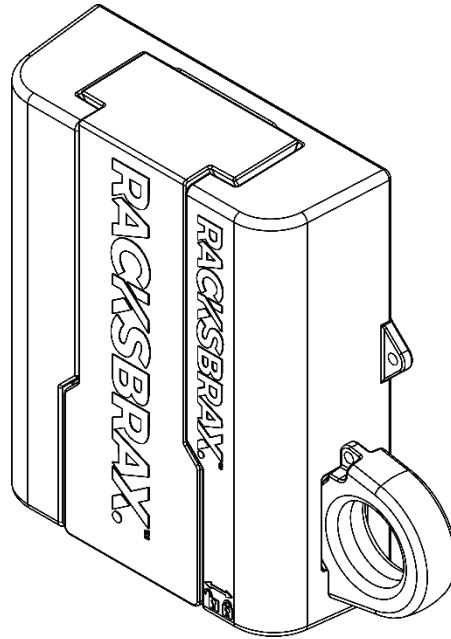


# RACKS BRAX.®



## **HD HITCH**

### *Assembly and Mounting Instructions*

**HD Hitch Standard (8159)  
HD Hitch Series 33 (DOUBLE) (8202\*)**

**HD Hitch Tradesman II (8162)  
HD Hitch Series 33 Tradesman II (8204\*)**

**HD Hitch Tradesman III (8163)  
HD Hitch Series 33 Tradesman III (8205\*)**

**HD Hitch Triple (8182)  
HD Hitch Series 33 (TRIPLE) (8203\*)**

The RacksBrax HD Hitch has been engineered to ensure safety, quality and ease of use for the quick loading and unloading of roof rack mounted pull-out awnings\*, storage tubes and shower tents. When coupled with various RacksBrax HD Accessories (sold separately), the HD Hitch may also be used with some wing awnings\*\*, some recovery boards\*\*\* and some soundbars\*\*\*\*. See website for more detail.

\* These models suit awnings with spine mount points at 33mm centres. Please see page 14 and 15 with special notes on these products.

\*\* Not to be used for wing awnings with mount point spacings from 100-120mm. See XD Hitch and XD Hitch Accessories at [www.racksbrax.com](http://www.racksbrax.com).

\*\*\* HD Hitch Standard (8159) may be used with full-sized MAXTRAX® and TRED® recovery boards.

\*\*\*\* May be used with ECOXGEAR® soundbars.

**Table 1      CONTENTS BY PRODUCT**

PART	QUANTITIES SUPPLIED IN EACH BOX							
	HD Hitch Standard 8159	HD Hitch Series 33 (DOUBLE) 8202*	HD Hitch Tradesman II 8162	HD Hitch Series 33 Tradesman II 8204*	HD Hitch Tradesman III 8163	HD Hitch Series 33 Tradesman III (8205*)	HD Hitch (TRIPLE) 8182	HD Hitch Series 33 (TRIPLE) 8203*
Body (with lock)	2	2	4	4	5	5	3	3
Body (Wall Mount - no lock)	/	/	2	2	2	2	/	/
Holder	2	2	4	4	6	6	3	3
Cover	2	2	2	2	3	3	3	3
Pin	2	2	2	2	3	3	3	3
Prop Cleat	2	2	2	2	2	2	2	2
Barrel Lock	2	2	2	2	3	3	3	3
Pin Lanyard	2	2	2	2	3	3	3	3
Fastener Set 8159	1	/	1	/	1	/	1	/
Fastener Set 8202	/	1	/	1	/	1	/	1
Fastener Set 8162	/	/	1	/	/	/	/	/
Fastener Set 8204	/	/	/	1	/	/	/	/
Fastener Set 8163	/	/	/	/	1	/	/	/
Fastener Set 8205	/	/	/	/	/	1	/	/
Fastener Set 8182	/	/	/	/	/	/	1	/
Fastener Set 8203	/	/	/	/	/	/	/	1
Instructions	1	1	1	1	1	1	1	1
Warranty and Safety Warnings	1	1	1	1	1	1	1	1

\* For awnings with spine track spacings of 33mm only

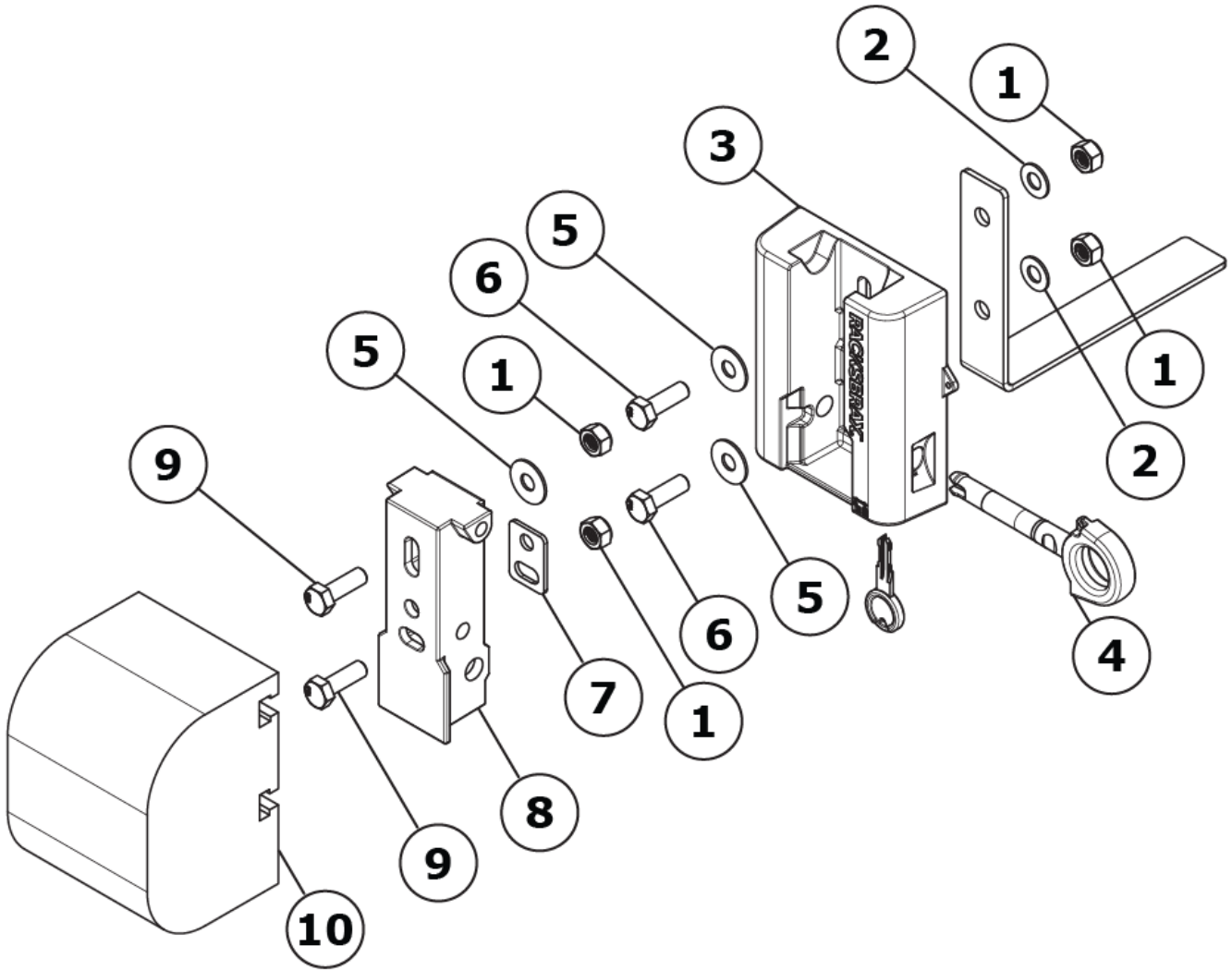
**Table 2      QUANTITIES IN EACH BOX**  
(see Figure 1 – Exploded View over page)

#	PART	QUANTITIES							
		HD Hitch Standard 8159	HD Hitch Series 33 (DOUBLE) 8202	HD Hitch Tradesman II 8162	HD Hitch Series 33 Tradesman II 8204	HD Hitch Tradesman III 8163	HD Hitch Series 33 Tradesman III 8205	HD Hitch (TRIPLE) 8182	HD Hitch Series 33 (TRIPLE) 8203
3	Body (with inbuilt lock not shown)	2	2	4	4	5	5	3	3
<b>NOT SHOWN</b>	Body (Wall Mount-no lock)	/	/	2	2	2	2	/	/
8	Holder	2	2	4	4	6	6	3	3
<b>NOT SHOWN</b>	Cover	2	2	2	2	3	3	3	3
4	Pin	2	2	2	2	3	3	3	3
<b>NOT SHOWN</b>	Prop Cleat	2	2	2	2	2	2	2	2
<b>NOT SHOWN</b>	Pin Lanyard	2	2	2	2	3	3	3	3
10	Generic Awning	/	/	/	/	/	/	/	/
6*, 9*	SS304 Set Screw M6 × 20*	8	/	12	/	16	/	12	/
<b>NOT SHOWN</b>	SS304 Set Screw M6 × 25* (For Prop Cleat)	2	/	2	/	4	/	2	/
2*, 5*	SS304 Washer Mud M6 × 18 × 1.4*	10	/	14	/	22	/	14	/
1	SS304 Nut M6 (Nylon Insert Lock Nut)*	10	/	14	/	20	/	14	/
9	SS304 Set Screw M8 × 20**	4	4	8	8	12	12	6	6
6	SS304 Set Screw M8 × 25	6	6	6	6	8	8	8	8
2	SS304 Washer Flat M8 × 17 × 1.2	6	6	6	6	8	8	8	8
5	SS304 Washer Mud M8 × 22 × 1.8***	6	4	8	6	12	9	9	6
1	SS304 Nut M8 (Nylon Insert Lock Nut)	10	10	14	14	20	20	14	14
7	SS304 Holder Washer M8 × 32 × 22.5 × 2****	2	2	4	4	6	6	3	3
<b>NOT SHOWN</b>	SS304 Washer M8 × 30 × 14.5 × 2****	/	2	/	2	/	3	/	3

- \* Used where only M6 set screw heads fit awning mounting slots and awning manufacturer's bracket
- \*\* Use T Bolts supplied with Rhino Rack® Sunseeker® awnings to attach nylon Holders to Sunseeker® awnings
- \*\*\* Use these washers on the inside of nylon Body and upper inside of the nylon Holders
- \*\*\*\* Used for HD Hitch Series 33 models only on the central hole of the nylon Bodies
- \*\*\*\*\* Use these washers on the lower inside of the nylon Holders

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**Figure 1 EXPLODED VIEW**



**NOTE:** For the HD Hitch Series 33, refer to the exploded view on page 15 of these instructions.

## **WARNING**

**(Read in conjunction with RacksBrax "SAFETY WARNINGS")**

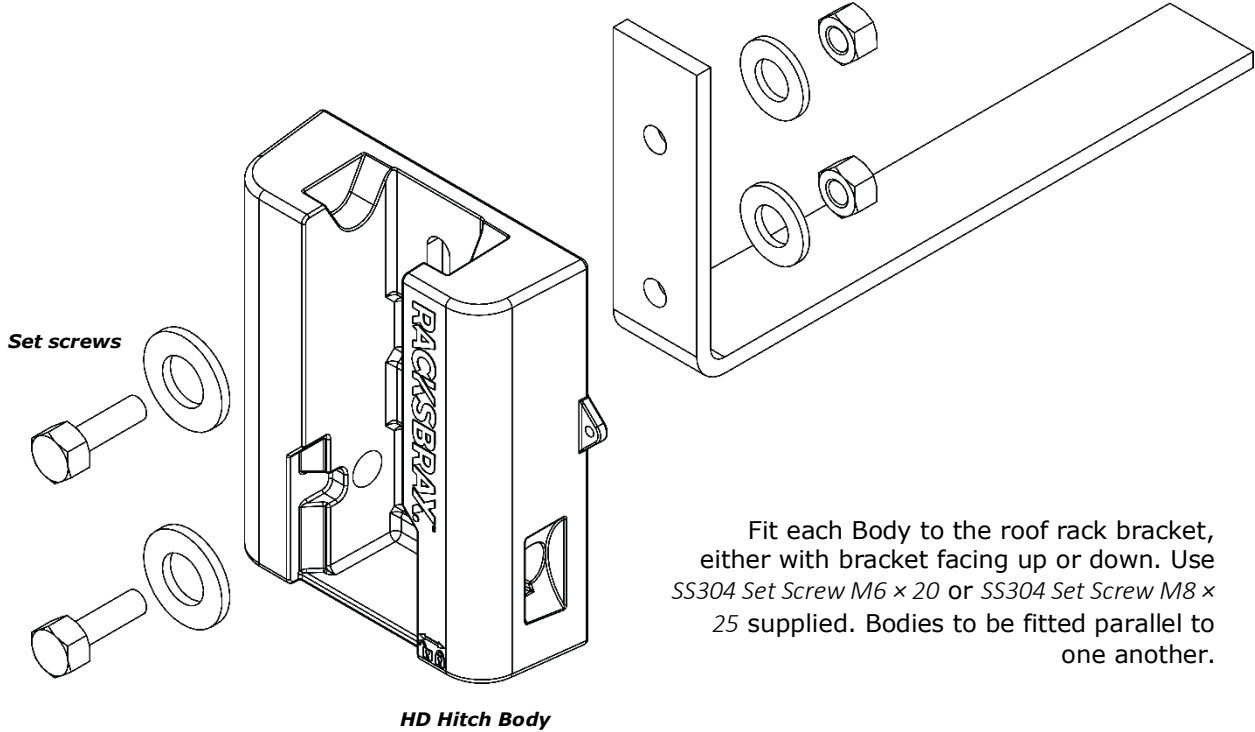
- 1) Bolt torque settings: M6 = 5N·m (4ft·lb), M8 = 6N·m (5 ft·lb).
- 2) Do not use nylon-insert lock nuts more than once.
- 3) To reduce the chance of threads seizing use an **anti-seize compound** and tighten thread **slowly to avoid heat buildup in the threads.**
- 4) **DO NOT USE DRILL TO TORQUE BOLTS.**
- 5) **Maximum load** per single Hitch is 20kg/44lb. **A lesser roof rack capacity may reduce this.**
- 6) Loads must not exceed the rated load capacity of the Hitch (20kg/44lb), the bracket (20kg/44lb), the roof rack nor the vehicle manufacturers' specifications.
- 7) Awnings must be restrained in windy conditions, drained during rain and cleared during snow.

# RACKSBRAX.

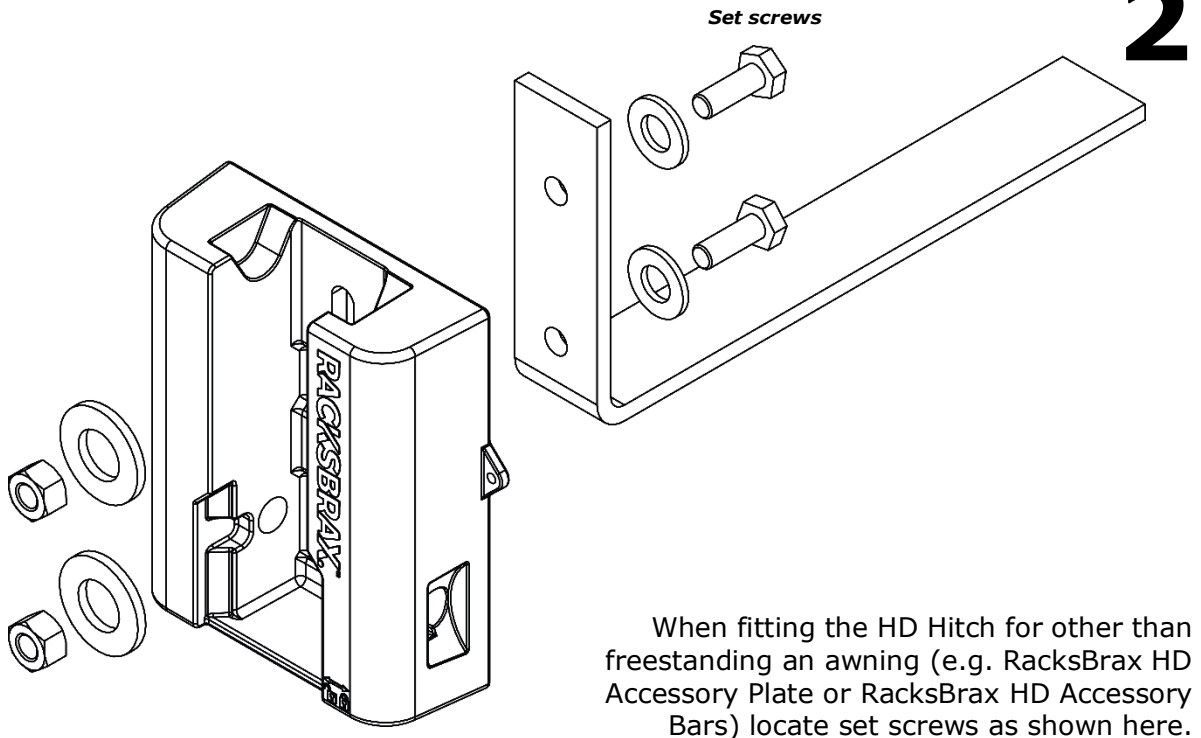
Set screw configuration if a pull-out awning is to be used freestanding (see Pages 12 to 13). Or when used with a RacksBrax HD Awning Adaptor Plate.

# 1

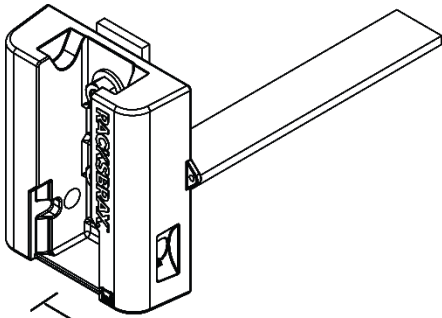
Generic bracket shown.



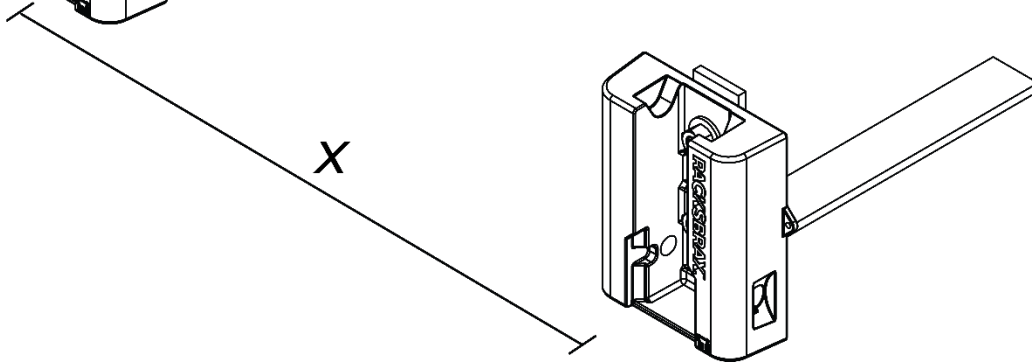
# 2



# 3

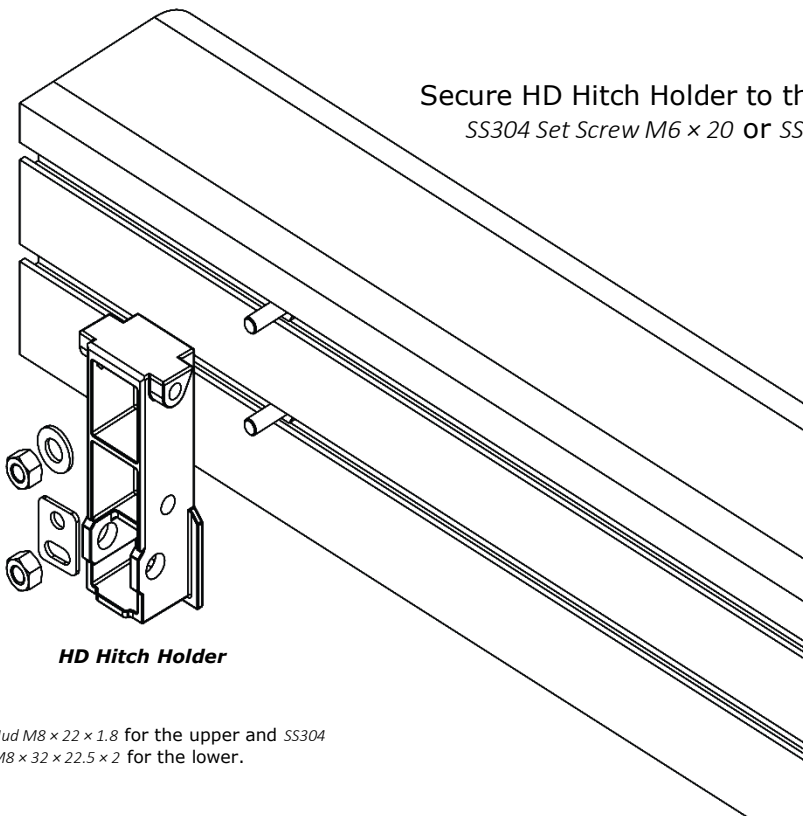


Bodies located vertically and parallel to each other.



# 4

Secure HD Hitch Holder to the accessory using  
SS304 Set Screw M6 x 20 or SS304 Set Screw M8 x 20  
supplied.



**NOTE:**

**HD Hitch Holder**

**For M8 use**

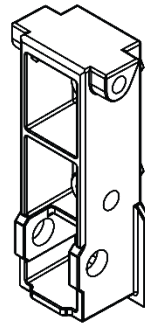
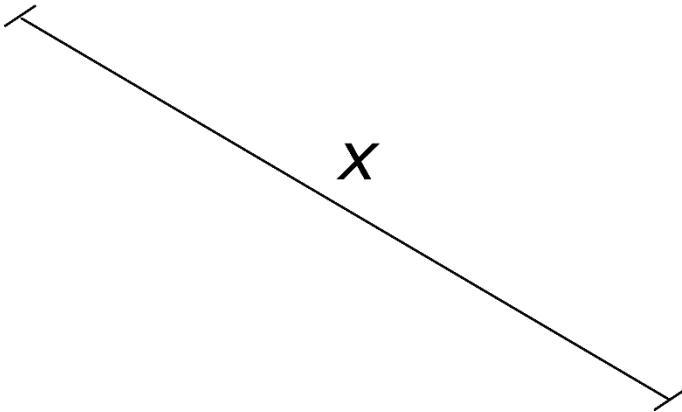
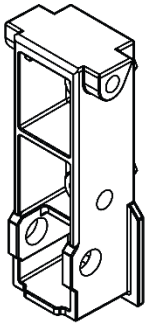
SS304 Washer Mud M8 x 22 x 1.8 for the upper and SS304 Holder Washer M8 x 32 x 22.5 x 2 for the lower.

**For M6 use**

SS304 Washer Mud M6 x 18 x 1.4 for upper and lower, in addition to the supplied M8 washers (in above).

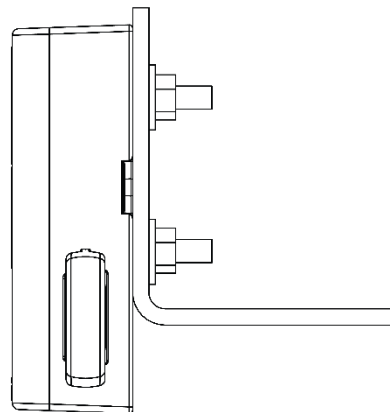
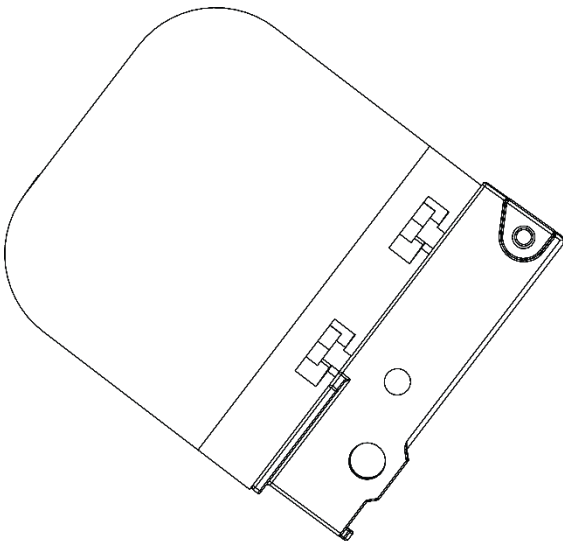
# 5

Ensure the HD Hitch Holders are the same distance apart (**x**) as the HD Bodies.



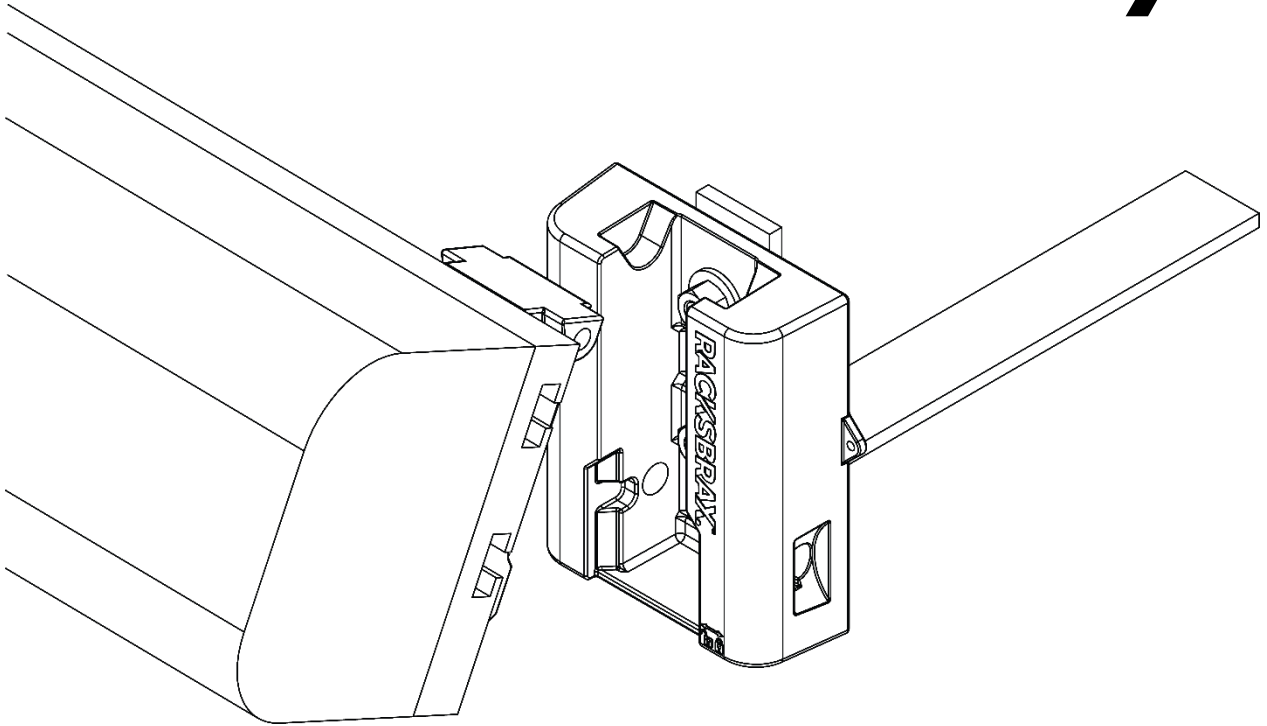
# 6

Load accessory onto HD Hitch Body.



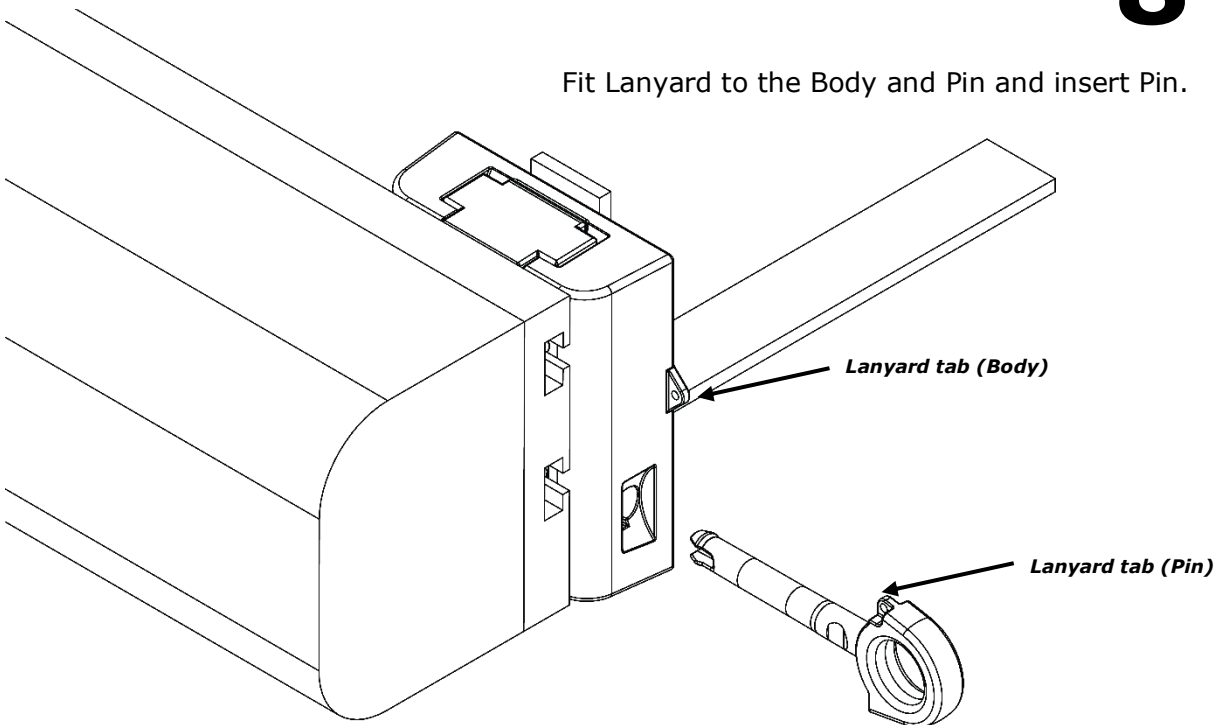


**7**



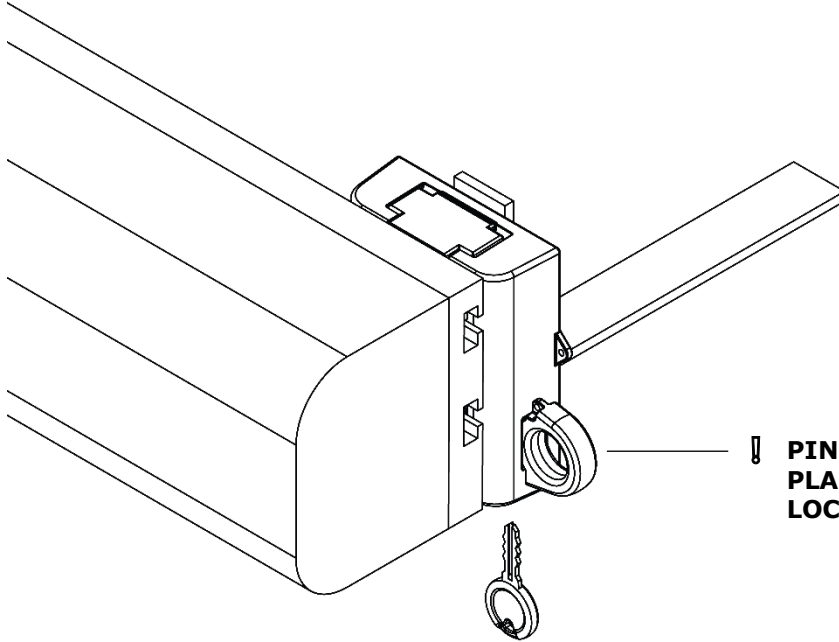
**8**

Fit Lanyard to the Body and Pin and insert Pin.



# 9

Lock in-built barrel lock to secure accessory.

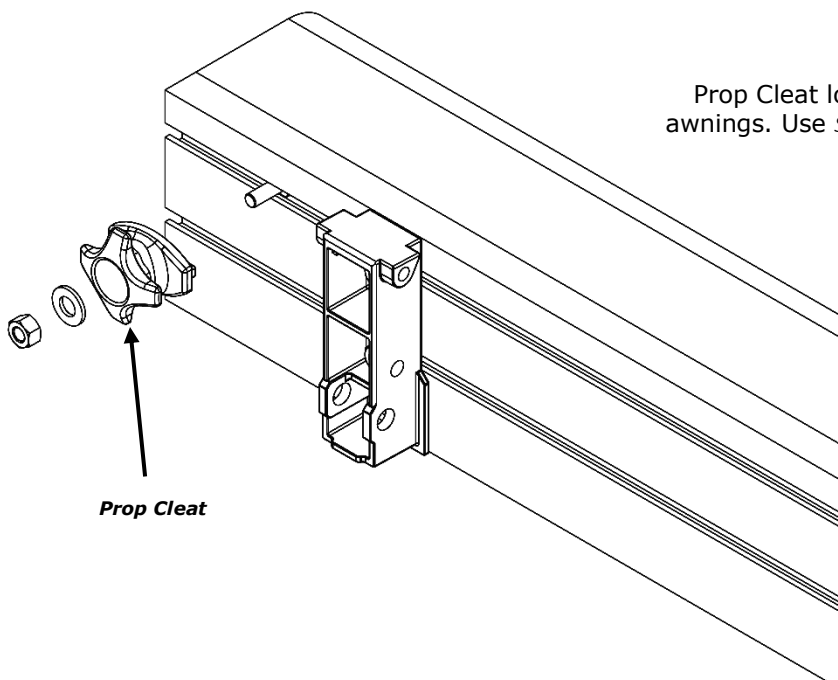


*Note, if Key does not turn, the Pin is not fully inserted.*

# 10

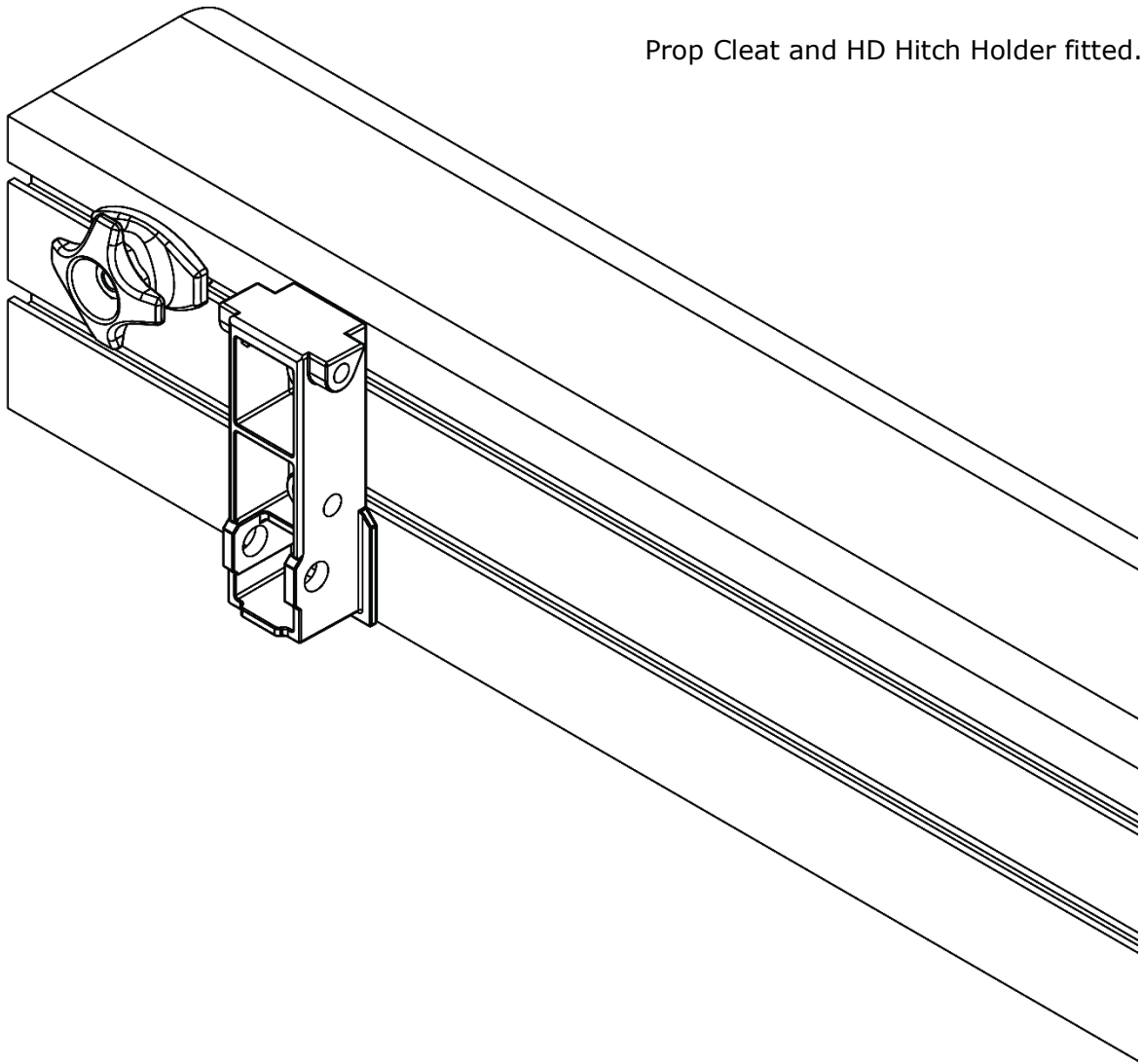
Prop Cleat location for use with pull-out awnings. Use SS304 Set Screw M6 x 25 or SS304 Set Screw M8 x 25 supplied.

*See pages 11 to 12 for freestanding instructions.*



# 11

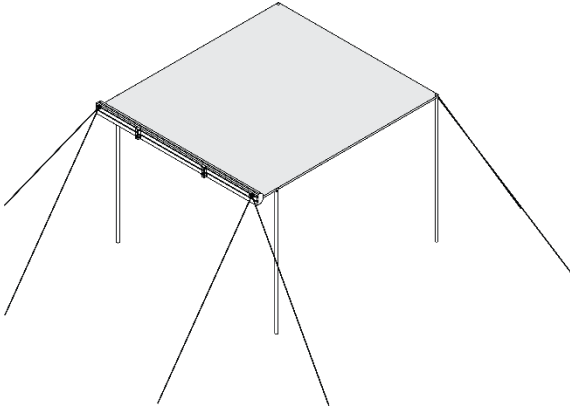
Prop Cleat and HD Hitch Holder fitted.



# RACKSBRAX.

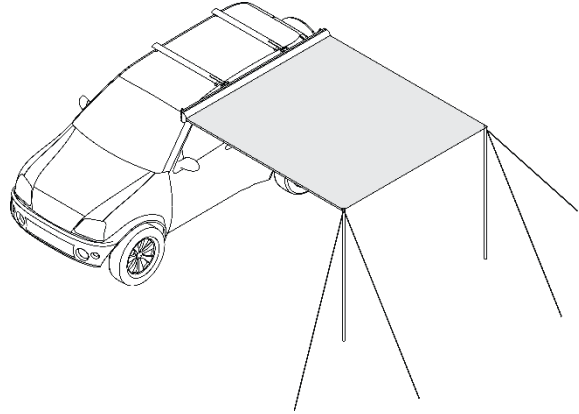
## HOW TO SET A PULL-OUT AWNING FREESTANDING USING RACKSBRAX HD HITCH

**1**



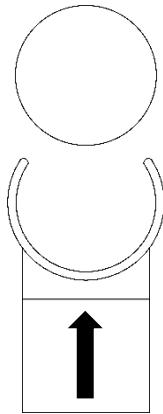
Freestanding pull-out awning.

**2**



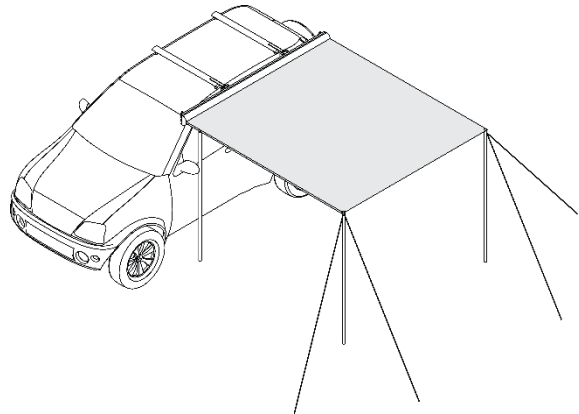
Set up your pull-out awning as normal but with a **pair** of guy ropes on each of the outer 2 corners.

**3**



Attach C-clip poles to each horizontal "rafter" bar on the awning, then slide them up towards the vehicle adjusting them for length.

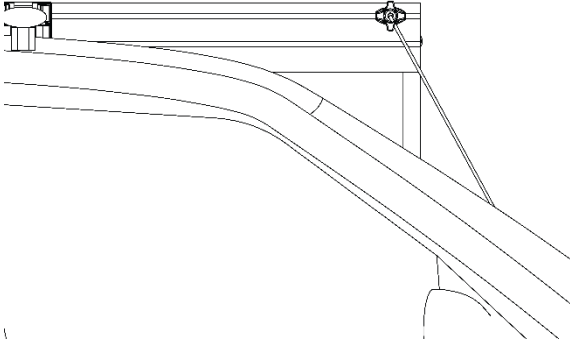
**4**



Place each C-clip tent pole close to your vehicle. Keep them approx. 100mm (4") away from the vehicle (*C-clip poles not included*).

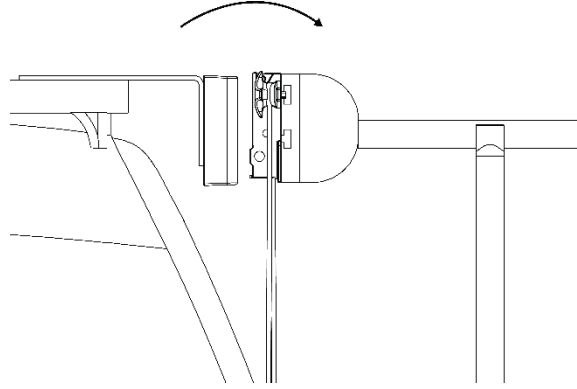
# RACKSBRAX.

## 5



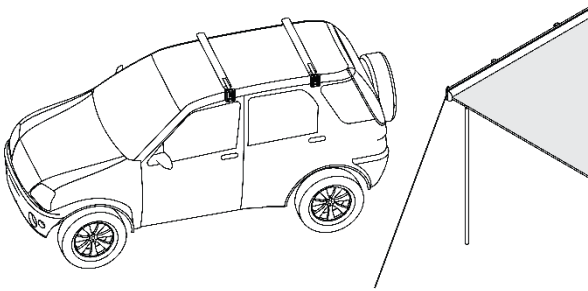
Attach a **pair** of guy ropes to the Prop Cleats at each end of the awning and peg one leg of each **pair** of guys ropes parallel to the vehicle (one to the front and one to the back of the vehicle).

## 6



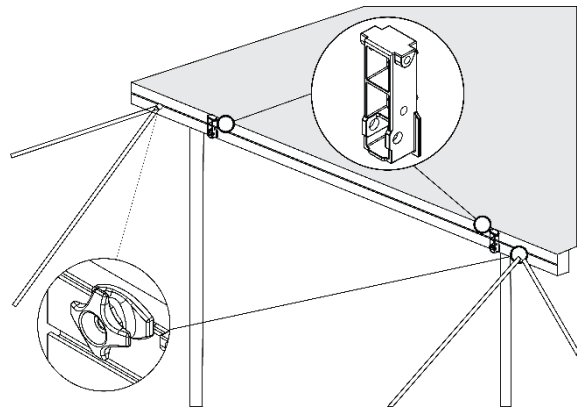
Assistant to un-hitch awning from vehicle and rest weight on C-clip tent poles.

## 7



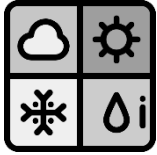
Assistant to hold awning while driver moves the vehicle. Assistant to ensure the 2 pairs of outer guy ropes remain taut. **Assistant to keep feet well clear of vehicle tyres!**

## 8



Driver returns to awning and pegs remaining 2 guy ropes, one from each Prop Cleat.

**VOILA! YOUR AWNING IS NOW FREESTANDING WITH RACKSBRAX' HD HITCH!**



## **AWNINGS: WIND, RAIN AND SNOW**

The HD Hitch mounting system is designed with a high load capacity relative to the weight of even the heaviest awnings. However, in the deployed state, loads from high winds, pooled rainwater, and accumulated snow can exceed the HD Hitch, bracket, roof rack and/or vehicle roof rack capacity.

Always follow the awning manufacturer's recommendation with respect to awning use under conditions of wind, rain and snow. In addition, in windy conditions poles and guy ropes must always be installed, and that during rain and snow events, steps are taken to prevent excessive loading on the awning. For example, do not leave un-guyed awnings unattended if weather conditions may deteriorate.

Due to the high number of variables associated with wind direction, awning size and arrangement, local terrain, and other factors, it is not possible to provide meaningful wind speed recommendations.

### **THE 3 ENEMIES OF AWNINGS ARE: WIND, RAIN AND SNOW.**

**WIND:** The wind loads on the awning mounting system relate to wind direction, wind strength, local terrain and awning area. In gusty conditions in particular, the loads on the awning are unpredictable, and may vary from upwards to downwards in a short space of time. It is recommended that in all but calm conditions, regardless of the awning manufacturer's instructions, that awnings should be restrained with poles and guy ropes to prevent damage to the mounting system.

**RAIN:** Most wing awnings come with a means to deflect runoff water from rain to avoid stretching the awning material (and causing other damage) when water collects in pools. Typically, this is accomplished with guy ropes set midway between the rafters and with poles at the rafters. To prevent potential overloading of the mounting system during heavy rain, drainage measures are recommended.

**SNOW:** The awning mounting system may be overloaded under snow loads. In snow conditions where heavy snow loads may develop, snow needs to be periodically cleared or the awning needs to be stowed.

**Failure to adhere to any of these recommendations may void the RacksBrax Warranty.**

## **HD HITCH SERIES 33 MODELS**

### **ADDITIONAL ASSEMBLY AND MOUNTING INSTRUCTIONS FOR**

### **AWNINGS AND SHOWER TENTS WITH SPINE TRACK MOUNT POINT SPACINGS AT 33MM CENTRES AND M8 FASTENERS TO ATTACH THESE ACCESSORIES**

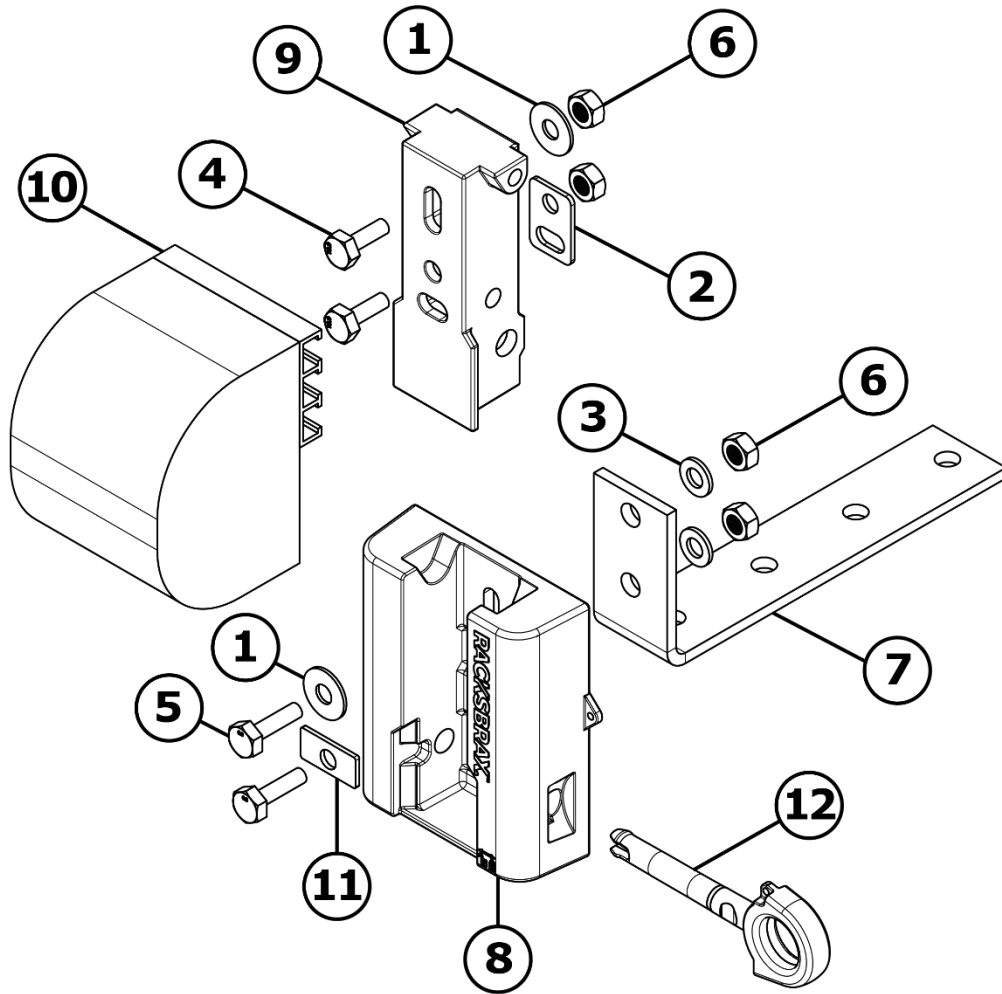
*Note: Awnings and shower tents at this **33mm spacing AND M6 fasteners** are rare and will require the purchase of additional fasteners not included in these packs (4 × SS304 Set Screw M6 × 20, 4 × SS304 Nut M6 (Nylon Insert Lock Nut and 6 × SS304 Washer Flat M8 × 17 × 1.2 **per Hitch/bracket location** - typically 2 locations).*

*The M6 washers (SS304 Washer Mud M6 × 18 × 1.4) are to be used over the top of the SS304 M8 washers provided (SS304 Washer Mud M8 × 22 × 1.8, SS304 Holder Washer M8 × 32 × 22.5 × 2, SS304 Washer M8 × 30 × 14.5 × 2) (items 1, 2 and 11) where they are located on the **inside** of the HD Hitch Holder and HD Hitch Body indicated in the diagram over page.*

These instructions cover the placement of an alternate washer (Item 11 in diagram over page) to be added to the inside faces of the HD Hitch Body. These washers replace one M8 washer per Body indicated in RB-INS-001 – Instructions for HD Hitch Range.

The Set Screws that fasten the HD Hitch Body to the awning brackets fit through the **top** of the HD Body's vertical slot and the **central** M8 hole 33mm below. Fit HD Body and HD Holder washers to each Hitch set as indicated in the diagram over.

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PART	QUANTITY				
	8202	8203	8204	8205	
<b>1</b>	SS304 Washer Mud M8 × 22 × 1.8	4	4+2*	4+2*	4+5*
<b>2</b>	SS304 Holder Washer M8 × 32 × 22.5 × 2	2	2+1*	2+2*	2+4*
<b>3</b>	SS304 Washer Flat M8 × 17 × 1.2	14	14+6*	14+4*	14+12*
<b>4</b>	SS304 Set Screw M8 × 20	4	4+2*	4+4*	4+8*
<b>5</b>	SS304 Set Screw M8 × 25	4	4+2*	4*	4+2*
<b>6</b>	SS304 Nut M8 (Nylon Insert Lock Nut)	10	10+4*	10+4*	10+10*
<b>7</b>	Bracket with M8 Hole centres at 33mm **	2	3	2	3
<b>8</b>	RacksBrax HD Hitch Body	2	3	4	5
<b>9</b>	RacksBrax HD Hitch Holder	2	3	4	6
<b>10</b>	HD HITCH SERIES 33 Awning **	-	-	-	-
<b>11</b>	SS304 Washer M8 × 30 × 14.5 × 2	2	2+1*	2*	2+1*
<b>12</b>	RacksBrax HD Hitch Pin	2	3	2	3
<b>Not Shown</b>	RacksBrax HD Cover	2	3	2	3
<b>Not shown</b>	SS304 Set Screw M8 × 25 (for Prop Cleats)	2	2	2*	2*

\* total combined fastener in 2 packs    \*\* Awning components purchased separately



**RACKSBRAX.**

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FAST OFF!**



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visit ***racksbrax.com***