

## VW Crafter '17- & MANTGE '17- L2H2

No.	Tools Required
1	10mm Socket/Spanner
2	Set of Metric Allen Keys
3	Electric Drill
4	BS4 Center Drill - <i>supplied</i>
5	4.1mm Drill Bit - <i>supplied</i>
6	6.5mm Drill Bit
7	11.1mm Drill Bit - <i>supplied</i>
8	Step Drill or 25mm Hole Cutter
9	Countersink Bit
10	Pozi-Drive Bit
11	Deburring Tool or Small Round File
12	Rivet Gun
13	Rivnut Setting Tool (to set M8 rivnuts)
14	Tape Measure
15	Set Square
16	G-Clamp
17	Marker Pen
18	Stanley Knife
19	Adhesive (e.g. CT1)
20	Anti-Corrosion Paint (e.g. Hammerite)
21	Small Paint Brush

### CRUX Base Kit

Before getting started, please look through the instructions to understand the full process of fitting the CRUX Base Kit.

Check that all parts and fasteners have been supplied and that you have all the tools required to install the kit.

#### Please Note

Where safety glasses when drilling into the van bodywork (especially when drilling into the roof ribs).

Apply anti-corrosion paint using a small paint brush to any exposed metalwork after drilling holes.



# INSTRUCTIONS CRUX-D – Base Kit

## VW Crafter '17- & MANTGE '17- L2H2

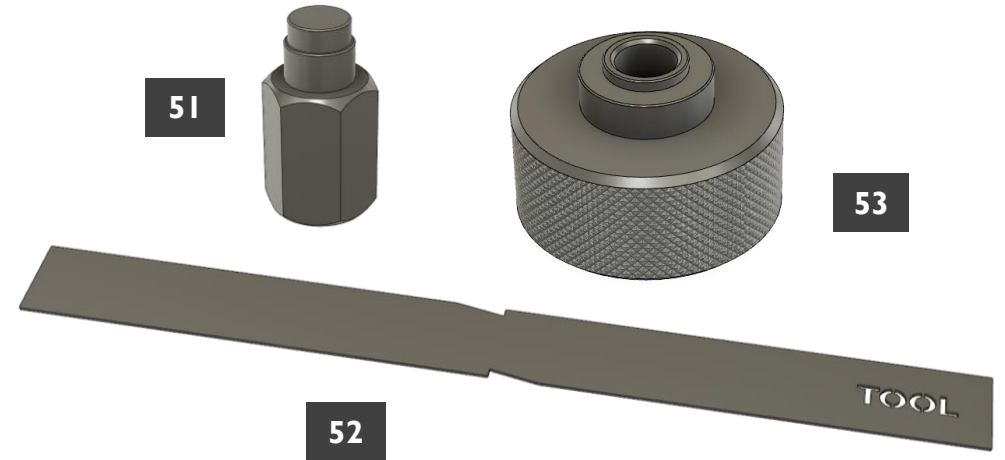
No.	Part No.	Description	Quantity	Notes
1	SMW-0188	Z7 - Side	1	
2	SMW-0190	Z9 - Side	1	
3	SMW-0191	Z10 - Side	1	
4	SMW-0192	Z11 - Side	1	
5	SMW-0193	Z12 - Side	1	
6	SMW-0194	Y5 - Side	4	
7	SMW-0196	Y7 - Side	2	
8	SMW-0202	C8 - Corner	1	
9	SMW-0203	C9 - Corner	1	
10	SMW-0204	C10 - Corner	1	
11	SMW-0205	C11 - Corner	1	
12	SMW-0067	X3 - Roof	1	
13	SMW-0215	X5 - Roof	3	
14	SMW-0216	X6 - Roof	1	
15	SMW-0206	V7 - Roof	2	
16	SMW-0207	V8 - Roof	2	
17	SMW-0208	V9 - Roof	2	
18	SMW-0209	V10 - Roof	2	
19	SMW-0069	Roof Support Bracket	9	
20	SMW-0076	Roof Rivnut Plate	1	
21	SMW-0217	F7 - Floor Center	1	
22	SMW-0218	F6 - Floor Front	2	
23	SMW-0219	F8 - Floor Rear	2	

No.	Part No.	Description	Quantity	Notes
24	T-0041	Floor Track Front	2	1879mm Long
25	T-0042	Floor Track Rear	2	1456mm Long
26	T-0027	Roof Track Front	2	2987mm Long
27	T-0028	Roof Track Rear	2	109mm Long
28	T-0007	Roof Track Center	1	514mm Long
29	T-0032	Side Track Z7 & Z10	2	4x4/RWD - 1772mm Long FWD - 1872mm Long
30	T-0034	Side Track Z9 & Z12	2	4x4/RWD - 1745mm Long FWD - 1875mm Long
31	T-0035	Side Track Z11	1	4x4/RWD - 1768mm Long FWD - 1868mm Long
32	T-0036	Side Track Y5	4	1377mm Long
33	T-0038	Side Track Y7	2	1453mm Long
34	CSK Bolt	M8 x 20mm	139	
35	CSK Bolt	M8 x 25mm	36	
36	Flanged Hex Head Bolt	M6 x 12mm	56	
37	Button Head Bolt	M6 x 70mm	6	
38	Button Head Bolt	M6 x 12mm	2	
39	Nyloc Nut	M6	8	
40	Washer	M6	24	
41	Rivnut	M8 Flanged	97	
42	Rivnut	M8 Flanged (Blind)	30	
43	Rivet	4 x 8mm	166	
44	Rivet	4 x 12mm	6	
45	Self Tapping Pan Screw	4.2 x 13mm	40	
46	Hex Nut Extender	M6 x 18mm	2	
47	T-0018	Corner Track Rear	2	2946mm Long
48	T-0019	Corner Track Front RH	1	1153mm Long
49	T-0020	Corner Track Left LH	1	875mm Long
50	CSK Bolt	M8 x 20mm	44	

\* Items 47 – 50 only supplied if wall to roof corner track ordered.

**VW Crafter '17- & MANTGE '17- L2H2**

No.	Part No.	Description	Quantity	Notes
51	TOOL-0002	Hex Locating Tool	1	
52	TOOL-0005	Floor Spacing Tool	1	
53	TOOL-0004	Drilling Tool	1	
54	TOOL-0006	Roof Layout Tool	1	
55	TOOL-0007	Floor Layout Tool	1	
56	TOOL-0008	Cargo Rail Tool		
57	3DP-0001	Rear Door Surround Infill - Round Large	1	
58	3DP-0002	Rear Door Surround Infill - Round Small	2	
59	3DP-0003	Rear Door Surround Infill - Rectangle Large	2	
60	3DP-0004	Rear Door Surround Infill - Rectangle Medium	6	
61	3DP-0005	Rear Door Surround Infill - Rectangle Small	2	
62	CSK Screws	4 x 20mm	5	



**What's in the box?**

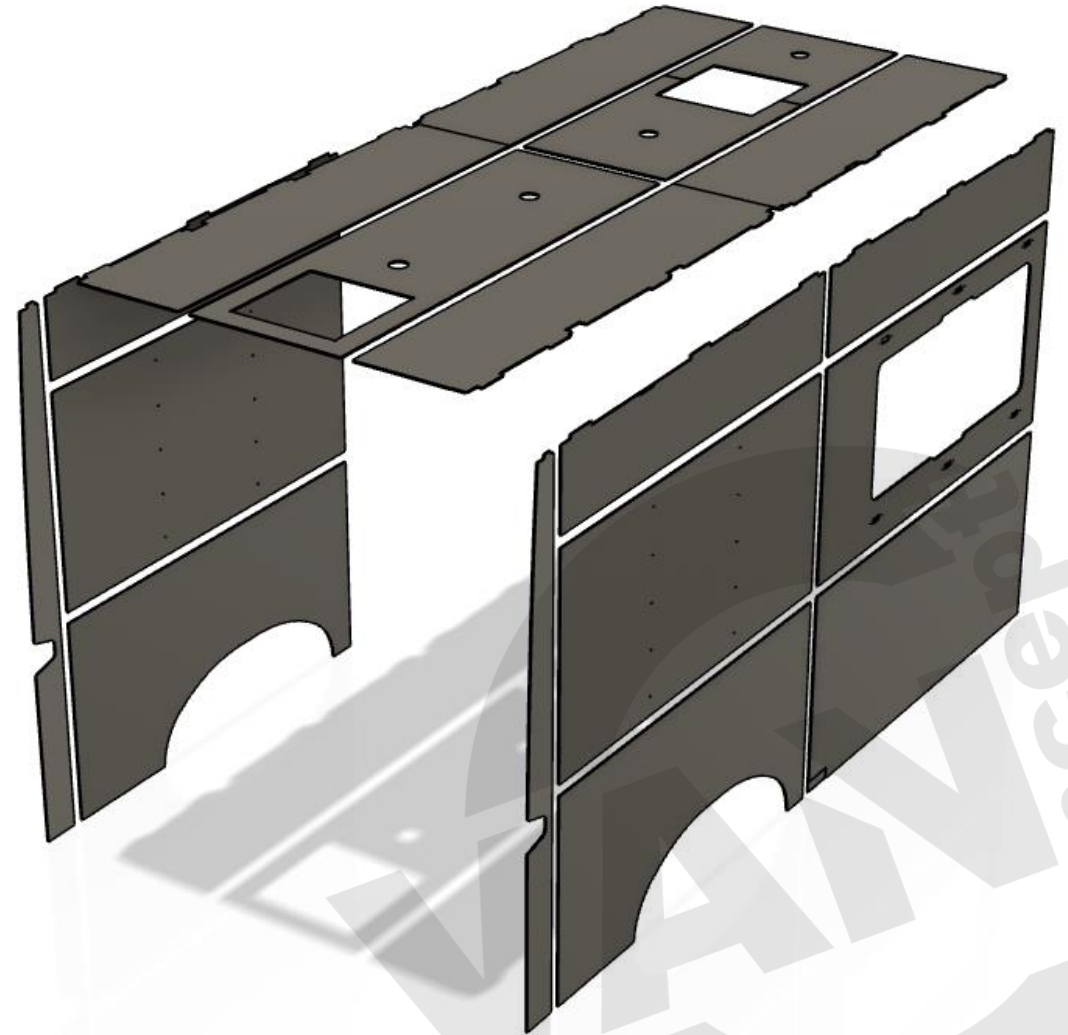
Where safety glasses when drilling into the van bodywork (especially when drilling into the roof ribs).

*Apply anti-corrosion paint using a small paint brush to any exposed metalwork after drilling holes.*

## VW Crafter '17- & MANTGE '17- L2H2

No.	Part No.	Description	Quantity	Notes
63	P-0079	P79 - Sliding Door Lower Top Panel	1	
64	P-0080	P80 - Sliding Door Lower Bottom Panel	1	
65	P-0081	P81 - Rear Door Upper Panel	2	
66	P-0083	P83 - Rear Door Lower LH Panel	1	
67	P-0084	P84 - Rear Door Lower RH Panel	1	
68	P-0086	P86 - Side Window Panel (Blind)	1	
69	P-0087	P87 - Front Lower Panel	1	
70	P-0088	P88 - Front Upper Panel	1	
71	P-0095	P95 - Rear Lower Panel	2	
72	P-0096	P96 - Rear Center Panel	2	
73	P-0097	P97 - Rear Upper Panel	2	
74	P-0104	P104 - Rear End Panel	2	
75	P-0105	P105 - Roof Center Front A Panel	1	
76	P-0106	P106 - Roof Center Front B Panel	1	
77	P-0107	P107 - Roof Center Rear Panel	1	
78	P-0109	P109 - Roof Side Front Panel	1	
79	P-0110	P110 - Roof Side Door Front Panel	1	
80	P-0111	P111 - Roof Side Rear Panel	2	
81	E-0026	Plastic Angle "Skirting" – Front Side	1	1630mm long
82	E-0027	Plastic Angle "Skirting" – Front Sliding Door	1	125mm long
83	E-0028	Plastic Angle "Skirting" - Rear	2	550mm long
84	Fir Tree Clips	Fir Tree Clips	59	
85	Velcro	Velcro Strips 25mm x 50mm	6	
86	CSK Screws	4 x 20mm	2	
87	Pozi Flange Head Screws	4 x 13mm – Black	9	

- Panels for sliding door window & rear door window supplied as individual kits with instructions CRUX-0031 & CRUX-0032



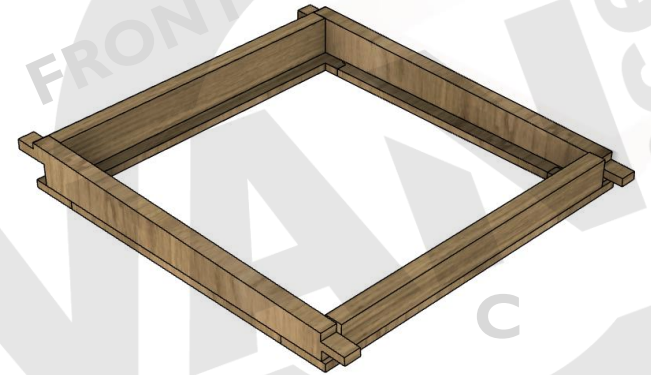
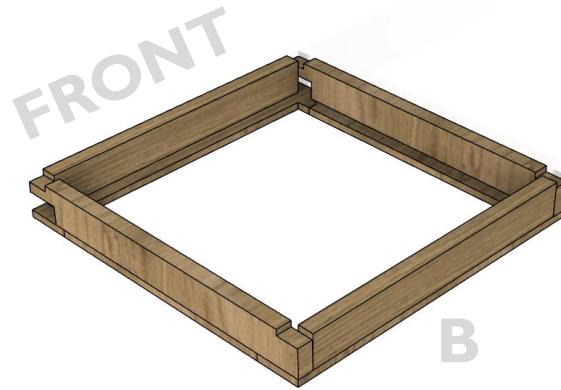
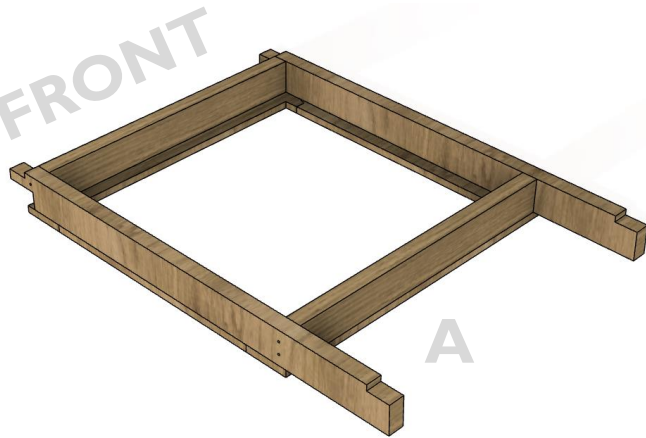


**INSTRUCTIONS**  
**CRUX-D – Base Kit**

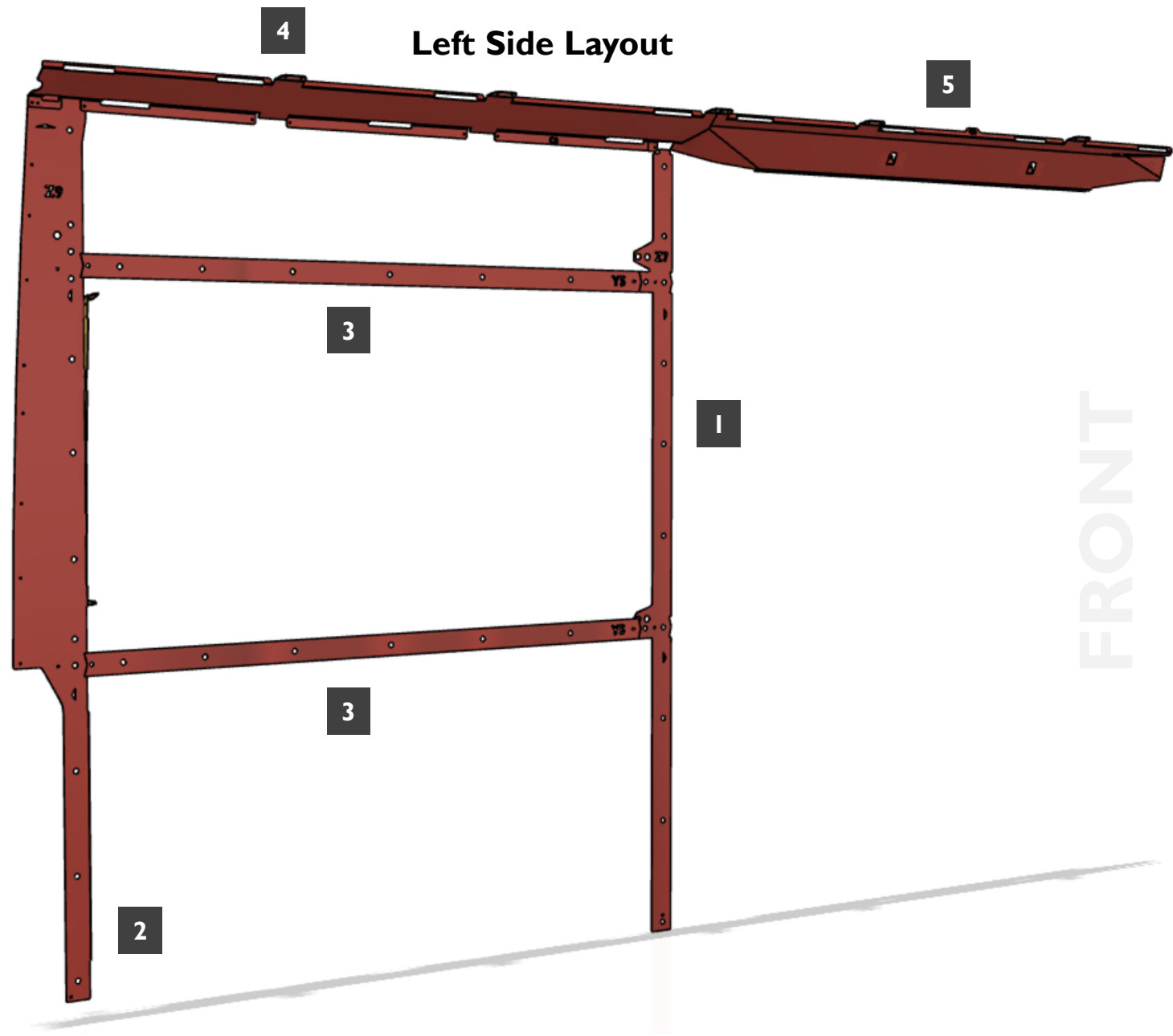
**VW Crafter '17- & MANTGE '17- L2H2**

No.	Part No.	Description	Quantity	Notes
88	A	Vent Surround Front	1	
89	B	Vent Surround Rear (Forward)	1	
90	C	Vent Surround Rear (Rearward)	1	

- Surrounds supplied depending on quantity/position – to fit 400x400 roof vents
- Arch box kits supplied as individual kits with instructions CRUX-0040



# INSTRUCTIONS CRUX-D – Base Kit



Left Side Layout

No.	Part No.	Description	Quantity
1	SMW-0188	Z7 - Side	1
2	SMW-0190	Z9 - Side	1
3	SMW-0194	Y5 - Side	2
4	SMW-0202	C8 - Corner	1
5	SMW-0203	C9 - Corner	1
6	Rivnut	M8 Flanged	31
7	Rivet	4 x 8mm	41
8	Rivet	4 x 12mm	2
9	CSK Bolt	M8 x 20mm	36
10	Button Head Bolt	M6 x 12mm	2
11	Hex Nut Extender	M6 x 18mm	2

FRONT

A

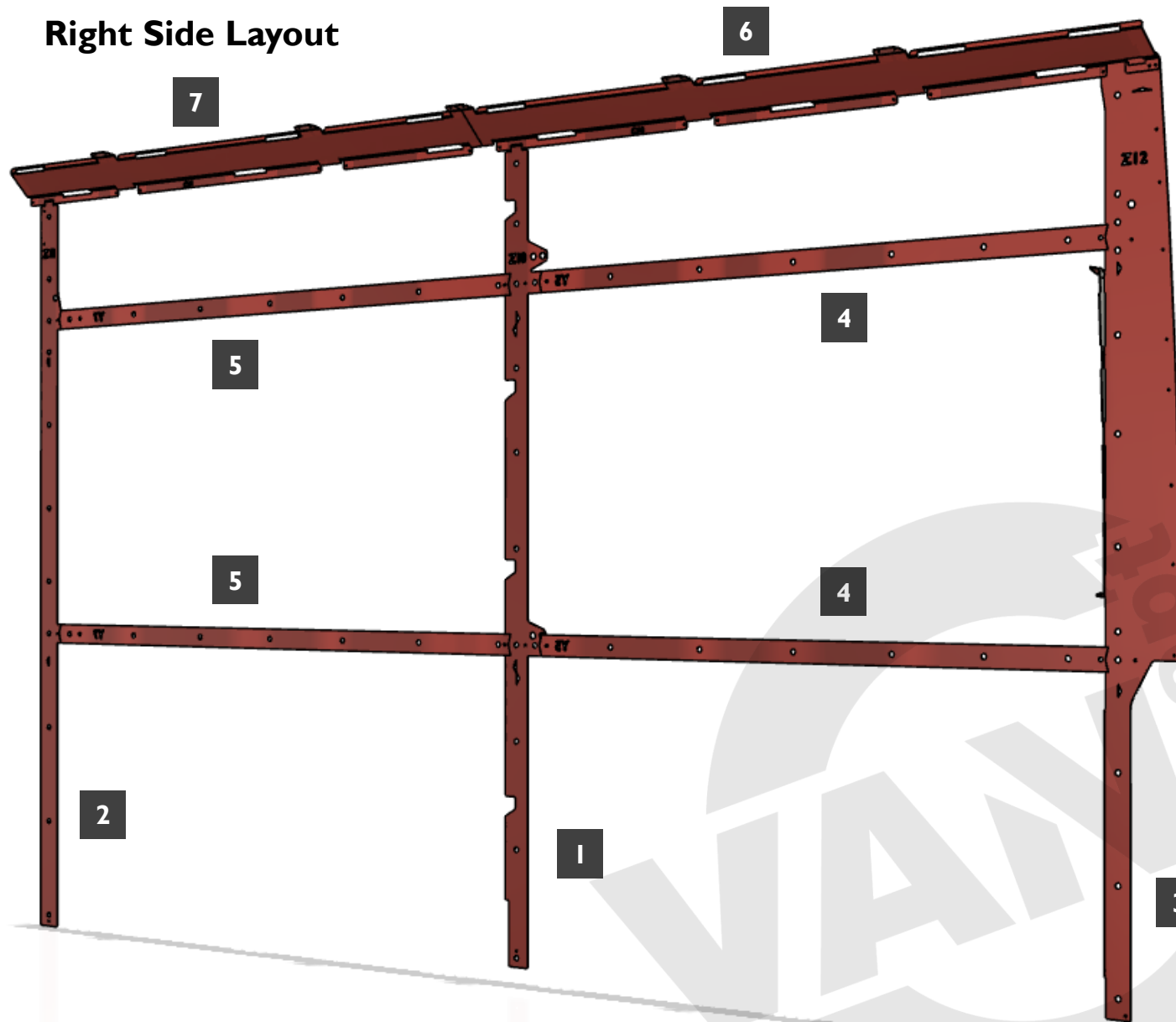


# INSTRUCTIONS CRUX-D – Base Kit

# B

Right Side Layout

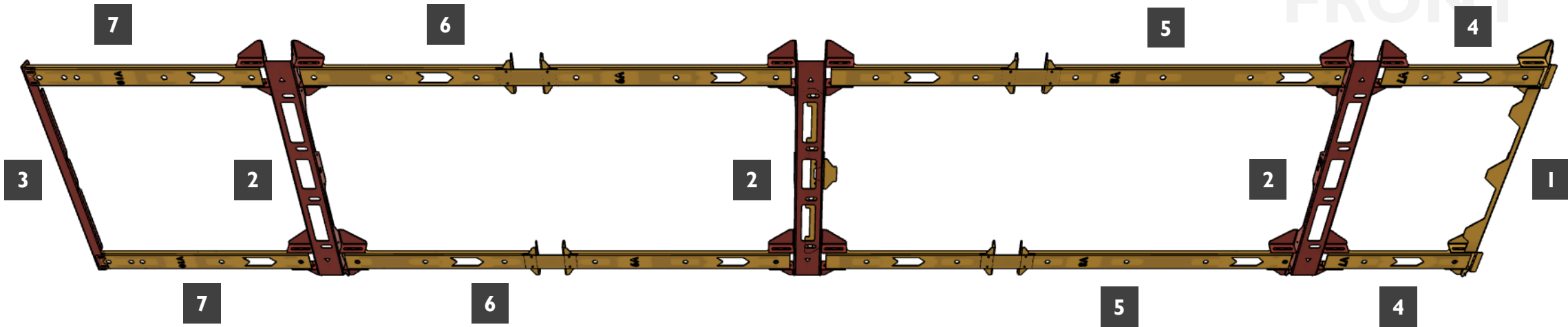
FRONT



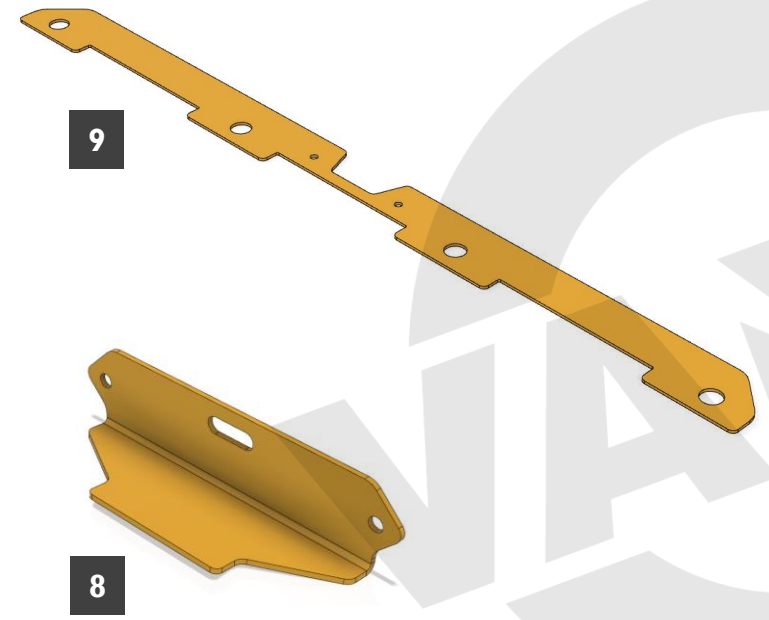
No.	Part No.	Description	Quantity
1	SMW-0191	Z10 - Side	1
2	SMW-0192	Z11 - Side	1
3	SMW-0193	Z12 - Side	1
4	SMW-0194	Y5 - Side	2
5	SMW-0196	Y7 - Side	2
6	SMW-0204	C10 - Corner	1
7	SMW-0205	C11 - Corner	1
8	Rivnut	M8 Flanged	56
9	Rivet	4 x 8mm	51
10	Rivet	4 x 12mm	2
11	CSK Bolt	M8 x 20mm	61

# INSTRUCTIONS CRUX-D – Base Kit

## Roof Layout

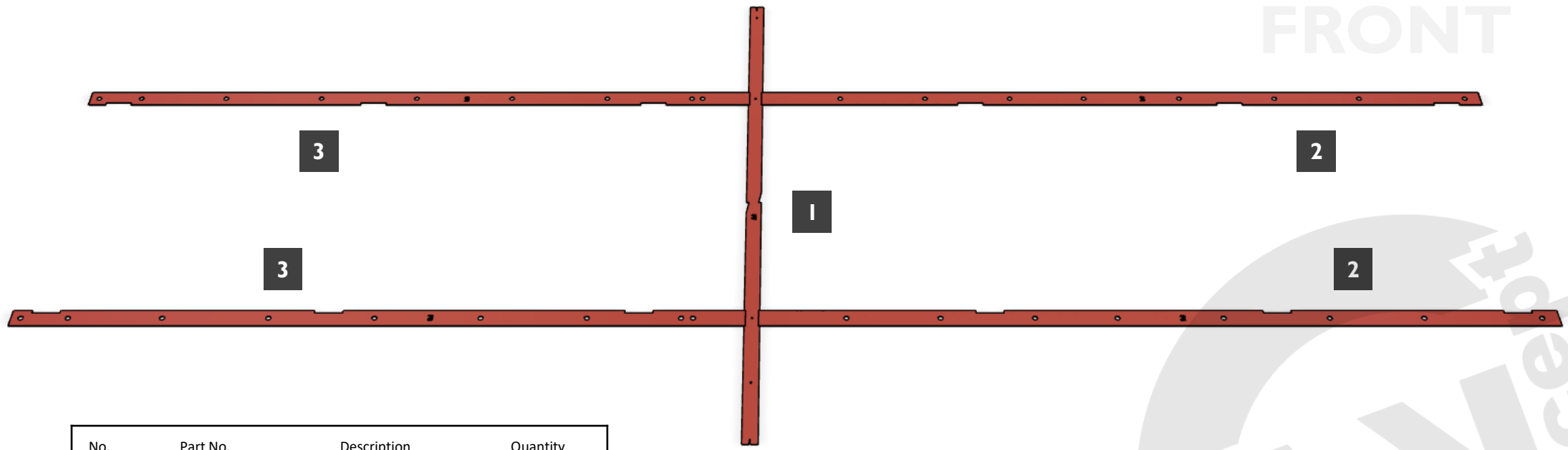


No.	Part No.	Description	Quantity
1	SMW-0067	X3 - Roof	1
2	SMW-0215	X5 - Roof	3
3	SMW-0216	X6 - Roof	1
4	SMW-0206	V7 - Roof	2
5	SMW-0207	V8 - Roof	2
6	SMW-0208	V9 - Roof	2
7	SMW-0209	V10 - Roof	2
8	SMW-0069	Roof Support Bracket	9
9	SMW-0076	Roof Rivnut Plate	1
10	Rivnut	M8 Flanged	4
11	CSK Bolt	M8 x 20mm	42
12	Rivet	4 x 8mm	70
13	Rivet	4 x 12mm	2
14	Flanged Hex Head Bolt	M6 x 12mm	56
15	Button Head Bolt	M6 x 70mm	6
16	Nyloc Nut	M6	6
17	Washer	M6	12

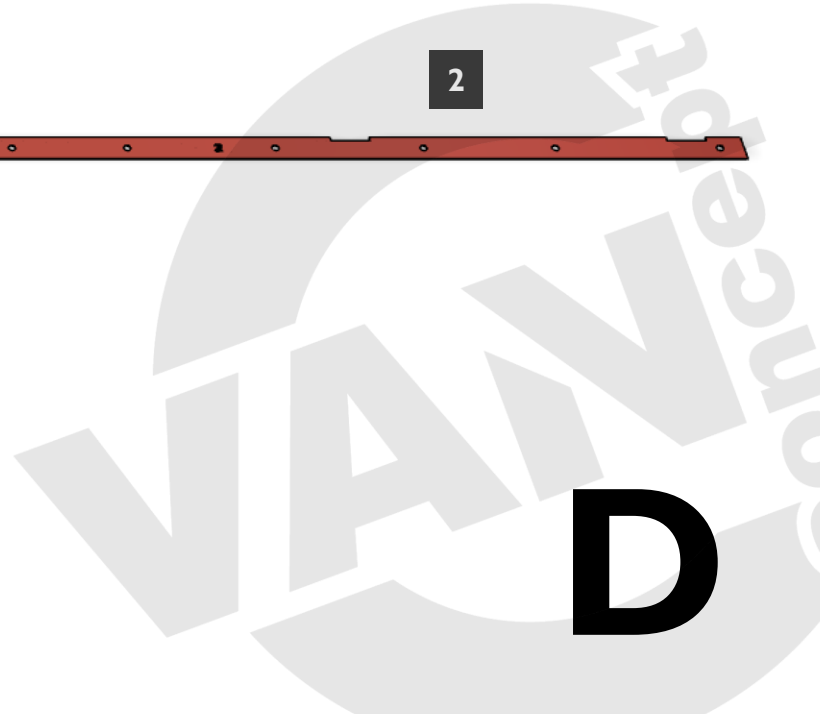


**INSTRUCTIONS**  
**CRUX-D – Base Kit**

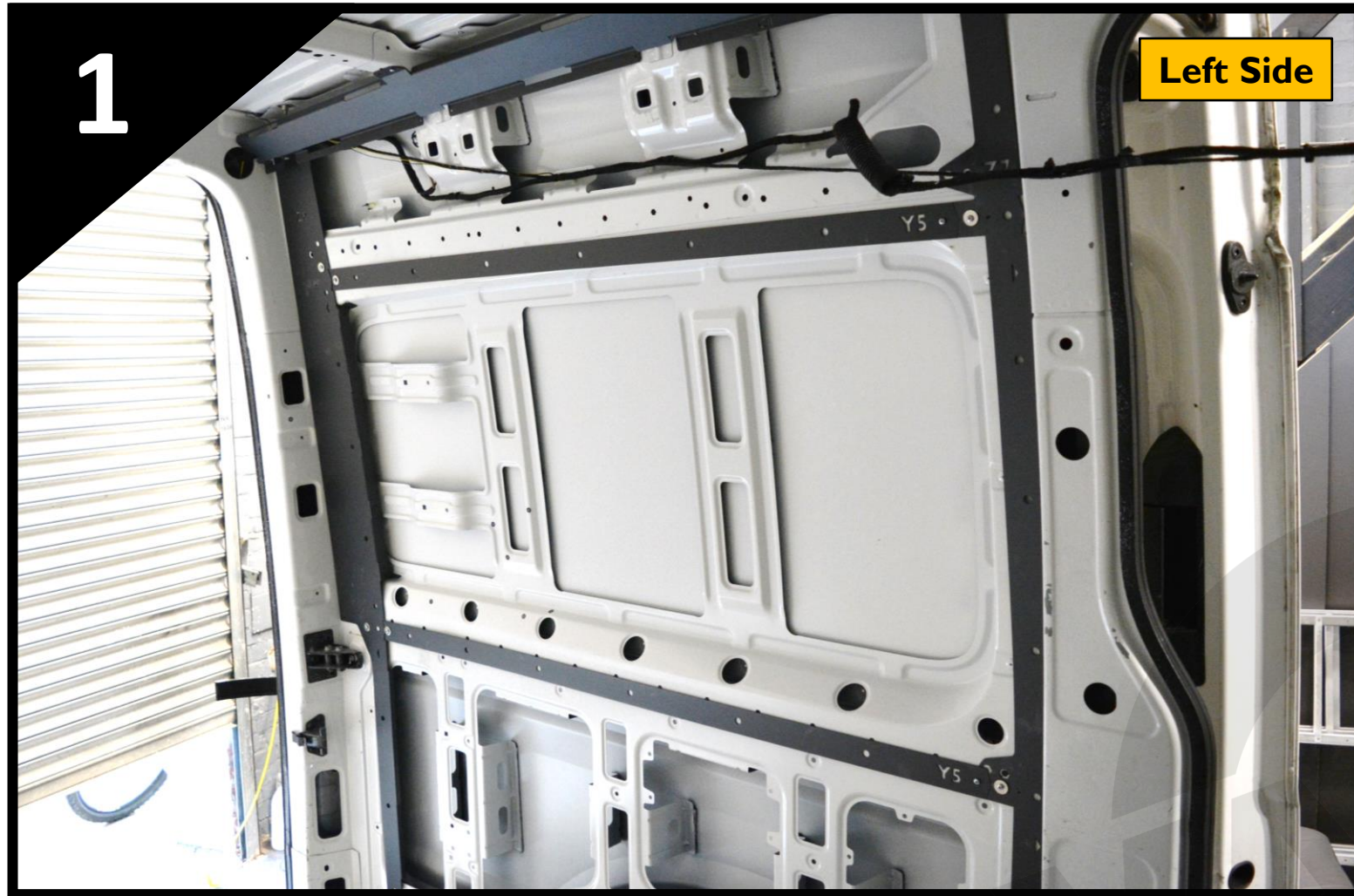
**Floor Layout**



No.	Part No.	Description	Quantity
1	SMW-0217	F7 - Floor Center	1
2	SMW-0218	F6- Floor Front	2
3	SMW-0219	F8 - Floor Rear	2
4	CSK Bolt	M8 x 25mm	36
5	Rivnut	M8 Flanged (Blind)	30
6	Rivnut	M8 Flanged	6
7	Rivet	4 x 8mm	4



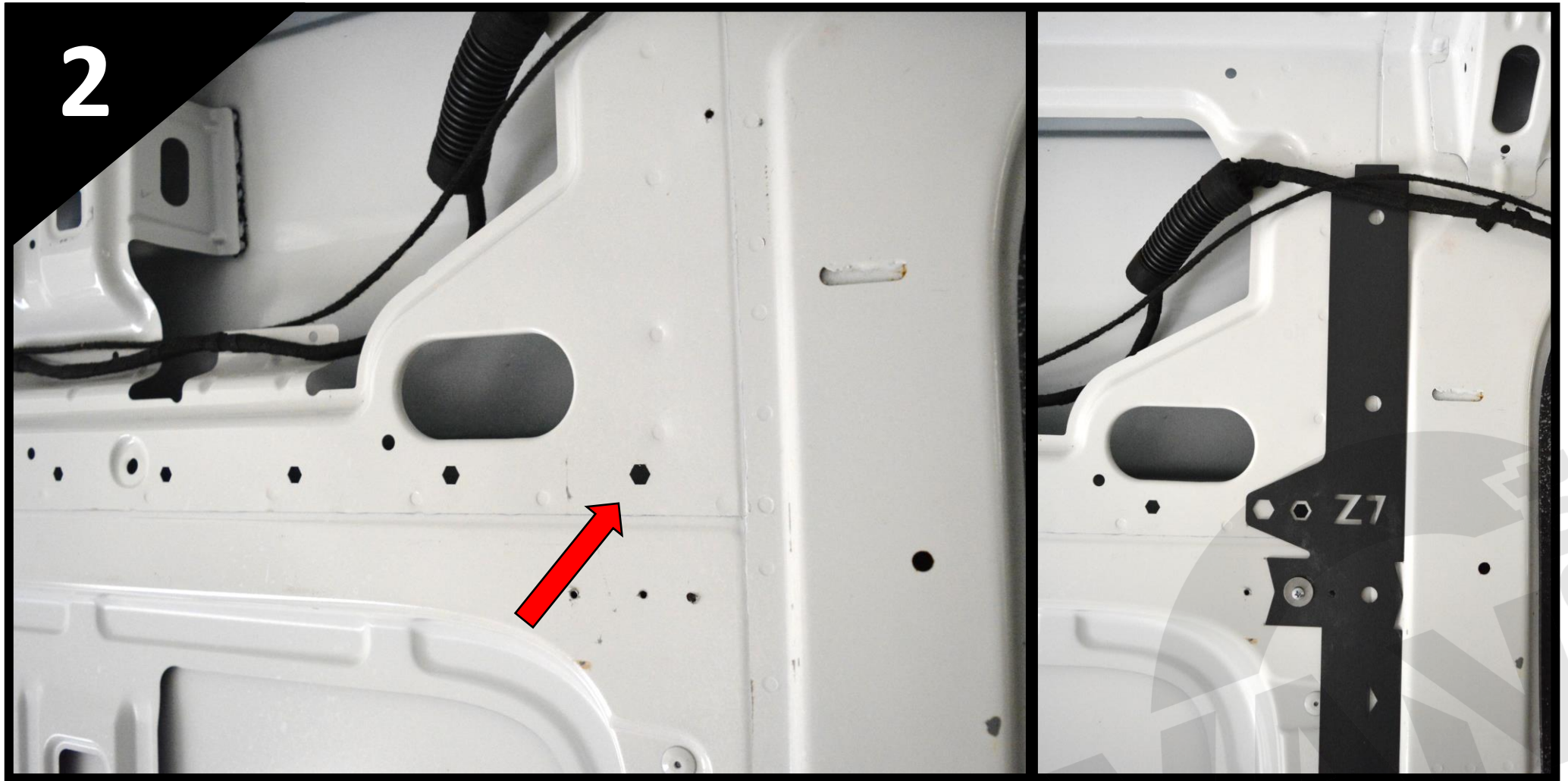
# INSTRUCTIONS CRUX-D – Base Kit



- The fully laid out left side is shown above and the parts required and layout are documented on page A.
  - “Z” parts are vertical, “Y” parts are horizontal, with directional arrows pointing forwards.



# INSTRUCTIONS CRUX-D – Base Kit



- Take Z7 and item **58** – Hex Locating Tool. Position the Hex Locating Tool into the hexagonal hole on Z7 and locate the round boss into the hex hole on the pillar behind the sliding door, as shown by the red arrow. *This is essentially the datum and must remain aligned, the other hex hole alignments are as a guide.*
  - With Z7 roughly vertical, fit a self-drilling pan head screw to hold in place through one of the larger holes as shown.

# INSTRUCTIONS

## CRUX-D – Base Kit

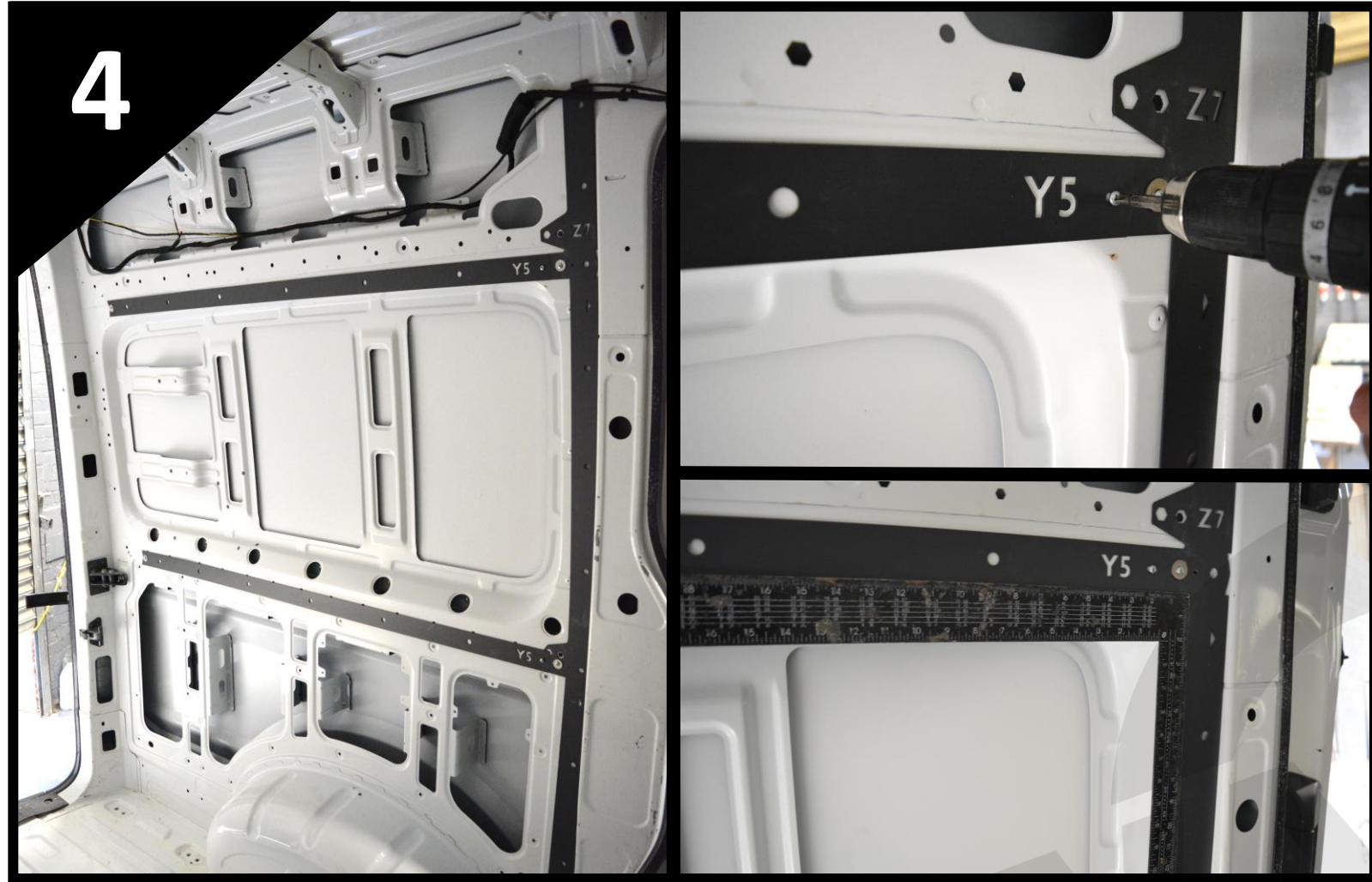


- In the middle of Z7, the hex hole should align with hexagonal hole in the bodywork. *(Use the Hex Locating Tool if required).*
- With this aligned, press Z7 against the curve of the bodywork and fit a self-drilling pan head screw to hold in place through the small hole as shown in the middle and bottom of Z7.
  - *Z7 should be vertical against the sliding door pillar.*



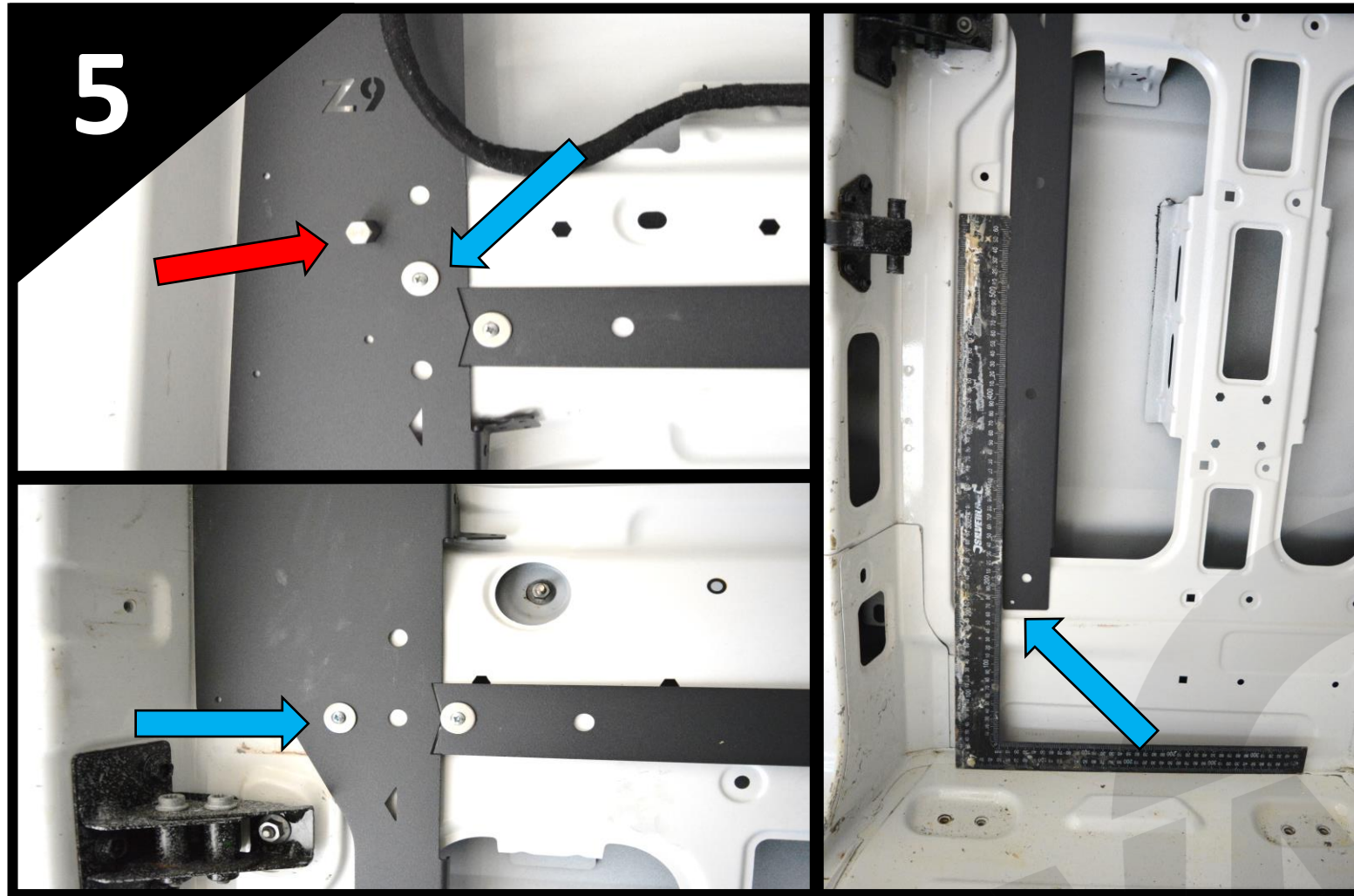
# INSTRUCTIONS

## CRUX-A – Base Kit



- Take 2x Y5's and fit as shown above, using 1x self-drilling pan head screw in each of the small slots at either end of the metalwork.
  - Use a large square against the back edge of Z7 to ensure Z7 and Y5 are perpendicular, before tightening the screws.

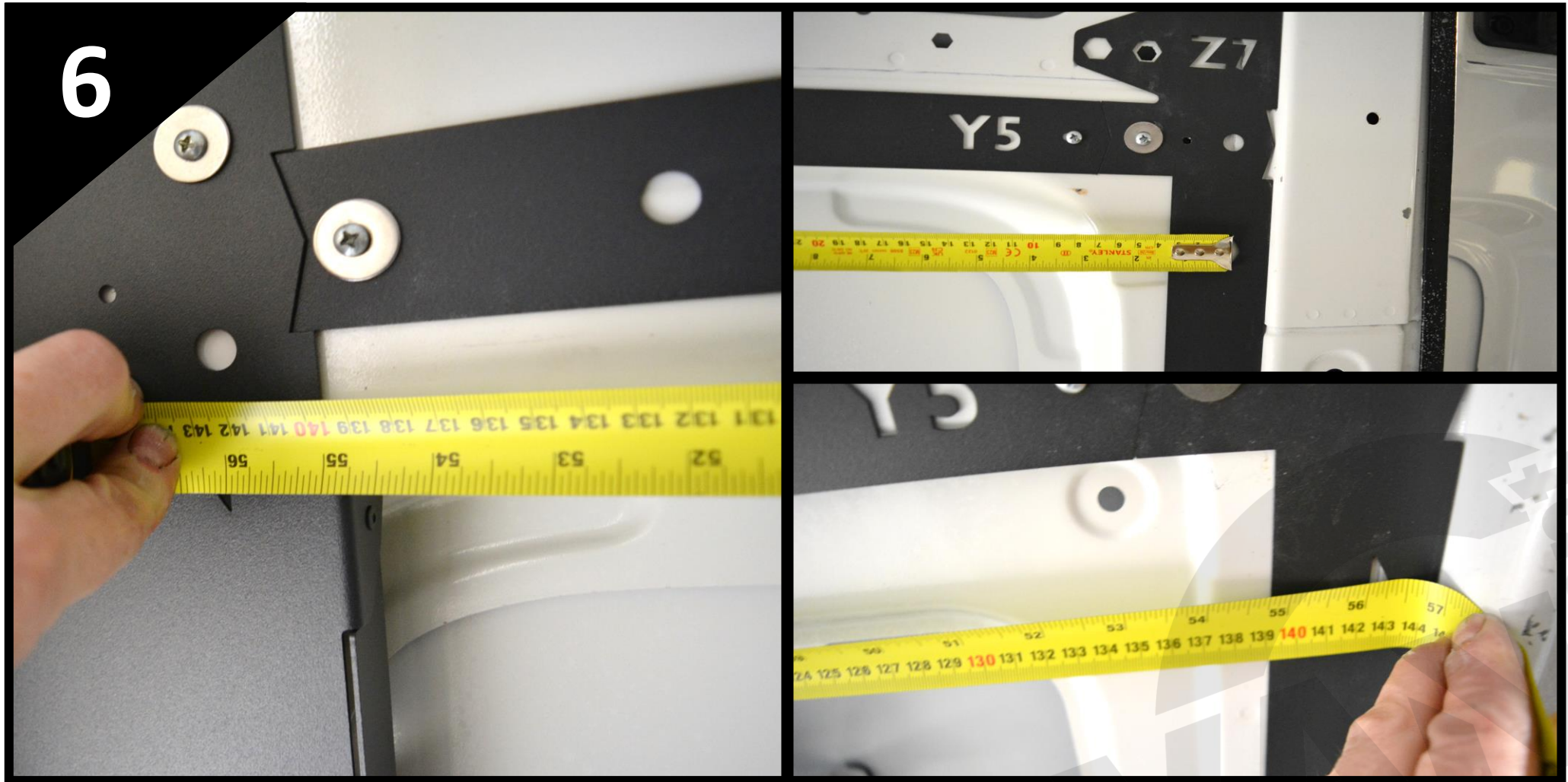
# INSTRUCTIONS CRUX-D – Base Kit



- Take Z9 and the Hex Locating Tool. Position the Hex Locating Tool into the hexagonal hole on Z9 and locate the round boss into the hex hole on the rear pillar, as shown by the red arrow.
  - With Z9 vertical, fit 3x self-drilling pan head screws to hold in place through the small holes as shown.
- Use a large square against the front edge of Z9 to ensure Z9 and Y5 are perpendicular, before tightening the screws (*The floor can also be used as a reference*).



# INSTRUCTIONS CRUX-D – Base Kit



- Use a tape measure to check the spacing between Z7 and Z9 is at 56 inches. It's important to get this as accurate as possible in order for the cargo rails to fit well.
  - With all 4 pieces located, double check all parts are perpendicular and the spacing is correct, adjusting where required.
- \*\*\*The hex hole alignment for the Z9 may need to be out slightly laterally to achieve the correct measurement, but not vertically. (All vans seem to be a little different) The correct distance is more important than the hex hole alignment, due to panel fitment \*\*\*

# INSTRUCTIONS CRUX-D – Base Kit



- Fit the two wall to roof sections, C8 and C9 as follows.
  - Fit the two Hex Nut Extenders onto the exposed M6 threads as arrowed and tighten.
- Offer into place C9 and use two M6 x 12mm button head bolts to loosely secure (*let it still slide for adjustment*) the C9 to the nut extenders.
- Ensure the wiring is tucked behind the profiles, and if carpet lining the door aperture, we suggest doing this before permanently fitting the wall to roof sections.
  - At the front, the metalwork will distort slightly to fit the profile of the van.

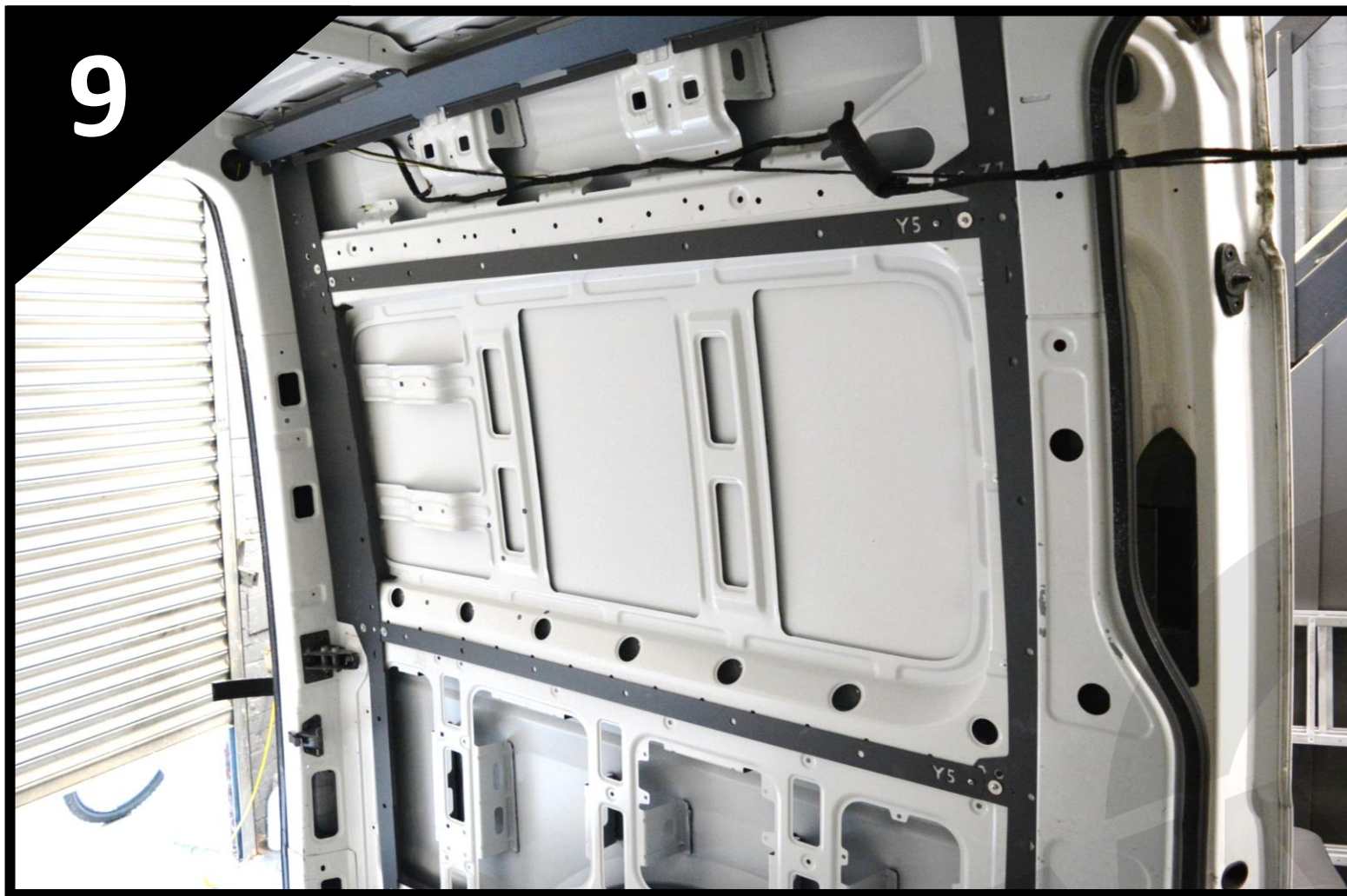


# INSTRUCTIONS CRUX-D – Base Kit



- Fit the rearward wall to roof section, C8, by positioning as above and using one self-drilling pan head screw to secure each tab to the roof ribs as shown, ensuring C8 and C9 butt up to each other. *(For correct alignment, the vertical edge of C8 and Z7 should be aligned, as shown by the yellow line).*
  - Ensure the angle flat face of the metalwork is flat against the angle on the roof ribs.
- There is a marker on Z9 which the bottom edge of C8 should align too, as shown by the green line. *(It needs to be close to this for panel fitment).*

# INSTRUCTIONS CRUX-D – Base Kit



- The fully laid out left side is shown above
- Whilst we are still at the layout stage and before drilling and fitting any rivnuts, we advise to layout the metalwork for the right side of the van.

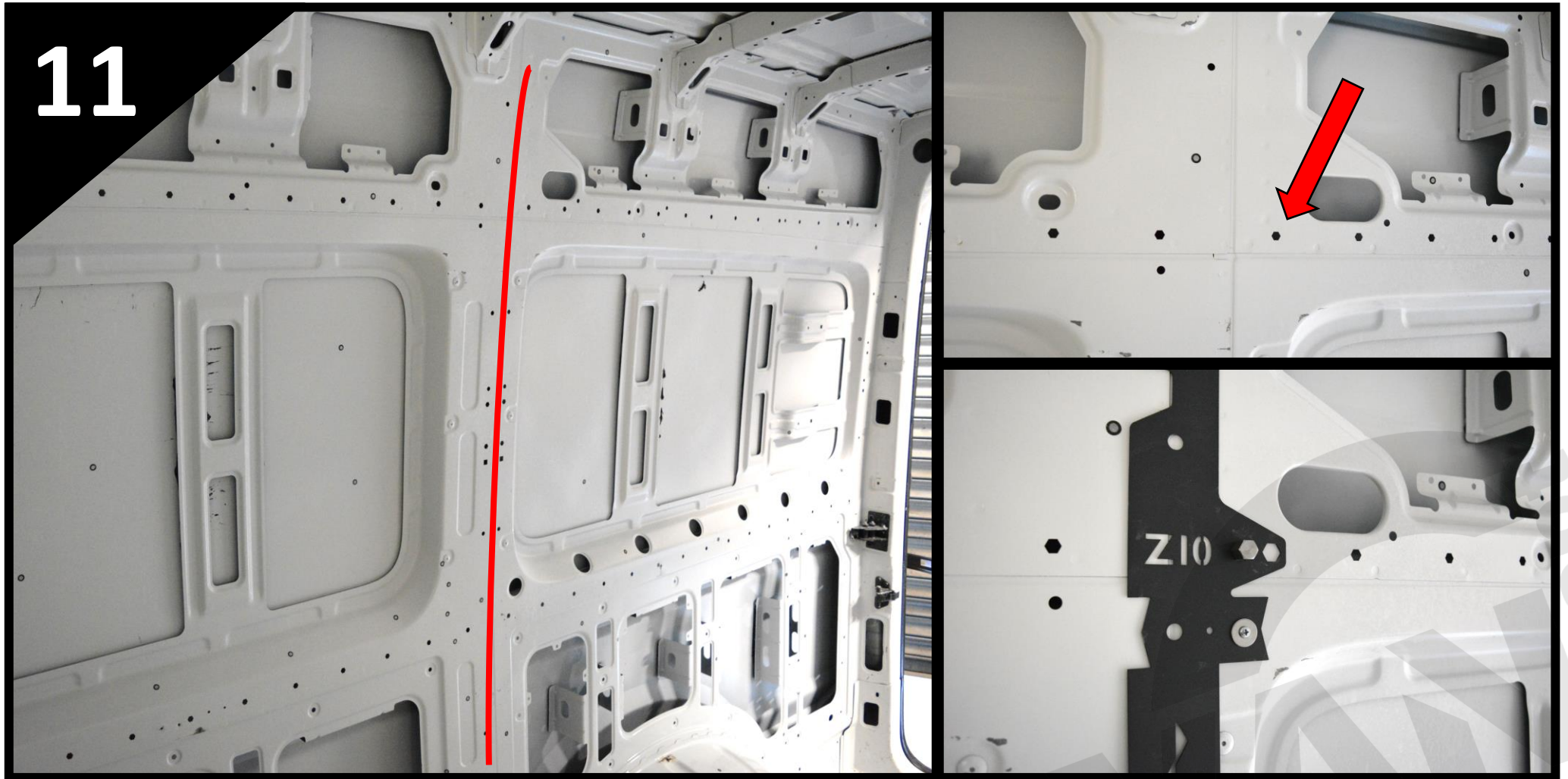


**10**



- The fully laid out right side is shown above and the parts required and layout are documented on page B.
- The right side is installed the same way as the left side. Read through the next 6 steps before starting. Any differences are noted in the following steps.

# INSTRUCTIONS CRUX-D – Base Kit



- The part Z10 is to be located opposite Z7, using the hex hole shown with the red arrow to locate the Hex Locating Tool.
  - As there is no sliding door/pillar, the vertical reference line to use is the join between the two bodywork panels.



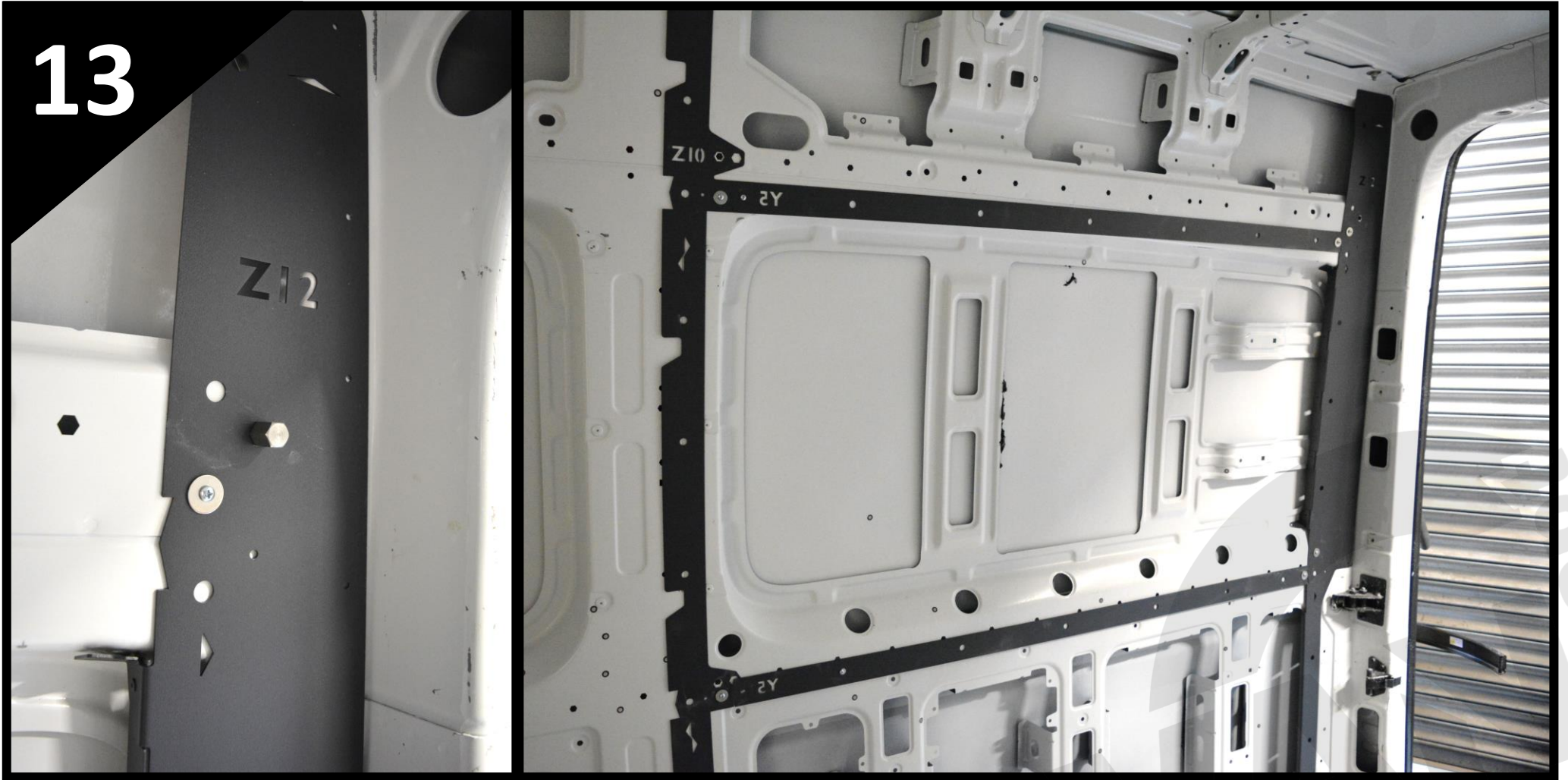
# INSTRUCTIONS

## CRUX-D – Base Kit



- The hex hole in the middle of Z10 (hexagonal hole in picture) should align with the hex hole in the van bodywork.
  - Ensure Z10 is vertical and fit some self-drilling pan head screws to hold in place.

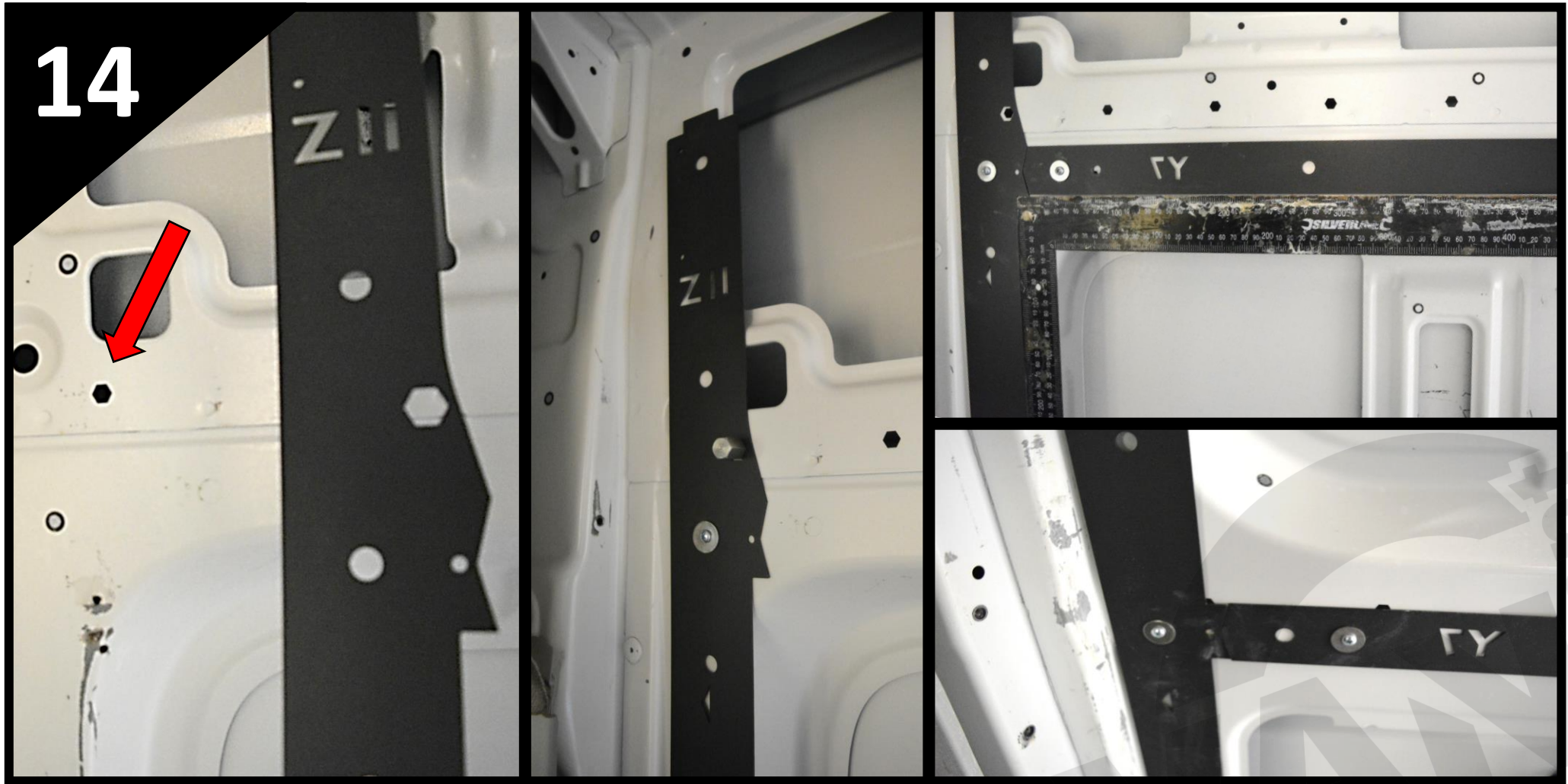
# INSTRUCTIONS CRUX-D – Base Kit



- The part Z12 is to be used at the rear and is a mirrored version of Z9 on the left side of the van.
- You'll note that the lettering on the Y5 & Y7 should appear backwards on the right side of the van (all arrows on the end of parts point should point forward).

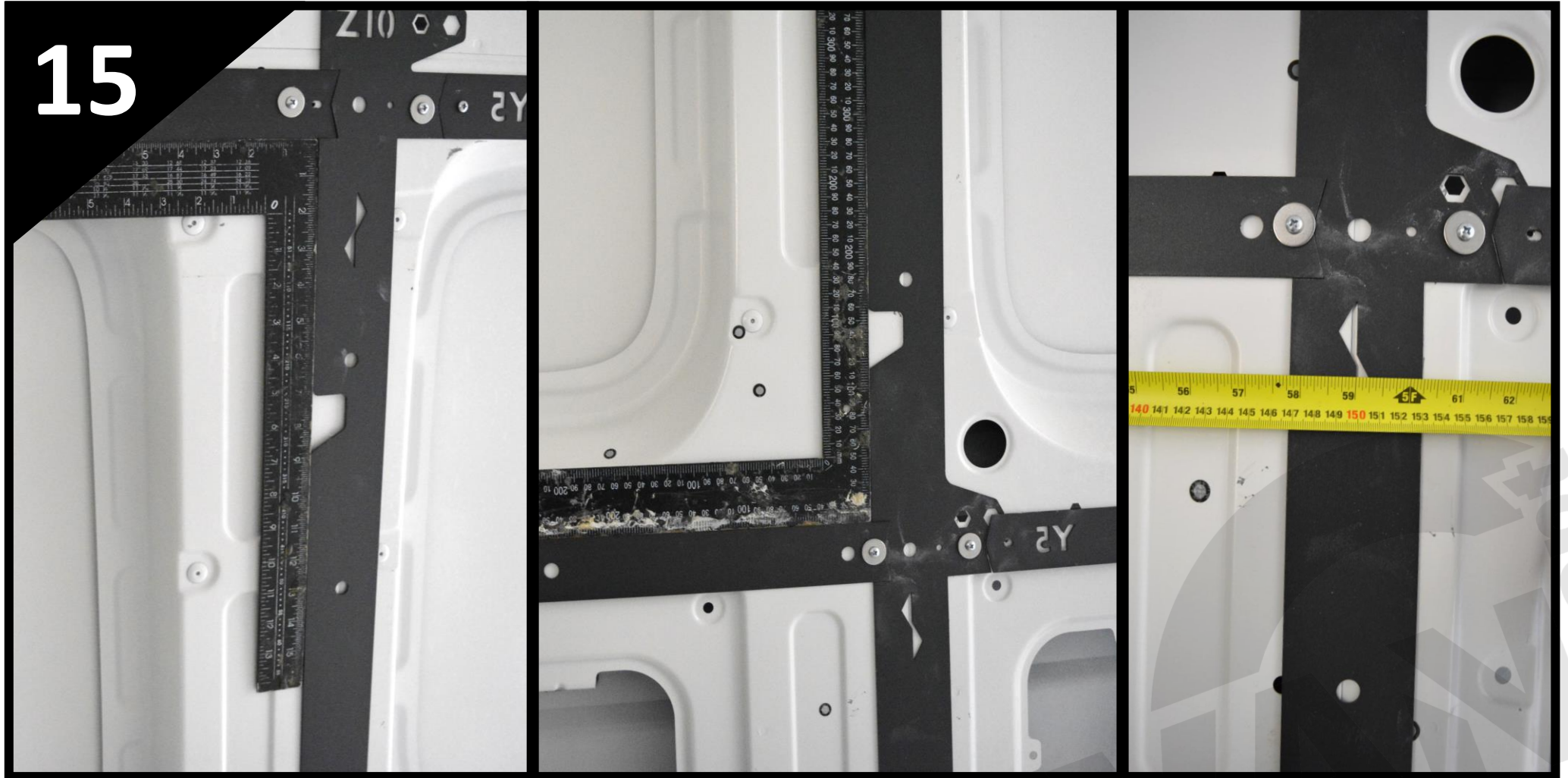


# INSTRUCTIONS CRUX-D – Base Kit



- Position Z11 at the front, locate the Hex Locating Tool with the hex hole arrowed and hold the Z11 in place using 3x self-drilling pan head screws, pressing the centre of the metalwork against the curve of the van bodywork whilst doing so.
  - Fit the 2x Y7's between the Z10 & Z11 (the same way as the Y5's)
  - Use the centerline cutouts to check the spacing between Z10 and Z11 is 59 inches.
- With all 7 pieces located, double check all parts are perpendicular and the spacing is correct, adjusting where required.

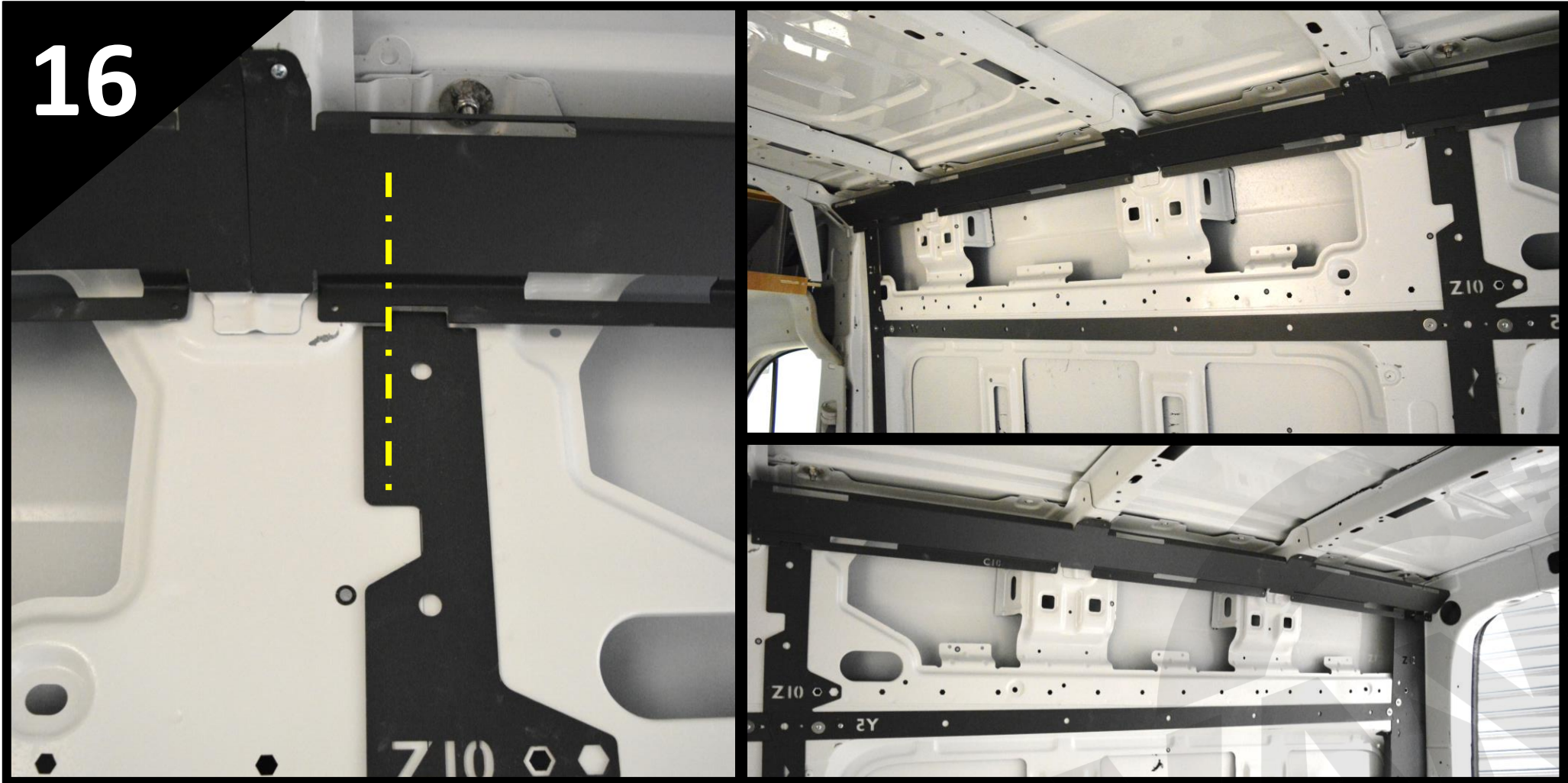
# INSTRUCTIONS CRUX-D – Base Kit



- In the same way that Y5 have previously been fitted, 2x Y7's can be fitted forward of Z10.
  - Use a square to ensure they are perpendicular to Z10.
- *From the back of the van, look along the length of the Y5 & Y7 parts to seeing any deviations in alignment.*



# INSTRUCTIONS CRUX-D – Base Kit



- Fit the two wall to roof sections, with C10 at the rear and C11 at the front, using one self-drilling pan head screw to secure each end in place, ensuring both end pieces butt up to each other.
- Ensure C10 section aligns with the vertical edge on the top tab of Z10. *There should be a vertical gap, to allow for variation in fit.*
  - *Ensure the angle flat face of the metalwork is flat against the angle on the roof ribs.*

# INSTRUCTIONS CRUX-D – Base Kit

# 17



- Double check everything is perpendicular and the spacing between Z parts is correct and that it also matches up with the left side.
  - *Now is the time to make any minor adjustments to the alignment if required.*

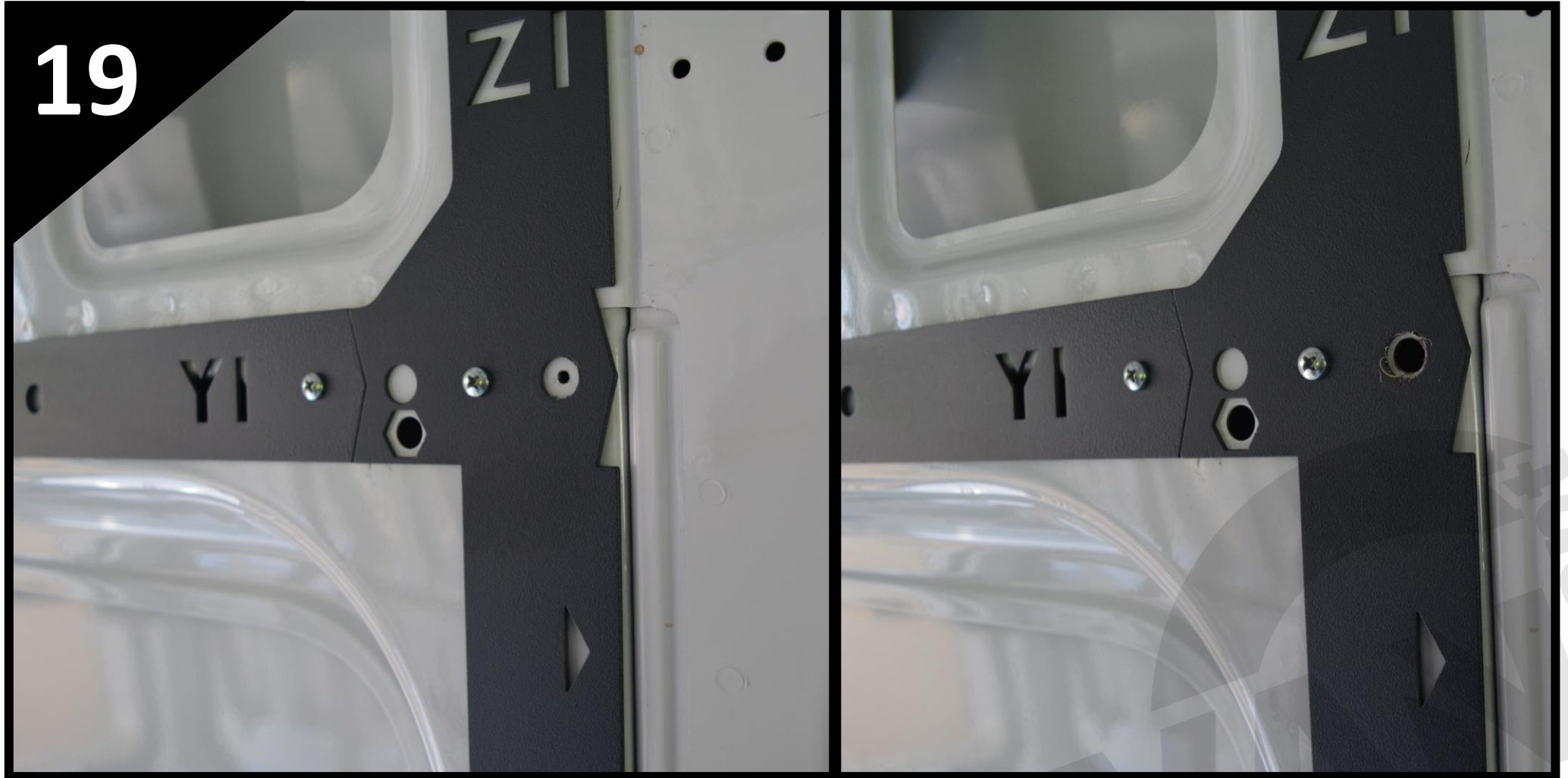


18



- With all the parts positioned, its now time to drill the holes for the M8 rivnuts that attaches the metalwork to the van bodywork.
  - Starting on the left side with Z7, take item 59 – Drilling Tool and position the smaller end within one of the holes as shown.
    - Using the center drill, drill through the hole in the drilling tool and into the van bodywork.
      - With a pilot hole drilled, now open this hole up using an 11.1mm drill bit.

# INSTRUCTIONS CRUX-D – Base Kit



- Repeat the drilling procedure for all the holes in the Y and Z parts.
- It's advisable to work in a sequential order, pressing the metalwork against the curve of the van bodywork whilst going through each hole.
  - For the Y parts, work from one end to the other (*this prevents issues with distortion when fitting rivnuts*).



# INSTRUCTIONS CRUX-D – Base Kit

20



- Remove the Y and Z parts by removing the screws.
- Clean off any swarf that may have stuck to the rear of the metalwork and de-burr all the holes. A countersunk bit can be used on the front face (*do not open up the hole size*) and a deburring tool is best on the reverse side (*a small round file could also work*).
  - *The burrs on the reverse need to be removed for correct installation of the rivnuts.*

# INSTRUCTIONS CRUX-D – Base Kit

# 21



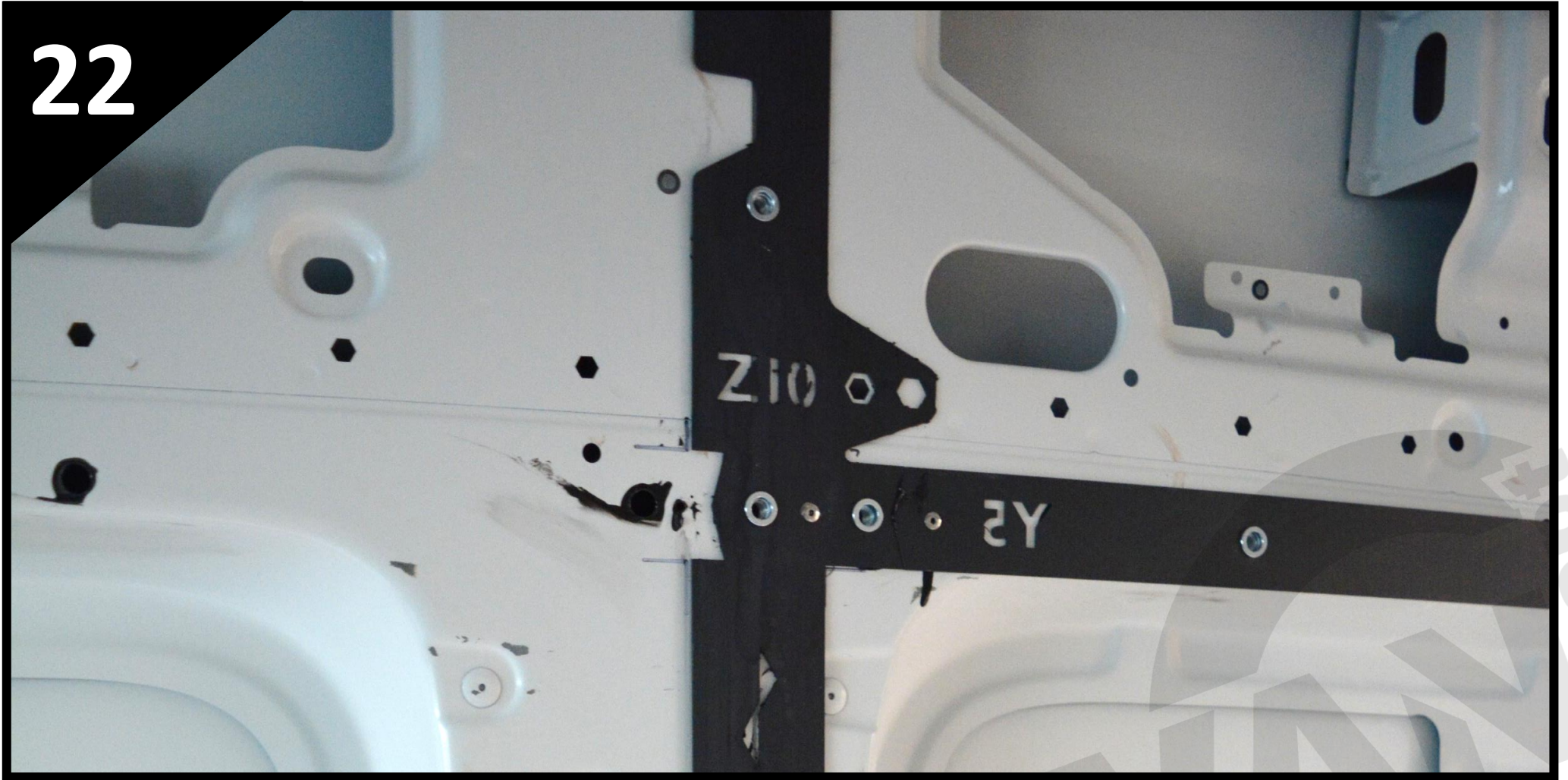
- Apply some anti-corrosion paint to the exposed metal in the holes.
- If fitting our full kit with our Thermofleece insulation, we suggest fitting some to the upper channel through the oblong slots, whilst they are now accessible (*the lower channel is easily accessible later*).



# INSTRUCTIONS

## CRUX-D – Base Kit

22



- Apply a bead of silicon/adhesive to the rear of each Y & Z part where it contacts the van bodywork (*this is to prevent future squeaks/rattles*).
- With the anti-corrosion paint dry, re-fit the 7xY & Z parts using the same screws and holes, before double checking everything is square.
- Start fitting the M8 rivnuts supplied, starting from the centre of each part and working outwards. We suggest you follow your tools instructions and use a scrap piece of metal (*window cutouts work well*) to successfully fit some test rivnuts before attaching the metalwork to the van bodywork.

# INSTRUCTIONS CRUX-D – Base Kit

## 23



- Use the 4.2mm drill bit to drill through each hole on both mounting feet on Z9 & Z12 into the bodywork.
- If out of alignment slightly with the van bodywork, use some light force to manipulate these against the bodywork, before fitting the 4x8mm rivets.
  - Drill the remaining holes and fit rivets. *(The 2x longer rivets per side are to be used to attach Z9/Z12 with the C sections and van body).*
    - There is also a row of holes at the rear of Z9 to drill and rivet and a number of holes in the wall to roof sections.

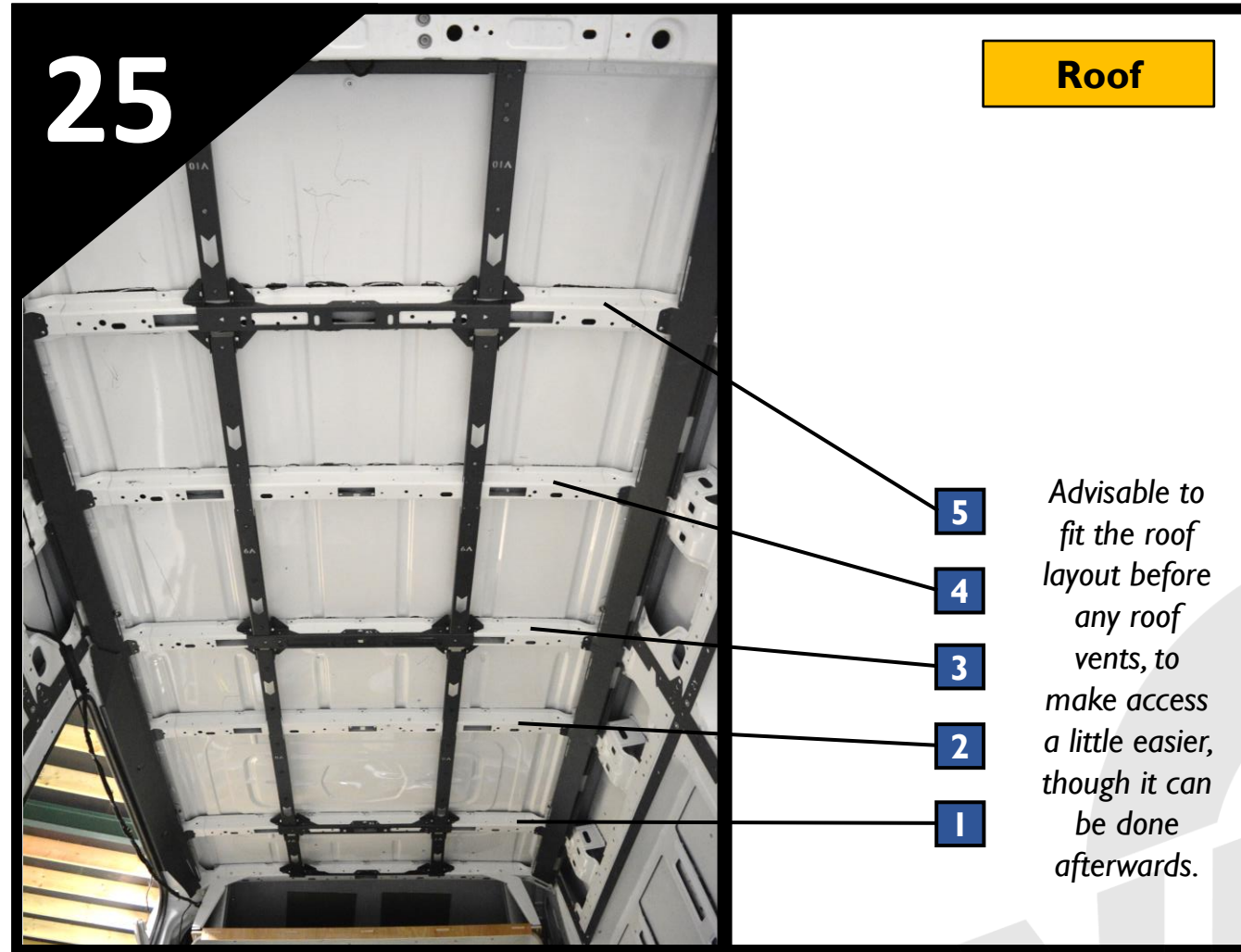


# INSTRUCTIONS CRUX-D – Base Kit



- Remove the self drilling pan head screws from the metalwork and drill and rivet these holes too.
  - Repeat the same process to fit the rivnuts to the right side of the van.
- Remove as much metal swarf that's been created as possible. The best way to do this is with an airline if you have one – a Hoover or large magnet can work just as well.
  - *The metalwork for both sides is now fully fitted.*

# INSTRUCTIONS CRUX-D – Base Kit



- The fully installed roof is shown above and the parts required and layout are documented on page C.
  - “X” parts are lateral, “V” parts are longitudinal, with directional arrows pointing forwards.
- We refer to the roof rib numbers as shown, with rib 1 being the first full rib at the front of the van.

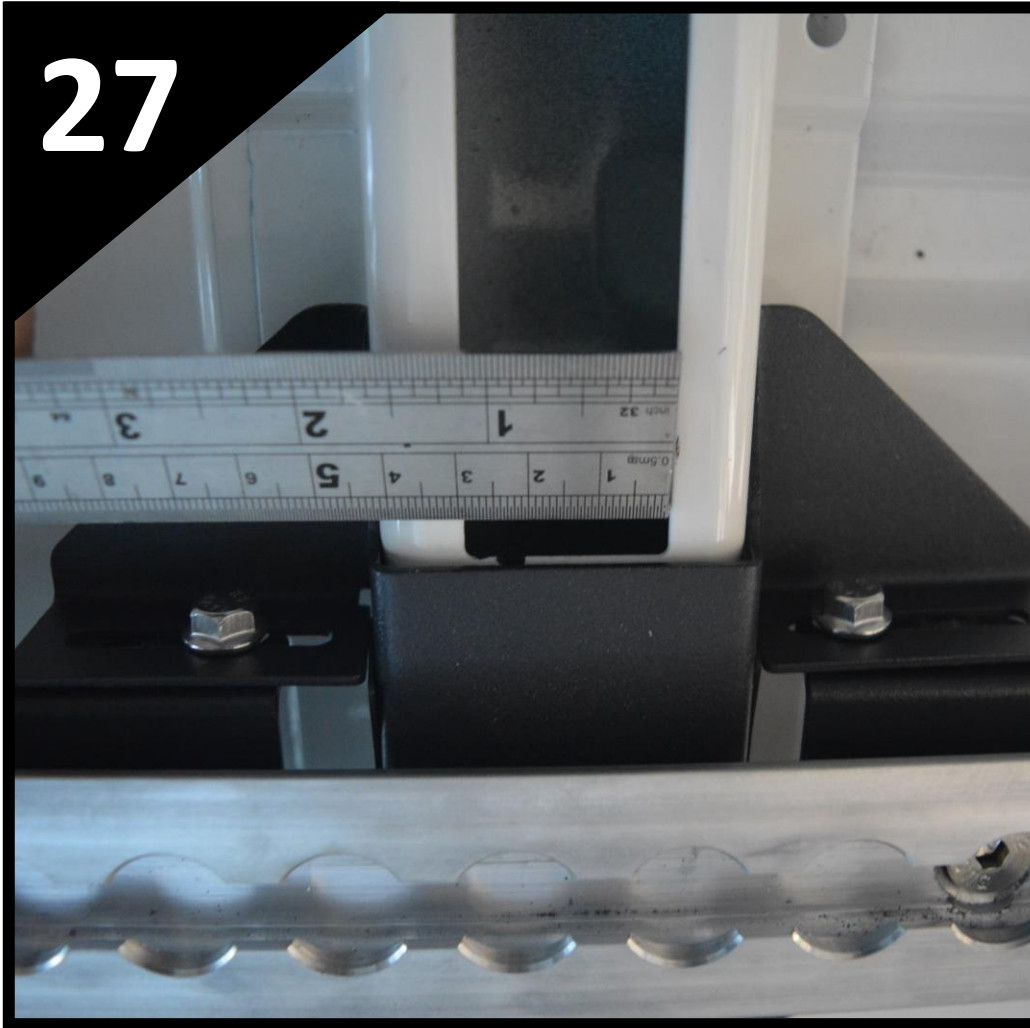
# INSTRUCTIONS CRUX-D – Base Kit



- A centerline for the cargo rail in the roof need to be marked on 4 inches in front of the centerline for Z7, using TOOL-0006.
- Attach the cargo rail (T-0032) to Z7 and fit TOOL-006 to the top of the rail. When fitting flat on the cargo rail, mark a line along the front edge that fits against the roof rib. This should now be 4 inches forward of the cargo rail centerline.
  - Extend that line toward the center of the roof rib with a ruler.



# INSTRUCTIONS CRUX-D – Base Kit



- Repeat this on both sides and then extend the line all the way across the roof rib.
- A good way to check that its straight is to take a measurement from the cutout hole as above.
- *It's important to have the holes centers in line with those on the van sides, especially is using items such as our lockers. +/- 1mm is an acceptable tolerance.*



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- Take X5 and offer it into position on rib 3, holding in place in the centre. *Ensure that X5 is orientated the correct way round – the X5 cutout should be facing towards the rear of the van.* Mark onto the ribs the position of the four slots.
  - Remove X5 and create four large holes where marked to give clearance for the back of the rivnuts that will be installed later.
    - This can be done by drilling a centre hole and using a step drill or 25mm Hole Cutter.
    - De-burr the holes and apply some anti-corrosion paint to the exposed metal.

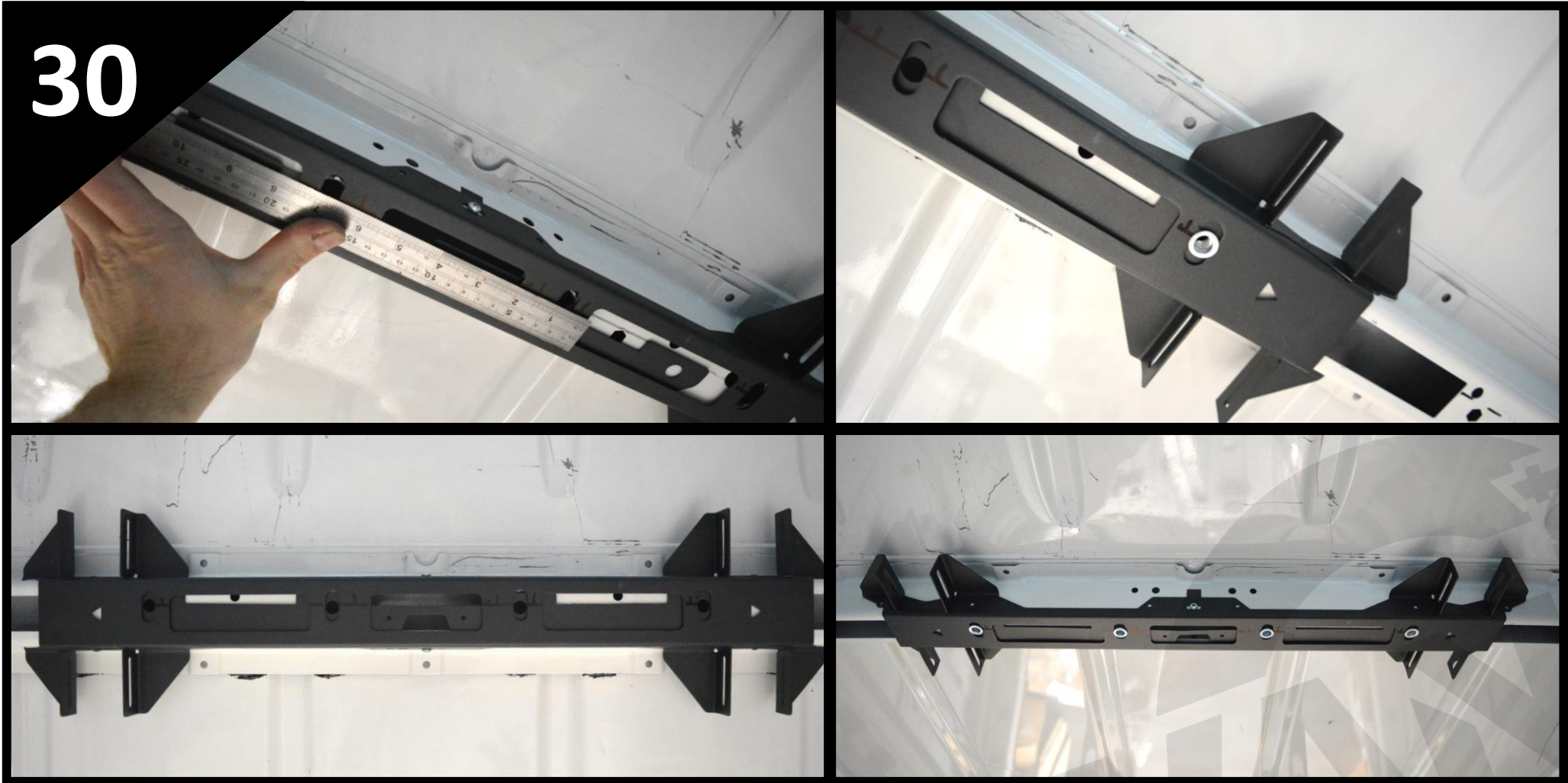
# INSTRUCTIONS CRUX-D – Base Kit



- Take **item 11** – Roof Rivnut Plate and position it within X5 as shown above.
- Align the edges of X5 to the edge of the cutout in the roof rib 3 and screw in 1x self-drilling pan head screw through the central slot on the side and into the roof rib to temporarily hold in place.



# INSTRUCTIONS CRUX-D – Base Kit



- Transfer the previously marked centerline onto the metalwork. This will give the centerline and position of where to fit the 4x rivnuts to attach the roof rivnut plate to X5.
  - Fit one M8 rivnut in position at one end, then a second at the other end, ensuring correct alignment.
    - With these to position correctly, fit the remaining two in the center.



# INSTRUCTIONS

## CRUX-D – Base Kit



- Locate and fix the 2x remaining X5 parts in the same way on roof rib 1 and 5, with X5 cutout facing rearward.
- For all three parts, apply some upward pressure to each part and fit 1x self-drilling pan head screw to the slot on both sides of each part.
  - The parts now have some lateral adjustability by loosening these screws later.

# INSTRUCTIONS

## CRUX-D – Base Kit



- At the rear, X6 can be fitted by aligning the bottom edge with the top of the OEM light cutout, and then drilling the four smaller 4.2mm holes either side and fitting 1x 4x8mm rivet in each hole.

# INSTRUCTIONS

## CRUX-D – Base Kit



- At the front, locate X3 into position and fit 1x self-drilling pan head screw through the central slot of the metalwork and screw into the roof rib.
  - Align this by eye using the depressions in the roof panel as a visual guide. The part can be adjusted laterally before tightening the screw.
    - *The forward-facing tabs of this part should fit between the headliner and underside of the rib.*



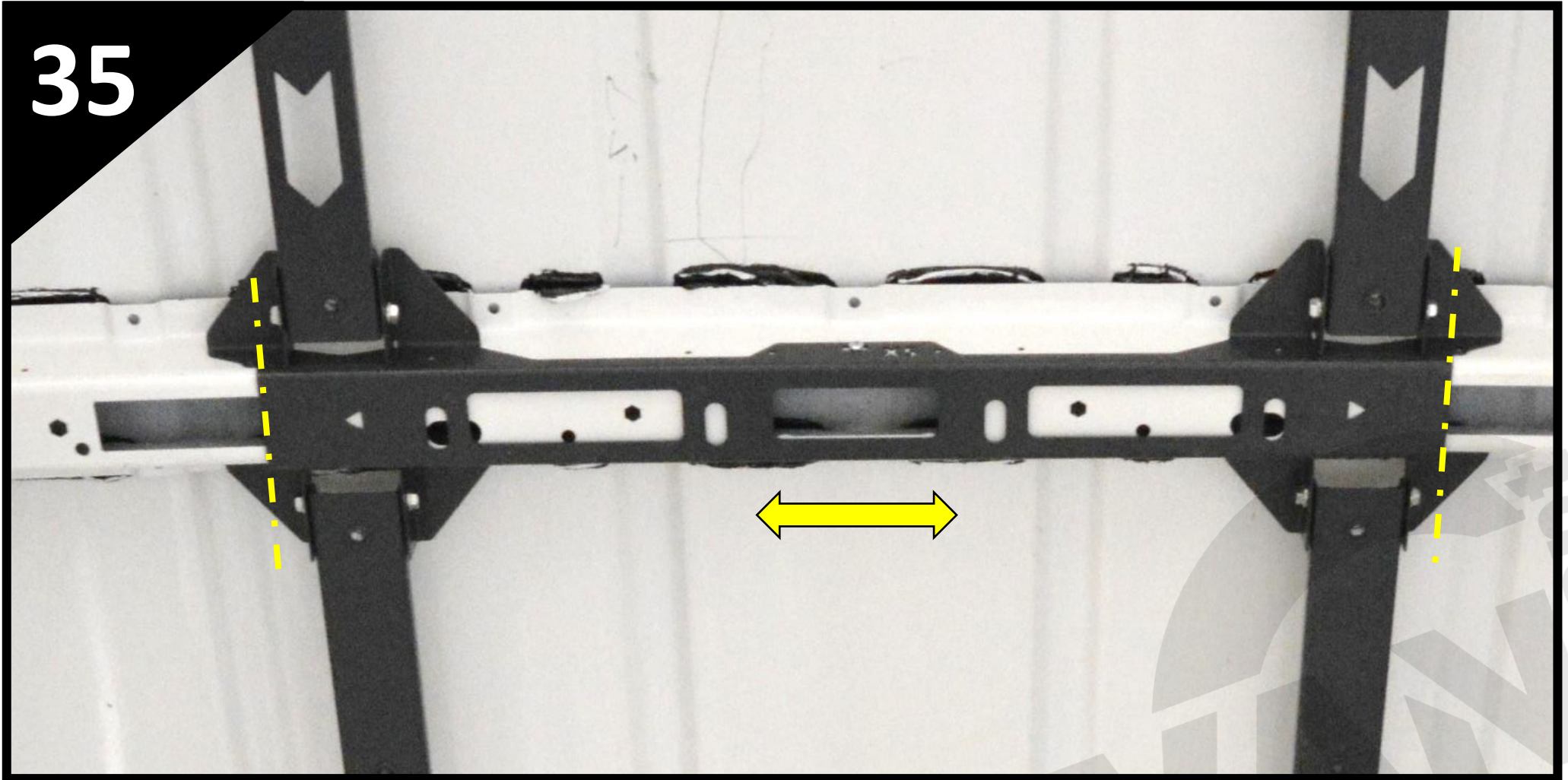
# INSTRUCTIONS CRUX-D – Base Kit

## 34



- Fit one side of the “V” metalwork (see layout diagram for correct locations) to the previously fitted X parts.
- Fit one M6 x 12mm Flange Head Bolt through each of the slots of the X parts and into one of the rivnuts pre-fitted to the V parts. *Leave the bolts slightly loose at this stage.*
  - Ensure all arrows on the parts are facing forward.

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- No two roof ribs seem to be assembled the same, and some sit off from the centreline of the van roof panel, as shown above.
- Check the X3, X5 and X6 parts for alignment. If needing adjustment, loosen the screws and move the X parts laterally, before re-tightening the screw when aligned. The ends of the X5 part should align with the cutout profile on the rib.
- From the rear of the van, look along the length of the V parts to see any deviation in alignment as a final check. A measurement can also be taken for the end of the roof rib on both sides of the van, to check for centralisation.



# INSTRUCTIONS

## CRUX-D – Base Kit

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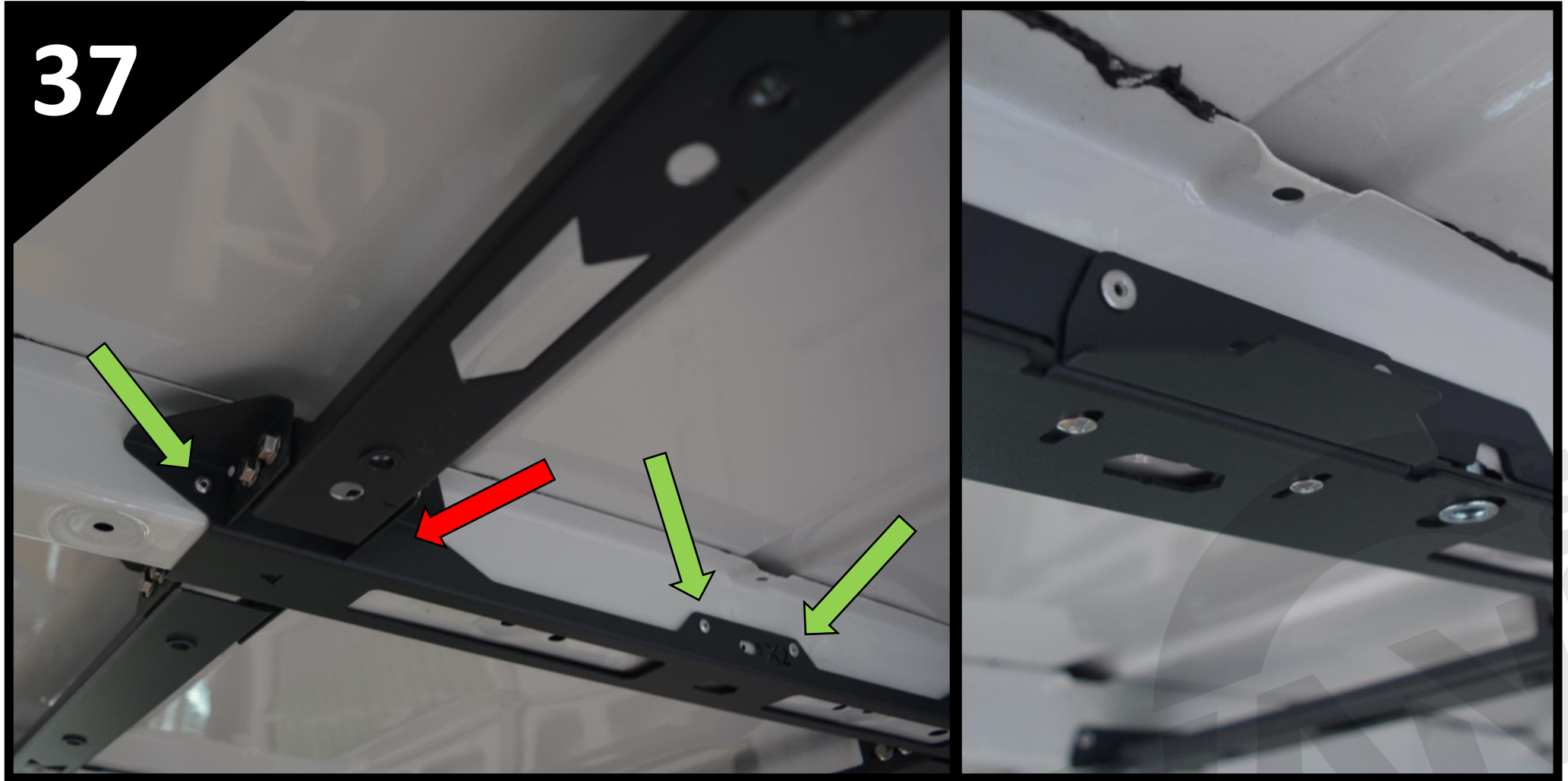


- Fit the T-0007 cargo rail to the center four bolts using the M8x20 countersunk bolts.
- Position the T-0027 cargo rail against the V-part on the roof and fit one bolt through the cargo rail and into each end of the v-part. With these all positioned, the cargo rail and V-part should slide forward/rearward as one entity for alignment.
  - Use TOOL-0008 to correctly align T-0027 with T-0007, by locating the tool over the holes.
- With the rails aligned, the M6 flanged hex bolts can be tightened and the remaining bolts added to secure the X and V parts together.



# INSTRUCTIONS

## CRUX-D – Base Kit



- Remove the cargo rails and drill the holes for the rivets through the X3, X5 and X6 parts into the roof rib using a 4.2mm drill bit.
  - *Apply some anti-corrosion paint to all holes.*
- Fit 4x8mm rivets through the metalwork and into the roof rib in the holes in the green arrow positions.
  - On the rear of X5 use 2x 4x12mm rivets and fit 1x Roof Support Bracket as shown above.

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- For the four holes per X5 part that we not riveted, use a 6.5mm drill to open-up the hole size.
  - *De-burr these holes and apply some anti-corrosion paint.*
- Once dry, fit one M6x70mm Button Head Bolt, two M6 washers and one M6 Nyloc Nut through both holes, before tightening (*do not overtighten to prevent distortion of the roof rib*).

# INSTRUCTIONS

## CRUX-D – Base Kit



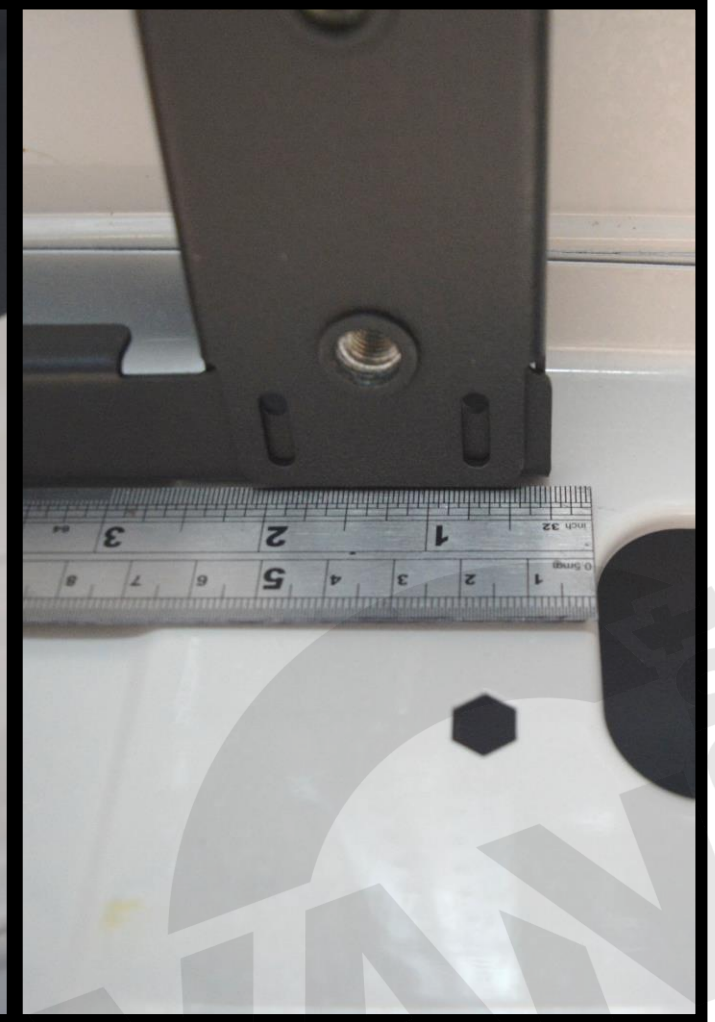
- At roof rib 2 &4, **item 5** - Roof Support Brackets are used. Slide these into place through the side of each V part and align the width of the bracket with the V part.
- Push the V part upwards against the roof rib and mark the position of the two holes of each bracket on the roof rib.
- Using the 4.2mm drill bit, drill a hole on each mark (*the brackets can be slid out sideways and rib drilled with the V-parts in place, but it's easier to drop these down temporarily*).



**40**



- With the V parts back up, fit one 4x8mm rivet through the outboard hole of the bracket and use a 6.5mm drill bit to drill through the inboard hole.
- *De-burr and apply some anti-corrosion paint.* Once dry, fit one M6x70mm Button Head Bolt, two M6 washers and one M6 Nyloc Nut through both holes to secure the two brackets in place, before tightening (*do not overtighten to prevent distortion of the roof rib*).



- With the rails removed, use a 4.2mm drill bit to drill through the holes in the V parts and into the Roof Support Brackets.
  - Fit one 4x8mm rivet through each hole, securing the two parts together.
  - At the rear, fit one 4x8mm rivet through either slot to and into the hole in X4 to secure in place.
- Remove any remaining self-drilling pan head screws and replace with a 4x8mm rivet, re-drilling the hole if required.

# INSTRUCTIONS

## CRUX-D – Base Kit



- Double check everything is tightened and secured in place.
- Remove as much metal swarf from the inside of the roof ribs as possible. The best way to do this is with an airline if you have one – a Hoover can work just as well, with a magnet covering the large holes at either end of the roof ribs to catch any debris.
  - *The roof metalwork is now installed.*



# INSTRUCTIONS CRUX-D – Base Kit



- The fully installed floor is shown above and the parts required and layout are documented on page D.
  - The floor comprises of 5x parts which are identified as “F” parts.

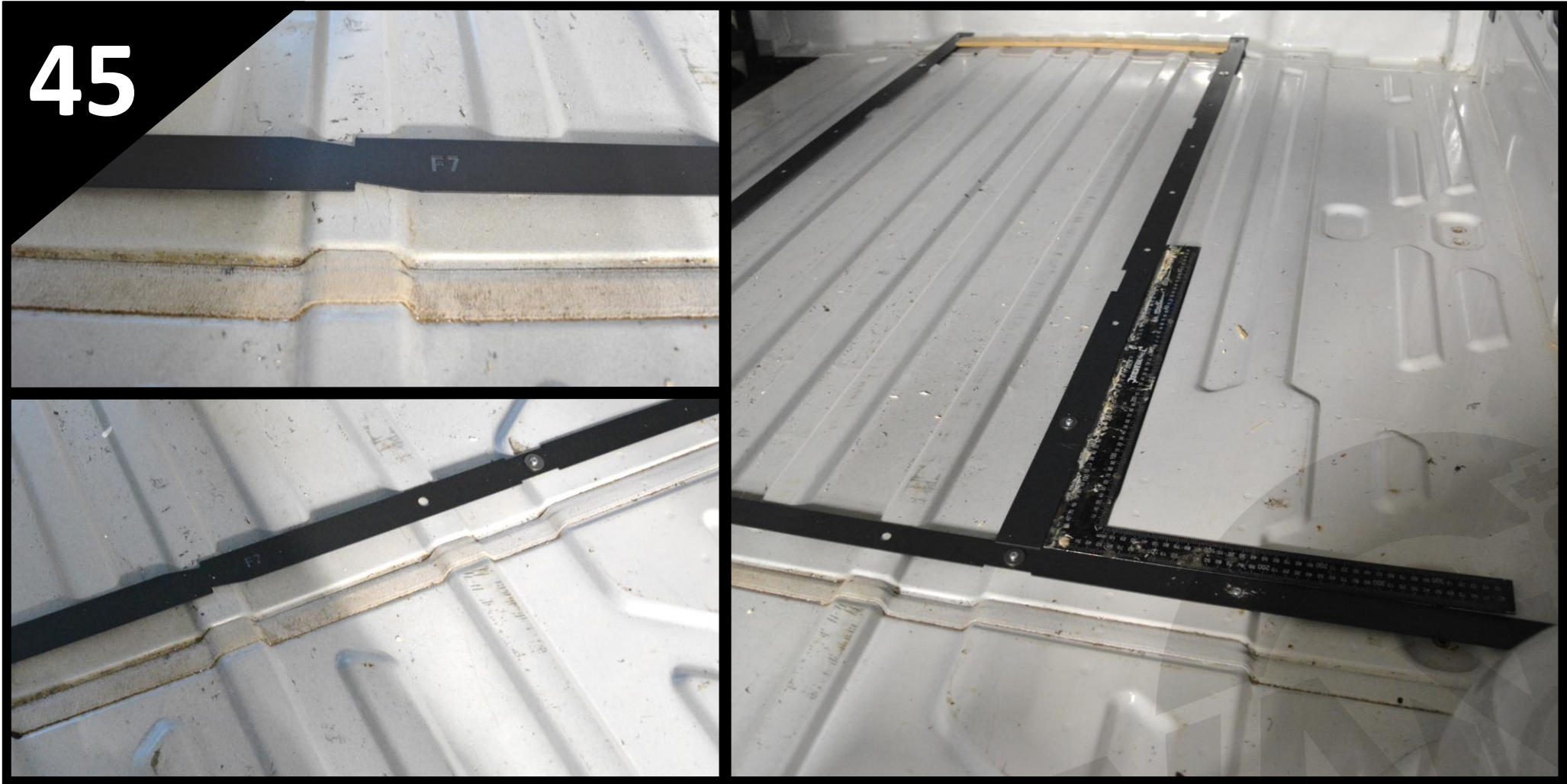
44



- Temporarily fit the T-0032 cargo rails to Z7 & Z10 with a few bolts, ensuring the lower section is bolted in place.
- Use TOOL-0007 to fit into the rail and slide to the floor. Position F7 across the van floor and check its square by lining up against the ribs in the van floor.
- Move the tool to the other side of the van and check alignment before fitting a couple of self-drilling screws to temporarily secure the metalwork in place.



# INSTRUCTIONS CRUX-D – Base Kit

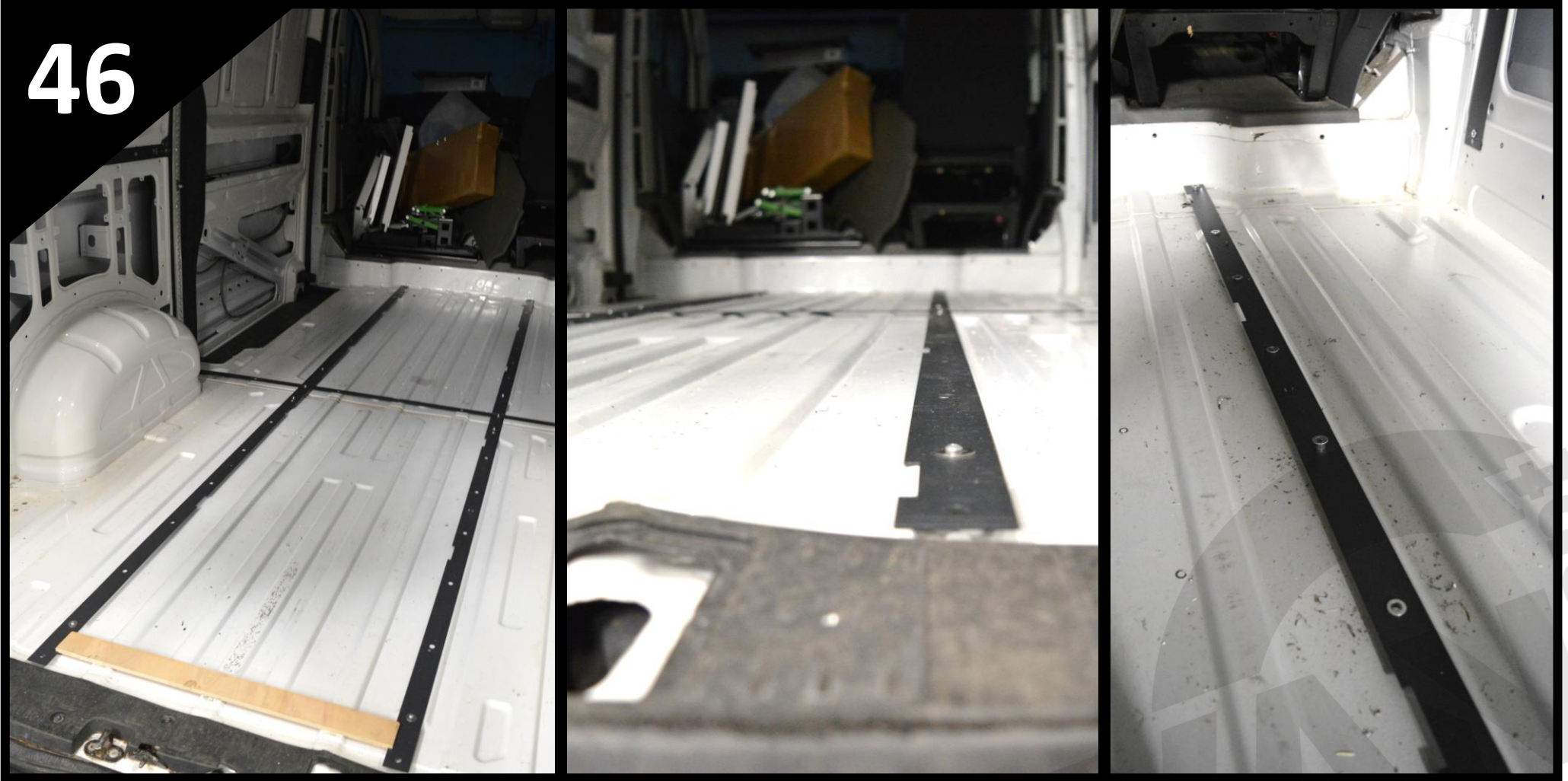


- Use the center marks on F7 and centralise with the middle rib.
- Offer up the two F6 pieces heading forward in the van and use TOOL-0005 to maintain the correct spacing.
- Use a square to ensure the metalwork runs true down the van and check against the edge of the floor ribs.
- With it laid out in place, temporarily fit a self-drilling screw in both ends of both rails to hold in place.



# INSTRUCTIONS CRUX-D – Base Kit

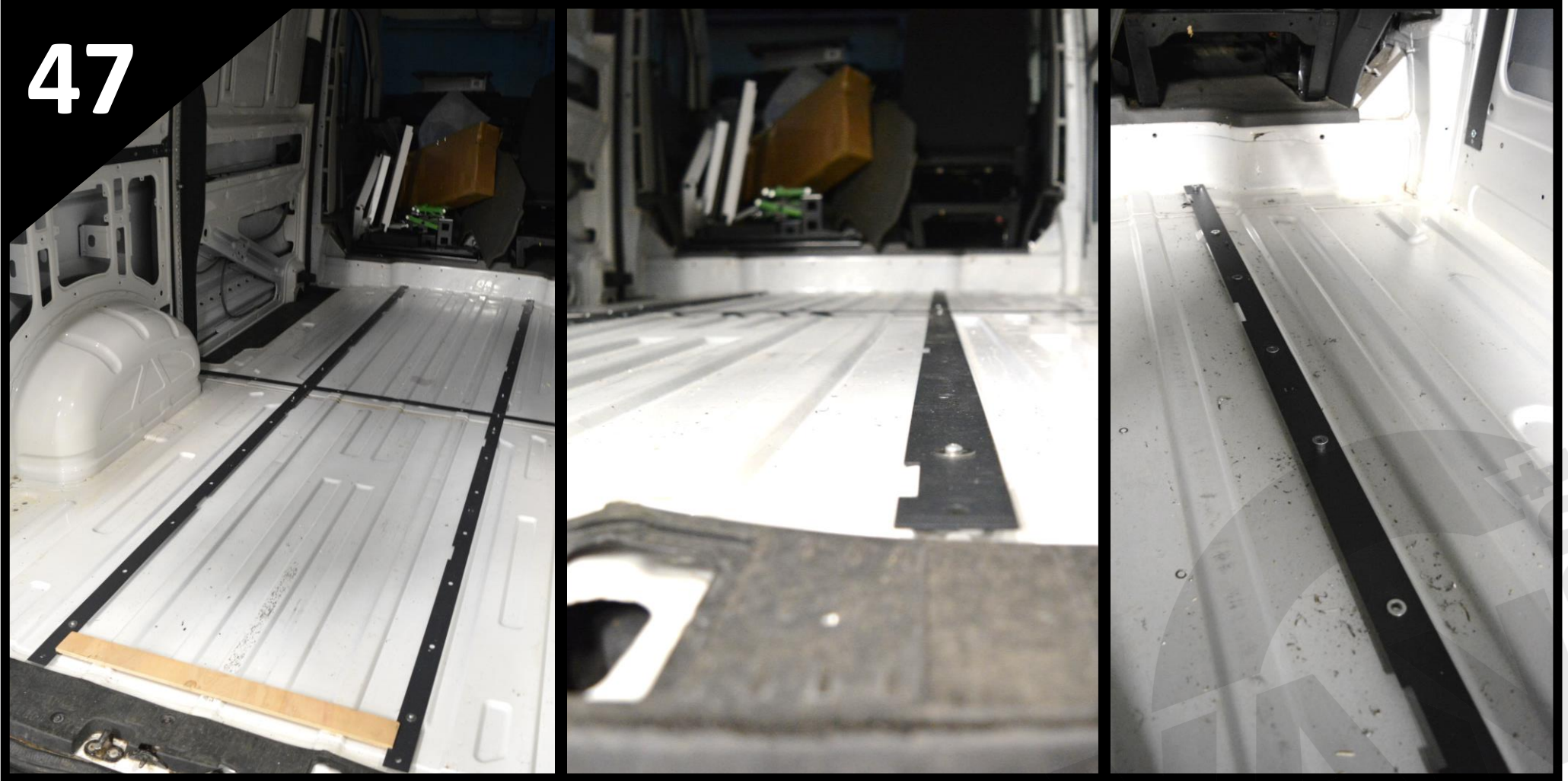
46



- Repeat the same process heading rearward to fit the two F8 pieces. Once position, you should be able to look along the full length and check for any deviations.
- In a similar process to drilling and fitting the rivnuts to the metalwork on the sides of the van, use TOOL-0004, a centre drill and 11.1mm drill bit to drill the rivnut holes. Prior to doing this, use a marker pen to mark the edge of the metalwork on the floor, in case it moves.

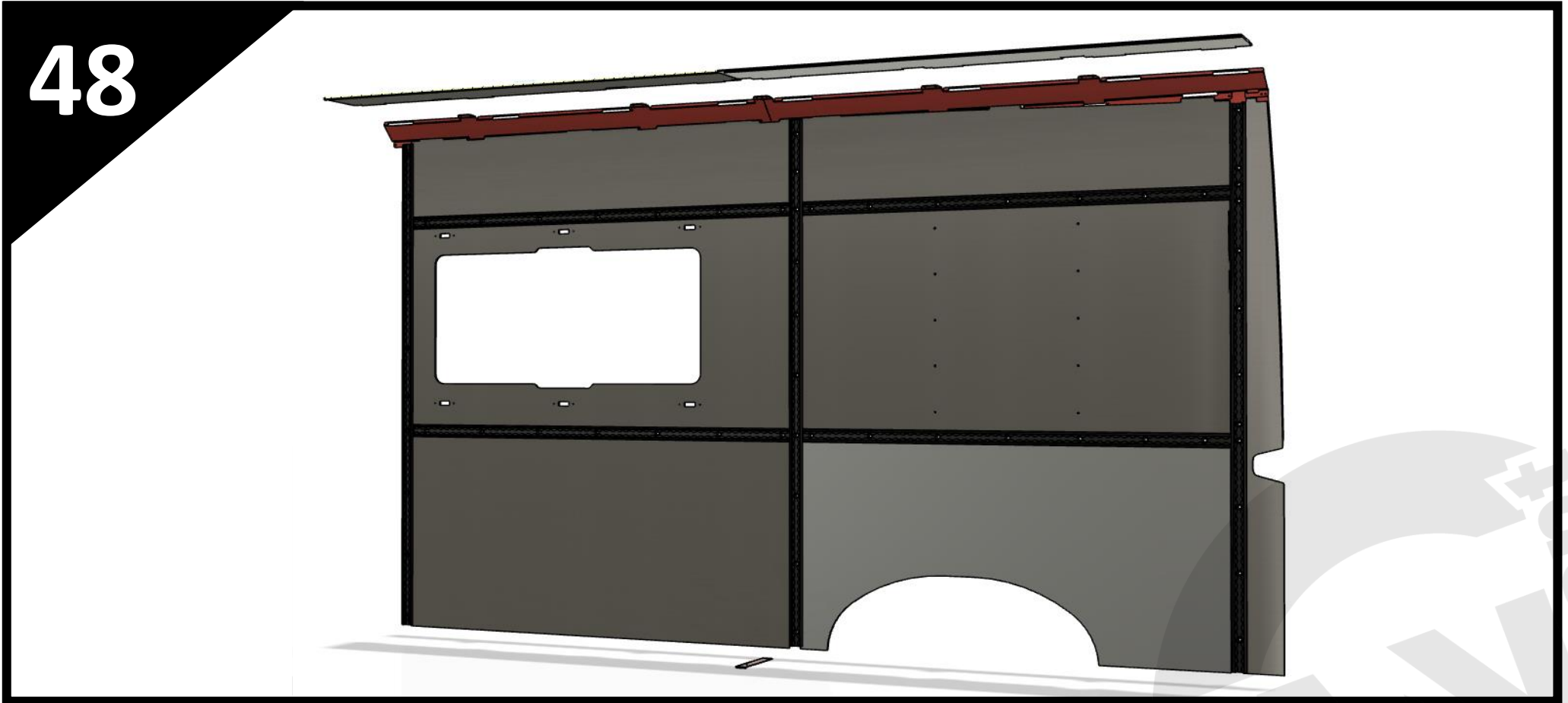
# INSTRUCTIONS CRUX-D – Base Kit

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- Remove the rails, de-burr, prep with paint and re-fit the metalwork with some adhesive such as CTI between the metalwork and van floor.
  - Fit the blind rivnuts to secure in place (the first, fifth and last rivnut on each side need to have a normal flanged rivnut).
    - Fit a rivet through any holes where the self-drilling screw were fitted.

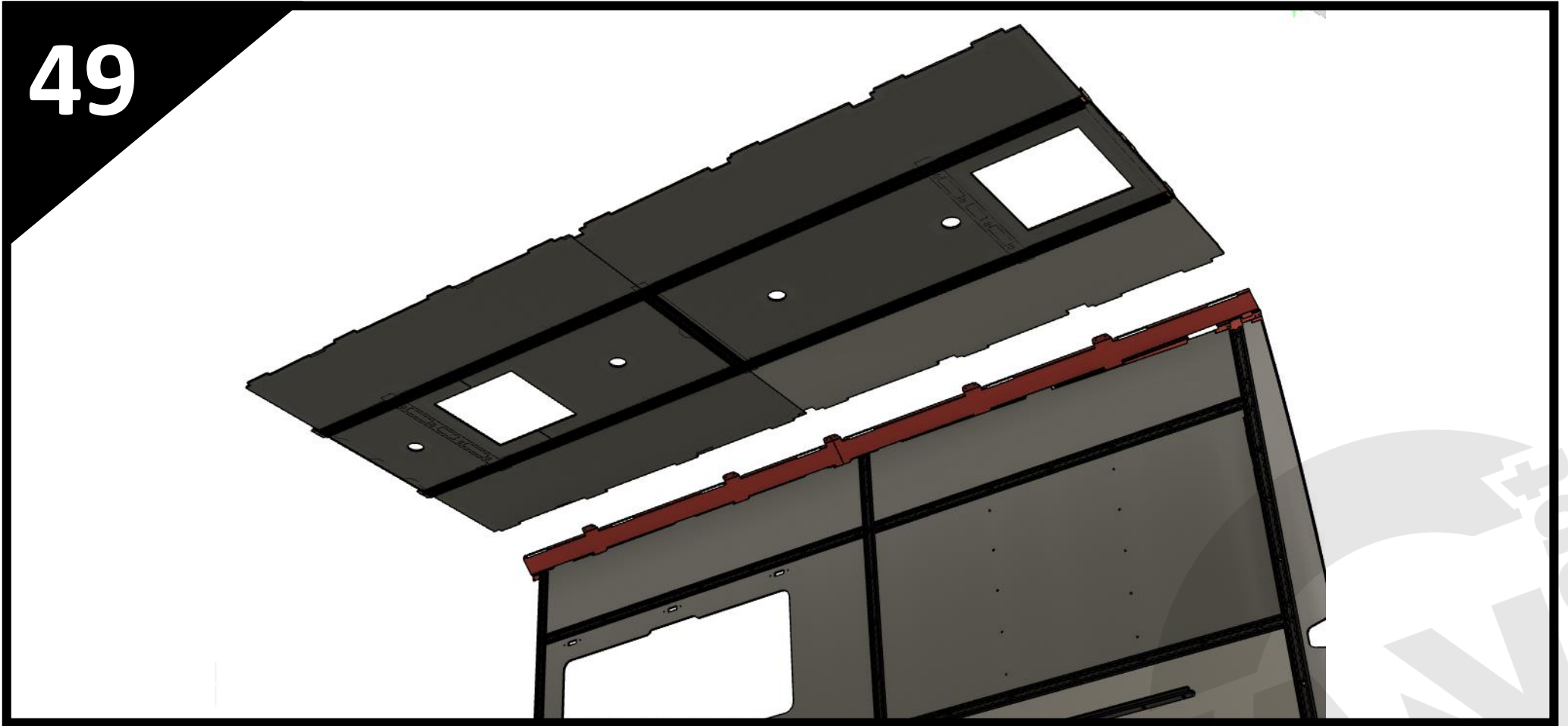
48



- To fit the panels, slot the upper side panels into the mounting slots in the corner section before positioning the first horizontal cargo rail in place and loosely fit a couple of bolts.
  - Proceed to the middle panels, positioning under the flange of the upper cargo rail and hold in place by fitting the lower cargo rail.
  - Fit the lower panels in place in the same way under the flange. The end panel can be fitted with some Velcro strips on the back.
- With the panels in place, fit the vertical cargo rails. Apply force in the centre of the rail to distort and loosely fit on of the bolts in the middle.
  - Work outwards from here, fitting the bolts and gradually tightening them as more are installed.
    - Once fitted, tighten all the bolts to secure the panels in place.
- Along the lower edge of the panels, fit the plastic “skirting” angle using the black Pozi-Flange screws in the wall panels to hide any gap created by a difference in floor height.



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- To fit the roof panels, loosely fit the cargo rails in place with a couple of turns of a couple of bolts, so the rails hang clear of the metalwork.
- Slide the edge of the side panels between the cargo rail and metalwork and then slot the side panels into the mounting slots in the corner section (*one bolt at a time may need to be removed and its easier with two people - the panel should hold in place*).
  - Repeat for the other side of the roof, before fitting the central roof panels in a similar way.
- Once happy with everything in position, add the remaining bolts and tighten. Use a couple of the 4 x 20mm screws provided to secure the panels around the roof vent openings to the roof vent wooden mounts.

# INSTRUCTIONS CRUX-D – Base Kit

- Your CRUX kit should now be fully installed and ready to fit out with either our products or your own bespoke items.
- We welcome any feedback for your experience on fitting the CRUX kit and are always looking to improve our products and installation instructions, so if something is not too clear or you feel we can do better on, please let us know.

