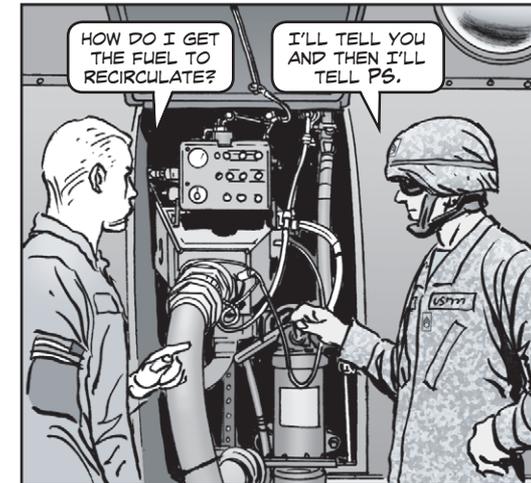
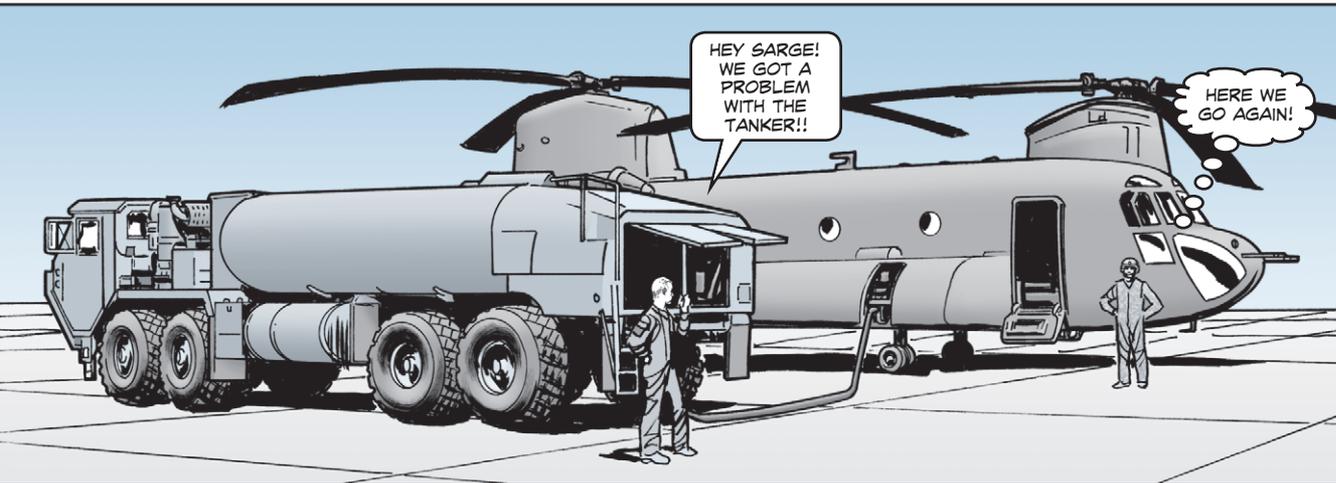


# Tanker Trouble - shooting Tips



Dear Editor,

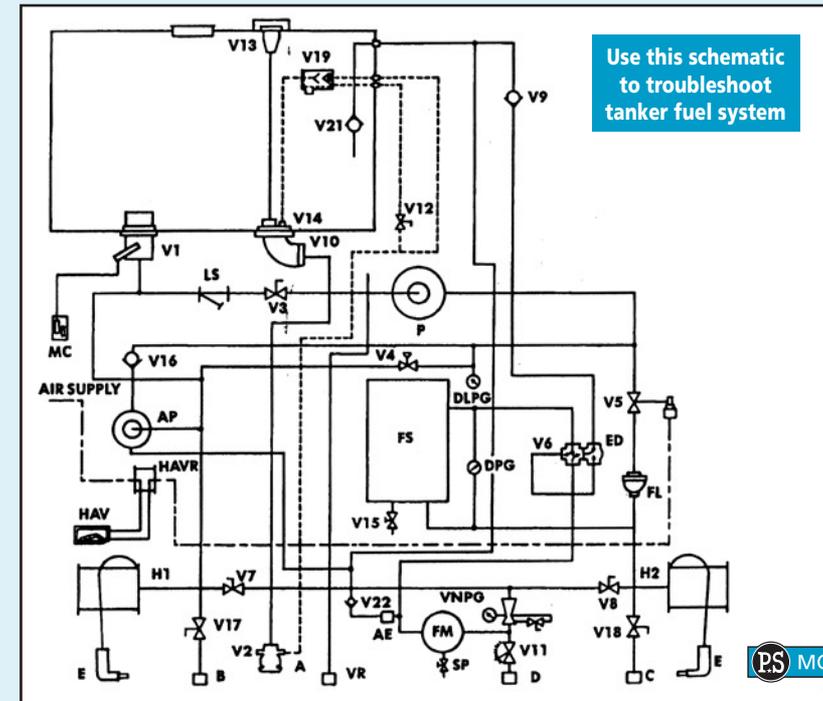
I've got some ideas that will help your readers that work on HEMTT fuel tankers. Your article on page 16 of PS 664 (Mar 08) about M978 tankers not taking fuel did not address the problem that many tankers are experiencing. The problem we've seen in our Aviation Ground Support unit is debris in the pressure line going from under the V12 precheck valve to the V19 valve's top level (jet sensor) shut off venturi.

Debris in the system stops the fuel from spraying across the venturi. Then no pressure—or not enough pressure—goes out the output side of the V19 and down to the V14 pilot valve which opens the V10 valve.

Some tankers have foaming in the V19 box. We've seen foaming through the manhole cover while trying to bottom load or recirculate. Foaming is caused mostly by air getting into the fuel line on the input side of the V19. It's also caused by loose brass elbows on the side of the V19.

### Circulation

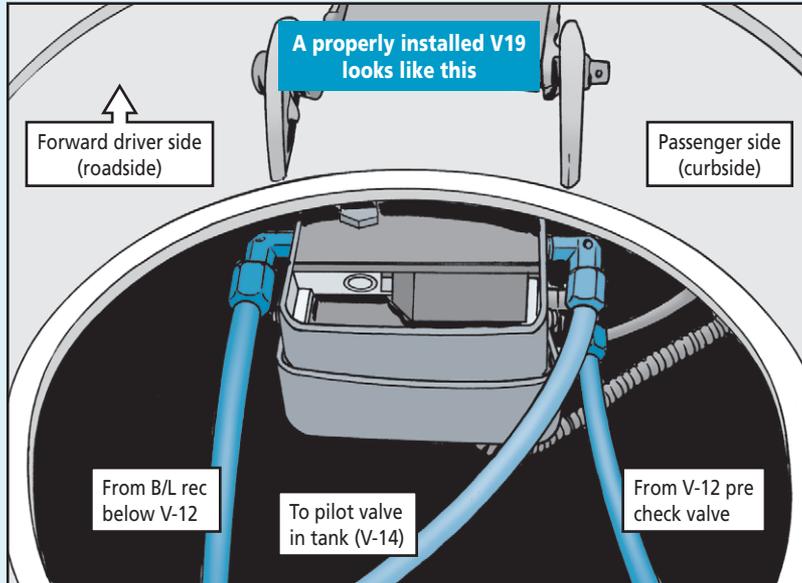
For newly RESET HEMTT -A2 tankers, and generally for all HEMTT tankers that fail to recirculate or bottom load, do this. Trace the plastic lines connected to the V19 to make sure they are installed properly. By the way, you'll find a picture of these lines in the HEMTT maintenance and parts manuals. The picture in the HEMTT parts manual has the right and left sides reversed.



Follow these additional troubleshooting instructions.

Wear the proper personal protective equipment (PPE), such as gloves and eye protection, and inspect the V19 for the following:

- A.** The INPUT plastic fuel line should be installed on the left (driver) side of the V19. This line comes from the fitting located below the V12 (the precheck valve) and gets pressure directly from the recirculation/bottom loading port where you connect the D-1 nozzle.
- B.** The plastic line to the pilot valve (in the bottom of the fuel tank just above the V10) should be installed on the top right (passenger) side of the V19 jet sensor box.
- C.** The plastic line from the V12 (the precheck valve) should also be installed on the bottom right (passenger side) of the V19.



**D.** Inspect the brass elbows that connect all three lines to the V19. If you can move them at all, they are too loose. So remove, clean and reinstall them securely using thread seal tape on the threads going into the V19. Do not put tape on the threads that go into the brass nut end where the plastic fuel lines attach. Tape in the wrong place could add debris to the line, and is not needed for the fitting-to-tube connection.

Inspect the direct line from the fuel inlet to the left side of the V19 for damage or blockage.

**E.** Connect the tanker, set up to bottom load, to a clean fuel source (possibly another M978 tanker). Follow TM 9-2320-279-10-1.

**F.** Stop bottom loading/recirculating. Close the connected D-1 nozzle and let the pressure bleed off for three minutes. Then open the manhole cover. Remember to wear your PPE!

Following these steps ought to get the truck bottom loading or recirculating properly.

If the truck still will not take fuel by bottom loading or recirculation, check the line going to the pilot valve to see if it is loose or cracked, as shown in the HEMTT troubleshooting. The only possible remaining fault is a bad pilot valve or a bad V10.

Checking or repairing either involves entering the tank itself, so confined space and fuel vapor issues are involved. Before troubleshooting or repairing inside the tank, get guidance from your unit safety officer. You'll need to know the safety requirements for working inside of a fuel tank. And you may need to be certified to work inside the tank.

### ***Continual Screeching?***

Note that sometimes your HEMTT tanker's V19 system will receive enough fuel pressure to open, but not to open completely. This problem can be identified by a *continual* screeching noise coming from the V10 as it opens and closes continually while recirculating or bottom loading.

I have found this problem to be more likely when bottom loading at a fuel dispensing pump station that loads fuel at 300 gpm. If you hear continual screeching coming from the V10 valve when bottom loading, there could be a pressure problem with the V-19 jet level sensor.

Also, note that all V10 valves give a few screeches when they first open while loading fuel at high volumes. They could screech again when they close because the tank is full, or because the operator is testing the V12 precheck valve.

All of our tankers work fine now that we've cleaned out debris from the V12/V19 system and jet level sensor, and repaired some trucks with loose brass elbows received from the RESET program.

SSG P.M.

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Lincoln, NE

THANKS FOR THE DETAILED TROUBLESHOOTING TIPS, SERGEANT MCFARLAND.

HEMTT USERS SHOULD FIND THIS INFORMATION USEFUL.

BY THE WAY, IF YOUR UNIT HAS NEWLY RESET HEMTT -A2 TANKERS THAT DON'T RECIRCULATE OR BOTTOM LOAD, USE ANY EXISTING WARRANTY AND SUBMIT A QUALITY DEFICIENCY REPORT (QDR).



PS END