

## ULTRAMAGIC MAINTENANCE MANUAL SUPPLEMENT No. 29

### W-2.8 SMALL VAPOUR CYLINDER

#### **Section 1 - General**

Indexes are kept in line with the Ultramagic Maintenance Manual to facilitate its use. All other limitations, instructions and safety information contained in the Ultramagic Maintenance Manual remain applicable.

#### **Section 2 – Envelope Repairs**

No change.

#### **Section 3 – Basket Repairs**

No change.

#### **Section 4 – Fuel Systems**

##### **4.2 Fuel Cylinders**

###### 4.2.1 Introduction

(Add the following)

Ultramagic W-2.8 Small Vapour Cylinder is a dedicated cylinder to feed the burner with fuel in vapour phase. This type of source is needed on burners equipped with vapour pilot light and a specific hose. It is constructed in aluminium and its capacity is of 2.8 kg of fuel.

###### 4.2.4 Thread sealing

(Add the following)

POL fittings must not be assembled with liquid sealants nor Teflon tape, as seal is achieved with an internal rubber seal.

###### 4.2.9 Cylinder body and valve positions

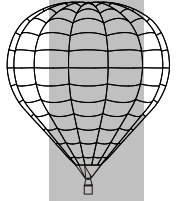
(Replace with the following)

W-2.8 Cylinder has a single boss on top of the cylinder, with a 3/4" NPT female fitting. It is meant to accommodate a multifunction valve. This device has a Vapour Valve with handwheel knob, a Pressure Relief Valve, Liquid Level Gauge (Bleed Valve) and an Overfill Prevention Device (OPD) controlled by a float.

The multifunction valve must be then equipped with a Vapour Regulator (See Maintenance Manual Section 4.2.16) with a single or double outlet connector, similarly to the vapour valve on a large liquid (master) cylinder. Whenever the valve is to be removed, the regulator assembly is to be previously withdrawn in order to allow the rotation of the valve.

4.2.10 to 4.2.15

Not applicable



#### 4.6 Standard Torque Values

Apply a torque of 90 to 110 N·m on the main valve fitting to the cylinder boss. If in doubt, a recommended torque for the LH brass nut securing the POL fitting is of 60 N·m.

### Section 5 – Instruments

No change.

### Section 6 – Inspection Schedules

#### 6.3 Annual inspection (“B type”)

(Add the following)

Ultramagic W-2.8 Cylinder follows the same inspection interval and requirements of Ultramagic liquid cylinders.

#### 6.5 10 year Cylinder Proof Pressure Test (“D type”)

(Add the following)

Ultramagic W-2.8 Cylinder follows the same inspection interval and requirements of Ultramagic liquid cylinders.

#### 6.6.5 Fuel Cylinders

(Add the following)

Whenever necessary, OPD (Overfill Prevention Device) function may be checked when the cylinder is empty by attempting to refill it in vertical upside-down position. In this case, if the device works correctly the cylinder should not get filled as float position blocks the incoming flow of fuel.

##### 6.6.5.5 Proof Pressure Test of Fuel Cylinders (D-Type Inspection)

(Replace the indicated steps of "Hydraulic Test" procedure as follows)

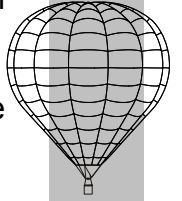
- 2) Valve must be removed
- 5) [Deleted]
- 11) Refit the valve and regulator assembly. A test for leaks at an operational pressure should be developed.

#### 6.8 Service Life Limitations

(Add the following)

NOTE: On the W-2.8 Cylinder, PRV is built in the main multifunction valve. When due, its replacement is by replacement of the whole multifunction valve.

NOTE: Date of manufacture of the valve is engraved on its side, following the YYWW format (YY = Year, WW = Week). Contact Ultramagic if in doubt.

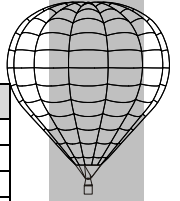


### Section 7 – Airworthiness Limitations

No change.

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## TROUBLESHOOTING GUIDE



PROBLEM	POSSIBLE CAUSE	ACTION REQUIRED
Cylinder fails to supply vapour	Empty cylinder	Refill cylinder
	Handwheel is closed	Open handwheel valve
	Handwheel valve malfunction	Check/Replace valve
	Regulator malfunction	Check/Replace regulator
	Incorrect regulator setup	Adjust regulator knob
	Incorrect hose plug/connector	Check type of connector and replace, if necessary
	Blocked connector	Check/Replace connector
Cylinder fails to close	Jammed OPD device	Check/Replace valve
	Handwheel valve malfunction	Check/Replace valve
Not possible to refill cylinder	Handwheel is open	Close handwheel valve
	Cylinder already full	Check liquid contents gauge or weight
	OPD device jammed	Check/Replace valve
	Handwheel is closed	Open handwheel valve
Leak on POL fittings	Inlet connection blockage	Check/Replace valve
	Incorrect sealing	Check/Replace sealing
	Loose nut	Tighten assembly
Leak on screwed fittings	Scratched POL nipple	Replace regulator
	Missing seal or wrong sealing	Undo and rectify the assembly
	Jammed thread	Inspect and replace as required
Leak on quick coupling(s)	Loose fitting	Tighten assembly
	Dirty coupling	Check/Clean/Replace coupling
	Incorrect coupling	Check/Replace coupling type
Unable to connect vapour hose	Dirty or Jammed coupling	Check/Clean/Replace coupling
	Incorrect coupling	Check/Replace coupling type
Leak on PRV	PRV failure	Replace valve
	Cylinder overfilled	Vent Cylinder
Liquid Level gauge fails to open	Jammed valve	Replace valve
	Cylinder is empty	Fill Cylinder
Liquid Level gauge fails to close	Jammed valve	Replace valve
Liquid Level gauge does not spit liquid when cylinder is full	Broken liquid level dip tube	Replace valve
Cylinder supplies fuel in liquid phase	Incorrect cylinder position	Place cylinder vertical upright

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