

# DANIELS HPU11 HYDRAULIC POWER UNIT

SEE PAGE 4 FOR IMPORTANT INFORMATION CONCERNING LIMITED WARRANTY, AND LIMITATION OF LIABILITY.

## OPERATING, TOOL CARE PROCEDURES AND SPECIFICATIONS

### GENERAL SPECIFICATIONS

The HPU11 Hydraulic Power Unit generates 10,000 psi of hydraulic pressure at an 85 psi inlet air pressure. It is intended to be used with the PPC-1.5 hydraulic cylinder & either the the TBHD1 or BDHD1 crimp heads. Also available from Daniels Manufacturing Corp.

The working air pressure of the unit is 25–125 PSI. It is recommended that the unit be used with a Filter and Regulator (WA27RF) sold separately.

The output pressure of the Hydraulic Power Unit is 2000 – 10000 psi.

### HYDRAULIC POWER UNIT SPECIFICATIONS

See Table 1 below.

### CRIMPING RANGE

The crimping heads designed to be used with the unit cover a wire range of 8AWG to 4/0 and their appropriate sized contacts.

### HYDRAULIC POWER UNIT DIMENSIONS

LENGTH: 13.66 in.

WIDTH: 6.20 in.

HEIGHT: 8.21 in.

Part Number	Reservoir Capacity	Usable Oil Horizontal Mounting	Usable Oil Vertical Mounting	Hydraulic Air Ratio	Hydraulic Output Port Size
HPU11	150 cu. in. (2.5 liters)	127 cu. in. (2.1 liters)	70 cu. in. (1.2 liters)	100:1	3/8–18 NPTF
Weight	Air pressure Range	Oil Flow @ 100 psi (6.9 bar)	Oil Flow @ 10,000 psi (700 bar)	Operating Noise Level	Air Consumption @ 100 psi (6.9 bar)
18 lb (8.2 Kg)	25–125 psi (1.7–8.6 bar)	60 in <sup>3</sup> /min (1.0 l/min)	10 in <sup>3</sup> /min (.16 l/min)	76 dBA	12 SCFM (.34 cu.m/min)

**TABLE 1**

### VENTING THE PUMP

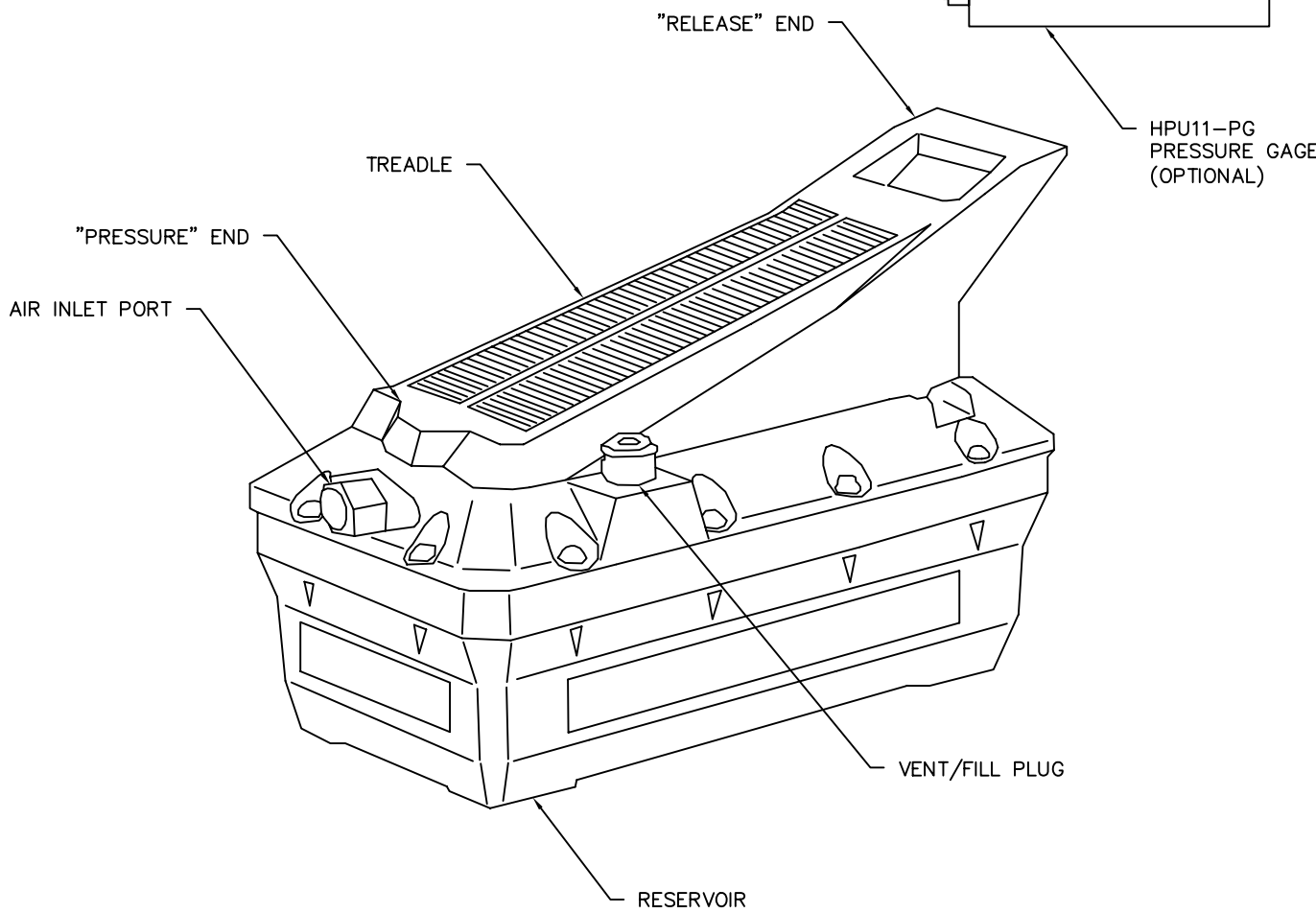
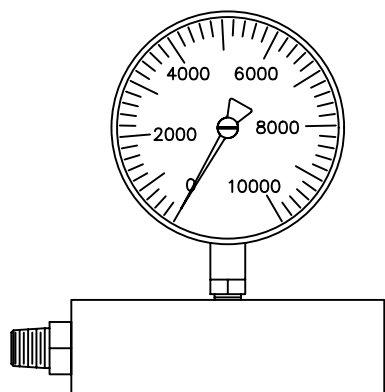
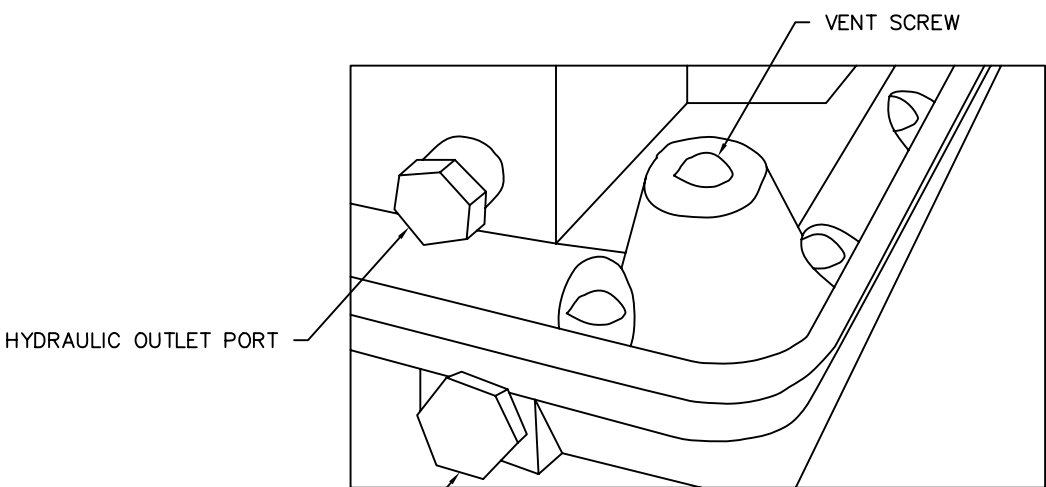
THIS PUMP MUST ALWAYS BE VENTED PRIOR TO AND DURING USE!

#### **VENTING WHEN MOUNTED HORIZONTALLY**

Use the vent screw (See Fig. 1) to vent the pump in the horizontal position. It is located near the hydraulic outlet port on top of the reservoir. Open this screw 1–2 turns. When tightening this screw back down, to move the pump, tighten only until the head contacts the reservoir cover. The vent screw can NOT be used when the pump is mounted in the vertical position.

#### **VENTING WHEN MOUNTED VERTICALLY**

Use the vent/fill plug (See Fig. 2) to vent the pump in the vertical position. It is located on the air inlet end of the pump, opposite the vent screw. To use as a vent, pull up on the plug until the first dent is reached. To use as a fill port, pull up on the plug past the first detent and remove the plug from the reservoir. Oil level should be to the bottom of the port.



### **MOUNTING THE PUMP**

The HPU11 power unit can be mounted either horizontally or vertically. If mounted vertically, position pump with hydraulic outlet port facing down. The four mounting holes in the bottom of the reservoir should be used for bolting through the mounting surface into the reservoir. Use the #10 x 5/8" fasteners included with the pump, or allow no more than 3/4" (19mm) thread engagement into reservoir.

### **OIL LEVEL**

Always check oil level with all cylinders or tools in the fully retracted position. If they are advanced when the pump is filled, the reservoir will be over filled when they are retracted.

Use the low-level sight glass (See Fig. 1) in the end of the pump to check the oil level. When the pump is mounted horizontally, the reservoir is full when oil is at the bottom of the fill port. If oil is not visible, then oil must be added. To add oil, remove the vent/fill plug (See Fig. 2) from the reservoir. Oil level should be to the bottom of the plug.

When the pump is mounted vertically, the oil should be checked periodically by removing the pump and placing it on a horizontal surface.

NOTE: Prior to mounting the pump vertically, oil volume in the reservoir must be reduced to prevent leakage through the vent/fill plug. See table 1 for usable oil capacity when mounted in the vertical position.

### **OPERATING THE PUMP (See Fig. 2)**

#### **TO ADVANCE CYLINDER:**

Depress the "PRESSURE" end of the treadle and the pump will start to pump hydraulic oil to the system.

#### **TO HOLD THE CYLINDER POSITION:**

The pump will stop and hold pressure when the treadle is in the free/neutral position (treadle is not depressed in either "PRESSURE" or "RELEASE" positions.)

#### **TO RETRACT CYLINDER:**

Depress the "RELEASE" end of the treadle to retract cylinder. To stop the cylinder from retracting, release the treadle and return it to the hold position.

### **PRESSURE ADJUSTMENT**

The output hydraulic pressure can be lowered by limiting the amount of air inlet pressure. When limiting the inlet air pressure, the pump will slow down and stall as the hydraulic pressure increases. To obtain a stall out pressure, lower the inlet air pressure until the pump stalls below the desired hydraulic pressure. Then increase the air inlet pressure until the desired hydraulic outlet pressure is reached. Repeat pump operation to verify stall out pressure.

NOTE: The HPU11 power unit was not designed for stall to restart applications. Always fully retract the cylinder once the stall out pressure has been reached.

**MOUNTING THE OPTIONAL PRESSURE GAGE (See FIG 2)**

The HPU11 power unit can be ordered with an pressure gage to monitor hydraulic output. It is ordered separately using DMC P/N HPU11-PG. The male end of the HPU11-PG is threaded into the hydraulic output port of the power unit. The HH6 hose assembly is then threaded into the female output port of the HPU11-PG. Teflon tape or equivalent should be used on all male threads.

We strongly recommend that you:

1. DO NOT immerse the power unit in cleaning solution.
2. DO NOT spray oil into the power unit to lubricate.
3. DO NOT attempt to disassemble the power unit or make repairs.

DANIELS offers complete refurbishing and recalibration services.

DANIELS specially engineers and manufactures complete tool kits to satisfy individual customer requirements, such as total aircraft support, general shop maintenance or production, on board ship and vehicle service, etc.

**LIMITATION OF LIABILITY**

DANIELS MANUFACTURING CORPORATION IS NOT LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY NATURE OR KIND RESULTING FROM THE USE, OR MISUSE, OF ANY OF ITS PRODUCTS. OWNERS AND USERS OF DMC PRODUCTS ASSUME FULL RESPONSIBILITY FOR INSTRUCTING THEIR EMPLOYEES IN THE PROPER AND SAFE USE OF SUCH PRODUCTS.

**LIMITED WARRANTY**

DMC (Daniels Manufacturing Corporation) warrants each new product sold by it to be free from defects in material and workmanship under normal use and service. DMC's obligation under this warranty is limited to the free correction or, at DMC's option, the refund of the purchase price of any such product which proves defective in normal service within ninety (90) days after delivery to the first user, provided that the product is returned to DMC with all transportation charges prepaid and which shall appear to DMC's satisfaction, after DMC's inspection, to have been defective in material or workmanship, it being understood that DMC products are not consumer products. This warranty shall not cover any damage to any product which, in the opinion of DMC, was caused by normal wear, misuse, improper operation, tampering, neglect or accident. This warranty is in lieu of all other warranties express or implied. No warranty, express or implied, is made or authorized to be made or assumed with respect to products of Daniels Manufacturing Corporation other than those herein set forth.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Daniels Manufacturing:](#)

[HPU11-PG](#)