

## Technical Service Bulletin 180

### ECH440 Pulse Pump Line Replacement

**Prepared By:** B King  
**Date:** 29 April 2019

**Estimated time of completion:**  
Vacuum Line Replacement 30 minutes

**Models Affected:**  
KOHLEK POWERED LANDSTAR 455, TRAILWAGON 450

**Description of Problem:**  
Unit stall (fuel starvation) when ran at continuous full throttle.

**Solution:**  
Replace pulse pump 1/4" vacuum line with 3/16" vacuum line.

**Tools Required:**  
Pliers  
Side cutters / Tube cutters

**Parts Required for Tank Replacement:**  
3/16" x 8" rubber fuel line (ALM PN 17395)  
3/16" x 22" rubber fuel line (ALM PN 17395)  
7/16" Hose Clamp (ALM PN 2-50853)

**Safety Warning:**  
- Always wear safety glasses

#### Procedure:

##### Hose Removal:

- 1- Access the fuel system – Gain access to the fuel system by removing the seat bottom and underseat storage tray.
- 2- Locate the pulse pump and connecting lines. (Ref Fig 1)
- 3- Loosen and slide clamps away from connection at the pulse pump and at the engine crankcase connection. (Ref Figs 2 and 3)
- 4- Remove hose assembly from vehicle.

- 5- Remove old hose and clamps from the filter and replace with supplied 3/16" hose and clamps. (Ref Fig 4)
- 6- Re-install new hose assembly by reversing steps 1-4.

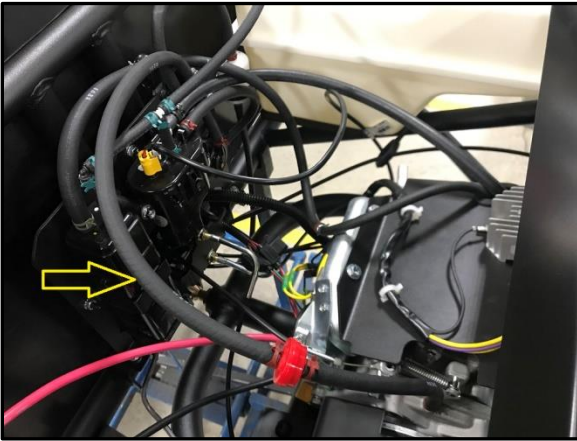


Fig 1 – Pulse Pump Hose Assembly

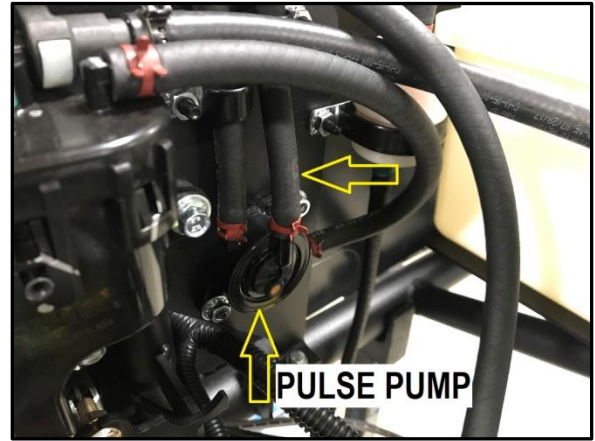


Fig 2 – Pulse Pump Detail

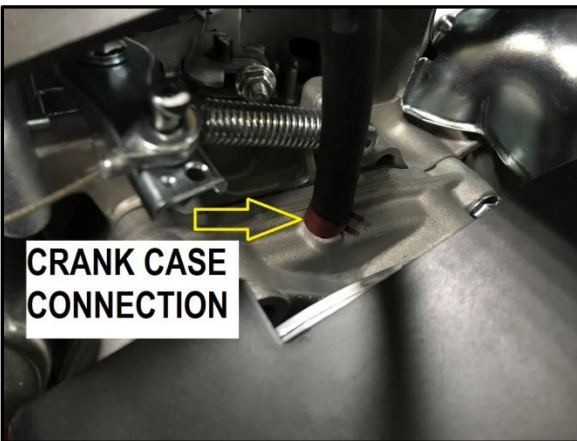


Fig 3 – Crank Case Connection



Fig 4 – 3/16" Hose assembly with clamps

**If you do not understand the TSB or if you cannot perform the tasks outlined in the TSB, please contact American LandMaster at 800-643-7332 or email at [feedback@AmericanLandmaster.com](mailto:feedback@AmericanLandmaster.com).**