

# RG MY21 ON ROCK SLIDERS WITH BRUSH RAILS

#### **IMPORTANT! – READ BEFORE INSTALLATION**

- This product must be installed exactly as per these instructions using only hardware supplied.
- Take a few moments to read instructions thoroughly before beginning work.
- In the event of damage to any bar component please contact OFFROAD ANIMAL to arrange repair/replacement of components.
- Do not use this product for any vehicle make or model other than that specified on these instructions.
- Do not remove labels from this product.
- This product and its fixings must not be modified in any way unless stated in these fitting instructions.
- The installation of this product is recommended for trained personnel.
- These instructions are correct at time of publication. OFFROAD ANIMAL cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer. If you find something has changed, please contact us to let us know!
- During installation it is the duty of the installer to check correct operation/clearances of all components.
- If Instructions are to be printed for reference in the workshop, it is recommended that they are printed in colour, for best legibility.

# PARTS LISTING

**IMPORTANT:** Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

## **Rock Slider – Mounting Kit**

Qty	Part Number	Description	Image
1	RS-IDM-RG- 21-ASM2L	Dmax Slider Front Mount Left Hand	
1	RS-IDM-RG- 21-ASM2R	Dmax Slider front Mount Right hand	
4	RS-IDM-RG- 21-ASM1	DMAX SLIDER COM MOUNT	
4	B-0584	Shim	
4	NP-COM- M10-190- SLIM	Nut plate M10 Slim	

## **Mounting Kit Small Parts – Contained in Small Parts Kit Bag**

Qty	Part Number	Description
4	M12X130 GR8.8	Bolt Hex, M12X130x1.75, GR8.8 ZP
4	M12 FLAT WASHER	M12 FW
4	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
24	<b>24</b> M10 x 25 Bolt Hex, M10X25x[1.5], GR8	
26	26 M10 FLANGE NUT Flange Nut, M10x1.5 G8.8 Z	
6	M10 X 30 Bolt Hex, M10x30x[1.5] G8.8 ZF	
6	M10 FW	M10 Flat Washer

## **Side Rail Step Kit**

Qty	Part Number	Description	Image
1	B-1077L	LH Side Rail Step - 1800 Extrusion	
1	B-1077R	RH Side Rail Step - 1800 Extrusion	
1	COM-RS- AECM	LH Slider End Cap Assy – Angled	
1	COM-RS- AEC	RH Slider End Cap Assy – Angled	

# Side Rail Step Kit Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
2	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25
		GR12.9, ISO4042 ZnNi BLACK PASSIVATED
		FINISH
16	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP,
		M8X20X1.25, ISO4042 ZnNi BLACK
		PASSIVATED FINISH
32	M8 FLAT WASHER- BLACK	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042
	ZINC	ZnNi BLACK PASSIVATED FINISH
30	M8 NUT	Hex Nut, M8x1.25 G8.8 ZP
14	M8X20 CAP SCREW	CAP SCREW, M8X20X1.25 GR10.9 ZP
4	M10X15 BHCS	SCREW, BUTTON HEAD CAP, M10X16X1.5
		GR12.9 ZP
4	M10 Flat Washer	M10 FW
4	M10 NUT	Hex Nut, M10x1.5 G8.8 ZP

## **Rock Slider – Extrusion Kit**

Qty	Part Number	Description	Image
2	E-0002- 1800	Slider extrusion - 1800MM	

## **Side Rail Tube Kit**

Qty	Part Number	Description	Image
1	SR-IDM-RG- 21-ASM1L	D-MAX RG Side Rail Welded Assembly LH	
1	SR-IDM-RG- 21-ASM1R	D-MAX RG Side Rail Welded Assembly RH	
2	SR-TLC-300- 22-ASM3	LC300 Side Rail Spigot End Assy	
2	P-0086	Side Rail - Joiner Plate	
2	T-0069	Crush Tube 65mm	

2	M10 Saddle Washer 102057059 901	Black Nylon Saddle Washer	
2	PW-P-14X9- 165	Pinch Weld - Plain 14X9MM, Rubber, 165mm Length	N/A

# Side Rail Tube Kit Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
10	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25
		GR12.9, ISO4042 ZnNi BLACK PASSIVATED
		FINISH
10	M8 FLAT WASHER- BLACK	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042
	ZINC	ZnNi BLACK PASSIVATED FINISH
6	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
2	M10 Flat Washer	M10 FW
4	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
2	M10X100 BHCS BLACK	SCREW, BUTTON HEAD CAP,
	ZINC	M10X100X1.5 GR12.9, ISO4042 ZnNi
		BLACK PASSIVATED FINISH
2	M10 FW LHD BLACK ZINC	WASHER, FLAT M10X28.5X2.5, ISO4042
		ZnNi BLACK PASSIVATED FINISH

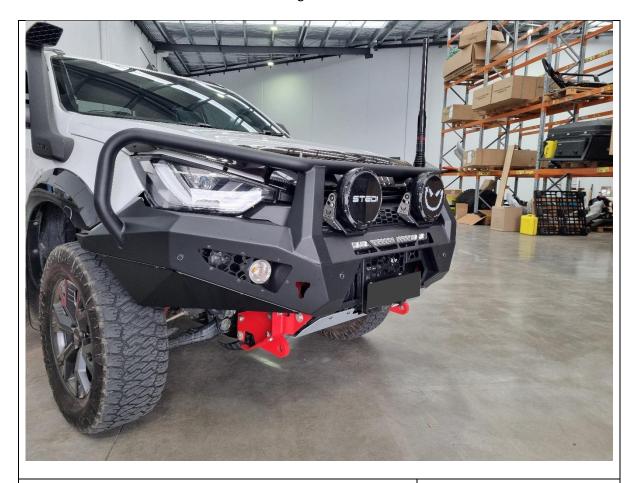
The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop
		Equipment
Metric Socket Set 10-19mm	Electric/Air Impact	Hydraulic Floor Jack
	Driver (Optional)	
Socket Extension Bar		Masking Tape
	Electric Drill	
Metric Spanner Set 10-19mm		Marker Pen
	6mm Drill Bit	
Hex (Allen) Key Set 4-6mm		Workshop Rag
	Step Drill (6-18mm	
Flat Blade Screwdriver	min. range)	Paint Pen/Rust
		Inhibitive Paint
Centre Punch		
Deburr Tool		
Side Cutters		

# WORKSHOP SAFTEY

It is the responsibility of the installer to always complete works in a safe manner. Make sure the following safety equipment is available and precautions are observed whilst fitting this product.

Hearing Protection	Always wear ear protection when using power tools.
Eye Protection	Ensure eye protection is always worn when cutting or drilling.
Manual Handling	Do not attempt to lift bar assemblies or rock sliders on your own.  Always use two people to lift or use mechanical Lifting aid such as hydraulic lifting trolley.
Vehicle Support	Always ensure vehicle is properly supported when working on it. Do not attempt to fit products whilst suspension work is being carried out. Do not work under a vehicle supported only by a jack.



- Offroad Animal Toro Bar (Part No. FB-IDM-RG-21-TOR-ASM0 or FB-IDM-RG-24-TOR-ASM0) must be fitted to the vehicle prior to fitment of these rock slider scrub rails.
- 2. If Offroad Animal Rock Sliders (Part No. RS-IDM-RG-21-ASMO) have previously been fitted, skip to Step 26.
- 3. These scrub rails are not compatible with any other variants of sliders and bars.

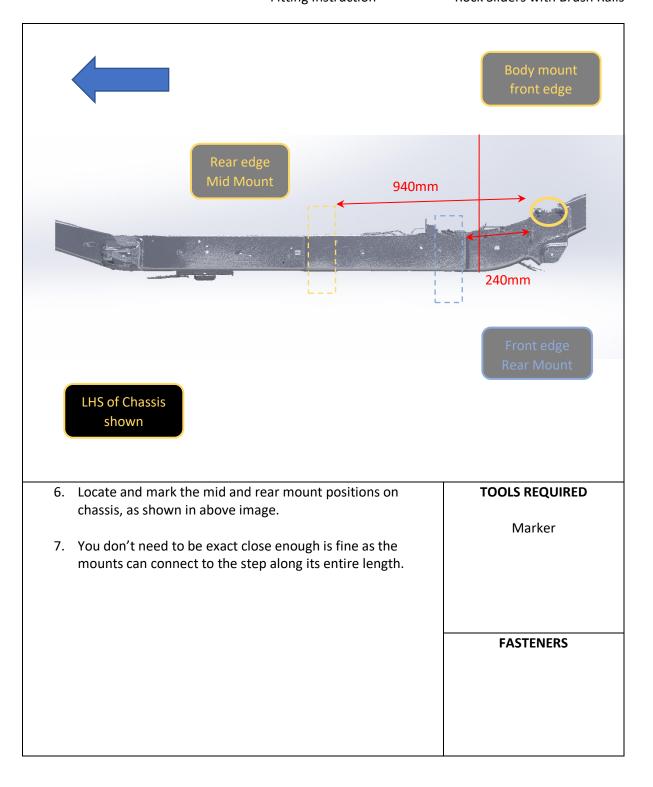


- Remove Factory side steps if fitted by removing the 6x Bolts (2 Per mount) securing them to the body using a 12mm socket.
- 5. Discard Factory steps and bolts.

12mm socket

#### **FASTENERS**

6x Factory Flange head Bolts (per side)





- 8. Middle mount shown on LHS of chassis. Push bracket up to chassis with shim plate between chassis and bracket as shown. Secure with M12x130 Hex bolt, washer, and flange nut. Push bracket all the way up and ensure top of bracket does not hit floor pan.
- 9. Bracket slides inside the brake and fuel lines near the chassis.
- 10. Tighten bolt so bracket is pinching hard on chassis.

18mm Spanner

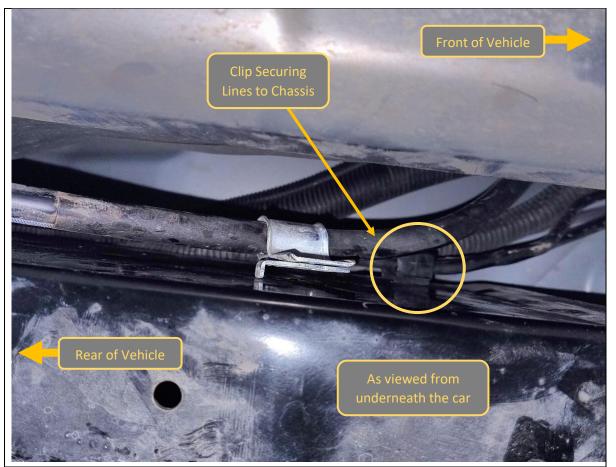
#### **FASTENERS**

M12x130 (1) M12 FW (1) M12 FN (1)



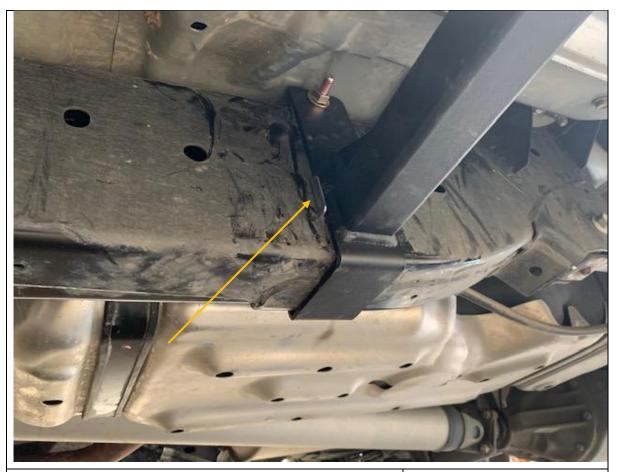
- 11. To fit rear bracket on LHS you need to lower the fuel tank.
- 12. To lower fuel tank, put a jack under the fuel tank and just touch the tank.
- 13. Remove 4 bolts (2 per strap) on holding fuel tank up.
- 14. Gently lower tank down about 100mm with jack. Leave jack in place to support tank.

14mm socket



- 15. Some vehicles have a plastic clip securing fuel lines to the chassis, on the inside of the LH chassis rail in the location of the rear mount.
- 16. If vehicle is equipped with these lines, release the clip from the chassis using a trim tool.
- 17. When fitting the rear mount, ensure that the mount goes between the chassis and the lines. Ensure that the lines do not rub on the edges of the mount. Protect the lines with conduit or rubber hose if required (not supplied).

Trim tool

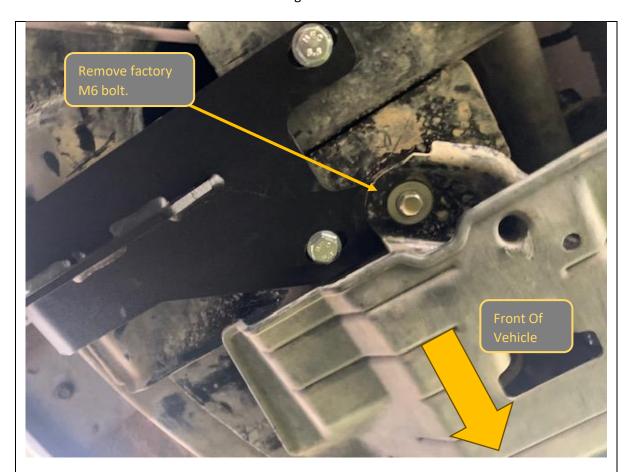


- 18. Fit rear mount with shim plate, push up as high as it will go and tighten the bolt until the bracket is pinching hard on chassis. Make sure top of bracket does not touch floor pan.
- 19. Raise fuel tank back up and secure with straps with factory bolts.

18mm spanner, 14mm socket

#### **FASTENERS**

M12x130 (1) M12 FW (1) M12 FN (1)



- 20. Install the front bracket as shown above. LHS of vehicle is shown in above image, looking from below and slightly behind mount location.
- 21. Remove M6 bolt that is already in vehicle shown with arrow.
- 22. Put bracket up to chassis as shown and reinstall factory M6 bolt. Leave loose.
- 23. Using nut plate install M10 bolt on top side of photo, again leave loose.
- 24. Next fit M10x30 bolt on bottom side of photo with flange nut. You may need to undo the factory M6 previously tightened before holding plastic guard to get nut into place. Leave loose at this stage.

16/17mm socket/spanner (depends on bolt supplier)

#### **FASTENERS**

M10 x 30 (2) M10 FW (2) M10 FN (2)



- 25. Using the nut plate through the chassis window behind the bracket put a small bend in stick with your hand and then feed through window. Line up nut on plate with corresponding point on bracket and feed in M10x30 bolt and washer.
- 26. Once bolt has been started use a jack to hold the front of the bracket up as high as it will go while using a flat head screwdriver to lever bracket as far away from centre of vehicle as possible. Then torque up the M10 bolt.
- 27. Remember this bracket need to be as high as possible in its slot.
- 28. Torque 3 bolts underneath.

16/17mm socket/spanner (depends on bolt supplier)

# FASTENERS

M10 x 30 (1) M10 FW (1)



- 29. The following steps only apply if Offroad Animal Rock Sliders have already been fitted. Skip to Step 30 if installing rock sliders onto the vehicle for the first time.
- 30. Remove the existing step and extrusion from the mounting brackets by undoing 12x M10 flange nuts per slider.

16mm socket/spanner

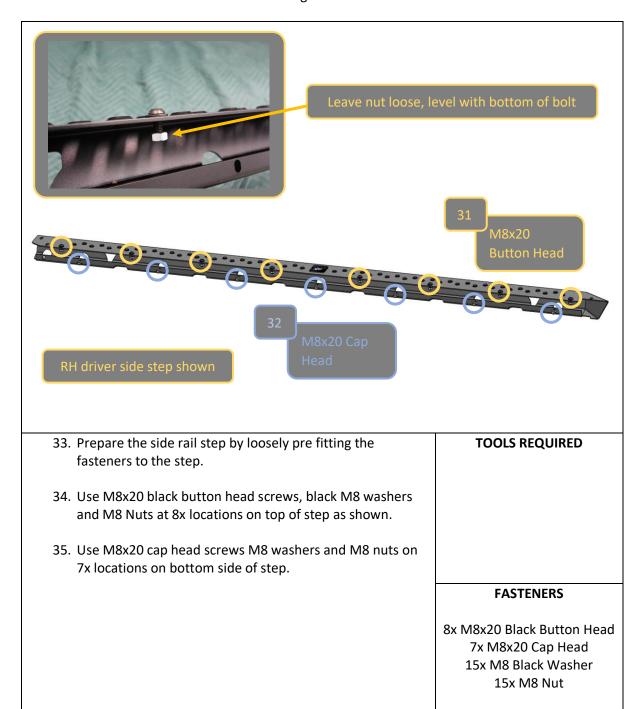
#### **FASTENERS**

M10 flange nut (24)



- 31. Unbolt all end caps and slider step from the extrusion.
- 32. Remove any bolts/nuts in the extrusion slots.

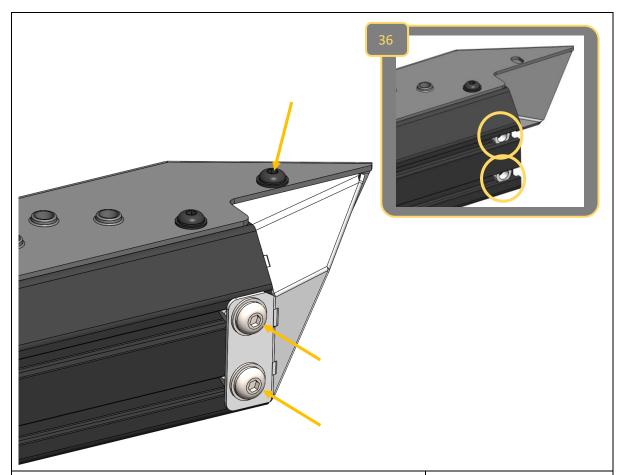
5/6mm hex/Allen key 15/16mm socket/spanner





- 36. Slide the step plate onto the main slider structural extrusion. Align the nuts as they enter the T-slots on the extrusion.
- 37. Centre the step on the extrusion. Once happy with alignment, tighten all bolts.

5mm hex/Allen key



- 38. Fit end cap to the tapered end of the extrusion.
- 39. First slide 2x M10 hex nuts into the T-slots on the back side of the extrusion.
- 40. Then slide endcap into the inside of the slider step.
- 41. Secure the endcap to the extrusion with 2x M10x15 button head bolts and flat washers.
- 42. Secure the endcap to the step with 1x M8x20 black button head bolt and black flat washer.
- 43. Repeat Steps 30-39 for the other slider step.

5mm hex/Allen key 6mm hex/Allen key

#### **FASTENERS**

2x M10x25 Bolts 1x M8x20 Button Head bolt 1xM8 Flat Washer 2x M10 Flange Nut



44. Slide the 12x M10x25 hex bolts into the T-slots on the back side of the extrusion. 6 bolts per slot.

45. Loosely arrange the bolts in 3x groups of 4, in approximate location of mounts, as shown.

TOOLS REQUIRED

**FASTENERS** 

M10x25 (12)



46. With the help of a friend or mate, lift step and extrusion up to brackets. Align all the bolts so they fit through the corresponding holes in the brackets.

**Note:** The tapered end cap should be at the rear of the vehicle.

- 47. Once all the bolts are through into the brackets, loosely secure M10 flange nuts on the M10 bolts to hold step up. Leave the slider step free to move fore/aft at this stage.
- 48. Repeat for other side.

**TOOLS REQUIRED** 

**FASTENERS** 

12x M10 Flange Nut



49. Apply masking tape around the outer bend of the Toro bar tube where the scrub rail will attach to.

**TOOLS REQUIRED** 

Masking tape

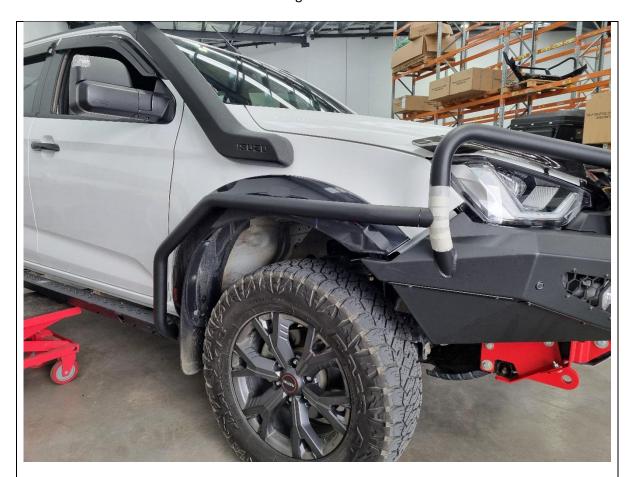


50. Slide in 2x M10x25 hex bolts into the front open end of the extrusion as shown.

TOOLS REQUIRED

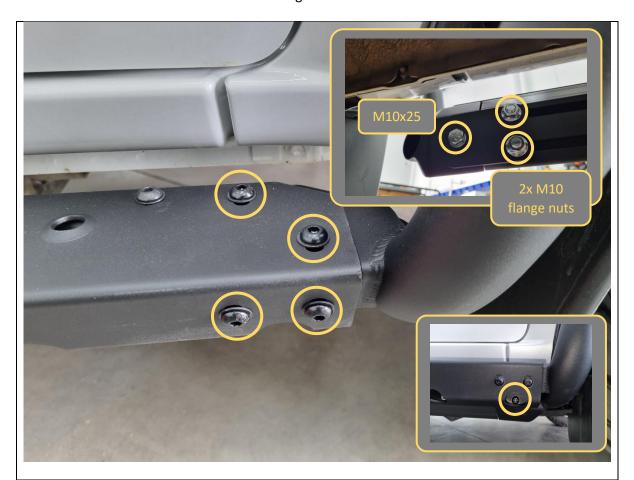
**FASTENERS** 

2x M10x25 hex bolts



51. Perform a dry test fit of the scrub rail by sliding it into the open end of the slider step.

TOOLS REQUIRED



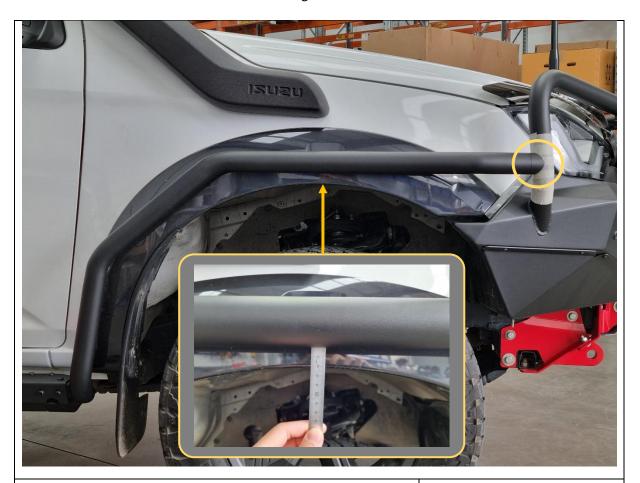
- 52. Loosely secure the top and side faces of the scrub rail end to the slider step using 5x M8x16 black button head bolts and black washers. (1x hidden on the side, see lower right inset).
- 53. Loosely secure the inside face of the scrub rail end to the extrusion with the P-0086 side rail joiner plate, 1x M10x25 hex bolt, 1x M10 flat washer, and 2x M10 flange nuts.

#### **FASTENERS**

5x M8x16 black button head 5x M8 black flat washer

> 1x M10x25 hex bolt 1x M10 flat washer

2x M10 flange nut



54. Place the spigot end assembly (circled) in between the scrub rail and Toro bar.

**Note:** LH and RH spigots are the same. There is a small V-notch in the spigot, which should be facing towards the centre of the vehicle.

- 55. Adjust the fore/aft position of the slider/bar/scrub rail until the gap is closed. Ensure at least 15mm clearance to the vehicle body is still maintained.
- 56. Also adjust the position of the scrub rail and slider step to achieve 20mm of vertical distance between the scrub rail and car at the highest point of the wheel arch (see inset photo).
- 57. Once happy with position, tighten/torque M10 flange nuts holding the extrusion step to the chassis mounts. Also lightly tighten the bolts securing the scrub rail to the slider step.

**Note:** The order of tightening bolts holding the scrub rail to the slider step affects the position of the scrub rail. If you have trouble aligning, try tightening bolts in a different order.

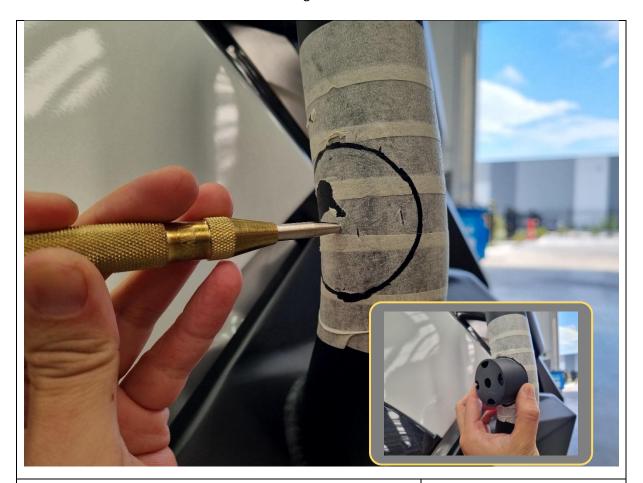
#### **TOOLS REQUIRED**



58. Using a marker pen, trace the outline of the spigot in position onto the Toro bar tube.

TOOLS REQUIRED

Marker pen



- 59. Remove the scrub rail and spigot from the vehicle.
- 60. Hold the spigot back up against the Toro bar by hand, then mark the position of the hole in the centre of the spigot onto the Toro bar with a pen.
- 61. Then use a centre punch to mark the hole location on the Toro bar.

Marker Pen

Centre Punch



- 62. Drill 6mm pilot hole through both sides of the Toro tube at the centre punch location. Use a rag over the car to protect from metal swarf.
- 63. Take care to ensure the drill always remains perpendicular to the tube, so that the hole is aligned in the direction of the spigot/scrub rail.

Electric Drill 6mm Drill Bit Workshop Rag



- 64. Open up the holes on both sides to 18mm using a step drill.
- 65. Deburr and paint edges of holes to prevent rust.

Electric Drill Step Drill

Deburr Tool Paint



66. Fit supplied pinch weld around the curved edge of the spigot. Trim with side cutters if oversized.

Side Cutters



67. Loosely position the spigot with the Toro bar and hold in place with 1x M10x100 black button head, flat washer, nylon saddle washer and crush tube, through the 18mm drilled hole in the bar.

#### **TOOLS REQUIRED**

#### **FASTENERS**

1x M10x100 black button head 1x M10 black flat washer 1x M10 nylon saddle washer 1x crush tube



- 68. Refit the scrub rail to the vehicle.
- 69. Secure the scrub rail to the spigot/Toro bar with the M10x100 button head bolt into the embedded nut on the flat end of the scrub rail.
- 70. Secure the base of the scrub rail to the slider the same way as during the dry fit.
- 71. Re-check and adjust alignment between scrub rail, rock slider and Toro bar. Ensure 15mm clearance to the vehicle body is still maintained.
- 72. Once happy with alignment, tighten all bolts, including any loosened bolts in the slider and Toro bar during alignment.
- 73. Complete the entire scrub rail install again for the other side of the car.
- 74. After that you are done!

5mm hex/Allen key 6mm hex/Allen key 15/16mm socket/spanner

#### **FASTENERS**

5x M8x16 black button head 5x M8 black flat washer

1x M10x25 hex bolt 1x M10 flat washer

2x M10 flange nut



Congratulations!
Head for the tracks and enjoy your newly protected D-MAX!