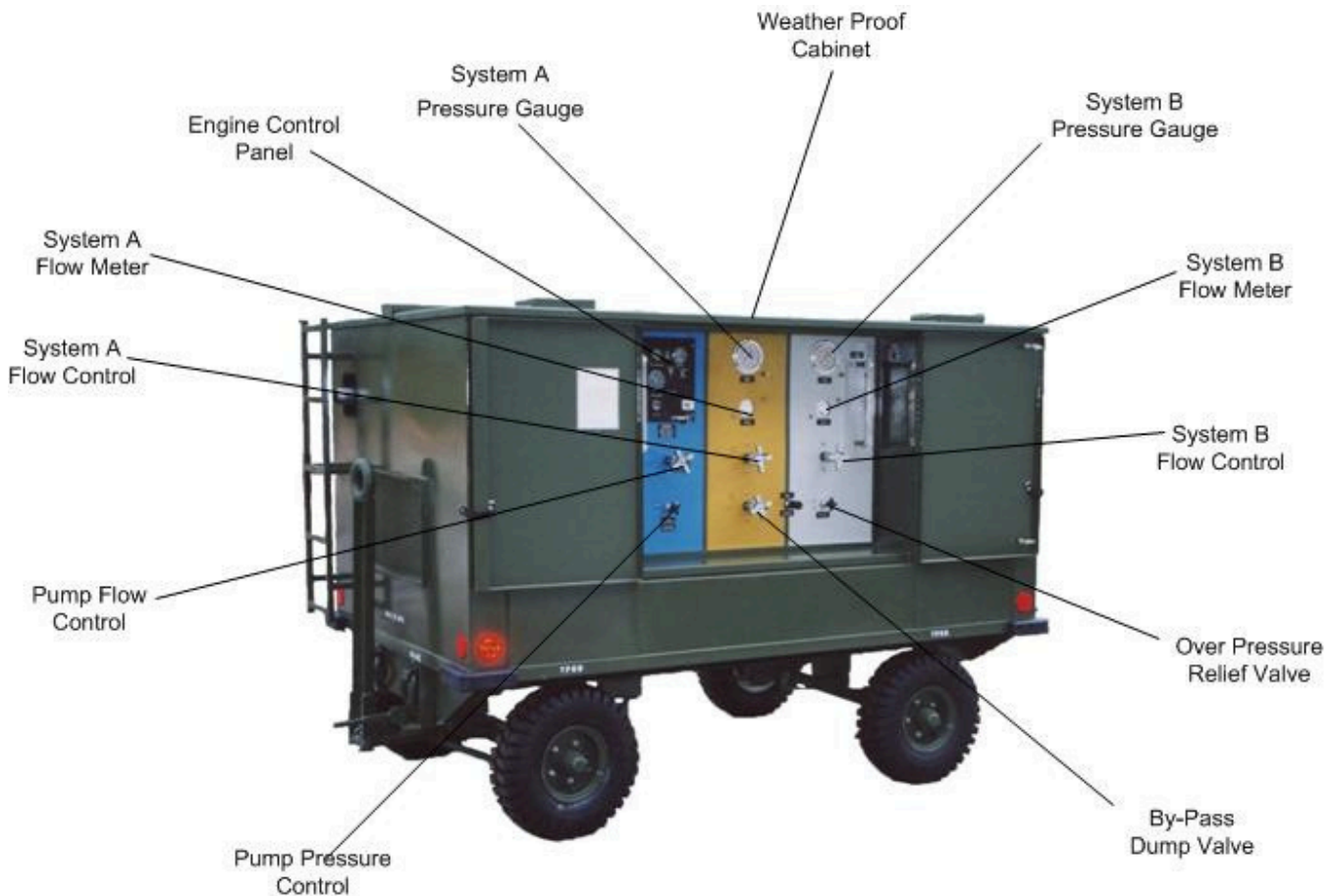


**510**  
**Series**

**SUPER DUTY, INDEPENDENT DUAL SYSTEM  
HYDRAULIC POWER UNIT / DIESEL POWERED**  
*Designed to Meet or Exceed Standards Set By  
National Stock Number Specifications*

**2 Year  
Warranty**



Model 05-514-03

***Electric Motor Available As Prime Mover***

***Independent Dual Systems Will Simultaneously  
Deliver Two Separate Flows and Pressures***

- Performance Assured 100% Duty Cycle, Will Deliver Maximum Flow @ Maximum Pressure
- Dual System for Operational Checks of Aircraft with Primary and Secondary Hydraulic Systems Dependable Perkins® Diesel Engine
- Weather Proof Cabinet with Hose Storage Heavy
- Duty Frame with Puncture Proof Tires Complete
- with Spare Components for Maintenance

# SUPER DUTY, INDEPENDENT DUAL SYSTEM HYDRAULIC POWER UNIT / DIESEL POWERED

**510  
Series**

***Designed to Meet or Exceed Standards Set By  
National Stock Number Specifications***

***Independent Dual Systems –***

- System A and System B May be Used Independently or Combined Together for Maximum Flows System A and System B Will Deliver Different Pressures and Flows
- Simultaneously Cross Over Valve Incorporated for Combined Flows for Maximum Performance Independent Dual System Includes: ***Independent Dual Pumps  
Independent Dual Flow Meters  
Independent Dual Pressure Gauges  
Independent Dual Flow and Pressure Control Valves  
Independent Dual By-Pass Valves  
Dual Pressure Hoses (35 ft. Long)  
Dual Return Hoses (35 ft. Long)***

***Instrumentation***

- Dual Variable Area Flow Meters (4% accuracy)
- Dual Test Quality Pressure Gauges (1% accuracy)
- Dual Scale Pyrometer / Oil Temperature Gauge (2% accuracy)
- Test Quality Boost Pump Pressure Gauge

Dimensions: Length 110", Width 75", Height 74"

<b><i>SPECIFICATIONS:</i></b>				
<b><i>SERIES MODEL</i></b>	<b><i>PUMP PRESSURE PSI (bar)</i></b>	<b><i>MOTOR HP (kW)</i></b>	<b><i>PUMP FLOW GPM (lpm)</i></b>	<b><i>WEIGHT Lbs. (kg)</i></b>
05-512-**	450 - 4000 PSI 30 - 272 bar	60 HP 45 kW	25 GPM 95 lpm	2750 lbs 1247 kg
05-513-**	450 - 4000 PSI 30 - 272 bar	75 HP 56 kW	35 GPM 132 lpm	3313 lbs 1502 kg
05-514-**	450 - 4000 PSI 30 - 272 bar	120 HP 89 kW	50 GPM 189 lpm	3875 lbs 1757 kg
05-515-**	450 - 4000 PSI 30 - 272 bar	150 HP 112 kW	60 GPM 227 lpm	4438 lbs 2013 kg

\*\*Model by Fluid Type: Mil-H-5606 = 02 Mil-H-83282 = 03



Monroe, NC  
704-289-5413  
ap-hydraulics.com

# DIESEL POWERED HYDRAULIC POWER UNIT

## *Leading Particulars*

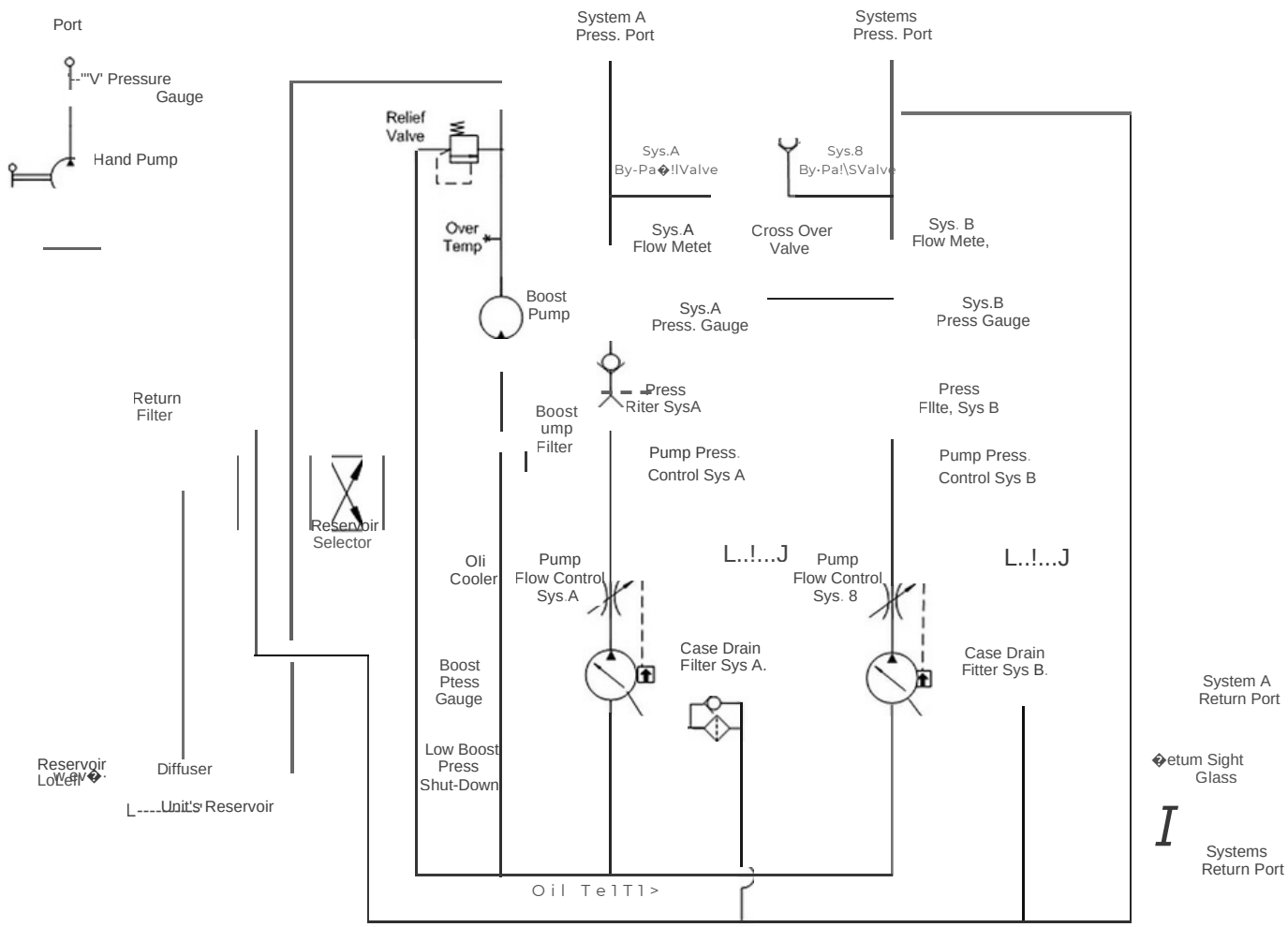
**510  
Series**

<i>Item</i>	<i>Specifications</i>
Purpose	To test independent hydraulic systems of aircraft.
Functions	<ul style="list-style-type: none"> <li>a. Boost pump for close loop circuit.</li> <li>b. Open loop configuration for filling and draining of A/C reservoir.</li> <li>c. Dual system with dual in and outlets with shut off valve s.</li> </ul>
Performance	<ul style="list-style-type: none"> <li>a. Maximum pressure at maximum flow: 300 - 3000 PSI, 4000 PSI</li> <li>b. Flow Range: refer to model number</li> </ul>
Engine	Perkins® Diesel Engine
Hydraulic System	<ul style="list-style-type: none"> <li>a. Axial piston pump variable stroke with proportional control of flow and pressure Fluid Sample Port</li> <li>c. Pressure filter 3 micron absolute, low pressure filter 10 micron absolute with electric clogged conditions indicator Stainless steel reservoir capacity 150% of maximum pump output (refer to model number)</li> <li>d. Pressure and return hoses 35 ft. long High volume hand pump with filter and pressure gauge for servicing aircraft's reservoir Analog pressure gauge</li> <li>f. 0-4000 PSI in pressure line</li> <li>a. and 0-200 PSI in return line (1% Accuracy)</li> </ul>
Switches/Gauges/Indicators	<ul style="list-style-type: none"> <li>c. Analog read out for actual flow</li> <li>d. Flow setting by flow control valve</li> <li>e. Pressure setting by pressure relief valve</li> <li>f. Temperature shut down switch</li> <li>g. Emergency shut-down button</li> <li>h. Low pressure filter clogged conditions indicator</li> <li>a. Switch for low and high level and return pressure gauge</li> <li>b. Contains all control gauges and indicators for hydraulic system</li> <li>d. Accessible through hinged panel in a dust and water proof housing</li> </ul>
Control Panel	<ul style="list-style-type: none"> <li>e. Illuminated to enable easy operation at night</li> <li>Graphic lay out for ease of operation</li> <li>Protective cover for control panel</li> </ul>
Safety System	HTS have all required safeties pertaining to electrical, Hydraulic and emergency system.
Structure	<ul style="list-style-type: none"> <li>a. Strong and heavy duty chassis.</li> <li>b. Heavy duty frame with dip tray. Hydraulic and Electrical components completely isolated from each other.</li> <li>c. Canopy out of steel, spray painted.</li> <li>d. Maximum towing speed 16 Km/hour, parking brake on front wheel by tow in upright position.</li> <li>e. Tie down / lifting points. Fork-lift pick-up points.</li> </ul>

## DIESEL POWERED HYDRAULIC POWER UNIT

### *Leading Particulars*

<i>Item</i>	<i>Characteristics</i>
Noise Level	a. Less than 75 dbA at two meter distance.
Accessories	<ul style="list-style-type: none"> <li>a. Bottle samplers for laboratory check of contamination to be provided with each HTS.</li> <li>b. All models incorporate in Line Sensor for connection with Hydraulic contamination.</li> <li>c. One set of hydraulic pressure and return lines, 35 ft. long</li> <li>d. One 45 Watt swiveling spot light with each HTS.</li> <li>e. One CO2 fire extinguisher mounted on outside of unit.</li> <li>f. One tool kit for routine scheduled/unscheduled maintenance with each unit.</li> </ul>
Publications	<ul style="list-style-type: none"> <li>a. 2 Sets of Operation Manual</li> <li>b. Engine maintenance and IPC manual for complete overhauling of engine</li> </ul>
Training	One week training, depot level maintenance on troubleshooting, rectification, and maintenance
Spare Parts	<ul style="list-style-type: none"> <li>a. Hydraulic pressure filter 6 sets and o-rings</li> <li>b. Boost pump filter 6 sets spin on elements</li> <li>c. Return filter 6 sets spin on elements</li> <li>d. Reservoir service pump filter 2 sets spin on elements</li> <li>e. Diesel engine fuel filter 4 sets</li> <li>f. Diesel engine air filter 2 sets</li> <li>g. Pump gasket kit 1 set</li> <li>h. O-ring set for all manual valves 1 set</li> <li>i. Spare puncture proof tire 1 each</li> <li>j. Availability of parts 20 years</li> </ul>
Warranty	<ul style="list-style-type: none"> <li>a. Frame and running gear 5 years</li> <li>b. Diesel engine 3 years</li> <li>c. Pumps 2 years</li> <li>d. Complete hydraulic system 2 years</li> </ul>



Series 510 Hydraulic Power Unit Schematic

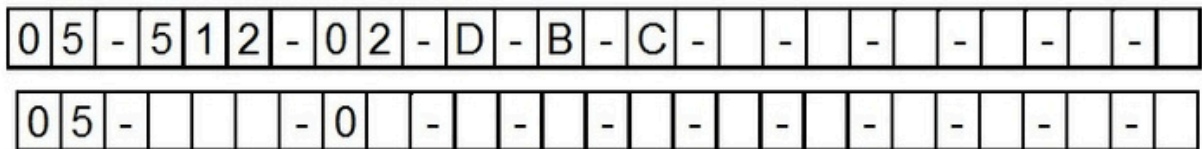


# Ordering Instructions

- Step 1: Determine Size of the Hydraulic Power Unit Required, Refer to Aircraft's Maintenance Manual For  
 A.Maximum (GPM) Gallons Per Minute                      B.Maximum (PSI) Pound Per Square Inch
- Step 2: Refer to Aircraft's Maintenance Manual for Type of Hydraulic Fluid.
- Step 3: Call A&P Hydraulics experienced sales staff for any questions or for explanation of the complete range of Hydraulic Power Unit Options that we offer.

**EXAMPLE:**

Hydraulic Power Unit – 25 GPM @ 4000 PSI – Mil-H-5606 Fluid – Diesel Engine  
 Optional: 50 ft. Hoses and Dual System



CHAR	GPM	LPM	PSI	BAR	HP	KW
512	25	95	4000	272	60	45
513	35	132	4000	272	75	56
514	50	189	4000	272	120	89
515	60	227	4000	272	150	112

CHAR	DESCRIPTION
D	Diesel Engine
E	Electric Motor Prime Mover

CHAR	FLUID TYPE
2	Mil-H-5606
3	Mil-H-83282

CHAR	OPTION DESCRIPTION
B	50 ft. Hoses
C	Dual System
T	Return Back Pressure w/ Sight Glass
U	Return Sight Glass
V	Return Back Pressure
W	Second Language Operation Placards & Owner's Manual
X	CE Compliant
Y	Custom Engineering