

OWNER'S MANUAL

MANUAL P/N: 77700-07221

Kubota®

CAB ENCLOSURE

***p/n: 77700-VC5045 (VC5045) fits vehicle SN 61996 and below
p/n: 77700-VC5045A (VC5045A) fits vehicle SN 61997 and above
(also backwards compatible)***



For use with KUBOTA RTV X1140

Rev. J, 03/20/2024

**PLEASE READ THIS MANUAL CAREFULLY
KEEP READY AT ALL TIMES**

INTRODUCTION

This is the owner's manual for the cab enclosure kit for the Kubota RTV X1140. This manual includes installation of the cab onto the vehicle, and notes for conversion of the vehicle from four to two passenger modes as it relates to the cab.

IMPORTANT:

- Windshield assembly (VC5025, VC5023, or VC5020) must be installed prior to installation of cab enclosure.
- If installing work lights, it will ease assembly to install lights onto the canopy prior to installing canopy onto vehicle.
- If installing a 4-way flasher kit, it will ease assembly to install lights onto the rear header before installing header to vehicle.
- If installing a Vinyl Center Curtain, the curtain must be installed prior to installing canopy onto vehicle.

Approximate installation time: 4 Hours (not including accessories or other cab components)



SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.



DANGER:

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING:

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION:

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT:

Indicates that equipment or property damage could result if instructions are not followed.

NOTE:

Gives helpful information.

Legal Disclaimer

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CALIFORNIA PROPOSITION 65



WARNING:

Cancer and reproductive harm -
www.P65Warnings.ca.gov

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SAFETY INFORMATION



WARNING:

TO PREVENT SERIOUS PERSONAL INJURY OR DEATH:

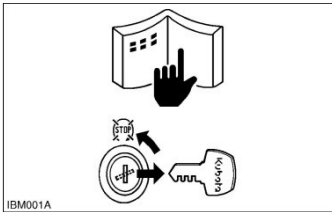
- This cab enclosure adds an additional 335lbs (152Kg) to the weight of the base vehicle, not including windshield, canopy or other accessories. Deduct the accessory's total weight from the vehicle's rated capacity including driver and passenger. Never operate the vehicle outside of its rated weight capacity. The additional weight could affect the center of gravity of the unit, therefore additional care should be taken during operation.
- Use proper personal protective equipment (PPE) during all phases of installation, removal and operation.
- Exposure to carbon monoxide can cause illness, serious injury or death. Never operate vehicle if suspicious of carbon monoxide. Inspect exhaust system for leaks monthly. Leaks can result from loose connections, corrosion, cracks or other damage to the exhaust manifold. If leaks are found, repair or replace exhaust system. Do not use vehicle until repair or replacement is complete.

Serious injury or death:

- This cab enclosure does not provide additional protection from rollover or other accidents.
- This cab enclosure is not certified to provide protection from flying objects including golf balls.
- This cab enclosure does not provide protection from lightning. When lightning threatens, take cover and do not operate vehicle.



GENERAL SAFETY INFORMATION

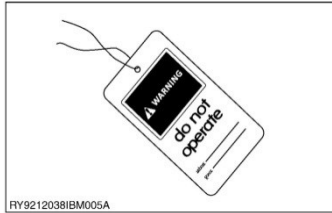


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BEFORE YOU START SERVICE

- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a stable and level ground, and set parking brake.
- Lower the implement to the ground.
- Stop the engine, then remove the key.
- Disconnect the battery negative cable.
- Hang a "DO NOT OPERATE" tag in the operator station.

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- When performing maintenance on the equipment, hang the DO NOT OPERATE sign where it will be obvious from and around the driver's seat
- When performing maintenance or repairs, always lower attachments to the ground, stop the engine and secure the tracks with blocks.
- When performing maintenance on the equipment, always disconnect the negative battery cable.
- Before using tools, make sure you understand how to use them correctly and use tools in good condition and of the right size for the job.

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IBM002A

START SAFELY

- Do not do the procedures below when you start the engine
 - short across starter terminals
 - bypass the safety start switch
- Do not alter or remove an part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged position.
- Do not start the engine when you stay on the ground. Start the engine only from operator's seat.

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STARTING THE MACHINE SAFELY

- Before starting the engine, always sit in the driver's seat and make sure the area is safe and clear.
- As it is dangerous, never start the engine from anywhere but the driver's seat
- Always check and make sure control lever(s) are not engaged before starting the engine.
- Never start the engine by hot-wiring the starter circuit. This is not only dangerous, but many damage the machine.

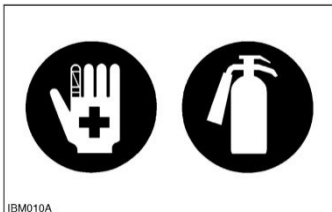
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- Wear clothes appropriate for working on equipment. Do not wear loose-fitting clothes as they may catch on the machine controls.
- When working on the equipment, use all safety gear, such as a helmet, safety glasses and shoes, that are required by law or regulation.
- Never perform maintenance while drowsy or under the influence of alcohol or drugs.

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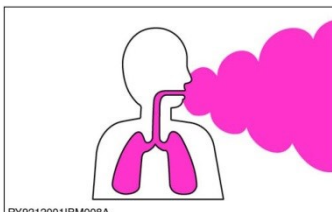


IBM010A

BE READY FOR AN EMERGENCY

- Keep a first-aid kit and fire extinguisher close at hand so you can use it when needed.
- Keep emergency contact information for doctors, hospitals and ERs handy.

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KEEP A GOOD AIRFLOW IN THE WORK AREA

- If the engine is in operation, make sure that the area has good airflow. Do not operate the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.

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NO SMOKING OR OPEN FLAMES WHILE FUELING

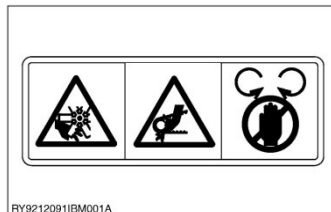
- Fuel is extremely flammable and dangerous. Never smoke near fuel. If fuel is spilled on the machine, its engine, or electrical parts, it may cause a fire. If fuel is spilled, wipe it all up immediately.
- Never smoke while filling machine with fuel. And always tighten the fuel cap securely and wipe up any spilled fuel.

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- Do not remove the radiator cap when the engine operates, or immediately after it stops. If not, hot water can spout out from radiator. Only remove the radiator cap when it is at a sufficiently low temperature to touch with bare hands. Slowly loosen the cap to release the pressure before you remove it fully.



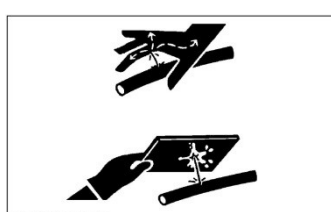
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- The engine, muffler, radiator, hydraulic line, etc., have parts that remain very hot even after the engine has been stopped. Be sure to avoid these parts, as touching them can result in burns. Radiator coolant, hydraulic fluid and oil also remain hot. Therefore, do not attempt to remove caps and plugs, etc., before these fluids have sufficiently cooled.
- Make sure the coolant temperature has dropped sufficiently before opening the radiator cap. Also since the inside of the radiator is pressurized, when removing the cap, first loosen it to release the pressure before removing the cap completely.



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- Grease is under high pressure inside the hydraulic cylinder. It is very dangerous to loosen a grease nipple quickly as it may shoot off. Always loosen grease nipples slowly.
- And never face a grease nipple while loosening it.

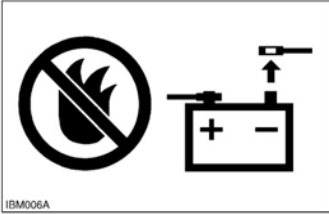


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- The pressure in the hydraulic circuit stays at pressure even after the engine stops. Before removing parts, such as hydraulic devices from the machine, first release the pressure. Please note that when releasing residual pressure, the machine itself and/or implements may move without warning, so be very careful when releasing the pressure.
- Oil gushing out under pressure is extremely dangerous as it may pierce your skin or your eyes. Similarly, oil leaking out of pinholes is not visible. So when checking for oil leaks, always wear safety glasses and gloves and use a piece of cardboard or a wool block to shield yourself from oil.
- Do not open a fuel system under high pressure. The fluid under high pressure the stays in fuel lines can cause serious injury. Do not disconnect or repair the fuel lines, sensors, or any other components between the fuel pump and injectors on engine with a common rail fuel system under high pressure.
- Put on an applicable ear protective device (earmuffs or earplugs) to prevent injury against loud noises.
- Be careful about electric shock. The engine generates a high voltage of more than DC100 V in the ECU and is applied to injector.



GENERAL SAFETY INFORMATION



IBM006A

PREVENT A FIRE

- Fuel is very flammable and explosive under some conditions. Do not smoke or let flames or sparks in your work area.
- To prevent sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- The battery gas can cause an explosion. Keep the sparks and open flame away from the top of battery. Especially when you charge the battery.
- Make sure that you do not spill fuel on the engine.

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DISPOSE OF WASTE FLUIDS PROPERLY

- Never dispose of waste fluids on the ground, in the gutter, a river, pond or lake. Always dispose of hazardous substances like waste oil, coolant and electrolytic fluid in accordance with the relevant environmental protection regulations.
- Keep the safety plates clean so they can be read. If a safety plate is damaged and comes off or becomes illegible, put a plate with the same warnings back in its place.

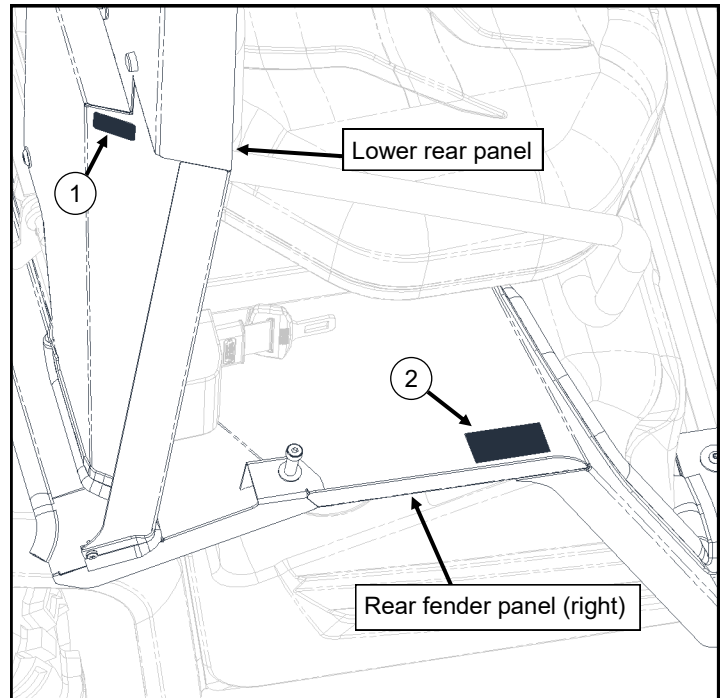
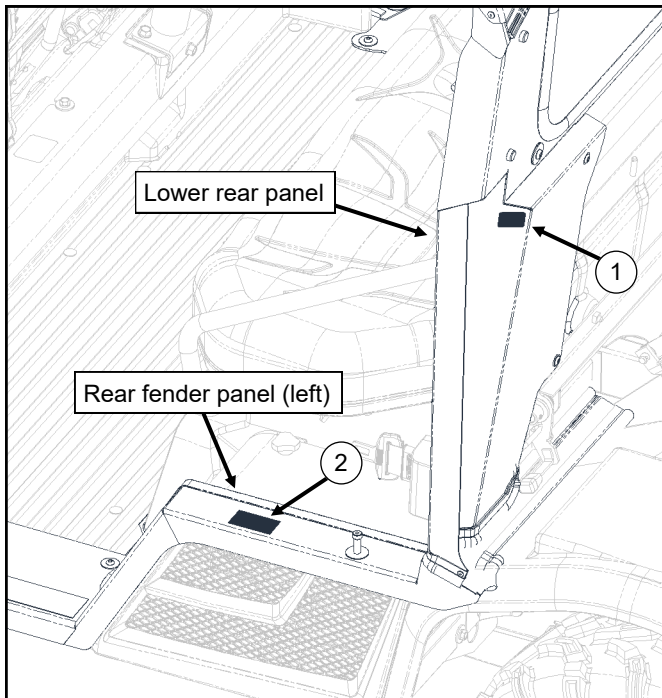
DECALS AND PLACEMENT

IMPORTANT: Keep all decals clean and legible. Replace all missing, illegible, or damaged decals.

IMPORTANT: Decal placement locations shown are approximate; decals should not be placed in a location where the operator's field of view is impeded, and should not cover any portion of other decals installed in the same vicinity.

INSTALLING OR REPLACING DECALS: Thoroughly clean the area where decal is to be placed using mild soap and water. Allow the surface to fully dry. Remove the backing from the decal, exposing the adhesive surface. Apply the decal to the recommended position shown in the diagram below and smooth out any bubbles.

- **WARNING: PINCH POINT - 9DL-150**
Located on left and right sides of Lower Rear Panel
- **CAUTION: NO STEP - 9DL-197**
Located on top surface of left and right Fender Panels.



1) WARNING: 9DL-150

2) CAUTION: 9DL-197



OPERATION

CAUTION: The additional latches, upper and lower rear panels present potential pinch points which may cause personal injury.

IMPORTANT: The addition of a cab requires extra steps to convert from four passenger to two and back, due to the rear panel latches, upper and lower rear panels.

Four Passenger to Two Passenger Conversion:

- 1) Open both rear doors. **NOTE:** the rear doors may remain on the vehicle and will not interfere with the operation of the cargo bed. The rear doors will latch securely in two-passenger mode.
- 2) Lift and rotate the seat bottom forward. **IMPORTANT:** if the rear seat is not forward, the rear seat back assembly may damage the rear seat cushion.
- 3) Open both cabin rear panel latches by lifting the latch tab, rotating the tab counter-clockwise and pulling up on the tab.
- 4) Pull up on the rear seat latch handle behind the driver's side of the seat, lift and rotate the rear seat back assembly forward. Secure the seat back with the rubber tethers on the front side of the rear passenger compartment.
- 5) Rotate the upper rear panel up and forward. Then, lock the panel into the latch on the driver's side.
- 6) Close or remove the rear doors as desired.

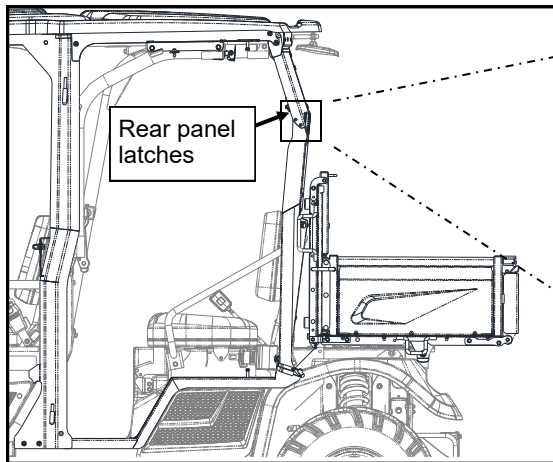
When Converting from Two Passenger to Four Passenger:

Convert from two passenger to four passenger in reverse order of the above with the following exceptions:

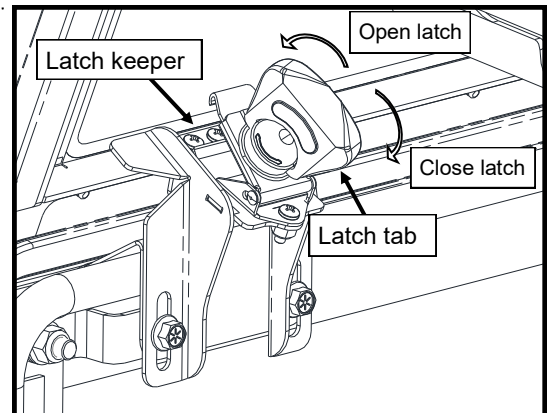
- Release the upper rear panel from its latch first by pressing down on the release lever above the front of the upper rear panel, on the driver's side of the cab.

NOTE: The upper rear panel must be behind the lower rear panel for proper fit and seal.

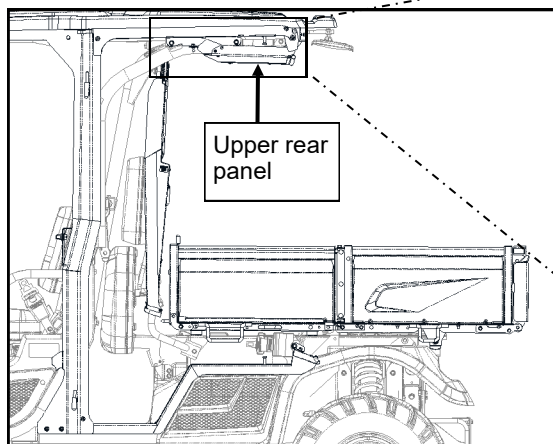
- The lower rear panel may need to be shifted side to side to align to the fender panels.
- Make sure to lift the center seat belt catches above the seat bottom.



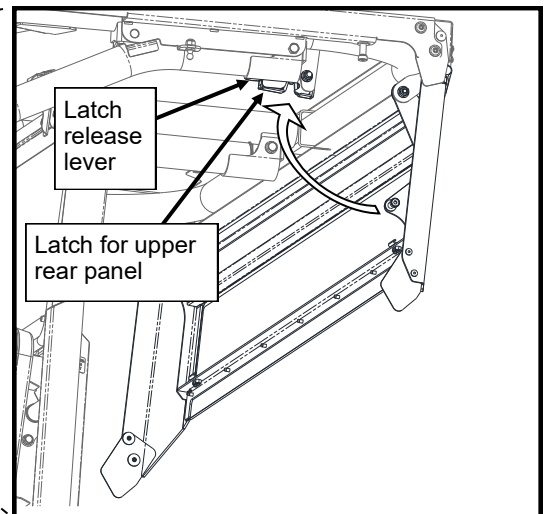
Four Passenger Configuration
(shown with doors removed)



Rear Panel Latches



Two Passenger Configuration



Upper Rear Panel

CARE AND MAINTENANCE

IMPORTANT:

- **NEVER USE** AN ABRASIVE DETERGENT / VEHICLE CLEANER OR A WIRE BRISTLED BRUSH. Do not use any **CITRUS-BASED CLEANERS** such as orange or lemon.
- **NEVER USE** AN ALCOHOL-BASED PRODUCT FOR CLEANING THE PLASTICS. Many brand-name glass cleaners contain alcohol that will result in deterioration of the plastics.
- Check and tighten all hardware after 20 hours of operation.
- Periodically inspect and tighten hardware for the remainder of the unit's service life.
- Keep the components clean in order to prevent dust and dirt from forming an unattractive film. The life of your cab components depend upon following these care procedures:
- Clean the enclosure surfaces thoroughly with warm soapy water and a COTTON cloth or chamois. Be sure to use mild soap, specifically a dish liquid or equivalent. Clean in a light circular motion for best results.
- Remove grease and oil with mineral spirits, and a COTTON cloth or chamois.

INSTALLATION

All installation procedures listed within this manual are generally representative of the machine model for which the manual is written. Your machine may be configured differently (e.g. SP1 vs. SP2, etc.), but the outline for the procedure should still be followed. For further support for any issues not covered within the pages of this manual, please contact your local Kubota representative.

WARNING:

REQUIRED BEFORE INSTALLATION:

1. Read and understand this entire manual and any other publications for the equipment being operated.
2. Ensure that the surrounding area is clear and that personnel are positioned away from the area where engagement and disengagement of attachments will occur.
3. Always shut off engine when leaving the operator's area to perform any portion of the listed procedures.

IMPORTANT:


- Windshield assembly (VC5025, VC5023, or VC5020) must be installed prior to installation of cab enclosure.
- If installing work lights, it will ease assembly to install lights onto the canopy prior to installing canopy onto vehicle.
- If installing a 4-way flasher kit, it will ease assembly to install lights onto the rear header before installing header to vehicle.
- If installing a Vinyl Center Curtain, the curtain must be installed prior to installing canopy onto vehicle.

TOOLS REQUIRED:

- | | | |
|--|--|---------------------------------------|
| <u>Open ended wrenches or sockets:</u> | Allen Wrenches (T-handle recommended): | • Torque Wrench and Ratchet |
| • 3/4" | • 17mm | • Cordless drill and 11/32" drill bit |
| • 1/2" | • 14mm | • Needle Nose Pliers |
| • 7/16" | • 12mm | • Grease |
| • 3/8" | • 5mm | • Measuring Tape |
| | • 5/32" | |
| | • 3/16" | |

STEP 1: Vehicle Preparation

- Convert the Cargo Bed into the shorter four-seat configuration, raise the Cargo Bed to its highest angle and set the bed lock. The cargo bed should remain raised until cab installation is complete.

 **WARNING:** Failure to install the lock on the cargo bed may result in personal injury or damage to cab components

STEP 2: Canopy Mounts and Windshield

- Install the Canopy Mounts and Windshield per the windshield installation manual. Do not tighten any bolts until the full cab assembly is complete.

NOTE: If a canopy is already installed on the vehicle, remove the canopy and retain all bolts, washers and nuts used to secure the canopy. Re-install the six M10 bolts into the top of the vehicle ROPS. Remove and discard the P-clamps that were holding the canopy.

INSTALLATION

STEP 3: Lower Rear Panel Mounts

- 3.1 Convert the rear seat into its forward, two-seat configuration.
- 3.2 Remove the bracket holding the seat support rod to the seat back (Figure 3.2) and install the Rear Panel Mount between the bracket and the seat frame. Reinstall the seat support bracket with the original fastener. Align the lower hole of the mount to the hole in the seat frame. Then, install one flanged hex 1/4-20 x 3/4" bolt and flanged nut. Repeat for the opposite side.
- 3.3 Torque both seat support bracket bolts to 19 ft-lbs. (25.8 N-m), and the lower 1/4-20 bolts to 10ft-lbs. (13.5 N-m).

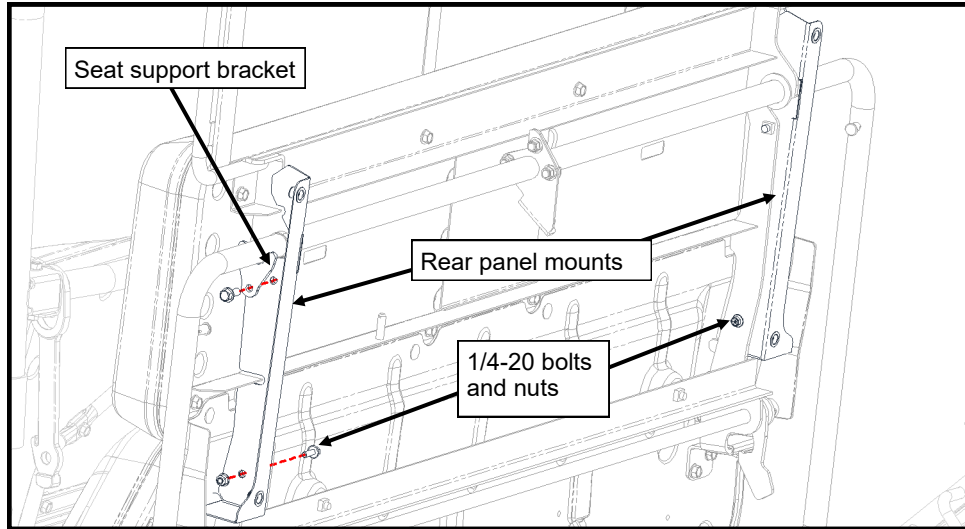


Figure 3.2: Lower Rear Panel Mounts

STEP 4: Lower Rear Panel

- 4.1 Move the seat back into its rear position and latch it into place.
- 4.2 **IMPORTANT:** Remove the protective film from the inside of the window on the lower rear panel.
- 4.3 Place the lower rear panel onto the seat back, with the tabs at the top of the panel hooked over the seat screen frame (see Figure 4.1). Align the holes in the panel to the threaded inserts in the rear panel mounts and secure the panel with four 5/16-18 x 3/4" bolts (see Figure 4.2). Center the lower rear panel on the rear seat back and tighten the bolts snug.

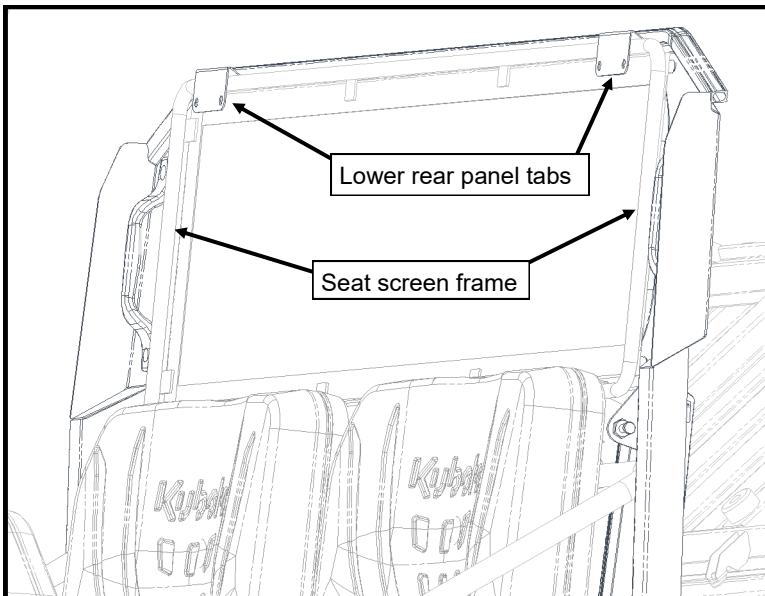


Figure 4.1: Lower Rear Panel onto Seat Screen

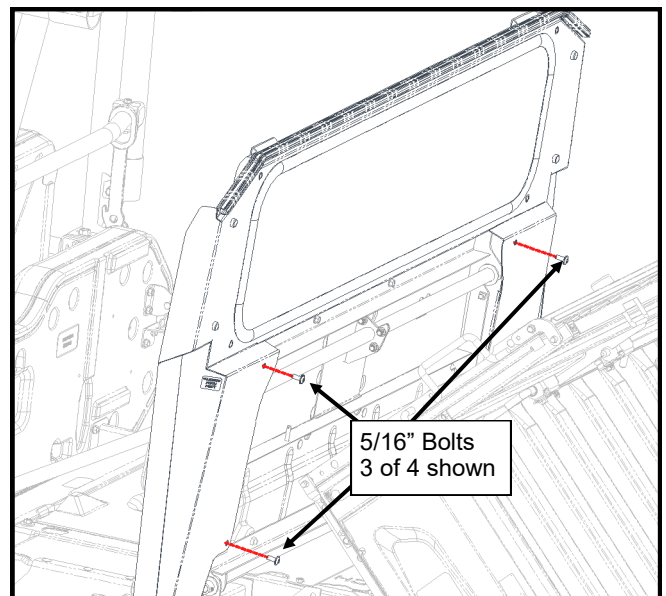


Figure 4.2: Lower Rear Panel onto Seat Screen

INSTALLATION

STEP 5: Rear Fender Panels

- 5.1 Move the rear seat back to its forward position.
- 5.2 Remove the two plastic tree plugs shown from the rear floor pan. Remove the M10 nut from the seat belt retractor for the rear seat (see Figure 5.2). Do not remove the seat belt retractor or washers.
- 5.3 Slide the fender panel under the frame for the seat belt, over the stud for the seat belt and outside the seat belt retractor (see Figure 5.2). Install two 1/4-20 x 3/4" button-head bolts and fender washers through the floorboard and secure with 1/4-20 nuts under the floor pan (see Figure 5.3). Leave loose.
- 5.4 Install the nut for the seat belt retractor, set the slot of the fender bracket approximately centered on the seat belt stud and tighten snug. Ensure the seat belt retractor rotates freely.
- 5.5 Repeat steps 5.2 through 5.4 for the other side.

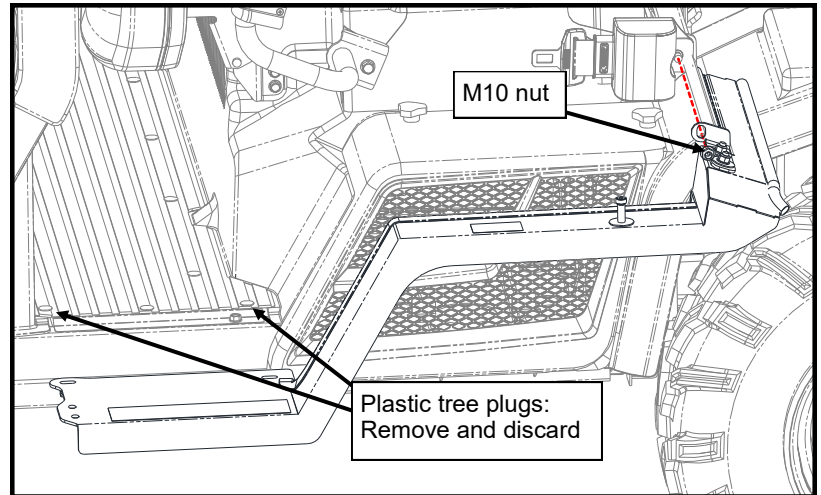


Figure 5.2: Rear Fender Panel (Driver's side shown)

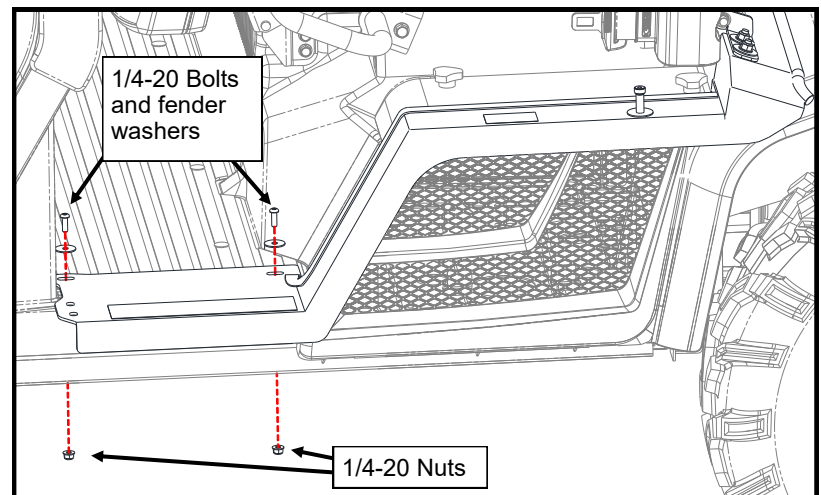


Figure 5.3: Rear Fender Panel (Driver's side shown)

INSTALLATION

STEP 6: B-Pillar Panels

- 6.1 For each side, remove and retain both M12 bolts at the base of the center, side pillar of the ROPS (see Figure 6.1)
- 6.2 For each side, remove and retain the M10 bolt from the side of the ROPS, just forward of the center pillar (see Figure 6.2). These bolts will be used later to secure the front side headers.
- 6.3 Place the B-Pillar over the center side ROPS pillar and secure it with the removed M12 bolts.
- 6.4 Adjust the B-pillar to be centered in the slots with the lower section of the B-pillar as close to parallel to the ROPS as possible. Tighten the M12 bolts snug but do not apply final torque.
- 6.5 Install a floorboard bracket at the corner above the floorboard and inside the B-pillar (see Figure 6.1). Attach the bracket to the B-pillar with three 5/16-18 X 3/4" flanged button head bolts and nuts inside. Push the B-pillar against the floorboard to remove any gap and secure the bracket to the floorboard with two 5/16-18 X 3/4" flanged button head bolts and nuts underneath. Tighten snug but do not apply final torque.
- 6.6 Repeat for the other side.

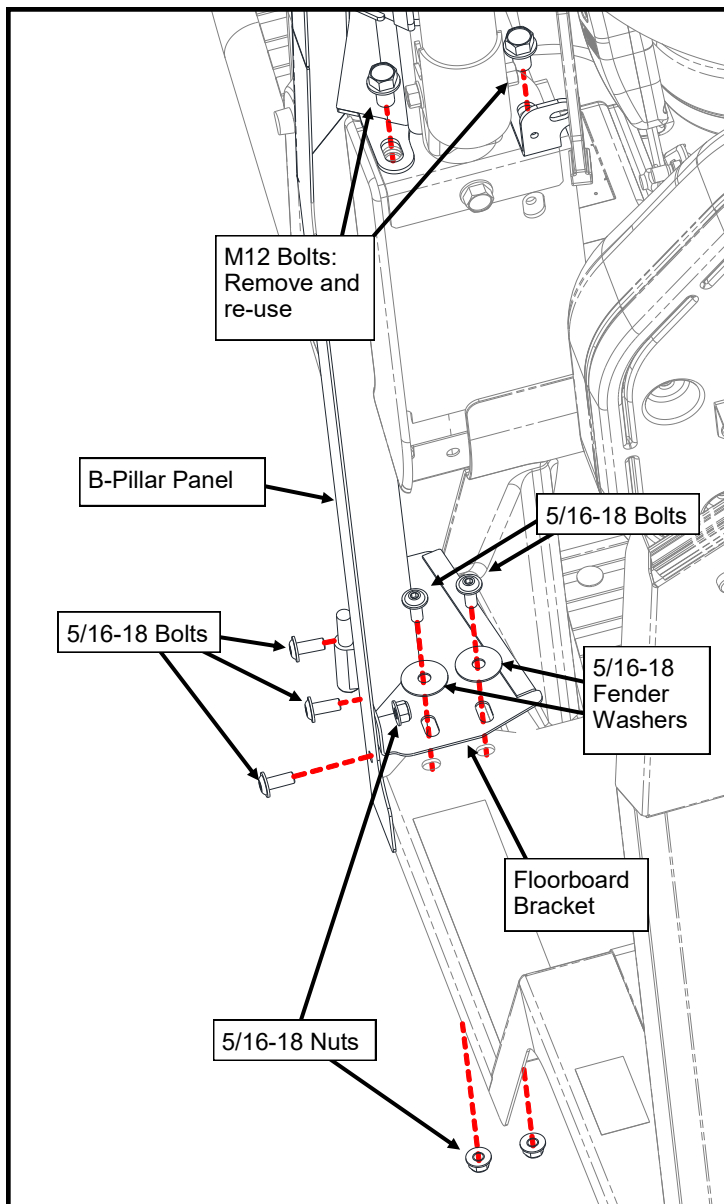


Figure 6.1: B-Pillar Center and Lower Bolts

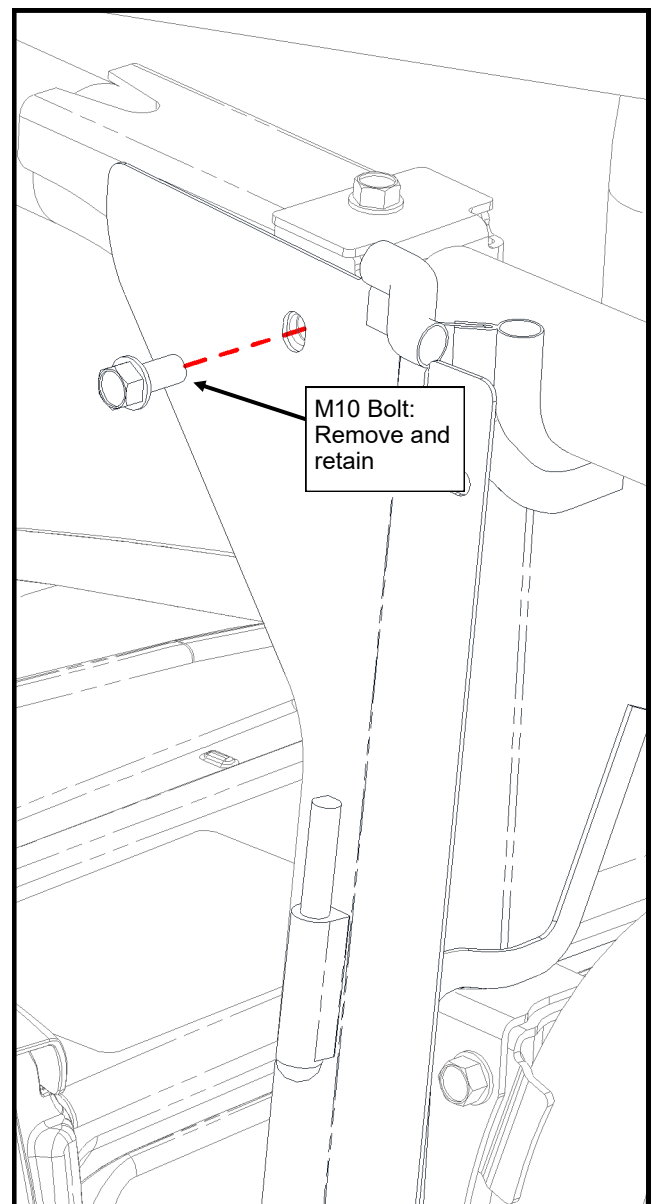


Figure 6.2: B-Pillar Upper M10 Bolt

INSTALLATION

STEP 7: Front Side Header Assemblies

- 7.1 For each side, one side at a time, remove and retain the M10 bolt at the underside of the front end of the front ROPS cross member. Then, remove the M10 bolt at the top of the ROPS above the B-pillar (see Figure 7.1).
- 7.2 Place each front side header over the ROPS and secure it to the underside of the ROPS with the removed M10 bolt.
- 7.3 Install the M10 bolt removed in step 6.2 through the front header and B-pillar panel and into the ROPS. Tighten both M10 bolts snug but do not apply final torque.

NOTE: The front header will be secured to the windshield frame after the rear doors are installed and adjusted. The M10 bolt in the top of the ROPS will be installed with the canopy.

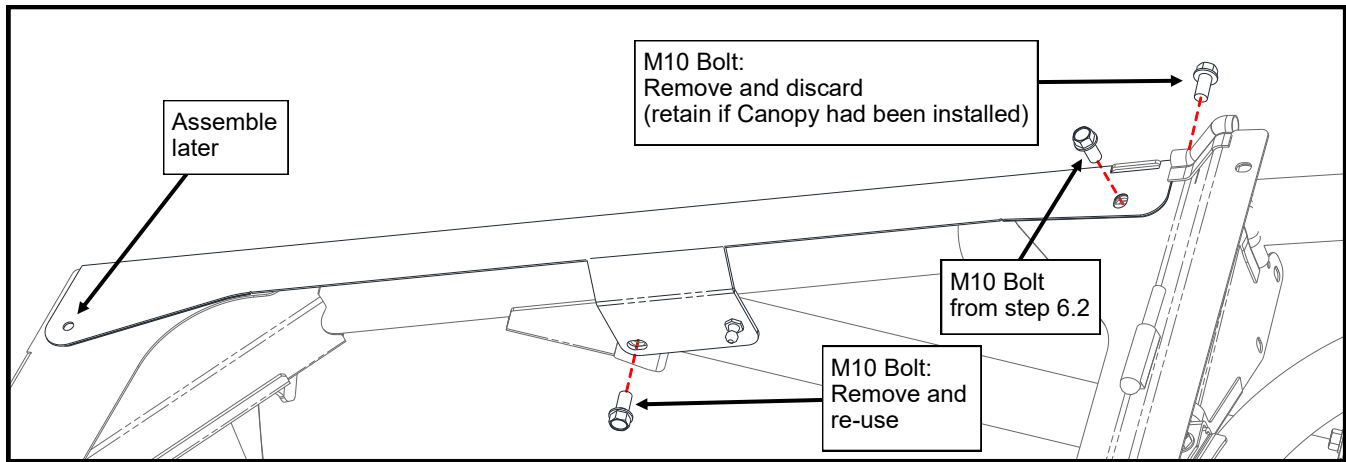


Figure 7.1: Front Side Headers (Driver's side shown)

INSTALLATION

STEP 8: Rear Header Assemblies

- 8.1 For both sides, remove and retain the two M10 bolts at the outside, upper rear of the side of the ROPS (see Figure 8.1). Do not remove or loosen the bolts on the inside of the ROPS.
 - 8.2 Place the driver's side rear side header over the ROPS and secure it with the removed bolts (see Figure 8.1). Leave the bolts loose. Ensure the latch is on the inside of the frame.
 - 8.3 Secure the Side Header to the B-Pillar with one 5/16 x 3/4" bolt and nut. Leave loose.
 - 8.4 Convert the rear seat to its forward position.
 - 8.5 Loosen the bolt in the mirror mount on the ROPS and remove the rear mirror (see Figure 8.5).
- NOTE:** If installing a 4-way flasher kit (VC5057A), install the flashers to the rear header first before placing the header on the vehicle frame.
- 8.6 With an assistant, place the rear header onto the rear ROPS and against the inside of the driver's side header and secure the rear header to the side header with two 5/16-18 x 3/4" bolts and nuts. Leave loose. Place the passenger's side header onto the frame and secure it with two M10 bolts from step 8.1, and one 5/16 x 3/4" bolt and nut to the B-pillar.
 - 8.7 Secure the rear header to the passenger's side header with two 5/16-18 x 3/4" bolts and nuts. Ensure the top of the rear header is parallel to the top of the side headers and tighten the four 5/16" bolts for the rear header snug.
 - 8.8 Re-install the rear mirror onto the upper rear frame.

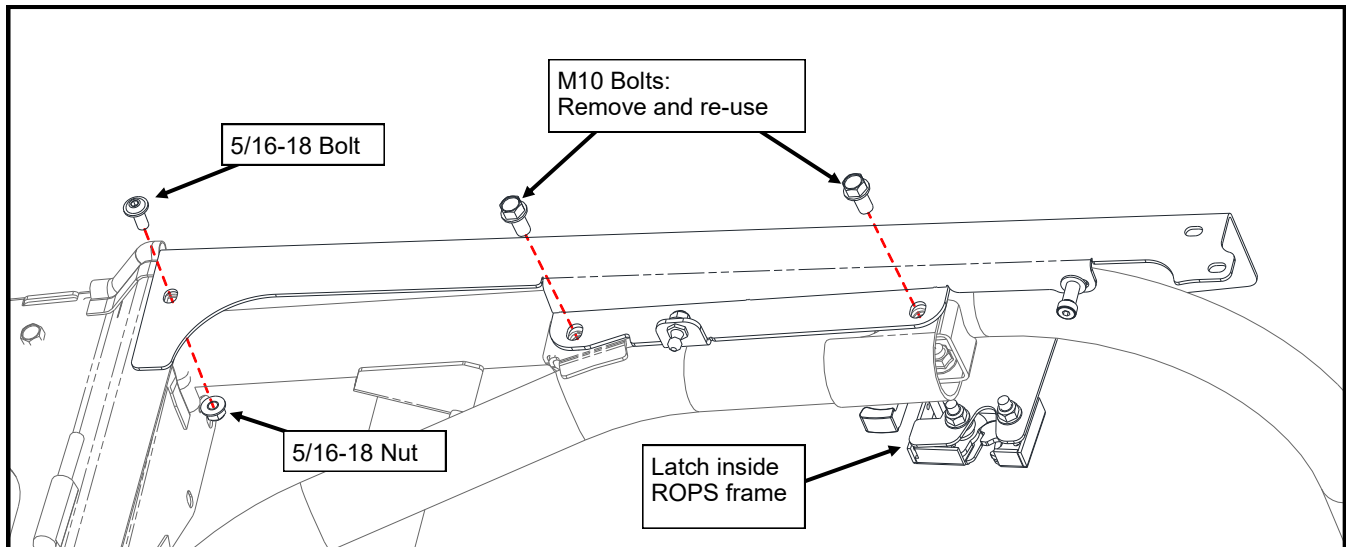


Figure 8.1: Rear Side Headers (Driver's side shown)

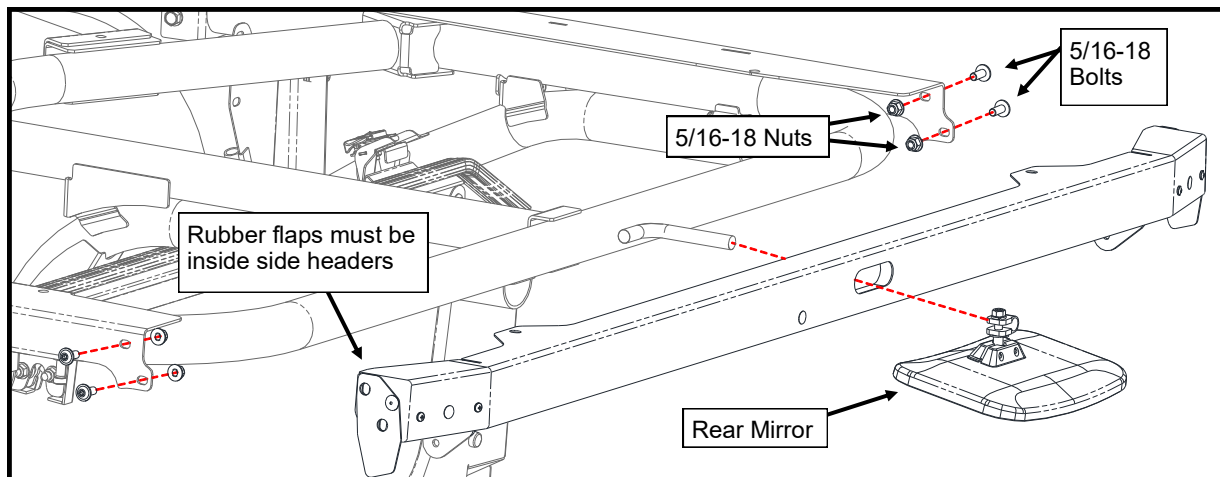


Figure 8.5: Rear Header

INSTALLATION

STEP 8: Rear Header Assemblies (continued)

8.9 Measure the distance between the rear fenders and the rear side headers, just rear of the latch pin washers, to the sheet metal surface of the panels.

8.10 Push up or down on the rear side headers to meet the following dimensions: (see Figure 8.10)

- Driver's side: $49\text{-}7/8" \pm 1/8"$ (1267mm \pm 3mm)
- Passenger's side: $46\text{-}7/8" \pm 1/8"$ (1190mm \pm 3mm)

If the header height is still too low or too high from header adjustment alone, push the headers up or down as far as the slots will allow, then loosen the M10 nut for the seat belt retractor and push the fender panel up or down to meet the required measurement within $\pm 1/8"$ (3mm).

NOTE: Left and right measurements differ due to the designs of the left and right fender to accommodate the battery cover and fuel filler, respectively.

8.11 Tighten the two M10 bolts in each rear side header, the 5/16" bolt at the front of each side header and the M10 nut at the seat belt retractor snug.

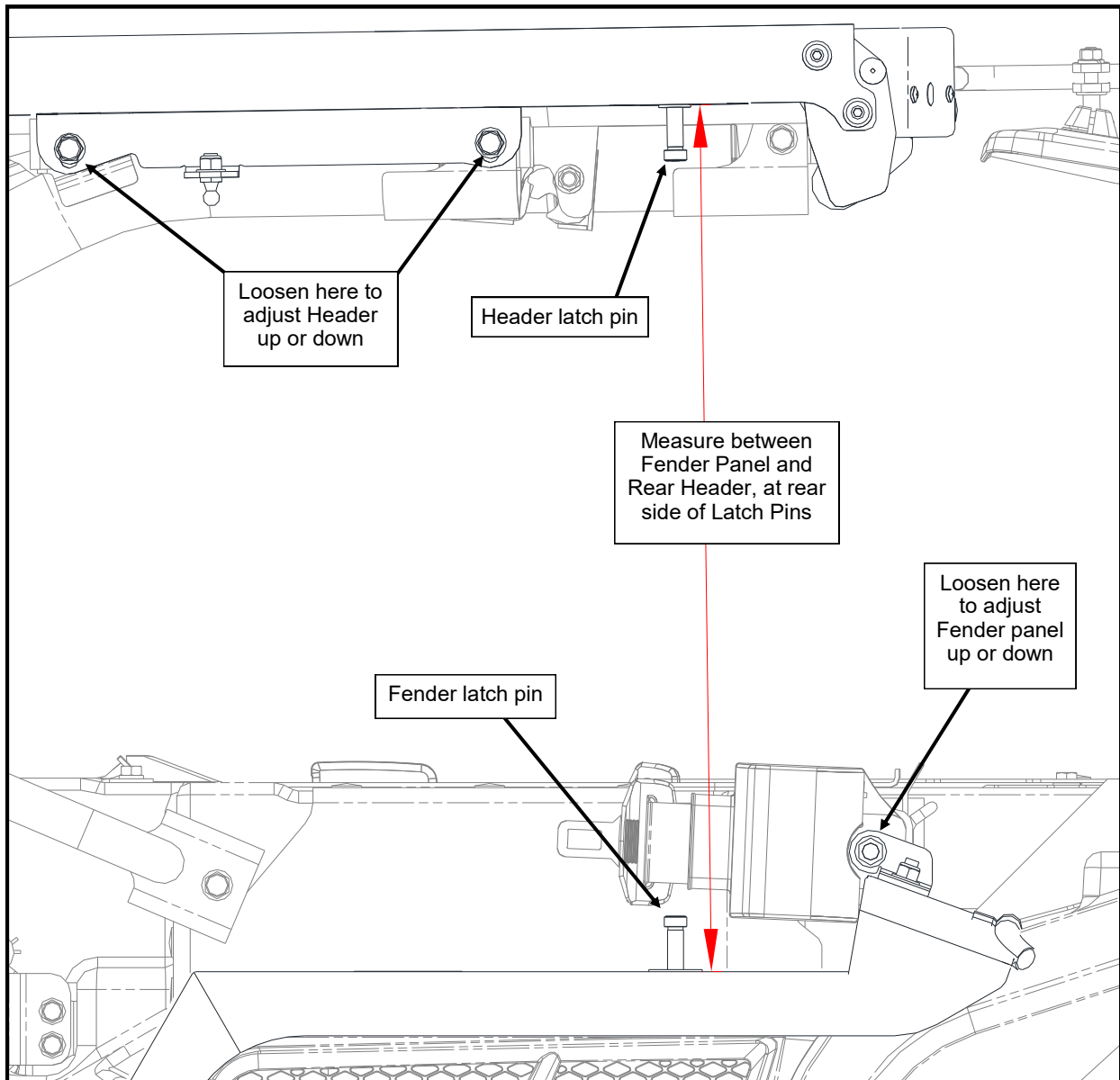


Figure 8.10: Rear Header Adjustment

INSTALLATION

STEP 9: Upper Rear Panel

- 9.1 With assistance, align the upper rear panel to the hinge tabs of the upper header, with the rear panel tabs to the inside of the rear header tabs. Secure the upper rear panel to the rear header with two shoulder screws, 3/8" ID washers, plastic spacers and 5/16" nuts (see Figure 9.1). Torque to 16 ft-lbs. (21.5 N-m).
- 9.2 Rotate the upper rear panel up and check alignment of the rear panel pin and latch on the driver's side. Adjust the latch and pin as needed until the panel latches fully and repeatably (see Figure 9.2).

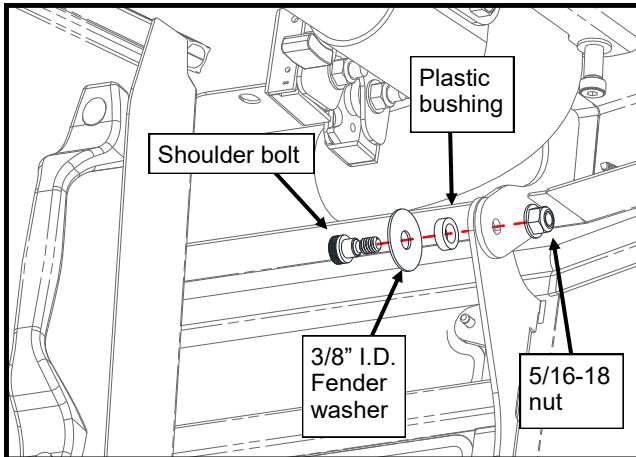


Figure 9.1: Upper Rear Panel Hardware

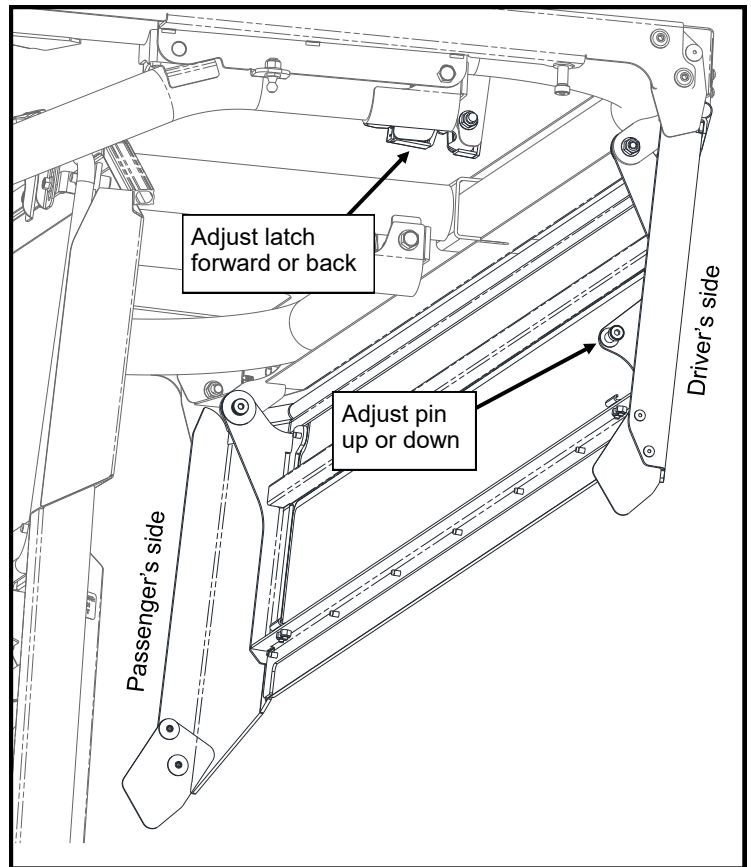


Figure 9.2: Upper Rear Panel Latch Adjustment

INSTALLATION

STEP 10: Lower Rear Panel Alignment Install Rear Panel Latches

- 10.1 Unlatch the upper rear panel from the upper frame and allow it to hang down, then move the rear seat back to its rear position.
- 10.2 Shift the lower panel and rear seat back left or right as needed to center it under the upper rear panel. (see Figure 10.2). If more movement of the lower panel is needed, loosen the four 5/16" lower bolts and shift the lower rear panel left or right. Tighten the bolts snug.
- 10.3 Using the holes in the upper portion of the lower rear panel as a guide, drill four 11/32" holes through the screen frame of the rear seat (see Figure 10.2).
- 10.4 For the upper two holes, place a rear panel bracket inside the screen frame and under the rear panel tabs (see Figure 10.4) and align the brackets to the drilled holes. Install 5/16-18 x 1-1/2" bolts, 5/16" I.D. rubber and steel fender washers and 5/16-18 nuts through all four drilled holes in the rear panel and screen frame. Tighten snug.
- 10.5 Install one rear panel latch mount to each rear panel tab and bracket with two flanged hex 1/4-20 x 3/4" bolts and flanged nuts per latch (see Figure 10.5). Leave loose.
- 10.6 Open the rear panel latches on the lower rear panel by lifting the tab and rotating the tab counter-clockwise. Hook the latch onto the keeper on the upper rear panel and slightly rotate the latch tab clockwise to partially close (see Figure 10.5).
- 10.7 Raise or lower the latch mount until the mount contacts the upper rear panel frame and fully close the latch. Repeat for both latches and tighten the four 1/4" bolts snug.

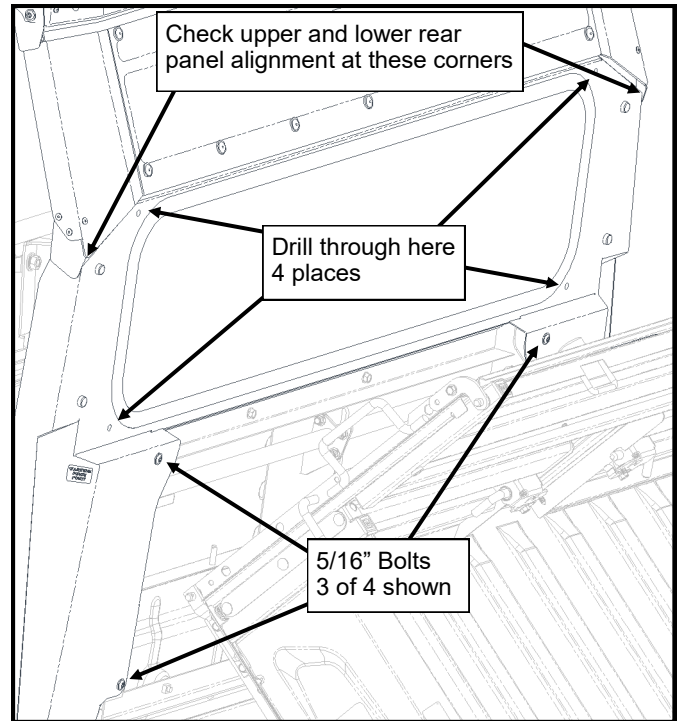


Figure 10.2: Lower Rear Panel

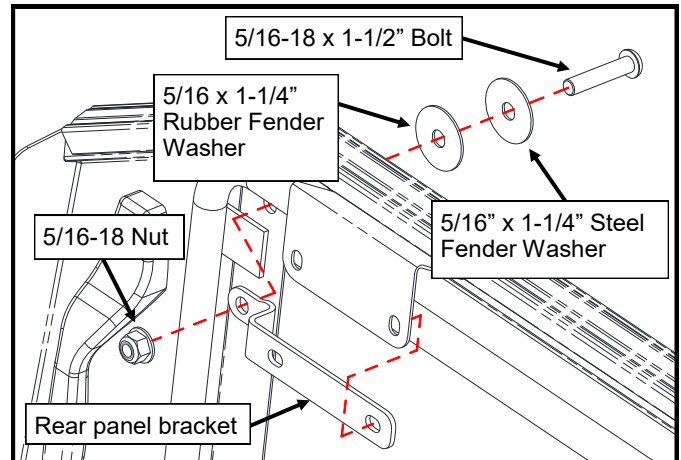


Figure 10.4: Rear Panel to Screen Bolts
Note: Upper mounting hole shown.

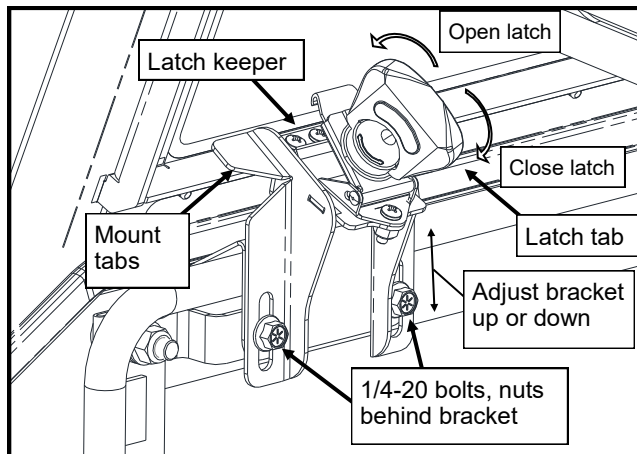


Figure 10.5: Rear Panel Latches

INSTALLATION

STEP 11: Fender Alignment

- 11.1 Ensure the lower rear panel is centered under the upper rear panel. If necessary, loosen the latches at the top of the lower rear panel and shift the lower rear panel left or right.
- 11.2 Loosen the two 5/16" nuts at the rear of each fender panel and shift the rear of the fender panel left or right to align the outer surface to the bottom of the lower rear panel (see Figure 11.2). Tighten the 5/16" nuts snug.

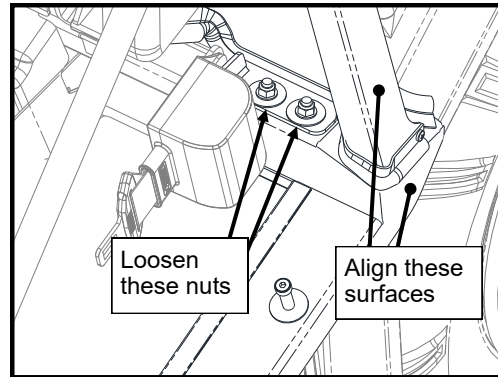


Figure 11.2: Rear Fender Adjustment

STEP 12: Rear Door Installation.

- 12.1 Install a total of four Brass Washers onto the weld-on hinge pins on the B-Pillars, one washer per pin (see Figure 12.1).
 - 12.2 Apply grease to the hinge pins on the B-pillars.
 - 12.3 Holding the door perpendicular to the vehicle, lower the door hinge sleeves over the pins on the vehicle (see Figure 12.1).
- NOTE:** If the hinge sleeves don't line up with the hinge pins, loosen factory installed door hinges until fasteners are finger tight, then repeat this step, aligning the sleeves to the pins, as necessary.
- 12.4 Rotate the door open and closed until the hinge sleeves seat properly on the brass washers. It may be necessary to manipulate the angle of the hinges by hand to get them to fully seat on the brass washers.
 - 12.5 Gently close the door, lifting on the door handle if necessary, to allow the latches to lock around the striker pins. Ensure that you have heard two clicks of both latches.
- NOTE:** The rear doors have two latches, one at each rear corner of the door.

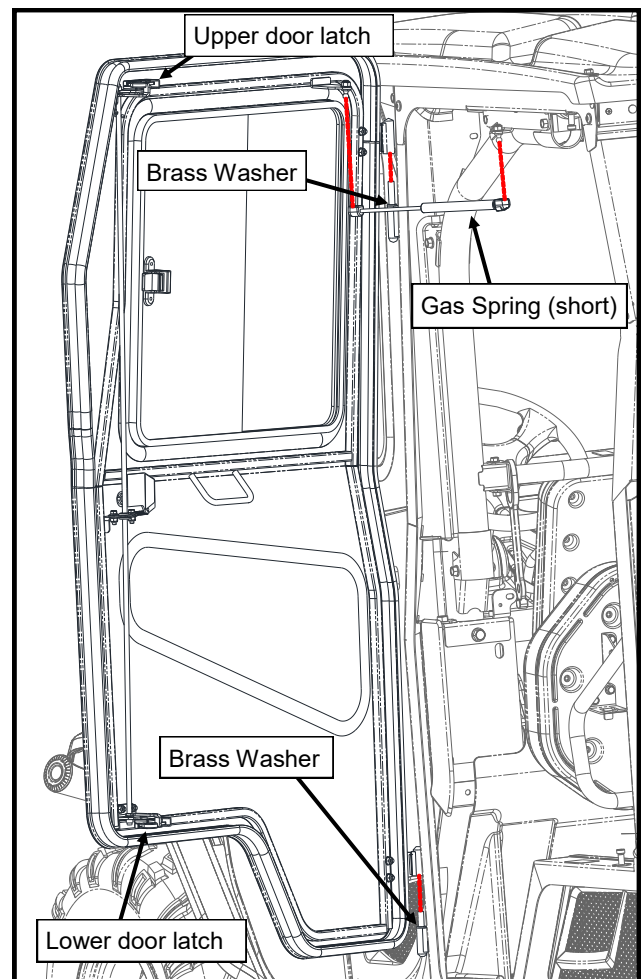


Figure 12.1: Rear Door Installation (Driver's side shown)

INSTALLATION

STEP 13: Rear Door Adjustment

- 13.1 Tighten the rear door hinges enough to remove slack yet still allow the door to hinge bolts to slide within the slots of the hinges. Shift the door to align the top of the door roughly parallel door to the top of the rear side header.
- 13.2 Check the vertical alignment of the door to the striker pins. Readjust as needed via the door hinges if the door latches are less than 1/16" from either striker pin washer.
- 13.3 If more adjustment is needed:
 - The rear header assembly may be moved up or down (see Step 8).
 - The fender panel may be adjusted up or down after loosening the bolt at the seat belt mount.
 - The B-Pillar can be shifted to rotate the hinge pin alignment. Loosen all bolts in the B-Pillar as well as the two M10 bolts in each side header to adjust.
- 13.4 Once the latches are aligned vertically, adjust both striker pins back or forth to align to the latches.
- 13.5 Tighten all hinge bolts, striker pins and any bolts loosened for adjustment snug.
- 13.6 Ensure the door latches consistently with two clicks of both latches, and opens consistently with both the inside and outside handles. Readjust if needed.
- 13.7 Open door to slightly less than 90°. Install the shorter pair of gas springs onto the rear door and rear side header ball studs with the red tab quick release end on the side header (see Figure 12.1).

STEP 14: Canopy, Center Panel and Accessories

- 14.1 If installing a vinyl center panel, VC5047, install it at this time per the instructions included with the panel, prior to installing the canopy.
- 14.2 If installing a center panel with slider, VC5046, install it at this time per the instructions included with the panel.
- 14.3 Apply the 1/2" V-groove weather seal along the top perimeter of the cab (see Figure 14.3). Start at the seal on the windshield and route the seal to the rear along the edge of the side headers. Continue along the rear header and forward along the front headers up to the seal on the opposite side of the windshield.
- 14.4 Apply 1/2" foam weather seal to the upper center beam of the ROPS, along the center of the beam and up to the v-groove seal on each side (see Figure 14.3).
- 14.5 Install the plastic or steel canopy at this time per the instructions included with the canopy kit. Note that the canopy will use the holes in the cab enclosure and does not require the P-clamps included with the canopy kit.

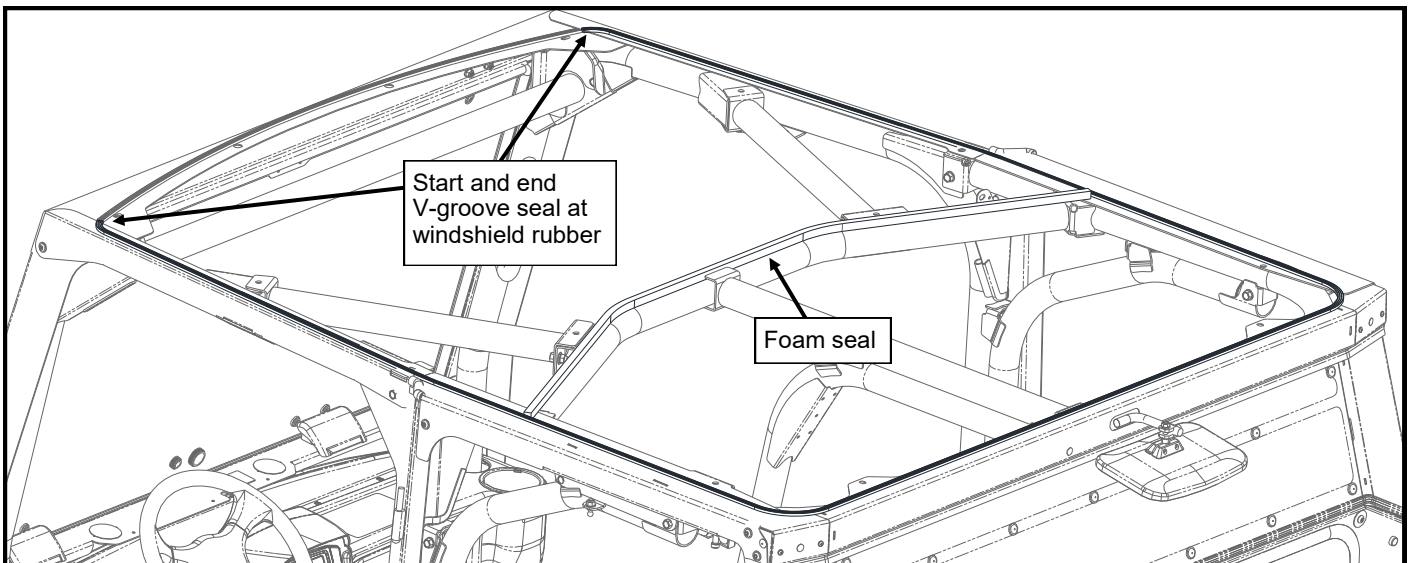


Figure 14.3: Canopy Weather Seal

INSTALLATION

STEP 15: Front Door Lower Hinge Mounts

- 15.1 Remove two plugs from each side of the dashboard, just behind the front fenders (see Figure 15.1).
- 15.2 Secure the hinge mounts to the vehicle with two M8 button head bolts and washers. Run a long straight edge along the pins of the lower hinge mount and the windshield frame to pre-align the axes of the pins and tighten the bolts snug but do not apply final torque.

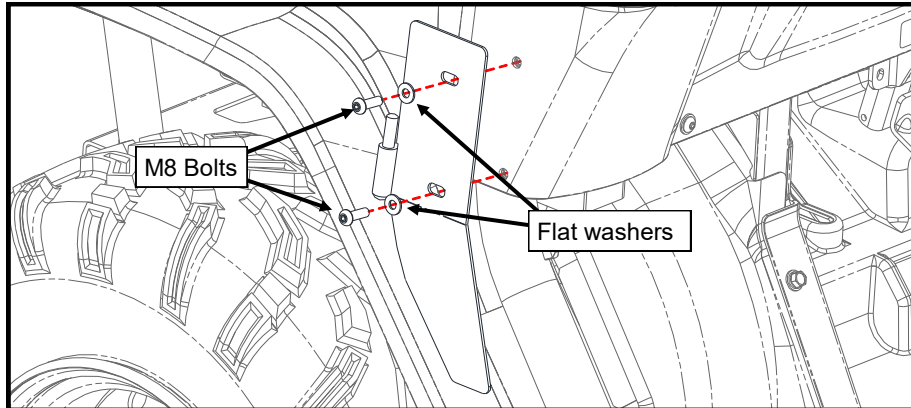


Figure 15.1: Lower Hinge Mount for Front Doors (Driver's side shown)

STEP 16: Front Door Installation and Adjustment

- 16.1 Install a total of four brass washers onto the weld-on hinge pins on the Windshield Frame and Lower Hinge Mounts, one washer per pin (see Figure 16.1).
 - 16.2 Apply grease to the hinge pins on the windshield and lower hinge mounts.
 - 16.3 Holding the door perpendicular to the vehicle, lower the door hinge sleeves over the pins on the vehicle (see Figure 16.1).
- NOTE:** If the hinge sleeves don't line up with the hinge pins, loosen factory installed door hinges until fasteners are finger tight, then repeat this step, aligning the sleeves to the pins, as necessary.
- 16.4 Rotate the door open and closed until the hinge sleeves seat properly on the brass washers. It may be necessary to manipulate the angle of the hinges by hand to get them to fully seat on the brass washers.
 - 16.5 Gently close the door, lifting on the door handle if necessary, to allow the latch to lock around the striker pin. Ensure that you have heard two clicks of the latch.
 - 16.6 See Door Troubleshooting on page 22 for information about adjusting the door latches and hinges.
 - 16.7 Open door to slightly less than 90°.
 - 16.8 Install gas springs onto ball studs with the red tab quick release end on the frame.

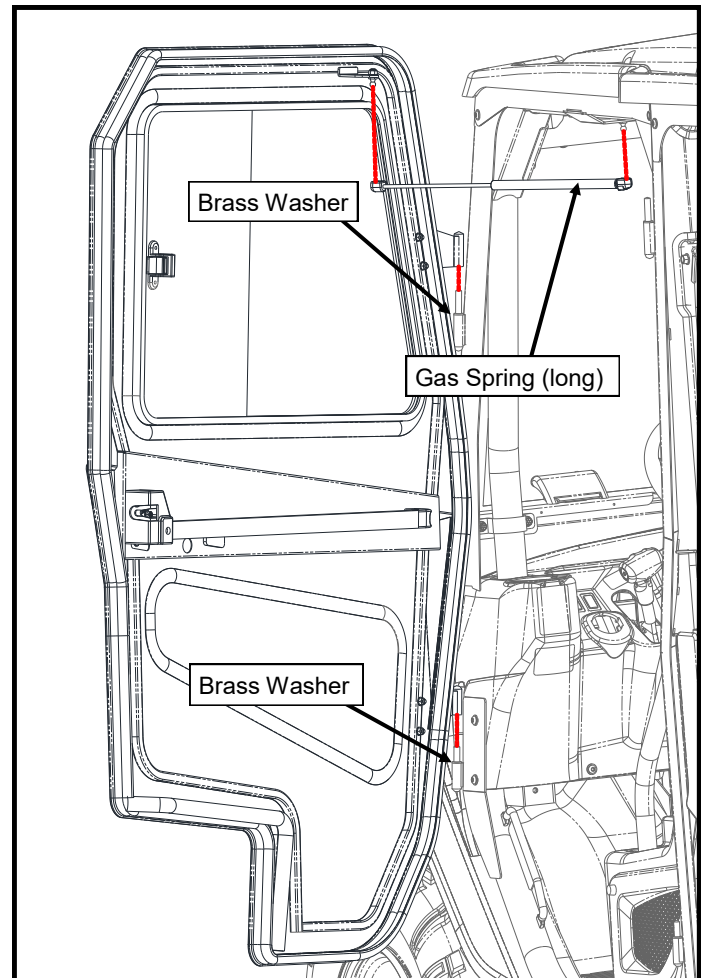


Figure 16.1: Front Doors (Driver's side shown)

INSTALLATION

STEP 17: Front Side Headers to Windshield

17.1 Press the front of the header against the top and side of the windshield frame and drill a 11/32" hole through the windshield, using the hole in the header as a guide. (see Figure 17.1).

CAUTION: Drilling into the windshield should only be done after all adjustments and fit of the roof is complete.

17.2 Secure the front header to the windshield with one 5/16-18 x 3/4" bolt and nut.

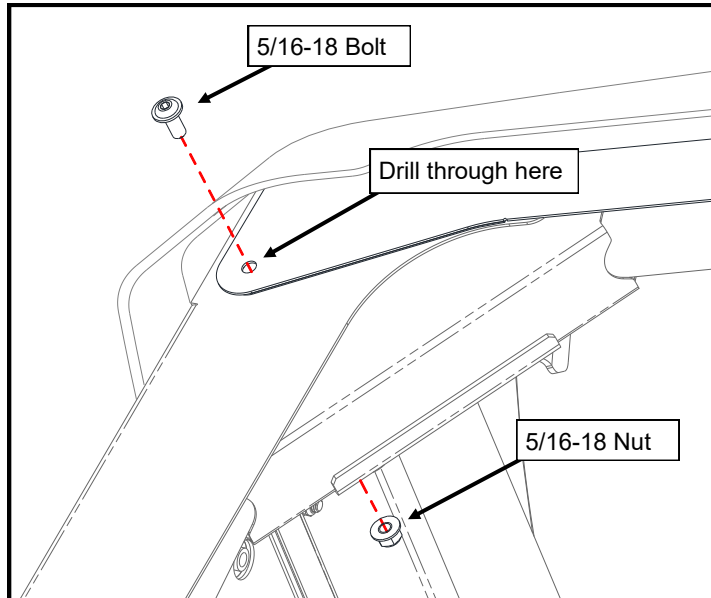


Figure 17.1: Front Side Headers
(Driver's side shown)

STEP 18: Finishing Touches

18.1 Check the operation of all doors and operation of the rear panel conversion. Verify that all parts operate smoothly and consistently. If a problem is found, consult the Troubleshooting guide on page 22.

18.2 Torque all bolts to the following specifications:

- M10 bolts to 41 ft-lbs. (51.5 N-m).
- M12 bolts to 62 ft-lbs. (84 N-m).
- All button head M8 bolts and 5/16-18 bolts in the cab to 16 ft-lbs. (21.7 N-m).
NOTE: Button head bolts require a lower torque specification than hex head bolts.
- 1/4-20 bolts to 10 ft-lbs. (13.5 N-m).
- Tighten all bolts for the canopy per the canopy installation instructions.

18.3 Remove the protective film from the upper and lower rear windows, and from the lower windows on the front and rear doors.

TROUBLESHOOTING

FRONT DOOR TROUBLESHOOTING

Condition	Possible Solution
<ul style="list-style-type: none"> Door latch and striker pin don't line up vertically. 	<ul style="list-style-type: none"> Loosen striker pin and move up or down. Use two 3/4" wrenches to adjust striker pin.
<ul style="list-style-type: none"> Door latch and striker pin don't line up horizontally. 	<ul style="list-style-type: none"> Remove plastic covers on interior door latch. Loosen three 1/4-20 hex flange screws between latch and door. Move interior door latch forward or backward. Retighten.
<ul style="list-style-type: none"> Top of door is not aligned to roof. 	<ul style="list-style-type: none"> Loosen door hinges and lower hinge mount, if necessary. With the door unlatched, lift up (or lower down) on the door handle until the door is aligned with the roof. Have an assistant sit inside the vehicle and determine the new height required for the striker pin. Have the assistant adjust the height of the striker pin. Re-latch the door and tighten all fasteners.
<ul style="list-style-type: none"> Door seal not aligned with B-Pillar. Door seal interfering with angled section of B-pillar. 	<ul style="list-style-type: none"> Loosen hinges on door. Slide door forward on hinges and latch door. Check alignment with roof and B-Pillar. Adjust striker, if necessary. Retighten hinges.
<ul style="list-style-type: none"> Door latch is unable to be double-latched. (2 clicks have not been heard) 	<ul style="list-style-type: none"> Check to make sure acorn nut on outer handle plunger is adjusted properly . There should be a slight clearance between nut and latch to prevent door from opening unexpectedly.

REAR DOOR TROUBLESHOOTING

Condition	Possible Solution
<ul style="list-style-type: none"> Door upper latch and striker pin don't line up vertically. 	<ul style="list-style-type: none"> Loosen door hinges, shift and rotate the door within the slots of the door hinges until the upper latch is approx. centered on the pin.
<ul style="list-style-type: none"> Door latch and striker pin don't line up horizontally. 	<ul style="list-style-type: none"> Adjust the striker pins forward or back to align to the latches on the doors.
<ul style="list-style-type: none"> Door lower latch and striker pin don't line up vertically. 	<ul style="list-style-type: none"> Loosen the M10 nut at the seat belt retractor and shift the fender panel up or down until the lower latch is approx. centered on the pin. If necessary, loosen the bolts for the rear side headers and shift the rear headers up, if more adjustment is needed.
<ul style="list-style-type: none"> Door latch is contacting fender panel. 	<ul style="list-style-type: none"> Loosen the M10 nut at the seat belt retractor and shift the fender panel down in the slot. If not enough adjustment is available in the slot, loosen the fasteners in the B-Pillar and adjust the top of the B-Pillar forward and the bottom of the B-Pillar rearward. NOTE: it is easier to adjust if the door is removed.
<ul style="list-style-type: none"> Door latches do not contact strikers simultaneously. <p>NOTE: This is important to ensure proper latching of the doors.</p>	<ul style="list-style-type: none"> Loosen the 5/16" nuts at the rear of the fender panel and shift the fender panel in or out. Slowly move the door into position such that the upper latch pawl just touches the striker. Move the fender panel out until the striker just touches the lower latch pawl. Retighten.

SERVICE PARTS BREAKDOWN

KUBOTA RTV X1140 CAB ENCLOSURE

ITEM #:	PART NUMBER:	CODE NUMBER:	QTY/KIT:	DESCRIPTION:
1	77700-06980A	KX40-08AL	1	B-PILLAR, LEFT, RTV X1140
2	77700-06981A	KX40-08AR	1	B-PILLAR, RIGHT, RTV X1140
3	77700-06976	KX40-09L	1	PANEL, LEFT FENDER, RTV X1140
4	77700-06978	KX40-09R	1	PANEL, RIGHT FENDER, RTV X1140
5	77700-06977	SM-KX400906-L	1	TAB, LEFT FENDER MOUNT, RTV X1140
6	77700-06979	SM-KX400906-R	1	TAB, RIGHT FENDER MOUNT, RTV X1140
7	77700-07219	KX40-18L	1	BRACKET, LEFT FLOORBOARD, RTV X1140
8	77700-07220	KX40-18R	1	BRACKET, RIGHT FLOORBOARD, RTV X1140
9	77700-05250	9SV-DSTRH	5	HARDENED STRIKER PIN ASSEMBLY
10	77700-07216	70-54-0261	2	STRIKER PIN AND NUT SET, 3/8 X 1" LONG
11	77700-07217	9DL-197	1	DECAL, CAUTION NO STEP
12	77700-01048	9PRO2	1	5/8" BULB RUBBER (170")
13	77700-07213	9PR27	1	5/8" OFFSET BULB RUBBER (60")
14	77700-05134	9PR43	1	1/2" X 9/16" WEATHER SEAL FOAM RUBBER (96")
15	70000-01045	9PR20	1	1/2" WEATHER SEAL V-GROOVE RUBBER (55")
16	77700-05241	9PR41	1	1-1/2" DOUBLE SIDE BULB (180")
17	77700-05144	9PR19	1	1" BULB RUBBER (72")
18	77700-07215	HWK-VC5045	1	HARDWARE KIT, CAB, RTV X1140

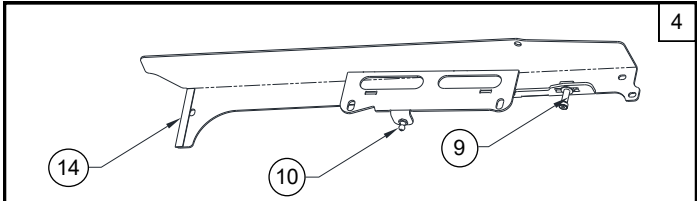
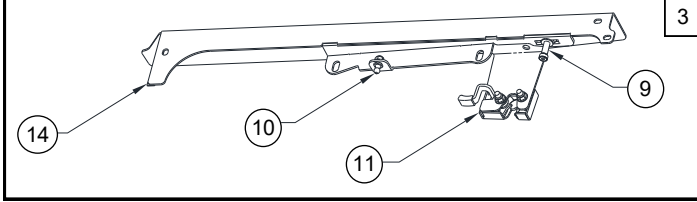
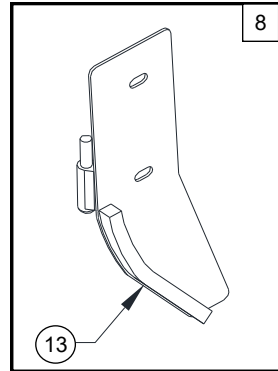
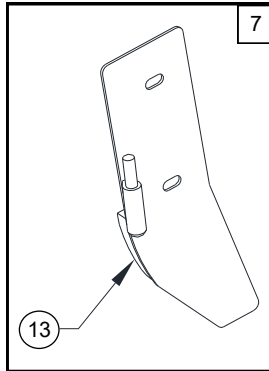
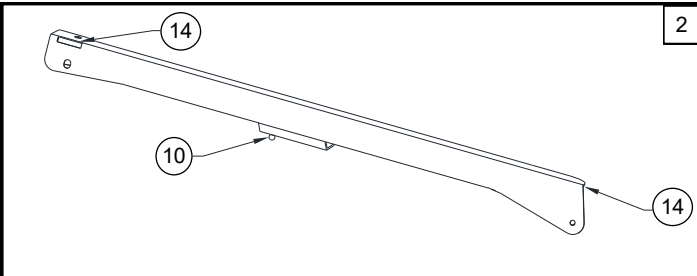
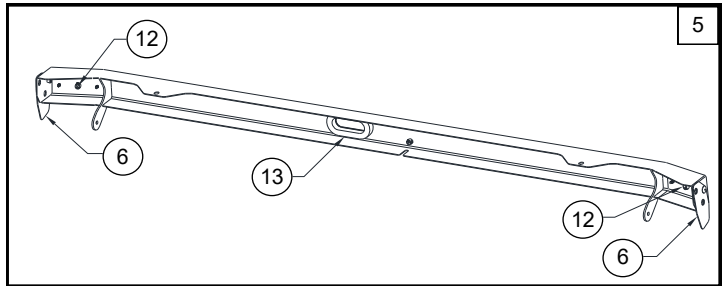
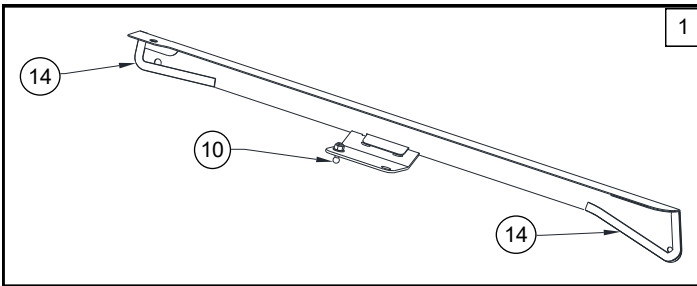
HARDWARE KIT

- 6X — SCREW, HEX FLANGE, 1/4-20 X 3/4LG
- 4X — SCREW, BUTTON HEAD, 1/4-20 X 3/4LG
- 10X — NUT, HEX FLANGE, NYLON INSERT, 1/4-20
- 22X — SCREW, BUTTON FLANGE, 5/16-18 X 3/4LG
- 24X — NUT, HEX FLANGE, NYLON INSERT, 5/16-18
- 4X — SCREW, BUTTON HEAD, M8 X 25mm LG
- 4X — STEEL WASHER, 5/16" ID X .688" OD
- 4X — STEEL WASHER, 1/4" ID X 1" OD
- 8X — STEEL WASHER, 5/16" ID X 1.25" OD
- 4X — RUBBER WASHER, 5/16" ID X 1.25" OD
- 2X — SHOULDER SCREW, 3/8" X 25LG
- 2X — STEEL WASHER, 3/8" ID X 1.25" OD
- 2X — PLASTIC BUSHING, .63 OD X .39 ID X .19
- 8X — BRASS HINGE WASHER, .63 OD X .41 ID X .08
- 4X — SCREW, BUTTON HEAD, 5/16-18 X 1-1/2LG

SERVICE PARTS BREAKDOWN

KUBOTA RTV X1140 CAB ENCLOSURE

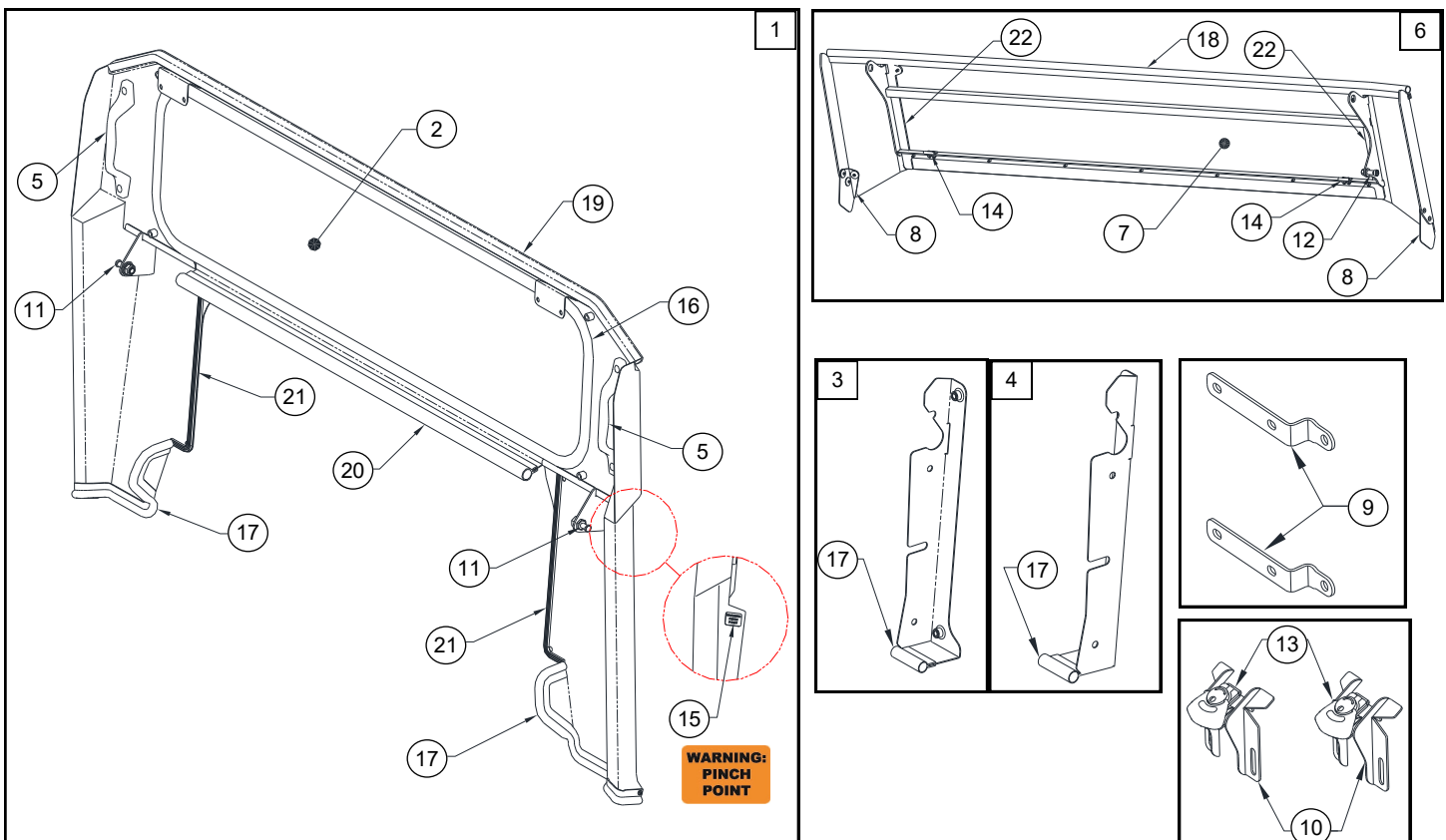
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1	77700-06990	KX40-14L	1	HEADER, LEFTFRONT SIDE, RTV X1140
2	77700-06991	KX40-14R	1	HEADER, RIGHT FRONT SIDE , RTV X1140
3	77700-06988	KX40-12L	1	HEADER, LEFT REAR SIDE, RTV X1140
4	77700-06989	KX40-12R	1 <td HEADER, RIGHT REAR SIDE, RTV X1140	
5	77700-06982	KX40-10	1	HEADER REAR, RTV X1140
6	77700-06983	FR-KX401001	1	SEAL, END, RBBR DIE CUT, UPR REAR HEADER, RTV X1140
7	77700-05251	KX9-14L	1	LOWER HINGE MOUNT, LEFT
8	77700-05252	KX9-14R	1	LOWER HINGE MOUNT, RIGHT
9	77700-07216	70-54-0261	2	STRIKER PIN AND NUT SET, 3/8 X 1" LONG
10	70000-01024	9GS02A	1	BALL STUD FOR GAS SPRING
11	77700-01028	9DL06B	1	LATCH & COVER SET-R, SPORT DOOR
12	77700-01480	9DP01	1	DOME PLUG, 7/16"
13	77700-05134	9PR43	1	1/2" X 9/16" WEATHER SEAL FOAM RUBBER (96")
14	77700-07212	9YR-DT	1	1/2" WIDE X 1/16" WEATHER SEAL TAPE (36")



SERVICE PARTS BREAKDOWN

KUBOTA RTV X1140 CAB ENCLOSURE

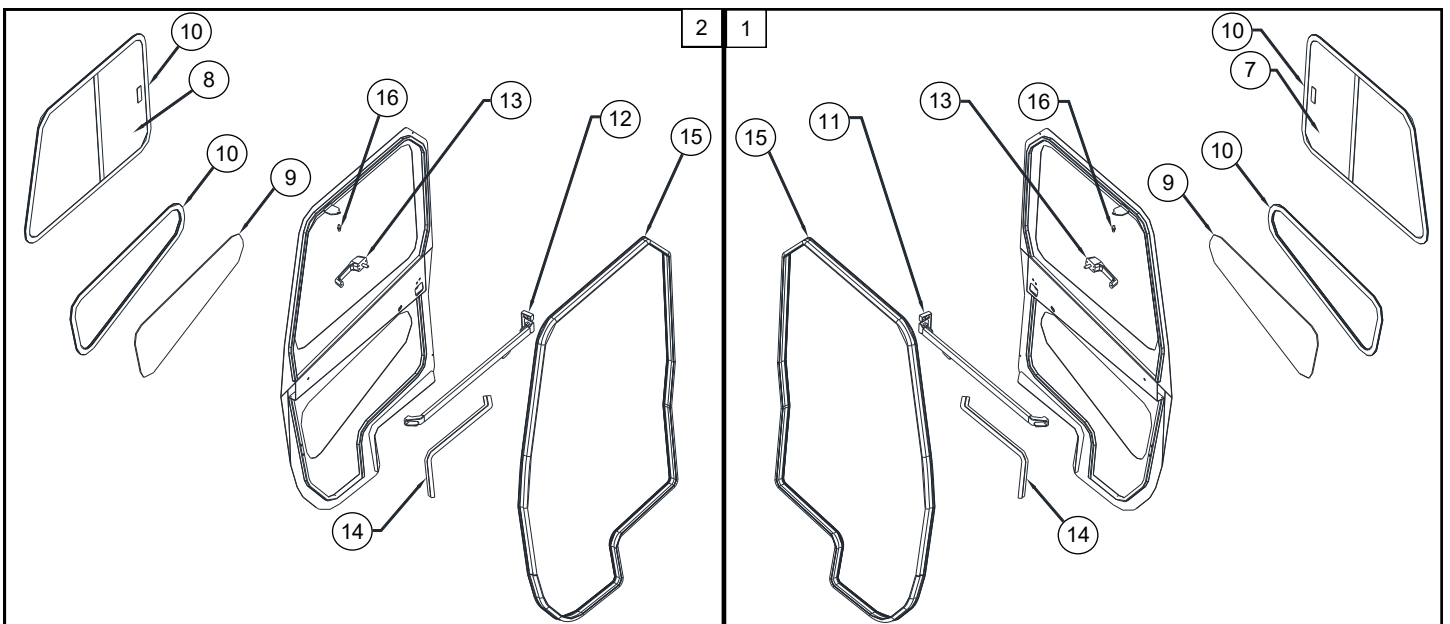
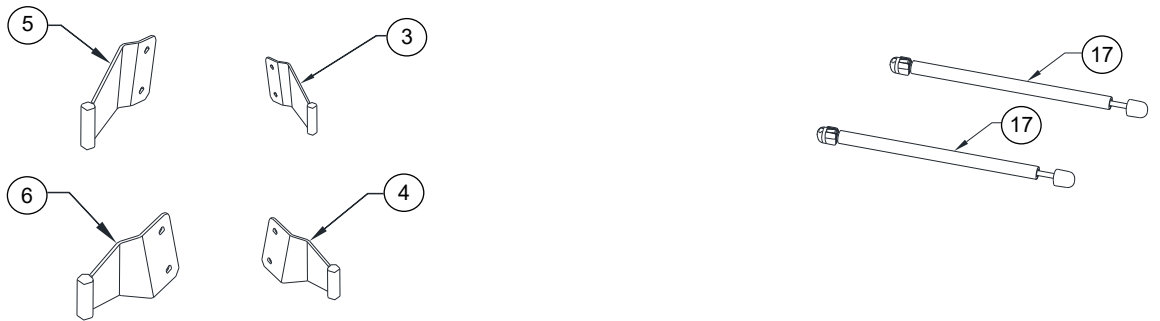
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1	77700-06974	KX40-06	1	PANEL, LOWER REAR, RTV X1140
2	77700-06975	PC-KX400601	1	WINDOW, LOWER REAR PANEL, RTV X1140
3	77700-07207	KX40-13L	1	MOUNT, LEFT LOWER REAR PANEL, RTV X1140
4	77700-07208	KX40-13R	1	MOUNT, RIGHT LOWER REAR PANEL, RTV X1140
5	70000-01021	9GH01	1	GRAB HANDLE (PLASTIC)
6	77700-06984	KX40-11	1	PANEL, UPPER REAR, RTV X1140
7	77700-06986	PC-KX4001101	1	WINDOW, UPPER REAR PANEL, RTV X1140
8	77700-06987	FR-KX401101	1	SEAL, END, RBBR DIE CUT, UPR REAR PANEL, RTV X1140
9	77700-07209	KX40-15	1	BRACKET, REAR PANEL, RTV X1140
10	77700-07210	KX40-16	1	LATCH ASSEMBLY, RTV X1140
11	77700-05250	9SV-DSTRH	5	HARDENED STRIKER PIN ASSEMBLY
12	77700-07216	70-54-0261	2	STRIKER PIN AND NUT SET, 3/8 X 1" LONG
13	77700-07211	9WL04A	1	LATCH, ROTARY DRAW, SPRING LOADED, SMALL, BLACK
14	77700-06985	9WL04B	1	KEEPER FOR DRAW LATCH, BLACK
15	77700-07218	9DL-150	1	DECAL, WARNING PINCH POINT
16	77700-00279	9PR10	1	WINDOW MOUNTING RUBBER (110")
17	70000-01051	9PRO2	1	5/8" BULB RUBBER (40")
18	77700-07214	9PRO7	1	5/8" BULB RUBBER WITH 1/4" GRIP (72")
19	70000-01041	9PR17	1	3/4" SIDE BULB RUBBER (180")
20	77700-05144	9PR19	1	1" BULB RUBBER (72")
21	70000-01045	9PR20	1	1/2" WEATHER SEAL V-GROOVE RUBBER (55")
22	77700-07212	9YR-DT	1	1/2" WIDE X 1/16" WEATHER SEAL TAPE (36")



SERVICE PARTS BREAKDOWN

KUBOTA RTV X1140 CAB ENCLOSURE

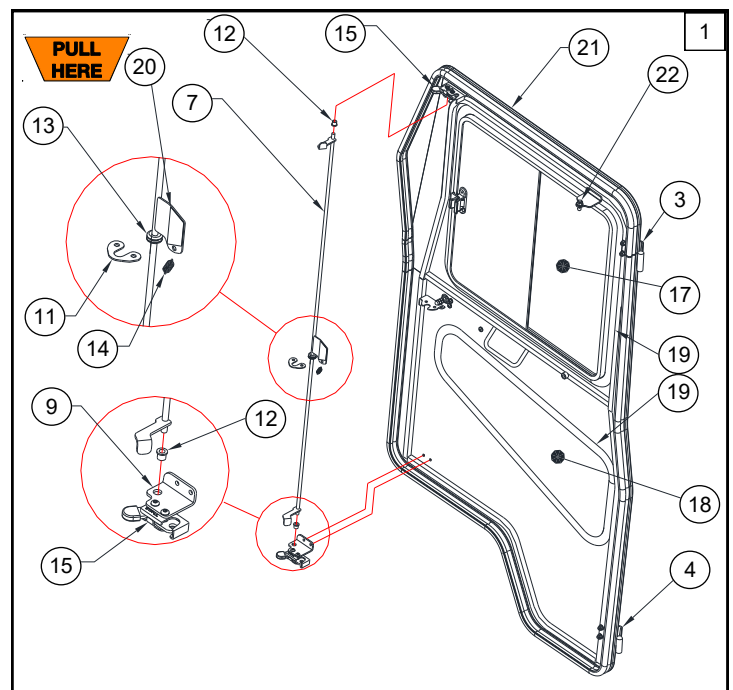
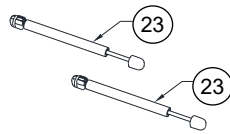
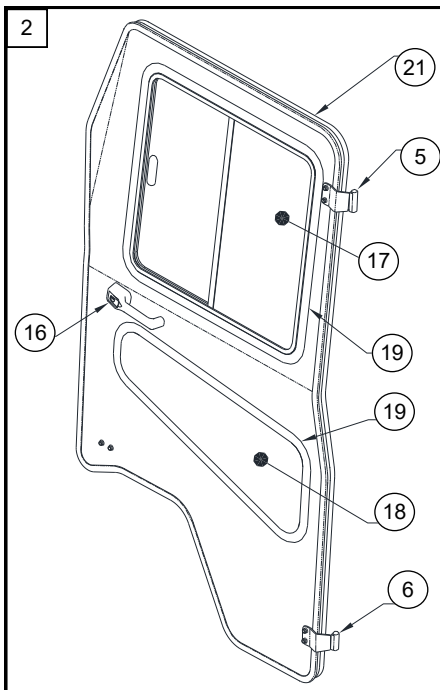
ITEM #:	PART NUMBER:	CODE NUMBER:	QTY/KIT:	DESCRIPTION:
1	77700-05230	KX9AS-07LB	1	BLACK HARD SIDED DOOR, FRONT LEFT
2	77700-05232	KX9AS-07RB	1	BLACK HARD SIDED DOOR, FRONT RIGHT
3	77700-05234	KX9DHT-L	1	DOOR HINGE, TOP LEFT
4	77700-05235	KX9DHB-L	1	DOOR HINGE, BOTTOM LEFT
5	77700-05236	KX9DHT-R	1	DOOR HINGE, TOP RIGHT
6	77700-05237	KX9DHB-R	1	DOOR HINGE, BOTTOM RIGHT
7	77700-05238	9SW-KX9L	1	SLIDER, 3/16 TEMPERED (AS2) GLASS, NO TINT, LEFT
8	77700-05239	9SW-KX9R	1	SLIDER, 3/16 TEMPERED (AS2) GLASS, NO TINT, RIGHT
9	77700-05240	PG-KX9LD	1	LOWER DOOR WINDOW
10	77700-00279	9PR10	1	WINDOW RUBBER (110")
11	70000-01020	9DL02B	1	DOOR LATCH W/ INTEGRATED HANDLE, LEFT
12	70000-01019	9DL02A	1	DOOR LATCH W/ INTEGRATED HANDLE, RIGHT
13	70000-01018	9DL01C	1	DOOR HANDLE
14	70000-01051	9PRO2	1	5/8" BULB RUBBER (40")
15	77700-05241	9PR41	1	1-1/2" DOUBLE SIDE BULB (180")
16	70000-01024	9GS02A	1	BALL STUD FOR GAS SPRING
17	77700-05202	9GS10Q	1	GAS SPRING, 10 LB, W/QUICK RELEASE END
N.S.	70000-01216	9DL01H	2	KEYS, CAB DOOR



SERVICE PARTS BREAKDOWN

KUBOTA RTV X1140 CAB ENCLOSURE

ITEM #:	PART NUMBER:	CODE NUMBER:	QTY/KIT:	DESCRIPTION:
1	77700-06992	KX40-07L	1	COMP DOOR, REAR, LEFT, RTV X1140
2	77700-06997	KX40-07R	1	COMP DOOR, REAR, RIGHT, RTV X1140
3	77700-06993	WA-KX400702-L	1	HINGE, REAR DOOR, UPPER LEFT, RTV X1140
4	77700-06994	WA-KX400703-L	1	HINGE, REAR DOOR, LOWER LEFT, RTV X1140
5	77700-06998	WA-KX400702-R	1	HINGE, REAR DOOR, UPPER RIGHT, RTV X1140
6	77700-06999	WA-KX400703-R	1	HINGE, REAR DOOR, LOWER RIGHT, RTV X1140
7	77700-06996	WA-KX400704-L	1	RELEASE, LEFT INSIDE LATCH, REAR DOOR, RTV X1140
				NOTE: INCLUDES LATCH ROD AS WELL AS (9), (11), (12), (13) AND (14)
8	77700-07201	WA-KX400704-R	1	RELEASE, RH INSIDE LATCH, REAR DOOR, RTV X1140
				NOTE: INCLUDES LATCH ROD AS WELL AS (10), (11), (12), (13) AND (14)
9	77700-06995	SM-KX400708-L	1	BRACKET, LOWER LATCH, REAR DOOR, LEFT, RTV X1140
10	77700-07200	SM-KX400708-R	1	BRACKET, LOWER LATCH, REAR DOOR, RIGHT, RTV X1140
11	77700-07204	SM-KX400709	1	PLATE, LATCH, MIDDLE, REAR DOOR, RTV X1140
12	77700-07202	9BSH06	2	BUSHING, NYLON FLANGED, 7/16OD X 5/16ID X 7/16LG, 9/16 X 1/16FLG
13	77700-07203	9GR12	1	GROMMET, RUBBER, .313ID, .813OD, .125GW, .563GD
14	77700-07205	9SP001	1	SPRING, EXT, 1.00 LG, .375 OD
15	77700-01021	9YR-LL / 9YR-LR	1L, 1R	SET LATCH - PLASTIC ROOF (set of 2)
16	70000-01018	9DL01C	1	DOOR HANDLE
17	77700-02022	9SW-00006	1	SLIDING WINDOW, LARGE
18	77700-07206	PG-KX400701	1	WINDOW, LOWER, REAR DOOR, RTV X1140
19	77700-00279	9PR10	1	WINDOW RUBBER (110")
20	77700-13574	9DL-130	1	DECAL, PULL HERE
21	77700-05241	9PR41	1	1-1/2" DOUBLE SIDE BULB (180")
22	70000-01024	9GS02A	1	BALL STUD FOR GAS SPRING
23	70000-01023	9GS02Q	1	GAS DOOR SPRING, 11-5/8 STROKE
N.S.	70000-01216	9DL01H	2	KEYS, CAB DOOR






BOLT TORQUE

GENERAL TORQUE SPECIFICATION TABLE

Use the following torques when special torques are not given. These values apply to fasteners as received from suppliers, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads. Remember to always use grade five or better when replacing bolts.

IMPORTANT: On all PLATED GRADE 8 bolts, reduce torque 15% from listed bolt torque specification.

SAE Grade No.		2				5				8*			
Bolt head identification mark as per grade. NOTE: Manufacturing Marks Will Vary													
		TORQUE		TORQUE		TORQUE		TORQUE		TORQUE		TORQUE	
Bolt Size		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters	
Inches	Millimeters	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4	6.35	5	6	7	8	9	11	12	15	12	15	16	20
5/16	7.94	10	12	14	16	17	20.5	23	28	24	29	33	39
3/8	9.53	20	23	27	31	35	42	48	57	45	54	61	73
7/16	11.11	30	35	41	47	54	64	73	87	70	84	95	114
1/2	12.70	45	52	61	70	80	96	109	130	110	132	149	179
9/16	14.29	65	75	88	102	110	132	149	179	160	192	217	260
5/8	15.88	95	105	129	142	150	180	203	244	220	264	298	358
3/4	19.05	150	185	203	251	270	324	366	439	380	456	515	618
7/8	22.23	160	200	217	271	400	480	542	651	600	720	814	976
1	25.40	250	300	339	406	580	696	787	944	900	1080	1220	1464
1-1/8	25.58	-	-	-	-	800	880	1085	1193	1280	1440	1736	1953
1-1/4	31.75	-	-	-	-	1120	1240	1519	1681	1820	2000	2468	2712
1-3/8	34.93	-	-	-	-	1460	1680	1980	2278	2380	2720	3227	3688
1-1/2	38.10	-	-	-	-	1940	2200	2631	2983	3160	3560	4285	4827

*Thick Nuts must be used with Grade 8 bolts

METRIC BOLT TORQUE SPECIFICATIONS

Size of Screw	Property Class	Course Thread			Fine Thread		
		Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-9.4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		55-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.6-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6