

HEAD BALLOONS, INC.

P.O. BOX 28
HELEN, GEORGIA 30545

~~404~~-865-3874

706

FAA APPROVED
BALLOON FLIGHT MANUAL SUPPLEMENT
FOR
HEAD BALLOONS, INC.
MODEL AX8-88 w/ parachute top

Registration No. _____

Serial No. _____

This SUPPLEMENT must be attached to the FAA APPROVED BALLOON FLIGHT MANUAL dated Nov. 9, 1984, when Balloon Works basket and burner system are installed in accordance with SUPPLEMENTAL TYPE CERTIFICATE SL1748SO.

The information contained herein supplements or supersedes the information in the basic BALLOON FLIGHT MANUAL *only* in those areas listed herein. For limitations, procedures and performance information not contained in this SUPPLEMENT, consult the basic BALLOON FLIGHT MANUAL.

FAA APPROVED:

John R. James

MANAGER

ATLANTA AIRCRAFT CERTIFICATION OFFICE
CENTRAL REGION
FEDERAL AVIATION ADMINISTRATION

DATE: FEB 27 1985

1.0 OPERATING LIMITATIONS

- 1.4 Fuel Tanks: Size 4 or 4.5 baskets- 1,2 or 3 FAA approved Ten gallon fuel cylinder. Size 5 basket- 1,2,3,4,5 or 6 FAA Approved Ten gallon fuel cylinder. Size 3.9 or 4.9 basket- 1,2,3 or 4 FAA Approved Ten gallon fuel cylinder. Fuel hoses to unused tank positions must be capped with Balloon Works Part No. A3193 and secured to a tank support. Approved for above baskets with single burners only.

2.0 NORMAL OPERATING PROCEDURES

2.1 Preflight

2.1.4 OMIT

2.1.6.4 Verify flow from each tank by opening the blast valve and then opening each liquid tank valve, one at a time, for two seconds.

2.1.6.6 Verify fuel flow to the Fire 2 burner by opening the Fire 2 valve for two seconds.

2.1.7 Install instrument pack and thermometer. Set altimeter to field elevation and check thermometer by noting the ambient temperature.

2.2 Balloon layout and inflation

2.2.1 Basket Corner I contains the Control Panel. Corner II is the first corner counterclockwise from Corner I when viewed from the top. Lay the basket with Corner I up. The burner should be mounted with the fuel inlet fittings pointing to Corner I.

2.2.3 Connect suspension cables. The balloon envelope gores are numbered. The numbers are located on the gore seam at the mouth of the balloon envelope. The number corresponds to the gore to the left of the number. Recommended assembly orientation is Gore #1 above Corner I. The suspension cables from Corner I will then be attached to gore seams 21,22,23,24,1,2,3,4. The cables from Corner II will be attached to gore seams 5 thru 12. The cables from Corner III will be attached to gore seams 13 thru 20. This alignment places the pyrometer wire (if installed) and the parachute top line in favorable positions for the inflation.

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- 2.2.4 Install thermometer or connect pyrometer cable.
- 2.2.9 Turn on tank #1. This will insure a liquid supply to the burner.
- 2.2.10 Move crew from immediate area of the burner and begin hot inflation.

WARNING

FALIURE TO DO SO MAY RESULT IN SERIOUS INJURY TO PEOPLE IN THE IMMEDIATE VICINITY OF THE BURNER.

2.3 Pre-Launch - check:

- 2.3.3 That the burner, Fire 2 and the pilot light operate properly.

2.4 Flight

- 2.4.3 Fuel Management (fig 1. shows a fuel system schematic) A suggested procedure is to use Tank #1 until the fuel guage starts to indicate a decreasing quantity, thus insuring operation of the guage. Then use the other tanks in sequence leaving the remaining fuel in Tank 1 as a reserve. The system may be operated with 2 or more tank valves open. In this case fuel transfer between tanks may occur. If Fire 2 is installed, see fig. 2 for schematic. Fire 2 draws fuel from Tank 1 only. If Tank 1 should be emptied, fuel can be transferred into it through the primary fuel system by opening the primary fuel valves on Tank 1 and on the tank to be transferred from.

2.5 Landing

- 2.5.1 Be sure the main burner and Fire 2 are "off" at instant of touchdown to avoid possible damage to the envelope .

CAUTION

ALWAYS close the Fire 2 valve TIGHTLY after use. After the fire goes out TIGHTEN APPROXIMATELY 1/8 TURN MORE.

3.0 EMERGENCY PROCEDURES

3.1 Burner Relight

3.1.3 If the pilot light cannot be relighted, the Fire 2 control may be kept slightly opened for flame retention. If this should happen, land as soon as practical.

3.2 Main Burner Malfunction

3.2.1 In the event of a failure of the primary fuel system, the Fire 2 system can be used for flight control.

CAUTION

Fire 2 is an auxillary burner and has a slower response time than the primary system. Cold fuel (low pressure) and/or heavy loads slow this response time even further. Care should be exercised to keep descents rates under 500 FPM when operating only on the Fire 2 burner.

3.2.2 OMIT

3.6 Under some conditions, generally associated with low ambient air densities, a flame instability may develop after several seconds of continuous burner operation. This is first evidenced by a change in tone of the burner flame, a "swoosh" noise. If burning is continued a flameout may occur. However flameout can generally be avoided by terminating the burn at the initial "swoosh" sound, leaving the control valve closed for one or two seconds, and then renew the blasting. Further, "swoosh" can be avoided by using shorter blast periods.

4.0 PERFORMANCE

NO CHANGE

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P.O. Box 28
 Helen, Ga. 30545
 404-865-3874

Head Balloons, Inc.
 BFM Supplement for
 Head AX8-88

Balloon Flight Manual
 FireFly 5, 6, 6B, 7, 7B, 6

FUEL SYSTEMS

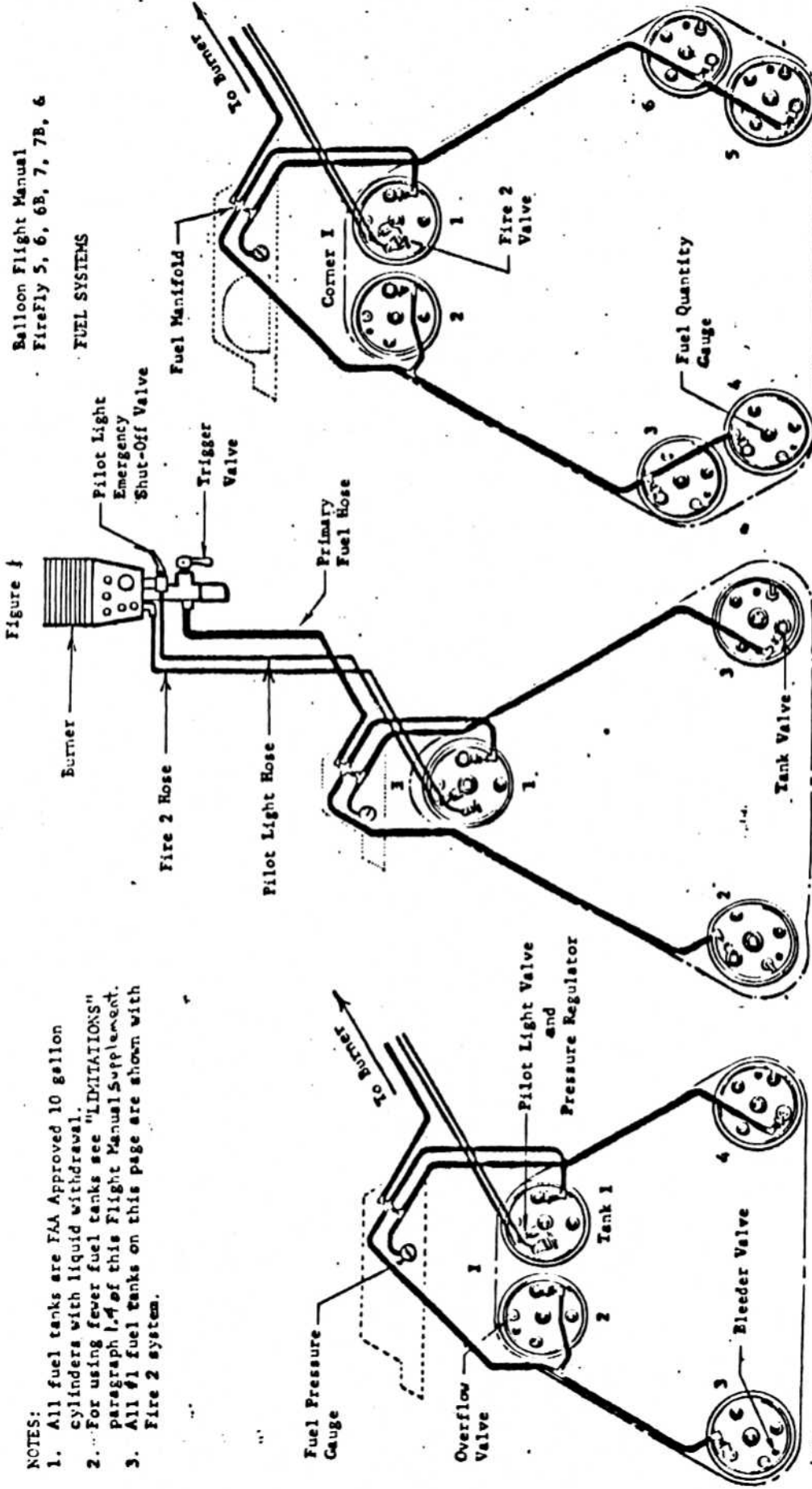


Figure 1

- NOTES:
1. All fuel tanks are FAA Approved 10 gallon cylinders with liquid withdrawal.
 2. For using fewer fuel tanks see "LIMITATIONS" paragraph 1.4 of this Flight Manual Supplement.
 3. All #1 fuel tanks on this page are shown with Fire 2 system.

3.9B, 3.9A1, 4.9A1

4.0A, 4.0A1, 4.5A1

5.0A1, 5.5.0A1

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Fuel System Schematic with
Fire 2 installed

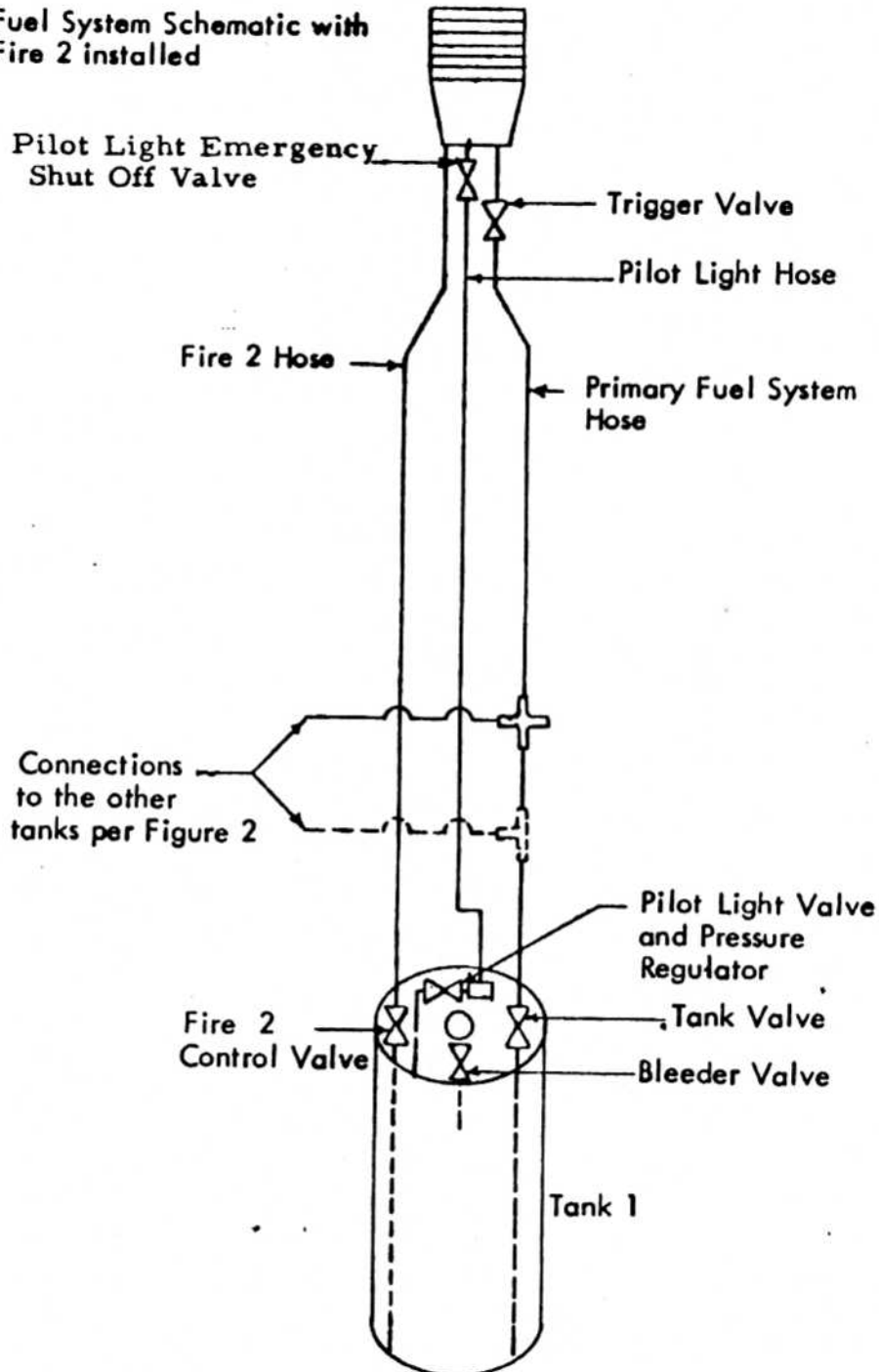


Figure 2 - Fuel System with Fire2
(For Tank 1 only)

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WEIGHT DATA SHEET

CAUTION
IT IS THE RESPONSIBILITY OF THE PILOT TO INSURE THAT THE BALLOON IS LOADED PROPERLY.

Registration # _____

Serial # _____

Envelope S/N _____ Actual weight (lbs) _____
note: Envelope weight includes skirt.

Balloon Works

Basket S/N _____ Actual weight (lbs) _____
Note: Basket weight is without tanks, but with instruments and burner.

Empty fuel tank weight - 28 pounds

Full fuel tank weight - 70 pounds

Sample Loading Guide (approximate weights)

Envelope	260 pounds
Basket	180 pounds
2 full tanks	140 pounds
Pilot	170 pounds
Passenger	185 pounds
Passenger	125 pounds

1060 pounds - approximate lift off weight