

ON ROAD

R-2810 SIDEWALL/BACKWALL**Heater/Air Conditioner Unit****TRUCKS • MOTOR HOMES •
VANS • REFUSE**

The compact, low profile design of the R-2810 allows an out of the way ceiling mount in virtually any vehicle. The high output of ice cold air blowing down from above is the ultimate in driver comfort.

The R-2810 can be installed facing any direction that best suits the particular application. Not only does this air conditioner make a perfect installation in cabs where space is a problem it is also an effective auxiliary cooling unit in vans, motor homes and small delivery vehicles.



HEATER-AC

R-2810 SPECIFICATIONS

BTU'S	Heating – 16,000 BTU's/hr @ 100°F Cooling – 25,000 BTU/Hr @ 36°F
AIR FLOW	345 CFM (587 m³/h)
WEIGHT	61 lbs. (28 kg)
CONTROLS	Three speed blower
MODELS	R-2810-OP (12 VDC), R-2810-O-24P (24 VDC)

R-2810 SYSTEM ORDERING GUIDE

	R12/R-134a	NOTES
UNIT	R-2810-OP R-2810-O-24P	12 VDC – Variable Thermostat 24 VDC – Variable Thermostat
CONDENSER	R-6160 - ROOF MOUNT 77R0650 - RADIATOR MOUNT	See Units Condensers section See 77 Section Condensers section
INSTALLATION KIT	78R1070 78R1027 / RD-5-11864-1P 78R1025	Rooftop Condenser / ATCO version Front mount condenser / E-Z Clip version Front mount condenser / ATCO version
COMPRESSOR	See 75 Series Compressor section	
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications	

ON ROAD

R-5045 BACKWALL**Heater/Air Conditioner Unit****ARMORED CARS • AID CARS •
PERSONNEL CARRIERS**

The R-5045 Series offers the highest capacity of any Red Dot heater and air conditioner package. The R-5045-2 was originally designed for armored cars. Its outstanding performance can be directed to both front and rear compartments through multi-directional louvers. The tremendous capacity of the R-5045 Series makes them ideal for aid cars, delivery trucks, or large box applications. The R-5045 also offers simple service and an evaporator filter.

OPTIONS:**Bulkhead Louver Kit**

RD-3-3133-OP

(-2 models only)

Inline Booster Pressurizer

(-3 models only)

see Filters & Pressurizers section

R-5045 SPECIFICATIONS**BTU'S**

Heating – 46,000 BTU/Hr @ 150°F
(13.5 kW @ 66°C) water to air differential
Cooling – 33,000 BTU/Hr with 36°F
(9.7 kW @ 2.2°C) refrigerant temp. and 80°F
(26.7°C) wet bulb entering air

AIR FLOW

430 CFM (730 m3/h)

WEIGHT

47 lbs. (21 kg)

MOTOR

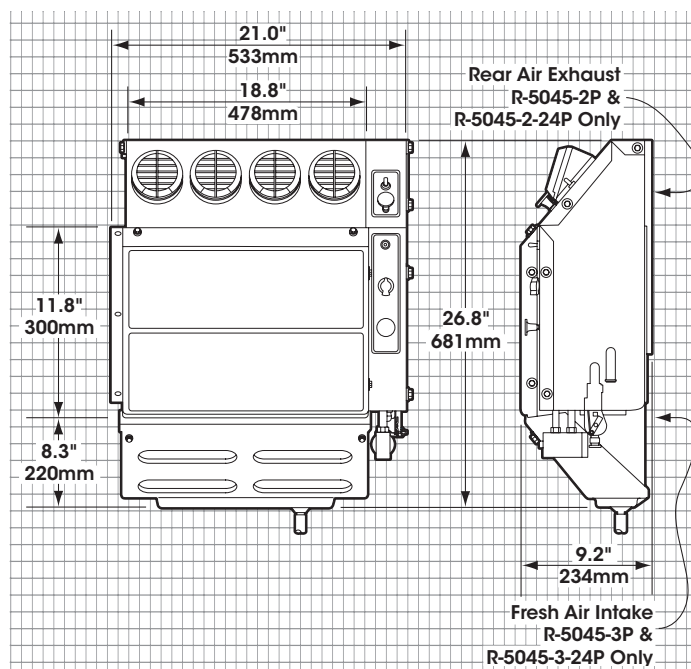
One three-speed

**CURRENT
DRAW**

22.5 amps @ 13.6 VDC
(includes 4 amps for A/C clutch),
11.2 amps @ 27.2 VDC
(includes 2 amps for A/C clutch)

MODELS

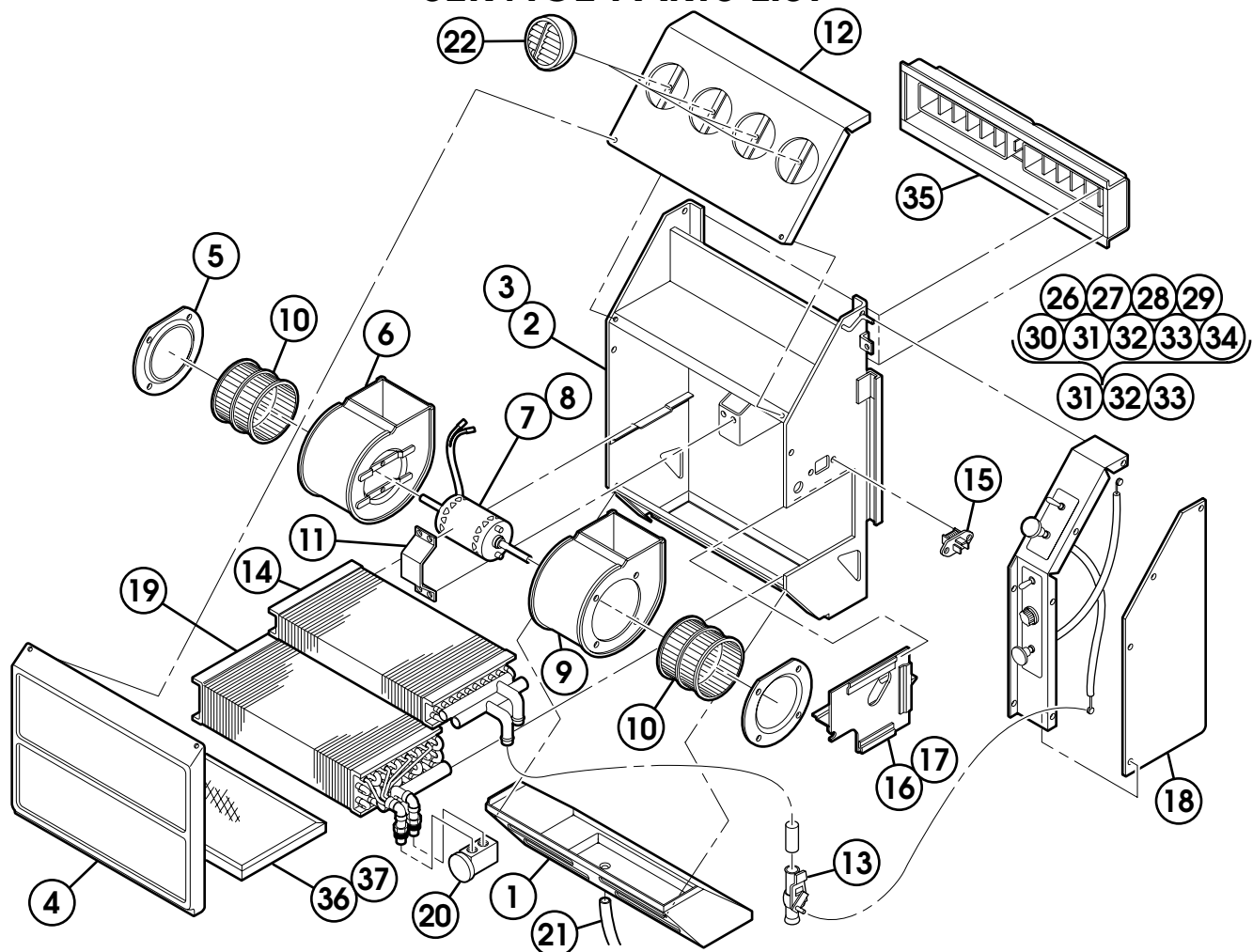
Rear Exhaust – R-5045-2P (12 VDC)
R-5045-2-24P (24 VDC)
Fresh Air Intake – R-5045-3P (12 VDC) **LS**
R-5045-3-24P (24 VDC) **LS**

**R-5045 SYSTEM ORDERING GUIDE**

	R12/R-134a	NOTES
UNIT	R-5045-2P R-5045-2-24P R-5045-3P LS R-5045-3-24P LS	12 VDC - Rear Air Exhaust Outlet 24 VDC - Rear Air Exhaust Outlet 12 VDC - Fresh Air Intake 24 VDC - Fresh Air Intake
CONDENSER	77R0700 - Radiator Mount R-9730 - Remote Mount	See 77 Series Condensers section See Units Condenser section
INSTALLATION KITS	78R1027 / RD-5-11864-1P 78R1025 78R1070	Front mount condenser / E-Z Clip version Front mount condenser / ATCO version Remote mount Condenser / ATCO version
COMPRESSOR	See 75 Series Compressor section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required with CCI and TECUMSEH applications
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications section	
OPTIONS	Replacement Recirc Filter 78R5400	

LS = Limited to stock on hand

SERVICE PARTS LIST



ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO.	ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO.
1		RD-3205-29	AIR INTAKE COVER		20		RD-4157-0	EXPANSION VALVE	
2		RD-3-3122-1	HOUSING ASSY		21		RD-5-3550-24	DRAIN HOSE	71R 8300
3		RD-3-3122-2	HOUSING ASSY		22		RD-5-5223-2	AIR DIFFUSER ASSY (4)	78R 0070
			(R-5045-2 ONLY)		23		RD-3-3130-1	CONTROL PANEL ASSY	72R 3110
4		RD-3-3121-1	CORE COVER ASSY-FRT.		24		RD-3-3130-2	CONTROL PANEL ASSY	
5		RD-3-2592-0	ENTRY RING (2)					(A/C ONLY)	
6		RD-3-2547-0	BLOWER ASSY		25		RD-3-3130-3	CONTROL PANEL ASSY	71R 0400
7		RD-5-5049-0	MOTOR 12V	73R 4322				(R-5045-2 ONLY)	
8		RD-5-5049-24	MOTOR 24V	73R 4324	26		RD-3-5106-1	PANEL - CONTROL	
9		RD-3-2547-1	BLOWER ASSY		27		RD-3-5106-2	PANEL-CONTROL (A/C ONLY)	
10		RD-3-2557-0	BLOWER WHEEL (2)		28	A	RD-5-3646-0	SWITCH-3 SPEED (A/C ONLY)	71R 0200
11		RD-3-3174-0	RETAINER - MOTOR		29		RD-4124-20	CABLE - CONTROL (2)	71R 2250
12		RD-3-3128-0	PANEL ASSY - TOP		30		RD-5-3764-0	NUT - BEZEL (2)	71R 4050
13		RD-5-5300-1	WATER VALVE	72R 5210	31		RD-4123-2	SWITCH - TOGGLE	
14		RD-1-0325-0	HEATER CORE ASSY	76R 3500	32		RD-5-0071-0	SWITCH - TOGGLE	
15		RD-5-3647-0	RESISTOR	71R 1450	33	A	RD-4125-36	THERMOSTAT - VARIABLE	
16		RD-3-3315-0	COVER ASSY-CORE SIDE		34		RD-5-5928-0	KNOB - CONTROL	
17		RD-3-3315-1	COVER ASSY-CORE SIDE		35		RD-3-3133-0	LOUVER ASSY (PURCH. SEP.)	
18		RD-3-3132-1	PLATE ASSY SIDE		36		RD-5-5428-0	FILTER	
19		RD-2-1370-0	EVAPORATOR ASSY		37	A	RD-3-3753-0	CLIP FILTER (2)	

A. NOT SHOWN

ORDERING INFORMATION

ORDER BY MODEL # R-5045-1,2 OR -3 FOR 24 VOLT APPLICATIONS ADD-24 TO MODEL NUMBER.

Additional Cost Items May be needed To Complete System.

1. Condenser-Either Frontal Or Rooftop. See Applications Section of the Red Dot Aftermarket Parts Catalog.
2. Heater Hose & Fittings And General Installation Kit 78R 1000, Including Freon Hose, Fittings and Receiver/Drier.
3. Compressor, Compressor Mounting Brackets, And Clutch. See Applications Section of the Red Dot Aftermarket Parts Catalog.

RED DOT CORPORATION P.O. Box 58270 Seattle, WA 98138 (253) 575-3840

RD-3-3336-0 (REV C)

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R-5075 BACKWALL

Heater/Air Conditioner Unit

CONSTRUCTION • MINING • AGRICULTURE

Using the proven performance characteristics of the R-5045 Series, Red Dot has beefed up this unit with a heavy duty metal housing for off road applications. The R-5075 was specifically designed for application where high capacity is required. This unit offers fresh air intake and can be pressurized.

OPTIONS:

Inline Booster Pressurizers:
see Filters & Pressurizers section

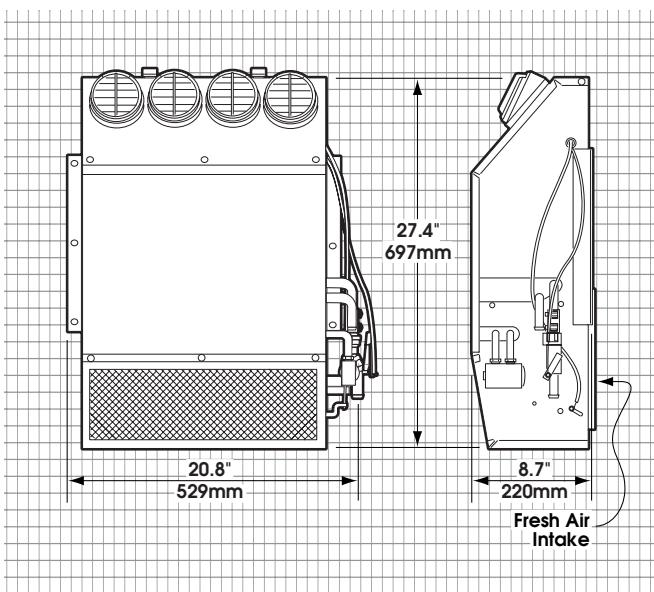


Panel Filter:
78R5150
Replacement Filter:
78R5320



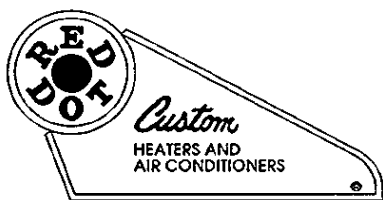
R-5075 SPECIFICATIONS

BTU'S	Heating – 46,000 BTU/Hr @ 150°F (13.5 kW @ 66°C) water to air differential Cooling – 33,000 BTU/Hr with 36°F (9.7 kW w/ 2.2°C) refrigerant temp. and 80°F (26.7°C) wet bulb entering air
AIR FLOW	430 CFM (730 m3/h)
WEIGHT	47 lbs. (21 kg)
MOTOR	One three-speed
CURRENT DRAW	21.8 amps @ 13.6 VDC (includes 4 amps for A/C clutch) 10.9 amps @ 27.2 VDC (includes 2 amps for A/C clutch)
MODELS	R-5075-0P (12 VDC) R-5075-0-24P (24 VDC)



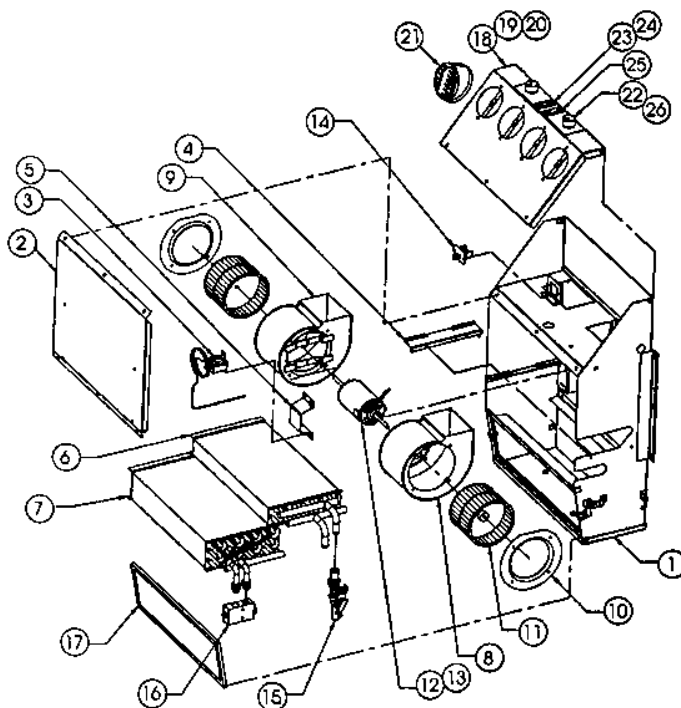
R-5075 SYSTEM ORDERING GUIDE

	R12/R-134a	NOTES
UNIT	R-5075-0P R-5075-0-24P	12 VDC 24 VDC
CONDENSER	77R0700 - Radiator Mount R-9730 - Remote Mount	See 77 Series Condensers section See Units Condensers section
INSTALLATION KITS	78R1027 / RD-5-11864-1P 78R1025 78R1070	Front mount condenser / E-Z Clip version Front mount condenser / ATCO version Remote mount condenser / ATCO version
COMPRESSOR	See 75 Series Compressor section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required with CCI and TECUMSEH applications.
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications section	
OPTIONS	Replacement Recirc Filter Replacement Fresh Air Intake Filter Fresh Air Intake	78R5360 78R5320 78R5150



Heater- Air Conditioner Model R-5075

SERVICE PARTS LIST



ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO	ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO
1		RD-3-7243-0	HOUSING ASSY.		14		RD-5-3647-0	RESISTOR-SPEED CONTROL	71R1450
2		RD-3-7244-0	COVER ASSY-CORE		15		RD-5-7760-0	VALVE-WATER CABLE OPER.	
3		RD-4427-24	THERMOSTAT	71R3100	16		RD-5-6868-0	VALVE-R-134a/R12 CMPTBL71R8300	
4		RD-3-7252-13	RETAINER-CORE		17		RD-5-8076-0	FILTER-AIR 17.5x5.5x.34 THK	
5		RD-3-3174-13	RETAINER-MOTOR		18		RD-3-7254-0	PLENUM ASSY CNTRL PNL, 12 V	
6		RD-1-0325-13	HEATER CORE ASSY	76R3500	19		RD-3-7254-1	PLENUM ASSY-CNTRL PNL, 24 V	
7		RD-2-1370-0	EVAPORATOR CORE ASSY	76R7070	20		RD-3-7255-0	WRAP ASSY-PLENUM	
8		RD-3-2547-0	BLOWER ASSY		21		RD-5-5223-2	AIR DIFFUSER ASSY	
9		RD-3-2547-1	BLOWER ASSY		22		RD-5-8152-27.8	ROTARY ACTUATOR ASSY	
10		RD-3-2592-0	ENTRY RING		23		RD-5-7183-1	SWITCH-MODE OFF-ON-ON 12V	
11		RD-3-2557-0	BLOWER WHEEL	73R7150	24		RD-5-7183-0	SWITCH-MODE OFF-ON-ON 24 V	
12		RD-5-5049-0	MOTOR-12 VOLT	73R4322	25		RD-5-7181-0	SWITCH-RCKR FAN ON-ON-ON	
13		RD-5-5049-24	MOTOR-24 VOLT	73R4324	26		RD-5-8075-0	KNOB-CNTRL DEEP RECES	

A. NOT SHOWN B. HTR-A/C ONLY C. HEATER ONLY

Red Dot Corporation PO Box 88790, Seattle, WA 98138 (425) 251-6897 Fax (425) 251-3934

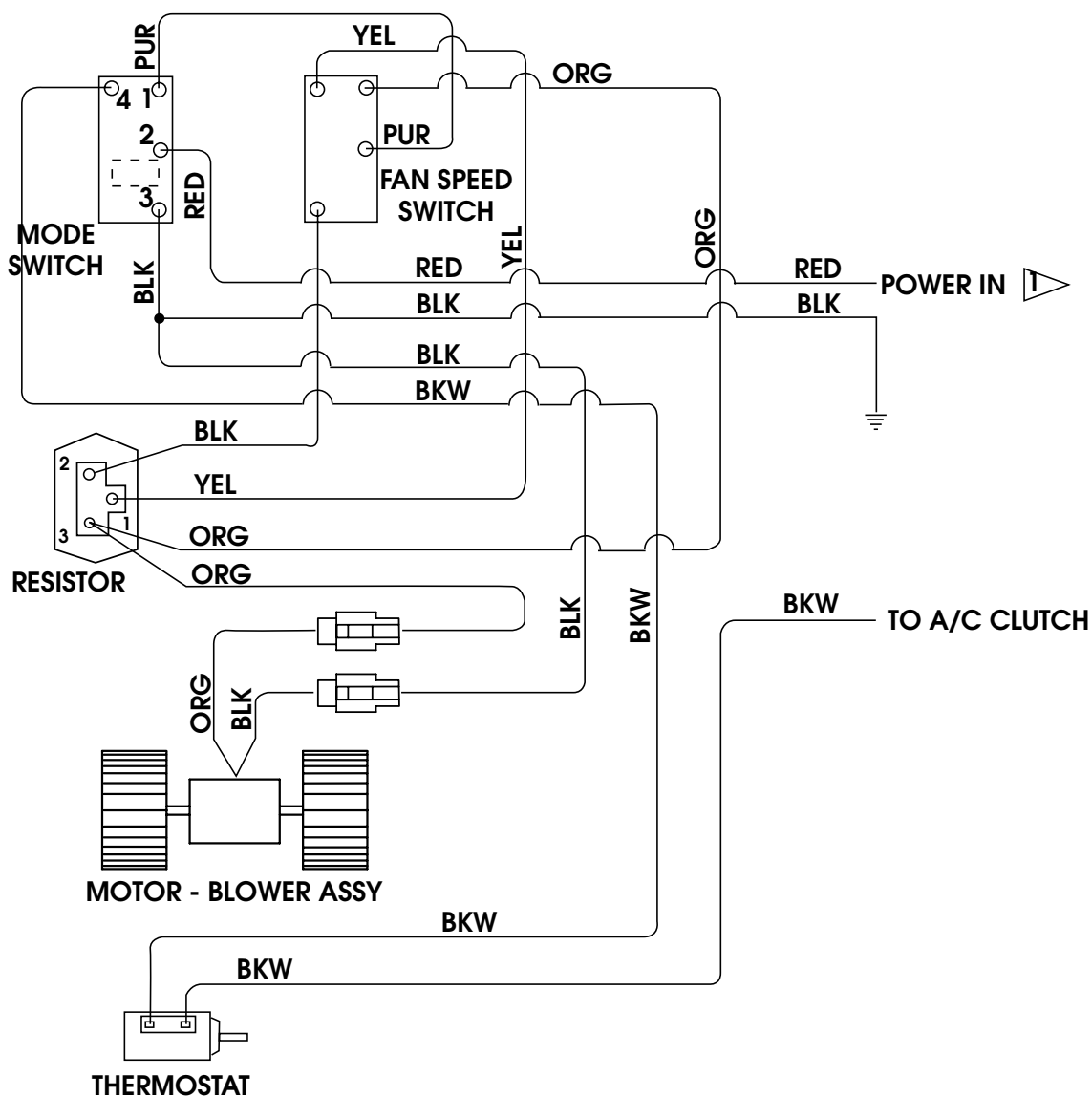
RD-5-8074 REV -

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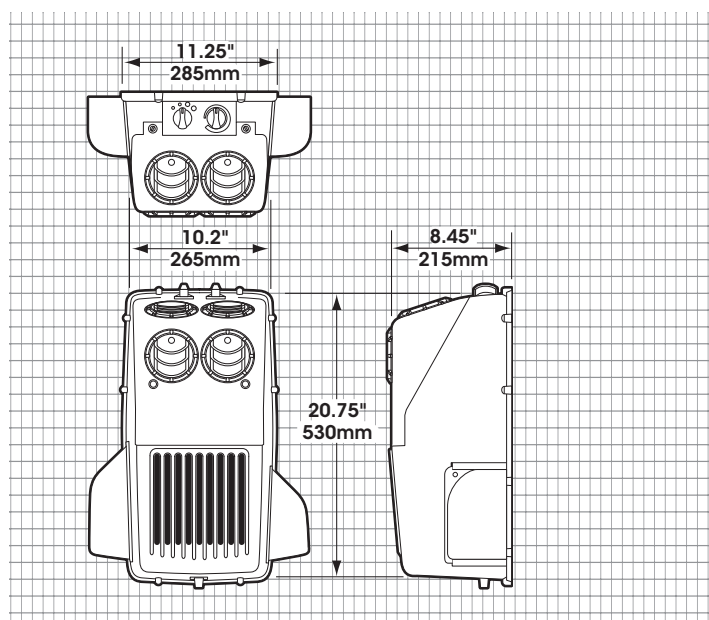
ELECTRICAL SCHEMATIC



ON/OFF ROAD

R-6830 BACKWALL*Air Conditioner Unit***FLEETS • HEAVY & MEDIUM DUTY TRUCKS •
INDUSTRIAL • AGRICULTURAL • CONSTRUCTION**

Red Dot's all new R-6830 sets a new standard in air conditioning technology. It combines performance and styling in a package small enough to fit almost anywhere. In addition, it utilizes engineered resin technology to create a unit that is not only attractive but incredibly durable. The R-6830 utilizes advanced coil and blower technology to create the highest capacity possible in a wall mounted unit that is no more than 11¼" wide.

**OPTIONS:**

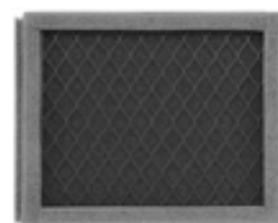
Plumbing Covers
RD-2-3515-OP



Floor Support Kit
RD-2-3673-OP



Filter
RD-2-3683-OP

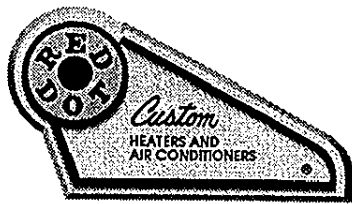


R-6830 SPECIFICATIONS

BTU'S	Cooling – 17,180 BTU/Hr with 36°F (5 kW with 2.2°C) refrigerant temp and 80°F (26.7°C) wet bulb entering air
AIR FLOW	260 CFM (442 m3/h)
WEIGHT	16 lbs. (7.3 kg)
CURRENT DRAW	18.6 amps @ 13.6 VDC (includes 4 amps for A/C clutch); 9.5 amps @ 27.2 VDC (including 2 amps for A/C clutch)
CONTROLS	High-low motor speed, four adjustable louvers, adjustable thermostat
MODELS	R-6830-OP (12 VDC) R-6830-0-24P (24 VDC)

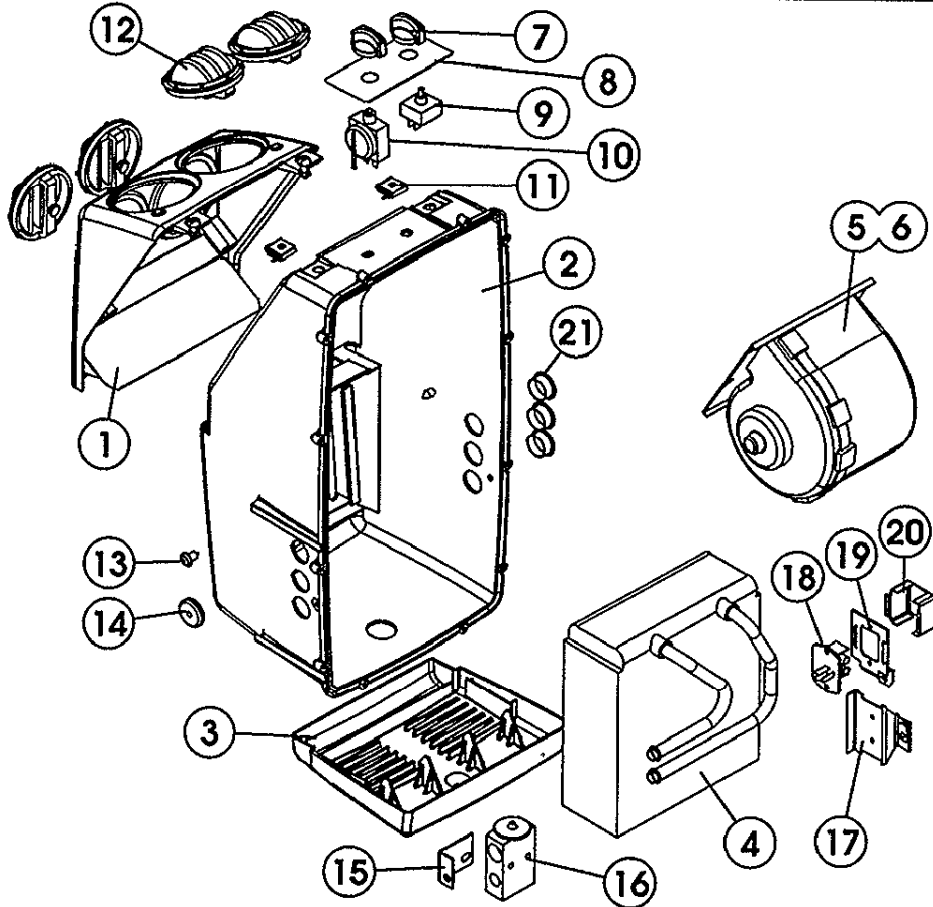
R-6830 SYSTEM ORDERING GUIDE

	R12/R-134a	NOTES
UNIT	R-6830-OP R-6830-0-24P	12 VDC – Variable Thermostat 24 VDC – Variable Thermostat
CONDENSER	R-6160 - ROOF MOUNT 77R0650 - RADIATOR MOUNT	See Units Condensers section See 77 Section Condensers section
INSTALLATION KIT	78R1070 78R1027 / RD-5-11864-1P 78R1025	Rooftop Condenser / ATCO version Front mount condenser / E-Z Clip version Front mount condenser / ATCO version
COMPRESSOR	See 75 Series Compressor section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required with CCI and TECUMSEH applications.
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications	
OPTIONS	Floor Support Kit Plumbing Covers (left and right) Recirc Filter Remote Control Panel Kit	RD-2-3673-OP RD-2-3515-OP RD-2-3683-OP RD-2-3674-OP



Model R-6830 Air Conditioner

SERVICE PARTS LIST



ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO.
1		RD-2-3637-0	HOUSING - COVER	
2		RD-2-3638-0	HOUSING	
3		RD-2-3639-0	DRAIN PAN	
4		RD-2-3640-0	EVAPORATOR CORE	
5		RD-5-9194-0	MOTOR BLOWER ASSY. - 12V	73R5572
6		RD-5-9194-24	MOTOR BLOWER ASSY. - 24V	73R5574
7		RD-5-8812-0	KNOB - ROTARY CONTROL	71R4025
8		RD-2-3641-0	LABEL - CONTROL PANEL	
9		RD-5-9833-0	SWITCH - 3 SPEED, ROTARY (25 AMP)	71R1170
10		RD-4125-36	THERMOSTAT	71R2250
11		RD-5-5355-0	RECEPTACLE - 1/4 TURN	
12		RD-5-8436-0	LOUVER	72R3120
13		RD-5-8303-0	RIVET - PLASTIC, REMOVABLE	
14		RD-5-9843-0	GROMMET	
15		RD-2-3645-0	BRACKET ASSY. - TXV	
16		RD-5-6868-0	EXPANSION VALVE - 134a	71R8300
17		RD-2-3644-0	BRACKET ASSY. - CORE	
18		RD-5-3647-0	RESISTOR - SPEED CONTROL	71R1450
19		RD-2-3647-0	BRACKET - RESISTOR	
20		RD-3-4351-0	RESISTOR GUARD	
21		RD-5-5688-0	BUTTON - PLUG, 1.00 DIA	78R2090
22	A	RD-2-3601-0	WIRE HARNESS	
23	A	RD-5-5260-0-.500	SCREW - #8 PLASTITE HEX. HD	
24	A	RD-5-5261-0-.750	SCREW - #12 PLASTITE HEX. HD	

NOTES: A= Not shown

RED DOT CORPORATION

Aftermarket Office P.O. Box 88790 Seattle, WA 98138 (425) 251-6897 fax (206) 251-3934

RD-2-3666-0 (REV -) FOR REFERENCE ONLY. SUBJECT TO CHANGE WITHOUT NOTICE

ON/OFF ROAD

R-7830 BACKWALL**Air Conditioner Unit**

**FLEETS • HEAVY & MEDIUM DUTY TRUCKS •
INDUSTRIAL • AGRICULTURAL • CONSTRUCTION**

The R-7830 blasts ice cold high velocity air where you want it. Multi-directional diffusers are positioned directly over the blower so you get cool air right off the coil in any direction.

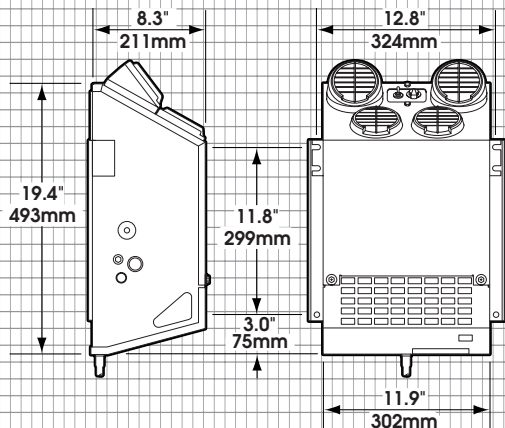
This compact high-capacity unit easily mounts between the seats to back walls in most class 6-8 conventional cabs. It can also be front dash mounted in some class 6 and 7 vehicles where a flat space permits.

The R-7830 was designed to provide maximum cooling with a minimum amount of maintenance. The welded steel construction uses only nut plates and is void of troublesome sheetmetal screws. Its unique design which provides access to any component in minutes, is a fleet owners dream and breath of fresh air to owner operators tired of bruised knuckles under the dash.

A backwall/floor support kit option is available for added reinforcement.



*Shown with optional
RD-2-1398-OP floor
support kit.*

**OPTIONS:****Floor Support Kit**

RD-2-1398-OP

**Recirculation
Filter**
78R5390



R-7830 SPECIFICATIONS

BTU'S	Cooling – 17,180 BTU/Hr with 36°F (5 kW with 2.2°C) refrigerant temp and 80°F (26.7°C) wet bulb entering air
AIR FLOW	260 CFM (442 m3/h)
WEIGHT	25 lbs. (11 kg)
CURRENT DRAW	18 amps @ 13.6 VDC (includes 4 amps for A/C clutch); 9 amps @ 27.2 VDC (including 2 amps for A/C clutch)
CONTROLS	High-low motor speed, four adjustable louvers, adjustable thermostat
MODELS	R-7830-0P (12 VDC) R-7830-0-24P (24 VDC)

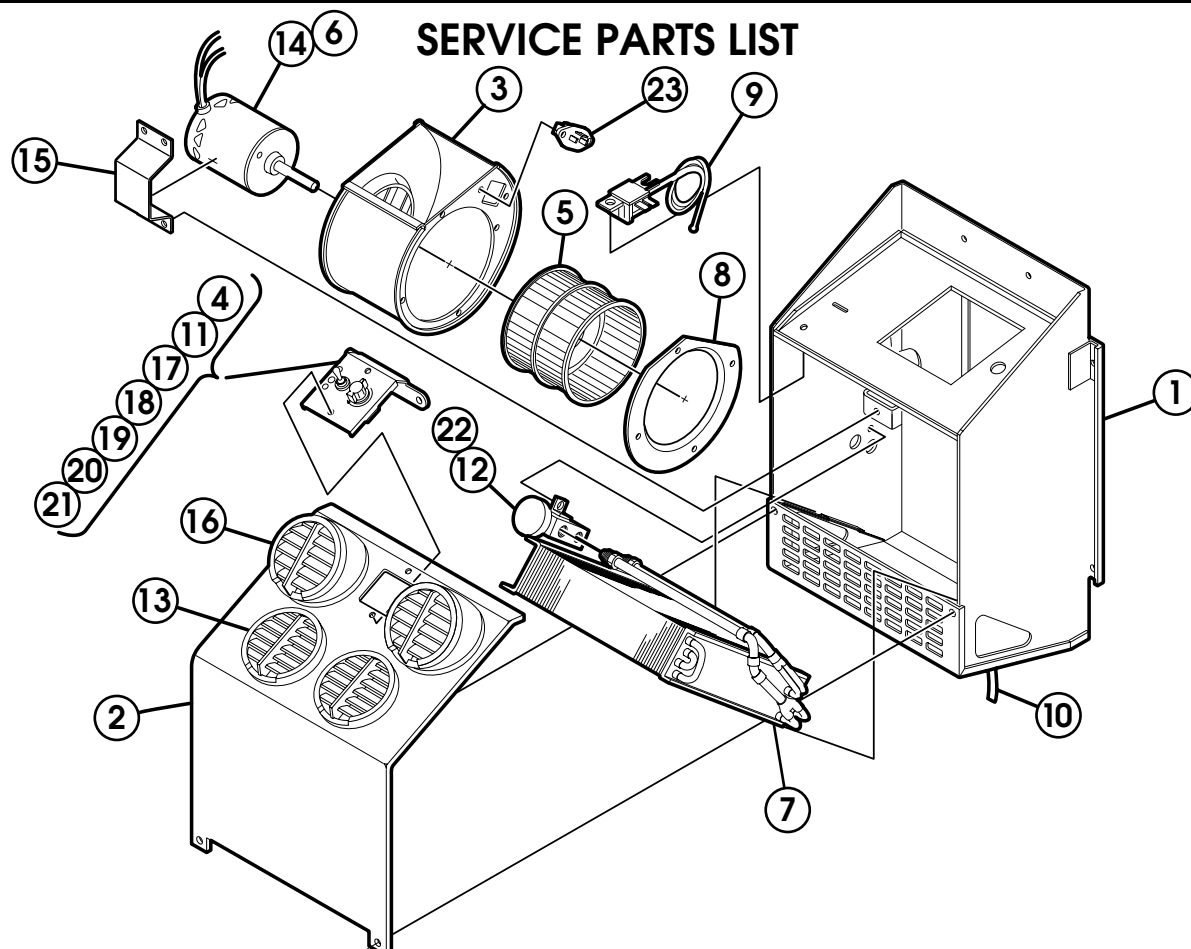
R-7830 SYSTEM ORDERING GUIDE

	R12/R-134a	NOTES
UNIT	R-7830-0P R-7830-0-24P	12 VDC – Variable Thermostat 24 VDC – Variable Thermostat
CONDENSER	R-6160-0P - Roof Mount R-6160-0-24P - Roof Mount 77R0650 - Radiator Mount	12 VDC – See Units Condensers section 24 VDC – See Units Condensers section See 77 Series Condensers section
INSTALLATION KIT	78R1070 78R1027 / RD-5-11864-1P 78R1025	Rooftop Condenser / ATCO version Front mount condenser / E-Z Clip version Front mount condenser / ATCO version
COMPRESSOR	See 75 Series Compressor section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required with CCI and TECUMSEH applications.
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications section	
OPTIONS	Floor Support Kit Recirc Filter Kit	RD-2-1398-0P 78R5390

INSTALLATION TIPS

IDEAL FOR MOUNTING VERTICALLY BETWEEN THE SEATS ON THE BACK WALL OF A TRUCK CAB, OR THE SIDE WALL OF AN OFF-HIGHWAY CAB ON CABS WHERE EXTRA SUPPORT IS REQUIRED TO COMPLETE INSTALLATION, MOUNT SUPPORT KIT RD-2-1398-0 SHOULD BE USED TO SIMPLIFY INSTALLATION.

- NOTES: 1. REINFORCING MAY BE REQUIRED WHEN MOUNTING DIRECTLY TO CAB WALL.
2. DUE TO THE WIDE VARIETY OF CONDITIONS FOUND IN OFF HIGHWAY APPLICATIONS, IT IS RECOMMENDED THAT A TRIAL INSTALLATION BE MADE TO DETERMINE IF THESE PRODUCTS ARE SUITABLE TO A PARTICULAR APPLICATION.



SERVICE PARTS LIST

ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO.	ITEM	NOTE	PART NO.	DESCRIPTION	CAT. NO.
1		RD-2-1389-0	HOUSING ASSY.		13		RD-5-5222-0	DIFFUSER (2)	
2		RD-2-1387-0	HOUSING COVER ASSY		14		RD-5-4827-24	MOTOR (24V)	
3		RD-2-1315-0	BLOWER SCROLL ASSY		15	C	RD-3-3174-0	RETAINER - MOTOR	
4	A	RD-2-1393-0	LABEL CONTROL PANEL		16		RD-5-5223-2	DIFFUSER ASSY. (2)	
5		RD-3-2557-0	BLOWER WHEEL	73R 7150	17	A	RD-4125-36	THERMOSTAT	71R 2250
6		RD-5-3753-1	MOTOR (12V)	73R 0402	18	A	RD-5-5928-0	KNOB	71R 4050
7		RD-2-1316-0	EVAPORATOR ASSY.	76R 6350	19	B	RD-2-1392-0	LABEL CONT. PNL. (FIXED)	
8		RD-2-1354-0	AIR ENTRY RING		20	A	RD-2-1487-0	CONTROL PANEL ASSY.	
9	B	RD-5-4531-24	THERMOSTAT	71R 3200	21	B	RD-2-1487-1	CONTROL PANEL ASSY.	
10		RD-5-3550-120	DRAIN HOSE	78R 0070	22		RD-4157-0	EXPANSION VALVE (R-12)	71R 8300
11		RD-5-3599-0	SWITCH	71R 0200	23		RD-5-3647-0	RESISTOR	71R 1450
12		RD-5-6868-0	EXPANSION VALVE (R-134a)	71R 8300					

A. VARIABLE THERMOSTAT MODEL B. FIXED SET THERMOSTAT MODEL C. 24 VOLT APPLICATION

ORDERING INFORMATION

ORDER BY MODEL NUMBER **R-7830-0** FOR ADJUSTABLE THERMOSTAT OR **R-7830-1** FOR FIXED SET THERMOSTAT.
FOR 24 VOLT APPLICATIONS ADD **-24** TO MODEL NUMBER.
FOR MOUNT SUPPORT KIT USE **RD-2-1398-0**.

Additional cost items required for complete system:

1. Condenser - Either Frontal or R-6060 Rooftop.
2. General Installation Kit including Hose Fittings, Receiver Dryer, and Compressor.
3. Compressor Engine Mounting Bracket including Clutch.

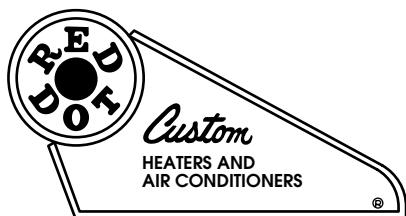
RED DOT CORPORATION P.O. Box 58270 Seattle, WA 98138 (206) 575-3840

RD-2-1400-0 (REV C)

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2-12BC
2/94

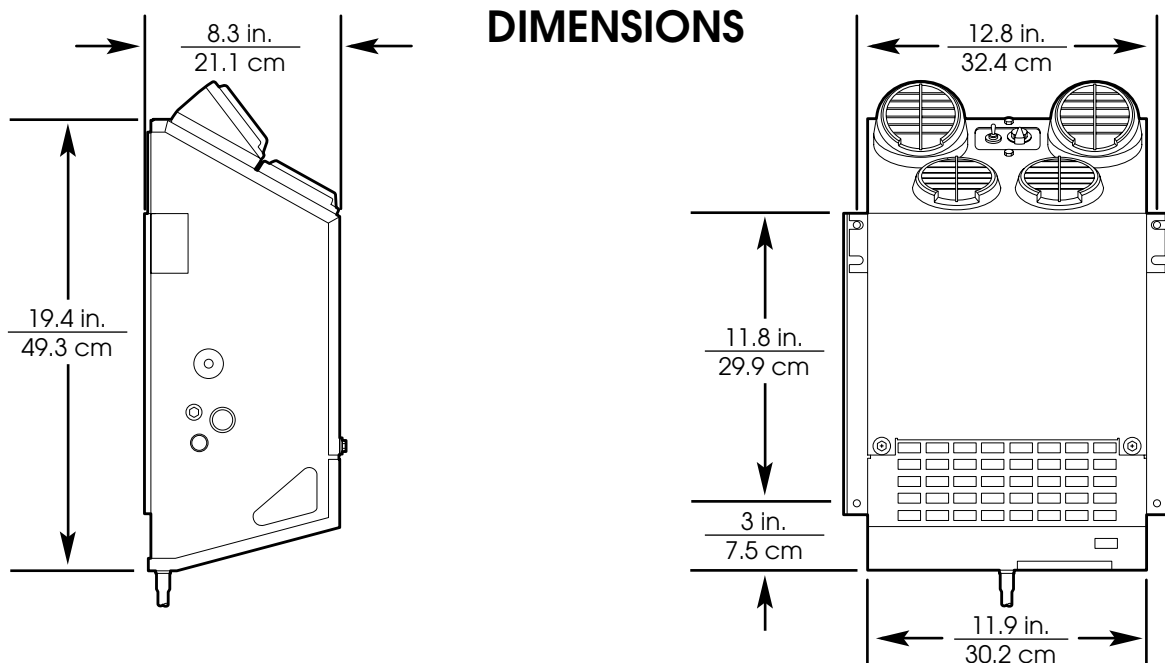
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R-134a Compatible

Red Dot Air Conditioner R-7830 Series

TECHNICAL SALES BULLETIN AND SERVICE PARTS LIST

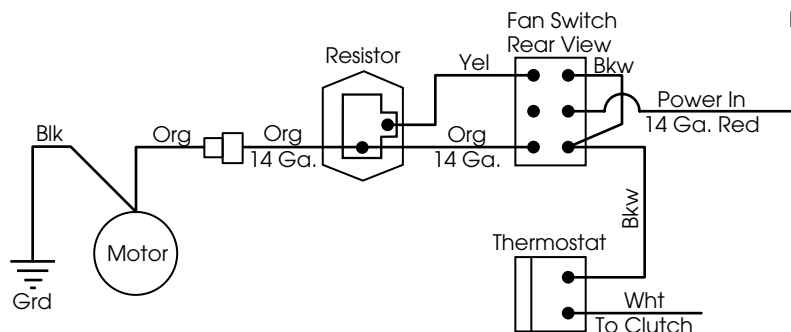


SPECIFICATIONS

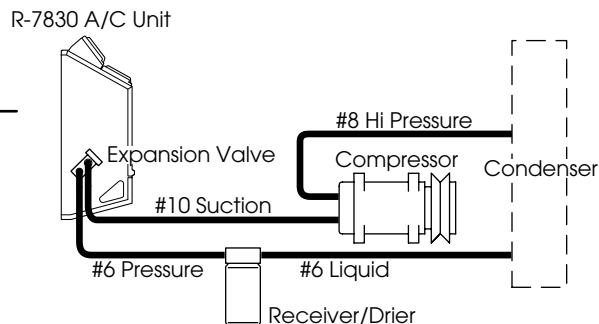
BTU's:	17,180 BTU/Hr with 36°F (4329 kcal/h w/2.2°C) Refrigerant Temp. and 80°F (26°C) Wet Bulb Entering Air
Air Flow:	260 CFM (442 m ³ /h)
Weight:	25 Lbs. (11 Kg)
Current Draw:	18 Amps @ 13.6 V.D.C. (Includes 4 Amps for A/C Clutch) 9 Amps @ 27.2 V.D.C. (Includes 2 Amps for A/C Clutch)

SCHEMATICS

ELECTRICAL SCHEMATIC



PLUMBING SCHEMATIC



Use 30 Amp fuse or breaker (customer supplied).
WARNING: Unit warranty void if fused power source not used.

OFF ROAD

R-8500 BACKWALL

Air Conditioner Unit/Heat Option

CONSTRUCTION • MINING • AGRICULTURE

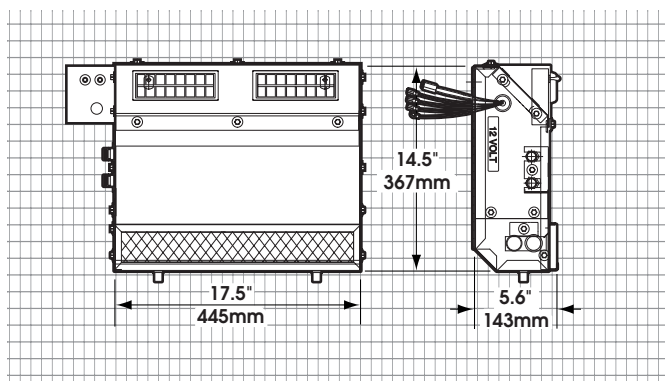
With the emergence of smaller cabs comes the demand for systems that deliver paramount performance while requiring minimum space. Red Dot delivers with the R-8500.

The versatility of the R-8500 allows the air plenum to be changed to divert the air out the top or the front of the unit depending on the application. In addition, the controls can be remote mounted.

Utilizing the rugged design and quality components you have come to expect from Red Dot, this unit promises to provide hassle free maintenance and exemplary performance.



Shown with remote mount controls.



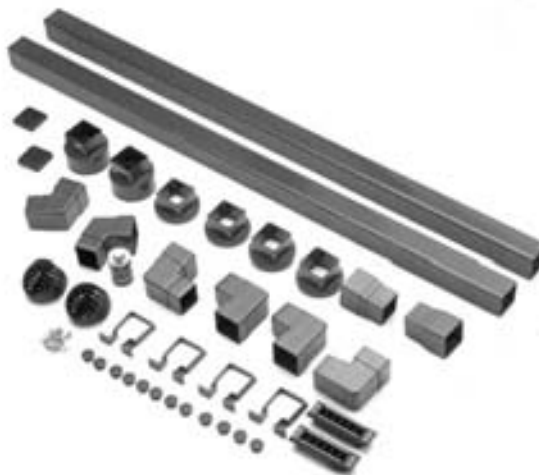
OPTIONS:

Plenum Assembly

*RD-3-6060-0P
With 2 1/2" hose
adapters*



UNIVERSAL DUCT KIT 78R2100



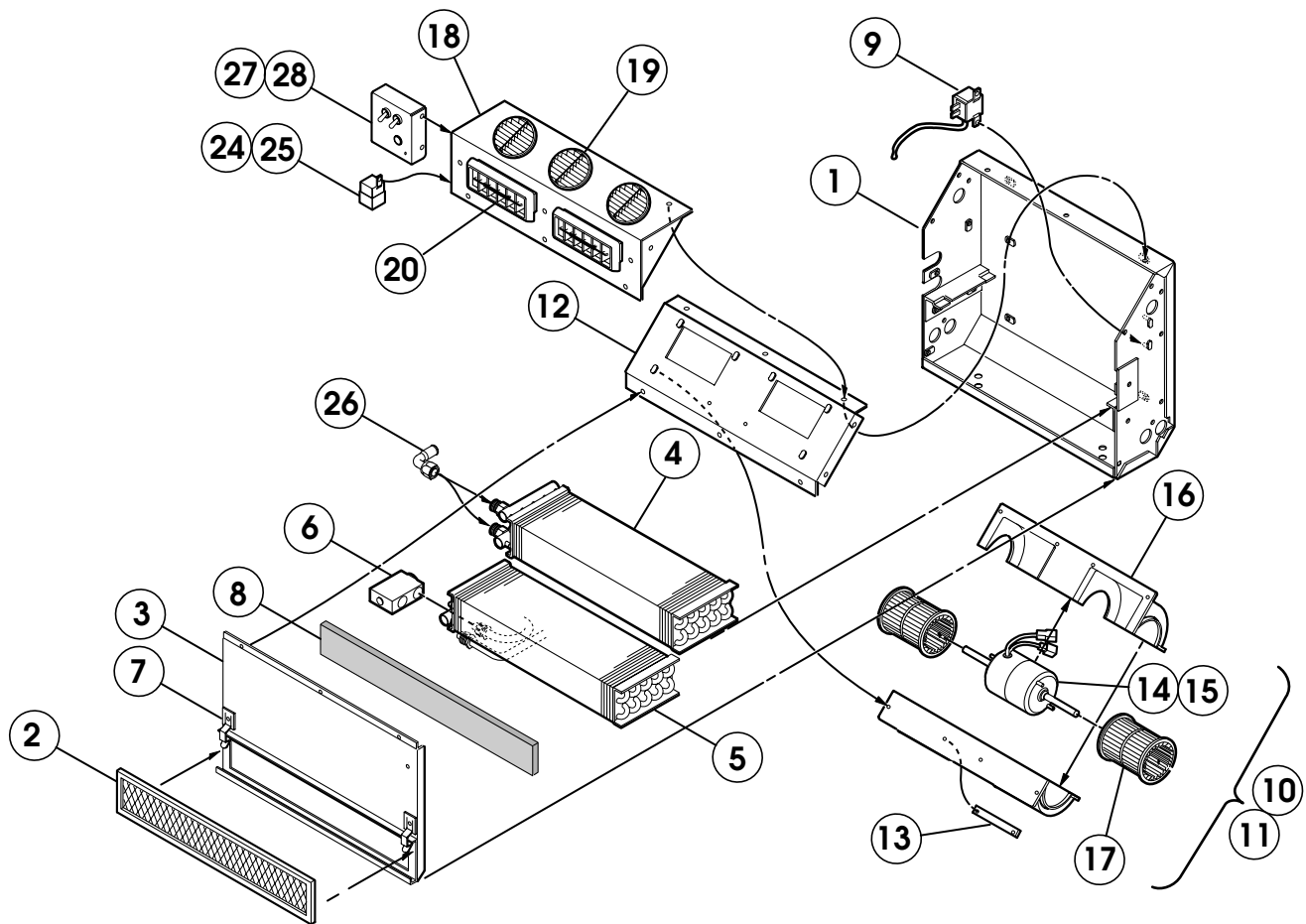
R-8500 SPECIFICATIONS

BTU'S	Heating – 22,000 BTU/Hr @ 100°F (6.4 kW @ 37.8°C) air temperature rise Cooling – 15,200 BTU/Hr with 36°F (w 4.5 kW w/ 2.2°C) refrigerant temp. and 80°F (26.7°C) wet bulb entering air
AIR FLOW	205 CFM (348 m3/h)
WEIGHT	24 lbs. (11 kg)
MOTOR	Three-speed field wound
CURRENT DRAW	13.5 amps @ 13.6 VDC (includes 4 amps for A/C clutch) 6.75 amps @ 27.2 VDC (includes 2 amps for A/C clutch)
MODELS	R-8500-0P (12 VDC) Heater/Air Conditioner R-8500-0-24P (24 VDC) Heater/Air Conditioner R-8500-1P (12 VDC) A/C only R-8500-1-24P (24 VDC) A/C only

R-8500 SYSTEM ORDERING GUIDE

	R12/R-134a	NOTES
UNIT	R-8500-0P R-8500-0-24P R-8500-1P R-8500-1-24P	12 VDC – Heater - A/C 24 VDC – Heater - A/C 12 VDC – A/C Only 24 VDC – A/C Only
CONDENSER	R-9720-3P - Remote Mount R-9720-3-24P - Remote Mount 77R0650 - Radiator Mount	12 VDC – See Units Condensers section 24 VDC – See Units Condensers section See 77 Series Condensers section
GENERAL PURPOSE INSTALLATION KIT	78R1705 78R1027 / RD-5-11864-1P 78R1025 78R0100	Remote Mount Radiator mount condenser / E-Z Clip version Radiator mount condenser / ATCO version Heater Hose - 3/8" diameter, 50'
COMPRESSOR	See 75 Series Compressors section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required with CCI and TECUMSEH applications.
R134A CHARGE FITTING	75R5681 & 75R5688	Required with CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications section	
OPTIONS	Replacement Recirc Filter Plenum Assembly Universal Duct Kit	78R5330 RD-3-6060-0P 78R2100

SERVICE PARTS LIST



ITEM	NOTE	PART NO.	DESCRIPTION	CAT NO	ITEM	NOTE	PART NO.	DESCRIPTION	CAT NO
1		RD-3-6051-0	HOUSING ASSY		17	A	RD-5-5656-0	BLOWER WHEEL (2)	73R7000
2		RD-3-6162-0	INTAKE FILTER		18		RD-3-6720-0	PLENUM ASSY	
3		RD-3-6055-0	COVER ASSY (TOP)		19		RD-5-5222-0	LOUVER ASSY (3)	
4		RD-1-0830-0	HEATER CORE ASSY	76R1030	20		RD-5-6987-0	LOUVER (2)	
5		RD-2-1909-0	EVAPORATOR ASSY	76R5030	21	B	RD-3-6727-0	ACCESSORY KIT	
6		RD-5-7125-0	EXPANSION VALVE	71R8340	22	B	RD-5-5874-0	CIRCUIT BREAKER-30AMP (12V)	71R1300
7		RD-5-5965-0	SPRING CLIP (2)		23	B	RD-5-6602-0	CIRCUIT BREAKER-15AMP (24V)	71R1310
8		RD-3-6068-0	GASKET (CORE)		24	C	RD-5-7232-0	RELAY (12V)	71R1912
9		RD-5-4531-24	THERMOSTAT	71R3200	25	C	RD-5-7233-0	RELAY (24V)	71R1914
10		RD-3-6062-0	MOTOR BLOWER ASSY (12V)		26	C	RD-1-0426-0	SWIVEL FITTING ASSY (2)	
11		RD-3-6062-1	MOTOR BLOWER ASSY (24V)		27	C	RD-3-6100-0	CONT. PNL ASSY (A/C ONLY)	
12	A	RD-3-6048-2	BRACKET (BLOWER ASSY)		28	C	RD-3-6082-0	CONT. PNL ASSY (A/C-HEAT)	
13	A	RD-2-1383-1	ATTACH STRIP ASSY		29	D	RD-5-0071-0	SWITCH (FAN SPEED)	71R0400
14	A	RD-5-6772-0	MOTOR (12V)	73R4112	30	D	RD-5-3748-0	SWITCH (MODE A/C ONLY)	71R0010
15	A	RD-5-6772-24	MOTOR (24V)	73R4114	31	D	RD-4123-2	SWITCH (MODE HEAT-A/C)	71R0200
16	A	RD-5-3781-0	BLOWER HOUSING		32	BC	RD-5-6532-0	DRAIN HOSE	

A. PART OF ITEM 10/11 B. NOT SHOWN C. INCLUDED IN ACCESSORY KIT (ITEM 21) D. PART OF ITEM 27/28

ORDERING INFORMATION

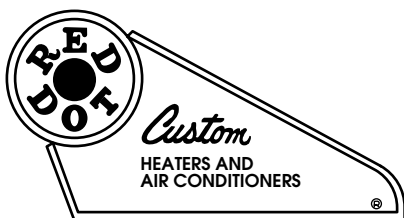
ORDER BY MODEL NUMBER **R-8500-0** FOR HEATER - A/C

ORDER BY MODEL NUMBER **R-8500-1** FOR A/C ONLY

FOR 24V ADD **-24** TO MODEL NUMBER

OPTIONS: PLENUM ASSEMBLY RD-3-6060-0

RED DOT CORPORATION P.O. Box 88790 Seattle, WA 98138 (206) 251-6897 Fax: (206) 251-3934

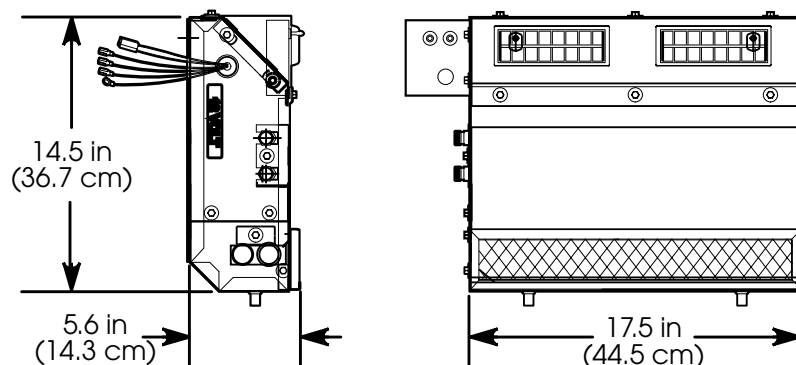


Compact Heater-A/C R-8500 Series

R-134a Compatible

TECHNICAL SALES BULLETIN AND SERVICE PARTS LIST

DIMENSIONS



SPECIFICATIONS

BTU's:

Heating - 22,000 BTU/Hr @ 100°F
(5,544 kcal/h @ 37.8°C) Air Temp. Rise
Cooling - 15,200 BTU/Hr with 36°F (3,830 kcal/h w/2.2°C)
Refrigerant Temp. and 80°F (26.7°C) Wet Bulb Entering Air

Air Flow:

205 CFM (348 m³/h)

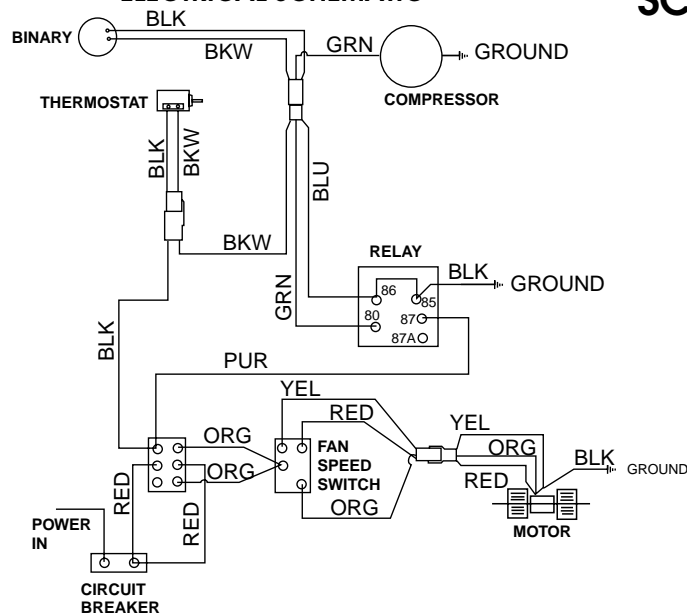
Weight:

24 Lbs (11 Kg)

Current Draw:

13.5 Amps at 13.6 VDC (Includes 4 Amps for A/C Clutch)
6.6 Amps at 27.2 VDC (Includes 2 Amps for A/C Clutch)

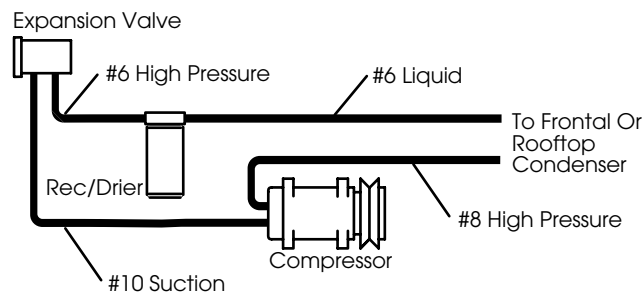
ELECTRICAL SCHEMATIC



RD-3-8263-0 (REV --)

SCHEMATICS

PLUMBING SCHEMATIC

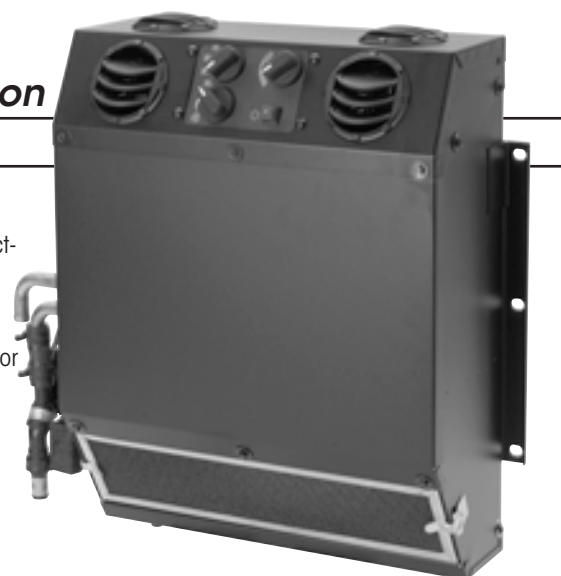


OFF ROAD

R-8545 BACKWALL*Heavy Duty Air Conditioner Unit/Heat Option***CONSTRUCTION • MINING • AGRICULTURE**

Compact and powerful are the best words to describe the R-8545. Inch for inch the R-8545 has the highest output of any unit its size in the off road. The R-8545 is constructed of heavy guage coated steel and engineered to filter in-cab air as well as incoming outside air when pressurization is required.

The R-8545's high-performance, rugged construction and serviceability make it ideal for all off road applications where space is a minimum and dependability essential.

**R-8545 SPECIFICATIONS**

BTU'S	Heating – 28,600 BTU/Hr @ 100°F (8.4 kW @ 37.8°C) air temperature rise
	Cooling – 18,000 BTU/Hr with 36°F (5.3 kW with 2.2°C) refrigerant temp. and 80°F (26.7°C) wet bulb entering air

AIR FLOW	265 CFM (450 m3/h)
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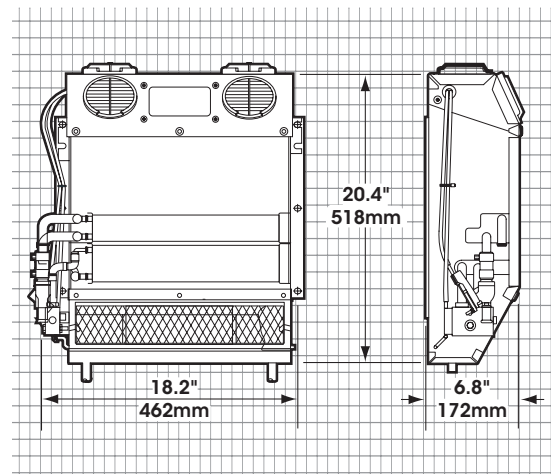
WEIGHT	Heater & A/C – 39 lbs. (18 kg)
	A/C Only – 34 lbs. (15 kg)

MOTOR	Totally sealed, 12 or 24 VDC permanent magnet type with long life brushes, and heavy duty pre-lubricated sealed ball bearings
--------------	---

CURRENT DRAW	16.1 amps @ 13.6 VDC (includes 4 amps for A/C clutch),
	8 amps @ 27.2 VDC (includes 2 amps for A/C clutch)

CONTROLS	Mode selector switch (heat or A/C), three-speed fan switch, fixed setting A/C thermostat, cable controlled water valve
-----------------	--

MODELS	R-8545-9P Air Conditioner only 12 VDC
	R-8545-9-24P Air Conditioner only 24 VDC
	R-8545-10P Heater/Air Conditioner 12 VDC
	R-8545-10-24P Heater/Air Conditioner 24 VDC
	R-8545-12P Heater/Air Conditioner 12 VDC



R-8545 SYSTEM ORDERING GUIDE		
	R12/R-134a	NOTES
UNIT	R-8545-9P	12 VDC – A/C Only
	R-8545-9-24P	24 VDC – A/C Only
	R-8545-10P LS	12 VDC – Heater-A/C
	R-8545-10-24P LS	24 VDC – Heater-A/C
	R-8545-12P	12 VDC – Heater-A/C Only
CONDENSER	R-9720-3P - 12V, Remote Mount R-9720-3-24P - 24V, Remote Mount 77R0650 - Radiator Mount	See Units Condenser section See Units Condenser section See 77 Series Condensers section
GENERAL PURPOSE INSTALLATION KIT	78R1705 78R1027 / RD-5-11864-1P 78R1025 78R0100	Remote Mount Condenser Radiator mount condenser / E-Z Clip version Radiator mount condenser / ATCO version Heater Hose – 5/8" Dia. 50ft
COMPRESSOR	See 75 Series Compressor section	
R12 SERVICE VALVES	75R5611 & 75R5618	Required for CCI and TECUMSEH applications.
R134A CHARGE FITTING	75R5681 & 75R5688	Required for CCI and TECUMSEH applications.
CLUTCH TECUMSEH/CCI	See 75 Series Clutch section	
COMPRESSOR MOUNT KIT	See Compressor Mount Applications section	
OPTIONS	3" Air Outlet Adapter for Pressurization RD-3-5448-0P	
	Remote Filters	See Filters & Pressurizers section
	Pressurizers	See Filters & Pressurizers section

Remote Mount**Gideon Technology Powered HVAC Air Filtration System**

12 volt Horizontal: 78R5602 RD-5-11851-0P
 Vertical: 78R5612 RD-5-11853-0P
 24 volt Horizontal: 78R5604 RD-5-11852-0P
 Vertical: 78R5614 RD-5-11854-0P
 Replacement Filter: 78R5259 RD-5-11855-0P

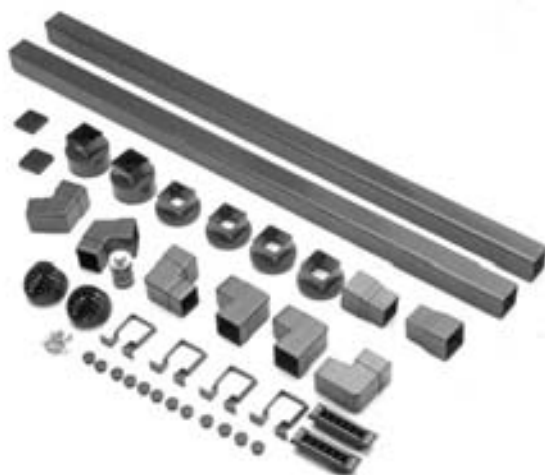


**Filter Kits for use with
in-line booster pressurizer**

Horizontal: 78R5100

Vertical: 78R5110

**UNIVERSAL
DUCT KIT**
78R2100



**Inline Booster
Pressurizers**
 73R9202 (12 VDC)
 73R9204 (24 VDC)
 3" DEFROST HOSE
 SOLD SEPARATELY
 78R0300

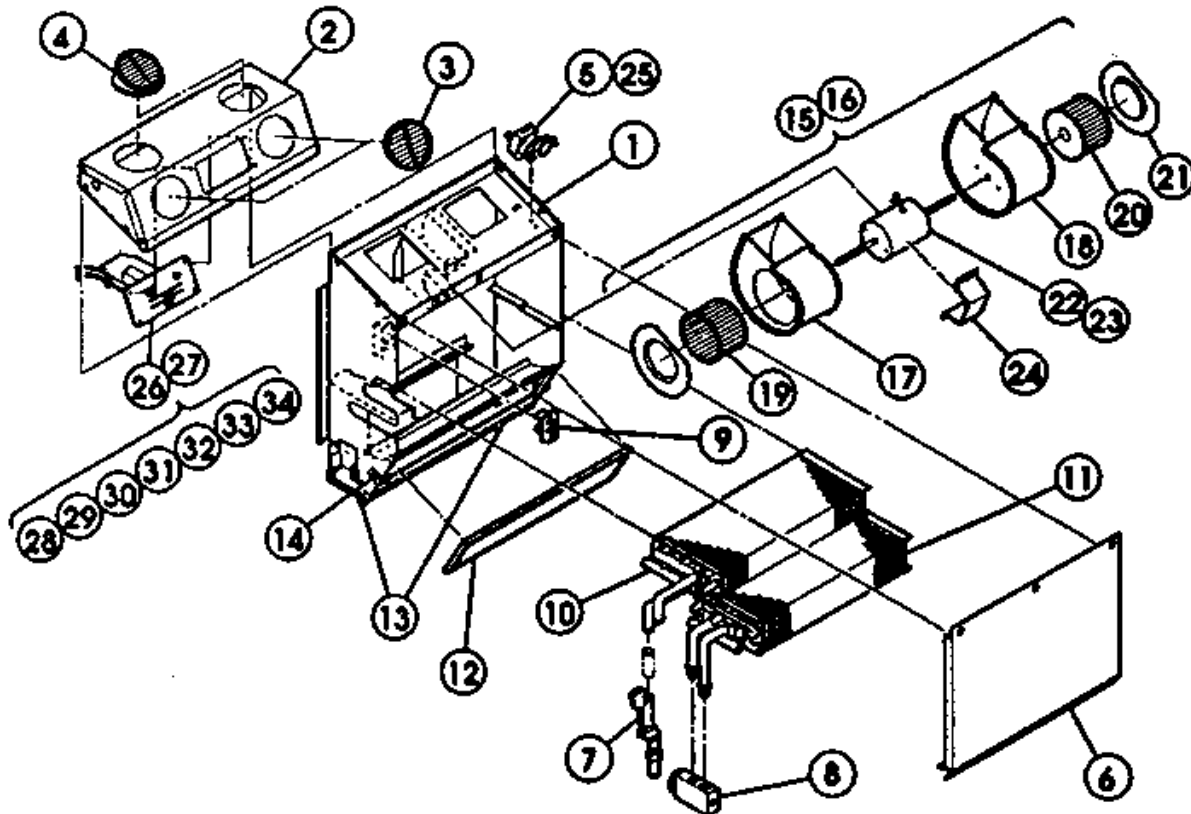


LS = Limited to stock on hand



Backwall A/C – Heater (option) Model R-8545

SERVICE PARTS LIST



ITEM	NOTE	PART NO.	DESCRIPTION	ITEM	NOTE	PART NO.	DESCRIPTION
1		RD-3-5264-0	HOUSING ASSY.	18		RD--2-1207-2	BLOWER ASSY.
2		RD-3-5273-0P	PLENUM ASSY.	19		RD-5-7311-0	BLOWER WHEEL
3		RD-5-5223-1	AIR DIFFUSER ASSY.(2)	20		RD-5-7312-0	BLOWER WHEEL
4		RD-5-5223-0	AIR DIFFUSER ASSY.(2)	21		RD-3-3928-2	ENTRY RINGS (2)
5		RD-4427-24	THERMOSTAT	22	C	RD-5-5121-0	MOTOR - 12V
6		RD-3-5290-0	COVER ASSY.	23	D	RD-5-5121-24	MOTOR - 24V
7	A	RD-5-7760-1	WATER VALVE	24		RD-3-3174-0	RETAINER - MOTOR
8		RD-5-6868-0	EXPANSION VALVE	25	E	RD-5-3816-18	TUBE - 5/32 I.D.
9		RD-5-3647-0	RESISTOR	26	A	RD-3-5277-0	CONTROL PANEL ASSY.
10	A	RD-1-0771-1	HEATER CORE ASSY.	27	B	RD-3-5277-1	CONTROL PANEL ASSY.
11		RD-2-1664-0	EVAPORATOR ASSY.	28	A, E	RD-3-5413-0	LABEL - CONTROL PANEL
12		RD-5-6240-0	FILTER	29	B, E	RD-3-5413-1	LABEL - CONTROL PANEL
13		RD-5-3550-24	DRAIN HOSE (2)	30	E	RD-3-4096-0	LEVER - CONTROL
14		RD-5-6239-0	SNAP FASTNER (2)	31	E	RD-5-4694-1	SWITCH - SPEED, FAN
15	C	RD-2-1206-2	MOTOR BLWR ASSY.	32	E	RD-5-3748-0	SWITCH - TOGGLE, SPST
16	D	RD-2-1206-3	MOTOR BLWR ASSY.	33	E	RD-5-4450-0	KNOB
17		RD-2-1207-1	BLOWER ASSY.	34	E	RD-4180-24	CONTROL CABLE

A. HEATER A/C COMBOS ONLY

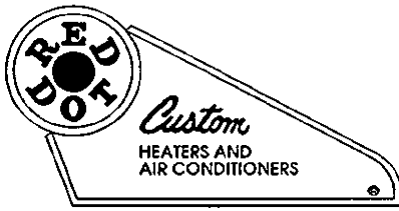
C. 12 VOLT ONLY

D. 24 VOLT ONLY

B. A/C ONLY

E. NOT SHOWN

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Heavy Duty Heater / Air Conditioner Model R-8545

INSTALLATION INSTRUCTIONS

NOTE

1. Please read instructions all the way through, making sure you have all the parts and tools
2. While working on or around a vehicle, disconnect the battery to prevent accidental start up or electrical shorts
3. It has been established that R-12 refrigerant does deplete the earth's protective ozone layer. Use care so as not to release this material into the atmosphere
4. A/C systems operate under high pressure At 77°F the refrigerant container Will be pressurized to approximately 80 psi. Use caution When working with these materials. Goggles are recommended.
5. To function properly the A/C system must be clean and dry. Keep caps or protective covers on all hoses and fittings until final assembly
6. **IMPORTANT:** Attach appropriate SAE warning label to vehicle.

ADDITIONAL ITEMS REQUIRED FOR COMPLETE INSTALLATION:

- | | |
|--------------------------------|--|
| A) Compressor | 8 to 10 cubic inch displacement required (Sanden SD-508, SD-510 or equivalent). For HFC use a compressor compatible with 134a. |
| B) Condenser | Remote Mount (R-9720 or equivalent); or Radiator Mount (77R 0650 or equivalent). For R-134a use R-9725 or 77R 0650. |
| C) Compressor Mount Kit | This includes mounting hardware, belts and pulleys. |
| D) Receiver Drier | High capacity (12 cubic inches of desiccant) 74R 1706 or equivalent. For R-134a applications use 74R 1816 or equivalent. |
| E) System Protection | 71R7000 binary switch, high and low pressure cut-out or equivalent dual switches. For R-134a applications use 71R 7050. |
| F) Refrigerant Hose | Nylon Barrier or nylon lined refrigerant hose is the minimum quality recommended for heavy duty applications. Push-on fittings can be used on either hose although a "crimp fitting" is recommended. Reusable fittings can be used only with the Aeroquip nylon lined hose (R-12 applications only). Galaxy hose with, beadlock crimp fittings are recommended for 134a. |

A. Mounting the Unit

1. Determine the most suitable location for mounting the air conditioning unit.
2. Mark the mounting holes, drain hole locations and fresh air opening (optional) locations. See Figure 1.

NOTE: 1) If mounting template is lost the fresh air intake opening can be marked (for 78R 5150 panel filter by scribing a side and bottom of the unit line on the mounting surface and measuring up 1 1/4" from the bottom (for the bottom of the fresh air opening) and 4 1/4" from the side. Then mark a rectangular opening 2 3/4" high by 7 3/4" wide (to mark the outside of the fresh air opening).

2) If optional fresh air opening is used, fresh air door retaining screw on unit must be removed.

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3. Drill the mounting holes and remove burrs and sharp edges.
4. Mount unit to cab using mounting bolts, nuts and washers. See Figure 1.

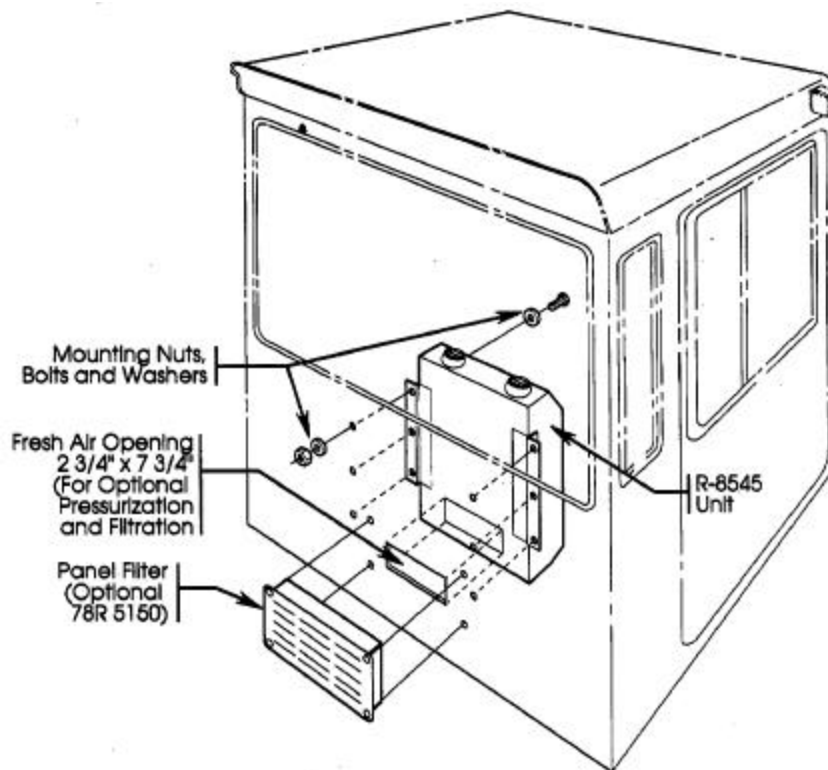
B. Compressor Mounting

1. Install compressor mounting hardware to engine block.

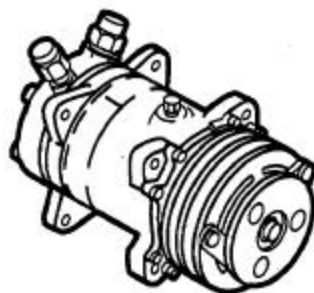
NOTE: Red Dot does not recommend any compressor mount designs that are not directly attached to the engine.

If fabrication of compressor mounting bracket is required, be sure to design so the belt wrap is a minimum of 1/3 around the clutch pulley and can be tensioned easily. If designing for a Sanden Compressor, Red Dot does provide an adjustable adapter bracket 75R 6010 which often saves time in design and fabrication. See Figure 2.

2. Install compressor making sure to properly align and tension drive belt.



TYPICAL UNIT PLACEMENT
Figure 1



SANDEN COMPRESSOR AND BRACKET
Figure 2



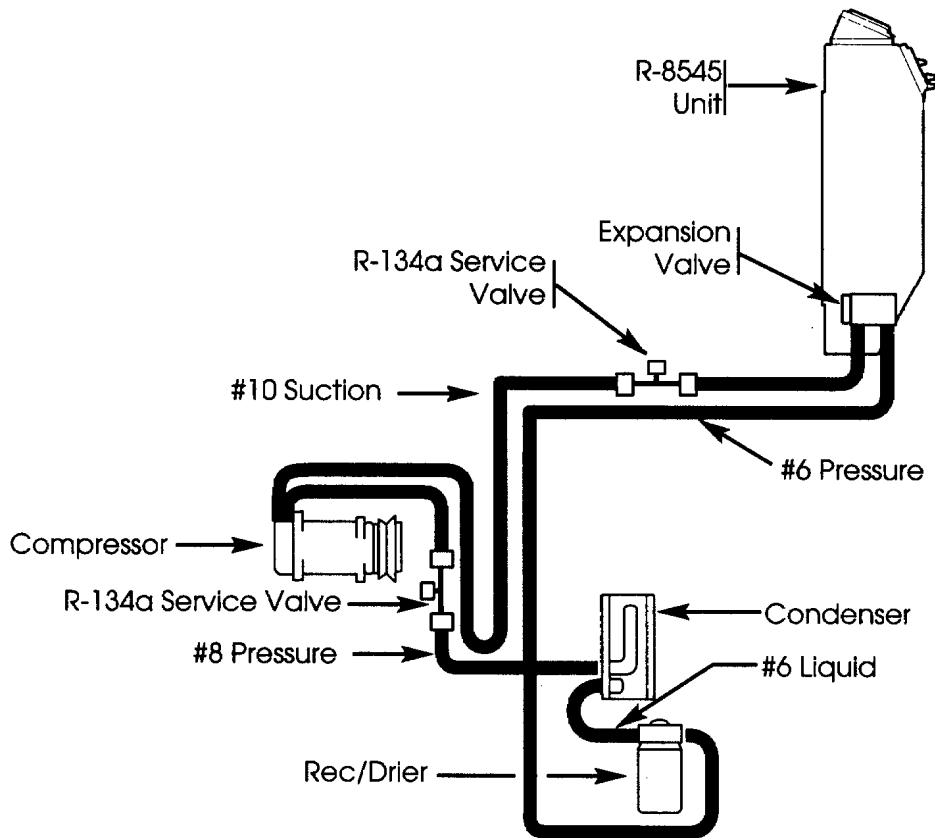
75R 6010

C. Condenser Mounting (Remote or Radiator Style) Remote Mount

1. Locate in an area easily accessible and free of dust and other debris.
2. Mount in a position so that the large (#8) hose fitting is above the small (#6) hose fitting. **Radiator Mount**
 1. A radiator mounted condenser will be effective only if positioned to receive maximum air flow.
 2. Install condenser allowing a minimum of 1.5 inch air space between the condenser and the radiator to prevent heat transfer from the radiator, Also, all radiators should have baffles on top and sides to prevent hot air recirculating back around the radiator.

D. Refrigerant Hose Installation

1. Determine desired hose routing and measure hose lengths, per plumbing schematic, See Figure 3.
NOTE: if suction line #10 hose length is longer than 10 feet, Red Dot recommends using #12 refrigerant hose and "step-up" refrigerant fittings. This will improve system function.
2. Cut refrigerant hose to length using a knife. **Do Not Saw Off.** See Figure 4.



R-8545 PLUMBING SCHEMATIC
Figure 3

3. Install fittings on hose. See Figure 4, (Be sure to clean out refrigerant hose after cutting).
4. Additional refrigerant oil is required for long hose applications.
5. Lubricate "O" rings with mineral oil and attach to fittings. Route and connect #6, #8 and #10 hoses to unit, compressor, condenser, and receiver drier per plumbing schematic. See Figure 3.
6. Use clamps to secure hoses and prevent hose movement. Hoses must not come in contact with hot engine components (exhaust manifold, etc.) and they should not be subject to mechanical abrasions

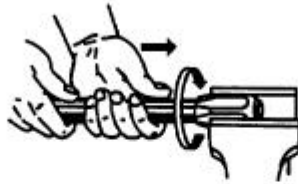
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REFRIGERANT HOSE INSTALLATION - Figure 4

MAKE CERTAIN "O" RINGS ARE ON ALL REFRIGERANT FITTINGS BEFORE SECURING



1. Cut refrigerant hose cleanly at 90° to proper length using a sharp clean edge.

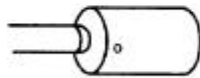


2. Screw hose into collar (left hand thread) until hose bottoms. Back out 1/4 turn.



3. Screw fitting into collar until insert bottoms. (Lubricate insert and I.D. of hose for ease of assembly.)

REFUSABLE FITTINGS



Bubble Crimp Fitting

1. Cut hose as above in Fig. 1. Lubricate the inside of the fitting ferrule with refrigerant oil. (It's important to form a seal.)



Refrigerant Hose

2. Insert the hose into the ferrule, being certain to fully seat the hose so it is visible in the ferrule viewing hole.



Crimped Fitting and Refrigerant Hose

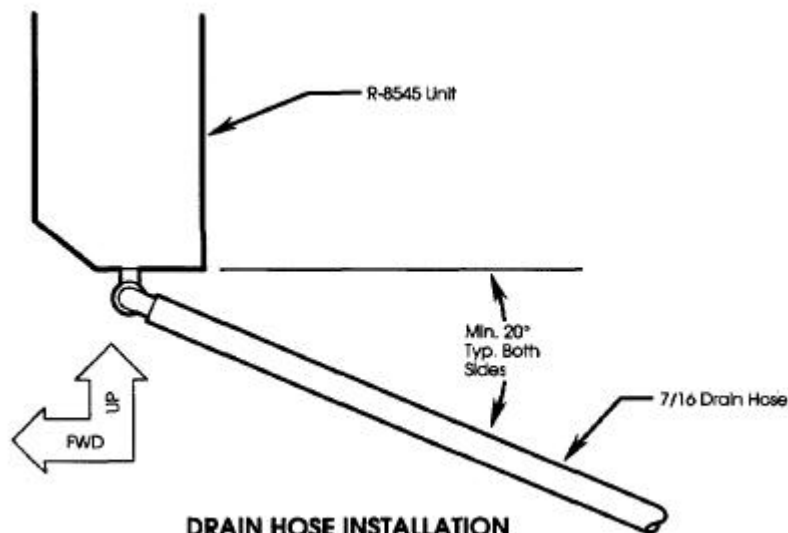
3. Use hand crimper part #79R 1510 or hydraulic crimper part #79R 1515 to crimp fitting on hose.

BUBBLE CRIMP

E. Drain Hose Installation

NOTE: See Figure 5 for additional information on drain hose installation.

1. Attach drain hose assembly to the unit.
2. Route drain hoses out the cab at desired location. Be certain the drain hose runs downhill from the unit at a minimum slope angle of 20°.
3. Secure drain hoses with tie wraps, inspect to make sure hoses are not kinked or pinched off.

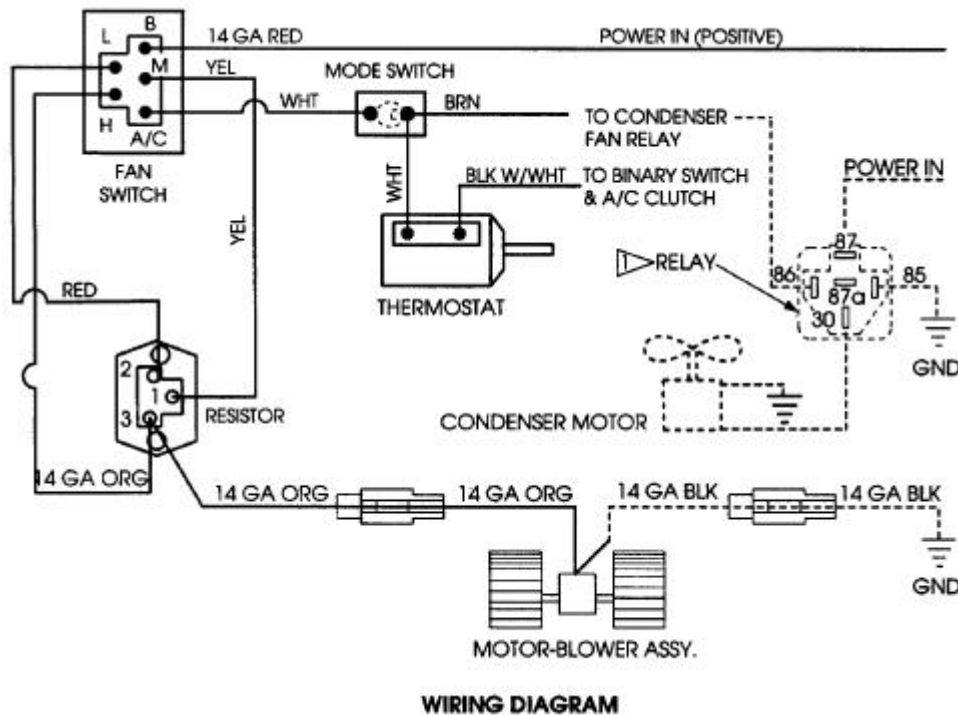


DRAIN HOSE INSTALLATION
Figure 5

F. Unit Wiring

NOTE: See Figure 6 for wiring diagram.

1. Disconnect battery.
2. Black W/White - Route to A/C clutch through low pressure protection switch if included.
3. Red Wire - Connect to an ignition switch supply through a 30 amp circuit breaker for 12 volt system; a 15 amp circuit breaker for 24 volt system.
4. Black Wire - Unit grounding wire.
5. Brown Wire - Route to condenser fan relay (remote mount condenser).



G. Final Assembly and Check

WARNING

The owner/operator of the R-8545 unit accepts the responsibility for the proper and safe installation and maintenance of the unit. Special attention must be given to the mounting as well as the hose assembly and connections to be sure that they are securely fastened and in good condition to preclude the possibility of personal injury.

1. Connect the battery.
2. Evacuate the system, then charge with refrigerant.
3. Turn the ignition switch to the "On" position and place the fan speed switch on the highest position.
4. Place the Heat-A/C switch to the "A/C" position and the temperature control lever on the coldest position.
 - a. The clutch should click on and be engaged.
 - b. The evaporator blower should be turning at high speed.
5. Turn the fan switch to the "Off" position and compressor clutch should disengage.
6. Move the Heat-A/C switch to the "Heat" position and compressor should disengage.
7. Start engine and run at 1200-1500 rpm. Place the Heat-A/C switch to the "A/C" position and the fan speed on high. Check sight glass on receiver drier for bubbles. Add 6 to 8 ounces more R-12 after the sight glass just clears.

NOTE: Be aware that the sight glass may appear "milky" when charging with R-134a. Be careful not to overcharge the system.

8. Make sure clutch cycles off and on as system is operating

Red Dot Corporation P.O. Box 88790, Seattle, WA 98138 (425) 251-6897 Fax (425) 251-3934