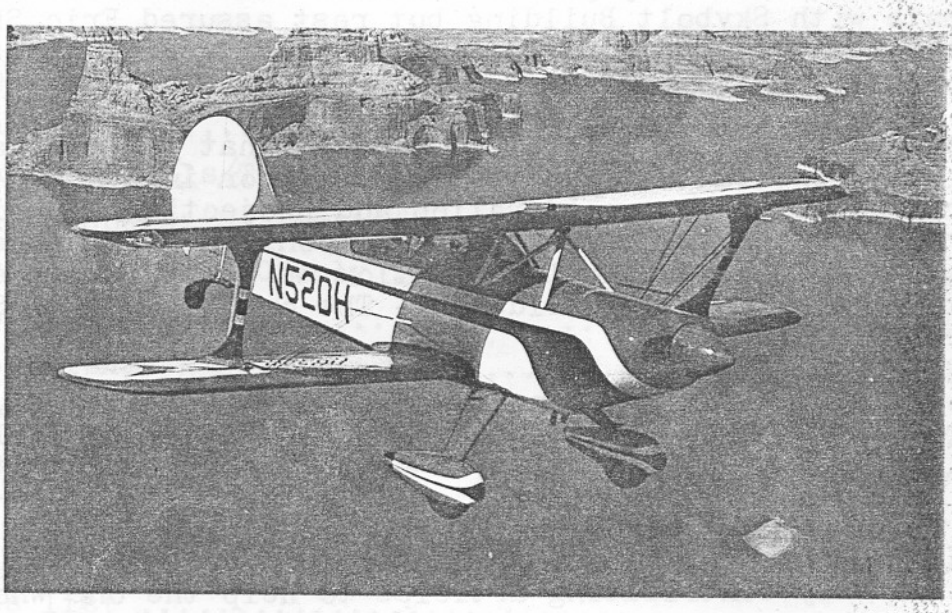
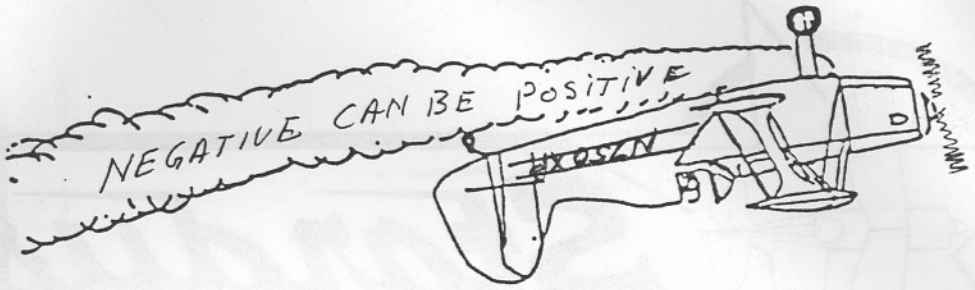
Starduster

JULY 1986



Dedicated to the
ACTIVE Homebuilders



OSHKOSH 86!!!

Again another spectacular performance from all who are responsible for everthing it takes to make it possible - Starduster chose to be a part of the "Flight Line" rather than "Booth it" and the result was, I missed a lot of friends, accoustomed to finding "us" at the usual booth - I enjoyed not being harnessed to the 10x10 but missed a lot of you.

By now most of you know that Starduster has, proudly, acquired the right to Lamar Steens "Skybolt" design. The Skybolt and Starduster both compliment each other and are proven designes and satisfy the needs and desires of many builders and pilots. As many of you know "Starduster" has been supplying parts and components for "Skybolt" for many years. It will take time for us to become intimate with Skybolt Building but rest assured Eric Shilling, who has been with us for years will, will be flying his homebuilt Skybolt in about a month.

Am very appreciative of all the support that you all gave me in both my nomination and proxies for director in E.A.A.. However after much thought, concideration and projection I decided to withdraw my nomination, only, because of conflict of interest. The demands of a Director would not allow me to satisfy the most important goals "you the builders" - The ones that make Starduster possible.

I know a lot of you are concerned about the possibility of "Flabob" being lost to urban spread, "condo's" but there is still hope and possibilities of "it" staying an airport and keeping its history- will keep all of you advised.

Again I must remind all of my readers and builders - support your magazine - by contributing articles to help the one who may help you.....

Bill Clouse

BILL CLOUSE

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JULY STARDUSTER MAGAZINE 1986

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Starduster magazine acts as an open forum for Homebuilders. The ideas expressed are often those of our Readers, and Starduster assumes no liability or responsibility, either expressed or implied, as to the suitability or accuracy thereof. Anyone using these suggestions or ideas does so at his or her own risk. Materials contained herein may be reprinted without prior permission, but please credit the original source and Starduster Magazine.

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FRONT COVER: DEAN HALL'S AWARD WINNING SKYBOLT

Dear Bill,

Now for some news from Switzerland on the long-lived Acro-duster 11 project - news isn't all that great.

For the positive side - I've gotten all the wing fittings made and will take a couple of pieces to the Federal Air office for a look over. They should be O.K.

Now for the less positive; I followed the advice of another builder here who had built 2 airplanes and used a glue he recommended. The Federal Air Office won't accept the glue because of its sensitivity to moisture and the fact it is brittle That's no big problem, except on the advice of said friend I glued up all the leading edge ribs (center section included). That makes 32 pieces,I'll have to do them over again with another glue - approved this time by OFAC (Federal Air Office). Since the other ribs are glued, I'd best use the leading edge pieces made in your tools rather than try to make them myself. Can you let me know as soon as possible how much these pieces will cost, plus 2 x 32 of the reinforcing pieces?

also the cap strips. The cap strips I may be able to make myself, but the slot dimension may require a special tool.

Now on the other really disagreeable news; I sent samples of the wood for the wing spars for testing. According to the OFAC they don't meet their strength requirements. To them "aircraft" quality" as you say doesn't mean anything. They see how many FSI the stuff takes! For the moment then, I have some expensive firewood on hand or perhaps I can use it for the cap strips. One possible solution is to determine what strength of wood in the spars was used for the design and dimensioning of the spars. If the design was based on a strength corresponding to the wood I've received, this would probably be enough. I have the stress analyis OFAC has it, and will try to find the answer there. However, if you know already, and can let me know, it may save time. There's a wood here which meets the requirements; it is slightly heavier I'm told. Such is the life of a homebuilder, sometimes encouraging, other times discouraging.

I've set myself the goal of finishing the wings this year. Since this project started in 1979-1980, you can imagine when (if ever) I'll finish. Anyway, I'm plugging away- and as everyone says - you have to do a little bit every day.

I'm going to be in the USA in May and eventually in the South-West. Would be very pleased to get by to see you.

It's great to see the Stardusters still taking prizes. Oshkosh results were great!

Lee Johnson

Dear Lee,

Am really dissappointed to hear of both the glue and spar problems - in 1979-80 We were supplying a U.S. certified glue with our wing kits - Now we do not. Because with the new adhesives avaible today (epoxy's) that are far superior to the old horses hooves type glue used in the 30's & 40's We favor "Chem Tech" T-88.

As far as spars go - I would like to have a copy of your OFAC strength requirements for spars, of our dimensions. We have a like problem with Canada, and it would be best for all if all Federal Agencies of the Free World to agree or accept a proven design or use the same standards - you remember the test spars I showed to you during your recent visit - I admire your determination and spirit - especially with the handicaps you are faced with.

Respectfully,

Bill Clouse

LEE:- WE ARE LATE TO PRESS, AND HERE ARE THE RESULTS OF — OSHKOSH "86" AWARDS — WE HOPE PICTURES WILL BE AVAILABLE FOR NEXT ISSUE [BLACK & WHITE]

OSHKOSH 86 STARDUSTER DESIGNER AWARDS WERE WON BY THE FOLLOWING PROUD OWNERS...

1. DAVE DARR ACFT # N 69 JG - A COMPLETELY REBUILD, AND PREVIOUS AWARD WINNER, FROM WISCONSIN - CONGRATULATIONS

2. LOU FURLONG ACFT # N 84 SW - CAME ALL THE WAY FROM GEORGIA AND LET HIS SON (16?) DO THE FLYING. COME BACK IN 87 LOU - YOU IN THE FRONT.

3. MAX BENNETT ACFT #N 76 GS - A NEIGHBOR OF MINE - HE'S A BUFFALO NY PILOT AND HE PARKS HIS SA 300 AT TRANSIT AIR PARK HAVE TO ARRANGE A VACATION SO WE CAN FLY TOGETHER - MAYBE TALK HIM INTO FLYING TO CALIF FOR MAY FLY IN.

STARDUSTER DESIGNER AWARD
"SKY BOLT" 1st PLACE
DEAN HALL N52DH
FULLERTON, CA

STARDUSTER DESIGNER AWARD
"SKY BOLT" 2nd PLACE
HALE WALLACE N1HW
CHARLOTTE, NC

STARDUSTER DESIGNER AWARD
"SKY BOLT" 3rd PLACE
DENNIS McALEE N104DM
ST. LOUIS, MO

Dear Bill,

Thank you so much for the award for Skybolt N1HW.

You really picked up the ball and did a fantastic job. I was really surprised to find that a 7 year old ship is still competitive when I found the award in the seat Thursday morning.

Had a real weather flight going home!

Enjoyed meeting you and call if I can help you in any way on your "Skybolt" venture.

Regards,

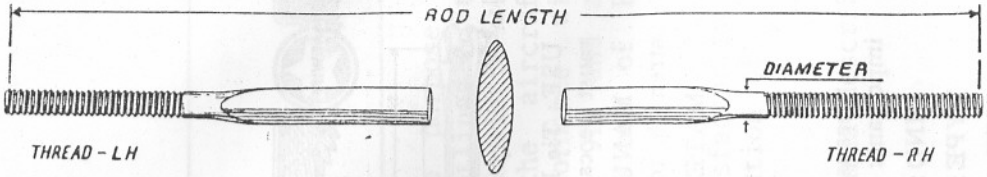
Hale Wallace
P.O. Box 26655
Charlotte, NC 28221

Hale:

It was my pleasure to meet you, and will probably call on you for assistance, because of your fine airplane, and talent.

Bill Clements

STREAMLINE



Size and Thread	Diameter Inches	Thread Length Inches		K*	Strength Pounds	AN NUMBER
		L. H.	R. H.		Type II	Type II
6-40	.138	1¼	1¾	1¼	1,200	AN671AC-
10-32	.190	1⅜	1⅞	1½	2,400	AN673AC-
¼-28	.250	1⅝	2⅛	1⅞	4,200	AN674AC-
5/16-24	.3125	1¾	2¼	2⅛	6,900	AN675AC-
⅜-24	.375	1⅞	2⅜	2¼	10,000	AN676AC-
7/16-20	.4375	2⅛	2⅝	2½	13,700	AN677AC-
½-20	.500	2⅜	2⅞	2⅞	18,500	AN678AC-
9/16-18	.5625	2⅝	3⅛	3¼	24,000	AN679AC-
⅝-18	.625	2⅞	3⅜	3½	29,500	AN680AC-
¾-16	.750	3¼	3¾	4⅜	42,000	AN632AC-

ROUND DRAWN

* Dimension "K" is the difference between Rod Length and Pin Center Length.

Threads are the American National Fine Thread Series, class 3 medium fit.

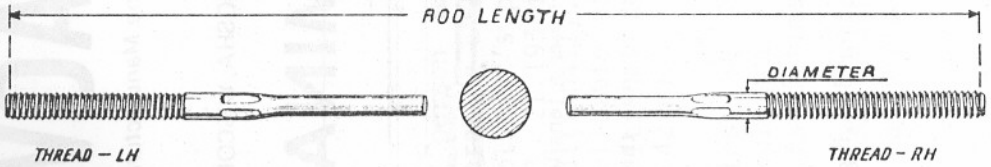
Thread lengths are in accordance with AN Standards, alternate design.

Any special thread length can be furnished.

Dash Nos. used with AN Nos. refer to ROD LENGTHS ONLY.

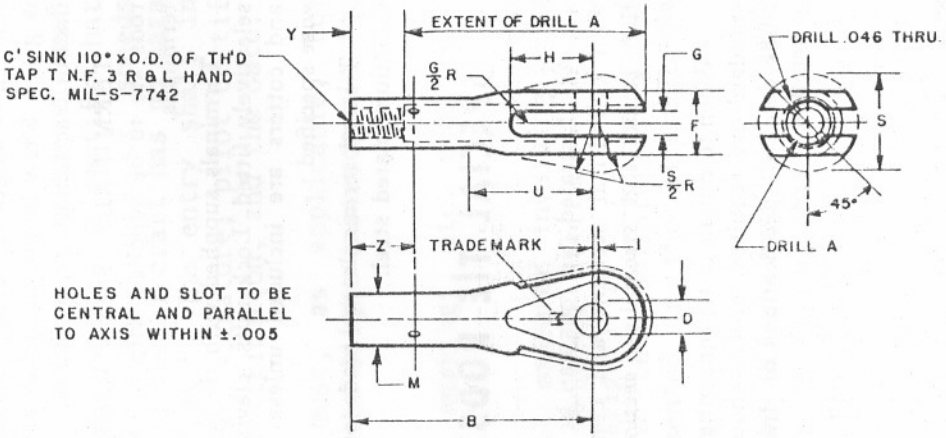
Dash Nos. are specified in inches and hundreths; thus AN676AC-12525 means ⅜-24 stainless steel streamline tie rod, alternate design, 125¼" rod length.

Avoid using AN numbers when specifying Pin Center Length.



Size and Thread	Diameter Inches	Thread Length Inches		K*	Strength Pounds	AN NUMBER
		L. H.	R. H.		Type II	Type II
6-40	.138	1¼	1¾	1¼	1,000	AN701AC-
10-32	.190	1⅜	1⅞	1½	2,100	AN703AC-
¼-28	.250	1⅝	2⅛	1⅞	3,400	AN704AC-
5/16-24	.3125	1¾	2¼	2⅛	6,100	AN705AC-
⅜-24	.375	1⅞	2⅜	2¼	8,000	AN706AC-
7/16-20	.4375	2⅛	2⅝	2½	11,500	AN707AC-
½-20	.500	2⅜	2⅞	2⅞	15,500	AN708AC-

TERMINALS



AN 665

Dash No.	Rated Tie Rod Stgth. Min. (Lb.)	Tap T	Drill A	B ±.015	D Dia. +.003 −.000	F +.010 −.005	G +.010 −.000	H	I +.010 −.000	M Dia +.010 −.000	S Dia.	U	Y ±.047	Z
10L 10R	1200	6-40	.147	1.313	.190*	.250	.109	.375	.031	.250	.375	.625	.250	.313
21L 21R	2400	10-32	.199	1.531	.190*	.313	.150	.469	.031	.281	.500	.719	.313	.375
34L 34R	4200	1/4-28	.261	1.813	.250	.438	.203	.625	.047	.375	.625	.875	.438	.500
46L 46R	(a) 4600	5/16-24	.323	1.875	.313	.500	.203	.656	.047	.438	.688	.938	.563	.625
61L 61R	6900	5/16-24	.323	2.000	.375	.563	.203	.844	.063	.453	.750	1.000	.563	.625
80LA 80RA	10000	3/8-24	.386	2.250	.375	.625	.266	.875	.063	.547	.875	1.125	.688	.750
115L 115R	13700	7/16-20	.453	2.500	.438	.719	.344	1.000	.078	.625	1.063	1.250	.750	.813
155L 155R	18500	1/2-20	.516	2.813	.500	.813	.406	1.188	.078	.703	1.188	1.438	.875	.938
202L 202R	24000	9/16-18	.578	3.125	.563	.922	.453	1.375	.094	.796	1.375	1.625	1.000	1.063
247L 247R	29500	5/8-18	.640	3.375	.625	1.032	.516	1.500*	.094	.875	1.500	1.750	1.125	1.188
430L 430R	42000	3/4-16	.766	4.125	.750	1.250	.656	1.938	.109	1.063	1.813	2.250	1.375	1.438

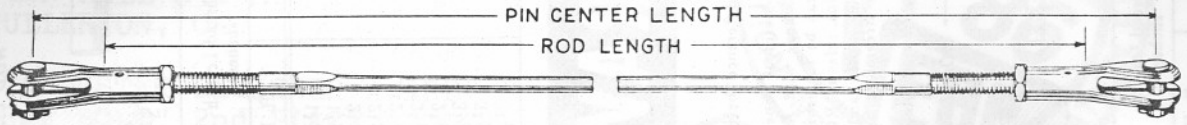
(a) Special for Use with 6900# Rod with 4600# Rating.
Material: Steel—MIL-T-5683.
Example of Part No.: AN665-10L—Left Hand Thread.
AN665-10R—Right Hand Thread.

*Tolerances: + .002 − .000

Dimensions in Inches. Tolerances: Fractions ± 1/64, Decimals ± .010, Angles ± ½°, Unless Otherwise Specified.
Finish: Cadmium Plate.
(Full part number required on numbers 34 and up, for example: "AN665-34R.")

MACWHYTE
Wire Rope Manufacturing Specialists Since 1896
A unit of the Amsted Industries
2906 - 14th AVENUE (414) 654-5381
KENOSHA, WISCONSIN 53141

TIE RODS and TERMINALS



USE: Tie Rods are used for bracing wings, body, tail, etc. of aircraft wherever a tensile load must be carried.

MANUFACTURE: They are made by cold drawing and cold rolling to give the wire strength, toughness, and ductility.

MATERIAL: Type II (highly polished Stainless Steel).

ORDERING INSTRUCTIONS

Because these tie rods are custom-made, the following information and/or drawings are important:

KIND: Streamline or Round.

TYPE: Type II (Stainless Steel). only

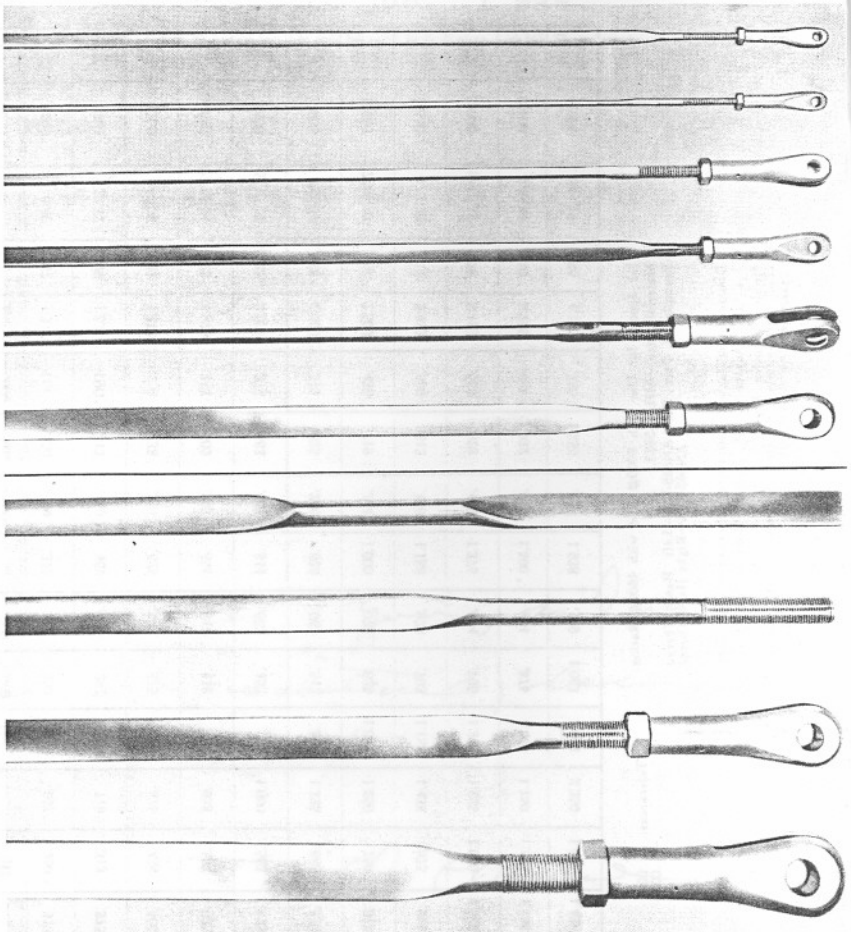
SIZE: Diameter of tie rod at shoulder as illustrated.

LENGTH: Rod length (R. L.) or Pin center length (P. C. L.). State which is given. Show length in inches and decimal or fractional parts of inches.

TERMINALS: Specify whether tie rods are to be supplied with or without terminals.

Terminals supplied with tie rods are selectively fitted. Lock nuts, clevis pins, and cotters are included unless otherwise specified.

Tie rod terminals are made only in Cadmium plated steel.



SPECIAL TIE RODS

As illustrated, tie rods can be made with cylindrical sections and combination round and streamline sections in each rod.

When terminals or tie rods other than standard are required, orders should include detailed specifications or drawings if possible.

Date: _____

EXPERIMENTAL OPERATING LIMITATIONS

Make: _____ Registration Number: _____

Model: _____ Serial Number: _____

1. No person may operate this aircraft for other than the purpose of operating amateur-built aircraft to accomplish the flights outlined in the applicant's program letter dated _____, describing compliance with FAR 21.193(d), and made available to the pilot in the aircraft. Additionally, this aircraft shall be operated in accordance with applicable air traffic and general operating rules of FAR 91, and all additional limitations herein prescribed under the provisions of FAR 91.42(e).

2. Unless it is shown that this aircraft has operated satisfactorily in compliance with FAR 91.42(b), as evidenced by the documentation of _____ hours of time in service in the aircraft log:

   a. All flights shall be conducted within the geographical area described as follows:

   b. No person may be carried in the aircraft during flight unless that person is essential to the purpose of the flight.

   Compliance with FAR 91.42(b) shall also be recorded in the aircraft log with the following, or a similarly worded statement: "I certify that this aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed; and the aircraft has no hazardous operating characteristics or design features." The entry shall include the aircraft total time-in-service, the name, signature, pilot certificate type and number of the person making the certification, and the date.

3. The pilot-in-command of this aircraft must, as applicable, hold an appropriate category/class rating or have the flight instructor's log book endorsement.

4. This aircraft shall contain the placards, markings, etc. required by FAR 91.31(a).

5. Acrobatic flight (that is, an intentional maneuver involving an abrupt change in the aircraft's altitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight) is _____. Only those acrobatics/maneuvers which have been satisfactorily executed during the flight test period and documented in the aircraft log are permitted after leaving the assigned test area.

6. The cognizant FAA Manufacturing Inspection Office must be notified and their response received in writing, prior to flying this aircraft after incorporating a major change as defined by FAR 21.93.

7. This aircraft shall not be operated for glider towing or parachute jumping operations.

8. No person shall operate this aircraft unless within the preceeding 12 calendar months it has had a condition inspection performed in accordance with Appendix D of Part 43 and found to be in condition for safe operation. Additionally, this inspection shall be recorded in accordance with Limitation 10 listed below.

9. Experimental aircraft builders certificated as repairmen, _____, FAA-certified mechanics holding an airframe and powerplant rating, and appropriately rated repair stations may perform condition inspections in accordance with Appendix D of Part 43.

10. Condition inspections shall be recorded in the aircraft maintenance records showing the following or a similarly worded statement: "I certify that this aircraft has been inspected on [insert date] in accordance with the scope and detail of Appendix D of Part 43 and found to be in condition for safe operation." The entry will include the aircraft total time-in-service, the name, signature, and certificate type and number of the person performing the inspection.

Issued by: _____

§ 21.93 Classification of changes in type design.

(a) In addition to changes in type design specified in paragraph (b) of this section, changes in type design are classified as minor and major. A "minor change" is one that has no appreciable effect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product. All other changes are "major changes" (except as provided in paragraph (b) of this section).

(b) For the purpose of complying with Part 36 of this chapter, and except as provided in paragraphs (b)(2) and (b)(3) of this section, any voluntary change in the type design of an airplane that may increase the noise levels of that airplane is an "acoustical change" (in addition to being a minor or major change as classified in paragraph (a) of this section) for the following airplanes:

(1) Transport category large airplanes.

(2) Turbojet powered airplanes (regardless of category). For airplanes to which this paragraph applies, "acoustical changes" do not include changes in type design that—

(i) Are limited to engine or nacelle changes or both; and

(ii) Specify that the airplane may not be operated, under the change in type design, for any period of more than 90 days unless compliance with the applicable acoustical change provisions of Part 36 of this chapter is shown for that change in type design.

(3) Propeller driven small airplanes in the normal, utility, acrobatic, transport, and restricted categories (except for those airplanes that are designated for 'agricultural aircraft operations' (as defined in § 137.3 of this chapter, as effective on January 1, 1966) or for dispensing fire fighting materials to which § 36.1583 of this chapter does not apply). For airplanes to which this paragraph applies, "acoustical changes" are limited to the following type design changes:

(i) Any change to, or removal of, a muffler or other component designed for noise control.

(ii) Any change to, or installation of, a powerplant or propeller that increases maximum continuous power or thrust at sea level, or increases the propeller tip speed at that power or thrust, over that previously approved for the airplane.

(Sec. 611, 82 Stat. 395, as amended, 49 U.S.C. 1431; Title I of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and EO 11514, Mar. 5, 1970; secs. 307, 313(a), 601(a), 603, 611, Federal Aviation Act of 1958, as amended (49 U.S.C. 1348, 1354(a), 1421(a), 1423, and 1431); sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)); Title I, National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); EO 11514, Mar. 5, 1970)

[Amdt. 21-27, 34 FR 18363, Nov. 18, 1969, as amended by Amdt. 21-42, 40 FR 1033, Jan. 6, 1975; Amdt. 21-47, 43 FR 28419, June 29, 1978; Amdt. 21-52, 45 FR 67066, Oct. 9, 1980; Amdt. 21-56, 47 FR 758, Jan. 7, 1982]

§ 21.193 Experimental certificates: general.

An applicant for an experimental certificate must submit the following information:

(a) A statement, in a form and manner prescribed by the Administrator setting forth the purpose for which the aircraft is to be used.

(b) Enough data (such as photographs) to identify the aircraft.

(c) Upon inspection of the aircraft, any pertinent information found necessary by the Administrator to safeguard the general public.

(d) In the case of an aircraft to be used for experimental purposes—

(1) The purpose of the experiment;

(2) The estimated time or number of flights required for the experiment;

(3) The areas over which the experiment will be conducted; and

(4) Except for aircraft converted from a previously certificated type without appreciable change in the external configuration, three-view drawings or three-view dimensioned photographs of the aircraft.

Part 43, App. D

APPENDIX D—SCOPE AND DETAIL OF ITEMS (AS APPLICABLE TO THE PARTICULAR AIRCRAFT) TO BE INCLUDED IN ANNUAL AND 100-HOUR INSPECTIONS

(a) Each person performing an annual or 100-hour inspection shall, before that inspection, remove or open all necessary inspection plates, access doors, fairing, and cowling. He shall thoroughly clean the aircraft and aircraft engine.

(b) Each person performing an annual or 100-hour inspection shall inspect (where applicable) the following components of the fuselage and hull group:

(1) Fabric and skin—for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.

(2) Systems and components—for improper installation, apparent defects, and unsatisfactory operation.

(3) Envelope, gas bags, ballast tanks, and related parts—for poor condition.

(c) Each person performing an annual or 100-hour inspection shall inspect (where applicable) the following components of the cabin and cockpit group:

(1) Generally—for uncleanliness and loose equipment that might foul the controls.

(2) Seats and safety belts—for poor condition and apparent defects.

(3) Windows and windshields—for deterioration and breakage.

(4) Instruments—for poor condition, mounting, marking, and (where practicable) improper operation.

(5) Flight and engine controls—for improper installation and improper operation.

(6) Batteries—for improper installation and improper charge.

(7) All systems—for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

(d) Each person performing an annual or 100-hour inspection shall inspect (where applicable) components of the engine and nacelle group as follows:

(1) Engine section—for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.

(2) Studs and nuts—for improper torquing and obvious defects.

(3) Internal engine—for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.

(4) Engine mount—for cracks, looseness of mounting, and looseness of engine to mount.

(5) Flexible vibration dampeners—for poor condition and deterioration.

(6) Engine controls—for defects, improper travel, and improper safetying.

(7) Lines, hoses, and clamps—for leaks, improper condition and looseness.

(8) Exhaust stacks—for cracks, defects, and improper attachment.

(9) Accessories—for apparent defects in security of mounting.

(10) All systems—for improper installation, poor general condition, defects, and insecure attachment.

(11) Cowling—for cracks, and defects.

(e) Each person performing an annual or 100-hour inspection shall inspect (where applicable) the following components of the landing gear group:

(1) All units—for poor condition and insecurity of attachment.

(2) Shock absorbing devices—for improper oleo fluid level.

(3) Linkages, trusses, and members—for undue or excessive wear fatigue, and distortion.

(4) Retracting and locking mechanism—for improper operation.

(5) Hydraulic lines—for leakage.

(6) Electrical system—for chafing and improper operation of switches.

(7) Wheels—for cracks, defects, and condition of bearings.

(8) Tires—for wear and cuts.

(9) Brakes—for improper adjustment.

(10) Floats and skis—for insecure attachment and obvious or apparent defects.

(f) Each person performing an annual or 100-hour inspection shall inspect (where applicable) all components of the wing and center section assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, and insecurity of attachment.

(g) Each person performing an annual or 100-hour inspection shall inspect (where applicable) all components and systems that make up the complete empennage assembly for poor general condition, fabric or skin deterioration, distortion, evidence of failure, insecure attachment, improper component installation, and improper component operation.

(h) Each person performing an annual or 100-hour inspection shall inspect (where applicable) the following components of the propeller group:

(1) Propeller assembly—for cracks, nicks, binds, and oil leakage.

(2) Bolts—for improper torquing and lack of safetying.

(3) Anti-icing devices—for improper operations and obvious defects.

(4) Control mechanisms—for improper operation, insecure mounting, and restricted travel.

(i) Each person performing an annual or 100-hour inspection shall inspect (where applicable) the following components of the radio group:

(1) Radio and electronic equipment—for improper installation and insecure mounting.

(2) Wiring and conduits—for improper routing, insecure mounting, and obvious defects.

(3) Bonding and shielding—for improper installation and poor condition.

(4) Antenna including trailing antenna—for poor condition, insecure mounting, and improper operation.

(j) Each person performing an annual or 100-hour inspection shall inspect (where applicable) each installed miscellaneous item that is not otherwise covered by this listing for improper installation and improper operation.

§ 91.31 Civil aircraft flight manual, marking, and placard requirements.

(a) Except as provided in paragraph (d) of this section, no person may operate a civil aircraft without complying with the operating limitations specified in the approved Airplane or Rotorcraft Flight Manual, markings, and placards, or as otherwise prescribed by the certificating authority of the country of registry.

(b) No person may operate a U.S. registered civil aircraft—

(1) For which an Airplane or Rotorcraft Flight Manual is required by § 21.5 unless there is available in the aircraft a current approved Airplane of Rotorcraft Flight Manual or the manual provided for in § 121.141(b); and

(2) For which an Airplane or Rotorcraft Flight Manual is not required by § 21.5, unless there is available in the aircraft a current approved Airplane or Rotorcraft Flight Manual, approved manual material, markings, and placards, or any combination thereof.

(c) No person may operate a U.S. registered civil aircraft unless that aircraft is identified in accordance with Part 45.

(d) Any person taking off or landing a helicopter certificated under Part 29 of this chapter at a heliport constructed over water may make such momentary flight as is necessary for takeoff or landing through the prohibited range of the limiting height-speed envelope established for that helicopter if that flight through the prohibited range takes place over water on which a safe ditching can be accomplished, and if the helicopter is amphibious or is equipped with floats or other emergency flotation gear adequate to accomplish a safe emergency ditching on open water.

(Secs. 313(a), 601, and 603, Federal Aviation Act of 1958, as amended (40 U.S.C. 1354(a), 1421, 1423 and 1424); 49 U.S.C. 106(g) (revised, Pub. L. 97-449, Jan. 12, 1983))

[Doc. No. 1580, Amdt. 1-1, 28 FR 6704, June 29, 1963, as amended by Amdt. 91-30, 31 FR 9211, July 6, 1966, as amended by Amdt. 91-103, 37 FR 20024, Sept. 23, 1972; Amdt. 91-115, 38 FR 12905, May 17, 1973; Amdt. 91-145, 43 FR 2328, Jan. 16, 1978; Amdt. 91-185, 49 FR 44440, Nov. 6, 1984]

§ 91.42 Aircraft having experimental certificates: operating limitations.

(a) No person may operate an aircraft that has an experimental certificate:

(1) For other than the purpose for which the certificate was issued; or

(2) Carrying persons or property for compensation or hire.

(b) No person may operate an aircraft that has an experimental certificate outside of an area assigned by the Administrator until it is shown that:

(1) The aircraft is controllable throughout its normal range of speeds and throughout all the maneuvers to be executed; and

(2) The aircraft has no hazardous operating characteristics or design features.

(c) Unless otherwise authorized by the Administrator in special operating limitations, no person may operate an aircraft that has an experimental certificate over a densely populated area or in a congested airway. The Administrator may issue special operating limitations for particular aircraft to permit takeoffs and landings to be conducted over a densely populated area or in a congested airway, in accordance with terms and conditions specified in the authorization in the interest of safety in air commerce.

(d) Each person operating an aircraft that has an experimental certificate shall:

(1) Advise each person carried of the experimental nature of the aircraft;

(2) Operate under VFR, day only, unless otherwise specifically authorized by the Administrator; and

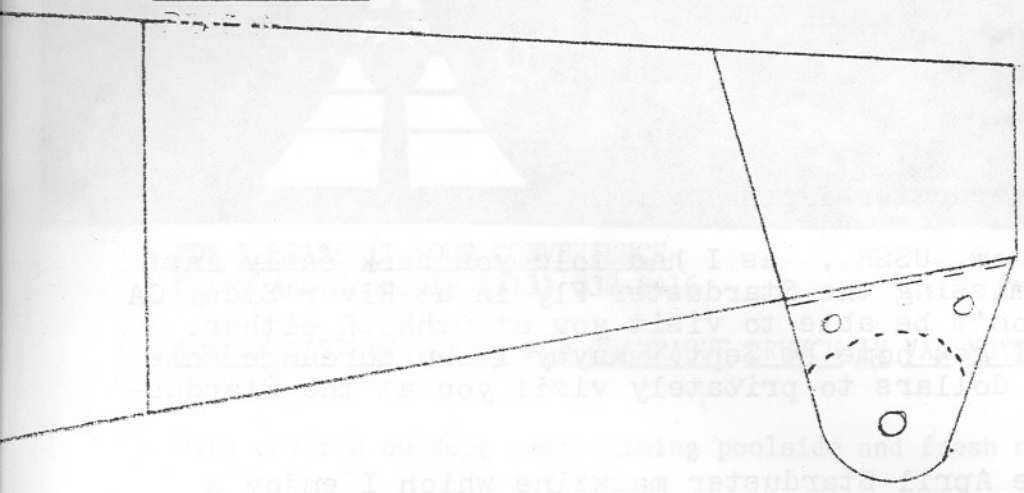
(3) Notify the control tower of the experimental nature of the aircraft when operating the aircraft into or out of airports with operating control towers.

(e) The Administrator may prescribe additional limitations that he considers necessary, including limitations on the persons that may be carried in the aircraft.

(49 U.S.C. 1423)

[Amdt. 91-53, 33 FR 6859, May 7, 1968, as amended by Amdt. 91-109, 38 FR 1176, Jan. 10, 1973]

DIAGRAM #1



Aluminum Block Machined to fit Available Space above Rod End Bearing to act as Stop!! Held in place with Two 832 Machine Screws Limit Travel to prevent Overcenter Action of Top Ailerons.

When it comes to ailerons, I confess we like to have stops not one, but two places. We favor a stick stop similar to the one on the STARDUSTER TOO plans, as shown below

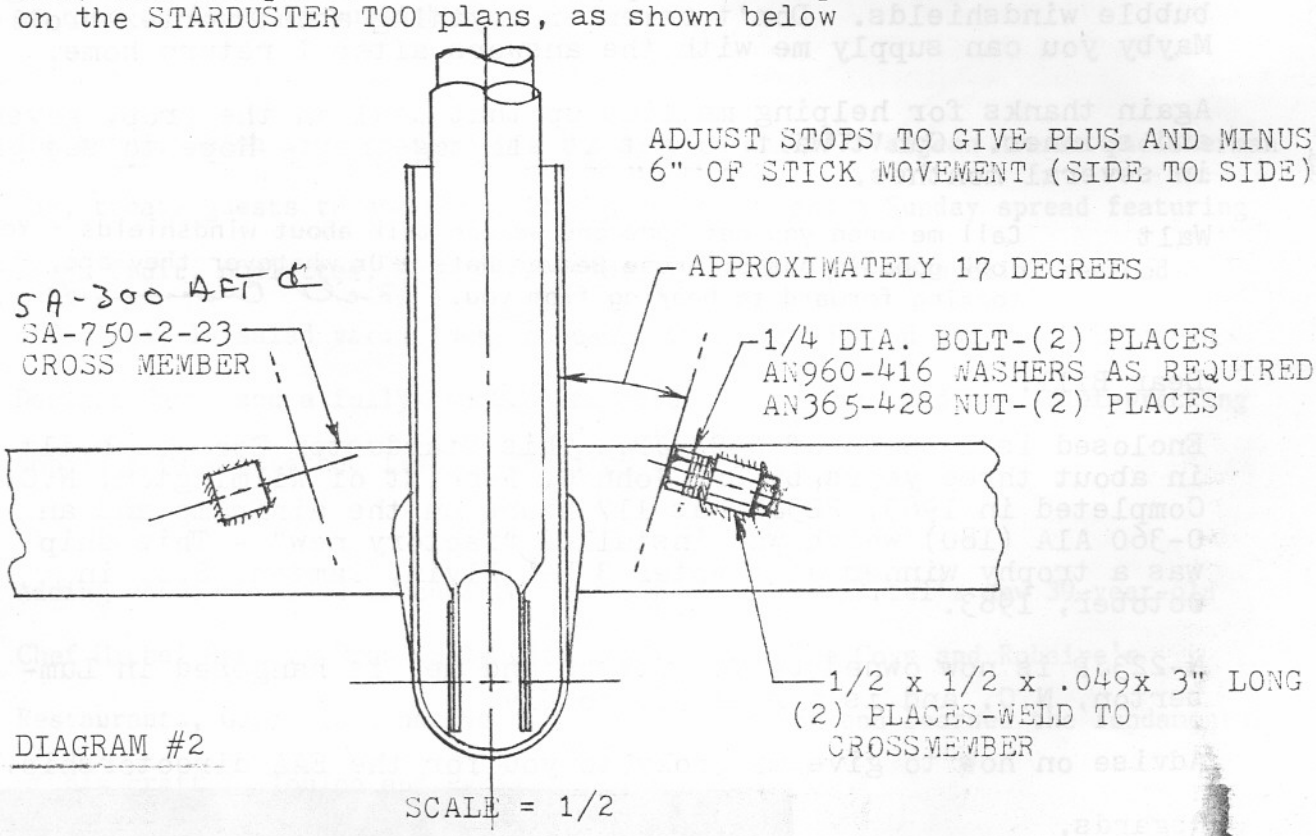


DIAGRAM #2

SCALE = 1/2

VIEW LOOKING FORWARD-STICK AND TORQUE TUBE ASSY
REAR COCKPIT

DIAGRAM #1 ILLUSTRATES AN IMMEDIATE REMEDY OR FIX TO AN OVERCENTER PROBLEM IF YOU HAVE ONE - BECAUSE OF A STUDY ALLREADY DONE WE CANNOT SUPPLY READY MADE PARTS BECAUSE OF MULTITUDE OF DIMENISIONS FOUND ON HOMEBUILT AIRPLANES.

DIAGRAM #2 SHOWS INTERNAL STOPS WHICH SHOULD HAVE BEEN INSTALLED ON INITIAL CONSTRUCTION OF CONTROL SYSTEM.

NOTE: THERE IS ENOUGH FLEXIBILITY IN THE CONTROL SYSTEM TO FORCE TOP AILERONS OVER CENTER - SA 300 ONLY.

Hey Bill and the Starduster factory gang,

Greetings from Moscow, USSR., as I had told you back early last April, I would be missing the Starduster Fly in at River Side, CA I now tell you I won't be able to visit you at Oshkosh either. I may be lucky if I get home by Sept. Mayby I can scrounge some time off and a few dollars to privately visit you at the Starduster factory.

My wife sent me the April Starduster magazine which I enjoy a great deal. Reading the article by Oscar Bayer about windshields again sets me to wondering. Do or has other builders had such problems and if so what is the fix for this? As I have planned my bubble windshield fairly well forward on the rearcock pit, will this make a difference? As I recall some where in some of my old Starduster magazines, Lou Stolp had an article about installing bubble windshields. Don't remember anything about vortex problems. Mayby you can supply me with the answers after I return home.

Again thanks for helping me line up that deal on the prop, govener and spinner. Can't wait to get it all together. Hope to see you in several monthes.

Walt

Call me when you get home and we can talk about windshields - You'd look good in one of those Beaver Hats - Or whatever they are. Looking forward to hearing from you. Bill Clouse Jr. ?

Dear Bill,

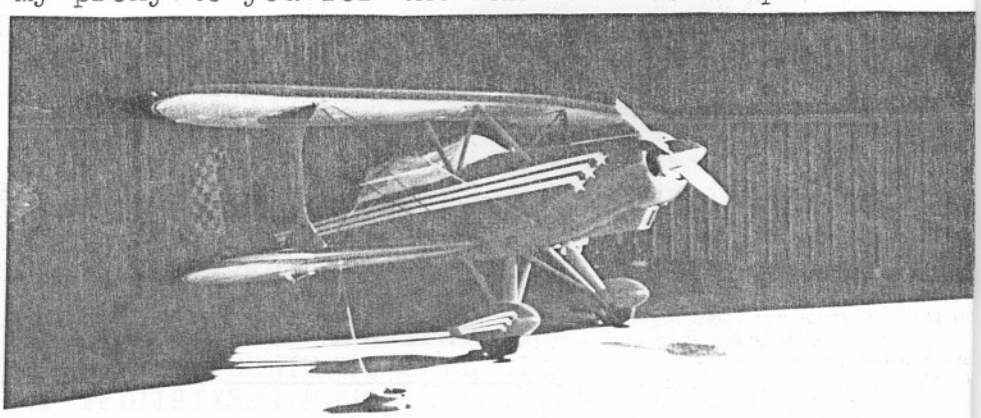
Enclosed is a photo of N-223JP. This Starduster Too was built in about three years by Dr. John O. Perritt of Wilmington, N.C. Completed in 1983, 223JP has 117 hours on the airframe and an O-360 A1A (180) which was installed "factory new" - This ship was a trophy winner at chapter 3 EAA Flyin, Camden, S.C. in October, 1983.

N-223JP is now owned by Tom Gibson and me, is hangered in Lumberton, N.C. and is a real joy to fly.

Advise on how to give my proxy to you for the EAA directorship.

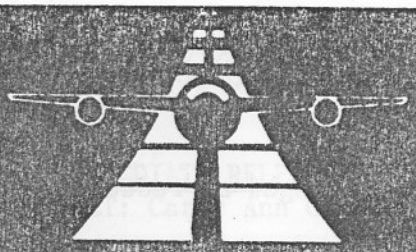
Regards,

Clarkson B. McLean
EAA #201064



Thanks for the picture and your faith in me and your "Starduster". Enjoy and lets hear more from you.

"BC"



FOR RELEASE AT YOUR CONVENIENCE 6/17/86

Cathy Ann Connelly (213) 838-8416

SUNDAY AIRPLANE RIDES AND CHAMPAGNE BRUNCH IN VAN NUYS? THE ANSWER IS YES!

With covered outdoor patio dining poolside and fresh morning surprises inside, the Airtel Plaza Hotel is offering a 50 item, all-you-can-eat champagne buffet brunch for $14.95 per person, 10:00 a.m. to 2:00 p.m. each Sunday in its Landings Restaurant (price may change without notice -- please check with hotel at time it is to be published).

The hotel, which sits on the Van Nuys Airport at 7277 Valjean Avenue and Sherman Way, treats guests to soothing, live piano music and a Sunday spread featuring fresh fruit, omelettes, Eggs Florentine, roast beef, ham, special seafood offerings, 14 salad variations, cheeses, fresh breads and bagels, a European Dessert Cart, and a fully-stocked ice cream bar with incredible, diet-wrecking toppings (see attached listing for item details).

Adding his own unique touches to this buffet is the Airtel's new 39-year-old Chef Michel Garic. Previously with Los Angeles' The Cove and Robaire's Restaurants, Garic is a native of Normandie, France and learned the fundamentals of his craft in Toulon and Paris.

In addition to Garic's culinary brunch enhancements, there's another incredible new hotel offering to make your Sunday like no other -- The Airtel Plaza has recently established Flying Packages for brunch guests who wish to end their weekend on an exciting note.

Half-hour biplane rides and helicopter rides can be arranged at reduced rates during the brunch hours from the Airtel Plaza tie down area -- just a few steps from the lobby. Current adult, Stearman biplane rates are $69 per person, including your individual brunch and ride.

Call Sales and Marketing Director Gene Connelly weekdays to make reservations for this unique experience offered exclusively through the Airtel Plaza Hotel -- (818) 997-7676. It makes a great gift and memorable outing.

Am going to try this - All visitors to this area may want to include this in your itinerary - will let you all know what this can be.

Bill Clampett

CONNELLY COMMUNICATIONS
° Public Relations °

FOR IMMEDIATE RELEASE 6/18/86
CONTACT: Cathy Ann Connelly (213) 838-8416

AIRTEL PLAZA DEDICATES FOUR MORE NON-SMOKING ROOMS TO AMERICAN LUNG ASSOCIATION

The Airtel Plaza Hotel, 7277 Valjean Avenue, Van Nuys, has added yet another unique dimension to its growing facilities -- it has joined a group of select hotels throughout the nation offering non-smoking rooms to guests.

Beginning with six rooms a few months ago, the Best Western Airtel Plaza has added four more, dedicating their existence to the American Lung Association which has pushed the non-smoking room availability throughout the nation. The Association publishes a stringent list of cleaning procedures to qualify rooms for non-smoking listing.

Available at no extra charge to guests and equal in location to regular rooms throughout the facility, the Airtel Plaza non-smoking rooms are designated by brass plaques announcing their status and noting the American Lung Association link.

Not polluted by traces of smoke and nicotine left by previous guests, the rooms have proven to be quite popular with guests, said Gene Connelly, Director of Sales and Marketing for the hotel.

The American Lung Association checklist for listing non-smoking rooms involves: cleaning all draperies, carpeting, upholstery and bedding including mattresses and box springs; replacing all pillows; repainting all painted surfaces and disinfecting all other surfaces.

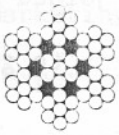
2566 Overland Avenue ° Suite 670
Los Angeles, California 90064 ° (213) 838-8416

MACWHYTE PREformed *Hi-Fatigue* AIRCRAFT CABLES

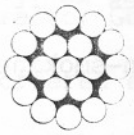
MACWHYTE HI-FATIGUE AIRCRAFT CABLE (Strand and Cord) is made of very high strength specially processed wire. It is used wherever high strength in small sizes is essential, such as controls and bracing in aircraft, for yacht rigging, small hoists and in "Safe-Lock" cable assemblies for machine parts and slings.

It is made in the following constructions in keeping with the requirements of Aircraft Manufacturers, Airlines, Federal Government, and Military Specifications.

7 x 19 Flexible



7 x 7 Flexible



1 x 19 Non-Flex.

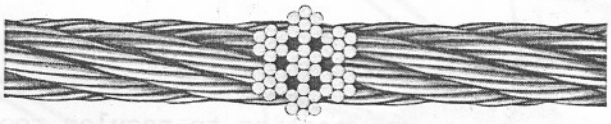
The terms, used to denote flexibility, apply to aircraft cables as covered by military specifications.

Macwhyte Tinned, Galvanized, or Stainless Steel Aircraft Cable is supplied in reel lots or cut lengths as required.

SPECIAL CATALOG: For complete specifications catalog of Aircraft Cable, "Safe-Lock" Terminals, Cable Assemblies and Tie-Rods, ask for Special Macwhyte Aircraft Products Catalog.

7x7* Flexible

Macwhyte PREformed "Hi-Fatigue" Aircraft Cable



7 x 7 (Flexible) MACWHYTE AIRCRAFT CABLE has seven strands of seven wires each. Its greater number of wires which are smaller in size make it much more flexible than 1 x 19, but not as flexible as 7 x 19. It has the least metallic area and therefore is not as strong as 1 x 19 and 7 x 19.

7 x 7 construction is used for control purposes where extreme flexibility is not required, but where abrasion is a factor.

Made in conformance with the latest Military Specifications.

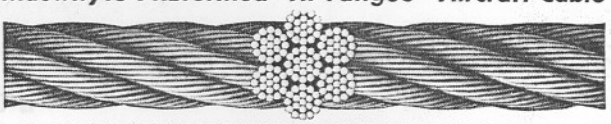
7 x 7 MACWHYTE "HI-FATIGUE" AIRCRAFT CABLE

Diameter in Inches	Minimum Breaking Strength in Lbs.		Approximate Weight in Lbs. per 100 Ft.
	GALVANIZED PREformed	STAINLESS STEEL PREformed	
3/32 **	110	110	0.16
1/16	480	480	0.75
5/64	650	650	1.10
3/32	920	920	1.60
7/64	1,260	1,260	2.20
1/8	1,700	1,700	2.80
5/32	2,600	2,400	4.30
3/16	3,700	3,700	6.20
7/32	4,800	4,800	8.30
1/4	6,100	6,100	10.60
9/32	7,600	7,600	13.40
5/16	9,200	9,000	16.70
11/32	11,100	10,500	20.10
3/8	13,100	12,000	23.60

**Also known as "6x7 SC." That is, having 6 outside strands of 7 wires each, helically laid around a wire strand core (SC).*
***3x7 construction.*

7x19* Flexible

Macwhyte PREformed "Hi-Fatigue" Aircraft Cable



7 x 19 (Flexible) MACWHYTE AIRCRAFT CABLE has seven strands of 19 wires each. It is stronger than the 7 x 7 construction and not as strong as the 1 x 19, but is the most flexible.

Because of its fine wires, the best service is obtained with 7 x 19 where abrasion is not too severe. These fine wires make it the most flexible to withstand severe bending.

It is used for the operation of all types of aircraft controls, mooring lines, slings, bomb hoists, etc.

Made to conform with latest Military Specifications.

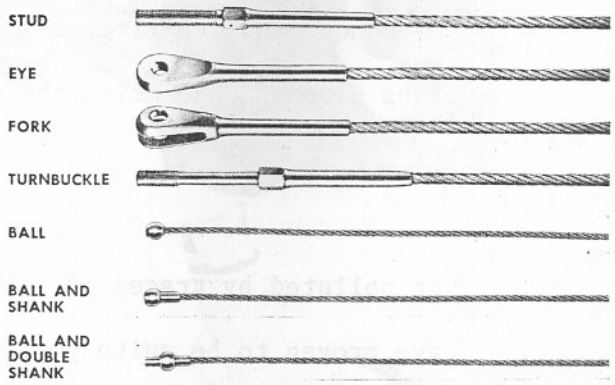
7 x 19 MACWHYTE "HI-FATIGUE" AIRCRAFT CABLE

Diameter in Inches	Minimum Breaking Strength in Lbs.		Approximate Weight in Lbs. per 100 Ft.
	GALVANIZED OR TINNED PREformed	STAINLESS STEEL PREformed	
3/32 **	1,000	920	1.74
1/8	2,000	1,760	2.90
5/32	2,800	2,400	4.50
3/16	4,200	3,700	6.50
7/32	5,600	5,000	8.60
1/4	7,000	6,400	11.00
9/32	8,000	7,800	13.90
5/16	9,800	9,000	17.30
11/32	12,500	.....	20.70
3/8	14,400	12,000	24.30
7/16	17,600	16,300	35.60
1/2	22,800	22,800	45.80
9/16	28,500	28,500	59.00
5/8	35,000	35,000	71.50
3/4	49,600	49,600	105.20

**Also known as "6 x 19 SC." That is, having 6 outside strands of 19 wires each, helically laid around a wire strand core (SC).*
I.W.R.C.—Sizes larger than 3/8" diameter made up only with an Independent Wire Rope Core (IWRC).
***Not included in Military Specifications.*

MACWHYTE *"Safe-Lock"* CABLE TERMINALS

Aircraft Standards



These terminals are made from Stainless Steel in accordance with Military Specifications.

General Information

"Safe-Lock" terminals are attached to the cable by special equipment which, through a cold working process, reduces the sleeve diameter causing the metal to flow into the interstices of the cable, forming a bond stronger than the cable.

They can be made from various materials or of special design.

Please consult us with reference to your particular problem. Our engineers will be glad to make recommendations. When inquiry is submitted, please furnish detailed information—preferably in the form of a sketch.

Quotations will be submitted promptly upon request.

These cable terminals are completely described and illustrated in Macwhyte Aircraft Catalog available on request.

DURETHANE POLYURETHANE ENAMEL FINISHING SYSTEM FOR FABRIC COVERED AIRCRAFT

1. Install fabric cover over framework in usual manner using nitrate adhesives.
2. **Do not** coat entire fabric envelope with nitrate dope.
3. Heat shrink fabric as required, using hot irons.
4. Install all necessary rings, grommets, reinforcing tapes, etc., as required, using nitrate dope. Apply dope **only** to those areas where these items are installed.
5. Spot prime all nitrate dope areas **only** with a **single coat** of DAS-1980 Del-Seal that has been mixed as follows: 1 gallon of DAS-1980 Del-Seal and 4 ounces of DX-369 Flexative. Heavy coats detract from flexibility. Allow sealer to dry a minimum of one (1) hour, but no longer than one (1) week.
6. Mix Durethane Primer as follows:

   2 gal — DPU-35 Base Component
   1 gal — DPU-301 Catalyst
   1½ gal — DX-369 Flexative
   Mix thoroughly.
   1 gal — DTU-801 Reducer

7. Spray apply 3 full coats of mixed Durethane Primer allowing a 15 - 20 minute flash time between coats. Allow to dry overnight or 12 hours and lightly sand if necessary. If additional fabric filling is required, apply additional coats of mixed Durethane Primer.
8. Mix Durethane color as follows:

   1 gal — Durethane color
   1 gal — Durethane Catalyst
   ½ pint — DX-369 Flexative
   ½ - 1 gal — Durethane (DTU) Reducer. (adjust amount as necessary to get best application characteristics)
   Mix throughly.

9. The Del-Seal and Durethane Primer usually provide more than enough hiding power for adequate UV radiation protection, however, if additional protection is required, a coat of Durethane Black, prepared as in 8 above can be applied prior to the regular Durethane color coats.
10. Spray apply 2 or 3 full wet coats allowing 15 - 20 minutes between coats.
11. Allow to dry 5 - 6 hours before taping for stripes and second color.

Special Note:

If a fabric covered aircraft has already been finished with a Nitrate/Butyrate Dope System up through the 'Silver Coat' and the finisher wishes to complete the job with the Ditzler System

— it is possible, as follows:

1. Seal entire aircraft with Flexible DAS-1980.
2. Apply 1 wet double coat of Flexible Durethane primer, allow to dry and sand lightly.
3. Apply 2 - 3 wet coats of Flexible Durethane.

— While this finish will be much superior to a regular Nitrate/Butyrate Dope job, it will not be as good as the full Ditzler System. —

Caution:

Be sure to read and follow all safety information and health warnings found on the labels of all products mentioned herein.

Ditzler Aircraft Finishes PPG

PPG INDUSTRIES, INC.
P.O. Box 3510
2155 West Big Beaver Road
Troy, Michigan 48007-3510

Form 8110A June, 1983

June 5th, 1986

Stolp Starduster Corp.

Dear Sir,

Attached is my check for the amount due on my last order to the amount of $18.15.

Thanks for the very fast service and I'll have another smaller order for you in the next few days, something I didn't think ahead to last time.

Now I'll go fly my Davis D-1s and enjoy every minute of it.

Are they finally starting to get to the liability mess?

Thanks again and see you next time around.

Sincerely,

Frank Luft
16355 Shiloh Rd.
White City, Ore.
97503

Frank - please kept this address me as Bill. Never got above R.7 - We always enjoy letters like yours. And always enjoy compliments - Yes we are finally getting at the liability mess - Our greatest ally is E.A.A. I remember a "slogan" United we Stand. also only "In America"

Hang in there Frank -
We are here
B. C.

(305) 247-8439

VICTOR W. TATELMAN

18900 S.W. 232 STREET
MIAMI (GOULDS), FL 33170, U.S.A.

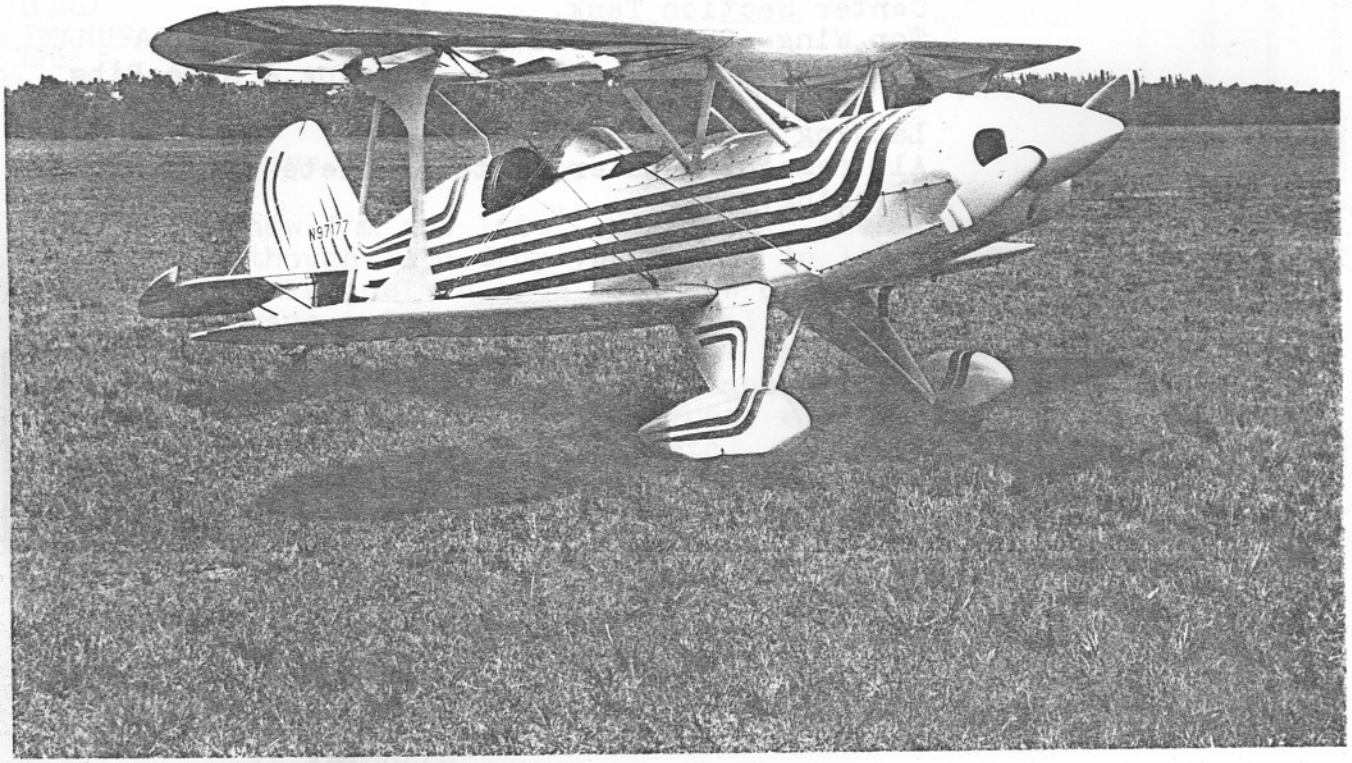
May 30, 1986

Bill Clouse
Stolp Starduster Corp.
4301 Twining - Flabob Airport
Riverside, CA 92509

Dear Bill;

Thanks for your letter of May 13. I'm enclosing my check for $10.00, as per your invoice, for the ad insertion in the next issue of STARDUSTER. The ad as worded in my letter of May 6 can be changed as you see fit.

I am enclosing a black and white photo as per your suggestion, let me know if you'd like a different view.



"Highly Customized" call "Vic" for details and price - A very nice Airplane.

BC

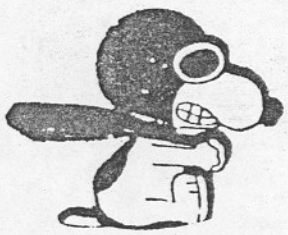
PARTS LIST
ACRODUSTER TOO

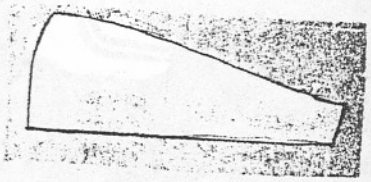
Engine------Lycoming IO-540-D4-A5
New in Factory Packgage

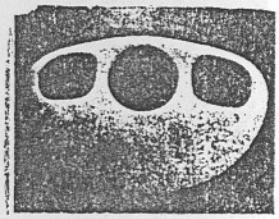
Engine Mount-----Mount,Rubbers,Bolts, etc.

Fuselage------
Fuselage
Landing Gear
Wheels
Tires
Brake Calipers
Scott Tailwheel & Tire
Seats (Woven Aluminum)
Floorboards (Plywood & Metal)
Rudder Cables (Installed)
Turtleback
Cabane Struts & Fittings
Tail Feathers

Wing Kit------
All Wing Hardware(finished)
Spars, Ribs, Leading Edge Aluminum, etc.
Center Section (Finishedexcept tank installation)
Center Section Tank.
Top Wing--Both Panels about 90% finished.
Lower R.H. Panel---Spars, Bracing & Nose Ribs Installed.
Landing Light & brackets.
All remaining material to complete wings except covering.

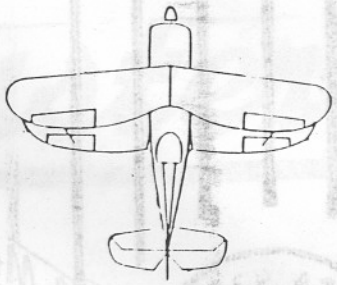






Classified Ads

STARDUSTER
ADS



(1) SET SKYBOLT
WINGS 80% COMPLETE

(2) I0540
FACTORY NEW

RONNIE SMITH
(512) 690-0660
WANTS TO BUY
STARDUSTER TOO

---

(1) I0360
200 hp
140 HRS SINCE NEW

METAL PROPELLER
(1) 7M7458
NEWLY OVERHAULED
SENSENICH

---

225 hp LYC
9 CYL
ROUND
REMANUFACTURED

O-235 G-1
40 HOURS SINCE MAJOR
ALL ACCESSORIES
R. OHLETZ
(714) 6814488
$3500.00

STARDUSTER 11 PROJECT
WINGS & CENTER SECTION
READY FOR COVER
FUSELAGE 40% COMPLETE
$4000.00/MAKE OFFER

FOR ANY DETAILS ON ITEMS OFFERED FOR SALE - CALL "STARDUSTER" WE ARE ANXIOUS TO HAVE YOU PLEASED WITH A PROJECT OR PRODUCT OF YOUR CHOICE.

B.C.

Dear Bill Clouse,

Although I know I'm too late for an ad in the summer Starduster Magazine, I thought I'd drop you a line to let you know of my project for sale just in case you know or hear of anyone looking for one. I have a Starduster 11 radial engine project. (#2097) The tailfeathers and controls are in. Wings are better than ½ finished. It's complete with a Continental 220 radial, McCarley prop, exhaust, engine mount, new tires, wheels, brakes, Scott 3200 tailwheel, wheelpants, etc., etc.. Most everything to complete it is included. I'm asking $5500.00 O.B.O. If neccessary I'd give someone an even better deal. In other words "I need to sell it." Please pass on my telephone number and address if you know of anyone. I'd greatly appreciate it.

Thanks,

Scott Crosby (503) 638-2557
2400 SW Mossy Brae
Westlinn, Oregon 97068