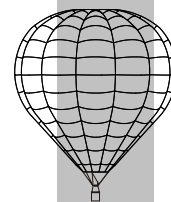


FLIGHT MANUAL SUPPLEMENT 59

W-2.8 SMALL VAPOUR CYLINDERS



59.1 General Information

This supplement details the additional instructions applicable to ensure the correct operation, maintenance and continued airworthiness of the Ultramagic W-2.8 Small Vapour Cylinders.

The section indexes on this supplement are preceded with the §59.X, and the suffix is kept in line with the Ultramagic Flight Manual. The content of this supplement replaces or appends the information contained on the Flight Manual for the balloon or parts to which this supplement is intended.

The W-2.8 Cylinder is a compact aluminium vessel designed and built to provide a source of fuel in vapour phase, adequate to feed burners with a vapour pilot light assembly. It is meant to be an alternative to the use of master tanks.

59.1.5 Identification of parts

Identification and markings on the W-2.8 Small Vapour Cylinder is engraved directly on the aluminium cylinder top protection collar:

Manufacturer:	Ultramagic
Model:	W-2.8
Serial Number:	[7 digit format]
Date of Manufacture:	[MM - YY]

Other information (such as DOT approval, Tare Weight, Water Capacity, Diameter) is also readable on the top collar.

59.2 Limitations of use

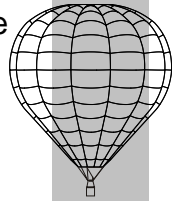
59.2.5 Fuel

(Add the following)

Sufficient provision of fuel must be carried on board, considering the consumption of the pilot lights: when full, a W-2.8 Cylinder is able to source vapour to a single burner for 10 hours. If using a cylinder with double-outlet to feed two burners, this time is reduced by a half.

It is not allowed to rely on a single vapour source to feed all burners on board. Two independent sources must be available at anytime. A single small vapour cylinder with a double outlet is not considered an independent source. A master cylinder pressurized with inert gas (e.g. Nitrogen) is not usable as vapour supply.

All vapour cylinders on board must have couplings suitable with the nipple on the burner hoses.



59.3 Emergency procedures

No change.

59.4 Standard procedures

59.4.5 Preparing the aerostat for flight

59.4.5.1.3 Burner and Fuel System

(Add the following)

If carried on board, check all W-2.8 cylinders to be full and in sufficient quantity to supply the burner for the intended flight. Check that two alternative vapour sources are present.

59.4.5.2 Rigging the basket and burner

(Add the following)

The W-2.8 cylinder must be secured in a suitable location inside the basket, using either the top collar ring or the main body as pick-up point, and at least one cylinder strap as attachment mean. It should be oriented so that it is vertical upright whenever fuel is withdrawn.

Make sure that the cylinder valve is accessible at all times and that the extension of the hose is not dangerously exposed in the event of a hard landing.

59.4.10.2 Fuel management

(Add the following)

The fuel flow rate of the vapour regulator may be adjusted in flight. Use the knob on the regulator in order to set up the flow of gas.

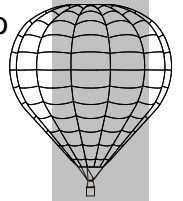
If the fuel supply is to be changed from one cylinder to another, proceed as described for a liquid fuel supply.

Change of a pilot light source should be carried out on each burner pot individually (never simultaneously), making sure that only one pilot light is off at a time.

NOTE: Continued drainage of vapour fuel may decrease the temperature of the cylinder body, especially if two hoses are fed. In some cases, it can reach temperatures below freezing point, causing ambient moist to condensate and freeze around.

59.4.12 Cylinders - Nitrogen pressurisation

W-2.8 Small Vapour Cylinder can only be filled with LP gas such as propane. No pressurization with inert gases is allowed.



59.5 Loading

For load calculation purposes, observe the masses from 59.6.3.

59.6 Balloon and Systems Description

59.6.2.4 Fuel Cylinders

(Add the following)

The W-2.8 Small Vapour Cylinder is built in Aluminium and equipped with a multifunctional valve to source vapour fuel to the burner pilot lights. The cylinder is not intended to provide heat to the envelope but to source the fuel to keep the pilot light lit during flight.

Cylinder is installed with a handwheel valve equipped with either a double or single outlets with independent vapour quick release connectors. Cylinder is protected with a cushioned jacket.

59.6.3 Dimensions and Weights

(Append with the following)

Height:	0.6 m
Diameter	0.19 m
Cylinder empty mass:	4.7 Kg
Full Mass	7.5 Kg

59.7 Balloon Maintenance, Handling and Care

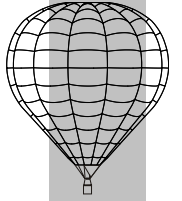
59.7.7 Small Vapour Cylinder Refill

The W-2.8 small Vapour cylinder uses the same coupling for refilling and gas withdrawal. This therefore requires the removal of the regulator assembly prior to the refill. To do so, make sure the handwheel valve on the cylinder is closed and the circuit vented. Then undo the nut securing the regulator to the main valve with a suitable 7/8" or 23mm spanner (note that the thread is left handed), and connect the hose from the fuel source.

Refill is to be monitored by means of the contents gauge (bleeder valve) built in the valve assembly. Depending on the valve, bleeder is to be operated by hand or by using a suitable flat blade screwdriver (6mm minimum). Valve is fitted also with an internal overfill prevention device, but process must not rely on it. When cylinder is full, the regulator assembly must be refitted by following the reverse procedure described above, including a leak test prior to the flight.

59.8 Other manufacturer's equipment

No change.



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