PLAN HOLDERS 2-166





Published by: Bob and Ching Walters

521 Rosemont St.

La Jolla, Calif. 92037 the U.S.

Subscription Rates: \$3.00 per yr.

for six issues or \$5.00 outside

FROM THE EDITOR:

I am happy to report that I have logged quite a few hours on my Duster since the last issue. Many people have admired the ship and expressed interest in building one. From all indications, we should have a sizeable Duster fleet before too long.

We are still looking for readers to contribute articles and photographs. It need not be anything fancy, but the important thing is to

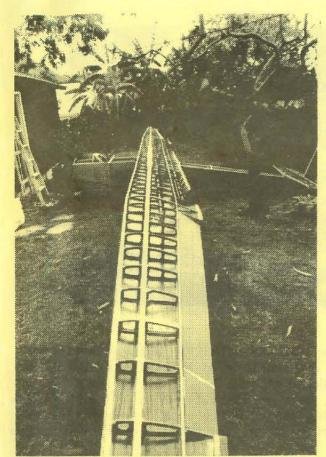
let people know that there are Dusters being built.

It looks as though my wife and I will be leaving the country in the near future. If so, the next issue will probably be our last. The Dust Rag needs one of its readers to take over publication. It is not very difficult and requires no special skills or equipment. There is no profit in it but you do manage to break about even at our present subscription level. If you are interested please contact me and I'll be glad to let you know how we publish the Dust Rag.

Don't forget to check the box on the last page. If it is marked

your subscription has expired.

Ed.



WITT DING THE DUCTED LING by

BUILDING THE DUSTER WING by Jim Maupin

If you are building from our kit or using our spar, you can build any one of the three pieces at a time, and another segment later, and they will mate correctly at assembly.

If you are building your own spar, you must complete all three pieces first, and install the attach hardware on all three before proceeding with assembly.

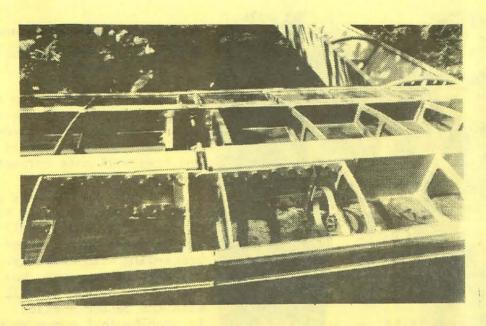
Either way, when you are ready to continue we will start with the center section. The only problem that comes up here is that you have to drill the holes in the center section for the attach fittings to the fuselage before you install the front part of the wing. Afterwards it is impossible to get the drill, drill motor and jig in place. You can build the rear portion of the wing

mate it to the fuselage, then remove it and build the nose section, or you can drill and install the attach hardware, and drill the fuselage bulkheads last, which is the route we took.

Mark the location of each rib on the spar, then with the ribs finished but still in one piece, put it on the spar; center of rib to center line of spar; and mark the cut marks on the rib. This way, if there is any slight variation in the thickness of the spar the rib will be cut to fit. Using a T-square, mark the cuts across each rib and saw apart.

Block the spar on the table, and glue on the cap strips. We glued these to the spar, and when set, then glued the ribs to both the spar and cap strips. I see no particular advantage either way. If you glue the cap strips to the spar, be sure you don't get glue spread around where the next joint is going. If you glue the cap strips to the ribs first you can disc sand the area for a clean joint later.

We glued the cap strips to the drag spar first also, and assembled the center portion of the wing all at once, using small C-clamps to hold both joints in pressure, top and bottom. When these are set, you



DUSTER WING continued

can glue on the trailing edge part of the ribs. Use a tight string or straight edge to line them up. The trailing edge itself is installed at the same time as the bottom skin.

When this part is complete, bolt or clamp two 2" x 4" to the table sticking out about 8" on one side, and turn the spar over so it rests on these, with the completed section down, and build the front part the same way.

We built the leading edge spar separately and glued it on to the ribs in one piece at this time, leave it a little oversize, and plane it to final contour after its in place on the wing, at the same time you plane the top of the spar to final curve.

You build the outer panels the same way. Block the spar up on the table so the center line of the spar is parallel to the table, then you can keep the ribs perpendicular to the table.

Again we built the leading edge spar and drag spar separately on the table, using stretched string to keep them straight. Both these were built in two pieces, and we made the joints at, or near the point shere the taper starts, in place on the wing at assembly.

At this point with the gluing done, you can bolt the root ribs in place, using the aluminum angle, withe holes already in them, as guides to drill the 3/4" ribs.

One important point. You can install the drag spar fittings on the center section now, but do not drill for them yet in the outer panels. This should be done later, with the pins in place, and with the wing assembled on the fuselage.

continued..... pg.# 8

DUSTER PLAN HOLDERS

Plan

2. Jim Maupin, 2650 Rockinghorse Rd., San Pedro, Ca. 90732 4. Roman J. Matherne Jr., 7371 C. Normandie Ct., Hazelwood, Md. 63042 10. J.S. Rogerson, Box 410, Hamilton, New Zealand 11. W.S. Bowes, 2284 Maywood Ave., San Jose, Ca. 95128 12. Wayne Loucks, Box 6, St. Williams, Ontario, Canada 14. Ellery Roberts, 402 S. 12th St. Montevideo, Minn. 56265 15. Don Eckler, R.D. #2 Delanson, N.Y. 12053 16. Bobby W. Hutchins, Sr., P.O. Box 3322, Oxford, Alabama 36201 17. Scott Thomas, 6101 Lockwood Lane, Virginia Beach, Va. 23462 18. John C. Nelson, R.R. #2, Mondovi, Wis. 54755 19. G.A. Seguin, 197 Trudeau St., Valleyfield, Quebec, Canada 20. Harold Tervort, 172 Ideal Lane, Salt Lake City, Utah 84115 21. Gerhard Mayer, 12242 Pershing Ave., Davenport, Iowa 52803 22. Ted Knight, 1603 Baxley St., Carrollton, Texas 75006 23. Alex Kozloff, 18006 Whitewood, Irvine, Calif. 24. S.G. Shutt, 612 Briarwood Dr., Brea, Ca. 92621 25. Ulrich Toll, 16 Saybrook Circle, South Hadley, Mass. 01075 26. William H. Ramsey, 940 Dedham St. Newton Centre, Mass. 02159 27. Thomas Gutekunst, Westrock Rd. Allentown, Pa. 18103 28. Richard A. Foht, 2944 W. 6th St., Erie, Pa. 16505 29. Mark Burnham, Box 264, Chapel Hill, N.C. 27514 30. Dick O'Conner, 22801 Trigger, Chatsworth, Ca. 91311 31. Armando G. Canton, P.O. Box 1207, Calexico, Ca. 92231 32. John S. Sinclair, 4655B Magnolia St., Mt. Home AFB, Idaho 83648 33. D. Wayne Shrum 414 Buchanan St., Hoquiam, Wash, 98550 34. S.W. Williamson, 1146 Mulberry Circle, Charleston, W.Va. 25314 35. Robert L. Merritt, Box 561, Afton, Wyoming 83110 36. Leonard Nikolajczyk, 4487 W. 12th St., Cleveland, Ohio 44109 37. Durward S. Riggs, c/o Commonwealth Club of American, Monadnock Arcade, 681 Market St., San Francisco, Ca. 94105 38. Robert Schaefer, 1726 Prairie, Downers Grove, Ill. 60515 39. Frank D. Lypscon, Pinewood Acres, RFD#3, So. Windham, Maine 04082 40. Dennis Gonski, 8622 Daymore Ave., Garden Grove, Ca. 92641 41. Leslie R. Neal Jr., c/o Torch Inc. Box 6626, San Antonio, Texas 78209 42. J.W. Langham, 5663 Madra Ave., San Diego, Ca. 92120 43. Kenneth Gooch, 3839 Bristol Ave., Klamath Falls, Oregon 97601 44. Lt. Raymond Schlanser, Jr., Box 226, Norton AFB, Ca. 92409 45. Don Lurkins, 627 Alberni St., Kamloops, B.C. Canada 47. James II. Bonney, 206 Pleasant St., Milton, Mass. 02186
48. Frank G. Mc. onald, 1401 Brentwood Dr., Ft. Collins, Colo. 80521

48. 48. Frank G. Mc. onald, 1401 Brentwood Dr., Ft. Collins, Colo. 80521 49. S.A. Centrair, 36 Le Blanc, France 50. Fred J. Becker, 1285 Terrebonne Dr., Ottawa, Ont. Canada 51. L.G. Ours, 9060 Vista del Rio, Fair Oaks, Ca. 95628 52. Alan R. Nelson 2362 Oxford Ave., Cardiff by the Sea, Calif. 53. Kenneth B. Zachara, 9 Mayfair Ct., Cheektowaga, N.Y. 14225 54. John C. Burritt, 1787 Gotham, Chula Vista, Ca. 92010

55. Albert J. Schmitt, Rt.#3-1271 Grandview Dr., Chino, Ca. 91710
56. Billy B. Storey, 2159 Los Padres Dr., Rowland Heights, Ca. 91745

57. George Taylor, 719 Middle Rd., Bayport, N.Y. 11705 58. R.C. Hodgkins, R8 Box 219, Austin Texas 78703

59. John J. Mazur, 96 Urban Ave., Westbury, N.Y. 11590

DUSTER PLAN HOLDERS continued

John Edward Sayers, 7860 Marion St., Buena Park, Ca. 90620 Houston R. McCoy, Box 688, Del Rio, Texas 78840 3064 Hans O. Wibben, c/o Nordac Inc., 12067 E. Slauson Ave., Santa Fe Springs, Ca 90670 62. 63. Robert J. Walters 521 Rosemont, La Jolla, Ca. 92037 JANICE CT. Clifford Espensen, 2266 27th St., Santa Monica, Ca. 90405 64. Arthur F. Johnson, 5438 S. Kostner, Chicago, Ill 60632 65. Robert Kumferman, W153-N8205 Elm Lane, Menemonee Falls, Wisc. 53051 66. Norman Gillmore, 207 Stanford Ave., Elyria, Ohio 44035 Angelo Benvenuti, York Rd. Box 43 Group J, S.S. 3 Hamilton, Ont. Canada Brian Evans, 17 Lincoln Ave., Hiawatha, N.J. 07034 S.M. Page 1200 W. Freeway, Forth Worth, Texas 76102 Randy Auburg, Rt. #1, No.20 La Vera Dr., Midland, Texas 79701 William J. Daley, 2570 Winslow Dr. N.E., Atlanta, Ga. 30305 Lawrence W. Corbin, 6314 Downington Dr., Ft. Wayne, Ind. 46816 L.R. Brown, R.R. #6 Box 127, Decatur, Ill. 62521 74. John M. Graef, 3050 Rue d'Orleans, Apt. 299, San Diego, Ca. 92110 Jim West, 1168 Highrock Place, Victoria, B.C. Canada Francis M. Miller Jr., 109 Dundee St., Buffalo, N.Y. 14220 Elroy B. Lovett, 717 Crabb Ave., Rockville, Md., 20850 James A. Marshall, 360 S. Harvey, Ferguson, Mo. 63135 79. Robert Orr, 12 Winston St., Churchill, M.S. 825, Ipswich, Queensland, Australia 80. 81. David A. Grobecker, 3769 Poe St., San Diego, Ca. 92107 Ernest Lueder, 657 Center Dr., Ann Arbor, Mich. 48103 83. David H. Krall 920 Arcturus Dr., Apt. 2G, Colorado Springs, Colo. 80906 Alfred F. Lee, 17132 Westport Dr., Huntington Beach, Calif. 92649 Alois Stibor, 8070 Ingolstadt, Nuernberger Str. 54/F3, West Germany T.D. Protheroe, 476 Paseo del Descanso, Santa Barbara, Ca. 93105 86. Paul F. Drake, RFD 1, Box 41, Housatonic, Mass. 01236 88. C. James Hamstra, 1067 E. Carson Dr., Tempe, Ariz. 85281 Don Mattson, 7027 Woodley Lane, Falls Church, Va. 20042 Glenn Klinski, Star Rte., Box 85, Yacolt, Wash. 98675 90. Bonald F. Kroesch, 3113 Heritage Dr., Joliet, Ill. 60435 Gerald T. Frazier, PSC #1 Box 112 965-53 APO San Francisco, Ca. 92. Glen D. Fields, D.P.M., 1012 S.E. Oak Ave., Roseburg, Oregon 97470 94. Stuart W. Kellogg, 21 Marudy Dr., Clinton, N.J. 08809 Bernie Michaels, 1120 S. Forest St., Denver, Colo. 80222 95. 96. W. Ary Treptow, 11970-A Eucalyptus Ave., Hawthorne, Ca. 90250 Donald E. Dilworth, 16590 Woodbine, Detroit, Mich. 48219 Alan Ramsey, 5905 7th St., N.W., Washington, D.C. 20011 99. Harry E. Rogers, R#1, Box 36 Minooka, Ill. 60447 100. Capt. Larry G. Riegert, Officers Mess, CFB Cold Lake, Medley, Alberta, Canada 101. Harvey P. Mickelsen, Jr., 649 Almond Avel, Los Altos, Ca. 94022 and Wayne E. Allen, 420 Paco Dr., Los Altos, Calif. 94022 102. W.R. Freimiller, W-Div, USS Midway, CVA-41, FPO San Francisco, Ca. 96601 103. T.B. Turner, Jr., 2919 Federal Avel, El Paso, Texas 79930 104. V.R. Hutchinson, 1039 W. Hillcrest Blvd., #41 Inglewood, Ca. 90301 105. Larry M. Ludwick, 2766 Mallard Dr., Costa Mesa, Ca. 92626 106. Alan B. Moore, 8160 Dartmoor Dr., Huntington Beach, Ca. 92646 107. Dr. James M. Parks, 2167 Palisade, Wichita, Kansas 67213 108. Douglas Robinson, Box 929, Estes Park, Colo. 80517

109. Leslie M. Anderson, 52 Meadow Way, Fairfax, Ca. 94930

110. G.T. Moseley, 9924 Richmond Ave, Grand Prairie, Alberta, Canada

DUSTER PLAN HOLDERS continued

111. G.W. Alexander 3405 Las Vegas, Oceanside, Calif. 92054 112. Henry P. Savoie, 6531 Cerulean Ave., Garden Grove, Ca. 92645 113. (None) 114. Michael H. Wimsatt, M.D., e/o M.I.B. Hospital, Copperstown, N.Y., 13326 115. Morris Lee Turner, D.D.S., 199 South St., Camden, Del. 19934 116. Donald A. Johnson, Rt.#1 Box 267, Lebanon, Oregon 97355 117. Homer T. Wentz, 687 San Leandro Way, Salinas, Ca. 93901 118. Martin E. Schreiber, 1601 Letitia St., Baton Rouge, La. 70808 119. Rawlin A. Smith, 46-293 Haiku Rd., Kaneohe, Hawaii 96744 120. Roger L. Grigsby, 1295 Tunnel Rd., Santa Barbara, Ca. 93105 121. Frank Barrows, Santa Inez Valley High School, Santa Inez, Ca. 93460 122. Mike J. Starkey, 27210 Sunset, Ferris, Ca. 92370 123. Harry J. Barry, 6622 Kameha Circle, Yorba Linda, Ca. 92686 124. Dennis N. Plunk Rt. #3, Bethel Springs, Tenn. 38315 428-7858 125. John H. Hackney, 50 Hewitt Ave., Buffalo, N.Y. 14215 126. Eric L. Reddish, 7530 Knox Ct., Westminster, Colo, 80030 127. 2nd Lt. Richard A. Walker, Box 145, Moody AFB, Ga. 31601 128. Jack N. Wallace, 7160-68th St., S.E., Caledonia, Mich. 49316 129. James Jepson, 500 South 12th St., Leesburg, Fla. 32758 130. Daniel W. Rouhier, 1426 S. Peach St., Medford, Oregon 97501 131. Dennis A. Brunton, 379-B Moore Rd. Durban, South Africa 132. Charles A. Tabscott, 5111 Cypress Court, Orlando, Fla. 32807 133. Ing. J. Ignacio Casillas G. de L., 2a. Jalapa #56, Mexico 7, D.F. 134. C.L. Bourget, 97 Forge Village Rd. Forge Village, Mass. 01828 135. Sherman Morehouse, Fire Hill Rd. RD #3, West Redding, Conn. 06896 136. Roman J. Matherne, Jr., 7371-C Normandie, Ct., hazelwood, Mo. 63042 137. John M. Bryce, 133 Kuukama St., Kailua, Hawaii 96734 138. Joseph Smolen, Winchester Rd., Northfield, Mass. 01360 139. H.A. Redding, 2822 Lando Lane, Orlando, Fla 32806 140. Peter Robinson, 17 Sixth St., Weston, N.S.W. 2326, Australia 141. Robert LeDoux, Human Development S-126 University Park, Pa., 16802 143. A.F. Gray, 109 Blairgowrie Dr., Blairgowrie, Randburg, Transvaal, South African 144. Ken Juen, Green River Rd., Williamstown, Mass. 01267 145. David J. Mattis, 1103 National Rd., Wheeling, W.Va. 26003 146. Stephen W. Merritt, 2411 Confederate Dr., Wilmington, N.C. 28401 147. Floyd F. Bates, Rt. #8, Box 286A, Austin, Texas 78703 148. Douglas A. Bell, 26471 Weston Rd., Los Altos Hills, Ca. 94022 149. Robert K. Graham, Box 114, Kainantu, E.H.D., New Guinea 150. Leon Coetzee, 65 Queen Alexandra Rd., Lombardy East, Johannesburg, South Africa 151. Ross A. Maehl, 4845 Beck Ave., N. Hollywood, Ca. 91601 152. Jim Thomas, 6015 W. Acampo Rd., Lodi, Calif. 95240 762893/ 153. Gerald W. Beaty, 1240 Sicux, Temple, Texas 78501 154. R. Ksander, 11 Parkview Dr., Peterborough, Ontario, Canada K9H 5M5 155. Ian Lea, c/o The Office of Mies Van Der Rohe, 1 Illinois Center, Chicago, Ill. 156. R.C. Dunn, 18 Trevan St., Whyalla Norrie, 5608 S.A., Australia 157. Albert Strasser, 63 Sunset, Chateauquay, Quebec, Canada 158. Ron Bassett, Rt. #1, Box 3A, Burnettsville, Ind. 47926 159. Robert W. Bowman, 31 Rolling Lane, Hamilton Square, N.J. 08690 160. Robert C. Catto, 3467 Speno Dr., San Jose, Calif. 95117 161. C.H. Berson, Star Rt. 937, Chugiak, Alaska 99567 162. Vincent Pessina, 3317 Burleson Rd., Austin, Texas 78741

DUSTER PLAN HOLDERS continued

163. Paul Deschenes, 6 Cook St., Franklin, Mass, 02038

164. P.J. How, Box 292, Bergylei, Transvaal, South Africa

165. Edwin Z. Reynolds, 9480 S.W. West Haven Drive, Portland, Gregon 97401

166. Verne R. Miller. 1754 Patterson St. #2. Eugene. Oregon 97401

MAILING LIST CHANGES:

11. Hal Porter, 5451 Leigh Ave., San Jose, Ca. 95124 (bought plans from Bowes)

19. G.A. Sequin, 197 Trudeau St., Valleyfield, Quebec, Canada (new address)

22. Ted Knight, 1326 Cherry Hill Lane., Lewisville, Texas 75067 (new address)

!! MOTICE TO PLANHOLDERS !!

Please contact the Dust Rag if you find any errors in the included planholders list. If you have moved or sold your plans be sure to let Hank Thor know. It is important that he be able to send design changes to all plan holders. Contact Hank at:

California Sailplanes Box 679 Huntington Beach California 92648

ADVERT ISBNENT

DUSTER KIT PRICES: June. 1973
Supersedes all previous price lists.
Subject to change without notice.

ADVERTISEMENT

I. RAW MATERIAL KIT \$1595.00

Includes all materials needed to build the Duster except liquids and instruments. Spar blanks are tapered and wing attach steel sheared to 1 3/8" strips. Fiberglass parts are formed.

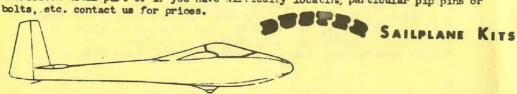
II. WOODWORKERS KIT \$2495.00

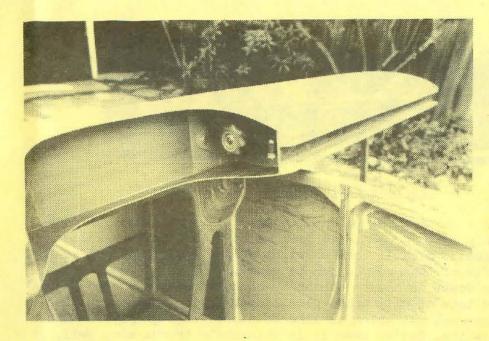
Same as above except all metal parts are completly ready to install. Spars are laminated and jig drilled and ribs and bulkheads are drawn full size on plywood.

III. HARDWARE KIT \$1395.00

Same as Kit II except no wood. All fiberglass and metal parts completly fabricated. Includes wheel, acrylic sheet etc.

- IV. Subassembly kits may be purchased separately as wood-and-metal kits or metal only kits. They are broken down as follows: Dive brakes, ailerons, centersection drag spar, tail surfaces, wing center section, right wing, left wing, fuselage (including wheel and fiberglass parts)
- V. For those building from plans alone, parts may be purchased separately. For example spars are available as blanks, tapered blanks, or tapered laminated and jig drilled assemblies. Fiberglass parts are available separarely. If you desire a particular fabricated metal part or if you have difficulty locating particular pip pins or bolts, etc. contact us for prices.





Oxygen
bottle
installed
in wing
center
section
on
Bob Walters
Duster

DUSTER WING continued....

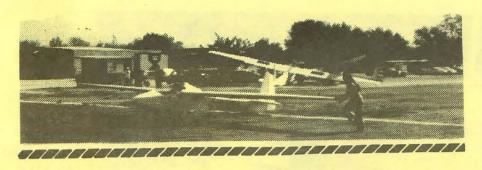
Skin the bottom of all three parts of the wing, installing the trailing edge at the same time, and give the whole thing two coats of varnish, being carefull to leave the glue areas clean.

Install the aileron bell cranks before covering, but the dive brake brackets should be drilled with the dive brakes in place for accurate alignment.

After FAA inspection, the top skin is installed. Block the wing right side up on the table, and with it level, skin the inner piece first (to the start of taper). At this point, it is still possible to twist the tip rib. Now block up the top rib with the correct degree of twist, and install the last skins. This will lack the twist into the wing permanently.

The top skins, of course, must be varnished before installation, leaving the areas free for glue. (See John Sinclair's marker idea in Issue #2:of the Dust Rag)

READ THE PLANS CAREFULLY !!
THINK ABOUT EACH STEP AND PLAN AHEAD !!!



THE LAST FIVE PERCENT by Bob Walters

I got to a point in my building where I thought I was 95% complete with only 5% to go. Take it from me, the last 5% is a killer. Somehow a thousand details come up right at the end. I would like to point out a few of them so you can be ready.

I was in doubt as how to finish my cockpit because I used Hughes Epoxy and had lots of ugly white glue lines. Krylon makes a spatter paint in an aerosol can which is like Zolatone. It's grey with flecks of black and white. You've seen it in automobile trunks etc. Well; it makes a great cockpit interior. It even makes it look stronger !! This stuff won't cover too well so I sprayed on a coat of grey primer first.

I taught myself to paint while finishing my Duster. I used an automotive acrylic lacquer over a compatible primer surfacer. This went on over my thin fiberglass coating described several issues ago. The lacquer chips easier than enamel but lacquer is easier to repair and rub out. The important thing is to insure you have a compatible primer-paint combination. Don't forget to use a face mask. I painted my numbers on using ready made stencils from Stits Aircraft Supply. Check your local airport. These stencils are well worth the money. Double check the numbers before you spray and make sure both sides read the same. I almost blew it at this point after a couple of afternoon beers.

I did the weight and balance as directed in the plans and came out very close to the target C.G. location with an empty weight of 393 lbs. It took 12 days from final FAA inspection until I got the paper work back, so allow for the delay.

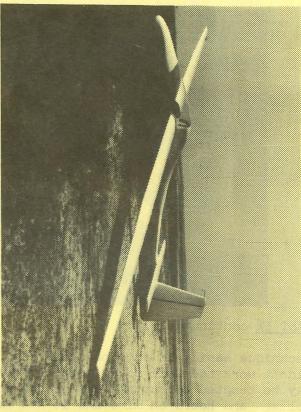
I put a lot of thought in the trailer and came up with what I think is a good design. I'll publish more details if enough readers are interested. I was able to rent an arc welder for \$25 a month and Al Nelson and I each made a trailer. We used 14" square tubing with .060 inch wall and cut it on a big radial arm saw using an abrasive blade. This works quite well and gave us nice joints. Neither one of us knew how to weld and we made some ugly welds at first. Get some one to show you how to move the rod if you can. You can pick up the



LAST 5% continued....

technique easily if someone shows you. The trial and error method didn't work too well so we asked a friend to give us a lesson. You may be tempted to cut corners on the trailer but I spent a few extra dollars and hours on mine and it was well worth it. The ship is easy to get on and off and tows well. It is also well protected from dents and dings and stores in my garage.







SUBSCRIPTION EXPIRED O

Volume I Issue #6

November-December 1973

THE DUST RAG

521 Rosemont

La Jolla, California

8292937203557 80 252 3677 233 5179 CARSWELL 4545

RUFUS

いいてのなから