
TECHNICAL BULLETIN – TB0321-1

Description/Affected Part or Machine: Obsolescence of tube & shell HX PN: 038-015

Models Affected: ALL CDS MODELS

The purpose of this document is for general information only. Normal warranty provisions apply.

Tech Safety Rules

Caution

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine may result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey manufacturer's instructions and safety rules
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

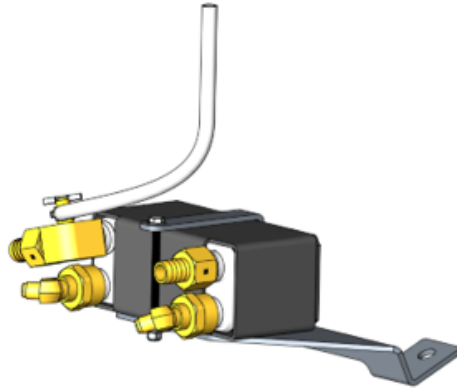
Background: HydraMaster is on the leading-edge of technology, reliability, and simplicity. As part of our ongoing dedication to continuous improvement HydraMaster is pleased to announce the introduction of PHE technology on HydraMaster's CDS Models. This new **Plate Heat Exchanger (PHE)** technology is replacing the shell and tube heat exchangers on most HydraMaster models. In the world of heat exchangers PHE's are smaller, weigh less, and take up less space. In our standard testing the PHE's meet or exceed the performance of our current shell and tube heat exchangers due to their exceptional efficiency. Quite simply, PHE's achieve the same heat transfer as shell and tube heat exchangers, but in a much smaller and lighter package size.

The next page includes detail on how to install the new style water to water plate heat exchanger (PHE) on a new CDS installation, as well as instruction to retrofit an existing CDS to replace the old & shell HX with the plate HX (using retrofit kit PN:078-981).

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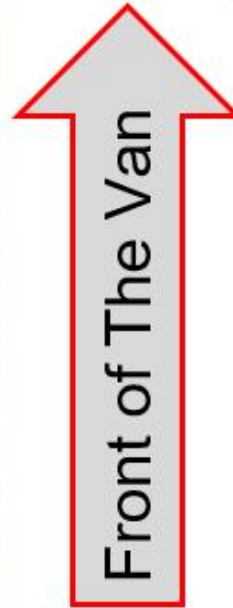
Installation of new style (PHE) on a new CDS 4.8 installation



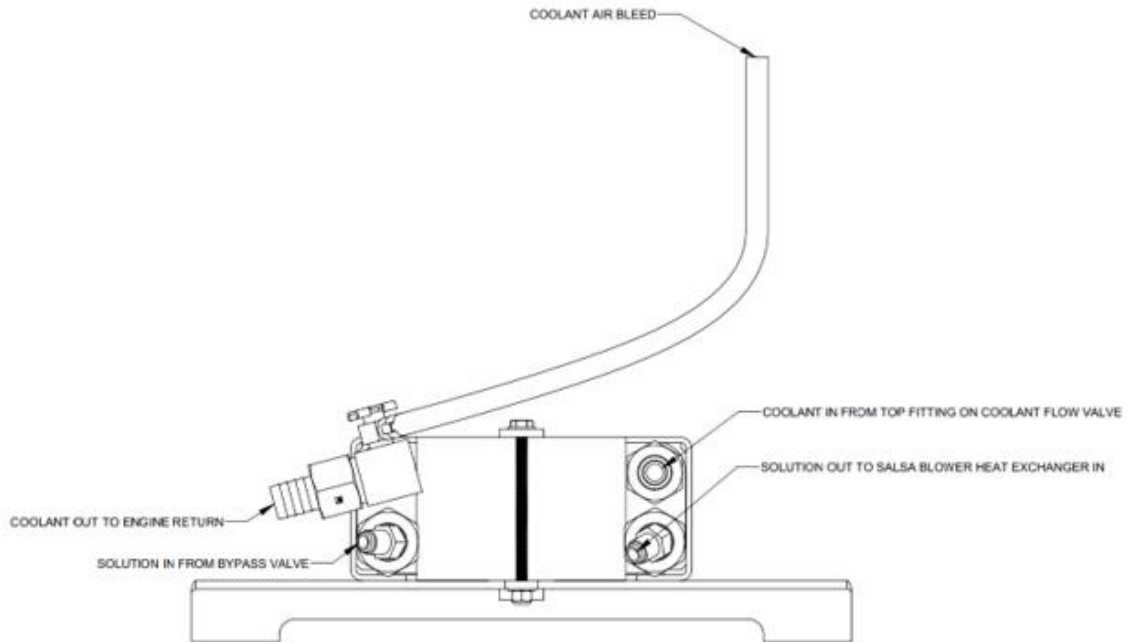
IMPORTANT - Hoses needed for installation of this assembly are as follow:

Location of the Hose	Hose Description	Hose Part Number
Included with Salsa Kit (PN: 000-079-077)	HOSE ASSY, 5/16" TEFLON X 42" LG. w/JIC END	000-068-802
	HOSE ASSY, 5/16" TEFLON X 31" LG. w/ 3/8" JIC	000-068-755
Installed on High Pressure Manifold (Instrument Panel)	HOSE ASSY, 5/16" TEFLON X 16.5" LG	000-068-330
On Pallet Shipped with Unit	HOSE, 3/4" GREENSTRIPE X 18' LG.	000-068-385

1) Place the assembly on the rear seat studs behind the passenger seat, with the fitting pointing to the back of the van, hand tighten the seat stud nuts for best fit.

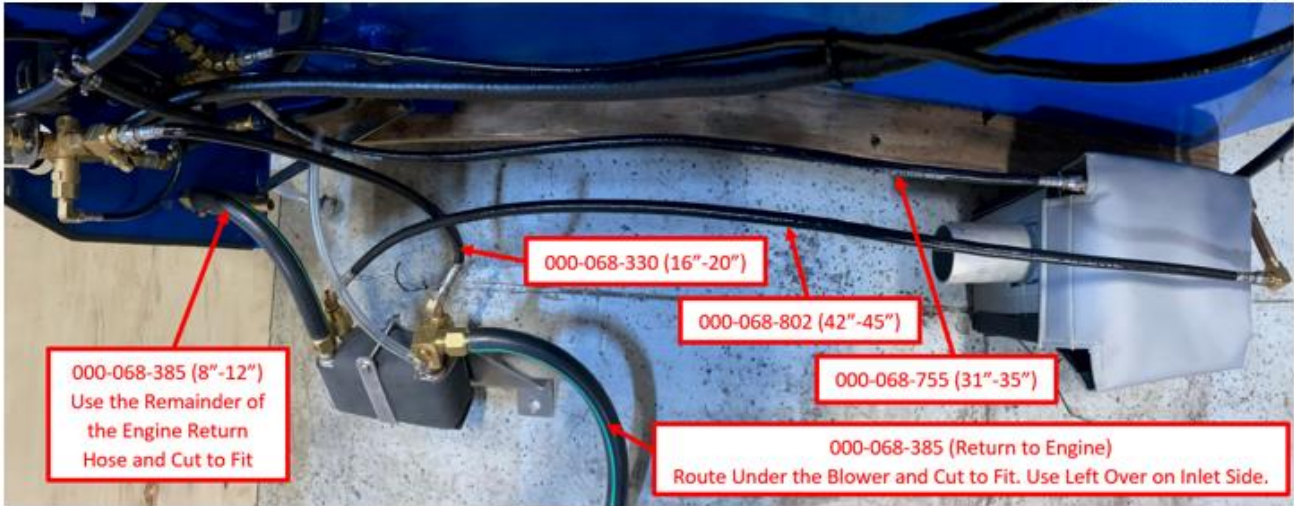


2) Route the hoses as follow:



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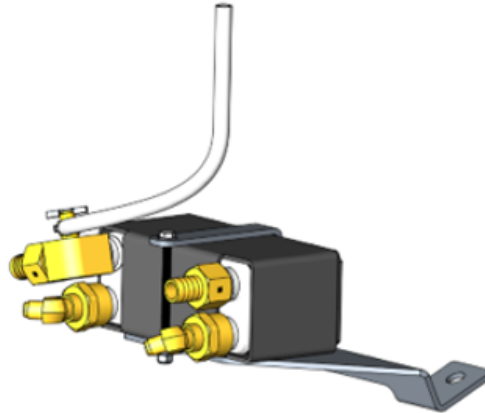
- 3) Bleed any trapped air, as necessary.
- 4) Use the clamps provided in the front-end kits to complete the assembly of 000-068-385 green stripe hoses.

****See next page for instructions how to retrofit from tube & shell HX to Plate HX on existing CDS models****

INSTRUCTION SHEET

Plate heat exchanger retrofit kit instructions

Kit No. 000-078-981



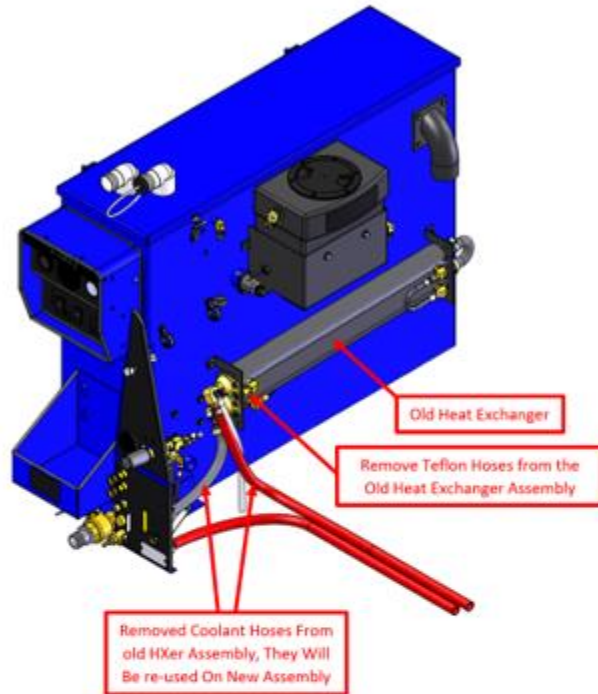
Important: Coolant heat exchanger will be full of coolant; it is recommended to drain the coolant prior completing these instructions and refill the cooling system once the new assembly has been installed. It is also required to remove the passenger side seat and the cowling for better access to components.

Parts included with this kit:

ITEM	DESCRIPTION	QUANTITY	PICKED
000-068-330	HOSE ASSY, 5/16" TEFLON X 16.5 LG	1	
000-068-802	HOSE ASSY, 5/16" TEFLON X 42 LG w/JIC END	1	
000-094-113	NUT, 1/4-20UNC NEOPRENE WELLNUT	4	
000-143-002	SCREW, 1/4"-20 X 1" HEX S/S	4	
000-174-003	WASHER, 1/4 FLAT S/S	4	
000-174-019	WASHER, 1/4 LOCK S/S	4	
601-006-031	ASSY, COOLANT HX GM CDS 4.8 ALFA LAVAL AXP14 - HX	1	

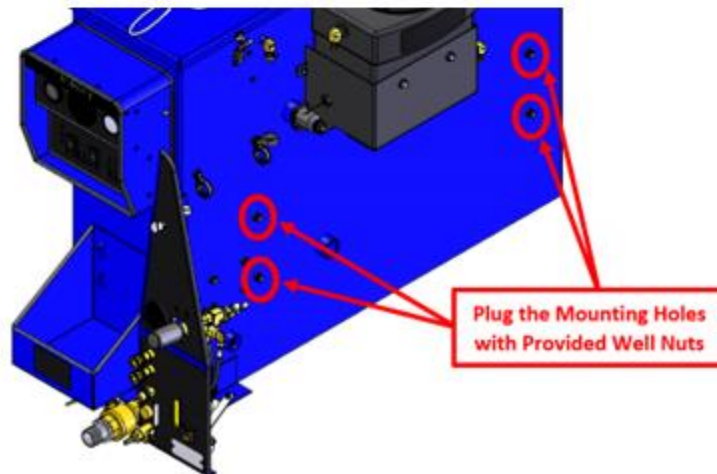
Removal of the old Heat Exchanger:

1) Remove hose assemblies from the heat exchanger. Take care not to damage the coolant hoses as they will be re-used in installation of the new heat exchanger.



2) Unbolt the heat exchanger from tank to remove the assembly.

3) Use the provided well-nuts to plug the old heat exchanger assembly mounting holes.

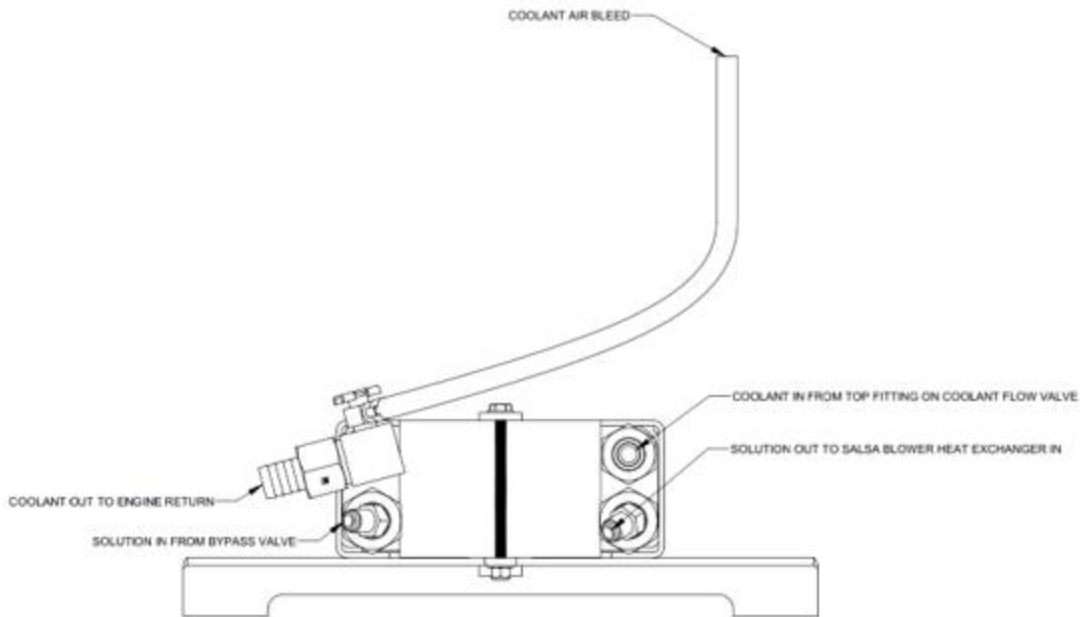


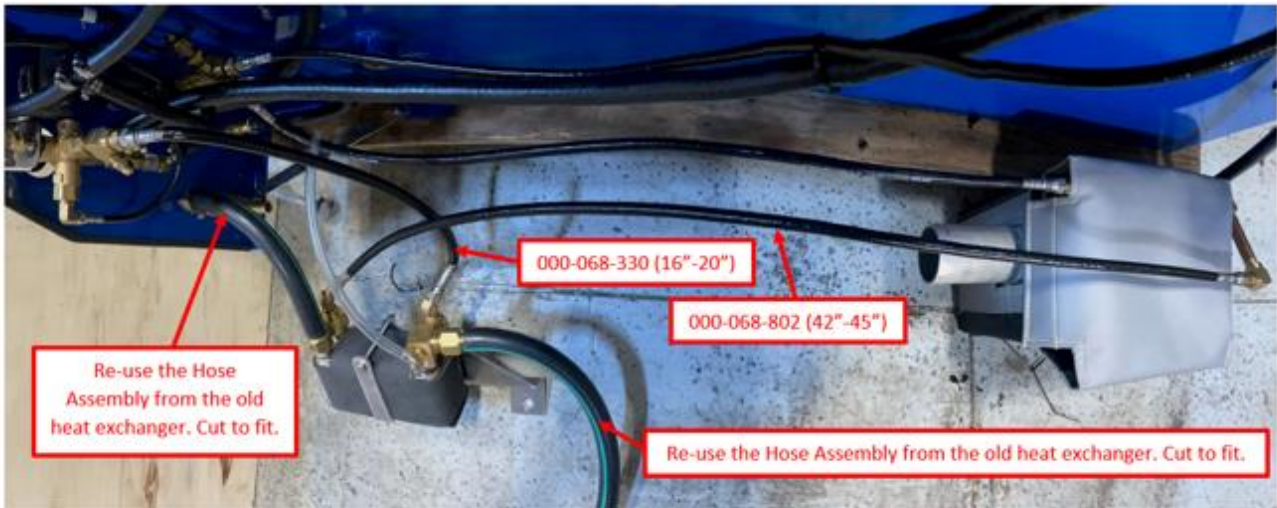
Installation of the New Heat Exchanger:

1) Place the assembly on the rear seat studs behind the passenger seat, with the fitting pointing to the back of the van, hand tighten the seat stud nuts for best fit.



2) Route the hoses as follow (view from the fitting side of the assembly):





- 3) Re-install the clamps onto the coolant hoses.
- 4) Bleed any trapped air and add or remove coolant, as necessary.