

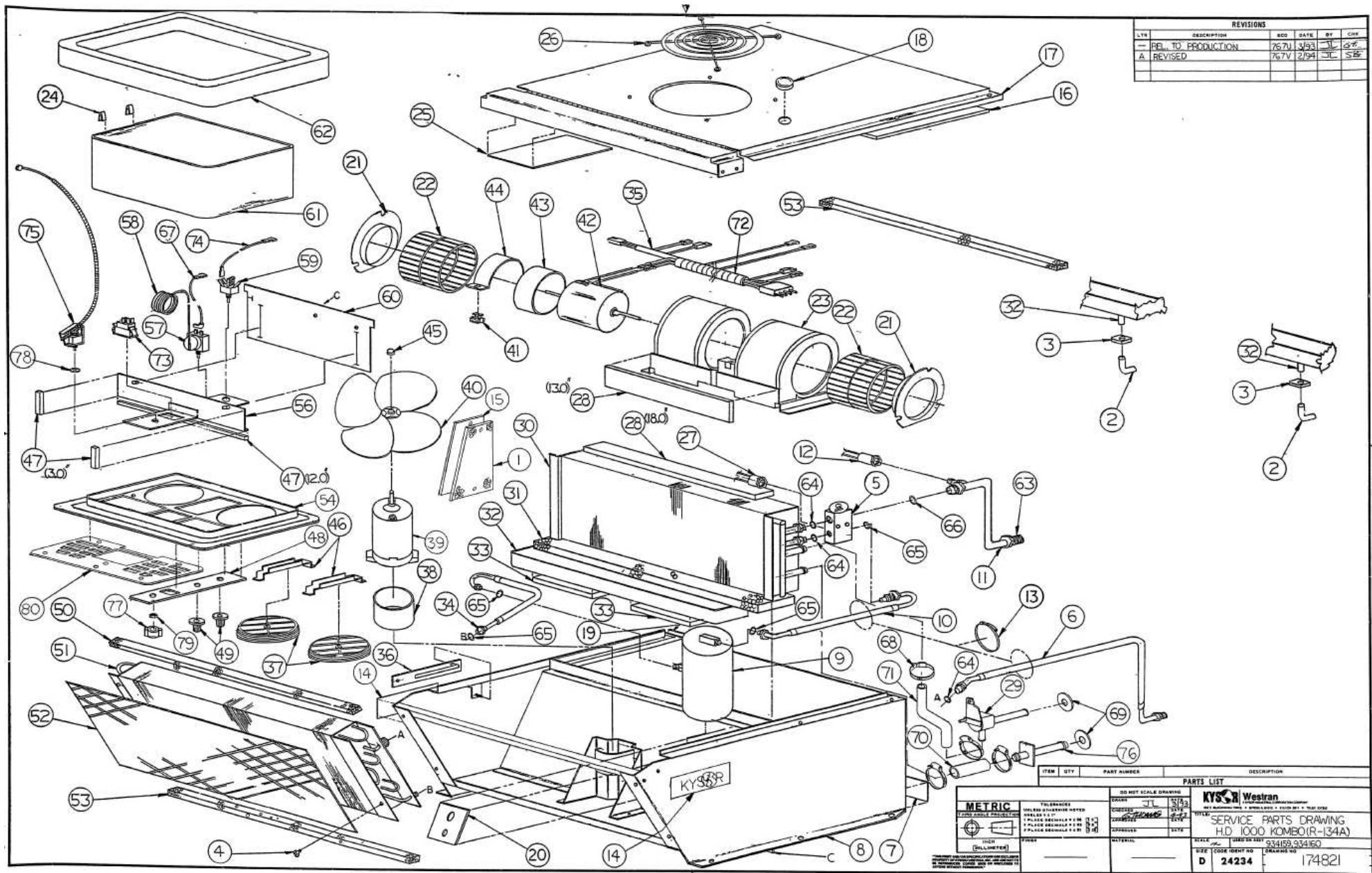
HVAC Systems for Commercial Vehicles...

Products that Perform.

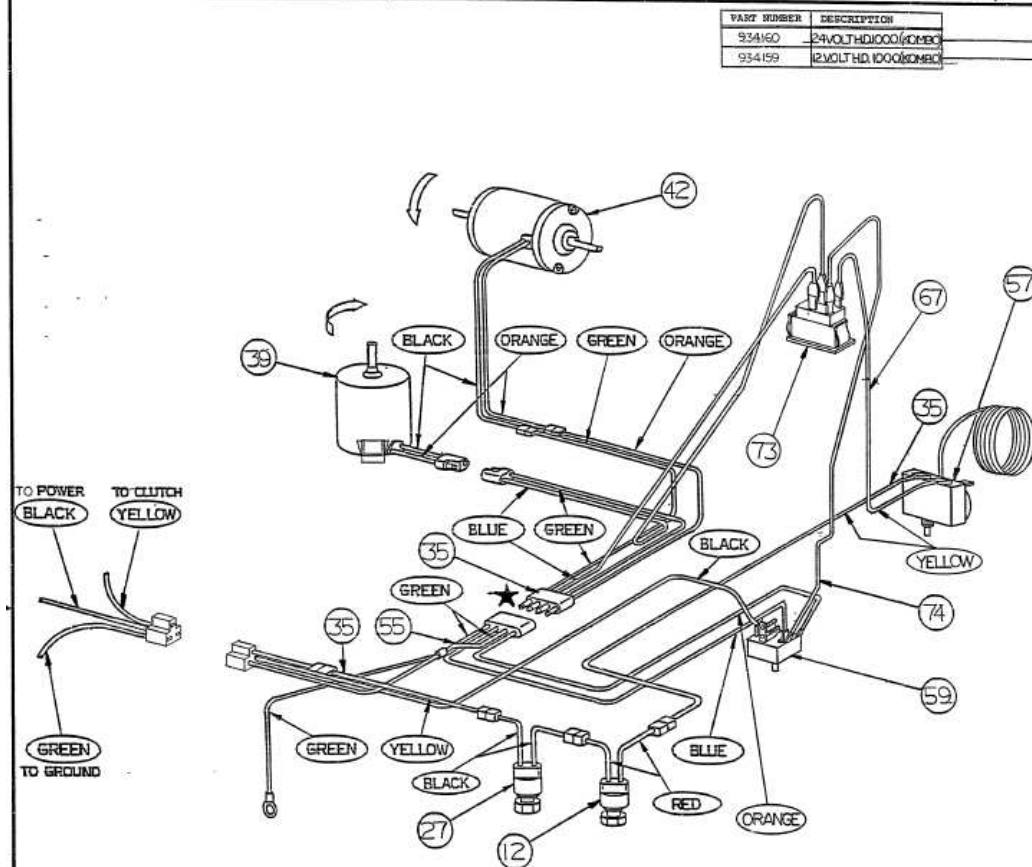
Exploded View Proprietary Drawings HD1000 Kombo



934159 - 934160 • HD1000 Kombo (continued)



934159 - 934160 • HD1000 Kombo (continued)



WIRING DIAGRAM

★ NOTE:

DIAGRAM SHOWN WIRE FOR NEGATIVE GROUND
VEHICLES ——— FOR POSITIVE GROUND VEHICLES
REVERSE 4-WAY CONNECTOR SO THAT BLUE IS TO
GREEN & ORANGE IS TO GREEN.



PART NUMBER	DESCRIPTION
934160	24VOLT HD 1000/10MB
934159	12VOLT HD 1000/10MB

REVISIONS					
LTR	DESCRIPTION	ECO	DATE	BY	CHK
—	REL. TO PROD.	767U	3/93	JL	GTS
A	REVISED	767V	2/94	JL	SB

	ITEM	QTY	PART NUMBER	DESCRIPTION
X	X	46	2	513988 LOWER BRACKET
X	X	47	1.5 ft	352700 URETHANE P.S. (1)12.0" (2)3.0"
X	X	48	1	34230 CONTROL DECAL
X	X	49	2	380089 ROTARY KNOB
X	X	50	2.0 ft	351755 SPONGE
X	X	51	1	401080 CONDENSER COIL
X	X	52	1	513998 GRILLE
X	X	53	4.0 ft	505900 SPONGE GASKETS (2)24"
X	X	54	1	516750 AIR TRANSFER CHAMBER WELDMENT
X	X	55	1	222448 WIRE ADDRESS
X	X	56	1	514565 TRANSFER CONTROL WELDMENT
X	X	57	1	404028 THERMOSTAT
X	X	58	1.33 ft	360243 INSULATION TUBING
X	X	59	1	220300 SWITCH 12V
X	X	60	1	220268 SWITCH 24V
X	X	60	1	354692 CHAMBER PLATE SEAL
X	X	61	1	300551 RUBBER BOOT
X	X	62	1	354195 GASKET
X	X	63	1	406807 TUBE & FITTING ASSY
X	X	64	3	300442 O-RING #8
X	X	65	4	300448 O-RING #6
X	X	66	2	300441 O-RING #10
X	X	67	1	222434 WIRE ASSEMBLY
X	X	68	4	290304 CLAMP
X	X	69	2	300581 FLEXIBLE GROMMET
X	X	70	50 ft	320000 HOSE (1) 6.0"
X	X	71	1	323033 FORMED HOSE
X	X	72	1	300696 WIRE COVER
X	X	73	1	221164 TIPPETTE SWITCH
X	X	74	1	222435 WIRE ASSEMBLY
X	X	75	1	250155 CONTROL ASSEMBLY
X	X	76	1	405796 TUBE ASSEMBLY
X	X	77	1	380074 KNOB
X	X	78	1	202500 WASHER, CONTROL
X	X	79	1	203894 NUT, CONTROL 7/16-20
X	X	80	1	516757 GRILLE

	ITEM	QTY	PART NUMBER	DESCRIPTION	
X	X	1	2	35580	SEAL - COVER
X	X	2	2	360790	ELBOW
X	X	3	2	355034	DRAIN SEAL GASKET
X	X	4	4	201047	SCREW - TRUSS HEAD
X	X	5	1	404364	BLOCK VALVE
X	X	6	1	403491	#8 CRIMPED ROSE ASSY
X	X	7	1	340958	I.D. PLATE
X	X	8	1	516748	CASE WELDMENT
X	X	9	1	402527	RECEIVER DRIVER
X	X	10	1	403489	#6 CRIMPED ROSE ASSY
X	X	11	1.0ft	300506	INSULATION TUBE
X	X	12	1	404161	LO PRESSURE SWITCH
X	X	13	1	360113	PLASTIC TIE
X	X	14	2	342625	KYSOR LOGO
X	X	15	1	516761	COVER
X	X	16	1	355032	COVER SEAL GASKET
X	X	17	1	513959	COVER WELDMENT
X	X	18	1	360313	CAP PLUG
X	X	19	1	514032	FRESH AIR COVER PLATE
X	X	20	1	355033	TUBE SEAL GASKET
X	X	21	2	513845	FOIL
X	X	22	2	360480	BLOWER WHEEL
X	X	23	1	513966	BLOWER WELDMENT
X	X	24	16	290215	CLIP
X	X	25	1	342288	WIRE DIAGRAM DECAL
X	X	26	1	513958	GRILLE, FAN GUARD
X	X	27	1	404081	HI PRESSURE SWITCH
X	X	28	2.5ft	352200	URETHANE P.S. (1)18.0" (1)13.0"
X	X	29	1	173089	WATER VALVE
X	X	30	1	400065	EVAPORATOR/HEATER COIL
X	X	31	1.7ft	355097	FOAM
X	X	32	1	516351	DRAIN PAN WELDMENT
X	X	33	1.0ft	353500	URETHANE P.S. (2)6.0"
X	X	34	1	403490	#6 CRIMPED ROSE ASSY
X	X	35	1	222436	WIRE HARNESS
X	X	36	1	513974	COVER SUPPORT BRACKET
X	X	37	2	360157	LOUVER
X	X	38	1	300242	MOTOR INSULATOR
X		39	1	275365	MOTOR 12V
X			1	275865	MOTOR 24V
X	X	40	1	285600	FAN
X	X	41	1	203300	CAGE NUT
X		42	1	275156	MOTOR 12V
X			1	275356	MOTOR 24V
X	X	43	1	300242	MOTOR INSULATOR
X	X	44	1	507920	MOTOR STRAP
X	X	45	1	360306	CAP (VINYL)

SHEET 1 OF 2

ITEM		QTY	PART NUMBER	DESCRIPTION	
				PARTS LIST	
DO NOT SCALE DRAWING					
		TOL. DIMENSIONS UNLESS OTHERWISE NOTED DECIMALS TO 0.0005 IN FRACTIONS TO 1/32 IN 1/16 IN 1/8 IN 1/4 IN 3/8 IN 1/2 IN 5/8 IN 3/4 IN 7/8 IN 1 IN		DRAWN CHECKED DESIGNED APPROVED DATE	
INCH (1/16 IN)		FINISH		TITLE SERVICE PARTS DRAWING H.D. 1000 KOMBO (P-134A)	
		MATERIAL		SCALE 1/4" = 1"	
				E.D. CODE IDENT NO. DRAWING NO.	
				24234 93459 334160 174821	

THIS DRAWING REFERS TO KYSOR PACKAGE NO. 934159 & 934160

934159 - 934160 • HD1000 Kombo (continued)

NOTES:

I. NOMINAL PERFORMANCE AT 14.0 VOLTS

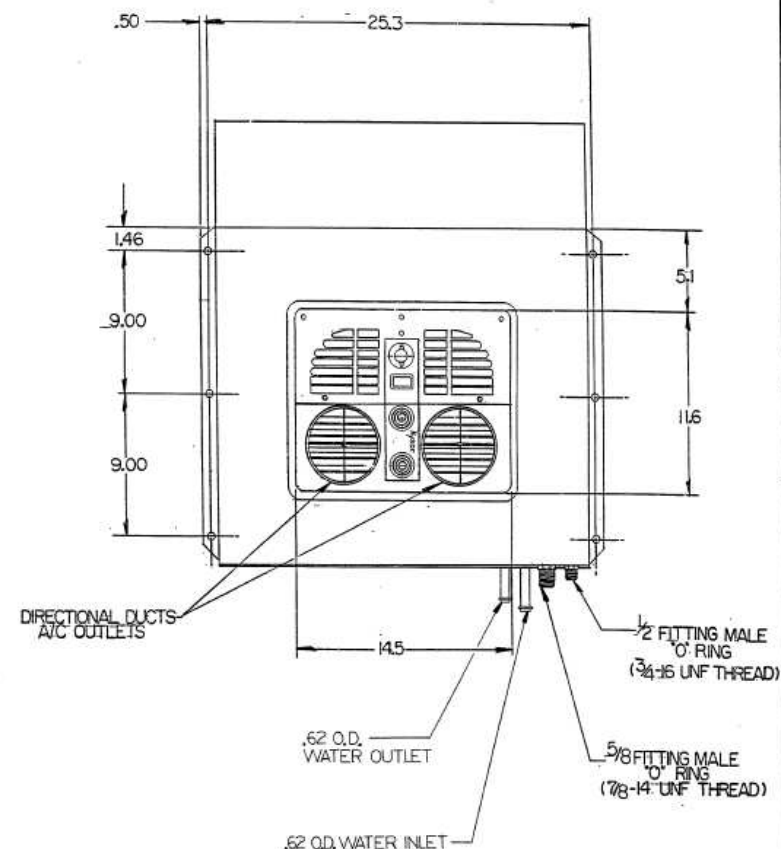
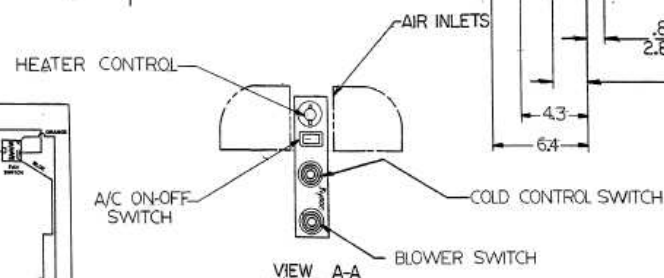
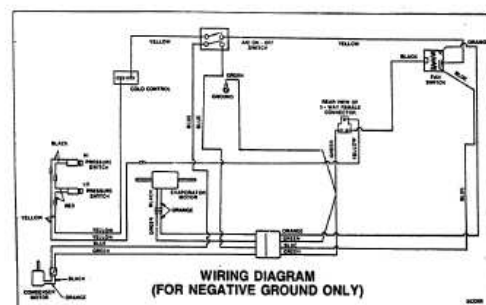
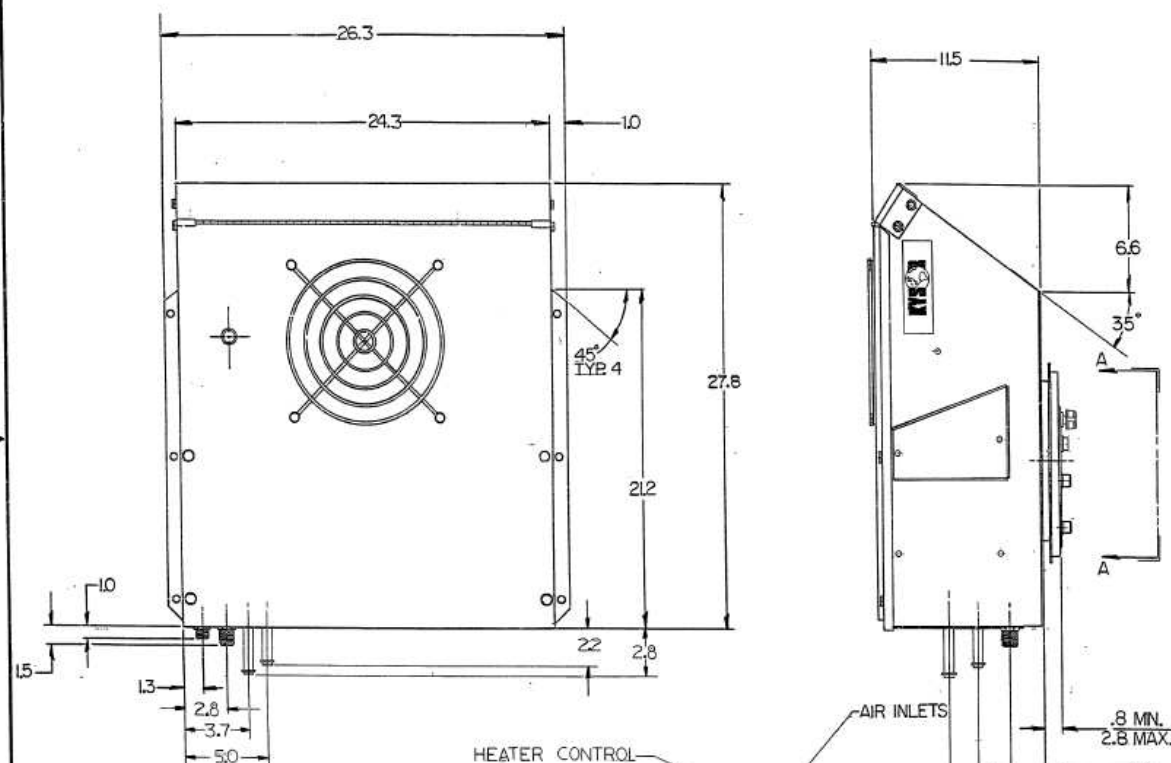
COOLING: 16100 ± 500 BTU/HR. AT 90°F DB/75°F WB; 25 PSIG EVAPORATOR SUCTION
PRESSURE; 100° AIR INTO CONDENSER, AND 0 IN. W.G.

AIR FLOW: 264±15 SCFM

POWER: 25.5±1 AMPS AT 14 VOLTS

HEATING: 28800 \pm 500 BTU/HR. AT 180°F TEMPERATURE DIFFERENTIAL

REVISIONS					
LTR	DESCRIPTION	ECO	DATE	BY	CHK
—	RELEASE TO PRODUCTION	757E	11/88	JL	DJ
A	ADDED 934159 & 934160	767U	3/93	JL	GT
B	REVISED	767V	2/94	JL	SR



ITEM		QTY	PART NUMBER	DESCRIPTION
				PARTS LIST
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>METRIC</p> <p>UNLESS OTHERWISE NOTED</p> <p>USE SI UNITS</p> <p>1/8" = 3.175 mm</p> <p>1/4" = 6.35 mm</p> <p>3/8" = 9.525 mm</p> <p>1/2" = 12.7 mm</p> <p>5/8" = 15.875 mm</p> <p>3/4" = 19.05 mm</p> <p>7/8" = 22.225 mm</p> <p>1" = 25.4 mm</p> <p>1 1/8" = 29.525 mm</p> <p>1 1/4" = 31.75 mm</p> <p>1 3/8" = 34.925 mm</p> <p>1 1/2" = 38.1 mm</p> <p>1 3/4" = 41.275 mm</p> <p>2" = 50.8 mm</p> <p>2 1/4" = 60.325 mm</p> <p>3" = 76.2 mm</p> <p>4" = 101.6 mm</p> <p>6" = 152.4 mm</p> <p>8" = 203.2 mm</p> <p>10" = 254 mm</p> <p>12" = 304.8 mm</p> <p>14" = 354.3 mm</p> <p>16" = 406.4 mm</p> <p>18" = 457.2 mm</p> <p>20" = 508 mm</p> <p>22" = 558.8 mm</p> <p>24" = 609.6 mm</p> <p>26" = 660.4 mm</p> <p>28" = 711.2 mm</p> <p>30" = 762 mm</p> <p>32" = 812.8 mm</p> <p>34" = 863.6 mm</p> <p>36" = 914.4 mm</p> <p>38" = 965.2 mm</p> <p>40" = 1016 mm</p> <p>42" = 1066.8 mm</p> <p>44" = 1117.6 mm</p> <p>46" = 1168.4 mm</p> <p>48" = 1219.2 mm</p> <p>50" = 1270 mm</p> <p>52" = 1320.8 mm</p> <p>54" = 1371.6 mm</p> <p>56" = 1422.4 mm</p> <p>58" = 1473.2 mm</p> <p>60" = 1524 mm</p> <p>62" = 1574.8 mm</p> <p>64" = 1625.6 mm</p> <p>66" = 1676.4 mm</p> <p>68" = 1727.2 mm</p> <p>70" = 1778 mm</p> <p>72" = 1828.8 mm</p> <p>74" = 1879.6 mm</p> <p>76" = 1930.4 mm</p> <p>78" = 1981.2 mm</p> <p>80" = 2032 mm</p> <p>82" = 2082.8 mm</p> <p>84" = 2133.6 mm</p> <p>86" = 2184.4 mm</p> <p>88" = 2235.2 mm</p> <p>90" = 2286 mm</p> <p>92" = 2336.8 mm</p> <p>94" = 2387.6 mm</p> <p>96" = 2438.4 mm</p> <p>98" = 2489.2 mm</p> <p>100" = 2540 mm</p> <p>102" = 2590.8 mm</p> <p>104" = 2641.6 mm</p> <p>106" = 2692.4 mm</p> <p>108" = 2743.2 mm</p> <p>110" = 2794 mm</p> <p>112" = 2844.8 mm</p> <p>114" = 2895.6 mm</p> <p>116" = 2946.4 mm</p> <p>118" = 2997.2 mm</p> <p>120" = 3048 mm</p> <p>122" = 3098.8 mm</p> <p>124" = 3149.6 mm</p> <p>126" = 3200.4 mm</p> <p>128" = 3251.2 mm</p> <p>130" = 3302 mm</p> <p>132" = 3352.8 mm</p> <p>134" = 3403.6 mm</p> <p>136" = 3454.4 mm</p> <p>138" = 3505.2 mm</p> <p>140" = 3556 mm</p> <p>142" = 3606.8 mm</p> <p>144" = 3657.6 mm</p> <p>146" = 3708.4 mm</p> <p>148" = 3759.2 mm</p> <p>150" = 3810 mm</p> <p>152" = 3860.8 mm</p> <p>154" = 3911.6 mm</p> <p>156" = 3962.4 mm</p> <p>158" = 4013.2 mm</p> <p>160" = 4064 mm</p> <p>162" = 4114.8 mm</p> <p>164" = 4165.6 mm</p> <p>166" = 4216.4 mm</p> <p>168" = 4267.2 mm</p> <p>170" = 4318 mm</p> <p>172" = 4368.8 mm</p> <p>174" = 4419.6 mm</p> <p>176" = 4470.4 mm</p> <p>178" = 4521.2 mm</p> <p>180" = 4572 mm</p> <p>182" = 4622.8 mm</p> <p>184" = 4673.6 mm</p> <p>186" = 4724.4 mm</p> <p>188" = 4775.2 mm</p> <p>190" = 4826 mm</p> <p>192" = 4876.8 mm</p> <p>194" = 4927.6 mm</p> <p>196" = 4978.4 mm</p> <p>198" = 5029.2 mm</p> <p>200" = 5080 mm</p> <p>202" = 5130.8 mm</p> <p>204" = 5181.6 mm</p> <p>206" = 5232.4 mm</p> <p>208" = 5283.2 mm</p> <p>210" = 5334 mm</p> <p>212" = 5384.8 mm</p> <p>214" = 5435.6 mm</p> <p>216" = 5486.4 mm</p> <p>218" = 5537.2 mm</p> <p>220" = 5588 mm</p> <p>222" = 5638.8 mm</p> <p>224" = 5689.6 mm</p> <p>226" = 5740.4 mm</p> <p>228" = 5791.2 mm</p> <p>230" = 5842 mm</p> <p>232" = 5892.8 mm</p> <p>234" = 5943.6 mm</p> <p>236" = 5994.4 mm</p> <p>238" = 6045.2 mm</p> <p>240" = 6096 mm</p> <p>242" = 6146.8 mm</p> <p>244" = 6197.6 mm</p> <p>246" = 6248.4 mm</p> <p>248" = 6299.2 mm</p> <p>250" = 6350 mm</p> <p>252" = 6400.8 mm</p> <p>254" = 6451.6 mm</p> <p>256" = 6502.4 mm</p> <p>258" = 6553.2 mm</p> <p>260" = 6604 mm</p> <p>262" = 6654.8 mm</p> <p>264" = 6705.6 mm</p> <p>266" = 6756.4 mm</p> <p>268" = 6807.2 mm</p> <p>270" = 6858 mm</p> <p>272" = 6908.8 mm</p> <p>274" = 6959.6 mm</p> <p>276" = 7010.4 mm</p> <p>278" = 7061.2 mm</p> <p>280" = 7112 mm</p> <p>282" = 7162.8 mm</p> <p>284" = 7213.6 mm</p> <p>286" = 7264.4 mm</p> <p>288" = 7315.2 mm</p> <p>290" = 7366 mm</p> <p>292" = 7416.8 mm</p> <p>294" = 7467.6 mm</p> <p>296" = 7518.4 mm</p> <p>298" = 7569.2 mm</p> <p>300" = 7620 mm</p> <p>302" = 7670.8 mm</p> <p>304" = 7721.6 mm</p> <p>306" = 7772.4 mm</p> <p>308" = 7823.2 mm</p> <p>310" = 7874 mm</p> <p>312" = 7924.8 mm</p> <p>314" = 7975.6 mm</p> <p>316" = 8026.4 mm</p> <p>318" = 8077.2 mm</p> <p>320" = 8128 mm</p> <p>322" = 8178.8 mm</p> <p>324" = 8229.6 mm</p> <p>326" = 8280.4 mm</p> <p>328" = 8331.2 mm</p> <p>330" = 8382 mm</p> <p>332" = 8432.8 mm</p> <p>334" = 8483.6 mm</p> <p>336" = 8534.4 mm</p> <p>338" = 8585.2 mm</p> <p>340" = 8636 mm</p> <p>342" = 8686.8 mm</p> <p>344" = 8737.6 mm</p> <p>346" = 8788.4 mm</p> <p>348" = 8839.2 mm</p> <p>350" = 8890 mm</p> <p>352" = 8940.8 mm</p> <p>354" = 8991.6 mm</p> <p>356" = 9042.4 mm</p> <p>358" = 9093.2 mm</p> <p>360" = 9144 mm</p> <p>362" = 9194.8 mm</p> <p>364" = 9245.6 mm</p> <p>366" = 9296.4 mm</p> <p>368" = 9347.2 mm</p> <p>370" = 9398 mm</p> <p>372" = 9448.8 mm</p> <p>374" = 9499.6 mm</p> <p>376" = 9550.4 mm</p> <p>378" = 9601.2 mm</p> <p>380" = 9652 mm</p> <p>382" = 9702.8 mm</p> <p>384" = 9753.6 mm</p> <p>386" = 9804.4 mm</p> <p>388" = 9855.2 mm</p> <p>390" = 9906 mm</p> <p>392" = 9956.8 mm</p> <p>394" = 10007.6 mm</p> <p>396" = 10058.4 mm</p> <p>398" = 10109.2 mm</p> <p>400" = 10160 mm</p> <p>402" = 10210.8 mm</p></div></div>				

THIS DRAWING REFERS TO KYSOR PACKAGES 934115, 934116, 934159, 934160

INSTALLATION INSTRUCTIONS
HD 1000 HEAVY DUTY R-134A ROOFTOP KOMBO OR A/C ONLY
342557

- NOTE:**
1. Read instructions carefully.
 2. If vehicle is to be used at highway speeds, an additional relay will be necessary to prevent reverse current flow caused by windmilling of condenser fan.

Installation Procedure

1. Install compressor brackets, pulley and accessory hardware per instructions in Adapter Kit.
2. Roof Unit Mounting.
 - A. Remove cab roof liner, if applicable.
 - B. Lay out template 342125 on top of roof. Be sure the unit will clear lights and accessories mounted to cab roof and ceiling. Mark mounting hole locations and drill six (6) 13/32" mounting holes.
 - C. Mark the position for air transfer chamber and cut hole.
 - D. If applicable, install roof liner, trace outline of opening in roof on the liner. Remove roof liner and cut out opening traced.
 - E. Clean dust, dirt and metal burrs from around air transfer chamber opening and mounting holes.
 - F. Place unit on roof top temporarily to verify that mounting bolts and transfer chamber are aligned correctly with holes cut in roof.
 - G. Remove unit.
 - H. Clean the roof surface approximately 1½" around transfer chamber opening. Wipe seal ring on unit with a clean dry cloth to remove dust and dirt.
 - I. Mount unit as in step (F) and tighten mounting bolts. An incomplete seal (gaps or loose appearance) is a result of improperly tightened mounting bolts. Maximum compression of seal ring should not exceed ¾". Use sealant around bolt holes.

Issue Date: 1-31-94

Installation Instructions – 342557
HD 1000 Heavy Duty R-134a Roof Top Kombo or A/C Only
Page 2

3. Wiring Installation.
 - A. Cut a small hole through rubber boot close to roof at rear of air chamber opening. This hole should be large enough for the three (3) wires of the harness.
 - B. Insert the three (3) wires through the hole and insert terminals into connector. Care should be taken to ensure that wire color coding relationship is maintained.

NOTE: Cabs without roof liner, route wires through hole in rear of air chamber.
4. Air Chamber Assembly Installation.
 - A. Install roof liner if applicable. Hold roof liner in normal position. Trim rubber boot level with roof liner or roof. Loosen the two (2) wing nuts inside rear of air chamber opening allowing control panel to drop down to bottom of adjustment.
 - B. Hold air chamber in position and determine position for control panel so that air chamber will be tight against roof liner or roof.

NOTE: Make sure that clip on air chamber is behind the control plate.

Tighten wing nuts when air chamber is in proper position. Attach air chamber and grille to control plate as shown.
5. Hose Kit Installation.
 - A. Attach refrigerant hoses to air conditioner connections on unit and route down rear and under cab to compressor.
 - B. Attach heater hoses to heater connections on unit and route down rear and under cab to water connections on engine (Kombo only).
 - C. Attach hoses to vehicle with clamps located approximately two (2) feet apart and where required to keep hoses away from hot spots and sharp objects.

NOTE: On tilt cab installations, always route refrigerant and heater hoses to the cab pivot point and then on to the compressor and water connections of hose, to prevent tearing of hose, breaking of service valves, and destruction of hose due to laying on hot spots of engine. Check routing with cab up and down to ensure proper routing.

 - D. On refrigerant hoses with crimp fittings, after routing and determining proper hose lengths, cut to length using a sharp knife.

934159 - 934160 • HD1000 Kombo (continued)

Installation Instructions – 342557

HD 1000 Heavy Duty R-134a Roof Top Kombo or A/C Only

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NOTE: Do not use a saw of any type. Push fitting into hose, crimp per manufacturer's instructions.

- E. Use hose clamps to attach heater hoses to unit and water connections on engine (Kombo only).
- F. Determine desired direction of drainage. Cut drain hose to desired lengths. Attach drain hoses to drain elbows on bottom of unit. Use hose clamps to hold drain hoses in position.

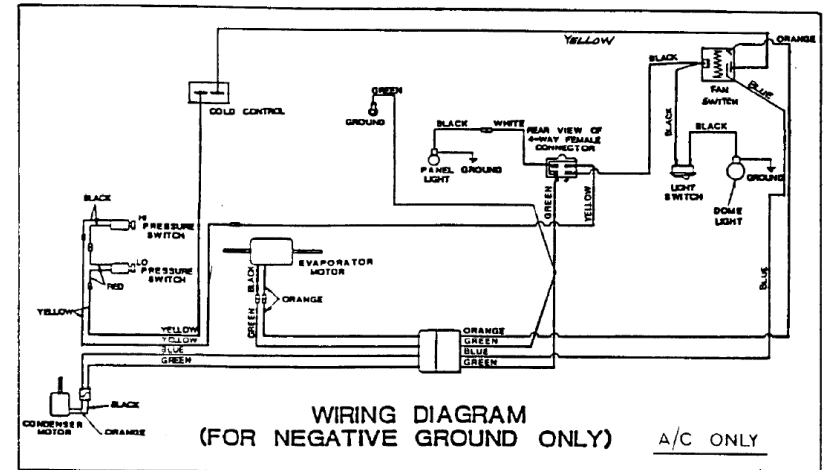
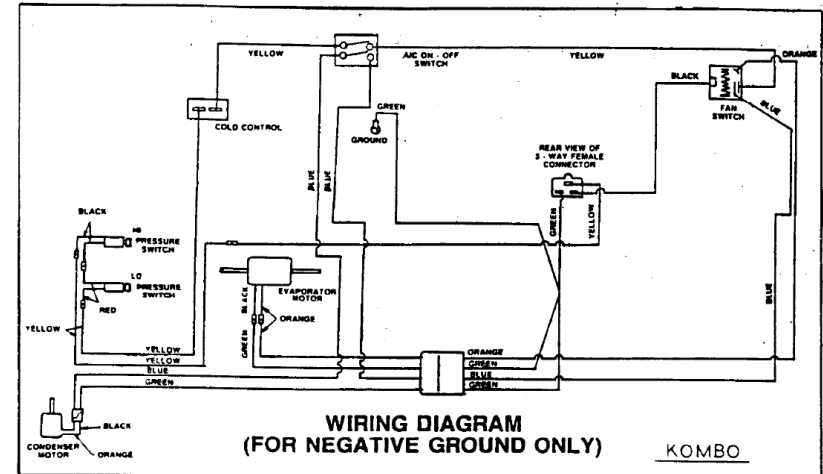
NOTE: Drain hose should be positioned in a direction that will allow unit to drain if vehicle is operated on an incline.

Attach check valves to the ends of drain hoses.

Installation Instructions – 342557

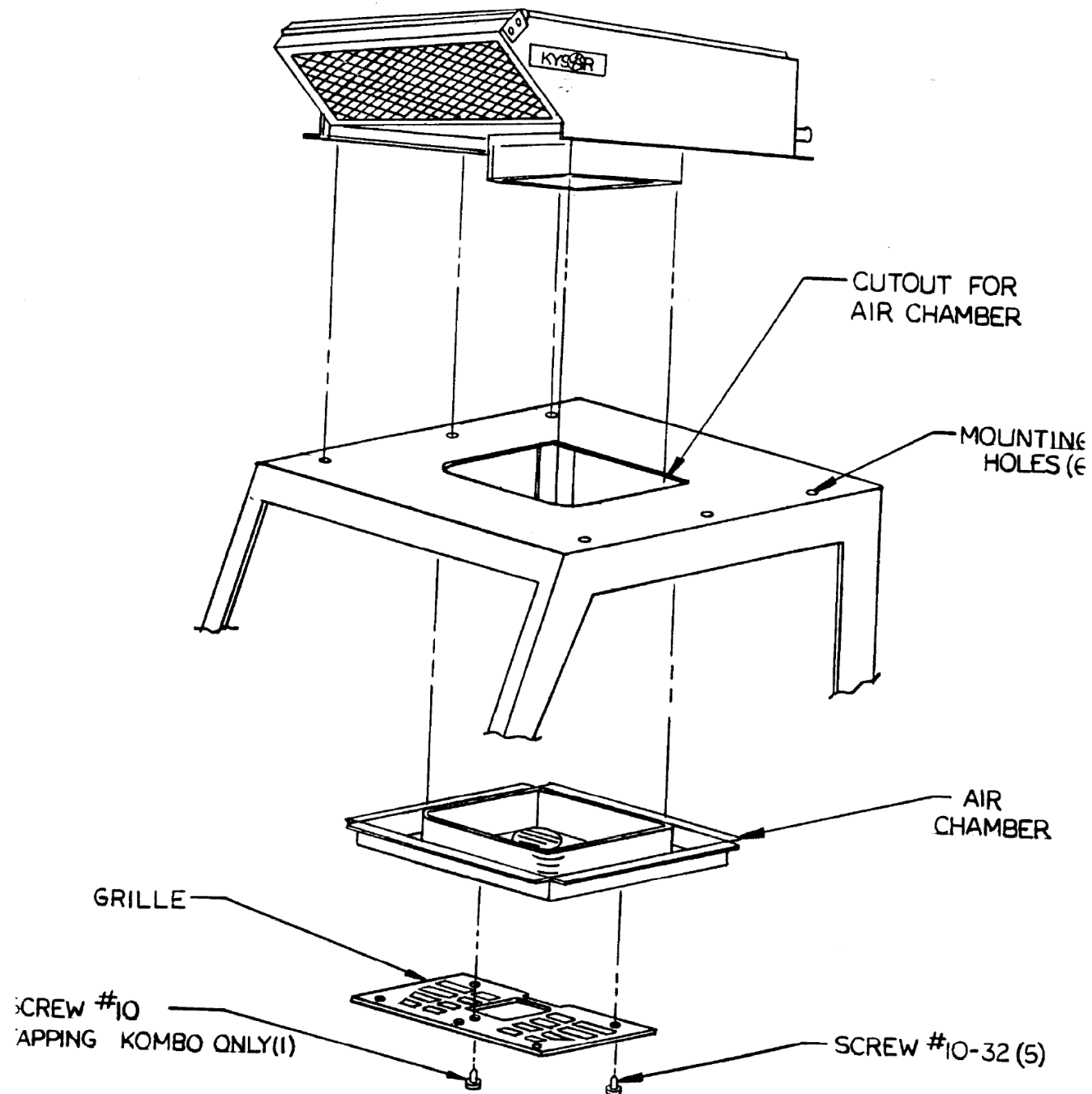
HD 1000 Heavy Duty R-134a Roof Top Kombo or A/C Only

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- NOTES:
1. Diagram shown is for unit factory wired for negative ground system. For positive ground, reverse 4-way connector so that green is to orange and blue to is green.
 2. Unit requires a 30 amp fuse or circuit breaker for 12 volt system and 15 amp for 24 volt.
 3. Fan switch must be "ON" to get power to temperature control switch and clutch.

934159 - 934160 • HD1000 Kombo (continued)



934159 - 934160 • HD1000 Kombo (continued)

