

# TRAILBOSS

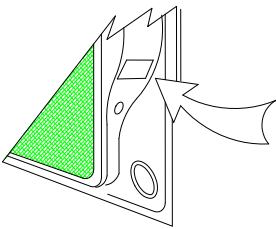
## Towbar Fitting Instructions To Suit **MITSUBISHI CHALLENGER** 2010 on Part Number QTCL647L Rating 3000 kg

### **WARNING:**

1. Do not, drill, cut, weld or otherwise modify the tow bar.
2. If you are using electric welding on a motor vehicle, **always** check that the vehicle is not equipped with electronic engine or instrument management equipment. Failure to do so could **destroy** any onboard computers. If in doubt, check with the vehicle's manufacturer.

### **General:**

1. Ensure all hardware items have been included refer to assembly diagram.
2. It is recommended that the instructions are read through and completely understood before making any attempt to fit this product.
3. Be wary of any changes to vehicle designs or other accessories that may conflict with the installation of this product.
4. Before drilling ensure that the area is clear of fuel, electrical & other components.
5. All holes drilled into the body panels shall have all burrs & swarf removed then coated with a suitable rust preventative paint.
6. For vehicles that require the bumper to be cut. Ensure cut out area is in correct position on the vehicle prior to cutting the bumper.
7. The high tensile fasteners supplied with this product were used to achieve the specified rating. If replacement is required ensure that fasteners of the same rating & quality are used. Contact an authorized **Trailboss** dealer if further information is required.
8. Ensure that all hardware is fastened to torque list below check fasteners on regular basis.
9. Tow bar load rating sticker provided with this product shall be conspicuously located on inside rear end of the driver's door. **(See diagram below).**
10. Trailboss recommends that you check your tow ball to ensure that it complies with the Australian standards **AS 4177.2**.
11. **PLEASE NOTE:** It is advised to remove your lug or tbm when not actually towing so as to produce a clear view of the vehicles registration plate if obscured, and to also provide maximum available departure angle



Place load rating sticker  
inside driver's door here

### **FOR TOWING PURPOSES ONLY**

For towing capacity details please refer to vehicle owner's manual or to the manufacturer. Overloading can void your warranties.

### **RECOMMENDED ASSEMBLY TORQUE LISTING**

Diameter    Grade 8.8 Bolt

M6	9.5 Nm
M8	21.7 Nm
M10	43.4 Nm
M12	77.3Nm
M14	146 Nm
M16	189.8 Nm

### **Tow bar Maintenance and Care.**

Trailboss recommends that bolt torque's, as listed below, are routinely and regularly inspected and checked for correct tension. Replace any worn or defective parts.

We recommended to remove Tow Ball Mounts (TBM's, tongues or lugs) when not being used for any considerable length of time.

So as to avoid injury, when not towing it is suggested that the tongue, Pull Pin and R-clip are removed then stored in a safe, clean and dry place, away from excessive moisture.

Hitch Pull Pins and spring "R" clips are regularly checked for proper installation. Replace any worn or defective parts.

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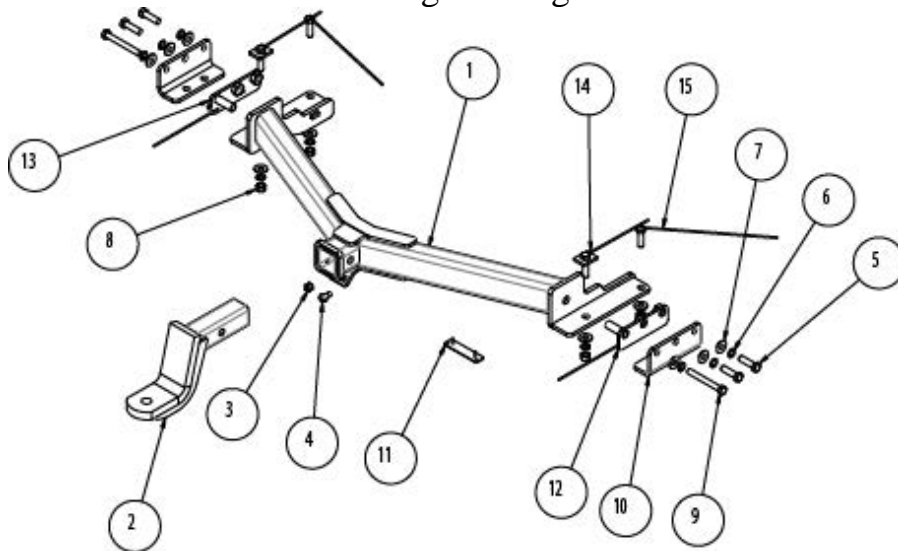


Figure 1 – Layout Diagram


ITEM NO.	DESCRIPTION	QTY.
1	WELDED ASSY MITSUBISHI CHALLENGER 2010	1
2	TBM ASSEMBLY	1
3	NUT HX M10 - 1.5 Z/P	1
4	BOLT M10-1.50 x 25	1
5	M12 x 45 1.75P BOLT	4
6	M12 X 4.0 X 2.5 SPRING WASHER	10
7	WASHER M12x28.8x3mm	10
8	M12-1.75 Z/P HX NUTS	4
9	BOLT M12-1.75x100 GR8.8	2
10	SIDE BRACKET	2
11	PLUG BRACKET	1
12	NUT PLATE ASSEMBLY DRIVER SIDE	1
13	NUT PLATE ASSEMBLY PASS SIDE	1
14	BOLT & WIRE ASSY WITH PLATE	2
15	M12 X 40 BOLT & 300 mm WIRE	2



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### STEPS TO FIT TOWBAR

 Position the vehicle on to a safe working height on the hoist before commencing fitment.

1. Remove the spare wheel.
2. Cut the middle tab.
3. Drill and enlarge the 2nd hole on the chassis from the rear of the vehicle to diameter 13mm.

*Note: Repeat the step for passenger side.*

4. Find the centre-line of the bumper and make a cut 120mm wide and 130mm deep, as illustrated in Figure 2.
5. Drill 5mm holes x 2, 180mm from the centre-line and 25mm from the lower edge of the bumper, on the driver side, to fit the plug bracket (item 11).
6. Feed the bolt & wire assemblies (item 14 & 15), in the horizontal holes on the chassis. Locate the towbar in place, & fit nut, spring washer and flat washer (items 6, 7 & 8) to hold it in place (only in the front hole, which has been drilled).
7. Feed the nut plate (item 12 on driver side & item 13 on the passenger side).
8. Fit the side bracket (item 10) on both sides, align the holes and fit bolts & washers.

*Note: The long bolt (item 9) goes through the spacer tube, into the weld-nut in the towbar assembly.*

9. Torque the bolts to the torque requirements mentioned on page 1.
10. Fit the spare wheel in the reverse order.
11. Affix the load rating label, as shown on page 1.

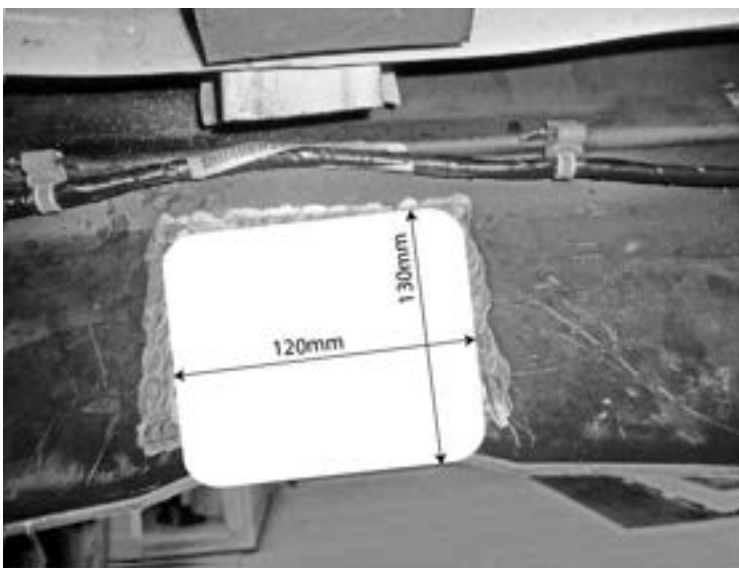


Figure 2 – Bumper Cut out illustration



Wiring Loom Fitting Instructions  
To Suit Mitsubishi Challenger  
Part Number 100220-WL

## Wiring Loom Installation Instructions

Mitsubishi Challenger  
Part No: 100220-WL

Tail Harness Length Required: 1800mm  
ECU Required: 04826  
RPA Override Switch Part No: 04848 (If Fitted)  
Kit Includes: 100220-P - Trailer Patch Harness  
100220-PH – Power Harness

Wiring Loom Installation Time: Approx 45 Mins

## Wiring Loom Fitting Instructions To Suit Mitsubishi Challenger Part Number 100220-WL

1. In the luggage compartment area, remove the luggage compartment LHS trim jack access door.
2. Drill out a hole to Ø30mm (1) where indicated. File down any rough edges and spray on rust inhibitor.



3. Underneath the vehicle on the rear LHS quarter, route the power harness (Part No: 100220-PH) along the LHS chassis rail and vehicle harness all the way to the engine bay area. Secure the harness every 200mm with cable ties (not supplied).
4. In the engine bay, retrieve the Power Harness and connect the ring terminal onto the positive battery terminal.
5. Locate the 12-way reverse lamp connector behind the rear bumper fascia, unclip and remove orange secondary lock from reverse lamp connector
6. Disconnect the Power Harness 1-way male connector and remove the green secondary locks from the male and female connectors.
7. Remove the reverse lamp male connector Red/Green wire and insert it into the Power Harness 1-way male connector.
8. House the Power Harness 1-way Black terminal wire into the reverse lamp connector's previous Red/Green location.
9. Secure the Tail Harness (tail length 1800mm) socket to the towbar mounting bracket using M4 fasteners (not supplied). Route the Tail Harness across the towbar towards the grommet hole and then refit the secondary locks on both connectors and reconnect the 1-way connectors. Route the Tail Harness/Power Harness through the drilled Ø30mm grommet hole
10. In the luggage compartment, retrieve the Tail Harness/Power Harness ensuring that the Tail Harness grommet is seated correctly into place.
11. Connect the Trailer Patch Harness (P/No: 100220-P) 8-way male connector to the vehicle trailer break out connector. Connect the Trailer Patch Harness 12-way female ECU connector to the ECU. Mount the ECU onto the LHS wheel arch using double sided tape.



Wiring Loom Fitting Instructions  
To Suit Mitsubishi Challenger  
Part Number 100220-WL

12. House the Power Harness terminals to the supplied 2-way connector and connect it to the Trailer Patch Harness 2-way connector matching the colours.
13. Secure the Trailer Patch Harness ground ring terminal to the vehicle grounding point.
14. Connect the Tail Harness 8-way male connector to the Trailer Patch 8-way female connector.
15. On the outside, secure the harness to the towbar using cable ties (not supplied).
16. Test the Trailer socket using a light board or multi-meter.
17. Secure all harnesses using cables ties (not supplied).
18. Refit all removed parts and secure all fasteners.
19. Place instructions in glove box after fitment.