

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A14SO	
Rev. No. 34	
Sidney Conn (Balloon Works)	
Firefly 5	Firefly 7B-15
Firefly 6	Firefly 8B-15
Firefly 6B	Firefly 9B-15
Firefly 7	Firefly 10
Firefly 7B	Firefly 6B-15
Firefly 7-15	Firefly Bottle
Firefly C7B	Firefly 11
Firefly 8	Firefly Boot
Firefly 8-24	Firefly JC-9B
Firefly 8B	Firefly 8B Sphere
Firefly 9	Firefly 11B
Firefly C7	Firefly TV-180
Firefly B7	
Firefly C8	
November 15, 2000	

TYPE CERTIFICATE DATA SHEET NO. A14SO

This data sheet, which is a part of Type Certificate No. A14SO, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

TYPE CERTIFICATE HOLDER: Sidney Conn
 143 Malibu Road
 Mooresville, North Carolina 28117

I. Model Firefly 5 Hot Air Balloon, approved February 7, 1978

Air Heater	Balloon Works Burner Model T3-017 (See Note 2)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	870 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300°F
Fuel Capacity	See Note 1
Serial Numbers Eligible	501-522, 10100, 10190, F5-001 and subsequent.

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II. Model Firefly 6 Hot Air Balloon, approved August 1, 1974

Air Heater	Balloon Works Burner Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1050 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	120-128, 600-636, 10152, 11150, F6-001 and subsequent.

III. Model Firefly 6B Hot Air Balloon, approved March 19, 1975

Air Heater	Balloon Works Burner Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1050 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	6601-6756, 10000, 10001, 10015, 10023, 10024, 10027, 10040, 10051, 10058, 10068, 10080, 10082, 10094, 10127, 10128, 10143, 10145, 10151, 10157, 10191, 10199, 10203, 10210, 10214, 10216, 10865, 11145, 90002, F6B-001 and subsequent.

IV. Model Firefly 7 Hot Air Balloon, approved February 6, 1974

Air Heater	Balloon Works Burner Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1660 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1

Serial Numbers Eligible	130-199, 700-799, 7700-7999, 10002-10014, 10019-10022, 10025, 10026, 10028-10039, 10042, 10043, 10046-10050, 10052-10057, 10059-10067, 10069-10073, 10075-10079, 10081, 10083-10093, 10096-10099, 10102-10126, 10129-10137, 10139-10142, 10144, 10146-10150, 10153-10156, 10158-10189, 10192, 10193, 10195-10198, 10200, 10201, 10204-10209, 10211-10213, 10215, 10217-10229, 10237, 10244, 10247, 10262, 10280, 10287, 10295, 10297, 10309, 10313, 10315, 10317, 10322, 10323, 10325, 10327, 10331, 10334, 10337, 10338, 10340-10342, 10970, 10971, 10974, 10977, 10979-10984, 10986, 10989, 10991-10993, 10995-11002, 11005-11007, 11014, 11017, 11024, 11027-11036, 11041-11050, 11054, 11055, 11058-11061, 11064-11070, 11072, 11074-11076, 11079-11096, 11098-11102, 11105-11114, 11116, 11117, 11119-11123, 11125, 11126, 11129, 11130, 11135-11138, 11140-11144, 11147-11149, 11151, 11152, 11155, 11157-11159, 11161-11169, 11171-11174, 11176, 11177, 11179-11185, 11189, 11194, 11196-11200, F7-001 and subsequent.
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V. Model Firefly 7B Hot Air Balloon, approved November 26, 1980

Air Heater	Balloon Works Burner Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1050 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300° F
Fuel Capacity	See Note 1
Serial Numbers Eligible	01231-10243, 10245, 10246, 10248-10261, 10263-10279, 10281-10283, 10285, 10286, 10288-10294, 10296, 10298-10306, 10308, 10310-10312, 10314, 10316, 10318-10321, 10324, 10326, 10328-10330, 10332, 0333, 10335, 10336, 10339, 10969, 10973, 10978, 10985, 10987, 10990, 10994, 11003, 11004, 11009, 11022, 11026, 11037, 11051, 11056, 11063, 11071, 11073, 11077, 11078, 11097, 11103, 11104, 11115, 11118, 11124, 11128, 11131, 11132, 11139, 11153, 11175, 11178, 11186, 11187, F7B-001 and subsequent.

VI. Model Firefly 7-15 Hot Air Balloon, approved March 30, 1990

Air Heater	Balloon Works Burner Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1750 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300°F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F7-715 and subsequent

VII. Model Firefly C7B Hot Air Balloon, approved April 13, 1990

Air Heater	Balloon Works Burner Model T3-017 (See Note 2)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1150 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300°F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F7B-5001 and subsequent

VIII. Model Firefly 8 Hot Air Balloon, Approved November 28, 1989

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8) Single or Double Burners (See Note 3)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, 4.9DB, S5.0, S5.0DB, 5.0, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2450 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300° F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F8-350 and subsequent.

IX. Model Firefly 8-24 Hot Air Balloon, approved February 13, 1976

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8) Single or Double Burners (See Note 3)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, 4.9DB, S5.0, S5.0DB, 5.0, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2020 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ⁰ F
Fuel Capacity	See Note 1
Serial Numbers Eligible	801-813, 10018, 10044, 10045, 10074, 10138, 10194, 10202, 10230, 10284, 10307, 11020, 11127, 11133, 11146, 11154, 11160, 11170, 11188, 11190, 11191, 11192, F8-001 and subsequent.

X. Model Firefly 8B Hot Air Balloon, approved September 19, 1984

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1660 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ⁰ F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F8B-001 and subsequent.

XI. Model Firefly 9 Hot Air Balloon, Approved November 20, 1987

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (Two required) (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 4.9DB, S5.0DB, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	3285 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ⁰ F
Fuel Capacity	Minimum of Six FAA-Approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	F9-001 and subsequent.

XII. Model Firefly C7 Hot Air Balloon, Approved November 16, 1990

Air Heater	Balloon Works Burner, Model T3-017 (See Note 2)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1150 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	FC7-001 and subsequent.

XIII. Model Firefly B7 Hot Air Balloon, Approved November 16, 1990

Air Heater	Balloon Works Burner, Model T3-017 (See Note 2)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1150 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	FB7-001 and subsequent.

XIV. Model Firefly C8 Hot Air Balloon, Approved January 29, 1991

Air Heater	Balloon Works Burner, Model T3-017 (Two required) (See Note 2)
Gondolas	Balloon Works Basket Sizes 4.9DB, S5.0DB, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2000 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	FC8-001 and subsequent.

XV. Model Firefly 7B-15 Hot Air Balloon, Approved July 18, 1991

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage(See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1300 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F7B-315 and subsequent.

XVI. Model Firefly 8B-15 Hot Air Balloon, Approved August 26, 1991

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8) Single or Double Burners (See Note 3)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, 4.9DB, S5.0, S5.0DB, 5.0, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	1900 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F8B-400 and subsequent.

XVII. Model Firefly 9B-15 Hot Air Balloon, Approved June 2, 1992

Air Heater	Balloon Works Burners, Model T3-017 or Model F1 Mirage (Two required) (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 4.9DB, S5.0DB, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2800 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum of Six FAA-Approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	F9B-001 and subsequent.

XVIII. Model Firefly 10 Hot Air Balloon, Approved July 14, 1992

Air Heater	Balloon Works Burners, Model T3-017 or Model F1 Mirage (Two required) (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	3600 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum of Six FAA-Approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	F10-001 and subsequent.

XIX. Model Firefly 6B-15 Hot Air Balloon, Approved October 27, 1992

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, S5.0, or 5.0
Fuel	Propane
Maximum Weight	1200 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F6B-001 and subsequent.

XX. Model Firefly Bottle Hot Air Balloon, Approved July 21, 1993

Air Heater	Balloon Works Burner Model F1 Mirage (See Note 2) Single or Double Burners (See Note 3)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9, 4.9DB, S5.0, S5.0DB, 5.0, or 5.0DB
Fuel	Propane
Maximum Weight	1660 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	Bottle-01 and subsequent.

XXI. Model Firefly 11 Hot Air Balloon, Approved June 15, 1994

Air Heater	Balloon Works Burner, Model F1 Mirage (Two Required) (See Note 2)
Gondolas	Balloon Works Basket Sizes 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	3940 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum of Six FAA-Approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	F11-001 and subsequent.

XXII. Model Firefly Boot Hot Air Balloon, Approved September 28, 1995

Air Heater	Balloon Works Burners, Model T3-017 or Model F1 Mirage (Two required) (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 4.9DB, S5.0DB, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2000 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	Boot 01 and subsequent.

XXIII. Model Firefly JC-9B Hot Air Balloon, Approved October 23, 1998

Air Heater	Balloon Works Burners (two required), Model T3-017 and Model F1 Mirage, or two Model F1 Mirage (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 4.9DB, S5.0DB, 5.0DB, 5.9, or 6.0
Fuel	Propane
Maximum Weight	2140 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum 50 gallons (See Note 1).
Serial Numbers Eligible	F9B-JC1 and subsequent.

XXIV. Model Firefly 8B Sphere Hot Air Balloon, Approved February 12, 1999

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8) Single or Double Burners (See Note 3)
Gondolas	Balloon Works Basket Sizes 3.9, 4.0, 4.5, 4.9DB, S5.0, S5.0DB, 5.0, or 5.0DB
Fuel	Propane
Maximum Weight	1900 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	See Note 1
Serial Numbers Eligible	F8BS-01 and subsequent.

XXV. Model Firefly 11B Hot Air Balloon, Approved May 10, 1999

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage (See Notes 2 and 8) Two required (See Note 3)
Gondolas	Balloon Works Basket Sizes 5.0DB, 5.9 or 6.0
Fuel	Propane
Maximum Weight	3600 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum of six FAA-approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	F11B-001 and subsequent.

XXVI. Model Firefly TV-180 Hot Air Balloon, Approved November 15, 1999

Air Heater	Balloon Works Burner, Model T3-017 or Model F1 Mirage Two required (See Notes 2 and 8)
Gondolas	Balloon Works Basket Sizes 5.0DB, 5.9 or 6.0
Fuel	Propane
Maximum Weight	2800 pounds (This weight includes the envelope weight.)
Maximum Allowable Envelope Temperature	300 ^o F
Fuel Capacity	Minimum of six FAA-approved 10-gallon tanks (Two P/N C3229, Four P/N C3035) (See Note 1)
Serial Numbers Eligible	FF-TV1 and subsequent.

DATA PERTINENT TO ALL MODELS

Certification Basis	FAR 31, effective July 1, 1964 through Amendment 31 - 2, effective April 12, 1965; FAR 31.85(a) of Amendment 31-3, effective February 1, 1977. Application for Type Certificate dated August 4, 1972. Type Certificate No. A14SO issued February 6, 1974, and amended August 1, 1974, March 19, 1975, February 13, 1976, February 7, 1978, November 26, 1980, September 19, 1984, November 20, 1987, November 28, 1989, March 30, 1990, April 13, 1990, November 16, 1990, January 29, 1991, July 18, 1991, August 26, 1991, June 2, 1992, July 14, 1992, October 27, 1992, July 21, 1993, June 15, 1994, September 28, 1995, October 23, 1998, February 12, 1999, May 10, 1999, and November 15, 1999.
Production Basis	Production Certificate No. 1SO, issued November 1, 1974.
Export Eligibility	Balloon will be eligible for issuance of an Export Certificate of Airworthiness subject to compliance with Federal Aviation Regulation Part 21, Subpart L, Sections 21.321 through 21.339. The applicable procedures are contained in Advisory Circular No. 21-2F.
Equipment	<p>The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following equipment must be installed:</p> <ol style="list-style-type: none"> 1. Burner lighter-sparker. 2. For balloons <u>equipped</u> with the panel throttle valve, the following FAA approved Balloon Flight Manuals (BFM) are required: <ul style="list-style-type: none"> Firefly 5 dated February 8, 1978 Firefly 6 dated August 1, 1974 Firefly 6B dated March 19, 1975 Firefly 7 dated February 6, 1974 Firefly 8-24 dated February 13, 1976 or FAA Approved Balloon Flight Manual Supplement dated May 4, 1983, and the Balloon Flight Manuals listed under item 3 are required. 3. For balloons <u>not equipped</u> with the panel throttle valve, the following FAA Approved Balloon Flight Manual (BFM), or later FAA approved revision, are required: <ul style="list-style-type: none"> Firefly 5 dated October 24, 1978 Firefly 6 dated October 24, 1978 Firefly 6B dated August 5, 1976 Firefly 7 dated August 2, 1976 Firefly 7B dated November 26, 1980 Firefly 7-15 dated March 30, 1990 Firefly C7B dated April 13, 1990 Firefly 8 dated November 28, 1989 Firefly 8-24 dated August 2, 1976 Firefly 8B dated September 19, 1984 Firefly 9 dated November 20, 1987 Firefly C7 dated November 28, 1990 Firefly B7 dated November 28, 1990 Firefly C8 dated January 29, 1991 Firefly 7B-15 dated July 18, 1991 Firefly 8B-15 dated August 26, 1991 Firefly 9B-15 dated June 2, 1992 Firefly 10 dated July 14, 1992 Firefly 6B-15 dated October 27, 1992 Firefly Bottle dated July 21, 1993 Firefly 11 dated June 15, 1994 Firefly Boot dated September 28, 1995 Firefly JC-9B dated October 23, 1998 Firefly 8B Sphere, dated February 12, 1998 Firefly 11B, dated May 10, 1999 Firefly TV-180, dated November 15, 1999 <p>Also see Note 2.</p>

Maintenance and
Inspection

1. The annual inspection required by FAR 91.409 must include inspection of fabric condition. The fabric should be tested in several areas with particular attention to the higher operating temperatures. The envelope material strength is adequate if the material withstands without tearing 40 pounds tension uniformly distributed along one inch and applied parallel to either direction of the threads.
2. Criteria for repairing the envelope, basket, and burners must be obtained from the Balloon Works and the work must be accomplished in accordance with The Balloon Works Repair and Maintenance Manual.
3. The Burner Model T3-017 with burner Serial Numbers 510 through 519 are fabricated from 304 stainless steel tubing. (See Model Firefly 7 balloon Flight Manual Supplement dated February 6, 1974, for inspections and limitations.)

Note 1:

Carriage Models 3.9 and 4.9: One, two, three or four 10-gallon FAA approved propane cylinders. One Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1, 3035-2 or 3258. Models 3.9 and 4.9 may alternately contain one or two 15-gallon FAA approved propane cylinders, Balloon Works P/N 3661-2 installed in corners 2 or 3 only.

Carriage Models 4.0 and 4.5: One, two or three 10-gallon FAA approved propane cylinders. One Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1, 3035-2 or 3258. Models 4.0 and 4.5 may alternately contain one, two or three 15-gallon FAA approved propane cylinders, Balloon Works P/N 3661-1 in corner one and Balloon Works P/N 3661-2 in the other corners.

Carriage Models 5.0 and S5.0: One, two, three, four, five, or six 10-gallon FAA approved propane cylinders. Two Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1, 3035-2 or 3258.

Carriage Model 4.9DB (two burners installed): Two, three or four 10-gallon FAA approved propane cylinders. Two Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1 or 3035-2. The size 4.9DB basket may alternately contain one or two 15-gallon FAA approved propane cylinders, Balloon Works P/N 3661-2 installed in corners 2 or 3 only.

Carriage Models 5.0DB and S5.0DB (two burners installed): Six 10-gallon FAA approved propane cylinders. Two Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining tanks must be Balloon Works P/N 3035, 3035-1 or 3035-2.

Carriage Model 5.9: Six or seven 10-gallon FAA approved propane cylinders. Two Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1 or 3035-2.

Carriage Model 6.0: Seven, eight or nine 10-gallon FAA approved propane cylinders. Two Balloon Works P/N 3229, 3229-1 or 3229-2 must be installed in corner one. The remaining cylinders must be Balloon Works P/N 3035, 3035-1 or 3035-2. The size 6.0 basket may alternately contain one or two 15-gallon FAA approved propane cylinders, Balloon Works P/N 3661-2 installed in corners 2 or 3 only.

Note 2:

The Fire 2 is an approved optional auxiliary heater. If installed, the number 1 tank must be modified in accordance with Balloon Works drawing C3229A (P/N 3229), dated September 10, 1975, or later FAA approved revision. Balloon Flight Manual revision dated December 24, 1975, is required with this installation for the Firefly 6, 6B and 7 balloons equipped with the panel throttle valve. Balloon Flight Manuals of other model balloons have Fire 2 information incorporated therein.

The Fire 2 auxiliary heater is a required installation on the Firefly Bottle balloon.

Note 3:

The double burner is an approved optional heater for the Firefly 8-24, Firefly 8, Firefly 8B-15, Firefly Bottle, and Firefly 8B Sphere balloons. Balloon Flight Manual Supplement dated June 10, 1983 is required with this double burner installation for the Firefly 8-24 balloon and Balloon Flight Manual Supplement dated November 28, 1989, is required with this double burner installation for the Firefly 8 balloon. Balloon flight manuals of other models have optional double burner information incorporated therein.

- Note 4: The following maintenance must be performed on the Rego 7553 series throttle or trigger valves at each 100 hours time in service or at each annual inspection, whichever comes first:
- a. All Rego 7553 Series Valves:
Remove the valve actuating level rollpin, P/N 7553S-8, from actuating level. (Be careful to remove any burrs in the stem area around the rollpin hole before removing the valve stem, P/N 7553S-1, from the bonnet, P/N 7553S-5.) Replace the "O" ring stem seal with a new Rego "O" ring, P/N 1421-7. Lubricate the new "O" ring with a suitable lubricant before reassembly.
 - b. Rego 7553S Valves Only:
Check the torque of the valve seat retaining screw to 10 to 12 inch-pounds in the loosening direction. If it turns, the screw must be removed, cleaned of lubricant and reinstalled using MIL-S-22473 high strength thread locking compounds, such as two ton epoxy by Devcon or Loctite 271 or equivalent. Recheck torque after thread locking compound is cured.

CAUTION: Do not permit the thread locking compound to adhere to the rubber seating surface.
 - c. Reinstall valve actuating level on the valve body with rollpin, P/N 7553S-8. Install a number six machine screw a stop nut or a 3/32 inch stainless steel cotter pin or a 0.040 inch diameter safety wire through the hole in the rollpin, holding the actuating handle to the valve body and secure.
- Note 5: Prior to shipment of a balloon envelope (and necessary attaching system), produced for use with a burner/basket assembly that is eligible for use with that envelope, the production approval holder must determine that the envelope and necessary attaching system conforms to the type design and is in a condition for safe operation. A Statement of Conformity, FAA Form 8130-9, may be used for this purpose. This envelope, in combination with an eligible burner/basket assembly, may be registered and is eligible for issuance of a standard airworthiness certificate when the applicant for such certificate shows, and the Administrator finds, that the envelope, burner, and basket combination conforms to the type design and is in a condition for safe operation.
- Note 6: Balloon burner/basket assemblies specifically designed for quick removal and installation from one envelope to another may be accomplished by the pilot/owner who holds at least a private pilot certificate. Appropriate entries must be made in the balloon records noting the removal and/or installation of burner/basket assemblies.
- Note 7: Appropriate entries into balloon records of burner/basket assembly removals and installations must be made by FAA certificated mechanics if the pilot/owner is not eligible to accomplish this task.
- Note 8: The F1 burner is an approved optional heater for the models Firefly 6, Firefly 6B, Firefly 7B, Firefly 7, Firefly 8B, Firefly 8-24, Firefly 7-15, Firefly 6B-15, Firefly 7B-15, Firefly 8B-15, Firefly 8, Firefly 9B-15, Firefly 9, Firefly 10, Firefly 8B Sphere, Firefly 11B, and these natural shaped balloons with appendages. The F1 burner may be combined with a T3-017 burner in double burner systems if the red Pilot Light Safety Shutoff lever on the T3-017 burner, Balloon Works P/N 4083, is removed and replaced with a black lever, Balloon Works P/N A3302-21. Balloon Flight Manual Supplement, dated October 21, 1992, is required for F1 burner installation on these models.
- Note 9: Inflated appendages on standard shape envelopes are permitted and approved as described in Drawing B213-A, dated February 11, 1993, or latter FAA approved revision. Appendages must meet the same standards for strength as the balloon envelope, and must be maintained in accordance with Firefly Balloons Instructions for Continued Airworthiness.
- Note 10: Some carriage model numbers contain the suffix "A1." The carriage models 3.9, 4.0, 4.5, 4.9, s5.0, and 5.0 are identical to the carriage models 3.9A1, 4.0A1, 4.5A1, 4.9A1, s5.0A1, and 5.0A1 respectively, and may be used interchangeably.

END