

Godwin Pumps Distributor
Rental \* Sales \* Service \* Operations











# **Safety Considerations**

# Guidelines for safe operation of Godwin Dri-Prime® pump systems

Consider the following guidelines for maximum safety and reliability of the Godwin Dri-Prime® pumpset and accessories.



# Do's

- 1. Always disconnect negative battery cable before working on any pump or engine parts.
- 2. Make sure all hose joints are properly connected before starting pump.
- 3. Level the pump using jack stands or cribbing.
- 4. Install cribbing or support when using 8", 10" or 12" hoses on suction and discharge.
- 5. Allow engine to warm up before rising to operating speed.
- 6. Raise and lower engine speed gradually.
- 7. Consult Godwin Pumps or authorized distributor if operating engine over 1800 RPM.
- 8. Service diesel engine every 250 hours of running (see 250 hour servicing guidelines provided in this information box).
- 9. Open drain valves on volute and non-return valve after shutting down pump in freezing weather (ice will form and expand possibly causing damage).



# Don'ts

- Don't touch air compressor outlet line hot surface!
- 2. Don't block air flow to engine radiator (prevents overheating).
- 3. Don't pump liquids other than pH of 7 (neutral), internal corrosion may occur.
- 4. Don't pump heavy abrasive material internal erosion may occur.
- 5. Don't run diesel engine out of fuel fuel delivery system will need to be bled prior to re-starting engine.
- 6. Don't open radiator cap when engine is still warm.

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See reverse side for operating instructions



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# **Operating Instructions**

## Pre-startup equipment checklist

Check engine oil level	Check radiator coolant level*  * <b>Note</b> - Do Not open radiator cap when engine is still warm			
Check diesel fuel level				
Check volute and non-return drain valves are in closed position				
Check that all hoses are securely attach	ned to pump suction and discharge			

\_\_\_\_ Check that hoses are properly supported and restrained

# **Equipment startup**

- 1. To start diesel engine, depress and hold safety shutdown by-pass button (located below key switch on control panel), turn key switch to "on" position.
- 2. Hold by-pass button in for 30 seconds (until engine establishes oil pressure).
- 3. Release button and let diesel engine warm up momentarily.
- 4. Raise diesel RPM to operating speed.

(Normal max. speed - 1800 RPM)

- 5. Air will discharge out of venturi outlet hose during priming sequence and during normal operation.
- 6. When air is evacuated from suction line, pump will prime and begin discharging product.
- 7. Adjust RPM of diesel engine to achieve desired product flow rate.

### Safety Shutdown Moveable Contact Coolant Oil Pressure Temperature Gauge Gauge Ignition Switch Tachometer Safety Shutdown **Engine Bypass** Hour' Meter Throttle Ammeter

# **Equipment shut-down**

- 1. Reduce RPM of diesel engine to idle speed.
- 2. Shut down diesel engine by turning key switch on Control panel to "off" position.
- 3. Open drain valves on volute and non-return check valve to drain suction and discharge hoses. (Note: Extremely important in freezing weather).

### **Notes:**

- If pump fails to prime, consult "Simplified troubleshooting guide."
- If pump vibrates excessively or engine malfunctions, shut down pump and contact a Pacific Pump and Power representative for servicing.
- Diesel engine requires servicing every 250 hours of run-time. Consult "Service and Maintenance of Godwin Dri-Prime® pumps."

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# **Simplified Troubleshooting**

Should the Godwin Dri-Prime® pump fail to prime, several simple checks can be made to isolate the problem. Tools required for trouble shooting include: Crescent wrench, long handled screw driver or pry bar.

### Most common problems:

### 1. Suction screen plugged

Shut down pump and open volute drain valve. Product in suction hose will "backwash" screen. Also remove suction screen from product and inspect for debris.

### 2. Volute drain valve is open

An open volute drain valve will allow air into the pump. Close drain valve and start pump.

# 3. Air leaking into the pump from the non-return valve

Remove non-return valve lid or top of check valve. Inspect seat for debris. Clean and reassemble.

#### 4. Venturi is partially plugged

Remove venturi and clean inlet and outlet. Excessive carbon build-up is a sign that the air compressor head needs cleaning and maintenance.

# 5. Venturi screen is plugged or Venturi ball is stuck

Remove four bolts holding venturi hat assembly to pump body. Remove screen and clean. Ensure check ball is moving freely in venturi hat. Replace screen and reassemble.

#### 6. Suction hose leak

Check for missing or cut o-rings in quick disconnect joints or cuts on the suction hose.

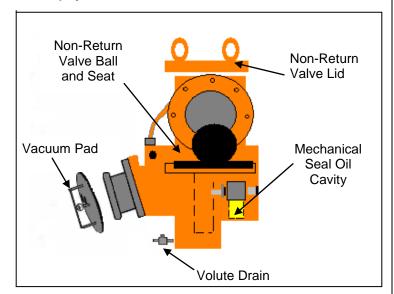
#### 7. Compressor filter dirty

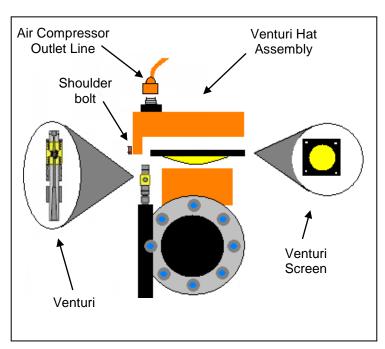
Remove compressor air filter and clean or replace.

#### 8. Venturi hose kinked or to small

Check venture hose. Make sure there are no kinks. Must

use 1" hose or bigger.





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See reverse side for routine servicing information

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# **Routine Servicing**

# Frequency of servicing: every 250 hours of run time

Godwin recommends that the date and hour total of servicing be written on the engine oil filter at each interval.

# **Engine**

### Replace the following items:

- Motor oil (15W-40 recommended)
- Oil filter < Fuel filter < Air filter</p>

Check the following items:

- Coolant level Fan belts
- Hoses Electrical connections

# Pump End

Check the following items:

 Oil bath mechanical seal oil - quantity and quality

(15W-40 oil, *Note:* do not overfill seal cavity)

Venturi assembly (remove, inspect, clean)

**Note:** If venturi shows carbon build-up, compressor head may need maintenance

- Inspect impeller for excessive wear and pitting
- Inspect and clean venturi screen
- Inspect seal of Non-return valve ball and seat

**Note:** some models use a check valve design instead of a ball.

# Air Compressor

# Replace the following items:

Air filter

### Check the following items:

- Inspect air outlet line for leaks and damage
- Inspect relief valve for excessive fouling
- Inspect drive belt from engine shaft to air compressor pulley

# Vacuum Pad Test

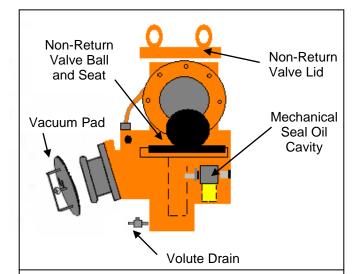
A vacuum pad test should read between 23" and 25" of mercury at sea level. *Vacuum pads are available for purchase from Pacific Pump and Power.* 

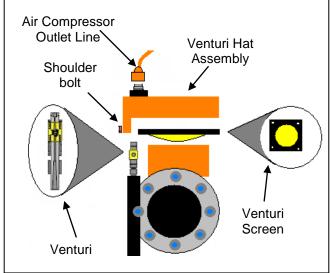
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