



FORCE America Inc.

ULTRAKOOL Operator's Manual

FORCE America UK8-50-12VDC-BTC-SS Operator's Manual



ULTRA KOOL



The High Performance, Compact Cooling System

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Warranty Disclaimer

Seller warrants that any goods sold by Seller to Buyer shall be free from defects in material and workmanship for a period of one (1) year from the date of delivery. THIS WARRANTY SHALL BE THE SOLE AND EXCLUSIVE WARRANTY MADE BY SELLER TO BUYER. SELLER HEREBY DISCLAIMS ANY IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

UK4 - 20 - 12VDC - FRM - AL - XX



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UK8-50-12VDC-BTC-SS – Bill of Materials

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1010279	WELDMENT, RES-8, ULTRAKOOL SS	1
2	1010286	CRADLE, ULTRAKOOL SS	1
3	1010287	COOLER MOUNT, ULTRAKOOL SS	1
4	1010290	PANEL, PERFORATED LEFT	1
5	1010291	PANEL, PERFORATED RIGHT	1
6	1010293	BRACKET, FRAME MOUNTING	2
7	1010489	WELDMENT, PANEL, TOP/END	1
8	1010557	1/4"-20 X 3/4" HHCS, 18-8 STAINLESS	14
9	1010558	3/8"-16 X 1-1/4" HHCS, 18-8 STAINLESS	4
10	1010559	1/4-20 NYLOCK HEX NUT, GRD 5, ZINC	7
11	1010560	3/8"-16 NYLON-INSERT HEX LOCK NUT, 18-8 STAINLESS	4
12	1010689	BRACKET, FRAME CLAMP	2
13	1010690	ANGLE, FRAME CLAMP	2
14	1010746	ASSEMBLY, TUBE, ULTRAKOOL SS	1
15	1010751	PUSH-IN HIGH-TEMP GROMMET, 1/2" ID, 1-1/16" OD, 13/16" HOLE	2
16	1010773	HARNESS, MAIN, COOLER, WP VERSION, 144"	1
17	1010799	3/8" STAINLESS STEEL WASHER	8
18	1010801	1/4"-20 X 1" HHCS, 18-8 STAINLESS	7
19	1011613	DECAL, ULTRA KOOL	1
20	1011760	WELDMENT, DIFFUSER, 1-1/2 NPT THREAD	1
21	1011765	1/2" SCREW SIZE FLAT WASHER, STEEL	20
22	1013967	FITTING STRAIGHT -20 MJIC / -20 MORB	1
23	1014335	FITTING 90 DEG -20 MJIC / -20 MORB	1
24	1015084	3/8"-16 X 3/4" HHCS, 18-8 STAINLESS	4
25	1015115	#12-14 X 1" SELF DRILLING SCREW, HEX WASHER HEAD, ZINC	6
26	1028135	RAISED FILLER BREATHER	1
27	1030846	1 NPT SQUARE HEAD PLUG	1
28	1067982	PLUG, MAGNETIC SQUARE HEAD, 3/4"-14 NPTF, STL	1
29	1068870	1/4" FLAT WASHER, GENERAL PURPOSE, 18-8 STAINLESS	28

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30	1079063	16277DC-12 COOLER W/12V FAN	1
31	1086823	0-60 PSI BYPASS GAUGE - 1/8 NPT	1
32	1090319	GASKET, TR/TS FILTER, REPLACES O-RING	1
33	1090446	TANK MOUNTED FILTER W/ELEMENT ENDURAGUARD	1
34	1096207	1/2"-13 X 1-1/2" HHCS, GR8, ZINC	4
35	1096208	1/2"-13 X 2" HHCS, GR8, ZINC	4
36	1096210	1/2"-13 NYLON-INSERT HEX LOCK NUT, GR8, ZINC	12
37	1097650	ISOLATOR, BONDED BUSHING & SNUBBER, 250LBS/IN SPRING RATE	4
38	1102641	5" SIGHT/TEMP GAUGE, M12X1.75, PLASTIC GUARD	1
39	1112688	1/2"-13 X 3-1/2" HHCS, GR8, ZINC	4
40	1121158	1/2" SCREW SIZE FENDER WASHER, 1.50" OD, 0.125" THICK, ZINC	4
41	1122300	PP, PLATE, SPACER, STL	4

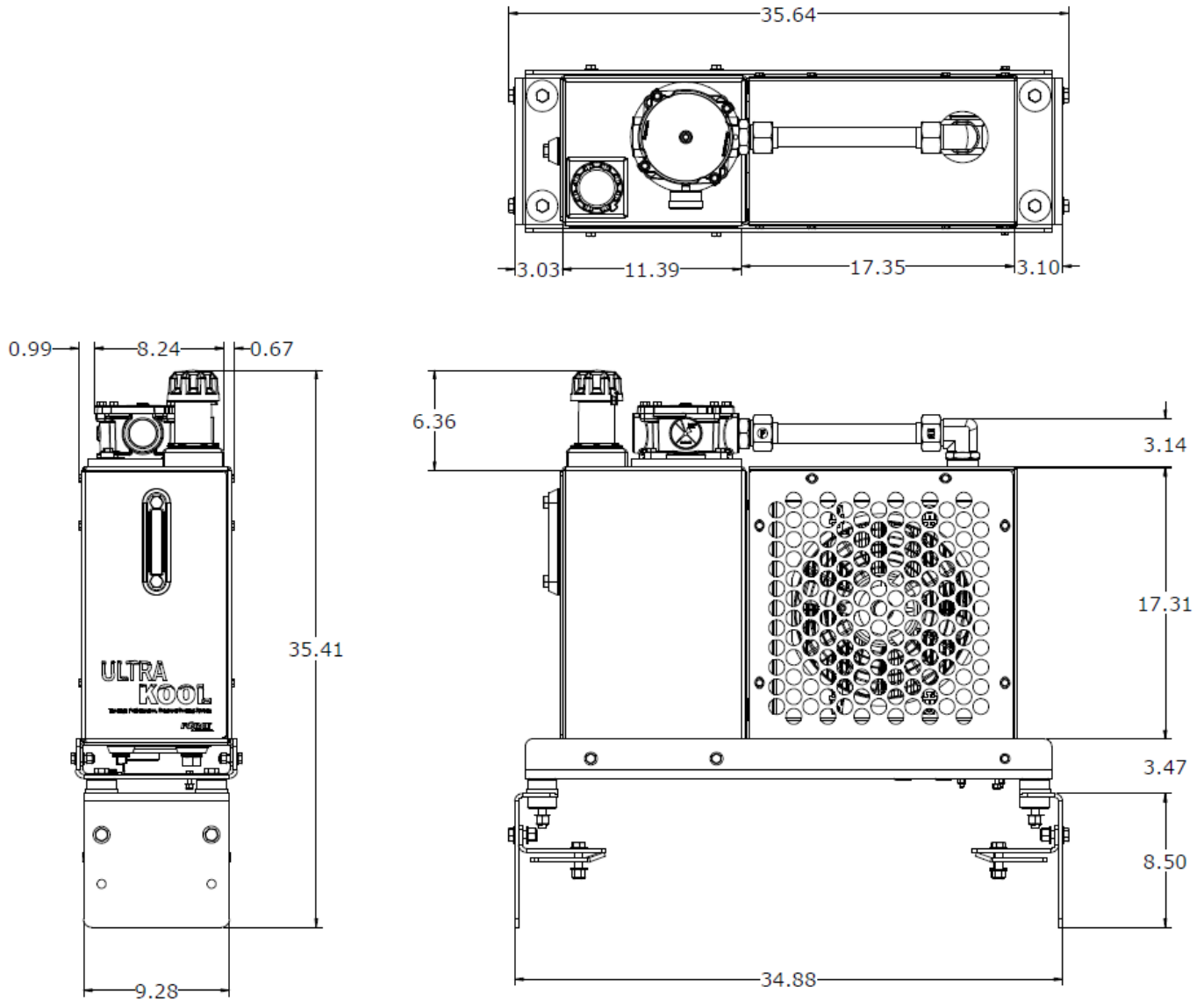
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UK8-50-12VDC-BTC-SS – Dimensions



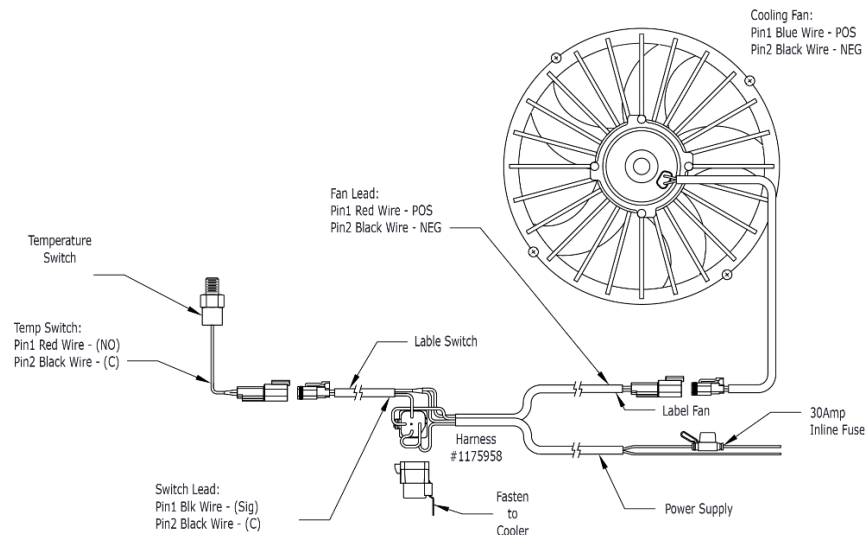
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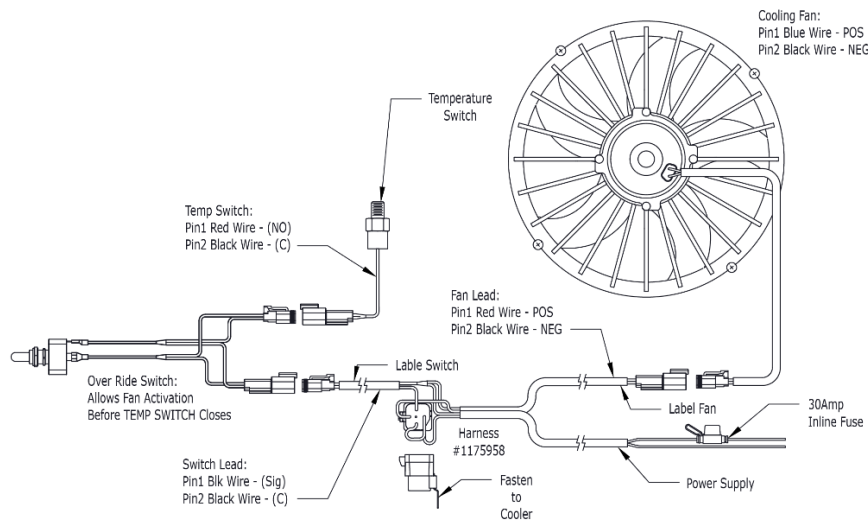
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UK8-50-12VDC-BTC-SS – Electrical Start Options



Temperature Switch Fan Activation



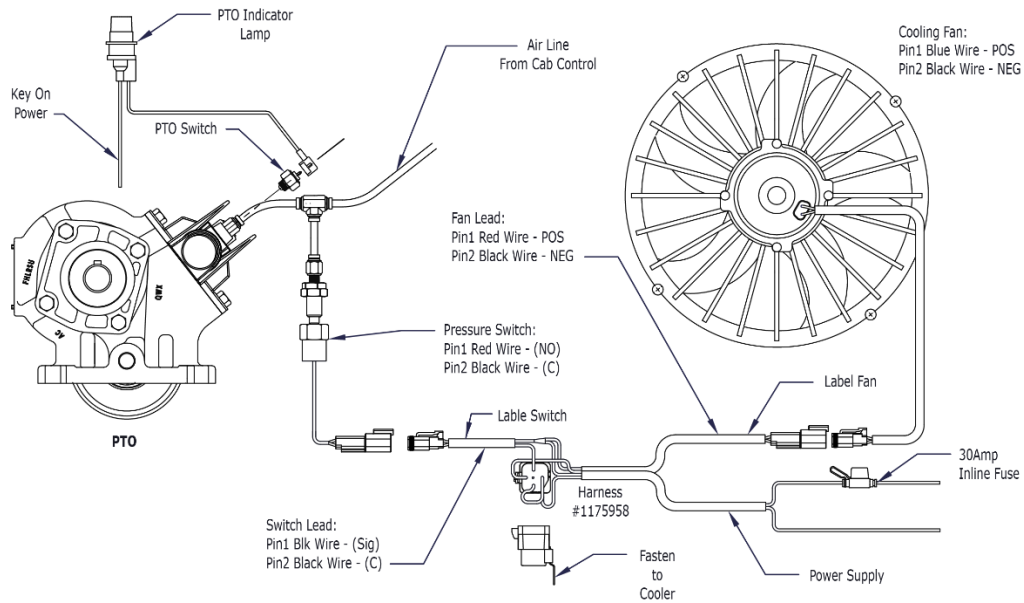
Temperature Switch Fan Activation W/Override

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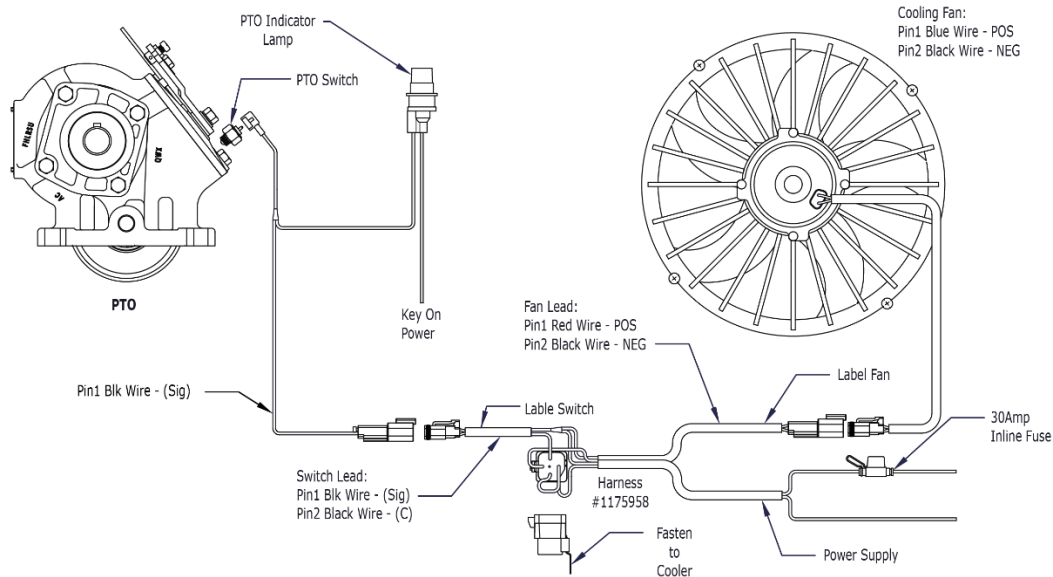
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Air Shift PTO Fan Activation



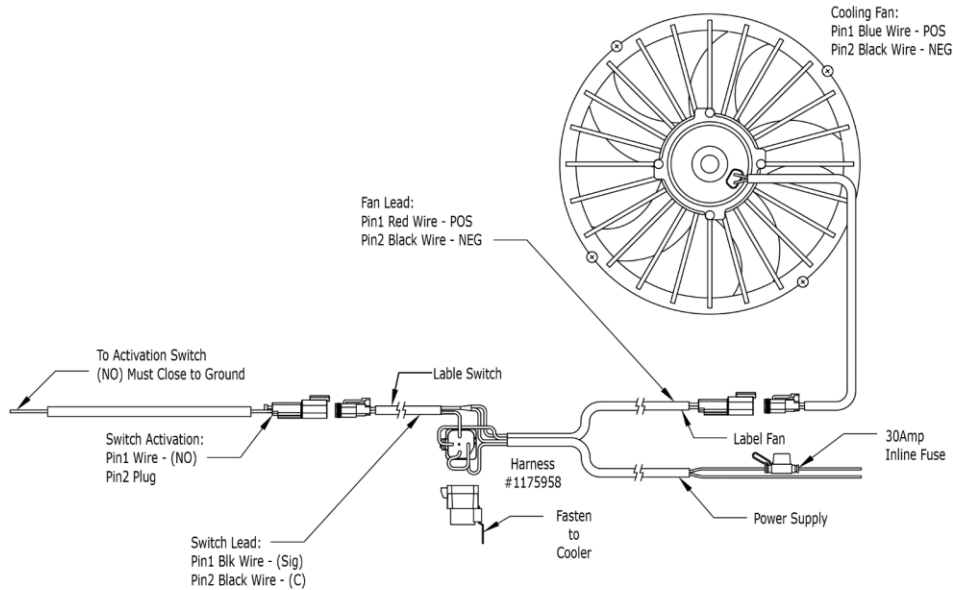
Cable Shift PTO Fan Activation

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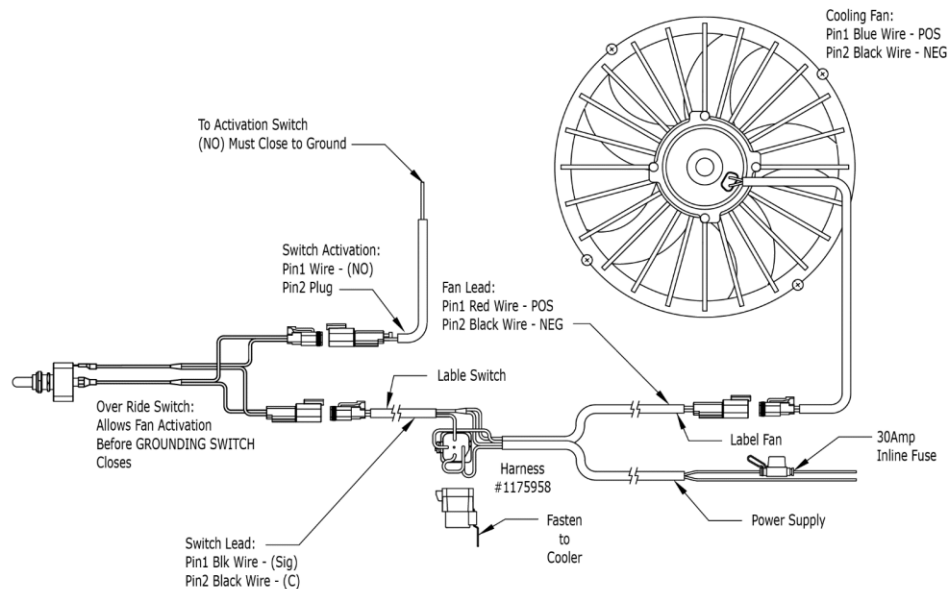
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Grounding Switch Fan Activation



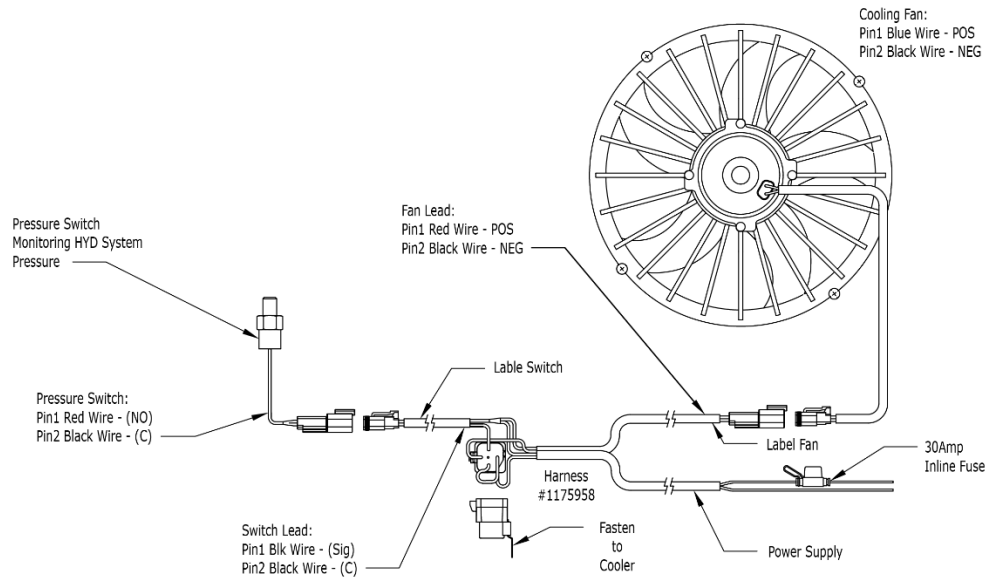
Grounding Switch Fan Activation W/Override

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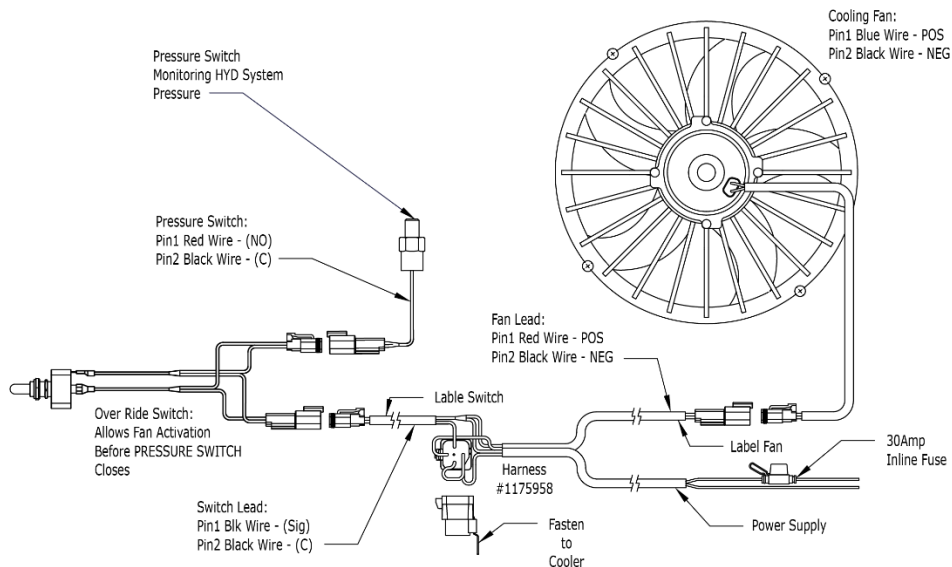
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Pressure Switch Fan Activation



Pressure Switch Fan Activation W/Override

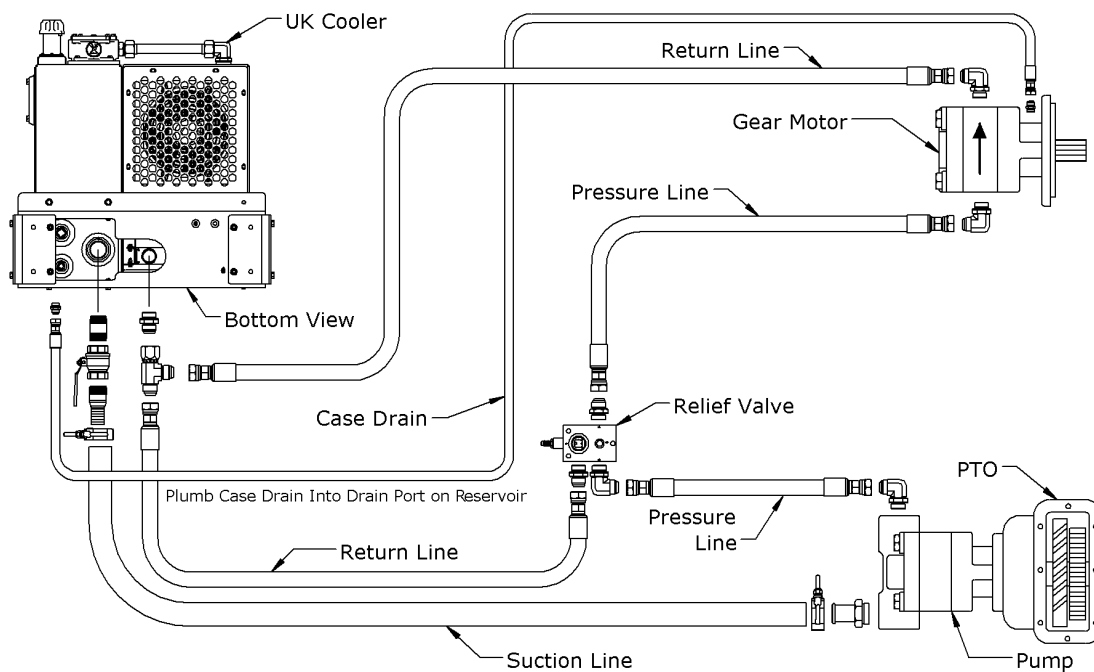
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UK8-50-12VDC-BTC-SS – Typical Plumbing Layout



UK8-50-12VDC-BTC-SS – Startup Procedure Steps

1. Mount unit to truck chassis.
2. Plumb all hydraulic lines per plumbing diagrams and application diagrams.
3. Fill Reservoir to the high end of the sight gauge.
4. Engage PTO at low RPM levels.
5. Continually add oil to make sure oil level stays visible within the sight gauge.
6. After oil level stays steady check for leaks and repair before continuing.
7. Verify fan operation for either hydraulic or electric fans.
8. Slowly increase PTO speed to get desired pump RPMs.
9. Run system until oil gets to temp (electric) and verify oil is being cooled (both fan types).

Should take roughly 5-10 minutes to verify.

10. Operate all functions of the system to verify the system is properly bled of air.
11. Disengage PTO.
12. System is functional and ready for full operation.

UK8-50-12VDC-BTC-SS – Maintenance Recommendations

General — Look over your Ultra-Kool system before each use to make sure there are no leaks, and all components are good working order.

Oil — Replace every 12 months or sooner depending on operational conditions. Only oil based hydraulic fluids should be used in this system. Please contact FORCE America if you have any questions related to the fluid you'd like to use in your system.

Filters — Replace as indicated by the gauge on the return filter housing. Replacement filter part number can be obtained from the parts breakdown diagram.

Hoses — Replace hoses due to any leaks or a visual inspection revealing abrasions or cracking.

Cooler — Rinse every 3-6 months with low pressure water (under 200 PSI). When used in dirty environments, it is recommended to rinse the cooler more frequently for optimal performance.

UK8-50-12VDC-BTC-SS – Troubleshooting

Cooling — If system is not cooling properly check the following items.

- Clean or rinse the cooler to remove debris
- Check to make sure the fan is engaging and functioning properly
- Check for additional heat coming from relief valves not functioning properly
- Check to make sure you don't have pump cavitation in your system

Noise — If the system is making excessive noise check the following items.

- Fan is engaging and functioning correctly
- Check oil level is in the center of your sight gauge
- Make sure all bolts are securely fastened on the unit

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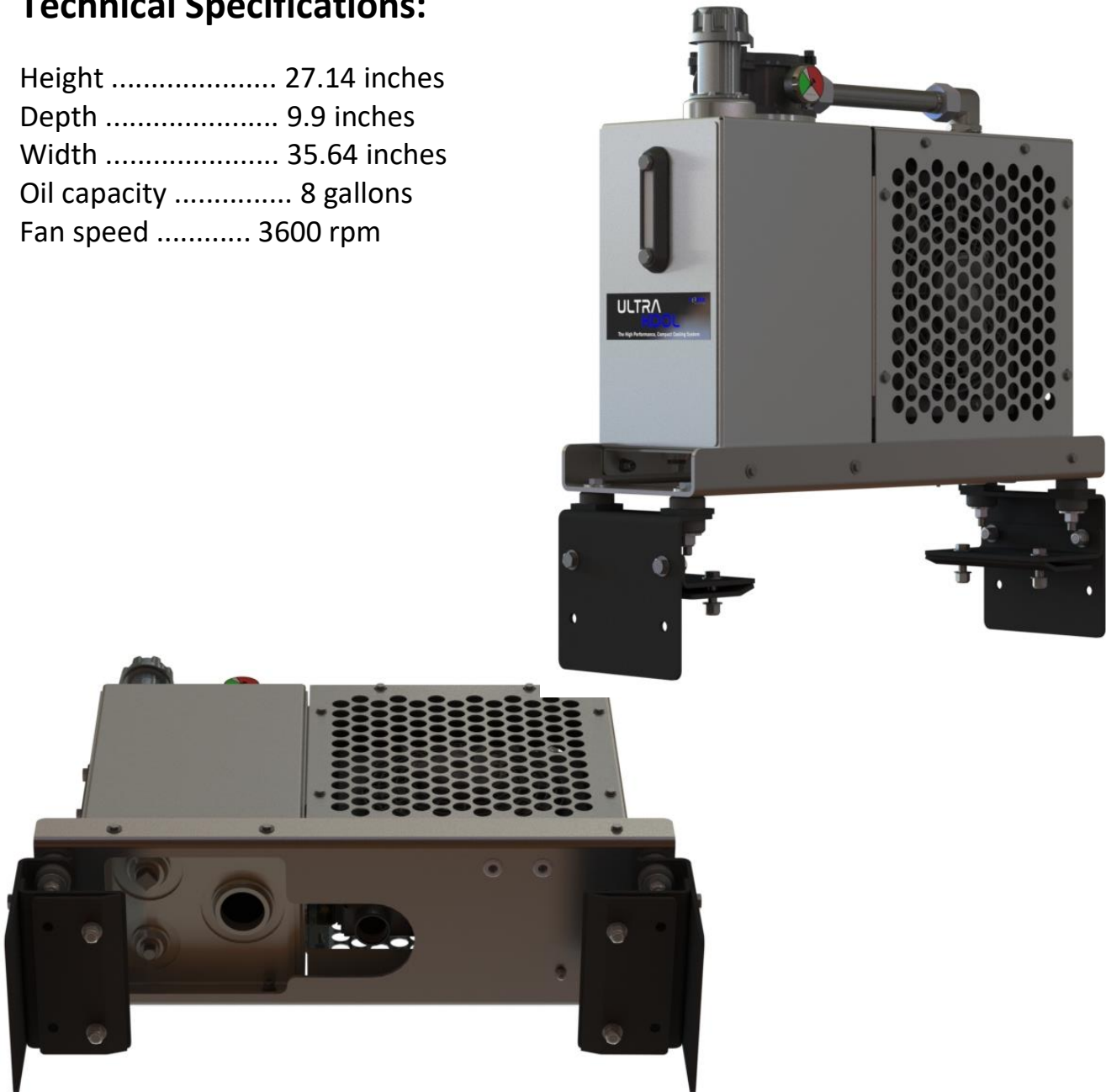
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UK8-50-12VDC-BTC-SS – Product Information

Technical Specifications:

Height 27.14 inches
Depth 9.9 inches
Width 35.64 inches
Oil capacity 8 gallons
Fan speed 3600 rpm



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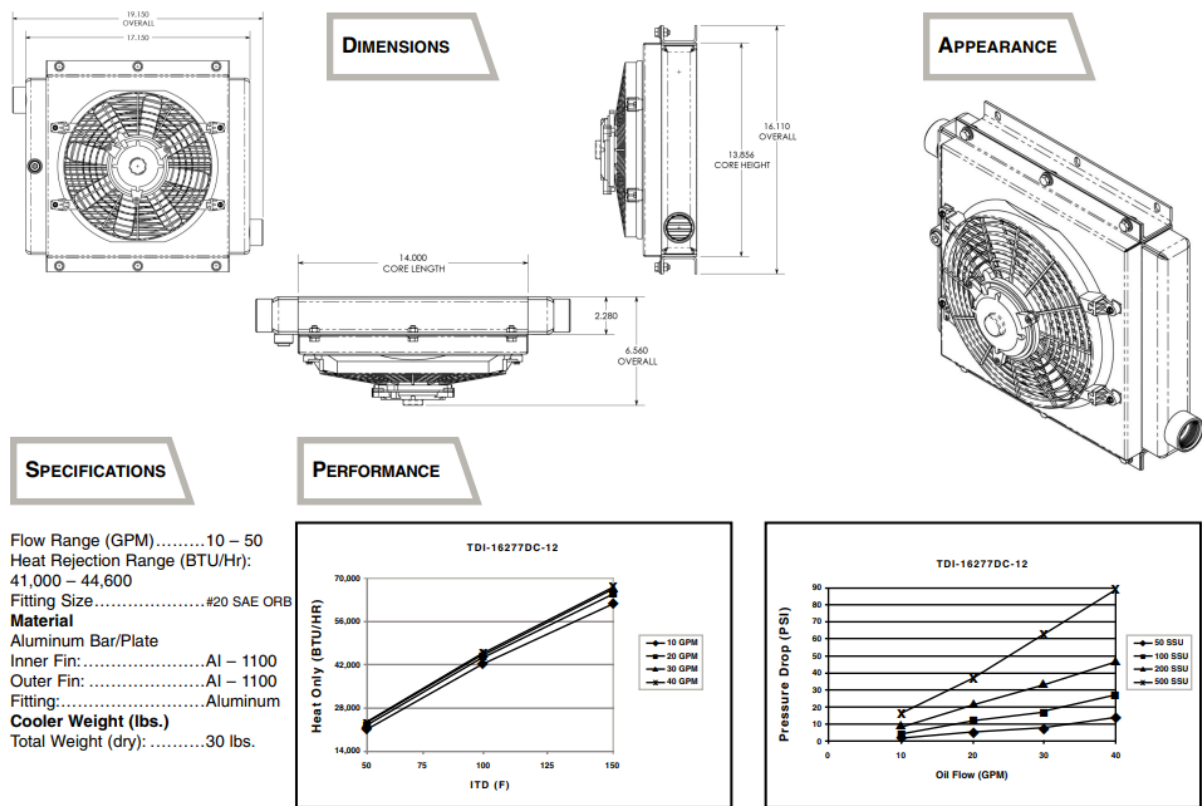
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TDI-16277DC – Hydraulic Cooler Specifications

TDI-16277DC

TDI Thermal
Dynamics
International



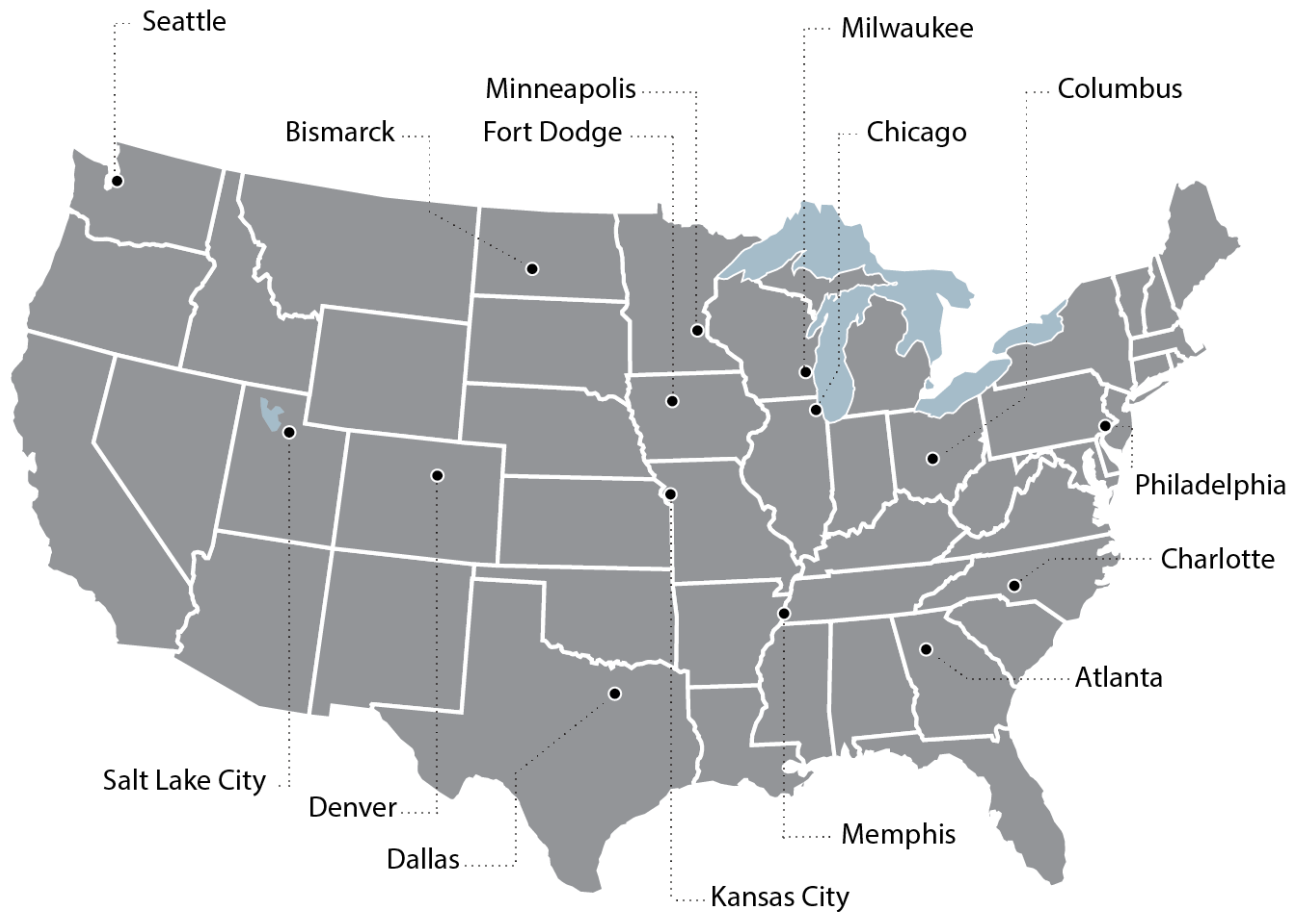
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Contact Us



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Dallas, Texas	800-893-7225
Denver, Colorado	888-833-7711
Fort Dodge, Iowa	800-362-2994

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Philadelphia, Pennsylvania	800-492-6621
Salt Lake City, Utah	877-230-0505
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