

UNIVERSAL HYDRAULIC TEST STAND (UHTS) Diesel Engine Driven A/M27T-17, P/N 101197-100 NSN: 4920-01-592-0750RN



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UNIVERSAL HYDRAULIC TEST STAND (UHTS)

Diesel Engine Driven, Dual Independent Systems, P/N 101197-100

Features

- Low emission by using a diesel engine that meets the EPA requirements.
- Hydraulic circuits are designed as an integral manifolds which eliminates excessive plumbing and external leakage of hydraulic fluid.
- By utilizing a 100% sealed hydraulic reservoir the air and moisture entering the reservoir is eliminated.
- Heat exchanger system for the engine and hydraulic system is designed for high ambient temperature.
- A highly efficient purification system removes moisture, particulate, & dissolved gases from aircraft, test stand, & external hydraulic fluid.
- Includes continuous water monitoring sensor and monitors in PPM.
- Continuous cooling, filtering, moisture and particle removal from hydraulic fluid keeps hydraulic fluid clean and eliminates the need of changing hydraulic fluid for a long period of time.
- Sample ports are provided for monitoring the condition of the hydraulic fluid in the reservoir.
- External reservoir fill and discharge ports enables the operator to fill the hydraulic reservoir from an outside source, or to remove clean filtered hydraulic fluid from the reservoir.
- Back pressure regulator allows operation in both aircraft (closed loop) or test stand reservoir (open loop) operation.
- Flushing system is provided to facilitate flushing and de-contaminating the supply and return hoses prior to connection to aircraft.

Leading Particulars

ITEM	CHARACTERISTICS
Test medium	Hydraulic fluid, MIL-PRF-83282, MIL-PRF-5606, MIL-PRF-87257
Capacity	53 GPM at 3000 PSI, 40 GPM at 4000 PSI or 32 GPM at 5000 PSI per system or combined.
Operating Conditions	
Ambient temperature range	-40°F to +125°F
Altitude	Sea level to 7000 feet
Relative humidity	0% to 100%
Test stand position	Up to 8 1/2° from horizontal
Overall Physical Characteristics	
Size	Height: 82", width: 78" and length: 120"
Wet weight	7200 lb Approximately
Hydraulic reservoir	90 U.S. gallon (70 useable)
Road clearance	8 inches
Tow speed	20 mph max over improved roads
Steering angle	40°
Major Component	
Drive unit	300 HP, turbo charged engine, six cylinder
Main pumps	Two variable displacement piston pumps, with remote volume and pressure compensator controls
Boost pumps	Two fixed displacement gear pumps
Heat exchangers	Two oil-to-air radiator type
Supply ports	Two 1" in tube size, AN type fitting
Return ports	Two 1 1/4" tube size, AN type fitting
Filtration	
Boost system filters	Two 10-micron (nominal)
Supply system filter	Two 3-micron (absolute)
Fill & purification system filter	3-micron (absolute)
Instrumentation	
Output pressure transducers	Two 0-6000 PSI
Compound pressure transducers . (Purification/boost suction)	Two -30-0-30 PSI
Hydraulic temp transducers	Two -60°F to 300°F
Engine monitoring gauge	Tachometer, hourmeter, oil press, coolant temp, ammeter and fuel gauge
Automatic shutdown	Low boost pressure, high temp, low and high reservoir level, low engine oil press, high coolant temp.
Purification system	
Contaminant removal	55 gallons of hydraulic fluid in 5 hrs
Water	From 1000 to less than 200 PPM
Chlorinated solvents	From 400 to less than 100 PPM
Air and gas	100% dissolved air removal, 98% (by volume) removal
Particulate	Cleanliness level equal to or better than NAS 1638 class 3



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