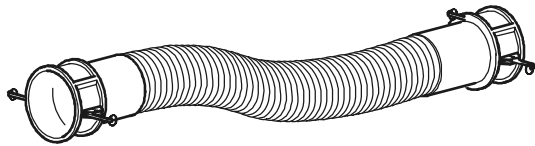


Top Hose Kit for the High-Density Cooling Enclosure — ARACTH1

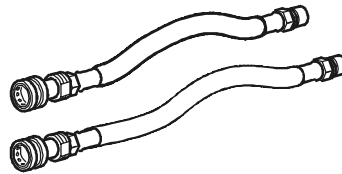
Overview

The top hose kit for the High-Density Cooling Enclosure (HDCE) (ARAC15000U & ARAC15000T) connects the heat exchanger coil to the valve set assembly (ARACBV1) to control the flow of water from the cooling bus. This kit utilizes the rigid piping system of the HDCE and provides a sealed connection.

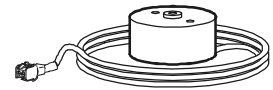
Identifying parts



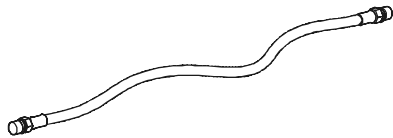
Cam-locking outer duct (1)



Self-sealing couplings (2)



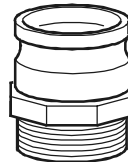
Valve box leak detection sensor (provided with HDCE)



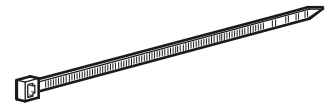
Inner hose (2)



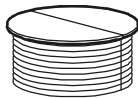
Male adapter (2)
(attached to inner hoses)



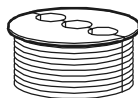
Cam-lock connector (1)
(attached to cam-locking outer duct)



Cable ties (provided with HDCE)



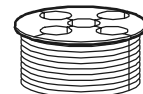
Bottom access hole seal (1)



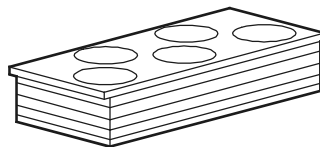
3-hole power distribution cable seal (1)



Power distribution cable hole plug (2)



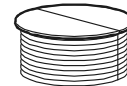
5-hole power distribution cable seal (1)



5-hole cable access seal (2)

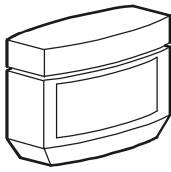


Cable access seal hole plug (10)



Cable access hole seal (4)

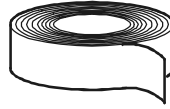
Tools required (not provided)



Petroleum jelly



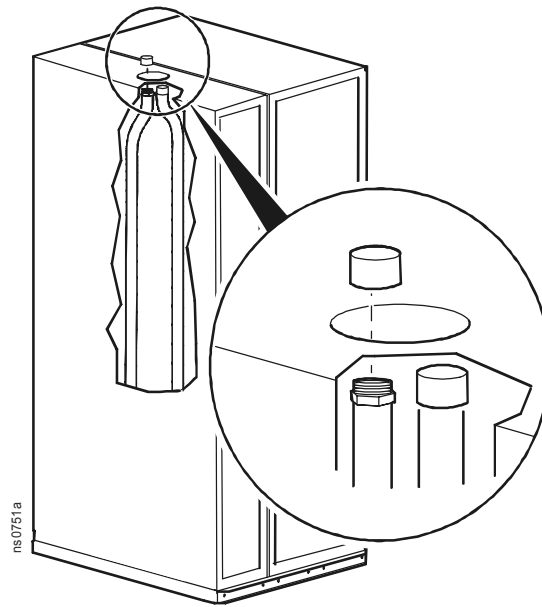
Rubber mallet



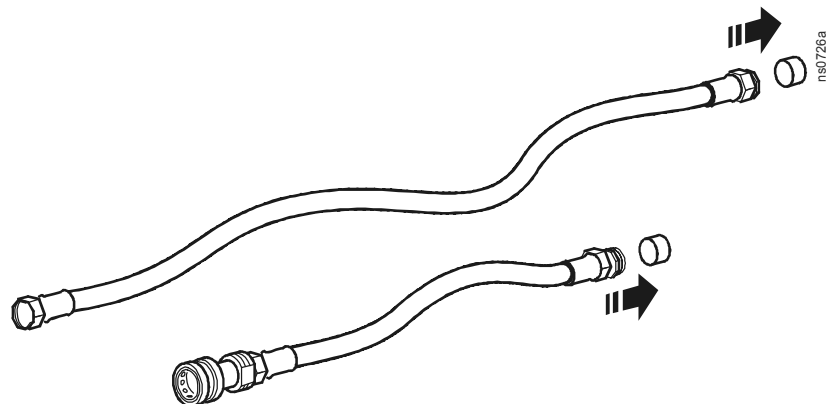
Pipe sealing tape

Before you begin

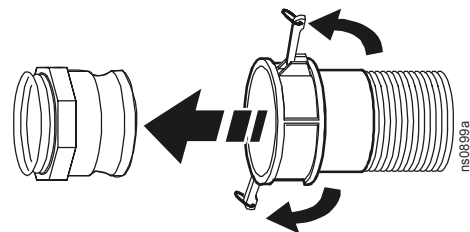
1. Remove caps from the chilled water rigid piping connections on the top of the Equipment Cooling Unit (ECU).



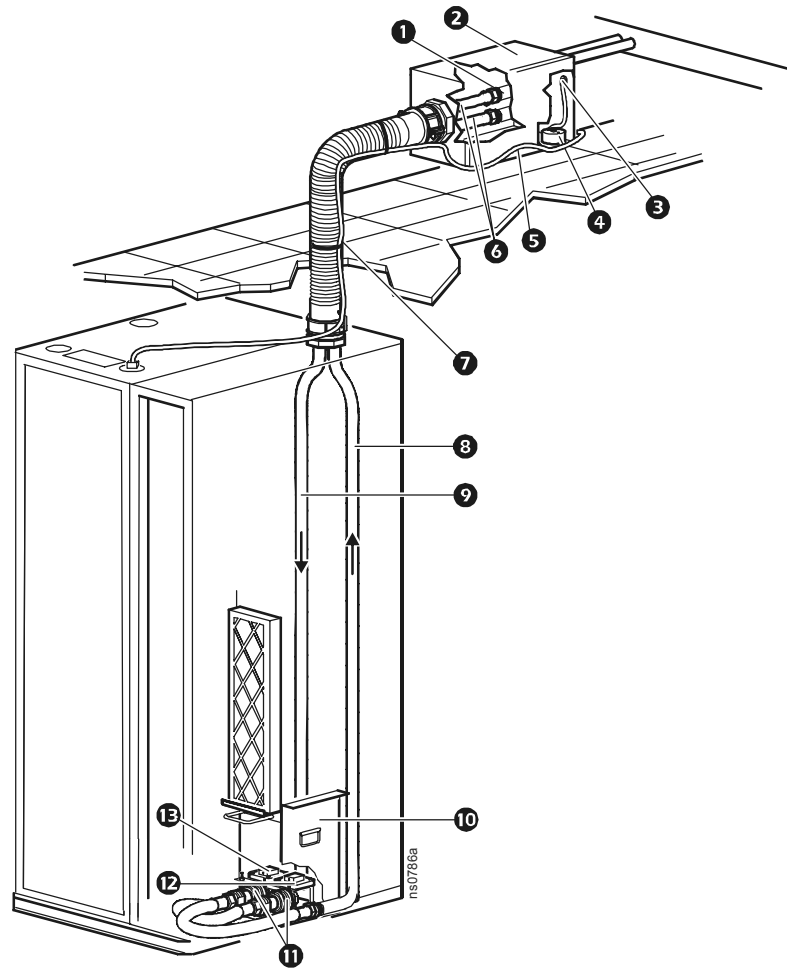
2. Remove plastic threading protection caps from all inner hoses and self-sealing couplings.



3. Remove the cam-lock connector from the cam-locking outer duct.



Top hose kit overview



- | | |
|-----------------------------------|---|
| ❶ Valve assembly | ❸ Chilled water return rigid pipework |
| ❷ Valve box | ❹ Chilled water supply rigid pipework |
| ❸ Leak detector access hole | ❺ Cooling coil cartridge |
| ❹ Valve box leak detection sensor | ❻ Inner hoses with self-sealing couplings |
| ❺ Leak detection cable | ❼ Chilled water supply connector |
| ❻ Inner hoses | ❼ Chilled water return connector |
| ❼ Cam-locking outer duct | |



See also

Refer to the “High-Density Cooling Enclosure Installation” manual for details about access hole measurements and HDCE placement.

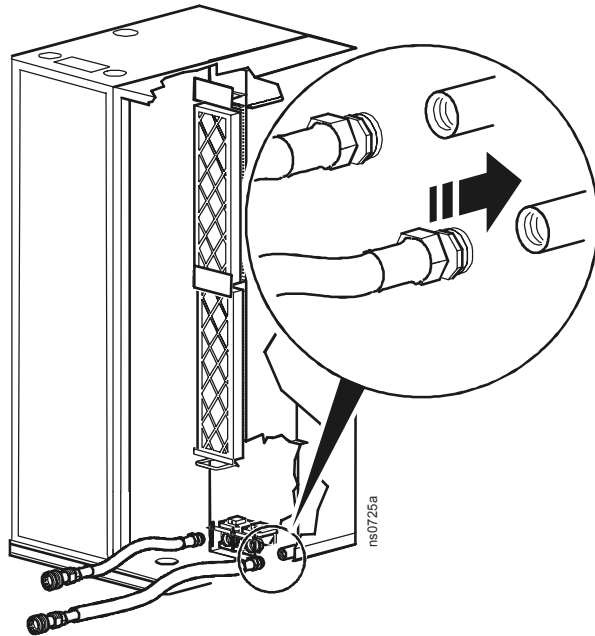


See also

See “Valve Box Assembly for the High-Density Cooling Enclosure - ARACVB1” for detailed information on placement and installation of the valve assembly.

Installation

1. Connect the self-sealing couplings to the fixed rigid pipework by screwing the tapered threaded male hose connector to the female threaded rigid pipe fitting. Apply pipe sealing tape as needed and tighten joint.

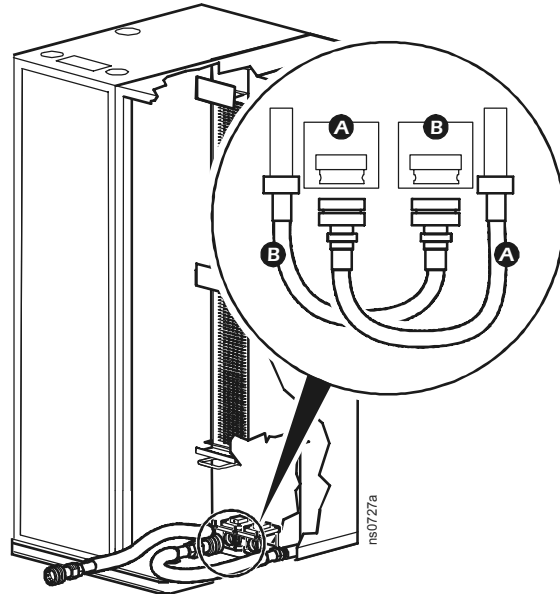


2. Connect the other end of the self-sealing couplings to the mating plug connector on the cooling coil cartridge. The right rigid pipe fitting **A** connects to the left mating plug connector **A** on the coil and the left rigid pipe fitting **B** connects to the right mating plug connector **B**.

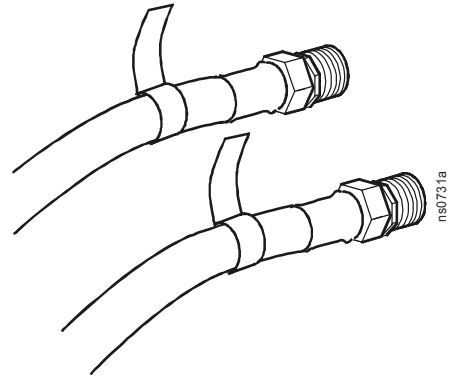


Note

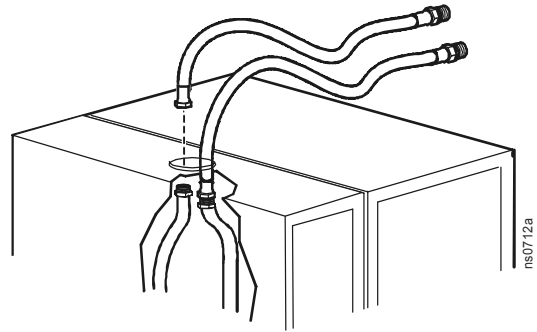
One hose is shorter than the other, enabling them to cross each other diagonally.



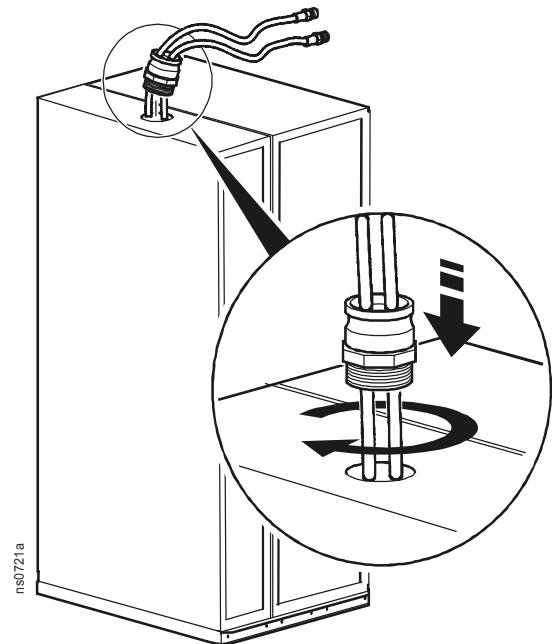
3. Label each inner hose as chilled water supply hose or chilled water return hose for proper connection to the valve box.



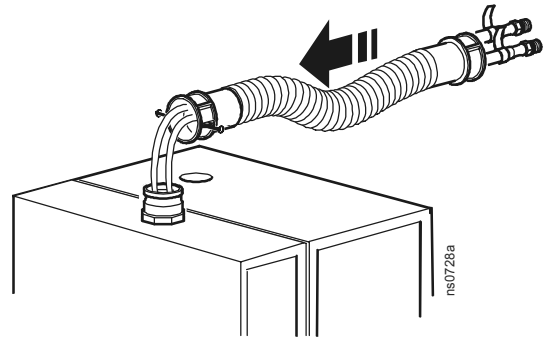
4. Connect the two female inner hoses to the fixed rigid piping on the top of the ECU. Apply pipe sealing tape as needed and tighten joint.



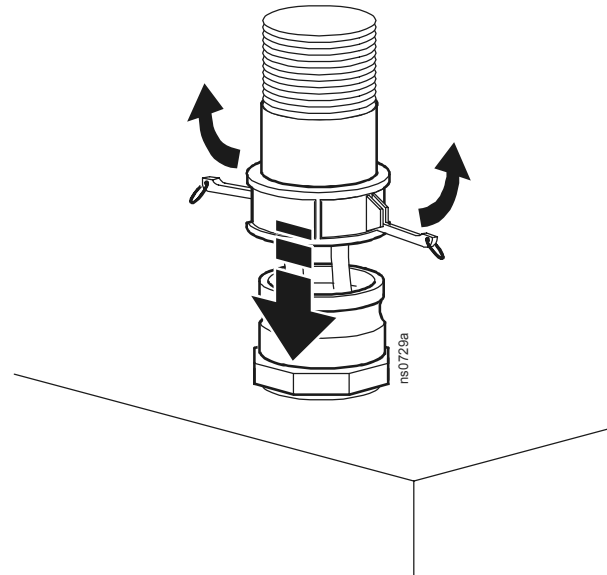
5. Thread the two inner hoses through the male threaded cam-lock connector and slide the connector down toward the top of the ECU. Screw the male threaded cam-lock connector into the threaded hole surrounding the rigid piping on the top of the ECU.



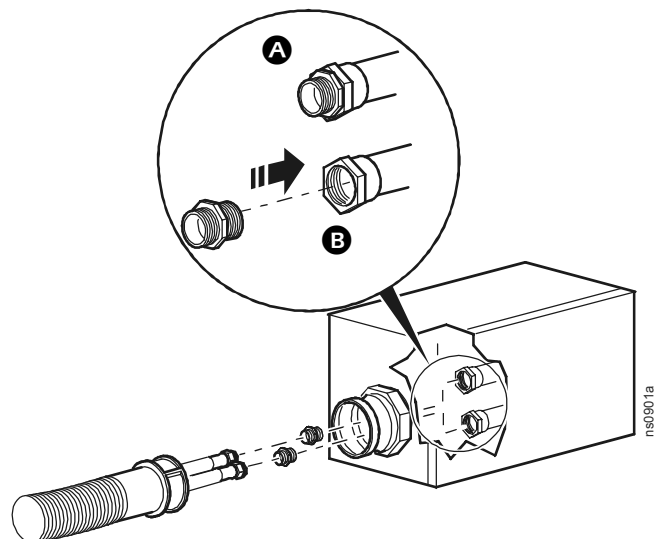
6. Slide the cam-locking outer duct over the two inner hoses.



7. Push the outer duct firmly onto the cam-lock connector installed in step 5. Pull the cams toward the outer duct to lock into place.



8. Remove the male adapters from the ends of the inner hoses not connected to the HDCE and screw them into the chilled water supply valve **A** and chilled water return valve **B** of the valve box. Apply pipe sealing tape as needed and tighten joint.

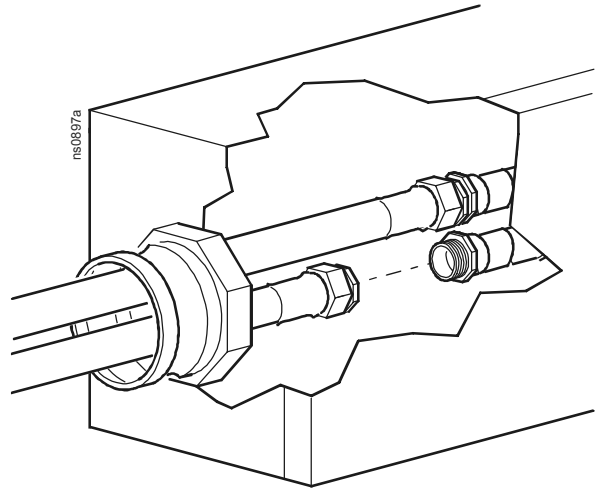


9. Insert the two inner hoses through the cam-lock connector and into the valve box. Connect the hoses to the male adapters installed in step 8. Apply pipe sealing tape as needed and then tighten the joint.



Note

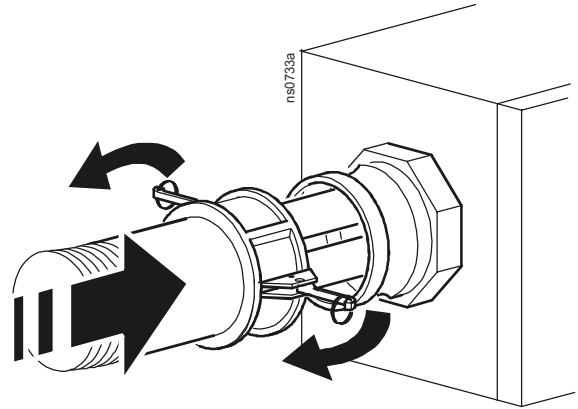
Ensure that the hoses are connected to the proper valves according to the identifying marks made in step 3.



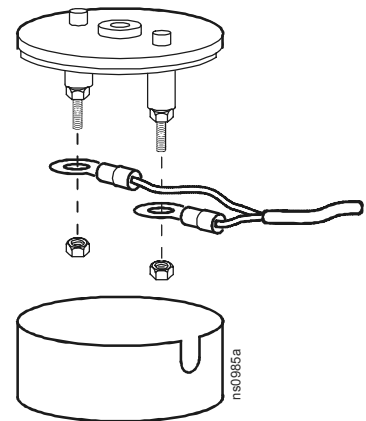
See also

Refer to the “Valve Box Assembly for the High-Density Cooling Enclosure - ARACVB1” for information on identifying parts and components of the valve assembly.

10. Secure the cam-locking outer duct in place by pushing the duct firmly onto the cam-lock connector. Pull the cams towards the duct to lock the duct in place.

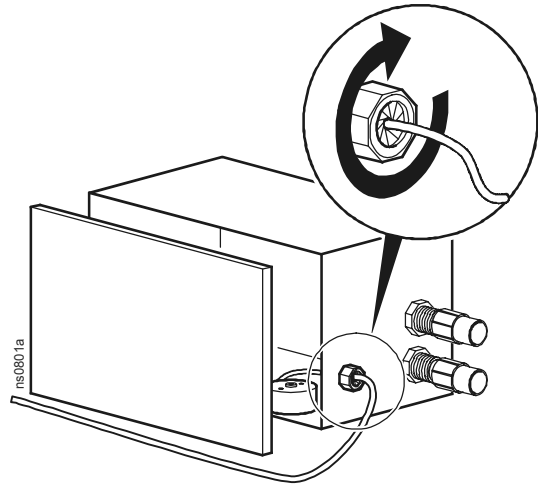


11. Disassemble the valve box leak detector: pull apart the sensor and remove the first set of bolts on the screw terminals. Remove the two open ring connectors and leak detection sensor cable.

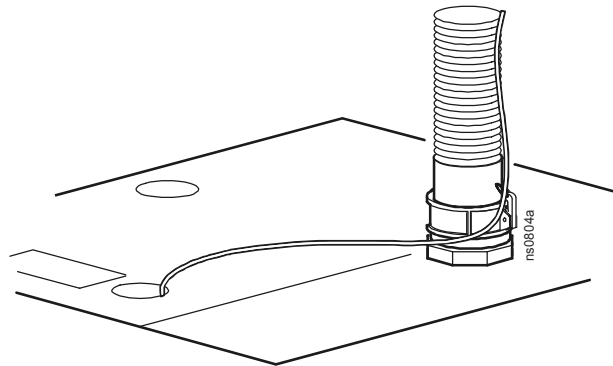


12. Place the disassembled leak detection sensor on the base of the inside of the valve box.

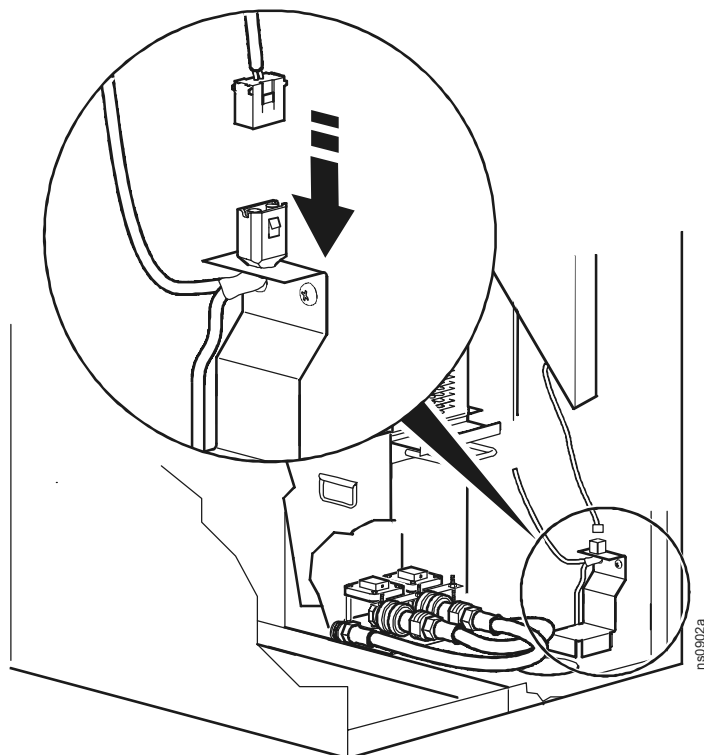
- a. Open the leak detector access hole by turning the nut counter-clockwise.
- b. Thread the two open ring connectors and the leak detection sensor cable through the access hole.
- c. Reattach the open ring spade connectors to the screw terminals on the leak detection sensor and then reassemble the sensor.
- d. Turn the nut clockwise to tighten around the leak detection cable and seal the valve box.



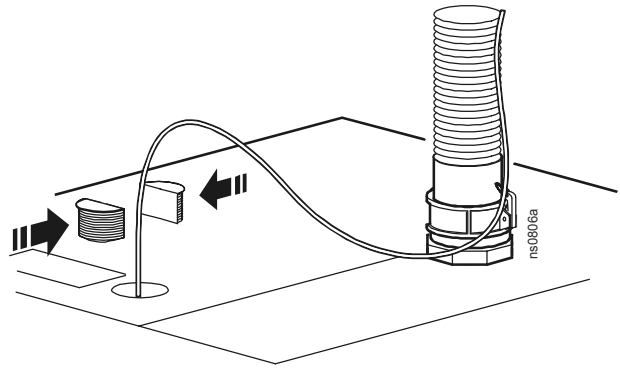
13. Insert the leak detection cable into the top cable transit hole. Route the cable through the HDCE and towards the bottom of the ECU.



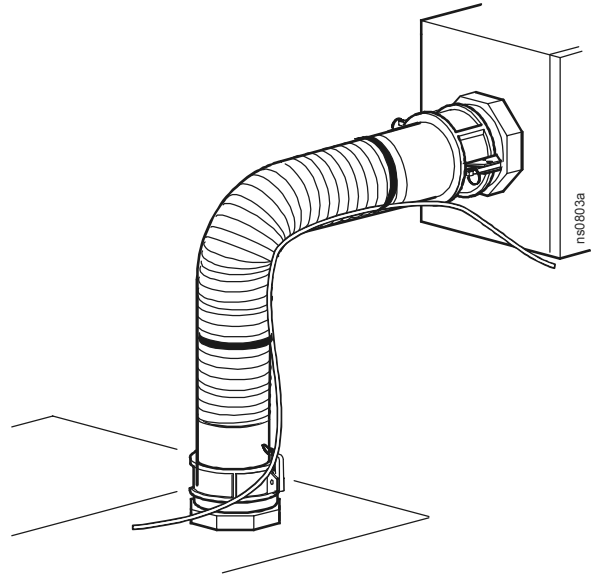
14. Connect the leak detector cable to the connector adjacent to the ECU leak detector.



15. Lubricate the outside of the cable access hole seal with petroleum jelly. Place the leak detector cable between the two halves of the seal and push the seal into the hole on the top of the Rack Equipment Unit (REU). Using a soft mallet, apply pressure evenly around the seal to hammer into place.



16. Attach the leak detection cable to the outer hose duct using cable ties.



Hose specifications

Length mm (in)	I/D mm (in)	O/D mm (in)	Working Pressure (Bar)	Minimum Bend Radius mm (in)	Temperature Range °C (°F)
1803 (71)	25 (1)	34 (1.34)	10	110 (4.33)	-20 – 110 (-4 – 230)

Self-sealing coupling specifications

Pressure Ratings		Manual Connection	Spillage and Air Inclusion	
Liquid Service (Bar)	Failure (Bar)	Connect/ Disconnect Force at 0 Bar	Spillage Max per Disconnect (ml)	Air Inclusion Max per Connect (ml)
160	400	19 kg (41.8 lb)	15.5	15.5

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