RELEASE NUMBER	REV LTR	REVISION DESCRIPTION	BY	DATE	APPD
P63212-14	-	INITIAL RELEASE	A_V	04/11/23	J_H

CSI SCROLL TYPE AIR COMPRESSOR SERVICE – RETROFIT GENERAL INSTRUCTIONS. FOR EB2-JOULEY ELECTRIC SCHOOL BUS:

1. ***IMPORTANT*:** VERIFY CHARGE (SOC) IN THE BATTERIES IS BETWEEN 50% - 80%. IF NOT, CHARGE THE BUS BEFORE PROCEEDING FURTHER.

2. ***IMPORTANT*:** MOVE THE BUS TO A WORK-BAY WITH LIFTS. ENSURE THE BUS IS IN "PARK", TURN HV "OFF", DRAIN THE AIR TANKS, AND **SAFELY DECOMMISSION THE BUS.**
   DO NOT START **ANY** WORK BEFORE THIS STEP.

3. **USE THE KIT ASSEMBLY TABLE BELOW TO CHOOSE THE CORRECT KIT P/N FOR EACH VEHICLE.**

4. SEE PAGES 2 AND 3 FOR FULL PARTS LIST, VERIFY ALL PARTS NECESSARY FOR RETROFIT ARE AVAILABLE. VERIFY ALL TOOLS NECESSARY ARE AVAILABLE BEFORE STARTING THE WORK.

5. FOLLOW THE STEP-BY-STEP PROCESS OUTLINED IN THIS DOCUMENT IN THE SAME ORDER AS PRESCRIBED.

6. REFER TO THE TORQUE NOTE APPENDIX IN PAGE-22 FOR ALL THE FASTENER TORQUES SPECIFIED WITH DELTA-NOTES.

KIT P/N	279" WB	259" WB	AIR REAR SUSP	SPRING REAR SUSP	FRONT CHARGE PORT	REAR CHARGE PORT
A01-35741-000	X		X			X
A01-35741-001	X			X		X
A01-35741-002		X	X			X
A01-35741-003		X		X		X
A01-35741-003		X	X	X	X	
A01-35741-004	X		X	X	X	

ITEM NUMBER D01-35742-000

DESCRIPTION INSTL-KIT,AIR COMPR,CSI,EB2

DAIMLER

Daimler Trucks North America

MATERIAL APPROVAL N/A	DATE N/A	UNLESS OTHERWISE NOTED, DIMENSIONS AND TOLERANCESARE DEFINED ACCORDING TO ASME Y14.5M- 1994,WITH EXCEPTION PER DTNA 09ENG-WI037
DRAWN BY A.VASANTHA	DATE 04/11/23	
CHECKED BY J.PARSONS	DATE 04/11/23	
RESPONSIBLE ENGINEER A.VASANTHA	DATE 04/11/23	THIRD ANGLE PROJECTION
APPROVED BY J.HIGH	DATE 04/11/23	UNITS OF MEASURE MM

DESCRIPTION

INSTL-KIT,AIR COMPR,CSI,EB2

SUPPLEMENTAL DESCRIPTION

3ZYA1

ITEM/DRAWING NUMBER	REVISION LETTER	PAGE
D01-35742	-	1 of 22

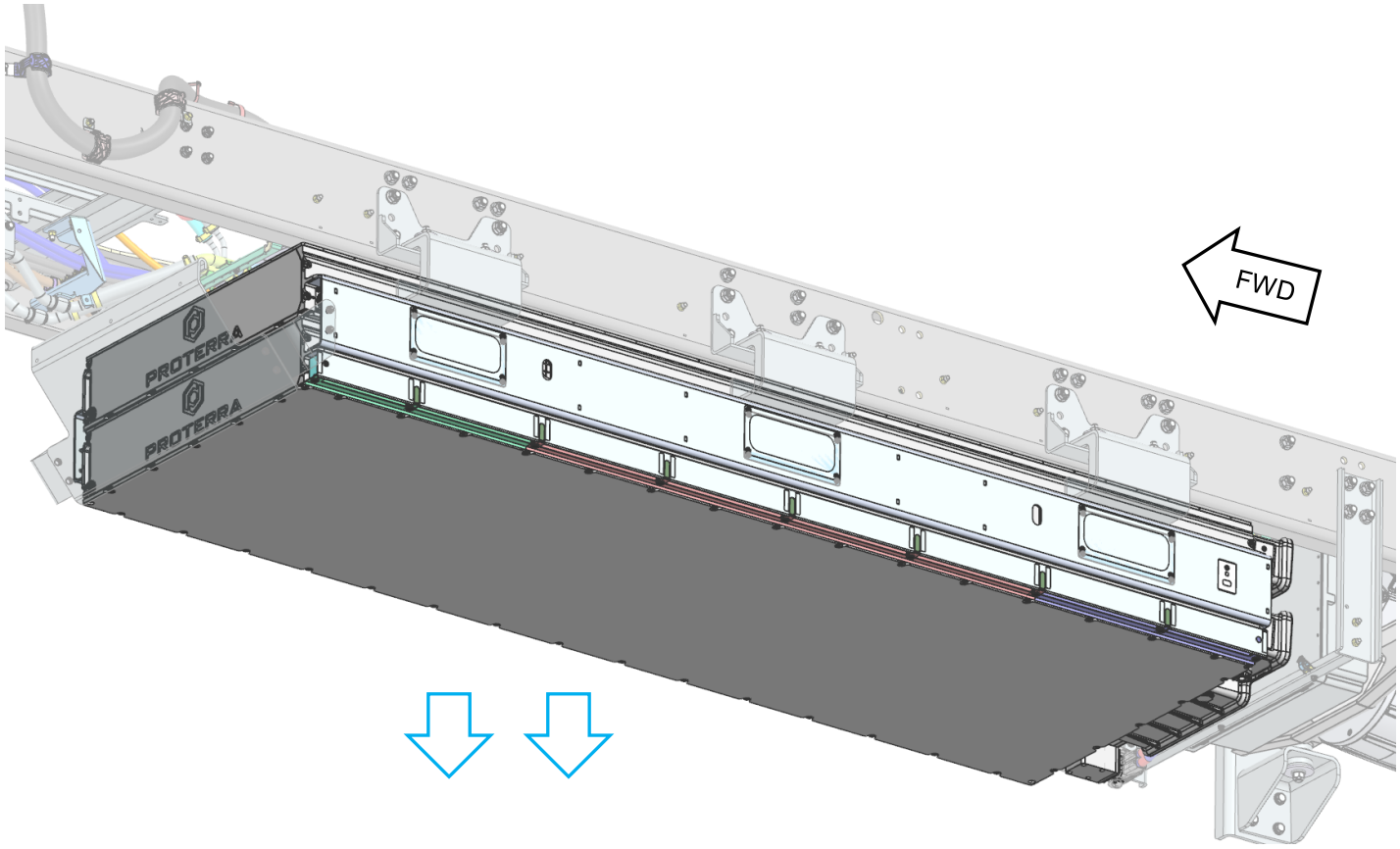
REF	PART NUMBER	DESCRIPTION	A01-35741-000	-001	-002	-003	-004
			QTY	QTY	QTY	QTY	QTY
1	A01-35560-000	AIR CPRSR-ASSY,220V,CSI,SCROLL	1	1	1	1	1
2	A66-30484-388	HV ASM-AIR COMP-VFD,279WB,KIT	1	-	-	-	-
	A66-30484-391	HV ASM-AIR COMP-VFD,279WB,KIT	-	1	-	-	-
	A66-30484-369	HV ASM-AIR COMP-VFD,259WB,KIT	-	-	1	-	-
	A66-30484-372	HV ASM-AIR COMP-VFD,259WB,KIT	-	-	-	1	-
	A66-30484-393	HV ASM-AIR COMP-VFD,279WB,KIT	-	-	-	-	1
3	TYCHDM250HIR	BASE,TIE STRAP MTG,.250"	1	1	1	1	1
4	23-13140-113	AXIAL MT-SADDLE ,TIE STRIP,8MM	-	-	-	1	1
5	A12-32839-000	BRKT ASSY-SUPT,AIR CPRSR,XMBR	2	2	2	2	2
6	12-25415-001	BRKT-RTG & CLPG,UNDER C/M L	1	1	1	1	1
7	23-09130-050	BRKT-STANDOFF,1.12X2.12,ANGLE	1	1	1	1	1
8	A12-32853-000	BRKT-SUPT,CSI AIR CPRSR,EB2,LH	1	1	1	1	1
9	A12-32838-000	BRKT-SUPT,CSI AIR CPRSR,EB2,RH	1	1	1	1	1
10	12-32886-000	BRKT-SUPT,CSI SEC AIR FLTR	1	1	1	1	1
11	12-33012-000	BRKT-SUPT,DISCH LN,AIR,CSI,EB2	1	1	1	1	1
12	23-14137-001	CABLE TIE-FIR TREE MOUNT,TYC	5	5	6	6	7
13	23-09132-012	CLAMP-HOSE .69-1.25	2	2	2	2	2
14	23-09132-020	CLAMP-HOSE .81-1.75	2	2	2	2	2
15	23-14576-034	CLAMP-RCHT,SZ B,180D,LONG,M10	3	3	3	3	3
16	23-14576-214	CLAMP-RCHT,SZ B,30D,SHORT,M10	1	1	1	1	1
17	23-14576-634	CLAMP-RCHT,SZ B,90D,LONG,M10	1	1	1	1	1
18	23-13140-018	AXIAL MT-SADDLE ,TIE STRIP,8MM	1	1	1	1	1
19	23-14580-016	CLIP-FIR TREE,MOC16,OVAL	15	13	14	12	13
20	23-13324-112	CONN-STR,ORNG,1.062 TO M22X1.5	1	1	1	1	1
21	23-11321-000	CONN-BARB,3/4" HOSE ID,1/2NPT	2	2	2	2	2
22	03-45232-000	HOSE-CSI COMP,AIR INLET,EB2	1	1	1	1	1
23	BCD22525 12	ISOLATOR-NEOPRENE,DURO 45	2	2	2	2	2
24	BCD22525 13	ISOLATOR-NEOPRENE,DURO 55	2	2	2	2	2
25	BCD9810145 01804	ISOLATOR-SNUB PLATE,STEEL	8	8	8	8	8
26	A12-15912-054	ASSY-HOSE,#12,TEFLON,54"	1	1	1	1	1
27	23-13839-106	NUT-HEX,3/8-16,GR8,ZN AL	4	4	4	4	4
28	23-13861-104	NUT-HEX,FLG,1/4-20,LOCK,ZN/AL	4	4	4	4	4

CONTINUED IN NEXT PAGE

REF	PART NUMBER	DESCRIPTION	A01-35741-000	-001	-002	-003	-004
			QTY	QTY	QTY	QTY	QTY
29	23-13861-106	NUT-HEX,FLG,3/8-16,ZN AL	9	9	9	9	9
30	23-13861-105	NUT-HEX,FLG,5/16-18,LK,ZN AL	2	2	2	2	2
31	23-13833-108	NUT-HEX,LKG,XL SIL,1/2-13	8	8	8	8	8
32	23-13833-110	NUT-HEX,LKG,XL SIL,5/8-11	8	8	8	8	8
33	23-10744-100	SCREW-CAP,HEX5/16-18X1.00GR5Z	2	2	2	2	2
34	23-11751-150	SCREW,CAP,HEX,1/2-13,GR8,ZNDI	8	8	8	8	8
35	23-11747-100	SCREW-CAP,HEX,GR8,3/8-16X1.00	1	1	1	1	1
36	23-11747-125	SCREW-CAP,HEX,GR8,3/8-16X1.25	4	4	4	4	4
37	23-11747-375	SCREW-CAP,HEX,GR8,3/8-16X3.75	4	4	4	4	4
38	23-11755-175	SCREW-CAP,HEX,5/8-11 UNC	8	8	8	8	8
39	23-10742-100	SCREW-CAP,HEX1/4-20X1 GR5ZNW	4	4	4	4	4
40	23-10746-100	SCREW-CAP,HEX3/8-16X1 GR5ZNW	4	4	4	4	4
41	23-09330-100	SPCR-TB,AL,.40"IDX1.5"OD	4	4	4	4	4
42	23-12229-000	STUD-WELD,3/8-16X1.0	1	1	1	1	1
43	12-32887-000	SUPT-BRKT, AIR DISCHG LN	1	1	1	1	1
44	TYCDCT110HIR	TIE-CABLE,DUAL,.375 TO 2.25	-	3	-	3	1
45	23-13476-000	TIE-CLAMP,.5W,15L,4.13BUNDLE	4	8	4	11	14
46	23-13482-002	TIE-FIR TREE MTD,6.5-7.0MM,FT7	4	4	4	4	4
47	48-25126-001	TRIM-EDGING,DOUBLE LIP	27 IN	27 IN	27 IN	27 IN	27 IN
48	23-10900-025	WASHER-FLAT,SST,1/4"	4	4	4	4	4
49	23-09114-006	WASHER-HRDN,0.34X0.69X.080,ZN	2	2	2	2	2
50	23-09114-002	WASHER-HRDN,0.41X0.81X.080,ZN	13	13	13	13	13
51	23-09114-003	WASHER-HRDN,0.53X1.06X.177,ZN	16	16	16	16	16
52	23-09114-000	WASHER-HRDN,0.69X1.31X.177,ZN	16	16	16	16	16
53	23-12157-008	CAP-PIPE,1/2 FNPTF,BRASS	2	2	2	2	2
54	12-33647-000	BRKT-HVIL LOCK,CSI AIR CMPRSR	2	2	2	2	2
55	000000 001147	SCR-MACH,PNH,HDI,M6X20	2	2	2	2	2
56	000125 006420	WASHER-FLAT,ZINC PLTD,M6	4	4	4	4	4
57	23-12828-006	NUT-HEX,SST,M6,PATCH LOCK	2	2	2	2	2
58	12-15465-064	CABLE-NYLON COATED,3/32,CM	1	1	1	1	1
59	LooSL1 3R	SLEEVE-1/8"CABLE,ALUM OVAL	2	2	2	2	2

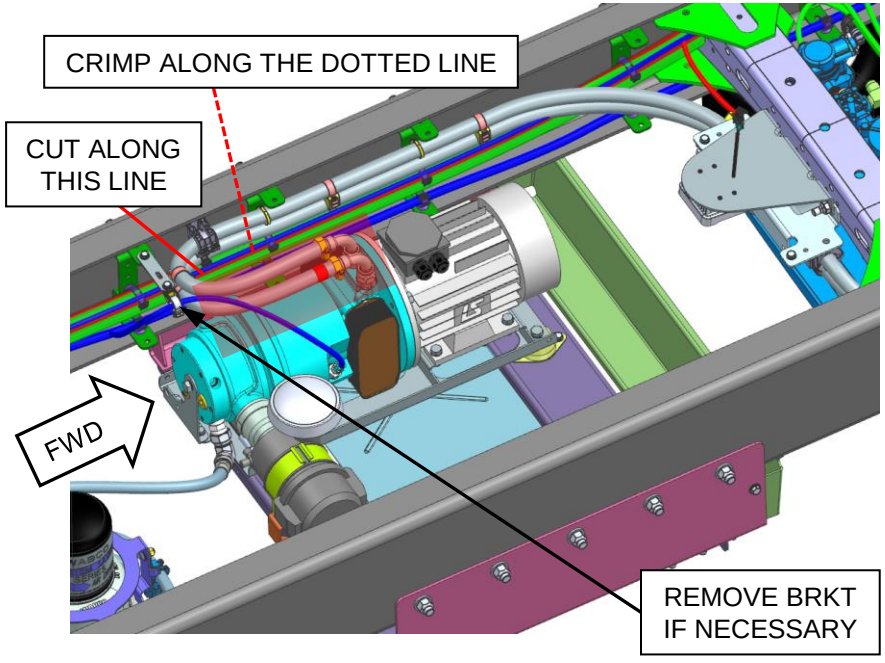
STEP – 1 : DROP THE HV-BATTERY.

- DISCONNECT ALL ELECTRICAL CONNECTIONS AT THE BATTERIES, CRIMP/PLUG BATTERY COOLANT LINES AND DISCONNECT THE COOLANT LINES AT BATTERY.
- REMOVE THE HV-BATTERY AS PER EXISTING STANDARD PROCEDURES.

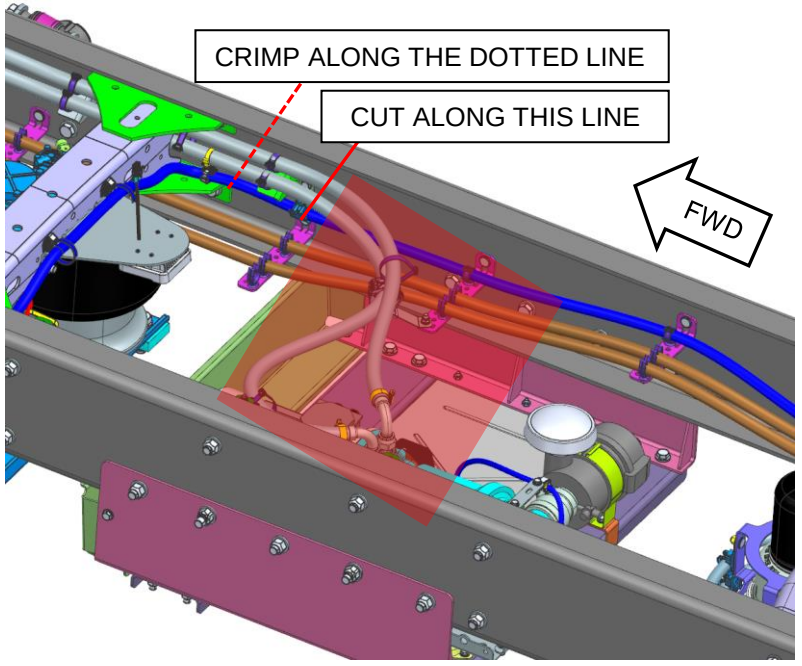


STEP – 2 : DISCONNECT AND TIE AWAY THE COOLANT LINES.

- CRIMP AIR COMPRESSOR COOLANT LINES AT RED DOTTED LINE AS SHOWN BELOW AND DISCONNECT THE SAE-37° FLARE SWIVEL CONNECTIONS FROM COMPRESSOR.
- DEPENDING ON THE CHARGE PORT LOCATION THE COOLANT HOSE ROUTING IS DIFFERENT. BOTH STYLES ARE SHOWN BELOW. CUT THE HOSES ALONG THE RED LINE AS SHOWN, TAKE CARE TO ENSURE A STRAIGHT CUT.
- THE FOCUS IS TO CUT THE HOSES CLOSE TO A CLIPPING POINT TO BE EASY TO PLUG AND STORE. LENGTH OF HOSE IS NOT IMPORTANT AS THIS WILL BE A DEAD BRANCH.
- DISCARD THE CUT HOSE PIECES AND 90-DEG FITTINGS.
- NOTE: IF OLD (HYDROVANE) COMPRESSOR TO BE REINSTALLED IN THE FUTURE, NEW FITTINGS AND COOLANT HOSE WOULD BE REQD.



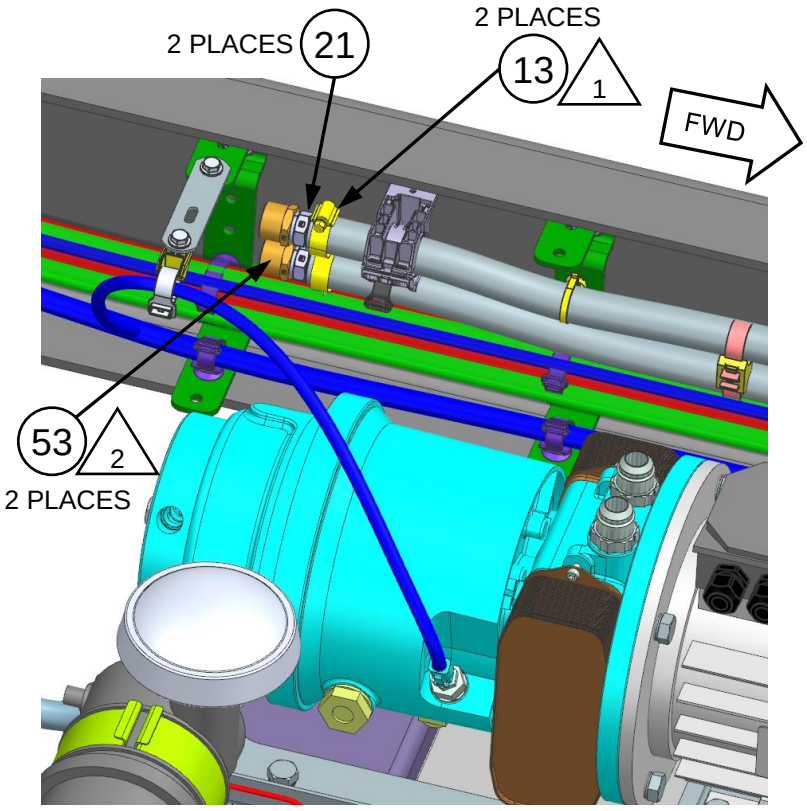
AIR SUSPENSION, FRONT CHARGE PORT OPTION



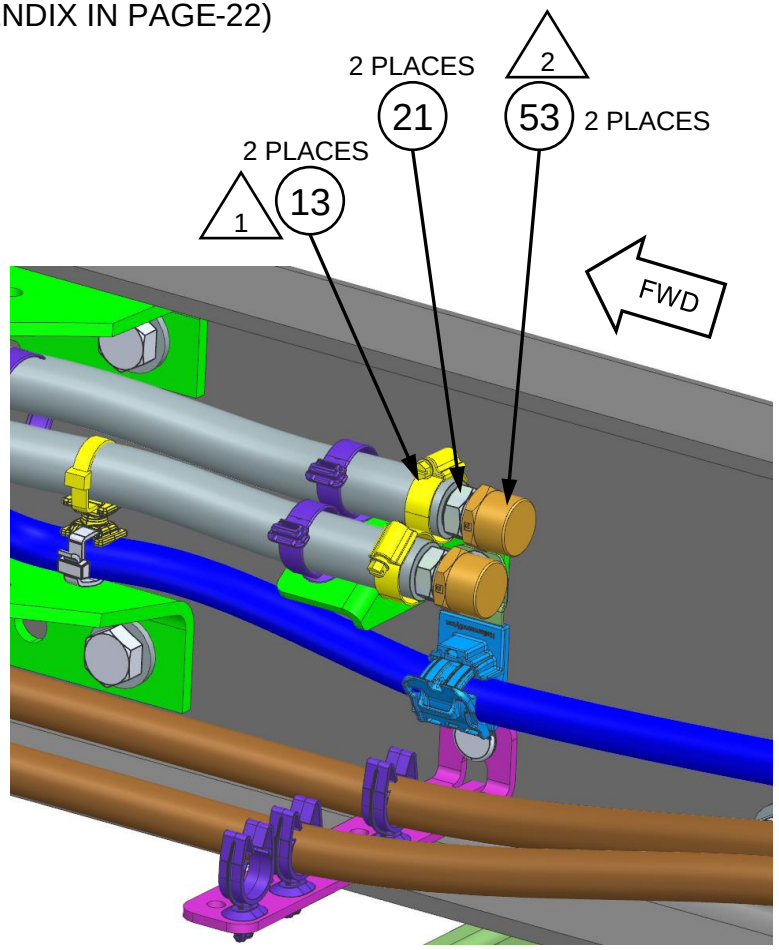
AIR & SPRING SUSPENSION, REAR CHARGE PORT

STEP – 2 CONTINUED :

- INSERT THE STRAIGHT HOSE FITTING (ITEM-21) TO THE CUT ENDS OF COOLANT HOSE AND SECURE WITH CLAMPS (ITEM-13). REFER APPENDIX IN PAGE-22 FOR CLAMP TORQUE.
- APPLY LOCTITE AND TORQUE THE PLUG/CAPS (ITEM-53) INTO THE OTHER END OF THE FITTING. TORQUE PLUG FITTINGS AS SPECIFIED. (REFER APPENDIX IN PAGE-22)
- REMOVE CRIMP CLAMPS IF USED.



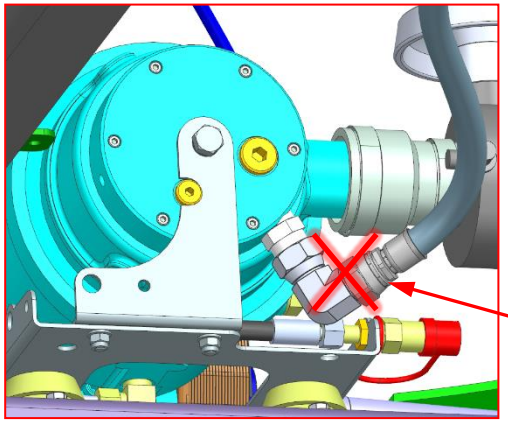
AIR SUSPENSION, FRONT CHARGE PORT OPTION



AIR & SPRING SUSPENSION, REAR CHARGE PORT

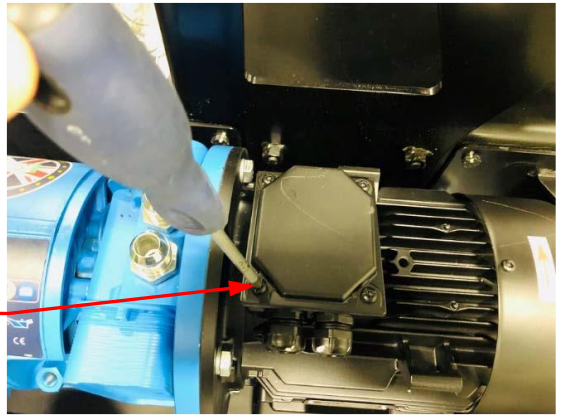
STEP – 3 : (A) DISCONNECT AND PREP OLD AIR COMPRESSOR FOR REMOVAL.

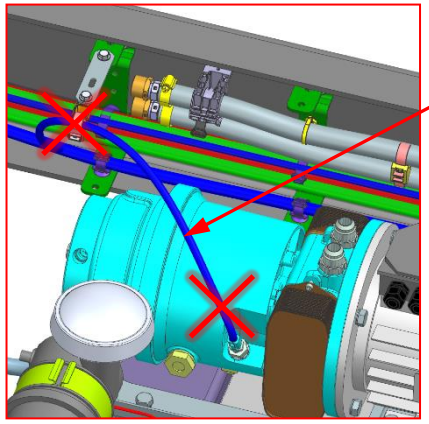
- VERIFY THE AIR TANKS ARE EMPTY, DRAIN TANKS IF NOT DONE SO.
- DISCONNECT THE AIR DISCHARGE LINE FROM THE COMPRESSOR OUTLET.
- DISCONNECT THE TEMPERATURE PROBE HARNESS AND TIE AWAY.
- DISCONNECT THE HV-CABLE BY OPENING THE AIR COMPRESSOR PANEL.
- ENSURE THERE ARE NO CONNECTIONS TO THE AIR COMPRESSOR.



DISCONNECT AIR DISCHARGE LINE

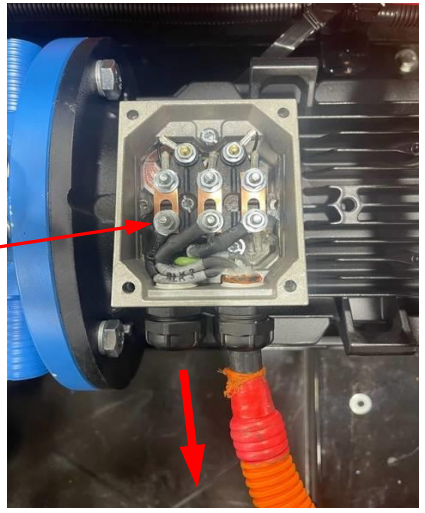
USE A T-25 SCREWDRIVER (4 PLACES) TO REMOVE THE AIR COMPRESSOR JUNCTION BOX COVER





DISCONNECT TEMP PROBE HARNESS

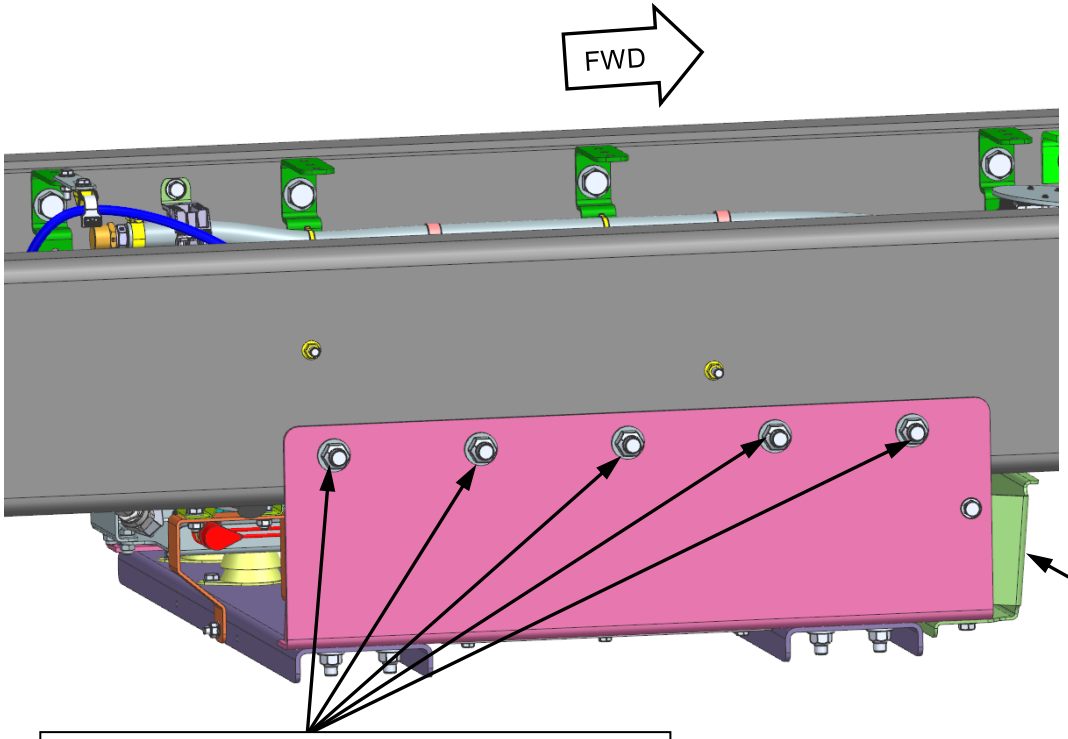
REMOVE ALL THE CONNECTIONS AND PULL THE HV-CABLE OUT



DETAIL VIEWS OF HYDROVANE COMPRESSOR SHOWN WITH COMPONENTS TO BE REMOVED

STEP – 3 : (B) REMOVE THE OLD AIR COMPRESSOR.

- BY REMOVING THE FRAME CONNECTION BOLTS, DROP THE ENTIRE ENCLOSURE CONSISTING OF THE HYDROVANE AIR COMPRESSOR, SUPPORTING BRACKETS AND THE FRONT SHIELD.
- SEPARATE THE FRONT SHIELD AS IT IS REQUIRED TO BE REINSTALLED (STEP – 5 OR LATER).

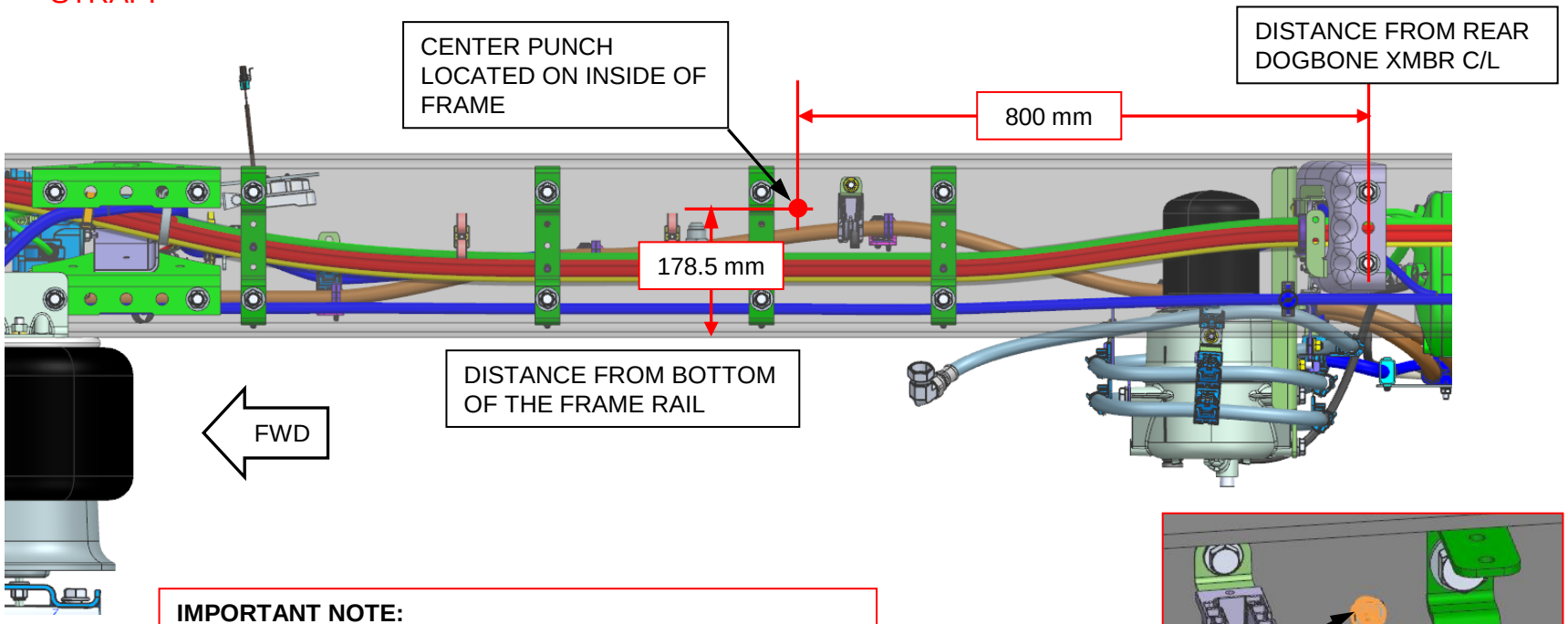


DISASSEMBLE AND SEPARATE THIS SHIELD, THIS MUST BE REINSTALLED WITH NEW COMPRESSOR.

REMOVE ALL 5 FASTENERS ON BOTH SIDES. ENSURE THE COMPRESSOR CAGE IS SUPPORTED SO IT DOES NOT FALL DOWN.

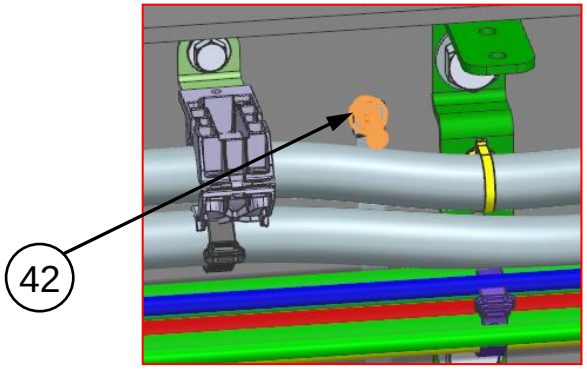
STEP – 4 : PREP THE CHASSIS FOR NEW COMPRESSOR.

- DRILL / CENTER PUNCH INSIDE OF THE FRAME RAIL AS SHOWN FOR WELDING A DEDICATED GROUND STUD FOR THE NEW AIR COMPRESSOR.
- WELD THE GROUND STUD (ITEM-42) TO THE INSIDE OF THE FRAME RAIL.
- WELD SURFACE AND STUD MUST BE COATED WITH PAINT ONLY AFTER CONNECTING THE GROUND STRAP.



IMPORTANT NOTE:
IN CASE THE LOCATION SPECIFIED ABOVE IS NOT FEASIBLE (CLIPPING/BOLT INTERFERENCE), THEN LOCATE THE GROUND STUD AT THE FIRST AVAILABLE SPACE CLOSE TO THE DEFINED POINT.
ENSURE GROUND STRAP LENGTH AND ROUTING IS FEASIBLE FOR THE NEW POINT.

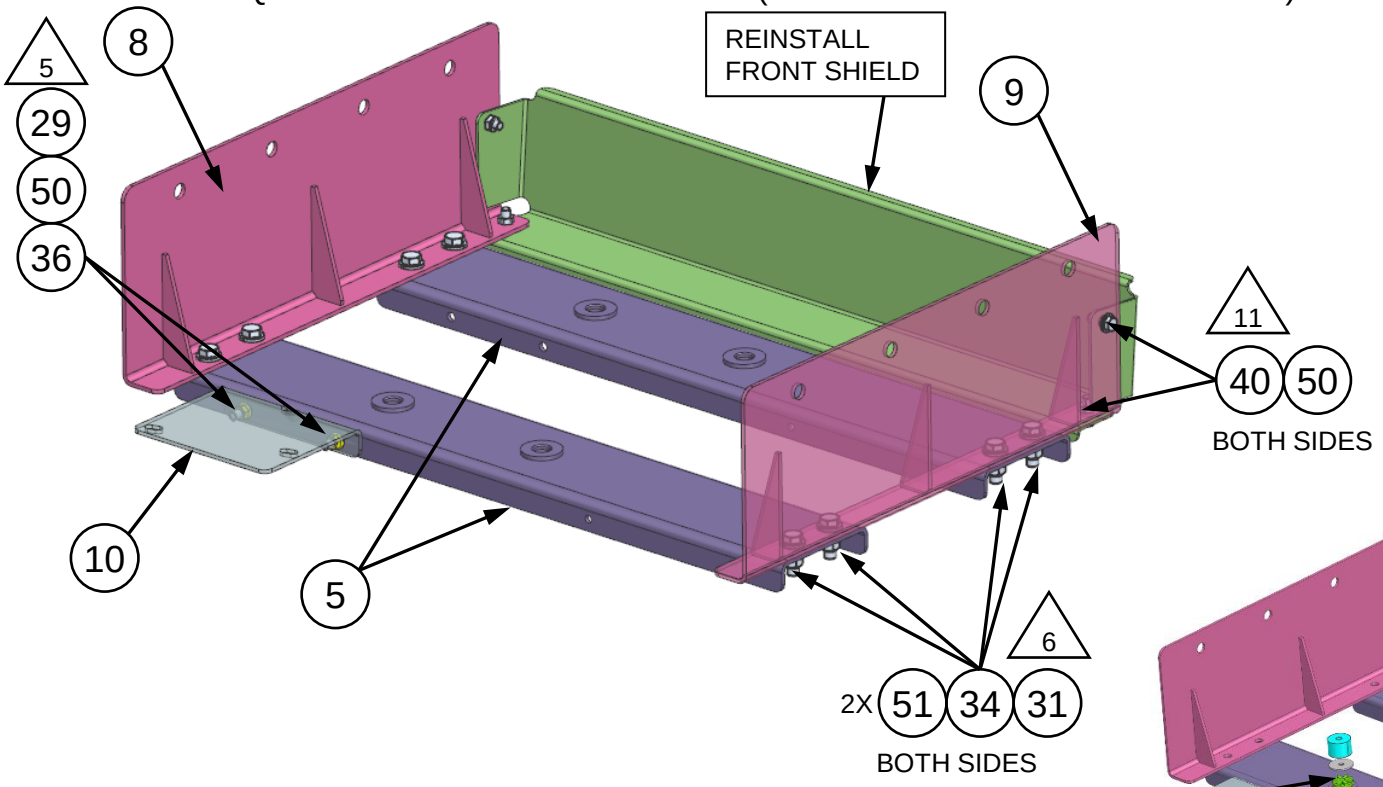
FOLLOW DTNA GUIDELINES FOR WELDING ON FRAME



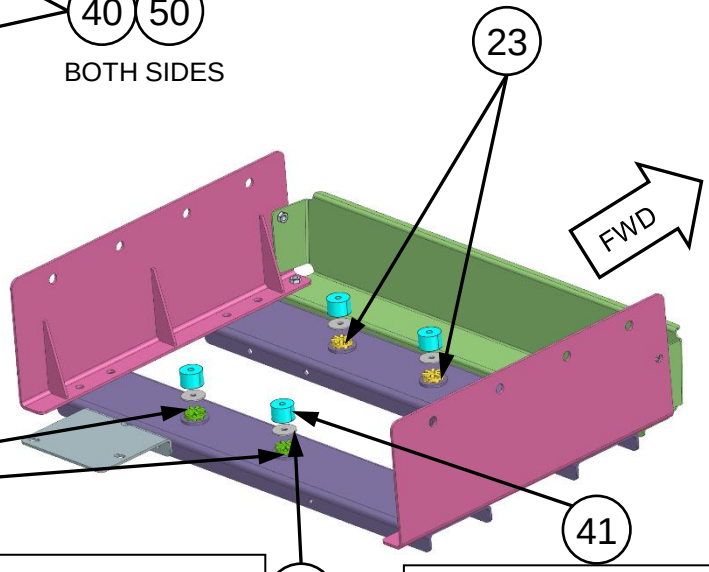
WELD STUD LOCATION SHOWN FOR REFERENCE.

STEP – 5 : (A) PREP THE NEW COMPRESSOR ASSEMBLY.

- ASSEMBLE THE NEW AIR COMPRESSOR MOUNT BRACKETS AS SHOWN BELOW.
- ***IMPORTANT*:** THE XMBRS (ITEM-5) HAVE ORIENTATION CONTROL VIA MOUNTING HOLE PATTERN.
- LOCATE AND POSITION THE CORRECT ISOLATORS (SHANK SIDE ON TOP), SNUB PLATES AND SPACERS.
- TORQUE HARDWARE AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)



ISOLATORS W. YELLOW DOT MUST BE INSTALLED IN THE FRONT. REFER TO IMAGE.



ISOLATORS W. GREEN DOT MUST BE INSTALLED IN THE BACK. REFER TO IMAGE.

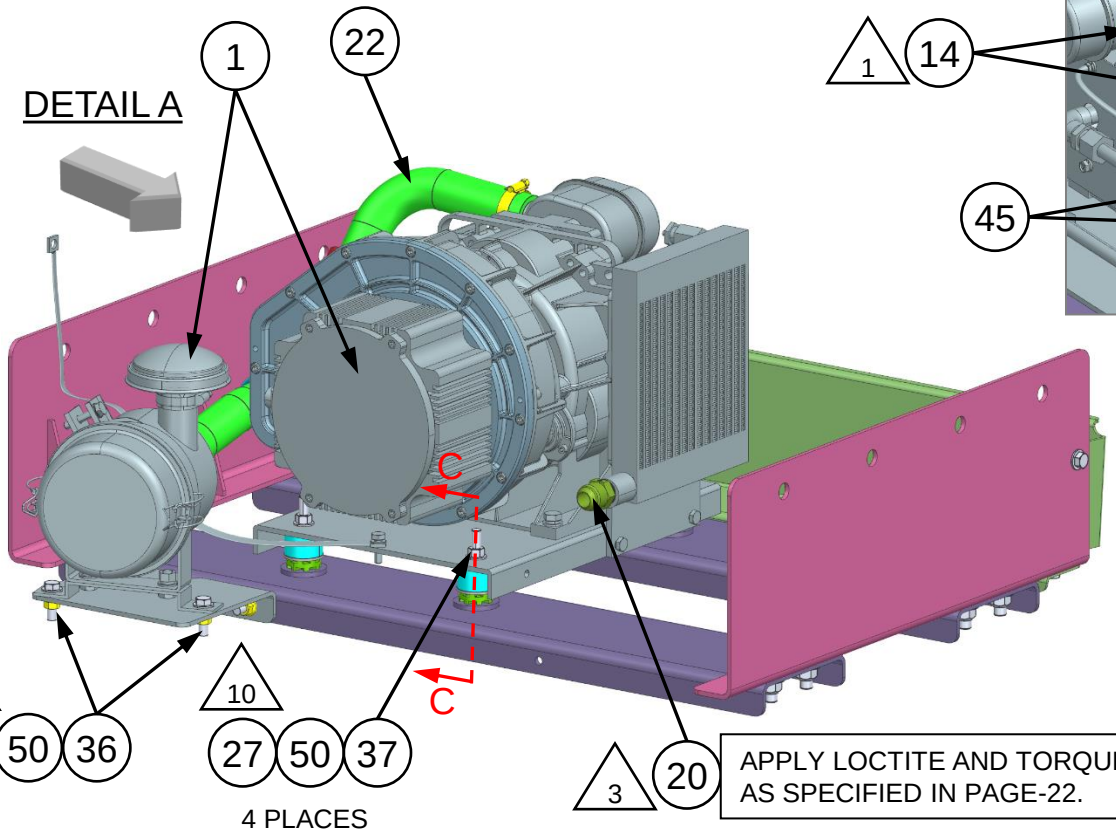
SNUB PLATE ON BOTH ENDS OF EACH ISOLATOR.

4 SPACERS, ONE AT EACH MOUNTING HOLE

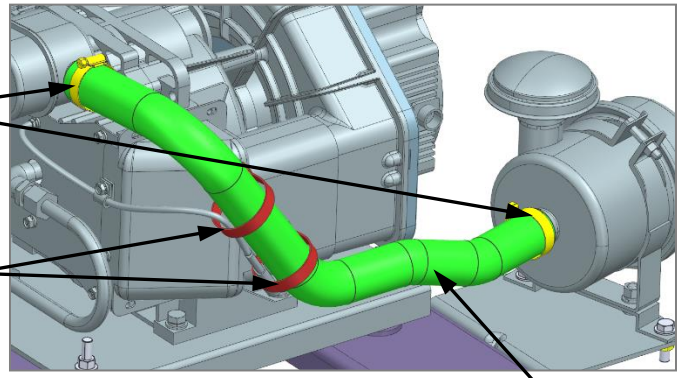
STEP – 5 : (B) COMPRESSOR PREP CONTINUED

- INSTALL THE NEW AIR COMPRESSOR AND SECONDARY AIR FILTER AS SHOWN BELOW.
- ISOLATOR, SPACER AND SNUBPLATES MUST BE INSTALLED AS SHOWN IN THE SECTION VIEW.
- TORQUE HARDWARE AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)
- CONNECT AIR INLET HOSE FROM FILTER TO COMPRESSOR. TORQUE CLAMPS AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)
- USING ZIPTIES, SECURE THE PIGTAIL FROM COMPRESSOR TO THE AIR INLET HOSE AS SHOWN IN DETAIL A. THIS WILL NOT BE CONNECTED ANYWHERE.

DETAIL A

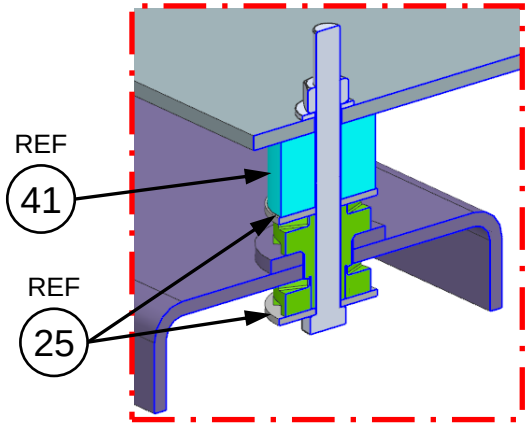


APPLY LOCTITE AND TORQUE AS SPECIFIED IN PAGE-22.



DETAIL A

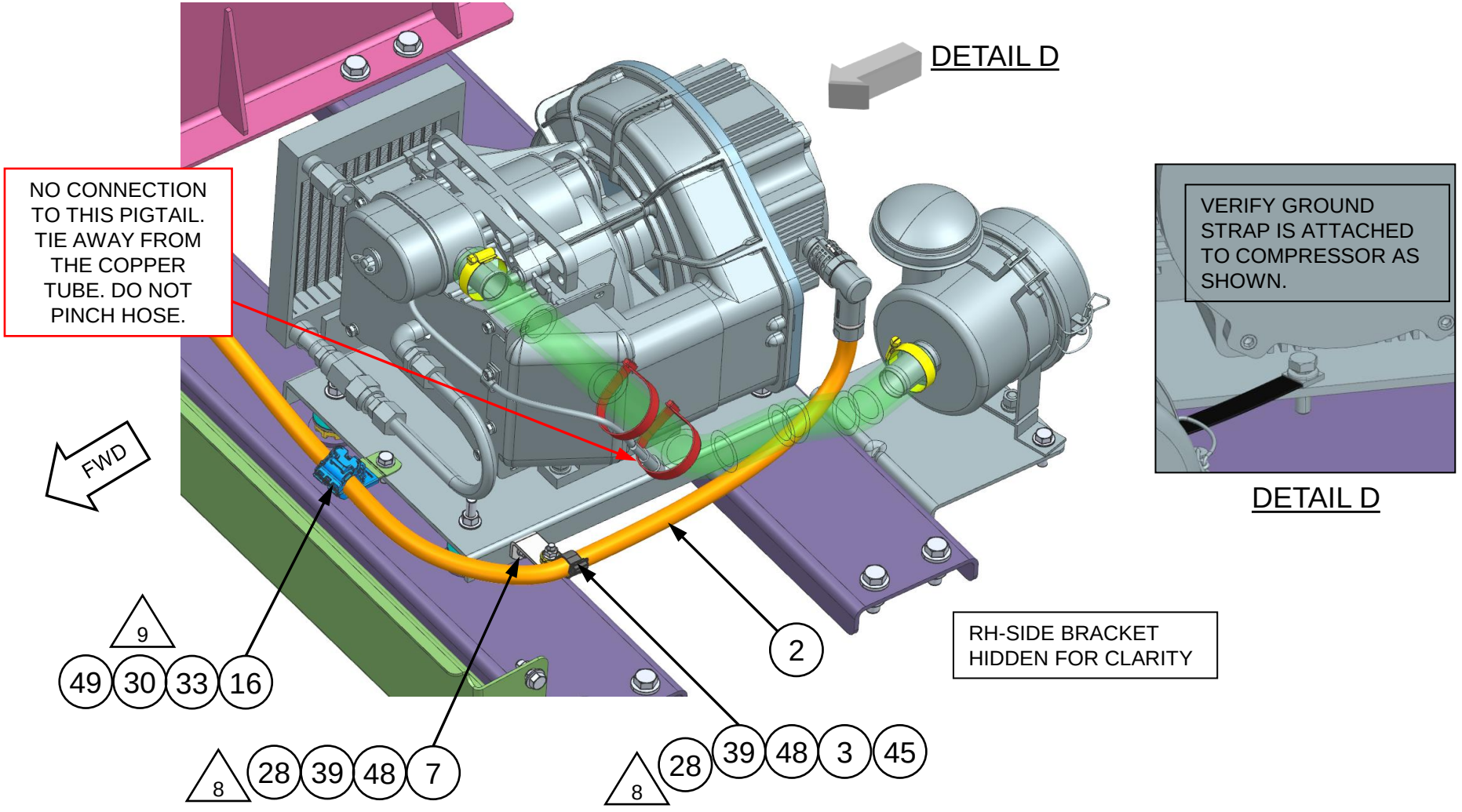
22 REF



SECTION C-C

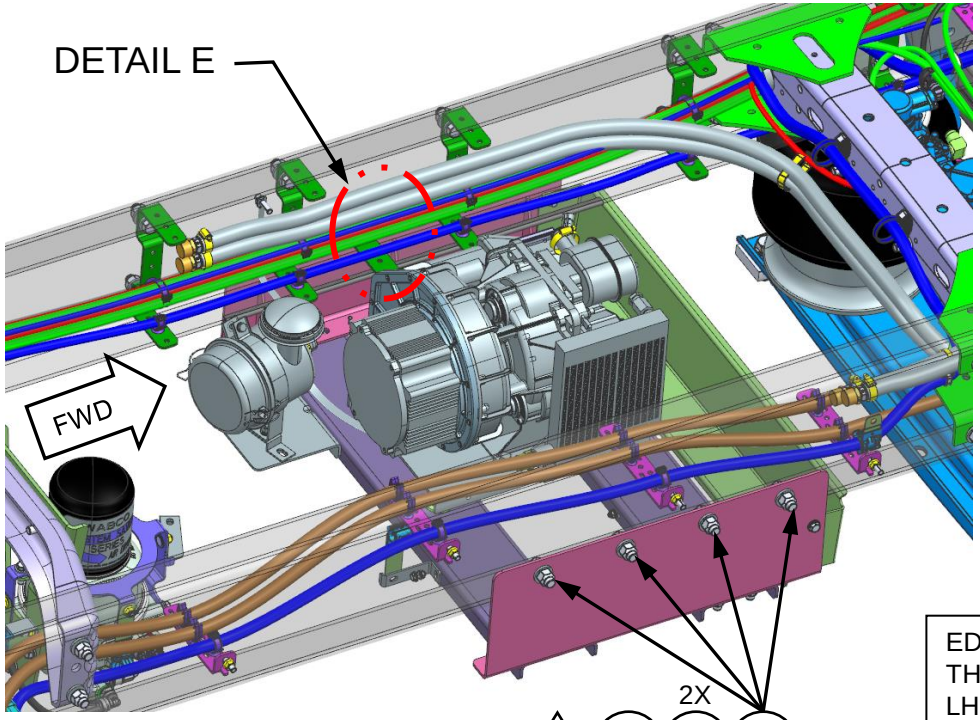
STEP – 5 : (C) COMPRESSOR PREP CONTINUED

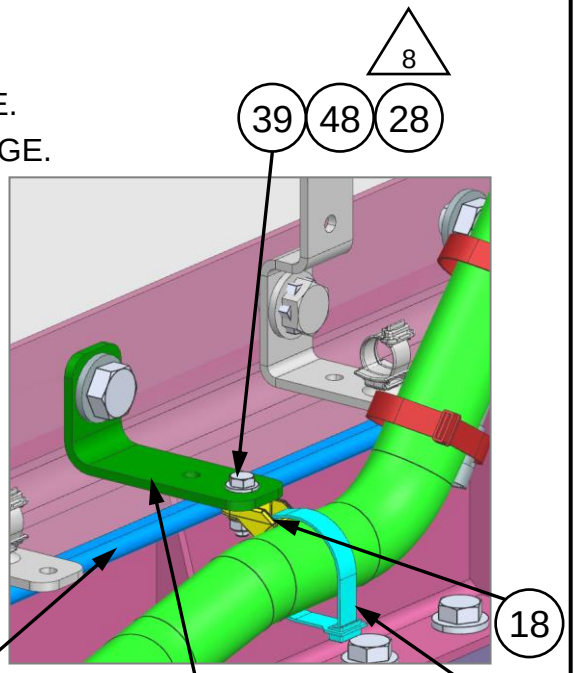
- INSTALL THE SUPPORT BRACKET/CLAMPS FOR HIGH VOLTAGE CABLE ROUTING AS SHOWN.
- HV CABLE (ITEM-2) IS SHOWN HERE FOR REFERENCE, BUT THE CONNECTION AND ROUTING IS PREFERRED AFTER COMPRESSOR IS INSTALLED ON CHASSIS, IN ORDER TO AVOID DAMAGING THE CABLE DURING INSTALLATION.



STEP – 6 : (A) INSTALL COMPRESSOR ASSEMBLY ON CHASSIS.

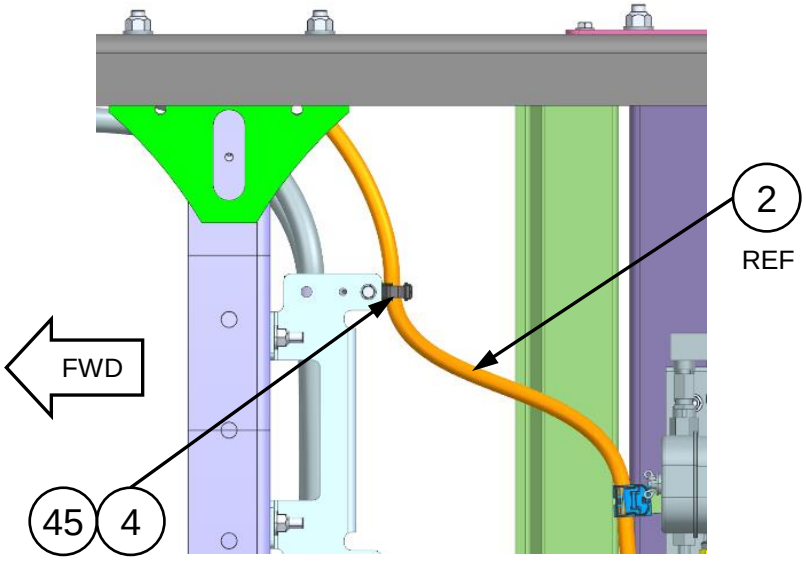
- SAFELY LIFT THE COMPRESSOR+BRACKET ASSEMBLY, LINE-UP WITH THE FORWARD MOST HOLE IN THE FRAME FOR THE OLD COMPRESSOR MOUNT, AND INSTALL AS SHOWN.
- TORQUE HARDWARE AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)
- SECURE AIR INLET HOSE AS SHOWN IN DETAIL VIEW - E.
  TAKE CARE TO ENSURE THE ZIPTIE DOES NOT PINCH THE FORMED HOSE.
- APPLY EDGE GUARD (ITEM – 47) ALONG THE LENGTH OF LH-FRAME FLANGE.



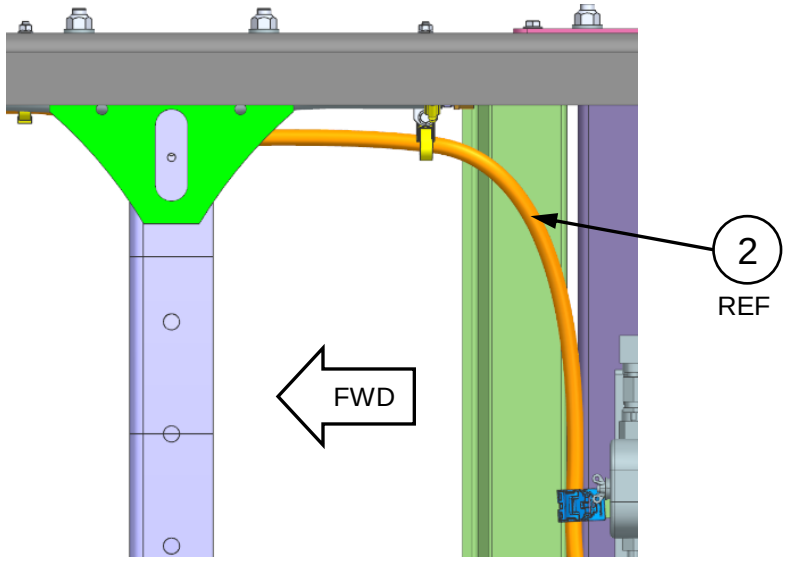


STEP – 6 : **(B)** COMPRESSOR INSTALLATION CONTINUED

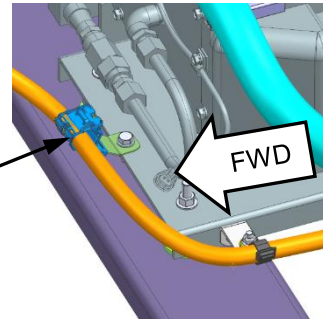
- HV-CABLE ROUTE CLOSE-UP AT THE COMPRESSOR SHOWN BELOW FOR CLARITY.
- NOTE THAT THE AIR SUSPENSION, FRONT CHARGE PORT VARIANT HAS A TRAY BRACKET ON THE CROSS MEMBER. THIS MUST BE USED TO ROUTE THE HV-CABLE TO THE RH-FRAME RAIL. IN ALL OTHER CASES, THERE IS A STANDOFF BRACKET AVAILABLE ON THE RH-FRAME RAIL.



AIR SUSPENSION, FRONT CHARGE PORT OPTION

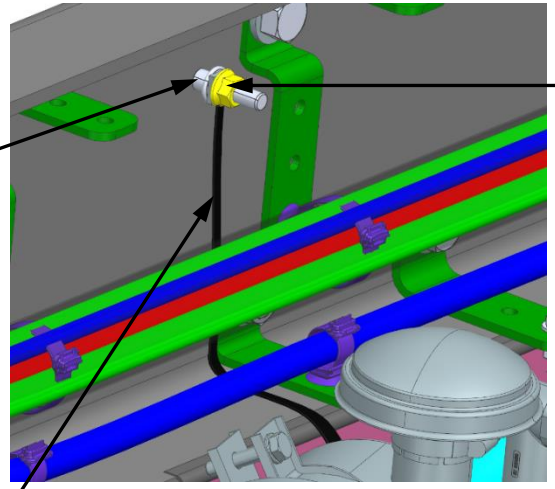


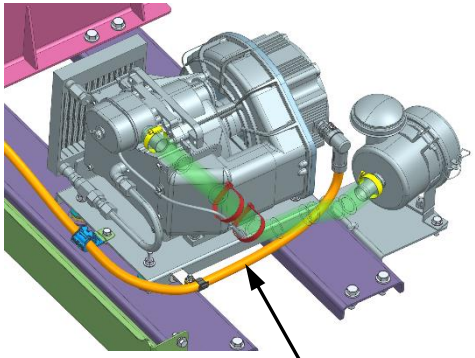
AIR & SPRING SUSPENSION, REAR CHARGE PORT

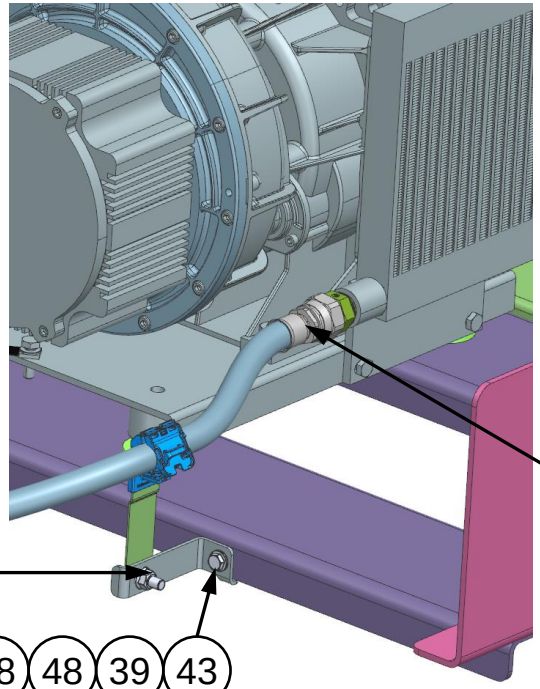


STEP – 6 : **(C)** COMPRESSOR INSTALLATION CONTINUED

- CONNECT THE GROUND STRAP TO THE WELDED STUD AS SHOWN. MASK THE WELD STUD AND CONNECTION WITH PAINT.
- CONNECT THE HIGH VOLTAGE CABLE (ITEM-2) IN THE CONNECTORIZED PORT ON COMPRESSOR. REF CABLE ROUTING SHOWN IN PAGES - 12, 14.
- REMAINING LENGTH OF HV-CABLE ROUTING IS DESCRIBED IN STEP - 8.
- CONNECT THE AIR DISCHARGE LINE AT COMPRESSOR OUTLET.
- TORQUE HARDWARE AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)



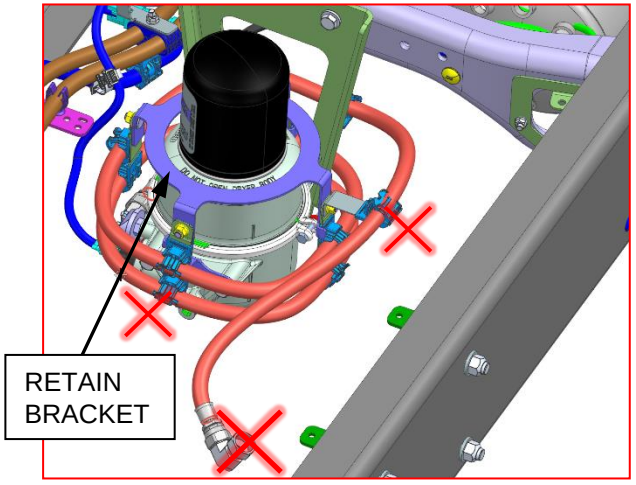




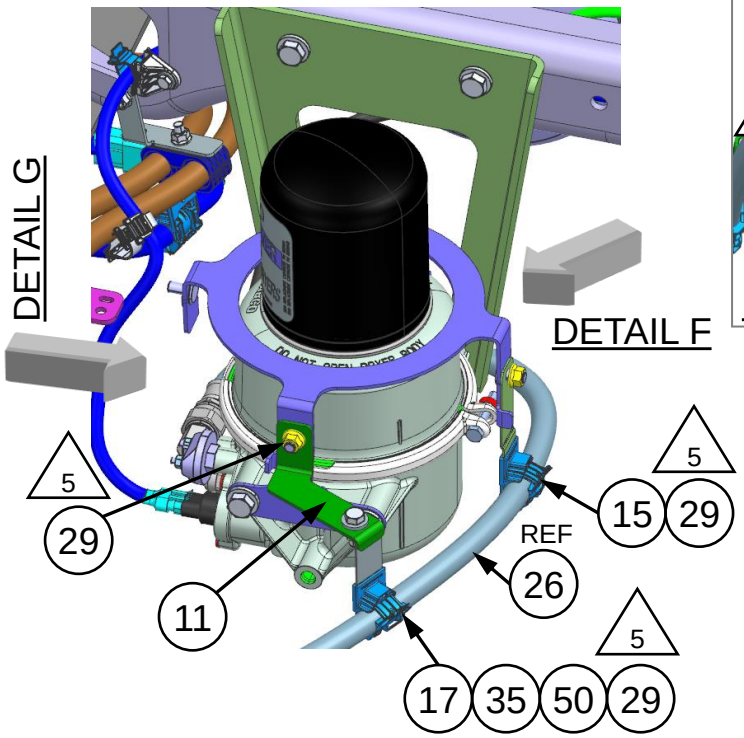
STEP – 7 : REPLACE THE AIR DISCHARGE LINE.

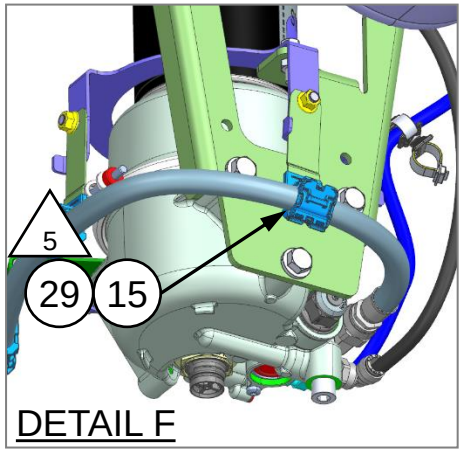
- DISCONNECT THE AIR DISCHARGE LINE FROM THE AIR DRYER SIDE AND COMPLETELY REMOVE FROM THE VEHICLE.
- REMOVE ALL RATCHET CLAMPS FROM THE BRACKET AROUND THE DRYER.

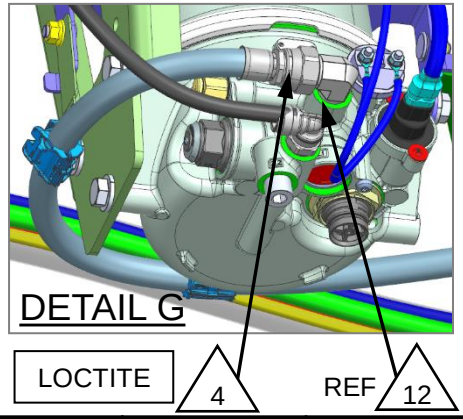
- INSTALL NEW AIR DISCHARGE LINE (ITEM-26) USING THE MOUNTING BRACKETS AND HARDWARE PROVIDED IN THE SERVICE KIT AS SHOWN BELOW.
- APPLY LOCTITE ON FITTING THREADS AND TORQUE FITTINGS AS SPECIFIED IN APPENDIX (PAGE-22).
- TORQUE HARDWARE AS SPECIFIED. (REFER TO APPENDIX IN PAGE-22)
- NOTE: USE NEW RATCHET CLAMPS INCLUDED IN THE KIT.



OLD DISCHARGE LINE AND CLAMPS REMOVAL







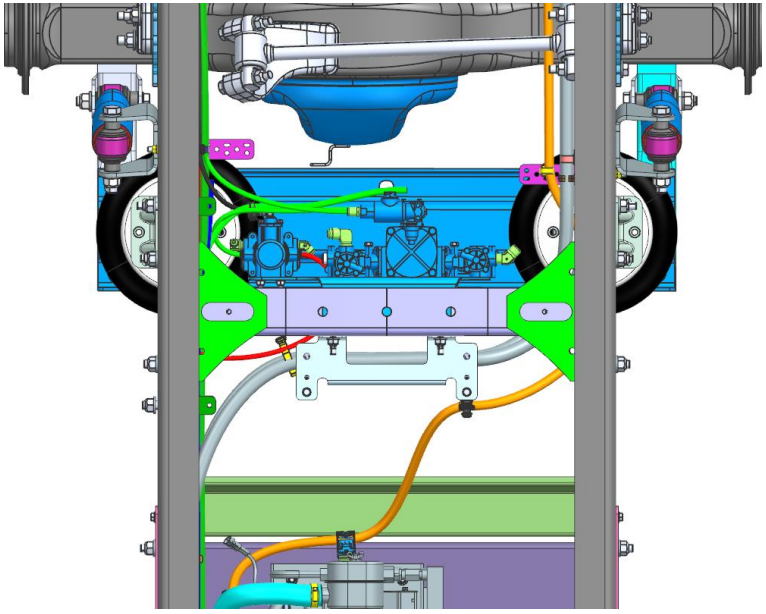
STEP – 8 : REPLACE THE AIR COMPRESSOR HV-CABLE ROUTING.

- ACCESS AND REMOVE THE OLD AIR COMPRESSOR HV-CABLE FROM ALL THE SUPPORT MOUNTS AND REMOVE THE USED FIR-TREE MOUNTS AND MOC CLIPS FROM THE MOUNTING BRACKETS.

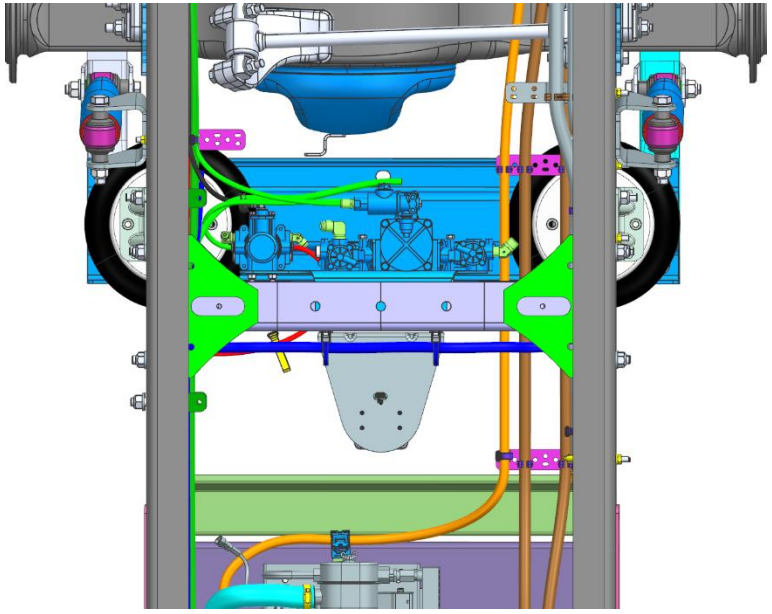
- USING NEW FIR-TREE MOUNTS (ITEM-12) AND MOC CLIPS (ITEM-19) PROVIDED IN THE SERVICE KIT, ROUTE THE NEW HV-CABLE ALONG THE SAME PATH AS THE OLD HV-CABLE UNTIL THE VFD.

- CHECK ROUTINGS, VERIFY HV-CABLE IS SECURE AND NOT PULLED. SECURE W.ZIPTIES (ITEM-45) OR BUTTERFLY TIES (ITEM-44) TO ENSURE HV-CABLE DOES NOT RUB ON OTHER HOSES.

- REINSTALL THE HV-BATTERIES AND MAKE ALL THE CONNECTIONS. **DO NOT RECOMMISSION.**



AIR SUSPENSION, FRONT CHARGE PORT OPTION

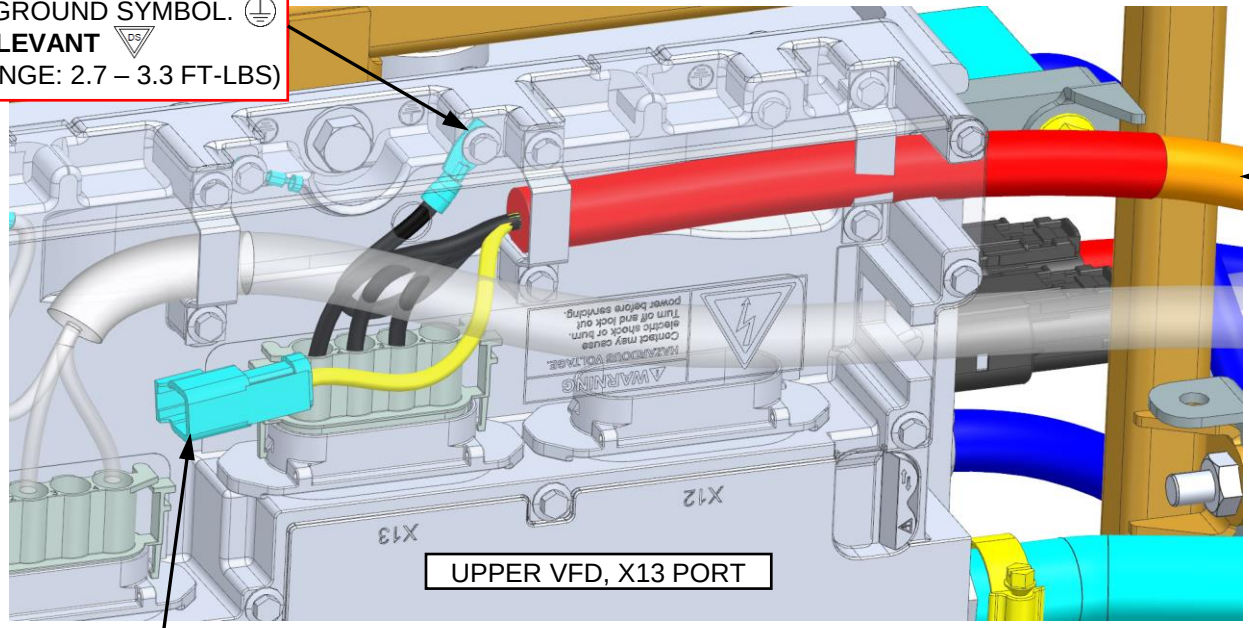


AIR & SPRING SUSPENSION, REAR CHARGE PORT

STEP – 9: REPLACE HV-CABLE AT VFD AND ROUTE IN THE FRONT BOX AREA.

- FOLLOW THE SAME PATH AS OLD HV-CABLE WHEN ROUTING IN THE FRONT BOX AREA UNTIL VFD. USE FIR-TREE MOUNTS PROVIDED (ITEM-46)
- OPEN THE UPPER VFD PANEL AND REMOVE THE OLD HV-CABLE FOR POWER SUPPLY TO THE HYDROVANE AIR COMPRESSOR.
- INSTALL ITEM – 2 (NEW HV CABLE) AT THE VFD, AND TIE AWAY THE HVIL CONNECTOR IN THE CABLE. WE ARE NOT PLANNING TO USE THIS HVIL.

CONNECT GROUND RING TERMINAL TO ONE OF THE STUDS WITH GROUND SYMBOL. ⏚
DS **SAFETY RELEVANT** DS
TORQUE TO 3 FT-LBS (RANGE: 2.7 – 3.3 FT-LBS)



2
REF

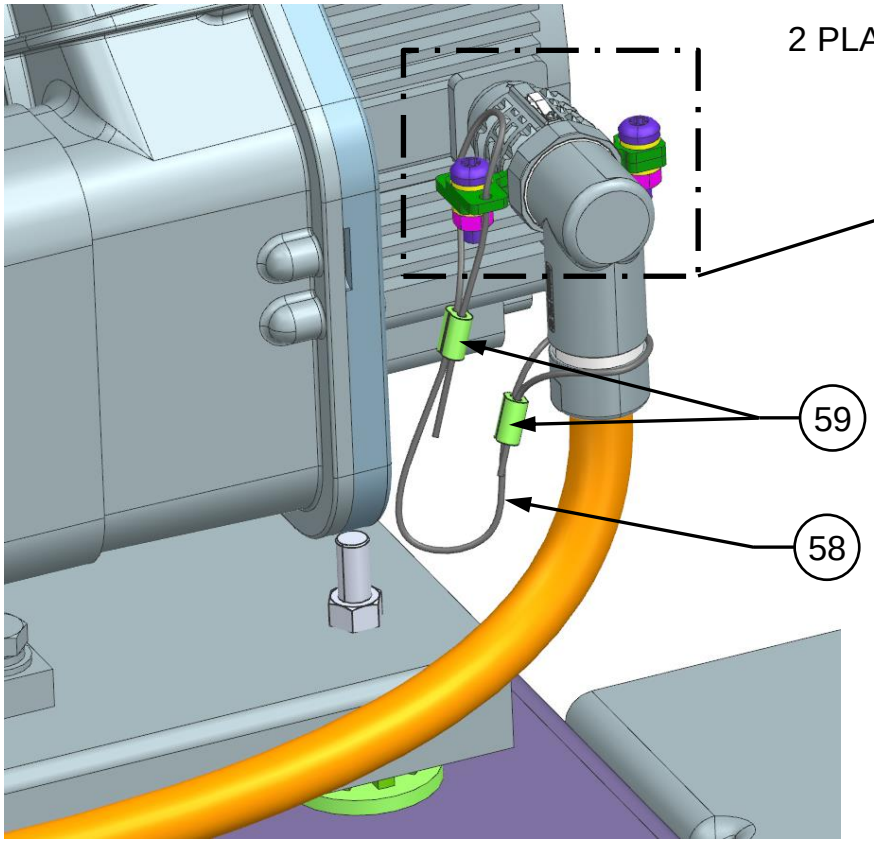
UPPER VFD, X13 PORT

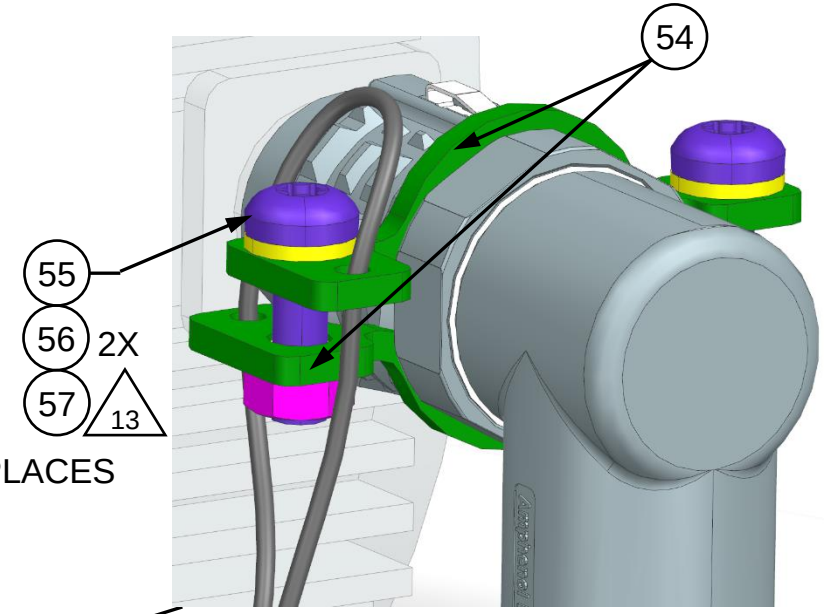
NO CONNECTION FOR HVIL JUMPER. TIE AWAY

PLUG-IN THE HV-CABLE TO COMPRESSOR FIRST

STEP – 10 : HV-CABLE CONNECTION

- CONNECT THE HV-CABLE TO THE AIR COMPRESSOR. THEN INSTALL THE HVIL LOCK BRACKET (ITEM – 54) AS SHOWN.
- TORQUE HARDWARE AS SPECIFIED IN APPENDIX PAGE-22.
- ONCE THE BRACKET IS INSTALLED TO PREVENT UNPLUGGING THE HV-CABLE, TETHER THE BRACKETS TO THE HV-CABLE AS SHOWN.
- CRIMP AND CUT-OFF EXCESS LENGTH OF TETHER CABLE.





DETAIL TO SHOW INSTALL PROCEDURE

BRKT MUST BE BEHIND THE BLACK LOCK SLEEVE SO THAT THE HV-CABLE CANNOT BE UNPLUGGED.

REF. INSTALLATION IMAGES

STEP – 11 : MECHANICAL VERIFICATION.

- VERIFY IF BATTERY IS REINSTALLED CORRECTLY, ALL ELECTRICAL CONNECTIONS ARE CORRECTLY MADE.
- VERIFY THE NEW AIR COMPRESSOR HV-CABLE IS SECURE AND NOT PULLED.
- VERIFY THE COMPRESSOR GROUND CABLE IS SECURELY ROUTED, CONNECTION IS SOUND AND IS PAINTED / MASKED.
- VERIFY THE OLD TEMP SENSOR HARNESS IS TIED AWAY AND DOES NOT RUB WITH SURROUNDING COMPONENTS.
- VERIFY BATTERY COOLANT CONNECTIONS ARE PROPERLY INSTALLED AND NOT SWAPPED. VERIFY THERE ARE NO COOLANT LEAKS ANYWHERE IN THE SYSTEM.
- VERIFY THE AIR COMPRESSOR COOLANT LINES ARE PLUGGED AND PROPERLY SECURED AWAY FROM THE NEW AIR COMPRESSOR, AND DO NOT RUB ON SURROUNDING COMPONENTS.
- IF COOLANT WAS DRAINED, REFILL COOLANT IN THE BUS. ANY CRIMP CLAMPS OR OTHER TEMPORARY HARDWARE USED FOR RETROFIT ACTIVITY MUST BE REMOVED.
- VERIFY THE AIR INLET HOSE (ITEM-22) DOES NOT RUB ON THE FRAME, OR WITH THE CHASSIS WIRING HARNESS, OR WITH THE AIR-LINES BUNDLE. SECURE WITH ADDITIONAL ZIPTIES IF NECESSARY.

STEP – 12 : SOFTWARE UPDATE / FLASH AND VERIFICATION.

- **VFD FLASH:** CONTACT FCCC CALL CENTER.
  IMPORTANT. NEW AIR COMPRESSOR WILL NOT WORK WITHOUT VFD FLASH

- AFTER VFD FLASH COMPLETE, START FROM STEP-9 (PAGE-18) AND COMPLETE HV CABLE ROUTING INTO VFD IF APPLICABLE. INSTALL HVIL LOCK BRACKET (PAGE-19) AND RECOMMISSION THE BUS.

- **VEHICLE CONTROLLER / M560 FLASH:** M560 MUST ALSO BE FLASHED WITH THE LATEST SOFTWARE. CONTACT FCCC CALL CENTER FOR FURTHER INSTRUCTIONS.

- AFTER SOFTWARE INSTALLATION IS COMPLETE, KEY-ON AND START THE BUS, THE BUS SHOULD START UP WITH LOW - AIR ALARM.

- AIR COMPRESSOR SHOULD TURN “ON” AUTOMATICALLY AFTER APPROXIMATELY 10 – 20 SECONDS, AND RUN TO FILL UP THE AIR TANKS. THE BEEP WILL STOP WHEN SYSTEM PRESSURE >60PSI.

- AFTER THE COMPRESSOR SHUTS DOWN, KEEP THE BUS RUNNING FOR ANOTHER MINUTE. IF THERE ARE NO FAULTS OR ISSUES FOUND, THE RETROFIT IS SUCCESSFULLY COMPLETED, TURN OFF THE HV, ENSURE THE BUS IS STILL IN “PARK”.

NOTE

- IF THERE ARE ANY FAULTS FOUND, FOLLOW STANDARD TROUBLESHOOTING PROCEDURES AND IF THERE IS NO RESOLUTION, CONTACT FCCC CALL CENTER.

APPENDIX: FASTENER AND FITTING TORQUE LIST

Ref	Torque Description	Reference Spec
1	CLAMP: TIGHTEN TO 45 IN-LB, RANGE: 40 - 45 IN-LB.	Ref Clamp drawing.
2	PLUG: FFWR METHOD - HAND TIGHTEN AND 2 FULL TURNS.	49-00305
3	FITTING: TORQUE TO 35 FT-LB, RANGE 30 -39 FT-LB.	Supplier Recommended.
4	FLARE FITTING: TORQUE TO 84 FT-LB, RANGE 92.4 - 84 FT-LB OR FFWR METHOD – HAND TIGHTEN AND 1 ½ TURNS.	49-00305
5	NUT: TORQUE TO 24.3 FT-LB, RANGE 19.4 - 29 FT-LB	49-00312-512
6	NUT: TORQUE TO 55.3 FT-LB, RANGE 44.24 – 66.34 FT-LB	49-00312-524
7	NUT: TORQUE TO 118 FT-LB, RANGE 94.4 – 141.6 FT-LB	49-00312-541
8	NUT: TORQUE TO 5.9 FT-LB, RANGE 4.72 – 7.08 FT-LB	49-00312-502
9	NUT: TORQUE TO 13.3 FT-LB, RANGE 10.64 – 15.96 FT-LB	49-00312-506
10	NUT: TORQUE TO 24.3 FT-LB, RANGE 21.87 – 26.73 FT-LB	49-00312-112
11	BOLT: TORQUE TO 28 FT-LB, RANGE 22.4 – 33.6 FT-LB	49-00312-414
12	FITTING: FFWR METHOD - HAND TIGHTEN AND 2 FULL TURNS.	49-00305
13	NUT(METRIC): TORQUE TO 4.4 FT-LB, RANGE 3.96 – 4.84 FT-LB	49-00312-753