



INTERNATIONAL, INC.

AEROSTAR CONTINUED AIRWORTHINESS INSTRUCTIONS SECTION 3.0

AIRWORTHINESS LIMITATIONS

This Airworthiness Limitations section of the Aerostar Continued Airworthiness Instructions (ACAI), is applicable to all models of hot air balloons manufactured by Aerostar Intl., Inc. (Raven) under Federal Aviation Administration (FAA) Type Certificate A15CE, and/or components thereof that are maintained in accordance with the ACAI and using Aerostar Intl., Inc. original replacement parts.

Any Aerostar (Raven) balloon system or a component that is repaired or altered using a method or technique not in accordance with the Aerostar (Raven) FAA approved type design or using methods not found in the ACAI manual, the alternate method or technique must be FAA approved. A person or facility that formulates and prepares an alternate repair or alteration to the aircraft is responsible for the structural integrity of the repair technique and is responsible for establishing the Airworthiness Limitations including the future inspection and testing criteria for the repair or alteration.

Non-Aerostar replacement parts that are installed for the repair or alteration of an Aerostar (Raven) component must be FAA approved and be accompanied by the proper part certification. The supplier of the non-Aerostar part is responsible for the airworthiness of the part and must establish supplemental information to the ACAI including the Airworthiness Limitations for their part(s), i.e. mandatory inspections, life limits and testing criteria.

In accordance with Federal Aviation Regulations 14CFR:

§ 31 Appendix A A31.4 “The Airworthiness Limitations Section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations.”

§ 43.16 states: “Each person performing an inspection or other maintenance specified in an Airworthiness Limitations section of a manufacturer’s maintenance manual or Instructions for Continued Airworthiness shall perform the inspections or other maintenance in accordance with that section, or in accordance with operations specifications approved by the Administrator under Parts 121,123, 127, or 135 or an inspection program approved under §91.409(e).”

SECTION 3.0
AIRWORTHINESS LIMITATIONS
Revision Page

The FAA approval applies to section 3.0 and the following Appendices.

Appendixes II-A, II-E and II-G.

Rev.Ltr.	Paragraphs	Pages	Approved By	Date
Original	All	All	Greg Michalik	2/15/01
A	- Chart 300 Chart 302	3-1 3-3 3-9	Greg Michalik	3/01/01
B	All	All	Greg Michalik	10/25/01
C	Revised Chart 301 Kevlar Cable re-qualification	3-5	Greg Michalik	02/04/2013
	Revised Chart 302 to include use of .011 "go gauge" to liquid pilot light orifice inspection	3-8	<i>FAA/CHICAGO ACC</i>	
	Appendix A revision status	II-A-1		
	Removed Federal Test Method 191 and replaced with ASTM D5035 and D2261	II-A-3		
	Removed Federal Test Method 191 and replaced with ASTM, removed Aerostar lab testing	II-A-6		
	Changed revision status of ABADS 1096	II-A-13,14		
	Changed revision status of ABADS 1205	II-A-16,17		
	Removed Federal Test Method 191 pages	II-A-19 thru 23		
	Re-numbered pages	II-A-24 thru 26		

Chart 301
Envelope Airworthiness Limitations

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Envelope Airframe /</p> <p>All models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>Replacement of envelope fabric is limited to a one time replacement of up to an accumulated total of 65% of the original fabric at the time of manufacture, except for minor patches and repairs.</p>	<p><i>Experience has shown that structural integrity of the envelope can be maintained by replacing no more than 65% of envelope fabric.</i></p> <p><i>Reference section 6.1.2 of the ACAI. It is recommended that anyone performing a major fabric repair to the envelope, contact the Aerostar factory to obtain information pertinent to the model being repaired.</i></p>
<p>Envelope Fabric After Possible Overheating /</p> <p>All models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the 275°F dot on the “tell-tale” tab (fabric over-temp indicator) in the top cap has turned black, the fabric must be tested per the ACAI Appendix II-A, Paragraph II-A.1.1, before further flight.</p>	<p><i>Reference Aircraft Flight Manual Section 2.26</i></p>
<p>Envelope Fabrics /</p> <p>All models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE, and all types of Aerostar fabrics, (i.e. square weave, Aerostar diamond weave, Aerolite, Aeromax).</p>	<p>All fabrics **(except those specified below) must be tested at intervals of 100 hours time in service (TIS) or 12 calendar months, whichever expires first, to the requirements for the 100 hour inspection criteria per Appendix II-A, Paragraph II-A.1.1.</p> <p style="text-align: center;">or</p> <p>Must be tested at intervals of 50 hours TIS or 12 calendar months, whichever expires first, perform structural test//re-test per Appendix II-A Paragraph II-A.1.1.</p> <p>**less that 2 years old, less than 150 hours TIS, no presence of mold or mildew or no increased fuel consumption.</p>	<p>The owner/operator or inspector has the option of fusing either of the following test criteria and associated test intervals:</p> <p>(a) the 100 hour testing criteria of 45 lbs. tensile, less than 50 cubic feet per minute (cfm) of porosity, or tear strength equal to or greater than 2.5 lbs.</p> <p>(b) the 50 hour testing criteria of 35 lbs. tensile, equal to or greater than 50 cfm porosity or tear strength less than 2.5 lbs.</p> <p>(see Appendix II-A Paragraph II-A.1.1 for exact criteria)</p>

Chart 301
Envelope Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Steel Suspension Cables /</p> <p>Galvanized and Stainless Steel suspension cables used on all models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that cables have broken wires, corrosion, severe kinks or areas of blackening or bluing that may indicate overheating or weakening, cables must be replaced prior to further flight.</p>	<p><i>Reference section 5.1.4 of the ACAI.</i></p>
<p>Kevlar Suspension Cables /</p> <p>Kevlar suspension cables used on all models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that Kevlar cables have internal Kevlar exposed, outer braid is not flexible, or eye splice whip wraps have broken threads, cable must be replaced prior to further flight.</p>	<p><i>Reference section 5.1.4 of the ACAI.</i></p>
<p>Kevlar Suspension Cables /</p> <p>Kevlar suspension cables used on all models of envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>Cables that exceed 2000 hours in service must be proof load tested to a dead load value of 1800 lbs. per cable or 3600 lbs. per cable pair (note: cable pairs must be tested as a pair. Loading an individual leg of a pair will cause damage to the common end termination of the cable pair.) This test must be repeated every 500 hours thereafter.</p>	<p><i>Reference section 5.1.6 of the ACAI.</i></p>
<p>Envelope suspension fittings/</p> <p>All 2-point and 4-point suspension fittings used on envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight or scheduled inspection reveals that the fitting is bent, broken, or cracked, the fitting must be replaced prior to further flight.</p>	<p><i>Reference section 5.1.6 of the ACAI.</i></p>

Chart 301
Envelope Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Carabiner envelope connectors /</p> <p>Carabiners used on envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight or scheduled inspection reveals that the carabiner is broken, bent, or the spring gate does not close and lock completely, the carabiner must be replaced prior to further flight.</p>	<p><i>Reference section 5.1.7 of the ACAI.</i></p>
<p>Rip top and Pararip top deflation panel/</p> <p>All envelopes using a Velcro rip panel as a deflation device manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight or scheduled inspection reveals that there is not a minimum of 2" excess material in the deflation panel between each vertical load tape on the S-series envelopes and a minimum of 3" on the Rally (RX) series envelopes, the deflation panels must be repaired or replaced prior to further flight.</p>	<p><i>See Service Bulletin #115</i></p> <p><i>Reference section 5.1.8 of the ACAI.</i></p>
<p>Hook and pile fastener tape used in deflation panels /</p> <p>All envelope models that are equipped with a Rip top or Pararip top deflation system manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the fastener tape does not meet the minimum strength requirements (30 lbs. average) as specified in the ACAI Appendix II-G Paragraph II-G.1, the fastener tape must be replaced prior to further flight.</p>	<p><i>Fastener tape MUST pass the required tests for continued airworthiness. Fastener tape that fails MUST be replaced by a FAA certified maintenance facility.</i></p> <p><i>See Service Bulletin #112</i></p> <p><i>Reference Appendix II-G, and section 5.1.9 of the ACAI.</i></p>
<p>Deflation system pulleys and torsion springs /</p> <p>All envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the pulleys and torsion springs must be lubricated.</p>	<p><i>Reference section 5.1.11 of the ACAI.</i></p>

Chart 301
Envelope Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Deflation-Venting systems /</p> <p>Rip top, Pararip top, Spring top, Parachute top, Aerochute top deflation systems and accessories used in all envelopes manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight or scheduled inspection reveals that:</p> <ul style="list-style-type: none"> • The deflation panel does not fit or seal properly in the port opening, • The control lines, cables, or straps are damaged beyond the specified limitations (see remarks section), • The deflation system does not function properly, <p>The deflation system must be repaired prior to further flight.</p>	<p><i>Fabric and stitched at the guide ring MUST not be torn abraded or broken. The 3/32 inch cable (if used) MUST not have any broken wires, severe kinks, or be rusted.</i></p> <p><i>The pull-out strap may not have more than 20% of its fibers in a 12 inch section damaged by abrasion, cuts, or burns.</i></p> <p><i>Reference sections 5.1.10, 5.1.11, 5.1.12, 5.1.13, 5.1.14 of the ACAI.</i></p>

Chart 302
Burner Assemblies Airworthiness Limitations

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Blast valve /</p> <p>Servicing of Rego valves 7553S, 7553T, Sherwood valve LV440 on all burner assemblies manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the burner blast valve(s) must be disassembled, cleaned, and inspected for damage or scoring to the interior bonnet wall that may cause the valve to leak. If the bonnet is damaged, a new bonnet assembly must be installed.</p> <p>A new blast valve O-ring and copper gasket must be installed. The blast valve O-ring and copper gasket must be lubricated with a light application of Krytox grease.</p> <p>The blast valve(s) must be tested to insure that the valve is free of leaks, operates smoothly, and shuts off completely.</p>	<p><i>DO NOT interchange parts between Rego and Sherwood valve assemblies. The only parts that can be used in either valve assembly are the blast valve assembly is the blast valve O-ring, copper gasket, and the Teflon spacer ring.</i></p> <p><i>Triggers on HP3 burners must have 1/16" to 1/8" of free play.</i></p> <p><i>See Service Bulletins #102 and #118.</i></p> <p><i>Reference sections 5.2.2, 5.5.3, 5.2.4 of the ACAI.</i></p>
<p>Metering valve(s) /</p> <p>Nupro and Hoke style valves on all burner assemblies manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check on scheduled inspection reveals that the metering valve leaks, does not operate smoothly, or does not shut off completely, the valve must be repaired or replaced prior to further flight.</p>	<p><i>Reference section 5.2.5 of the ACAI.</i></p>
<p>Liquid pilot light assemblies /</p> <p>All HP2 update and all HP3 burners manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the pilot light vapor converter must be removed, cleaned, lubricated, reassembled, and tested for proper operation.</p> <p>The pilot light orifice must be removed and inspected using a .011 "go gauge" to insure that it is not obstructed. Replace if needed.</p>	<p><i>Apply only a very thin film of Krytox grease to lubricate the vapor converter O-rings.</i></p> <p><i>Reference section 5.2.6 of the ACAI, Aerostar Maintenance Bulletin #805001.</i></p>
<p>All pilot light assemblies/</p> <p>All burners manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the pilot light valve leaks or binds during operation of the valve, the valve must be repaired or replace prior to further flight.</p> <p>If the pilot light does not stay lit or does not operate with a steady flame, the pilot light must be serviced prior to further flight.</p>	<p><i>The pilot light flame must burn mostly blue with yellow tips.</i></p> <p><i>Reference sections 5.2.7 & 5.2.8 of the ACAI.</i></p>

Chart 302
Envelope Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>All Nupro valves B-4JNAR2, B-4JAR2 for vapor and/or liquid control /</p> <p>All burner assemblies manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight or scheduled inspection reveals that the packing nut is loose, the packing nut must be tightened in a clockwise direction to a torque value of 60 in. lbs. or 5 ft. lbs.</p>	<p><i>Important: Torque values of greater than 60 in. lbs. may make the valve difficult to operate.</i></p> <p><i>Reference section 5.2.9 of the ACAI.</i></p>
<p>All burner assemblies manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that any of the following operations of the burner is malfunctioning, the burner must be repaired prior to further flight.</p> <ul style="list-style-type: none"> • Burner fittings including internal plumbing, no leaks present. • The pressure gauge(s) must operate properly and be easily read by the operator. • The burner must ignite easily from the pilot light(s) and have proper flame alignment. • Gimbal burners must move freely without binding and return to center when released. • Electric blast controls, valves, and fittings must be free from leaks and shut off completely. 	<p><i>Reference section 5.2.10 of the ACAI.</i></p> <p><i>See Service Bulletin #113. Reference section 5.2.11 of the ACAI.</i></p> <p><i>Reference section 5.2.12 of the ACAI.</i></p> <p><i>See Service Bulletin #131 for HPIII Burners. Reference section 5.2.13 of the ACAI.</i></p> <p><i>See Service Bulletin #110. Reference section 5.2.14 of the ACAI.</i></p>

Chart 303
Fuel System Airworthiness Limitations

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>All Fuel Cylinders/ Certified for use in Aerostar Int'l., (Raven) hot air balloon systems manufactured under Type certificate A15CE. Tank models: V10 V15 V18 V23 H20 H25</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, fuel cylinders MUST be inspected for the following:</p> <ul style="list-style-type: none"> • To insure that there are no leaks at: <ul style="list-style-type: none"> ○ All welded seams. ○ Around all tank fittings, valves, or plugs. • To insure that there are(is): <ul style="list-style-type: none"> ○ No digs, dents, gouges, or bulges (beyond specified limits found in Appendix E). ○ No evidence of heat or fire damage. • To insure that all valves: <ul style="list-style-type: none"> ○ Operate properly (no binding). ○ Are free from leaks and shut off completely. • To insure that vapor regulators (if installed): <ul style="list-style-type: none"> ○ Provide the needed fuel flow for proper pilot light operation. ○ Do not leak. • To insure that fuel gauges(s): <ul style="list-style-type: none"> ○ Operate properly & do not leak. ○ Are easily read by the operator. ○ Four retaining screws are checked for tightness. 	<p><i>See Service Bulletin #135.</i> <i>See Service Letter #104.</i></p> <p><i>Reference sections 5.3.1, 5.3.2, 5.3.4, 5.3.5, and appendix II-E of the ACAI.</i></p>
<p>All Fuel Cylinders/ Certified for use in Aerostar Int'l., (Raven) hot air balloon systems manufactured under Type certificate A15CE. Tank models: V10 V15 V18 V23 H20 H25</p>	<p>At an interval not to exceed 144 calendar months from the original date of tank manufacture, each fuel cylinder must be inspected and re-qualified.</p> <p>Subsequent inspections and re-qualification must be performed at intervals not to exceed 144 calendar months based on the type of re-qualification method used.</p>	<p><i>Cylinders must be inspected in accordance with Appendix II-E of the ACAI.</i></p> <p><i>Reference section 5.3.1 para. (c) and Appendix II-E of the ACAI.</i></p>

Chart 303
Fuel System Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>All Nupro valves B-4JNAR2, B-4JAR2, B-JR2 for vapor and/or liquid control /</p> <p>Fuel cylinder assemblies manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the packing nut is loose, the packing nut must be tightened in a clockwise direction to a torque value of 60 in. lbs. or 5 ft. lbs.</p>	<p><i>Important: torque values of greater than 60 in. lbs. may make the valve difficult to operate.</i></p> <p><i>Reference section 5.3.3, of the ACAI.</i></p>
<p>All fuel hoses and fittings /</p> <p>Certified for use in Aerostar Int'l., (Raven) hot air balloon systems manufactured under Type certificate A15CE.</p>	<p>At intervals not to exceed 120 calendar months from the date of manufacture, new fuel hoses must be installed.</p> <p>At intervals not to exceed 100 hours or 12 calendar months whichever expires first, fuel hoses MUST be leak tested by submersing the fuel hose in water and pressurizing the hose to a minimum of 120 psi.</p>	<p><i>See Service Bulletins #120 & #132</i></p> <p><i>Reference sections 5.3.6, and 5.3.7 of the ACAI.</i></p>
<p>Pressure relief safety valves installed in 10 gallon aluminum fuel cylinders /</p> <p>Certified for use in Aerostar Int'l., (Raven) hot air balloon systems manufactured under Type certificate A15CE.</p>	<p>At an interval not to exceed 60 calendar months a new pressure relief safety valve (Aerostar P/N 52435), must be installed.</p> <p>If a preflight check or scheduled inspection reveals evidence of leaks or signs of discharge, a new pressure relief safety valve must be installed.</p>	<p><i>Instructions for the replacement of the pressure relief safety valve on 10 gallon cylinders can be found in section 6.3.9 of the ACAI manual.</i></p> <p><i>Reference section 5.3.9 of the ACAI.</i></p>

Chart 304
Gondola Airworthiness Limitations

Component / Applicability	Life Limit and Damage Limitation	Remarks																
<p>Rattan /</p> <p>All woven rattan gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p style="padding-left: 40px;">Models:</p> <table style="margin-left: 40px; border: none;"> <tr><td>ELS</td><td>RSWS-AFX</td></tr> <tr><td>ELSS</td><td>TW-1</td></tr> <tr><td>RW</td><td>TW-2</td></tr> <tr><td>RWS</td><td>RB5</td></tr> <tr><td>RWSW</td><td>RB6</td></tr> <tr><td>CW</td><td>RB8</td></tr> <tr><td>CWS</td><td>RB12</td></tr> <tr><td>CW-AFX</td><td></td></tr> </table>	ELS	RSWS-AFX	ELSS	TW-1	RW	TW-2	RWS	RB5	RWSW	RB6	CW	RB8	CWS	RB12	CW-AFX		<p>If a preflight check or scheduled inspection reveals damage to the rattan greater than 4 inches in diameter or within 18 inches of another damaged area, that damage must be repaired prior to further flight.</p>	<p><i>See Service Bulletin #117.</i></p> <p><i>Reference section 5.4.1 of the ACAI.</i></p>
ELS	RSWS-AFX																	
ELSS	TW-1																	
RW	TW-2																	
RWS	RB5																	
RWSW	RB6																	
CW	RB8																	
CWS	RB12																	
CW-AFX																		
<p>Plywood floors /</p> <p>All plywood floors used in gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p style="padding-left: 40px;">Models:</p> <table style="margin-left: 40px; border: none;"> <tr><td>ELS</td><td>RSWS-AFX</td></tr> <tr><td>ELSS</td><td>TW-1</td></tr> <tr><td>RW</td><td>TW-2</td></tr> <tr><td>RWS</td><td>RB5</td></tr> <tr><td>RWSW</td><td>RB6</td></tr> <tr><td>CW</td><td>RB8</td></tr> <tr><td>CWS</td><td>RB12</td></tr> <tr><td>CW-AFX</td><td></td></tr> </table>	ELS	RSWS-AFX	ELSS	TW-1	RW	TW-2	RWS	RB5	RWSW	RB6	CW	RB8	CWS	RB12	CW-AFX		<p>If a preflight check or scheduled inspection reveals damage to the plywood floor (i.e. damage due to decay, delamination, impact, or punctures), or other damage that might affect the strength, the floor must be repaired or replaced prior to further flight.</p>	<p><i>See Service Bulletin #107.</i></p> <p><i>Reference section 5.4.2 of the ACAI.</i></p>
ELS	RSWS-AFX																	
ELSS	TW-1																	
RW	TW-2																	
RWS	RB5																	
RWSW	RB6																	
CW	RB8																	
CWS	RB12																	
CW-AFX																		
<p>Tank straps and moorings /</p> <p>Used in all models of gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals damage to a tank strap that exceed 20% of the cross section of the webbing, the tank strap must be replace prior to further flight.</p>	<p><i>See Service Bulletins #101 & #128.</i></p> <p><i>Reference section 5.4.3 of the ACAI.</i></p>																

Chart 304
Gondola Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks																
<p>Gondola hardware /</p> <p>Used in all models of gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that there is damage to any of the following hardware used in the gondola, the defective part must be replaced prior to further flight.</p> <p>Quick Pins: The pin must not be bent, must have both ball bearings at the tip of the pin, the head must not turn independently from the shank.</p> <p>Wirelock Pins: The pin must not be bent; the spring gate must require some effort to snap into place when installed.</p> <p>Misc. Bolts and Locknuts: Bolts must not be bent, cross-threaded, stripped, or show signs of metal fatigue or stress. Locknuts must not be cross-threaded or stripped and must require more than 8 in. lbs. of torque to be loosed.</p>	<p><i>Reference section 5.4.9, of the ACAI.</i></p>																
<p>Skids /</p> <p>Used on gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p>Models:</p> <table style="margin-left: 40px;"> <tr><td>ELS</td><td>RSWS-AFX</td></tr> <tr><td>ELSS</td><td>TW-1</td></tr> <tr><td>RW</td><td>TW-2</td></tr> <tr><td>RWS</td><td>RB5</td></tr> <tr><td>RWSW</td><td>RB6</td></tr> <tr><td>CW</td><td>RB8</td></tr> <tr><td>CWS</td><td>RB12</td></tr> <tr><td>CW-AFX</td><td></td></tr> </table>	ELS	RSWS-AFX	ELSS	TW-1	RW	TW-2	RWS	RB5	RWSW	RB6	CW	RB8	CWS	RB12	CW-AFX		<p>If a preflight check or scheduled inspection reveals that a skid is:</p> <ul style="list-style-type: none"> • not securely fastened, • damaged from decay and/or serious cracks that will effect the strength and/or function of the skid, • worn to the point of abrasion of the skid hardware, <p>The skid must be repaired or replaced prior to further flight.</p>	<p><i>See Service Letter #106.</i></p> <p><i>Reference section 5.4.10, of the ACAI.</i></p>
ELS	RSWS-AFX																	
ELSS	TW-1																	
RW	TW-2																	
RWS	RB5																	
RWSW	RB6																	
CW	RB8																	
CWS	RB12																	
CW-AFX																		

Chart 304
Gondola Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks						
<p>Aluminum and stainless steel tubing /</p> <p>All models of gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the tubing is damaged, the tube must be replaced prior to further flight.</p> <p>Aluminum Tubing:</p> <ul style="list-style-type: none"> • No uncontrolled localized bends. • No uncontrolled gradual bends. • No signs of cracking, kinking, buckling, collapse, or localized overstress. • No signs of corrosion, scratches, gouges, deeper than 1/32". <p>Stainless Steel Tubing:</p> <ul style="list-style-type: none"> • No uncontrolled localized bends. • No uncontrolled gradual bends greater than 5°. • If quick pin holes exceed 0.215", keeper tabs must be used or the quick pin replaced with an aircraft bolt and locknut. • Quick pin hole diameter does not exceed 0.220". 	<p><i>TW Gondolas; See Service Bulletin #122</i></p> <p><i>See Service Letter #109</i></p> <p><i>Reference sections 5.4.11, 5.4.12, 5.4.13, 5.4.14, 5.4.18 of the ACAI.</i></p>						
<p>Lower frame superstructure interface/</p> <p>Used on the following gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p style="text-align: center;">Models:</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td>RWS</td> <td>RWSW</td> </tr> <tr> <td>CW</td> <td>CWS</td> </tr> <tr> <td>TW</td> <td></td> </tr> </table>	RWS	RWSW	CW	CWS	TW		<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the aluminum interface pin must be removed and inspected to insure that:</p> <ul style="list-style-type: none"> • The pin is not bent. • There are no dents or gouges deeper than 1/32" deep. • If quick pin holes exceed 0.215", keeper tabs must be used or the quick pin replaced with an aircraft bolt and locknut. • Quick pin hole diameter does not exceed 0.220". 	<p><i>Reference section 5.4.13 of the ACAI.</i></p>
RWS	RWSW							
CW	CWS							
TW								

Chart 304
Gondola Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>Lower frame superstructure interface/</p> <p>Used on the following gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p>Models: ELS ELSS</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the oversleeve connector must be removed and inspected to insure that:</p> <ul style="list-style-type: none"> • The oversleeve is not bent. • There are no dents, digs, or gouges deeper than 1/32". • The spring pin holes do not exceed a diameter of 0.295". 	<p><i>Reference section 5.4.13 of the ACAI.</i></p>
<p>Lower frame superstructure interface/</p> <p>Used on the following gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p>Models: RB5 RB6 RB8 RB12</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the oversleeve connector and interface pin must be inspected to insure that:</p> <ul style="list-style-type: none"> • The oversleeve and/or aluminum interface pin is not bent. • There are no dents, digs, or gouges deeper than 1/32" in either the oversleeve or interface pin. • The spring pin holes in the oversleeve or interface pin do not exceed a diameter of 0.295". 	<p><i>Reference section 5.4.13 of the ACAI.</i></p>
<p>Superstructure /</p> <p>All models of gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the superstructure assemblies must be inspected for:</p> <ul style="list-style-type: none"> • Overall symmetry, security, and uniform position. • Interface connection hole diameter not in excess of: <ul style="list-style-type: none"> ○ 0.220" for models CW, CWS, RWS, RWS, RWSW, and TW. ○ 0.295" for models ELS, ELSS, RB5, RB6, RB8, RB12. <p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, all aluminum superstructure assemblies must have the envelope load blocks lowered and the tubing area under the block inspected for:</p> <ul style="list-style-type: none"> • Bends, cracks, or other minor damage in excess of 1/32" deep. • Bolt hole diameter in excess of 0.220". 	<p><i>TW Gondolas; See Service Bulletin #122</i></p> <p><i>See Service Letter #109</i></p> <p><i>Reference sections 5.4.11, 5.4.12, 5.4.13, 5.4.14, 5.4.18 of the ACAI.</i></p>

Chart 304
Gondola Airworthiness Limitations
(Continued)

Component / Applicability	Life Limit and Damage Limitation	Remarks
<p>All AFX gondolas manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p> <p>Models: CW-AFX RWSW-AFX</p>	<p>At intervals not to exceed 100 hours or 12 calendar months, whichever expires first, the:</p> <ul style="list-style-type: none"> • AFX burner frame must be disassembled and inspected to insure that the <ul style="list-style-type: none"> ○ Bolt holes in either the frame tubes or load blocks do not exceed a diameter of 0.220". ○ AFX load fittings are not bent, cracked, or have other damage deeper than 1/32". ○ AFX load block lugs interior is not worn beyond a minimum thickness of 0.160". • Lower AFX rod sockets must be inspected to insure that: <ul style="list-style-type: none"> ○ The socket tube is not bent. ○ The socket tube is free of dents, digs, gouges, or scratches deeper than 1/32". • The AFX support cables must be inspected to insure that they are free of: <ul style="list-style-type: none"> ○ Rust and corrosion. ○ Broken wire strands. • The polycarbonate rods must be inspected to insure that they are free of: <ul style="list-style-type: none"> ○ nicks, scoring, and gouges. ○ bends or signs of heat damage. 	<p><i>See Service Letter #112</i></p> <p><i>Reference section 5.4.19 of the ACAI.</i></p>
<p>Mode G Gondola manufactured by Aerostar Int'l., (Raven) under Type certificate A15CE.</p>	<p>If a preflight check or scheduled inspection reveals that the square aluminum tubing is cracked, broken, or has weld failures, the tubing must be replaced</p>	<p><i>See Service Bulletin #106</i></p> <p><i>Reference section 5.4.20 of the ACAI</i></p>