

## **ALDE high altitude regulator install instructions**

Tools required:

3/4" SAE open end wrench

7/8" SAE open end wrench

18mm metric open end wrench

3/8" open end wrench or deep well socket

7/16" open end wrench or deep well socket

#2 Robertson screwdriver

#2 Phillips screwdriver

Drill bits: 1/4", 3/16", 1/16"

Center Punch

Blue thread locker

Drill

Spray bottle with water and dish soap

### **Preparation:**

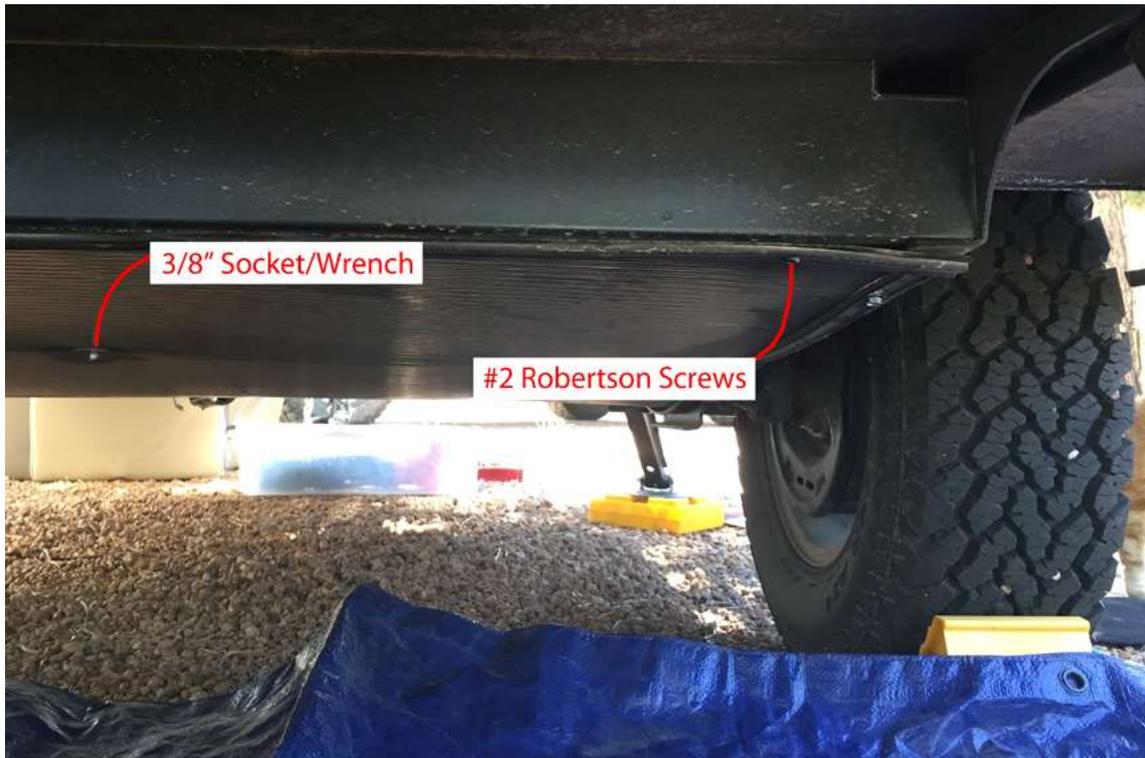
Turn off and disconnect the propane tank. Some residual propane may exist in the line while performing this work.

You will need to drop the rear liner (if equipped) and disconnect the factory propane supply hose. Access to the rear Alde compartments, both sides, from inside the trailer is required. Remove all items from inside that may hinder your access to the Alde boiler.

If you do NOT have a liner, skip this step:

Use a 3/8" socket to remove the three bolts with large washers. Use a #2 Robertson bit to remove the screws that hold the corrugated liner to the frame. Remove as many as you need to expose the underside of the trailer floor. Place the removed screws in a safe place as you will need them to re-attach the liner later.

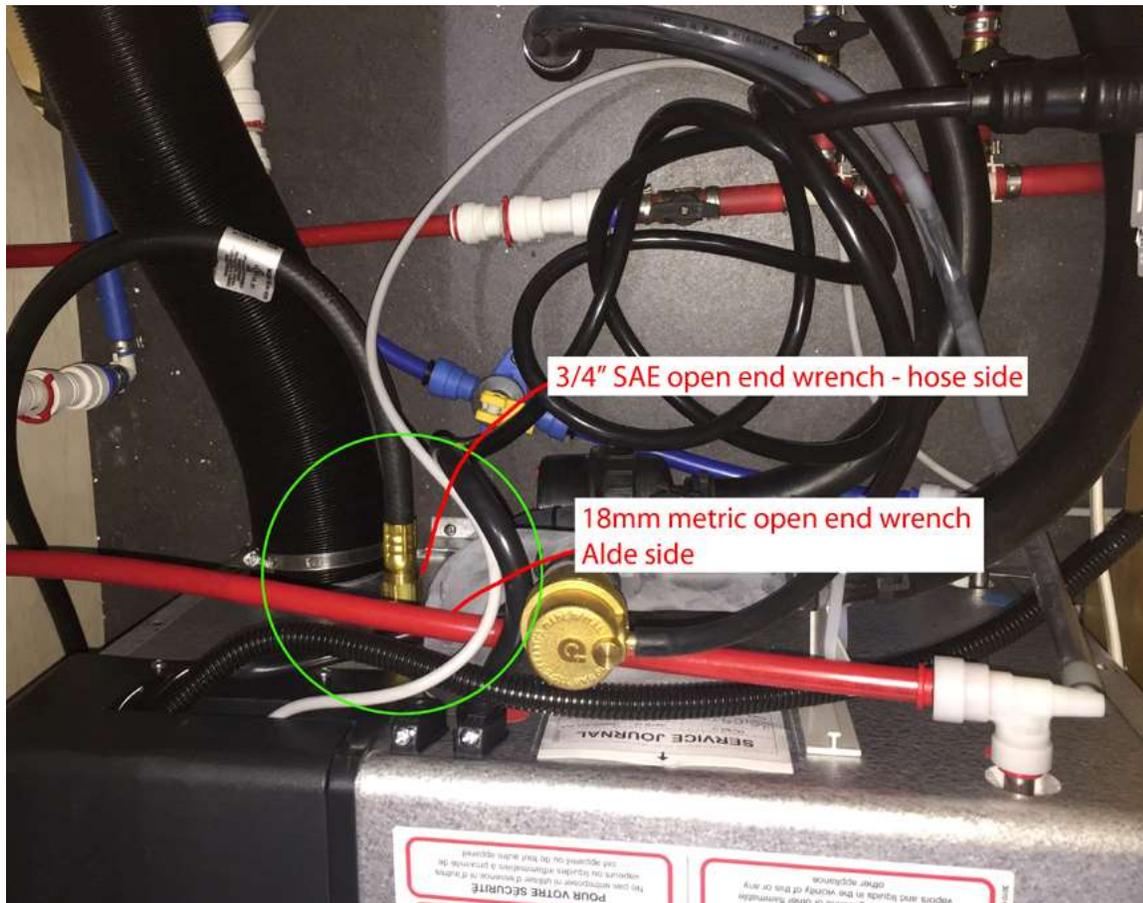
View from rear:



Liner dropped down:

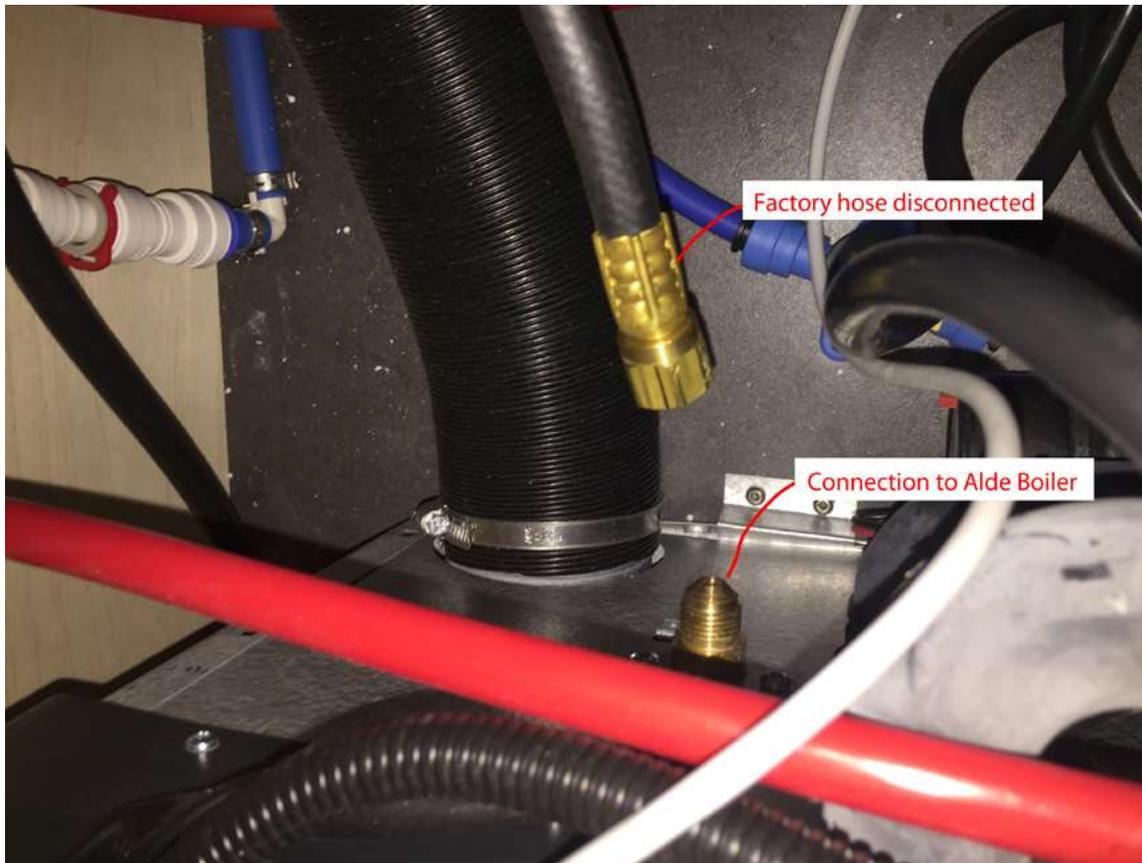


Inside the trailer, use a 18mm open end wrench and a ¾" open end wrench to remove the factory propane supply hose from the Alde boiler:

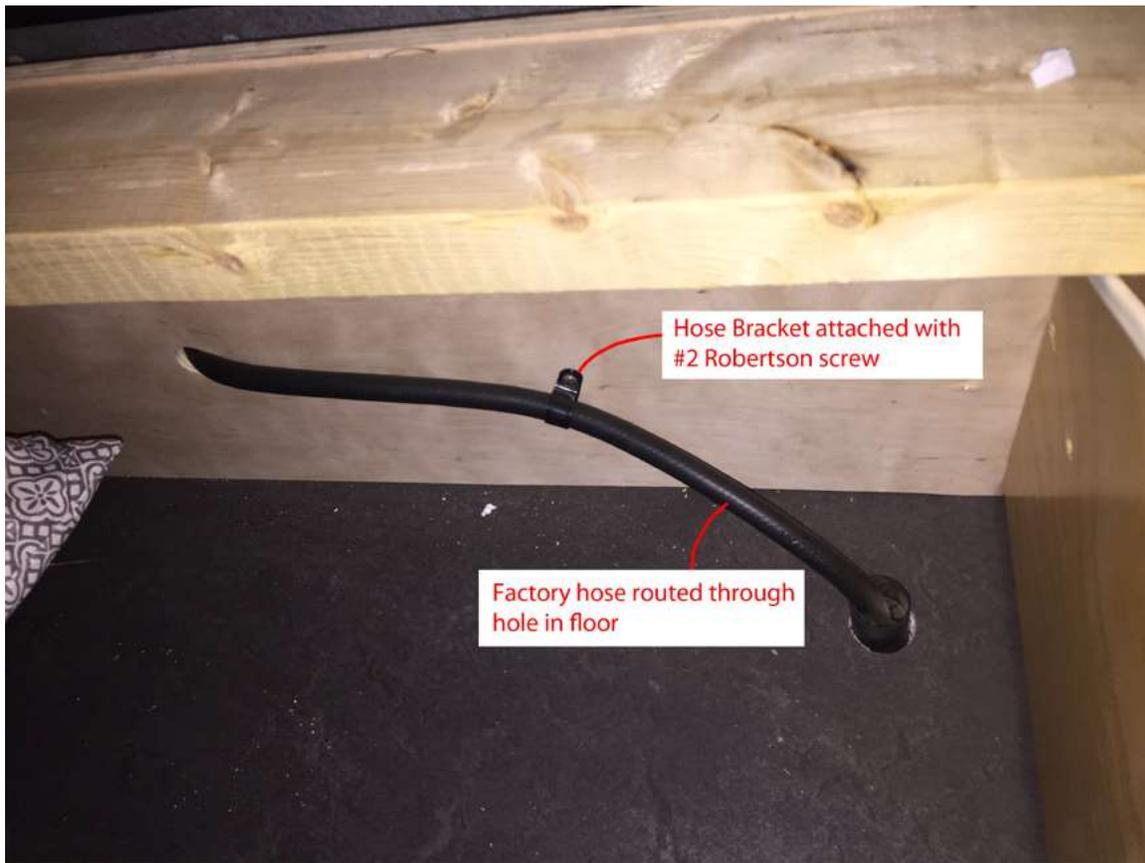


Use a 18 mm metric open end wrench to ensure that the fitting on the Alde does not turn while removing the supply line. The hose side of the supply line uses a ¾" SAE wrench.

Factory supply line disconnected:

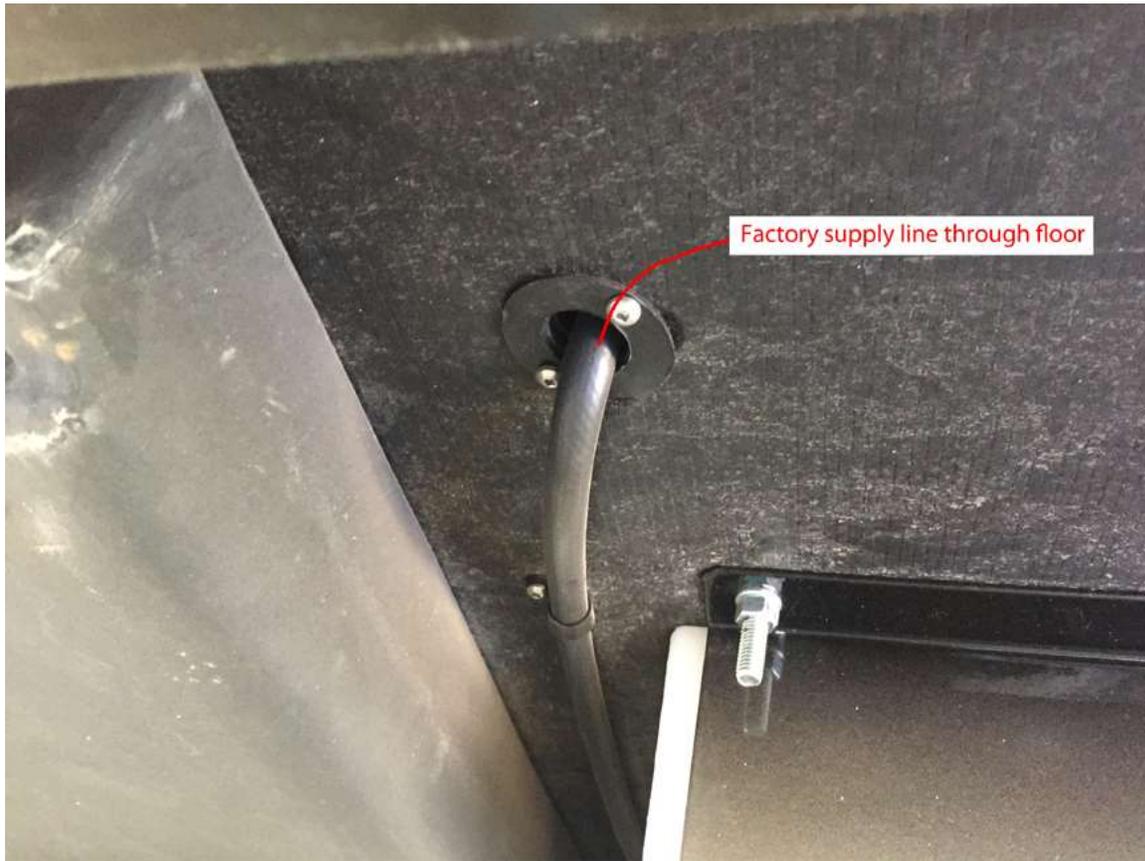


Note how the factory hose is routed around the back of the Alde boiler, through the bench sidewall, and down through the floor. Use a #2 Robertson bit to remove the hose bracket. Save the bracket and Robertson screw for later.



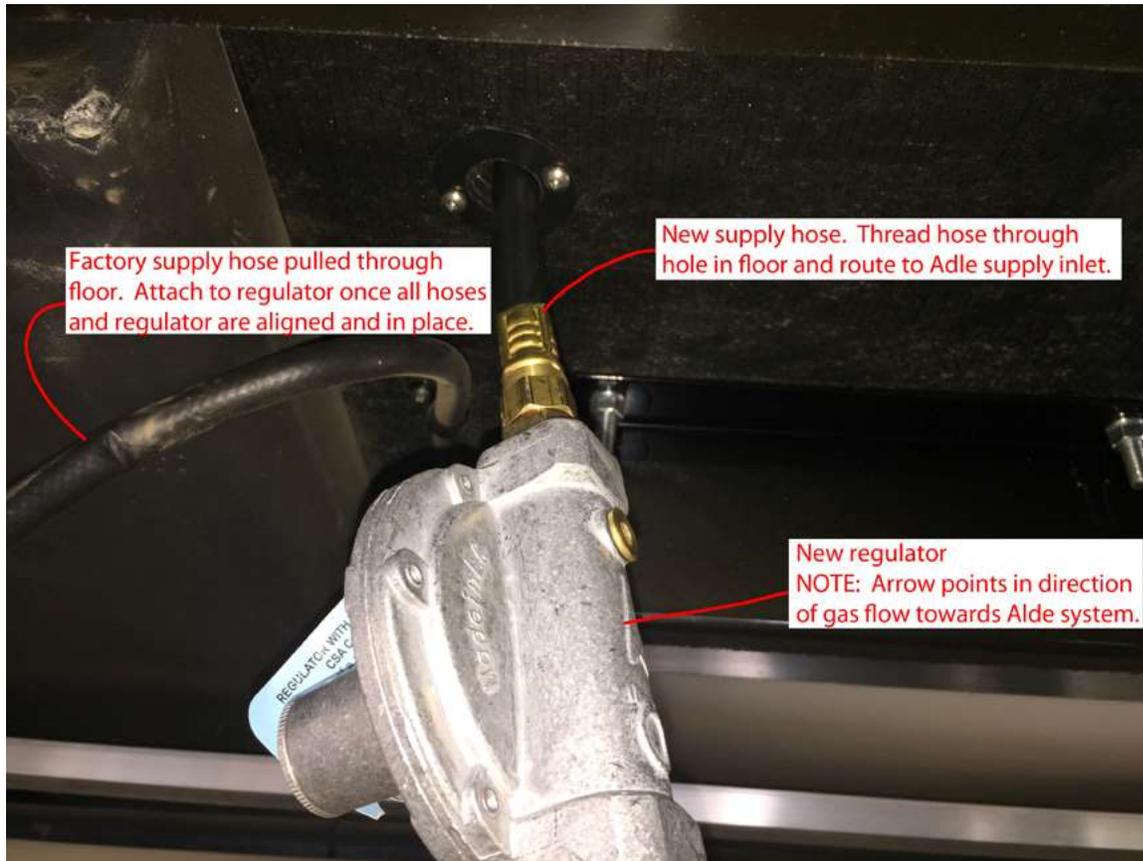
Push the factory hose down through the floor. It is best to have someone underneath, and someone inside the trailer feeding the line down through the hole and the plastic conduit at the floor.

Once the factory hose has been dropped through the hole you will need to prepare to attach and mount the new regulator.



Take the supplied propane hose (attached to new regulator) and thread it up through the plastic conduit, into the passenger side bench compartment, through the bench side panel, and attach to the Alde propane inlet fitting. Use an 18 mm metric open-end wrench to hold the fitting on the Alde system, and a  $\frac{3}{4}$ " SAE open-end wrench to tighten the hose fitting. Fitting should be tightened snug, but not over-tightened. Make sure that the arrow on the bottom of the regulator points towards the Alde system.

New regulator and hose threaded through plastic conduit through floor:



Attach the factory supply line to the inlet side of the regulator. Use a 7/8" and a 3/4" open end wrench to tighten the hose fitting onto the regulator. You can now turn on the gas at the tank and test each connection for leaks using the soapy spray bottle. Spray each fitting liberally with soapy water and if you see bubbles form you will need to either tighten or use tape/thread putty to seal the threads.

Once hoses are routed and attached, prepare mounting brackets for installation. Start by drilling 1/4" holes through the supplied mounting brackets. 1/2" to 3/4" from the end of the bracket works well.

Slip the mounting bracket clamps over the 3/4" brass fittings on the regulator and tighten with a 7/16" wrench and Phillips screwdriver. Use blue thread locker on the bolt. Rotate the bracket clamps so that the regulator diaphragm will sit horizontal with the vent facing up and arrow on the bottom when mounted to the trailer.

After the hoses have been connected and checked for leaks and the bracket clamps have been rotated and tightened, you can now position the regulator for mounting to the trailer frame. The regulator will mount to the rear frame cross-member.

You will need to determine the best location on the frame to secure the brackets by holding the regulator and brackets up to the rear frame cross-member. There should be plenty of slack in both hoses, and the regulator should be horizontal with the frame. The tall cap and vent must face upward. The direction arrow will be clearly visible from the bottom. If you can see the direction arrow clearly you can be sure that the regulator is facing the correct

way. You may need to adjust the bracket clamps on the regulator to get a good fit. Once you have determined the best location:

Hold each bracket against the rear frame of the trailer. Mark the mounting holes with a center punch, then pre-drill holes for the supplied self-tapping screws. It helps to begin with a small, 1/16" drill bit, then, finish with a 3/16" drill bit.

Once holes have been drilled use a 3/8" socket or open end wrench and the supplied 3/8" self-tapping screws to secure both brackets to the frame.



Check for leaks a second time by using a spray bottle with water/dish soap mixture. Spray soap and water mixture on each side of the new regulator, and at the Alde inlet connection. Turn the propane gas valve on to allow propane to flow through the new regulator.

If you see bubbles at any of the fittings you will need to remove and re-set the fitting. Use Teflon tape or plumbers putty to seal the threads, and then re-test with the water/soap spray.

Once you are sure that there are no leaks, route excess hose underneath trailer and secure with zip ties.

Turn the gas on at the tank and turn the Alde system on. Make sure there is water in the system and that the Alde system is calling for hot water. Allow the system to run for 30 minutes or more and then check for hot water. If you have hot water the system is working normally.

Re-attach the host bracket in the passenger compartment:



Then re-attach the corrugated liner to the frame. Installation is complete.