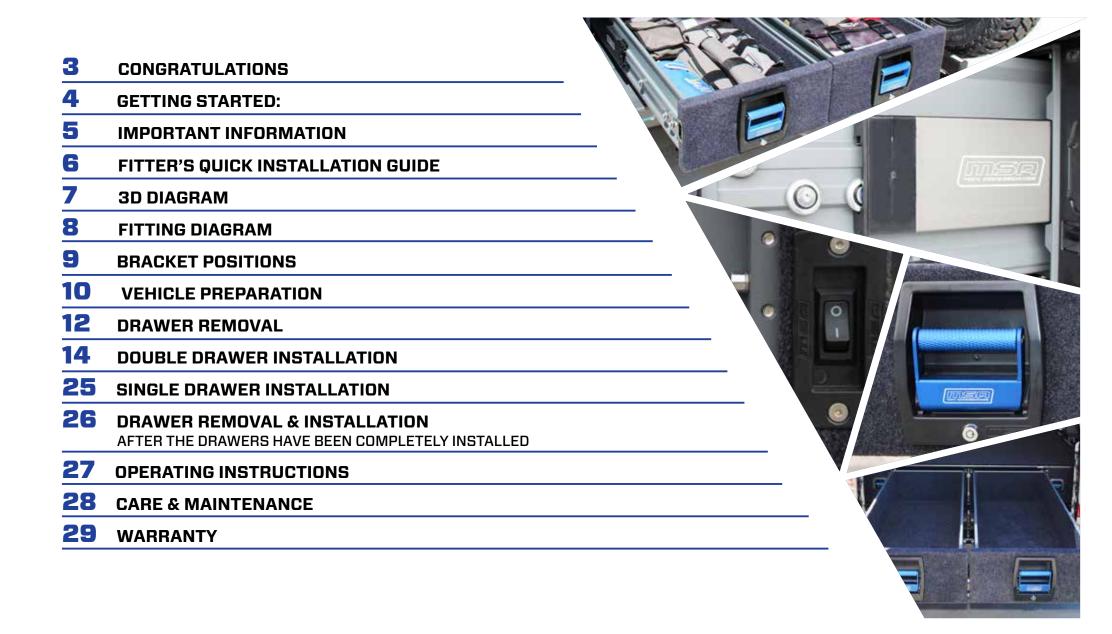


# FITTING INSTRUCTIONS TOYOTA LC200 LANDCRUISER 10/08 - CURRENT GXL/SAHARA/VX - EXP1030



# **CONTENTS**





# **CONGRATULATIONS ON YOUR PURCHASE OF A**QUALITY MSA 4X4 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 19 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.



## **GETTING STARTED:** Here's what comes in the box



### **IMPORTANT INFORMATION**

#### IMPORTANT INFORMATION

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

#### **MAINTAINING ADR COMPLIANCE OF YOUR 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 for the Toyota WFKLC200LE and WFKLC200RI 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 drawers may void the ADR compliance of the storage drawer system and/or the warranty.

#### **UNDERSTANDING DIFFERENCES BETWEEN LEFT & RIGHT HAND SIDE MODULES:**

MSA 4X4 storage drawer systems are of a modular design, they do come in left and right had side modules as the need for wires and switches must enter the frame from one side. The 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 & REAR DEFINITIONS FOR FITTING INSTRUCTION PURPOSES:

The "Front" is related to the front face of the 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  $\times$  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 OF CARGO BARRIER INSTALLATION:**

The top two bolts on both sides of the rear frame can be used for Cargo Barrier mounting, these points have been crash tested and are ADR Compliant when used with the supplied bolts.



The same second bolt down from the top only can be used as a Cargo Barrier mount and a Child Restraint point from the same bolt if needed. (see image above)

### FITTER'S QUICK INSTALLATION GUIDE

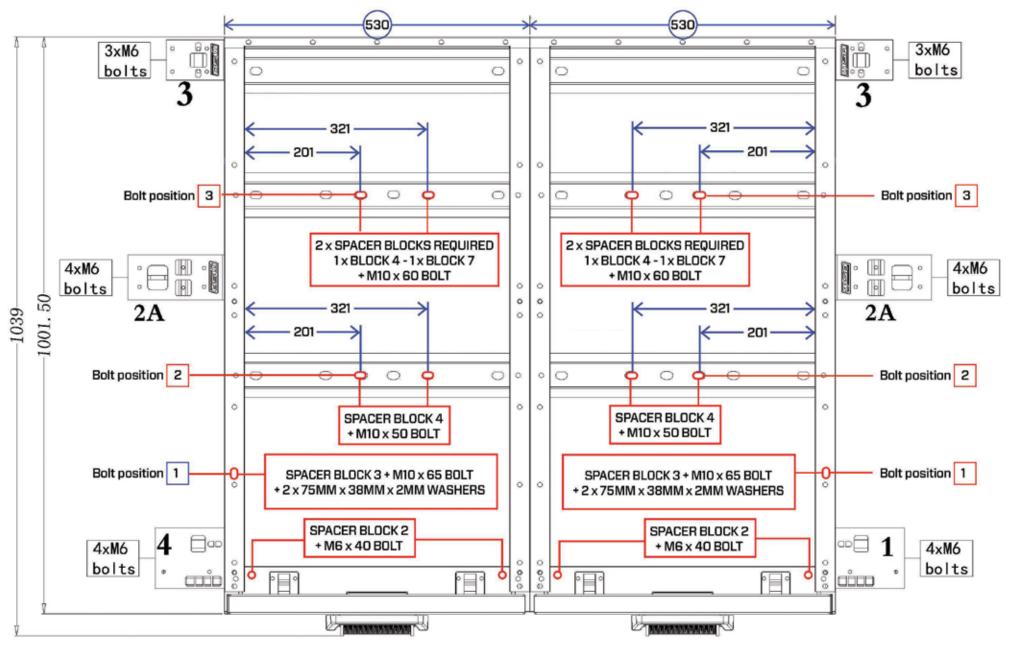
#### **TOYOTA LC200 LANDCRUISER**

- 1 Prepare vehicle by removing 3rd row of seats, any trims and carpet.
- 2 Remove drawer from frame if need not necessary but easier for handling and installing the frames.
- 3 Install Right (driver's) side module in to vehicle and loosely fit all bolts and spacer blocks
  - refer to fitting diagram for specific bolt and spacer block locations. (page 10)
- 4 Install Left (passenger's) side module into vehicle and loosely fit all bolts and spacer blocks refer to fitting diagram for specific bolt and spacer block locations. (page 10)
- 5 Join drawers with join kit bolts and tighten.
- 6 Prepare both drawers by installing any wing brackets or spacer blocks refer to fitting diagram for more detailed instruction.
- 7 Fit wing panels to give indication of drawer module position.
- **8** Centre the drawer frame in the car.
- **9** Tighten all fitting bolts to specified torque tensions.
- 10 Do any wiring required for power supply to drawer frames.
- **11** Re-install drawers into frame.
- 12 Check that drawers function correctly.
- 13 Remove wing panels and install large frame top panels then re-install all wing panels.
- 14 Install top panel front trim and install wing panel trims.

# **EXPLORER ALUMINIUM DRAWER SYSTEM**

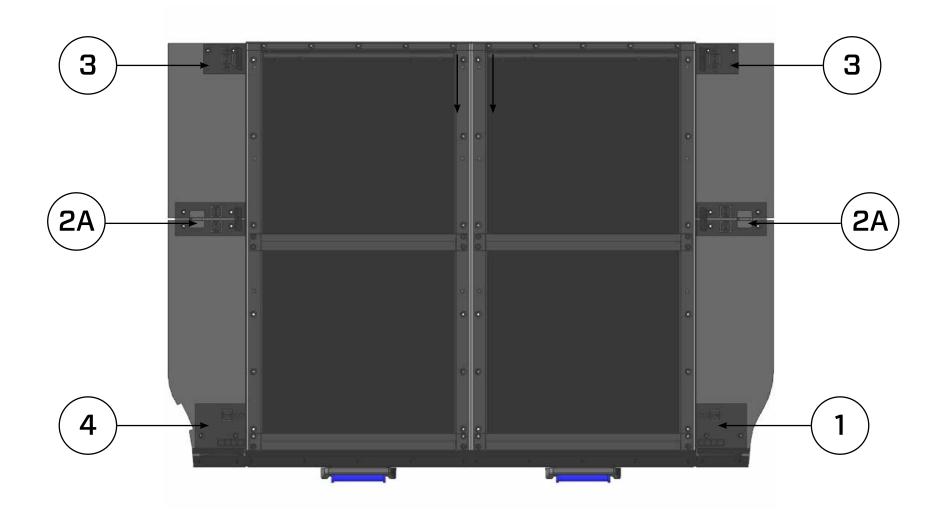


#### LANDCRUISER LC200 FITTING DIAGRAM



LEFT PASSENGER SIDE MODULE
FRONT OF DRAWER (BACK OF CAR)

# **BRACKET POSITIONS**



#### PLEASE FOLLOW THESE VEHICLE PREPARATION INSTRUCTIONS TO ENSURE THAT YOUR NEW EXPLORER ALUMINIUM STORAGE DRAWER SYSTEM IS INSTALLED CORRECTLY.

- Removal of the third row of seats and carpet is required for installation of the drawer system.
- 2 Remove the plastic trims on the base of the seats, remove the 4 x M10 bolts on each seat frame and remove the seats from the vehicle. (FIG. 1 & 1a)
- 3 Tuck the rear seat belt in to the seat belt clip located up on the trim sides.
- 4 Remove the 4 x plastic trims on the carpeted floor, these can be popped up by hand. (FIG. 2 & 2a)
- 5 Remove the tailgate trim by placing fingers under one end of the trim and popping out the clips along the length of the trim. (FIG. 3)
- 6 The carpet can now be removed from the rear of the vehicle. Note: There is a white plastic strip at the edge of the carpet with small clips in it, these clips can be released using a small flat blade screwdriver. Remove the carpet piece. (FIG. 4)











FIG. 1a FIG. 1

FIG. 2

FIG. 2a

FIG. 3

FIG. 4

## **VEHICLE PREPARATION**

- 7 Remove the piece of foam underlay from the vehicle (FIG. 5)
- **9** Clean any dirt or debris from the vehicle floor.







FIG. 6

### **DRAWER REMOVAL**

# PLEASE FOLLOW THESE DRAWER MODULE PREPARATION INSTRUCTIONS TO ENSURE THAT YOUR NEW EXPLORER ALUMINIUM STORAGE DRAWER SYSTEM IS INSTALLED CORRECTLY.

**Note:** Drawer preparation requires the drawer to be open to full extension. A long flat surface is required for this preparation.

**Tip:** 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.

- 1 Remove one drawer module from its packaging and place on a flat surface a 2.4 metre flat bench is recommended.
- Remove the carpeted top panel by removing the 17 x M6 countersunk allen head bolts (this is quickest with a cordless drill, 1/4 drive adapter and 1/4 drive 4mm hex head socket bit) set the panel aside. (FIG. 7 & 7a)

#### **DRAWER REMOVAL**

- 3 To remove the drawer, start by pulling the drawer out to 3/4 extension.
- 4 Support the end of the open drawer near the lock with a corner piece of packing from the box. (FIG. 8)

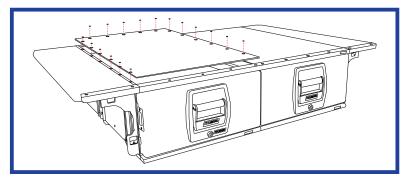






FIG. 7 FIG. 8

### **DRAWER REMOVAL**

- 5 You can now see the internal workings of the drawer system. Remove the two black injection moulded guide stopper blocks by removing the 4 x 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. (FIG. 9 & 9a)
- 6 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 slid forward and the drawer is free to be lifted clear of the frame. (FIG. 10 & 10a)
- 7 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.









**FIG. 10** 



**FIG. 10a** 

#### PLEASE FOLLOW THESE DRAWER MODULE INSTALLATION INSTRUCTIONS TO ENSURE THAT YOUR NEW EXPLORER ALUMINIUM STORAGE DRAWER SYSTEM IS INSTALLED CORRECTLY.

you will now need to mark and trim the rear air duct as this will fowl the two outside Block 4 & 7 bolt Position (3), this can easily be trimmed with left and right handed side cutters :Please note trimming as per the diagram will not affect the actual air duct operation. (fig 1, 2, 3 & 4)





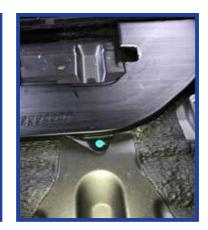




FIG. 1

FIG. 2

FIG. 3

FIG. 4

- 2 Replace the tailgate trim by positioning clips above holes and then push down firmly (FIG. 5)
- There are 2 x spacer blocks 2 (22mm thick with M6 threads installed) that need to be installed with 2 x M6 x 40mm bolts, flat and spring washers please refer to the diagram for the 2 x holes used for these two spacer blocks at the front of the frame. (FIG. 6)
- 4 With assistance, carefully place RHS drawer frame into vehicle. The front black aluminium base of the drawers will roughly align with the rear of the tailgate trim.
- It is now time to install High Tensile bolts and washers in to the existing vehicle threads. Note: There are 5 x M10 High Tensile Allen Head bolts with specific washers used for each module in the LC200.
- Starting with bolt position 1 on the outside of the frame. Assemble the bolt and washers in order of the diagram. Place the M10 H/T bolt/washer assembly through the M13 hole in the OUTSIDE of base frame. Install spacer block 3 under the frame and push the bolt through and hand tighten the bolt in to the respective thread in the vehicle floor. **Note:** This spacer block under the frame is specifically tapered on the base side to match the floor of the LC200, it needs to be installed in the correct direction longways with the frame. **(FIG. 7)**









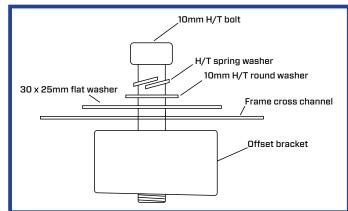


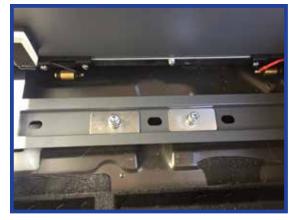
FIG. 5 FIG. 6

Note: Allen Key will be required for tightening of this bolt

**FIG. 7** 

- Align the drawers so the bolt positions 2 and 3 are directly above the respective vehicle M10 threads in the floor.
- 8 Place all 4 x spacer blocks under the cross channels to level out the drawer frame in the vehicle.
  - Note: refer to the diagram for spacer block numbers and positions.
- Assemble the 2 x M10 High Tensile bolts and washers as per the diagram into position (2) threads and hand tighten Spacer block (4) is used here which is 20mm thick. Slight movement of the drawer frame side to side will assist to locate the M10 bolts in their threads. (FIG. 8)
- Assemble the 2 x M10 High Tensile bolts and washers as per the diagram in to position 3 threads and hand tighten spacer block  $1 \times 4$  &  $1 \times 7$  is used here which is 25mm thick. Slight movement of the drawer frame side to side will assist to locate the M10 bolts in their threads. (FIG. 9)
- 11 If this is a double drawer installation, now install the second drawer frame into the vehicle.

Note: Leave all 5 x bolts loosely installed and hand tight until module is aligned.





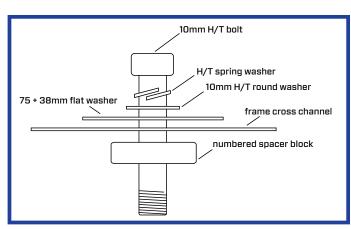
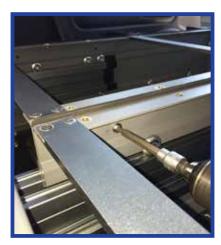


FIG. 8

FIG. 9

- The same installation process is to be followed on the LHS drawer as was done on the RHS drawer to install all  $5 \times M10$  High Tensile bolts and washers.
- 13 When all 10 x M10 High Tensile bolts have been installed loosely it is now time to join the drawer frames.
- There are 8 x M8 Allen Head bolts and nyloc nuts used to join the drawer frames. Starting at the front and rear top of the frame, place an M8 bolt through the two top holes that are aligned in the frames for joining. It is easiest to use a cordless drill with adaptor and an M5 hex head socket bit and a 13mm spanner. Place the M8 nyloc nut on the other side of the frame. (FIG. 10)
- Starting at the front top of the frame, ensure frame tops and the front black aluminum bases' are perfectly level and tighten the front top bolt. Now repeat this process for the rear top bolt.
- 16 Now install the remaining 2 x M8 top row bolts and tighten.
- Working from the front to back, now install the bottom 4 x M8 bolts and nuts and tighten.



**FIG. 10** 

#### **RIGHT SIDE (DRIVER) DRAWER PREPARATION**

- Starting with bracket number 1 install at the front of the RHS of the frame through the pre-drilled holes using 4 x M6 hex head bolts, use a 10mm socket and extension bar to install these bolts, flat and spring washers. Install the bolts from the inside of the frame out into the bracket. Leave all bolts loosely installed until all 4 are started, then align the bracket parallel with the front of the drawer frame and tighten all four bolts with the 10mm socket. (FIG. 11 & 12)
- Install bracket number (2A) in the middle pre-drilled holes of the RHS of the drawer frame following the procedure for bracket 1. (FIG. 13)
- Install bracket number (3) to the rear RHS of the frame. This is a small bracket to clear the vehicle wheel arches.

  PLEASE NOTE: only three (3) bolts are to be used in this bracket, the top two and one lower at the rear of the frame. Use the 3 x M6 allen head bolts and washers (FIG. 14) following the same tightening procedure as brackets 1 and 2 to fasten the bracket. (FIG. 15)











#### **LEFT SIDE (PASSENGER) DRAWER PREPARATION**

- Starting with bracket number 4 install at the front of the LHS of the frame through the pre-drilled holes using 4 x M6 hex head bolts, flat and spring washers. Screw the bolts from the inside of the frame out in to the bracket. Leave all bolts loosely installed until all 4 are started, then align the bracket parallel with the front of the drawer frame and tighten all four bolts. (FIG. 16)
- 22 Repeat the remaining process for left (LHS) drawer with all remaining brackets and spacer blocks.



FIG. 16

- 23 The drawers can now be centralised in the car by measuring both sides of the frame to align to the vehicle trim. (FIG. 17 & 18)
- Now is a good time to remove the four top wing panels from the box and Install the two black C clips on each wing panel by installing 2 x M4 allan head bolts and firmly tighten without crushing the clip. (FIG. 19) Place all four of these wing panels into place just to double check your positioning and alignment of the drawers.
- All 10 x M10 high tensile bolts can now be tightened with an M8 hex head socket bit and torqued down to 30ftlb (40.6 Nm) using a torque wrench. (FIG. 20 & 21)
- **26** Remove the wing panels from the storage system.
- Now is the time to take care of any wiring to the drawer frames. The power supply to the frames can be joined by feeding the supplied drawer joining wire (item14), under the drawers in the base of the frame. Please be sure to cable tie or tape these wires out of the way of the sliding drawer base, leaving the fuse blocks outside the drawer frame.
- Now check that the power supply to the 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).



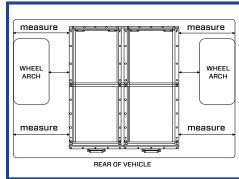








FIG. 17 FIG. 18 FIG. 19

) FIG. 20

FIG. 21

#### **DRAWER RE-INSTALLATION**

- Now it is time to place the drawers back into the frame. First remove the fuse in the power supply to the drawers, as allowing the drawer frame to touch the main frame may blow the fuse. The best way to re-install the drawer into the frame is to rest the two brass rollers at the rear base of the drawer onto the end of the contacts on the base frame (FIG. 1)

  Then, hold the drawer horizontally parallel with the frame and then slide the two centre slide extrusions in to the roller bearings. (FIG. 2 & 3)
- 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 4 x M4 allen head bolts on each side. Please ensure all these 8 bolts have the 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. (FIG. 4)
- 3 The fuse to the power supply can now be installed and the drawer LED strip lights check for function.
- 4 Check that the power supply to the drawers is functional by opening 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. When pushing the drawer back in to the frame, the LED light will immediately switch off, to prevent the light from accidentally being left on.

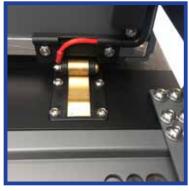








FIG. 1 FIG. 2

FIG. 3

FIG. 4

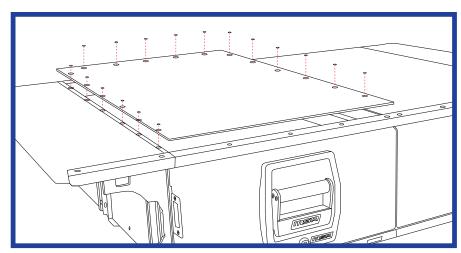
The top panels can now be installed back onto the drawer frames. Place the panel in position and locate a M6 bolt thread in each corner of the top. (FIG. 5 & 6)

Ensuring the 4 corner bolts have started, the remaining  $13 \times M6$  top hex head bolts can now be re-installed and tightened. These need only enough torque to pull the bolt head down to carpet level.

**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 10 x small stainless steel countersunk self-tap screws, push the trim firmly over the end of the double carpeted panels and centralise. Install 1 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. (FIG. 7, 8 & 9)
- 7 Reinstall all wing panels.
- The matching wing panel trims can now be installed using the same process. (FIG. 10)
- 9 The drawer System is now completely installed and ready for use. (FIG. 11)



**Note:** If a slide is to be mounted to the top of the drawer panels, the wing panels can be bolted down to the brackets with  $4 \times M6$  countersunk allen head bolts supplied in the wing kit. Use a sharp pointed device to locate the  $4 \times M6$  bolts can then be installed through these holes into the threads in the wing brackets and tightened down to a flush carpet level. There are  $4 \times M6$  bolts in each panel. **(FIG. 12)** 

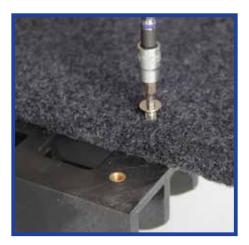


FIG. 12

### **SINGLE DRAWER INSTALLATION**

#### SINGLE DRAWER INSTALLATION

Refer to double drawer installation **pages 15 - 24**, ignoring any instructions referring to double drawers.

**Note:** If carpet is to be installed on the side of the single drawer, this can be adhered using a spray contact adhesive. (Single drawer side frame carpet pieces can be purchased for your Explorer Aluminium Storage Drawer System)

Part No: E1030-ESIN-CARP

# The MSA 4X4 Aluminium Drawer systems have been expertly designed to allow easy removal of the drawers from the frames if needed, without the need to remove the top decks of the system.

- 1 Open the drawers to full extension and the stay open contacts engage at the underside rear of the drawer. (FIG. 1)
- 2 Remove the fuse from the power supply to the drawers.
- On either side of the sliding frame are two black injection moulded stopper blocks. These two blocks need to be removed to remove the drawer from the frame.
- With a small screwdriver, pry the end cap away from the block, taking care not to mark the cap. Once removed, this will then give access to 4 x M4 allen head bolts with spring washers. (FIG. 2)
- Femove these 4 bolts on each side with a hex bit and take care not to lose the washers. (FIG. 3 & 4)
- 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. (FIG. 5)
- 7 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 procedure in reverse, taking care to align the middle sliding extension carefully to not cause any marking.

- 1 Sit the drawer rollers on the two contacts at the front of the frame. (FIG. 1)
- 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.
- **3** Replace the fuse in the power supply.

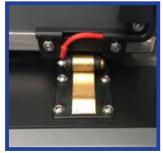










FIG. 1 FIG. 2

FIG. 3

FIG. 4

FIG. 5

### **OPERATING INSTRUCTIONS**

- To open the 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.
- For LED strip light function; 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.
- To 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.
- 4 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.
- To close the storage drawer; the drawer can be pushed closed without pulling the handle, a small push on the drawer face will push the drawer rollers over the stay open device.
- 6 The drawer can be pushed shut and key locked if necessary.

### **CARE & MAINTENANCE**

- Clean any exposed parts regularly to ensure that bearings and bearing tracks remain free from dirt, sand and grit, and spray bearings with INNOX / WD-40.
- Wipe down powdercoated aluminium extrusions with clean, warm, soapy water using a soft cloth. Do not use harsh chemicals or thinner based cleaners on your Explorer Aluminium 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 first check power supply then 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.

### LIFETIME GUARANTEE



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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 is applicable 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 for 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.