

# *HardCabs* →

*INSTALLATION INSTRUCTIONS*

**MAHINDRA**

**ROXOR2**



## **SAFETY INSTRUCTIONS**

***Warning: Failure to heed all safety and operating instructions and warnings regarding use of this product can result in serious bodily injury.***

### **THOROUGHLY READ COMPLETE ASSEMBLY INSTRUCTIONS BEFORE BEGINNING ASSEMBLY**

***Install all parts indicated in assembly instructions. Failure to fully assemble product before use could result in personal injury.***

***Assembly of product requires use of hand or power tools. If you are not experienced in using these types of tools, have product dealer do the install for you.***

***Some parts contain sharp edges, wear protective gloves if necessary. Always keep your assembly area clean, uncluttered and well lit.***

***Keep visitors and children a safe distance away from the assembly area. Visitors should wear the same safety equipment described above.***

***Never operate your UTV with the cab doors open. Failure to properly latch the doors before moving the vehicle could result in serious injury.***

***Dress for safety. DO NOT wear loose clothing, gloves, neckties or jewelry if using power tools to assemble this product. Install all nut covers after you finish installation.***

***Never drive your UTV with the cab front window in open position.***

***Failure of improperly latched/locked front window before driving the vehicle could result in serious injury.***

## **MAINTENANCE AND CLEANING**

*To clean polycarbonate surface use soapy water solution or other NON-ABRASIVE CLEANERS.*

*Wash dirt and dust with a gentle water stream and swipe only with wet or damp towel or sponge from top to bottom.*

*The recommended frequency of cleaning of polycarbonate part is about 1 time per month or according to the actual degree of dirtiness.*

*Do not use detergents that could scratch the surface plates. (abrasives, harsh fabrics, etc.)*

*Do not use solvents or alkaline detergents or cleaners with ammonia (ammonium hydroxide).*

*Do not remove any dirt or grime from the polycarbonate surface with Razor blades or other sharp items.*

*Do not clean cab when the polycarbonate panels are heated by the sun.*

*Do not use a squeegee as it could scratch the polycarbonate.*

*Do not powerwash current strength greater than 50 bar (725psi)*

*The manufacturer is not responsible for scratches on the polycarbonate surface in cases of failure to comply with the above instructions.*

*All bolted connections of cab must be checked and tightened by user at regular intervals.*

*To insure optimal performance it is necessary to check the air filter of the heater regularly.*

**PREPARATION FOR INSTALLATION:**

Uninstall all additional systems from the roll cage (i.e handles, work lights, rear mirrors, drink holders etc.)

**CAB PREVIEW**



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**DETAIL HANDLE VIEW**



**REAR PANEL 1.**

Adjust the original cargo-holder to neutral position.



Loosen the holders screws and adjust the rear bottom assembly holders to neutral position (red circles).



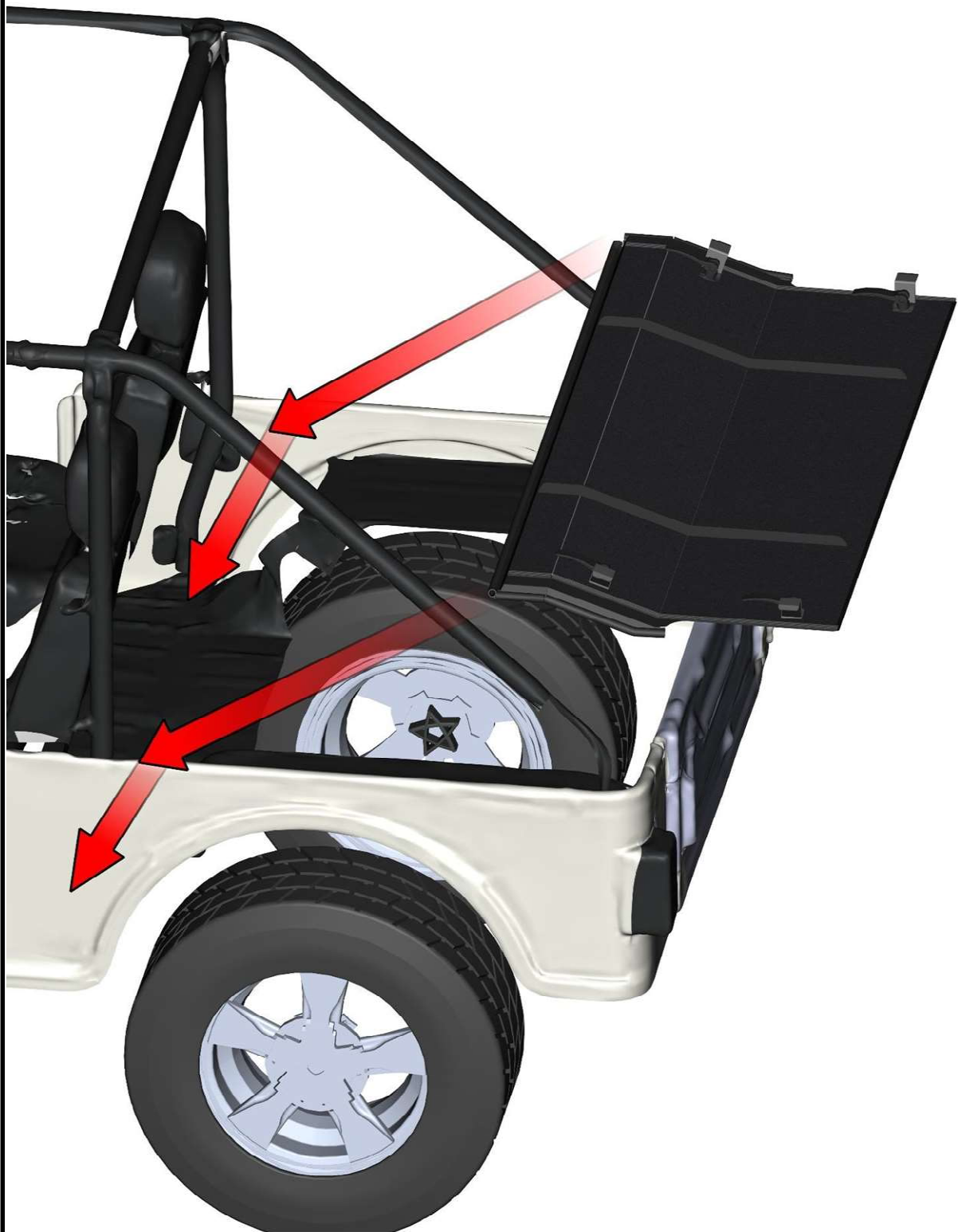
7



Turn the rear bottom assembly to horizontal position.



Place the rear bottom assembly into the cargo space. Push the rear bottom assembly to the cargo floor (around the wheel cover).





Turn the bottom rear assembly to vertical position.  
Press the assembly to the floor and to the vehicle frame.  
Adjust the holders to the best position and tighten screws correctly.



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**LEFT DOOR + RIGHT DOOR 1.**

Loosen the holder screws and adjust the left base holder to the best position. Place the base onto the vehicle frame.



Adjust the base holders to the best position. It is necessary to mount the door base to the best position. SEE NEXT PAGES

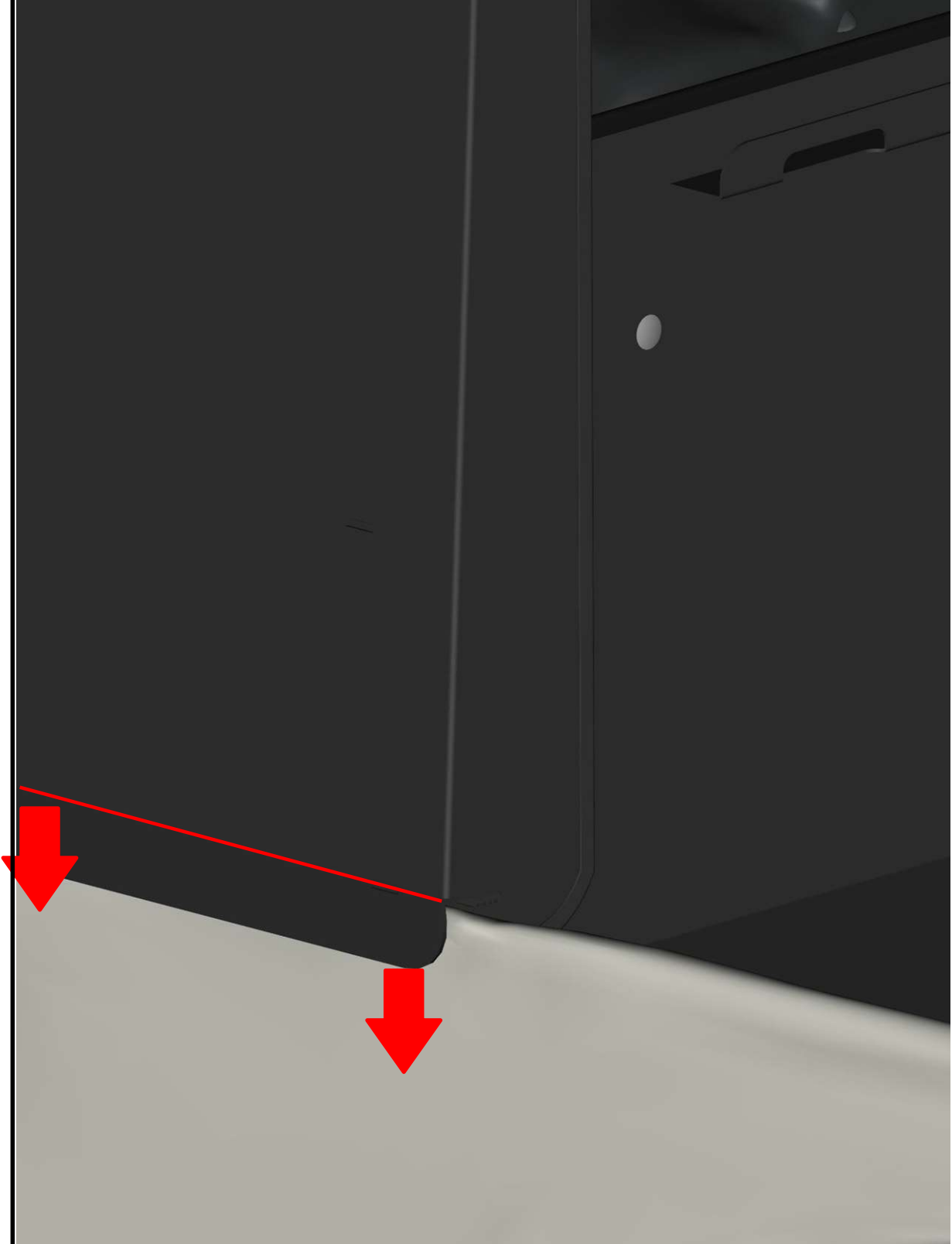


Push the base over the vehicle side cover (detail view).



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Push the base over the vehicle side cover (detail view).





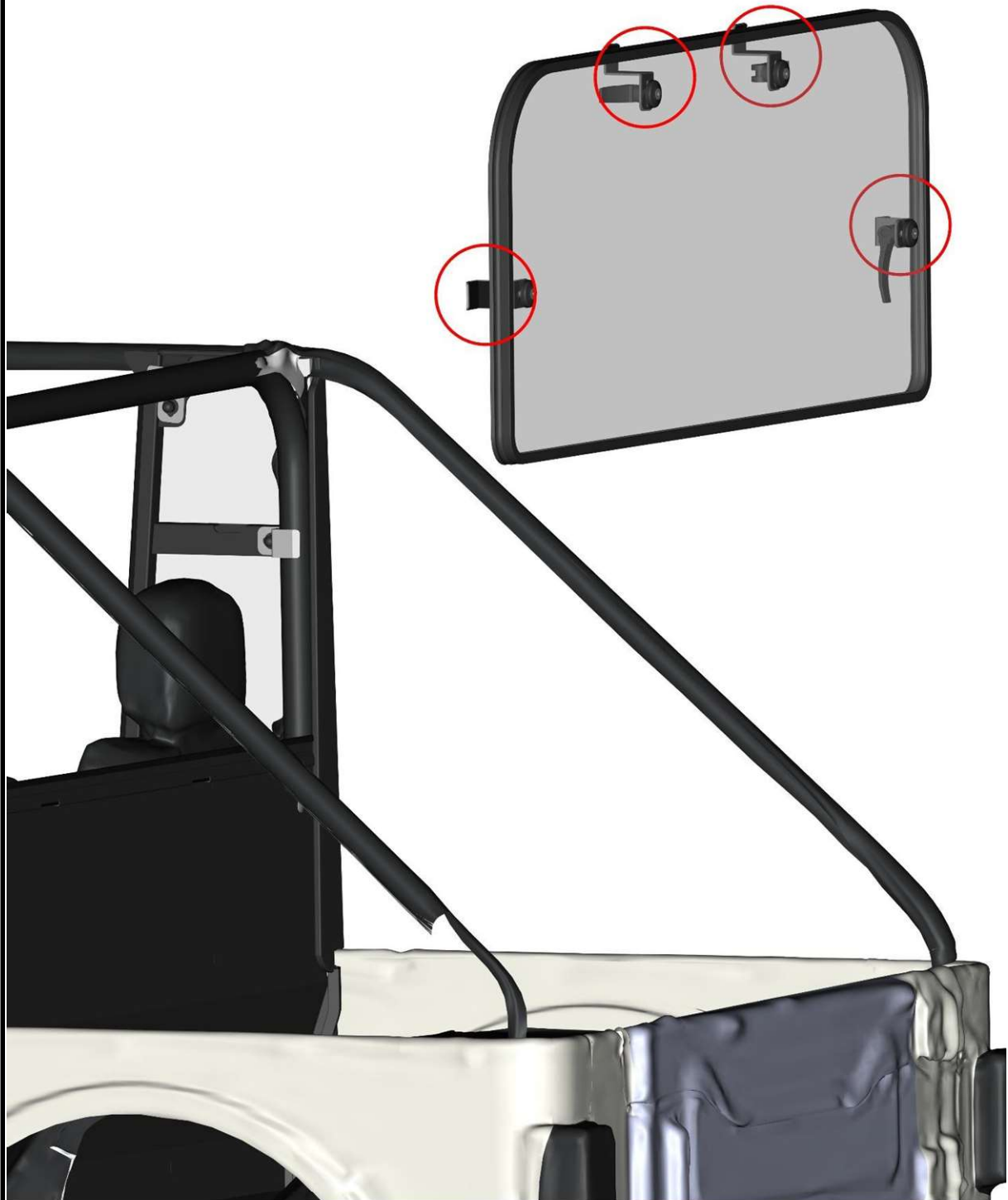
Repeat previous steps with the right door base.



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**REAR PANEL 2.**

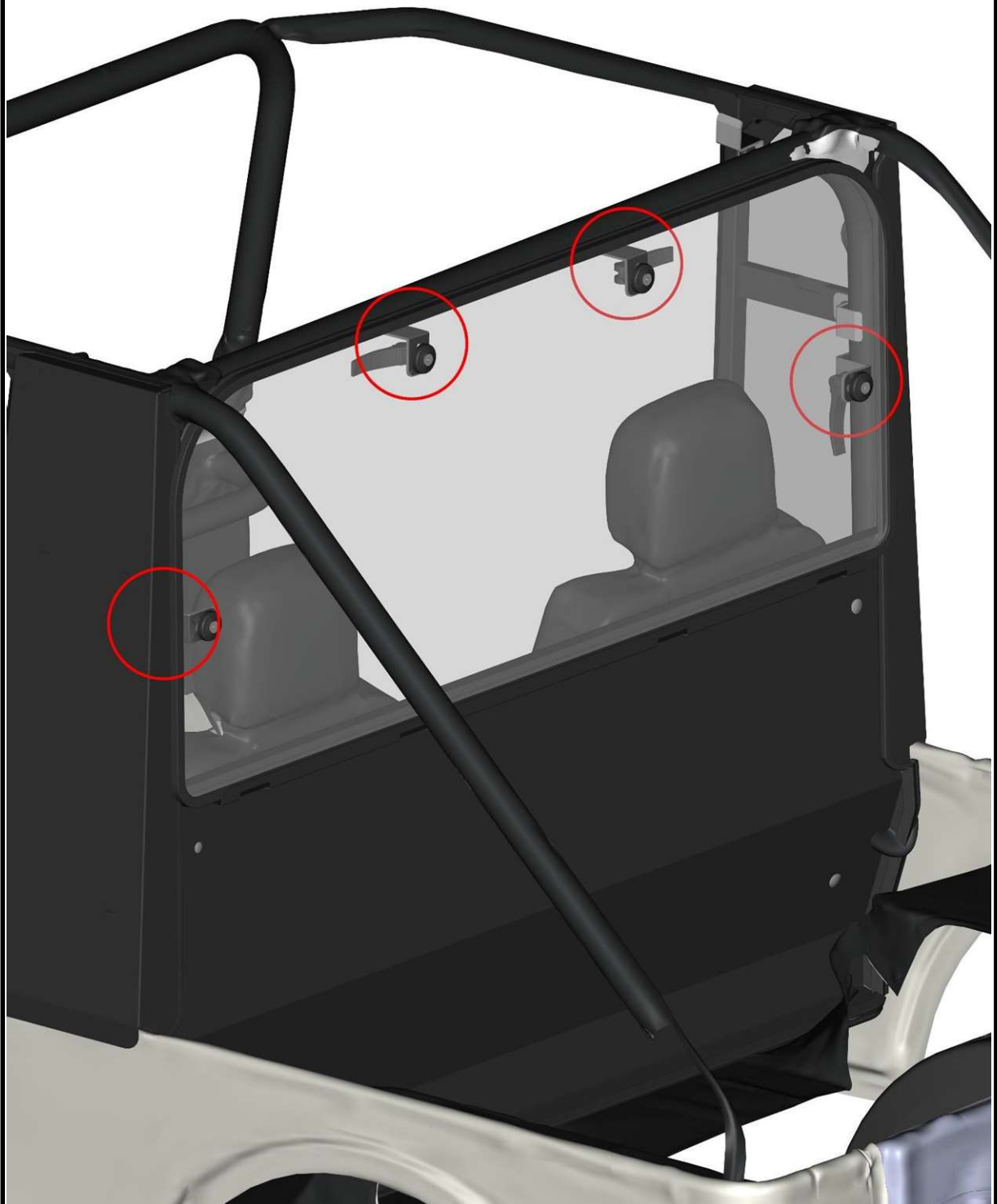
Loosen the holder screws  
and turn rear glass holders to the neutral position.



Place the rear window assembly onto the vehicle frame, door bases and rear bottom assembly.



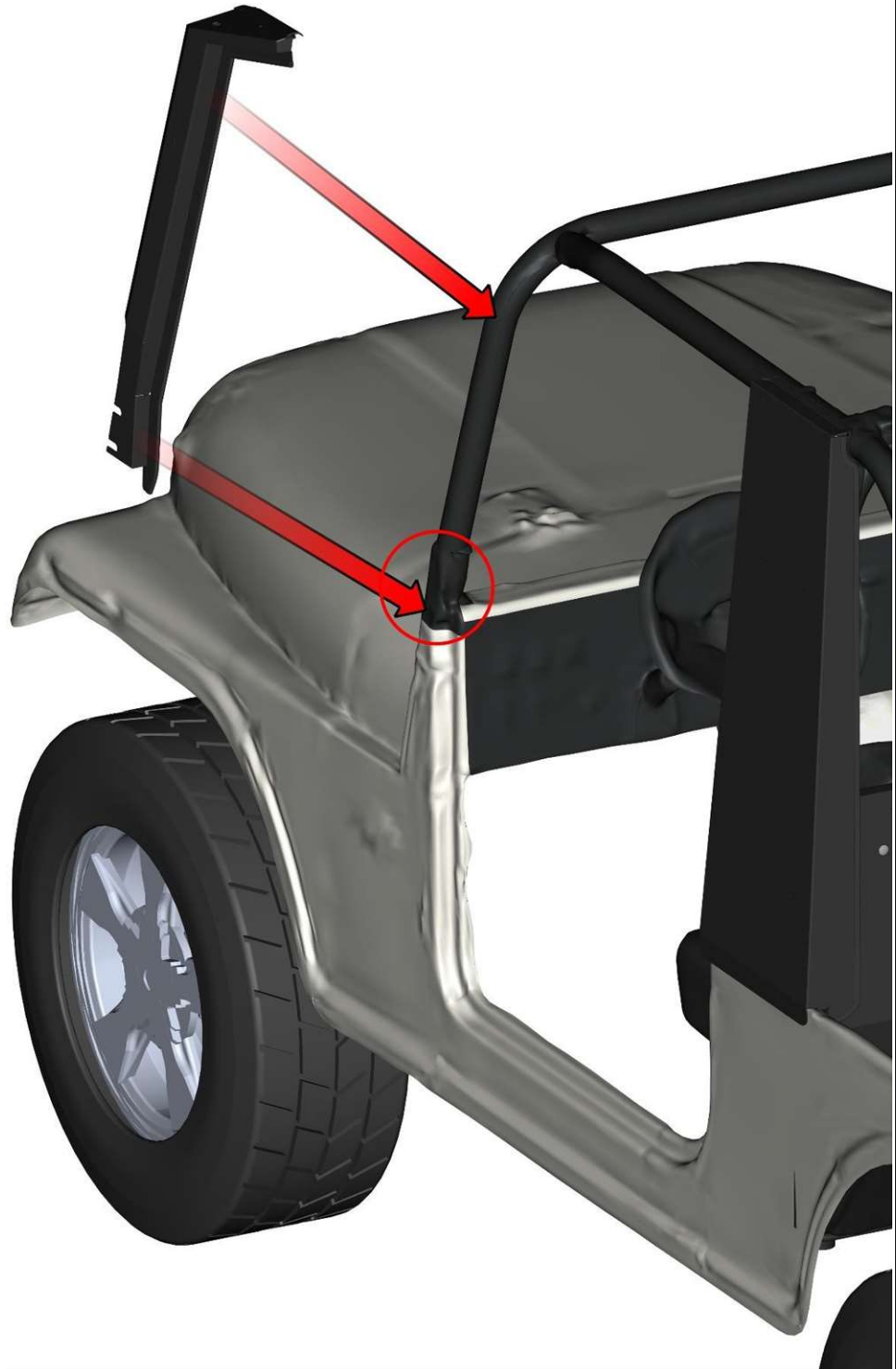
Adjust the rear window holders to the best position and tighten screws correctly.



18

**LEFT DOOR + RIGHT DOOR 2.**

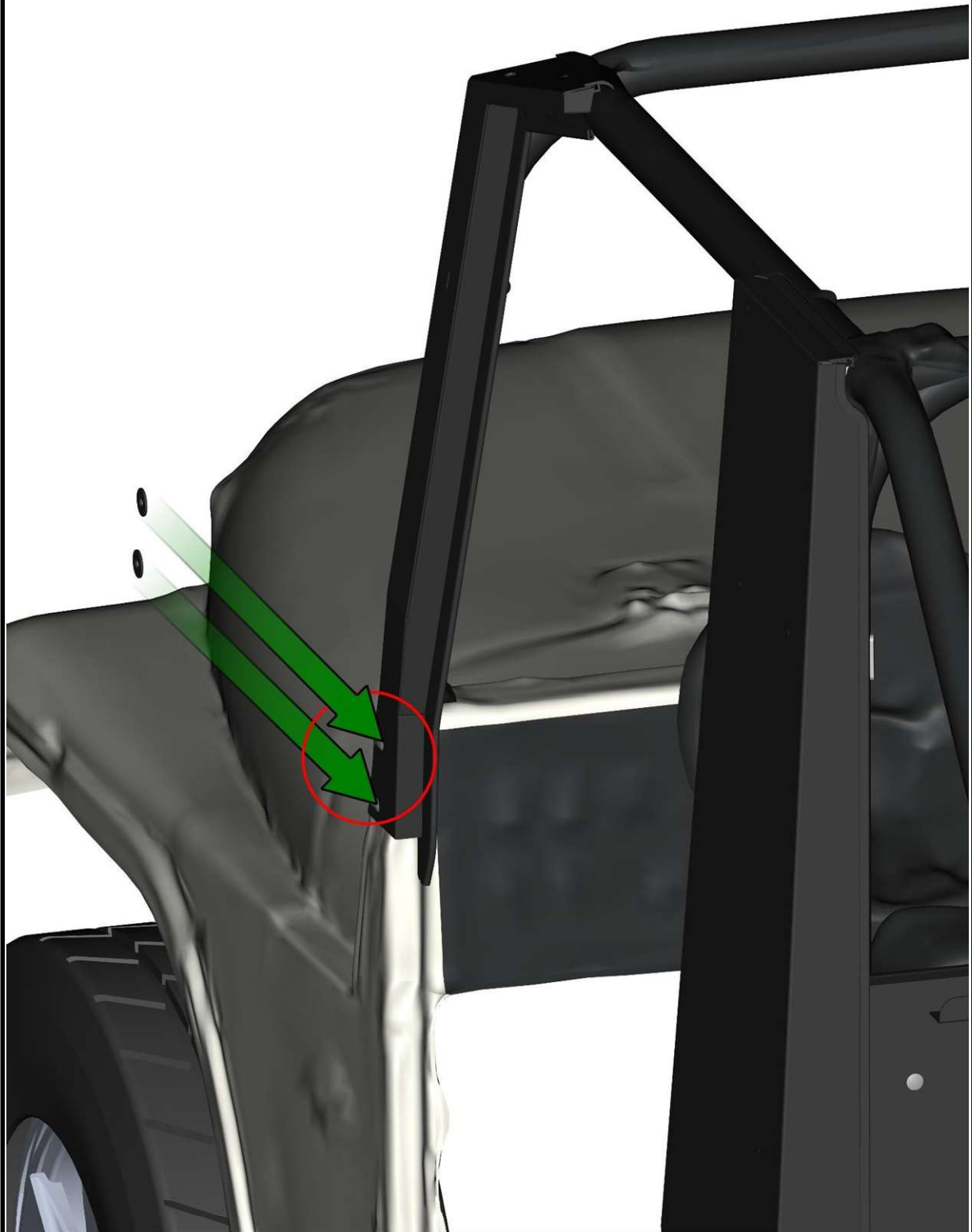
Loosen original screws (red circle) and place the front left cover assembly onto the vehicle frame.



19

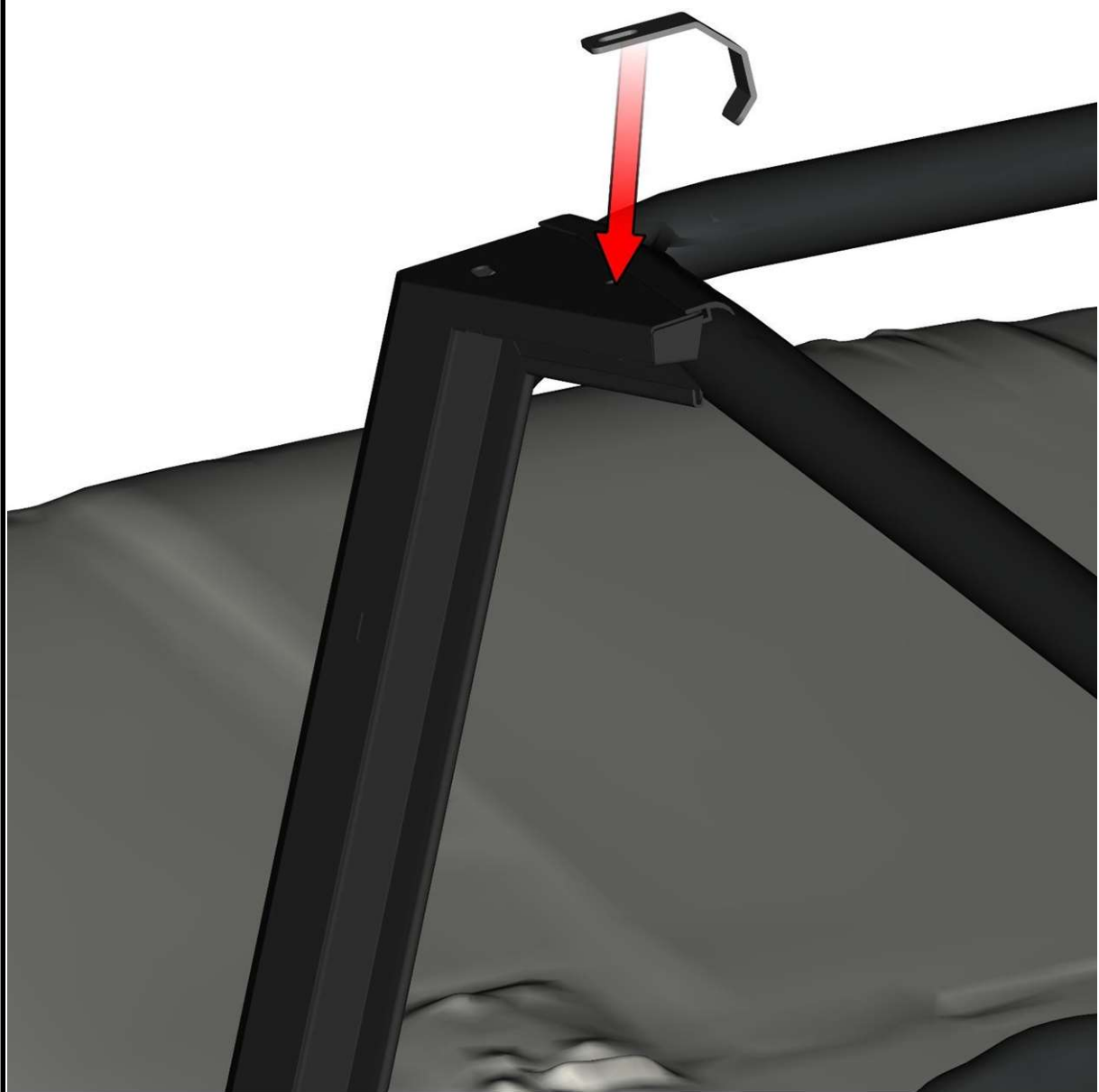


Fix the ledge with the vehicle using original screws (from previous page) and washers (included).



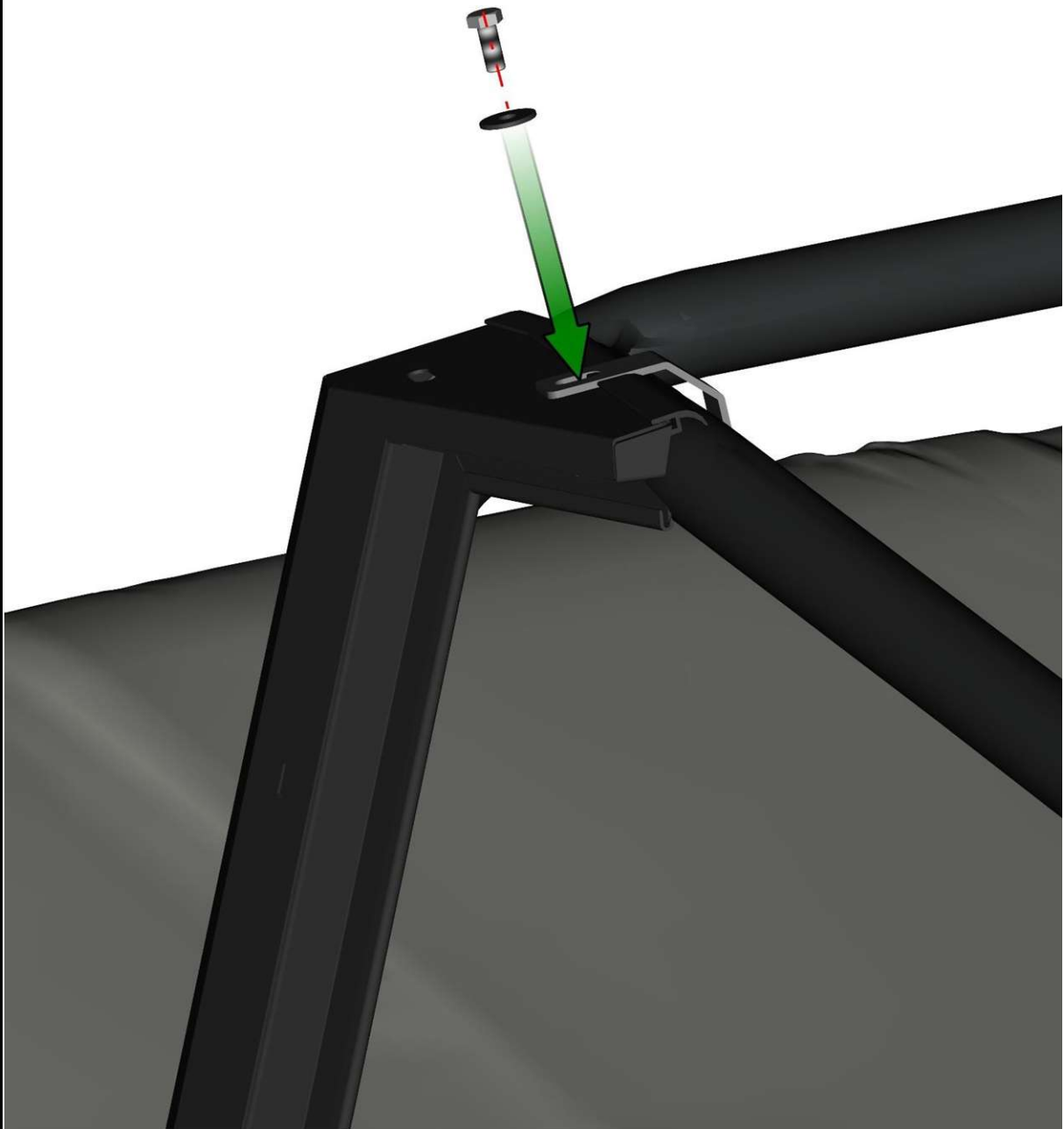
20

Place the front upper holder onto the cover and onto the vehicle frame.



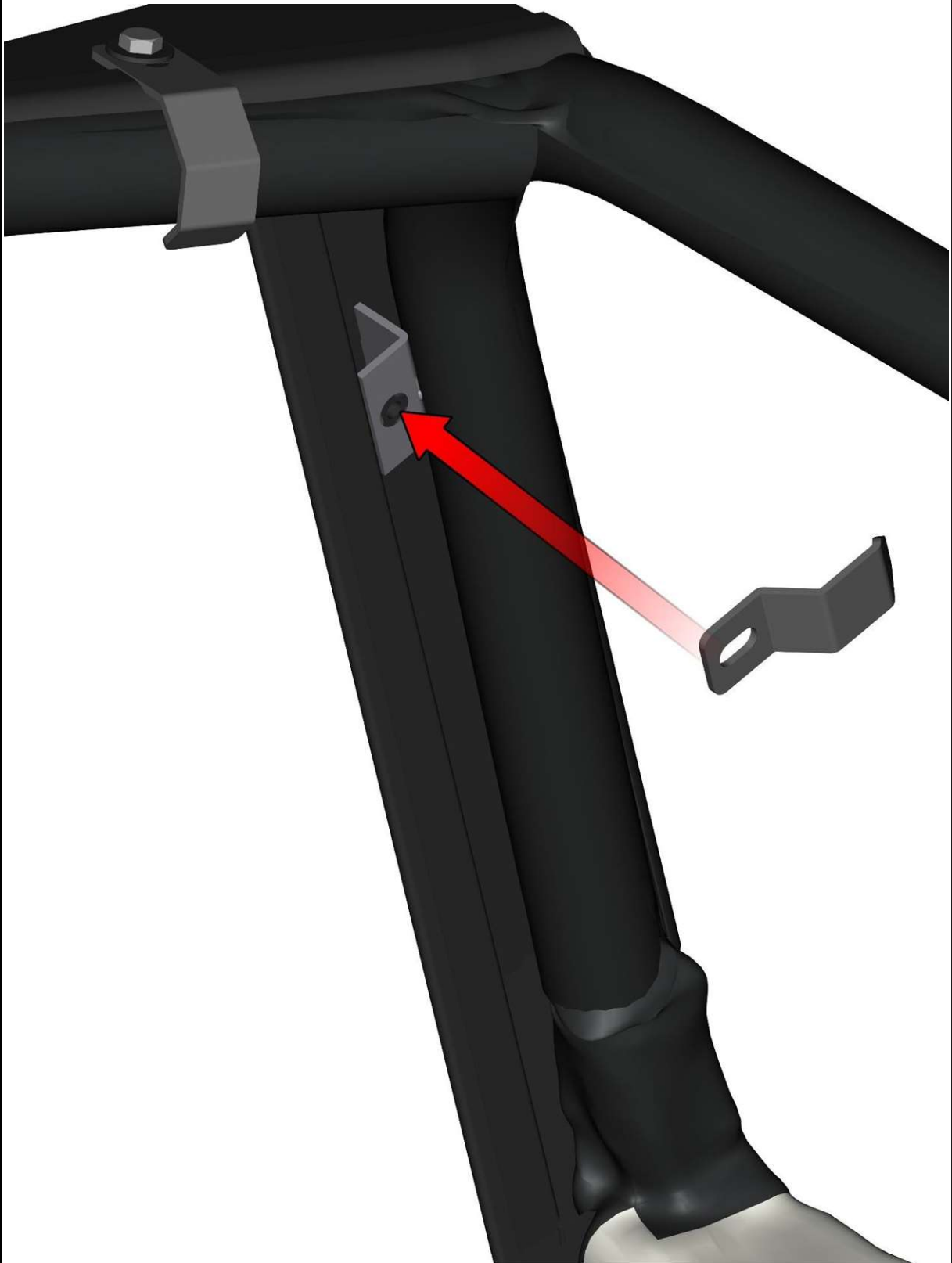
21

Fix the holder with the cover with screw and washer (included).



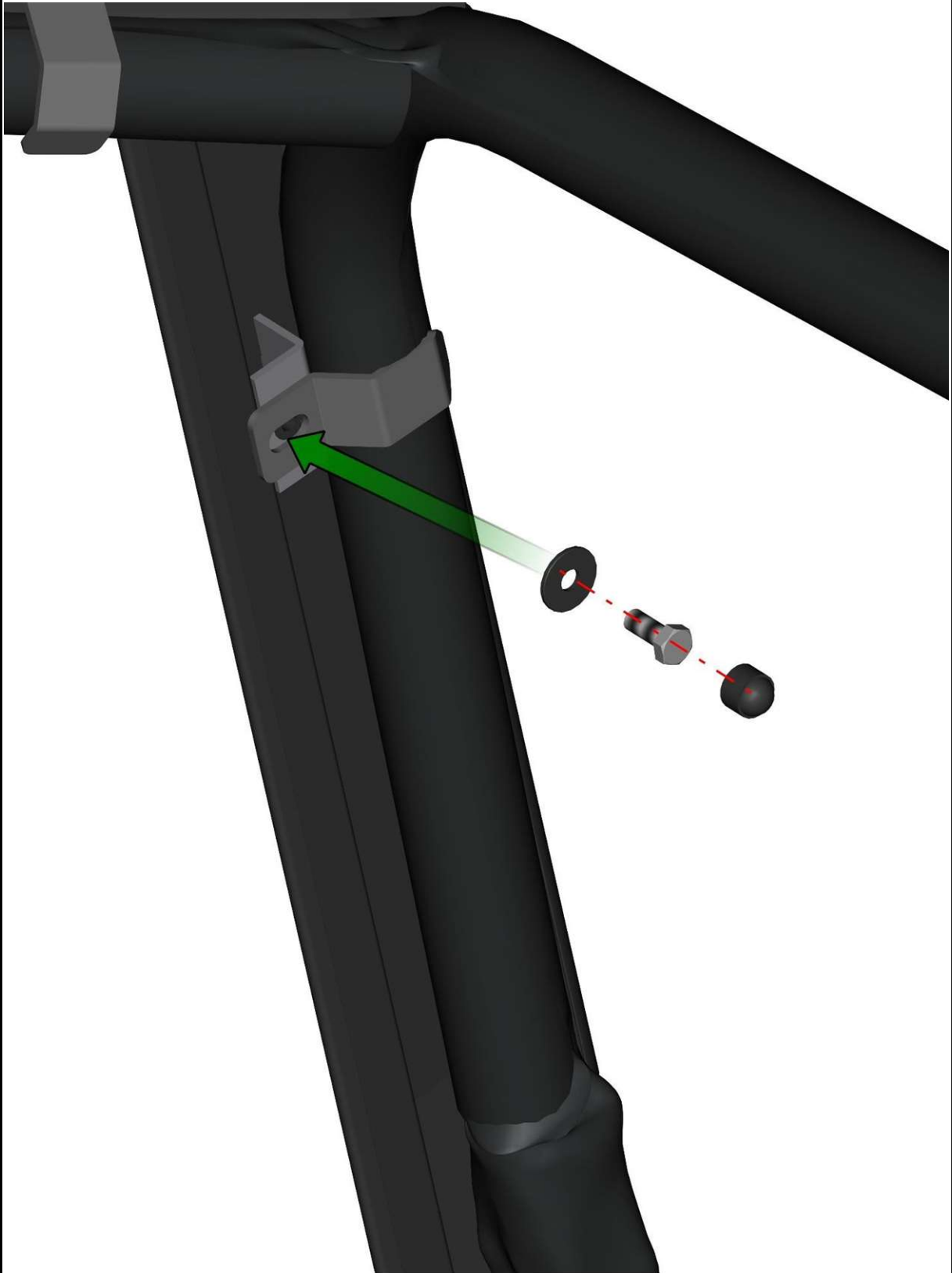
22

Place the central holder onto the cover.



23

Fix the holder with the cover using included screw, washer and nut.

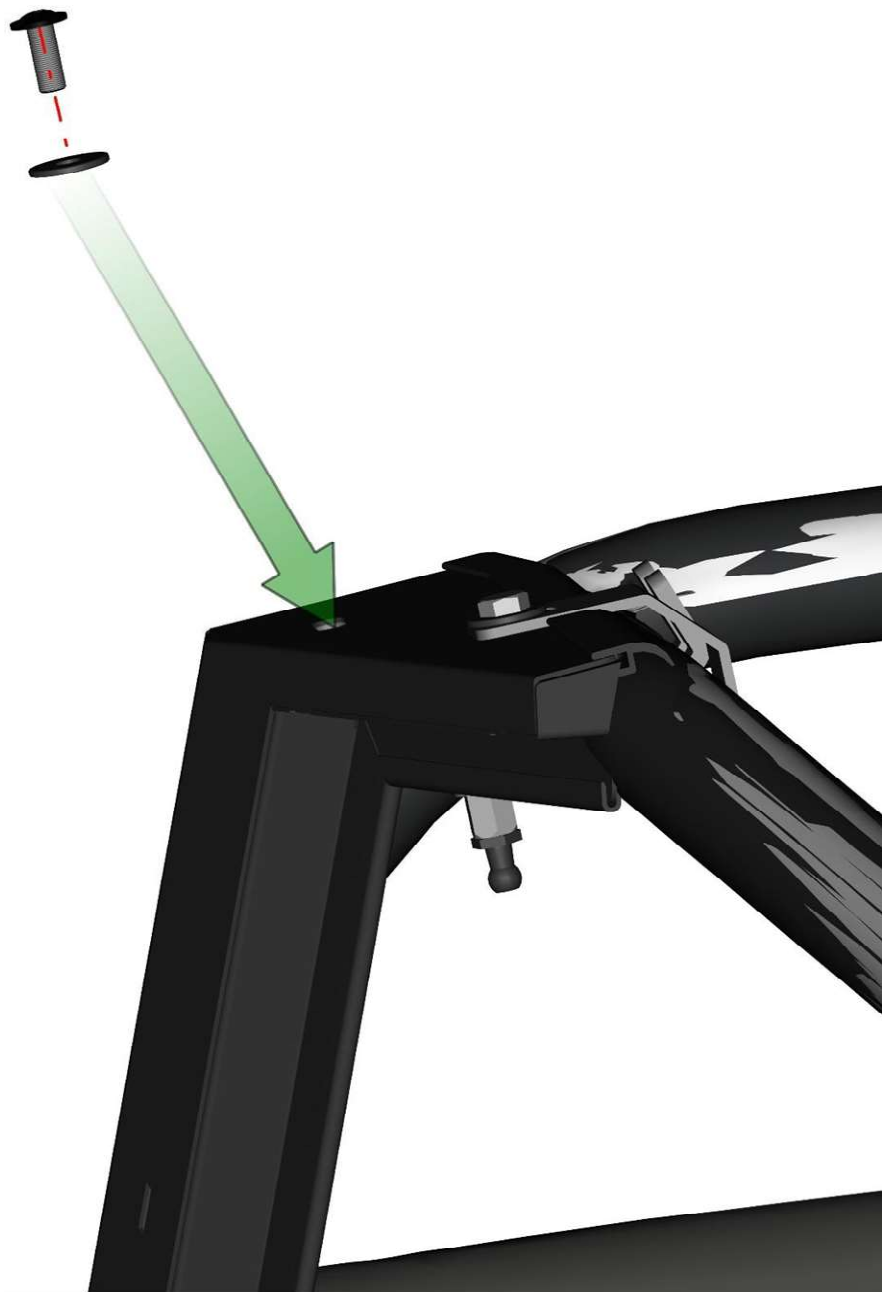




Loosen the original frame screw (red circle).  
Place the left gas spring holder onto the vehicle frame.



Fix the gas spring holder with the front left cover by with screw and washer. Tighten original frame screw from previous page.



Repeat previous steps on the right side.



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**FRONT PANEL**

Loosen original screws from the vehicle.  
Place the front bottom ledge onto the vehicle.



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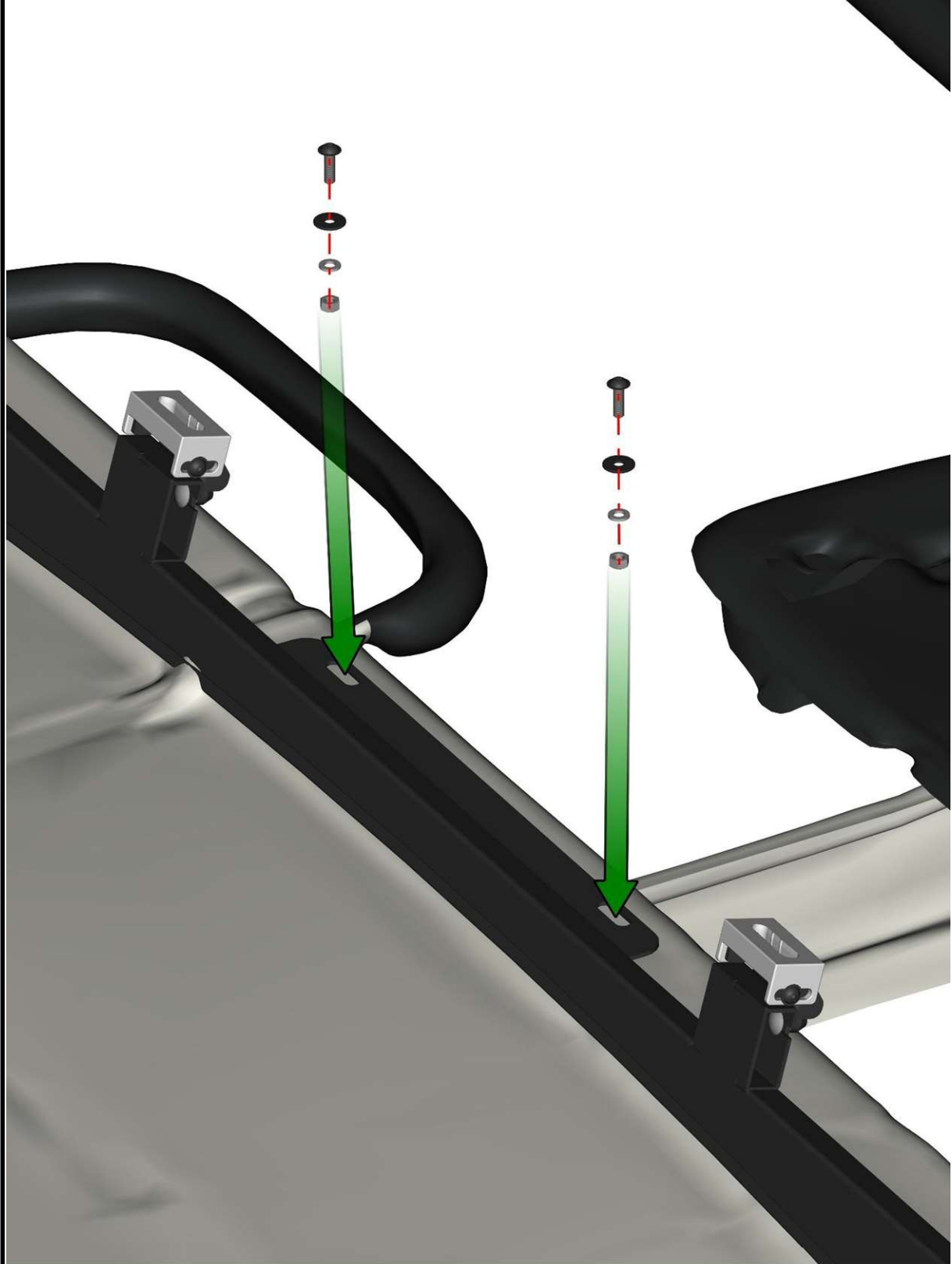
Fix the ledge with the vehicle by original screws (from previous page) and included washers.



29



Fix the ledge with the vehicle using included screws, washers and nuts.



30

Loosen the holders screws and adjust the front upper ledge holders to neutral position. Place the ledge onto the covers.



31

Adjust the holders to the best position and tighten screws slightly.



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**NOTE: IF NOT INSTALLING WIPER SKIP TO PAGE 40**

**WIPER SET**

View onto the wiper motor with the cover and with the middle ledge.



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Place the washer onto the wiper longer pin.





Place the washer onto shorter wiper pin.



View onto installed washers.





Place the wiper assembly onto the front glass from inner side.

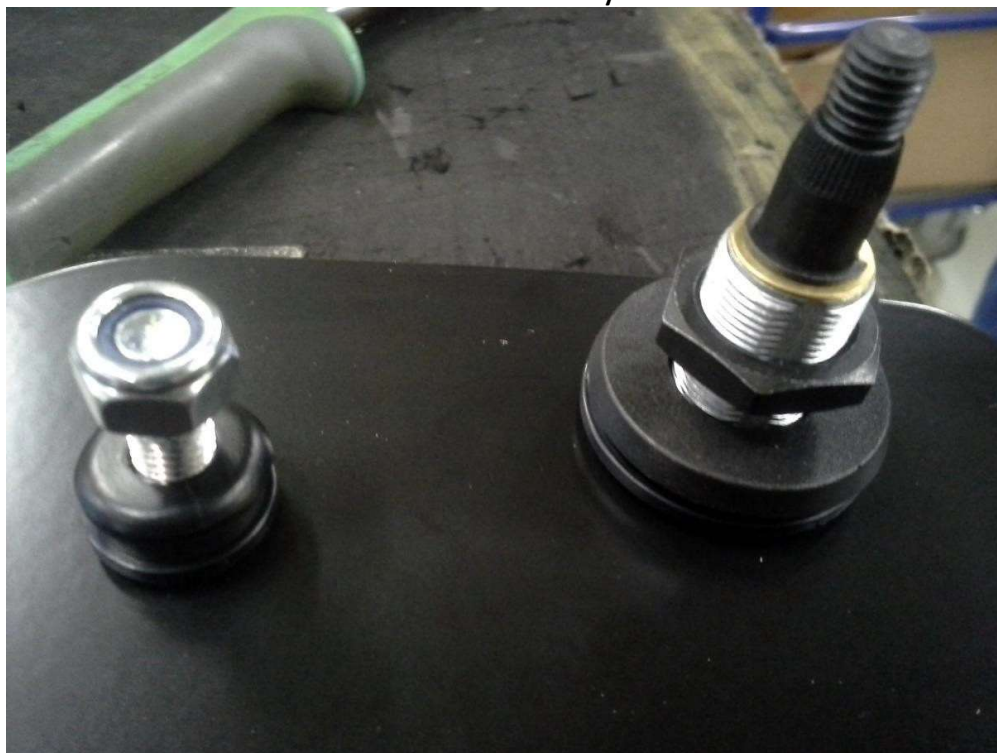


35

Insert these washers onto the wiper's pins and onto the glass from outer side.



Fix the wiper motor with the front glass by included nuts and tighten these correctly.



36

Install the wiper arm onto the wiper pin.



Fix the wiper arm with the wiper motor pin by included nut.  
Insert plastic holder onto the wiper latch pin in correct position



37

View onto the installed plastic holder.



Insert the wiper arm hook onto the wiper latch plastic holder and press it into the correct position.



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View onto installed wiper arm hook.



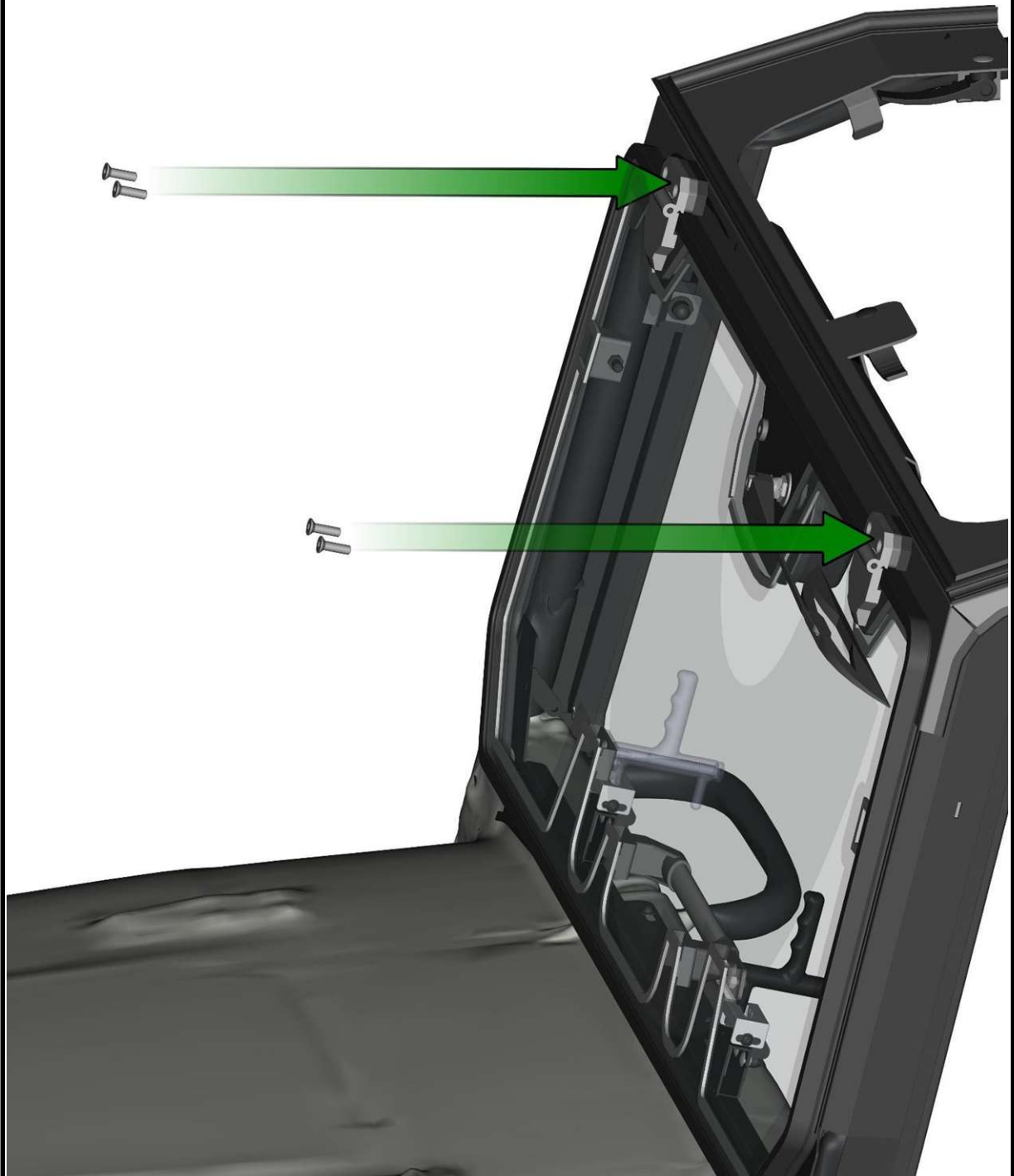


Place the window assembly onto the front upper ledge.



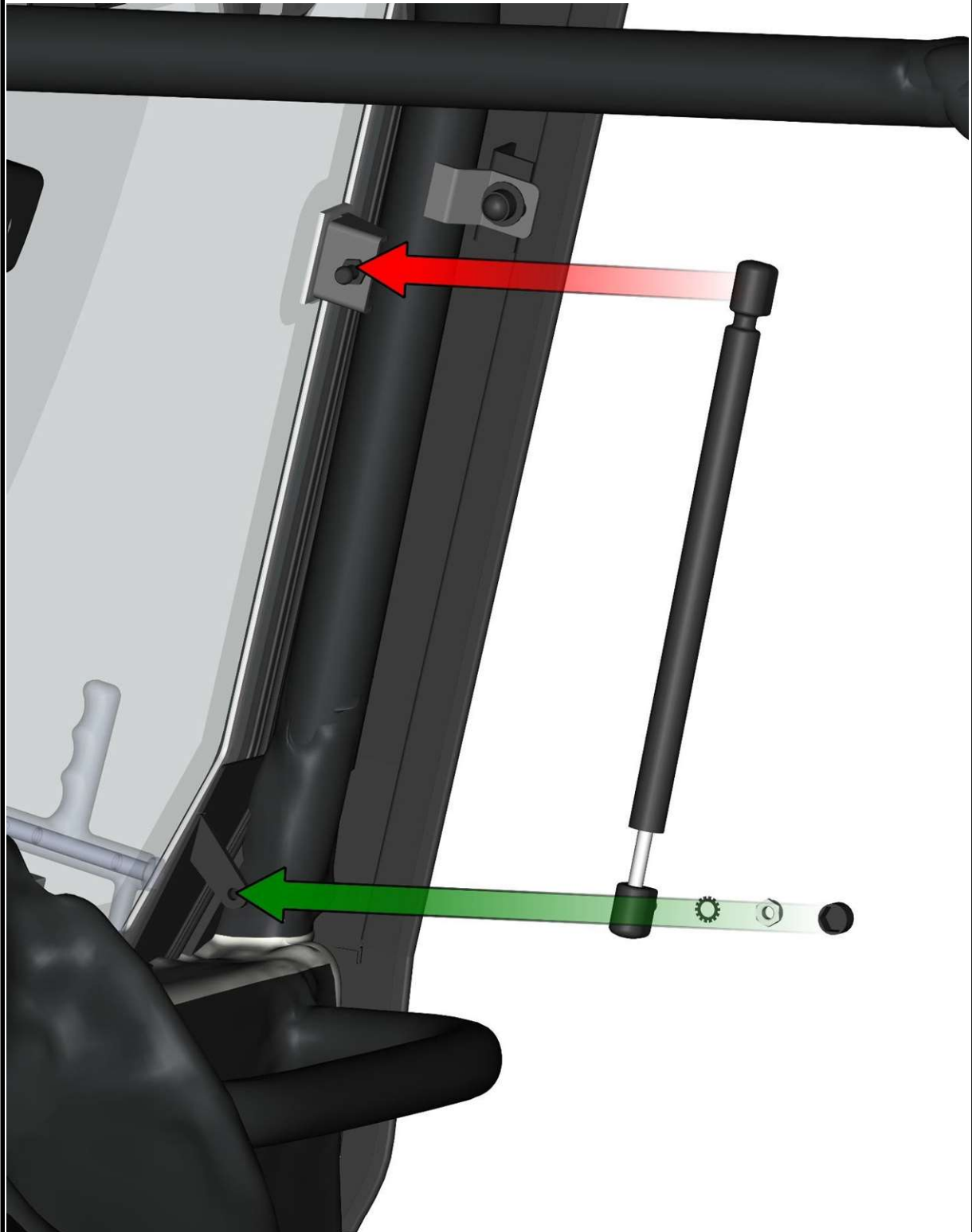
40

Fix the window hinges with the upper ledge by included screws.  
Adjust the window assembly by upper ledge to the best position and  
tighten all screws correctly.



41

Install the window gas spring onto the gas spring holders.  
**It is important to install the gas spring in the exact position shown below.**



Repeat previous steps on the vehicle left side.



43

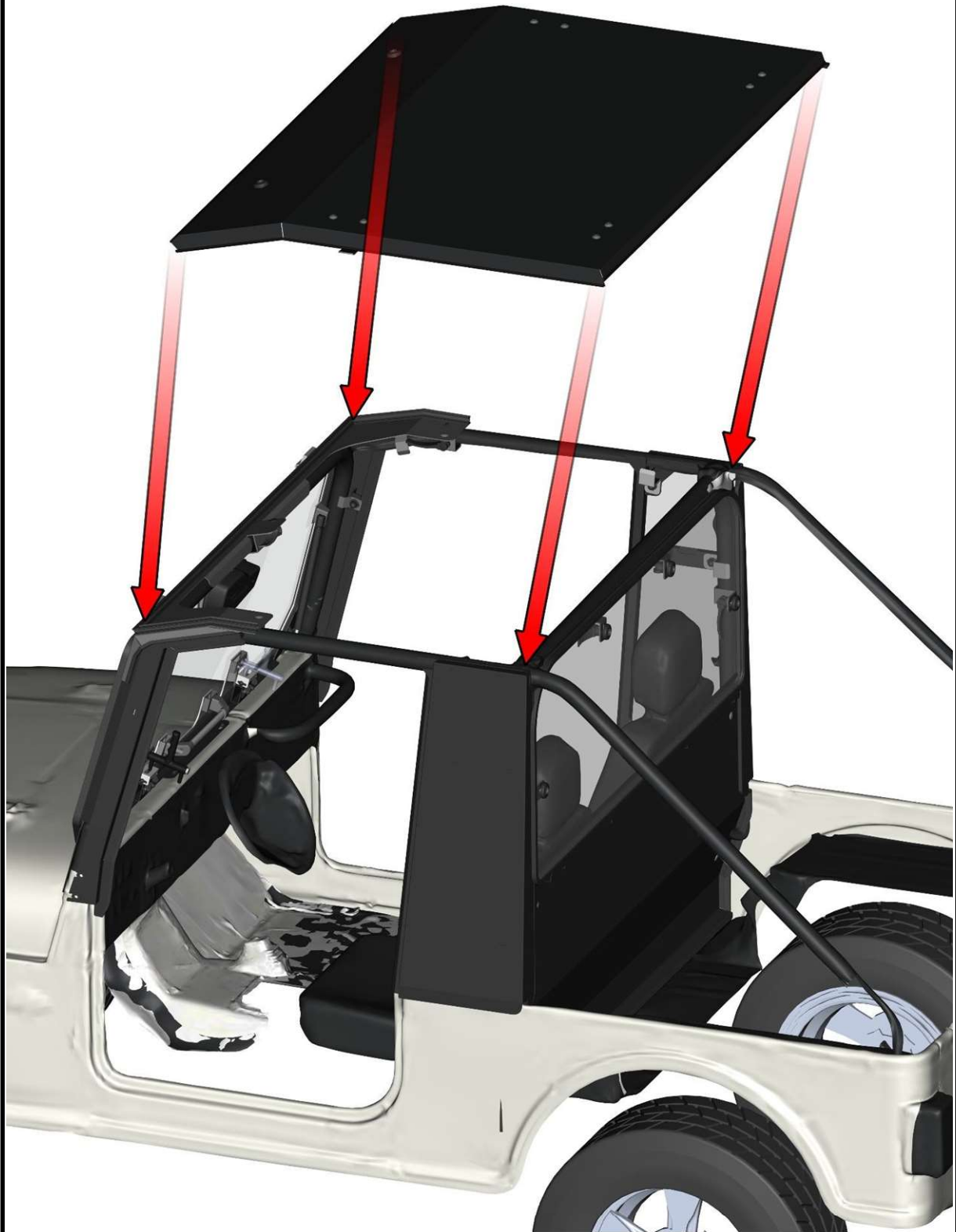
ROOF

Loosen the holder screws and adjust the holders to neutral position.





Place the roof onto the vehicle frame and onto the front ledge.



45

Adjust the roof holders to the best position.



Adjust the roof holders to the best position.



47

Adjust the roof to the best position and tighten screws correctly.



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**LEFT DOOR + RIGHT DOOR 3.**

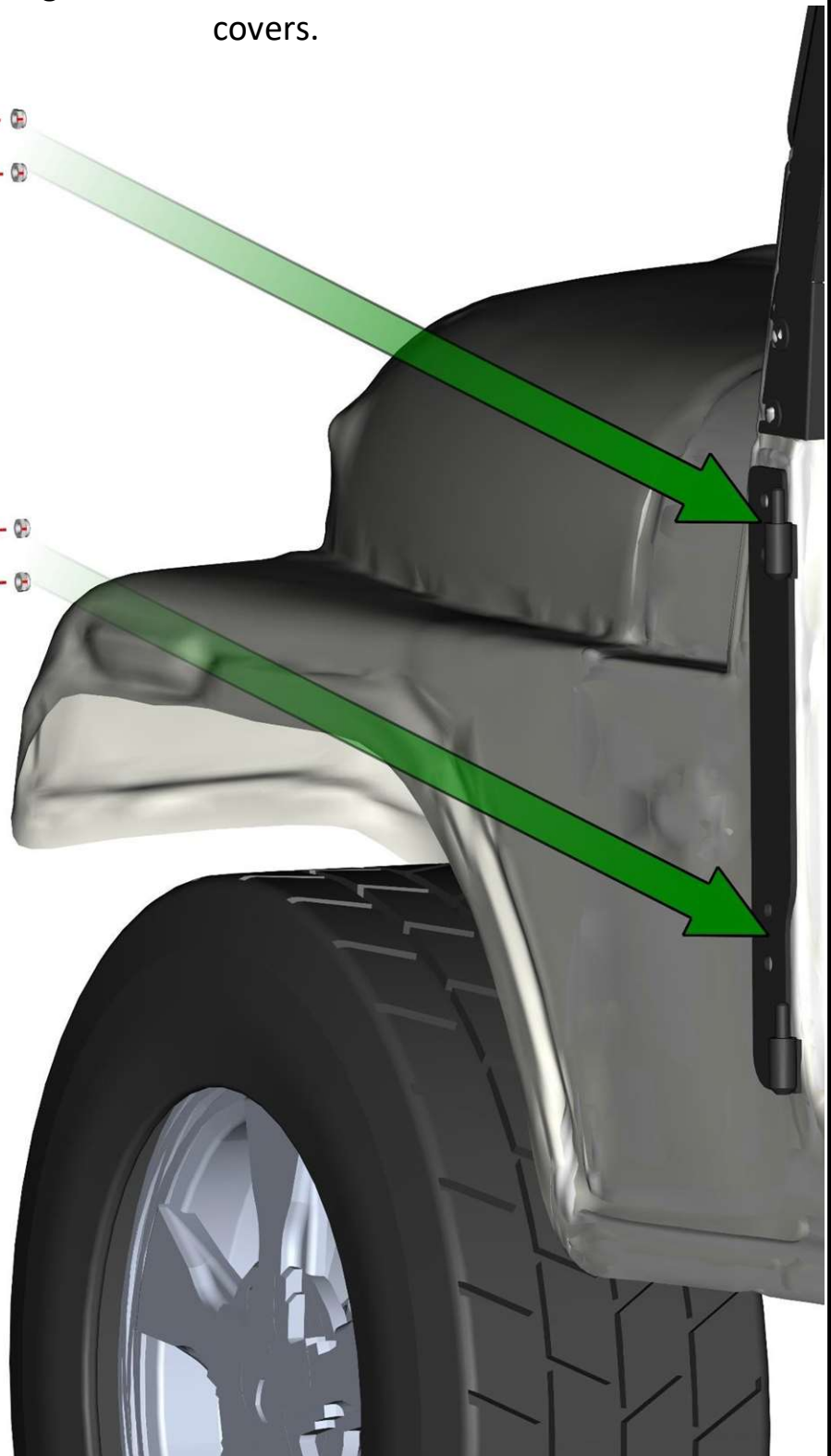
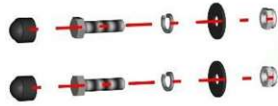
It is necessary to uninstall original hinge screws (red circles).  
Place the left door hinge ledge onto the vehicle.



49

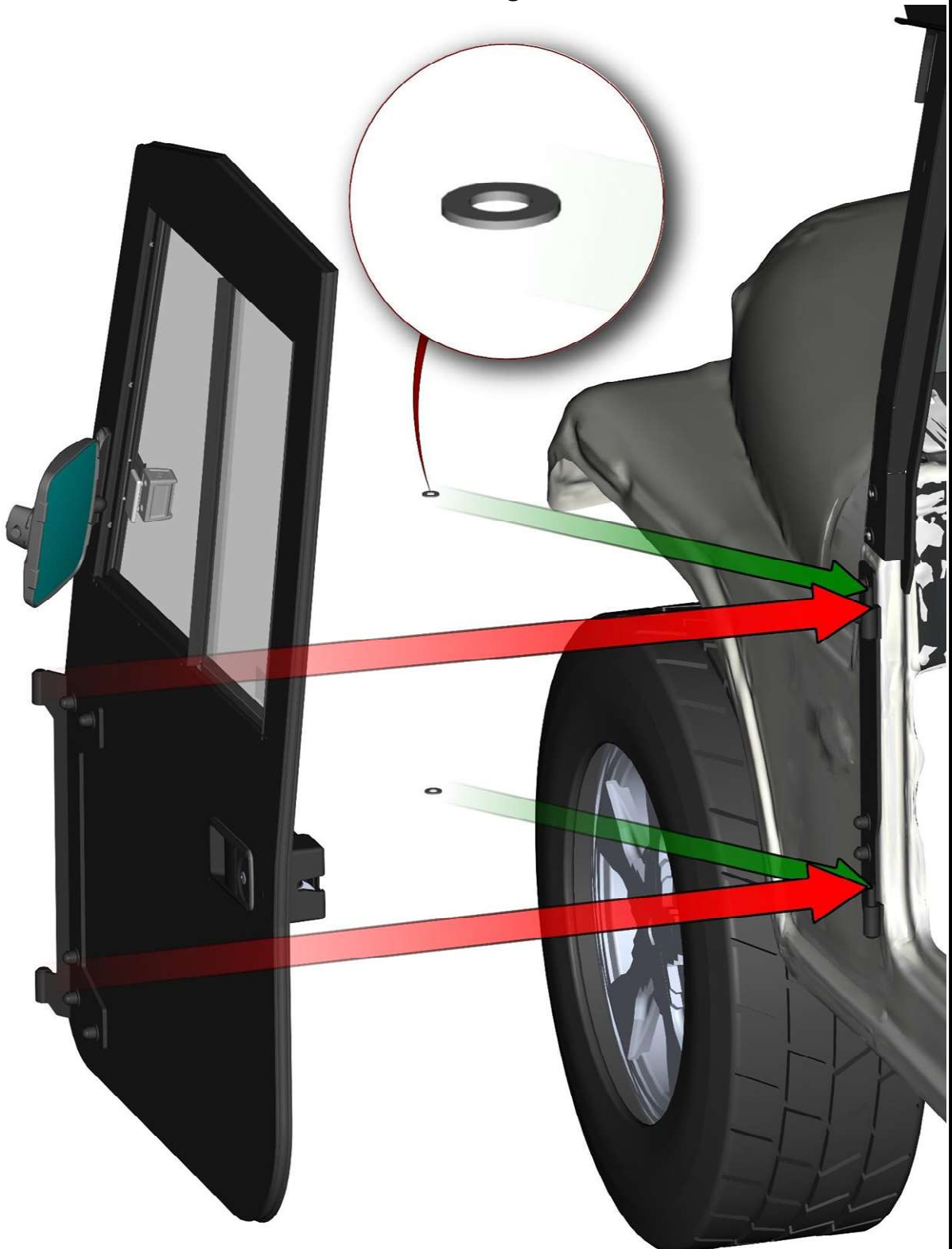


Fix the hinge ledge to the vehicle by using included screws, washers, nuts and covers.



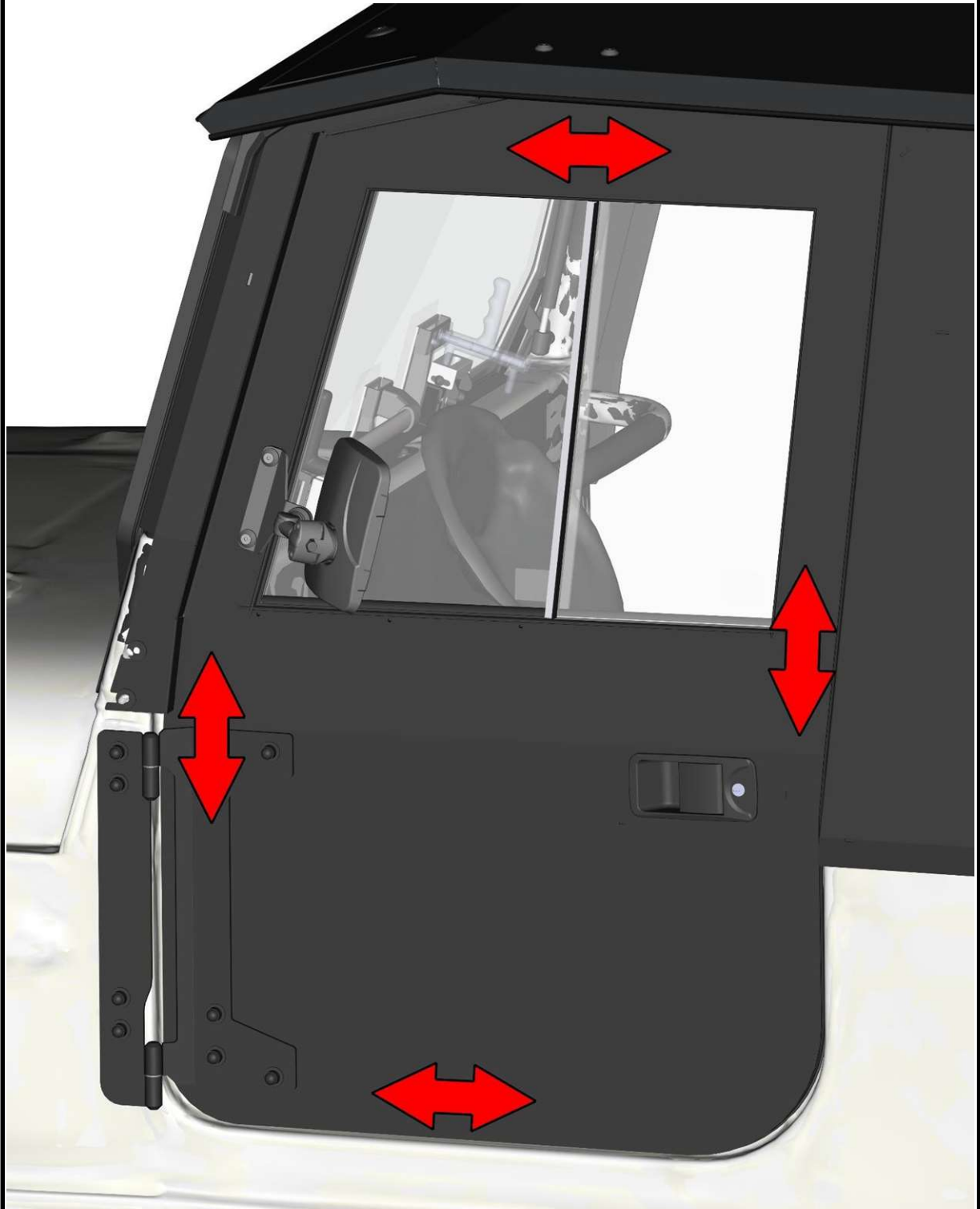
50

Lubricate the hinge pins and insert the washers onto the pins.  
Insert the door onto the hinges.



51

Loosen all hinge and door so you can easily adjust the door up/down, forward back. Align the door evenly with the roof line and rear door base. Re-tighten all the hinge screws.

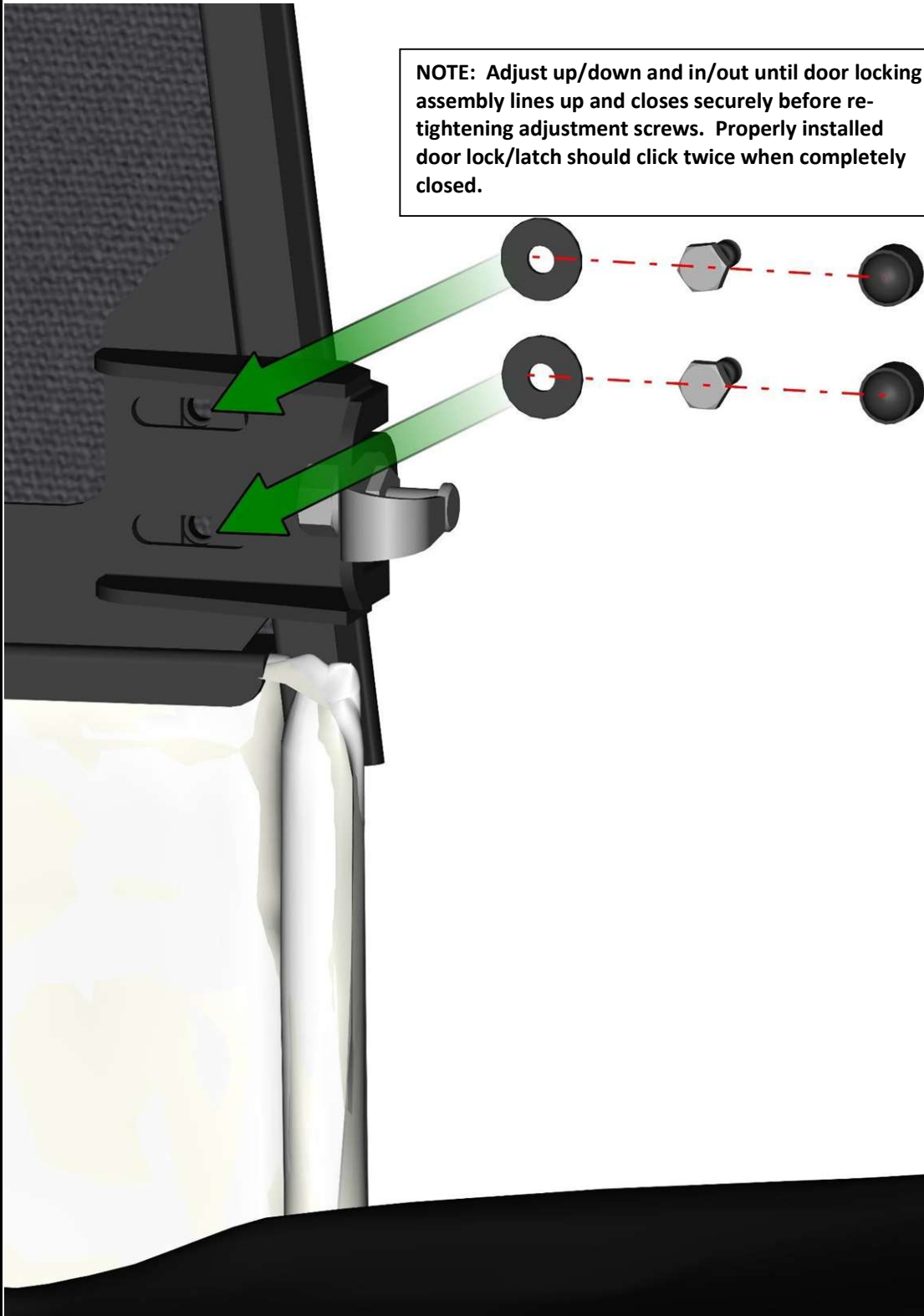


Insert the door stop fixing ledge into the door base.  
Place the door stop assembly onto the door base.



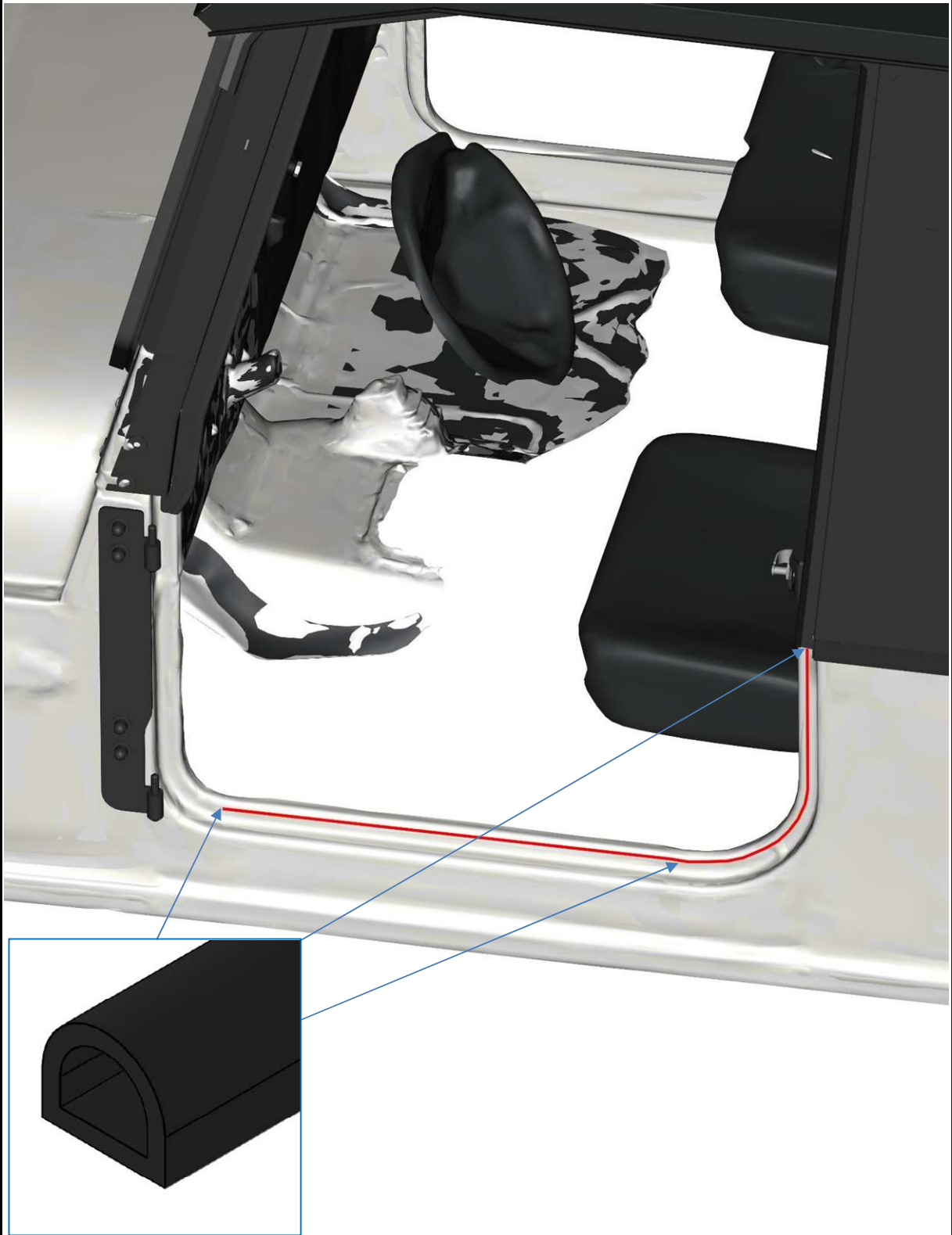
Fix the door stop assembly to the door base loosely with included screws, washers and covers.

**NOTE:** Adjust up/down and in/out until door locking assembly lines up and closes securely before re-tightening adjustment screws. Properly installed door lock/latch should click twice when completely closed.

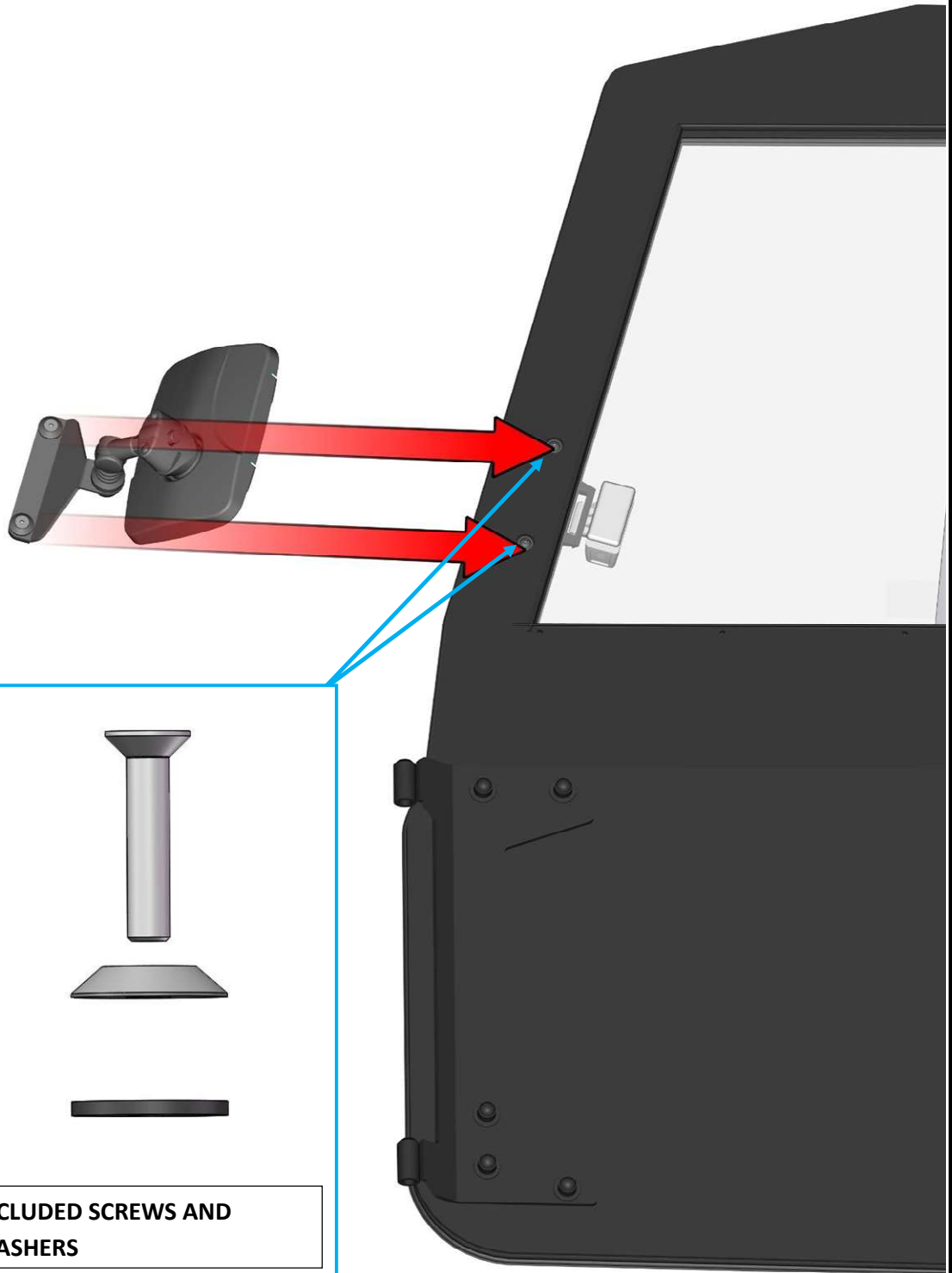




Clean the vehicle surface (red line)  
and stick the rubber profile apollo (red line) onto the vehicle body.



Install the rear mirror to the door using included screws and washers.

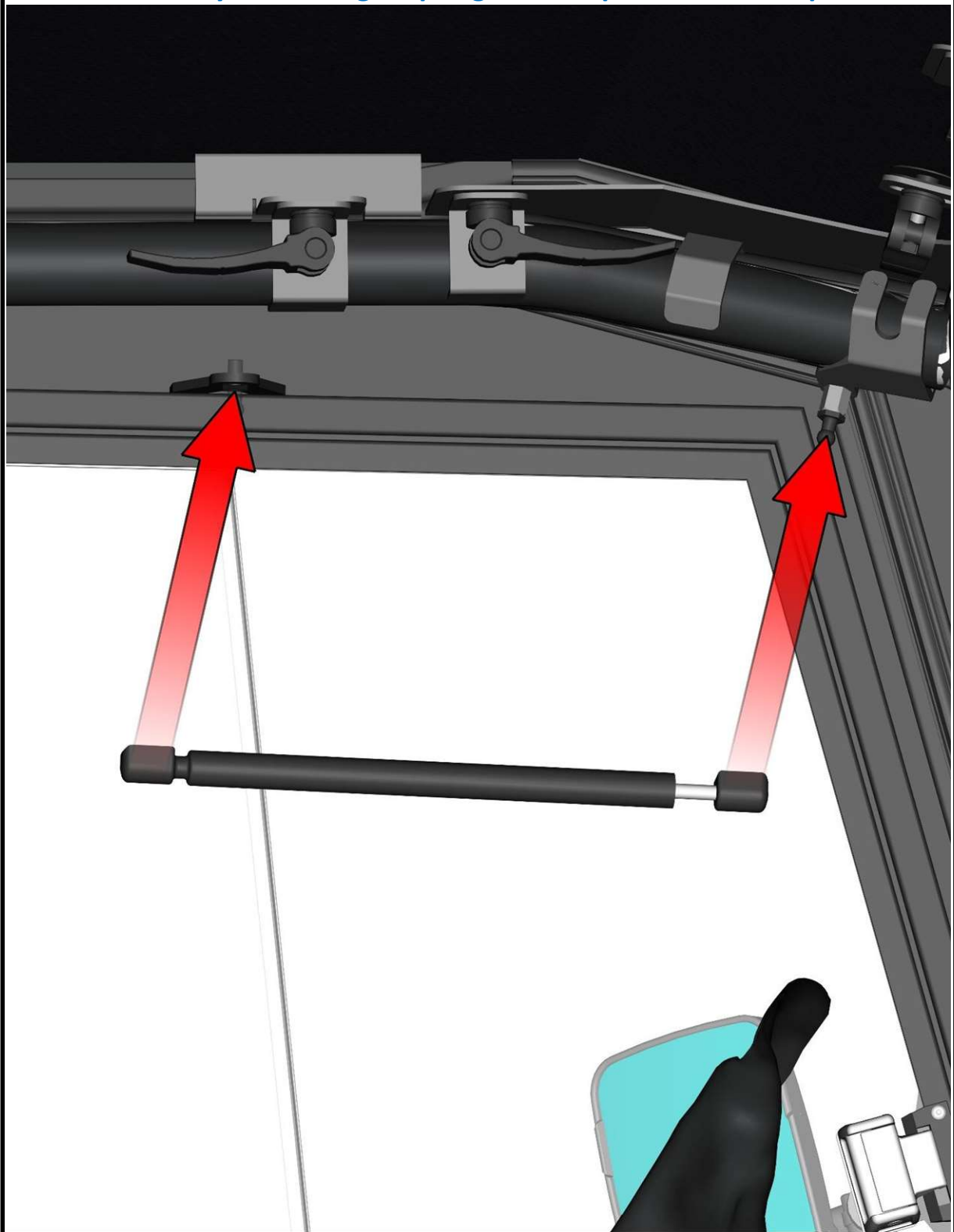


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**INCLUDED SCREWS AND  
WASHERS**

Install door gas spring onto the gas spring holders.

**It is necessary to install gas spring in same position like on picture.**



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Repeat previous steps on the right side with right assemblies and parts.



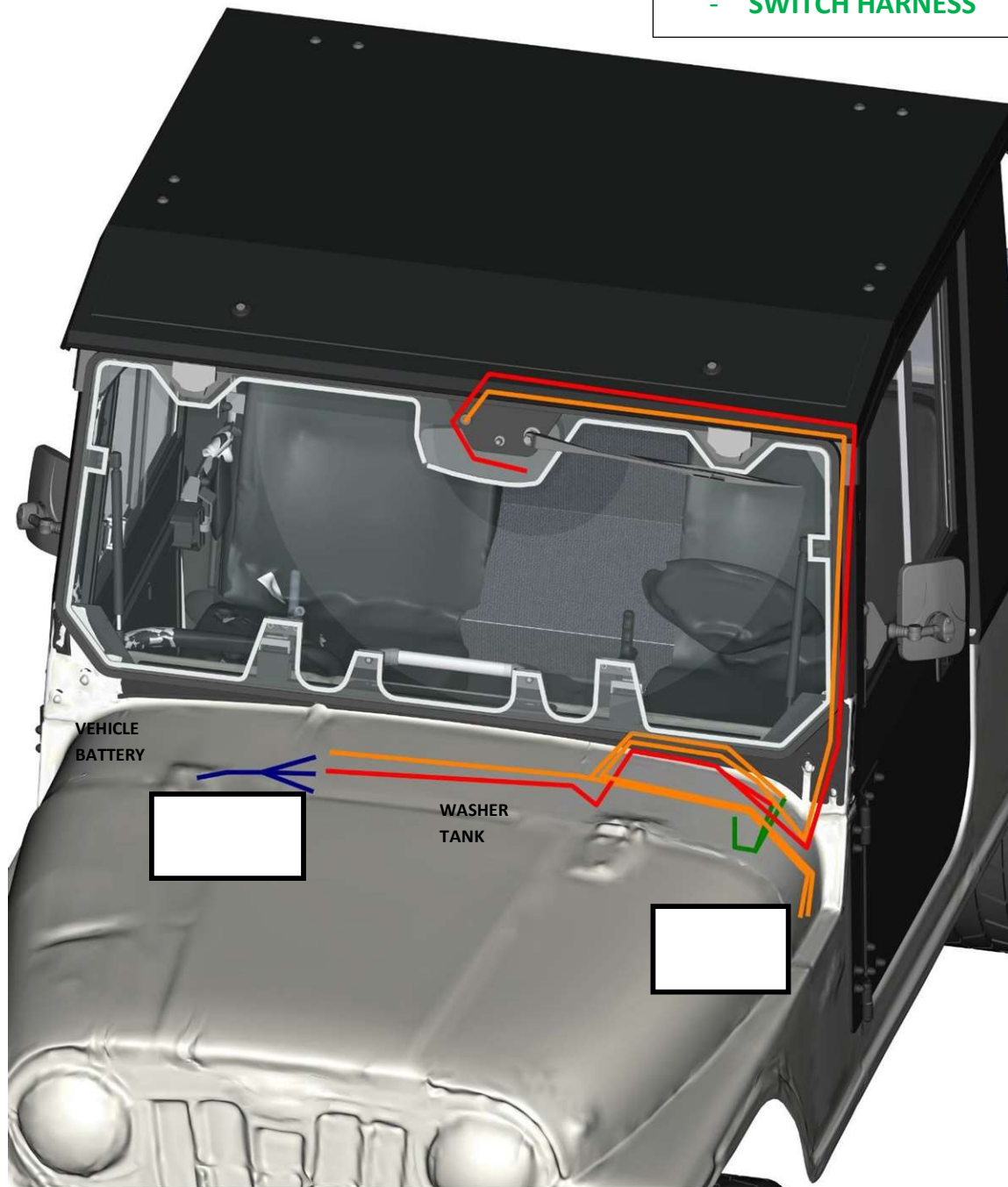
58

Tighten all screws and nuts correctly.

**ELECTROINSTALLATION**

Overall schematic diagram.

- **WIPER HARNESS**
- **WASHER HARNESS**
- **SUPPLY HARNESS**
- **SWITCH HARNESS**

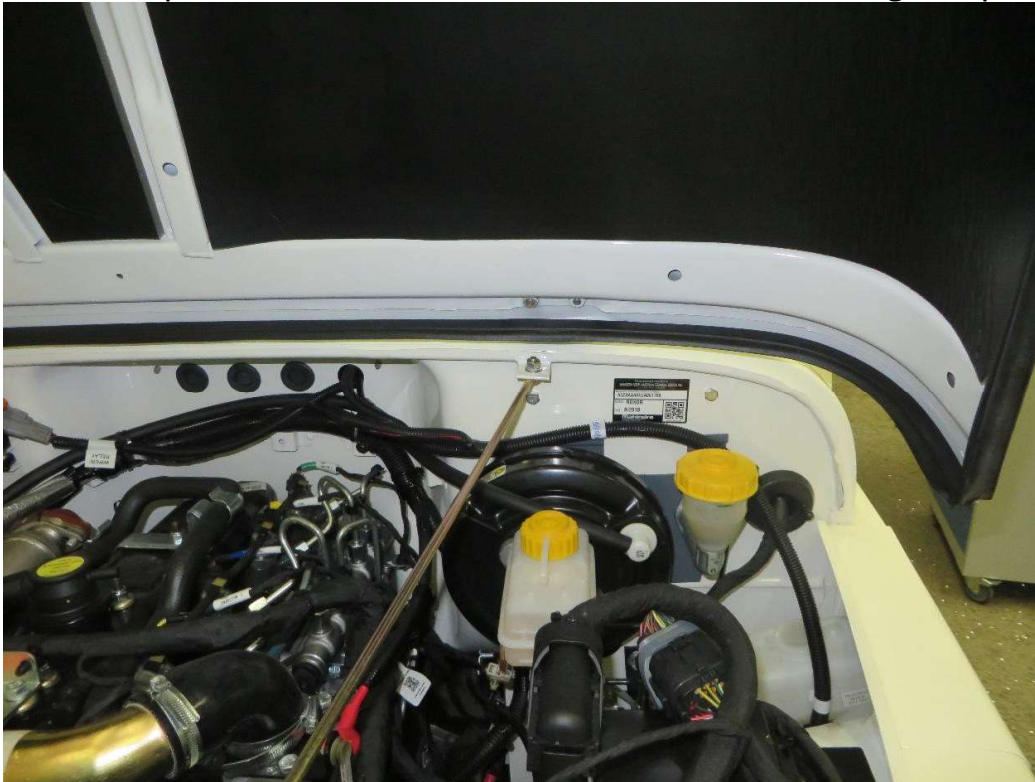




Place the supply harness onto the engine space.



Place the wiper harness and washer harness onto the engine space.

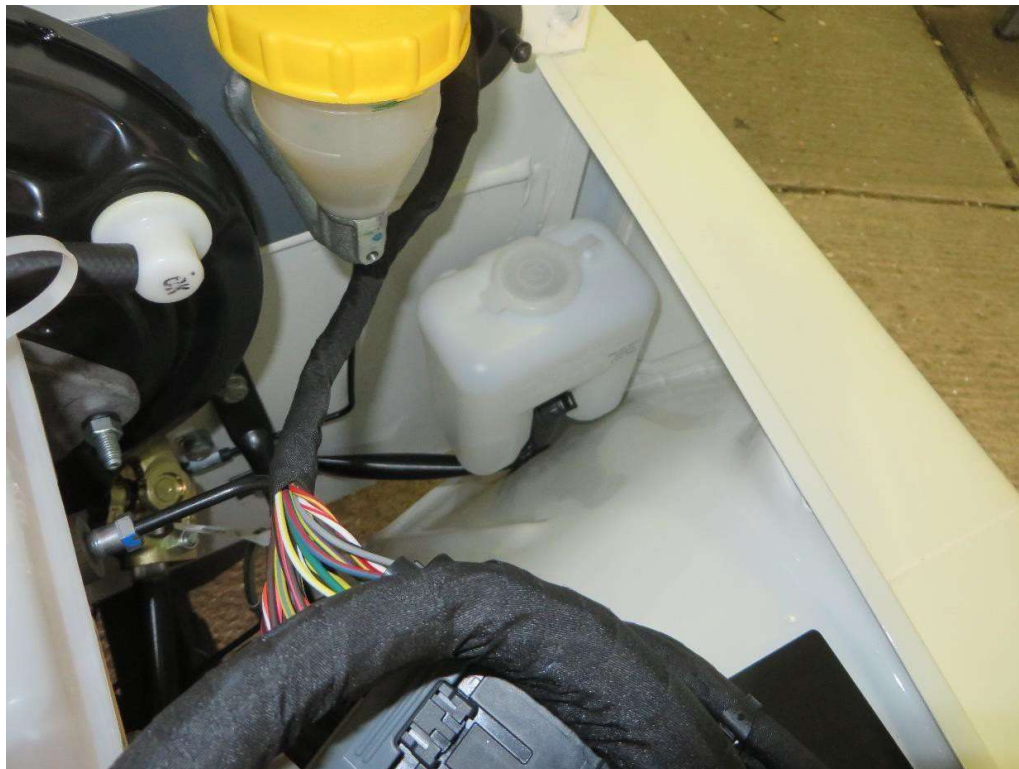


60

Install washer tank holder onto the frame by included washers and nut.



Mount the washer tank onto the washer tank holder.



61



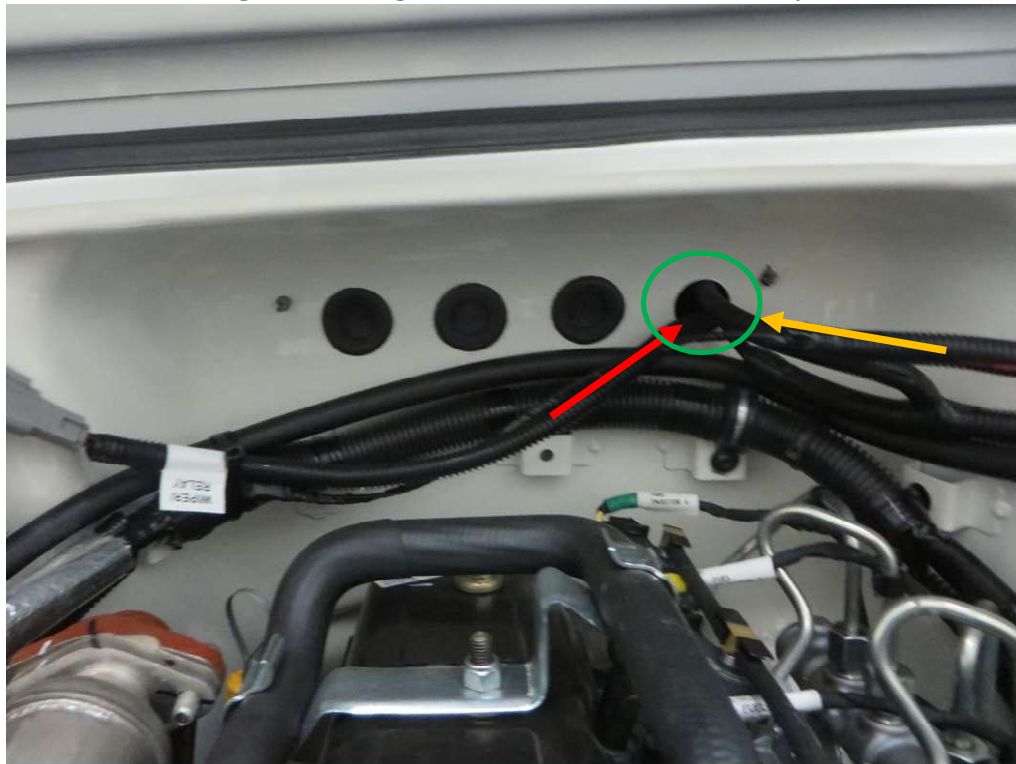
Connect the washer harness and the wiper harness with the supply harness.



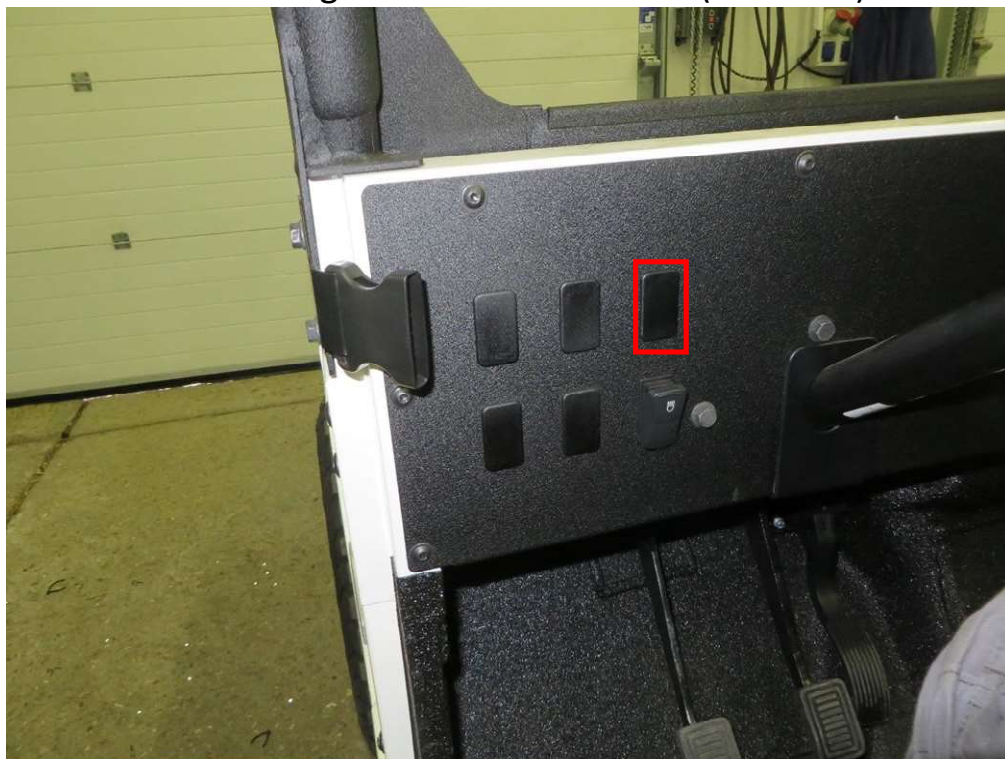
Run the washer harness to the washer tank.  
Connect the harness with the washer tank.



Run the wiper harness and washer hose through the original hole to the cabine space.

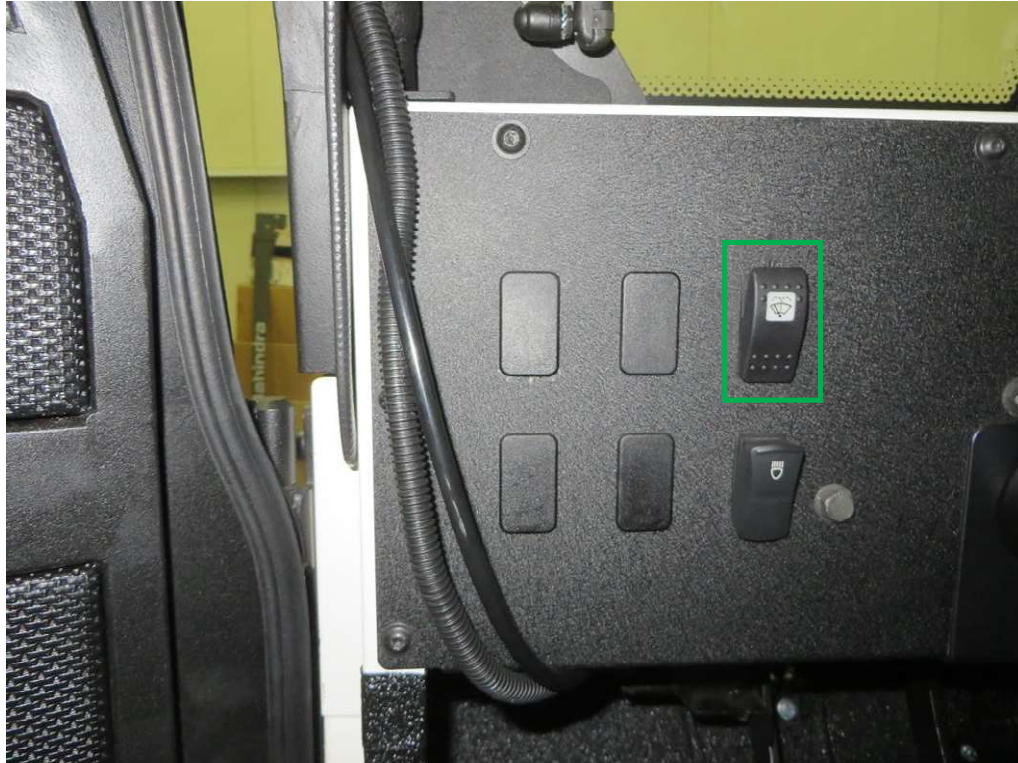


Pull out original switch hole cover (red mark).





Insert the switch assembly into the original hole.

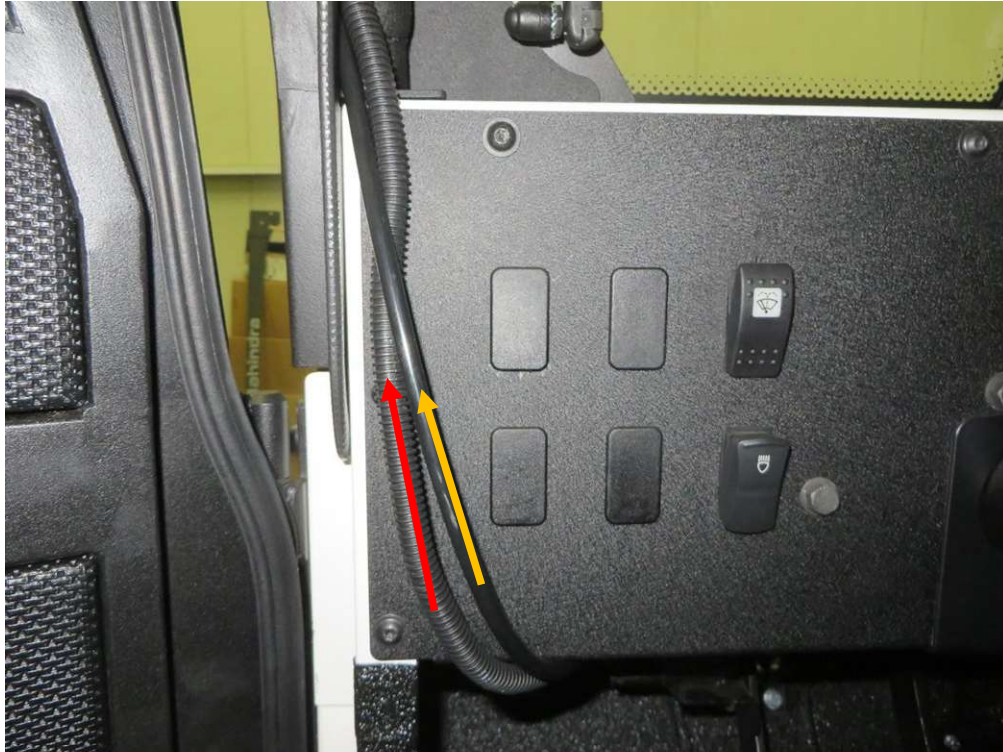


Connect the switch harness with the wiper harness and with the washer harness (inner dashboard space view).





Run the wiper harness and washer hose from dashboard to the wiper.



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Run the wiper harness and washer hose from dashboard to the wiper.



Run the wiper harness and washer hose from dashboard to the wiper.



Connect the wiper harness with the wiper. Connect the washer hose with the washer jet.  
SEE NEXT PAGE

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Run the supply harness wire (blue) from the relay to the original fuse box.

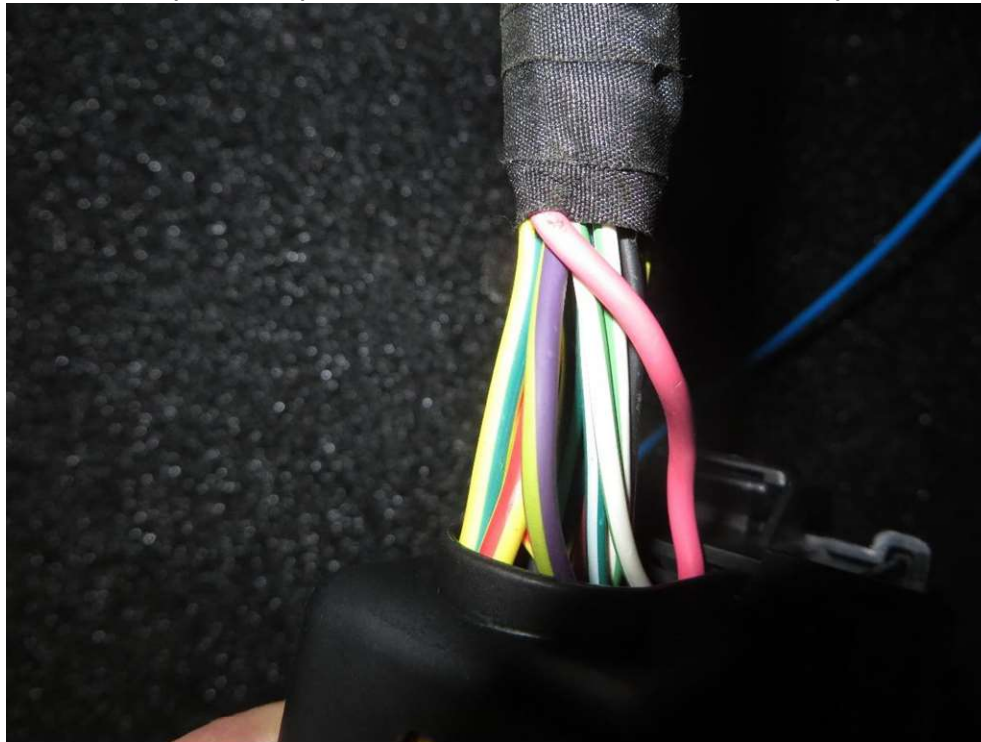


Unmount original fuse box from original position.  
(Right inner dashboard view).



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Install the tap wire splice connector onto the violent-yellow wire.





Detail view to the tap wire splice connector.



Detail view onto the installed tap wire splice connector.

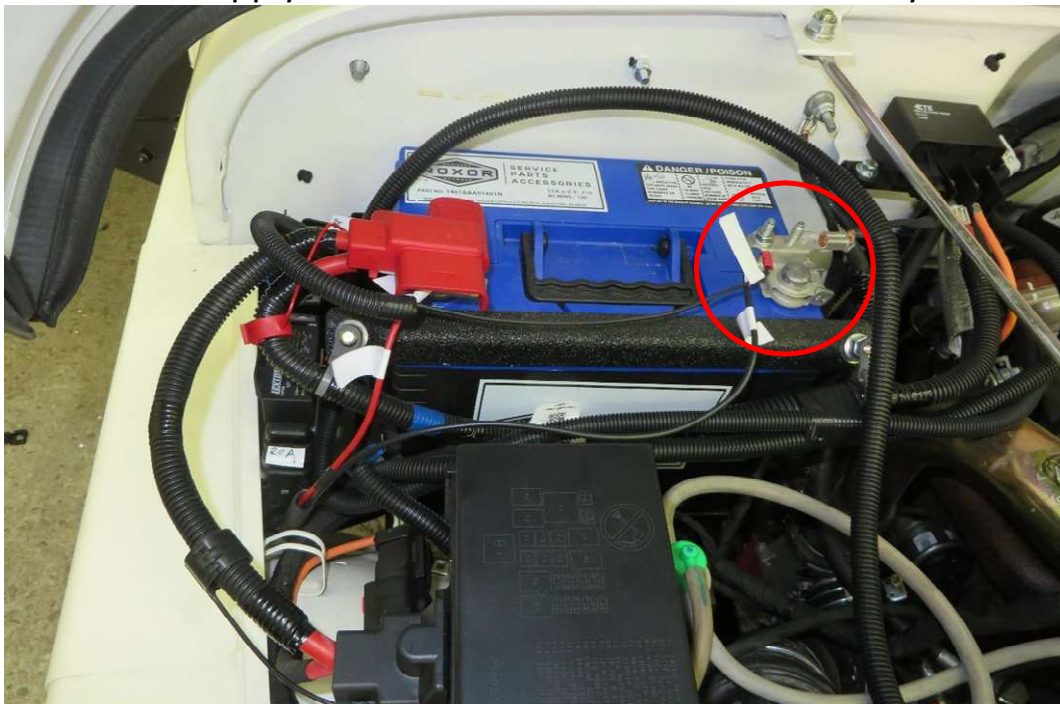




Connect supply harness **RED WIRE** with the battery **12V+**.



Connect supply harness **BLACK WIRE** with the battery **12V-**.



Fill the washer liquide to the washer tank befor first usage.




# BOLT TORQUE

## BOLT TORQUE SPECIFICATIONS

### 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													
Bolt Size		TORQUE				TORQUE				TORQUE			
		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

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### 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

