



INSTALLATION INSTRUCTIONS

BBR067

RAID BULL BAR TO SUIT MITSUBISHI TRITON
MR 11/2018 to 2023 All Variants



Bar Weight: 89kg (196lb) \pm 2kg (4.4lb)



NOTE

Some images contained in these instructions are generic and are a representation of the actual model and/or parts used. Some steps may also show parts out of sequence to the instructional steps.



**Bumper Cut
Required**



**5 Hours
Approximately**



SAFETY WARNING

IRONMAN 4X4 requires you read and understand the safety and pre-install directions on page 2 and 3 before commencing installation of this product.

Document No: BBR067/060924

**This product has been tested for airbag compatibility
and therefore the mounting system MUST NOT be modified**

PRE-INSTALLATION INFORMATION



SAFETY WARNING

- It is always good practice to disconnect the battery while working on 12 Volt systems.
Please check the owner's manual for vehicle-specific requirements as some models may need battery backup.
- Auto electrical work should be carried out by a competent person. Vehicle wire colours are listed as a guide only and may vary on some makes and models.
- The function of each wire should be checked before any connections are made. All wires tapped into should be soldered and then insulated with electrical tape or heat shrink.
- Grounding/Earth points must always be connected to the factory grounding points, not to the battery negative terminal. See owner's manual.
- Using only a LED test light, test all electrical components of the vehicle before and after wiring. This is to ensure everything works correctly.
- IRONMAN 4X4 does not recommend the installation of large or light-coloured antennas or aerials to the front of a bull bar as this may cause the lane departure system to malfunction.



NOTE

- Only a competent person should perform accessory installations. It is the responsibility of this person to ensure correct fitment.
- Whilst working on this vehicle, always use appropriate safety equipment.
- Read and understand instructions fully before commencing fitment.
- Check the hardware supplied against the contents list on the following pages.
- Do not use this product for any vehicle make or model other than specified in these instructions.
- This product and or hardware must not be modified in any way. Do not remove labels from this product.
- Recording the batch number on the customer's job card is good practice for future reference, or complete the information below and file with customer job card.



CARE INSTRUCTIONS

- To maintain the finish of the product, wash regularly using a PH neutral car wash, hose off and chamois dry.
- Do not use acidic or alkaline cleaners.
- Plastic components can be maintained with a silicone spray or similar (non-acidic or alkaline based).



CUSTOMER INFORMATION

Customer Name: _____ Date: _____

Contact: _____

Part Number: _____ Batch Number: _____

(Located on label behind bull bar wing)



IMPORTANT WARNINGS

Due to the increasing complexity of new cars with cameras, sensors and radars, it is imperative that when installing bar work to cars, the vehicle is not turned on at all - not even to accessories - without having all cameras, sensors and radars connected.

All late model vehicles with push-button start use a proximity sensor, which is continually searching for a signal. Keys located in the vehicle or nearby will retain residual power within the vehicle, causing faults once the key safety features are unplugged.

DO NOT leave keys within the vehicle, or locate nearby.

As newer vehicles become more technically advanced, some will flag fault codes if turned on when cameras, sensors and radars are not plugged in. This can result in error messages on the dash that cannot be cleared, requiring the car to be taken back to a dealership to be cleared and recalibrated.

Please be aware of this when working on any car with cameras, sensors or radars.

VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)

Do not attach VFPS to the vehicle using anchorages not intended for this purpose (e.g. engine mountings bolts)

Do not use this product for any vehicle make or model, other than those specified by the VFPS manufacturer.

Do not remove the plaque from the VFPS.

Do not modify the structure of the VFPS in any way.

- IRONMAN 4X4 includes specific mounting hardware to ensure correct fitment to your 4WD. The correct fitment of these components is critical for your safety.
- Do not use this bull bar or recovery point for any other vehicle make or model other than the one intended and specified by IRONMAN 4X4.
- Do not alter or modify the bull bar or recovery point in any way. Doing so may compromise the strength and integrity of the product.
- Do not remove warning labels from bull bar or recovery points. Bull bar and recovery points require warning labels to be installed, these are supplied and must be installed at the time of fitting.
- IRONMAN 4X4 recovery points are FEA tested during design and destruction tested during development to establish the Working Load Limits (WLL).
- IRONMAN 4X4 recovery points have been designed as a matching pair, supplied as right and left sides for vehicle-specific fitment.
- It is advised to use an equalising or bridle strap. Failure to do so correctly can result in recovery point fatigue or bending and void your warranty.
- Never use a single recovery point combined with a side load pull.
- Recovery Points are designed for a straight-line pull, by pulling on an angle or sideways pull may result in a reduction of the WLL.
- Ensure all bolts are tightened to the specified torque.

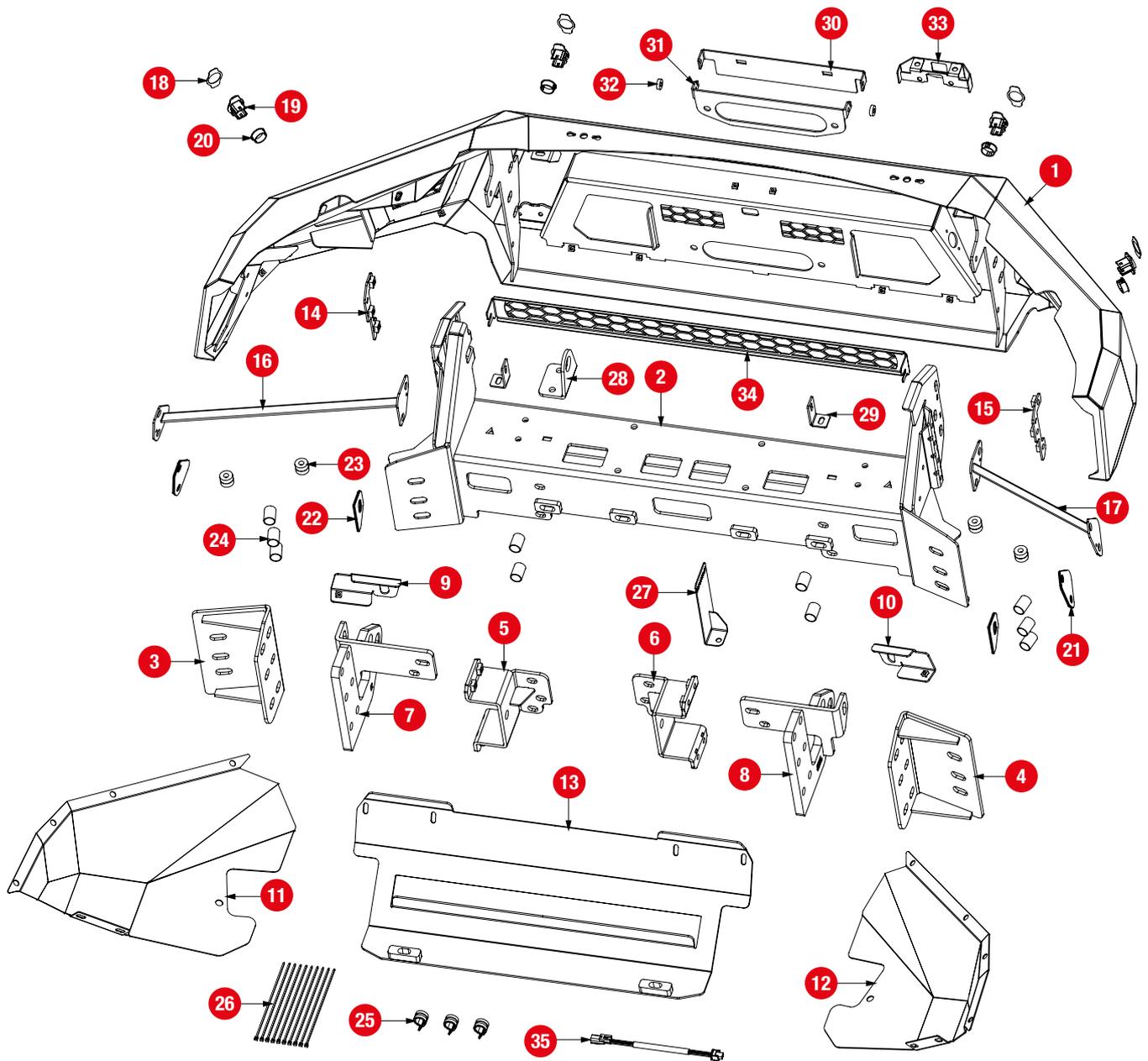


NOTE

- This product has been tested for airbag compatibility; therefore, the mounting system or any part of the bull bar **MUST NOT** be modified.
- Some images contained in these instructions are generic and are a representation of the actual model and/or parts used.
- Some steps may show parts out of sequence to the instructional steps.
- Fitting instructions are correct at the time of publication date and IRONMAN 4X4 cannot be held responsible for any vehicle changes from the manufacturer. It is the responsibility of the installer to ensure correct fitment.

PARTS LIST (ITEM)

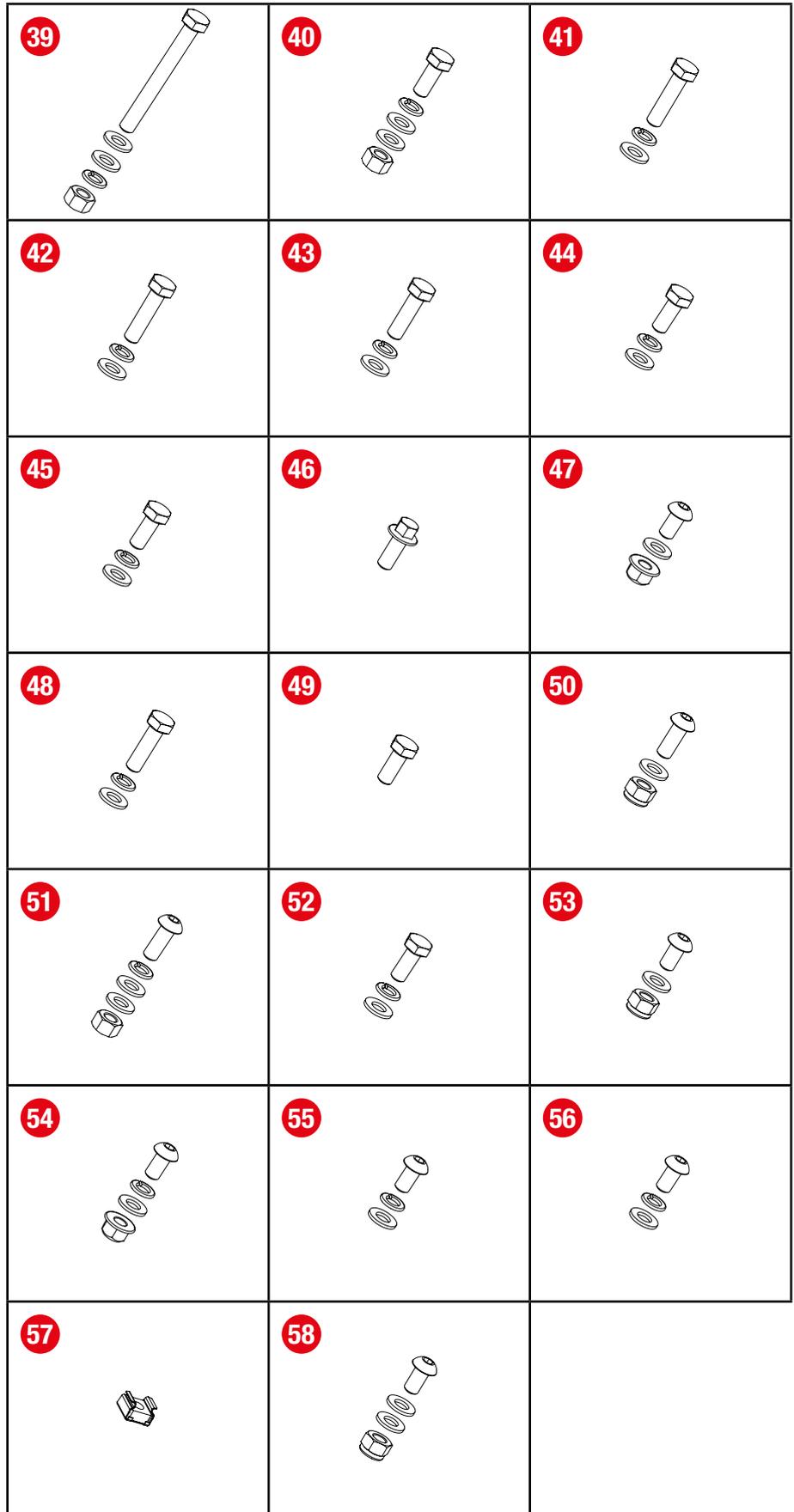
No.	Part Description	Qty	No.	Part Description	Qty	No.	Part Description	Qty
1.	Bull bar assembly	1	14.	Wired triple nut plate - LHS	1	27.	Washer bottle support bracket	1
2.	Winch cradle	1	15.	Wired triple nut plate - RHS	1	28.	Tie down hoop	1
3.	Outer chassis bracket - LHS	1	16.	Side wing support brace - LHS	1	29.	Lightbar mounting bracket	2
4.	Outer chassis bracket - RHS	1	17.	Side wing support brace - RHS	1	30.	Number plate base bracket	1
5.	Inner chassis bracket - LHS	1	18.	3M double sided tape	4	31.	Number plate flip bracket	1
6.	Inner chassis bracket - RHS	1	19.	Sensor holders (PSH067)	4	32.	Number plate nylon washer	2
7.	Recovery point - LHS	1	20.	Nylon plug	4	33.	Camera mount bracket	1
8.	Recovery point - RHS	1	21.	Wing support brace washer	4	34.	Lightbar mesh	1
9.	Side protection plate mounting bracket - LHS	1	22.	Recovery point washer	4	35.	Parking sensor extension harness	2
10.	Side protection plate mounting bracket - RHS	1	23.	Cube light washer	8	36.	Washer bottle	1
11.	Side wing protection plate - LHS	1	24.	Crush tube	10	37.	Recovery point sticker (not shown)	2
12.	Side wing protection plate - RHS	1	25.	18mm P-clip	3	38.	ACC warning sticker (not shown)	1
13.	Front underbody protection plate	1	26.	Zip tie	10			



Any damage or losses caused by improper installation and application, goes beyond our quality warranty.

PARTS LIST (ITEM)

No.	Part Description	Qty
	Hex Head Bolt M12 x 120mm	
	Flat Washer M12 (37 x 12 x 3mm)	
39.	Flat Washer M12 (37 x 12 x 3mm)	2
	Spring Washer M12	
	Hex Nut M12	
	Hex Head Bolt M12 x 80mm x 1.25P	
	Flat Washer M12 (32 x 12 x 3mm)	
40.	Flat Washer M12 (32 x 12 x 3mm)	10
	Spring Washer M12	
	Hex Nut M12	
	Hex Head Bolt M10 x 50mm x 1.25P	
41.	Flat Washer M10 (30 x 10 x 2.5mm)	2
	Spring Washer M10	
	Hex Head Bolt M10 x 50mm	
42.	Flat Washer M10 (30 x 10 x 2.5mm)	8
	Spring Washer M10	
	Hex Head Bolt M10 x 40 x 1.25mm	
43.	Flat Washer M10 (20 x 10 x 2mm)	4
	Spring Washer M10	
	Hex Head Bolt M10 x 35mm	
44.	Flat Washer M10 (30 x 10 x 2.5mm)	8
	Spring Washer M10	
	Hex Head Bolt M10 x 30mm	
45.	Flat Washer M10 (30 x 10 x 2.5mm)	2
	Spring Washer M10	
46.	Hex Head Flange Bolt M10 x 30mm	2
47.	Dome Head Bolt M10 x 20mm	2
	Flat Washer M10 (20 x 10 x 2mm)	
	Hex Flange Nut M10	
	Hex Head Bolt M8 x 45 x 1.25mm	
48.	Spring Washer M8	2
	Flat Washer M8 (24 x 8 x 2mm)	
49.	Hex Head Bolt M8 x 35mm	4
	Dome Head Bolt M8 x 30mm	
50.	Flat Washer M8 (16 x 8 x 1.6mm)	2
	Flat Washer M8 (16 x 8 x 1.6mm)	
	Nyloc Nut M8	
	Dome Head Bolt M8 x 25mm	
51.	Flat Washer M8 (24 x 8 x 2mm)	4
	Spring Washer M8	
	Hex Nut M8	
	Hex Head Bolt M8 x 25mm	
52.	Flat Washer M8	8
	Spring Washer M8	
	Hex Head Bolt M6 x 20mm	
53.	Flat Washer M6 (12 x 6 x 1.6mm)	3
	Nyloc Nut M6	
	Dome Head Bolt M6 x 20mm	
54.	Flat Washer M6 (OD 18mm)	4
	Spring Washer M6	
	Hex Flange Nut M6	
	Dome Head Bolt M6 x 20mm	
55.	Flat Washer M6 (OD18mm)	14
	Spring Washer M6	
	Dome Head Bolt M6 x 20mm	
56.	Flat Washer M6	2
	Spring Washer M6	
57.	Cage Nut M6	2
	Dome Head Bolt M4 x 16mm	
58.	Flat Washer M4 (12 x 4 x 1.0mm)	2
	Flat Washer M4 (12 x 4 x 1.0mm)	
	Nyloc Nut M4	



Any damage or losses caused by improper installation and application, goes beyond our quality warranty.

ACCESSORIES

MANDATORY

To meet some State Regulations, bull bar plug-and-play wiring harnesses to access parker/indicator/ fog light) may be required to be fitted - **IBBPL067** / **IPLS067**

OPTIONAL

- 120W centre lightbar - **ILBSR002BW** (1 required)
- 20W cube lights (can install up to 2 x cube lights per side)
 - White light spot - **ILED20B** - Amber light spot - **ILED20BA**
 - White light flood - **ILED20BF** - Amber light flood - **ILED20BFA**

If installing cube lights, driving lights or lightbar, you will require suitable wiring harnesses.

- 20W cube light loom - **IDLWL001** and cube light adaptor - **IDLWL007C**
- Lightbar patch loom - **ILBWL001** and **IPLS067**
- Scope 7" driving light loom - **IDLWL001**
- Scope 9" driving light loom - **IDLWL002**

If fitting a winch, a winch extension cable may be required dependent on the proximity of the winch.

- Winch extension cable, varying lengths - **WWB030** (500mm), **WWB031** (1000mm), **WWB032** (1500mm)
- Hidden control box mount kit - **WWBCP001**

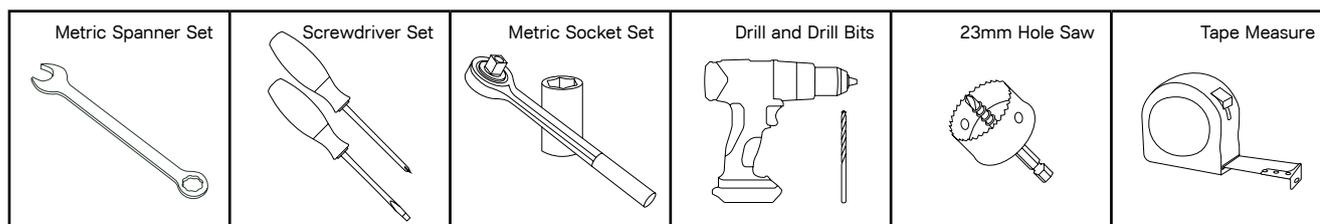
All wiring looms and any additional lights must be ordered separately.



NOTE

Please refer to specific wiring loom instructions for correct installation.

TOOLS REQUIRED



BOLT TENSION GUIDE

PROPERTY CLASS	TORQUE MA	NOMINAL DIAMETER - COARSE THREAD			
		M6 X 1	M8 X 1.25	M10 X 1.25	M12 X 1.25
8.8	NM	10.5	25	49	88
	FT/LB	7.7	18	36	64

1. Ensure bull bar application is compatible with the vehicle.
Before installation, unwrap the hardware.
Unwrap the bull bar, taking care not to damage or scratch in the process. Inspect bar for any damage.



TIP

It is good practice to lay out all hardware to cross-reference against the parts list and to record the Batch Number.



Generic image used as reference only.

STRIP DOWN AND PRE-INSTALL PROCEDURES

2. Remove and retain the number plate if fitted, to be reinstalled later.
Disconnect the negative battery terminal if applicable.
Remove plenum cover, retaining clips for later refitment.



WARNING

Please check owner's manual for vehicle specific requirements, as some models may require battery back up.



3. Remove the two (2) clips on each side securing the top of the grille in place.
Disconnect front camera and radar plugs located behind the grille.



NOTE

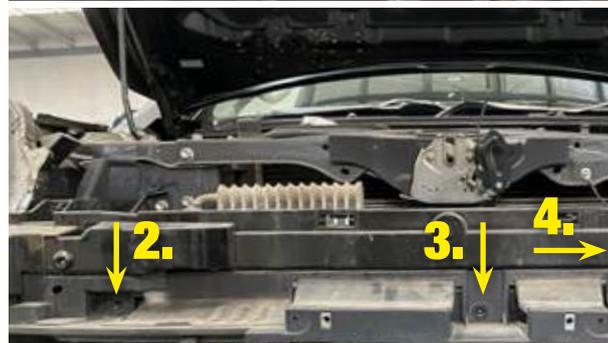
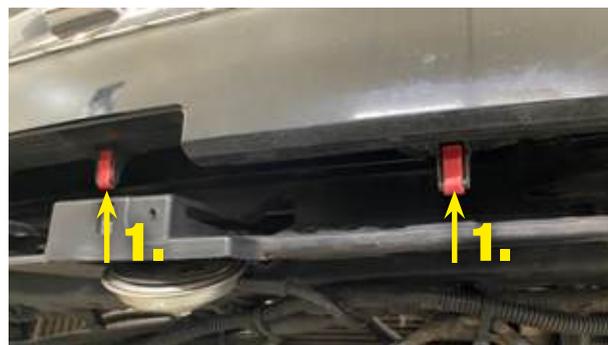
We strongly suggest using masking tape along the edges of the grille and factory bumper to prevent damage in the removal process.



- 4.** Gently remove the grille by pulling upward to disengage the lower clips **(1)**.
Remove the right-hand **(2)**, the centre **(3)** and the left-hand bolts **(4)** securing the top of the factory bumper in place.
Remove carefully place aside for later refitment.


WARNING

Ensure you do not drop the grille and radar bracket which may damage the radar.



- 5.** Remove the bolts and clips inside the wheel arch securing factory bumper and flares (if fitted).


NOTE

One (1) clip is located up inside the guard, securing the liner and factory bumper to the front fender panel.

If applicable, gently pull flares away from the factory bumper and front fender panel.

Repeat procedure on opposite side.



- 6.** Remove all bolts/clips along the base of the factory bumper, then remove the bolts securing the factory underbody plate.

- 7.** Unclip all clips on the factory bumper and gently pull at the edges to disengage from the vehicle.
Remove and carefully place aside.



8. Remove the bumper support components from across the front of the reinforcement bar to leave the front bar bare.



NOTE

The reinforcement bar is welded to the chassis and cannot be removed,

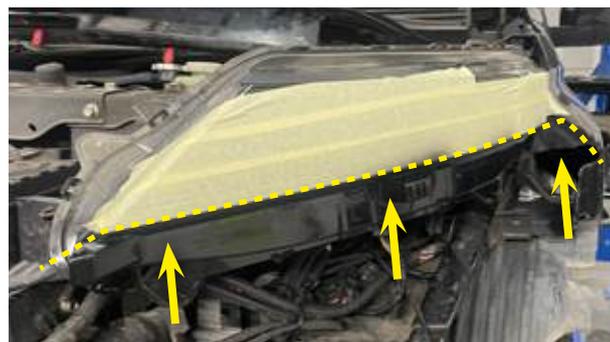
9. Remove bolts securing factory bumper bracket to the vehicle body.
Remove the bracket and replace the top bolt.
Repeat procedure on opposite side.



NOTE

We suggest painting the bolt head to obscure.

10. It is advised to paint below the inner guard, under the headlight to give greater depth to the bar once fitted.
Ensure you mask headlight and guard prior to spraying paint.
Repeat procedure on opposite side.



INSTALLING THE CRADLE AND RECOVERY POINTS

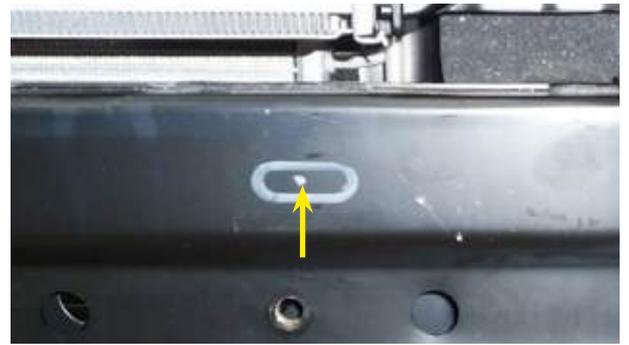
11. 'Dummy' fit the cradle in position, ensuring it is centralised to the vehicle.
With a paint pen, mark the forward facing holes on the face of the chassis crossmember and mark the central point.
Repeat procedure on opposite side.
Once all holes are marked, remove the cradle.



NOTE

Some trimming of air duct may be required,

- 12.** Drill pilot holes in the centre of each position marked, ensuring you drill through both sides of the crossmember.
Repeat procedure on opposite side.



- 13.** Once all pilot holes are drilled, use a 23mm hole saw to drill the front panel of the crossmember. Only drill through front panel.
Once drilled, use a 12.5mm drill bit to drill through the rear panel of the crossmember.
Apply rust preventative to the newly drilled holes.
Repeat procedure on opposite side.



- 14.** Insert crush tubes into each of the newly drilled holes.

**TIP**

Use shorter bolts supplied to temporarily hold crush tubes in position while installing.

Item: 24



- 15.** Lift the cradle into position and loosely secure into OE holes using OE bolts.

Item: 2



- 16.** Place the inner chassis bracket **(1)** against the inside of the chassis rail.

Bring recovery point **(2)** up under the cradle, positioning against the face of the cradle and side face of the chassis rail behind the cradle.

Sandwich the recovery point to the chassis rail using outer chassis bracket **(3)** and loosely secure all three (3) parts using M12 x 120mm bolt **(4)** through the chassis rail.

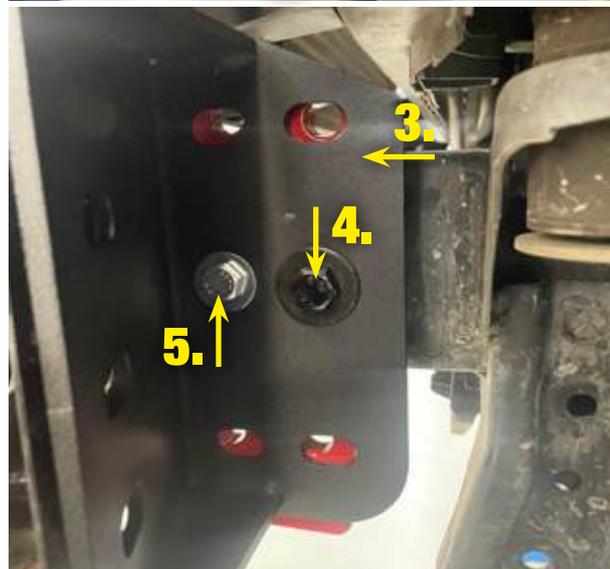
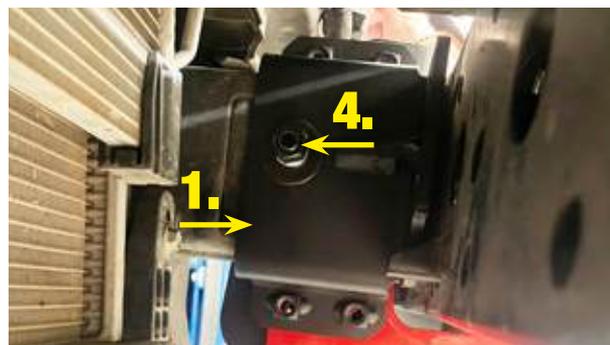
Use an M8 x 45mm bolt **(5)** to the front hole as shown.

Finger tighten only.

Repeat procedure on opposite side.

Item: 3, 5, 7, 39 and 48 - LHS

Item: 4, 6, 8, 39 and 48 - RHS



- 17.** Using M10 x 50mm bolts, sandwich the recovery point through the remaining four (4) holes into the captive nuts on the inner chassis bracket on the opposite side.

Finger tighten only.

Repeat procedure on opposite side.

Item: 42

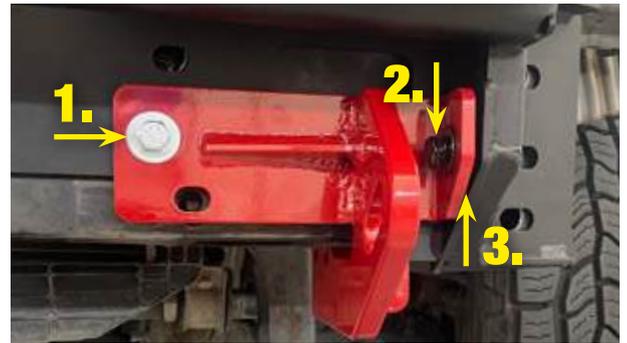


- 18.** Use M10 x 50mm bolt **(1)** through cradle face and into OE hole.

Secure side of recovery point to inner side of cradle using M10 x 35mm bolt **(2)** into captive nut. A washer **(3)** may be required between the recovery point and the cradle.

Repeat procedure on opposite side.

Item: 22, 41 and 44



- 19.** Using M12 x 80mm bolts **(1)**, secure through the previously drilled holes and crush tubes.

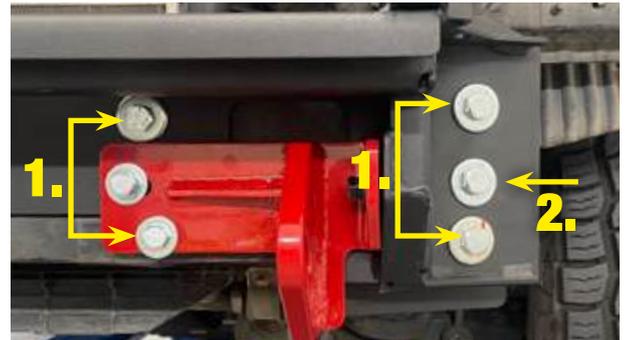
The outer cradle centre hole uses M12 x 80mm bolt **(2)** into OE hole.

The upper outside M12 x 80mm bolt **(3)** has the side wing plate bracket **(4)** added to the rear. Attach this prior to fitting washer and nut.

Repeat procedure on opposite side.

Item: 9 and 40 - LHS

Item: 10 and 40 - RHS



- 20.** Find a fixed point on the vehicle and opposing side of cradle as shown. Take measurement to square up and centre cradle.

Repeat from left and right fixed points until the cradle is centred.



TIP

Use the inside edge of the headlight as a guide.

Tighten bolts, check measurements and readjust if necessary.

Once centred, tighten chassis through bolts at the rear of the recovery points to pull unit together. Tighten forward facing bolts to torque guide specifications. Refer page 6.

Proceed to tighten all other bolts to torque guide specifications. Refer page 6.

Paint mark all bolt heads.



INSTALLING THE WINCH

21. WINCH OPTION

If installing a winch, you need to trim the upper centre section of the factory bumper based on brand and model being fitted. See next step.

We suggest dummy fitting the winch and grille to ensure adequate clearance between both items when permanently fitted.

When fitting a winch you can also use the optional winch control box bracket and control box extension wiring loom. Length based on location of winch control box.

P/N: WWBCP001 (Bracket)

P/N: WWB030 / WWB031 / WWB032 (Cable)



Generic image used as reference only.

- 22.** Mark and carefully trim the upper centre section of the factory bumper as shown, retaining the six (6) grille bottom clip housings **(1)**.

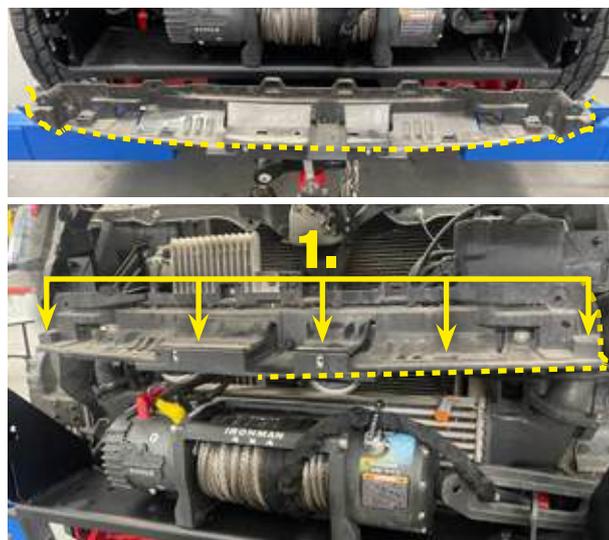
 **NOTE**

Cut already made and shown in image. Follow the dashed line for reference.

Clean up the trimmed edges.

 **WARNING**

Ensure you do not trim off the bottom of the grille clip housings **(1)**.



Cut already made. Images used as reference only.

- 23.** Bend the vehicle horn brackets up slightly to ensure adequate clearance for the winch.



- 24.** Select the desired mounting position. The top plate can be bolted into multiple positions depending on space available.



- 25.** Once the chosen position is found, screw the top and side brackets together using the hardware supplied.



- 26.** The electrical control box also has multiple mounting positions. Once the desired position is found, bolt down using supplied hardware.

 **NOTE**

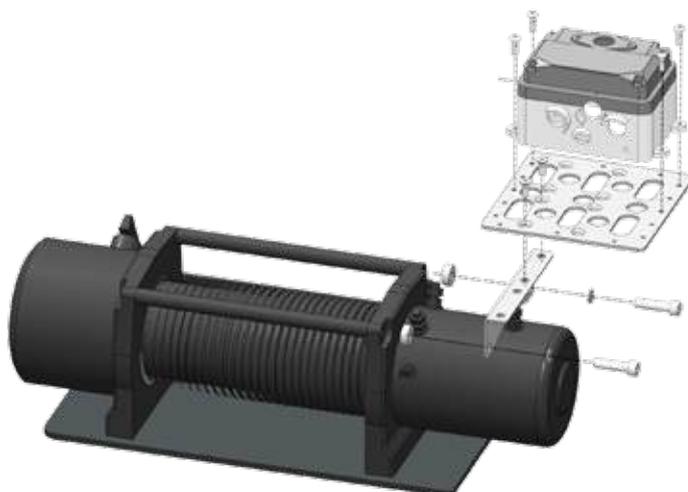
Earthing/grounding points must always be connected to the factory grounding points and not to the battery negative terminal. See the owner's manual.



- 27.** Remove 8mm side-mounted Allen-head bolts, and with the hardware supplied, bolt the side bracket to the winch using the supplied spacer kit.

 **NOTE**

Control box bracket can bolt over the electrical motor or gearbox side.



- 28.** Install winch into the cradle using M10 x 40mm bolts.

Connect winch power cables, colour to colour to the winch.

Item: 43



Generic image used as reference only.

- 29.** If not already installed, attach tie down hoop to the cradle and secure using M10 x 30mm bolts.

Item: 28 and 45



REMOVING AND REINSTALLING SENSORS

30.



NOTE

If the vehicle doesn't have factory-fitted parking sensors, the Parking Sensor Holders will still need to be installed into the new bull bar to fill sensor provision holes.

IMPORTANT: For parking sensors to function correctly, these instructions must be followed closely.

Before removing sensors from the original bumper bar, note the location and orientation of each sensor. This is so when they are fitted back into the bull bar their original location can be replicated.

IMPORTANT: **Do Not Paint Parking Sensors**

Parking sensors are a delicate piece of the vehicle's safety system. The centre "eye" of the sensor is responsible for detecting objects within a specified distance of the vehicle.

Painting a parking sensor does not damage it, but inhibits the sensor's ability to detect objects in its surroundings, causing a malfunction or premature detection.

Parking sensors should only be painted once by the OEM, as the more you paint them, the less effective they become.

IRONMAN 4X4 highly recommends not colour-coding parking sensors when installing a bull bar as excessive paint thickness will adversely affect the operation of the park assist system.

- 31.** Remove the parking sensor wiring and parking sensors from the factory bumper taking note of the position order and orientation of each sensor.



Generic image used as reference only.

- 32.** The centre of the plastic sensor holder will need to be removed to install parking sensors.

If the vehicle doesn't have factory parking sensors, leave the centre complete and skip the next step.

Item: 19



- 33.** Fit the sensor with the factory silicone sleeve to the sensor holder. Use the flat side of the clamping plate to secure the sensor. The sensor will false alarm if excess pressure is applied to the sensor body.



- 34.** Clean inside the bull bar, around sensor holes, and the mounting surface of parking sensor holders using grease and wax remover.



NOTE

It is advised to lightly scotch bright inside of the bull bar and the sensor mounting face holder.



- 35.** Apply adhesion promoter to the mounting surfaces around the sensor holes and on the sensor holders.

This step is important to ensure sensor holders adhere properly to the bull bar.



- 36.** Remove the protective film from one side of the double-sided tape and apply to the mounting surface of the sensor holder.

Item: 18



- 37.** Run the factory harness cabling in between brackets. Clip in parking sensors into parking sensor housings and add parking sensor extension harnesses to the outer two (2) sensor plugs.



NOTE

Don't cable tie off yet, leave wiring loom loose.

Item: 20



Generic image used as reference only.

DRESSING THE BULL BAR

- 38.** Bypass this step if not installing a lightbar. Refer to **STEP 42** for mesh infill fitting.

Assemble and install lightbar into the centre bar section using the brackets supplied with the bull bar fitting kit. **Item: 29** and **51**

The brackets provide some adjustments to ensure centralised positioning and the vertical aim of the light.



NOTE

Do not use supplied lightbar hardware from the retail package.



NOTE

*The optional centre lightbar **P/N: ILBSR002BW** requires **P/N: IPLS067** if not installing an IBBPL. Ironman 4x4 have an optional IBBPL available, **P/N: IBBPL067** with a built-in IPL. Please see product specific instructions for correct fitting procedures.*

- 39.** Assemble and install optional Ironman 4x4 cube lights to the light pods using M8 x 35mm bolts. The brackets provide some adjustments to ensure centralised positioning and a vertical aim of the light beam. Spacers may be required.

Fit cable management P-clips to the bar rear.

Item 23, 25, 49 and 53



NOTE

See page 6 for compatible looms available.



Generic images used as reference only.

- 40.** If fitting a winch, bolt in the optional winch extension plug based on the length required.



- 41.** If you are not fitting the optional lightbar, a mesh infill is supplied and fitted at this stage. Use the lightbar support brackets, M8 x 25mm bolts to install mesh.

If installing driving lights, we suggest also fitting these at this stage.

Item: 29, 34 and 51

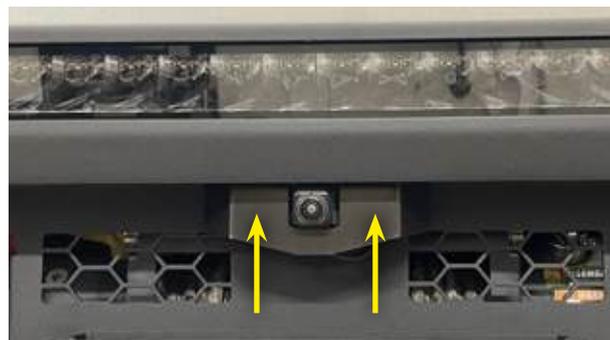


Generic images used as reference only.

- 42.** Remove front camera from the factory bumper and fit into the camera bracket supplied using M4 x 16mm bolts.

Install the bracket and camera to the front of the bull bar, below the lightbar/mesh in the centre using M6 x 20mm bolts.

Item: 33, 56 and 58



- 43.** Relocate the washer bottle to the rear left corner of the engine bay, in the void next to the vehicle battery using washer bracket and bottle supplied

Item: 27 and 36



- 44.** Complete dressing the bar, attach number plate bracket and fairlead using hardware supplied.

Check all bolts, fittings and overrides are tightly secured. Fix all wiring in place with P-clips and cable ties.

Apply ACC warning sticker to the bar if not already attached.

Item: 25, 26, 30, 31, 32, 47, 50 and 57



Generic images used as reference only.

INSTALLING THE BULL BAR AND FINISHING

- 45.** Insert the wired triple nut plates inside the cradle uprights, aligning with bolt holes.

NOTE

We suggest taping the nut plates to the cradle to assist with bolt and nut plate alignment.

Item: 14 - LHS

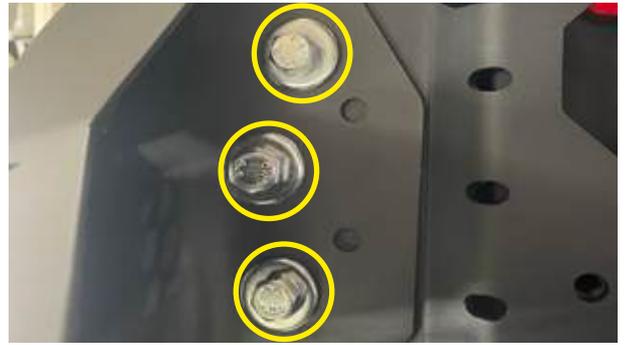
Item: 15 - RHS



- 46.** Lift bull bar into position and align with chassis mounting holes. Secure in place using M10 x 35mm bolts on both sides into triple nut plates.

Centralise the bull bar to the vehicle body and nip up lower bolt on each side to allow for manipulating into correct position.

Item: 1 and 44



NOTE

Allow approximately 25mm gap between the bull bar and bar wing.

This is to allow for chassis flex and prevent body panels and bull bar coming into contact.

WARNING

Unless using a bull bar assist lift, we recommend two (2) persons complete this task to avoid personal injury or damage to the vehicle and/or components.

- 47.** Drill pinning holes and pin the bar in place using M10 x 30mm pinning bolt sets.

Repeat procedure on opposite side.

Tighten all bolts using torque guide specifications. Refer page 6.

Paint mark all bolt heads.

Item: 46



- 48.** Attach wing support brace to the side of the cradle using M8 x 25mm bolts.

Secure the other end of the wing support brace to the bull bar wing using M8 x 25mm bolts.

NOTE

Spacer/s may be required for the wing support braces.

Repeat procedure on opposite side.

Item: 16, 21 and 52 - LHS

Item: 17, 21 and 52 - RHS



- 49.** Tighten all bolts using torque guide specifications. Refer page 6.

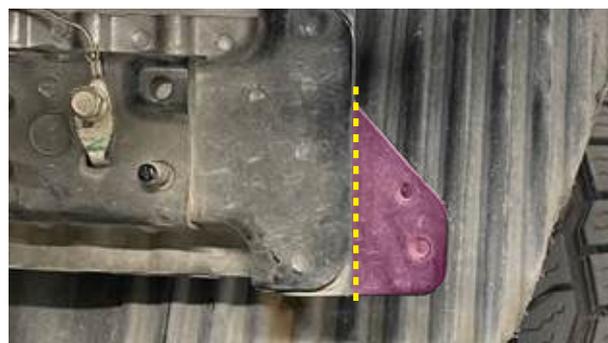
Paint mark all bolt heads.

- 50.** Connect all plugs for lights, parking sensors, fog lights, front camera and radars.
Use appropriate extension harnesses if required.

If a winch is fitted, connect the extension harness to the control box.

Test all functions operate correctly.

- 51.** Trim the lower outer radiator support panel on each side as shown.



- 52.** Lift and hold the wing protection plate in position, marking the guard liner to be trimmed.

Trim the guard liner as marked.

Repeat procedure on opposite side.

Item: 11 - LHS

Item: 12 - RHS



- 53.** Secure the side wing plate into the cage nuts in underside of the bull bar wing with M6 x 20mm bolts.

Secure the rear of the side wing plate to the bracket **(1)** installed earlier.

Repeat procedure on opposite side.

Item: 11 and **55** - LHS

Item: 12 and **55** - RHS

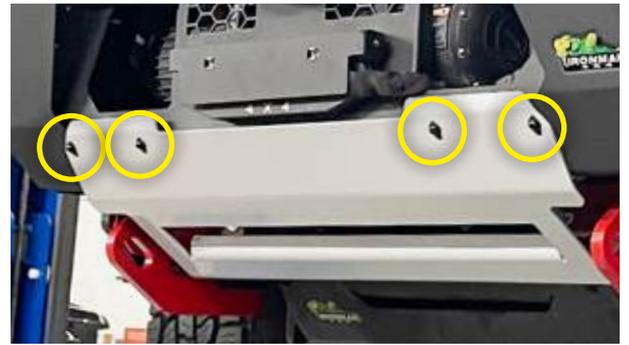


- 54.** Lift the front underbody protection plate into position and secure the front into the cage nuts in the underside of the bull bar using M6 x 20mm bolts.

Replace the factory underbody plate, securing at the rear using OE bolts.

Bring the rear and front protection plates together, overlaying the front plate on top of the rear. Secure both together into OE holes using OE bolts.

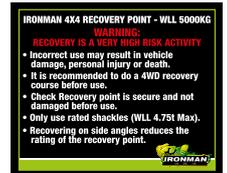
Item: 13 and 55



- 55.** Apply recovery point sticker to left and right-hand side recovery points.

Install number plate to the vehicle with hardware supplied and reinstall plenum cover.

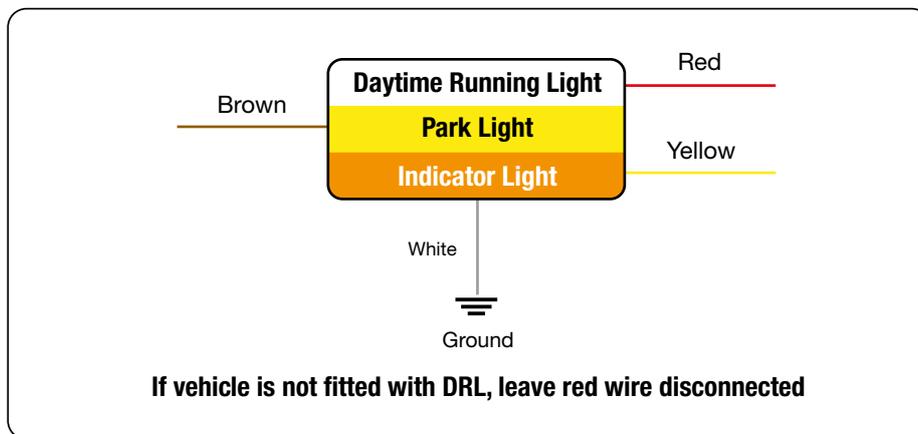
Item: 37



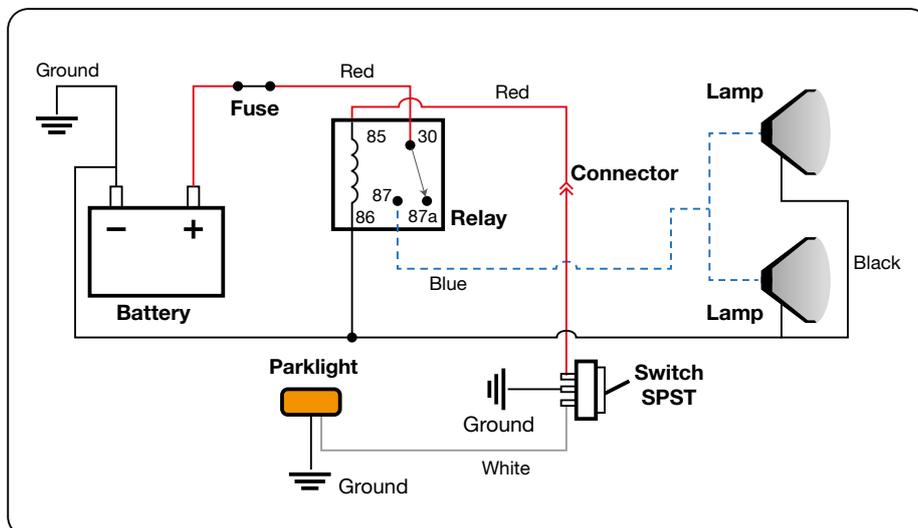
- 56.** Re-test all lights, camera, radars and washers are functioning correctly.

WIRING DIAGRAMS

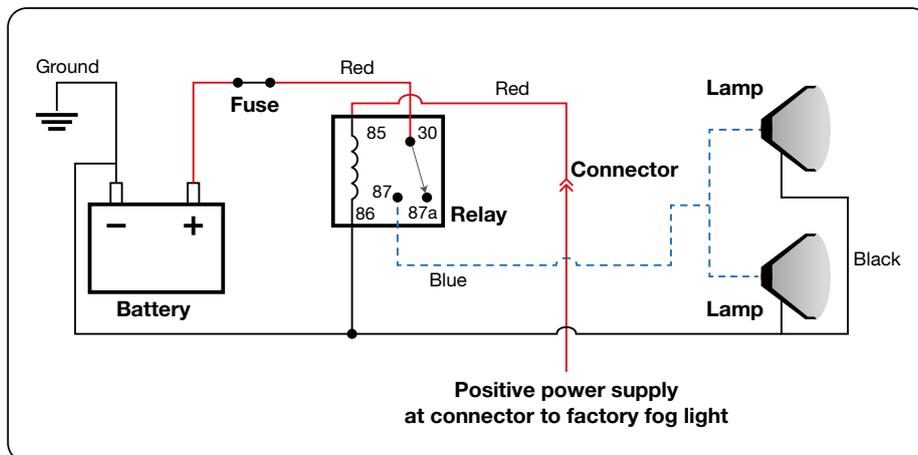
DRL/PARKING INDICATOR LIGHTS



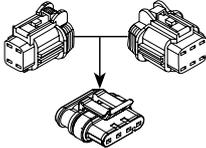
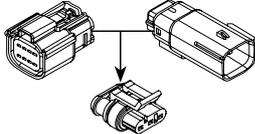
WITH FACTORY FOG LIGHTS

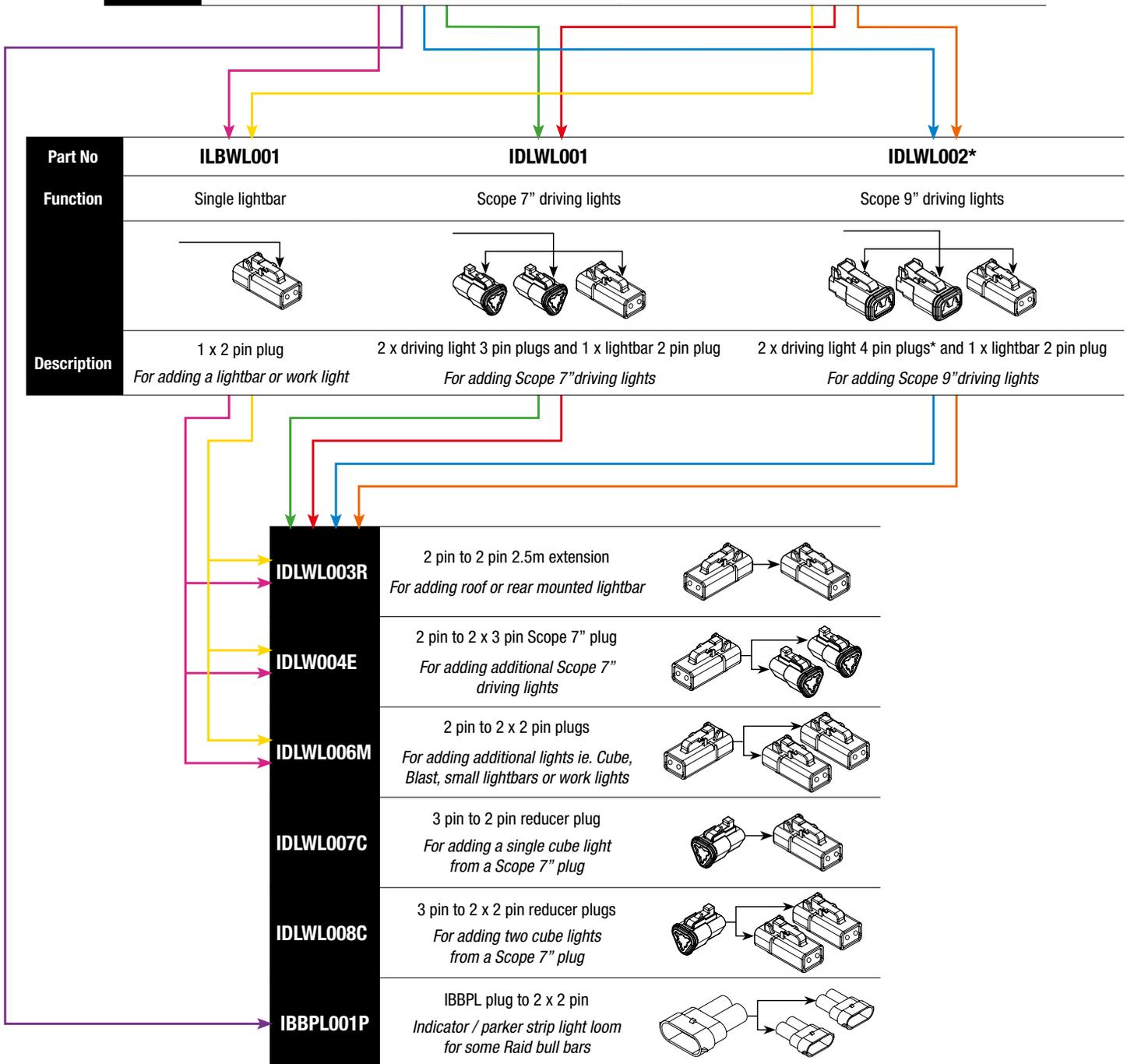


WITHOUT FACTORY FOG LIGHTS



WIRING LOOM - GENERIC ADD ONS

Part No	IBBPL	IPLS
Function	Bull bar parker / indicator and high beam trigger	High beam trigger
		
Description	Vehicle specific XX pin to 3 pin plug Plug and play connection for bull bar indicators / parkers Allows for expansion with cube lights, driving lights or lightbars	Vehicle specific XX pin to 3 pin plug Allows for expansion of adding additional lights



* Important Note: Scope 9" driving lights require 1 x IDLWL002 loom for each pair added to a vehicle

ONCE INSTALLED...

- Ensure all bolts are tensioned correctly
- Doing a pre-trip check before heading away, or every 10,000km (6,200 miles) is good practice.
- Visually inspect bull bar and hardware, retension bull bar hardware or when needed.
- Check the operation of the blinkers, park lights, fog lights and winch if installed and ensure that they are all functioning correctly.
- Ensure all electrical wiring is clear of sharp edges and correctly secured.
- If vehicles are fitted with parking sensors, radars and/or front cameras, check they are operating correctly.
- Some makes and models may need to return to the dealership for recalibration.
- Stand back and admire your work.

