safety in test > safety in flight 7127774477

FUEL

Test Stand Assy APU FCU and Fuel Nozzles PTRV2<</p>



The test stand is developed to test the TORNADO and EUROFIGHTER APUs, fuel pumps, regulators and injection nozzles.

It is possible to adapt the test stand for various fuel components of other aircraft.

- > The equipment tests specific performance data e.g. pressure, flow, temperature, rotational speed, etc.
- The test stand is capable of cooling and heating the test media (up to 165°C).
- The test stand is explosion proofed to ATEX
 Directive 94/9/EC enabling it to be used in a zone 1 environment.
- > To comply with the ATEX directive, a fuel vapour warning system and forced ventilation is fitted.

safety in test > safety in flight 712777447

RANGE OF APPLICATION

Tornado units tested	Eurofighter units tested
Fuel Control Units <0289 8092> and <0289 1980> Fuel Pumps <0289 8148> and <0287 8932> Ignition Fuel Nozzles <0289 5464> and <0289 5520> Fuel Recirculation Valve <frv 200mk3=""> <755-1-09300-003></frv>	Fuel Control Unit <efp 18210-1=""> Primary Fuel Nozzle <efp 13001-13=""> Secondary Fuel Nozzle <efp 13001-14=""></efp></efp></efp>

GENERAL INFORMATION

- > The test stand is operated by means of a movable, rotatable and explosion-proof control console fitted with keyboard and joystick
- > An integrated printer generates test reports
- > The test stand relies on an uninterruptible power supply (UPS) to protect it from possible mains fluctuations and power failures
- > The nitrogen circuit flushes the test stand prior to start up and prevents an explosive atmosphere
- > Two supply circuits (up to 10bar and up to 60bar) are provided for flow and pressure measurement
- > The lubricating oil circuit and its tank provide automatic lubrication of the drive pinion
- > Easy and quick calibration is ensured by the TEST-FUCHS standard software
- > The test stand is operated by means of a PC (see illustration page 1)
- > The test stand can easily be converted to use a different fuel test medium

TECHNICAL DATA

> Electrical sup	ply (requirements):	> Technical ventilation:			
Test stand:	3/N/PE AC 50Hz 400V Nominal current: 100A Back-up fuse: 125A Power: 69.3kVA	Air supply: Exhaust air (test stand): Exhaust air (test chambe	800m³/h (28.252ft³/h) 450m³/h (15.892ft³/h) r): 450m³/h (15.892ft³/h)		
> Pneumatic supply (requirements):					
	Minimum 5bar (72.5psi) Maximum 10bar (145.0psi) dry and oil-free	> Operating conditions: Operating temperature:	0 to +40°C +32 to +104°F		
> Nitrogen supp	oly (requirements):	Storage temperature:	-20 to +70°C -4 to 158°F		
	Minimum 8bar (116.0psi) Maximum 10bar (145.0psi)	Altitude: Humidity: Noise emission:	up to 1000m above MSL 0 to 90% non condensing max. 85dB at 1m distance		



TECHNICAL DATA

> Hydraulic and pneumatic parameters:			Current: (1-off)	0 to 200m	۱A		
Fuel circuit:	Test medium Pressure:	n:JP8 max. 60bar (870psi) 0 to 2500kg/h (0 to 5512lb/h)	(1-off)	0 to 5A ±0.5% of full scale			
	Flow:		> Dimensions and weight:				
Main reservoir:	Capacity: Pressure:	55I (14.5I 2.8bar (5	USgal) i0.7psi)	Test stand:	Length: Width:	3350mm 2100mm	(11.0ft) (6.9ft)
Lube oil circuit:	Medium: Reservoir:	MIL-L-23 8I (2.1US	699 gal)		Height: Weight:	(excl. cont 2650mm 3020kg	rol console) (8.7ft) (6658lb)
Heating and cooling circuit:	Cooling capa Heating capa	city: city:	15kW 15kW	Control console:	Length: Width:	700mm 820mm	(2.3ft) (2.7ft)
Hydraulic power unit:	Medium:	MIL-H-56 H 515	506-NATO		Height:	2750mm	(9.1ft)
	Reservoir: Flow: Pressure:	app. 601 0 to 201/ (0 to 5.31 up to 160 (up to 23	(15.9USgal) Imin USgpm) Ibar I20.6psi)	Switch cabinet:	Length: Width: Height: Weight:	2450mm 700mm 2750mm 930kg (incl. cont	(8.5ft) (2.3ft) (9.1ft) (2050lb) rol console)
> Measurement rang	e:			Hydraulic power	Length:	1200mm	(3.9ft)
Relative pressure: for example: (16-off altogether) 0 to 2bar (0 to 29psi) or 0 to 100bar (0 to 1450psi)		unit:	Width: Height: Weight:	700mm 1700mm 475kg	(2.3ft) (5.6ft) (1047lb)		
	±0.25% measurement range		Cooling power unit:	Length: Width:	2200mm 1300mm	(7.2ft) (4.3ft)	
Absolute pressure: (1-off)	0 to 10bar absolute (0 to 145psi) ±0.07% measurement range			Height: Weight:	1200mm 385kg	(3.9ft) (849lb)	
Temperature sensor:0 to 200°C (0 to 392°F) (8-off) ±1K absolute		User interface:	Length: Width: Height:	300mm 250mm 400mm	(1.0ft) (0.8ft) (1.3ft)		
(2-off) (1-off) (1-off)	0 to 80lpm (0 to 21.1USgpm) 0 to 16lpm (0 to 4.2USgpm) 0 to 4lpm (0 to 1.1USgpm) ±1% of full scale			weight:	IUSKg	(25210)	
Rotational speed: (1-off)	0 to 8500rp ±4rpm abso	m lute					
Voltmeter: (1-off) (1-off)	0 to 20V 0 to 40V ±0.5% of fu	ll scale					

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Example of a test set up



Switch cabinet and control console