

Equipment & Technology

Working Team

Newsletter



Winter 2022

Pump repair flow chart

This chart aims to help firefighters on the field to troubleshoot their pump. Warehouse managers through Canada did observe that a high number of pumps coming back from the field for repair could have been fixed on the field. However, crews might not have the skills to do so.

Many agencies have lost firefighters through retirement in the last decade. It results in new hiring and with it, comes a new cycle of transfer of knowledge. New firefighters don't necessarily have mechanical skills.

We assume that with this chart being in every tool kit, it can help reduce the number of pumps coming back from the field to get fixed. It will allow more pumps to stay on the field during critical period and thus, increase agencies capabilities.

Special thanks to Jay MacDonald from NorthWest Territories for the chart design.

FLOODED ENGINE RESTART PROCEDURE

- Remove and inspect spark plug (A wet or fouled spark plug should be replaced)
- Disconnect fuel line
- Place throttle in full open position (ensure choke is in the open position)
- Place an absorbent material under crankcase drain plug, remove plug (allow any excess fuel to flow from engine) re-install crankcase drain plug
- Crank engine several times to remove excess fuel
- Check for Spark (attach spark plug to lead place metal portion of spark plug on metal surface of engine pull starter rope spark should be blue in color)
- Install spark plug
- Start engine and run till all fuel is consumed
- Install fuel line
- Follow engine starting procedure (no choke required)

ATTENTION:

The process of removing excess fuel can expose the operator to flammable vapors proceed with caution.

CHECK PUMP END FOR AIR LEAKS

- Inspect fill cap gasket and tightness (replace gasket or tighten fitting)
- Inspect suction hose gasket and tightness (replace gasket or tighten fitting)
- Inspect Foot Valve gasket and tightness (replace gasket or tighten fitting)
- Inspect Foot Valve seat for obstruction or damage (clean or replace foot valve)
- Inspect pump seal (milky colored grease or water indicates a failing seal)

PUMP FAILURE DESCRIPTIONS

- Engine won't start- Flooding
- Engine seized
- Pump end seized
- Broken starter
- Leaking pump seal
- Pump lacks power
- Pump lacks pressure
- Engine does not shut down on over speed
- Stop switch not working
- No Spark
- Reached service limit
- Throttle/choke controls
- Other

IMPORTANT: ALL unserviceable pumps must have at least one failure description

The more information you can provide the better

All pumps MUST BE RE-ASSEMBLED to original state before returning for repair

PUMP REPAIR DECISION TREE

