

TOYOTA HILUX N70 03/2005 - 08/2015

STORAGE DRAWER SYSTEM

FITTING INSTRUCTIONS

PART NO. **E1350-HILUX7-COM**



MSA
4X4 ACCESSORIES

GEAR FOR **LIFE**



CONGRATULATIONS

ON PURCHASING A QUALITY MSA 4X4 STORAGE DRAWER SYSTEM

Years of design, development and manufacturing knowledge goes into every MSA 4X4 product to ensure that our products are the very best they can be!

Established in 2000, MSA 4X4 Accessories are the 4WD market leaders in quality Canvas products which include Certified ADR Compliant Canvas Seat Covers, Rear Wheel Bags, Rear Wheel Rubbish Bins, Vehicle Organisers and more.

We pride ourselves on our innovative products which include the world first, revolutionary Fridge Dropslide, the new patent pending Explorer Aluminium Storage Drawer System which delivers a whole new level of access to the drawer contents, the original Water Bra, fully adjustable air lumbar support systems, and an extensive range of 4x4 accessories that have stood the test of time.

As testament to our innovative culture, we have been awarded over 20 patents in Australia & Internationally across our range of products including innovations currently within the patent process. We are a growing team with a vast knowledge of what works and what doesn't work out in the real world and constantly strive to deliver the highest quality product to our customers. We treat every product design with fear of failure in mind, ensuring our products are always the very best they can be. All our products are designed to be as simple as possible to use and are supported by our MSA 4X4 Lifetime Guarantee.

Our products are available through a network of over 1200 stockists Australia wide.



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GETTING STARTED

WHAT COMES IN THE BOX:

- 1 x DRAWER MODULE
- 2 x KEYS (*located inside each Drawer Module*)
- 1 x WING AND FIT KIT BOX (*if ordered*)
- 1 x DOUBLE DRAWER JOINING KIT (*if ordered*)
- 1 x CRASH TEST CERTIFICATE
- 1 x JOINING WIRE (*if left+right Drawers ordered*)

INQUIRIES CONTACT: warranties@msa4x4.com.au

IMPORTANT INFORMATION

It is important that you read and understand the below information before installing your new MSA 4X4 Storage Drawer System.

MAINTAINING ADR COMPLIANCE OF YOUR STORAGE DRAWER SYSTEM

MSA 4X4 Storage Drawer Systems have been legally crash tested and are supplied as an ADR compliant drawer module and fit kit system when the correct number fit kits are used for the installation and joining of the **Drawer Modules**. Failure to use a matching fit kit or components for the particular vehicle installation or the use of other components to install **MSA 4X4 Storage Drawer System** may void the ADR compliance of the **Storage Drawer System** and/or the warranty.

UNDERSTANDING DIFFERENCES BETWEEN LEFT AND RIGHT HAND SIDE MODULES

RHS - Driver's Side | LHS - Passenger's Side

MSA 4X4 Storage Drawer System are of a modular design, they do come in left and right hand side **Modules** as the need for wires and switches must enter the frame from one side. The **Drawer Modules** are clearly marked '**Left**' and '**Right**' on the packaging boxes. On the right (RHS) **Drawer**, the wiring and the LED light switch is on the RHS of the **Drawer**. On the left (LHS) **Drawer** the wiring and switch is on the LHS of the **Drawer**.

FRONT AND REAR DEFINITIONS FOR FITTING INSTRUCTION PURPOSES

The '**Front**' is related to the front face of the **Storage Drawer System**, where the lock is located (*towards the rear of the vehicle*). The '**Rear**' is related to the rear of the drawer system (*towards the front of the vehicle*).

MAINTAINING ADR COMPLIANCE OF YOUR CHILD RESTRAINTS*

ADR Compliant Child Restraint Points are installed as standard in **MSA 4X4 Storage Drawer Systems**. The anchor point bolt for the **Child Restraint** is marked on the rear of the **Drawer**. This is the second bolt down from the top. The bolt installed is an **M8 x 30mm High Tensile Bolt**, please use this bolt for child restraint anchors. Do not replace this bolt as it will result in the child restraint anchor not being ADR compliant.

MAINTAINING ADR COMPLIANCE WHEN INSTALLING A MSA 4X4 CARGO BARRIER*

The top two bolts on the passenger side of the rear frame can be used as mounting points for an **MSA 4X4 Cargo Barrier**. The **Cargo Barrier** combined with an **MSA 4X4 Storage Drawer System** has been ADR crash test certified.

Compliant to ADR Crash Test Standard: AS/NZS 4034.2:2008.

To meet ADR compliance, the installation must utilise all the **Cargo Barrier** components, combined with the **Storage Drawers System**.

The second bolt down from the top can double as an **Cargo Barrier** and a Child Restraint mounting point.



* ONLY applies to wagon model vehicles. MSA Cargo Barriers available for select vehicles.

FITTER'S QUICK INSTALL GUIDE

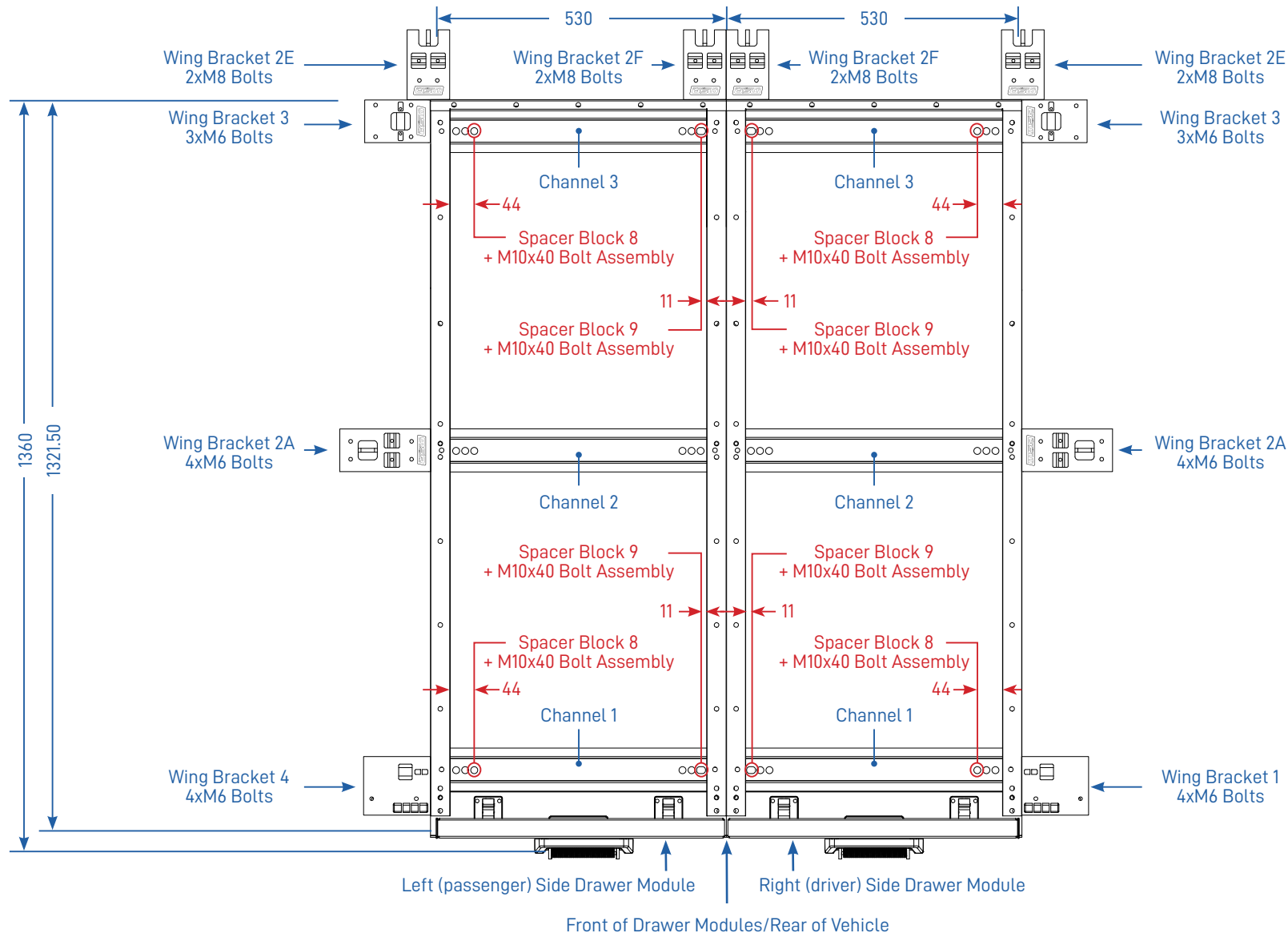
- 1.** Prepare the vehicle by removing the tub liner, if one is installed.
- 2.** Clean, vacuum and wipe down the tub.
- 3.** Join Storage Drawer Modules with join kit bolts and tighten.
- 4.** Prepare both Storage Drawer Modules by attaching Wing Brackets as per diagram (see page 8).
- 5.** Place the joined Storage Drawer Modules into the tub.
- 6.** Fit Wing Panels to give indication of Storage Drawer Modules position.
- 7.** Centre the Storage Drawer Modules in the vehicle.
- 8.** Drill and prepare the tub as per dimensions (see page 8).
- 9.** Install all fitting bolts and spacer blocks (see page 8).
- 10.** Tighten all fitting bolts to specified torque tensions.
- 11.** Do any wiring required for power supply to Storage Drawer Modules.
- 12.** Re-install Storage Drawers into Modules.
- 13.** Check that Storage Drawers function correctly.
- 14.** Install the large Storage Drawer Module Top Panels.
- 15.** Install Top Panel front trim and install Wing Panel trims.





FITTING DIAGRAM

NOTE: Measurements are in millimetres



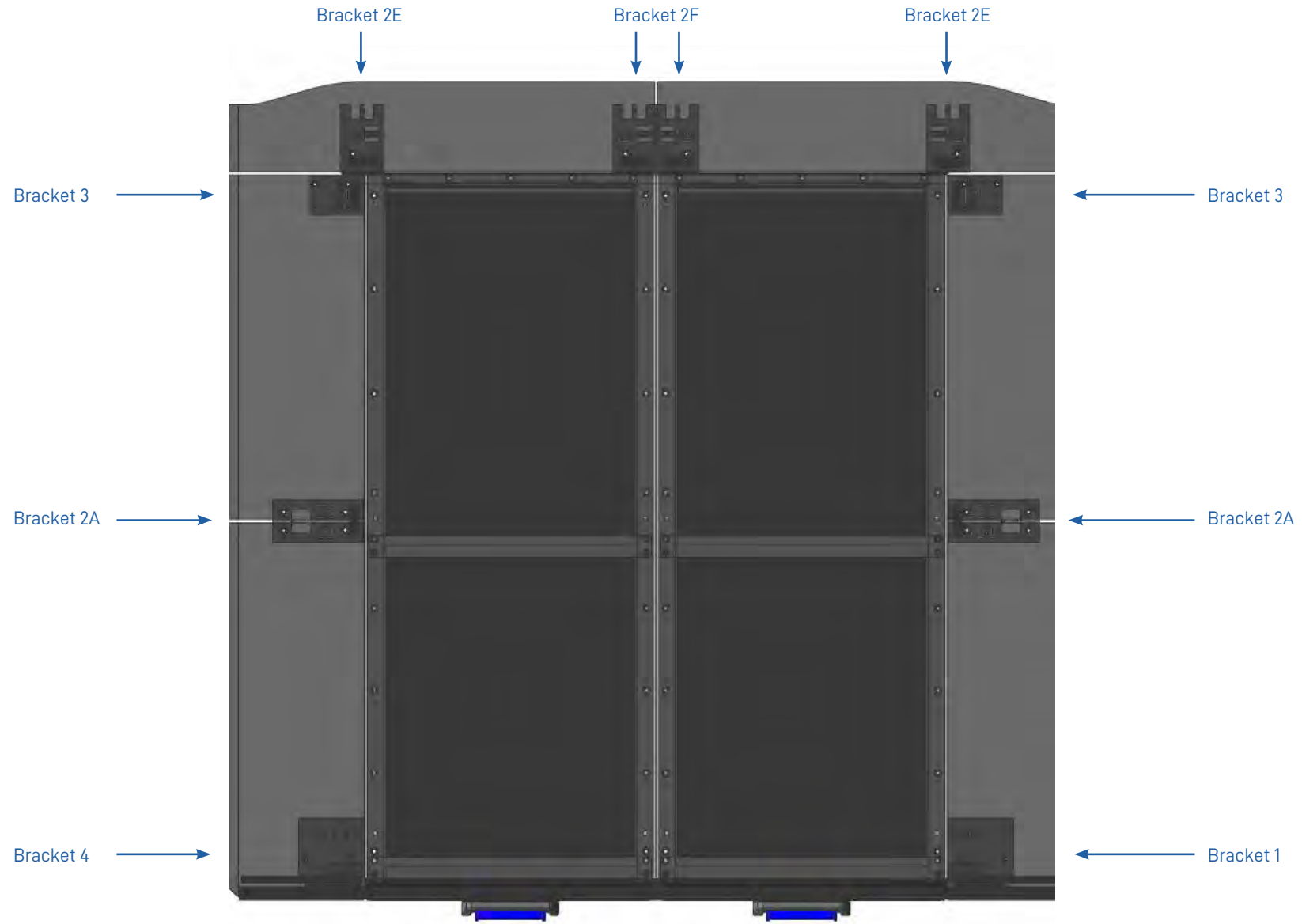
Cross Channel 1&3 Outside Bolt Assembly

- M10x40 Bolt
- M10 Flat Washer
- 100x20x3 Rectangular Washer
- Spacer Block 8
- 60x45 Foam Backed Flat Washer
- M10 Flat Washer
- M10 Nyloc Nut

Cross Channel 1&3 Inside Bolt Assembly

- M10x40 Bolt
- M10 Flat Washer
- 100x20x3 Rectangular Washer
- Spacer Block 9
- 60x45 Foam Backed Flat Washer
- M10 Flat Washer
- M10 Nyloc Nut

BRACKET POSITIONS



DRAWER PREPARATION

PLEASE NOTE

DRAWER PREPARATION REQUIRES THE DRAWER TO BE OPEN TO FULL EXTENSION. A LONG FLAT SURFACE IS REQUIRED FOR THIS PREPARATION.

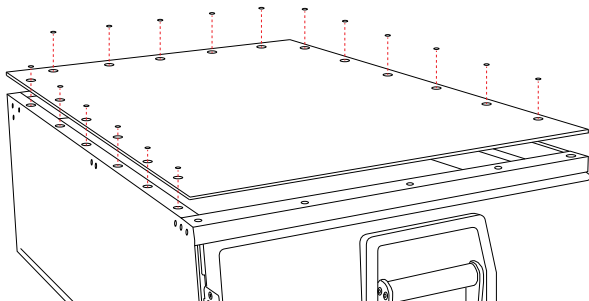
A CORDLESS DRILL, HEX BIT TO 1/4 AND 3/8 DRIVE SOCKET ADAPTERS, A SET OF 1/4 AND 3/8 DRIVE HEX HEAD BITS AND A SET OF METRIC SPANNERS ARE RECOMMENDED FOR INSTALLATION EASE.

INSTALLATION OVER TUB LINER IS NOT RECOMMENDED, REMOVE IF INSTALLED.

1 DRAWER REMOVAL

Remove one drawer module from its packaging and place on a flat surface – a 2.4m flat bench is recommended.

Remove the carpeted top panel by removing the **M6 Countersunk Allen Head Bolts**. Use a drill with a, 1/4 drive adapter and 1/4 drive 4mm hex head socket bit. Set the panel aside.



To remove the **Drawer**, pull the drawer out to 3/4 extension. Support the end of the open **Drawer** near the lock with a corner piece of packing from the box.

You can now see the internal workings of the **Storage Drawer System**. Remove the two black injection moulded guide stopper blocks by removing the four **4mm Allen Head Bolts** in each block. This is best done with a small hex bit attached to a flexible drive shaft and a cordless drill.

Once both blocks are removed, the drawer can now be pulled out onto the brass contacts and the middle Aluminium extrusions on each side of the drawer can be carefully slide forward. The drawer is free to be lifted clear of the frame.

The drawer can now be moved away, taking care not to allow the loose centre extrusion to run out, please place the drawer on two pieces of the angled cardboard packing. This protects the brass rollers at the rear and the lock mechanism.



DOUBLE DRAWER INSTALLATION

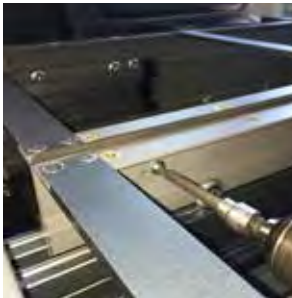
2

JOINING THE STORAGE DRAWER MODULES

To join the **Storage Drawer Modules** together use the supplied eight **Allen Head Bolts** and **Nyloc Nuts**. Align the **Storage Drawer Modules**. Place a **Allen Head Bolt** through the top front and rear holes. Place the **Nyloc Nut** on the end of the bolt on the other side of the frame.

Ensure the tops of the **Storage Drawer Modules** and the front black aluminium bases are perfectly level. Using a drill with a M5 Hex Head Socket Bit and a 13mm spanner, tighten the front top **Allen Head Bolt** and **Nyloc Nut**. Repeat for the rear top **Allen Head Bolt** and **Nyloc Nut** followed by the remaining two **Allen Head Bolts** and **M8 Nyloc Nuts**.

Follow the same procedure for the bottom **Allen Head Bolts** and **Nyloc Nuts**.



Position a **Wing Bracket 2A** to the middle of the **Drawer Module** as per diagram on page 9. Follow the previous install procedure to attach the bolts.

Position a **Wing Bracket 3** to the rear of the **Drawer Module** as per diagram on page 9. Follow the previous install procedure to attach the bolts.

To install **Wing Bracket 2E** and **2F** at the back of the **Storage Drawer Module**, first remove the top two **M8 High Tensile Allen Head Bolts** from the top of the **Drawer Frames**.

Wing Bracket 2E is positioned so it overlaps **Wing Bracket 3** at the outside rear of the **Drawer Module** as per diagram on page 8. Placing this bracket flush with outside of the **Drawer Module** will cause alignment issues with the **Wing Panels**. Re-install with the previously removed **M8 High Tensile Allen Head Bolts**.

Position **Wing Bracket 2F** to the inside back of the **Drawer Module** as per diagram on page 8. Follow the previous install procedure to attach the bolts. Ensure that **Wing Bracket 2F** is positioned flush with the inside edge of the **Drawer Module**. Tap with a rubber mallet if needed.

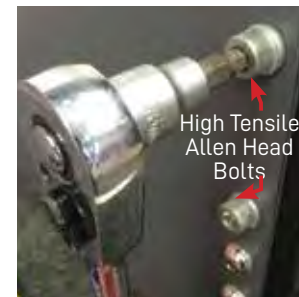
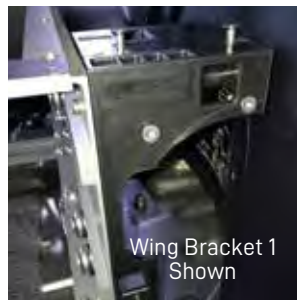
For single **Drawer** installation, **Wing Brackets** are only required on one outside of the **Drawer Module**. For double **Drawer** installation, repeat **Wing Bracket** install procedure for each **Drawer Module**.



3

ATTACHING THE WING BRACKETS

Position **Wing Bracket 1** (*driver side*) and/or **4** (*passenger side*) to the front of the **Storage Drawer Module** as per diagram on page 9. Working from the inside of the drawers, insert the four **M6 Hex Head Bolts** with **Flat** and **Spring Washers** through the pre-drilled holes. Loosely tighten with a 10mm socket and extension bar. Once all four bolts are finger tight, align the **Wing Bracket** so it is level with the top of the **Drawer Module**. Tighten all the bolts.



DOUBLE DRAWER INSTALLATION

4 PLACING THE STORAGE DRAWER MODULES IN THE VEHICLE

With assistance, carefully place the **Storage Drawer Modules** into the vehicle. Adjust so the **Modules** are positioned roughly in the middle.



5 ATTACHING THE WING PANELS

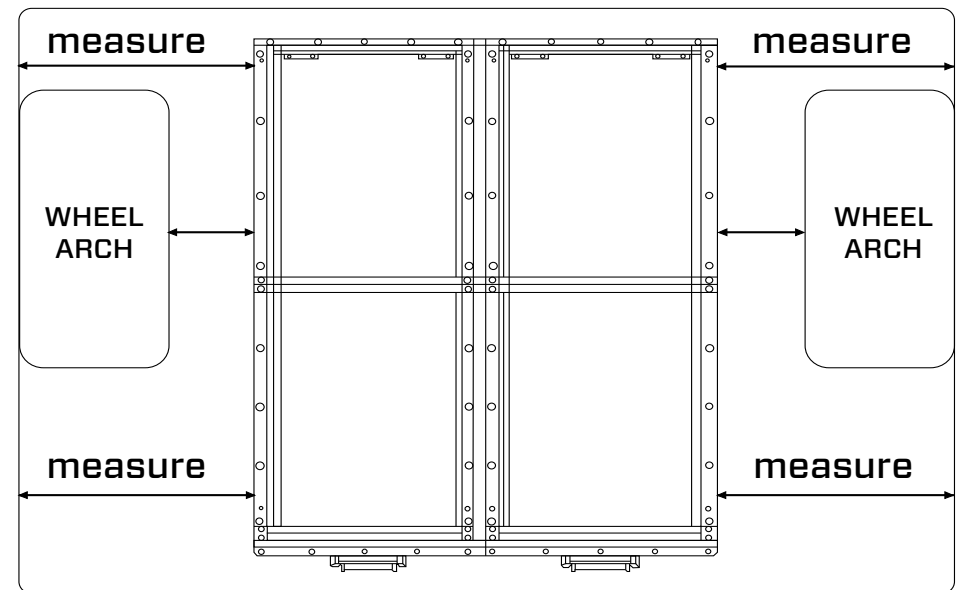
Remove the **Wing Panels** from the box. Attach the two **Black C Clips** to the bottom side of each of the two **Rear Wing Panels** by screwing the two **Allen Head Bolts**. Firmly tighten without crushing the clip. Place the **Rear Wing Panels** into place.



The other **Wing Panels** attach to the **Angle Brackets** with the supplied bolts.

6 ALIGNING THE DRAWER MODULES WITHIN THE VEHICLE

To centralise the **Storage Drawer Modules** within the vehicle, measure the distance between the **Storage Drawer Modules** and the vehicle tub on both sides. Reposition so the **Storage Drawer Modules** sit an equal distance between the vehicle tub on both sides. Ensure the gap between the **Wing Kit Panels** and the tub of the vehicle are even.



REAR OF VEHICLE

DOUBLE DRAWER INSTALLATION

7

ATTACHING THE STORAGE DRAWER MODULES

To attach the **Storage Drawer Modules**, holes will need to be drilled through the vehicle tub. Ensure **Drawer Modules** have not moved. Start from the outside. Mark the drill holes, onto the bottom of the ridge in the vehicle tub (see page 8 for measurements). Use the existing holes in **Cross Channels** as a guide.

Drill pilot holes through the vehicle tub, using a **6mm Drill Bit**. Widen the hole with a **11mm Drill Bit**, allowing a small clearance for the **Allen Head Bolt**. Vacuum to remove any shavings. Paint the exposed metal of the newly drilled holes to seal the metal and to prevent corrosion.

Pass the **Bolt Assembly** through the pre-drilled slots in the **Cross Channel**, the **Spacer Block** and the drilled hole in the vehicle tub. Place a **Foam Backed Flat Washer** (foam side up), **Flat Washer** and **Nyloc Nut** onto the end of the **Allen Head Bolt** from below and hand tighten **ONLY** at this point.

Repeat the drilling and bolt install process for each **Cross Channel**, to secure

PLEASE NOTE

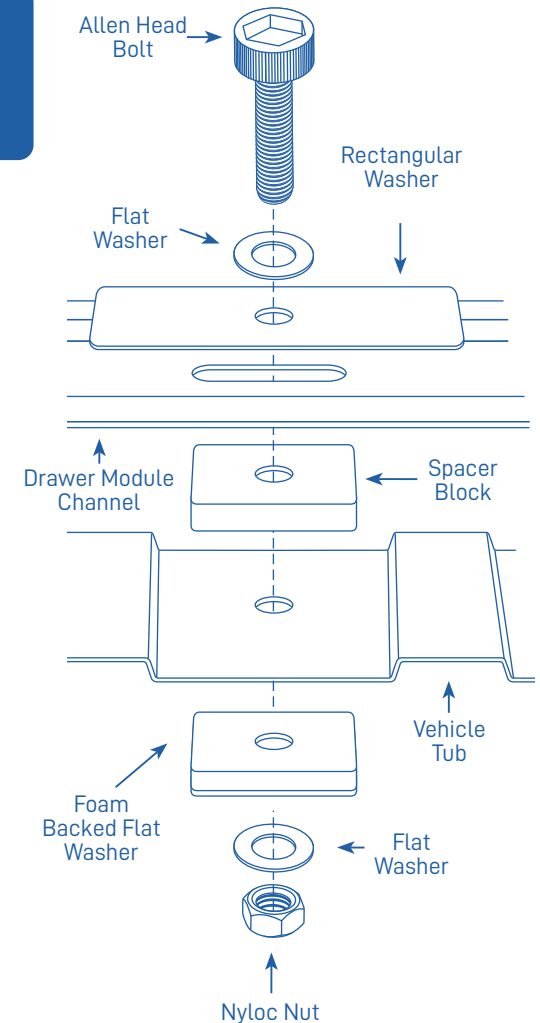
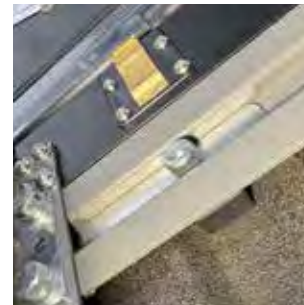
THESE MEASUREMENTS ARE VERY SPECIFIC, PLEASE MEASURE ACCURATELY. BEFORE DRILLING, CHECK UNDER THE VEHICLE FOR ANY WIRING OR FUEL LINES.

PLEASE NOTE

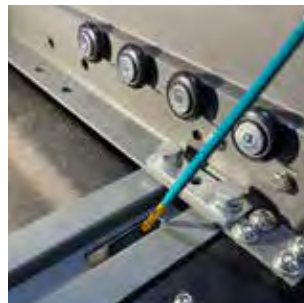
REMOVE THE SPARE WHEEL DURING THE INSTALL PROCESS.

the **Drawer Modules** to the **Vehicle Tub. Bolt Assembly** and **Spacer Block** combinations may vary for individual **Cross Channels**. See page 8 for correct **Bolt Assembly** combinations.

Tighten the bolts with a torque wrench, down to 30ftlb.



Example diagram shown. Cross Channel Bolt Assembly combinations may vary see page 8.



DOUBLE DRAWER INSTALLATION

8

WIRING THE STORAGE DRAWER MODULES

Connect the supplied **Joining Wire** under the base of the **Storage Drawer Modules**, ensuring the fuse is accessible behind the removable **Front Panel**.

Please be sure to cable tie or tape these wires out of the way of the sliding drawer base.



Check that the power supply to the **Storage Drawers** is functional using an electrical tester on the brass electrical contacts on top of the front black aluminum base.

It is now a good time to wipe out the Aluminium channels and roller bearings and give them a small spray of WD40 lubricant.

This does not get done in the assembly process as it can attract grit from the installation process.

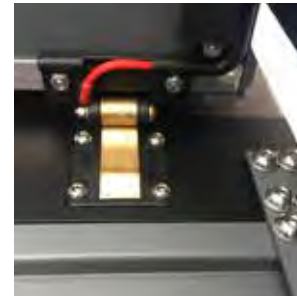


9

DRAWER RE-INSTALLATION

Remove the fuse in the power supply to the **Storage Drawer Modules**, as allowing the drawer frame to touch the main frame may blow the fuse. The best way to re-install the **Storage Drawer** into the **Storage Drawer Module** is to rest the two brass rollers at the rear base of the **Storage Drawer** onto the end of the contacts on the **Storage Drawer Module** base frame.

Then, hold the drawer parallel with the frame and then slide the two centre slide extrusions in to the roller bearings.



After the centre extrusion has passed the middle roller bearings, the rear stopper blocks can be re-installed by placing the blocks in the aligning holes and tightening the **4x M4 Allen Head Bolts** on each side. Please ensure all these bolts have the **M4 Spring Washers** installed. Do not over-tighten these bolts, just firm is enough (*a 7-9 on the screw clutch setting on a cordless drill is a good guide*). Repeat this process for the second drawer.



PLEASE NOTE

LHS BRASS ELECTRICAL CONTACT IS POSITIVE (+)
RHS BRASS ELECTRICAL CONTACT IS NEGATIVE (—)

DOUBLE DRAWER INSTALLATION

The fuse to the power supply can now be installed and the drawer LED strip lights check for function.

Check that the power supply to the drawers is functioning correctly. Open the drawer to full extension so that the brass electrical contacts, under the rear of the drawer frame, make contact. Check switch function. The LED Strip inside the drawer should light up. Push the drawer back in to the frame, the LED light will immediately switch off, this prevents the light from being left on, accidentally.

With a dry, clean cloth, wipe the aluminium channels clean and spray lightly, with a dry silicone lubricant. The production and install process, may attract dirt and grit to the channels that may effect drawers' performance and function.

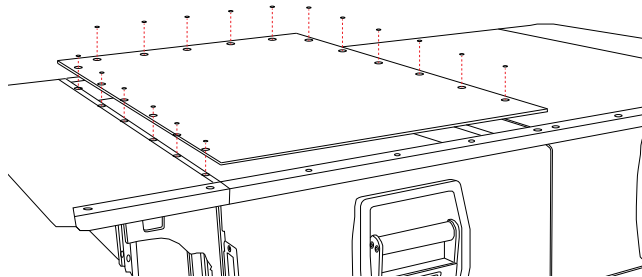
10 TOP PANEL INSTALLATION

The **Top Panels** can now be installed back onto the **Storage Drawer Modules**. Place the panel in position and locate a **M6 Bolt Thread** in each corner of the top.

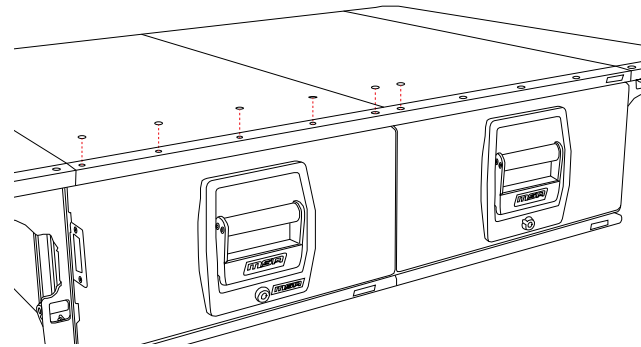
Ensuring the 4 corner bolts have started, the remaining **M6 Countersunk Allen Head Bolts** can now be re-installed and tightened. These need only enough torque to pull the bolt head down to carpet level.

PLEASE NOTE

A VERY LOW 3 TORQUE SETTING ON A CORDLESS DRILL IS ENOUGH TO TIGHTEN THESE BOLTS.



The double width top panel trim can now be installed, this is held into place with **Countersunk Self-Tap Screws**. Push the trim firmly over the end of the double carpeted **Top Panels** and centralise. Screw a **Countersunk Self-Tap Screw** to each end of the trim to secure it into place, taking particular care to install them in a perfect vertical line.



11 REINSTALL ALL WING PANELS

The matching wing panel trims can now be installed using the same process.



DRAWER REMOVAL

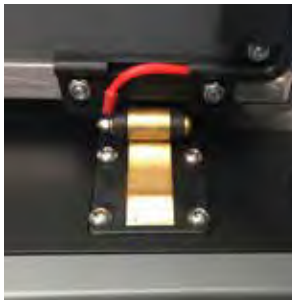
12 REMOVING THE DRAWERS AFTER INSTALLATION

MSA Storage Drawer Systems are designed to allow the easy removal of the drawers from the frames, without removing the **Top Panels** of the system.

Open the drawers to full extension, so the stay open contacts engage at the underside rear of the drawer.

Remove the fuse from the power supply to the drawers.

On each side of the sliding frame is a black injection moulded stopper block. With a small screwdriver, pry the



end cap away from the block, taking care not to mark the cap. This gains access to four **M4 Allen Head Bolts**.

Remove the four bolts on each side with a hex bit, taking care not to lose the washers.

After the two blocks have been removed, the two middle pieces of the over extension slide can be slid back into the frame and out of the way.



The drawer is now completely free from the frame and just resting on the contacts. It can be lifted away from the frame.

To re-install the drawers, follow the removal procedure in reverse. Align the middle sliding extension being careful to not cause any marking.

Sit the drawer rollers on the two contacts at the front of the frame.

Push the drawer three quarters of the way in to the middle slide extension while pulling the extensions out forward towards the front of the drawer frame. The stopper blocks can now be installed in both sides, taking care not to over-tighten. When all 8 bolts are installed and tightened, then replace the two end caps.

Replace the fuse in the power supply.





MAINTENANCE AND OPERATION

13 CARE AND MAINTENANCE

Clean any exposed parts regularly to ensure that bearings and bearing tracks remain free from dirt, sand and grit. Spray bearings with a dry silicon lubricant.

Wipe down powder coated Aluminium extrusions with clean, warm, soapy water using a soft cloth. Do not use harsh chemicals or thinner based cleaners on a **MSA Storage Drawer System**.

If Aluminium Panels are gouged, chipped or scratched, try touching up the damaged area with closely matching paint.

The LED Strip Light is designed to turn on at full extension. If the LED strip does not light up on full extension:

- Check power supply.
- Check the brass contacts are clean underneath the rear of the drawer.
- Check that the fuse in the fuse block is ok.

Carpet can be vacuumed or wiped with a wet sponge.

Trim can be touched up with a black permanent marker pen.



14 OPERATING INSTRUCTIONS

Open the Storage Drawer: Turn the supplied key to the right, then remove the key and pull on the blue Aluminium handle. This will release the drawer from the frame.

Turn on the LED strip light: Pull the drawer out to full extension. The drawer will roll over the first (small stage) of an electrical bumper to supply power to the LED strip light.

Keep the Storage Drawer open on a slope: Pull the drawer out a little further, the electrical contact will remain working and the drawer will then roll onto a stronger stage bumper which is the patented stay open/electrical contact device. This will keep the drawer open.

Turn off the LED strip light: The LED strip light can be turned off by the recessed switch on the outer side of the front panel. The LED strip light will only work when the drawer is fully open. This prevents leaving the light on and closing the drawer.

Close the Storage Drawer: A small push on the drawer face will push the drawer rollers over the stay open device. Pulling the handle is not required. Turn the supplied key to the left to lock the drawers while the vehicle is moving.



MSA 4X4 WARRANTY



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All MSA 4X4 Accessories products are designed and manufactured to the highest quality standards to perform as they should. We stand behind our products with a Lifetime Manufacturer's Warranty. All claims under this warranty should be made by returning the product at your cost to MSA 4X4 Accessories Pty Ltd, 43 Harrington Street, Arundel, QLD 4214, with the detail of the fault, proof of purchase, proof of identification and vehicle fitment details where relevant. Lifetime manufacturer's warranty applies to the original purchaser only.

If we determine that an MSA 4X4 Accessories product is defective in materials or workmanship during the Lifetime Warranty, we will either repair or replace the product. Repair or replacement is solely at the discretion of MSA 4X4 Accessories Pty Ltd. This warranty does not apply to failure or damage caused by incorrect or faulty fitment, accidental or intentional damage, misuse or abuse, failure of other products, operation of the product outside of its environmental or technical specifications, or repair or modification carried out by anyone other than MSA 4X4 Accessories Pty Ltd. No charges will be accepted for external labour or materials.

Lifetime warranty applies to all MSA 4X4 Accessories Fridge Slides, Fridge Barriers, Storage Drawers, and steel or aluminium products, excluding MSA 4X4's Driving Mirrors & Power Panels. MSA 4X4 Accessories Lifetime warranty does not cover any coating faults, rust, scratches, chips, carpet or battery packs. Fabric product Lifetime Warranty covers all manufacture and fabric components. Lifetime Warranty will not cover any fading of fabrics.

MSA 4X4 Accessories products are designed for lifestyle applications. Due to the harshness of the mining environment,

MSA 4X4 Accessories products used in mining applications that may be operating outside of their environmental and technical specifications are therefore excluded from a Lifetime Warranty. MSA 4X4 Accessories products used in mining applications are warranted for up to 1 year.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

DISCLAIMER

MSA 4X4 Accessories Pty Ltd is not liable to the buyer in contract or in tort arising out of, or in connection with, or relating to; (a) the performance of this product or any breach of these conditions; or (b) any fact, matter of thing relating to this product; or any error (whether negligent or in breach of contract or not) in information supplied to the buyer or a user before or after the date of the purchaser's or user's use of this product.



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