

INSTALLATION INSTRUCTIONS

PT-A-403 Rear HVAC System for

2015-2021 FORD TRANSIT

WITH OEM rear AC/Heat Prep Package Fittings (OEM order code 62C)

For Installation with Havis Prisoner Transport Insert

Warning – Do not attempt to install A/C units unless you are experienced with servicing A/C systems!

TOOLS REQUIRED:

A/C Refrigerant Recovery Unit
3" Hole saw
Phillips screwdriver

Drill and Drill bits
Wire Cutter / Crimper Socket set
Straight screwdriver

1.25" Hole saw
CV Boot crimp tool

PARTS AND HARDWARE:

<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART#</u>
1	ProAir Air Tech 2 Kit for Ford Transit Van	PRM97463 (parts breakdown below)
1	ProAir Air Tech 2 fittings, <u>for AC Prep Package</u>	PRM97481 (parts breakdown below)
1	Switch Plate	HS93361 (C-PS-4-L)
2	2 ½" "Y" Duct Connectors	PRM97483
4	Ceiling Vent Cover Bracket	KKM0403-001
12	3" Hose Clamp	GSM20045
12	8 x 3/8" Screw	GSM33179
36	2 ½" Air Duct Hose (36 foot length)	PRM97475
2	Switch Plate Labels (REAR A/C HEAT)	C-LABEL-S
20	15" Wire Tie	GSM20036



NOTES:

- Check for obstructions (Wires, brake lines, fuel tank, etc.) before drilling any holes!
- **These instructions include specific details for installing AC /Heat system with the Havis, Inc. Prisoner Transport insert. Some details may be slightly different than the Proair instructions**
 - Carefully read all instructions before installing any Havis, Inc. products.

PROAIR PARTS LIST

ProAir Air Tech 2 Kit for Transit Van / Havis Kit # PRM97463 (includes the following)

Proair Part Numbers

(10)	02 000 015	Linestake clamp, 2"
(1)	02 000 021	Clamp, Dr Hose 7/8
(1)	02 000 043	Washer, 1/4 Flat Zinc
(1)	02 000 053	Grommet, 1" hose, 1 1/4" OD
(1)	02 000 054	Grommet, 3" hose
(20)	02 000 074	Screw, 14x1 Hex Washer Tek Zinc
(2)	02 000 106	Speed clip, #10
(3)	02 000 132	Linestake clamp, 2" twisted ends
(1)	02 000 252	Bolt, 8mm -1.25 x 65
(20)	02 000 378	Wire tie, 14 x 5/16, 120# Pull
(16)	02 000 390C	Clamp, #10 Worm gear Heater Hose 5/8"
(2)	02 000 418	Screw, 10x1/2 hex washer type AB
(1)	02 000 448	Bolt, 1/4-20 x 7/8"
(1)	02 000 520	Nut, 1/4-20 Hex Zinc
(.5ft)	04 000 007	Hose, 1/2 ID Drain - clear
(6ft)	04 000 010	Tube, Convo 1"
(6ft)	04 000 077	Tube, Convo 1/4"
(2)	05 000 020	Plastic Wye, 5/8 OD
(2)	05 000 050	Splice, 5/8 Heater Hose
(2)	05 000 110	Ell, 60 5/8 ID x 4.5" Heater
(1)	05 000 295	Inline Booster Pump (<i>Havis # PRM98233</i>)
(1)	05 000 507	Ell, 90 #10FOR x 10 CF
(1)	05 000 813	Ell, 180 #6 FOR x 6 CF
(1)	06 001 670	Plate, ATII Transit Mtg
(.666ft)	08 000 017	Tape, Prestite, Refrigerant
(3 ft)	08 000 124	Sleeve, Fire Protective 2" I.D.
(1)	08 000 164	Washer, Sealing, 11mm GM
(1)	09 000 424	Inst. Instr. Transit Tie In
(1)	62 000 274	Hose assy, 5/8 OEM Heater x 75' feet
(1)	62 000 584	Hose assy #6 AOC x 30' feet
(1)	62 000 585	Hose assy, #10 AOC x 30' feet
(1)	02 000 118	Nut, 7/16-28 zinc
(1)	63 000 007	Trim lock, 1' 7"
(1)	63 000 705	Valve kazoo 5/8" ID x 3"
(1)	63 001 049	Water Valve Bag, 12 Volt 2 Port (<i>63 001 049 Kit includes the following</i>)
(1)	01 000 136	Relay, 12v 50/20 Amp
(1)	01 000 644	Water valve relay harness
(4)	02 000 075	#10 x 3/4 Hex washer screw
(2)	02 000 390	Worm gear clamp
(1)	05 000 852	12 v Electric water valve (<i>Havis # PRM97506</i>)
(1)	64 000 226	Elec bag, 15 Transit ATII
(1)	66 000 257	Power Pak AT II plate fin coil
(1)	68 000 032	Harness assy, 20A 239 Power Relay
(1)	65 000 011	Warranty Bag, Commercial

Notes:

Make sure to remove protective plugs or caps on fittings prior to installation.

This kit may include extra parts not needed for this specific vehicle application.

**When recharging the Air Conditioning system, you will need to add -
3 lbs total refrigerant
2 ounces refrigerant oil**

Refrigerant total may vary slightly depending on final air duct temperature test results.

**Check OEM vehicle specifications for proper Antifreeze/ Coolant.
Approximately 1/2 gallon of additional coolant required.**

(1) 80 002 017 kit Ford Transit Prep Pkg fittings kit / Havis #PRM97481 (includes the following) Also includes fittings for evaporator connections (Bolts, nuts and washers included for prep fittings)

(2)	05 000 479	Strt, #6 FOR x 6 CF
(1)	05 000 484	Strt, #10 FOR x 10 CF
(1)	05 000 507	90 #10FOR x 10 CF
(1)	05 001 158	#6MIO Tie-In Transit (high side fitting, Prep Package)
(1)	05 001 159	#10MIO Tie-In Transit (low side fitting, Prep Package)



Ford Transit PROAIR kit



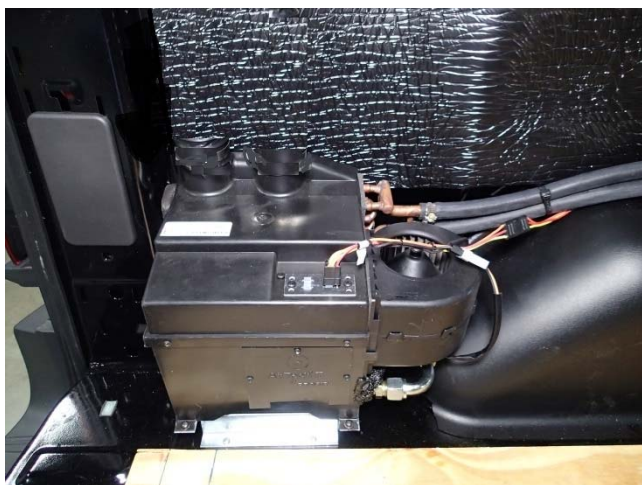
Havis vent adaptor kit



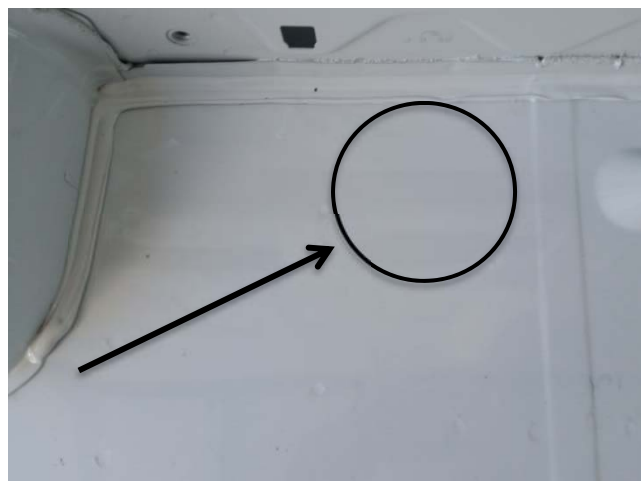
Remove the OEM tie down hook. Uncoil all of the hoses on the floor and mark one of the heater lines. Using red tape about every 24" this will be your push line.



Install mounting plate to the floor behind the driver side wheel well, lining up the floor rib to the edge of the plate. Attach with (4) 5/16" self-tapping screws. Drill drain hose hole through floor using plate as the template.



Attach heater hoses w/ (2) worm gear clamps and a/c lines to unit with the push line marked in red to the bottom of the coil. Crimp on the #6 evap fitting to the #6 liquid line. Crimp on the #10 evap fitting to the #10 suction line. Now attach the fittings using the appropriate "O" rings, lubing them with mineral oil. Wrap the suction line with prestite tape. Plug in the wire harness and ground the black wire to a good ground. Run wiring forward.



Drill a 3" hole at this location in front of the wheel well. Take note of the spot welds and the body seam. Your hole should be between these two points. Insert 3" grommet and fasten with three (3) 5/16" self-tapping screws.



Run hoses and harness over the wheel well. Use tie-wraps to keep hoses and harness together. Determine what wiring is needed to go to the pumps and what wiring needs to go to the switches. Run wiring accordingly.



Run hoses and pump wire harnesses down through 3" hole and out the bottom of van. The access hole must be sealed after all parts are installed and the system is tested.



Mount booster pump per ProAir instruction details. See attached print for heater hose hook up.
(Pump Proair # 05 000 295)
(Pump Havis # PRM98233)



Mount water valve per ProAir instruction details. See attached print for heater hose hook up.
(Water valve Proair # 05 000 852)
(Water valve Havis # PRM97506)



Air conditioning fittings for OEM rear prep package (Included in fittings kit # PRM97481)
Note: CV Boot crimp tool required to properly tighten metal clamp rings.



The AC prep package fittings are located roughly underneath the driver seat. **NOTE: Make sure the system has been properly evacuated before opening the fittings.**



The coolant lines tie into the OEM heater system underneath the center of the van near where the driveshaft meets the transmission.



Remove the OEM u-bend from the factory line.

NOTE: The bottom / rearward coolant line supplies the hot coolant



Attach the hose and clamps to the HVAC blower assembly.

Note: Carefully measure length of duct hose needed for each vent and "Y" connections before cutting.



Run a single long length of hose and attach the "Y" and split the hose into two vents in driver and passenger side front ceiling. This will provide a total of four ceiling vents.



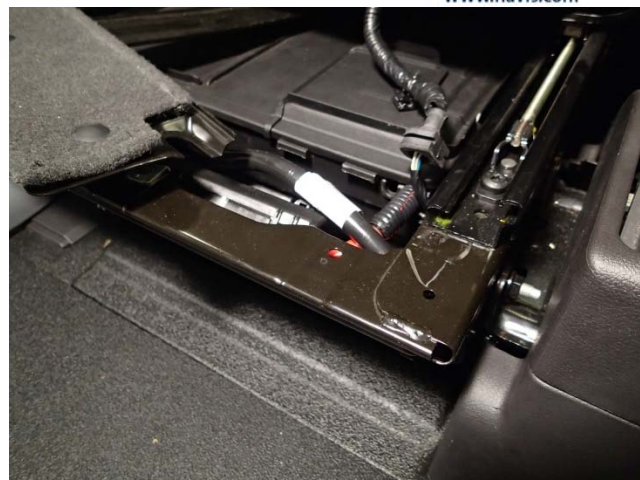
Route hose into ceiling holes and **cut off any extra slack.** Attach the hose to the vent bracket using a 3" hose clamp



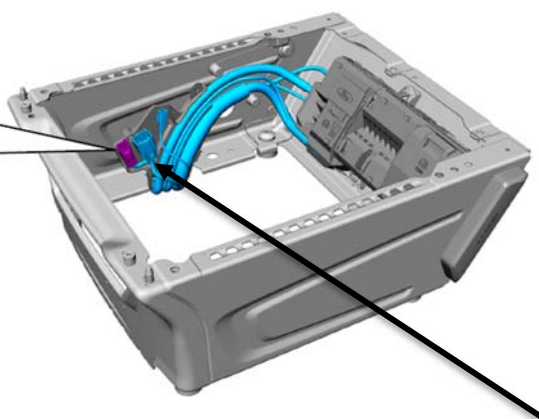
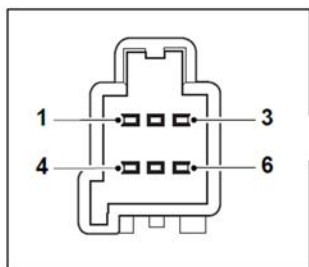
Align the three mount holes of the vent adapter cover with the pre-punched holes in ceiling. Attach each vent to ceiling using #8 x 3/8" flat head sheet metal screws. **(Screws included with standard insert hardware)**



Underneath the driver seat is the battery and upfitters wiring. Remove three push pins to pull the carpet off.



Remove the two (2) 8mm head bolts and remove the brace for the battery cover. This gives you access to the battery for power and the Upfitters ignition wiring.



Item	
1	Turn Lamp Left Front
2	Turn Lamp Right Front
3	Engine Run — Ground
4	Vehicle Speed
5	Switch Illumination
6	Ignition

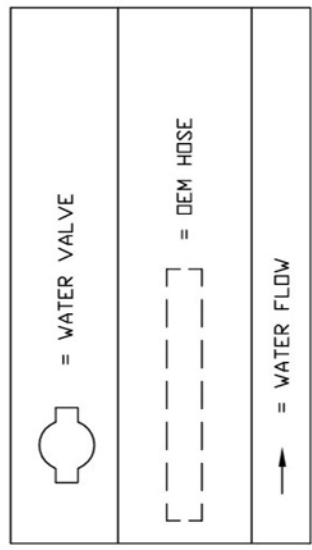
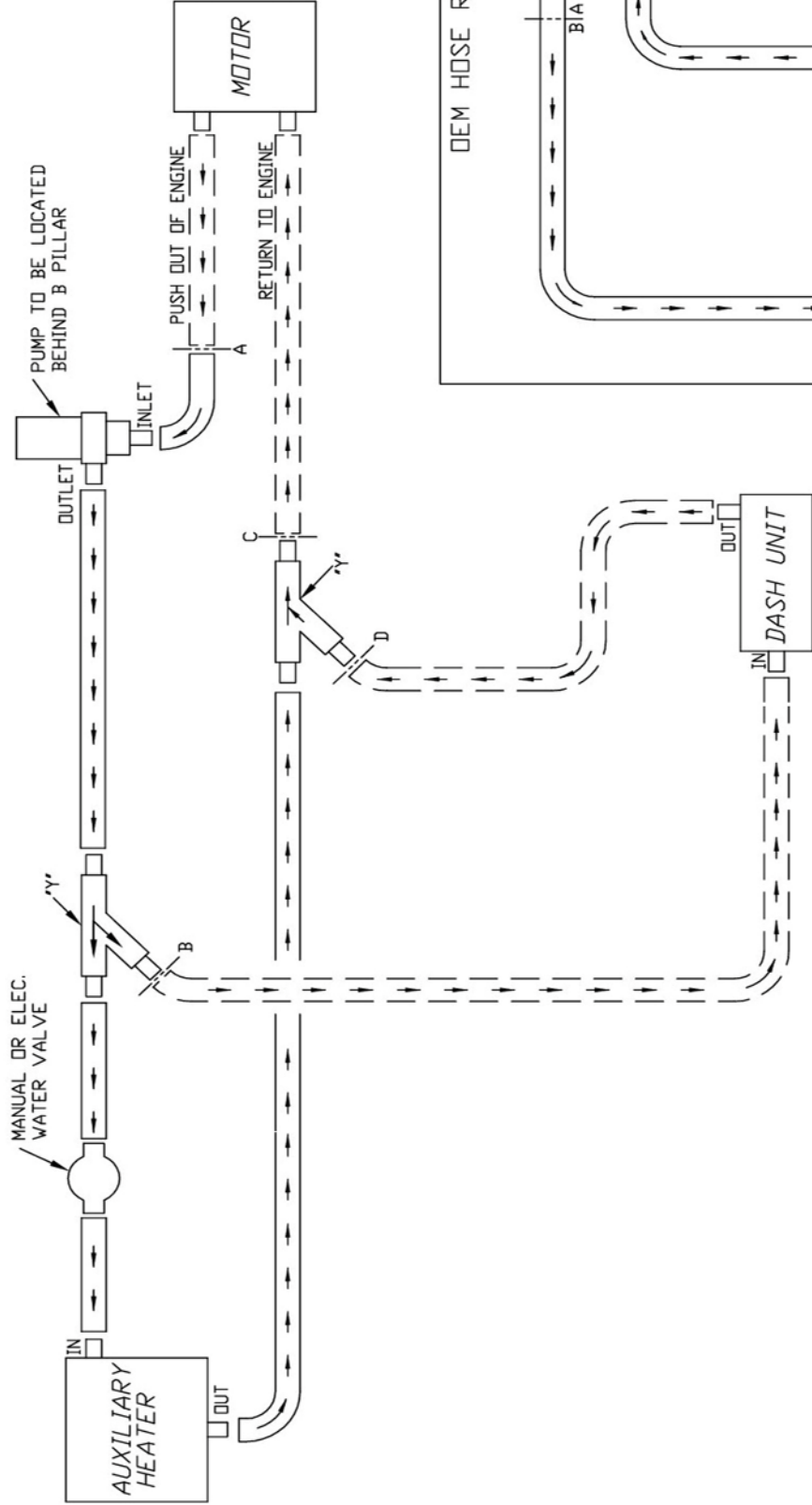
This is an example of where you can safely pick up an ignition source for your wiring. The max load is 10amps



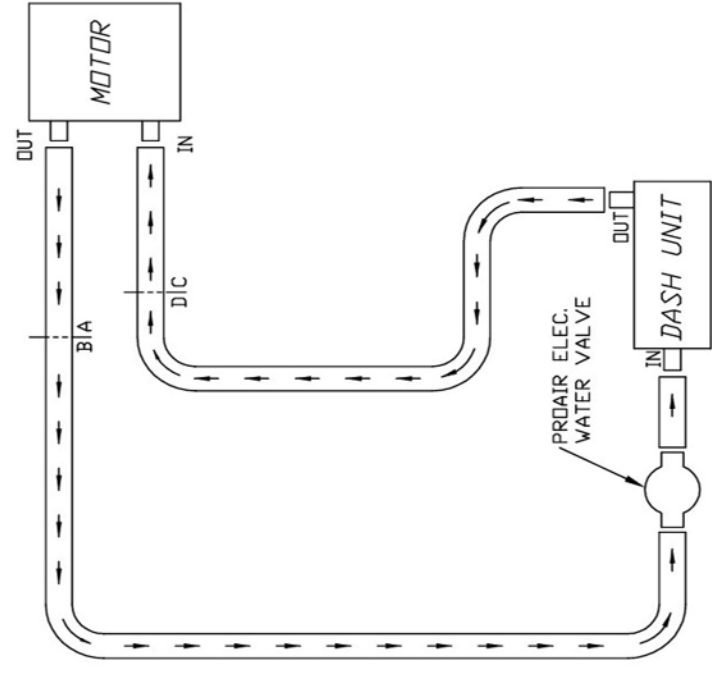
Follow wiring diagram listed below.

This photo shows the C-PS-4-L switch plate included in the PT-A-403 kit.

It is mounted in the optional C-240 console and C-B68 mount kit



DEM HOSE ROUTING



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REV. A		PART NO. 40 000 493		TITLE: WATER PLUMBING SCHEMATIC	
A 14-166		RELEASED TO PRODUCTION		USAGE: STR	
BY		DATE		SHEET 1 OF 1	
MRM		10/07/14		SCALE: 3/8" = 1" SIZE A	
CHECKED		10/07/14		PROAIR®	
DRAWN		10/07/14		28731 C.R. 6 ELKHART, IN 46514	
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