

AIRDRIVE-100 INSTALLATION AND OWNERS MANUAL



WARNING

BEFORE BEGINNING INSTALLATION OF THIS
APSCO PRODUCT READ AND FOLLOW ALL INSTALLATION
INSTRUCTIONS



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Product Catalog: AIR DRIVE-100

Revision Date: 10-30-2025

HELPFUL INFORMATION

ORDERING – Orders can be placed with us

by phone, fax or email at sales@apscopower.com

SHIPPING – All orders will be shipped via APSCO's default method, UPS ground, with freight invoiced to the customer unless otherwise specified at the time of order. APSCO facilitates drop shipments at no extra charge.

RETURNS – Unused, standard products may be returned to APSCO for full credit within 30 days of purchase. A 20% restocking fee is charged thereafter.

An RMA is required for all returns.

QUALITY – APSCO commitment to quality was recognized by becoming certified to ISO 9001:2000 in 2004. Our continued commitment to quality in all of our processes is reflected by our current certification ISO 9001:2015.

WARRANTY – All APSCO products are warranted for 1 year of service, but in no case more than 2 years beyond the original date of purchase. See page 28-30 for our warranty terms and conditions.

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Management System Certification



FEATURES INCLUDED

- The basic size of our system is 30" X 32" X 17" , making it the most compact integrated blower solution available .
- Weight: 240 pounds dry, making it the lightest blower solution available.
- Easy frame rail mounting in a minimal space with no drill mount.
- Maximum hydraulic system flow rate 26GPM.
- System relief valve – This Feature ensures that the maximum system pressure does not go any higher than what you set the valve at. Factory set at 5000PSI.
- Hydraulic filter – This filters your return fluid with a 6 micron filter, conveniently filters the oil that is added to the reservoir.
- Easy installation and also serviceable.
- Quietest blower solution available.
- This blower system consists of a hydraulically driven centrifugal compressor with integrated hydraulic cooler.

SYSTEM REQUIREMENTS

MAXIMUM HYDRAULIC SYSTEM FLOW RATE OF 26 GPM. OPERATING OVER 26 GPM WILL OVER REV THE HYDRAULIC MOTOR AND VOID YOUR WARRANTY

- It is imperative that there is an air filter on the inlet of the compressor. If this is neglected, there is a risk of damage to the compressor from objects being sucked into the inlet and damaging the host. ***Not using an air filter which can remove particles larger than 20 microns voids warranty.*** To prevent induction noises, use a closed filter box as seen on most OE applications.
- To maintain air cleanliness, it is important to position the air filter where external clogging can be prevented. The air filter should be mounted where it cannot be covered or sprayed with water and mud. If the air filter gets clogged, the air flow is restricted and will cause a pressure drop, resulting in temporary loss of pressure and air flow.
- Do not make unnecessary sharp bends in the air ducting as bends will cause pressure drop resulting in loss of output. ***Using a minimum of bends in the inlet and outlet hoses will significantly increase the adiabatic efficiency of the compressor and increase the success rate for reaching the desired point of operation.***

INSTALLATION AND OPERATION



WARNING: High Pressure oil can cause severe injury. Turn off PTO and bleed pressure before servicing hydraulic system.



WARNING: Heavy object. To avoid muscle strain or back injury, use lifting aids and proper lifting technique when removing or replacing



Caution: Surface May be Hot. Ensure PTO is off and unit has cooled before servicing.



Rotating: As the customer is installing the air filter themselves, there are a risk of getting your hands/fingers into the inlet, if they fail to follow the procedure. Suction power is very high and you can easily reach the rotating impeller blades

POSITIONING AND MOUNTING:

The AIR DRIVE-100 is designed to fit in very tight spaces, its narrow profile allows for frame rail mounting see pages 4-10 for mounting details.

CONNECTIONS (SEE FIG 11):

NOTE: SAE ports do not require a thread sealant, they seal with an o-ring. Make sure your SAE fittings have a properly sized o-ring and are free of thread sealant.

SUCTION PORT - SAE-32 - We can connect the external pump to this suction port. Connect the inlet of your pump to this port (minimum hose size 2")

TANK DRAIN - SAE-08 - Some hydraulic pumps, motors, and control valves have a case drain line that needs to be plumbed directly back to the cooler reservoir. This is where you will make that connection. If your hydraulic system does not require a case drain line simply leave the APSCO provided hex plug in this port.

HIGH PRESSURE PORT - SAE-12 - Connect the outlet of your pump to this port.(minimum hose size 1", minimum pressure rating 5000PSI)

OPTIONAL RETURN PORT - SAE-12 - For auxiliary circuit return oil to heat exchanger.

START UP PROCEDURE:

This Unit comes ready to install, no assembly required. Make up all connections.

Remove Filter cap from top of unit, leave filter in place and add fluid until the fluid level is 3/4 full on the sight glass with the PTO disengaged.



This will filter the fluid as it is being added. Even new hydraulic fluid should be filtered. You will need to add hydraulic fluid slowly

because the filter is in place. Bleed air from lines and check fluid level again. Ensure that the lines are full of fluid and the air is bled from your system, some pumps and motors, particularly piston will be ruined in a matter of seconds if operated without fluid.

Depending on the length and diameter of the system hoses you may need to add fluid to the reservoir several times.

Install filter cap. Slowly engage PTO with engine at idle speed.

Check for hydraulic leaks and repair as needed.

Recheck reservoir fluid level. Each time you add fluid disengage PTO, if the reservoir gets completely empty before you add fluid you will need to bleed air from the lines again.

SYSTEM RELIEF VALVE SETTING –

The AIR DRIVE-100 relief valve is factory set at 5000 PSI. This is the system main relief valve and dictates the MAX PSI the system will see.



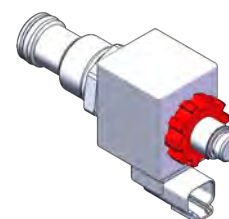
FLOW REGULATOR VALVE SETTING –

The AIR DRIVE-100 flow regulator valve function is to allow upto 2GPM of flow to the cooling fan.

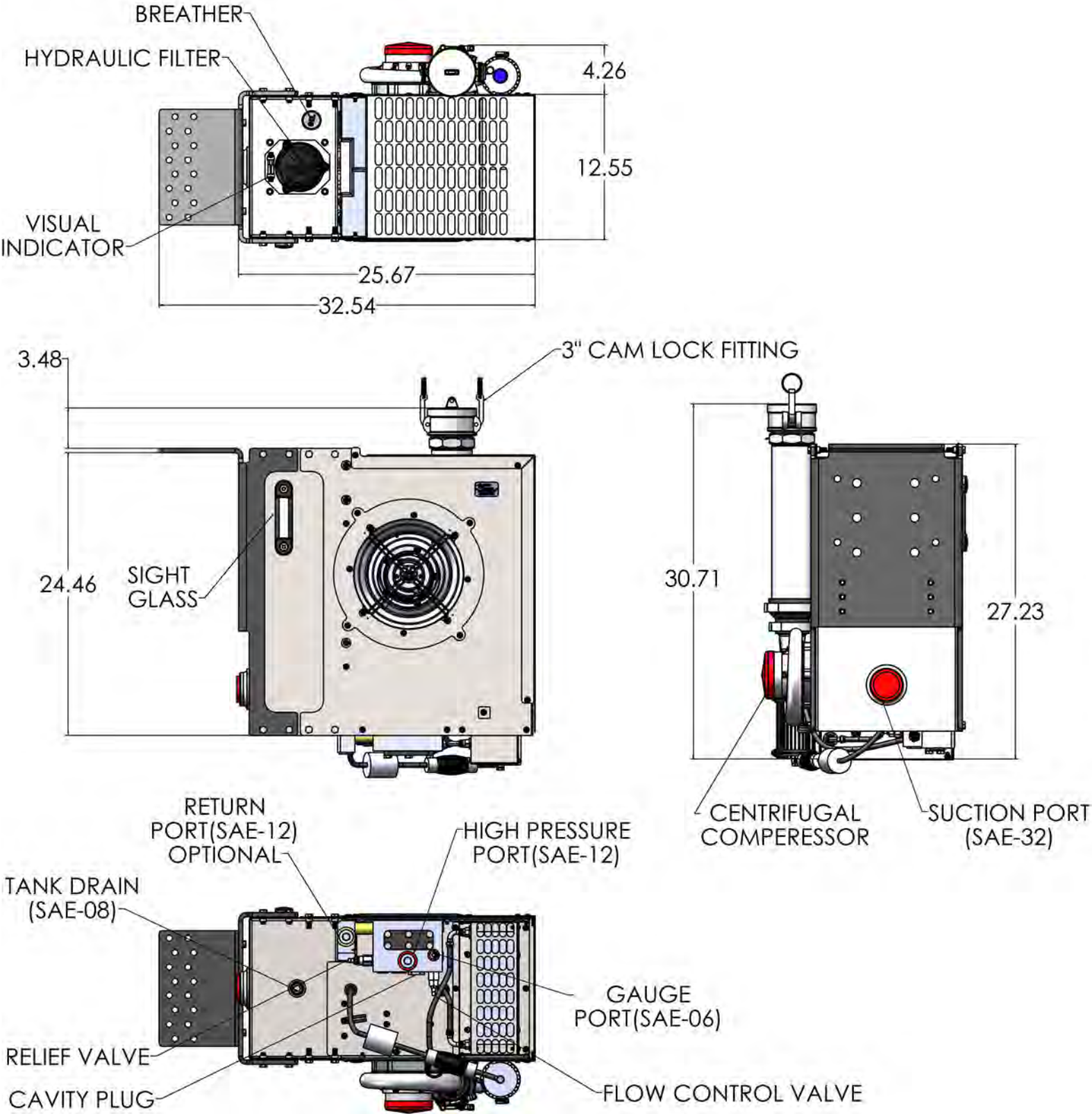


The FCV has been factory set to achieve an optimal fan rpm of 3600RPM +/- 100 RPM. Do not attempt to adjust .

OPTIONAL SOLENOID VALVE - This allows the operator to turn the unit off and on with a 12 volt signal while the PTO is running. The default plug will cause the unit to run whenever the PTO runs.



AIRDRIVE DIMENSIONS



POSITIONING AND MOUNTING

The Air Drive-100 only requires less than 17" of frame rail for mounting. Supplied parts are included to secure (clamp) the assembly to the top and bottom of the frame rail flanges without the need to drill holes. Tighten 1/2" fasteners to 80 Ft. Lbs.

A: TOP FLANGE MOUNTING - Place main mounting bracket face against frame rail with flange over top frame rail flange and secure.

B: BOTTOM FLANGE MOUNTING - Remove supplied mounting bracket (B1) from crate, place flange angle down, slide under frame rail flange and fasten (F7) into main mounting bracket face until tight, then secure as illustrated in FIG 2.

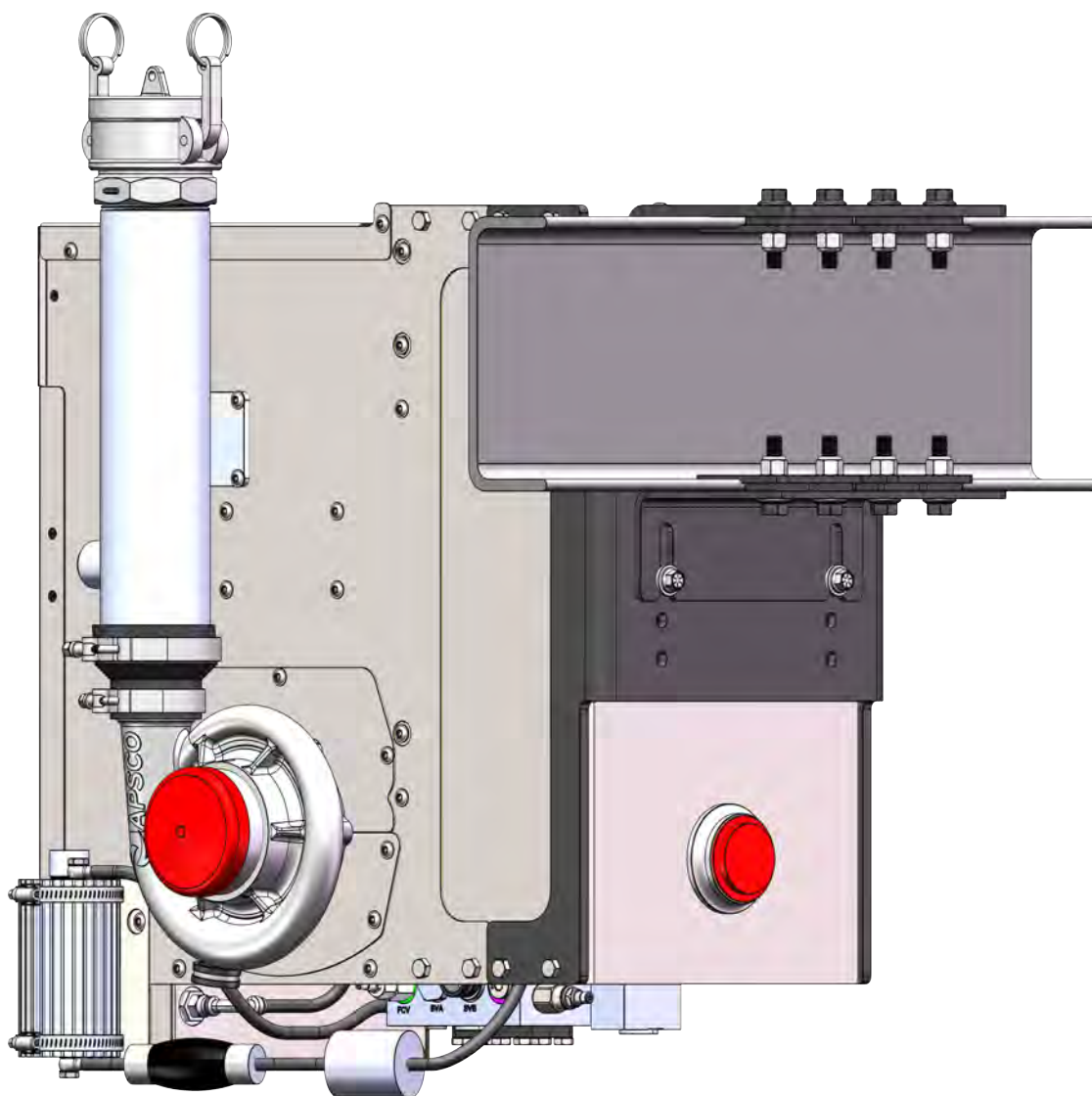
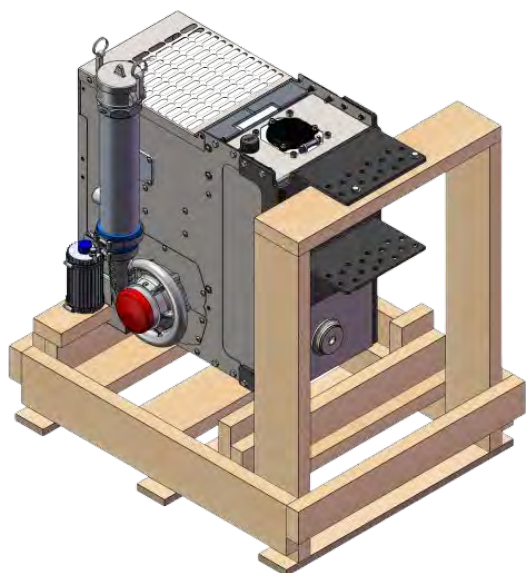


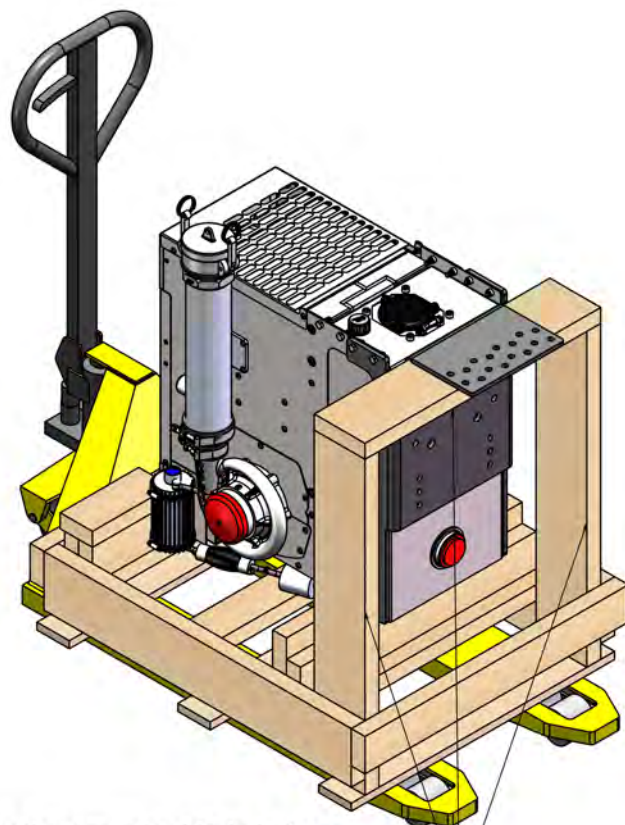
FIG 1

POSITIONING AND MOUNTING

STEP-1

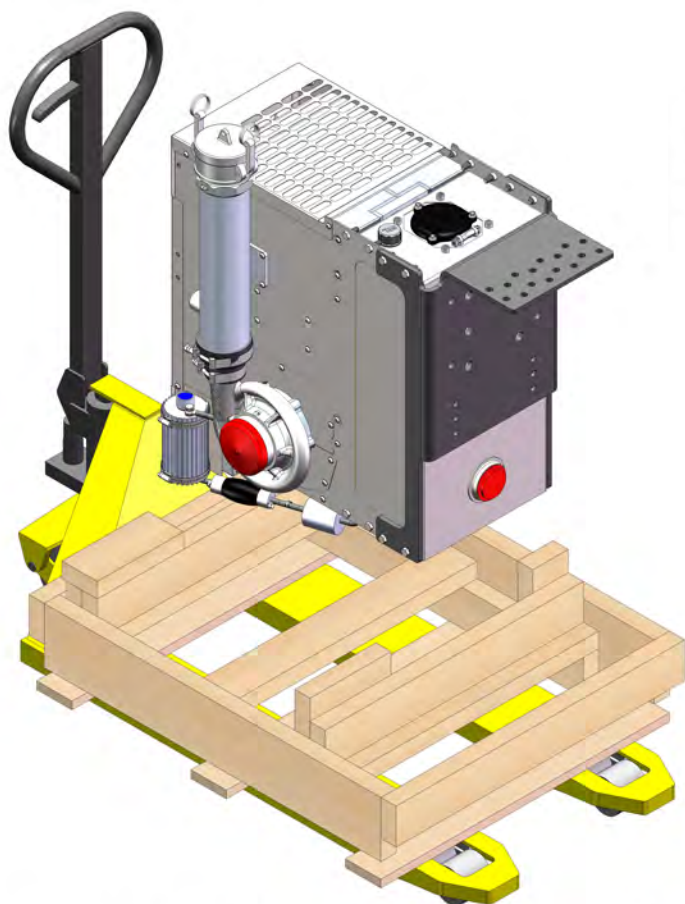


STEP-2



Remove these wooden blocks before installation and raise the cooler to C frame level and push unit onto C-frame. Refer page 6&7 to install the cooler to the C frame.

STEP-3



Cut the cable ties before dropping the pallet jack

FIG 2

C: C-FRAME OF WIDTH 8.75" TO 10.50"

C-FRAME OF WIDTH 8.75" TO 10.50"

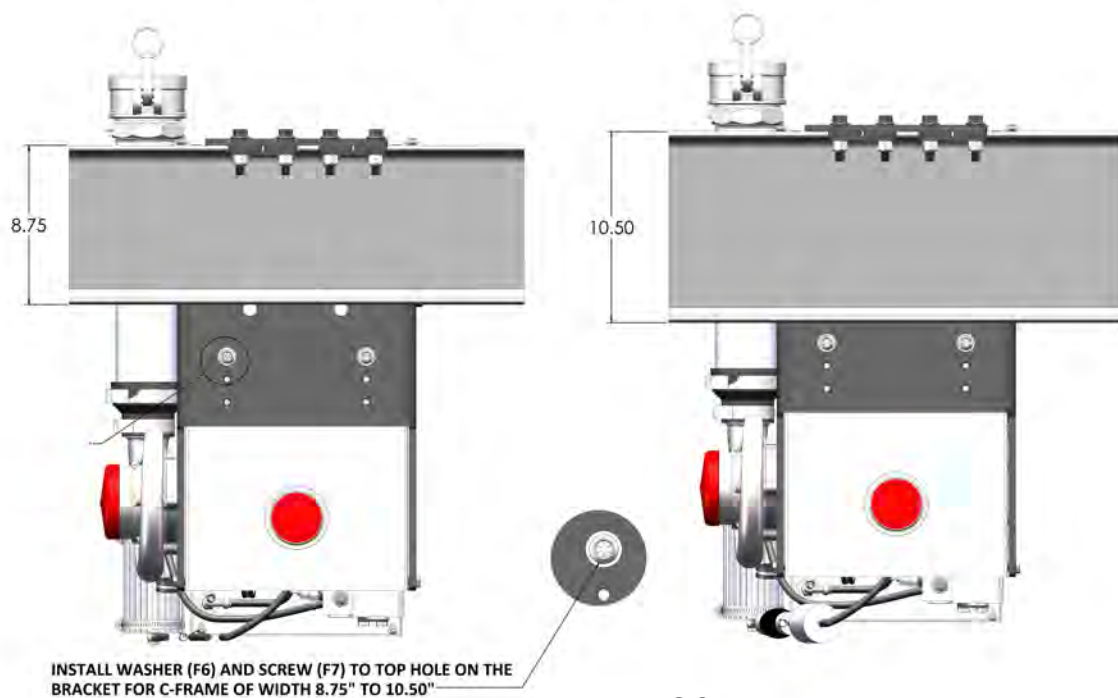


FIG 3

D: C-FRAME OF WIDTH 10.50" TO 11.90"

C-FRAME OF WIDTH 10.50" TO 11.90"

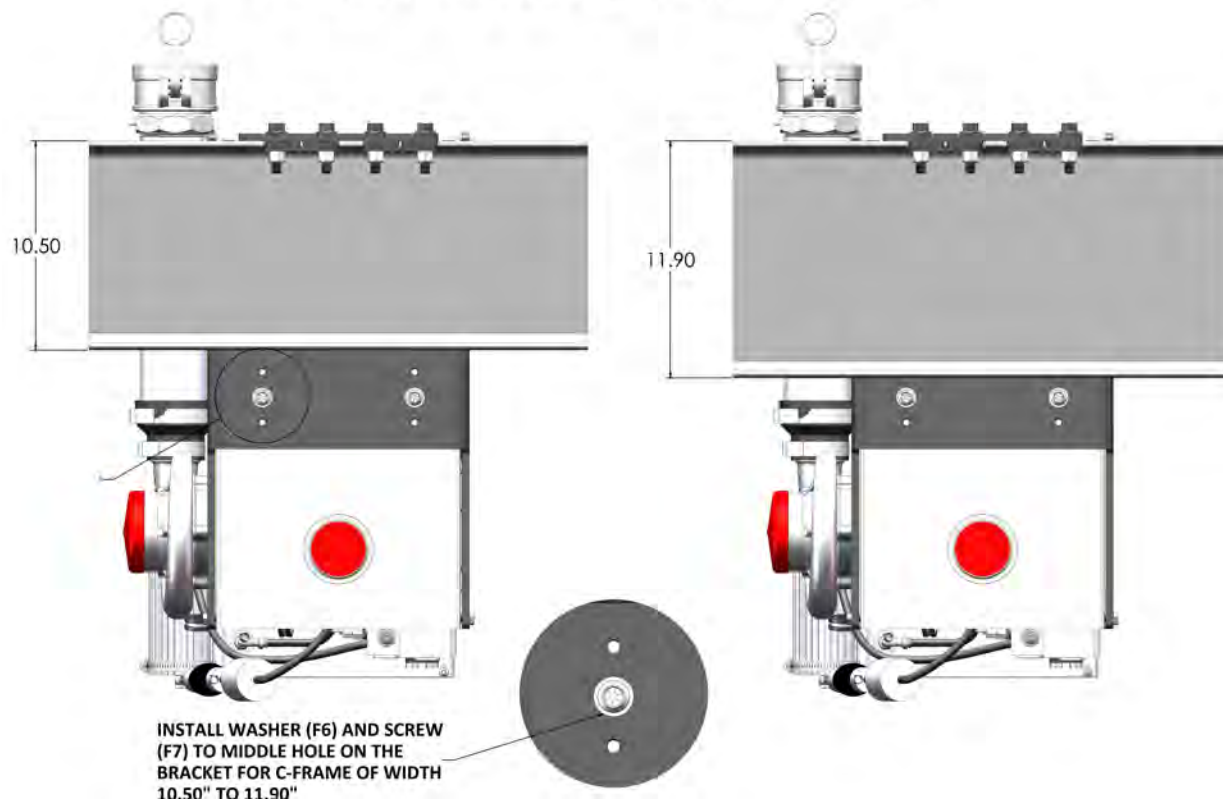


FIG 4

E: C-FRAME OF WIDTH 11.90" TO 12.90"

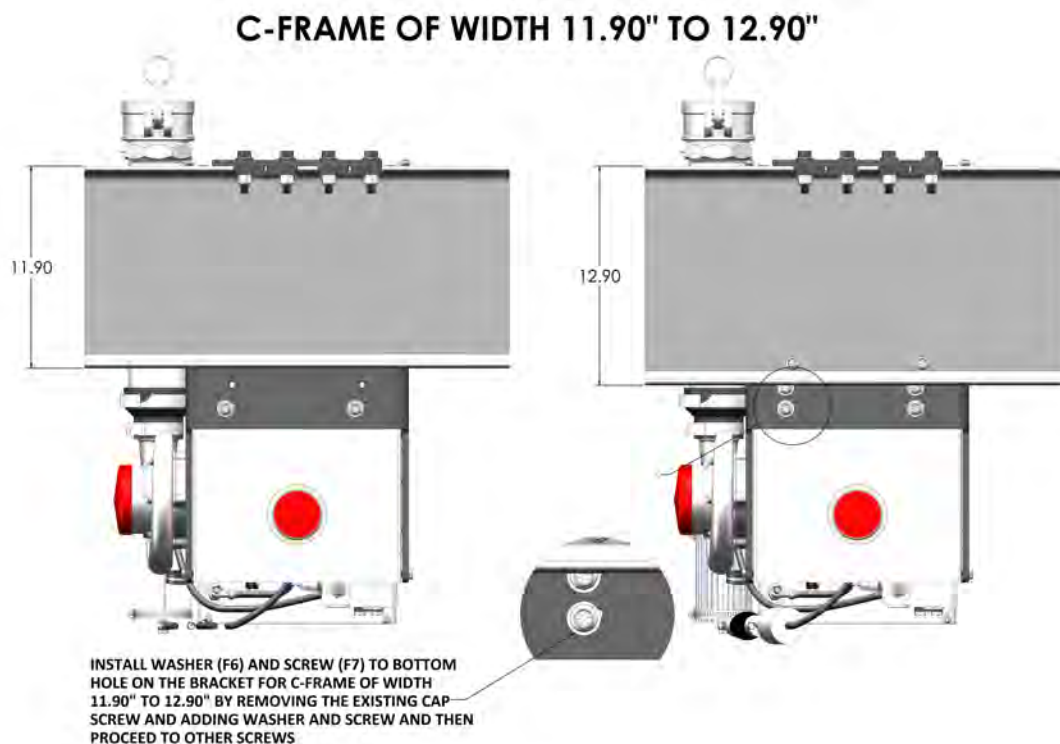


FIG 5

F: BRACKET ATTACHMENT AGAINST C-FRAME

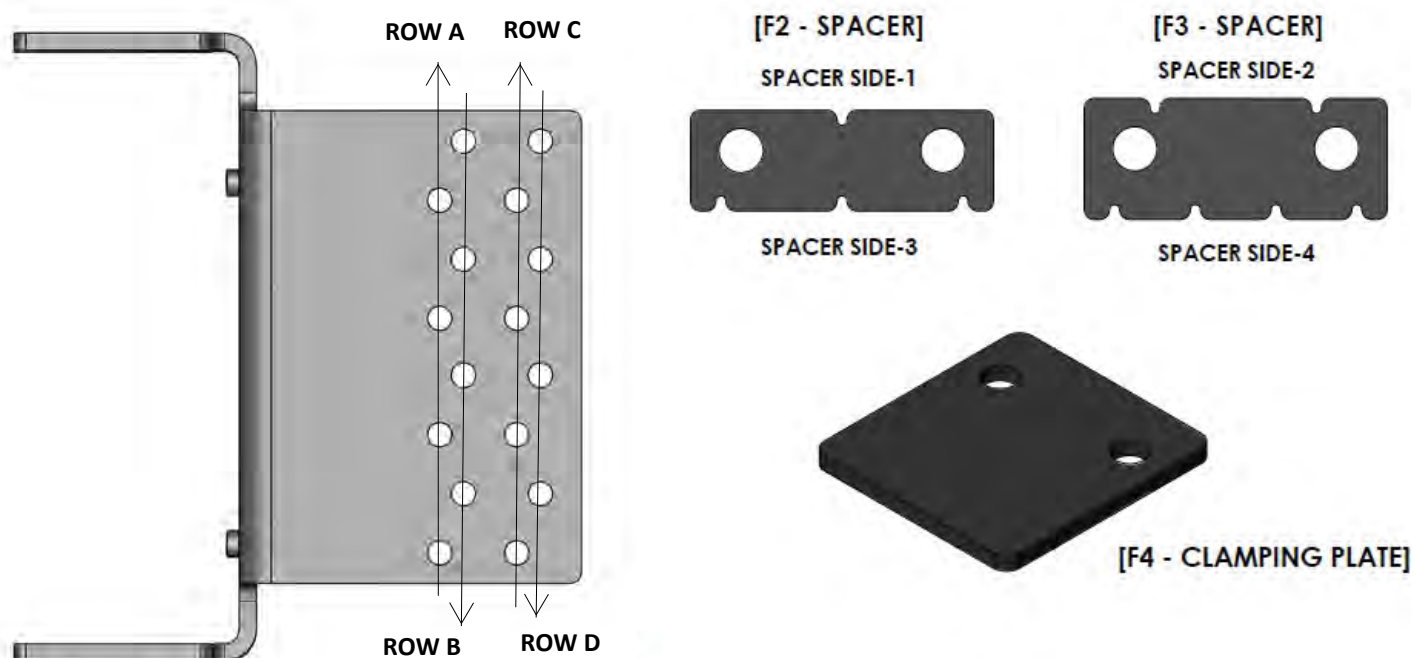
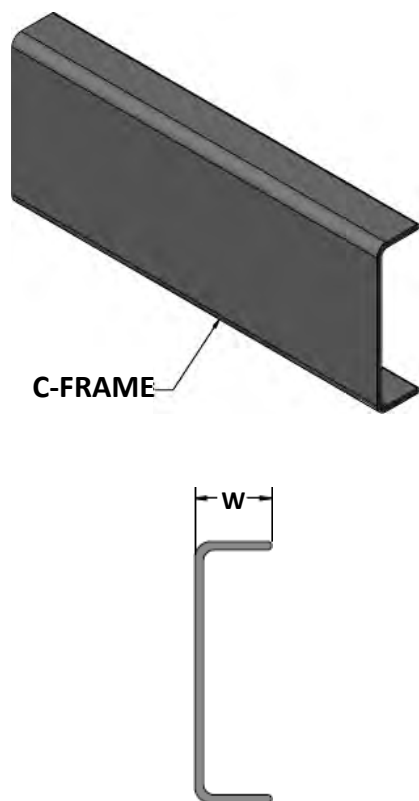


FIG 6



	FRAME WIDTH (W)	HOLE ROW ON BRACKET	SPACER SIDE
WITHOUT HUCK BOLT SPACERS	≤3"	A	4
	3" - 3.125"	A	3
	3.125" - 3.25"	A	2
	3.25" - 3.375"	A	1
	3.375" - 3.5"	B	4
	3.5" - 3.625"	B	3
	3.625" - 3.75"	B	2
	3.75" - 3.875"	B	1
WITH 1-1/2" HUCK BOLT SPACERS	≤3"	C	4
	3" - 3.125"	C	3
	3.125" - 3.25"	C	2
	3.25" - 3.375"	C	1
	3.375" - 3.5"	D	4
	3.5" - 3.625"	D	3
	3.625" - 3.75"	D	2
	3.75" - 3.875"	D	1

G: SEE FINISHED MOUNTING FRONT (FIG 7) and BACK (FIG 8)

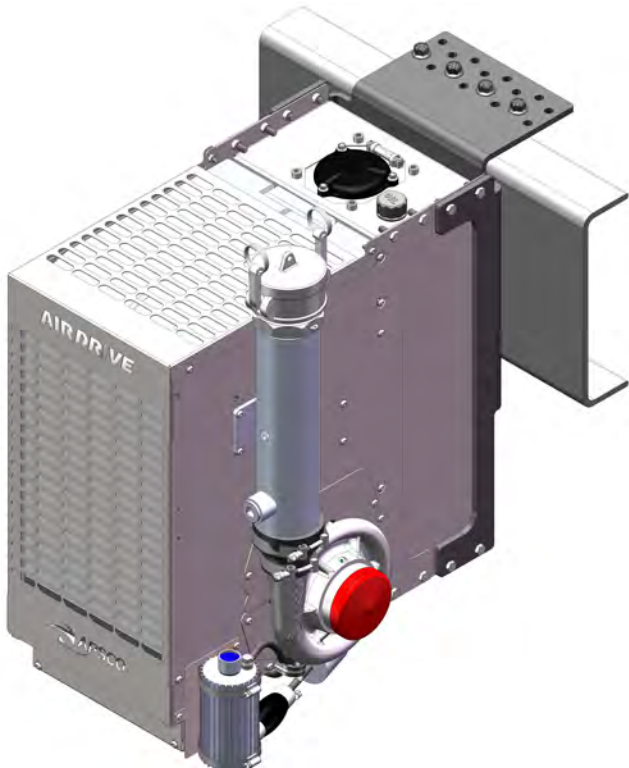


FIG 7

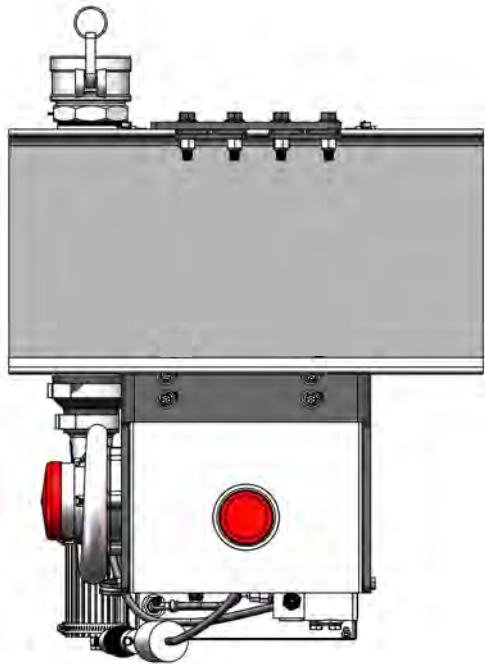
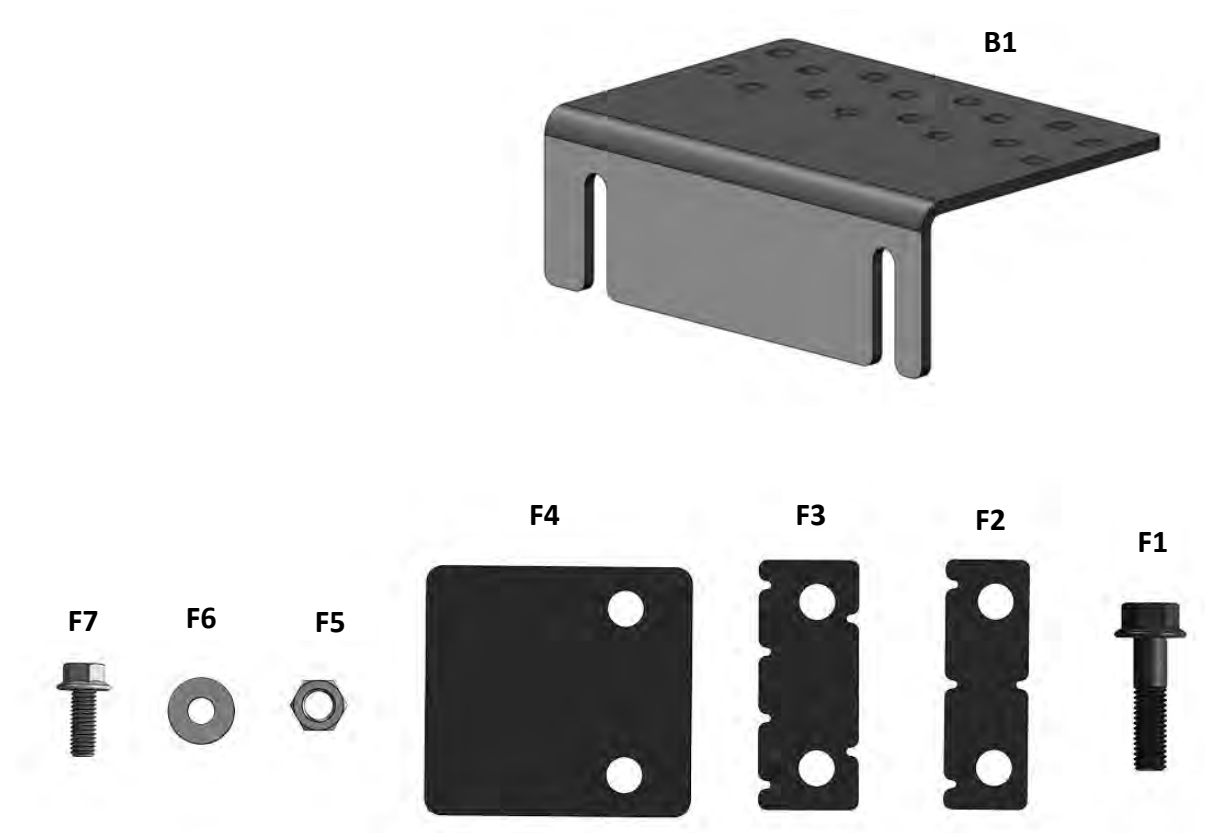


FIG 8

SUPPLIED PARTS



ITEM No	PART NUMBER	DESCRIPTION	QTY
F1	8248	1/20-13 X 2 HH BOLT GRADE 8	8
F2	8394	SPACER	4
F3	8480	SPACER	4
F4	8395	CLAMPING PLATE	4
F5	8123	1/2-13 LOCK NUT GRADE 8	8
F6	8954	3/8" WASHER	2
F7	8891	3/8-16 GRADE 8 BOLT	2
B1	9674	BRKT BTM NDRL	1

H: ALTERNATIVE FRAME RAIL MOUNTING - Use the "Huck Bolt Spacer Kit" when installing the Air Drive-100 on a frame rail containing huck bolts. The kit includes 4 aluminum plugs (spacers) and O-rings. To install, insert O-rings into the groove on the aluminium spacer and press in the aluminum plugs where they are needed to be installed (see FIG 9), then install as per Step 1, pressing spacers between main mounting bracket face and frame rail.

HUCK BOLT SPACER MOUNTING

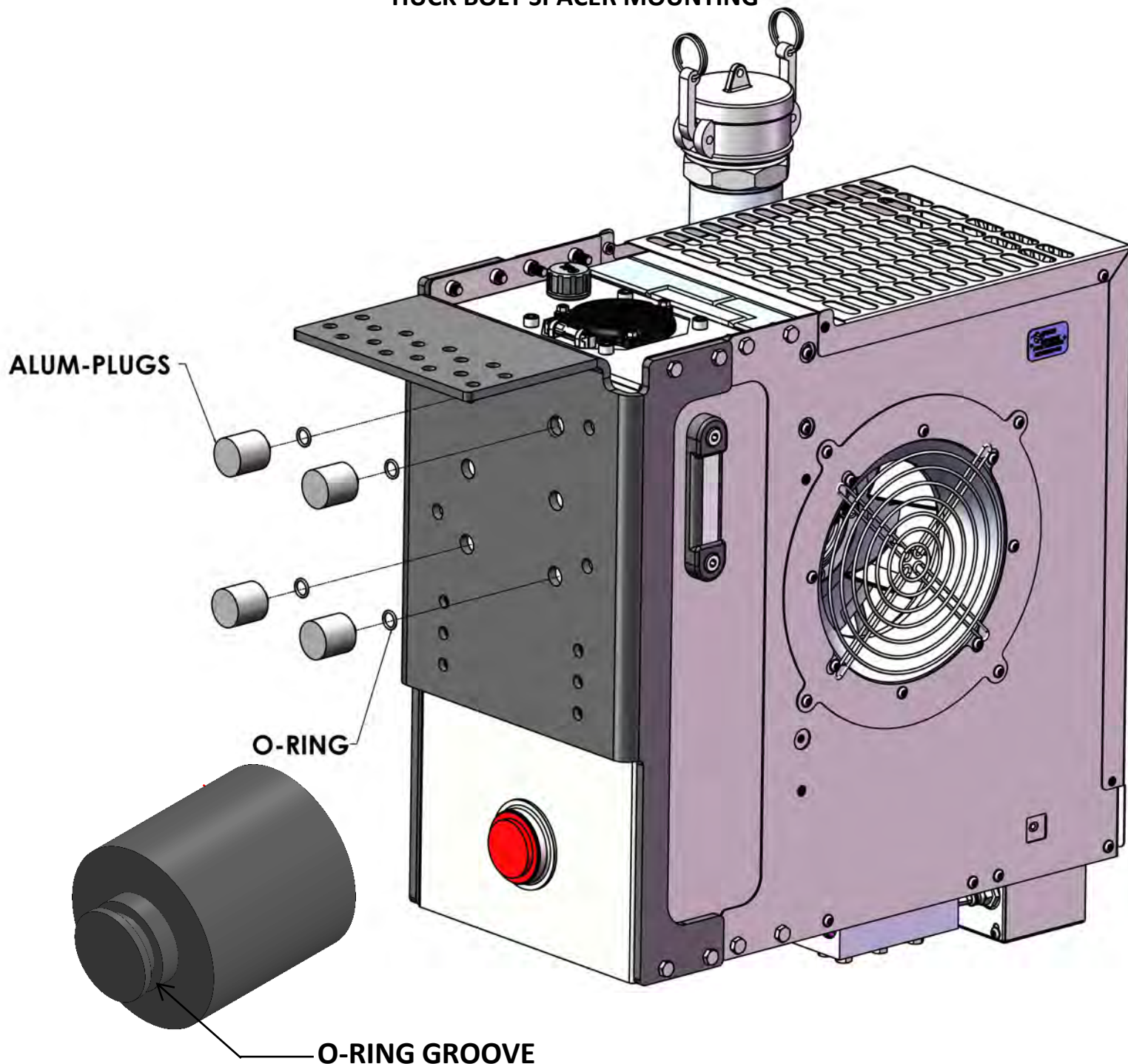


FIG 9

ELECTRICAL WIRING

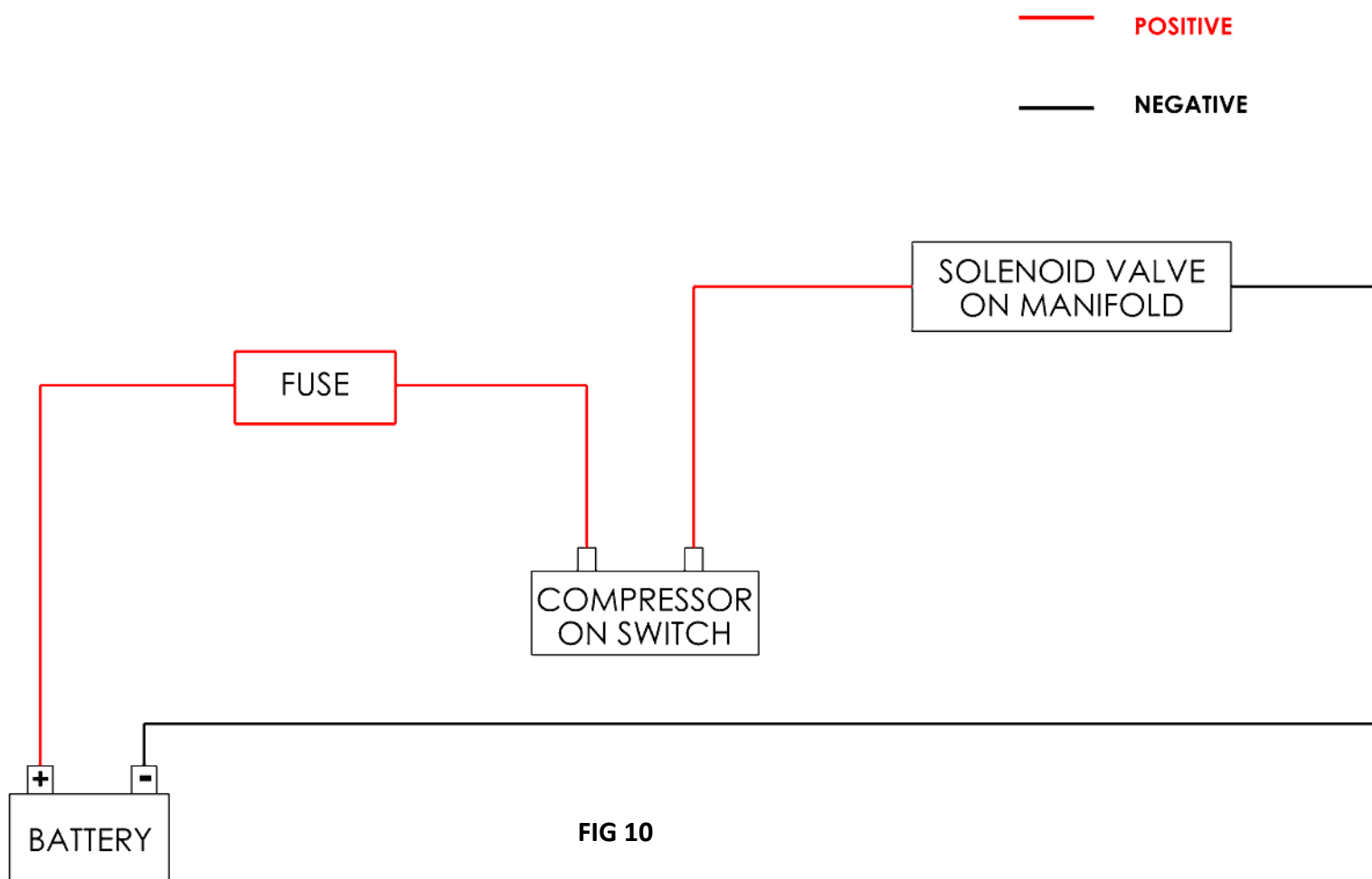
If you opted to operate your blower via the solenoid valve (part numbers 9122 & 9121) you will need to wire it as follows.

This option wires the Solenoid activation to run the compressor. We will connect a Compressor switch to the truck battery and by turning ON/OFF Solenoid will work accordingly. See the below diagram for further illustration..,




ELECTRICAL CONNECTIONS

RED WIRE: Connect to the positive (+) battery terminal (20 Amps)

BLACK WIRE: Connect to the truck frame or to the negative (-) battery terminal.



HYDRAULIC PLUMBING

-  SUCTION PORT ON AIR DRIVE-100 (SAE-32)
-  HIGH PRESSURE PORT ON MANIFOLD (SAE-12)
-  PTO PUMP TO TANK DRAIN (SAE-08) OPTIONAL

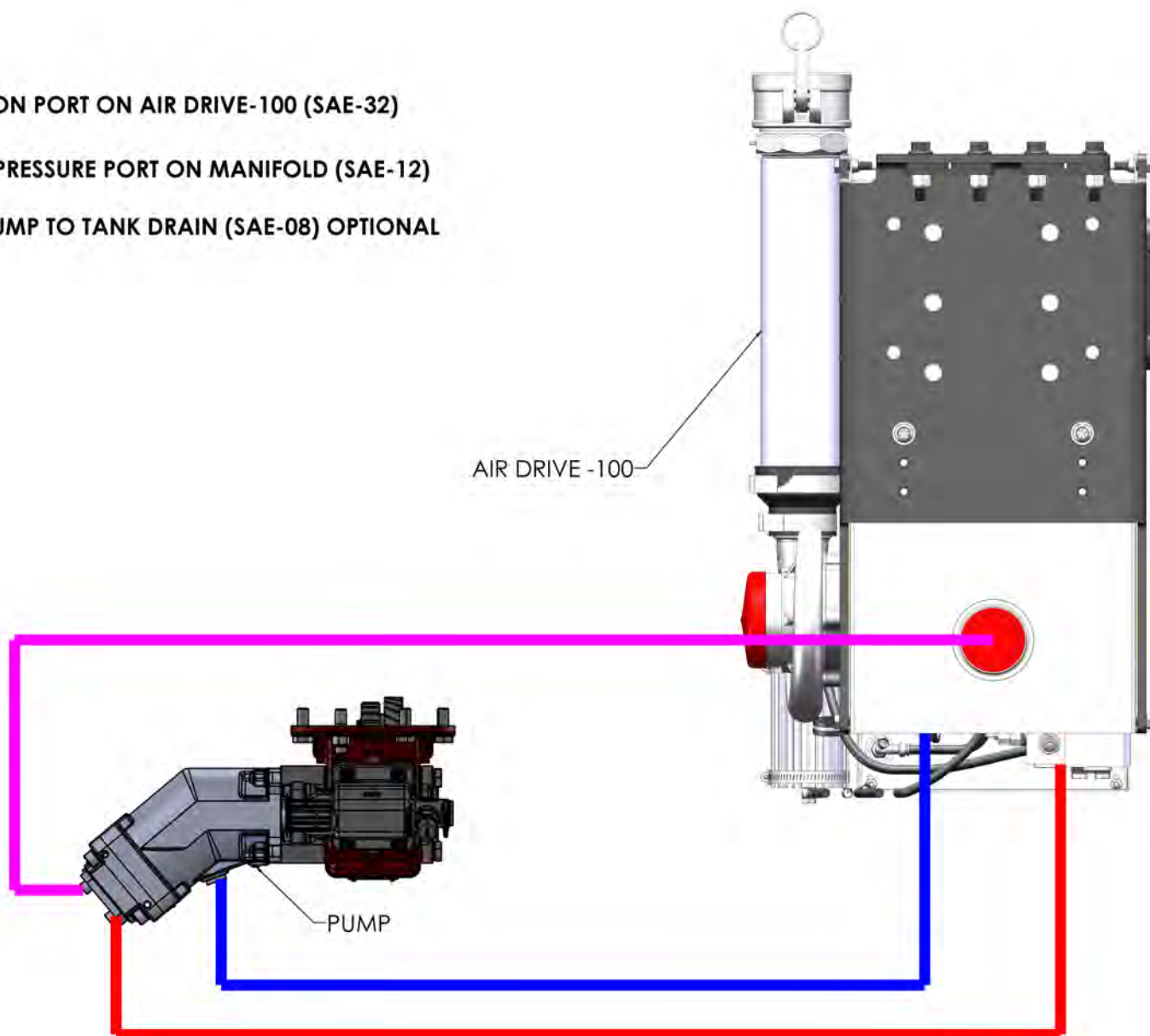


FIG 11

CENTRIFUGAL COMPRESSOR

Although the traction fluid is primed and filled to the correct level at the factory, it is still a good idea to check the fluid level on start up as shown below

You must use SX150 traction fluid. Any contamination of water or other petrochemicals can cause the system to foam up, stop cooling, and burn up the compressor. Once traction fluid is contaminated, the entire traction fluid system, including the compressor, will need to be replaced.

If there is any drop in the oil level during routine checks, refill with SX150 Traction fluid and immediately consult an authorized service technician.

MAINTENANCE:

The oil and filter change interval of the compressor is 800 Hours of operation or every year, whichever comes first.

Always maintain the oil level between minimum and maximum.

Over filling the compressor may cause oil leaks from the top of the canister, and too little oil may cause severe damage to the unit.

REGULAR OIL LEVEL CHECK:

1. Start the Air Drive-100.
2. Remove the dipstick and wipe it clean
3. Check the oil level using the dipstick with its thread fully engaged as shown on the picture

The correct oil level is between the "MIN" and "MAX" marking of the dipstick

IMPORTANT!

The procedure above is the correct and only way to check the oil level. Checking the oil level with the Air Drive-100 turned off does not give a correct reading.



FIG 12

FREQUENTLY USED PARTS		
S/NO	PART N/O	DESCRIPTION
1	9798	HYD. FILTER REPLACEMENT ELEMENT 6T
2	TDF1L	TRACTION DRIVE FLUID 1 LITER
3	9834	TRACTION DRIVE FILTER

Should you ever need to replace the traction fluid or components, follow the instructions of next page.

CENTRIFUGAL COMPRESSOR

TRACTION FLUID SYSTEM

INITIAL START-UP AND PRIMING :Traction fluid is full and primed from factory.

Before installing the traction fluid lubrication system, take care to check each component for debris, dirt or other type of contamination.

Overfilling of the system is not harmful to the compressor but will cause oil spilling.

Oil level checking procedure

Check the oil level using the procedure described below.

1.Start Air Drive-100

2.Remove the dipstick and wipe it clean

3.Check the oil level using the dipstick with its thread fully engaged

The correct oil level is between the "MIN" and "MAX" marking of the dipstick



Initial filling or refilling due to completed oil loss by any hose damage, see the below instructions.

1. With the blue canister cap removed, fill up the oil canister with traction fluid, to just below the threaded hole.

Use the one-time-use funnel to fill up the canister without spilling.

Canister volume ~400ml



2.Carefully squeeze the primer bulb by hand to prime the feed line.

The bulb slowly expands after each squeeze.When the bulb becomes firm, give it one more squeeze.Typically, 7-10 squeezes in total are required.



3.Refill the oil canister with SX150 traction fluid.

Take care not to overfill the lubrication system. Typically, 400-650ml is enough.



4. Start Air Drive-100 while paying attention to the oil level in the canister by looking into the fill hole.

Be prepared to add SX150 traction fluid to avoid air pockets in the oil feed line. The oil level should be below half full.



5.After 20-50 seconds the oil will return from the compressor and the flow indicator on the oil canister will turn blue, confirming oil flow. If the above time is exceeded, check the installation and restart the priming procedure from step 2.

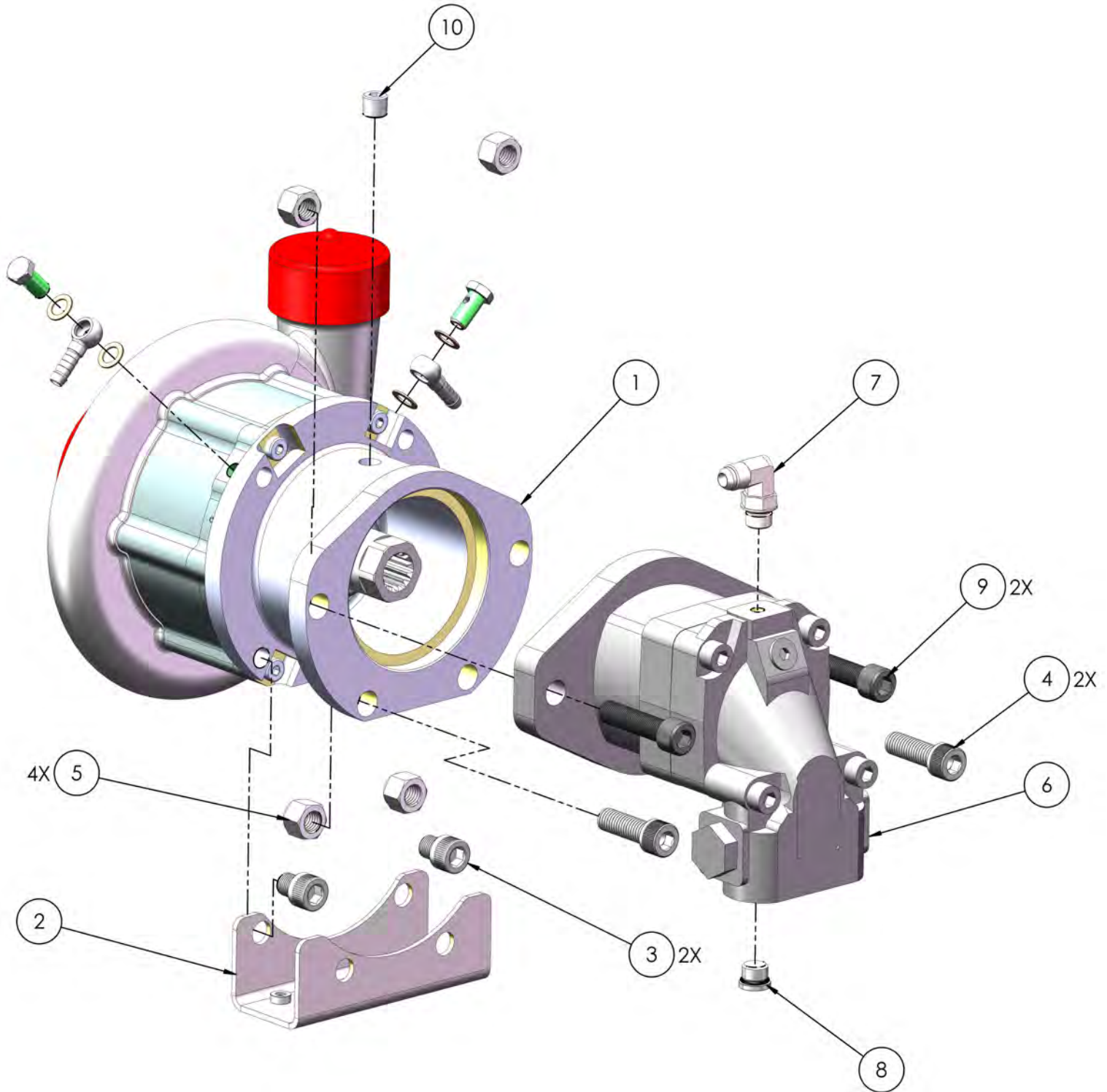


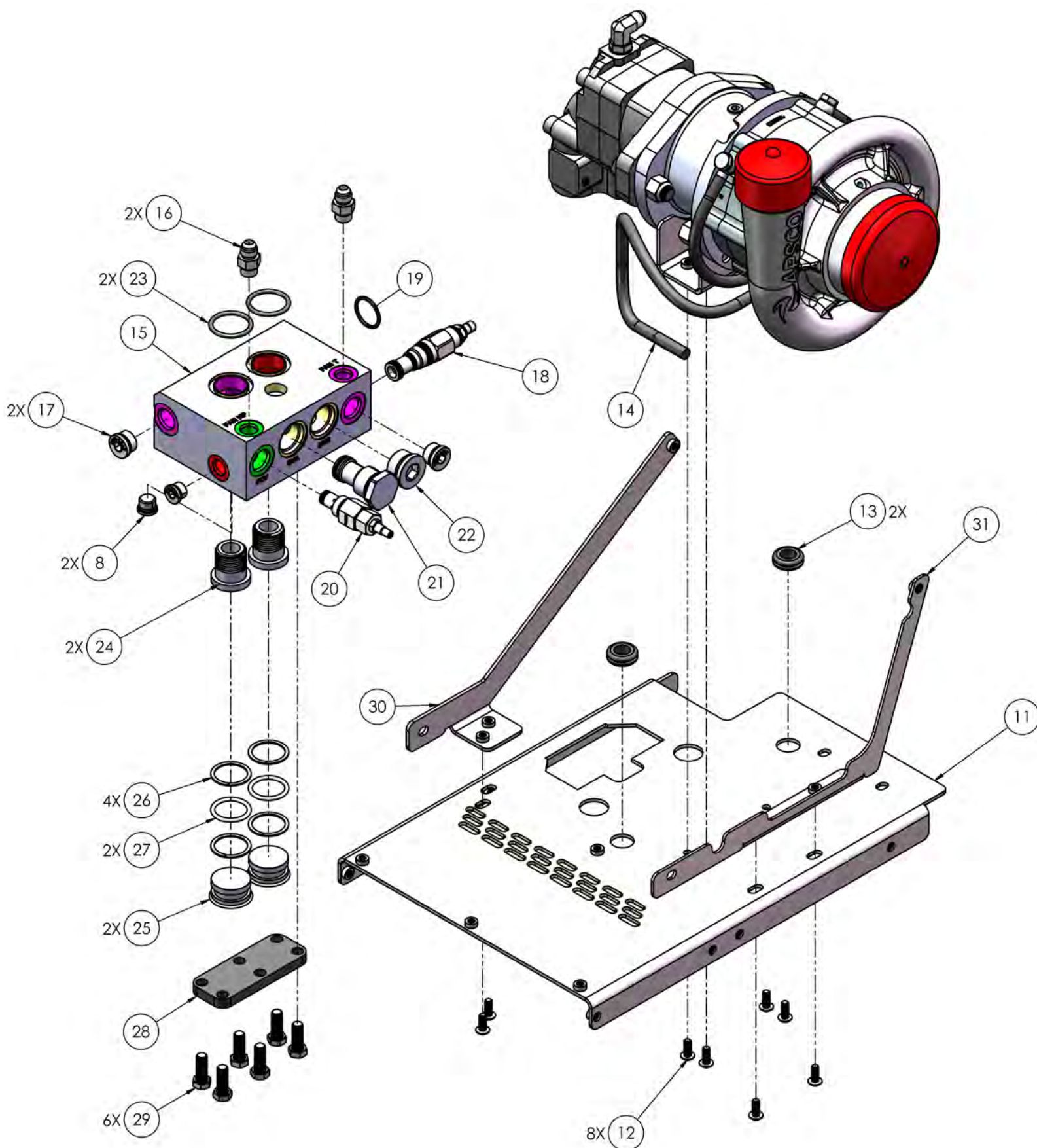
CENTRIFUGAL COMPRESSOR

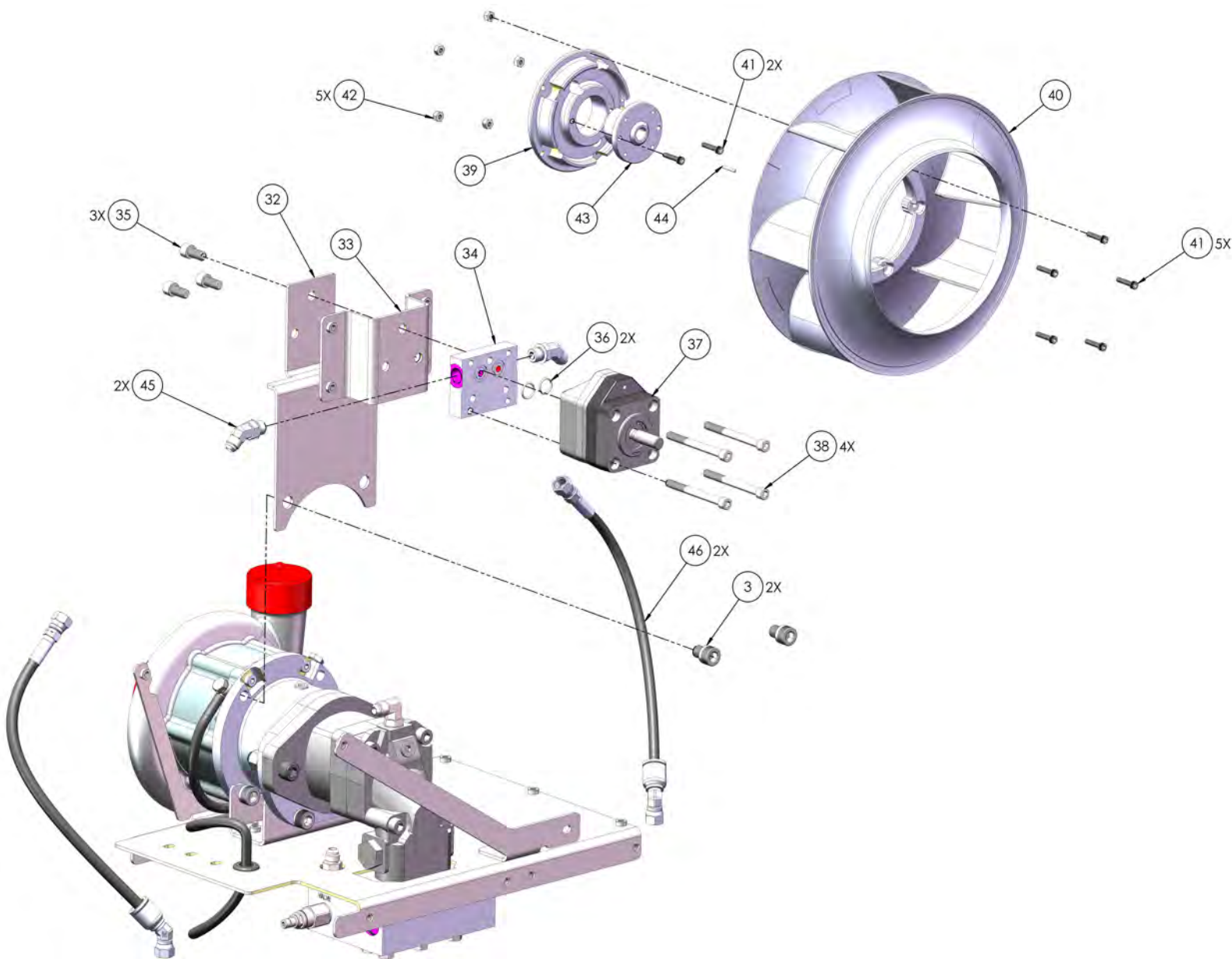
PROCEDURE FOR OIL AND FILTER REPLACEMENT:

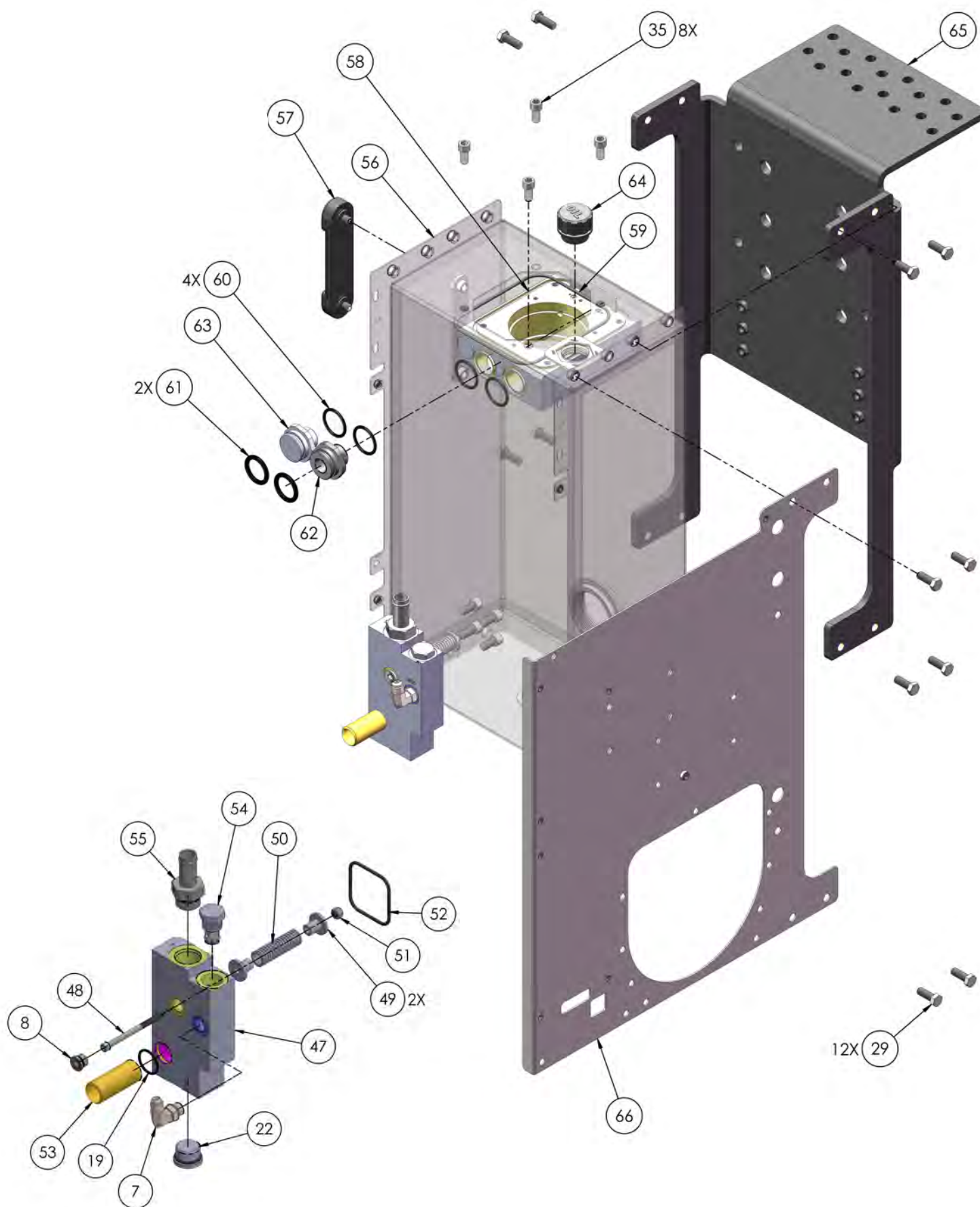
1. To prevent traction oil spilling, use brake hose pliers to clamp the oil hose as close to the oil filter as possible on the oil canister side (filter inlet).
2. Slide away the two hose clamps on the oil filter and remove the old oil filter.
3. Mount the new oil filter, ensuring you orient it correctly according to the arrows on the filter, which indicate the correct oil flow direction. Then, slide the two oil hose clamps back to their correct position to secure the new filter.
4. Remove the brake hose pliers.
5. Clean all the oil hose connections on the oil canister to prevent any debris or dirt from entering the oil circuit.
6. Remove the Oil return banjo bolt at the top of the canister
7. Remove the canister cap.
8. Start Air Drive-100. While it's idling, continually add new SX150 traction oil to the canister while the old traction fluid drains into the temporary oil reservoir. It is crucial to always observe the canister to make sure it never empties during this process. Continue to pour in new SX150 traction oil until approximately 800ml has been flushed through the system. After flushing, stop the Air Drive-100.
9. Remount the canister's oil return line, and crucially, remember to replace the copper washers with new ones. Do not re-use copper washers if the banjo bolt has been tightened previously.
10. Top up the canister and check the oil level. This check must be performed with the Air Drive-100 running. Remove the dipstick, wipe it clean, and then check the oil level with the dipstick's thread fully engaged. The correct oil level is between the "MIN" and "MAX" markings of the dipstick. Checking the oil level with the Air Drive-100 turned off will not provide a correct reading.

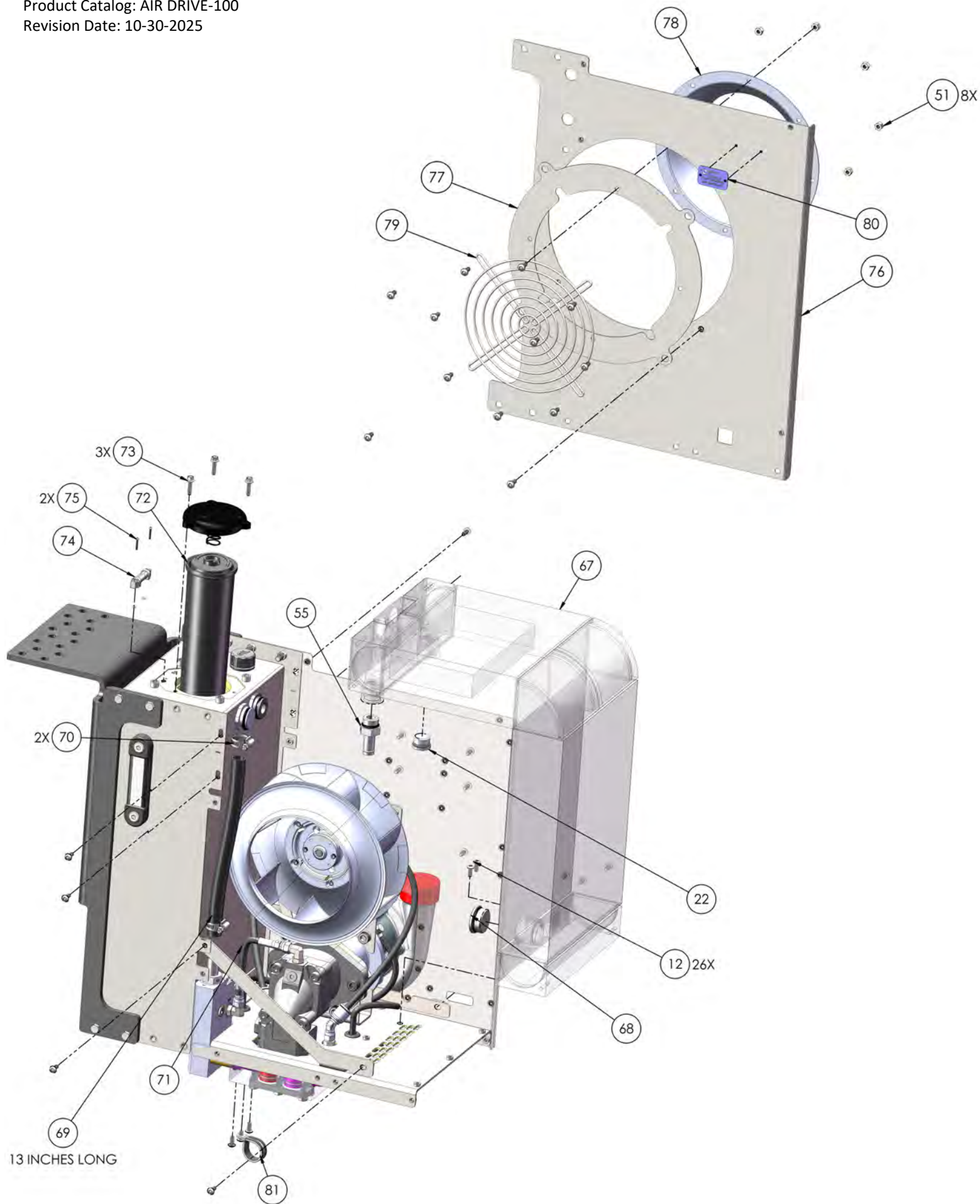
AIR DRIVE-100 EXPLODED VIEWS

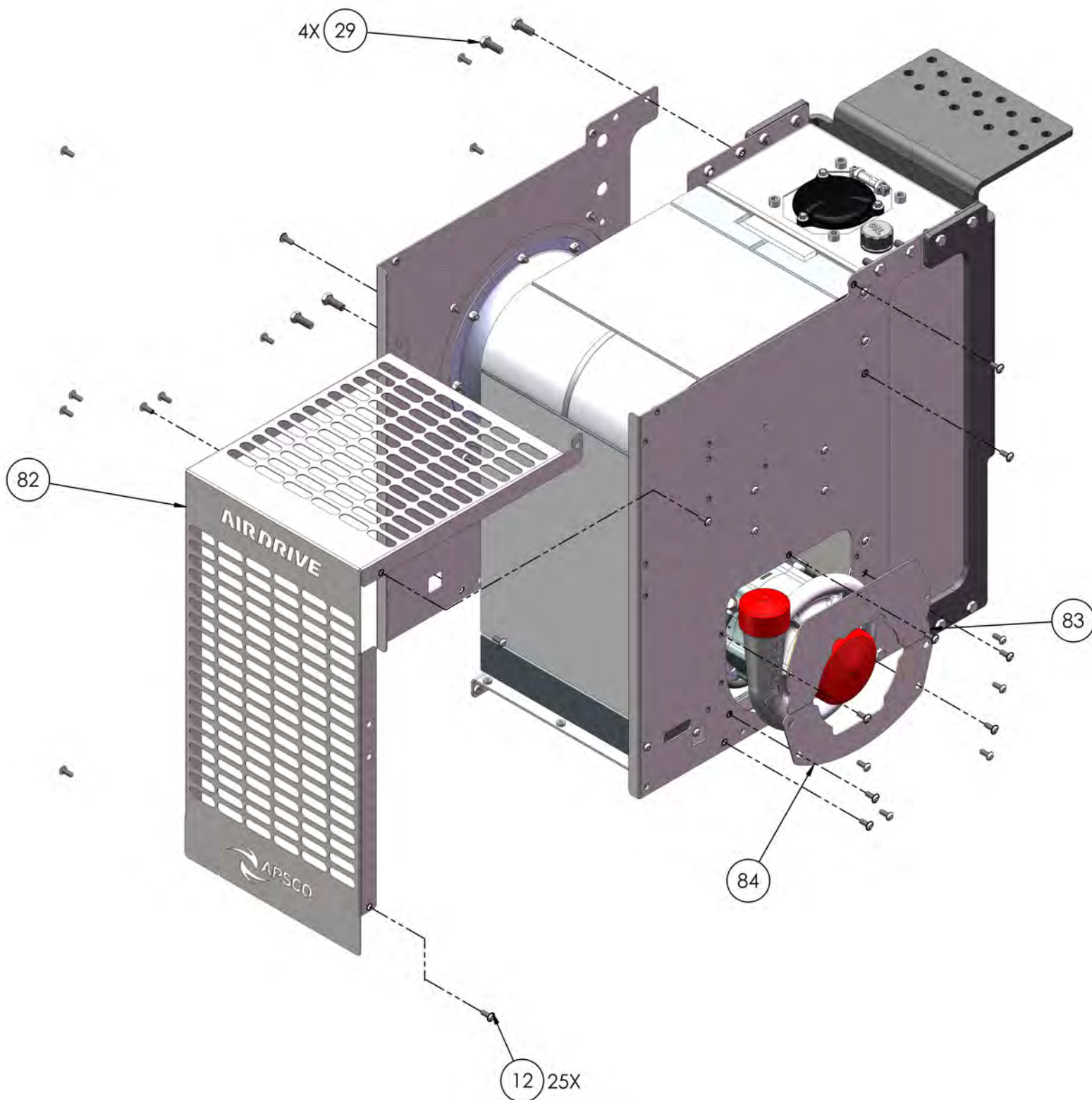


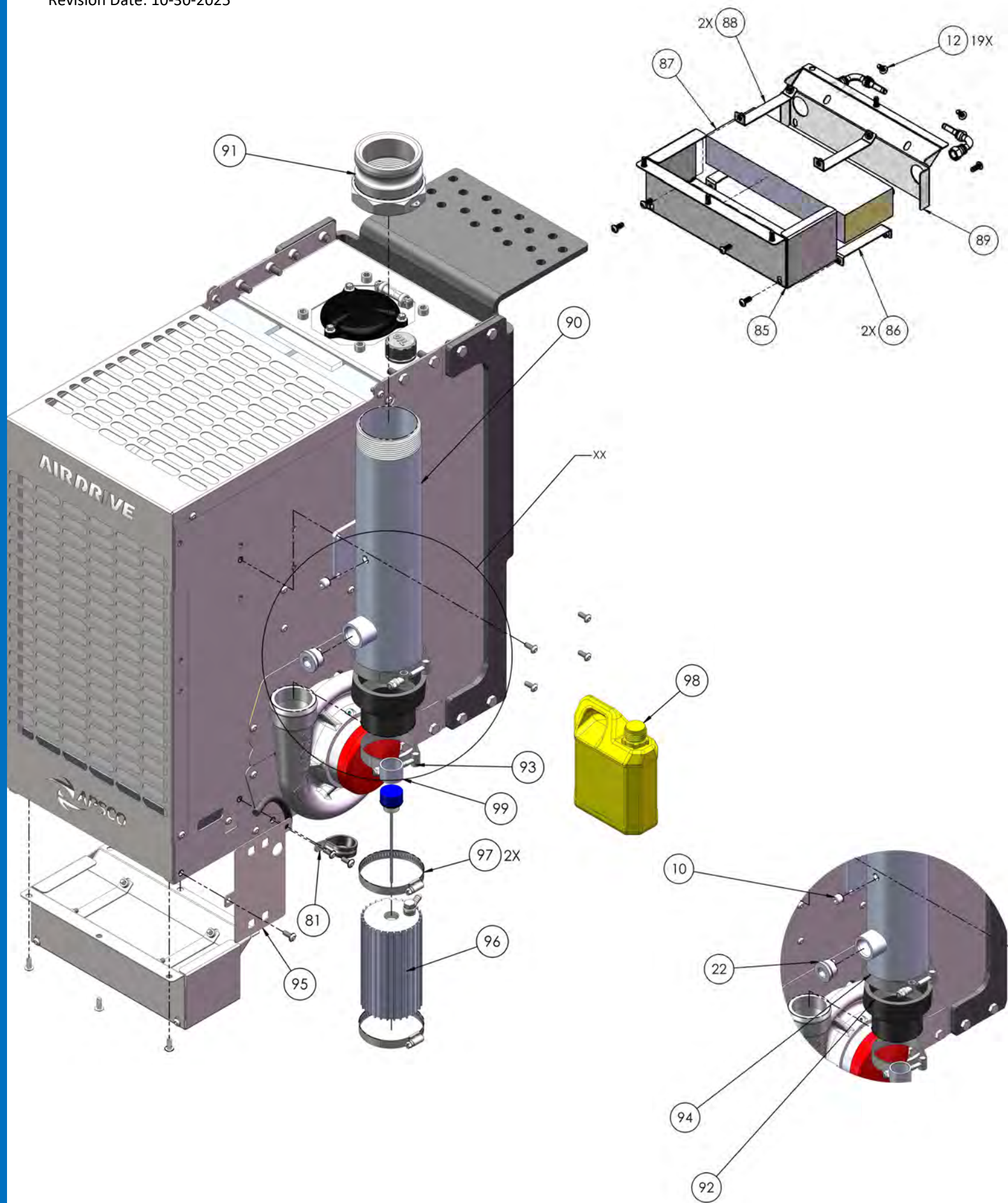


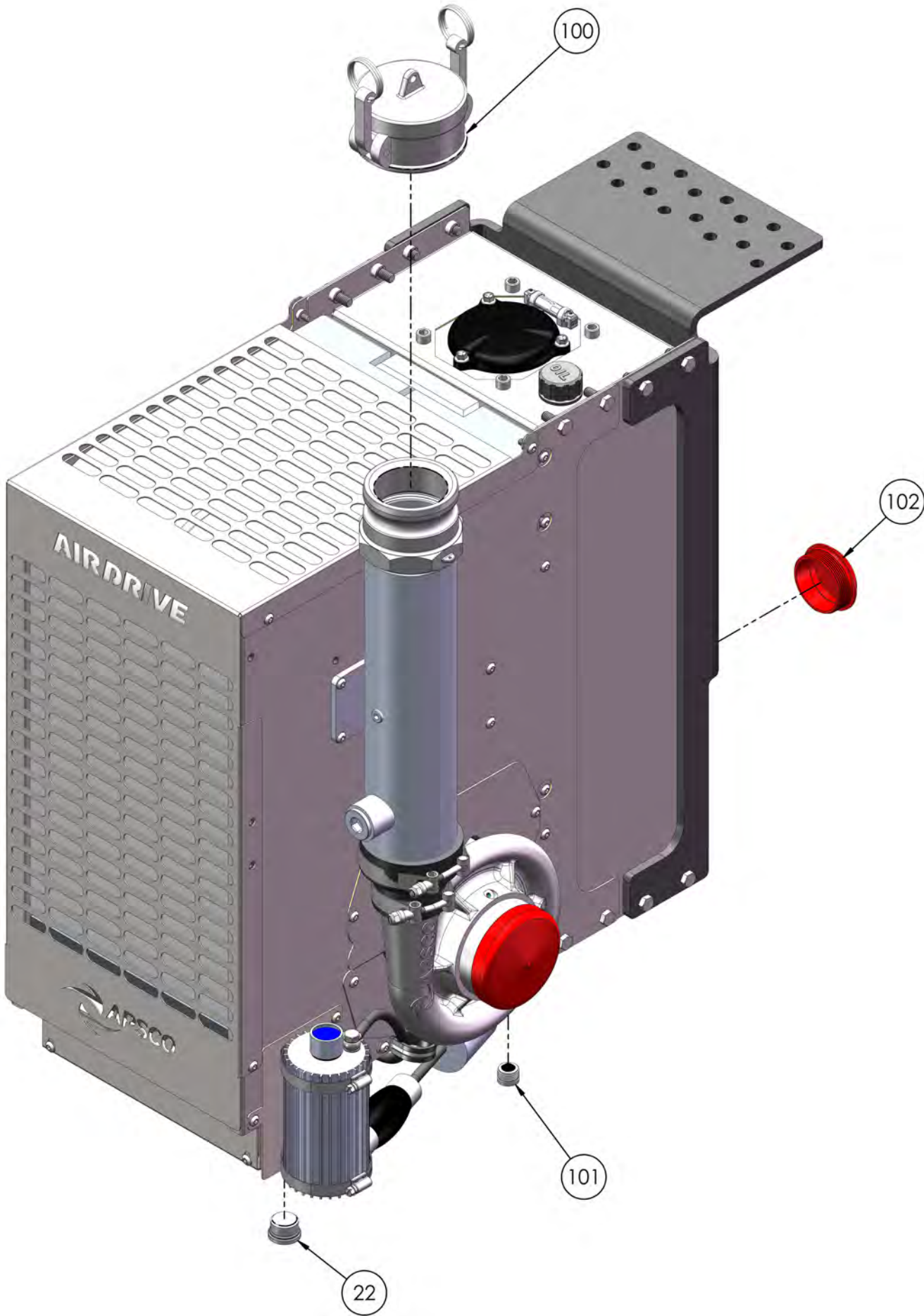












PART LIST

ITEM	PART	DESCRIPTION	QTY
1	9769	SHAFT COUPLING AND MOTOR HOUSING ASSEMBLY	1
2	9687	BRKT MNT FOR CMP 5.5X1.7X1.89	1
3	9689	SCW 1/2-20 X 1/2 SH BLK OX ALY S	4
4	9801	CW 1/2-13 X 1 1/2" SH ZNAS	2
5	8123	NUT, 1/2-13 NYLOCK GR 8 ZINC	4
6	9666	MTR HYD 10CC BNT AXIS	1
7	9282	FTG, 6MJ-6MORB 90	2
8	9211	PLUG, SAE-06 ZERO LEAK	4
9	8769	CAPS 1/2-13 X 2" LONG SH	2
10	1152	PLUG-PIPE 1/4 NPT SKT BLACK	2
11	9677	PLT BASE	1
12	7709	1/4-20 X 5/8" TORX T30 ADHESIV	78
13	9725	GMT 0.568 X 1.063 0.125	2
14	9788	TRAC FLD HSE KIT	1
15	9668	MNF 6 X 3.95 X 2.45	1
16	9283	FTG, 6MJ-6MORB STRT	2
17	9212	PLUG, SAE-08 ZERO LEAK	2
18	7930	VLV SY RLF PIL 10-2 70BAR	1
19	3189	O-RING 2-120 1 3/16 OD 1 ID	2
20	8103	FLOW REG, ARC-60	1
21	9817	12-2 CAVITY PLUG	1
22	8333	SAE-12 HOLLOW HEX PLUG	5
23	9706	ORNG 218 1 1/4 X 1 1/2	2
24	9705	FTG, BANJO SAE-12	2
25	9694	MANIFOLD PISTON	2
26	9709	BCKRNG 216 1.14X1.37 PTF	4
27	9707	ORNG 216 1 1/8 X 1 3/8	2
28	9703	MNFD BTM PLT S60	1
29	980240	CAPS 3/8-16 X 1 HH SS	22
30	9792	REINFORCEMENT BRKT, AIR DRIVE	1
31	9824	REINFORCEMENT BRKT, AIR DRIVE	1
32	9692	FAN MTNG BRKT 9.12X6.346	1
33	9840	FAN MTNG BRKT	1
34	9669	MNF FOR FAN 3 X 2.5 X .70	1

PART LIST(cont)

ITEM	PART	DESCRIPTION	QTY
35	8168	CAPS 3/8-16, 3/4 LG	11
36	9054	ORNG 015 9/16 X 11/16	2
37	8095	MTR HYD 0.5 SHAFT SIZE	1
38	7654	SCW 5/16-18 3.25 SH SS	4
39	9686	HUB, PRESS FIT	1
40	9644	FAN IMP 280MM 7BLD	1
41	9578	SCW 10-32 7/8 SH ZNC	7
42	300244	NUT 10-32 ZINC G2 HEX NYLOCK	5
43	9568	BUSH FAN 2.48OD PRSFIT	1
44	9579	7/64"D 3/4"L DOWEL PIN 18-8SS	1
45	9292	FTG, 6MJ-6MORB 45 ELBOW	2
46	9767	HOSE, 06 FJS STR, 06FJS45, 1/4, 15", 5000PSI	2
47	9670	MNF TNK 6.35 X 3.5 X 1.5	1
48	3467	SCW, 1/4-20X3-1/4, SH, AS, BLOX	1
49	8345	BUSH FLNG 1 OD	2
50	8390	SPG, .776 ID, 1.015 OD, 2.56 LG	1
51	3786	NUT 1/4-20 NC SS HEX NYLOCK	9
52	8110	O-RING 2-231 2 7/8 OD 2 5/8 ID	1
53	9708	TUBE 0.87 X 1, LG 2.49	1
54	9197	VLV, CHECK 10W-2, 2.1BAR	1
55	9766	FTG, 12MORB-12HB, STL	2
56	9681	TANK WELDMENT	1
57	9180	SIGHT GLASS	1
58	9684	FILTER HOLDER	1
59	8348	O-RING 260 6 3/4 OD, 6 1/2 ID	1
60	1132	O-RING 2-218 1 1/2 OD 1 1/4 ID	4
61	9855	ORG 320-1 1/2" X 1 1/8"	2
62	9682	FTG, HE TNK, THRU HOLE	1
63	9691	HE FITTING WITHOUT THRU HOLE	1
64	9664	BRTHR 1.65OD 0.71 1" BSPP	1
65	9673	BRKT RNFR	1
66	9678	PNL RIGHT	1
67	9616	HE 60GPM 90	1
68	6408-H20-0	20MORB HOLLOW HEX PLUG	1

PART LIST(cont)

ITEM	PART	DESCRIPTION	QTY
69	9507	HOSE .75" ID 1.15" OD	1
70	8343	HOSE CLAMP, 3/4 ID HOSE	2
71	9768	HOSE, 06 FJS STR, 06FJS STR, 1/4, 9", 200PSI	1
72	9785	RTN FILTER 4 LENGTH	1
73	8350	HEX HEAD 1/4-20 X 1 LG	3
74	9714	VSL IND 1.574" M3	1
75	9826	SCW M3 -0.5 X 20 BTNHD	2
76	9675	PNL LEFT	1
77	9685	FAN RD MISAL ADPTR	1
78	9647	FAN INCN 7 X 11 2.38TH	1
79	9648	FAN FNR GRD 10.4LG	1
80	9814	HYD-V-TAG, AIR DRIVE-100	1
81	8514	HOSE LOOP CLAMP, 1" ID	2
82	9676	PNL FRNT & TOP	1
83	9693	PNL ACS TOP 10.2 X 6	1
84	9696	PNL ACS BTM 10.12 X 5.225R	1
85	9697	TRAC HE GUARD	1
86	9698	PLT HE HLD 4.47 X 0.54 16GA	2
87	9779	HEAT EXCHANGER FOR TRAC FLUID	1
88	9771	TRAC HE HOLD PLATE-2	2
89	9718	PLT HE GRD 11.56X 4.56	1
90	9770	TUBE ASSY, AIR DRIVE 100	1
91	9726	CAM LOCK 3" NPT	1
92	9827	SILI ADPTR, AIR DRIVE 100	1
93	9716	HCLAMP, 2.60"-2.91" ID	1
94	9717	HCLAMP, 3.62"-3.94" ID	1
95	9790	CANISTER BRKT	1
96	9787	TRAC FLD RES KT	1
97	9795	H CLAMP 2.5"-3.5" ID	2
98	9786	TRAC FLUID BULK	1
99	9836	BREATHER CAP TRAC FLUID	1
100	9805	CAP, 3" CAM LOCK	1
101	7845	PLUG, #08 SAE MAGNETIC	1
102	8197	PLUG, #32 SAE PLASTIC	1

TROUBLESHOOTING GUIDE

Problem	Cause	Corrective Action
High Oil Temperature	<ul style="list-style-type: none"> • System Relief Valve is opening • low oil level in tank • Collapsed Suction Hose • Air leak in suction hose or fitting connections • Compressor has been operated outside of its normal operating conditions - for example product clog or deadheaded (closed valve), the compressor must be immediately shut-off or it will overheat. • Traction fluid hose is restricted (kinked) • Traction fluid is low 	<ul style="list-style-type: none"> • Ensure that valve relief pressure is set higher than your system pressure. Remove and clean or replace valve. Change fluid and filter element. • Fill Tank and tighten fittings. • Replace suction hose. • Bleed air and tighten fittings. • Ensure that compressor impeller` will still turn by hand, if not -replace compressor • Ensure that there are no sharp bends in the traction fluid system lines • Check for leaks and refill
Aeration of hydraulic fluid (Milky looking oil)	<ul style="list-style-type: none"> • Water Contamination • Air leak in suction hose or fitting connections • Pump is not lower than the tank • Restricted suction line • low oil level in tank 	<ul style="list-style-type: none"> • Replace Fluid and Filter Element. Check all fittings and Filter Cap for tightness. Tighten fittings and bleed air from lines. • Reposition to ensure the fluid can gravity feed into the pump through the suction line. • Route suction line to make as straight and short of a run as possible. Ideally you would want a 2" suction line for minimum flow restriction. • Fill Tank and tighten fittings, verify proper fill level before use.
Aeration or contamination of Traction Fluid	<ul style="list-style-type: none"> • Water or Chemical contamination • This is easy to verify by just visually checking traction fluid site glass-fluid should be blue with no sign of discoloration 	Once traction fluid is contaminated it is almost impossible to flush the contamination out of the system. Replace entire traction fluid system as well as super charger
Blower does not turn on when PTO is engaged	12Volt solenoid valve option not getting 12V	<ul style="list-style-type: none"> • Ensure switch is hooked up according to manual. • Fix any loose connections or ground issues.

TABLE 2

WARRANTY- TERMS AND CONDITIONS OF SALE

EXCEPT AS OTHERWISE AGREED IN WRITING, THESE TERMS AND CONDITIONS GOVERN ALL OUR CONTRACTS TO THE EXCLUSION OF OTHER TERMS AND CONDITIONS. OUR QUOTATIONS AND ESTIMATES ARE NOT OFFERS CAPABLE OF ACCEPTANCE BY YOU, AND ANY ORDER PLACED BY YOU WILL ONLY BE ACCEPTED BY OUR WRITTEN CONFIRMATION OF SUCH ORDER.

GENERAL PROVISIONS

1. The definition of terms used, interpretation of this agreement and rights of parties hereto shall be construed under and governed by the Uniform Commercial Code of the State of Illinois. "Seller" when used herein means **Air Power Systems Co., LLC**. "Purchaser" when used herein means the person, firm or corporation to whom this quotation is addressed. "Equipment" or "Products" means those articles, supplies, drawings, data or other property/services described herein.
2. All quotations are for immediate acceptance and subject to change or withdrawal without notice before an order is acknowledged by Seller. This proposal shall not become effective until accepted by an authorized employee of the Seller. This proposal cannot be changed or varied by any verbal agreement. If this proposal is deemed to constitute an offer, it may be accepted only on terms set forth in this proposal, including, without limitation, these Terms and Conditions. If this proposal constitutes an acceptance of an offer, such acceptance is expressly conditioned on Purchaser's assent solely to the terms of proposal, including, without limitation, these Terms and Conditions. An acceptance of any part of the Equipment or services covered hereunder shall be deemed to constitute such assent. Any additional and/or different terms and conditions proposed by Purchaser and/or any attempt by Purchaser to vary any of these terms and conditions is a material alteration and is hereby objected to and rejected.
3. Unless otherwise agreed by Seller in writing, Seller's prices are subject to change without advance notice at any time prior to order acknowledgment. Seller reserves the right to adjust the invoice price, after the price is quoted and/or acknowledged, to take account of any material variation in Seller's costs beyond Seller's reasonable control since the date of the quotation or (if no quotation is issued) the order acknowledgment, and the invoice so adjusted shall be payable as if the price set out therein were the original contract price. All sales are subject to increase without notification by the amount of any sales or excise tax levied or charged by any governmental agency and are subject to any price adjustment necessitated by Seller's compliance with any government action.
4. All sales under all orders and these terms and conditions are subject to Seller and/or Government priorities, laws and regulations, now or hereafter established.
5. The Seller reserves the right to change, discontinue or modify the design and construction of any product or to substitute material equal to or superior to that originally specified, without notice to the Purchaser.
6. All claims by Purchaser for shortages in a shipment of Equipment or Equipment damaged in transit must be made against the carrier. All claims by Purchaser against Seller for nonconforming Equipment and claims for shortages in a shipment or damaged Equipment (other than claims to be made against the carrier) must be made in writing to Seller within ten (10) days after receipt of shipment or thirty (30) days after date of shipment, whichever occurs first, or they are waived.
7. Any action for breach of the contract hereunder must be commenced within one year after the cause of action has accrued. Only variations/Modifications to the contract which are made in writing sign by Seller and Purchaser shall be enforceable. Any failure by seller to enforce its rights under this contract will not be deemed a waiver of such rights.
8. All disputes arising under or in connection with this Contract shall be resolved by (a) good-faith negotiations by knowledgeable, responsible representatives of each party who are fully authorized to settle any such dispute, or (b) in the event such negotiations do not resolve such dispute, binding arbitration held in Chicago, Illinois, by a single arbitrator pursuant to the Commercial Arbitration Rules of the American Arbitration Association. Each party shall bear its own costs of these procedures; the parties shall equally split the fees of the arbitration and the arbitrator. Notwithstanding the above, either party shall have the right to seek a temporary restraining order or an injunction related to the purposes of this Contract, to compel compliance with confidentiality obligations, or to file suit to compel compliance with this dispute resolution process.
9. Purchaser may not assign, novate or otherwise transfer its rights or obligations under this contract without Seller's prior written consent, and any attempt to do so shall be null and void and of no effect.

CANCELLATION

Purchaser cannot cancel orders under any circumstances without Purchaser first reaching an agreement in writing with Seller covering all Seller's damages. At a minimum, such an agreement must reimburse the Seller for all expenses incurred (including but not limited to costs of purchased materials), engineering costs, and a reasonable mark-up to cover overhead and profit; cancellation charges shall be, at a minimum, at least 15% of the purchase price of the goods covered by the cancelled orders.

ENGINEERING CRITERIA

The Equipment furnished by Seller are sophisticated engineering products; accordingly, Purchaser undertakes:

1. That it has provided and will promptly provide all the information reasonably necessary to enable Seller to (i) evaluate the requirements for performing and (ii) perform the Contract, and that all such information is full and accurate;
2. That all premises, plant, engineering support, spare parts, connected pipe work and machinery and inputs that it is required to provide for the design, engineering, installation, testing and use of the Products are fit for their purpose and of good engineering quality;
3. Fully to co-operate with Seller in the design, engineering, installation, testing and use of the Products;
4. To use the Products for the intended purpose only and in accordance with the Product literature; and
5. Not under any circumstances, to use any unapproved spare part, connected machinery, service or repair or use the Products in any manner as may render the Products dangerous and agrees that any breach of these negative criteria will negate all specific and implied conditions and obligations on the part of Seller relating to the quality of the Products

Purchaser further agrees that it will be liable to Seller for any costs, expenses and losses it suffers by reason of any breach of these undertakings.

DRAWINGS, DESIGNS AND CONFIDENTIALITY

1. All of Seller's specifications, designs, drawings, indications of physical, chemical and electronic properties and indications of inlet pressure or vacuum, pressure output and power consumptions ("the Designs") are made in good faith and are approximate indications only and are not binding in detail unless Purchaser has specified in writing a particular indication upon which he is relying and Seller shall be entitled to vary the same and/or to correct errors and omissions provided the Products remain in substantial conformity with the contractual requirements
2. The Designs (including all copyright, design right and other intellectual property in them) shall as between the parties be the property of Seller; and Purchaser is not entitled to make any use of the Designs other than for the purpose of this Contract.
3. Any inventions, modifications, improvements, techniques or know-how affecting the Products made or gained in the course of performing this Contract, shall belong to Seller absolutely.
4. Neither party shall disclose to third parties or use for its own purposes any confidential information or trade secrets of the other party.

WARRANTY- TERMS AND CONDITIONS OF SALE

SHIPMENT, PAYMENT AND CREDIT

1. Credit Terms of Payment: A. Domestic – Net thirty (30) days from date of invoice. Delinquent accounts shall bear interest at 18% per annum thereafter, until paid. Said interest rate shall be reduced to the maximum permissible rate in any state having laws which so require. B. International – Unless otherwise agreed to by the Seller's Manager of Credit and Collection, payment shall be in U.S. Funds by wire transfer or irrevocable Letter of Credit, confirmed by a major U.S. Bank. In addition to such late payment charges, Seller may add to the amount past due any costs associated with collection thereof, including reasonable attorneys' fees.
2. Seller may, in its sole discretion, accept payment for Products by cash in advance or by money-down with scheduled progress payments.
3. Shipments and deliveries shall be subject to approval of Seller's Credit Department. If Purchaser fails to fulfill the terms of payment, or if at any time before payment in full is made (whether or not payment is yet due) a petition is presented or resolution passed for the winding up or bankruptcy of Purchaser, or in the event of the appointment of a receiver or administrator of Purchaser's business, Seller may defer further shipment or at its option, cancel the unshipped balance. Seller reserves the right previous to making any shipments, to require from Purchaser satisfactory security for performance of Purchaser's obligation. No failure of Seller to exercise any right accruing from any default of Purchase shall impair Seller's right in case of any shipment default of Purchaser.
4. All sales are Ex Works (EXW, Incoterms 2010) Seller's plant unpacked and subject to VAT or other taxes (unless specifically stated to the contract). Seller may, in its discretion, select the carrier unless specified in advance by Purchaser.
5. While expected dates of delivery of goods are given in good faith, the same are not of the essence of or in any way terms of the contract or representations of fact. All shipping dates given are approximate, and while effort is made to maintain schedules, Seller will not be liable for damages on account of delay. In case of delay by Purchaser in furnishing complete. schedules or information, delivery dates may be extended for a reasonable time depending on factory conditions. The Seller shall not be responsible for reasonable or excusable delays nor shall the Purchaser refuse to accept delivery because of any such delays. Excusable delays include, without limitation, delays resulting from accidents, fires, floods, severe weather or other acts of God, strike, lockout or other labor difficulties, embargoes, government controls or other forms of intervention, inability to obtain labor, materials or services and other causes beyond Seller's control. If there is a scarcity in any of its products or goods, Seller will allocate its available supply in its sole discretion.
6. Title to the Products shall transfer to the Purchaser on the earlier of full payment and delivery; provided, however, that in the event delivery is prior to full payment, the Seller shall retain a security interest in the Products until the Seller receives payment in full. Pending payment of the full purchase price of the Equipment or parts furnished by Seller, Purchaser shall at all times keep the Equipment or parts comprehensively insured against loss or damage by accident, fire, theft and other risks usually covered by insurance in the type of business carried on by Purchaser in an amount at least equal to the balance of the price for the same from time to time remaining outstanding. In addition, the Purchaser undertakes not to charge by way of security any of the Products that remain the collateral of the Seller.
7. In the event of Cancellation in accordance with the provisions hereof, or in the event of non-payment (in full or in part) for the Equipment by the due date, Purchaser hereby irrevocably licenses Seller (insofar as it is able) to enter upon any premises to repossess the Equipment.

INDEMNITY

Purchaser will indemnify, defend and hold Seller, its affiliated companies and their respective directors, officers, employees and agents harmless from any loss, claim, cost, expense or damage (including payment of reasonable attorneys' fees) suffered or incurred by any of them and/or for which any of them may be liable to any third party due to, arising from or in connection with, directly or indirectly:

- i. any violation of law, negligence, omission or intentional misconduct on the part of the Purchaser, its servants, agents or employees;
- ii. Purchaser's instructions or lack of instructions or Purchaser's failure or delay in taking delivery;
- iii. the breach of any provision of this Agreement by Purchaser; or
- iv. any infringement or alleged infringement of patents, trademarks, copyright, design, right or other intellectual property right occasioned by the importation, manufacture or sale of the Equipment if made to the specification or special requirement of Purchaser.

LIABILITY

Seller's total liability for any and all claims, damages, losses and injuries arising out of or relating to Seller's performance or breach of any term herein shall not exceed the purchase price of the Equipment. IN NO EVENT, WHETHER IN CONTRACT, TORT OR OTHERWISE, SHALL SELLER BE LIABLE FOR LIQUIDATED, INDIRECT, EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, EXPENSES OR COSTS, INCLUDING BUT NOT LIMITED TO: (1) LOSS OF PROFITS, BUSINESS OR GOODWILL; (2) LOSS OF USE OF EQUIPMENT OR FACILITIES; OR (3) LOSS RESULTING FROM UNUSABLE MACHINERY OR FACILITY DOWNTIME, HOWSOEVER CAUSED AND EVEN IF THE POTENTIAL FOR SUCH DAMAGES WAS DISCLOSED AND/OR KNOWN.

DISCLAIMER OF WARRANTY

SELLER DOES NOT WARRANT THE MERCHANTABILITY OF ITS PRODUCTS AND DOES NOT WARRANT THE FITNESS OF THE PRODUCTS FOR A PARTICULAR PURPOSE. SELLER DOES NOT MAKE, AND HEREBY DISCLAIMS AND EXCLUDES, ANY WARRANTY, EXPRESS OR IMPLIED, OTHER THAN THE WARRANTY CONTAINED HEREIN. THERE ARE NO WARRANTIES EXPRESS OR IMPLIED BEYOND THAT WHICH IS DESCRIBED BELOW.

WARRANTY OF GOODS MANUFACTURED BY SELLER

1. Except to the extent Seller specifies another warranty period in writing, Seller warrants products and parts manufactured by it and sold hereunder to be free from material defect in material and workmanship for a period of eighteen (18) months from date of startup or twenty-four (24) months from date of shipment whichever occurs sooner; or, for Thermaflow® coolers, (24) months from date of shipment (the "Warranty Period"). provided, however, that Seller's sole responsibility under this warranty shall be to either repair or replace at Seller's option, any part which fails during the Warranty Period because of a defect in workmanship and material. Such replacement parts shall be provided at no cost to Purchaser, at the business establishment of Seller during regular working hours. Seller's obligation under this warranty shall not include any transportation charges, cost of installation, duty, taxes or any other charges whatsoever.
2. Seller shall be under no liability for breach of the warranty set forth herein:
(i) unless the Equipment has been properly installed, used, maintained and serviced; (ii) unless Purchaser has promptly informed Seller in writing of the defect alleged within the Warranty Period and within 7 days of the discovery thereof; (iii) with respect to wearing and consumable parts; (iv) if Purchaser places Products in long-term storage and fails to perform proper long-term storage preparations per Seller's instructions; and/or (v) to Equipment or component parts or accessories thereof not manufactured by Seller.
3. Seller makes no representation regarding compliance with any state, provincial, or local law, rules, regulations, building code or ordinance relating to the installation or operation of the Equipment.
4. If the Purchaser informs the Seller of a defect after the Warranty Period has expired, then Seller may offer advice (free of charge) and may offer repair or replacement at Purchaser's expense. Any dispute as to whether a defect is covered by the Warranty shall be immediately referred to an expert to be agreed by Seller and Purchaser whose decision shall be final and binding upon the parties.
5. There are no third party beneficiaries of the Warranty granted by Seller.

WARRANTY OF OTHER MANUFACTURER'S PRODUCTS

Seller makes no warranties or representations of any kind whatsoever, either expressed, implied or statutory on any component parts or accessories sold hereunder not manufactured by Seller. Seller hereby extends the manufacturer's warranty or guaranties, if any, given to Seller by the manufacturer of said component parts and accessories, but only to the extent Seller is able to enforce such warranty or guaranties. Seller does not guaranty warranties of other manufacturers' products. Claims under any manufacturer's warranty shall be made in accordance with the manufacturer's requirements regarding the return, repair or replacement of the goods. Seller agrees to use its best efforts and cooperate with Purchaser in enforcing claims against manufacturer(s) for defects that may occur. Seller has not authorized any party to make any representation or warranty other than the above warranty statements.

WARRANTY- TERMS AND CONDITIONS OF SALE

CONFLICTING LAW

Some jurisdictions provide rights in addition to those listed above, or do not allow the exclusion or limitation of implied warranties, or liability for incidental or consequential damages. If any provision or part of a provision of these terms is found to be illegal, invalid or unenforceable under any applicable law, such provision or part of a provision shall, insofar as it is severable from the remaining terms, be deemed omitted from these terms and shall in no way affect the legality, validity or enforceability of the remaining terms.

SPECIAL PROVISIONS

1. The Products nor the parts sold hereunder are designed or manufactured for use in or with any atomic installation or activity. If the Purchaser or the ultimate user of the Products or parts intends to use the Products or parts in such an installation or activity, the Seller's Terms for Nuclear Sales shall be a part of this Contract. The Seller will furnish the Purchaser with a copy of its Terms for Nuclear Sales upon request.
2. Purchaser understands and agrees that the Products may be subject to export and other foreign trade controls restricting resales and/or transfers to other countries and parties, including, but not limited to, licensing requirements under applicable laws and regulations of the United States (together, "Trade Control Laws"). Purchaser shall not export, re-export, transfer, or otherwise dispose of the Products directly or indirectly, except as permitted by applicable Trade Control Laws. Purchaser shall not do anything that would cause the Seller or its affiliates to be in breach of applicable Trade Control Laws. Furthermore, Purchaser shall protect, indemnify and hold harmless the Seller and its affiliates from any fines, damages, costs, losses, liabilities, penalties, and expenses incurred by the Seller as a result of Purchaser's failure to comply with this clause.
3. Data Privacy. Purchaser understands and agrees that certain of the Products include technology that allows Seller to collect technical and product-related information regarding such Products and to conduct remote diagnostics testing of such Products. This technology allows Seller to better serve and assist Purchaser in the event such Products need to be repaired, and to maintain and improve the Products. Purchaser agrees to grant and hereby grants Seller a transferable, sub-licensable, non-exclusive, non-revocable, worldwide right to access and use the data collected and processed by the technology for Seller's business purposes, including analysis, research, and development. In addition, Seller may share such information with its affiliates, subsidiaries, and service providers; and with third parties but only in an aggregate, de-identified format, with third parties for research, statistical and business purposes unless otherwise agreed to or in accordance with the applicable privacy policy. To the extent that Seller receives any individually identifiable personal information regarding Purchaser from such technology, Seller's policy is to protect the confidentiality of such information, and to prohibit the unlawful disclosure of Purchaser's personal information to third parties. Seller will take reasonable steps to insure the safety of Purchaser's personal information.



DUMP



BULKTRANSFER



SNOW & ICE



REFUSE & WASTE



REFUSE & WASTE



OIL & GAS

Product Catalog: AIR DRIVE-100

Revision Date: 10-30-2025

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