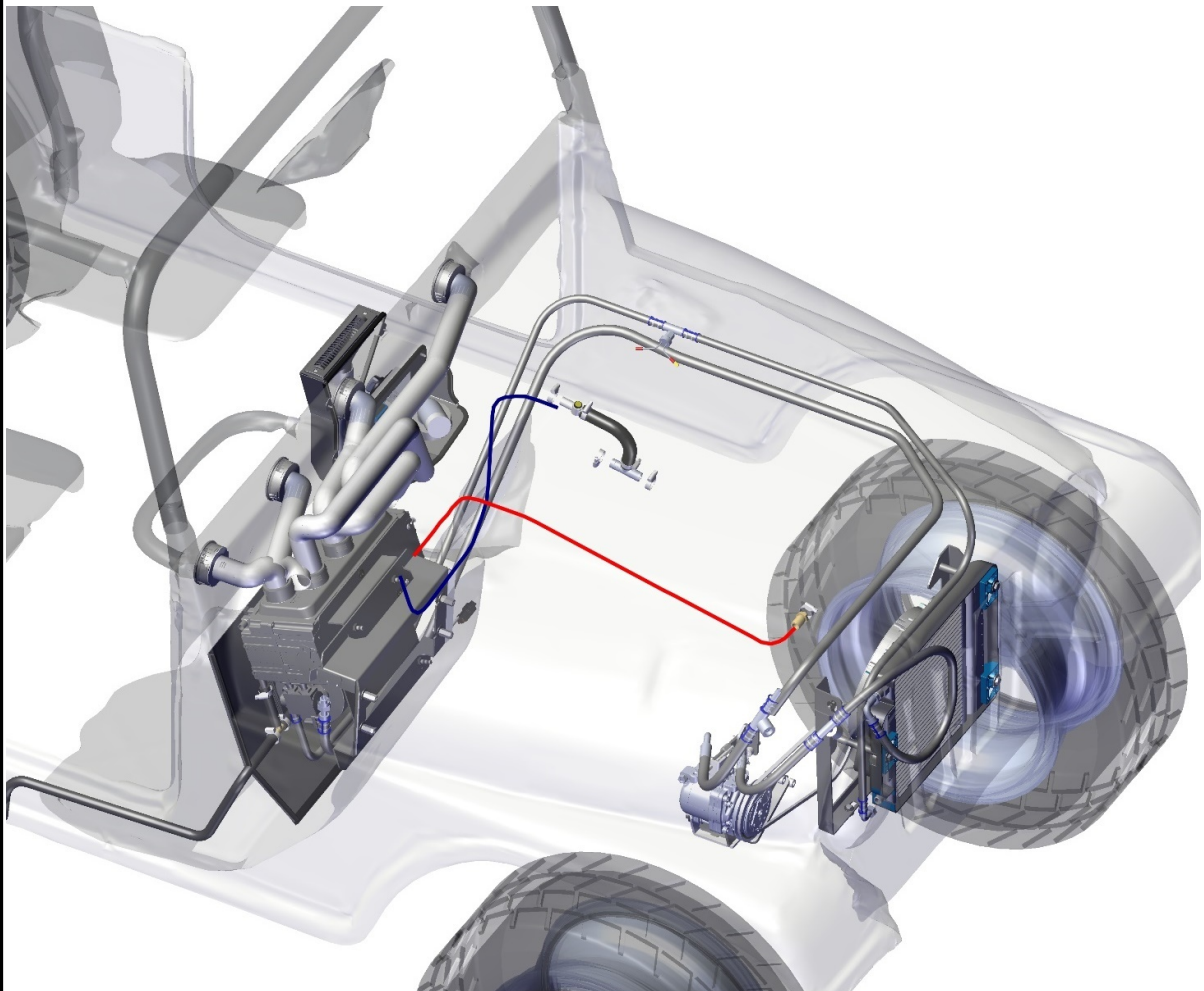




INSTALLATION INSTRUCTIONS

MAHINDRA

ROXOR / Heat/AC Unit



SAFETY INSTRUCTIONS

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

READ PROPERLY COMPLETE ASSEMBLY INSTRUCTIONS BEFORE STARTING OF 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 under.

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. Insert all nut covers after you finish installation.

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

Failure to properly latch/lock front window before driving the vehicle could result in serious injury.

IMPORTANT NOTICE

**HEAT/AC SYSTEM INSTALLATION REQUIRES HARDCABS
WIPER/WASHER KIT WIRE HARNESS.**

**FOR AC SYSTEM INSTALLATION IT IS NECESSARY TO SET
THE COOLING CIRCUIT AT MEDIUM. INSTALLATION OF AC
SYSTEM REQUIRES A TRAINED AND CERTIFIED
INDIVIDUAL IN AUTOMOTIVE**

**IT IS STRONGLY RECOMENDED TO USE SPECIALIZED CLIP
PLIERS DURING INSTALLATION (See next page)**

CAUTION

**DURING INSTALLATION THE ENGINE OR ENGINE
COOLING SYSTEM MAY BE HOT. ANY CONTACT
COULD RESULT IN SERIOUS BODILY INJURY!!!**

GENERAL BURGACLIP INSTRUCTION

1. Cut the hose to proper length with hose cutters. The cut must be made normal to the hose length.



2. Place the two clips in the clip holder. Install two proper-sized clips into the clipholder. For ease of assembly both clips should have the same orientation.



3. Slip on the clipholder with the clips. Place the clipholder with the two clips on the hose. In such a manner that the side with the smallest hole touches the end of the hose.



4. Oil the Burgaclic fitting with a generous amount of the A/C system's lubricator oil. This is to lower the force of the insertion.



5. Insert the fitting into the hose. Ensure that the fitting is fully inserted by checking the gap between the end of the hose and the shoulder of the fitting.

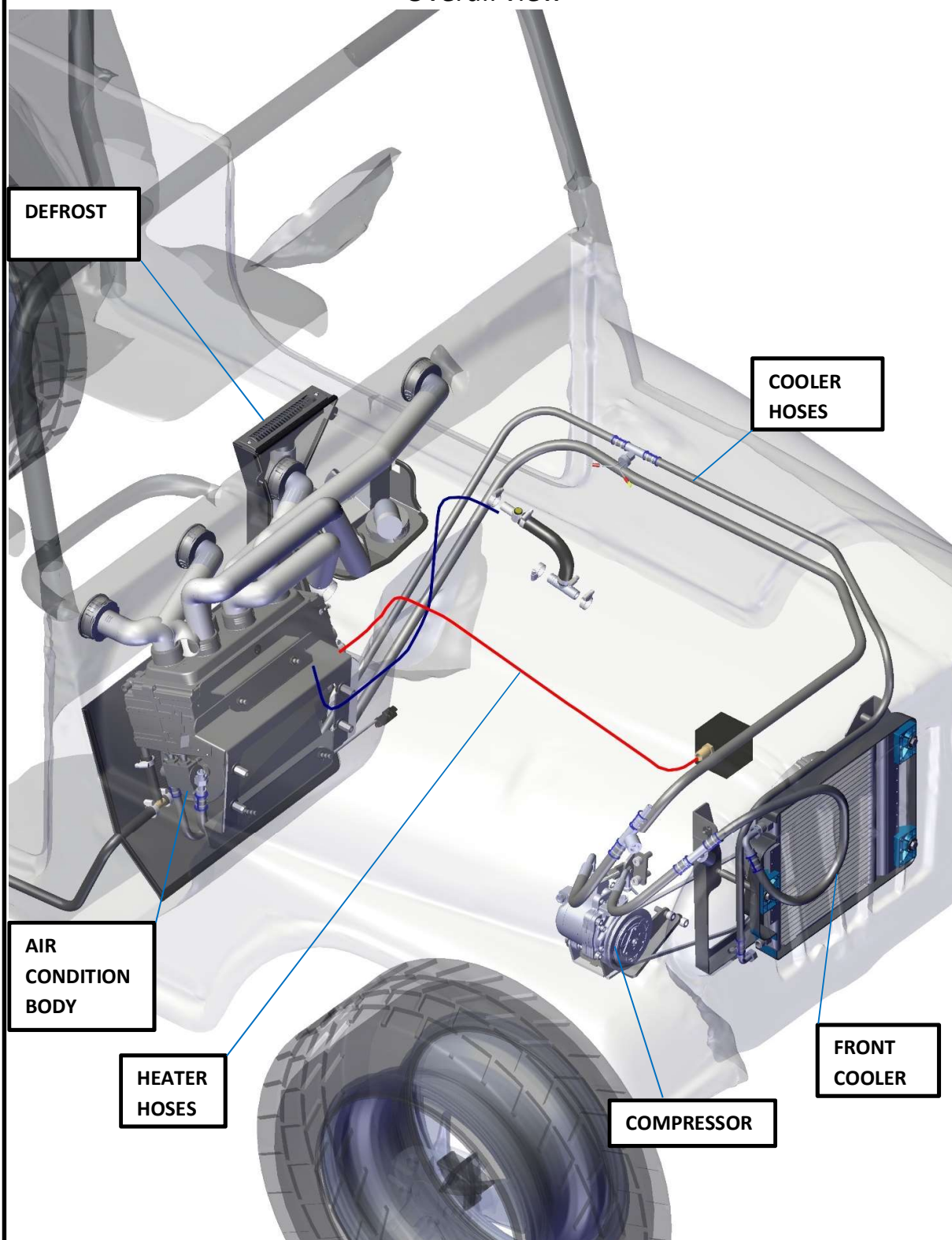


6. Close the clips with the Burgaflex Clip pliers. The pliers open themselves when the right force has been reached. Start with the clip closest to the end of the hose.



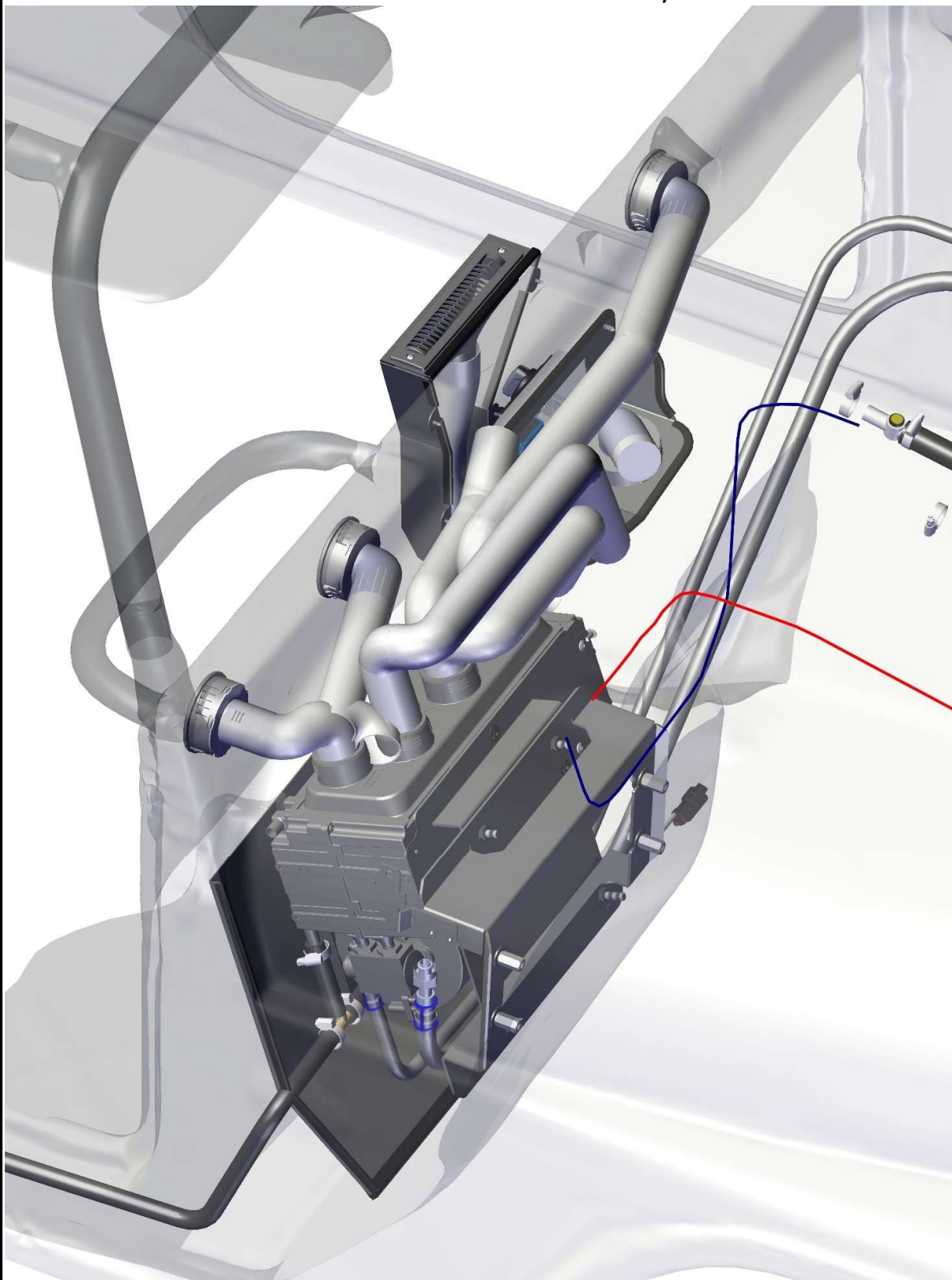
AC INSTALLATION

Overall view



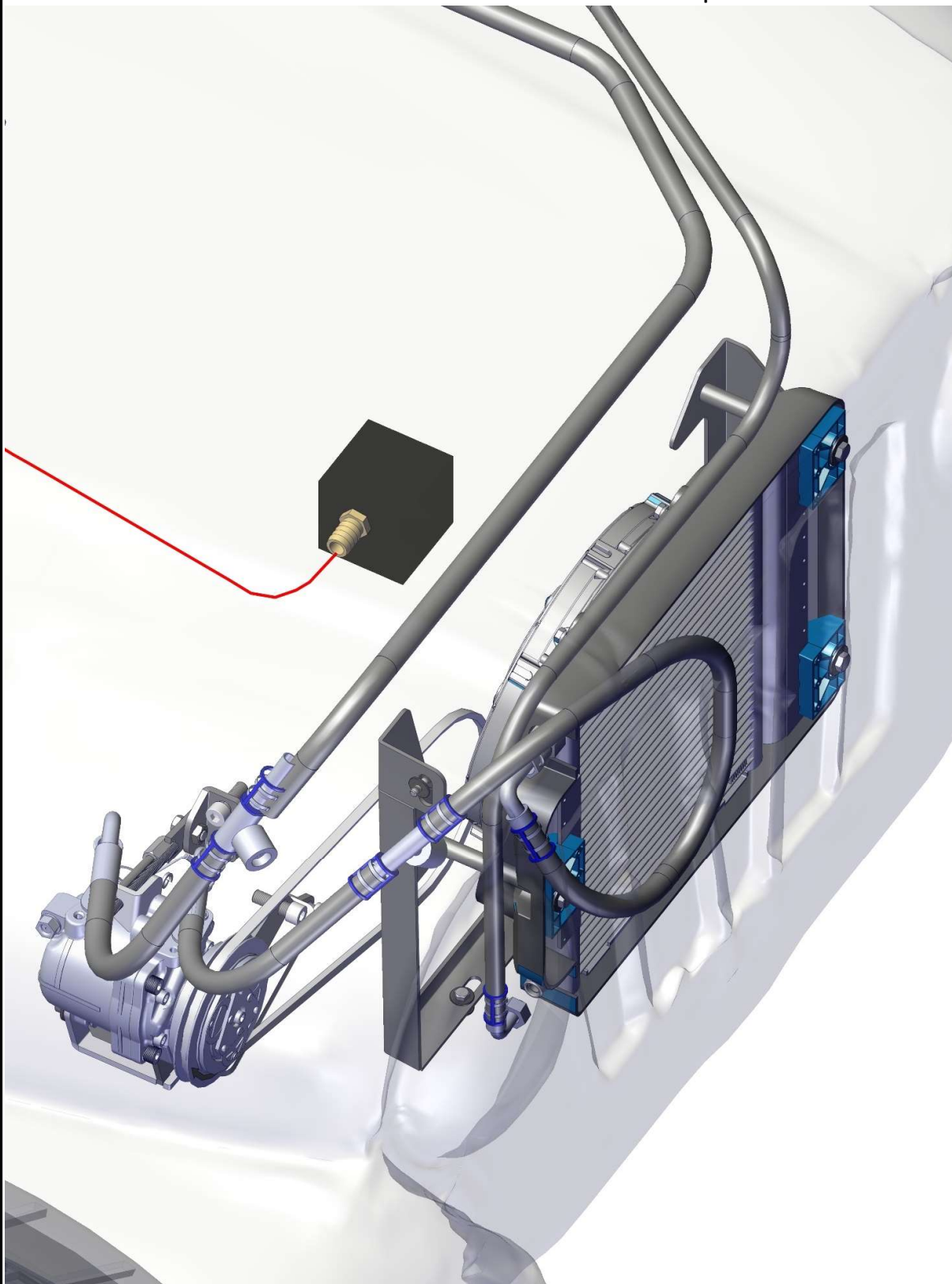
5

Detail view onto the air condition assembly with defrost.



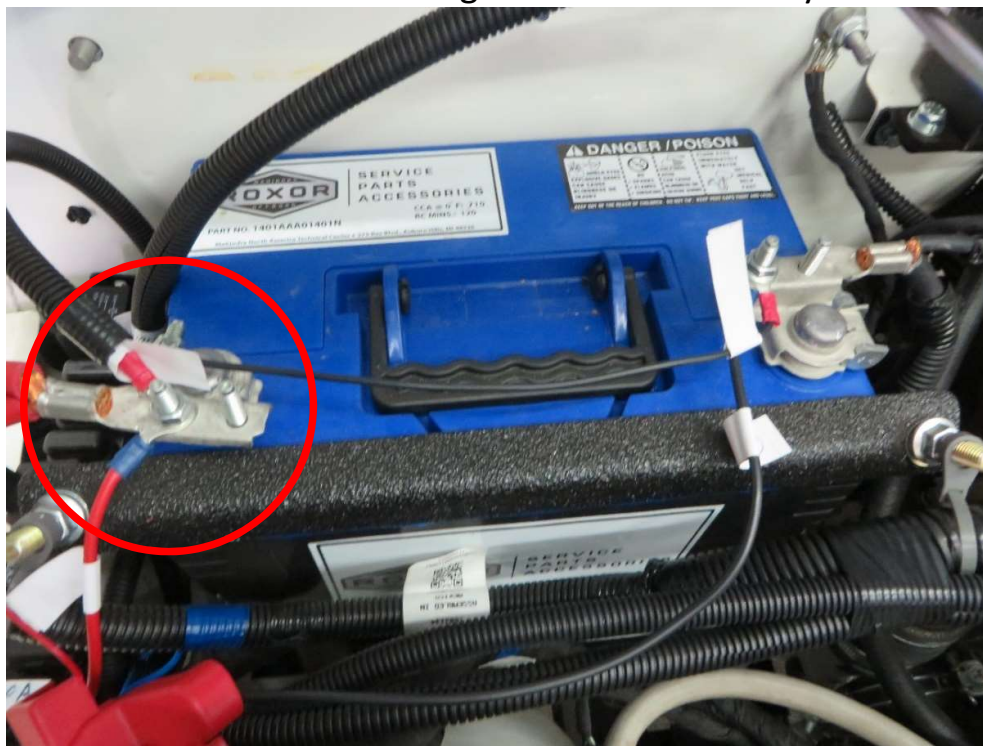
6

Detail view onto the front cooler with compressor.

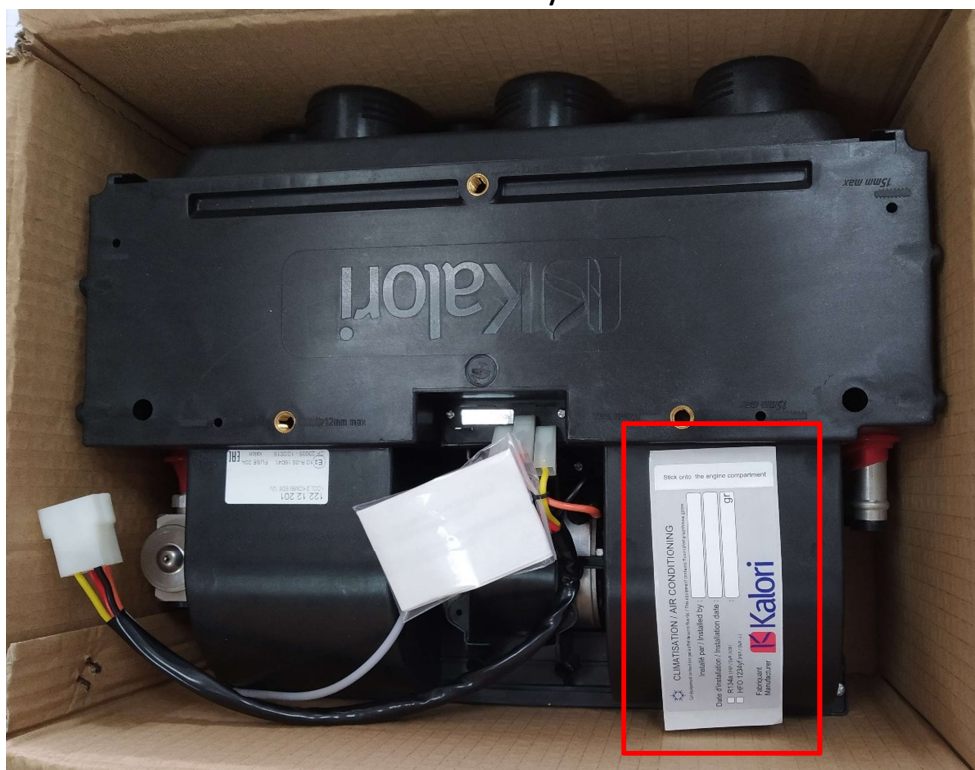


7

Disconnect all wiring from vehicle battery +.

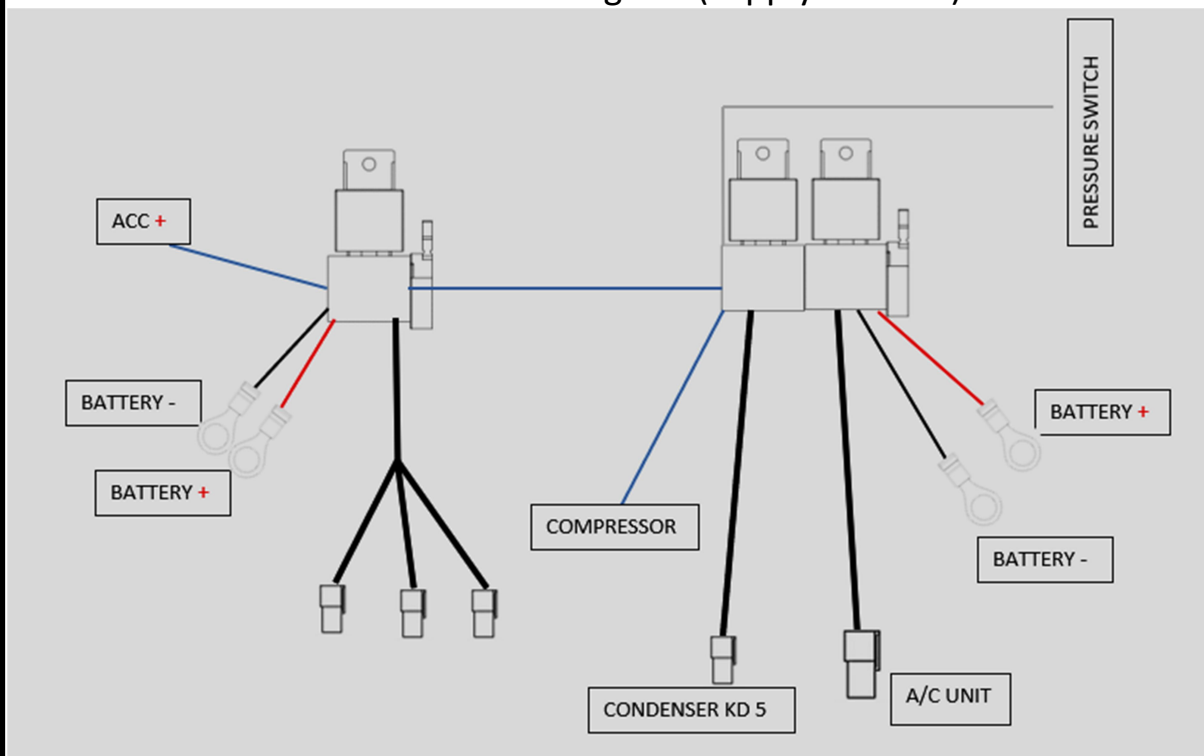


Take out the ticket from the air condition body and save this ticket carefully.



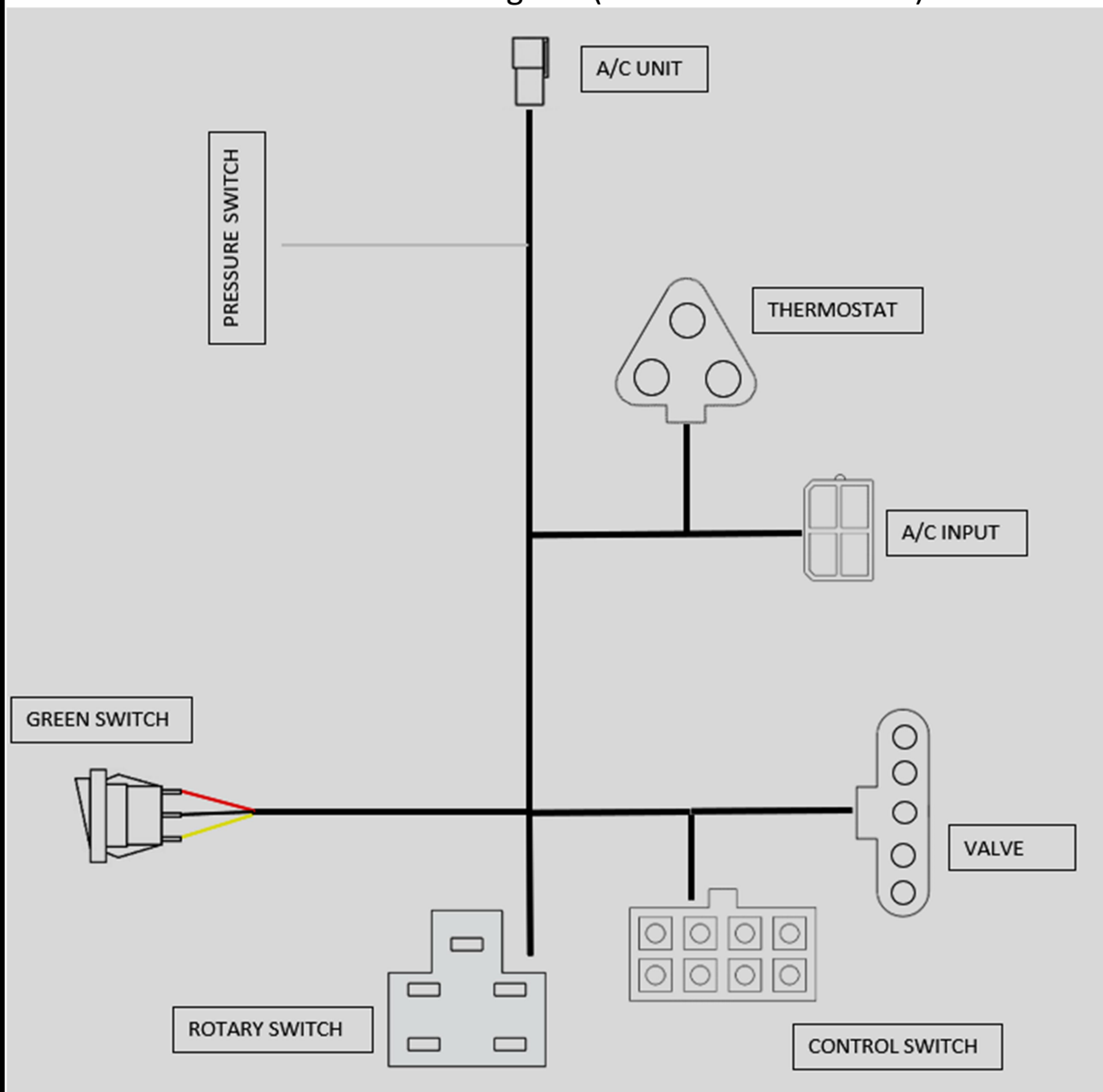
8

Electroinstallation diagram (supply harness).



9

Electroinstallation diagram (air condition harness).



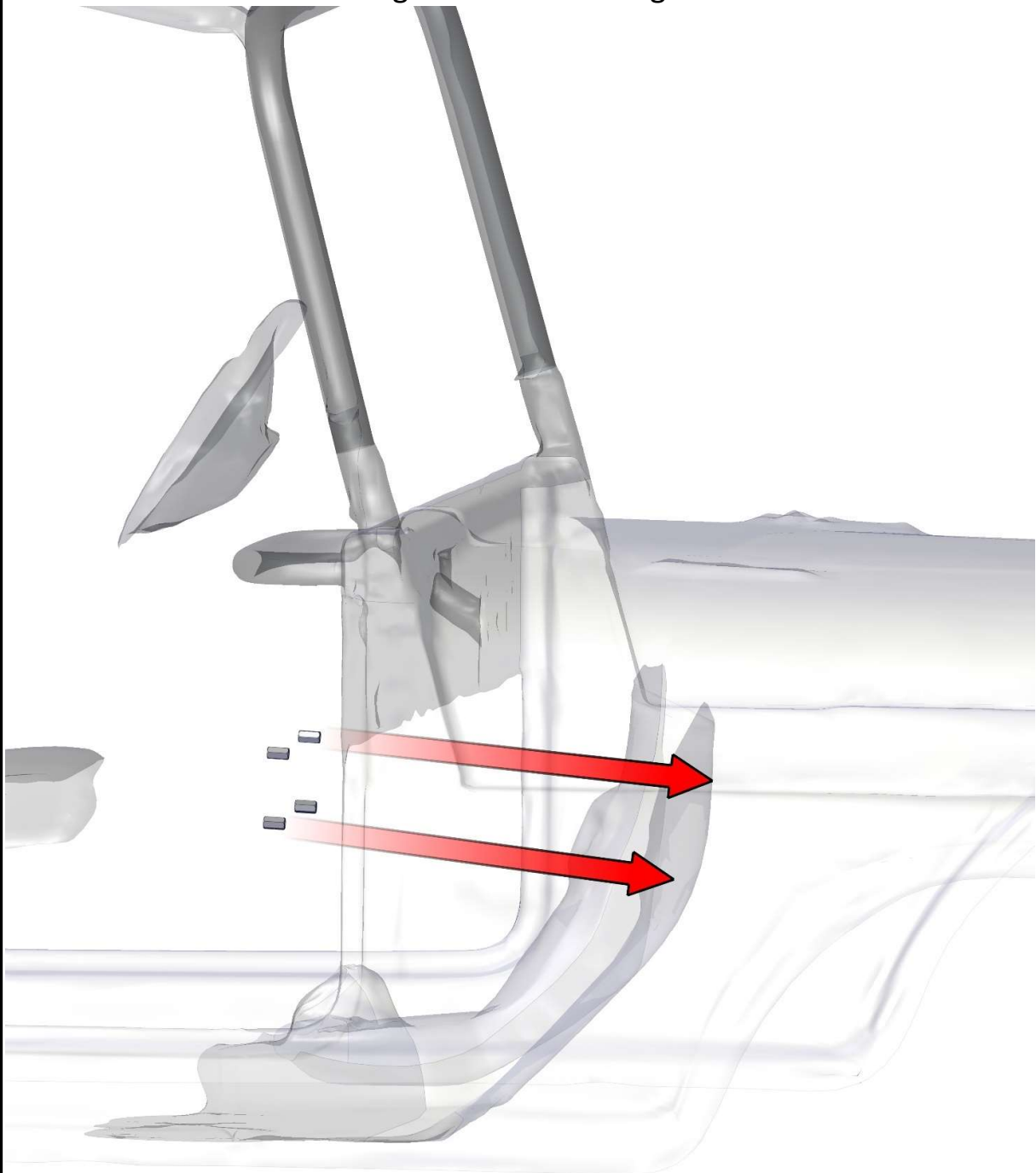
10

Uninstall the dashboard from the machine.



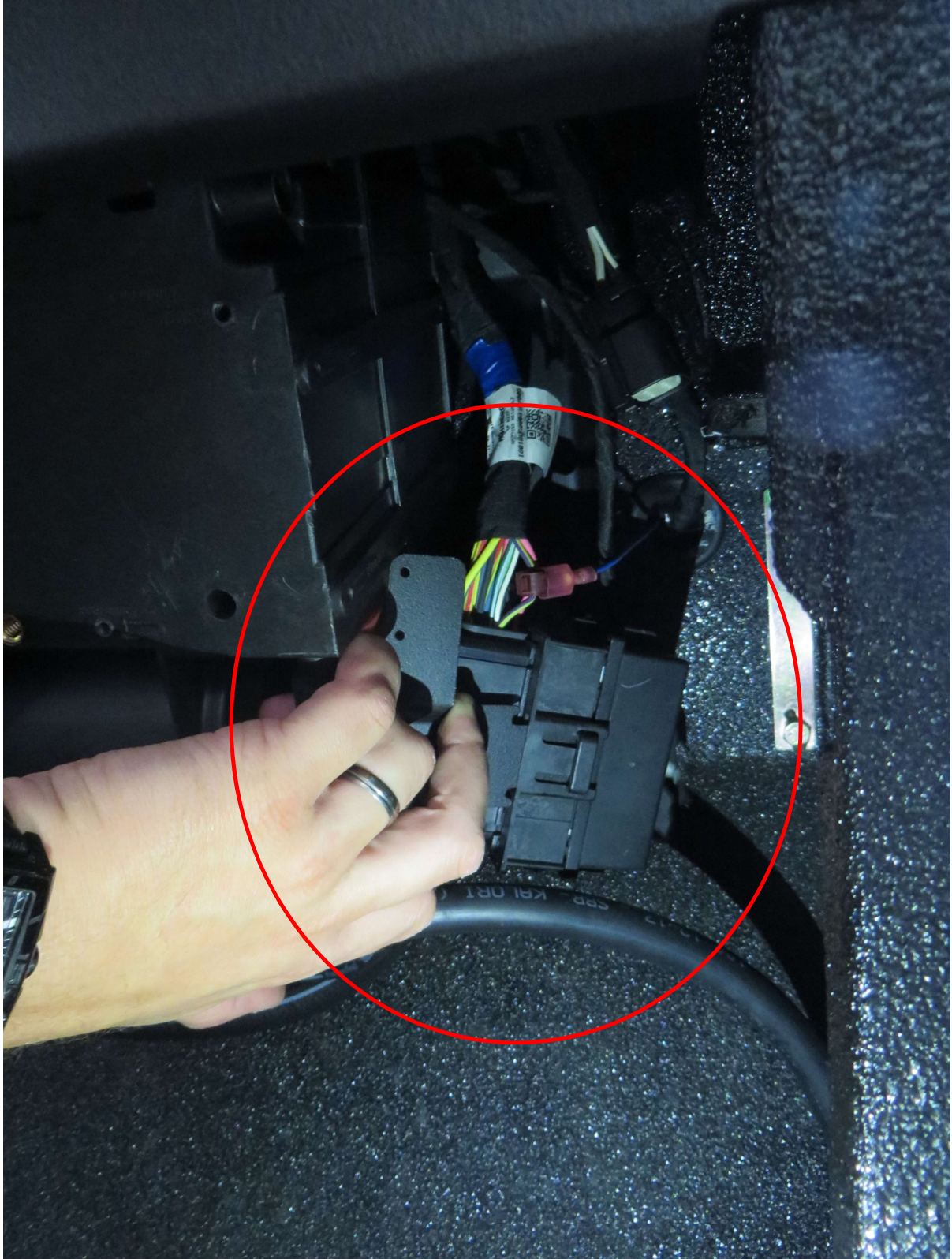
11

Install the long nuts onto the original screws.



12

Unmount the original fuse holder (near the long nut).



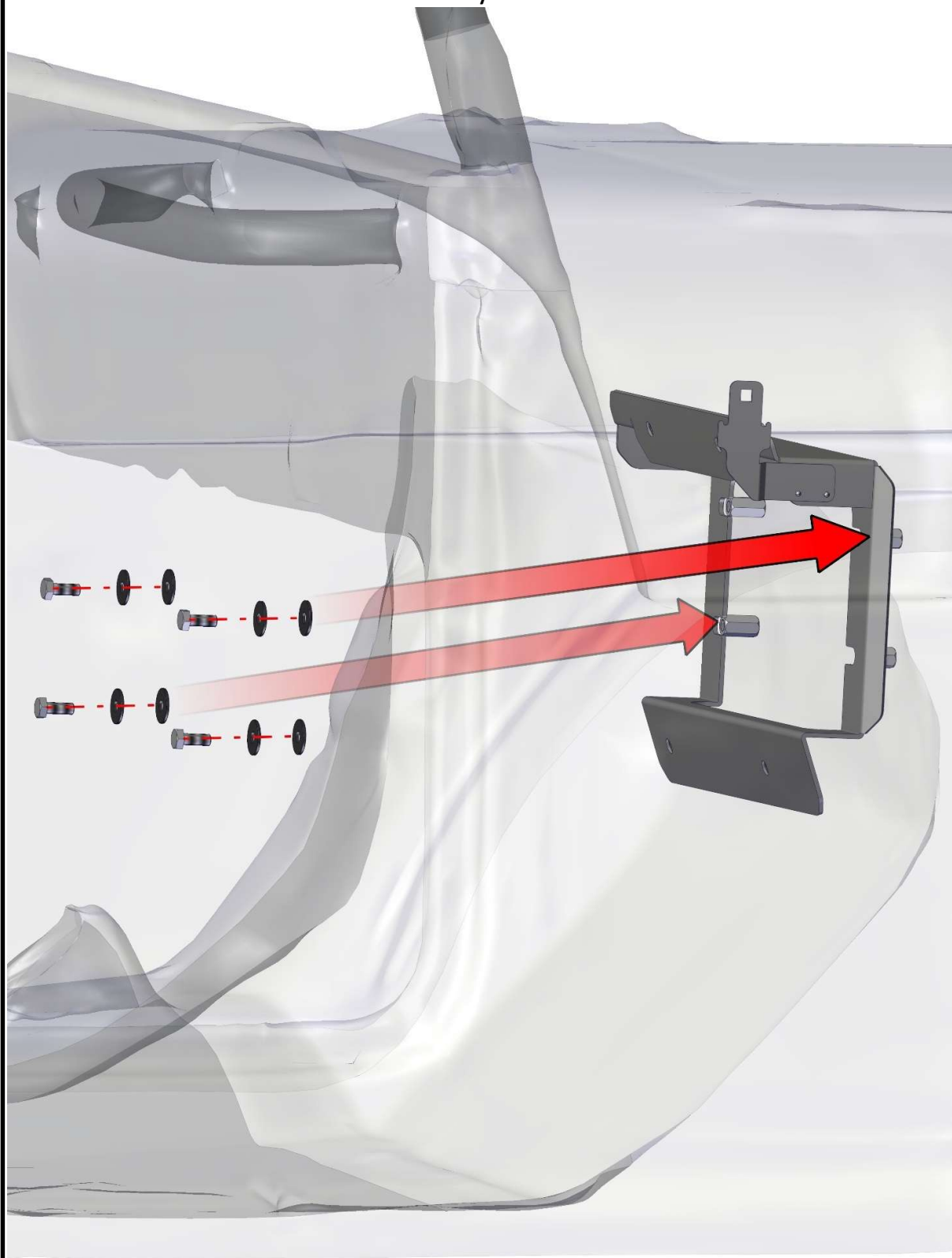
13

Place the air condition holder onto the long nuts.



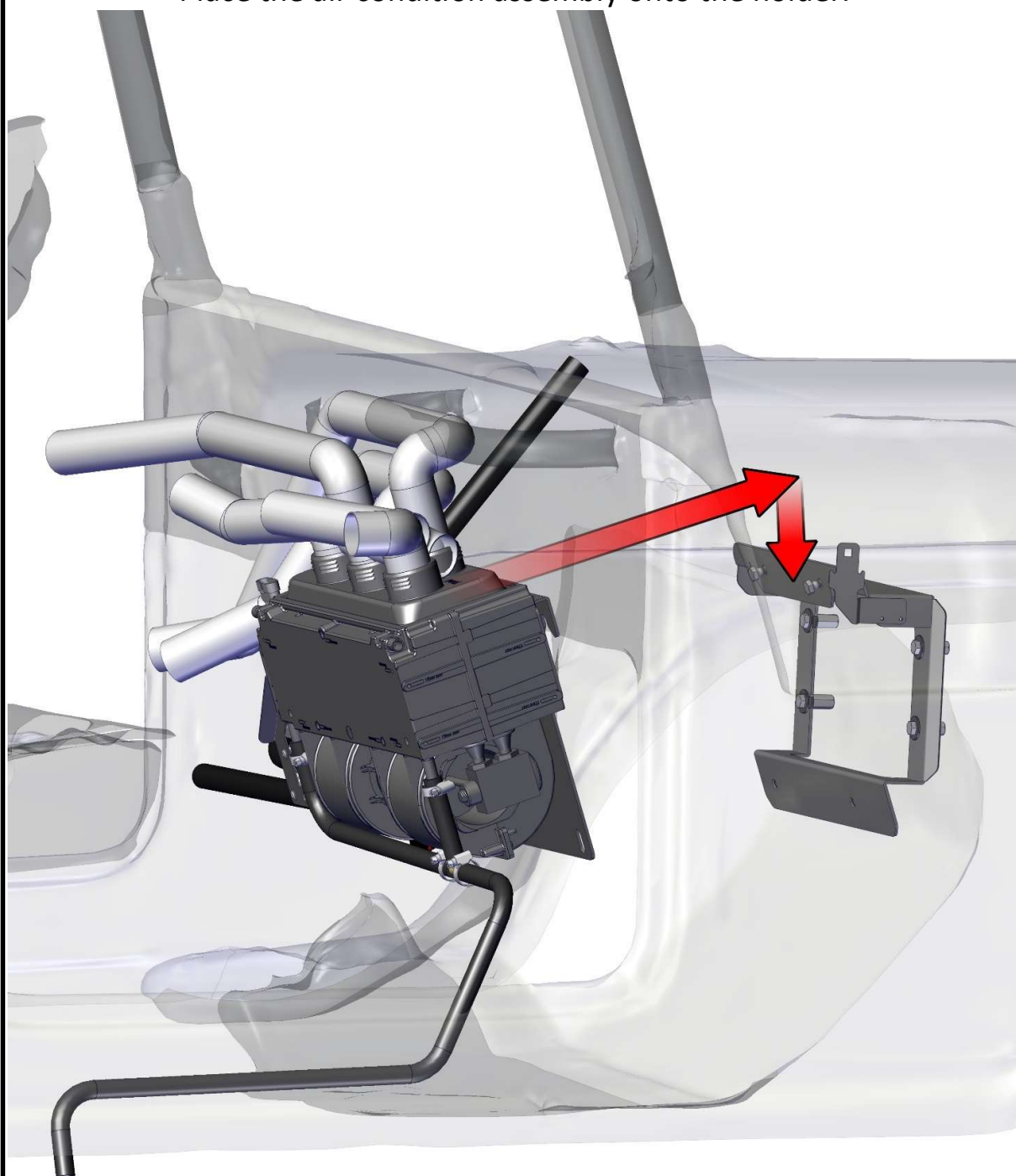
14

Fix the holders with the nuts by included screws and washers.



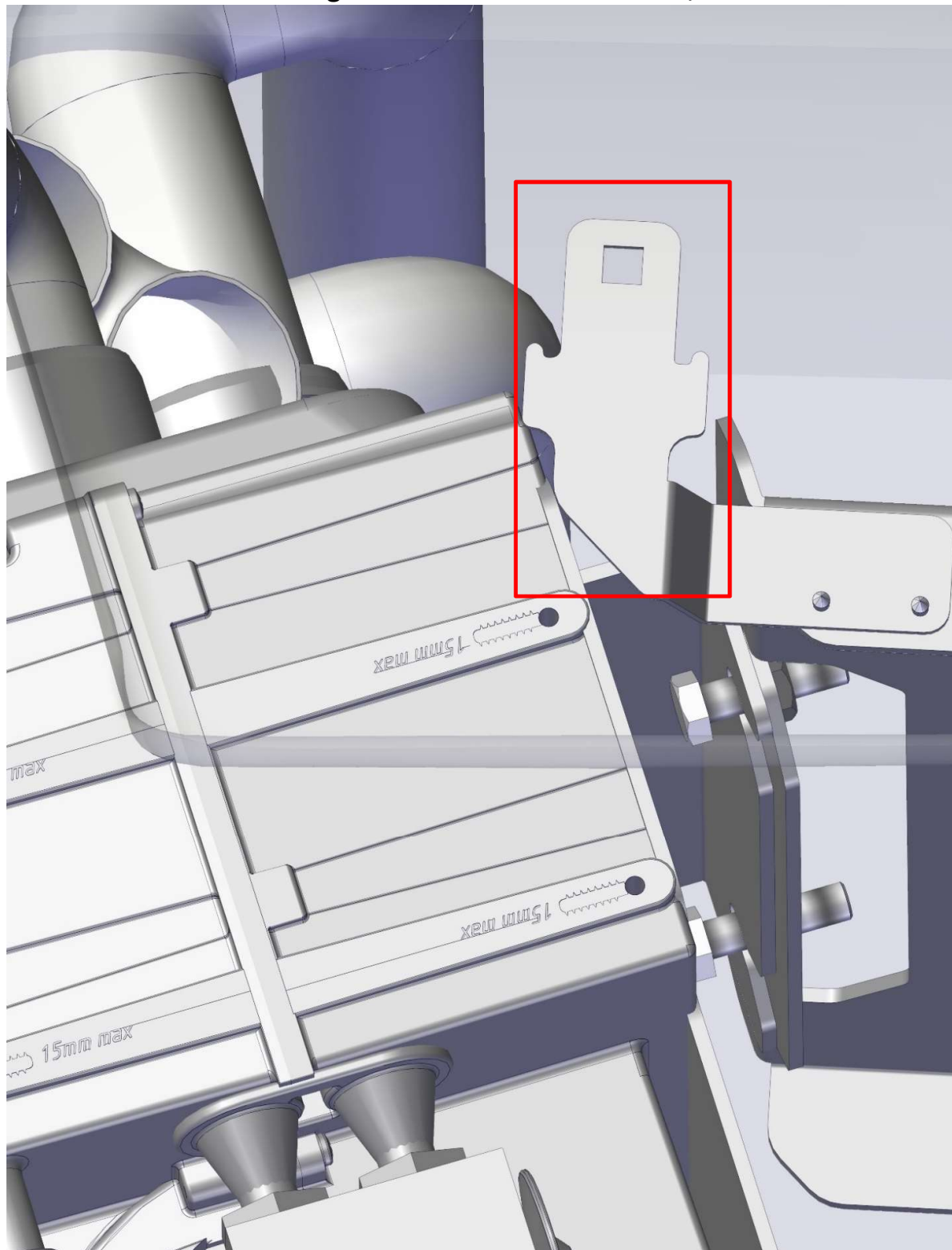
15

Place the air condition assembly onto the holder.



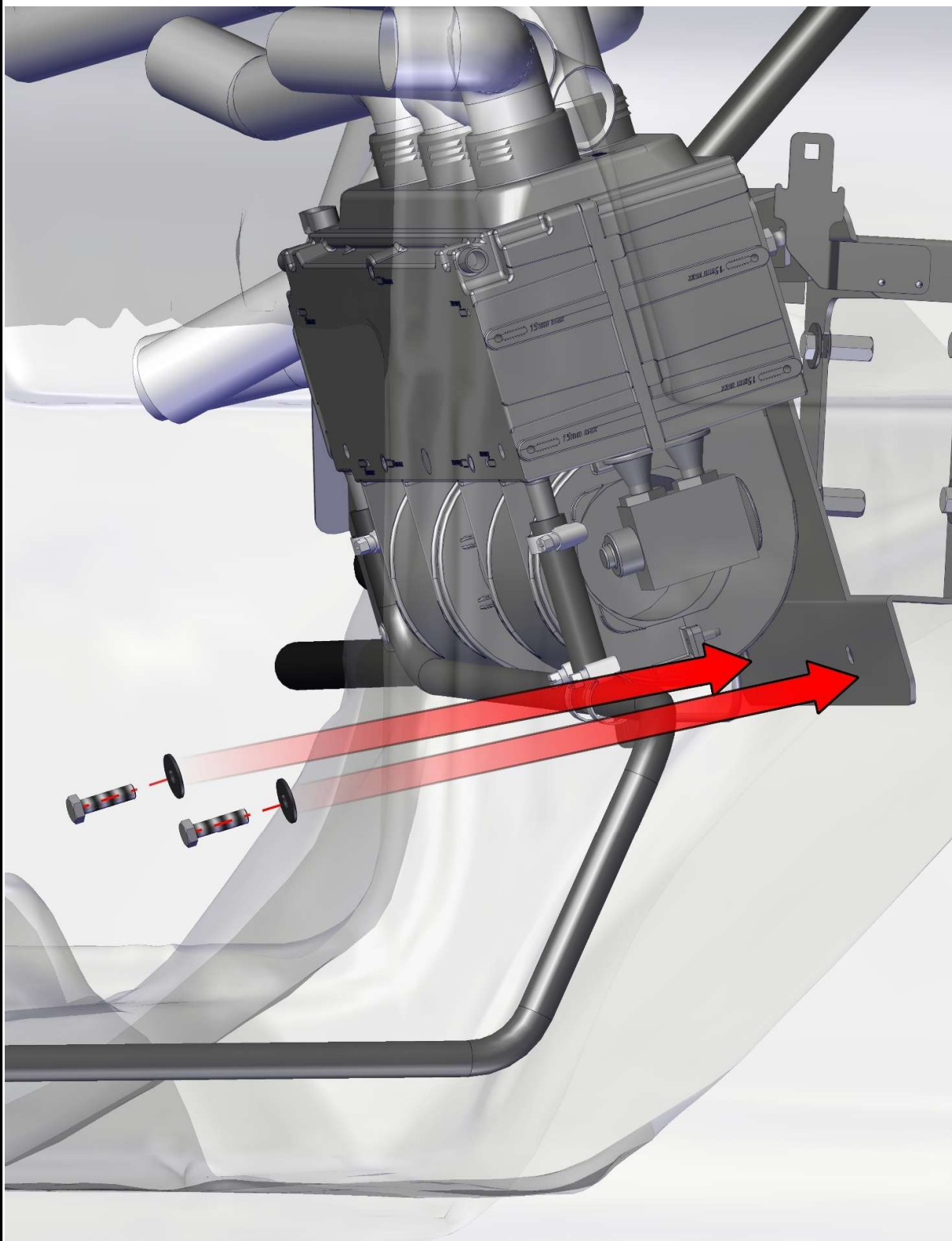
16

Detail view onto the connection.
Mount the original fuse holder onto the A/C holder.



17

Fix the air condititon assembly with the holder by included screws and washer.



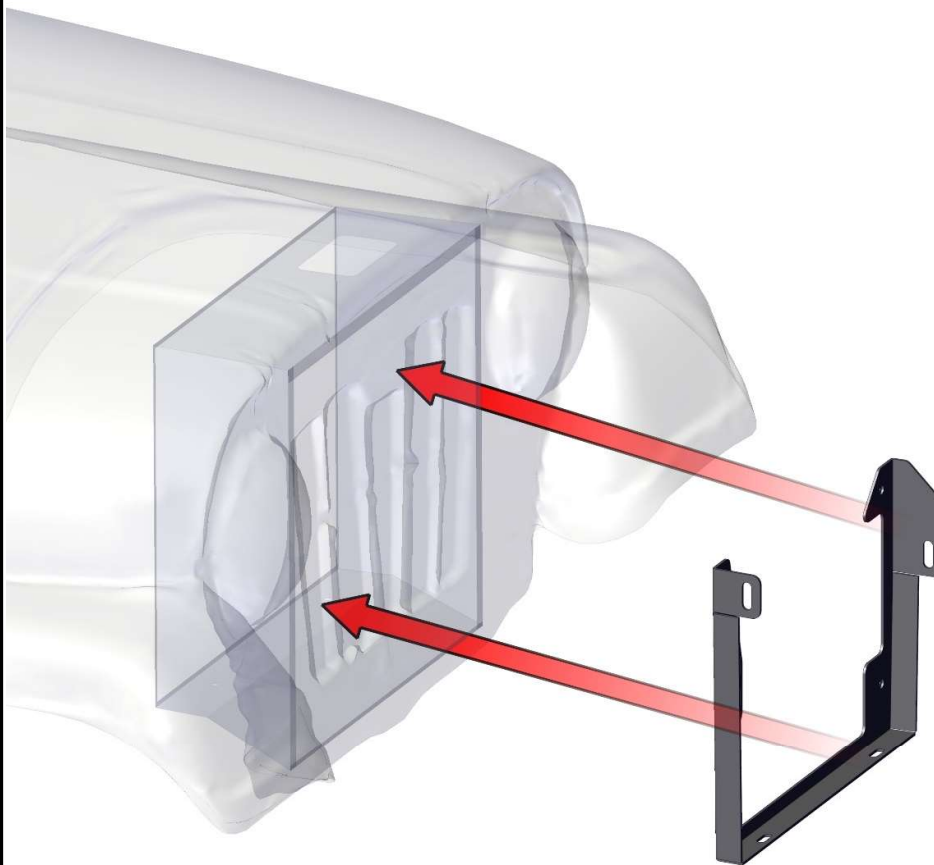
18

Uninstall front cooler mask from machine (uninstalled view).



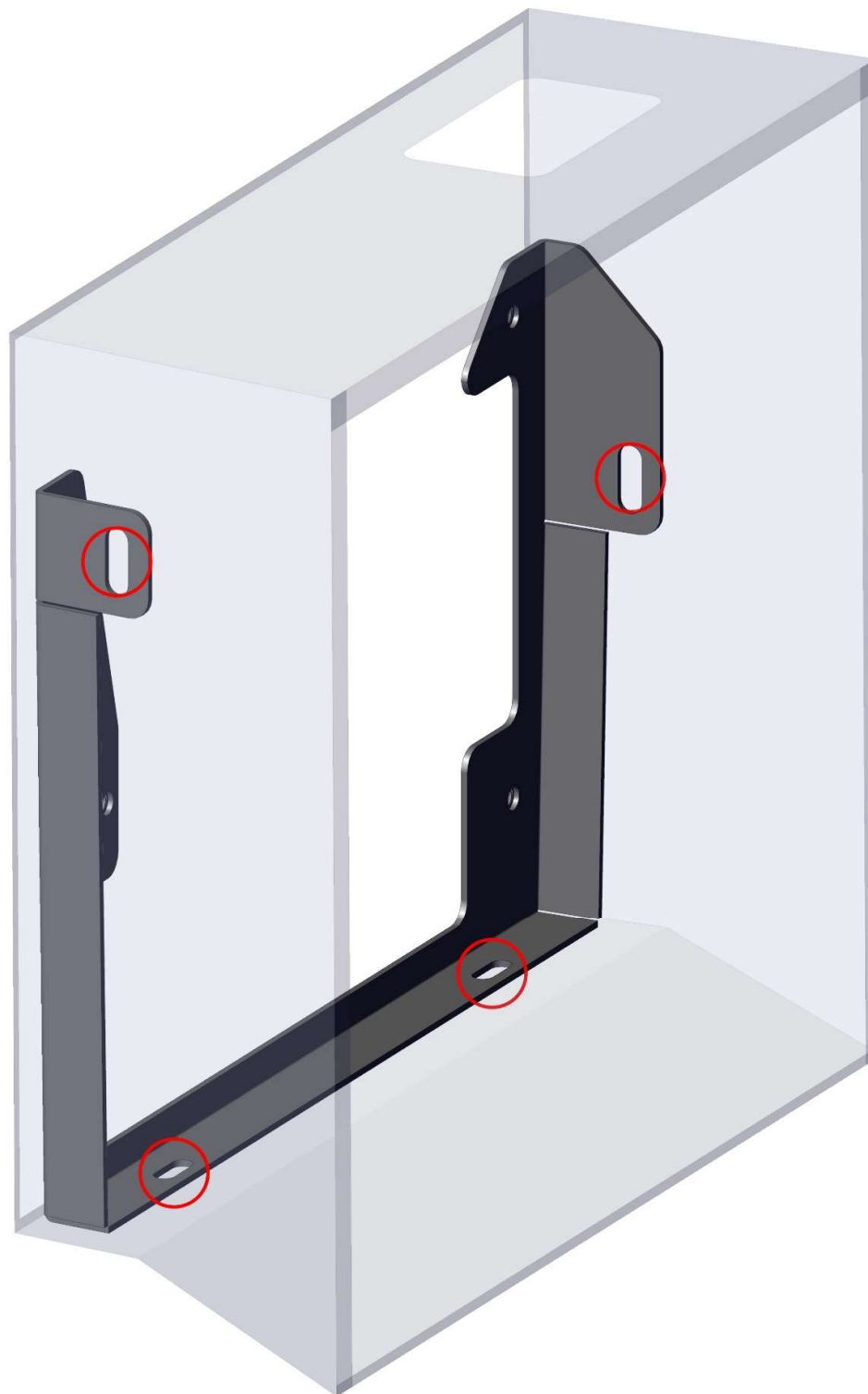
19

Place the cooler holder onto the front original cooler space.



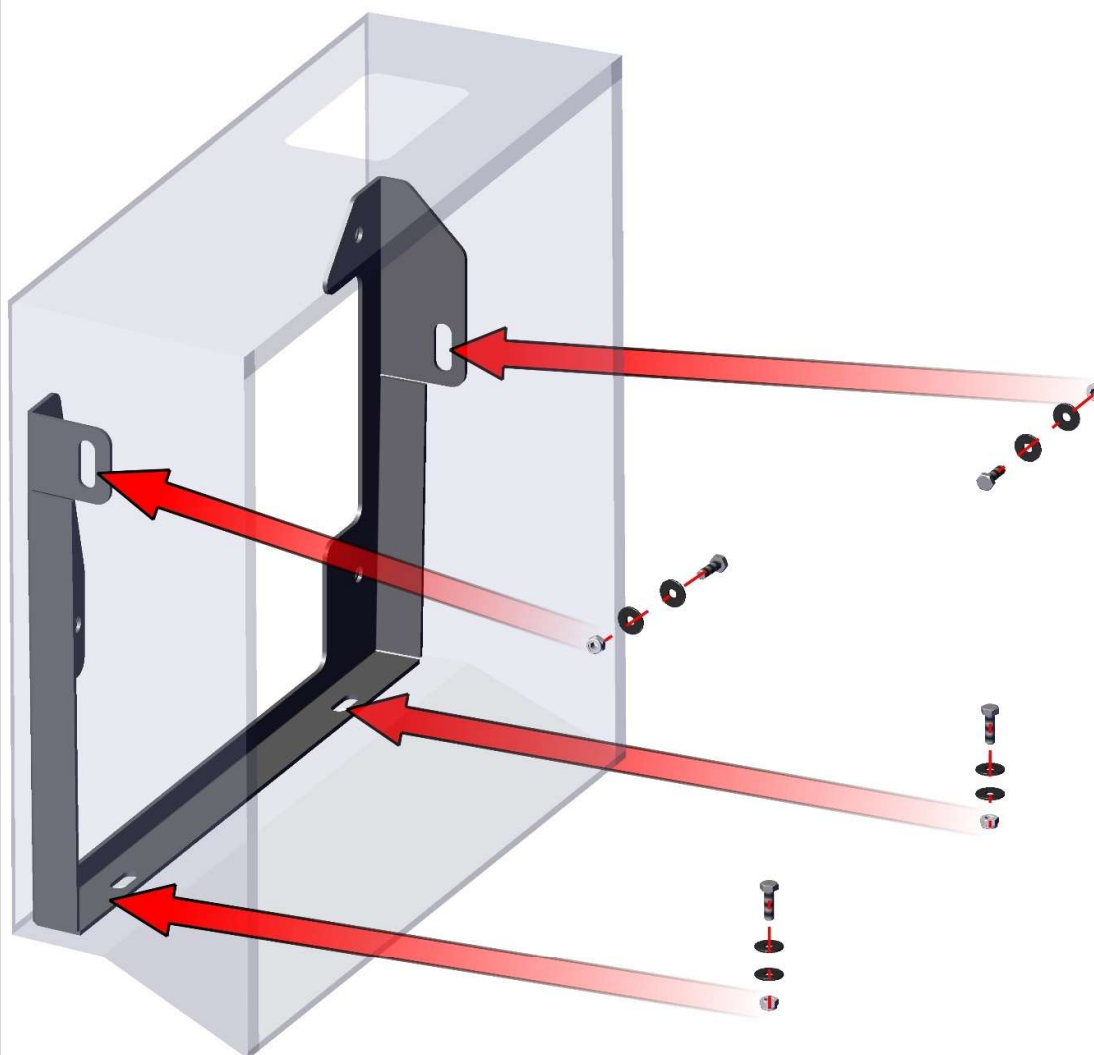
20

If you don't have usable holes, make marks onto the original frame.
Drill holes \varnothing 8mm onto the marks centers.



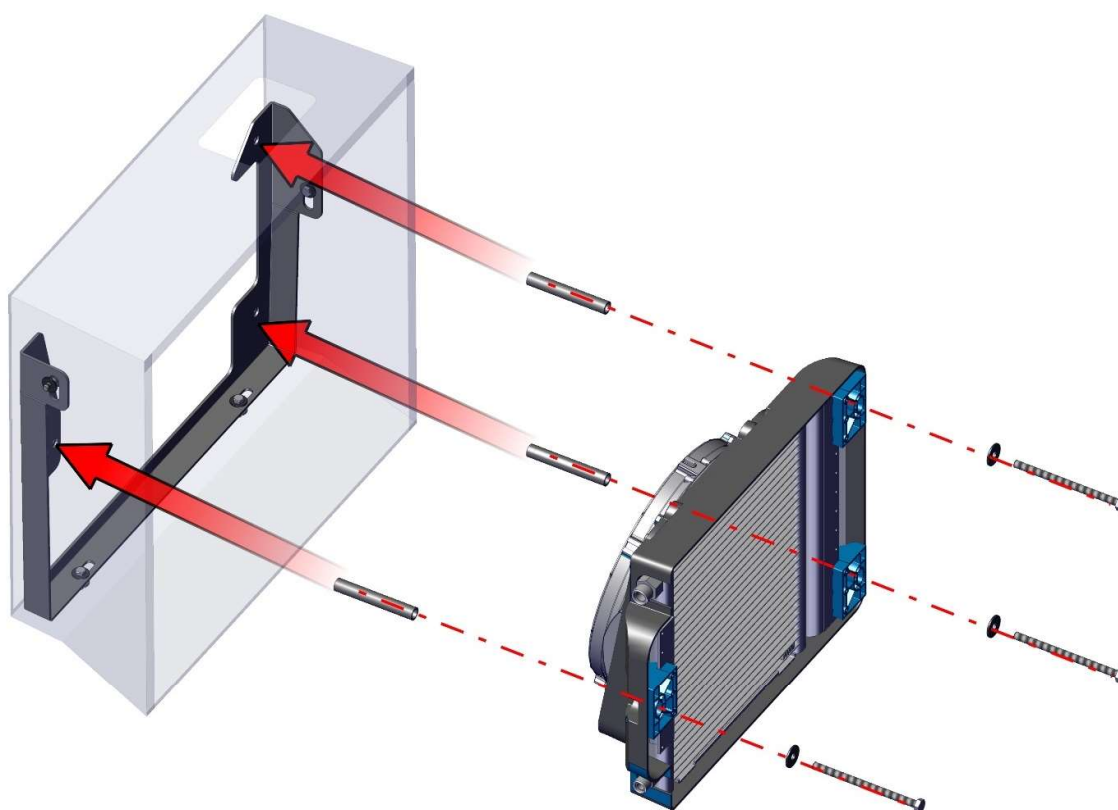
21

Fix the cooler holder with the machine
by included screws, washers and nuts.



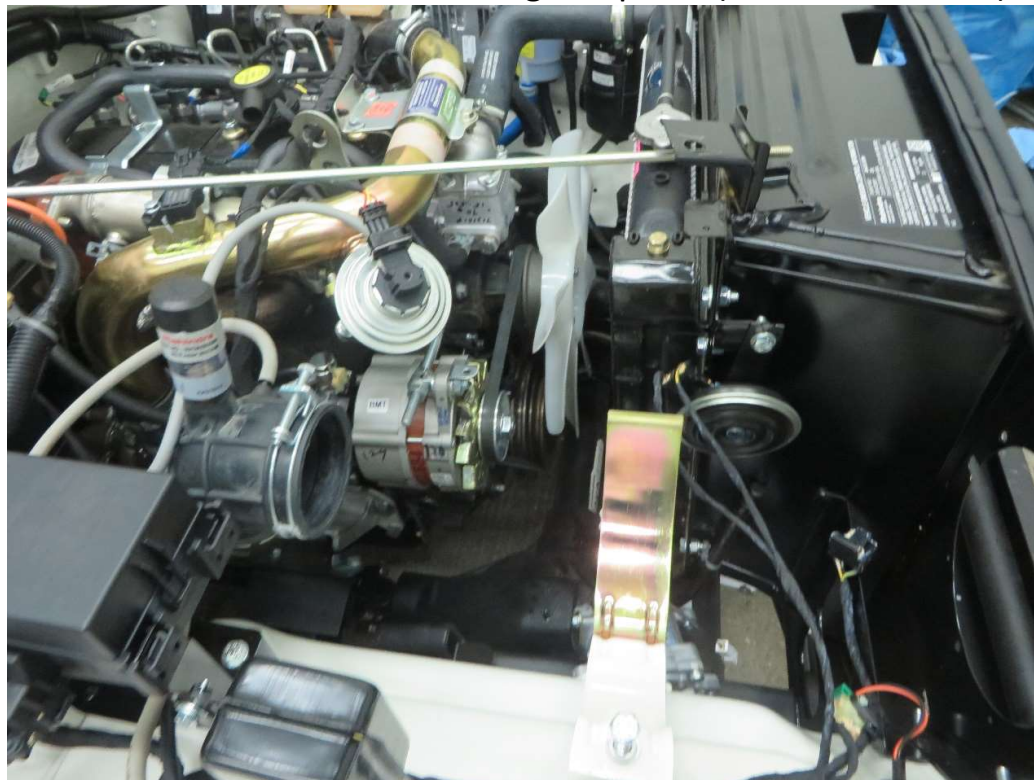
22

Install the cooler onto the cooler holder by included screws, washers and tubes.

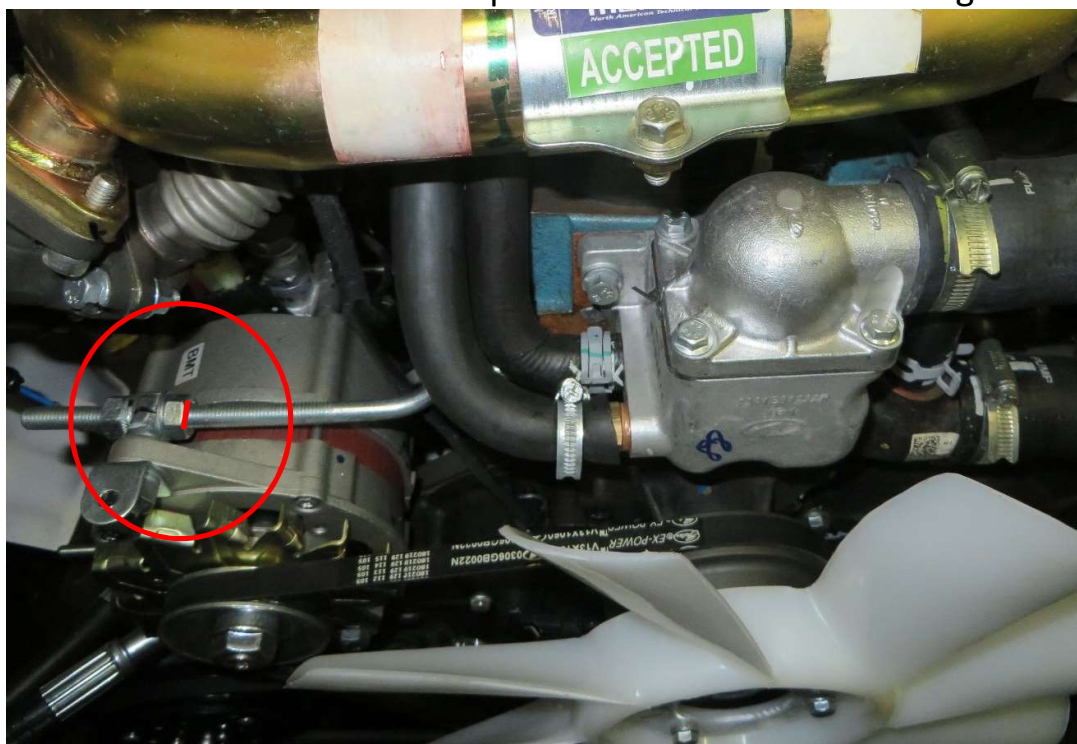


23

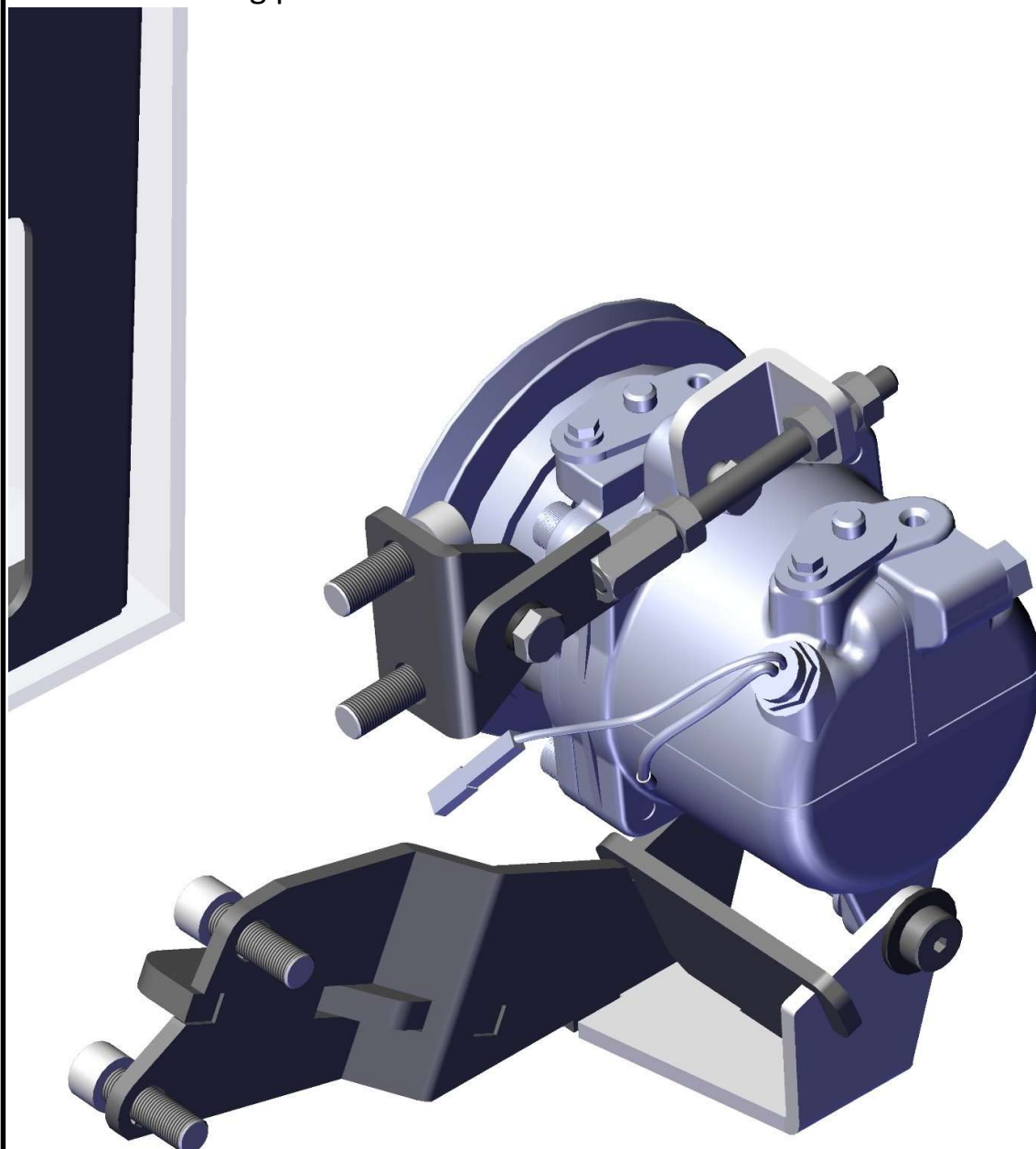
Uninstall air filter from the engine space. (Uninstalled view)



Make mark on the alternator tensoning screw (red line).
Loose the alternator to neutral position and uninstall the original belt.

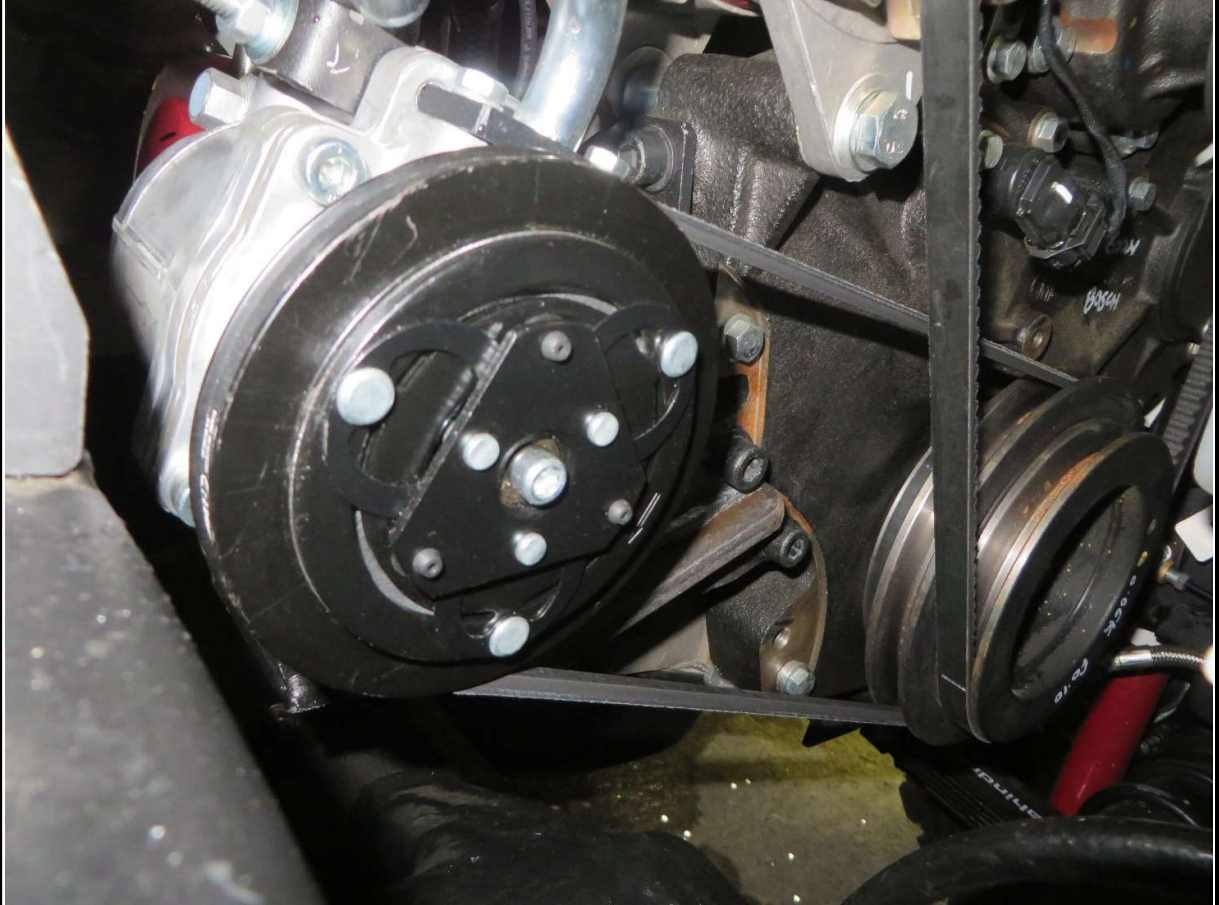


Install the compressor assembly onto the machine frame by originall fixing points and included screws . SEE NEXT PAGE



25

Detail view onto the mounted assembly

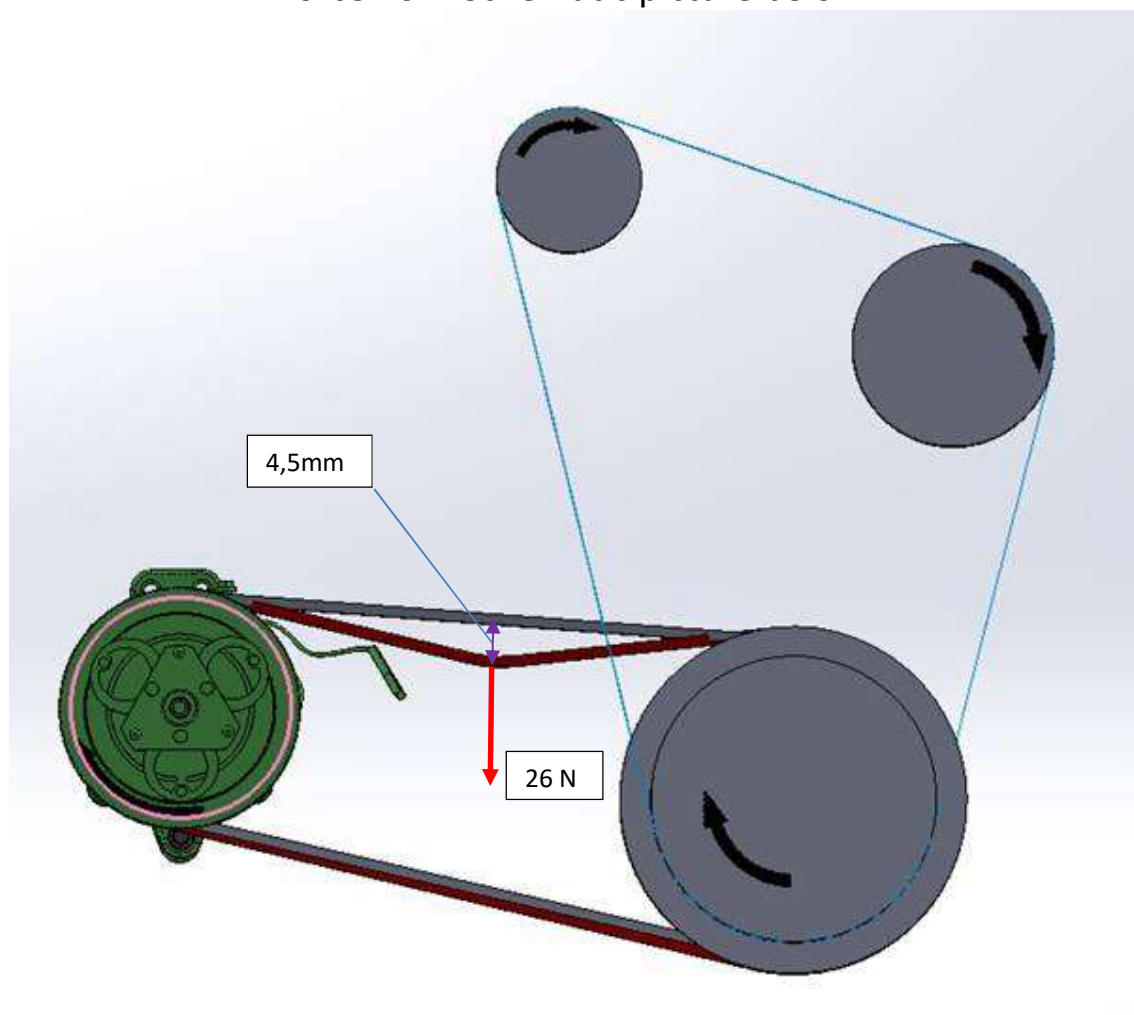


26

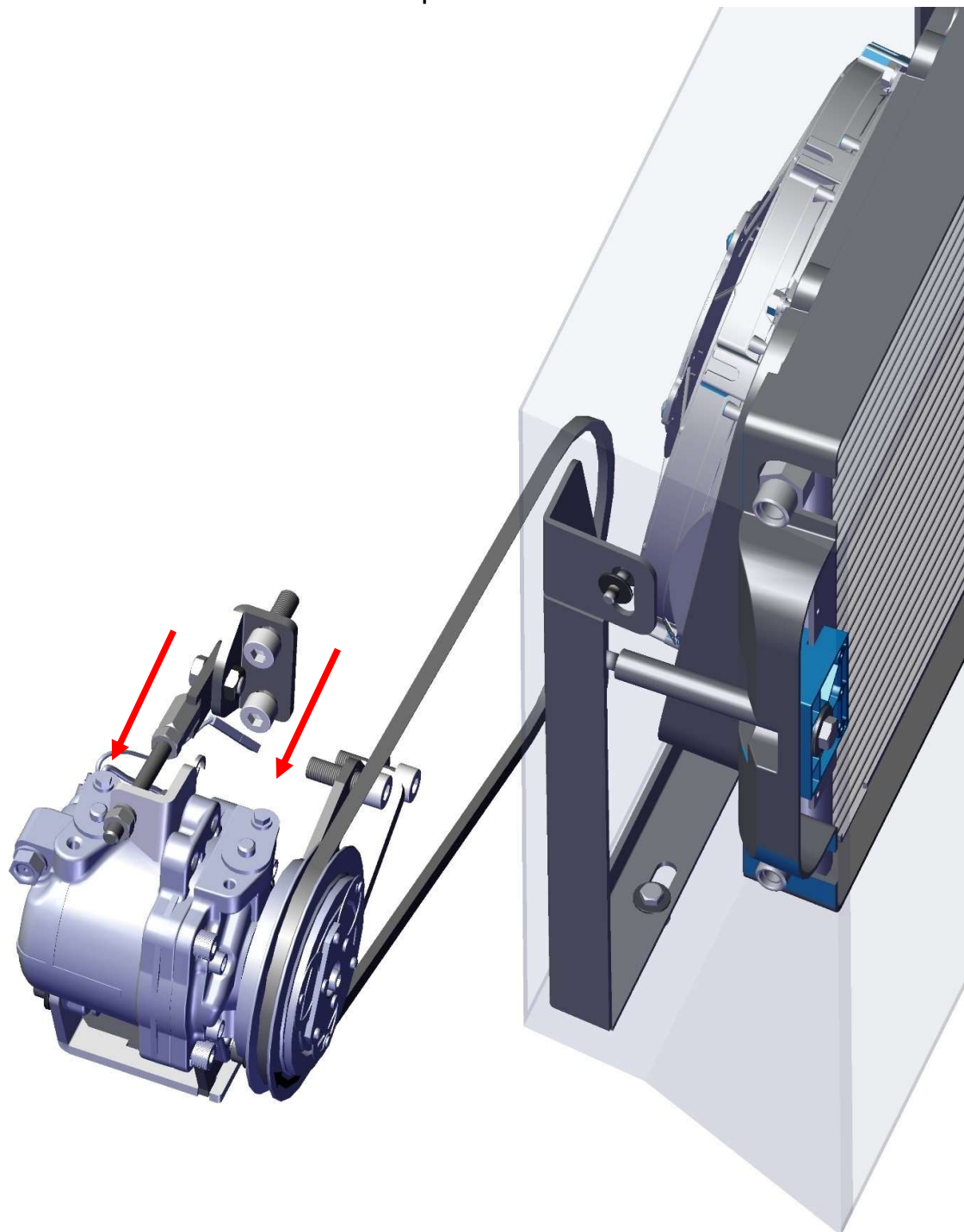
Install the belt onto the original sheave and onto the compressor.

It is necessary to adjust the compressor to correct belt tension.

If the belt have correct tension, deformation of the belt is 4,5 mm under force 26N. Schematic picture below.

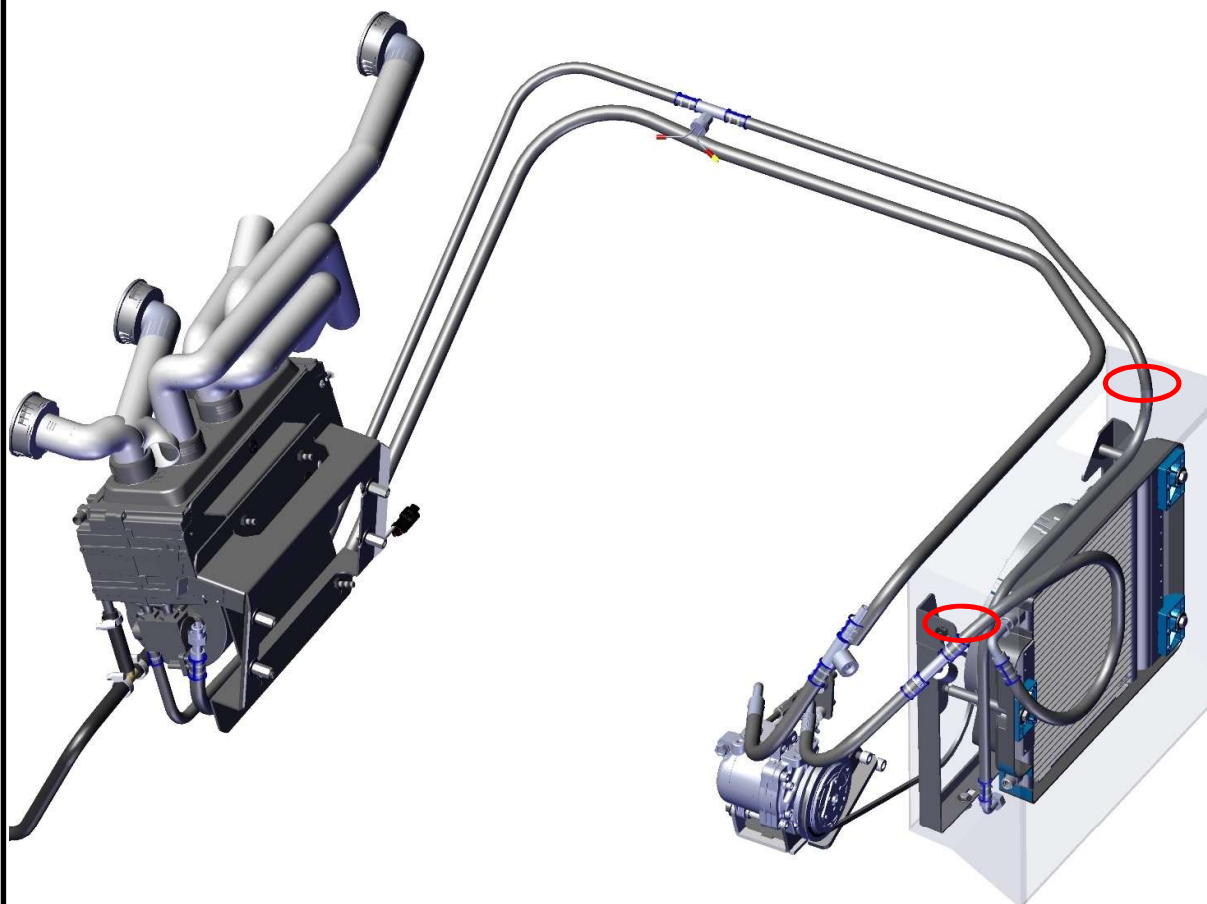


Install the original belt back to position and adjust the alternator to the best position.



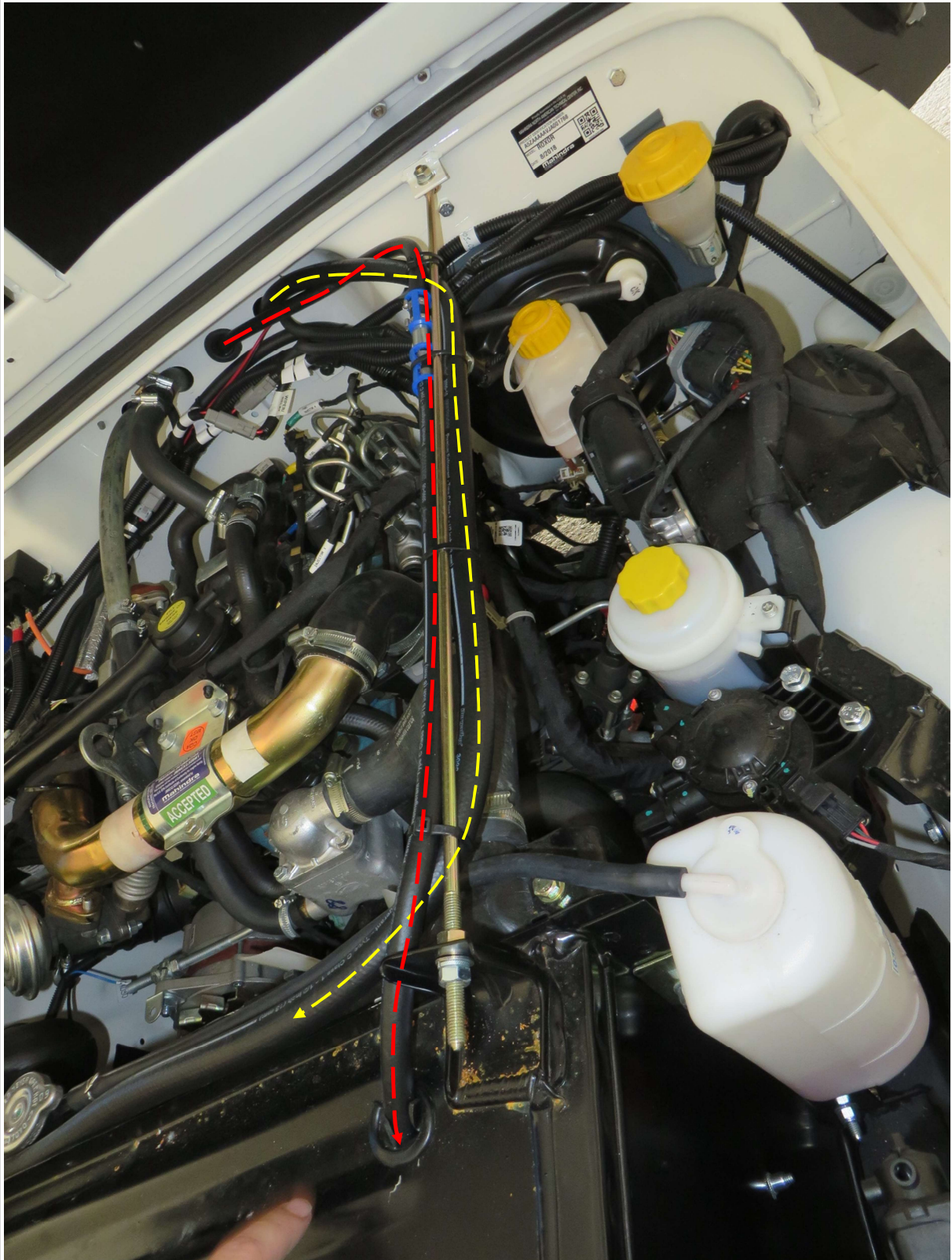
28

Install the cooler hoses onto the air condition body, compressor and cooler. You have drill two holes $\varnothing 20\text{mm}$ for cooler hoses (red circles)



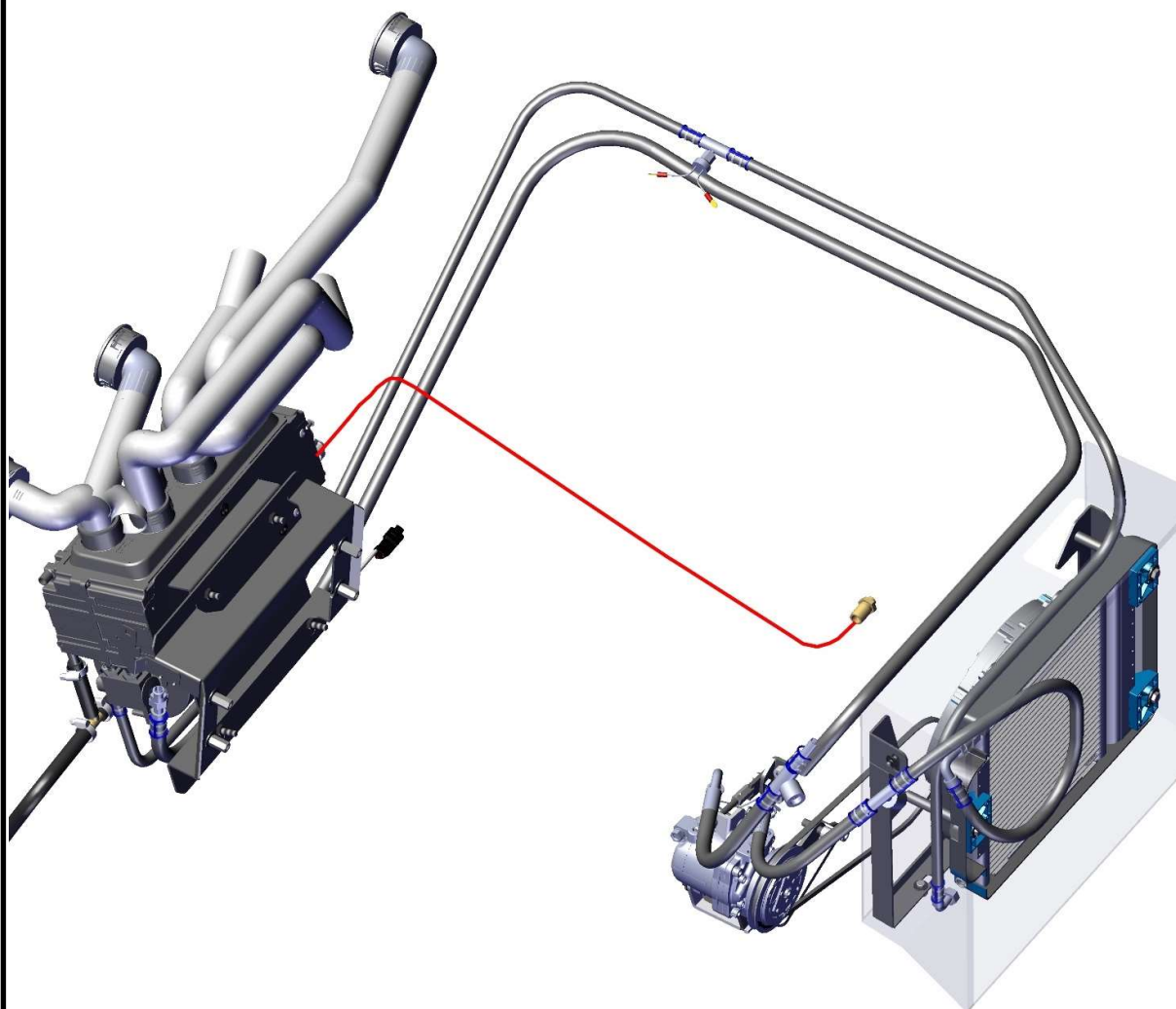
29

View onto the installed cooler hoses.



30

Run the heater hose to the engine plug. SEE NEXT PAGE
Install the tube onto the engine.
Install the heater hose onto the tube by included tightening straps.



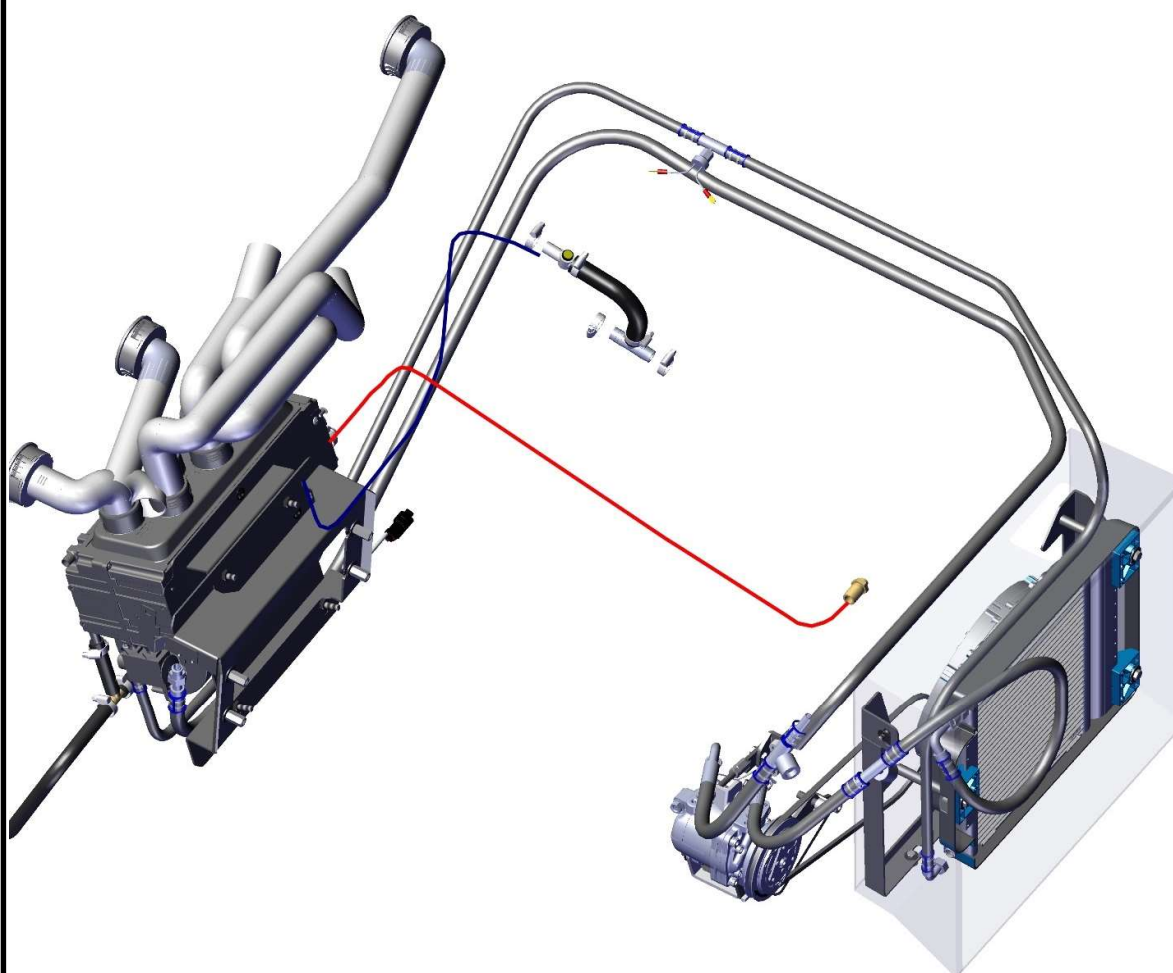
31

Detail view onto the hot heater hose (installed).



32

Run the heater hose to the engine cooling hose.
Install the tube onto the engine cooling hose.
Install the heater hose onto the tube by included tightening straps.



33

Detail view onto the heater hose (installed).
(Blue line-heater hose, yellow line-original engine cooler hose).



34

Place the relay harness and the supply harness onto the engine space.
Connect the blue short wire from supply harness with the relay.
Install the relay holder onto the machine by included screws.



Detail view



Install the relay assemblies onto the holder.



Run the blue wire "compressor" to the compressor and connect the wires.



36

Run the branch “condenser” to the cooler. Connect the branch with the cooler by installed connectors.

Place the air condition harness into the cab space.
Run the “A/C UNIT RELAY” branch to the engine space through original hole. Connect the supply harness branch “A/C UNIT RELAY” with the air condition harness branch “A/C UNIT RELAY”.



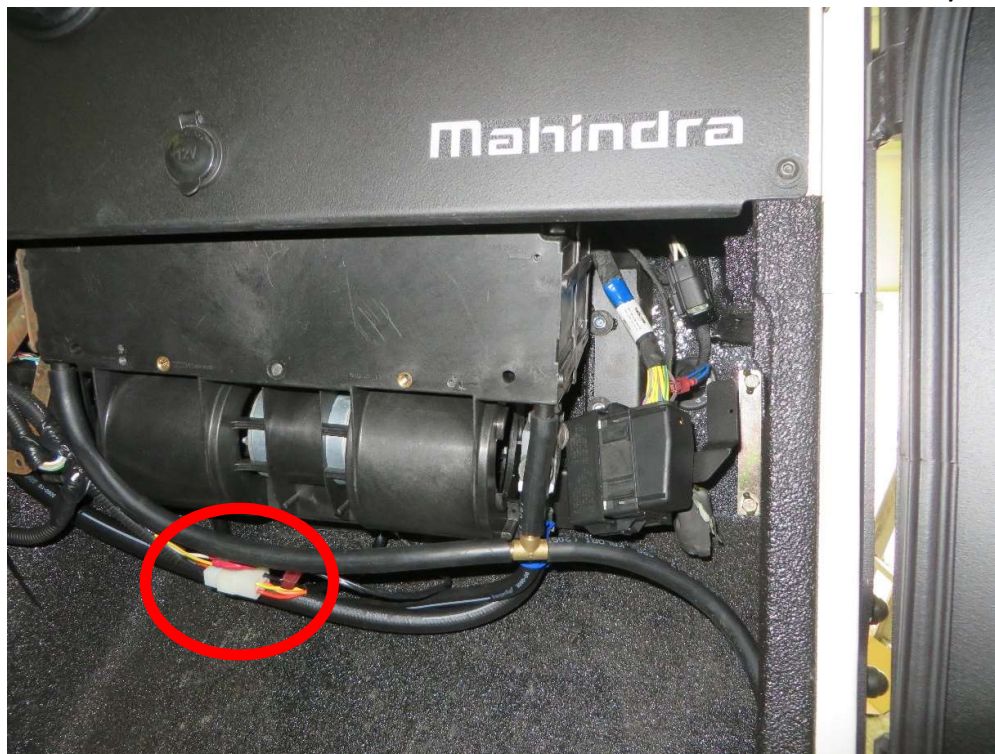
37

Run the harness branches “pressure switch” to the pressure switch on the cooler hose. Connect the wires with the pressure switch.

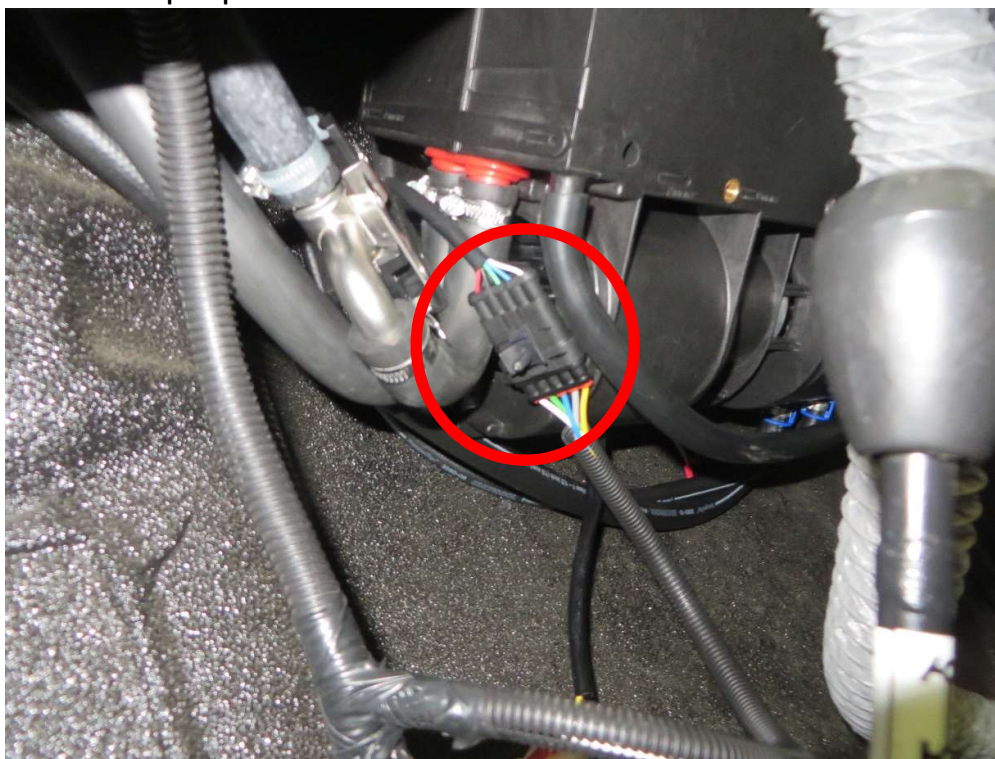


38

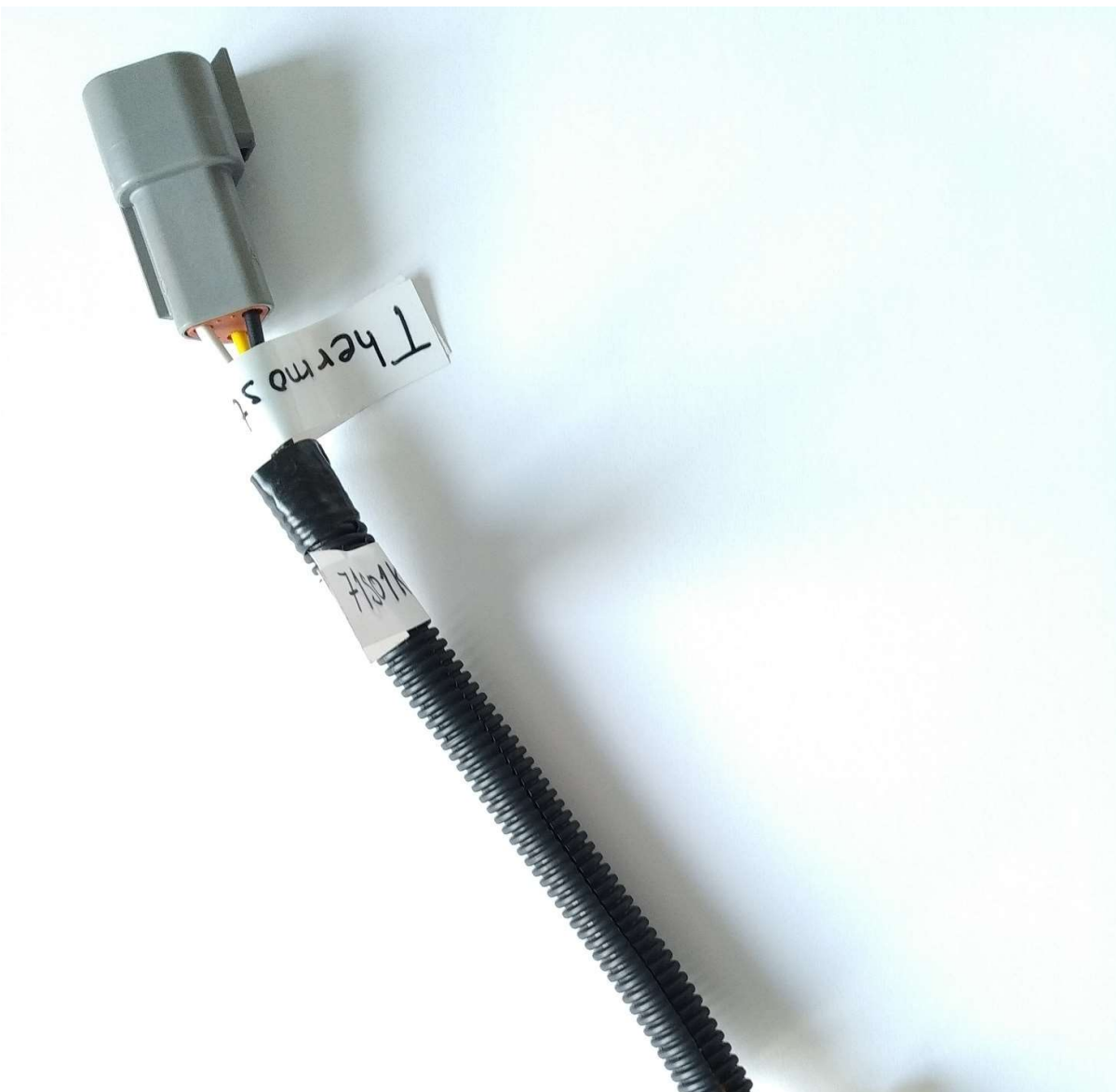
Connect the air condition connector with the harness branch "A/C UNIT".



Connect the proportional valve connector with the harness "valve".

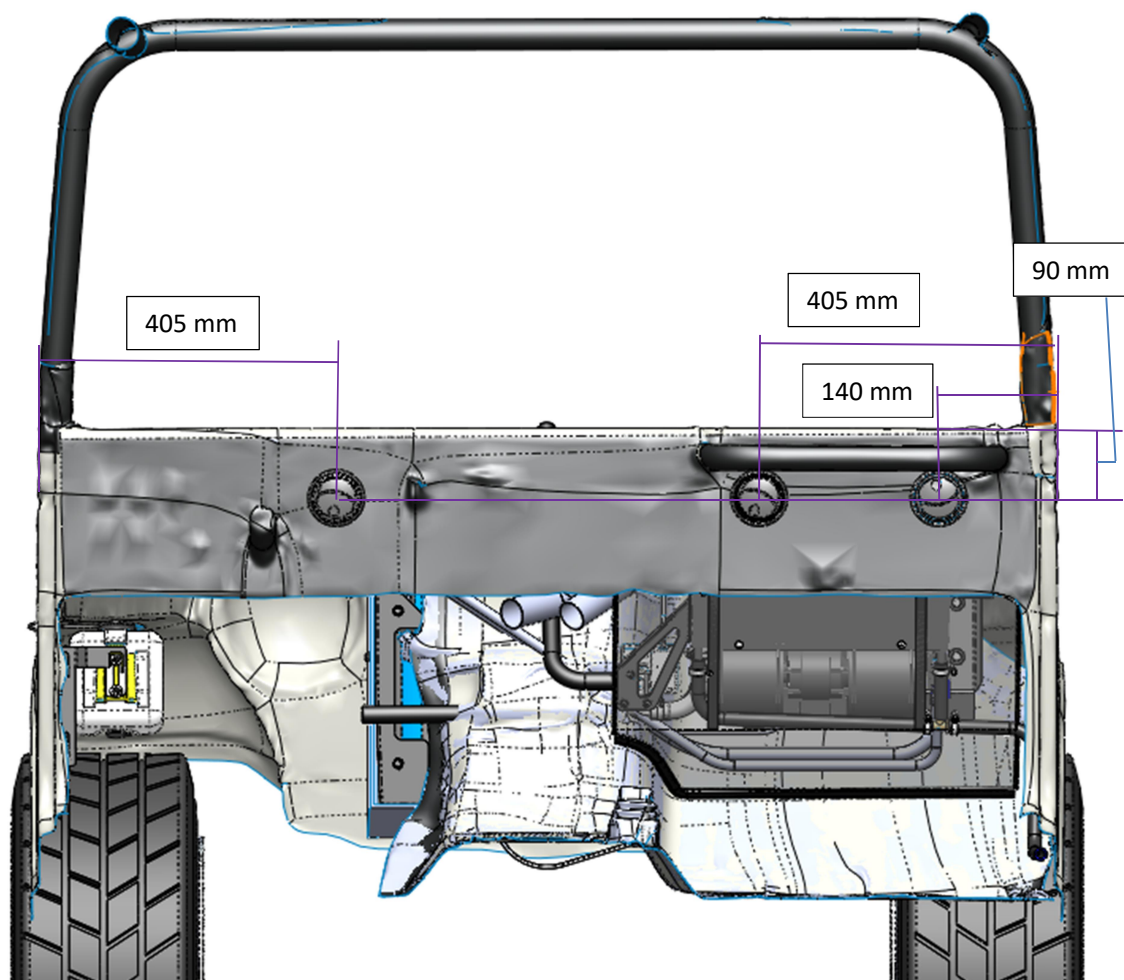


Connect the thermostat harness to the harness branch "thermostat".



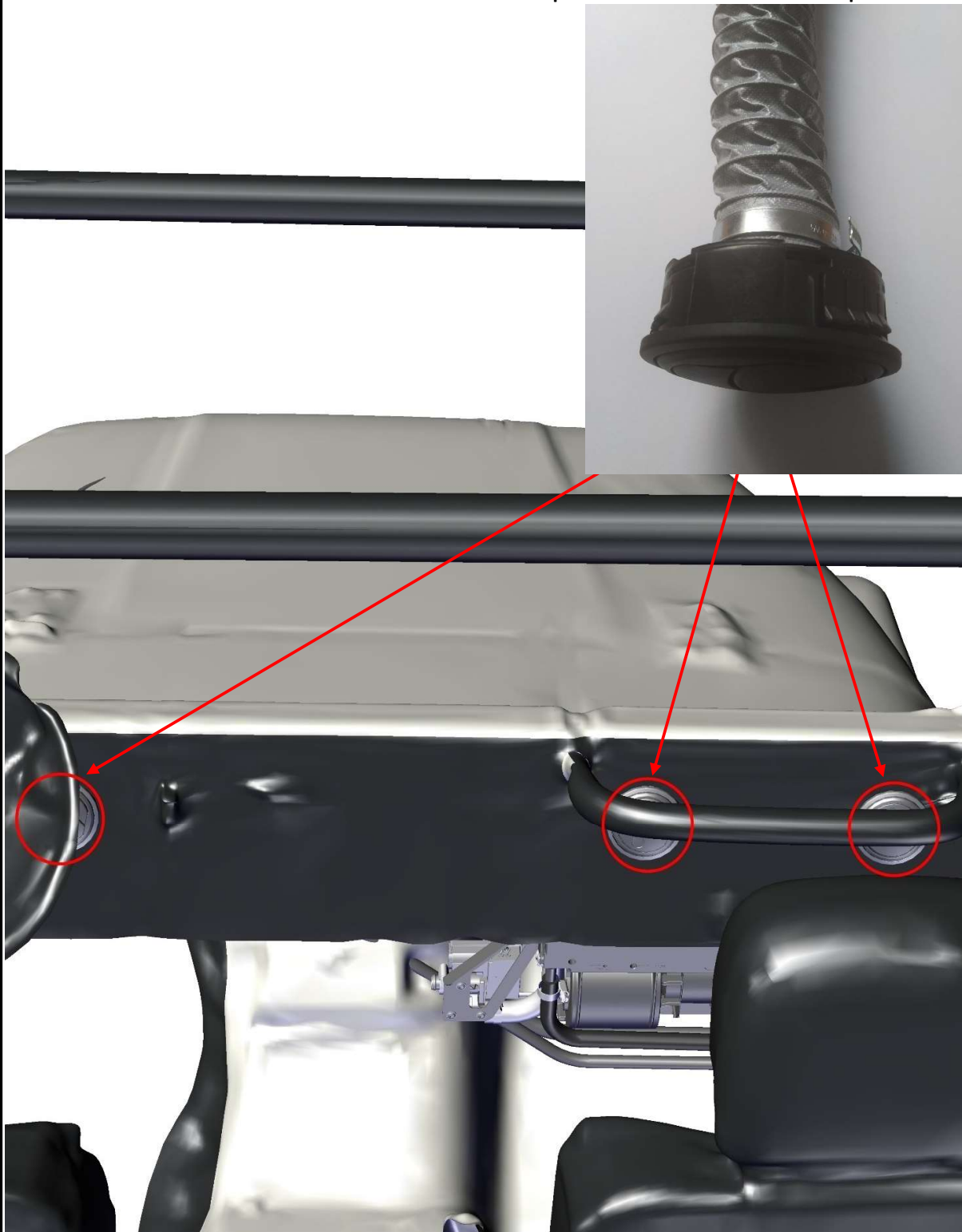
40

Place the dashboard onto the suitable work table.
Cut the holes $\varnothing 76,5\text{mm}$ for air vents onto the dashboard.



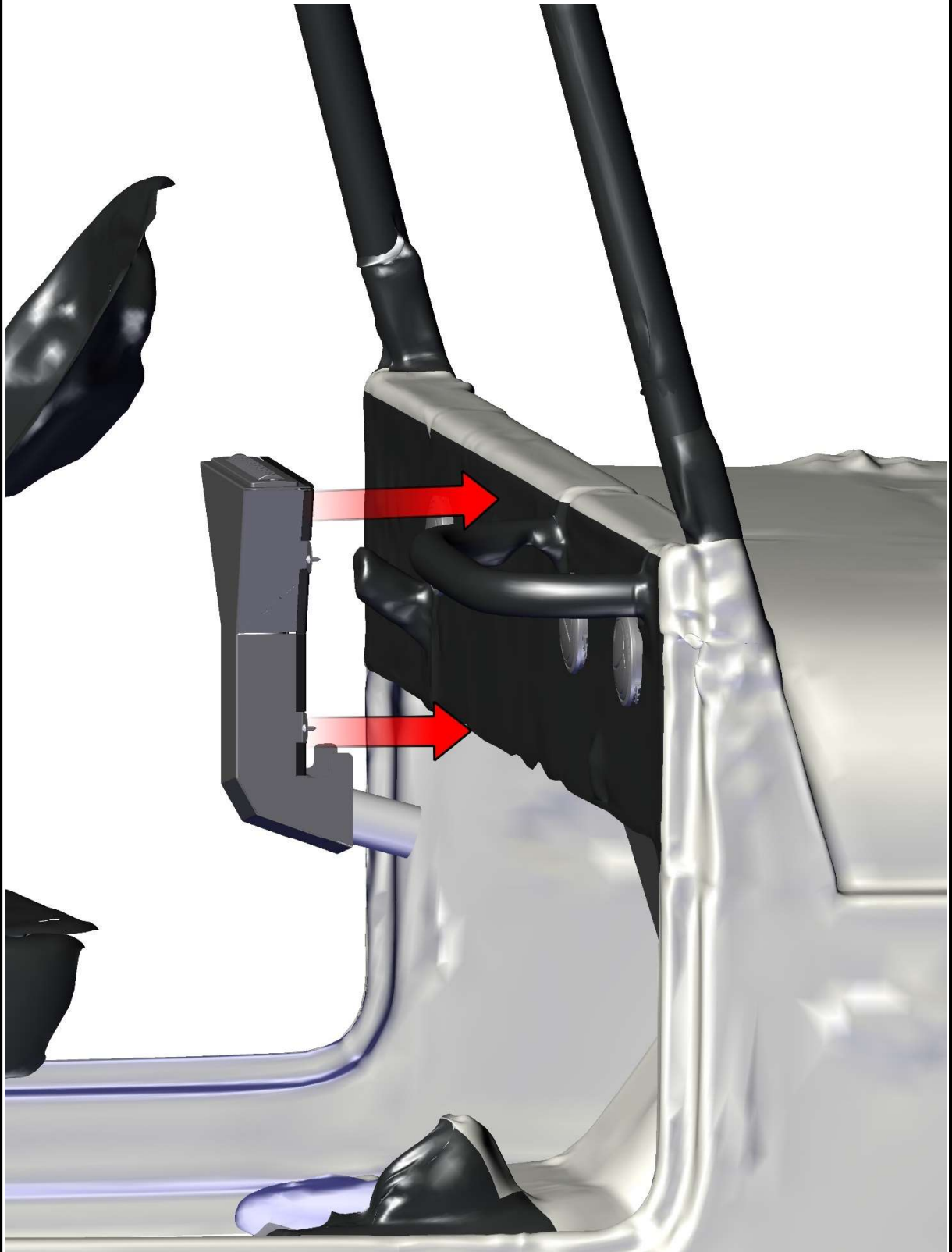
41

Install the dashboard back to machine.
Install the air hoses onto the air vent and push the vent into the position.



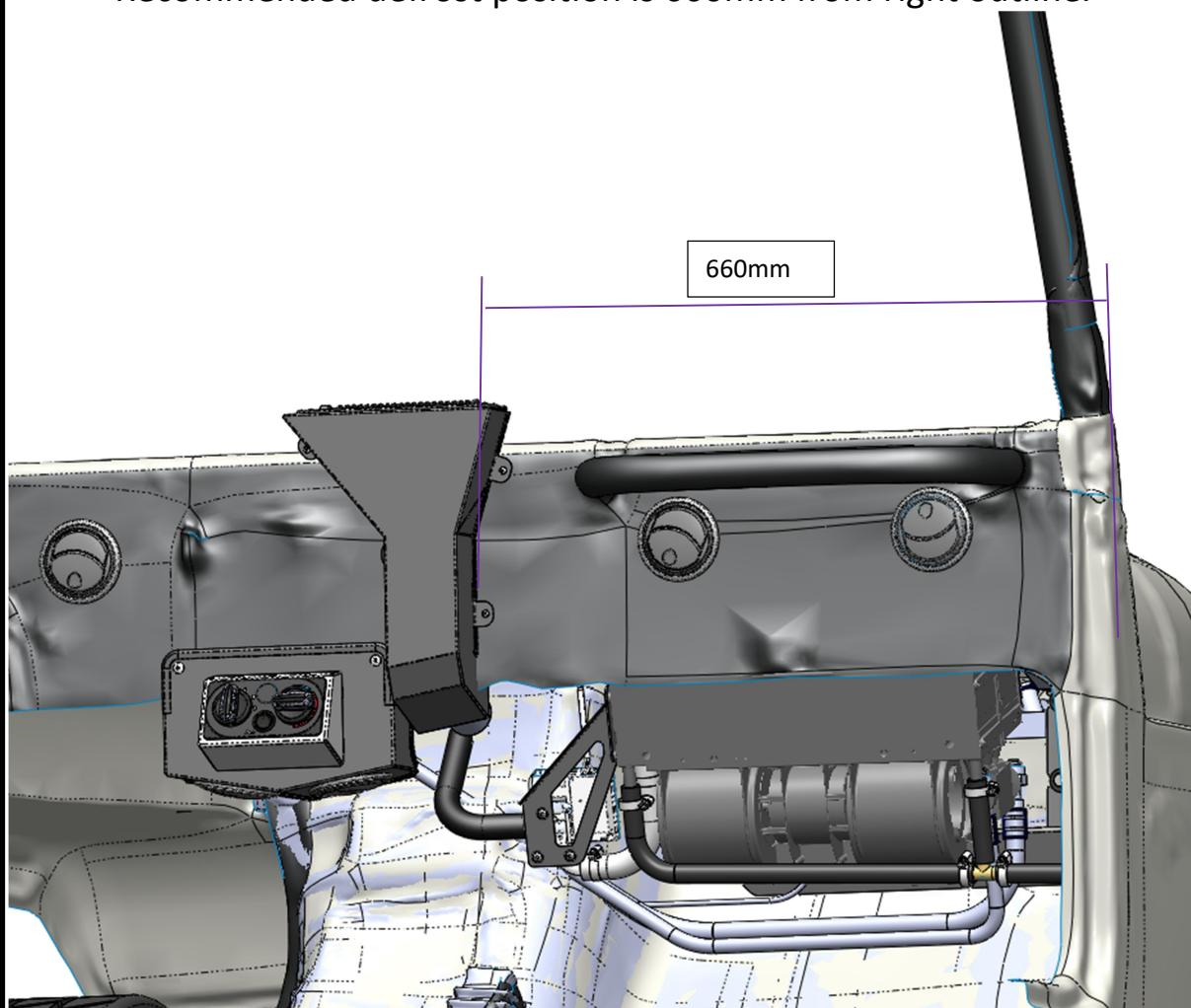
42

Place the defrost onto the dashboard. SEE NEXT PAGE



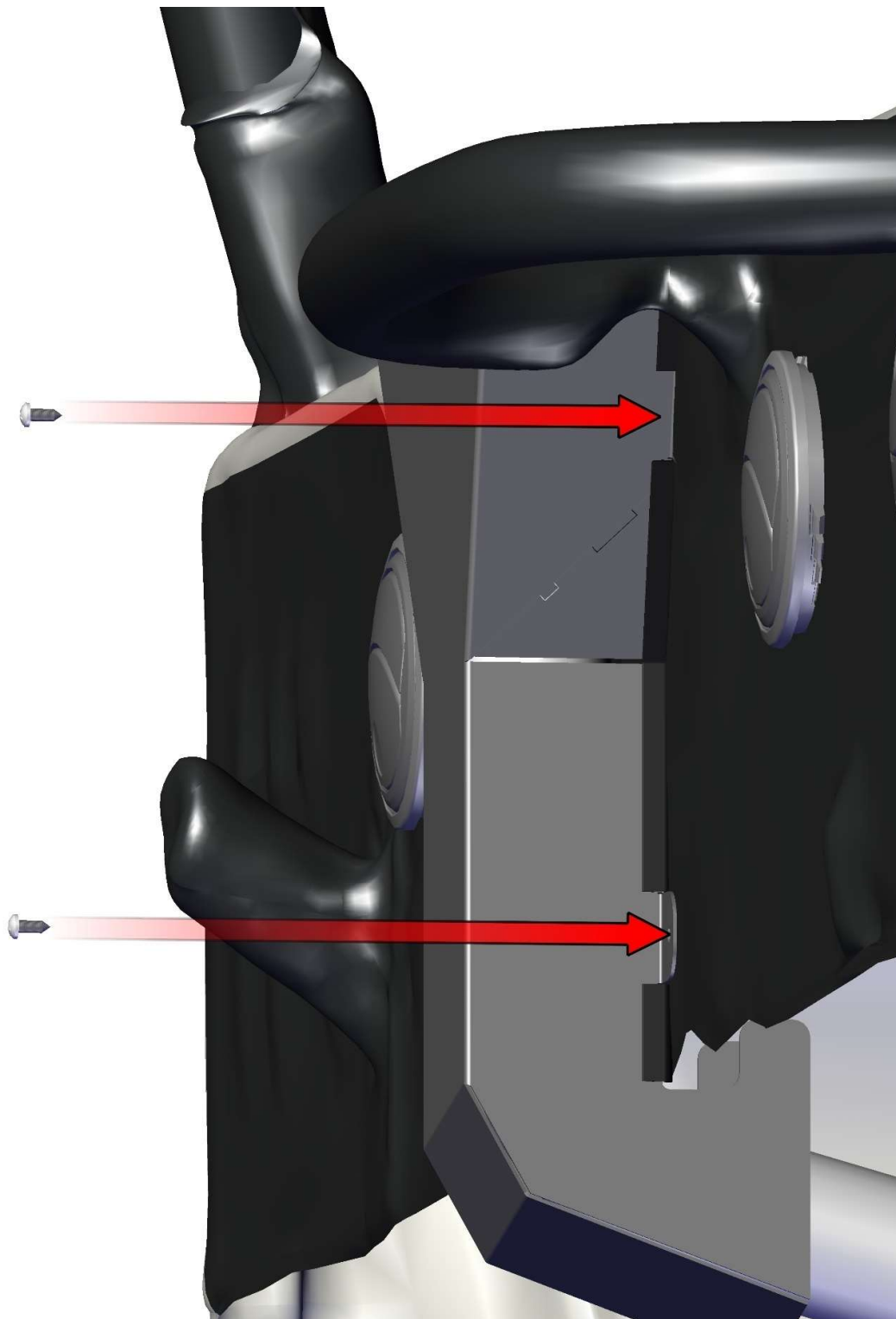
43

Recommended defrost position is 660mm from right outline.



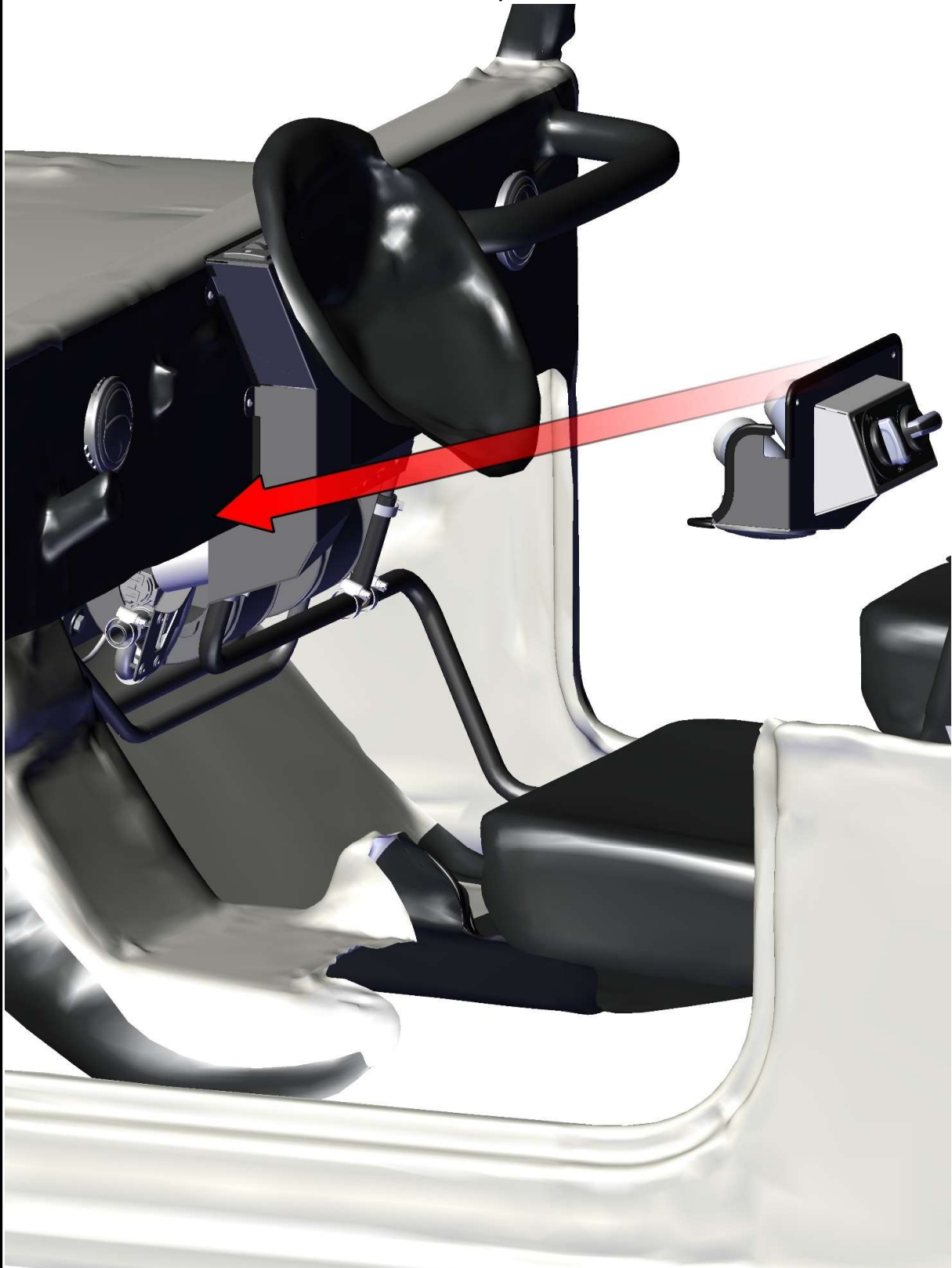
44

Drill 4 holes $\varnothing 3\text{mm}$ in accordance with the defrost holes.
Fix the defrost to the dashboard by included self-cut screw.
Connect the defrost air hose with the heater air hose.



45

Place the switch assembly onto the dashboard.



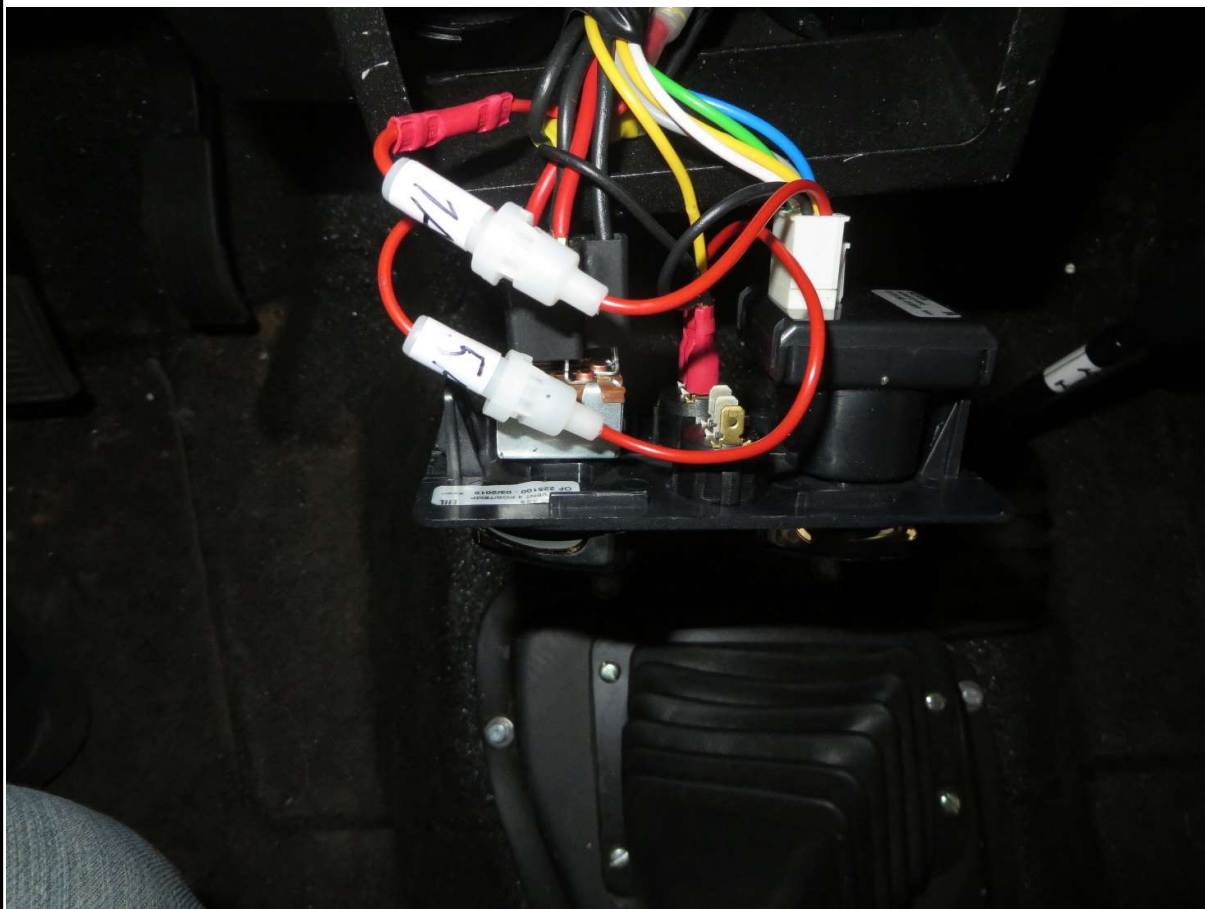
46

Drill 2 holes $\varnothing 3\text{mm}$ in accordance with the holders holes.
Fix the assembly with the dashboard by included self-cut screws.
Connect the air vent on the switch cover with the heater air hose.



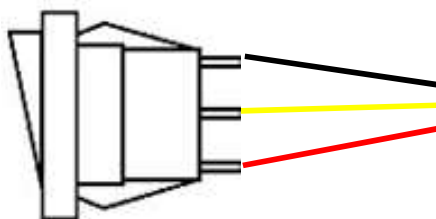
47

Pull out the movable part of the switch cover.
Connect the harness branches “CONTROL SWITCH”, “ROTTARY SWITCH”
and “GREEN SWITCH” with the switches.



48

“GREEN SWITCH” detail connection diagram

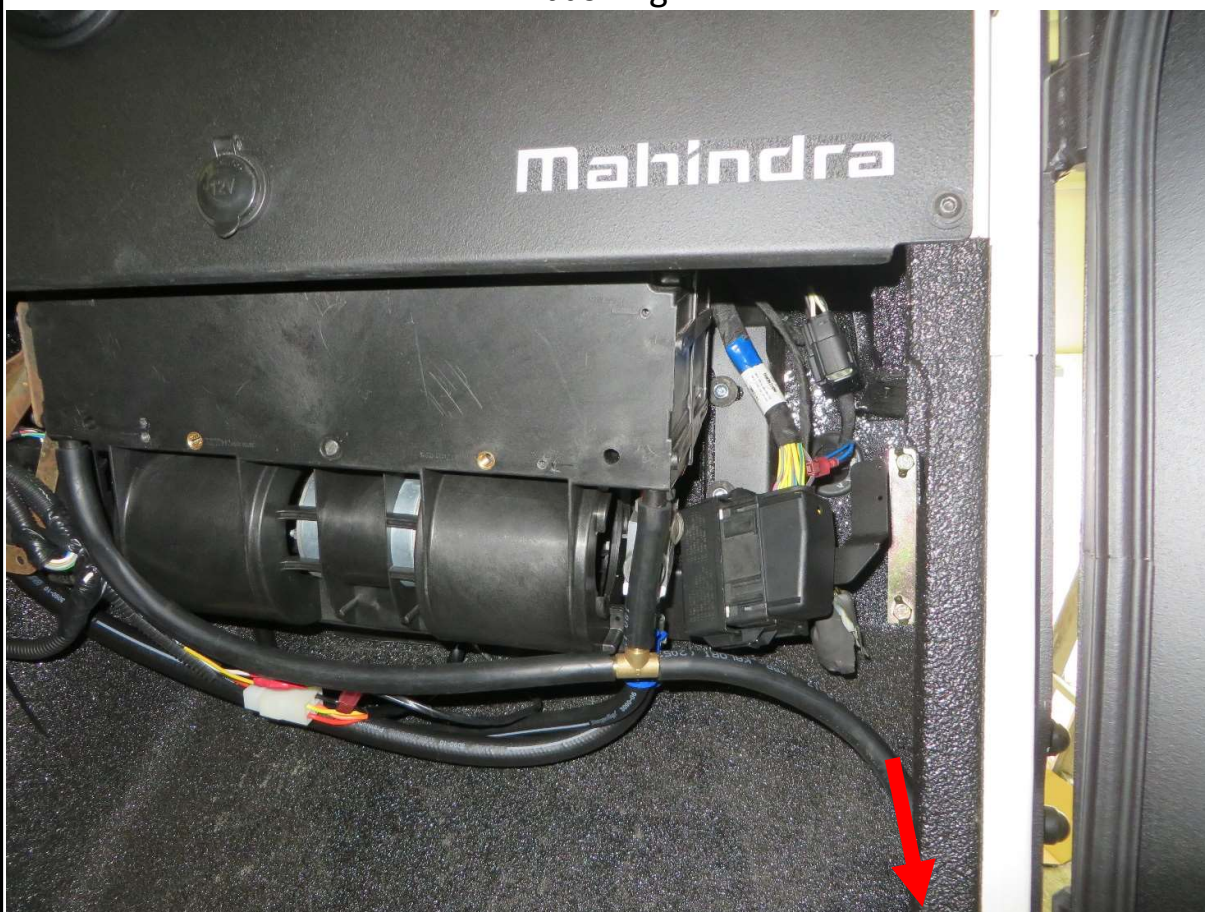


Place the switches with the cover back to position.

Connect the supply harness branches “+” with the battery 12V+.
Connect the supply harness branches “-” with the battery 12V-.

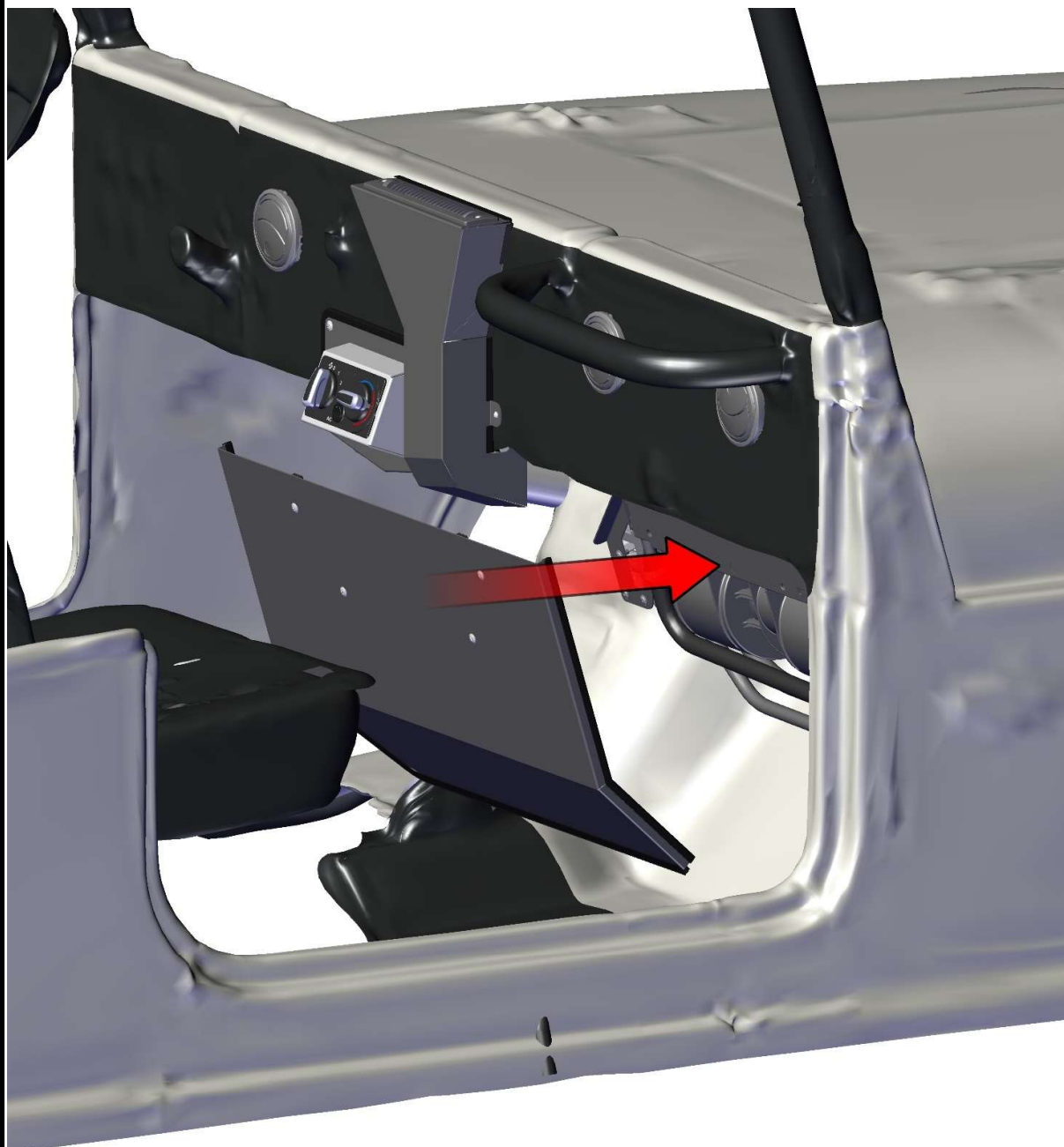


Press included bushing into the original machine floor hole. Run the condensation hose from the air condition out of the machine through the bushing.



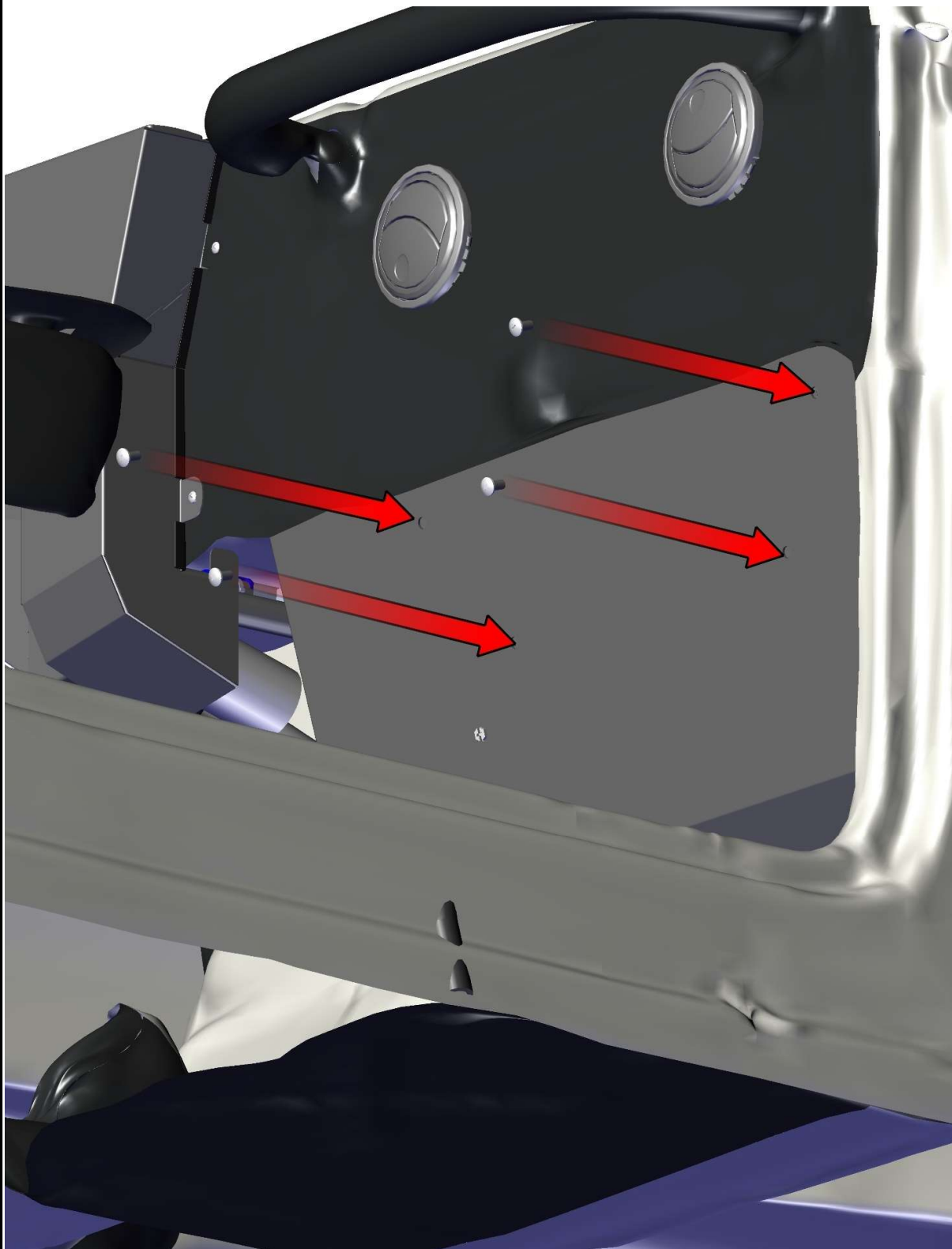
Fix the hose in position by included tightening strap.

Place the air condition cover onto the air condition.



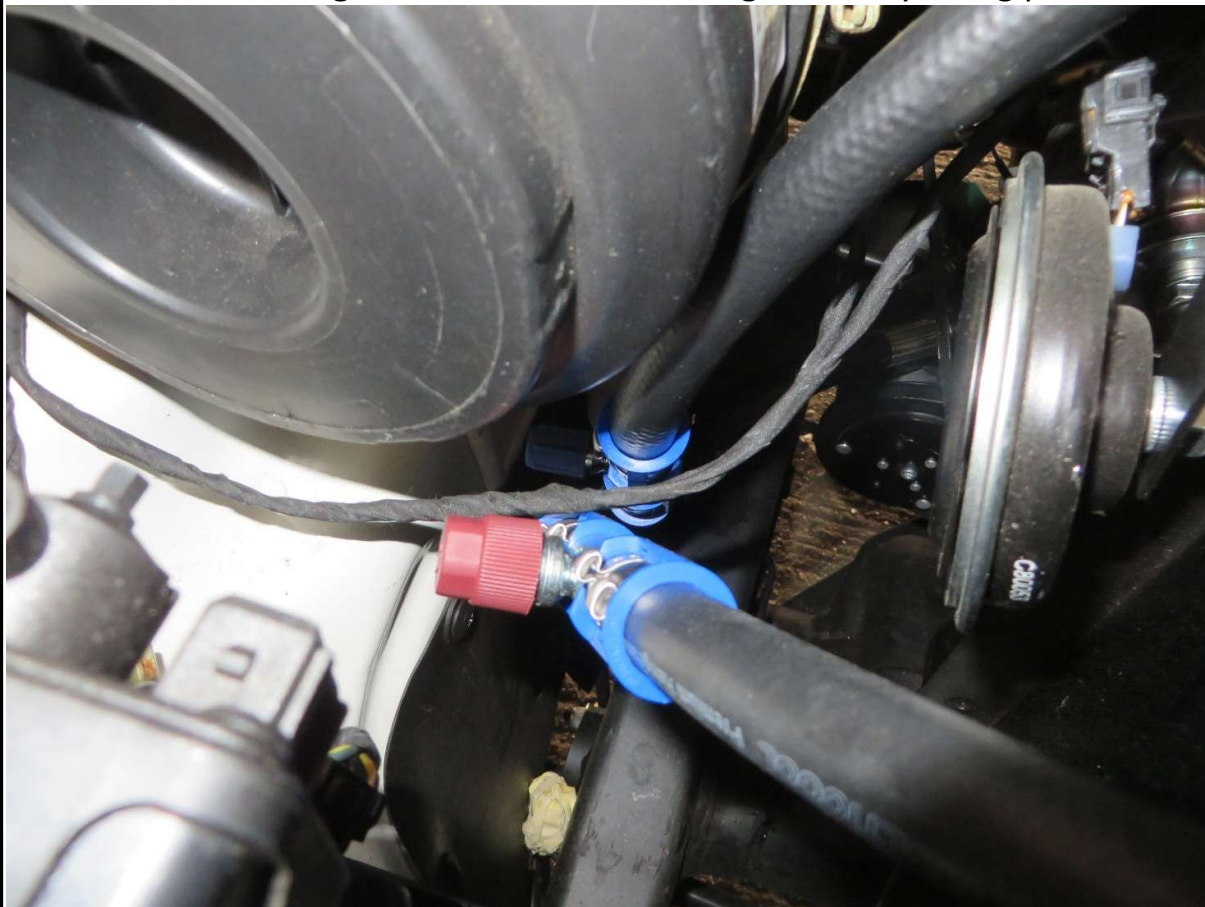
51

Fix the air condition cover with the air condition by included self-cut screw.



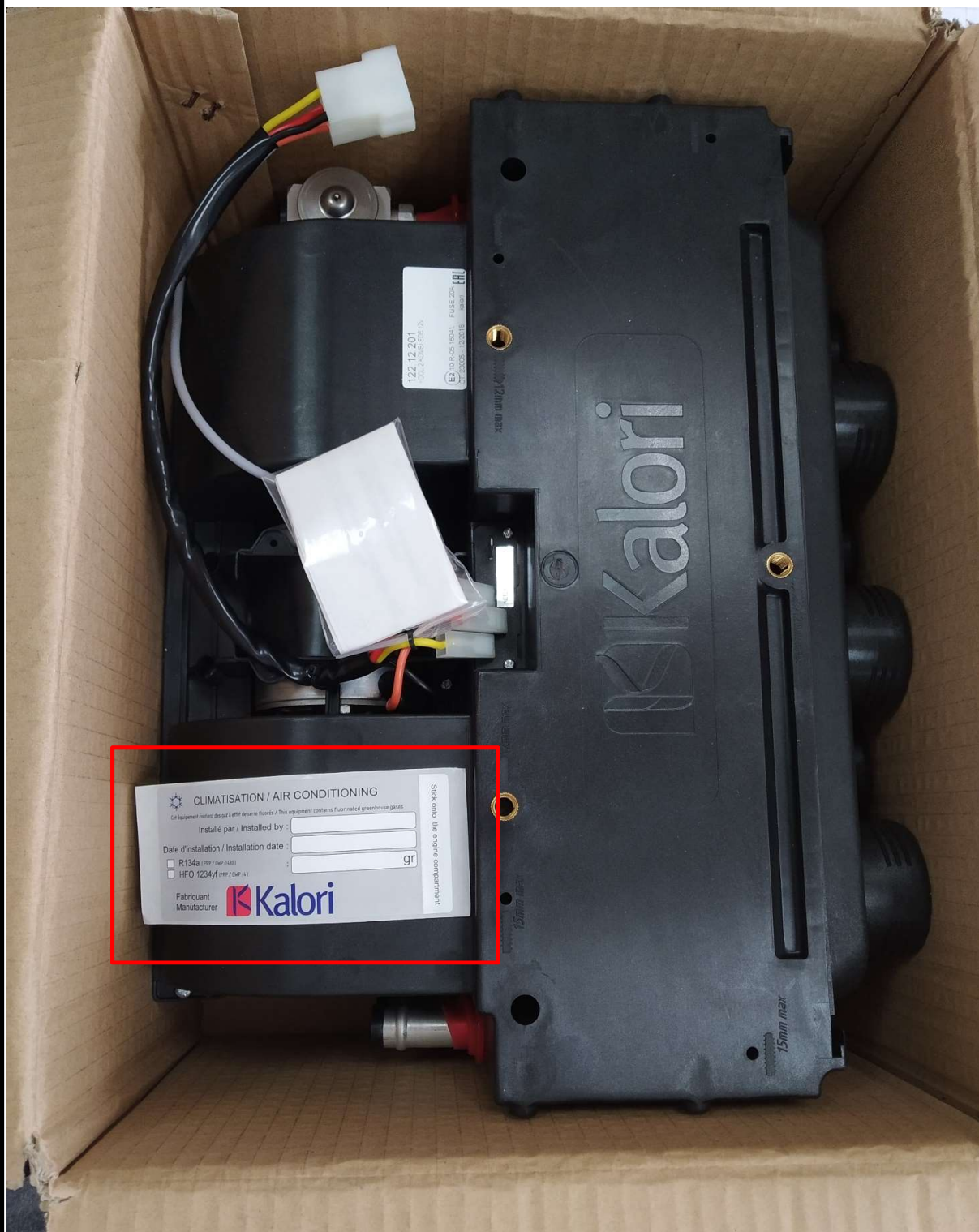
52

Fill the cooling medium into the cooling circuit by filling port.



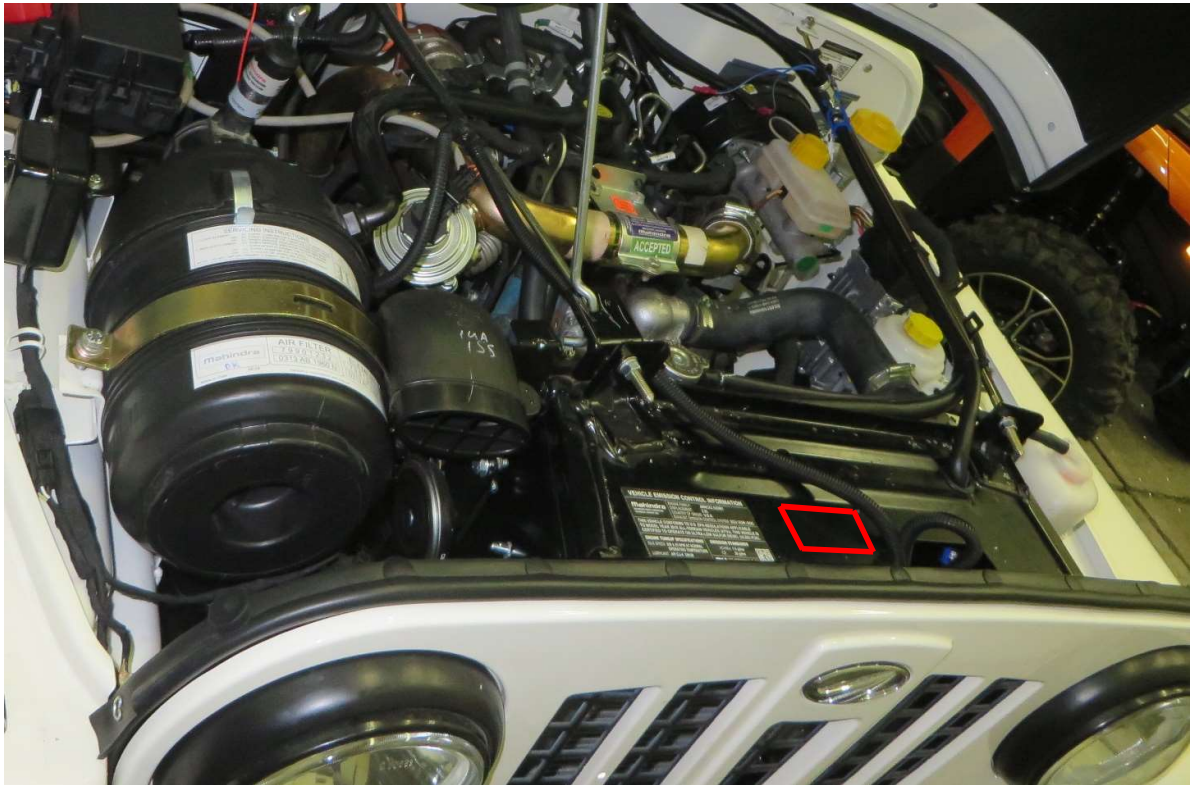
Recommended amount is **597g** of the cooling medium
(**R134a type**)
and **117 ml** of the oil (for cooling systems).

The person filling the air-conditioning circuit with the medium should write down the filling parameters on this ticket.



54

Stick the ticket onto the machine frame (red lines).



55

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

METRIC BOLT TORQUE SPECIFICATIONS

		5.6			8.8			10.9		
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			

HardCabs,