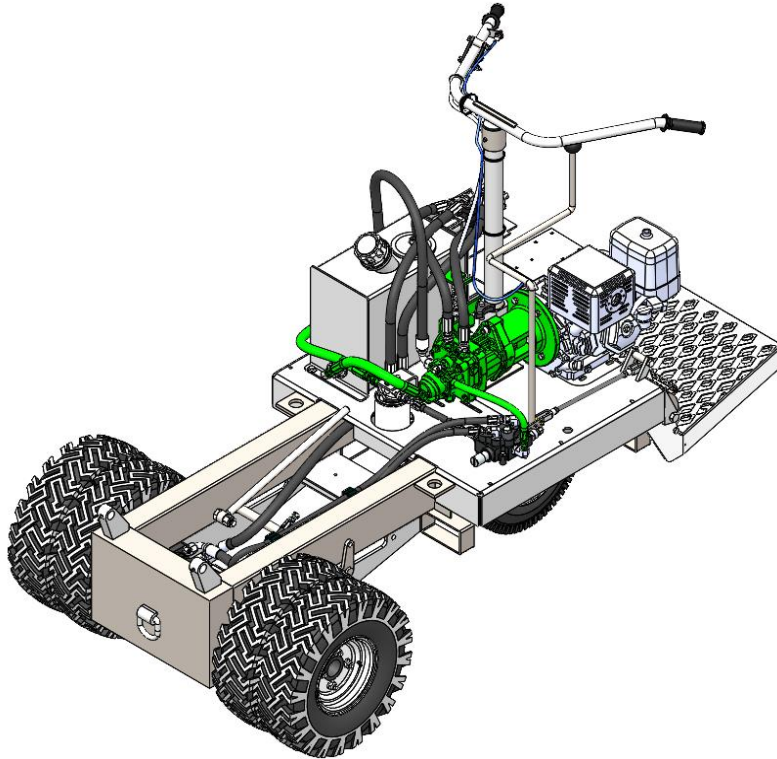


## HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

This document is for assisting the technician in bleeding the hydraulic pump and system after installing a new Hydro-Gear pump.



### Safety First:

- ✓ To avoid injury, read and understand Operator's Manual before working on this machine.
- ✓ Follow safety lock-out tag-out procedures:
  - Remove ignition key
  - Disconnect battery cables
- ✓ Intended for experienced qualified technicians only
- ✓ **DO NOT** open hydraulic lines or loosen fittings while the engine is running, hydraulic oil can penetrate the skin, blind and cause burns
- ✓ Always wear safety glasses and appropriate attire

### Tools Needed:

- Sockets and ratchet set
- Wrench set
- Allen Wrench set

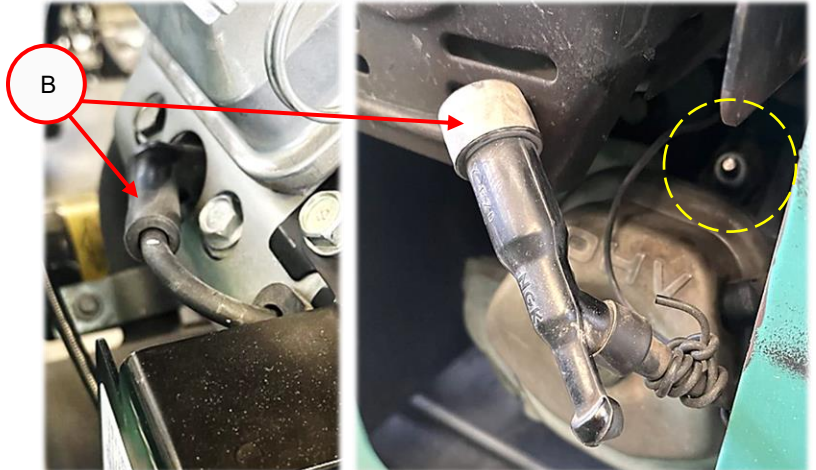
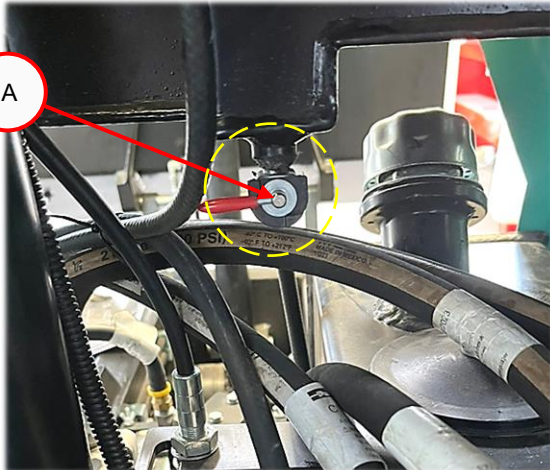
# HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

## Bleeding Air from Hydro-Gear Pump

### Important Preliminary Steps

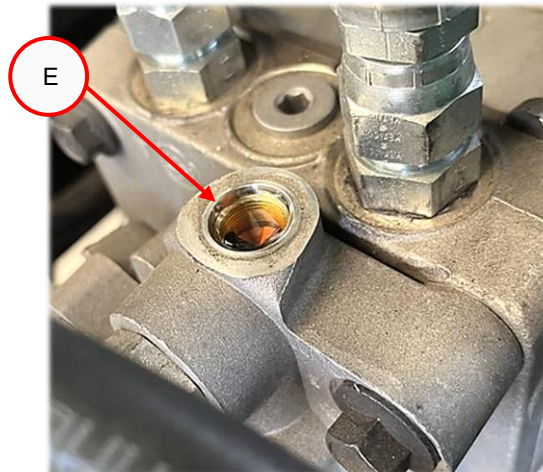
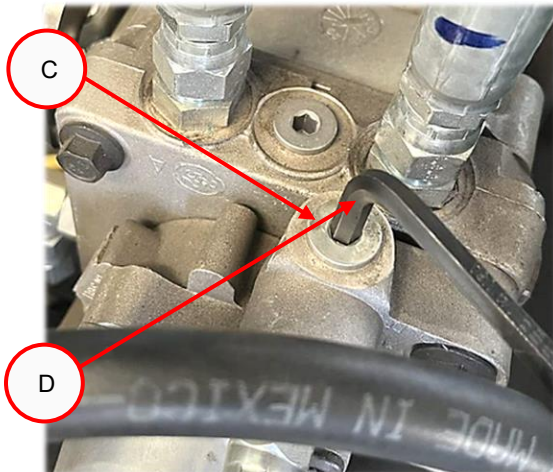
- ✓ If needed, add SAE 15W-40 motor oil to reservoir to level with the (black line) on sight glass
- ✓ **Place machine off the ground on jack stands**
- ✓ Shut off gasoline fuel valve
- ✓ Disconnect engine spark plug wire
- ✓ Proceed with the following pump and hydraulic system air purging procedure

**Step 1:** Shut off the fuel valve (A) and disconnect engine spark plug wire (B)



**Step 2:** Remove auxiliary pump port plug (C) using a 1/4" Allen key (D)

**Step 3:** Fill the auxiliary pump with SAE 15W-40 oil through the opened port (E)



## HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

### Bleeding Air from Hydro-Gear Pump

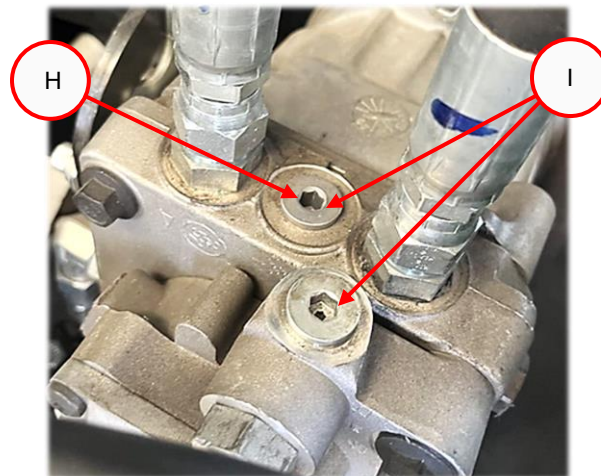
**Step 4:** Pull the engine's starter rope multiple times to rotate the pump and purge air from the auxiliary pump (F)

**Step 5:** Once the air is purged/no air bubbles are visible, install the port plug back in place (G)



**Step 6:** Remove main pump port plug (H) and fill with oil as in step 3, then follow the same procedures described in steps 4 and 5

**Step 7:** Once the air has been purged from both pump ports, verify both port plugs are tight (I)



## HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

### Bleeding Air from Hydraulic System

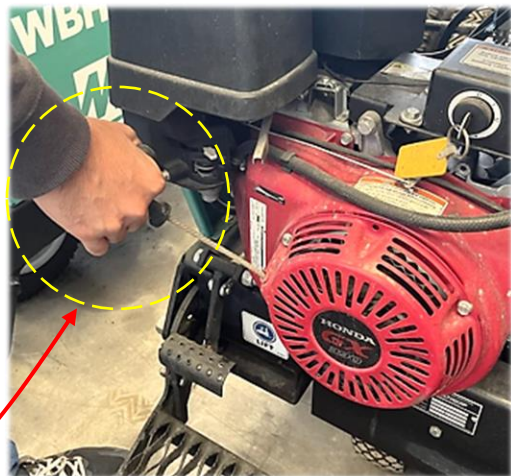
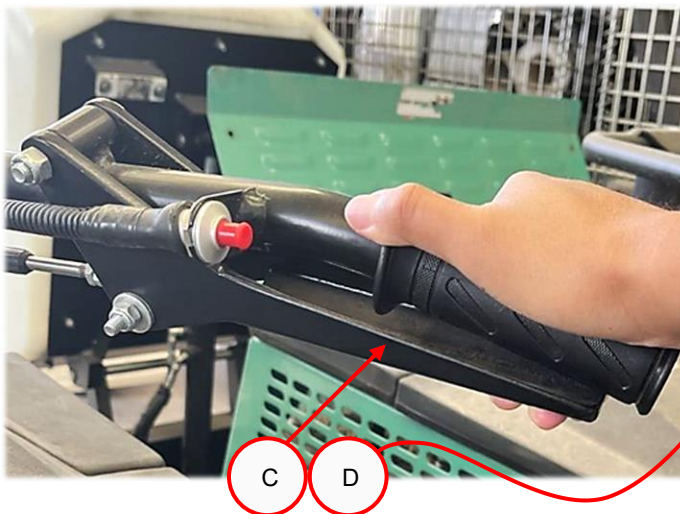
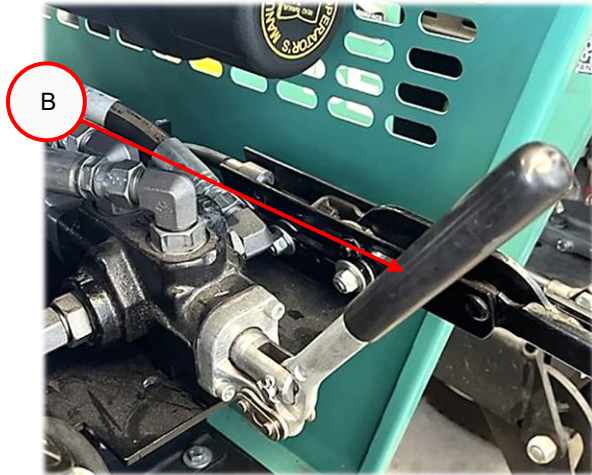
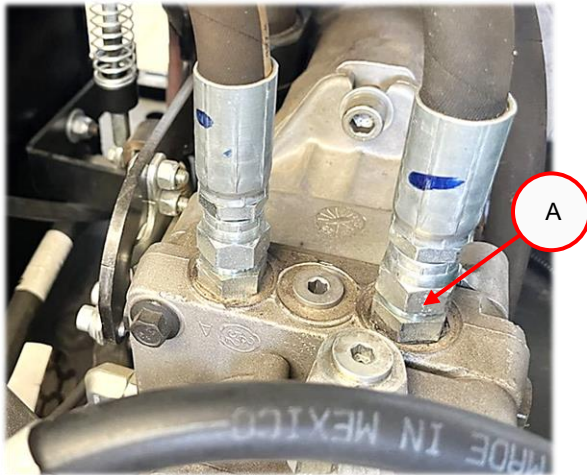
**IMPORTANT:** FIRST BLEED THE HYDRO-GEAR PUMP BEFORE PERFORMING THIS PROCEDURE

**Step 1:** Slightly crack open/loosen hose fitting (A)

**Step 2:** Activate the directional valve lever to either forward or reverse (B)

**Step 3:** Activate/squeeze the travel lever (C) and while activated, pull the engine starter rope multiple times (D) or use electric start to purge air from the (cracked) hose fitting.

**Step 4:** Once air is completely purged (no bubbles), tighten the hose fitting (A)

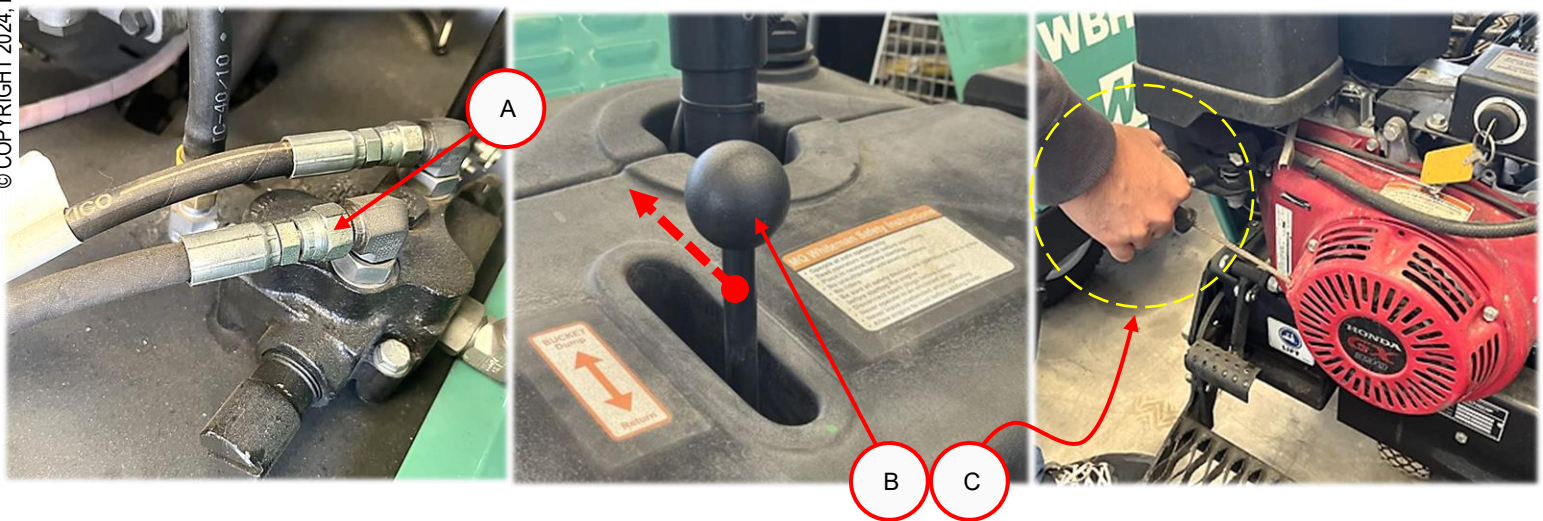


## HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

### Bleeding Air from Hydraulic Cylinder

**IMPORTANT:** FIRST BLEED THE HYDRO-GEAR PUMP BEFORE PERFORMING THIS PROCEDURE

- Step 1:** Slightly crack open/loosen hose fitting (A) at the dump valve
- Step 2:** Activate the dump lever (B) to the forward/dump position and hold
- Step 3:** Pull the engine starter rope multiple times (C) or use electric start to purge air from the (cracked) hose fitting.
- Step 4:** Once air is completely purged (no bubbles), tighten the hose fitting (A)



### Once hydraulic pump and hydraulic system is purged of air

1. Open the fuel valve
2. Reconnect the spark plug cap
3. Start the engine
4. Place the directional control lever in the forward position and check for wheel movement.
5. If wheel movement/creep is noticed, proceed with instructions on the following page #6 **“Pump – Neutral Lever Adjustment”**
6. Remove machine from jack stands, installation is completed.

# HYDRO-GEAR PUMP & SYSTEM BLEEDING INSTRUCTIONS

## Pump – Neutral Lever Adjustment

**Step 1:** (A) Loosen the speed control cable jam nuts from hydraulic tank bracket (B).

**Step 2:** Adjust speed control cable jam nuts until pump activation lever is set to neutral position.

**Step 3:** Loosen nuts (E) and adjust stop (C) until it contacts pump lever (D), **re-tighten nuts (E)**.

**Step 4:** Loosen jam nut (F) and rotate rod (G) to set the speed lever (H) gap distance from the rubber grip (I) as shown on the image.

- Make sure to re-tighten the jam nut (F)
- With the lever squeezed closed, verify the pump lever is fully activated.

**IMPORTANT: Make sure the pump lever has full movement without obstruction(s)**

