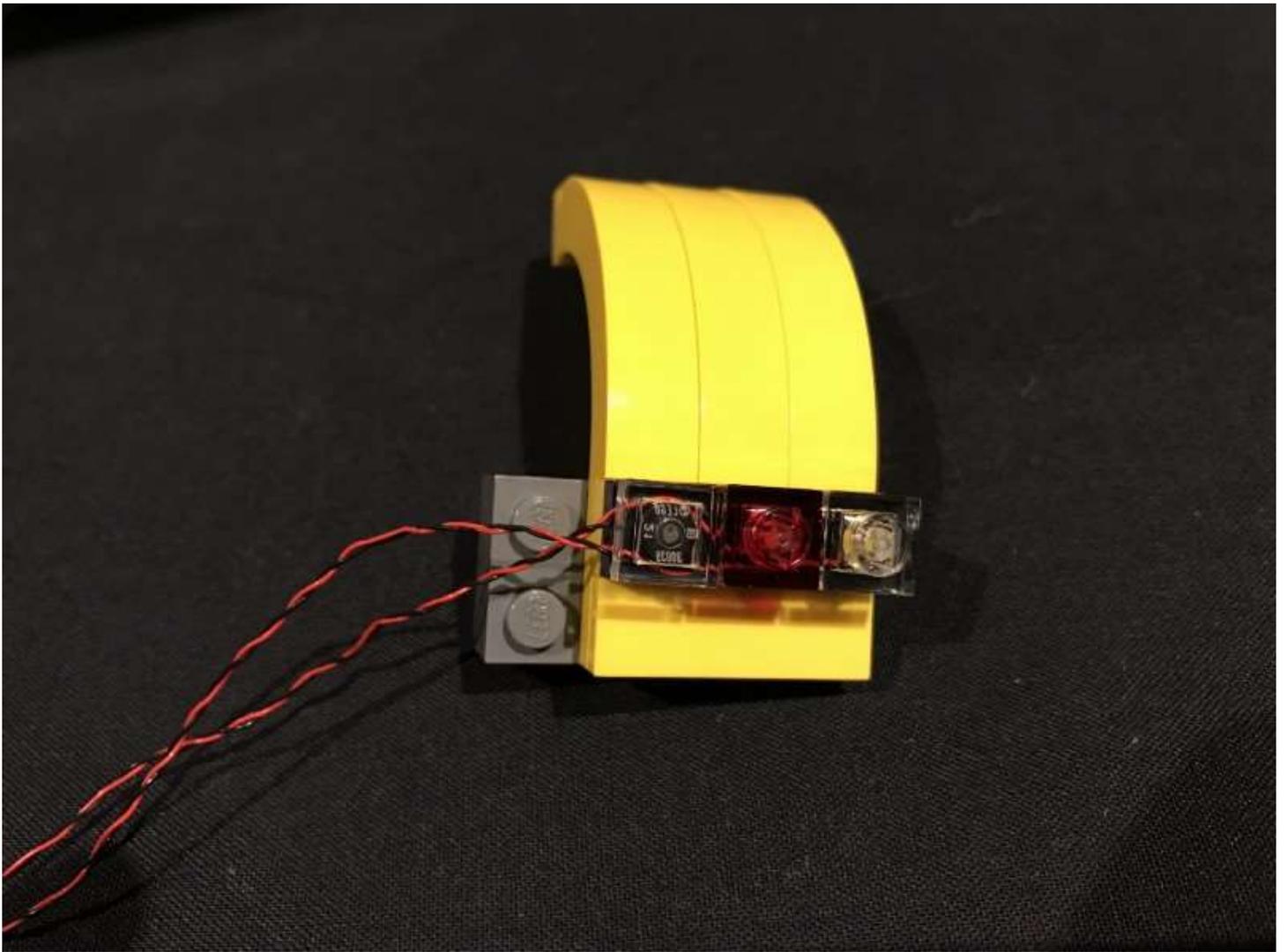
Take one **White Bit Light 15cm** and place the LED component directly over the black stud to the far right. Ensure the cable is facing toward the left and underneath the stud in the middle, then connect the **trans clear 1×1 plate** (provided in this kit) directly over the top.



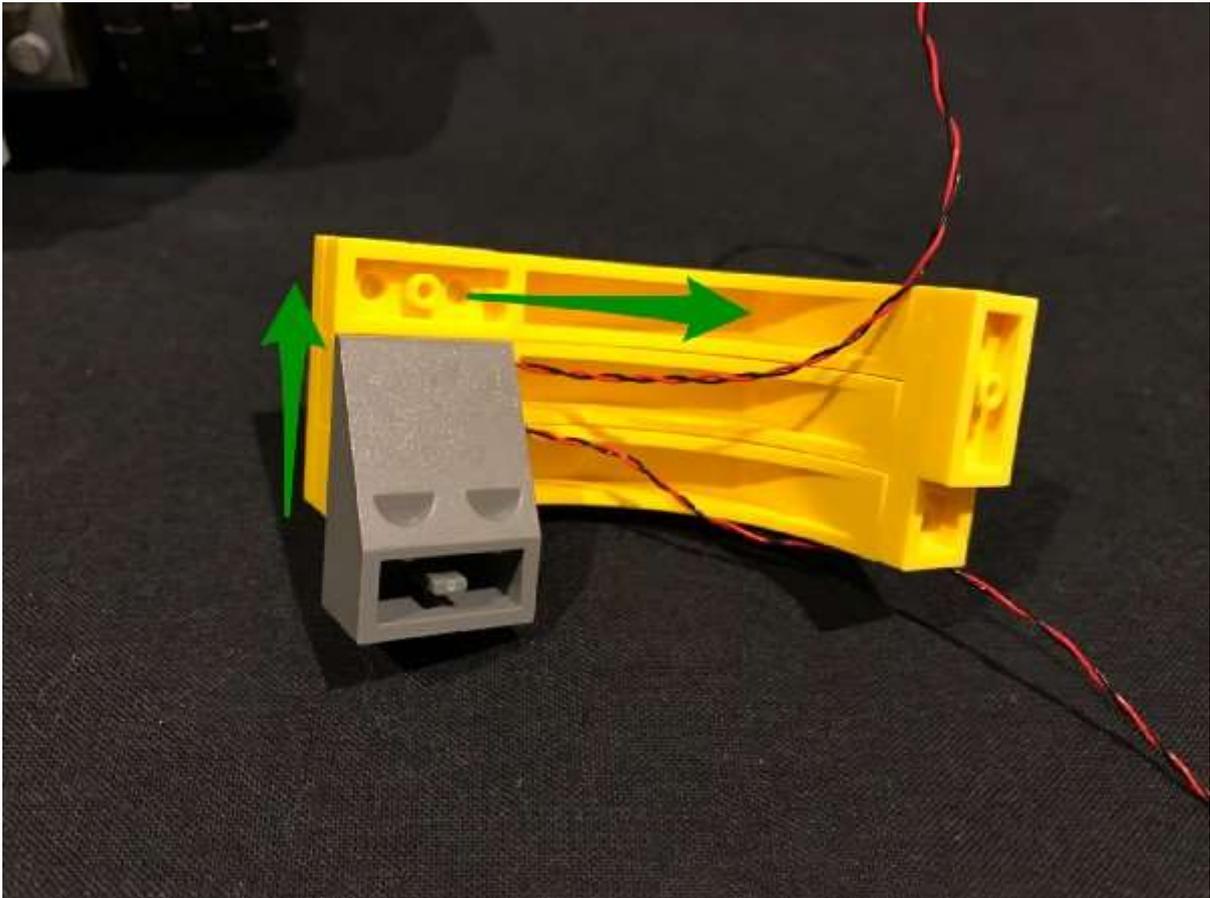
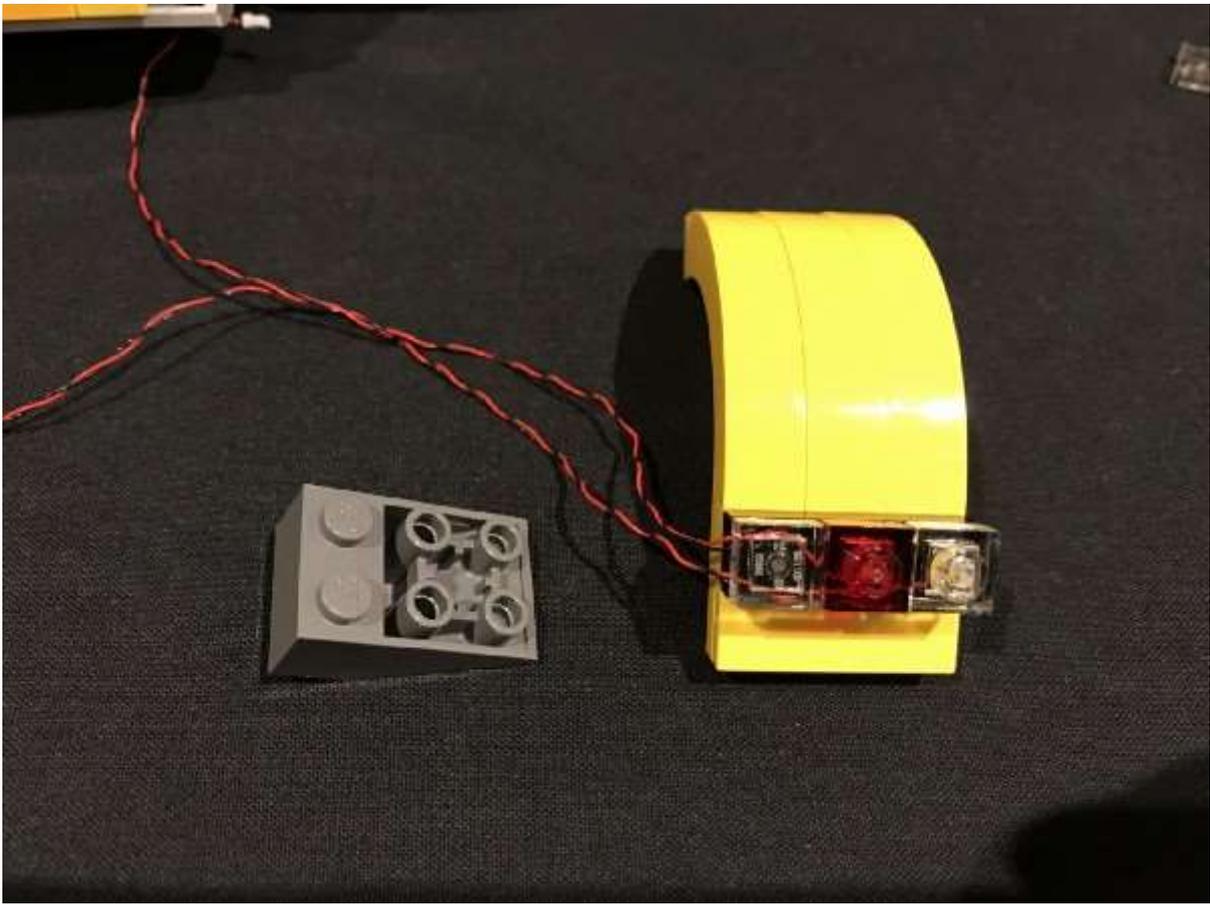
Take another **White Bit Light 15cm** and place the LED component directly over the black stud in the middle. Ensure the cable is facing toward the left and this time, above the black stud to the left and then connect the **trans red 1×1 plate** (provided in this kit) directly over the top.

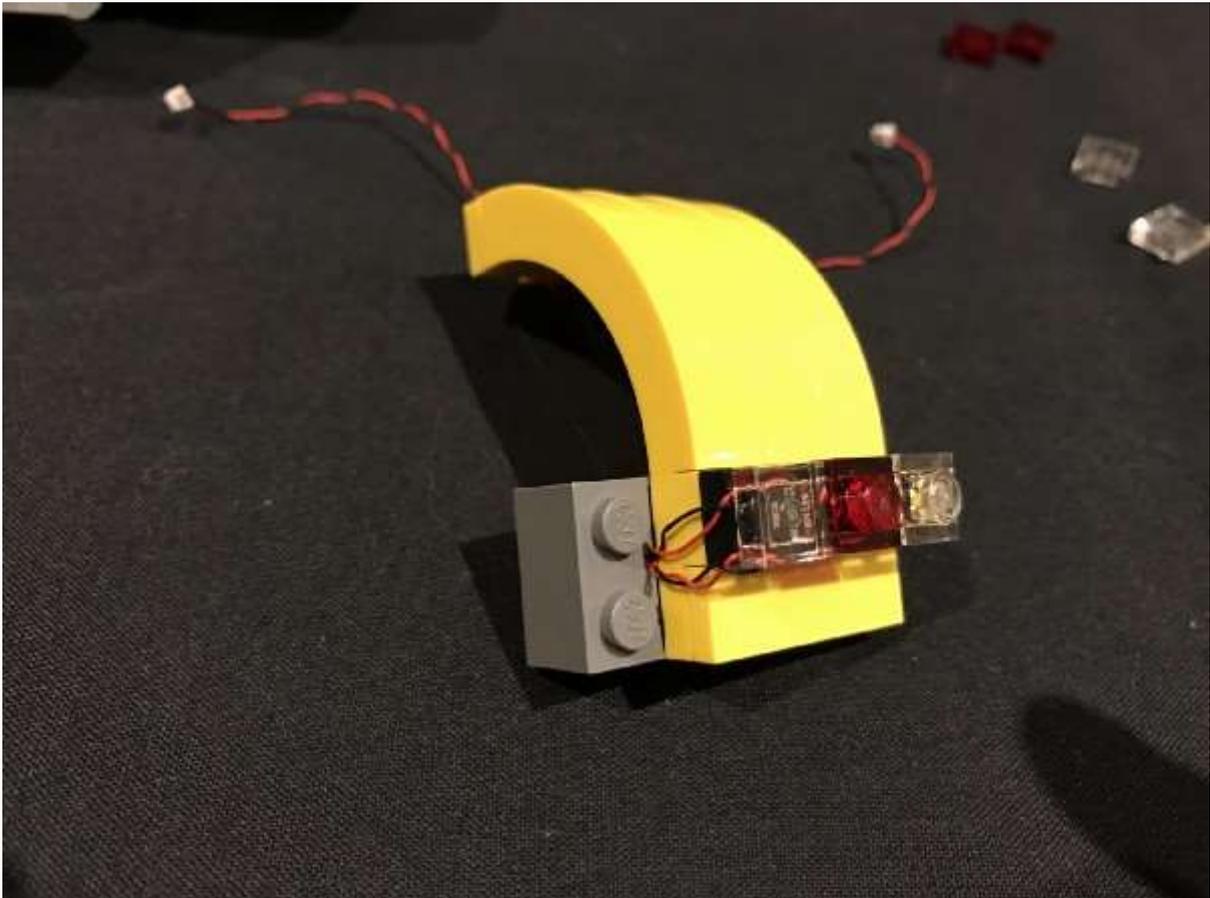
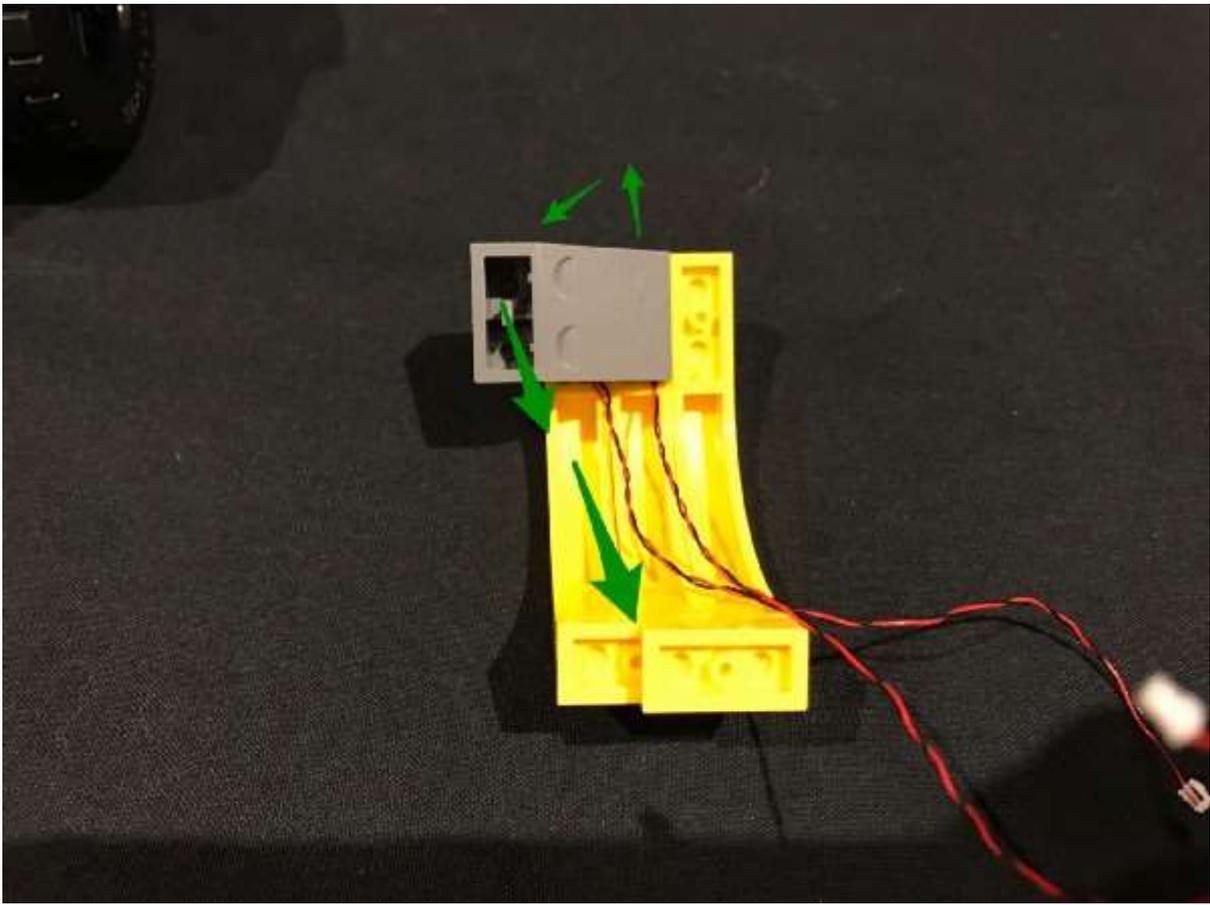


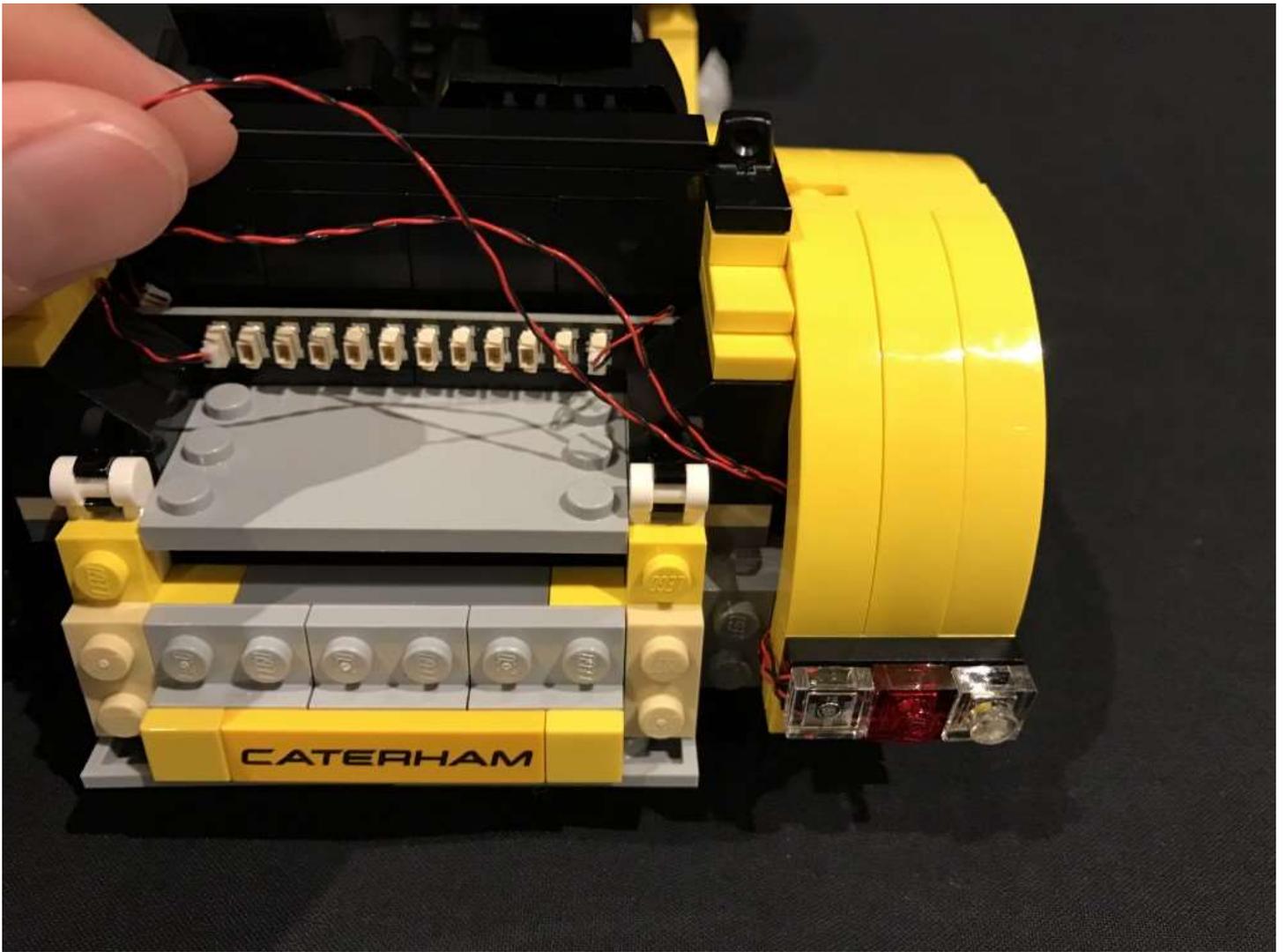
With the 2 cables underneath and above the black stud furthest to the left, reconnect the trans clear tile (original piece) directly over the top.



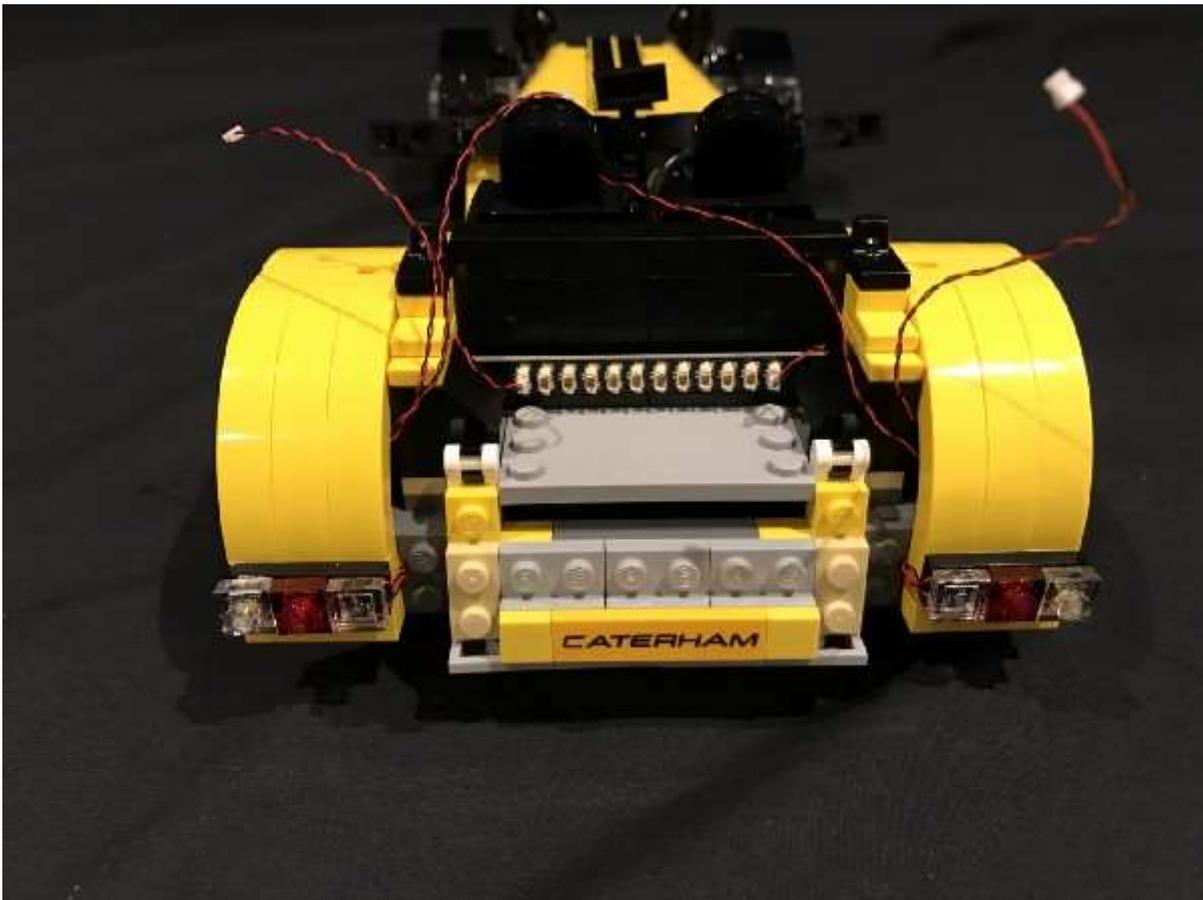
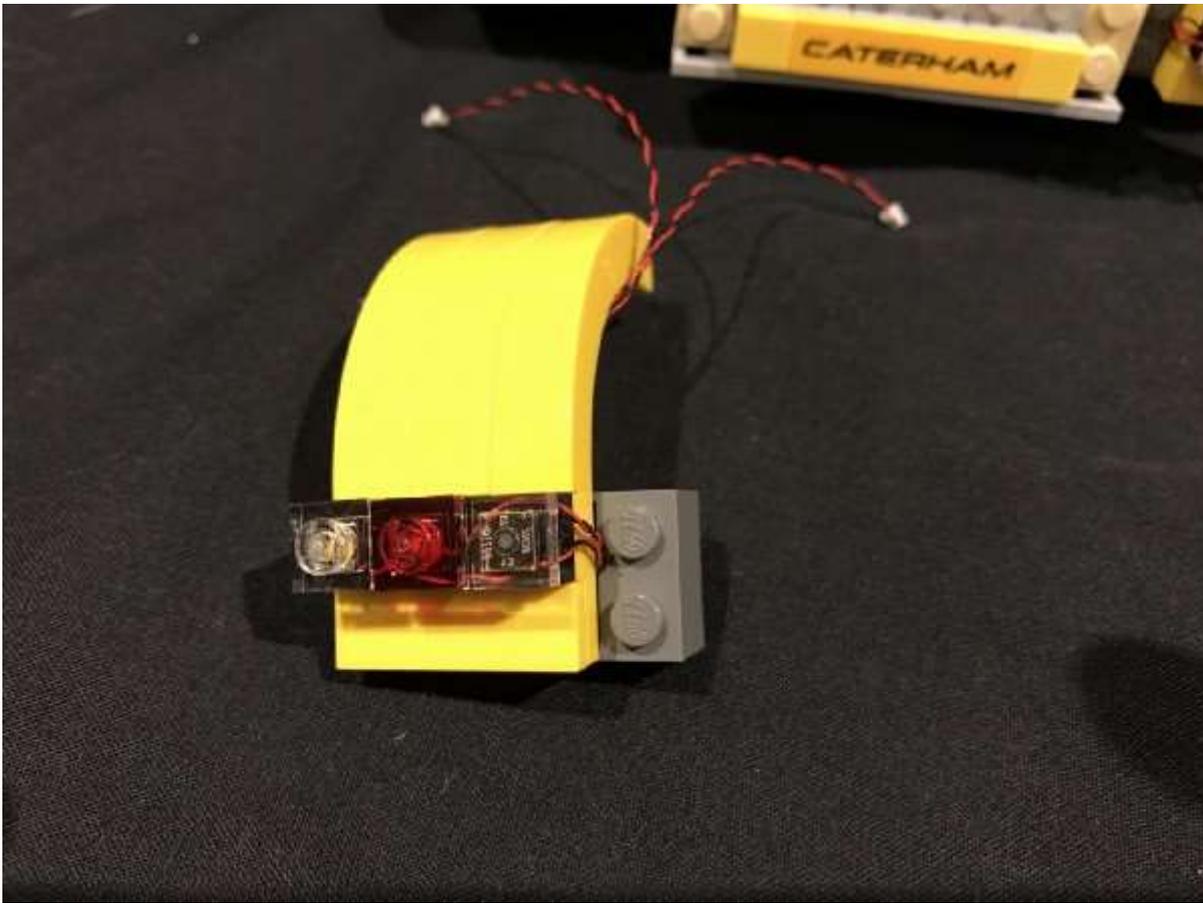
13.) Disconnect the grey LEGO piece underneath and then pull the two cables underneath and then upward. Reconnect the grey piece over the top to secure the cables down before reconnecting the whole section back to the Caterham.







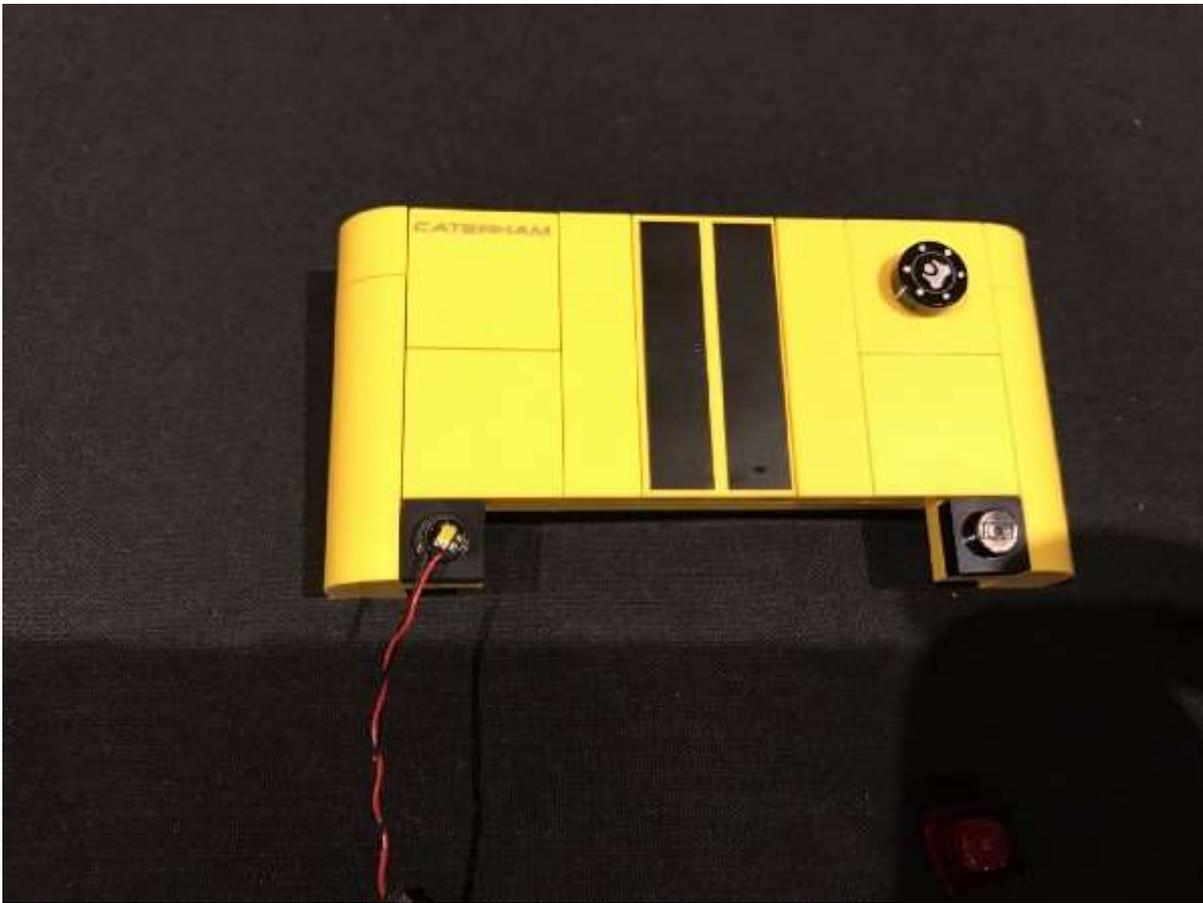
14.) Repeat the previous 2 steps to install another 2x **White Bit Light 15cm** to the left section of the back of the Caterham again, swapping out the trans red and white tiles with the provided trans red and white plates.



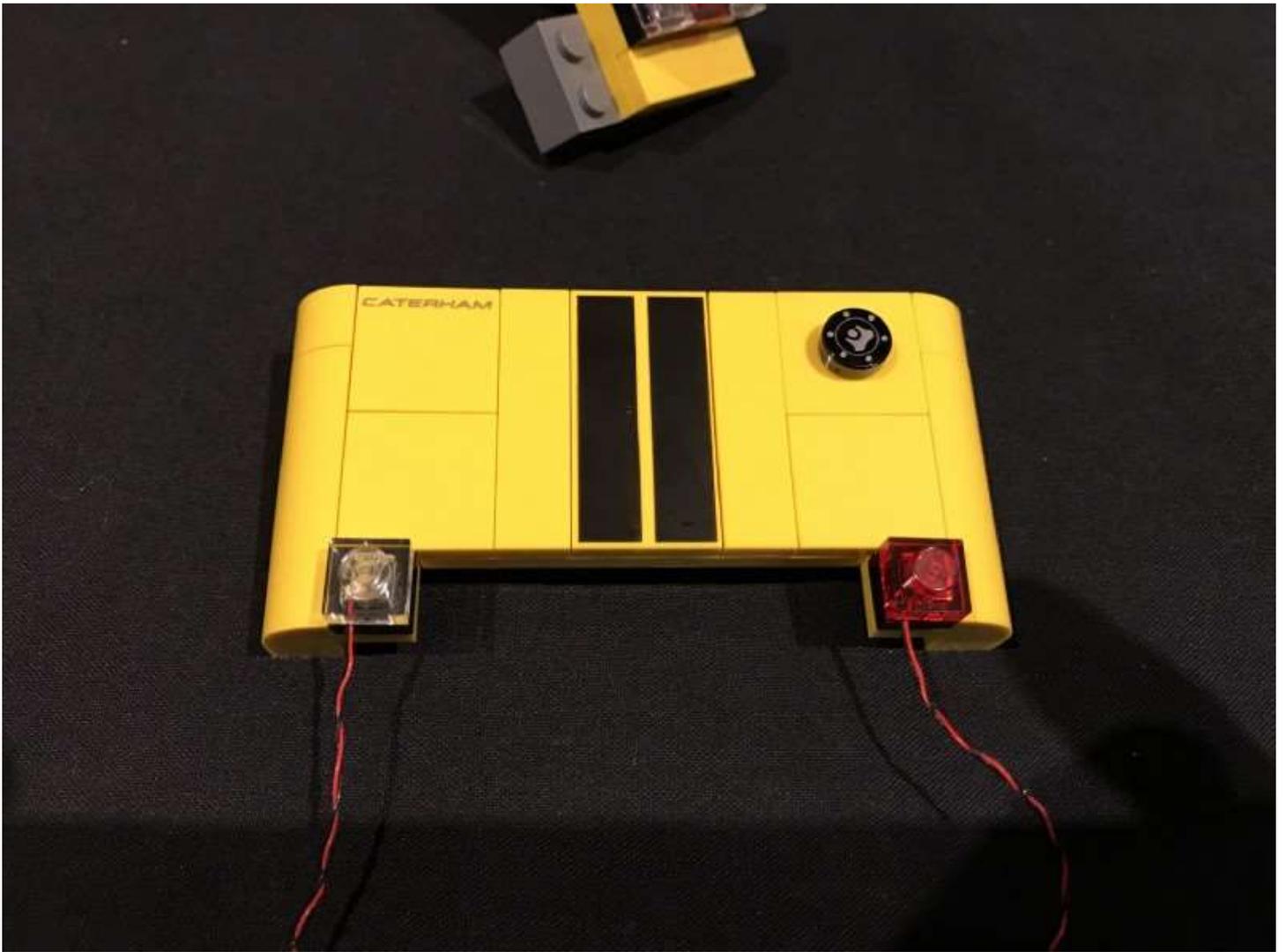
15.) Take the middle section and then remove both the trans red and white tiles.



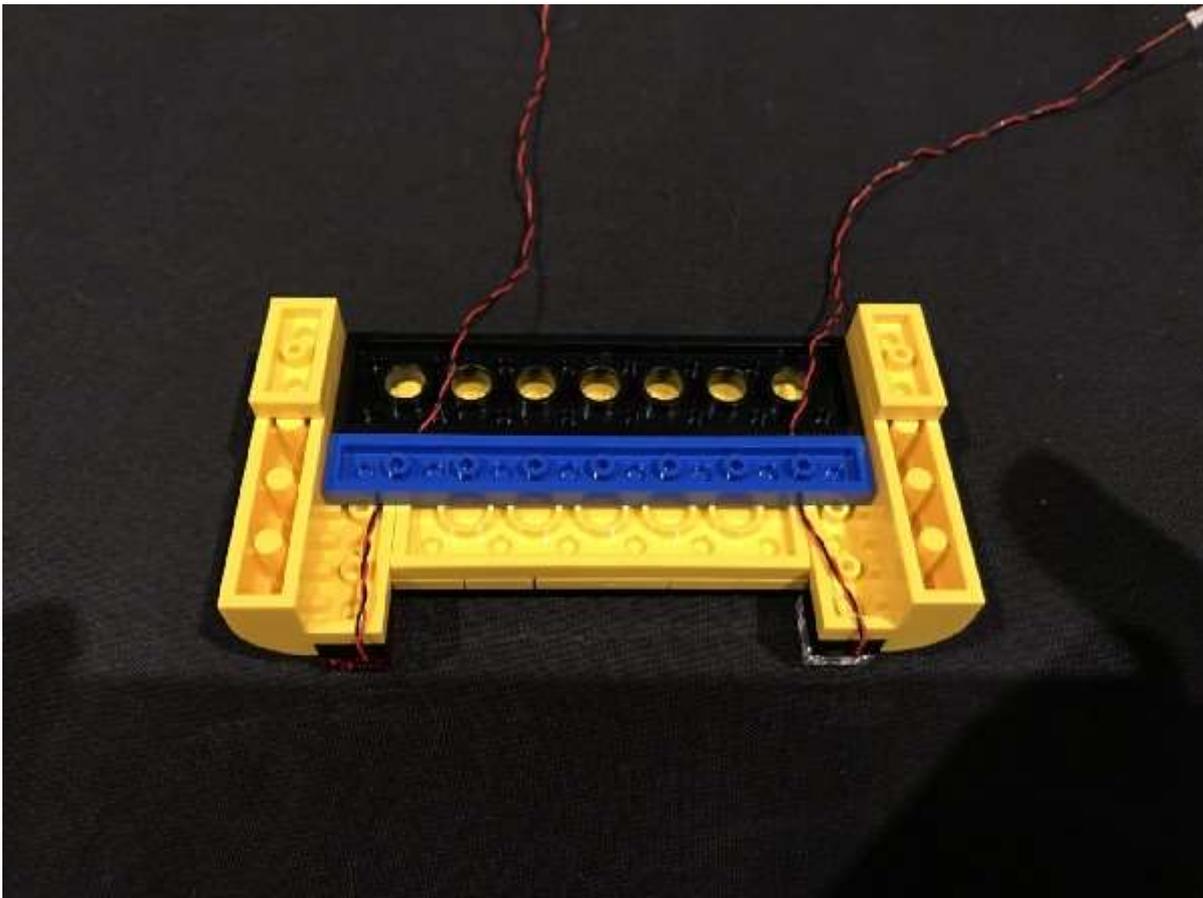
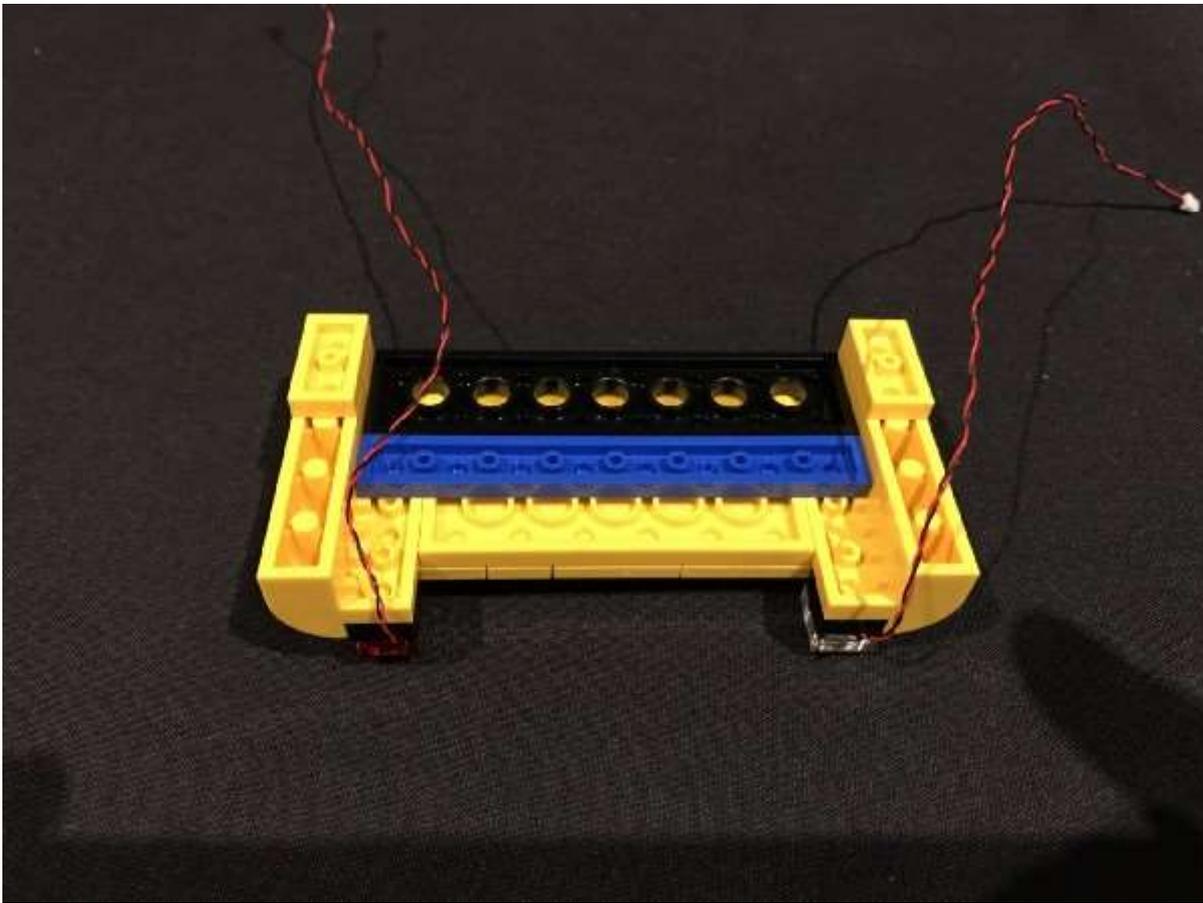
Take another **White Bit Light 15cm** and place the LED component over the left black stud and with the cable facing down, connect the trans clear plate (provided in this kit) directly over the top.



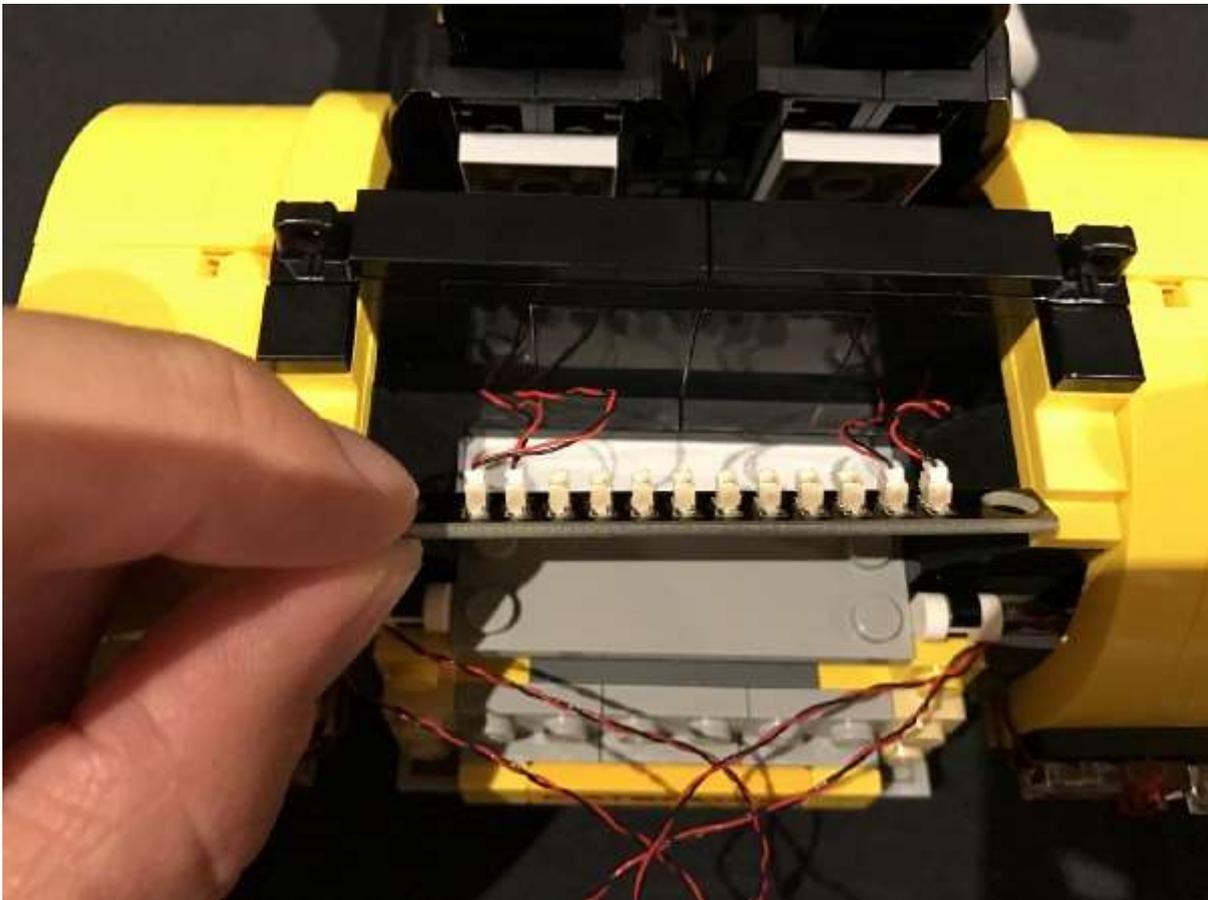
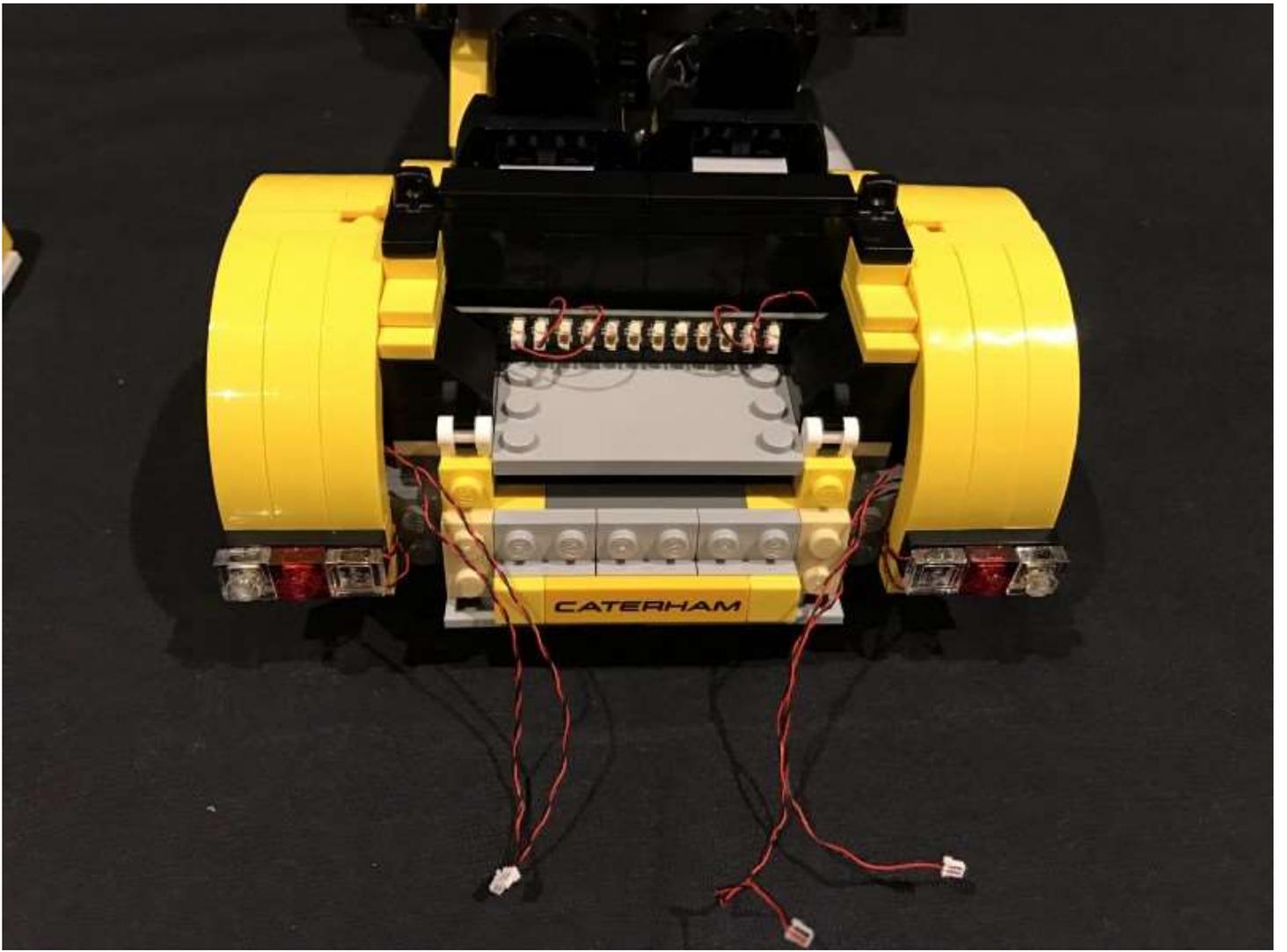
Repeat this step to install another **White Bit Light 15cm** to the right side of the middle section this time, using the trans red plate (provided in this kit) to connect directly over the top.

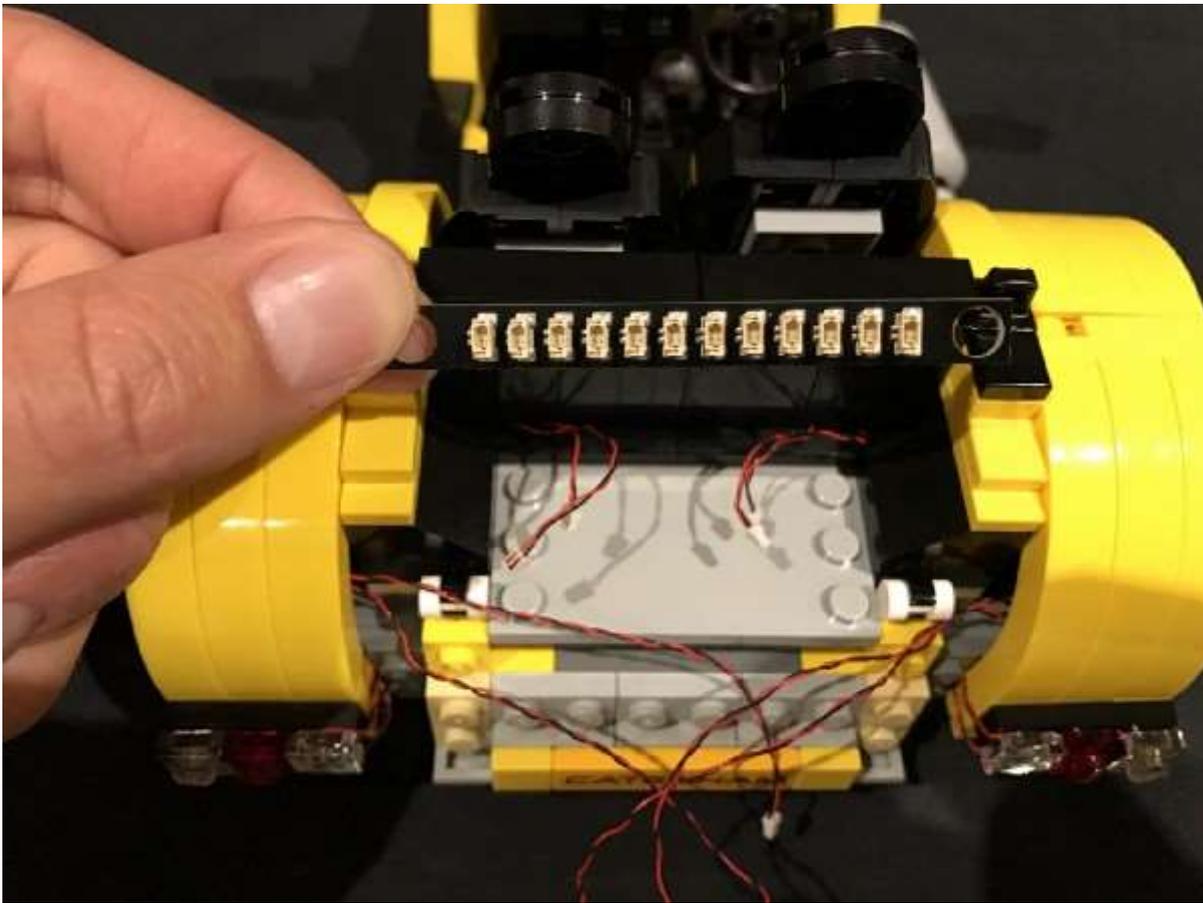


16.) Turn this middle section over and then bring the 2 cables up and then disconnect and reconnect the blue lego plate over the top.

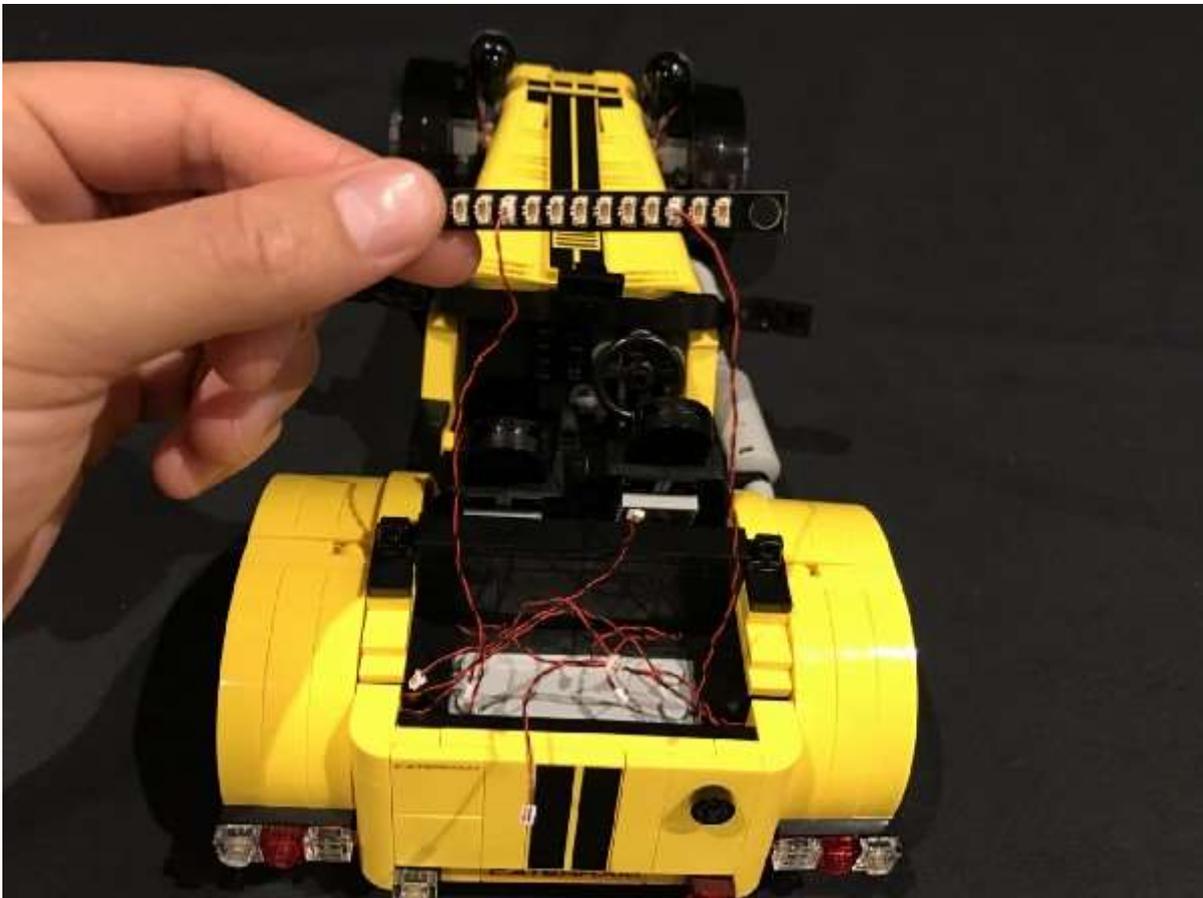


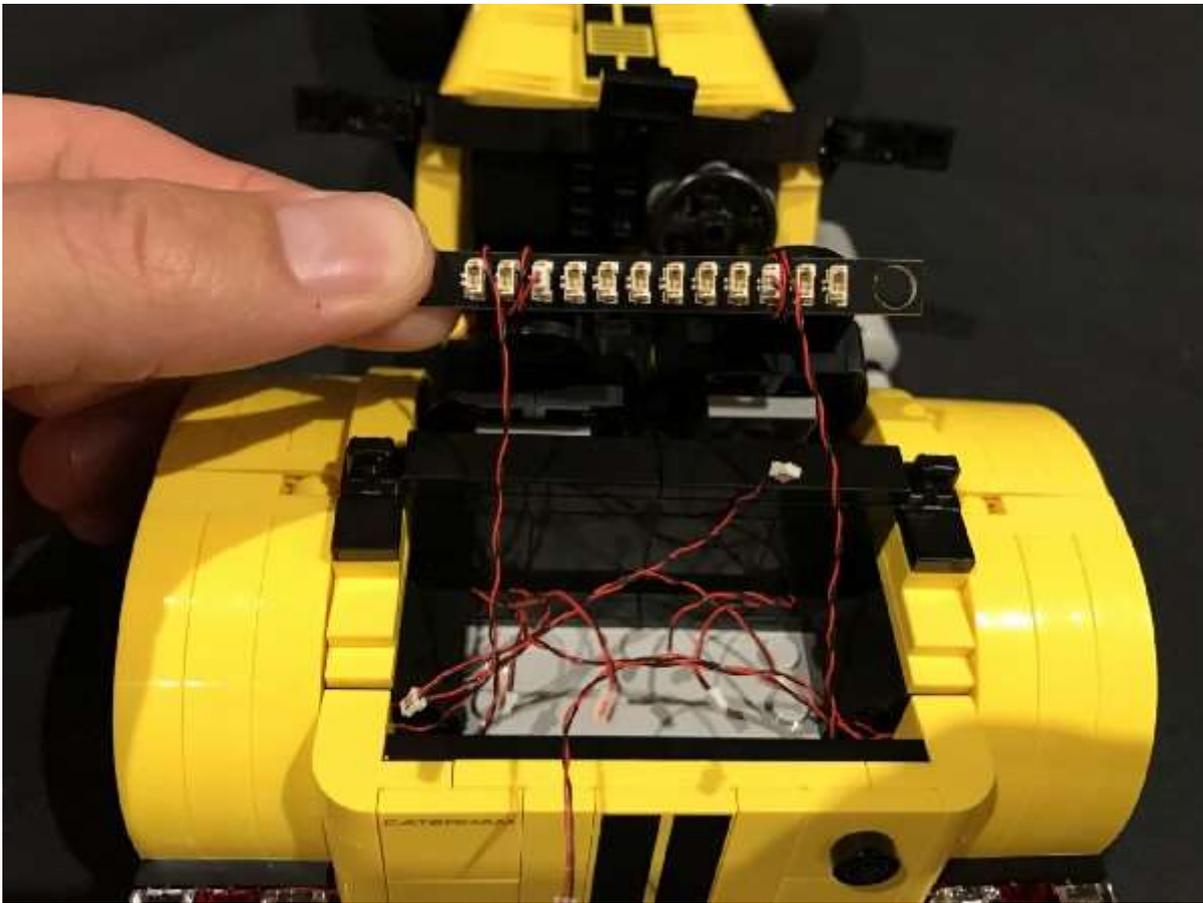
17.) Reconnect the middle section back to the back of the Caterham ensuring the cables are all neatly tucked in behind the back then disconnect the two headlight and blinker cables from each side of the expansion board.



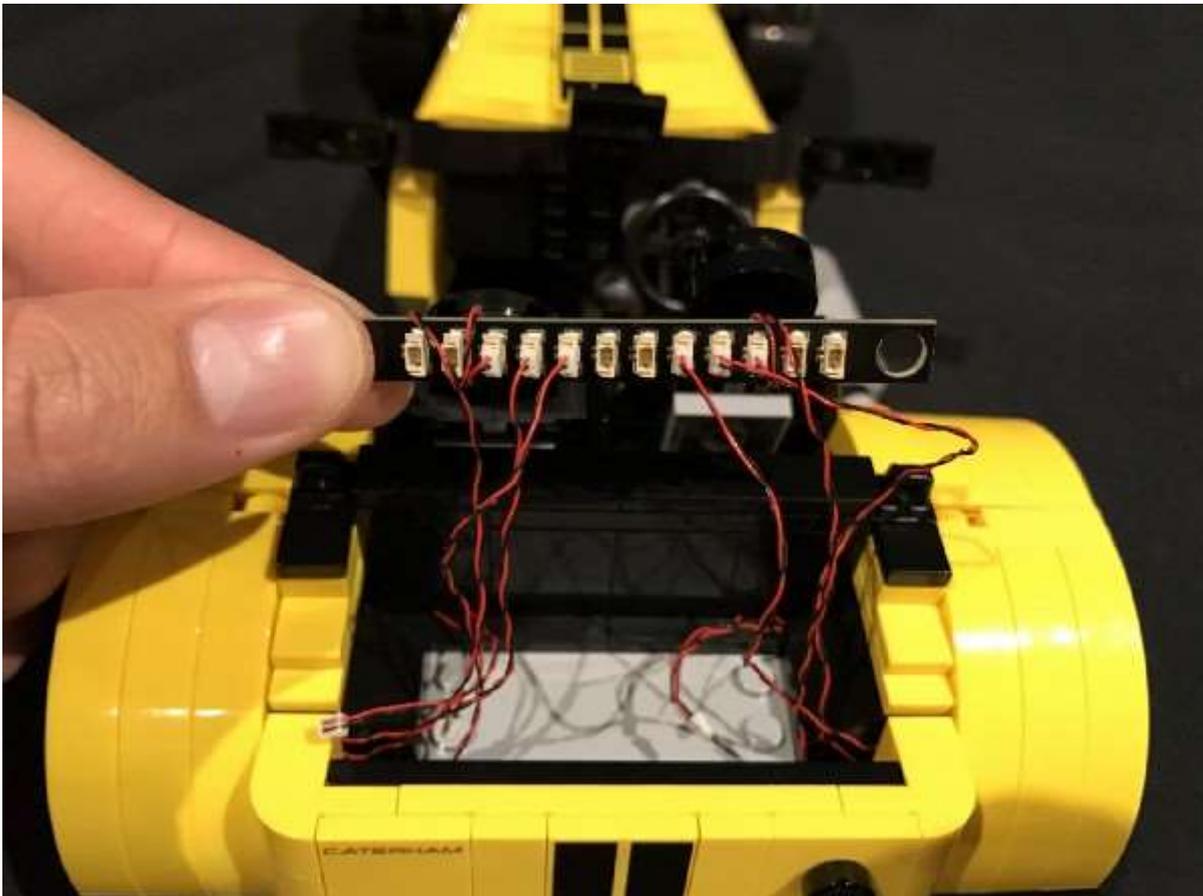


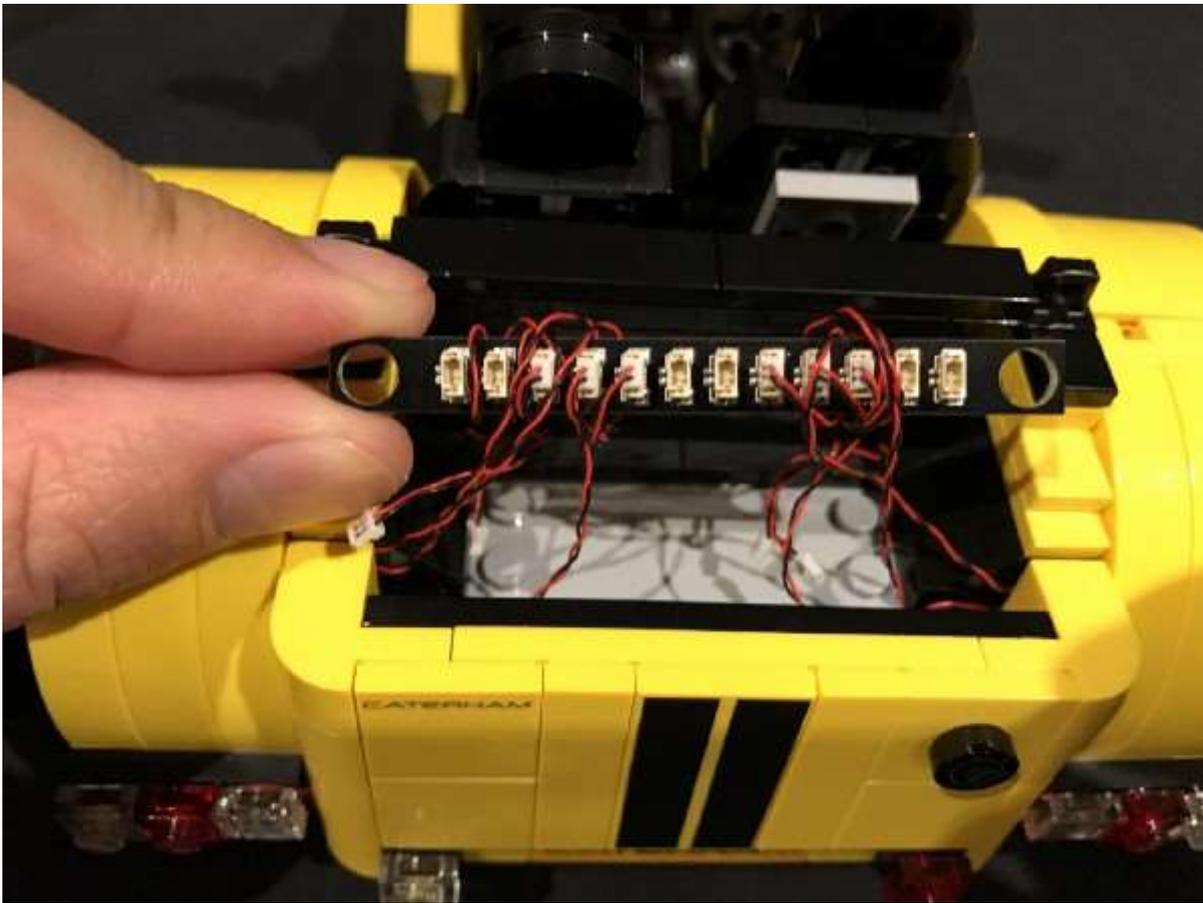
18.) Connect the two cables from the middle back section into each side of the expansion board then wind them around the expansion board twice.



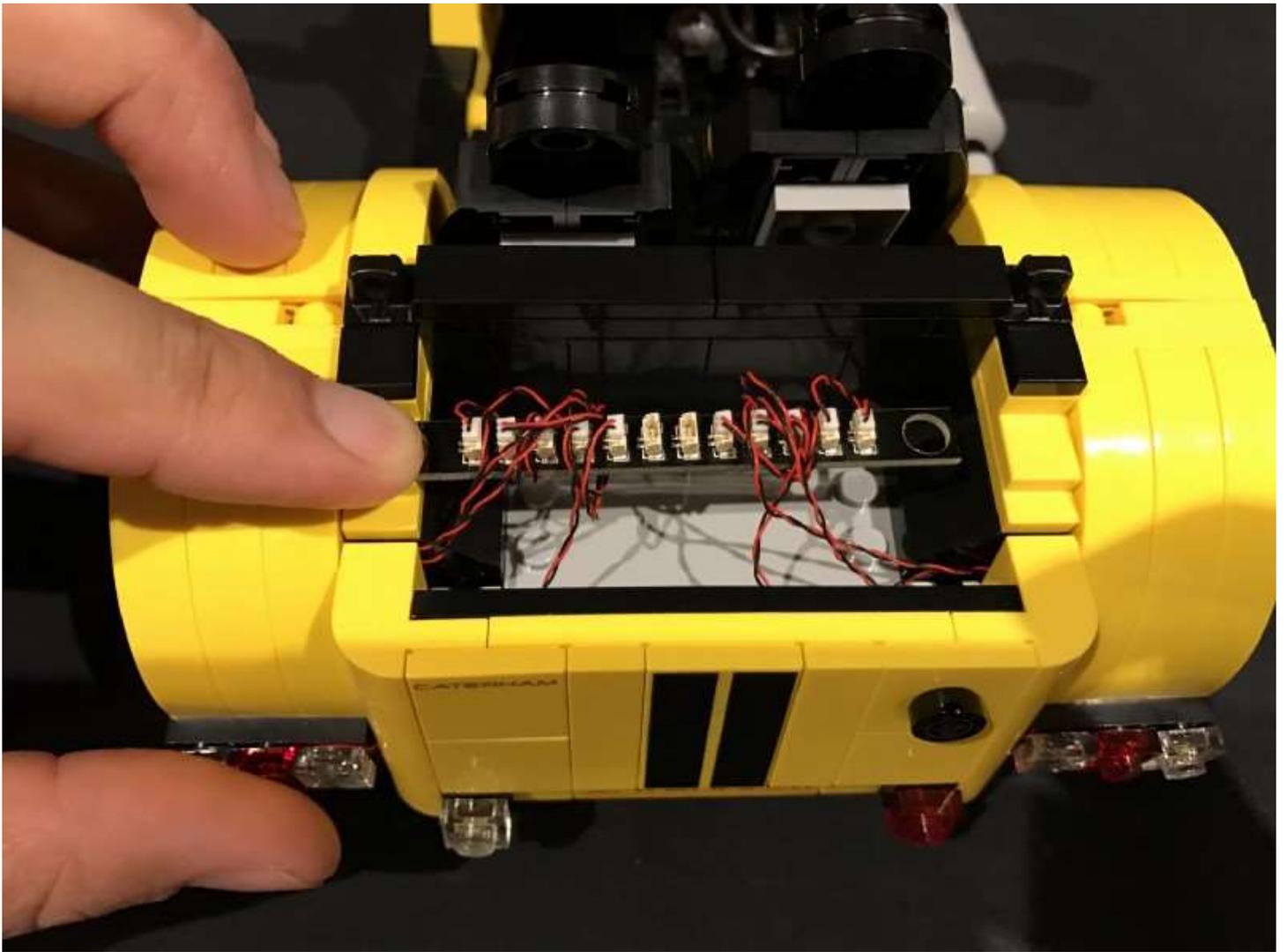


19.) Now take the cables from the back left and right sections (4 cables) and then connect them to the next available ports on each side of the expansion board. Wind them around the expansion board (along with the first 2 cables we connected) another 2 times or until we have about 4–5cm of slack.

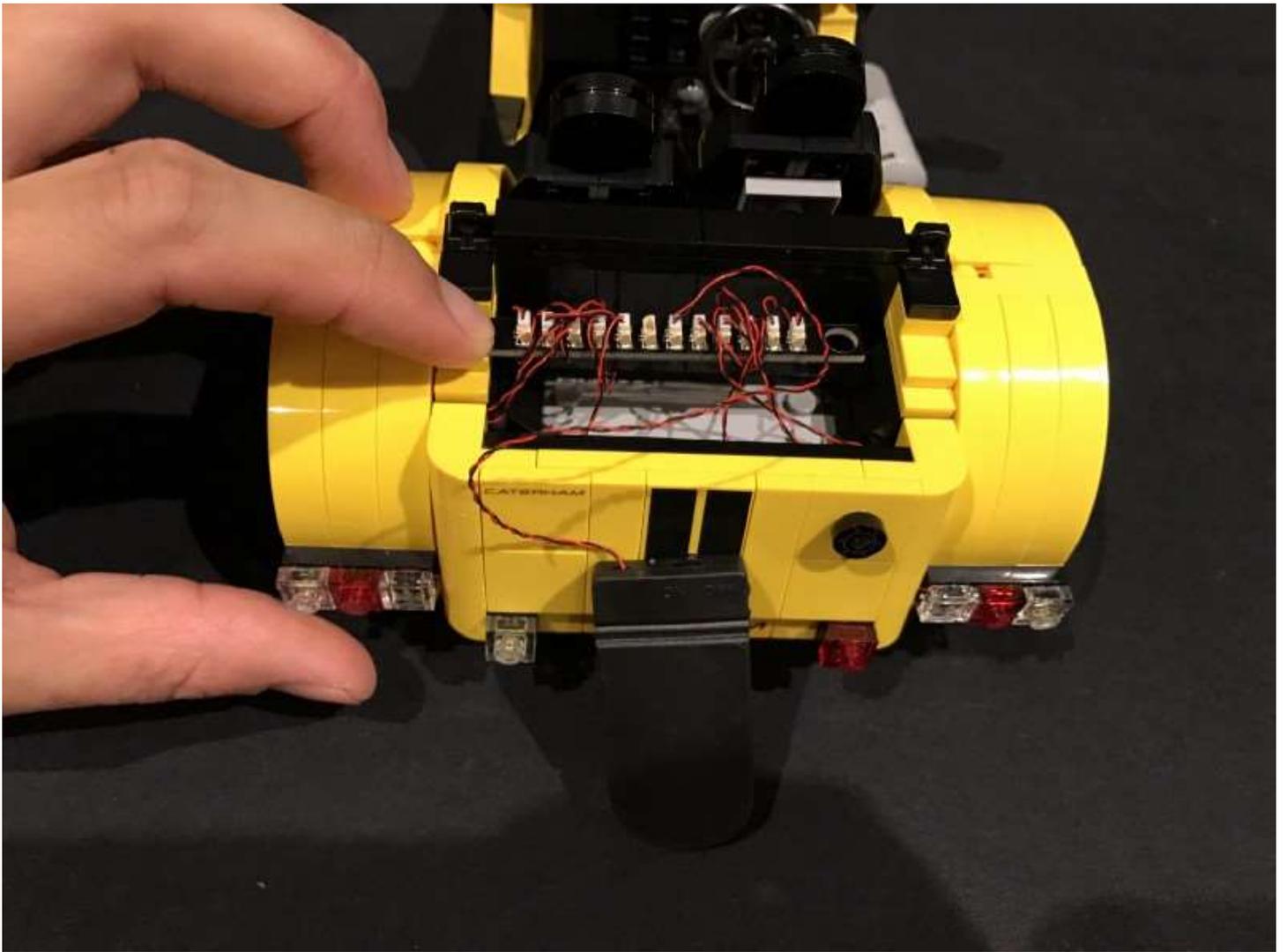




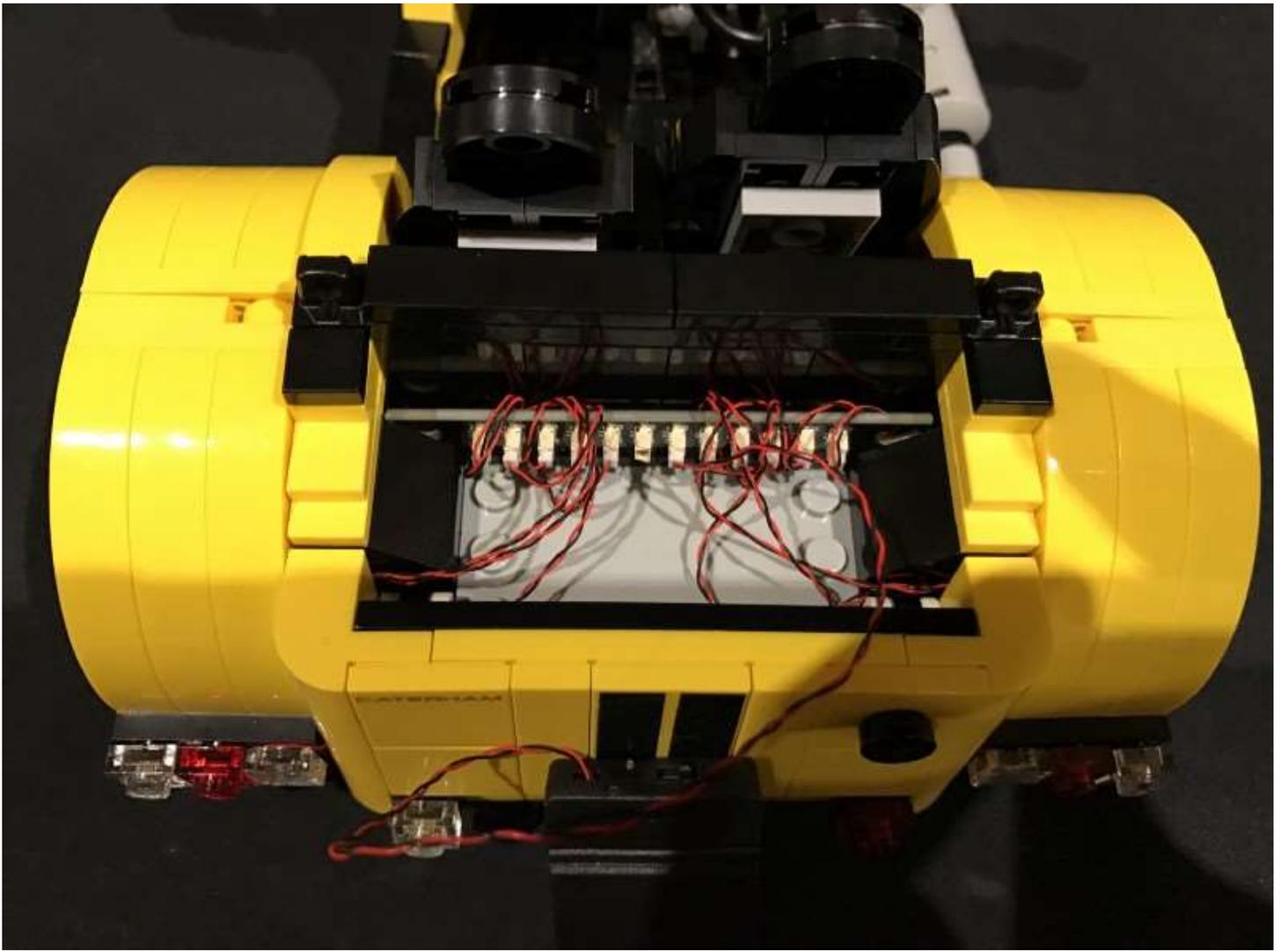
19.) Reconnect the cables from the 2 headlights and 2 blinker cables we removed earlier to each side of the expansion board.



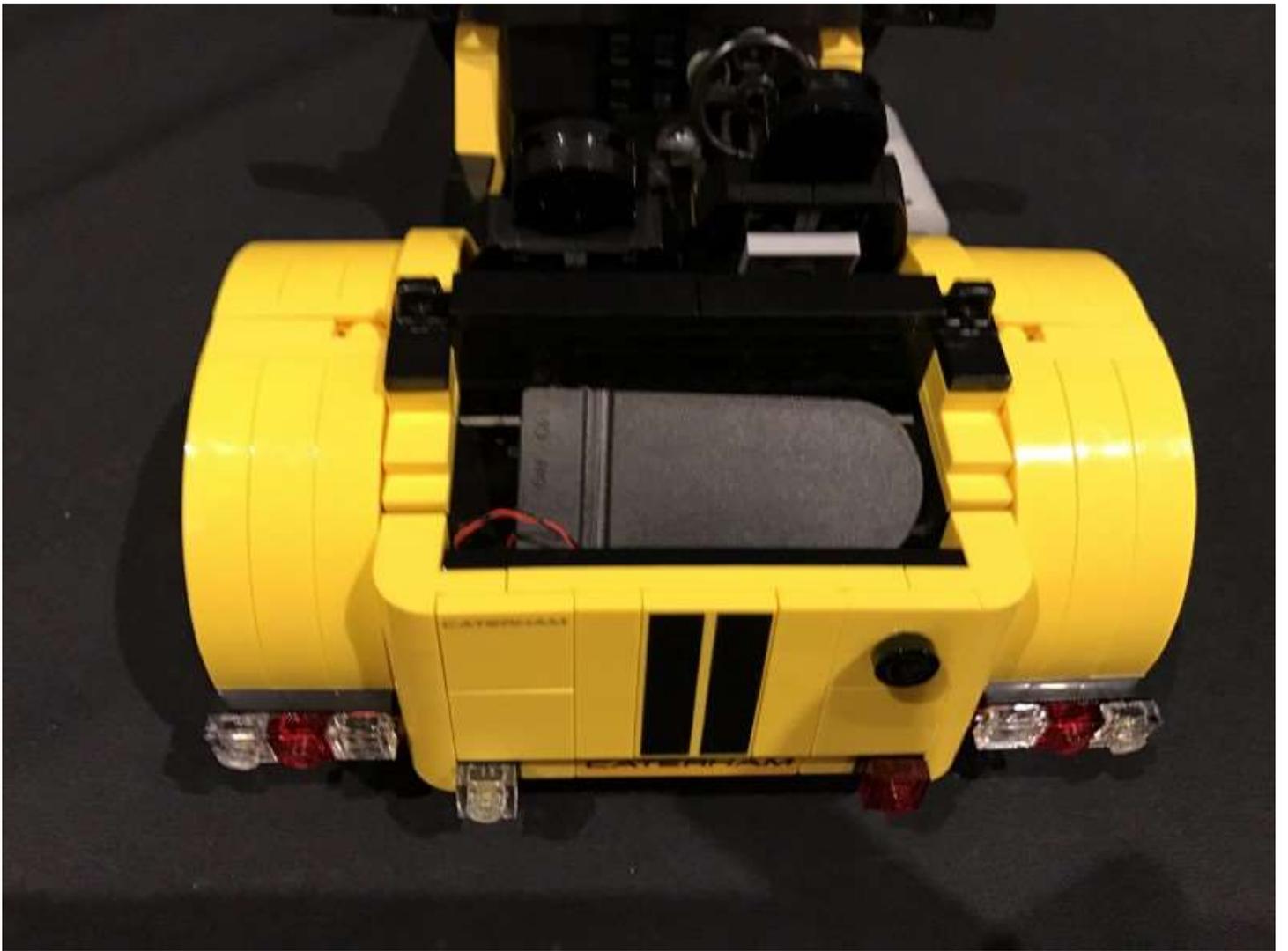
20.) Take the flat battery pack and insert 2x CR2032 batteries into it. Connect the battery pack cable into one of the available ports of the expansion board.



21.) Neatly place the expansion board and cables into the back of the boot. The expansion board should fit exactly in the below position.



Neatly place the battery pack on top ensuring you tuck in the battery cable underneath.



22.) Reconnect the sections of the back which we removed earlier.



This now completes installation of your LEGO Caterham LED Lighting Kit. Now turn on and enjoy!

