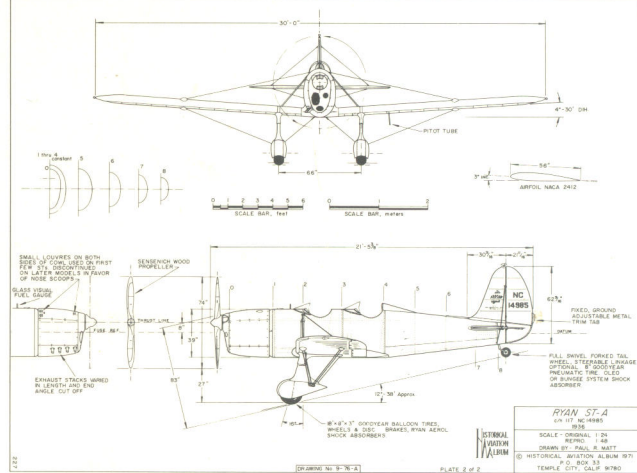
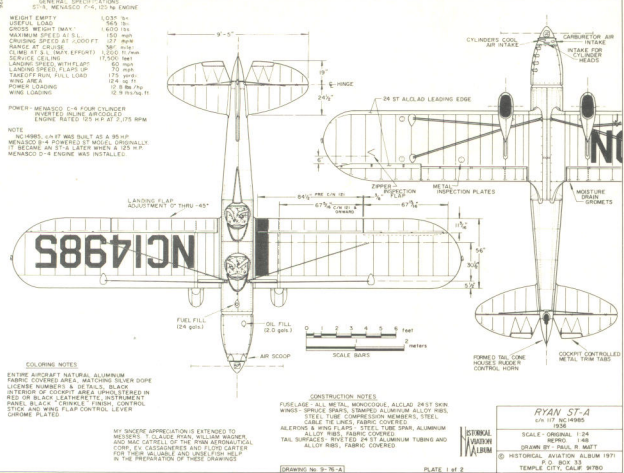


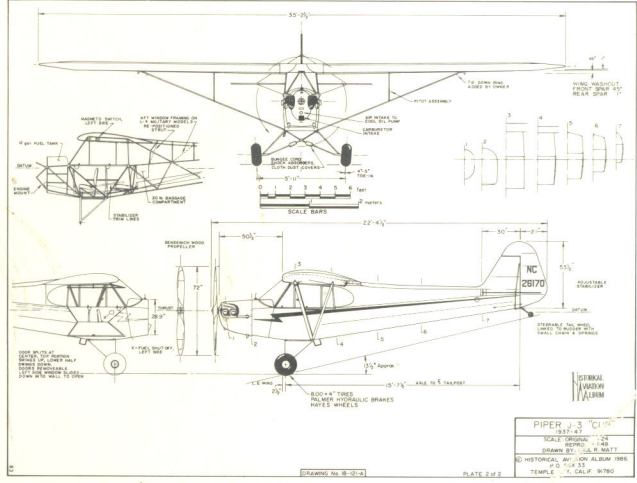
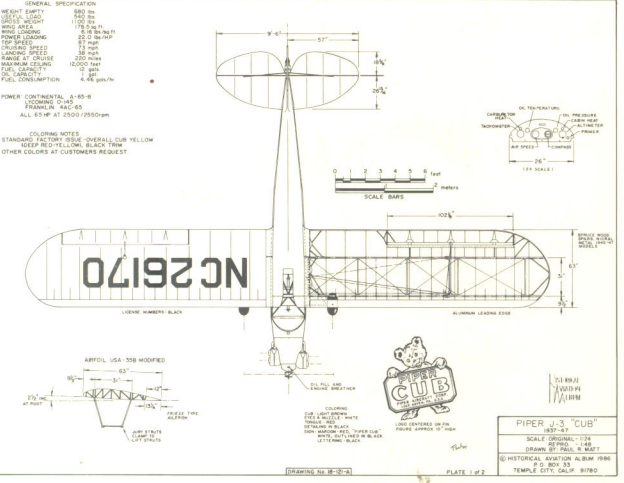
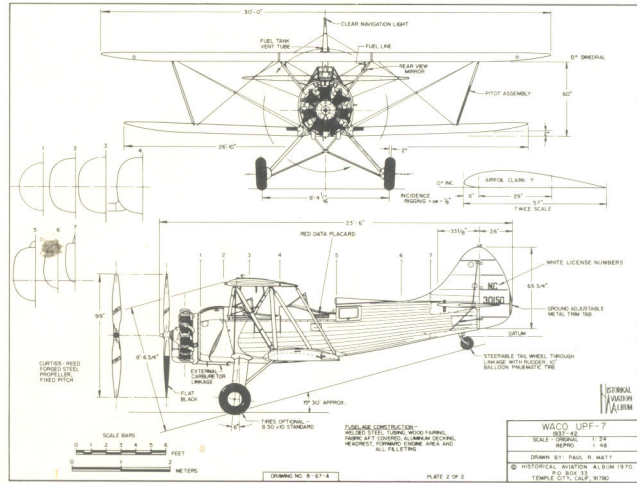
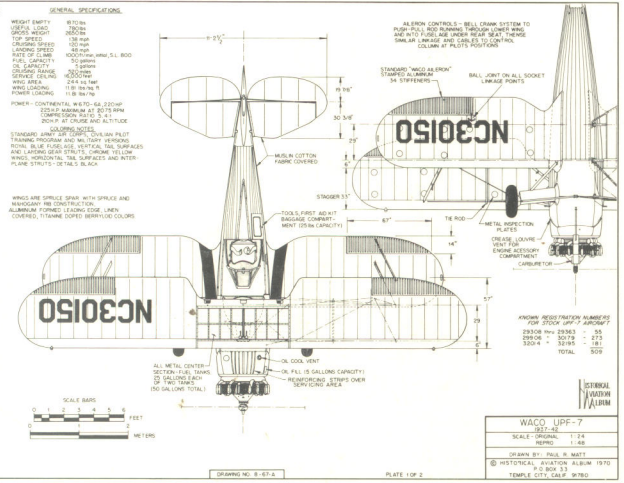
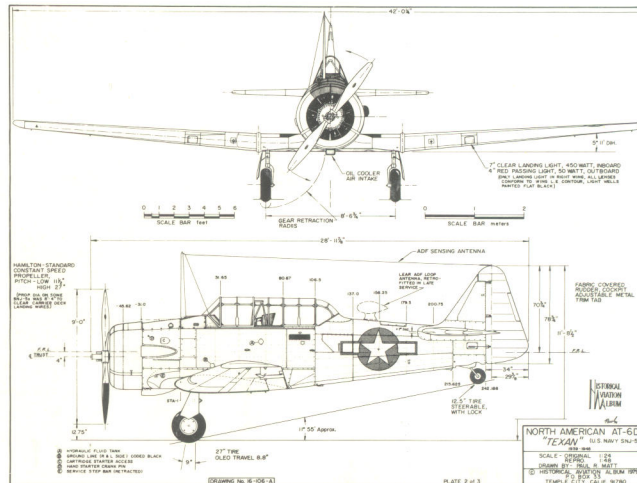


Paul Matt

Scale Airplane

Drawings

Volume 2



3-View Scale Drawings by Paul Matt

Volume 1 contains all airplanes listed from A through G. Volume 2 contains all airplanes listed from H through W. If you would like individual, large sheets of any of the below listed scale drawings, send request, catalog #, appropriate fee, and shipping charge of \$3.95. If you want your drawing rolled in a tube — add \$4.00. Clear, concise, uncluttered 3- and 4- view engineering presentations, in large (17" x 22"), easy to work with standard scales. Drawing is highly detailed and is an accurate working print with all dimensions, specifications, airfoils, cross sections, templates, and color scheme included. These drawings are part of the collection of the internationally acclaimed and highly honored *Historical Aviation Album*. All orders are folded unless a tube is ordered. Each has 2 to 6 large sheets. **Rolled in tube — add \$4.00 plus \$3.95 postage. Send to: Aviation Heritage, P.O. Box 665, Destin, FL 32540.**

DRAWING SCALE CODE

Last letter of catalog number indicates scale of drawing

A =	1:24 1/2" = 1'
B =	1:16 3/4" = 1'
C =	1:48 1/4" = 1'
D =	1:32 3/8" = 1'
E =	1:18 1 1/2" = 1'
F =	1:6 2" = 1'
G =	1:96 1/8" = 1'

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Thomas-Morse MB-3	(#4-28B, 2 shts.)	
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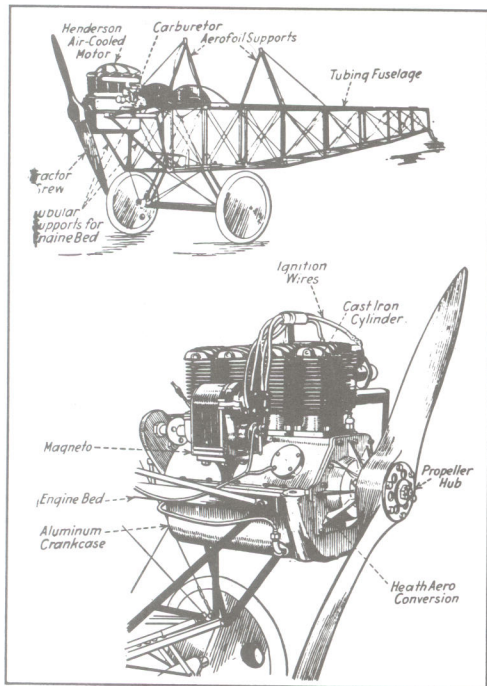
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Heath LNB-4 Parasol

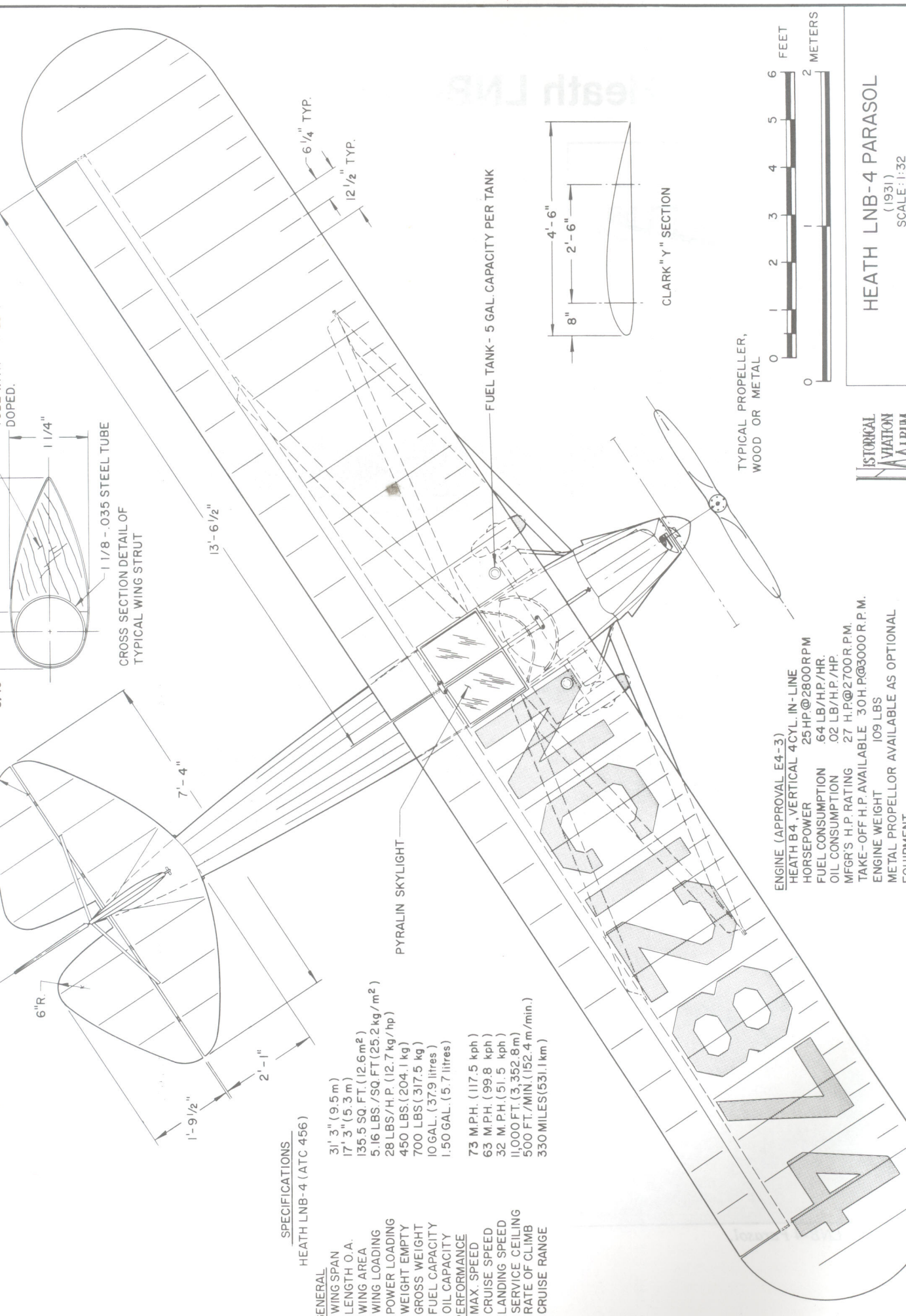


Heath Parasol on floats. Ed Heath by aircraft.

Heath Parasol and Henderson converted motorcycle engine installation.



Heath LNB-4 Parasol.

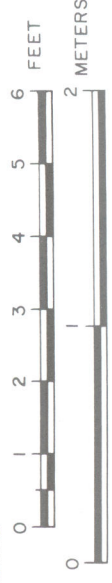


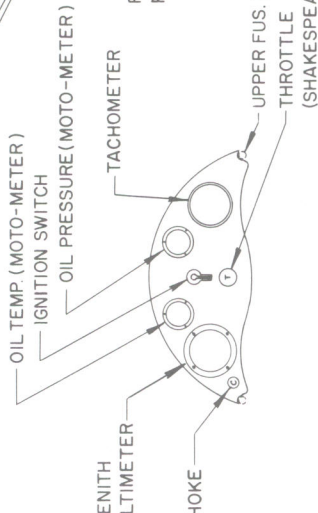
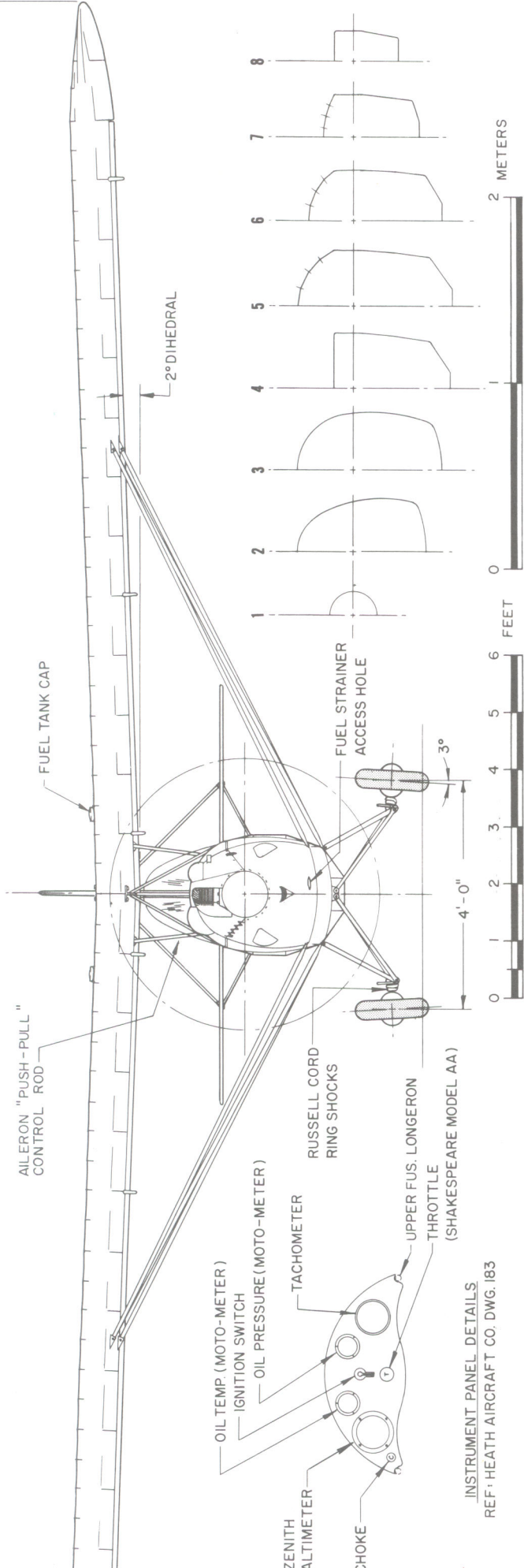
SPECIFICATIONS
HEATH LNB-4 (ATC 456)

- GENERAL
WING SPAN 31' 3" (9.5 m)
LENGTH O.A. 17' 3" (5.3 m)
WING AREA 135.5 SQ. FT. (12.6 m²)
WING LOADING 5.16 LBS./SQ. FT. (25.2 kg/m²)
POWER LOADING 28 LBS./H.P. (12.7 kg/hp)
WEIGHT EMPTY 450 LBS. (204.1 kg)
GROSS WEIGHT 700 LBS. (317.5 kg)
FUEL CAPACITY 10 GAL. (37.9 litres)
OIL CAPACITY 1.50 GAL. (5.7 litres)
PERFORMANCE
MAX. SPEED 73 M.P.H. (117.5 kph)
CRUISE SPEED 63 M.P.H. (99.8 kph)
LANDING SPEED 32 M.P.H. (51.5 kph)
SERVICE CEILING 11,000 FT. (3,352.8 m)
RATE OF CLIMB 500 FT./MIN. (152.4 m/min.)
CRUISE RANGE 330 MILES (531.1 km)

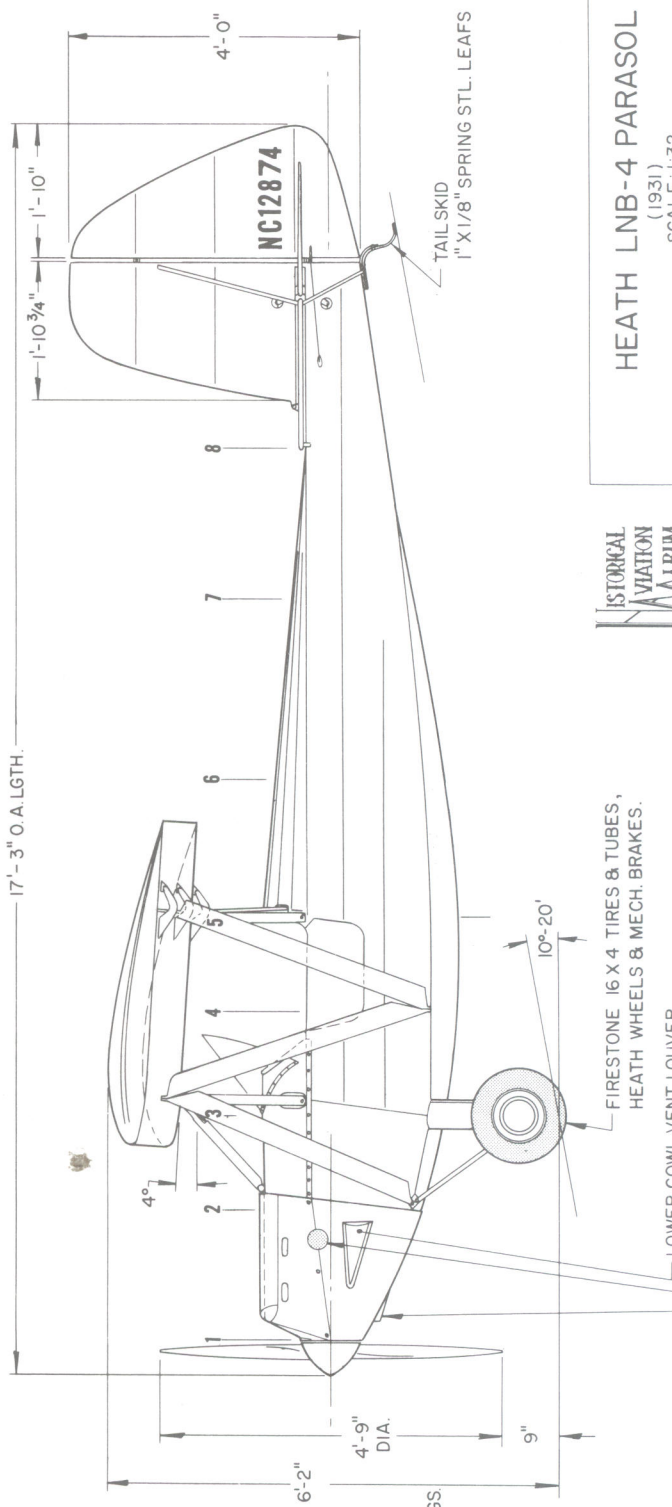
ENGINE (APPROVAL E4-3)
HEATH B4, VERTICAL 4CYL. IN-LINE
HORSEPOWER 25 HP @ 2800 RPM
FUEL CONSUMPTION 64 LB./HP./HR.
OIL CONSUMPTION .02 LB./HP./HP.
MFG'S H.P. RATING 27 H.P. @ 2700 R.P.M.
TAKE-OFF H.P. AVAILABLE 30 H.P. @ 3000 R.P.M.
ENGINE WEIGHT 109 LBS
METAL PROPELLOR AVAILABLE AS OPTIONAL EQUIPMENT

TYPICAL PROPELLER,
WOOD OR METAL





REF: HEATH AIRCRAFT CO. DWG. 183



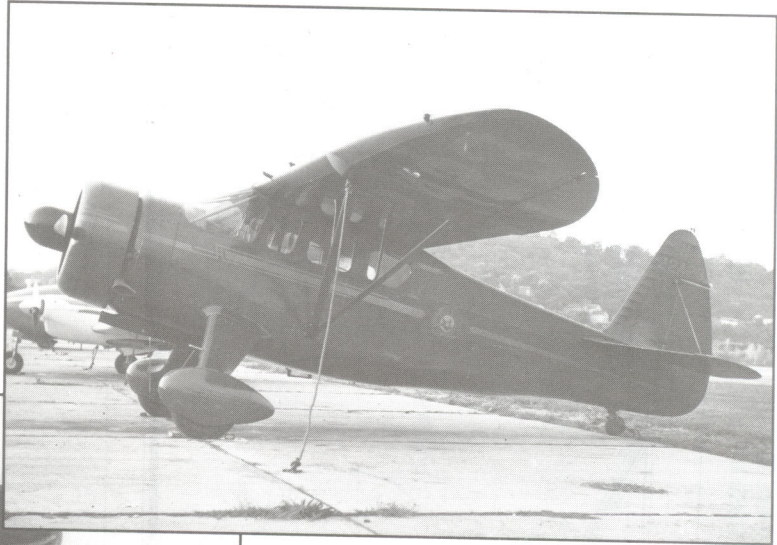
COLOR SCHEME

(FACTORY BUILT)
ENTIRE AIRCRAFT FINISHED IN LIGHT CREAM. REGISTRATION LETTERS, NUMERALS & OPTIONAL TRIM FINISH WERE BLACK.

KNOWN REGISTRATION NUMBERS OF FACTORY BUILT LNB-4 AIRCRAFT ARE LISTED AS FOLLOWS:
NC10739 - BELIEVED TO BE PROTOTYPE.
NC10740
NC12874 - AIRCRAFT SHOWN IN THESE DWGS.
NC13375
NC13646
NC15621

Howard DGA 15P

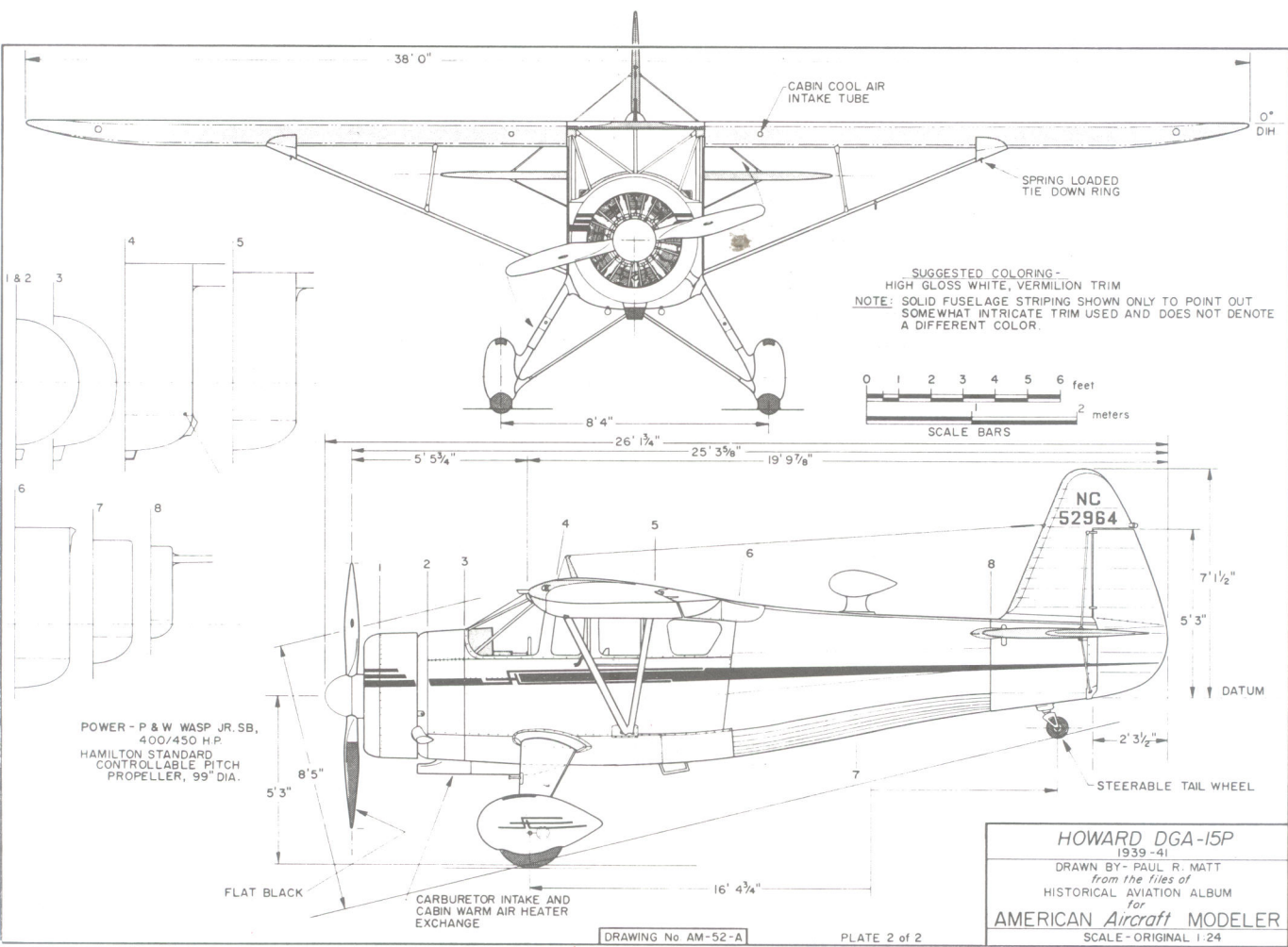
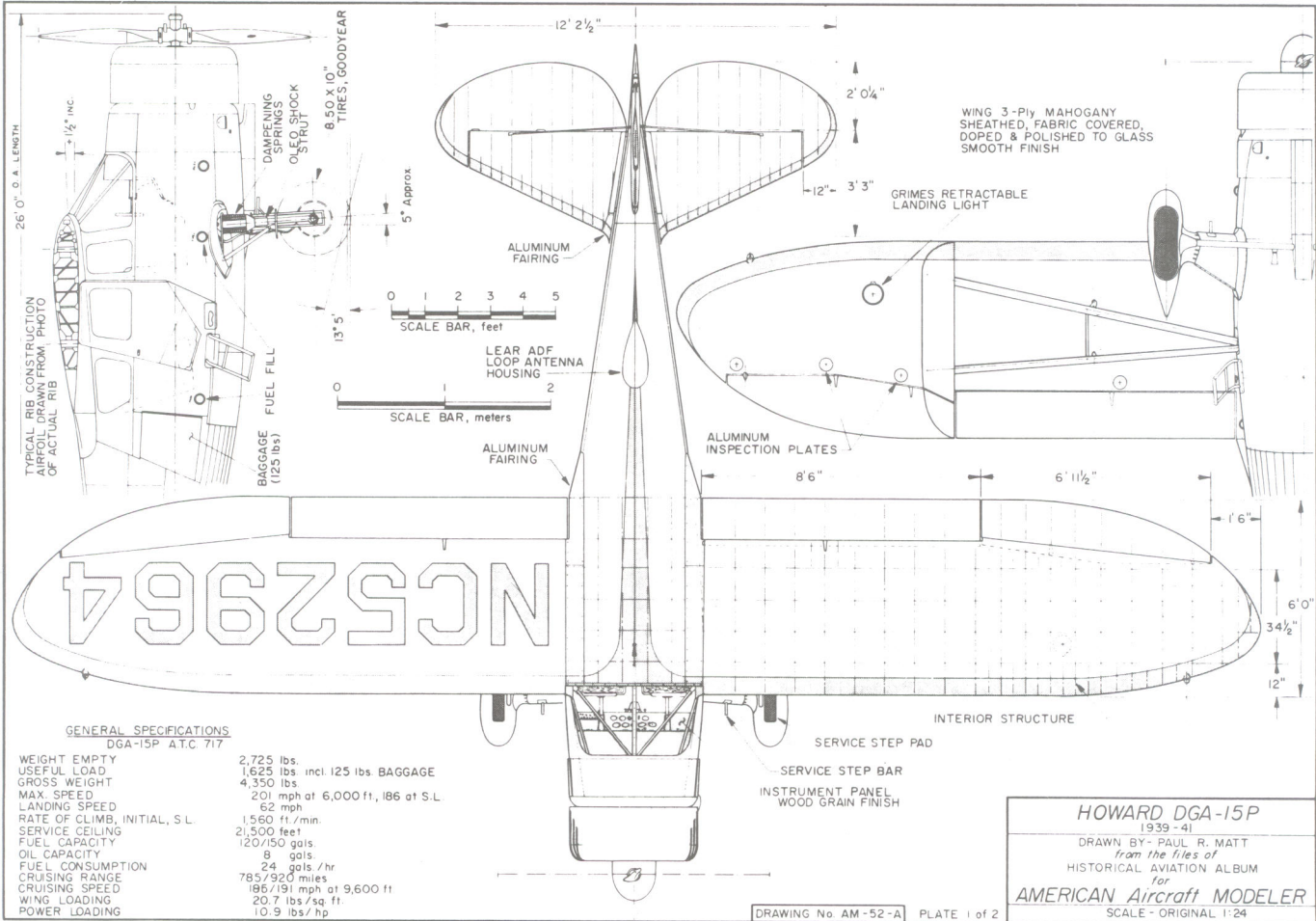
Dark blue and red DGA-15P of the Aeronautical Commission, State of West Virginia, visits Cincinnati, Ohio – 1956.



Howard DGA-15P Modified post WWII.

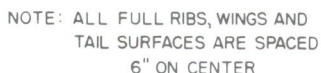


Howard DGA-15P.



EMPTY WEIGHT	635 lbs
USEFUL LOAD	265 lbs
GROSS WEIGHT	900 lbs
WING AREA (including ailerons)	67 sq. ft.
MAXIMUM SPEED	163.5 mph
LANDING SPEED	60 mph
CRUISING SPEED	150 mph
CRUISING RANGE	250 miles

85HP @ 1900RPM
90HP @ 2500RPM
95HP @ 2600RPM



COLORING NOTES:
AIRCRAFT ALL GLOSS WHITE
LETTERING AND DETAILS AS NOTED

HOWARD DGA-3 "PET"

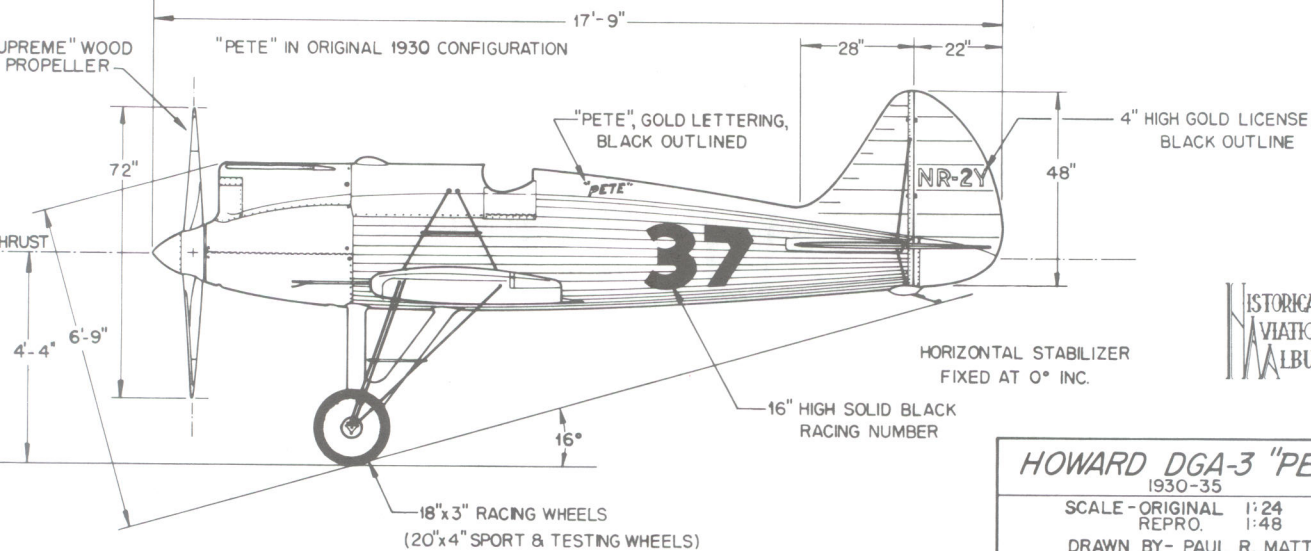
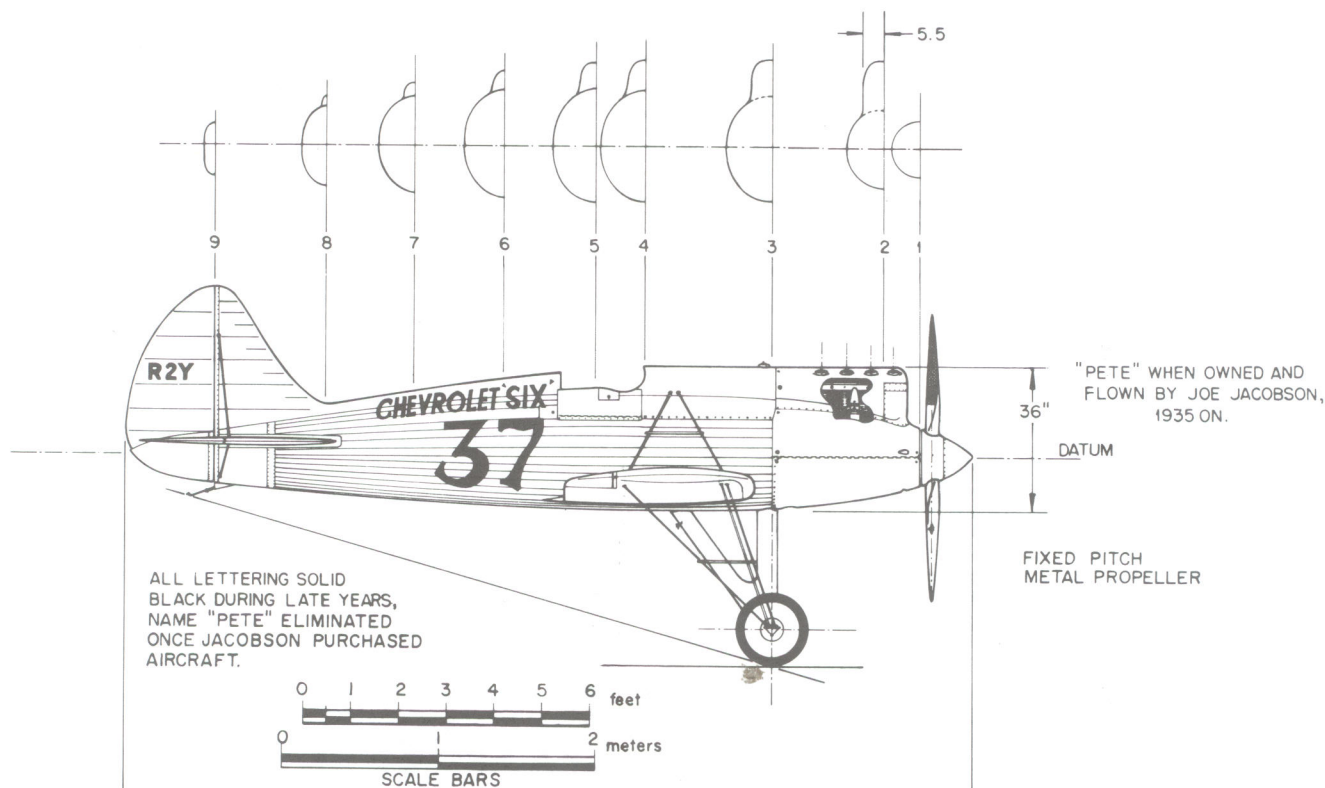
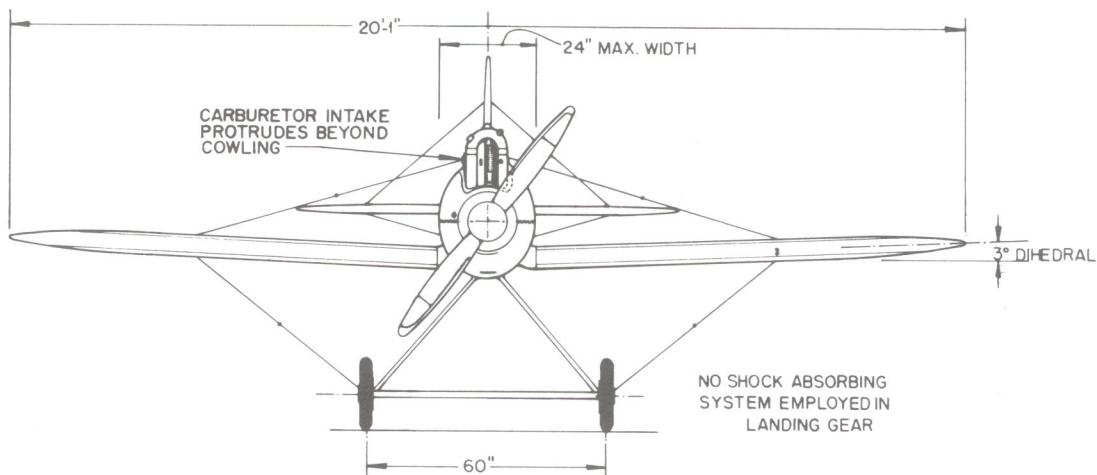
1930-35

SCALE - ORIGINAL	1:24
REPRO.	1:48

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HOWARD DGA-3 "PETE"
1930-35

SCALE - ORIGINAL 1:24
REPRO. 1:48

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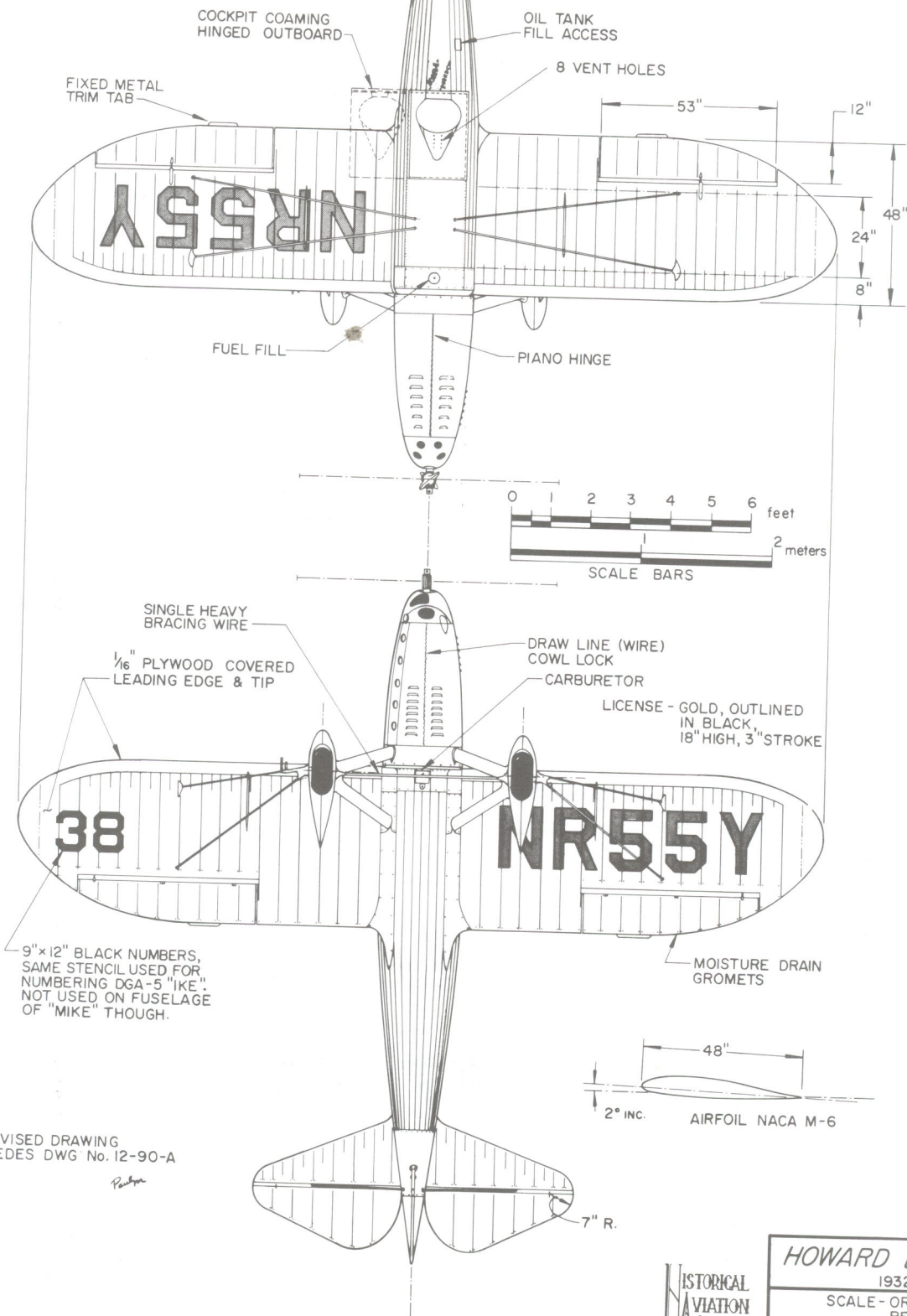
GENERAL SPECIFICATIONS

EMPTY WEIGHT 919 lbs.
USEFUL LOAD 275 lbs.
GROSS WEIGHT 1194 lbs.
MAXIMUM SPEED 241.6 mph
CRUISING SPEED 175 mph
LANDING SPEED 70 mph

POWER: MENASCO C-6-S "BUCCANEER"
6 CYLINDER INLINE ENGINE,
489 cu. in. DISPLACEMENT,
NORMAL RATING 160 HP
SUPERCHARGED TO APPROX.
200 HP FOR RACING.

COLORING NOTES

ENTIRE AIRCRAFT GLOSS WHITE,
LETTERING & DETAILS AS NOTED



NOTE:
THIS IS A REVISED DRAWING
AND SUPERSEDES DWG No. 12-90-A

Paul R. MA

GENERAL SPECIFICATIONS

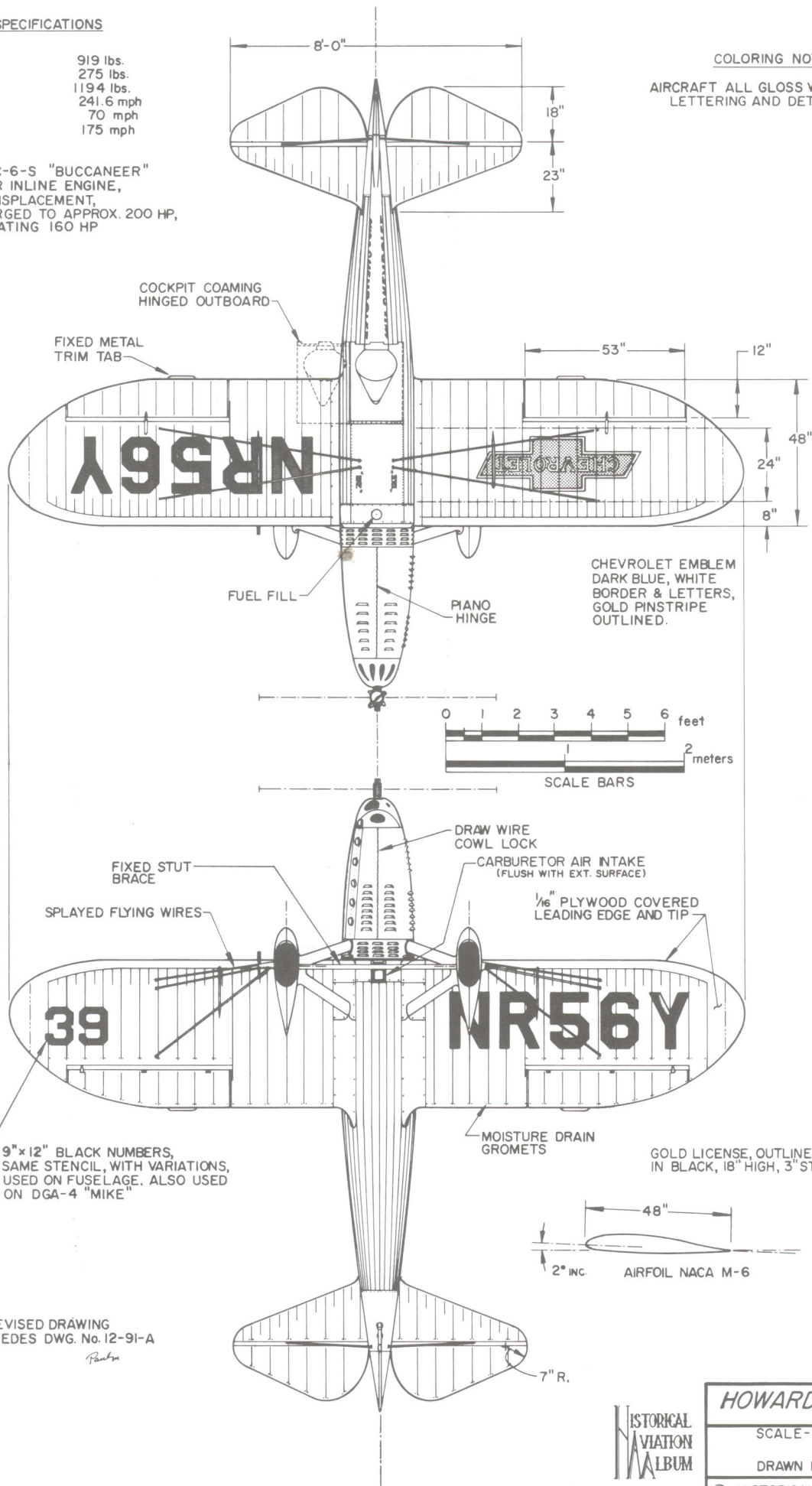
TY WEIGHT
FUL LOAD
SS WEIGHT
IMUM SPEED
DING SPEED
SING SPEED

919 lbs.
275 lbs.
1194 lbs.
241.6 mph
70 mph
175 mph

ER: MENASCO C-6-S "BUCCANEER"
6 CYLINDER INLINE ENGINE,
489 cu.in. DISPLACEMENT,
SUPERCHARGED TO APPROX. 200 HP,
NORMAL RATING 160 HP

COLORING NOTES

AIRCRAFT ALL GLOSS WHITE,
LETTERING AND DETAILS AS NOTED



NOTE:
THIS IS A REVISED DRAWING
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HOWARD DGA-5 "MIKE"

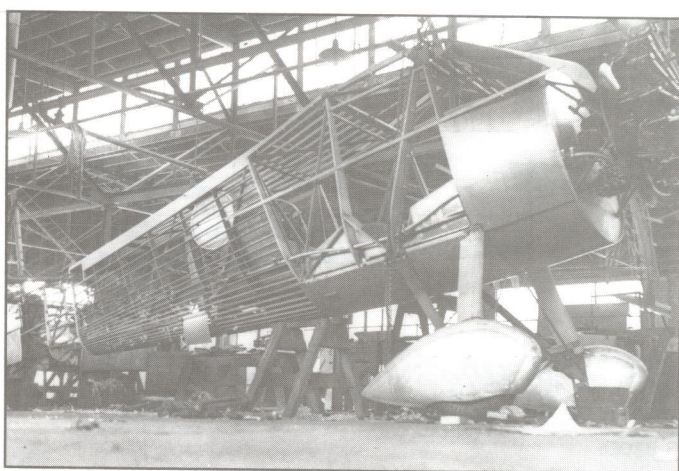
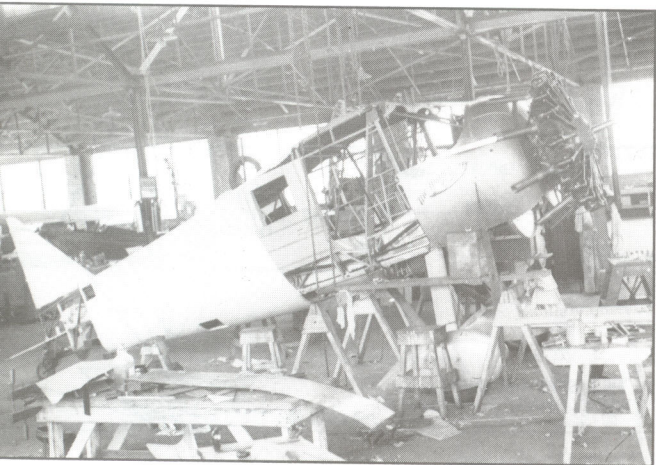
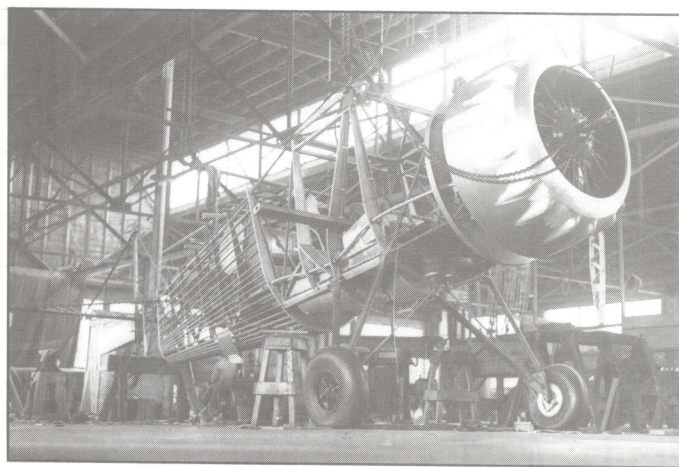
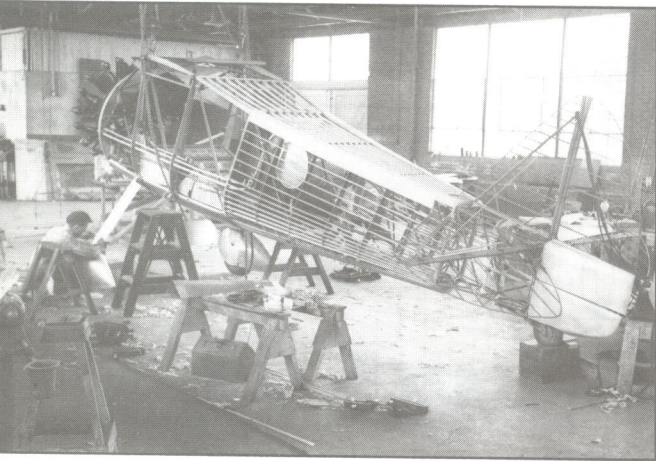
1932-37

SCALE - ORIGINAL 1:24
REPRO. 1:48

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P.O. BOX 33
TEMPLE CITY, CALIF. 91780

Howard DGA-6 Mister Mulligan



USEFUL LOAD
2700 lbs.
GROSS WEIGHT
5300 lbs.
WING AREA
150.7 sq. ft.
WING LOADING
39 lbs./sq. ft.
POWER LOADING
7.65 lbs./h.p.

MAXIMUM SPEED - 287 mph, S.L., 830 h.p., 100 OCTANE FUEL
(THOMPSON TROPHY RACE, 1935)

TOP SPEED, NORMAL, 251 mph, S.L., 550 h.p., 92 OCTANE
CRUISING SPEEDS, PULLING 550 h.p. & USING 87 OCT. FUEL

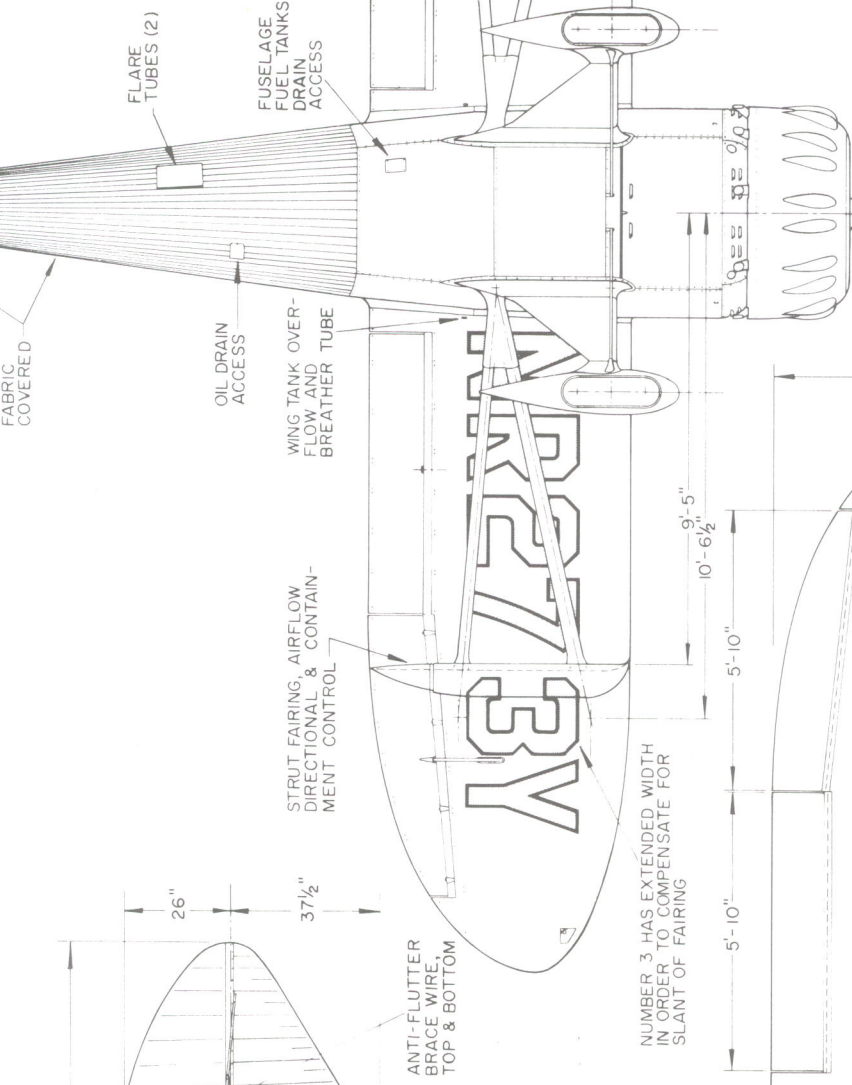
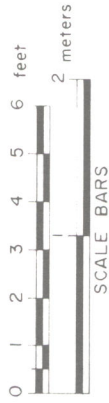
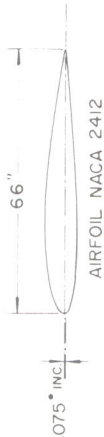
at 17,000 feet - 292 mph
at 11,000 feet - 262 mph
at Sea Level - 231 mph

LANDING SPEED, WITH FLAPS - 64 mph
RATE OF CLIMB, INITIAL, S.L. - 2800 ft./min.

(550 h.p., 92 OCTANE FUEL)
- 4450 ft./min.

(830 h.p., 100 OCTANE FUEL)

POWER - PRATT & WHITNEY WASP SE SPECIAL
s/n 5640, COMPRESSION RATIO 6:1
SUPERCHARGER RATIO 14:1
NORMAL RATING - 500 H.P. at 2200 R.P.M.
USING DESIGNATED 87 OCTANE FUEL



COLORING NOTES

ENTIRE AIRCRAFT - GLOSS WHITE
ALL LICENSE NUMBERS - GOLD,
OUTLINED IN BLACK
'MISTER MULLIGAN' NAME - GOLD,
OUTLINED IN BLACK
RACING NUMBER - SOLID BLACK
GULF OIL CO. INSIGNIA - ORANGE DISC,
OUTLINED IN DARK BLUE, GULF
DARK BLUE, SHADOW SHADED ON
RIGHT LOWER QUADRANTS IN
WHITE

HOWARD DGA-6
"MISTER MULLIGAN"
1934-36

SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY - PAUL R. MATT

MY SINCERE APPRECIATION IS
EXTENDED TO PETER M. BOWERS,
MRS. BEN. O. "MIKE" HOWARD, NICK
REZICH, TOM VERZY AND MAJOR
TRUMAN WEAVER USAF, FOR THEIR
PERSONAL TIME AND INTEREST IN
HELPING TO MAKE THESE DRAWINGS
AS AUTHENTIC AS POSSIBLE

ISTORICAL

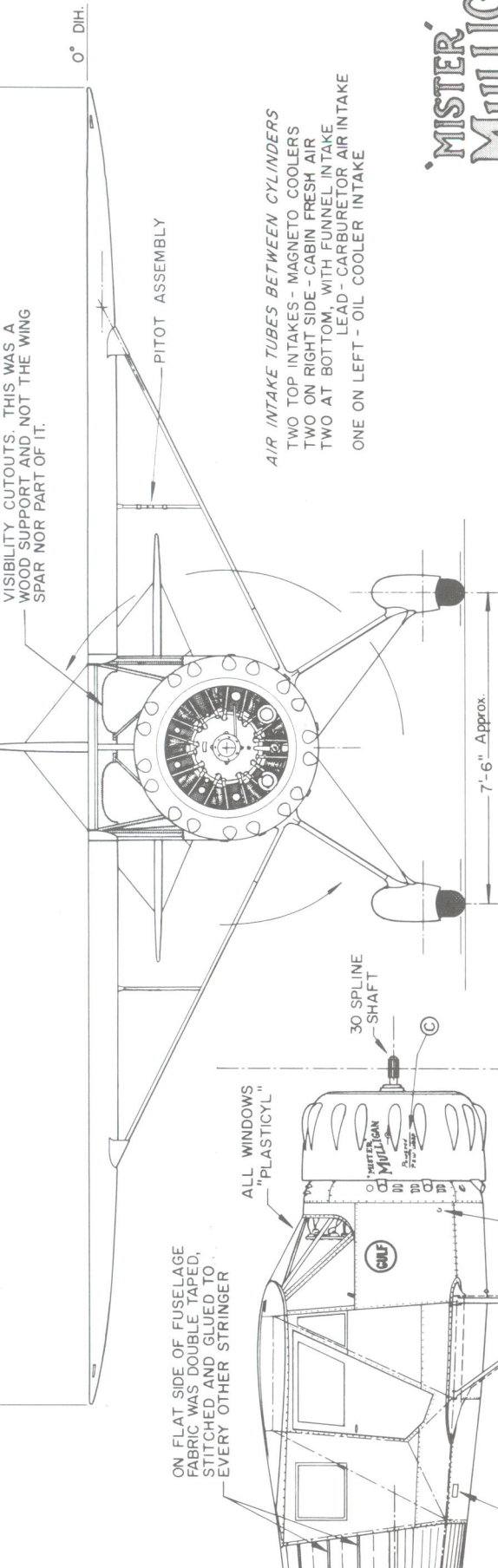


WING PANELS COVERED
WITH .0781 INCH 3-PLY
HASKELITE SPRUCE
PLYWOOD, THEN COVERED
WITH DOPED FABRIC

FUEL FILL CAP
FLUSH WITH SURFACE
OF WING, 25 GALS. CAP
IN EACH WING, 92 OCT.
FUEL

METAL COVERING

ENGINE COWL BUILT
IN ONE PIECE
PROPELLER WAS
REVOLVED



ON FLAT SIDE OF FUSELAGE
FABRIC WAS DOUBLE TAPED,
STITCHED AND GLUED TO
EVERY OTHER STRINGER

ALL WINDOWS
"PLASTICYL"

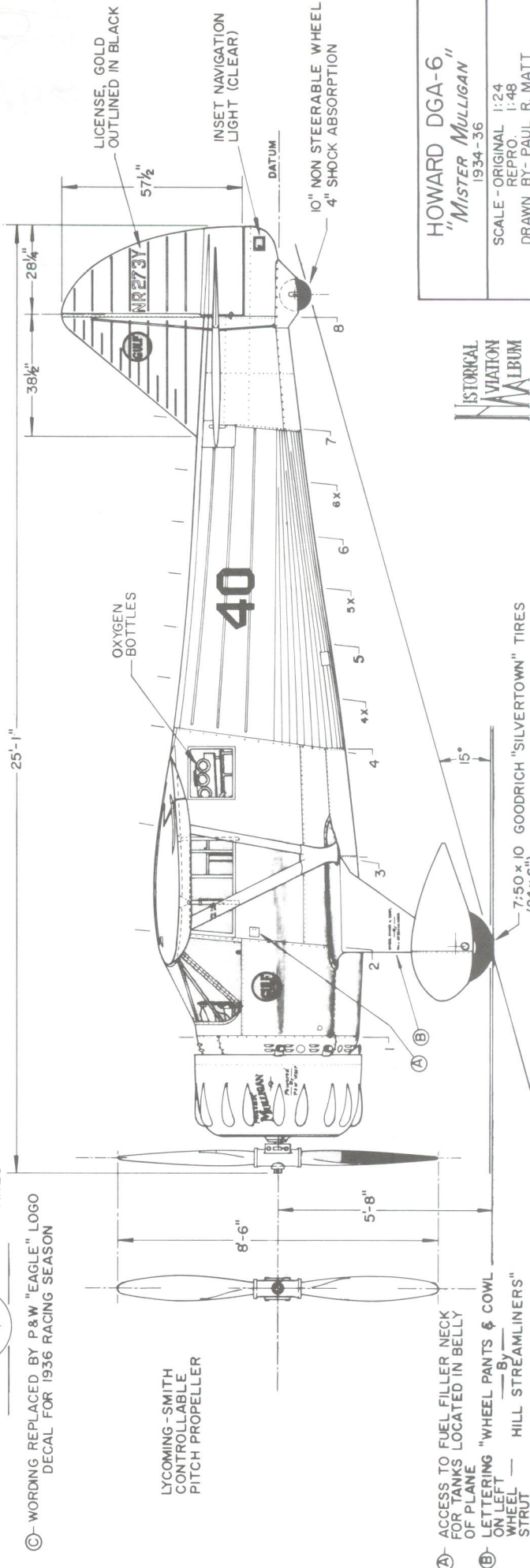
AIR INTAKE TUBES BETWEEN CYLINDERS
TWO TOP INTAKES - MAGNETO COOLERS
TWO ON RIGHT SIDE - CABIN FRESH AIR
TWO AT BOTTOM, WITH FUNNEL INTAKE
LEAD - CARBURETOR AIR INTAKE
ONE ON LEFT - OIL COOLER INTAKE

'MISTER' MULLIGAN

STYLE AND PLACEMENT
OF NAME ON ENGINE COWL:
GOLD, OUTLINED IN BLACK.
SCALE, 4 X SCALE OF G.A.



© WORDING REPLACED BY P&W "EAGLE" LOGO
DECAL FOR 1936 RACING SEASON



25'-1"

38 1/2"

28 1/4"

57 1/2"

LICENSE, GOLD
OUTLINED IN BLACK

INSET NAVIGATION
LIGHT (CLEAR)

DATUM

10" NON STEERABLE WHEEL
4" SHOCK ABSORPTION

A- ACCESS TO FUEL FILLER NECK
FOR TANKS LOCATED IN BELLY
OF PLANE
B- LETTERING "WHEEL PANTS & COWL"
ON LEFT WHEEL - HILL STREAMLINERS"
WHEEL - HILL STREAMLINERS"

HOWARD DGA-6
"MISTER MULLIGAN"
1934-36

SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY- PAUL R. MATT

HISTORICAL
AVIATION
MUSEUM

"MISTER MULLIGAN" WING TIP LAYOUT
ON 6 INCH INCREMENTS

DRAG WIRES WERE USED IN
CONSTRUCTION OF WING IN CONJUNC-
TION WITH THE .0781 INCH 3-PLY
ELITE SPRUCE PLYWOOD.
ASSEMBLY WAS THEN COVERED
FABRIC, DOPED, SANDED AND
PAINTED TO A SMOOTH FINISH

FLAP OPERATING
TORQUE TUBE

FUEL TANK
SUPPORT
MEMBERS
(WOOD)

FUEL TANK
GAL. CAP.
OCT. FUEL

AILERON
PUSH-PULL TUBE

STEEL COMPRESSION
TUBES

DRAG WIRES

OVERHEAD METAL PLATE
FOR STABILIZER ADJUSTMENT
CRANK

IN CONSTRUCTION ALLOWANCE
SHOULD BE GIVEN FOR TUBE
THICKNESS, FITTINGS & FORMERS
IN ORDER TO ATTAIN EXTERIOR SHAPE

SHEET
METAL

PLYWOOD
FORMERS
(TYPICAL)

STRUCTURE ON
RIGHT SIDE ONLY
THIS TUBE OMITTED
ON RIGHT SIDE TO
ALLOW FOR CABIN DOOR

EXACT DIMENSIONS CANNOT BE GIVEN ON
INTERIOR STRUCTURES AS THEY ARE NO LONGER
AVAILABLE. DRAWINGS ARE RECONSTRUCTED
FROM SURVIVING TECHNICAL DATA, PHOTOS
AND PERSONAL REMEMBRANCES OF THOSE
MORE CLOSELY ASSOCIATED WITH THE
ACTUAL AIRCRAFT

INTERIOR OF CABIN - NATURAL MAHOGANY PLY-VENEER
FLOORBOARD - PAINTED DARK GRAY

BRAKE LEVER
(MECHANICAL)

SHADED AREA,
LONG RANGE FUEL TANK
(BENDIX RACE)

WING FLAP
LEVER

RADIO &
HEADPHONES

PROPOSED
REAR SEATING

DATUM

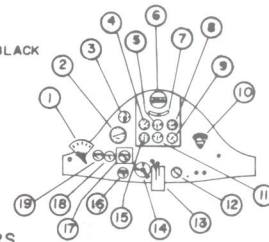
LANDING GEAR SHOCK
ABSORBERS, RUBBER
DISCS IN PAIRS,
IN COMPRESSION

FUSELAGE FUEL
TANKS, 87 OCTANE,
100 GALS. TOTAL CAP.

BAGGAGE COMPARTMENT

INTER-CONNECT
PIPING

INSTRUMENT PANEL, BLACK
CENTER FLIGHT
INSTRUMENT SQUARE,
CRINKLE FINISH



1. PROP. PITCH CONTROL INDEX
2. ARTIFICIAL HORIZON
3. CLOCK
4. AIRSPEED
5. TURN INDICATOR
6. COMPASS
7. BALL & BANK
8. RATE OF CLIMB
9. TACHOMETER
10. ENGINE PRIM
11. THROTTLE & MIXTURE C
12. IGNITION SW
13. ALTITUDE
14. MULTI POSIT
15. ON ENGINE H
16. TEMPERATU
17. OIL PRESSUR
18. OIL TEMPERA
19. OIL TEMPERA

INTERMEDIATE AUXILIARY
FORMERS

TAIL WHEEL SHOCK ASSEMBLY,
RUBBER DISCS.

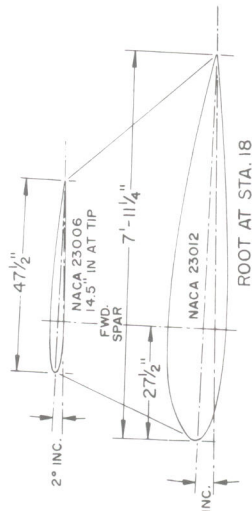
HOWARD DGA-6
"MISTER MULLIGAN"
1934-36

SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY- PAUL R. MATT

© HISTORICAL AVIATION ALBUM
P. O. BOX 33

WEIGHT EMPTY 4097.40 lbs.
TOP SPEED, APPROX. 330 mph
WING AREA 191 sq. ft.
WING LOADING 32.5 lbs./sq. ft.
POWER LOADING 8.86 lbs./H.P.
FUEL CAPACITY 280 gals.
OIL CAPACITY 30 gals.

POWER: PRATT & WHITNEY SA5-G (R-1535),
TWIN WASP Jr., s/n 27. (Redesignated s/n 281)
700 HP at 2500rpm. PROPELLER REDUCTION
GEARING 4:3. POWER BOOSTED TO APPROX.
900 HP THROUGH "DOPED" FUEL AND
CARBURETION ADJUSTMENTS.



FUSELAGE AND FIXED TAIL SURFACES - ALUMINUM,
FUSELAGE PROPER - FLAT SHEET, BUTT JOINED,
FLUSH, SHAVED, BURNISHED & POLISHED RIVETING
CONTROL SURFACES - METAL FRAMEWORK, FABRIC
COVERED, WING FLAPS - WOOD FRAMEWORK,
PLYWOOD COVERED.
WINGS - WOOD SPARS AND RIBS, PLYWOOD COVERED,
SHAVED, CLOTH COVERED, DOPED AND POLISHED.
LANDING GEAR - ALUMINUM BOX CONSTRUCTION,
RIGID EXCEPT FOR SHORT 5" SHOCK STRUT AT
WHEEL AXEL.

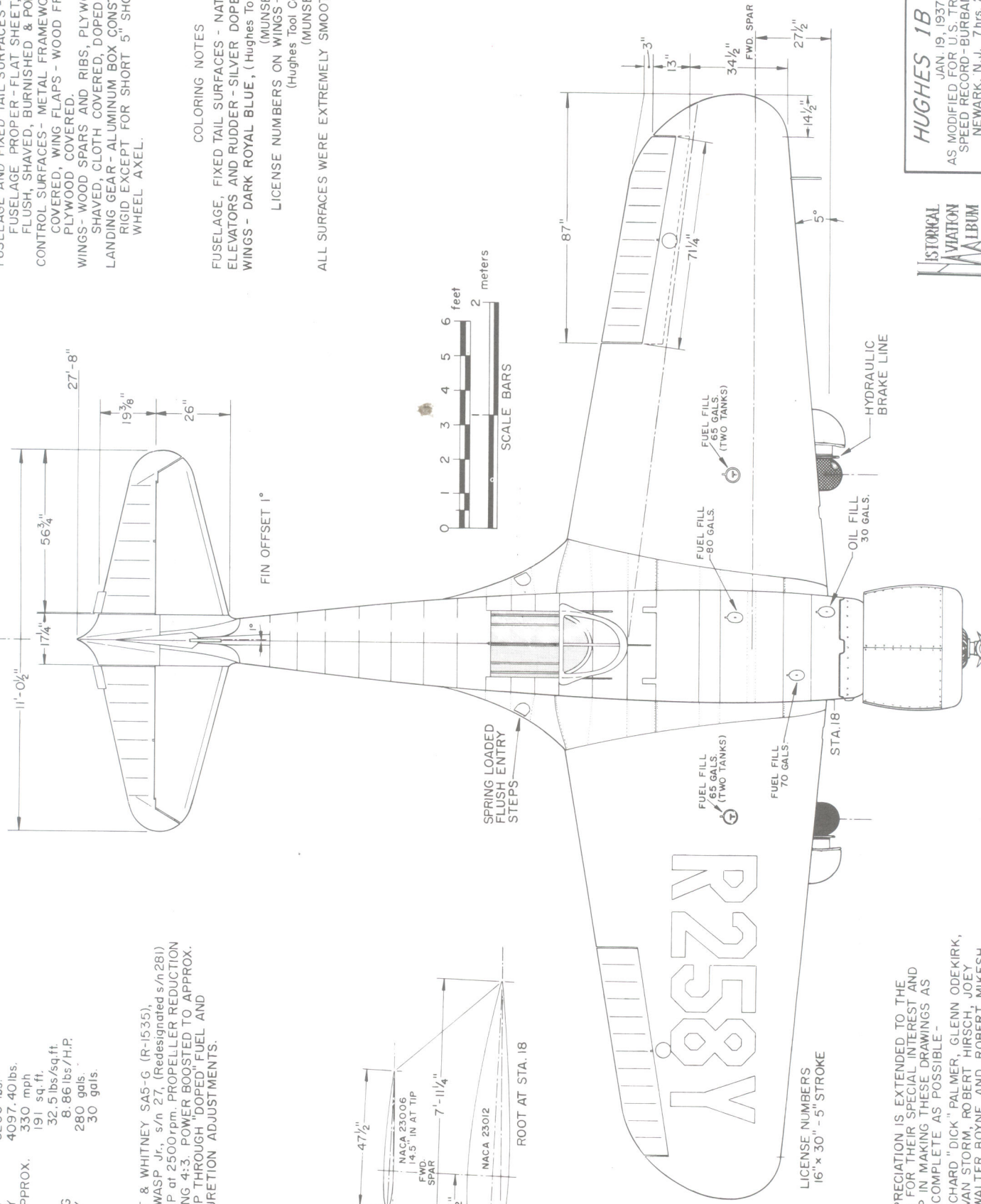
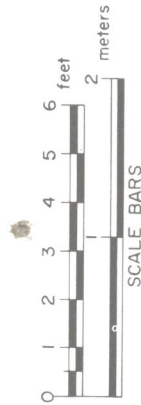
COLORING NOTES

FUSELAGE, FIXED TAIL SURFACES - NATURAL ALUMINUM.
ELEVATORS AND RUDDER - SILVER DOPED.

WINGS - DARK ROYAL BLUE, (Hughes Tool Co. blue)

LICENSE NUMBERS ON WINGS - DEEP YELLOW,
(MUNSELL 5PB 2/4)
(Hughes Tool Co. yellow)

(MUNSELL 7.5 Y 8/12)
ALL SURFACES WERE EXTREMELY SMOOTH IN FINISH.



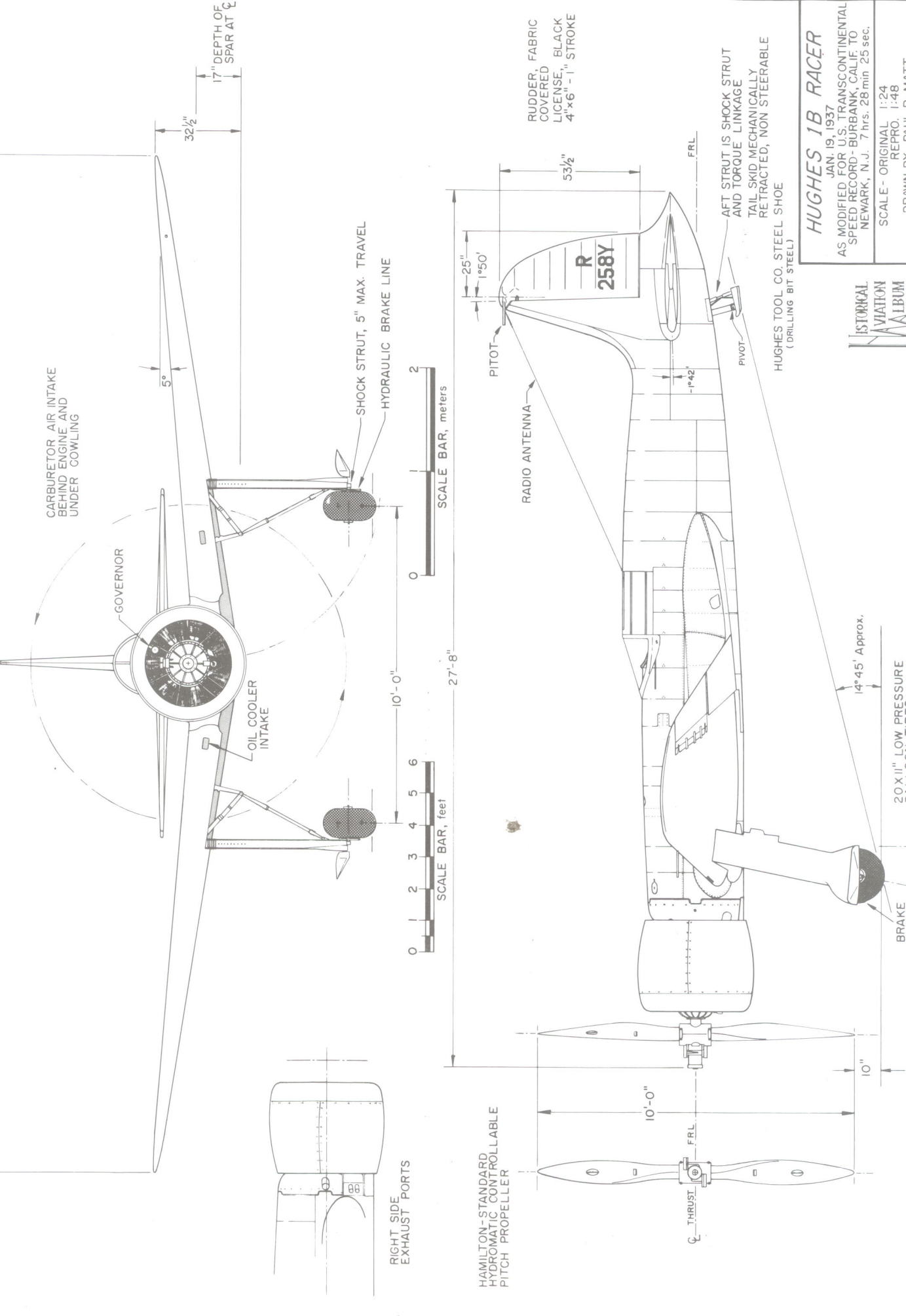
HISTORICAL
AVIATION
MUSEUM

HUGHES 1B RACER

JAN. 19, 1937

AS MODIFIED FOR U.S. TRANSCONTINENTAL
SPEED RECORD - BURBANK, CALIF. TO
NEWARK, N.J. 7 hrs. 28 min. 25 sec.

MY SINCERE APPRECIATION IS EXTENDED TO THE
FOLLOWING MEN FOR THEIR SPECIAL INTEREST AND
PERSONAL HELP IN MAKING THESE DRAWINGS AS
ACCURATE AND COMPLETE AS POSSIBLE -
MESSRS. RICHARD "DICK" PALMER, GLENN ODEKIRK,
EARL MARTYN, VAN STORM, ROBERT HIRSCH, JOEY
MINLEIB, AND WALTER ROYNE AND ROBERT MIKESH



ELEVATORS,
FABRIC COVERED
FIXED METAL
TRIM TABS

SPRING LOADED
FAIRING DOORS

FLUSH HOLE,
RELIEF TUBE

FLAPS MECHANICALLY OPERATED
BY LEVER IN COCKPIT,
DIRECT TORQUE LINKAGE

AILERON,
FABRIC COVERED

EMERGENCY FUEL
DUMP PORTS, ALL TANKS,
COLD SOLDERED PLATES.

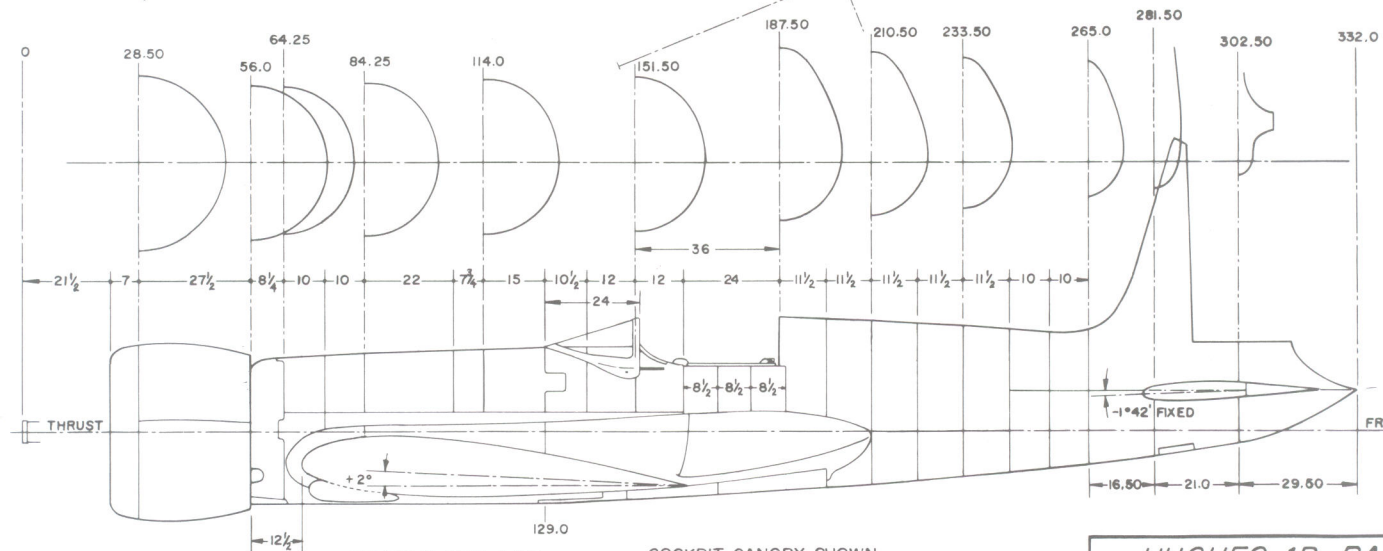
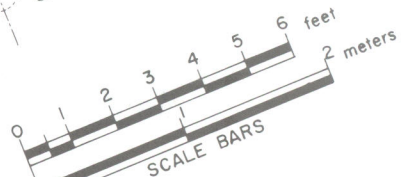
FWD. SPAR

INSET, FLUSH
INSPECTION PANEL

COLOR LINE—
BLUE OUTBOARD

3 - 1/4" GAPS
RETRACTION
ACTIVATING
ARMS

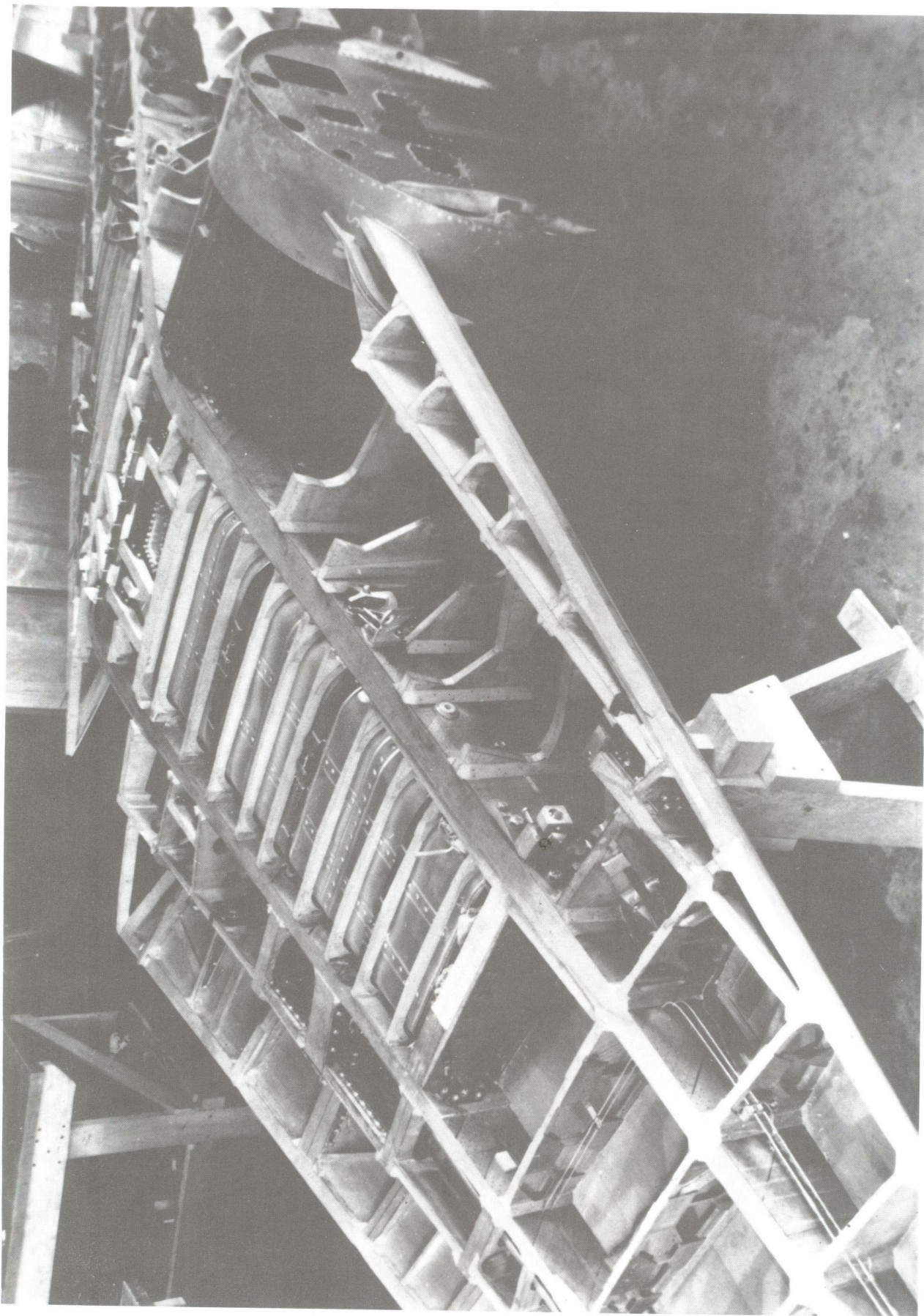
PITOT



ALL DIMENSIONS IN PROFILE VIEW ARE INCHES

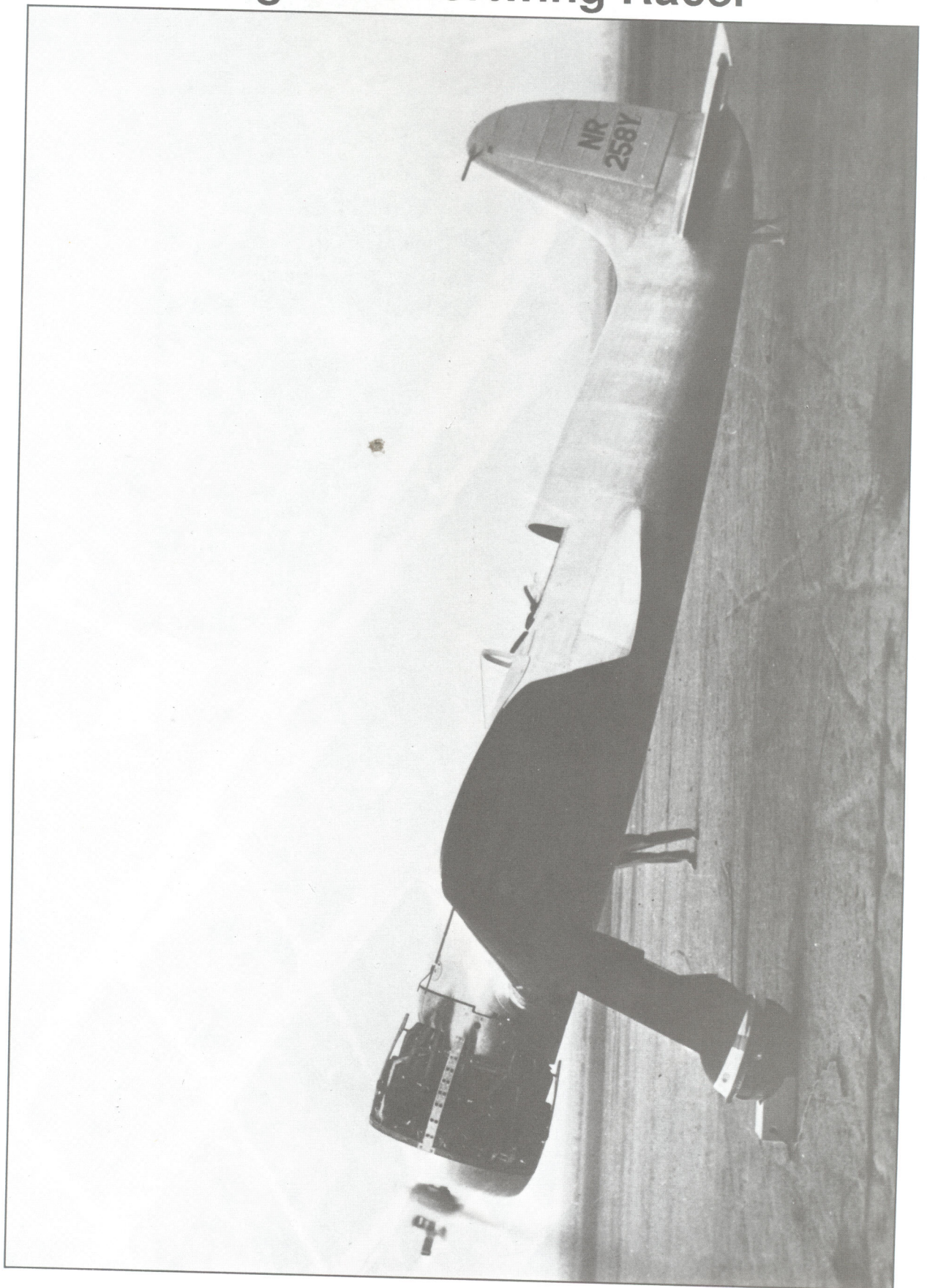
HISTORICAL
AVIATION
ALBUM

HUGHES 1B RA
JAN. 19, 1937
AS MODIFIED FOR U.S. TRANSCONTINENTAL
SPEED RECORD - BURBANK, CA
NEWARK, N.J. 7 hrs. 28 min.
SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY - PAUL R. MATTHEWS
© HISTORICAL AVIATION ALBUM



Hughes 1B Racer, "Longwing" under construction in 1937.

Hughes Shortwing Racer



OWER LOADING

7.85 lbs./H.P.

FUEL CAPACITY

250 gals.

OIL CAPACITY

30 gals.

OWER: PRATT & WHITNEY SA1-G (R-1535).

TWIN WASP Jr., s/n 22, 700 HP at 2500 rpm

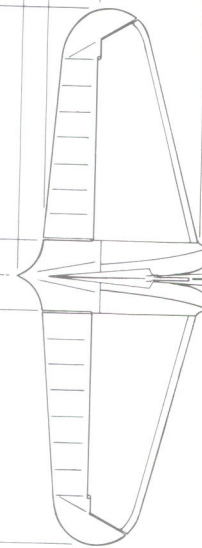
PROPELLER REDUCTION GEARING 4:3

POWER BOOSTED TO APPROX. 900 HP

THROUGH "DOPED" FUEL AND

CARBURETION ADJUSTMENTS.

27'-0" LINE



FIN OFFSET 1°

COLORING NOTES

FUSELAGE, FIXED TAIL SURFACES - NATURAL ALUMINUM.
ELEVATORS AND RUDDER - SILVER DOPED.

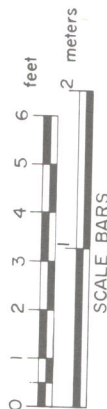
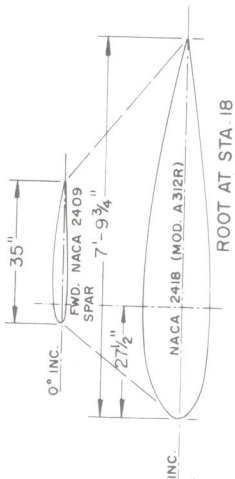
WINGS - DARK ROYAL BLUE, (Hughes Tool Co. blue)

LICENSE NUMBERS ON WINGS - DEEP YELLOW,
(Hughes Tool Co. yellow)

(MUNSELL 5PB 2/4)

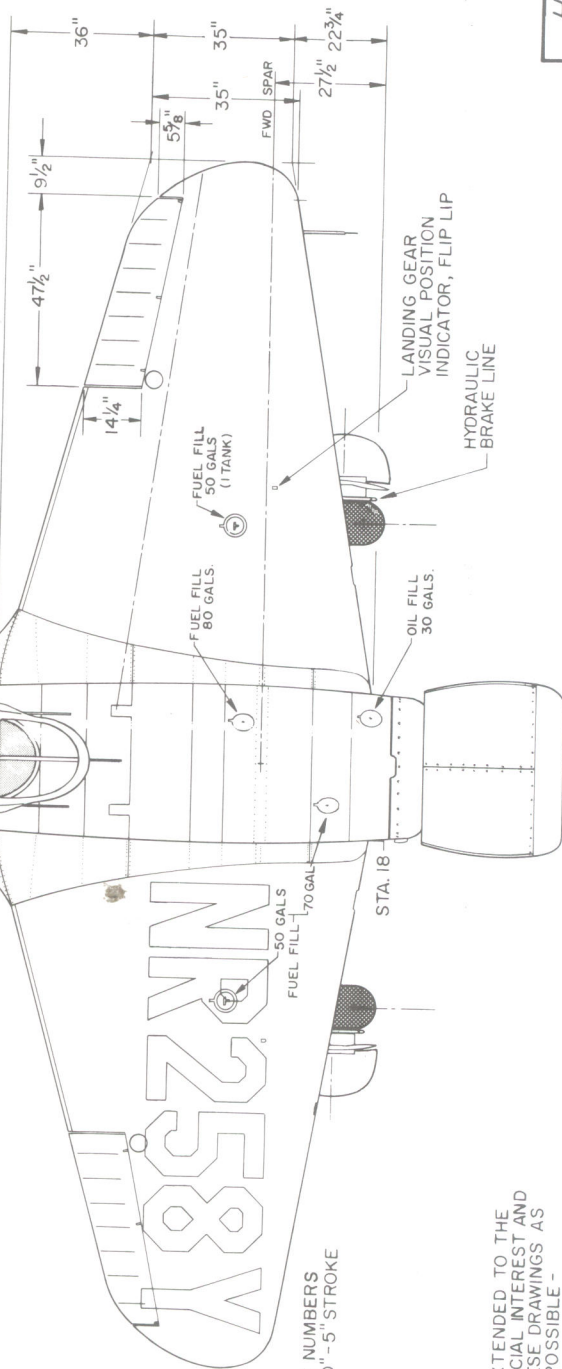
(MUNSELL 7.5 Y 8/12)

ALL SURFACES WERE EXTREMELY SMOOTH IN FINISH.



SPRING LOADED
FLUSH ENTRY

ROOT AT STA. 18



LICENSE NUMBERS
16" x 30" - 5" STROKE

SINCERE APPRECIATION IS EXTENDED TO THE
LOWING MEN FOR THEIR SPECIAL INTEREST AND
SONAL HELP IN MAKING THESE DRAWINGS AS
URATE AND COMPLETE AS POSSIBLE -

MESSRS. RICHARD "DICK" PALMER, GLENN ODEKIRK,
L. MARTYN, VAN STORM, ROBERT HIRSCH, JOEY
LEIB, AND WALTER BOYNE AND ROBERT MIKESH
HE NATIONAL AIR AND SPACE MUSEUM.

Robin

HISTORICAL
AVIATION
ALBUM

HUGHES 1B RACER

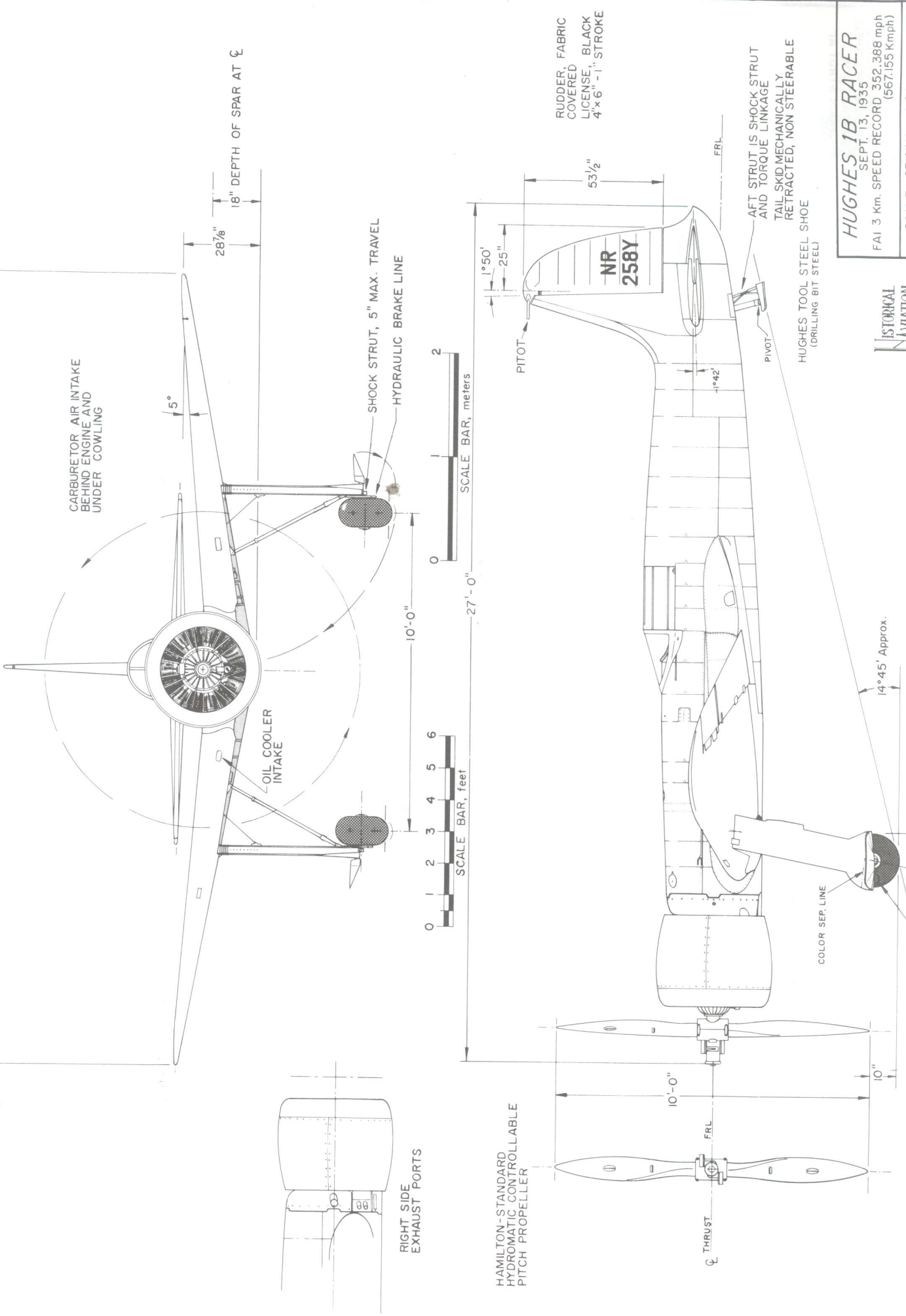
SEPT. 13, 1935

FAI 3 Km. SPEED RECORD 352.388 mph
(567.155 Km/h)

SCALE - ORIGINAL 1:24
REPRO. 1:48

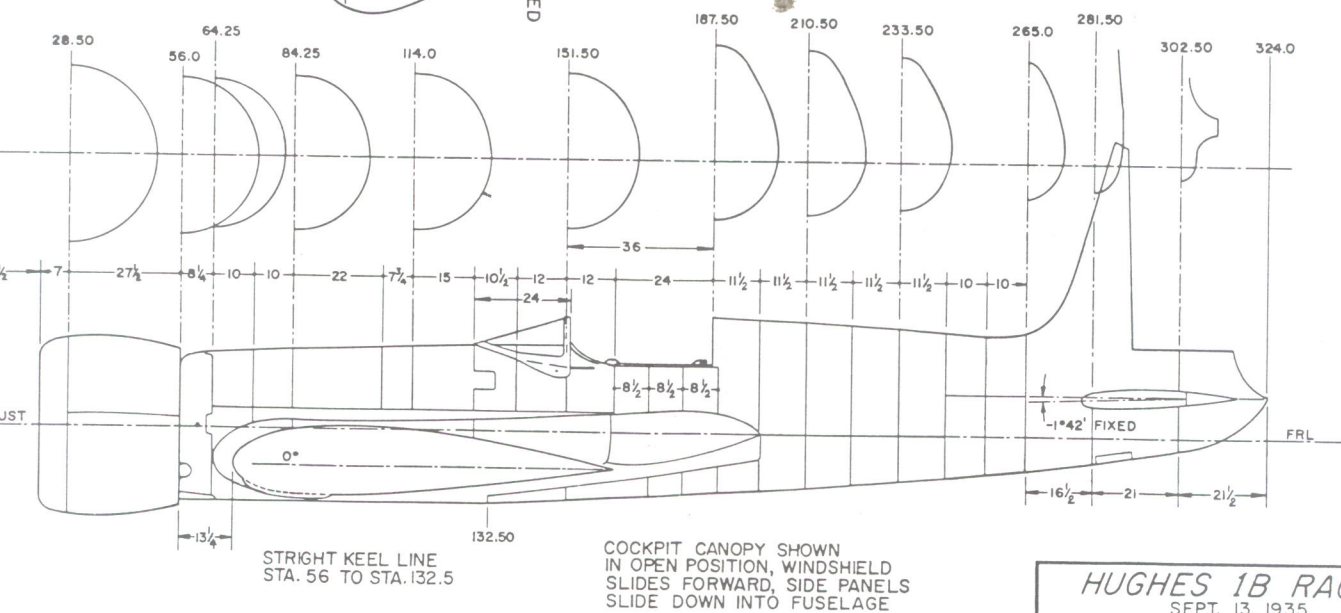
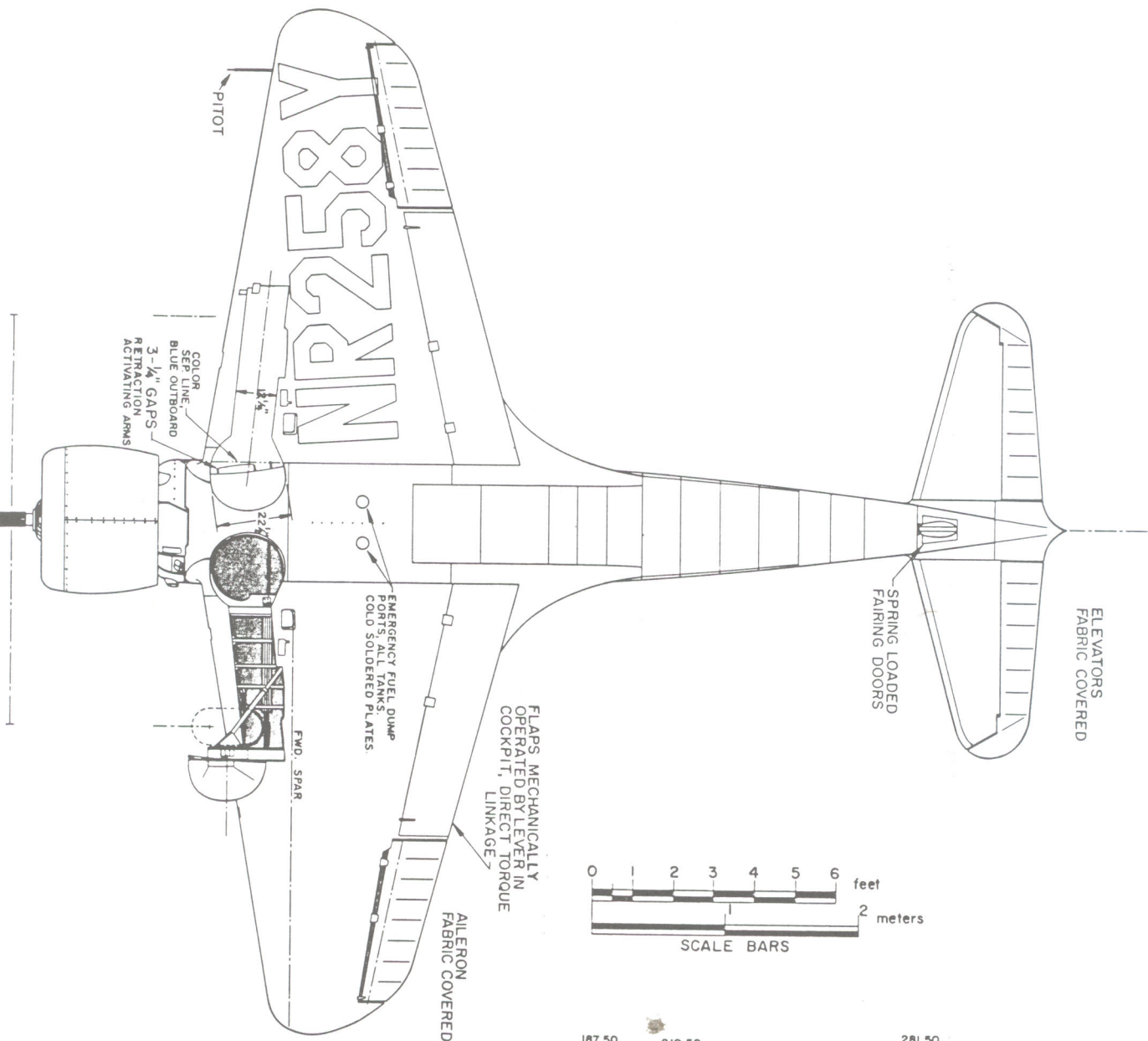
DRAWN BY - PAUL R. MATT

STA. 0



HUGHES 1B RACER
 SEPT. 13, 1935
 FAI 3 Km. SPEED RECORD 352.388 mph
 (567.155 Kmph)

HISTORICAL AVIATION



ALL DIMENSIONS IN PROFILE VIEW ARE INCHES

HISTORICAL
AVIATION
ALBUM

HUGHES 1B RACER

SEPT. 13, 1935

FAI 3 Km. SPEED RECORD 352.388 mph
(567.155 km/h)

SCALE - ORIGINAL 1:24
REPRO. 1:48

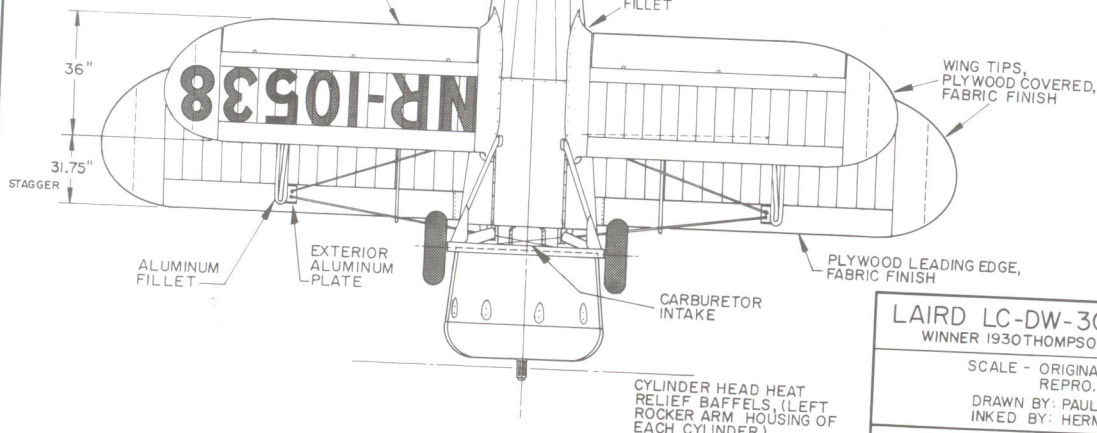
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Laird LC-DW-300 "Solution"



AILERONS AND WING AFT OF
REAR SPAR, PLYWOOD COVERED,
FABRIC FINISH, TOP & BOTTOM
SURFACE LOWER WING ONLY.



1930 TRADEMARK ONLY
1931 DIFFERED IN DETAILING



HISTORICAL
AVIATION
ALBUM

LAIRD LC-DW-300 "SOLUTION"
WINNER 1930 THOMPSON TROPHY RACE

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY: PAUL R. MATT
INKED BY: HERMAN LUEVANO

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P.O. BOX 33
TEMPLE CITY, CALIF. 91780

DRAWING No. 7-64-A

PLATE 2 of 2

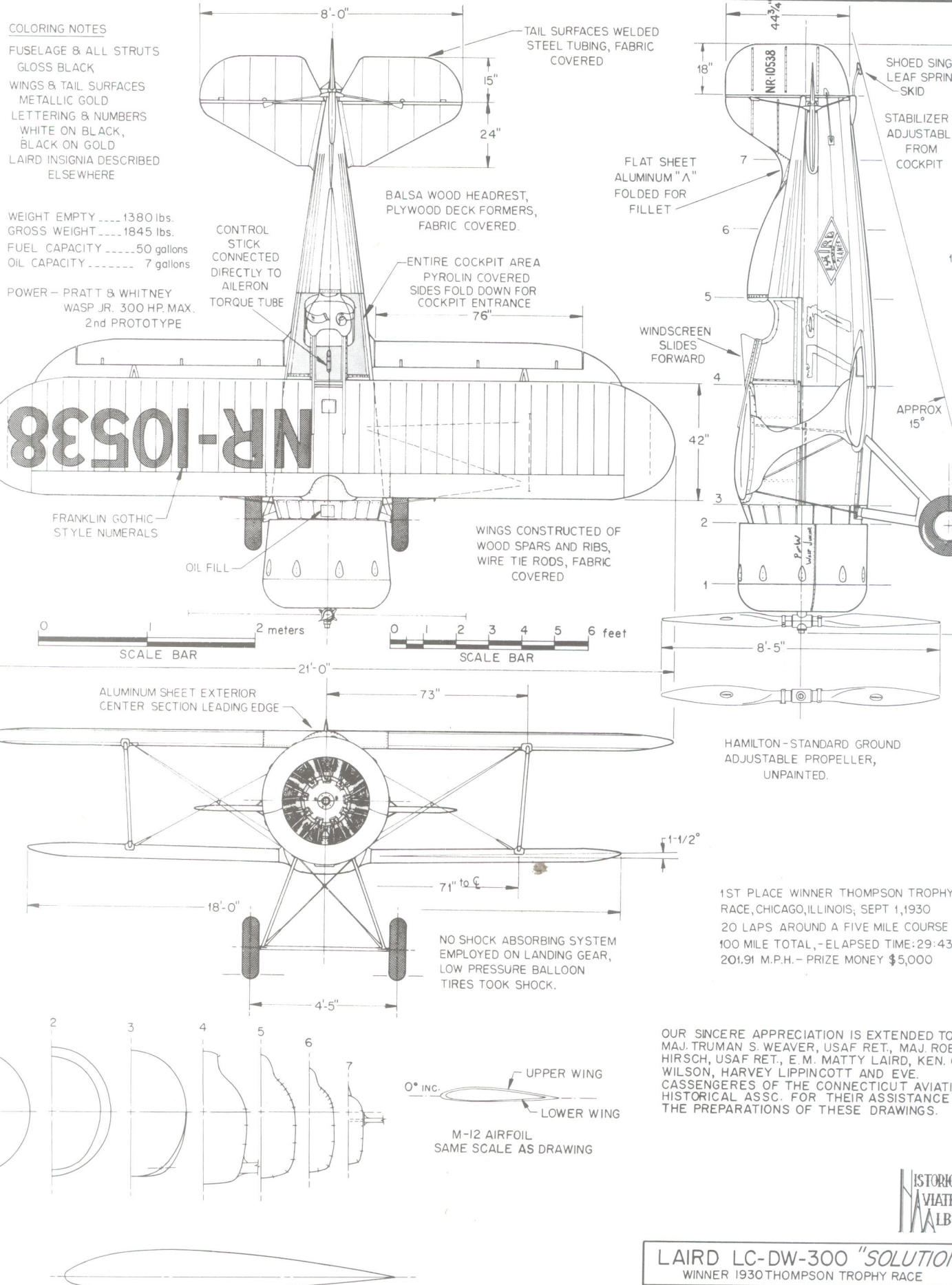
CYLINDER HEAD HEAT
RELIEF BAFFLES, (LEFT
ROCKER ARM HOUSING OF
EACH CYLINDER)

COLORING NOTES

FUSELAGE & ALL STRUTS
GLOSS BLACK
WINGS & TAIL SURFACES
METALLIC GOLD
LETTERING & NUMBERS
WHITE ON BLACK,
BLACK ON GOLD
LAIRD INSIGNIA DESCRIBED
ELSEWHERE

WEIGHT EMPTY1380 lbs.
GROSS WEIGHT1845 lbs.
FUEL CAPACITY50 gallons
OIL CAPACITY 7 gallons

POWER - PRATT & WHITNEY
WASP JR. 300 HP. MAX.
2nd PROTOTYPE



LAIRD LC-DW-300 "SOLUTION"
WINNER 1930 THOMPSON TROPHY RACE

SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY: PAUL R. MATT
INKED BY: HERMAN LUEVANO

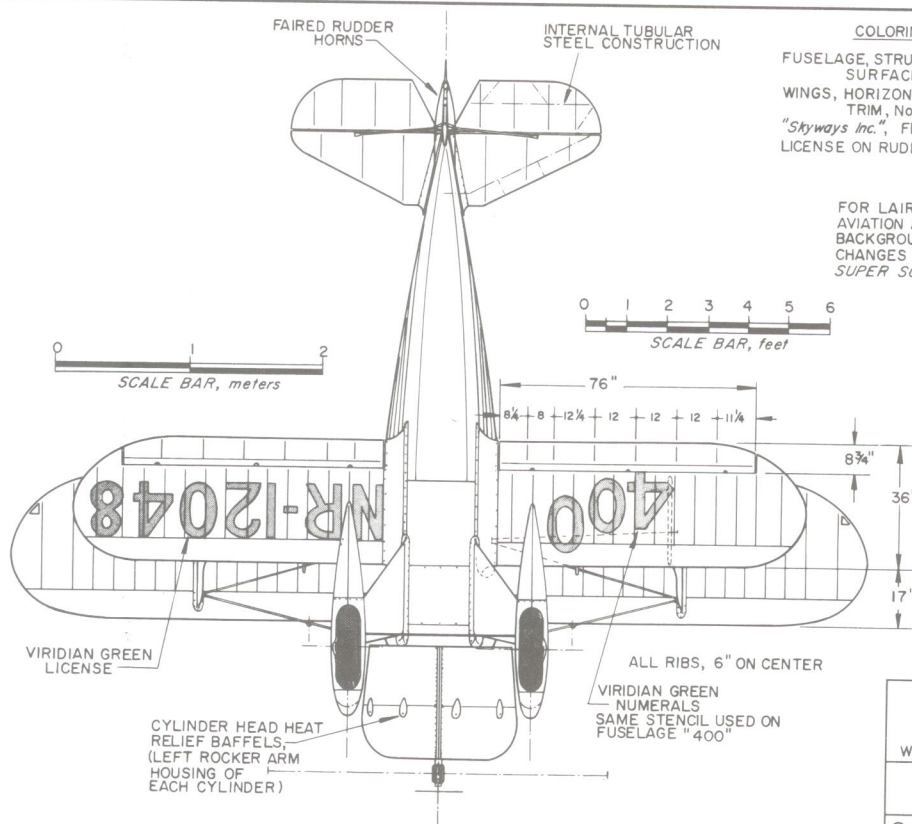
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P.O. BOX 33

Laird LC-DW-500 "Super Solution"



Laird Super Solution

*Jimmy Doolittle in front
of Laird Super Solution,
September, 1931.*



COLORING NOTES

FUSELAGE, STRUTS, WHEEL PANTS, VERTICAL TAIL SURFACES - BRIGHT VIRIDIAN GREEN
WINGS, HORIZONTAL TAIL SURFACES, WHEEL PANTS TRIM, No. 400 - "KODAK" YELLOW
"Skyways Inc.", FLAMINGOS DECOR, - DEEP RED
LICENSE ON RUDDER & FIN - BLACK

FOR LAIRD EMBLEM DETAILS SEE HISTORICAL AVIATION ALBUM, VOL. VII, LAIRD "SOLUTION." BACKGROUND OF DECAL BEING CLEAR VARNISH CHANGES THIS AREA, AND THIS ALONE, TO SUPER SOLUTION GREEN.

HISTORICAL
AVIATION
ALBUM

LAIRD LC-DW-500 "SUPER SOLUTION"

WINNER 1931 BENDIX TROPHY RACE

SCALE - ORIGINAL 1:24

REPRO. 1:48

DRAWN BY: PAUL R. MATT

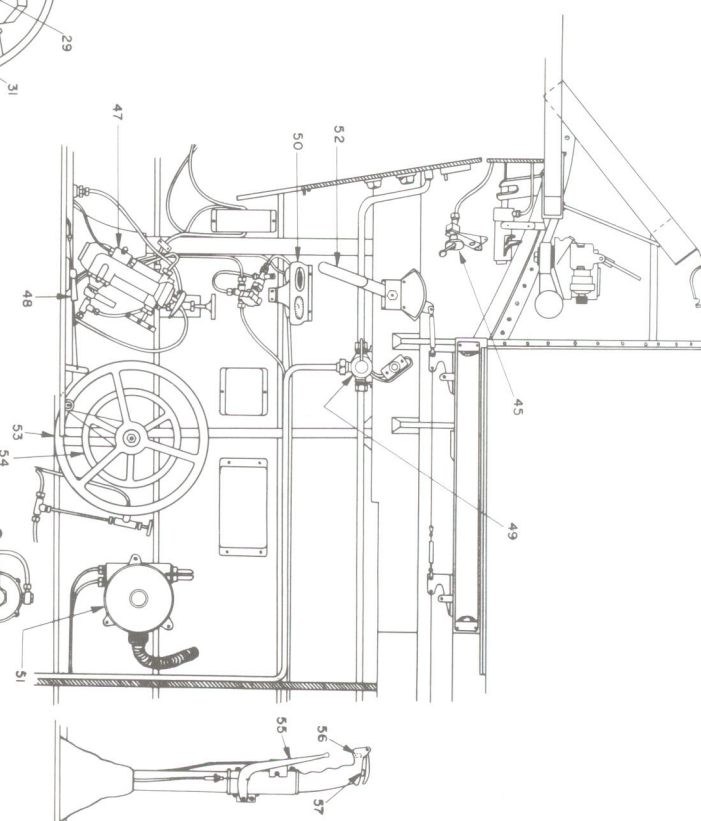
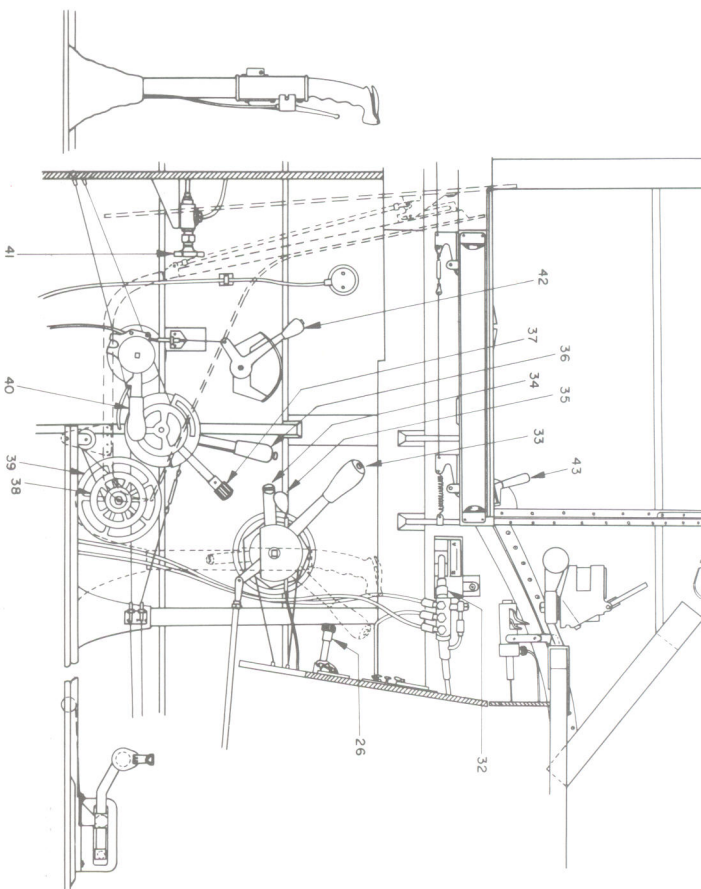
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P.O. BOX 33

TEMPLE CITY, CALIF. 91780

DRAWING No. 8-74-A

PLATE 2 of 2

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P.O. BOX 33

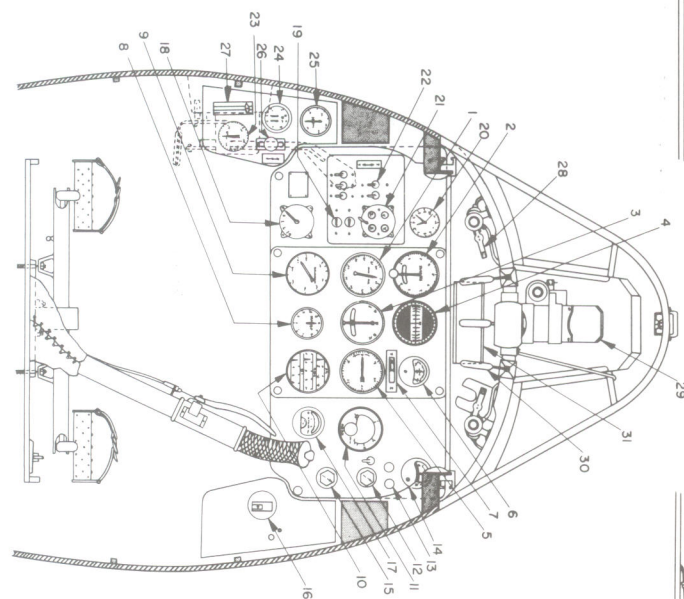


- 1 AIRSPEED INDICATOR
- 2 TURN AND BANK
- 3 COMPASS
- 4 VERTICAL SPEED INDICATOR
- 5 COURSE INDICATOR (RATE OF CLIMB)
- 6 REVERSING SWITCH, C.I.
- 7 BOOST INDICATOR
- 8 FUEL NEEDLE INDICATOR
- 9 FUEL LEVEL
- 10 COCKPIT ILLUMINATION
- 11 CHECK LIGHT, BOMB RELEASE
- 12 AMPERE METER
- 13 FREQUENCY REVERSING SWITCH
- 14 CYLINDER HEAD TEMP.
- 15 IGNITION SWITCH
- 16 STARTER SWITCH
- 17 CLOCK
- 18 UNDERCARRIAGE INDICATOR
- 19 SWITCHES
- 20 PRESSURE GAUGE
- 21 BRAKE PRESSURE GAUGE
- 22 AIR INSTALLATION PRESSURE
- 23 UNDERCARRIAGE CONTROL
- 24 LANDING FLAP INDEX
- 25 AIR CANNON CHARGING
- 26 DIRECTION FINDER
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43

- 30 MANUAL CHARGING OF CANNONS
- 31 LANDING FLAP CONTROL
- 32 THROTTLE
- 33 PROPELLER PITCH CONTROL
- 34 ENGINE STOP
- 35 BOOSTER CONTROL
- 36 OIL CONTROL CONTROL
- 37 FUEL CONTROL, RIM TAB
- 38 FUEL CONTROL, RIM TAB
- 39 BOMB BLOCKING, ARMING
- 40 MAIN AIR VALVE
- 41 COCKPIT AERATION
- 42 COCKPIT CLOSING LEVER
- 43 COCKPIT AERATION, CZECH
- 44 MIXING VALVE, FUEL TO OIL
- 45 FUEL PUMP
- 46 FUEL INJECTION PUMP
- 47 FUEL COCK
- 48 HYDRAULICS MAIN VALVE
- 49 OXYGEN PRESSURE
- 50 OXYGEN PRESSURE
- 51 EMERGENCY CANOPY RELEASE
- 52 SIDE LOUVRES CONTROL
- 53 FRONTAL LOUVER CONTROL
- 54 BRAKE LEVER
- 55 BOMB TRIGGER, RELEASE
- 56
- 57



SCALE BAR, FEET



LAVOČKIN LA-7

SCALE - SEE SCALE BAR

DRAWN BY - JOSEF KRYBUS

PRAGUE

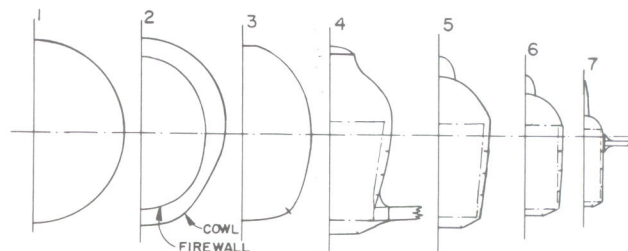
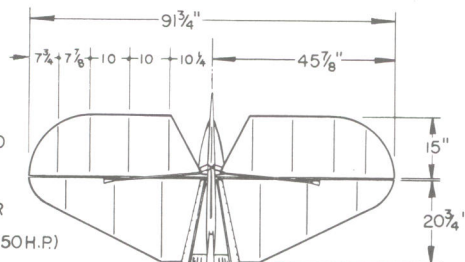
CZECHOSLOVAKIA

LINKED & TRANSLATED FOR

GENERAL SPECIFICATIONS BENDIX TROPHY CONDITION

WEIGHT EMPTY 1,580 lbs.
GROSS WEIGHT 2,160 lbs. (Approx.)
FUEL CAPACITY 112 gals.
OIL CAPACITY 11 gals.
POWER - PRATT & WHITNEY WASP JR.
ENGINE USED IN BOTH BENDIX AND
THOMPSON RACES WAS THE
DIRECT DRIVE WASP Jr., S/N
X-27 "YELLOW JACKET".
COMPRESSION RATIO 6:1, BLOWER
GEAR RATIO 10:1, BOOSTED TO
APPROX. 525 H.P. (NORMAL 435/450 H.P.)

WINNER BENDIX TROPHY RACE, BURBANK, CALIF.
TO CLEVELAND, OHIO, SEPT. 4, 1931, THENSE ON
TO NEWARK, N.J., 2,882 MILES IN 11 HRS., 16 MINS.
FOR FULL TRANSCONTINENTAL SPEED RECORD.
AVERAGE SPEED FOR BENDIX RACE 223.038 MPH,
AND 217 MPH AVERAGE FOR ENTIRE FLIGHT



AIRFOIL M-12 (TWICE SCALE)
DEVELOPED INTO NACA 2212

METAL FILLET
SLIDING FUEL HATCH

INSET NAVIGATION
LIGHT

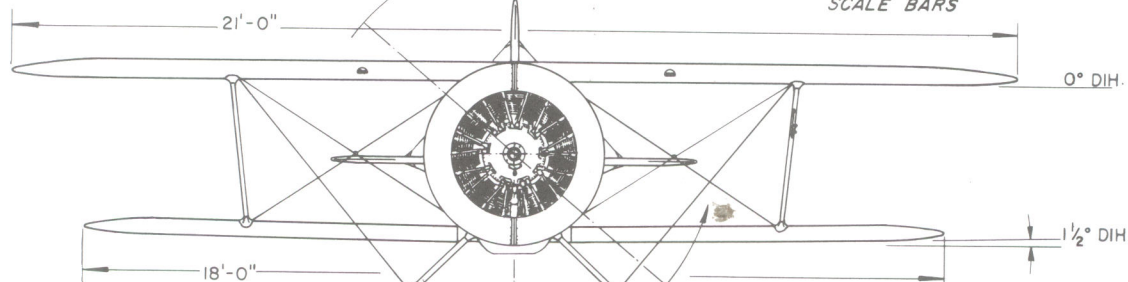
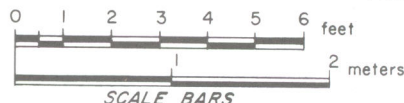
FRANKLIN GOTHIC
STYLE LETTERING,
VIRIDIAN GREEN

COCKPIT FRESH
AIR INTAKE

OIL GAUGE
OIL FILL

HAND FORMED COWL &
WHEEL PANTS BY
HILL STREAMLINERS OF
CINCINNATI, OHIO

ENTIRE AMIDSHIP COCKPIT
ENCLOSURE SWINGS OPEN,
SIDE PANELS HINGED ON
EITHER SIDE ON TOPSIDE
LONGERON, ALLOWING SIDES
TO FOLD OUTWARD, CLEAR
TO WINDSCREEN SLIDES ON
PARALLEL SIDE TRACKS.



CARBURETOR INTAKE & OIL COOLER
BEHIND BOTTOM CYLINDER WITHIN
COWL.

PROPELLER S/N 36382-36385
DESIGN No. 21A1-7

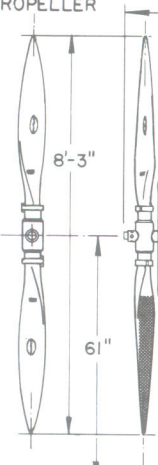
HAMILTON-STANDARD
GROUND ADJUSTABLE
PROPELLER

6.50 x 10"
B.F. GOODRICH
TIRES

17'-9 1/2" PYROLIN WINDSCREEN

LEATHER STRAP,
CANOPY HANDLE

INSET NAV.
LIGHT



NOTE - YELLOW STRIPE
APPLIED FOR THE
THOMPSON TROPHY
RACE ONLY

OUR SINCERE APPRECIATION IS
EXTENDED TO MAJ. ROBERT HIRSCH,
USAF RET., MAJ. TRUMAN C. WEAVER,
USAF RET., E.M. "MATTY" LAIRD AND
EV. CASSENGERES (CAHA) FOR
THEIR ASSISTANCE IN THE PREPARA-
TION OF THESE DRAWINGS

HISTORICAL
AVIATION
ALBUM

"LAIRD LC-DW-500
"SUPER SOLUTION"

WINNER 1931 BENDIX TROPHY RACE

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY: PAUL R. MATT

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P.O. BOX 33
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DRAWING No. 8-74-A

PLATE 1 of 2

GENERAL SPECIFICATIONS

WEIGHT EMPTY (WHEN AIRCRAFT ORIGINALLY LEFT THE LAIRD FACTORY)	3,195 lbs.
WEIGHT EMPTY (IN LATER MODIFICATIONS)	3,300 lbs.
GROSS WEIGHT, LIGHT LOAD	3,765 lbs.
GROSS WEIGHT, FULL LOAD	3,765 lbs.
GROSS WEIGHT, OVERLOAD (TURNER'S FIGURE)	4,923 lbs.
WING AREA	95 sq. ft.
WING LOADING, FULL LOAD COND.	lbs./sq. ft.
POWER LOADING	4.92 lbs./hp
MAX. SPEED, ESTIMATED STRAIGHT AWAY FLIGHT AT S.L.	330/350 m.p.h.
(LAIRD CO. & UNITED AIRCRAFT COMPUTATIONS)	
ROSCOE TURNER'S PERSONAL CLAIM	412 m.p.h. (1939)
LANDING SPEED, WITH FLAPS	87 m.p.h.

POWER: PRATT & WHITNEY SIB3-G, s/n 177
14 cyl. TWIN ROW WASP SR, 1830 cu.in.
DISPLACEMENT. MFG. RATING
900 hp AT 2450 RPM AT 6,500 FEET
1,000 hp AT 2600 RPM, S.L. TAKEOFF
USING 87 OCTANE FUEL

THOMPSON TROPHY RACE RECORD

3RD PLACE AT 253.802 m.p.h. 1937
1st PLACE AT 283.419 m.p.h. 1938
1st PLACE AT 282.536 m.p.h. 1939

FABRIC PATCH
OVER ABANDONED
NAVIGATION LIGHT
FITTING, SIMILAR
TREATMENT ON LEFT
WING AND ON THE FIN.

PITOT
TUBE

COCKPIT WINDOWS
PART AT CENTER
LINE, SLIDE DOWN
INTO FUSELAGE
WALLS ON CHANNEL
GUIDES

OIL FILL
ACCESS
UNDER LOUVERED
COWLING

FLAT BLACK
ANTI-GLARE
FINISH

0 1 2 meters
SCALE BAR

0 1 2 3 4 5 6 feet
SCALE BAR

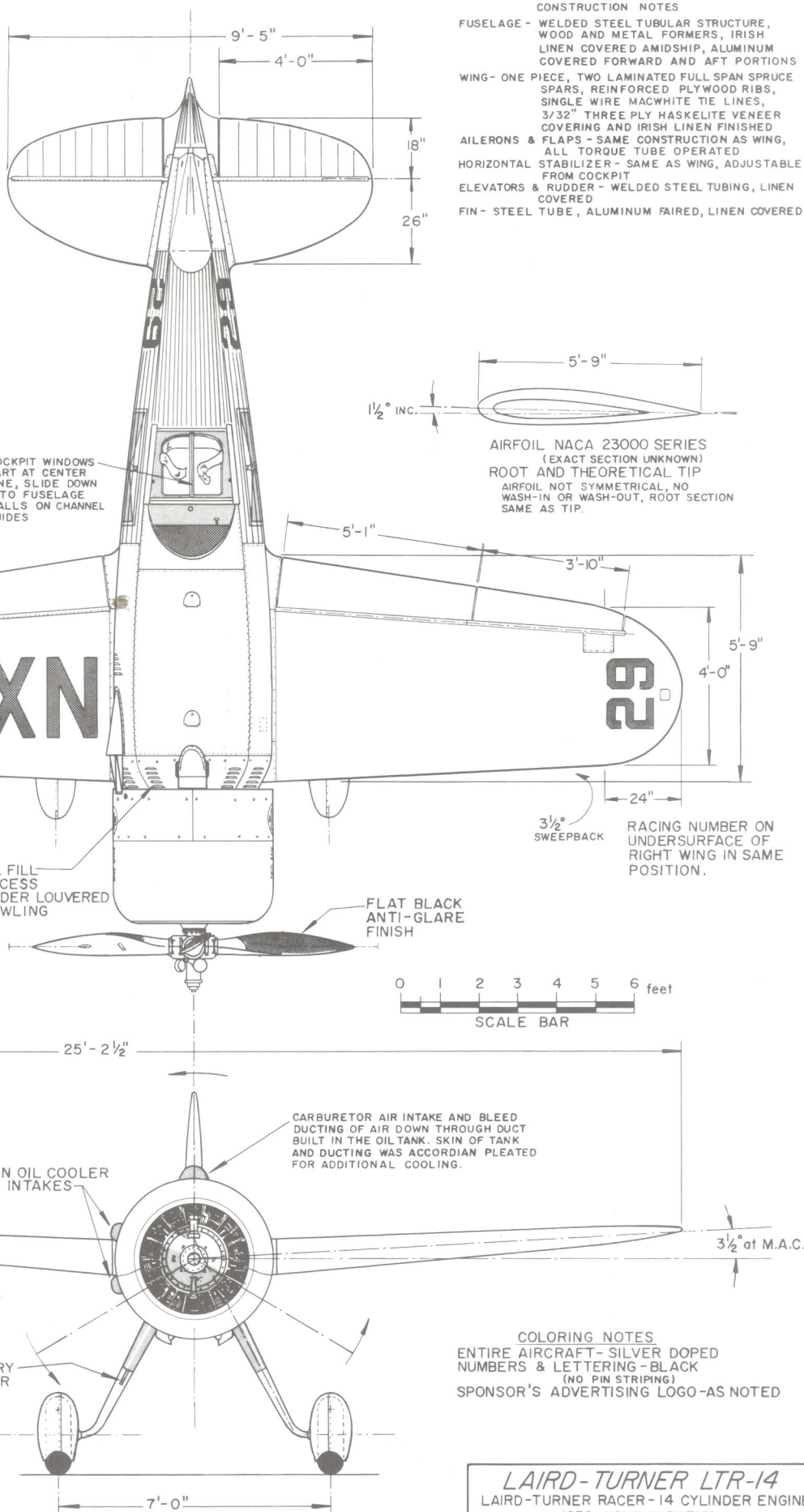
TWIN OIL COOLER
AIR INTAKES

CARBURETOR AIR INTAKE AND BLEED
DUCTING OF AIR DOWN THROUGH DUCT
BUILT IN THE OIL TANK. SKIN OF TANK
AND DUCTING WAS ACCORDIAN PLEATED
FOR ADDITIONAL COOLING.

COILED CAPILARY
FOR OUTSIDE AIR
TEMP. GAUGE
(COVERED OVER FOR
1938 RACES)

3 1/2° at M.A.C.

NOTE:
OUR BASIC AIRFRAME DIMENSIONS WERE
TAKEN FROM THE E.M. LAIRD AIRPLANE CO.'S
BLUEPRINTS AND A REVIEW OF SURVIVING
LAWRENCE BROWN AIRCRAFT CO. MATERIAL



CONSTRUCTION NOTES
FUSELAGE - WELDED STEEL TUBULAR STRUCTURE,
WOOD AND METAL FORMERS, IRISH
LINEN COVERED AMIDSHIP, ALUMINUM
COVERED FORWARD AND AFT PORTIONS
WING - ONE PIECE, TWO LAMINATED FULL SPAN SPRUCE
SPARS, REINFORCED PLYWOOD RIBS,
SINGLE WIRE MACWHITE TIE LINES,
3/32" THREE PLY HASKELITE VENEER
COVERING AND IRISH LINEN FINISHED
AILERONS & FLAPS - SAME CONSTRUCTION AS WING,
ALL TORQUE TUBE OPERATED
HORIZONTAL STABILIZER - SAME AS WING, ADJUSTABLE
FROM COCKPIT
ELEVATORS & RUDDER - WELDED STEEL TUBING, LINEN
COVERED
FIN - STEEL TUBE, ALUMINUM FAIRED, LINEN COVERED

COLORING NOTES
ENTIRE AIRCRAFT - SILVER DOPED
NUMBERS & LETTERING - BLACK
(NO PIN STRIPING)
SPONSOR'S ADVERTISING LOGO - AS NOTED

LAIRD-TURNER LTR-14
LAIRD-TURNER RACER - 14 CYLINDER ENGINE
1939 CONFIGURATION
SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY - PAUL R. MATT

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0 1 2 meters
SCALE BAR

0 1 2 3 4 5 6 feet
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3 1/2° at M.A.C.

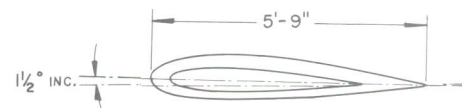
NOTE:
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BLUEPRINTS AND A REVIEW OF SURVIVING
LAWRENCE BROWN AIRCRAFT CO. MATERIAL

DRAWING No. 10-83-A

PLATE 1 of 2

CONSTRUCTION NOTES

FUSELAGE - WELDED STEEL TUBULAR STRUCTURE,
WOOD AND METAL FORMERS, IRISH
LINEN COVERED AMIDSHIP, ALUMINUM
COVERED FORWARD AND AFT PORTIONS
WING - ONE PIECE, TWO LAMINATED FULL SPAN SPRUCE
SPARS, REINFORCED PLYWOOD RIBS,
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3/32" THREE PLY HASKELITE VENEER
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FROM COCKPIT
ELEVATORS & RUDDER - WELDED STEEL TUBING, LINEN
COVERED
FIN - STEEL TUBE, ALUMINUM FAIRED, LINEN COVERED



AIRFOIL NACA 23000 SERIES
(EXACT SECTION UNKNOWN)
ROOT AND THEORETICAL TIP
AIRFOIL NOT SYMMETRICAL, NO
WASH-IN OR WASH-OUT, ROOT SECTION
SAME AS TIP.

3 1/2°
SWEEPBACK

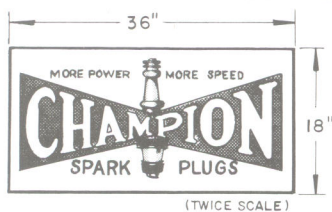
RACING NUMBER ON
UNDERSURFACE OF
RIGHT WING IN SAME
POSITION.

COLORING NOTES
ENTIRE AIRCRAFT - SILVER DOPED
NUMBERS & LETTERING - BLACK
(NO PIN STRIPING)
SPONSOR'S ADVERTISING LOGO - AS NOTED

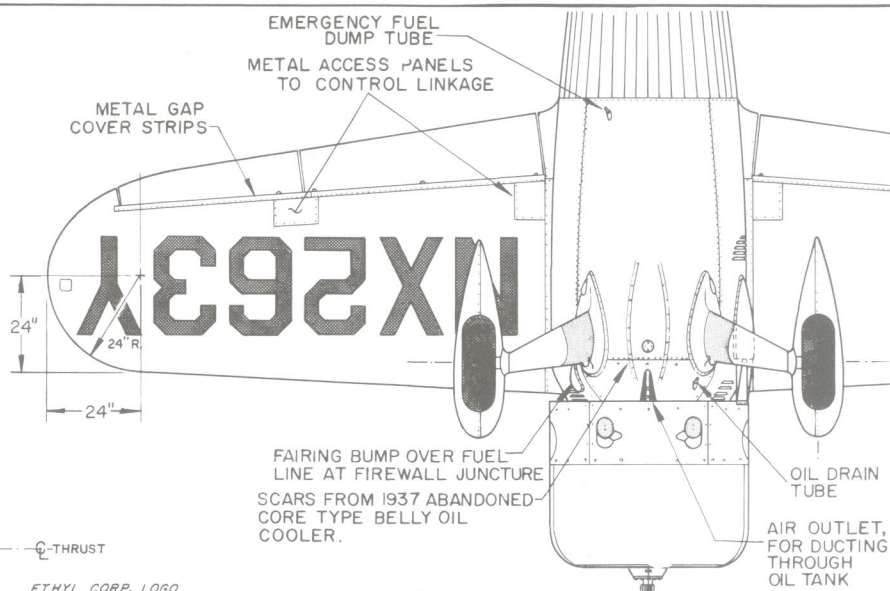
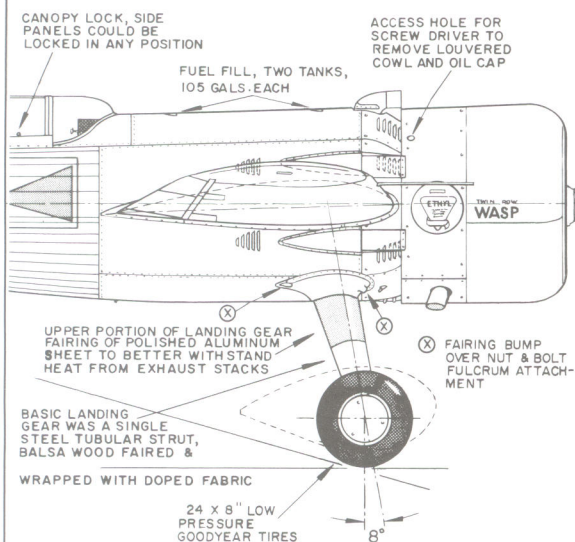
LAIRD-TURNER LTR-14
LAIRD-TURNER RACER - 14 CYLINDER ENGINE
1939 CONFIGURATION
SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY - PAUL R. MATT

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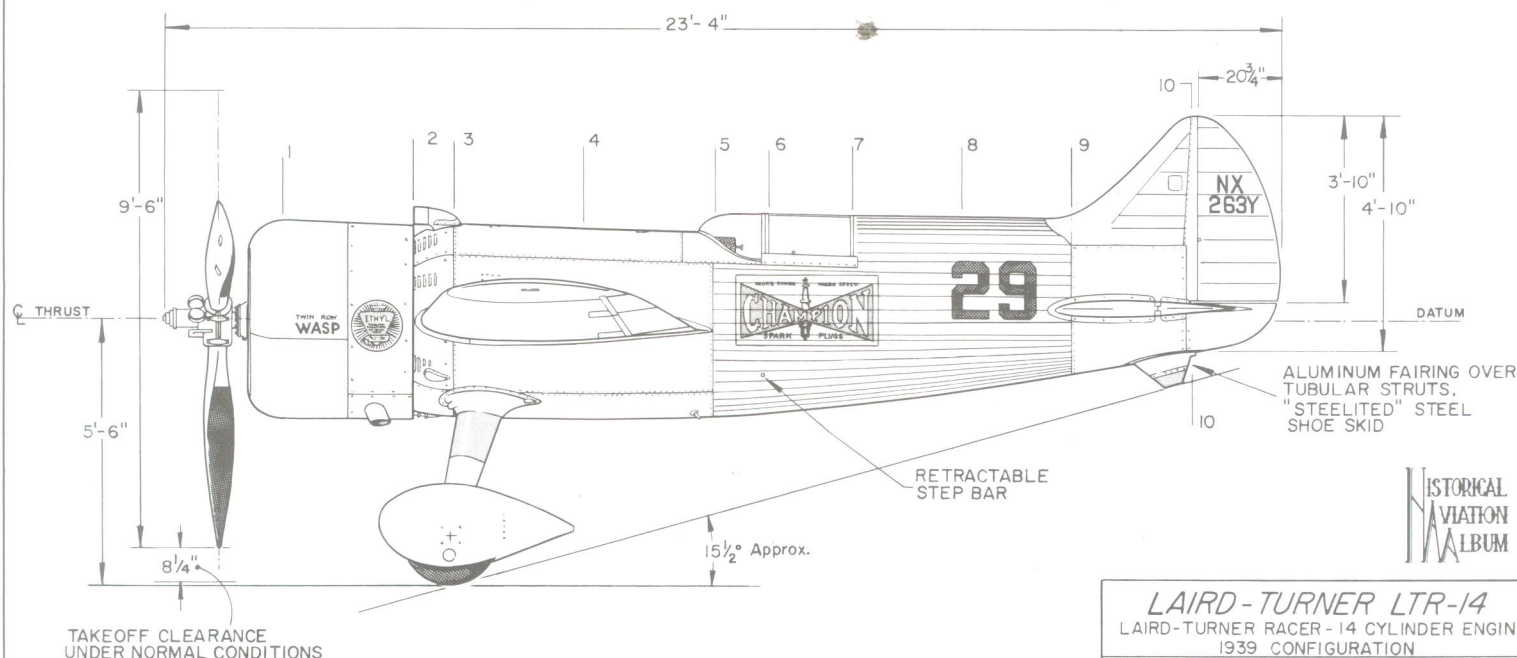
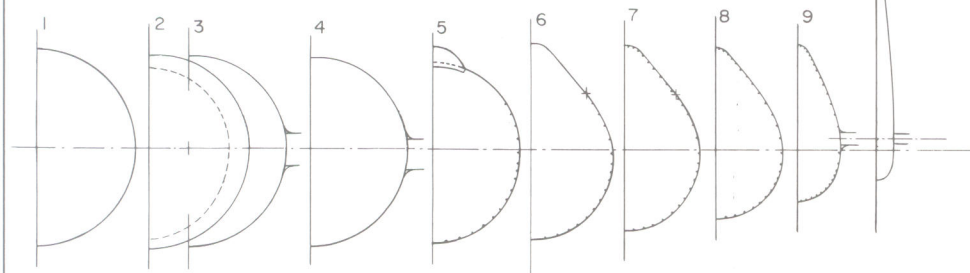
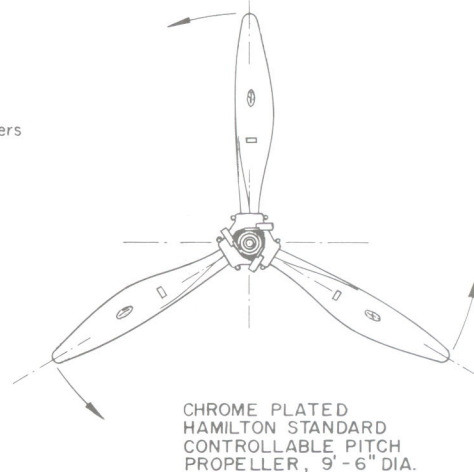
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(TWICE SCALE)
CHAMPION SPARK PLUG LOGO
 YELLOW BACKGROUND, DARK BLUE PINCHED BAR, 'CHAMPION' WHITE, SPARK PLUG WHITE WITH TONE OF GRAY, BLACK & COPPER. ALL LETTERING & OUTLINES - BLACK



ETHYL CORP. LOGO
 WHITE 12" DISC, RED TRIANGLE, YELLOW 'ETHYL' & RADIATING SUN BURST, OTHER LETTERING & OUTLINING - BLACK



OUR SINCERE THANKS TO E.M. "MATTY" LAIRD AND MAJ. ROBERT HIRSCH FOR THEIR VALUABLE ASSISTANCE IN THE PREPARATION OF THESE DRAWINGS

HISTORICAL
 AVIATION
 ALBUM

LAIRD-TURNER LTR-14

LAIRD-TURNER RACER - 14 CYLINDER ENGINE
 1939 CONFIGURATION

SCALE - ORIGINAL 1:24
 REPRO. 1:48

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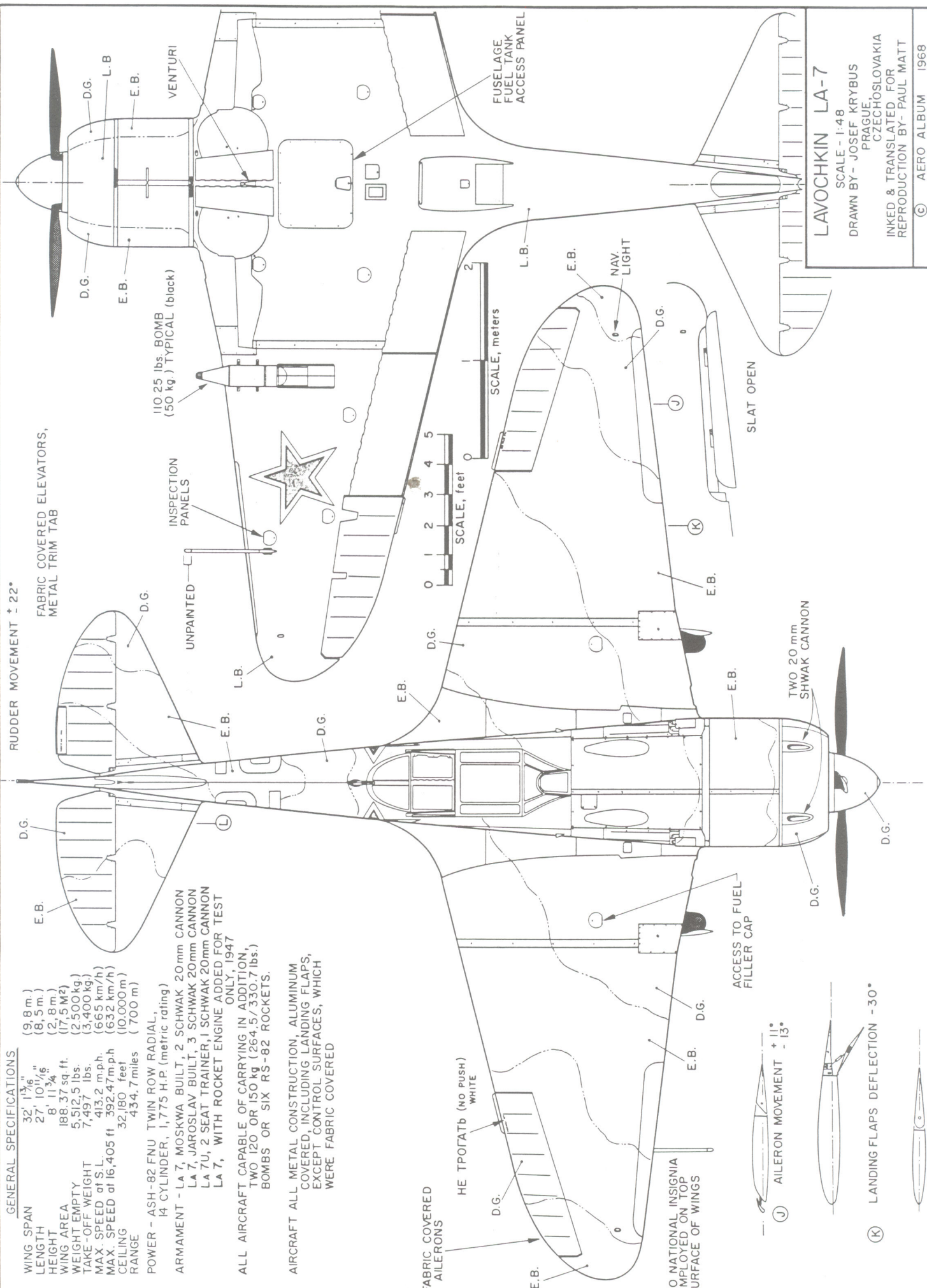
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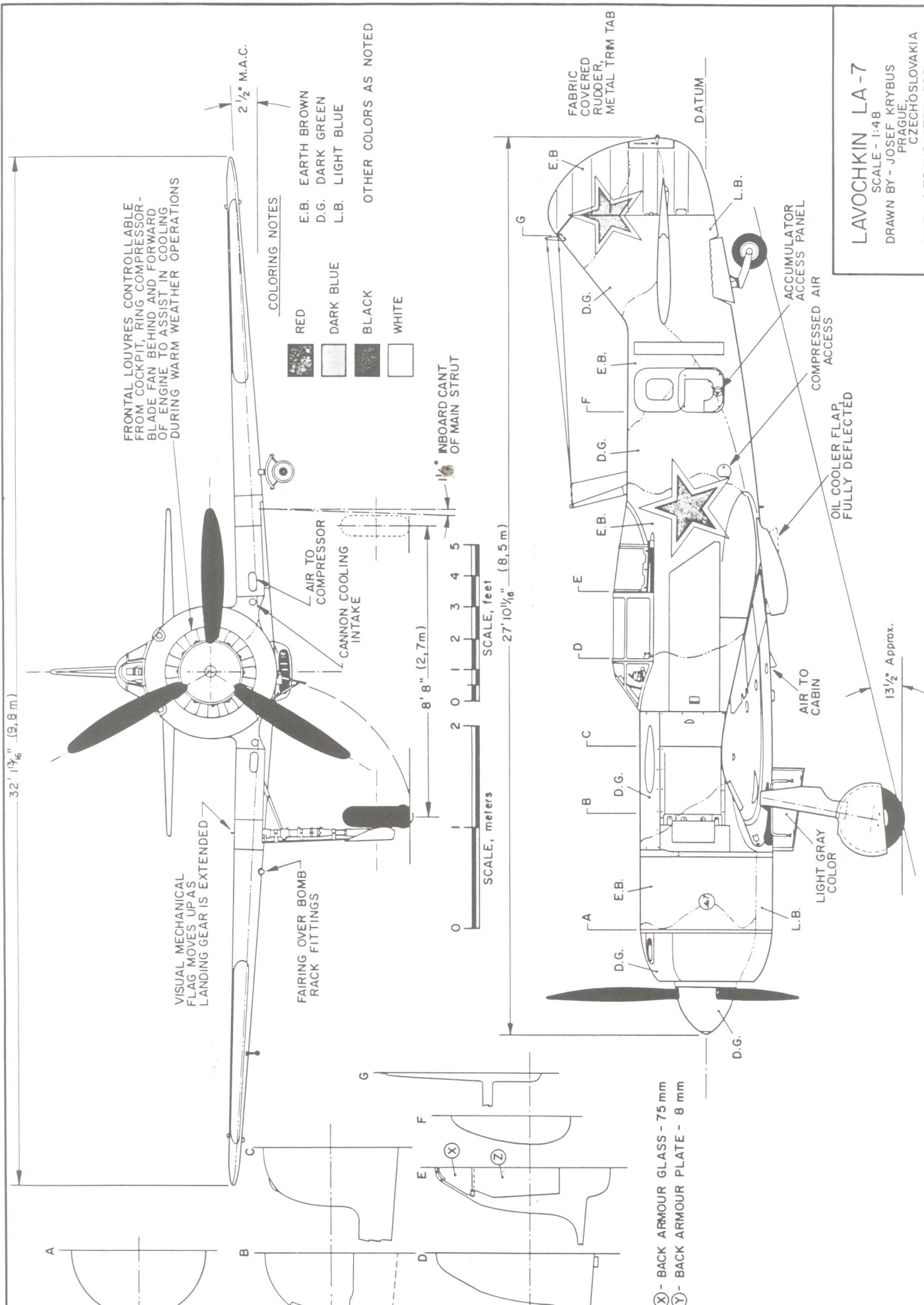
GENERAL SPECIFICATIONS

WING SPAN 32' 1 13/16" (9.8 m.)
 LENGTH 27' 10 1/16" (8.5 m.)
 HEIGHT 8' 11 3/4" (2.8 m.)
 WING AREA 188.37 sq. ft. (17.5 M²)
 WEIGHT EMPTY 5,512.5 lbs. (2,500 kg.)
 TAKE-OFF WEIGHT 7,497 lbs. (3,400 kg.)
 MAX. SPEED at S.L. 413.2 m.p.h. (665 km/h)
 MAX. SPEED at 16,405 ft 392.47 m.p.h. (632 km/h)
 RANGE 32,180 feet (10,000 m)
 434.7 miles (700 m)
 POWER - ASH-82 FNU TWIN ROW RADIAL,
 14 CYLINDER, 1,775 H.P. (metric rating)
 ARMAMENT - LA 7, MOSKWA BUILT, 2 SCHWAK 20mm CANNON
 LA 7, JAROSLAV BUILT, 3 SCHWAK 20mm CANNON
 LA 7U, 2 SEAT TRAINER, 1 SCHWAK 20mm CANNON
 LA 7, WITH ROCKET ENGINE ADDED FOR TEST ONLY, 1947
 ALL AIRCRAFT CAPABLE OF CARRYING IN ADDITION,
 TWO 120 OR 150 kg (264.5/330.7 lbs.)
 BOMBS OR SIX RS-82 ROCKETS.

AIRCRAFT ALL METAL CONSTRUCTION, ALUMINUM
 COVERED, INCLUDING LANDING FLAPS,
 EXCEPT CONTROL SURFACES, WHICH
 WERE FABRIC COVERED



LAVOCHKIN LA-7
 SCALE - 1:48
 DRAWN BY - JOSEF KRYBUS
 PRAGUE,
 CZECHOSLOVAKIA
 INKED & TRANSLATED FOR
 REPRODUCTION BY- PAUL MATT
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LAVOCHKIN LA-7

SCALE - 1:48

DRAWN BY - JOSEF KRYBUS

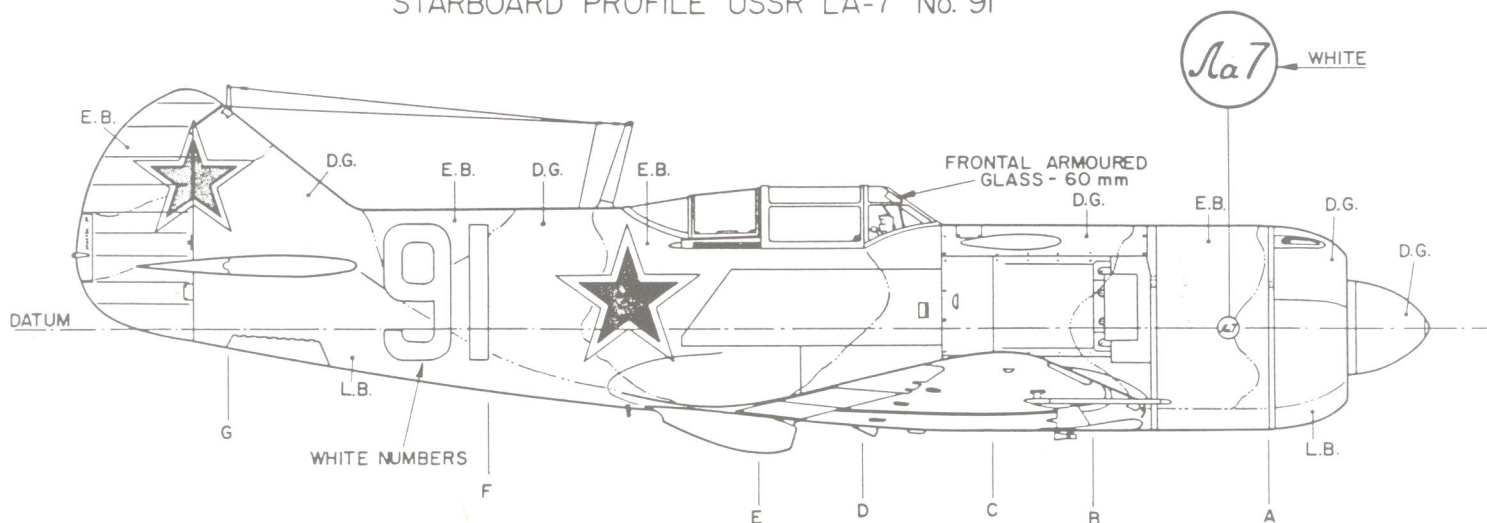
PRAGUE, CZECHOSLOVAKIA

INKED & TRANSLATED FOR REPRODUCTION BY - PAUL MATT

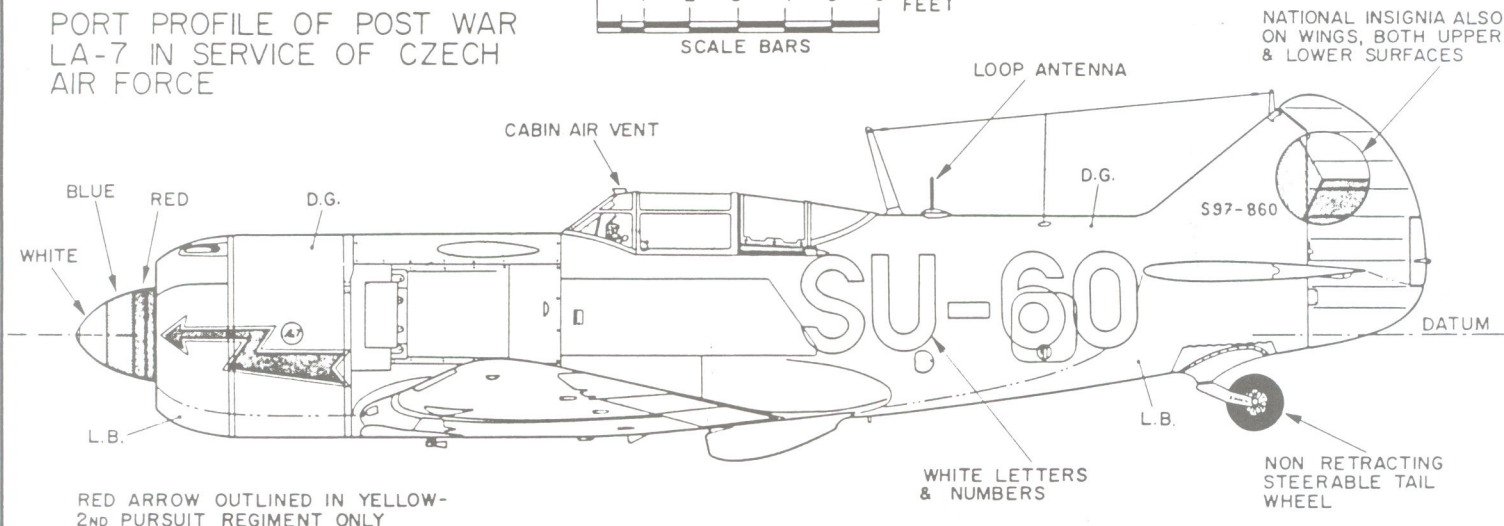
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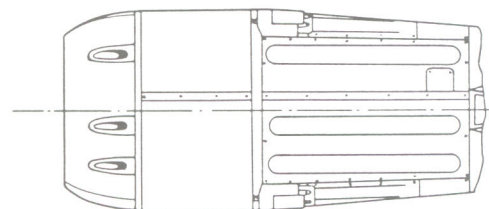
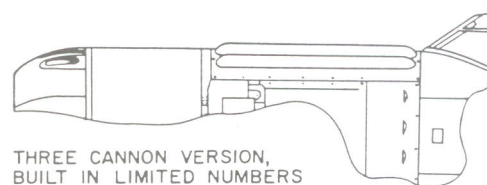
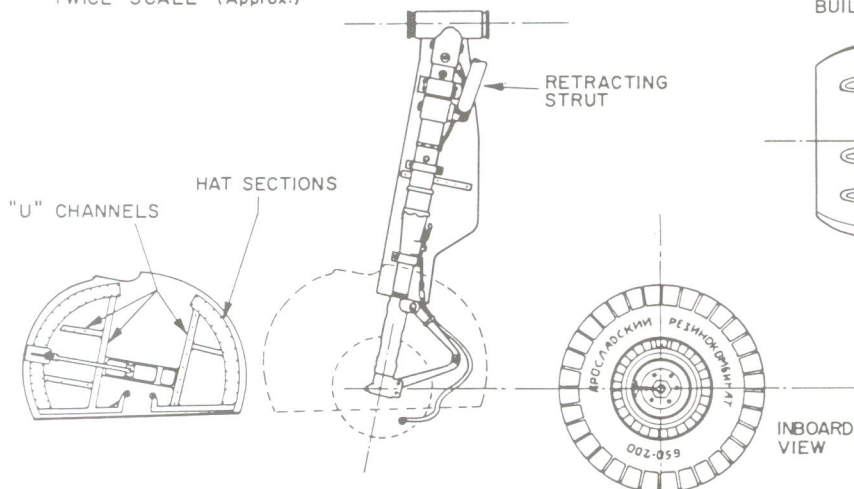
STARBOARD PROFILE USSR LA-7 No. 91



PORT PROFILE OF POST WAR LA-7 IN SERVICE OF CZECH AIR FORCE



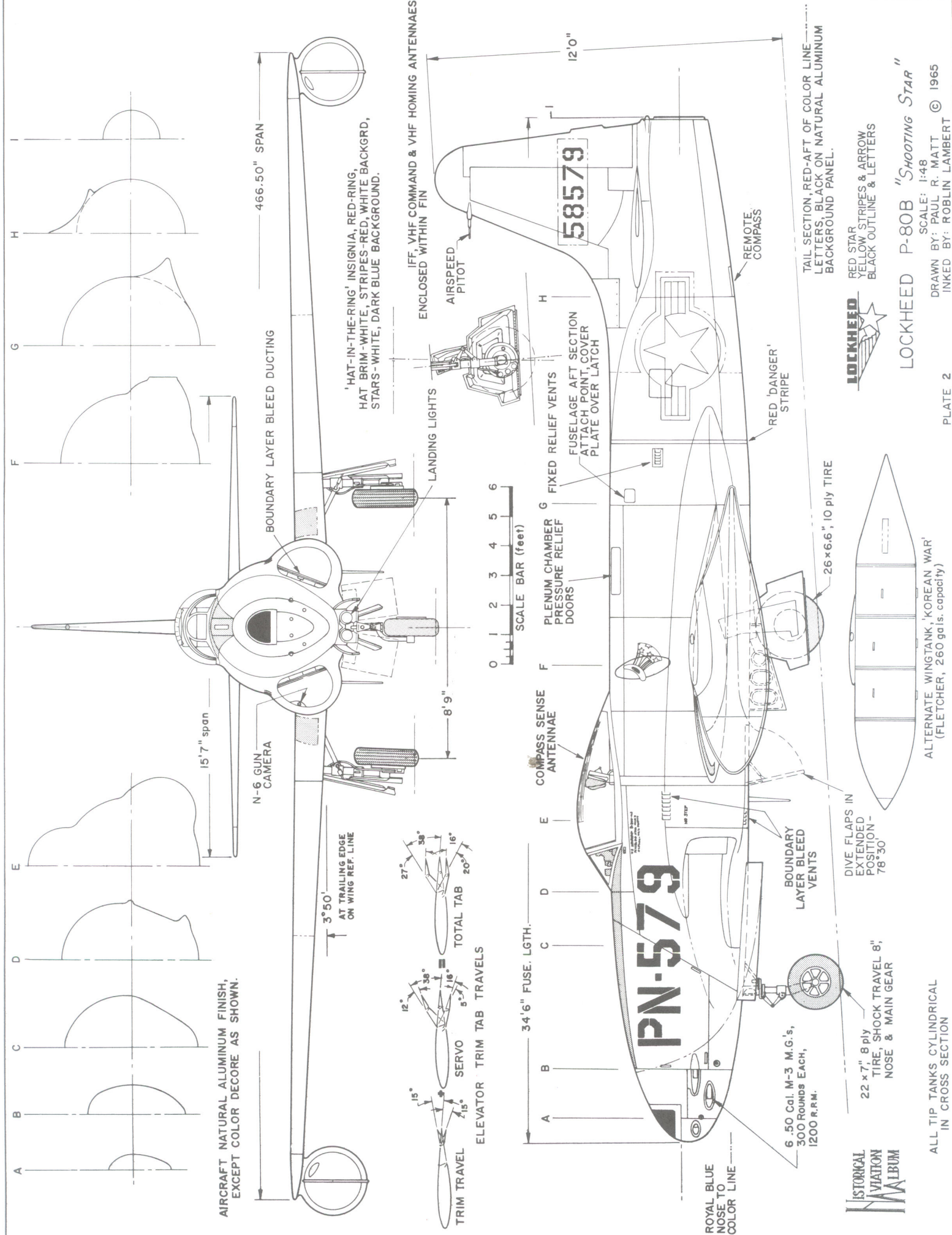
MAIN LANDING GEAR DETAILS TWICE SCALE (Approx.)



LAVOCHKIN LA-7

SCALE - 1:48
DRAWN BY - JOSEF KRYBUS
PRAGUE, CZECHOSLOVAKIA
INKED & TRANSLATED FOR
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WEIGHT	EMPTY	3,420 lbs.
USEFUL	LOAD	1,780 "
GROSS	WEIGHT	5,200 " (PASSENGER VERSION)
		5,400 " (MAIL/EXPRESS ONLY)
RECOMMENDED MAX. SPEED		
CRUISING	SPEED	220 mph at S.L.
LANDING	SPEED	175 mph, 1800 rpm, 11,000 ft.
RANGE AT	CRUISE	65 mph
FUEL	CAPACITY	750 miles
OIL	CAPACITY	124 gals.
RATE OF	CLIMB, MAX., EMPTY	1,450 f.p.m. S.L.
SERVICE	CEILING	22,000 ft.
WING	AREA (incl. ailerons)	294 sq. ft.
POWER	LOADING	11.56 lbs./H.P.
WING	LOADING	17.7 lbs./s.f.
COMPLIMENT, PILOT, 6 PASSENGERS &		

LOGAGE
A.T.C. 421 ISSUED
MAY 6, 1931

ENGINE:
PRATT & WHITNEY
"WASP" SC - 450 HP
AT 2100 r.p.m. & 1
BLOWER

LICENSE NUMBERS
(VERMILLION) ON UNDER
SURFACE OF LEFT WING
OF SAME PHYSICAL DIMEN-
SIONS, COMPRESSED, AND
RUN FROM LANDING GEAR CUT
OUT TO EXTREME TIP

VERMILLION L.E. TRIM
& WING PANEL, BLACK
PIN STRIPE OUTLINED.
LICENSE NUMBERS - WHITE

Historical Aviation Album

LOCKHEED
"ORION"

MODEL 9
1931 - 34

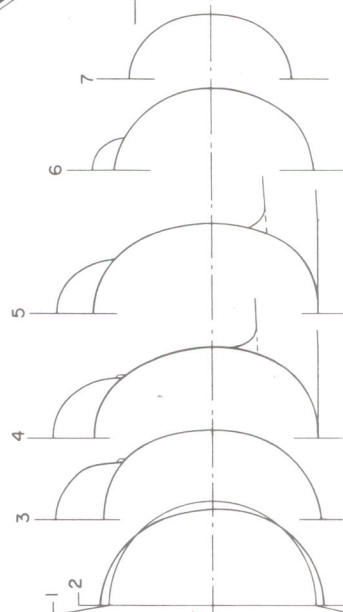
SCALE: 1:48

SCALE: 1:40
DRAWN BY: PAUL R. MATT

42' 9.25" OVER ALL SPAN

LEATHER PADDED HEADREST

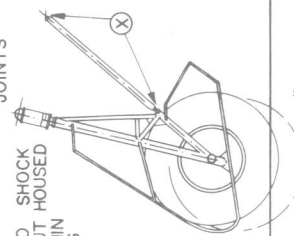
TWO TUBES BETWEEN UPPER CYLINDERS ARE CARBURETOR INTAKES. LOWER TUBES ARE FOR OIL COOLING



PROPELLER, HAMILTON STANDARD GROUND ADJUSTABLE

THIN TUBING IS BRACING FOR WHEEL FAIRING

OLEO SHOCK STRUT HOUSED WITHIN WING



6" OLEO TRAVEL FULLY EXTENDED DURING RETRACTION

DULL BLACK

9.50x12 WHEEL / 11.00x12 TIRE (33x11" o.a.)

12" APPROX.

27' 6"

GREEN TINT SUNSHADE

EMERGENCY EXIT DOOR

OIL FILLER

VARNEY SPEED LANES

7

2' 11"

2' 7"

6"

5' 8 3/8"

LOCKHEED INSIGNIA RED-STAR, STRIPES & LETTERING

6"

DATUM

BUMPER & TIE DOWN RING

LEATHER BOOT

12 X 5" TIRE FULL SWIVEL & CASTER

NOTE: THIS DRAWING PORTRAYS VARNEY SPEED LANES "NORTH WIND" MODEL 9 "ORION". OTHER VARNEY ORIONS DIFFERED ONLY SLIGHTLY WHILE OTHER ORIONS, IN PARTICULAR THE LATE VERSIONS & SPECIAL MODELS, HAD MANY MODIFICATIONS.

VARNEY'S SIX "ORIONS" SCHEME
 NC 12223 "WEST WIND"
 NC 12224 "SOUTH WIND"
 NC 12225 "NORTH WIND"
 NC 12226 "EAST WIND"
 NC 12227 "WINTER WIND"
 NC 12228 "SPRING WIND"

ENTIRE AIRCRAFT, HIGH GLOSS INSIGNIA WHITE-ALL TRIM & ALL LETTERING, INCLUDING NUMBERS, VERMILLION OUTLINED WITH A BLACK PIN STRIPE ONLY TWO BASIC COLORS USED.

"NORTH WIND" WAS THE ONLY VARNEY ORION NOT TO HAVE FIN LEADING EDGE TRIM PAINT.



LOCKHEED "ORION"

MODEL 9
1931-34

SCALE: 1:48
DRAWN BY: PAUL R. MATT

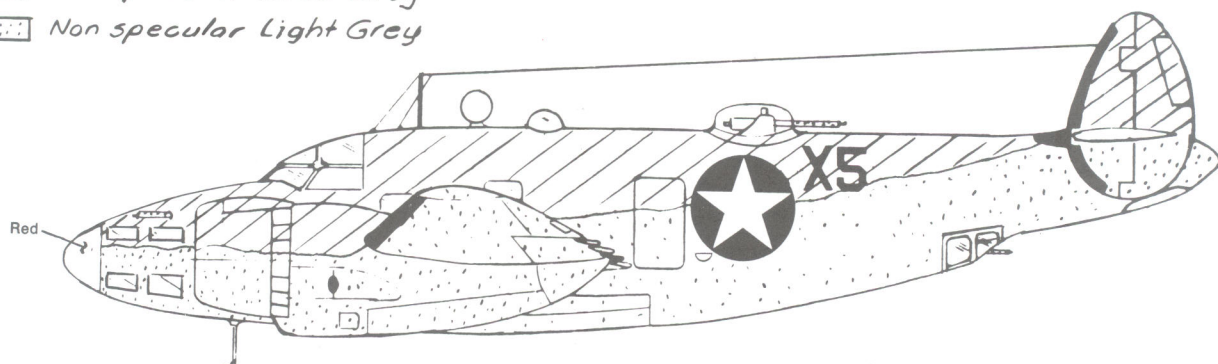
PLATE 2

© PAUL R. MATT 1966

Lockheed Vega PV-1

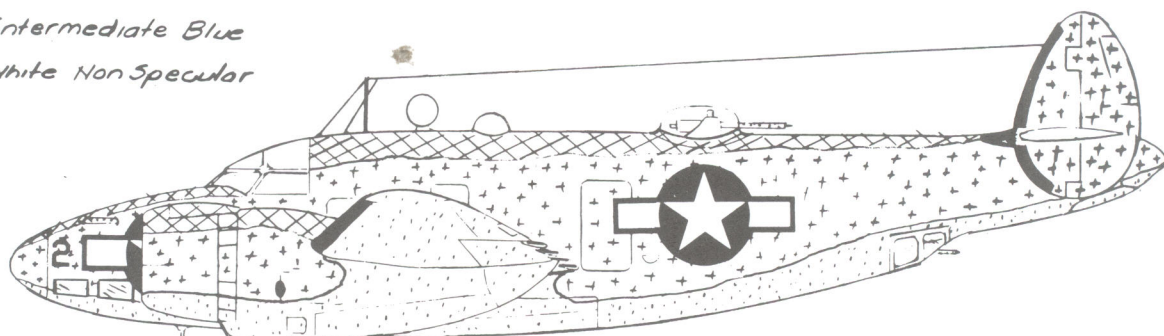
"Ventura"

-  Non specular Blue Grey
-  Non specular Light Grey

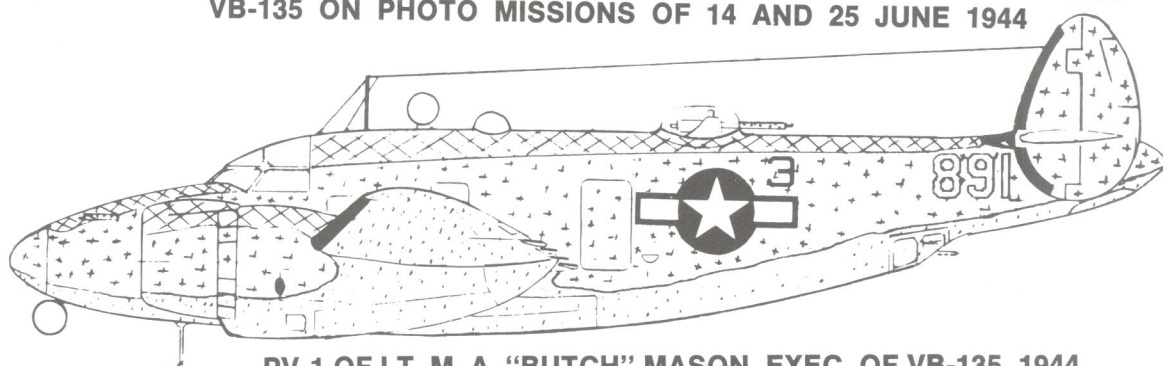


PV-1 VENTURA OF LT.(jg) L. W. FISCHER, VB-135, 1943

-  Dark Sea Blue Non Specular
-  Intermediate Blue
-  White Non Specular

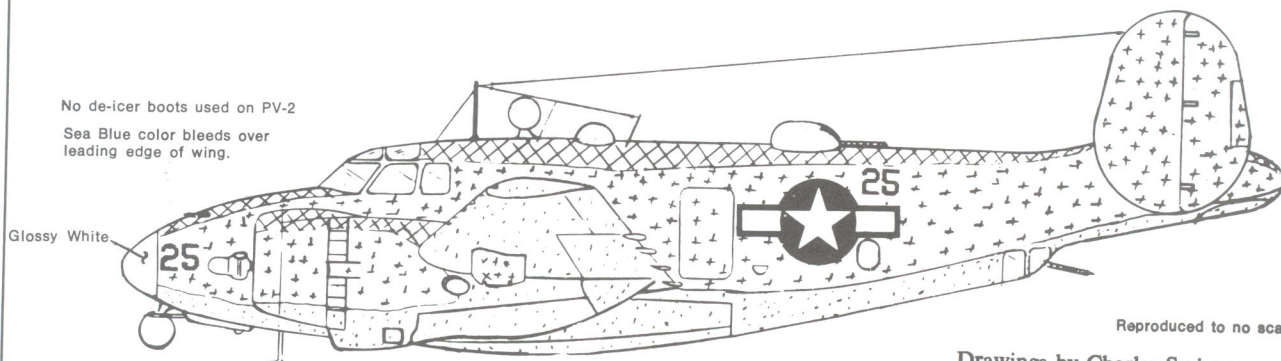


SPECIALLY EQUIPPED PV-1 FLOWN BY LT. L. A. "PAT" PATTESON
VB-135 ON PHOTO MISSIONS OF 14 AND 25 JUNE 1944



PV-1 OF LT. M. A. "BUTCH" MASON, EXEC. OF VB-135, 1944

- No de-icer boots used on PV-2
- Sea Blue color bleeds over
leading edge of wing.

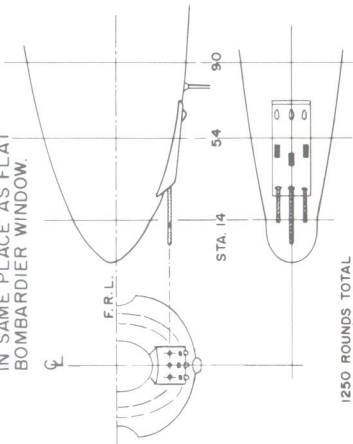


Reproduced to no scale.

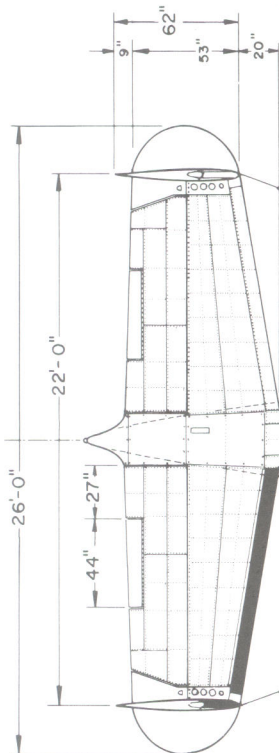
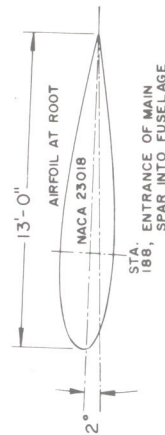
Drawings by Charles Scrivner

PV-2 HARPOON OF LCDR. GLENN DAVID, SKIPPER OF VPB-139, 1945

3-.50 Cal. CHIN GUN PACK,
FITTED ON LATE MODELS,
MID-1943, REPLACED AND
IN SAME PLACE AS FLAT
BOMBARDIER WINDOW.



1250 ROUNDS TOTAL



INBOARD PROFILE
FORWARD FUSELAGE
AREA

PLEXIGLASS, FABRIC
COVERED NOSE CONE

TWIN .50 Cal. BROWNING M. G.
TURRET IN 250 CAL. 12 ELECTRIC TURRET,
3000 ROUNDS, 85° ELEVATION.
800 ROUNDS TOTAL



SCALE BARS

STARBOARD
NATIONAL INSIGNIA
MOVED FORWARD TO
CLEAR WINDOW JUST
AFT OF STA. 392

FUEL FILL
132 GAL. CAP.

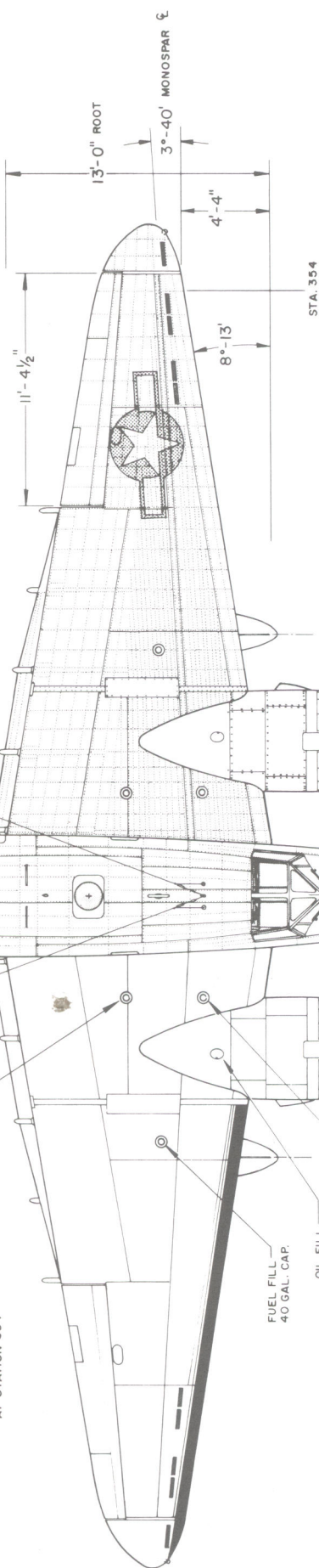
FUEL FILL
40 GAL. CAP.

OIL FILL
40 GAL. CAP.

FUEL FILL
115 GAL. CAP.

TWIN .50 CAL.
FIXED MACHINE
GUNS, 2500
ROUNDS TOTAL

PLEXIGLASS RADOME
COVERED WITH DOUBLE
LAYERS OF FABRIC,
DOPED AND PAINTED
CAMOUFLAGE COLORS,
OR DISCREETIVE RED
OR WHITE



WING AND TAIL SURFACE
LEADING EDGE DEVICES
BOOTS OMITTED ON THIS SIDE

HISTORICAL
AVIATION
ALBUM

NOTE
ADDITIONAL FUEL AND OIL WAS CARRIED WITHIN THE FUSELAGE
THE AMOUNT VARIED, DEPENDING UPON THE MISSION WHICH THE
AIRCRAFT WAS TO BE USED. AS MANY AS FIVE FUEL TANKS,
TWO OF WHICH WERE PLACED IN THE BOMB BAY AND TOTALING
896 GALS., COULD BE INSTALLED.

LOCKHEED-VEGA PV-1
"VENTURA"
1941-45

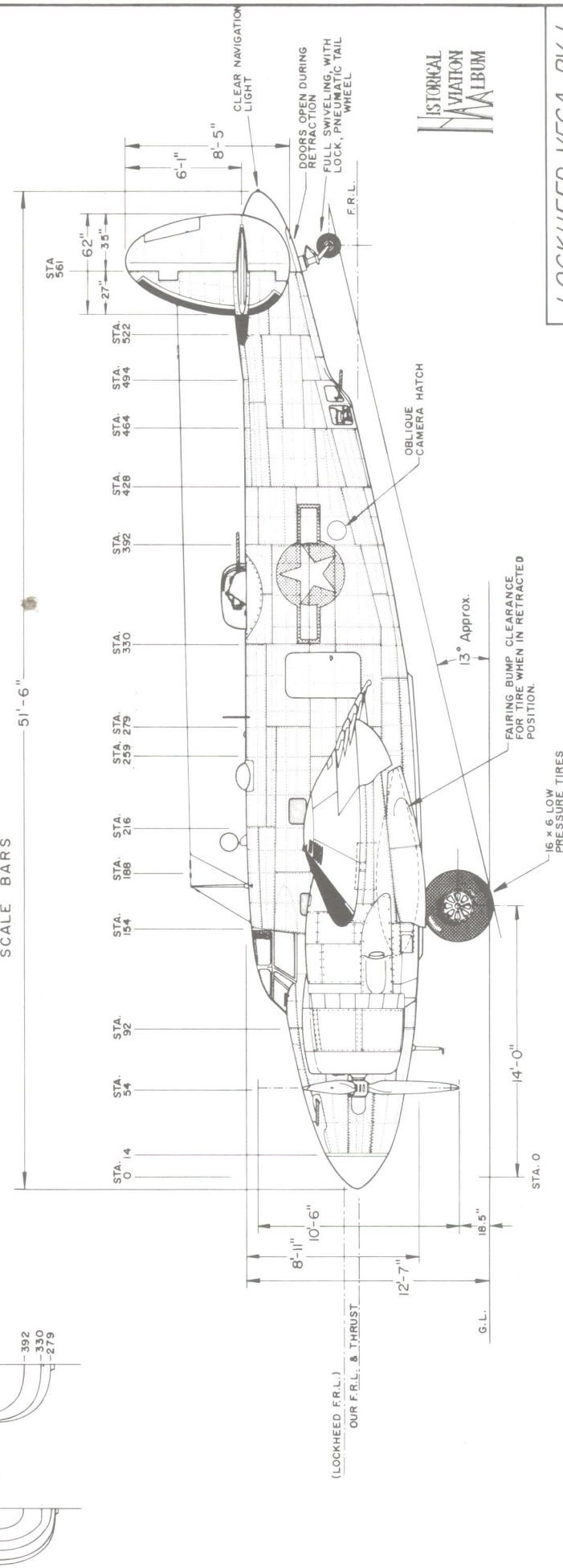
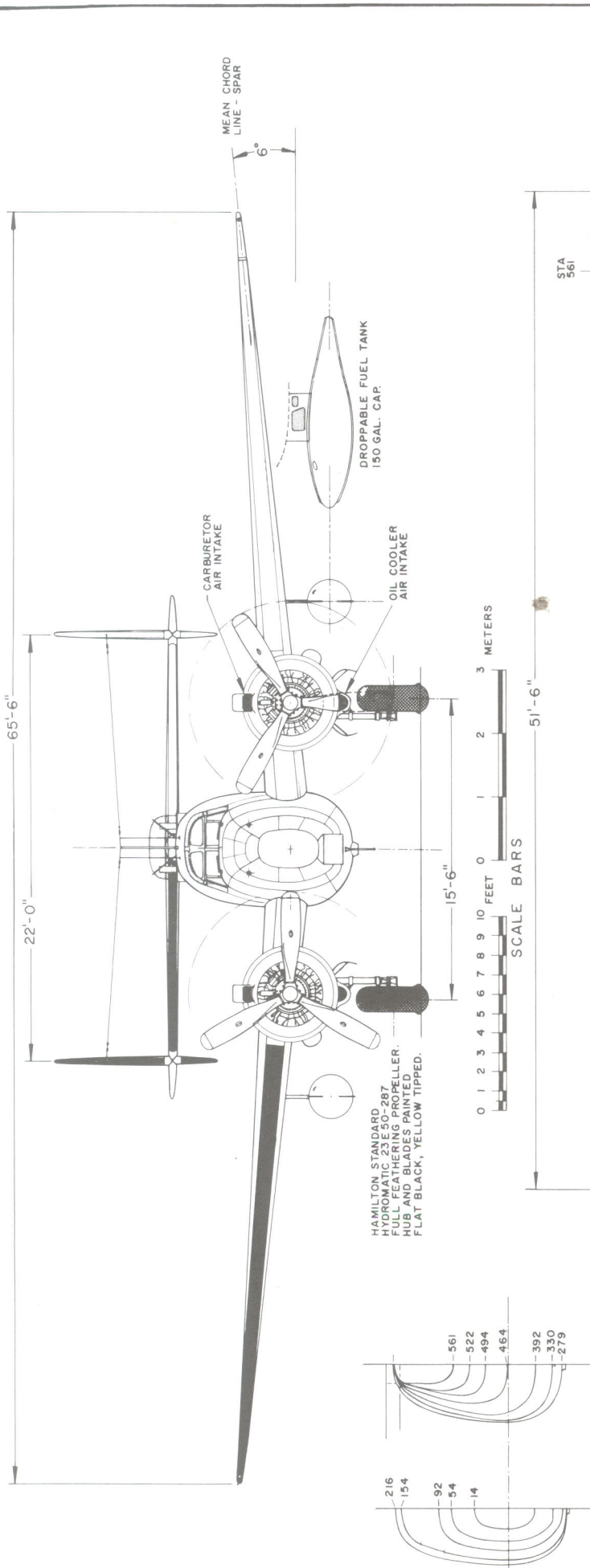
SCALE - ORIGINAL 1:48
REPRO. 1:96

DRAWN BY - PAUL R. MATT

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PLATE 1 of 3

DRAWING No. EE-101-C



LOCKHEED-VEGA PV-1
"VENTURA"
1941-43

SCALE - ORIGINAL 1:48
REPRO. 1:96
DRAWN BY- PAUL R. MATT

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TEMPLE CITY, CALIF. 91780

GENERAL SPECIFICATIONS

WEIGHT EMPTY 12,500 lbs.
 USEFUL LOAD 10,000 lbs.
 GROSS WEIGHT 22,500 lbs.
 DESIGN OVERLOAD 31,000 lbs.
 SERVICE OVERLOAD 34,000 lbs.
 WING AREA 551 sq. ft.
 SERVICE CEILING 27,000 feet
 TOP SPEED 322 mph (280 knots)
 CRUISING SPEED (ECONOMICAL) 170 mph (145 knots)
 CRUISING SPEED (COMBAT) 250 mph (218 knots)
 LANDING SPEED 90 mph (78 knots)
 STALL SPEED, CLEAN 105 mph (91 knots)

POWER - TWO P & W TWIN-ROW R-2800-31 WASP
 ENGINES, 2,000 H.P. EACH, AT 2700 RPM,
 (100 OCTANE FUEL). SINGLE STAGE,
 TWO SPEED SUPERCHARGERS.

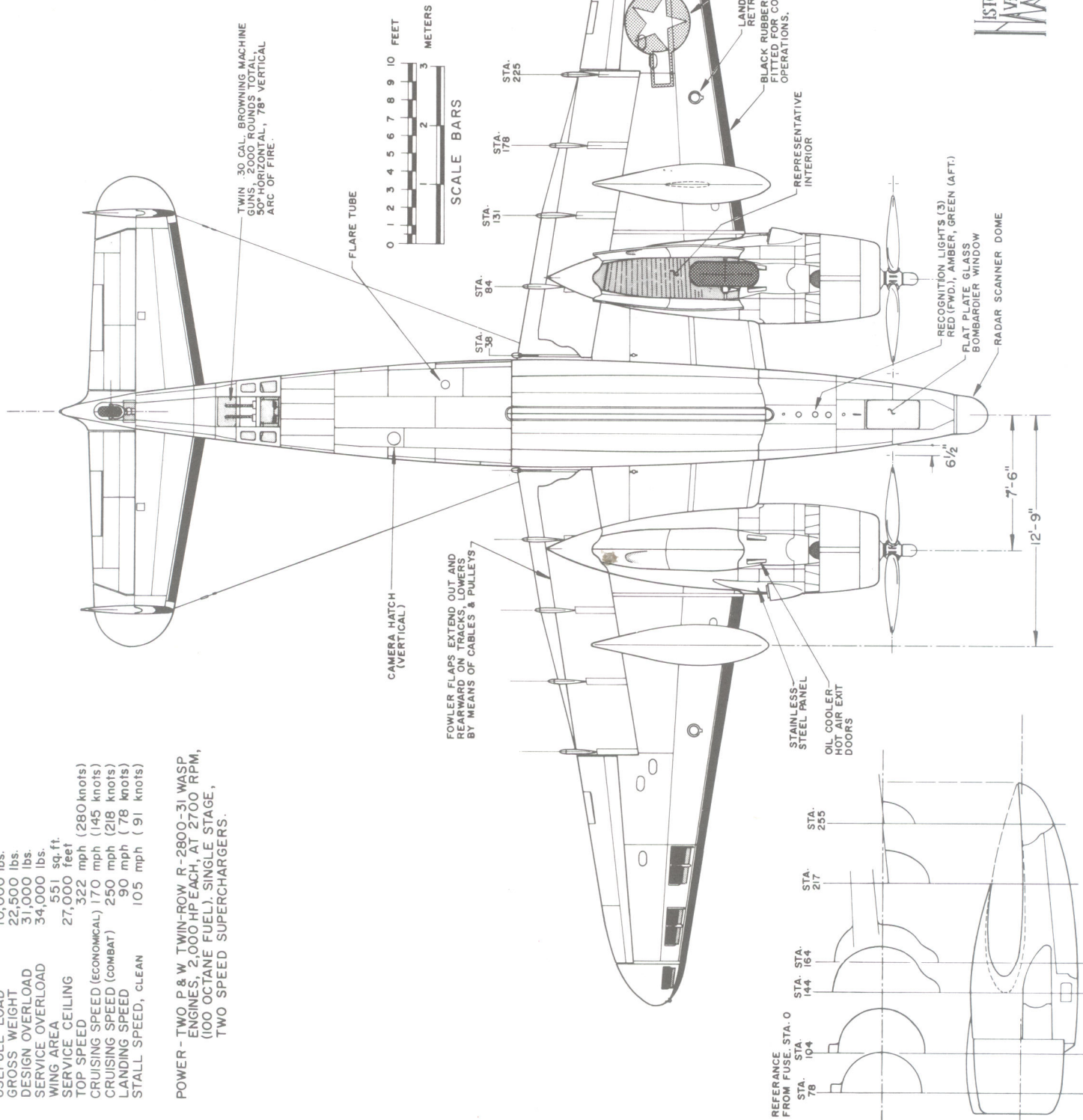
NOTE: ONLY MAJOR PANELING AND RIVET LINES
 ARE SHOWN ON THESE DRAWINGS. ALL
 SUCH DETAILING WAS NOT NECESSARILY
 TRANSFERRED FROM ONE VIEW TO ANOTHER.

COLORING NOTES

U.S. NAVY PV-1 MODELS

1942-43, BLUE GRAY-PLANVIEW AND
 UPPER SURFACES.
 LIGHT GRAY-UNDERSURFACES.

1944-45, TRI-COLOR, DARK SEA BLUE
 UPPER AND PLANVIEW SURFACES
 BLENDING TO INTERMEDIATE
 ON SIDE VIEW SURFACES.
 WHITE UNDERSURFACES.
 ALL COLORS WERE NON-
 SPECULAR, DULL FINISH.



MY SINCERE APPRECIATION IS EXTENDED TO
 CHARLES SCRIVNER FOR TECHNICAL MATERIAL
 SUITABLE TO MAKE THESE DRAWINGS AS
 ACCURATE AS POSSIBLE AT THIS TIME.

R. M. M.

LOCKHEED-VEGA PV-1
 "VENTURA"
 1941-45

SCALE - ORIGINAL 1:48
 REPRO. 1:96

DRAWN BY-PAUL R. MATT

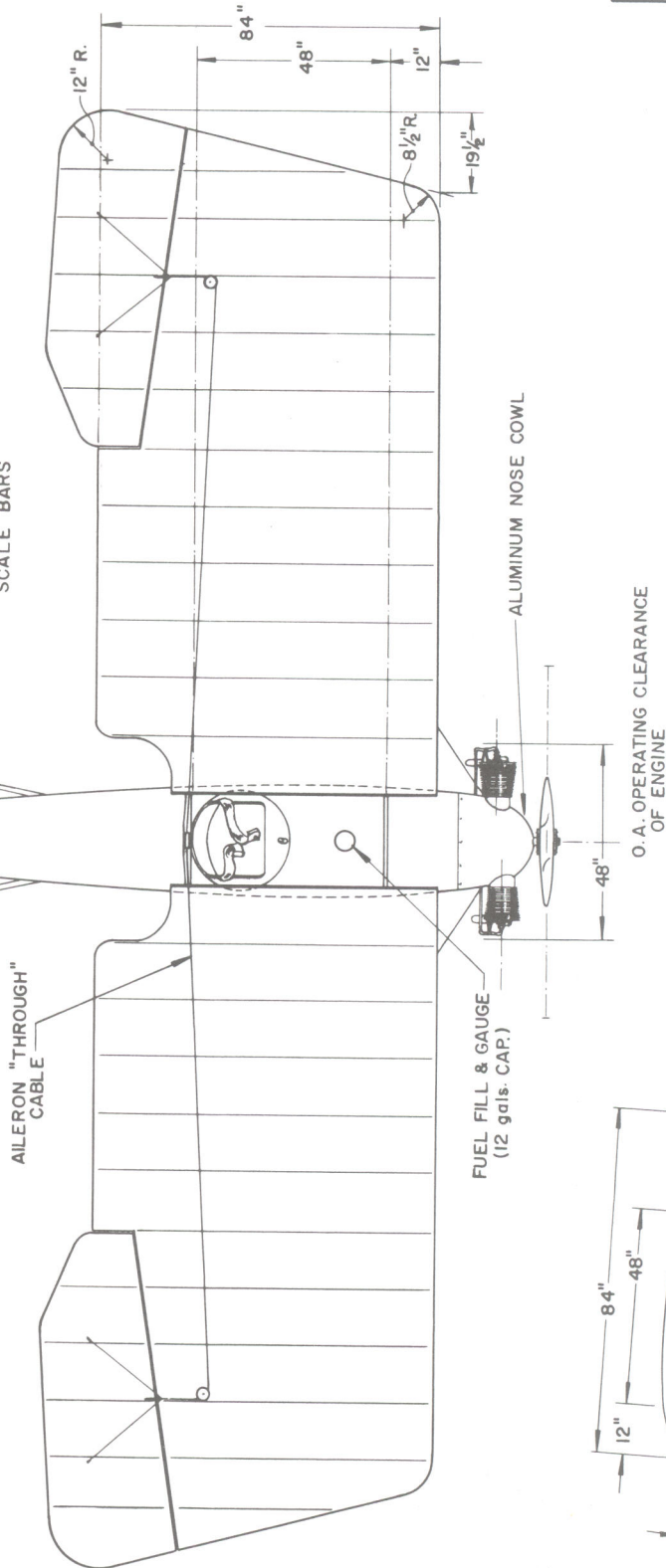
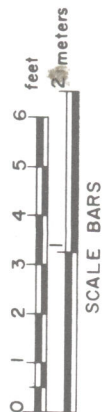
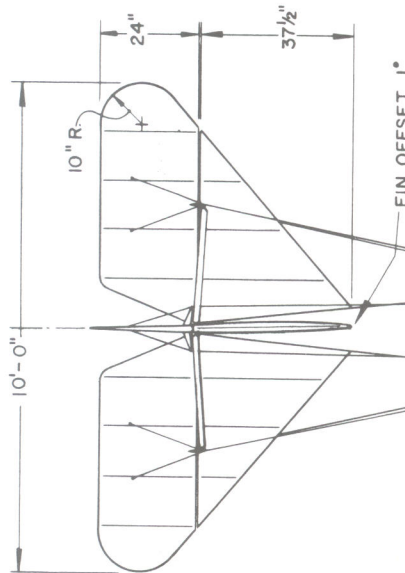
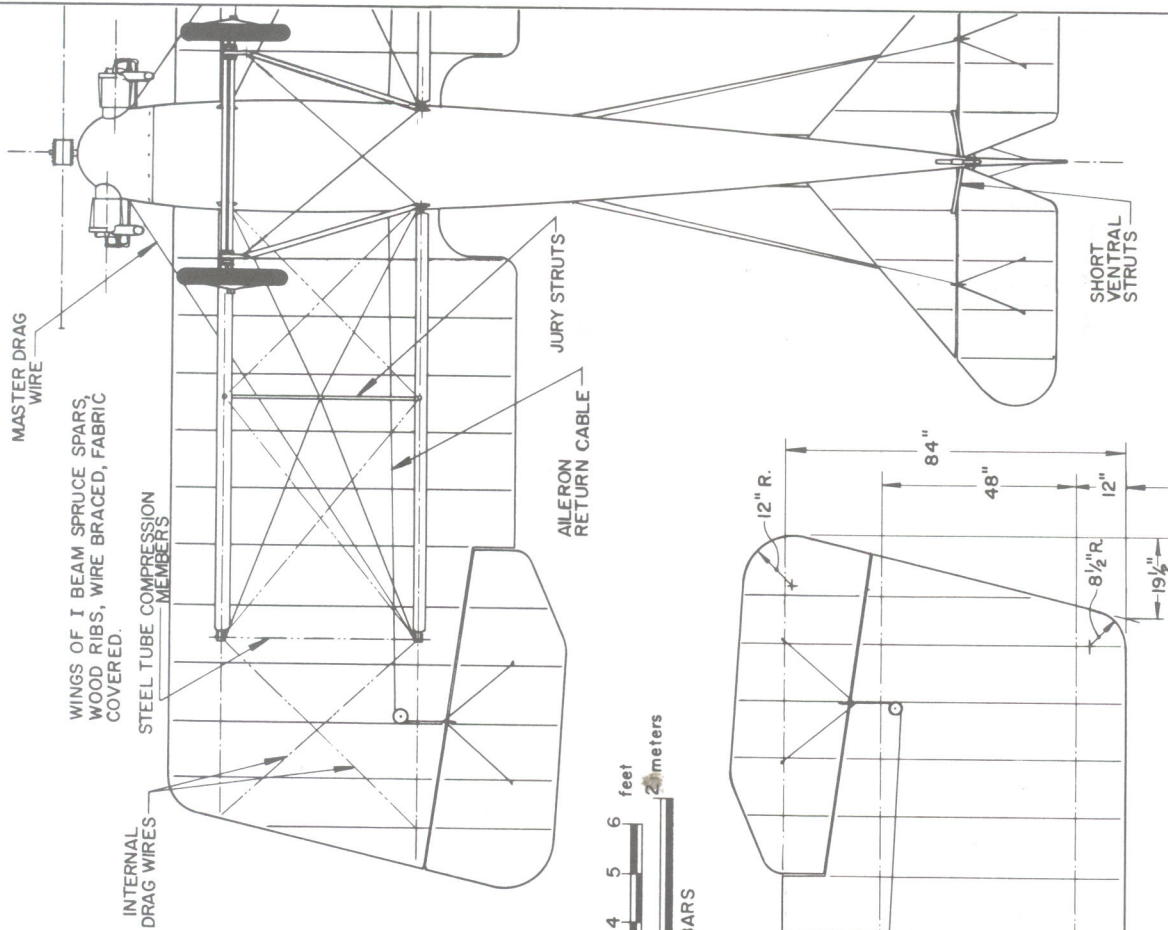
© HISTORICAL AVIATION ALBUM 1976
 P.O. BOX 33
 TEMPLE CITY, CALIF. 91780

HISTORICAL
 AVIATION
 ALBUM

GENERAL SPECIFICATIONS

WEIGHT EMPTY 595 lbs.
 USEFUL LOAD 393 lbs.
 GROSS WEIGHT 978 lbs.
 TOP SPEED 72 mph.
 CRUISING SPEED 60 mph.
 LANDING SPEED 30 mph.
 CLIMB 4,800 FT. IN 10 MIN.
 RANGE AT CRUISE 240 miles
 WING AREA, INCL. AILERONS 187 sq. ft.
 WING LOADING 5.2 lbs./sq. ft.
 POWER LOADING 13.5 lbs./h.p.

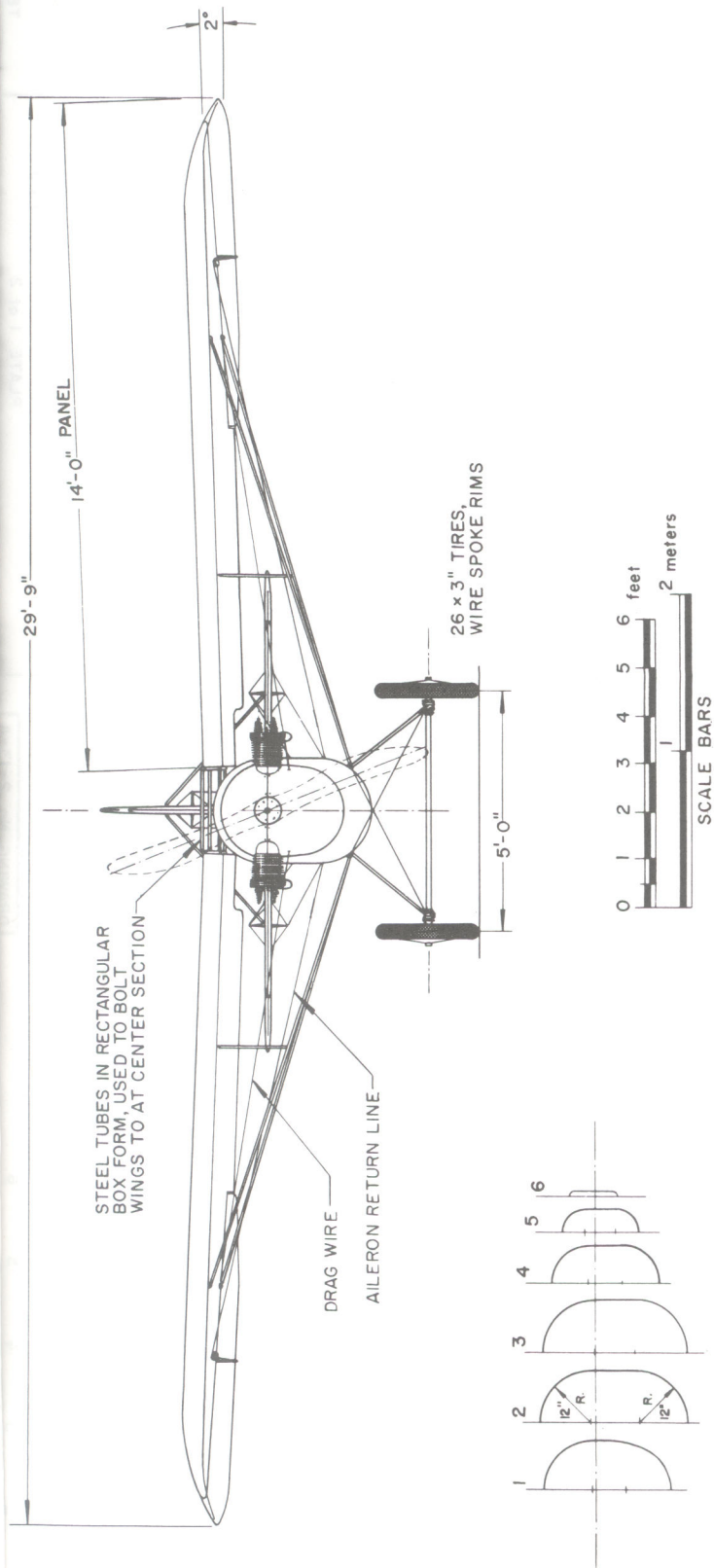
POWER: CATO AIR COOLED 2-CYL.
 HORIZONTALLY OPPOSED ENGINE
 5" BORE 6" STROKE
 NORMAL RATING 68 h.p.
 MAX. RATING 72 h.p. AT 1825 r.p.m.



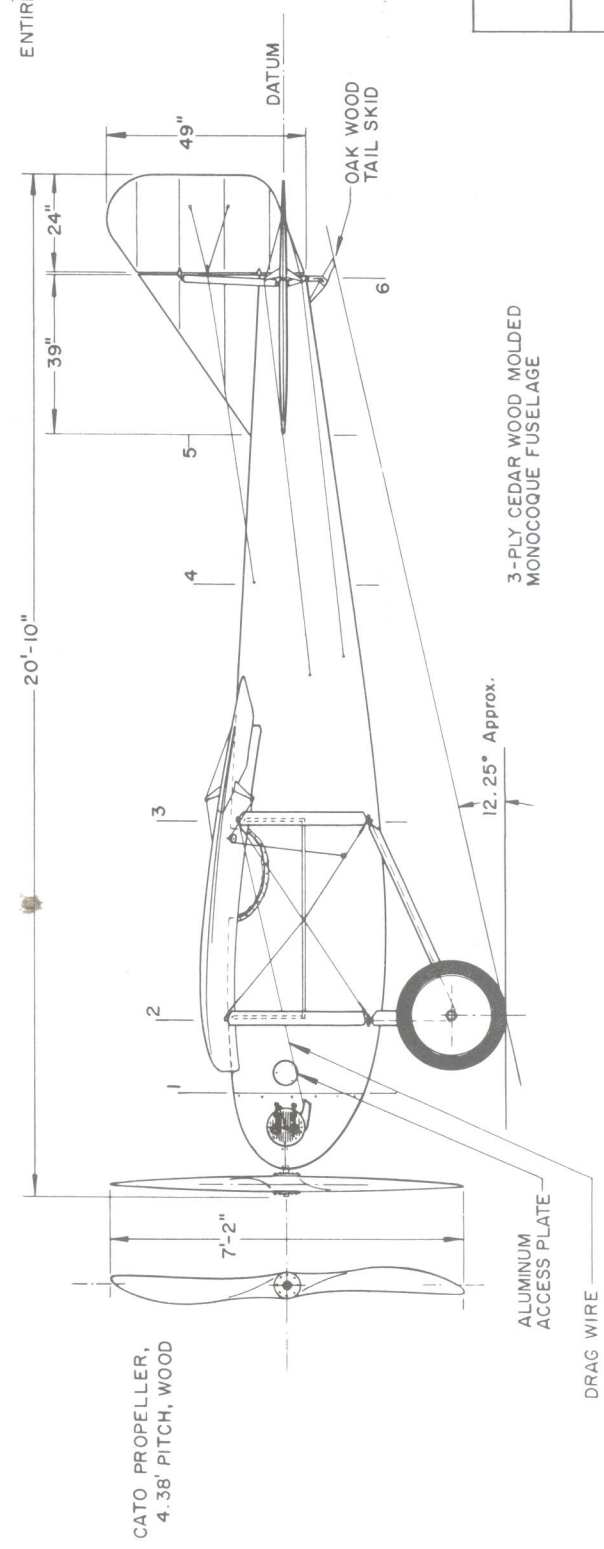
CATO No. 4 AIRFOIL
 (MODIFIED U.S.A. 6 SECTION)
 ORDINATES UPON REQUEST

HISTORICAL
 AVIATION
 ALBUM

LWF-CATO Model L
 "BUTTERFLY"
 1919-1920
 SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY- PAUL R. MATT
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 TEMPE, CALIF. 91780



COLORING NOTE
ENTIRE AIRCRAFT SILVER DOPED



ELEVATOR FIXED AT 0°



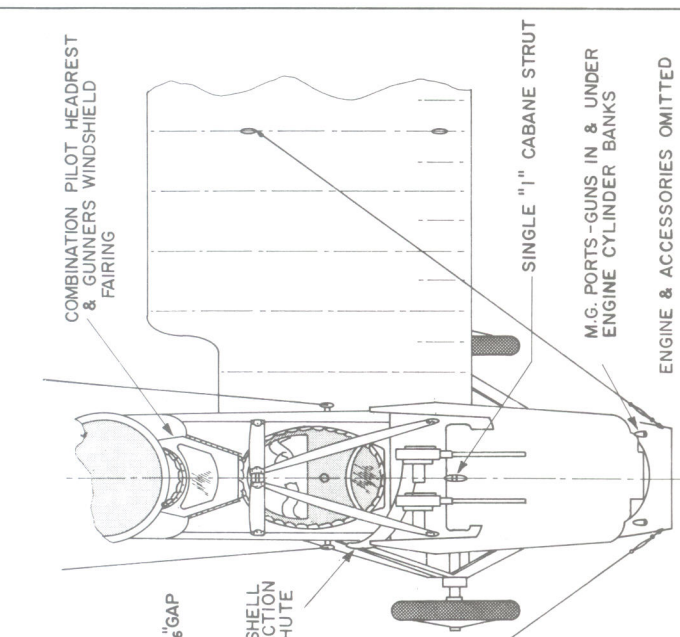
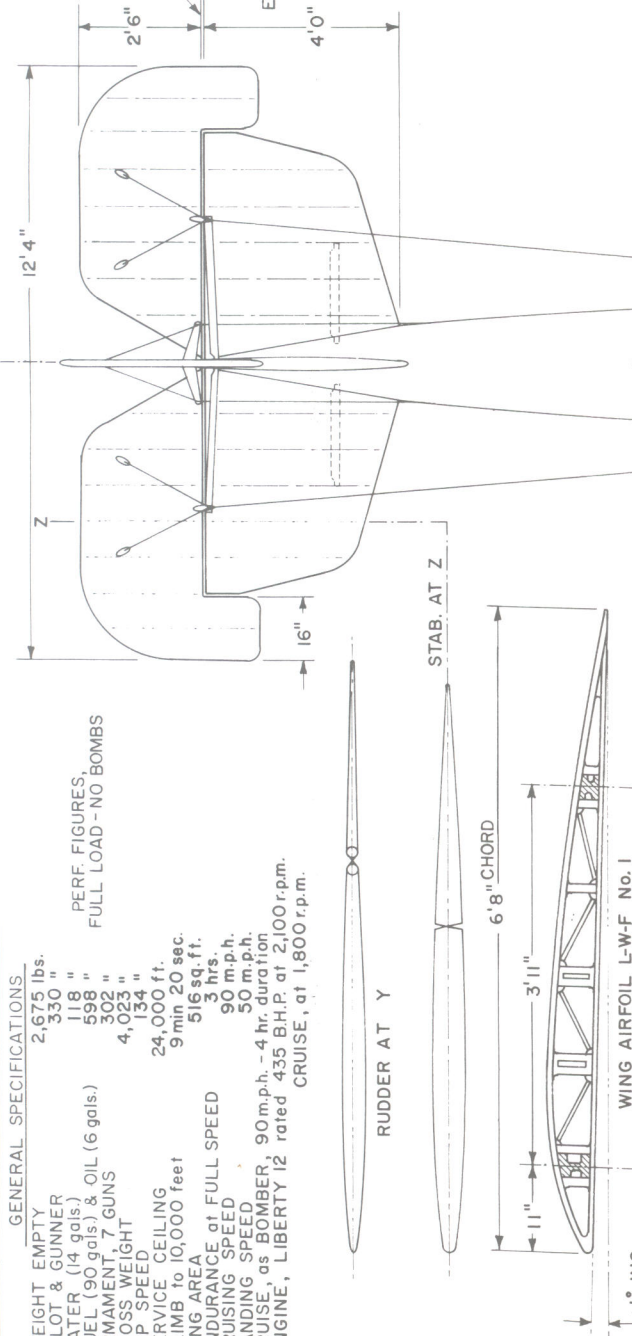
LWF-CATO Model L "BUTTERFLY" 1919-1920	
SCALE - ORIGINAL	1:24
REPRO.	1:48
DRAWN BY- PAUL R. MATT	
© HISTORICAL AVIATION ALBUM 1972	
P.O. BOX 33	
TEMPLE CITY, CALIF., 91780	

3-PLY CEDAR WOOD MOLDED
MONOCOQUE FUSELAGE

GENERAL SPECIFICATIONS

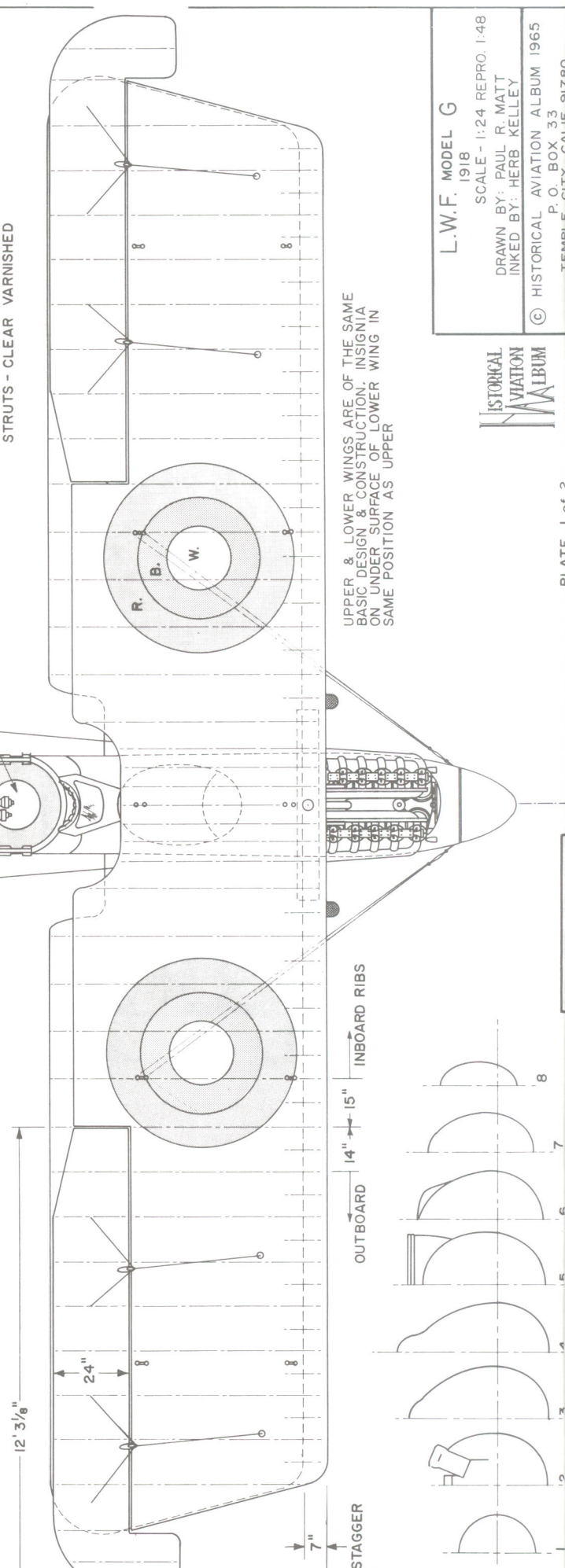
WEIGHT EMPTY 2,675 lbs.
 PILOT & GUNNER 330 "
 WATER (14 gals.) 118 "
 FUEL (90 gals.) & OIL (6 gals.) 598 "
 ARMAMENT, 7 GUNS 302 "
 GROSS WEIGHT 4,023 "
 TOP SPEED 134 "
 SERVICE CEILING 24,000 ft.
 CLIMB to 10,000 feet 9 min 20 sec.
 WING AREA 516 sq. ft.
 ENDURANCE at FULL SPEED 3 hrs.
 CRUISING SPEED 90 m.p.h.
 LANDING SPEED 50 m.p.h.
 CRUISE, as BOMBER, 90 m.p.h., - 4 hr. duration
 CRUISE, LIBERTY 12 rated 435 B.H.P. at 2,100 r.p.m.
 CRUISE, at 1,800 r.p.m.

PERF. FIGURES, FULL LOAD - NO BOMBS



COLORING NOTES
 ALL PLAN VIEW SURFACES - DARK EARTH BROWN
 (UPPER SURFACES OF WINGS, TAIL SURFACES & TOP OF FUSELAGE TO COLOR LINE)
 UNDER SURFACES - PALE SKY BLUE
 STRUTS - CLEAR VARNISHED

.30 BROWNING M.G.s
 (ALL GUNS SAME)
 GUNNER'S STOOL



UPPER & LOWER WINGS ARE OF THE SAME BASIC DESIGN & CONSTRUCTION. INSIGNIA ON UNDER SURFACE OF LOWER WING IN SAME POSITION AS UPPER

L.W.F. MODEL G

1918

SCALE - 1:24 REPRO. 1:48

DRAWN BY: PAUL R. MATT

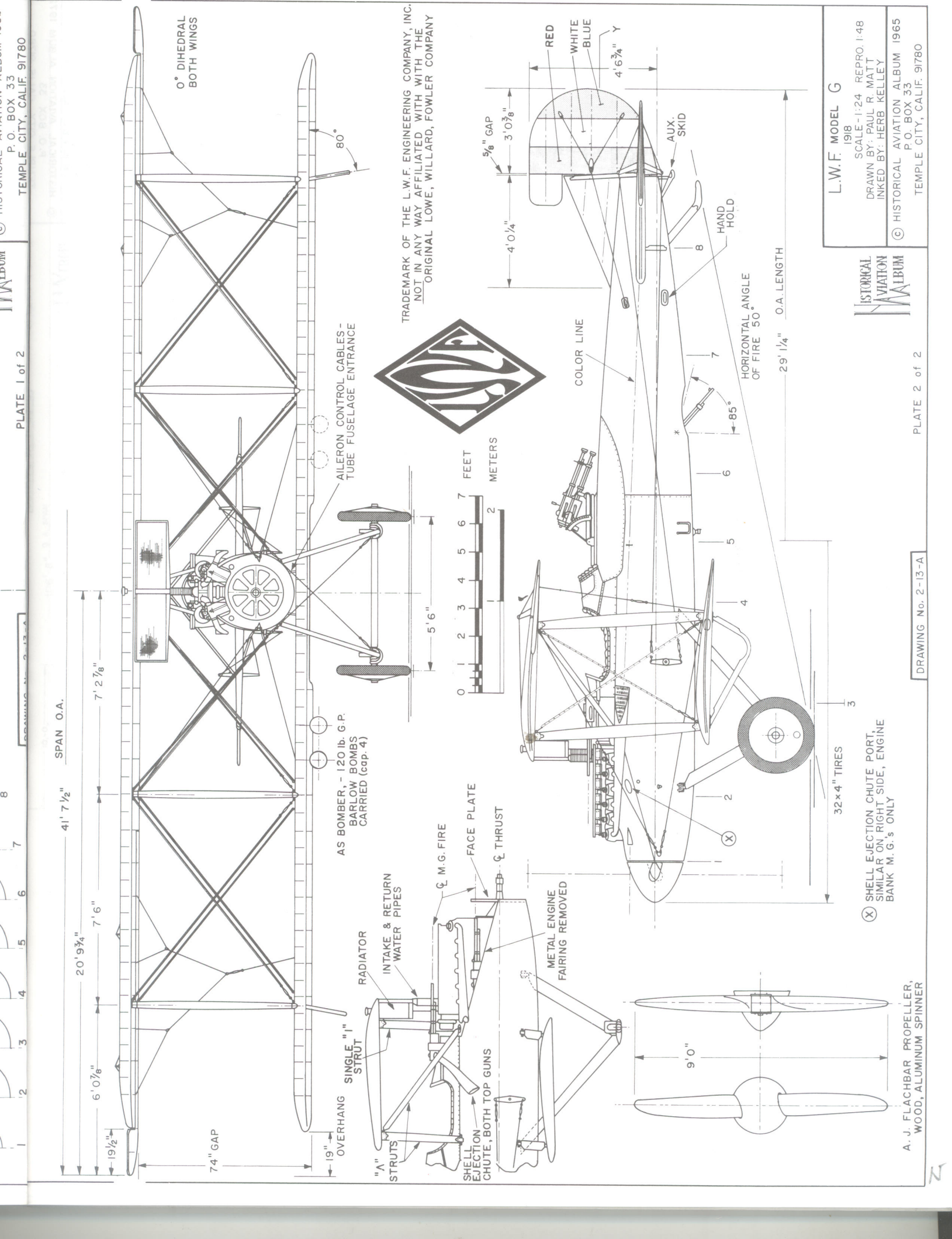
INKED BY: HERB KELLEY

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TEMPLE CITY, CALIF. 91780

HISTORICAL AVIATION ALBUM



L.W.F. MODEL G

1918
SCALE 1-1/24 REPRO. 1:48
DRAWN BY: PAUL R. MATT
INKED BY: HERB KELLEY
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P.O. BOX 33
TEMPLE CITY, CALIF. 91780

HISTORICAL VIATION ALBUM

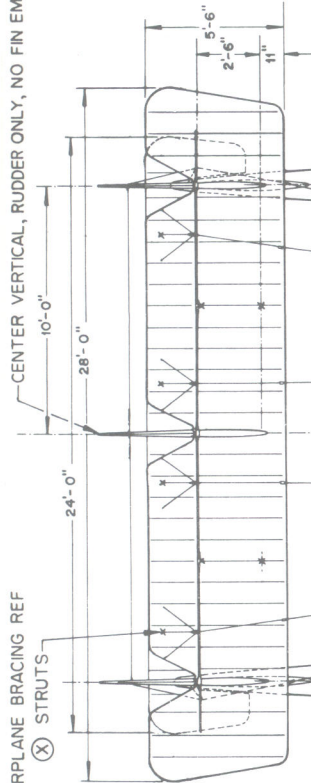
PLATE 2 of 2

DRAWING No. 2-13-A

A. J. FLACHBAR PROPELLER,
WOOD, ALUMINUM SPINNER

INTERPLANE BRACING REF

(X) STRUTS

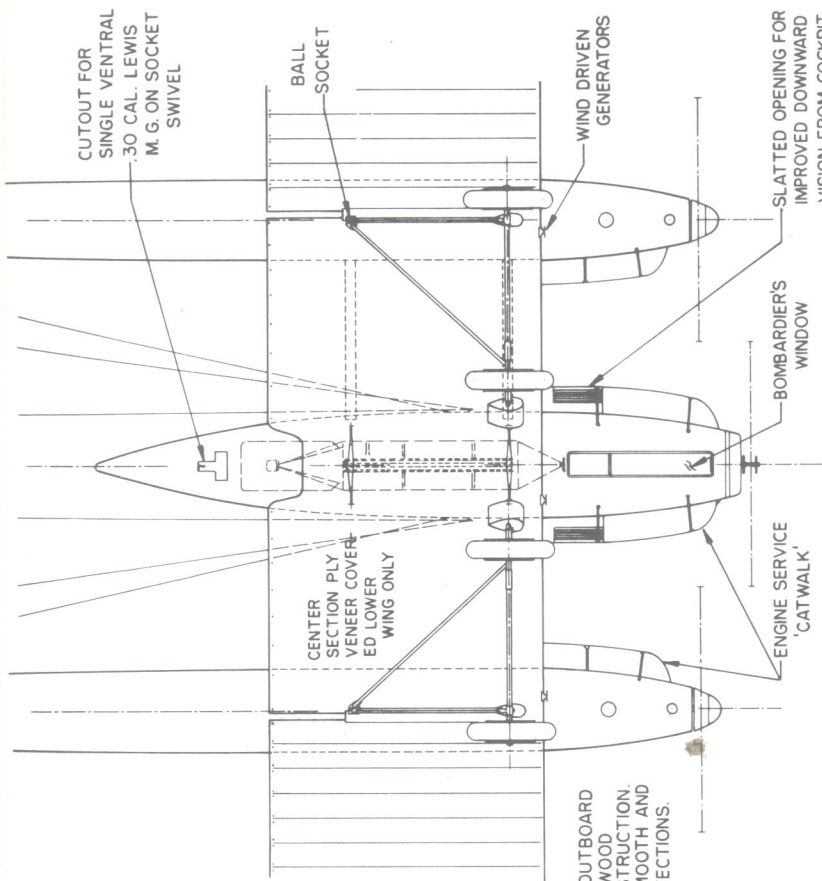


GENERAL SPECIFICATIONS

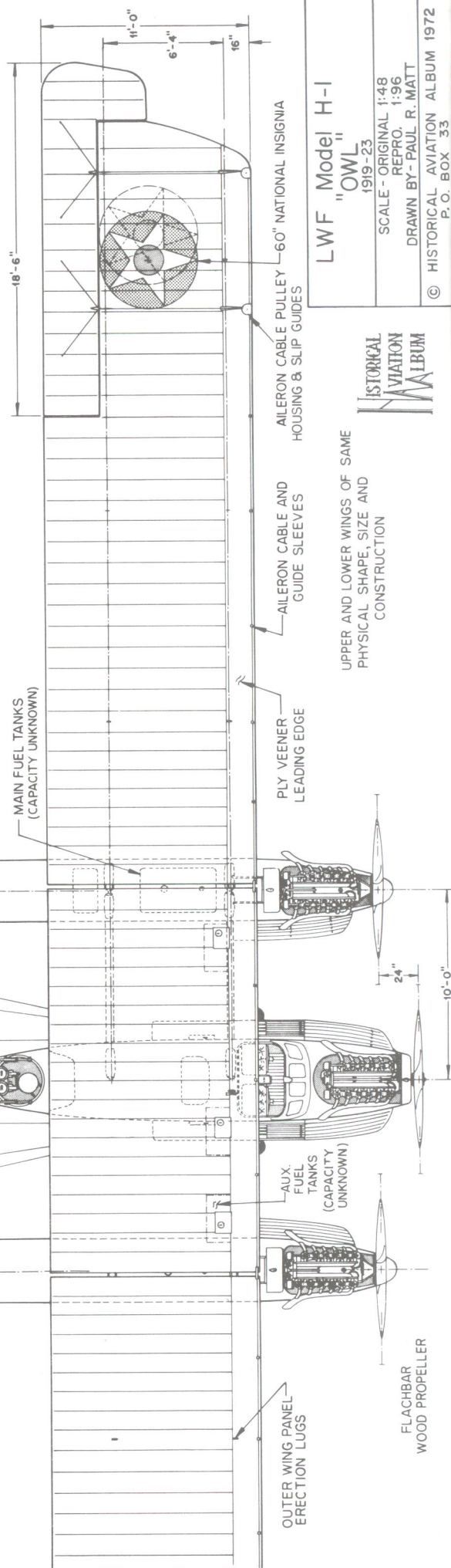
WEIGHT EMPTY 12,400 LBS.
 USEFUL LOAD 7,600 LBS.
 GROSS WEIGHT 20,000 LBS.
 WING AREA (INCL. ALERONS) 2,000 SQ.FT.
 POWER LOADING 110 M.P.H.
 TOP SPEED, S. L. 110 M.P.H.
 CRUISE ENDURANCE, COMPUTED 10 HRS
 CLIMB, INITIAL, S. L. 650 FT./MIN
 SERVICE CEILING, COMPUTED 17,000 FT
 LANDING SPEED 55 M.P.H.
 POWER: 3 LIBERTY 12s 400 HP
 @ 1700 RPM

COLORING NOTES

ENTIRE AIRCRAFT GLOSS OLIVE DRAB (GREEN)
 A. S. NUMBER & WHEEL COVERS - WHITE
 NATIONAL INSIGNIA, RED, WHITE & BLUE



MAIN FUEL TANKS
 (CAPACITY UNKNOWN)



LWF Model H-1
 "OWL"
 1919-23

SCALE - ORIGINAL 1:48
 REPRO. 1:96
 DRAWN BY - PAUL R. MATT
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UPPER AND LOWER WINGS OF SAME
 PHYSICAL SHAPE, SIZE AND
 CONSTRUCTION

106'-8" O. A. SPAN

53'-4"

PITOT VENTURI MAST

GENERAL SPECIFICATIONS

WEIGHT EMPTY	3700 lbs.
USEFUL LOAD	2049 "
WEIGHT GROSS	5749 "
FUEL CAPACITY (INTERNAL) 100 gals.	
OIL CAPACITY	12 "
MAXIMUM SPEED	145 mph
LANDING SPEED	59 "
CRUISING SPEED	95 "
WING AREA	417 sq. ft.
SERVICE CEILING	16,500 feet
RANGE AT CRUISE	400 miles (GROSS WHT. INT. FUEL)

COLOR NOTES FOR AIRCRAFT PORTRAYED

ALL EXPOSE METAL AREAS, (FUSELAGE, STRUTS, FILLET) - LIGHT GRAY

FABRIC COVERED WINGS - SILVER. (TOP OF UPPER WING, - CHROME YELLOW)

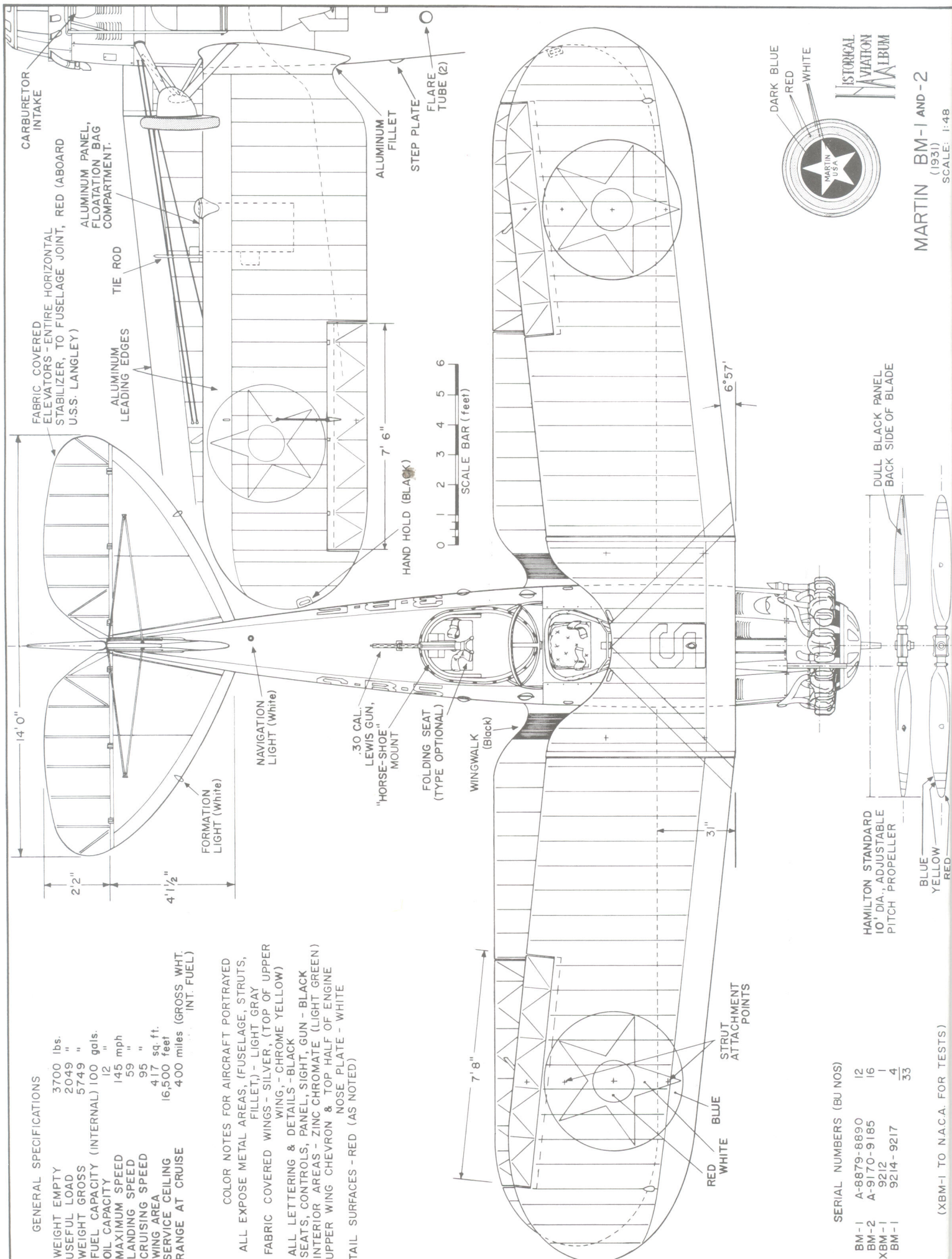
ALL LETTERING & DETAILS - BLACK

SEATS, CONTROLS, PANEL, SIGHT, GUN - BLACK

INTERIOR AREAS - ZINC CHROMATE (LIGHT GREEN)

UPPER WING CHEVRON & TOP HALF OF ENGINE NOSE PLATE - WHITE

TAIL SURFACES - RED (AS NOTED)



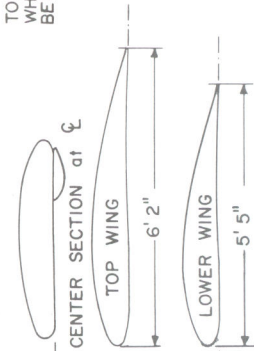
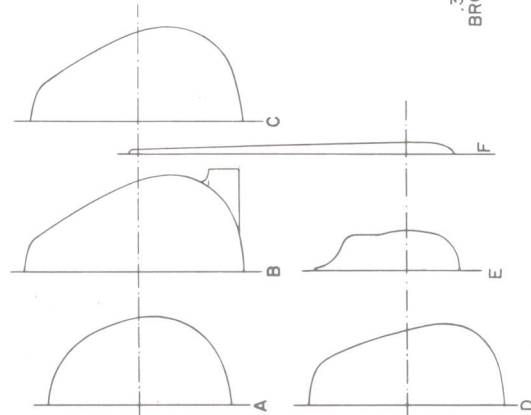
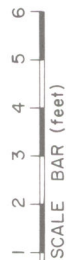
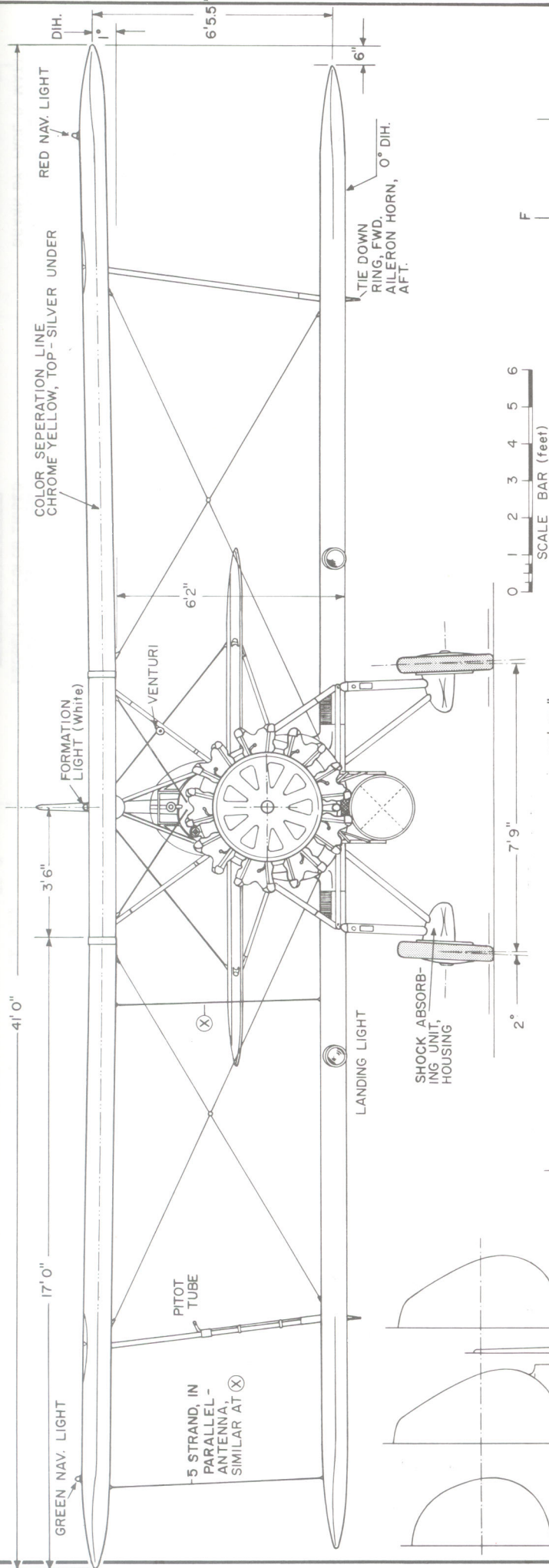
SERIAL NUMBERS (BU NOS)

BM-1	A-8879-8890	12
BM-2	A-9170-9185	16
XB-1	9212	1
BM-1	9214-9217	4
		33

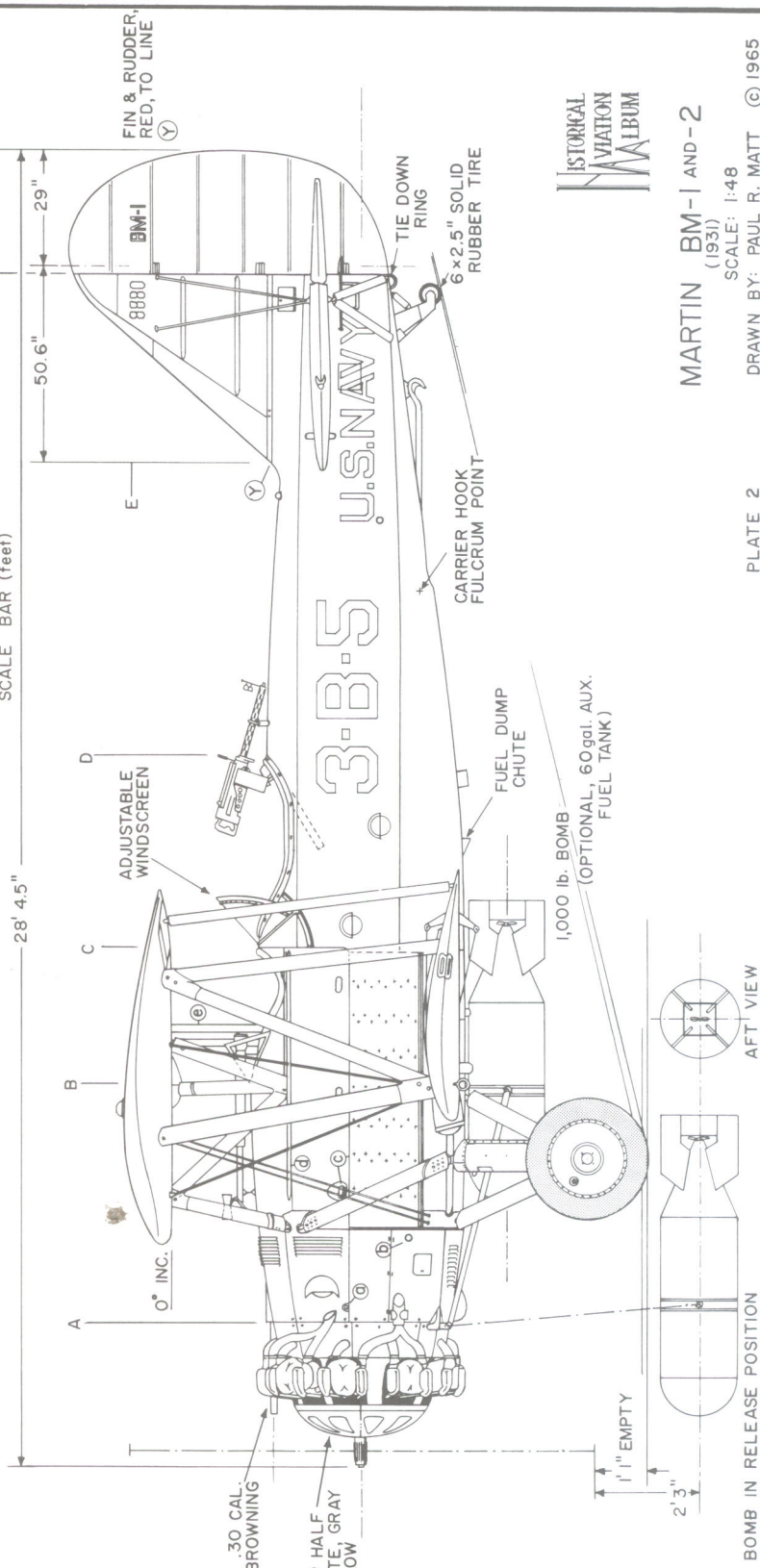
(XB-1 TO NACA. FOR TESTS)

MARTIN BM-1 AND -2

(1931)
SCALE: 1:48



- FWD AREA CODE
- (A) ENGINE STARTING CRANK COUPLING
 - (B) FOOT REST BAR
 - (C) FUEL TANKS & FILLER CAP
 - (D) INTER-PLANE TIE ROD
 - (E) 5 STRAND ANTENNA (STBD. ONLY)



MARTIN BM-1 AND -2
(1931)

SCALE: 1:48

DRAWN BY: PAUL R. MATT © 1965

PLATE 2

AFT VIEW

BOMB IN RELEASE POSITION

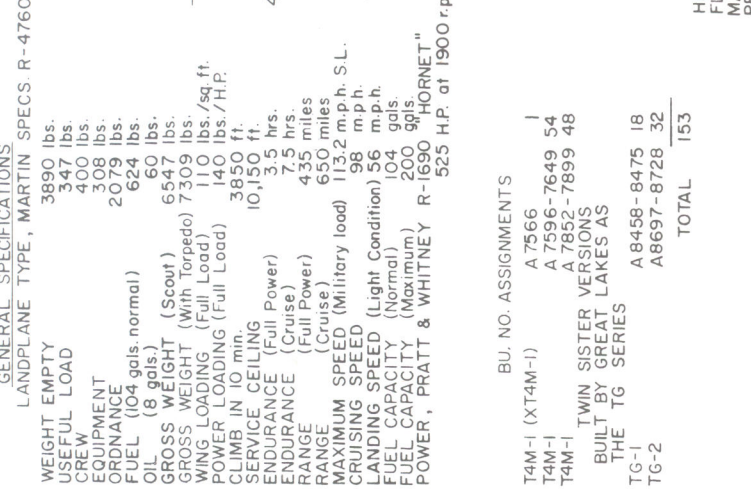
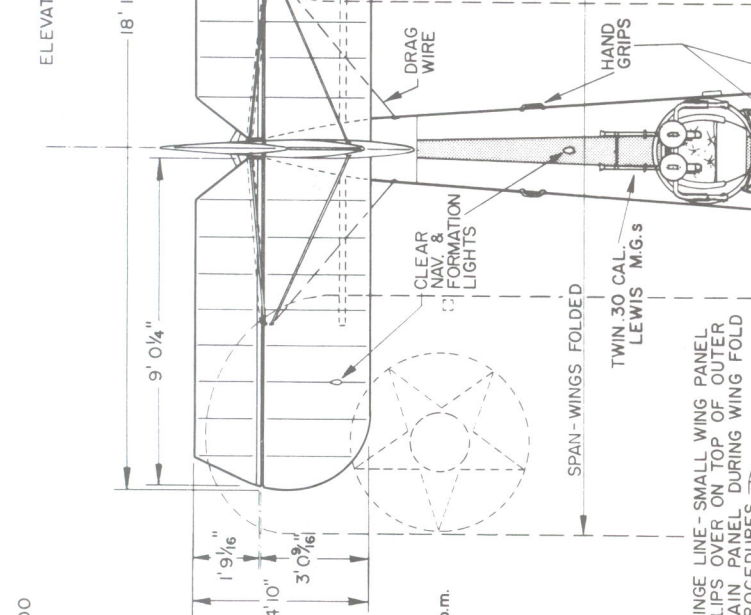
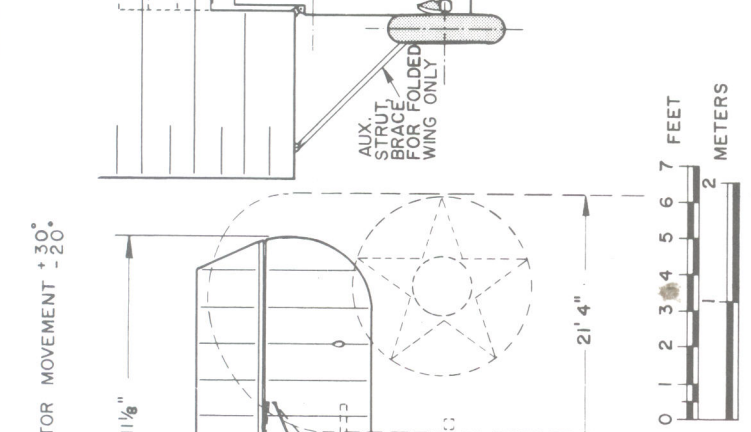
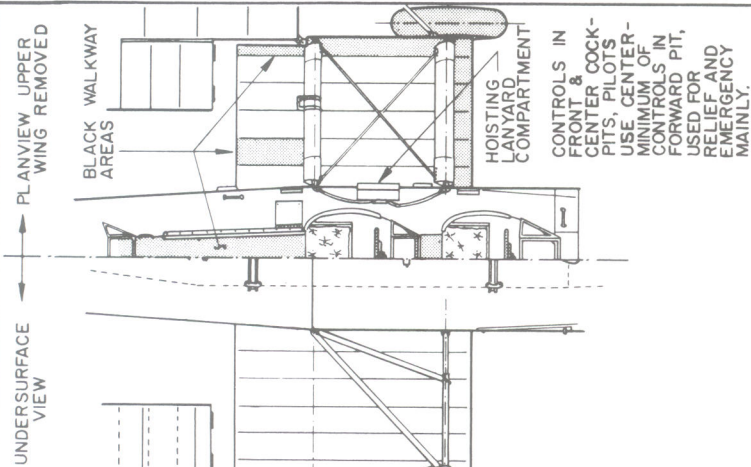
19

GENERAL SPECIFICATIONS LANDPLANE TYPE, MARTIN SPECS R-47600

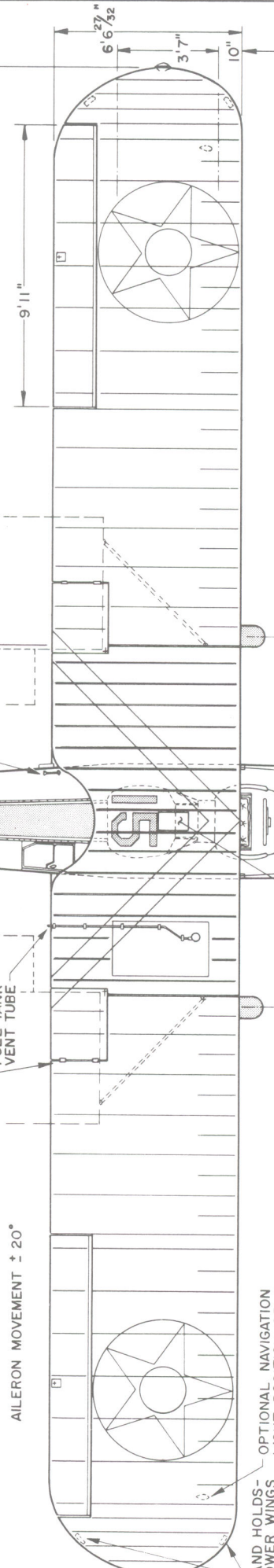
WEIGHT EMPTY 3890 lbs.
 CREW 347 lbs.
 EQUIPMENT 400 lbs.
 ORDNANCE 308 lbs.
 FUEL 2079 lbs.
 OIL 624 lbs.
 (8 gals.)
 GROSS WEIGHT (Scout) 6547 lbs.
 GROSS WEIGHT (With Torpedo) 7309 lbs.
 WING LOADING (Full Load) 110 lbs./sq. ft.
 POWER LOADING (Full Load) 140 lbs./H.P.
 CLIMB IN 10 min 3850 ft.
 SERVICE CEILING 10,150 ft.
 ENDURANCE (Full Power) 3.5 hrs.
 ENDURANCE (Cruise) 7.5 hrs.
 RANGE 435 miles
 (Cruise)
 MAXIMUM SPEED 113.2 m.p.h. S.L.
 CRUISING SPEED 98 m.p.h.
 LANDING SPEED (Light Condition) 56 m.p.h.
 FUEL CAPACITY (Normal) 104 gals.
 FUEL CAPACITY (Maximum) 200 gals.
 POWER, PRATT & WHITNEY R-1690 "HORNET"
 525 H.P. at 1900 r.p.m.

BU. NO. ASSIGNMENTS

T4M-1 (XT4M-1)	A 7566	1
T4M-1	A 7596-7649	54
T4M-1	A 7852-7899	48
TWIN SISTER VERSIONS		
BUILT BY GREAT LAKES AS		
THE TG SERIES		
TG-1	A 8458-8475	18
TG-2	A 8697-8728	32
TOTAL		153



AILERON MOVEMENT $\pm 20^\circ$



DRAWINGS COMPLETED FROM THE
 GLENN L. MARTIN CO., CLEVELAND,
 OHIO. PRINTS R-47600 No. 2200,
 R-47601 No. 2065 AND 4340 OF
 9/10/28

HISTORICAL
 AVIATION
 MUSEUM

MARTIN T4M-1

1928-31

SCALE: 1:64

DRAWN BY: PAUL R. MATT

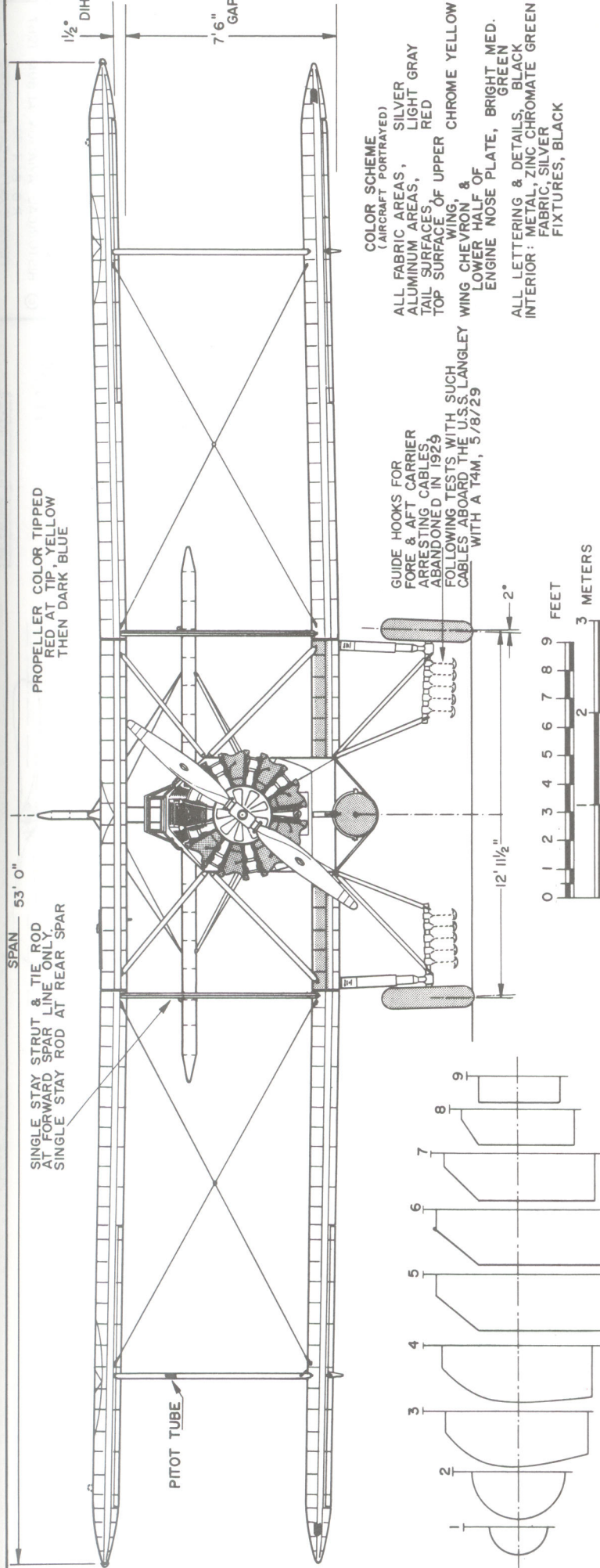
DRAWING No. 4-29-D

PLATE 1 of 2

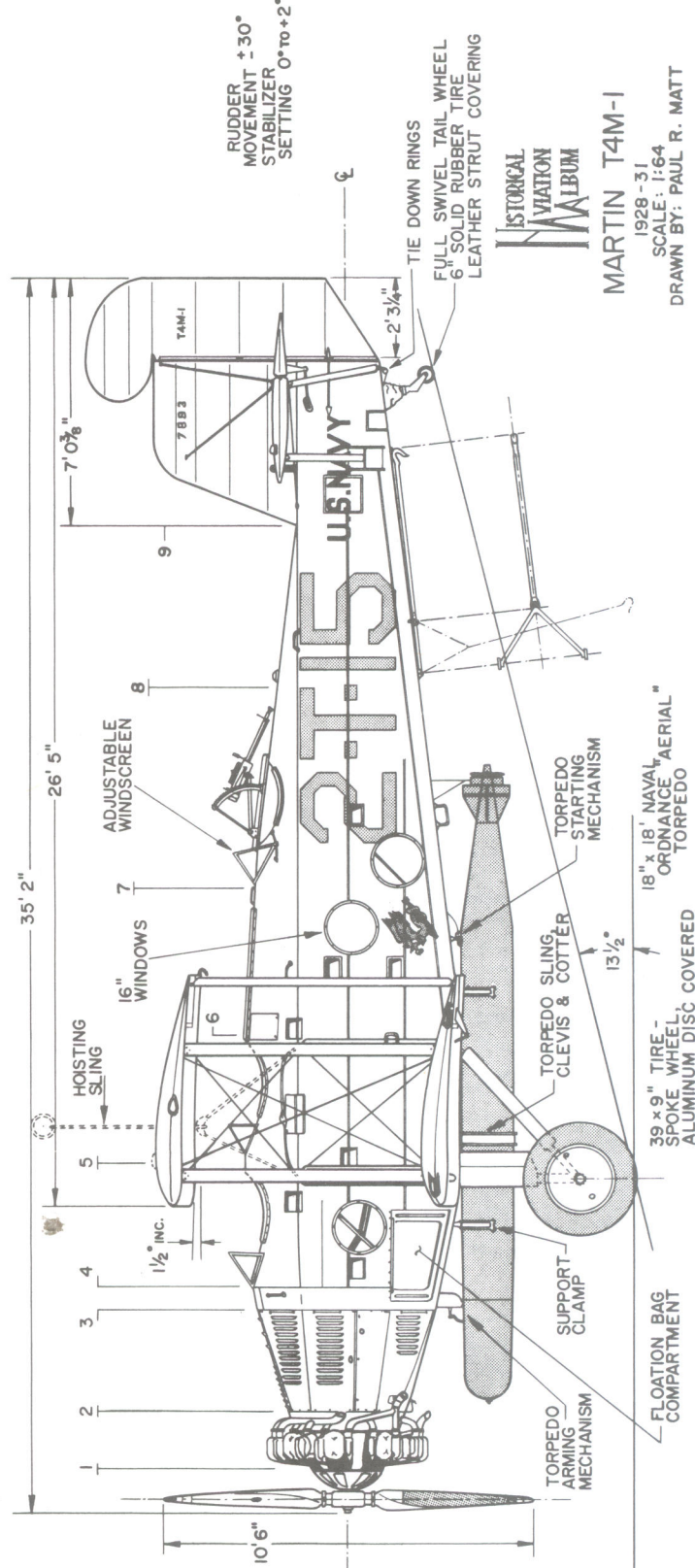
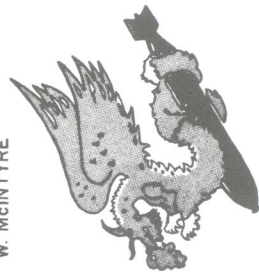
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SPAN 53' 0"

SINGLE STAY STRUT & TIE ROD



REF. U.S. NAVY AIRCRAFT, 1921-1941
by W. T. LARKINS &
artist W. MCINTYRE



MARTIN T4M-1

1928-31

1928-31
SCALE: 1:64
DRAWN BY: PAUL R. MATT

DRAWING No. 4-29-D

PLATE 2 of 2

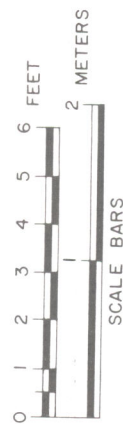
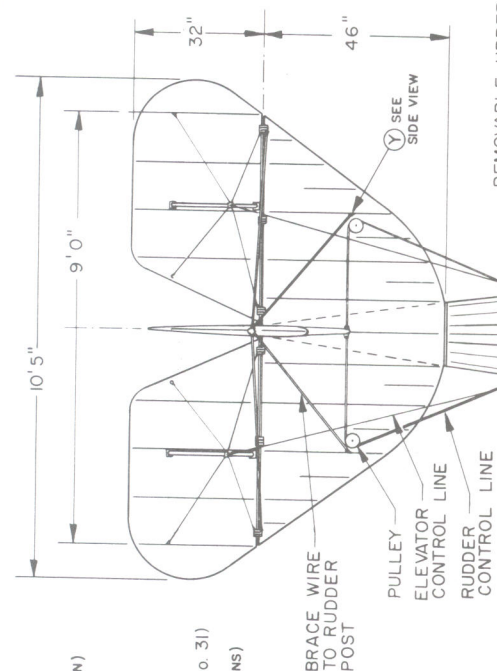
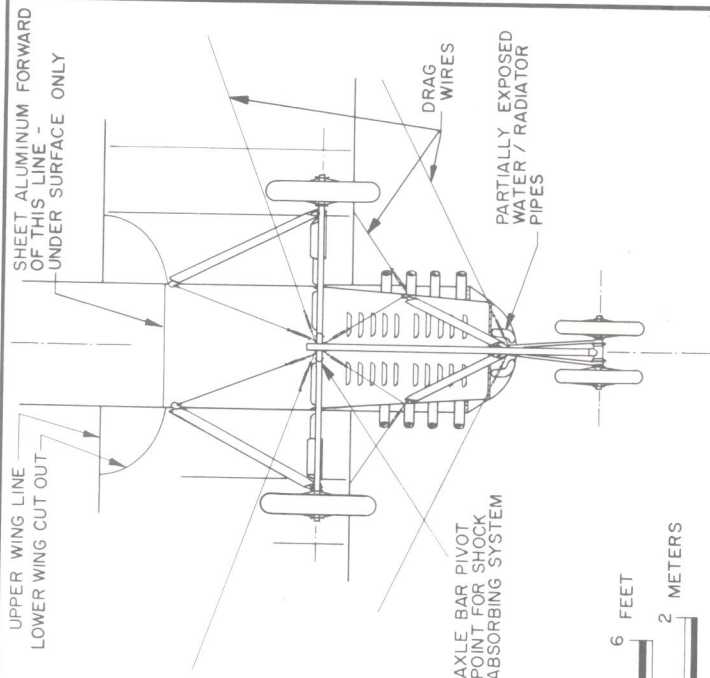
© HISTORICAL AVIATION ALBUM, 1967

GENERAL SPECIFICATION

WEIGHT EMPTY 1320 lbs.
 USEFUL LOAD 400 lbs. APPROX.
 GROSS WEIGHT 1720 lbs. (LAND PLANE VERSION)
 TOP SPEED 96 m.p.h.
 CRUISING SPEED 80 m.p.h.
 LANDING SPEED 45 m.p.h.
 GLIDE RATIO 12:1
 FUEL CAPACITY 50 gals.
 CLIMB TO 3500 FEET 10 min.
 RECORD CLIMB, 1915 - 5,200 feet in 10 min. 15 sec. (MARTIN TT No. 31)
 SERVICE CEILING, 2 PERSONS ABOARD, 9,500 feet
 WING AREA 379 sq. ft. (NOT INCL.AILERONS)
 POWER- CURTISS OX-2 90 hp

COLORING NOTES

ALUMINUM ENGINE COWLING AREA, COCKPIT COMBING - MEDIUM GRAY
 BALANCE OF AIRCRAFT - CLEAR DOPED FABRIC
 INTER-PLANE STRUTS - CLEAR VARNISHED ASH
 MAIN LANDING GEAR METAL STRUTS - BLACK



12" WHEEL ROTATES FOR RUDDER CONTROL, MOVES FORE & AFT FOR ELEVATOR CONTROL

CURTISS AILERON SHOULDER YOKE CONTROL

AILERON CONTROL LINES

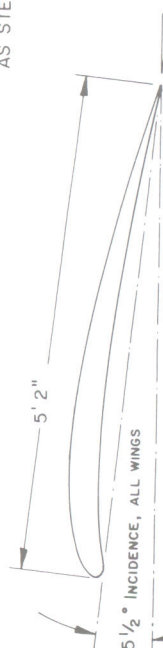
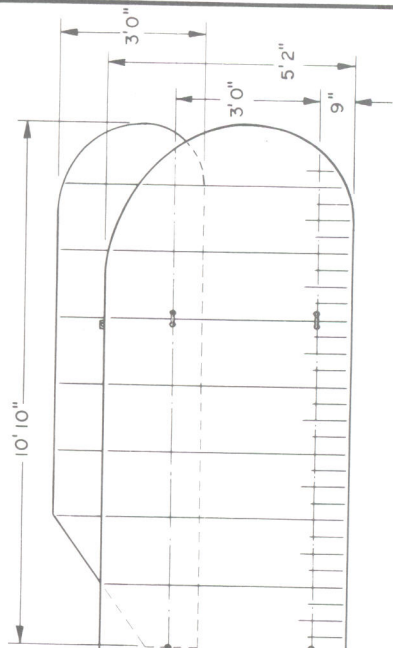
AILERON PIVOT LINE

UPPER WING OMITTED ON THIS SIDE

METAL STRUT SOCKET & SPAR TIE BRACKET

HARDWOOD STRIPS AS STEP PLATES

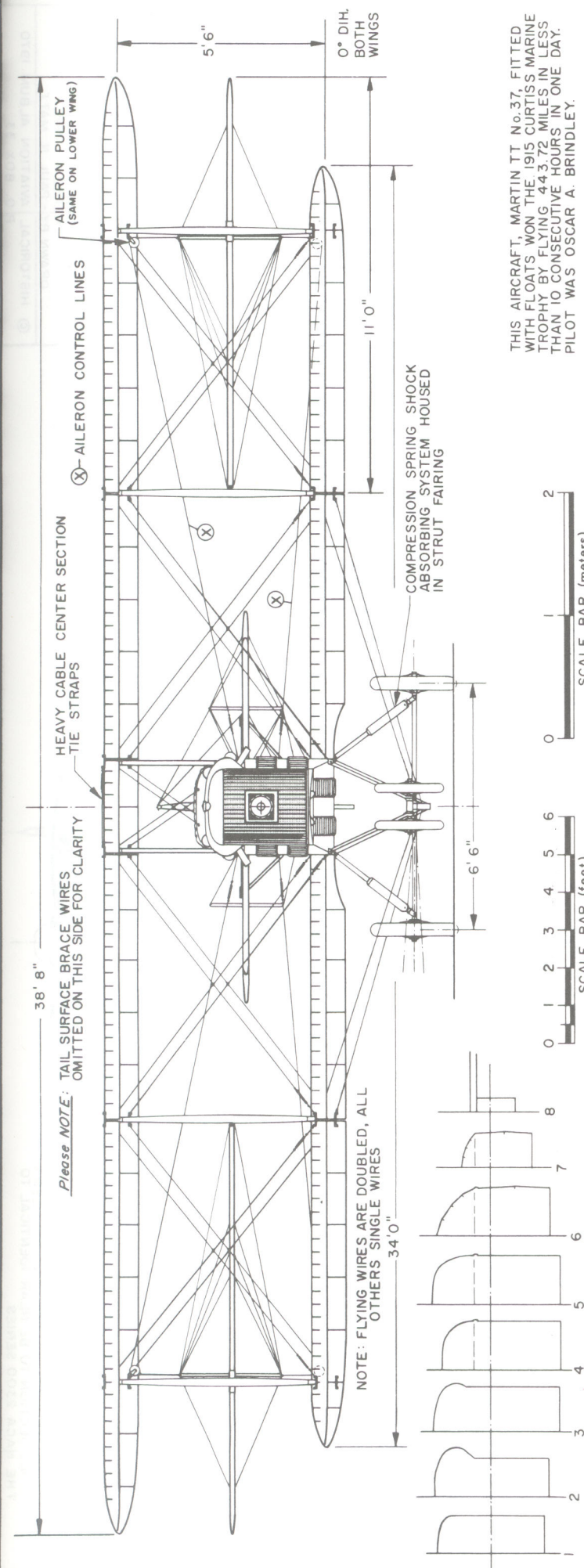
ELONGATED ENGINE HEAT VENTS



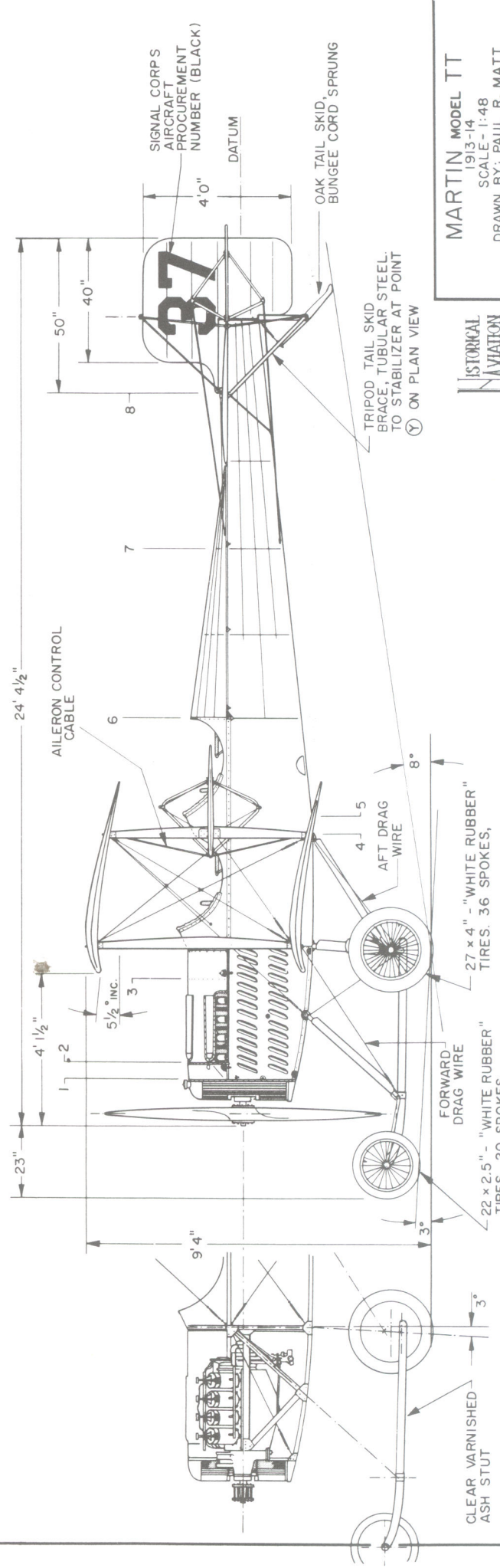
AIRFOIL, TWICE SCALE
 EXACT ORDINATES UNKNOWN, BELIEVED TO BE A MARTIN BASED ON AN EARLY

HISTORICAL AVIATION

MARTIN MODEL TT
 1913-14
 SCALE - 1:48



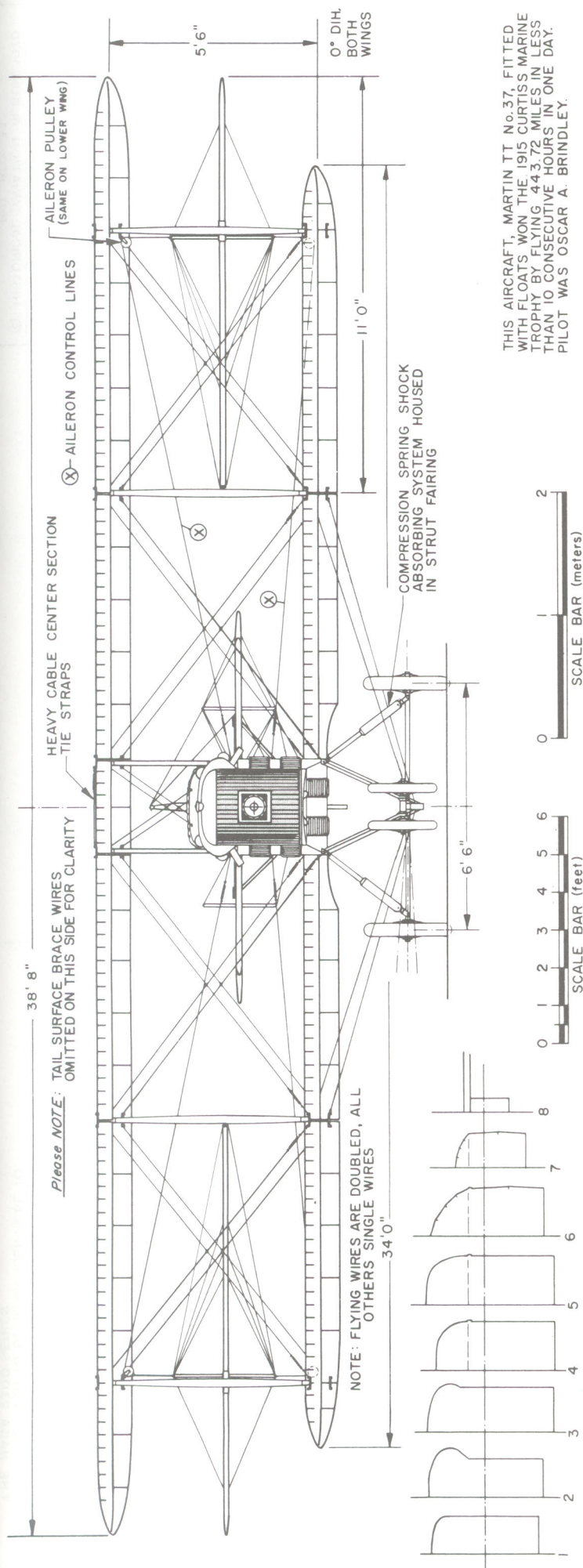
THIS AIRCRAFT, MARTIN TT No. 37, FITTED WITH FLOATS WON THE 1915 CURTISS MARINE TROPHY BY FLYING 443.72 MILES IN LESS THAN 10 CONSECUTIVE HOURS IN ONE DAY. PILOT WAS OSCAR A. BRINDLEY.



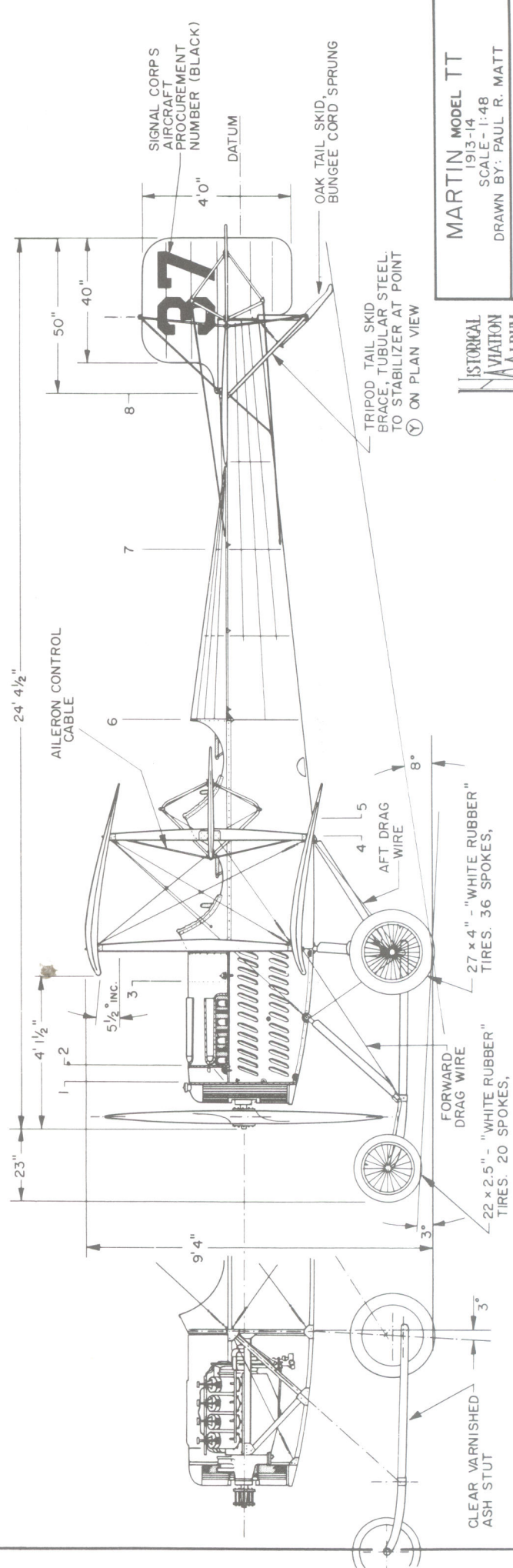
"WHITE RUBBER" WAS LIGHT GRAY IN COLOR ALL SPOKES WERE STRAIGHT, UNCROSSED AT RIMS OR HUBS

HISTORICAL AVIATION ALBUM

MARTIN MODEL TT
1913-14
SCALE-1:48
DRAWN BY: PAUL R. MATT
© HISTORICAL AVIATION ALBUM 1967
P.O. BOX 33
TEMPLE CITY, CALIF. 91780



THIS AIRCRAFT, MARTIN TT No. 37, FITTED
WITH FLOATS WON THE 1915 CURTISS MARINE
TROPHY BY FLYING 443.72 MILES IN LESS
THAN 10 CONSECUTIVE HOURS IN ONE DAY.
PILOT WAS OSCAR A. BRINDLEY.



"WHITE RUBBER" WAS LIGHT GRAY IN COLOR
ALL SPOKES WERE STRAIGHT, UNCROSSED AT RIMS
OR HUBS

HISTORICAL
AVIATION
ALBUM

MARTIN MODEL TT
1913-14
SCALE - 1:48
DRAWN BY: PAUL R. MATT

© HISTORICAL AVIATION ALBUM 1967
P.O. BOX 33
TEMPLE CITY, CALIF. 91780

GENERAL SPECIFICATIONS

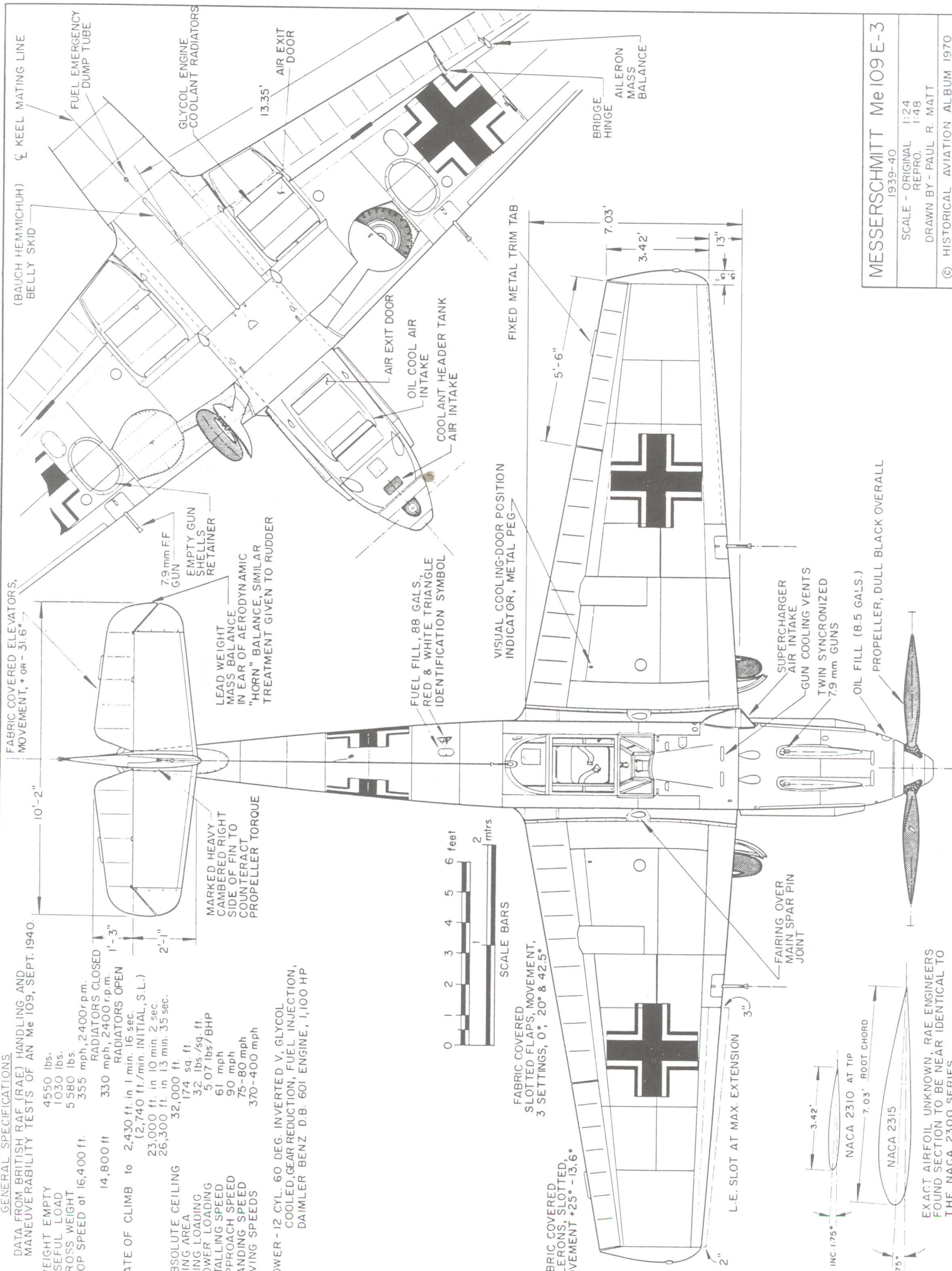
DATA FROM BRITISH RAF (RAE) HANDLING AND MANEUVERABILITY TESTS OF AN Me 109, SEPT. 1940.

WEIGHT EMPTY 4550 lbs.
USEFUL LOAD 1030 lbs.
GROSS WEIGHT 5580 lbs.
TOP SPEED at 16,400 ft. 355 mph, 2400rpm.

14,800 ft. 330 mph, 2400rpm.
RATE OF CLIMB to 2,430 ft. in 1 min. 16 sec.
(2,740 ft./min. INITIAL, S.L.)
23,000 ft. in 10 min. 2 sec.
26,300 ft. in 13 min. 35 sec.

ABSOLUTE CEILING 32,000 ft.
WING AREA 174 sq. ft.
WING LOADING 32 lbs./sq. ft.
POWER LOADING 5.07 lbs./BHP
STALLING SPEED 61 mph
APPROACH SPEED 90 mph
LANDING SPEED 75-80 mph
CLIMBING SPEED 370-400 mph

POWER - 12 CYL. 60 DEG. INVERTED V, GLYCOL COOLED, GEAR REDUCTION, FUEL INJECTION, DAIMLER BENZ D.B. 601 ENGINE, 1,100 HP



MESSERSCHMITT Me 109 E-3

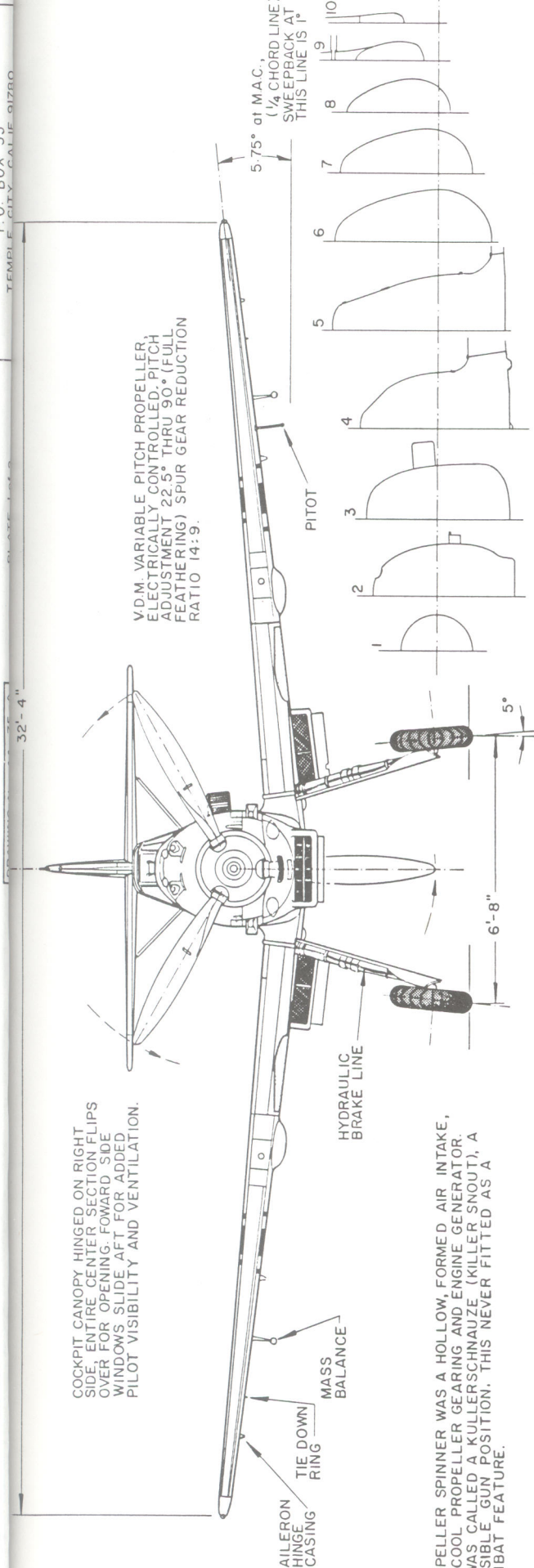
1939-40

SCALE - ORIGINAL 1:24
REPRO. 1:48

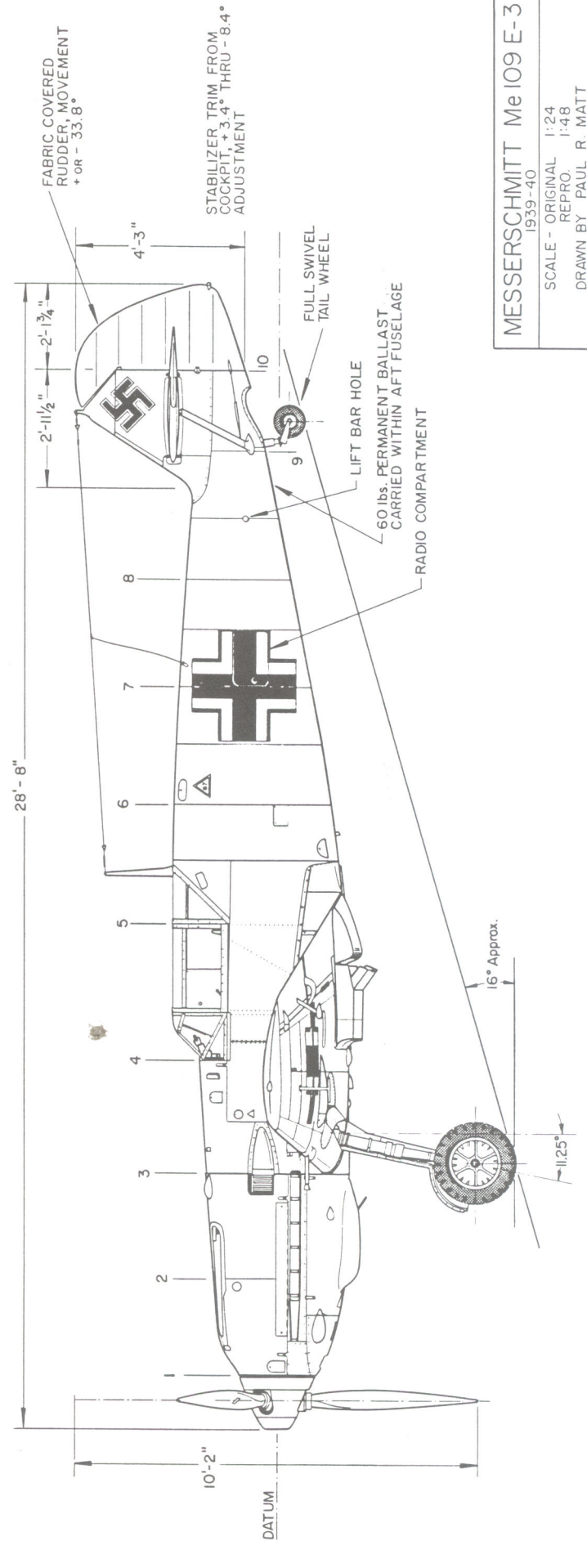
DRAWN BY - PAUL R. MATT

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P.O. BOX 33



PROPELLER SPINNER WAS A HOLLOW, FORMED AIR INTAKE, TO COOL PROPELLER GEARING AND ENGINE GENERATOR. IT WAS CALLED A KULLERSCHNAUZE (KILLER SNOOT), A POSSIBLE GUN POSITION. THIS NEVER FITTED AS A COMBAT FEATURE.



MESSERSCHMITT Me 109 E-3
1939-40

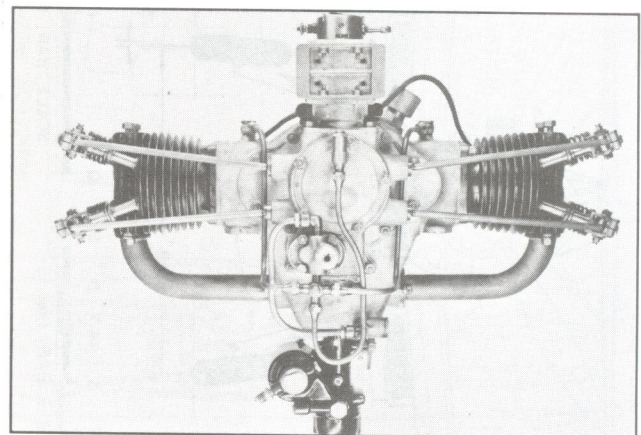
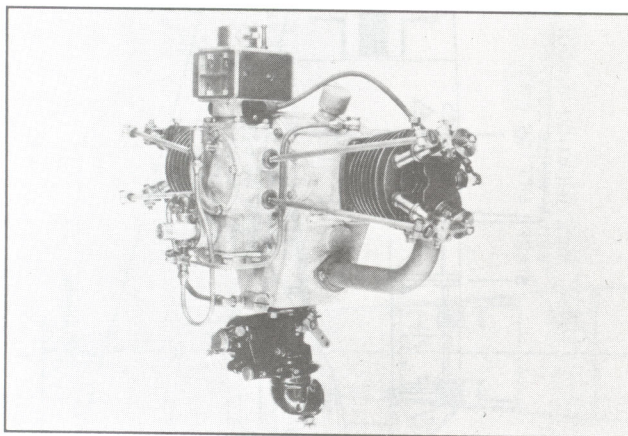
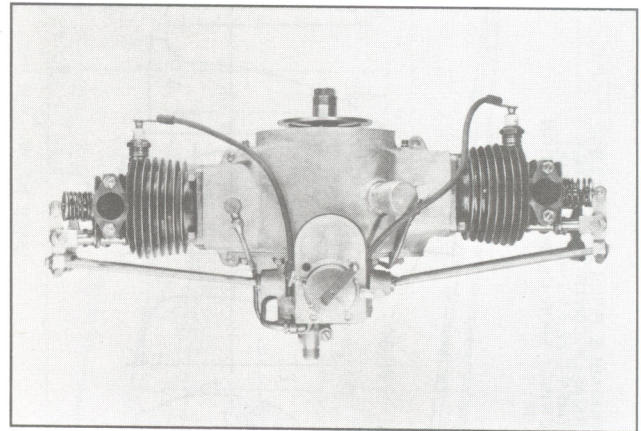
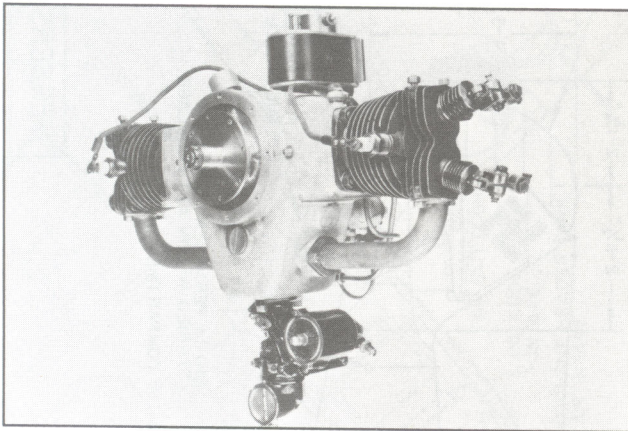
SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY PAUL R. MATT

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P.O. BOX 33
TEMPLE CITY, CALIF. 91780

Morehouse 29.IH.P. Aircraft Engine

1925



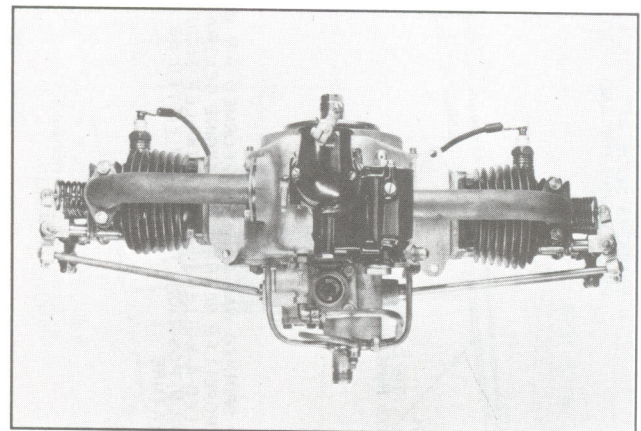
Top left: Front view

Top right: Top view

Middle left: Right rear view

Middle right: Direct rear view

Bottom right: Bottom view



- SPECIFICATIONS -

THE FOLLOWING DATA & PERFORMANCE FIGURES ARE AS REPORTED BY THE POWER PLANT SECTION, MCCOOK FIELD, ENGINEERING DIVISION, JUNE 15, 1925.

BORE : 3.750

STROKE : 3.625

DISPLACEMENT : 80.10 CU. IN.

COMPRESSION RATIO : 5.10 : 1

RATED H.P. : 29.1 AT 2500 R.P.M. AT SEA LEVEL

WEIGHT DRY : 89.50 LBS.

OIL PRESSURE AT CRUISE R.P.M. : 12.16 LB. / SQ. IN.

FUEL CONSUMPTION : 51.3 LBS. / H.P. / HR.

THE FOLLOWING H.P. RATINGS ARE AT SEA LEVEL:

24.0 H.P. @ 2,050 R.P.M.

24.8 H.P. @ 2,100 R.P.M.

26.0 H.P. @ 2,200 R.P.M.

27.2 H.P. @ 2,300 R.P.M.

28.3 H.P. @ 2,400 R.P.M.

29.1 H.P. @ 2,500 R.P.M.

29.6 H.P. @ 2,600 R.P.M.

29.8 H.P. @ 2,650 R.P.M.

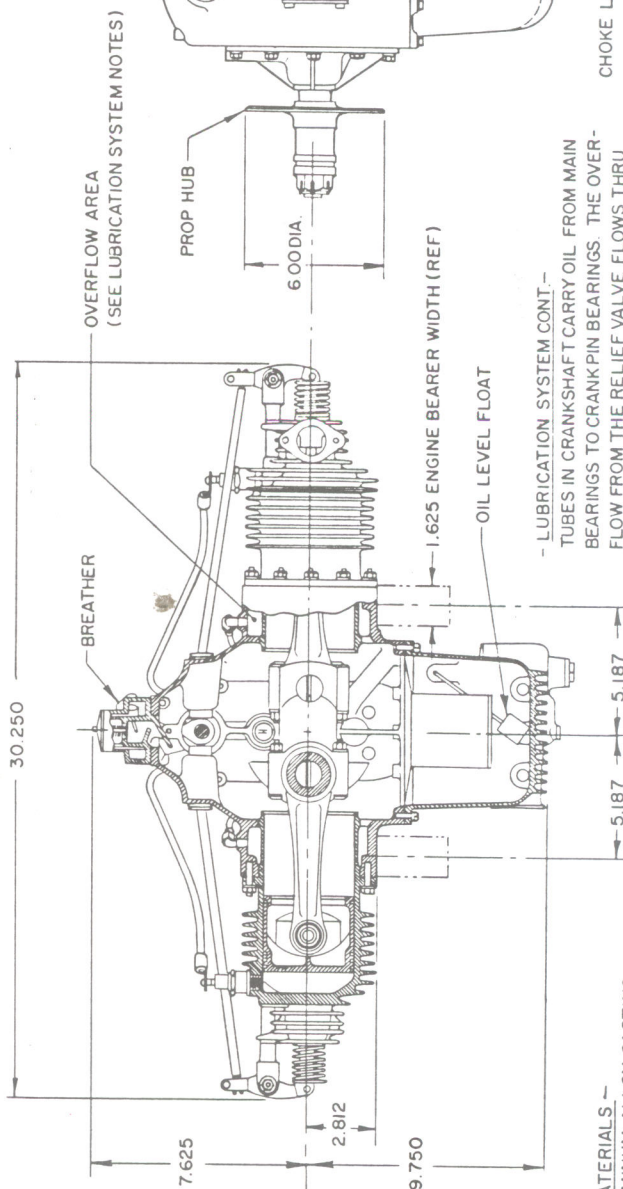
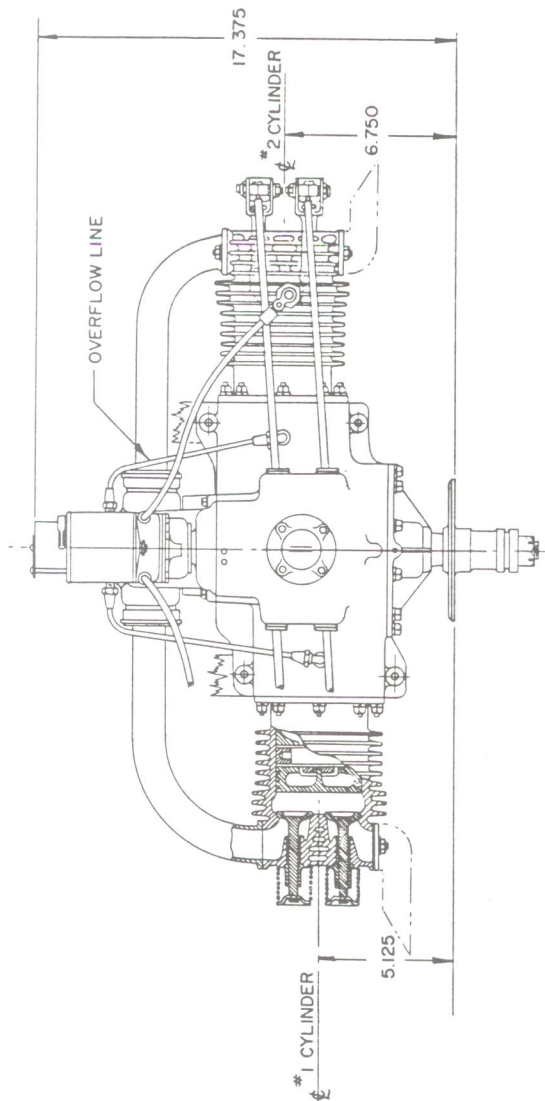
CARBURETOR : STROMBERG MODEL OX-2

IGNITION : SCINTILLA MAGNETO, DELCO SYSTEM & CHAMPION

SPARK PLUGS.

LUBRICATION SYSTEM : SINGLE GEAR PUMP IN REAR COVER SUPPLIES OIL THRU DRILLED CRANKSHAFT PASSAGES TO MAIN BEARINGS, IDLER & CAMSHAFT GEAR BEARINGS.

CONT. BELOW



- MATERIALS -

CRANKCASE : ALUMINUM ALLOY CASTING

CRANKSHAFT : S.A.E. 3240 STEEL FORGING

CONNECTING RODS : FORGED DURALUMINUM

WITH BRONZE PISTON PIN BUSHINGS.

PISTONS : MACHINED ALUM. WITH 4.125 TEE TOR RINGS.

CYLINDERS : CAST IRON WITH INTEGRAL FINS & VALVE SEATS.

VALVES : COBALT CHROME.

CAMSHAFT & VALVE GEARS : S.A.E. 6120 STEEL.

- LUBRICATION SYSTEM CONT. -

TUBES IN CRANKSHAFT CARRY OIL FROM MAIN BEARINGS TO CRANKPIN BEARINGS. THE OVERFLOW FROM THE RELIEF VALVE FLOWS THRU THE COMPARTMENTS AROUND THE CYLINDERS SKIRTS.

THE OIL SUMP IS PROVIDED WITH AN OIL LEVEL INDICATOR, FILTERS & A THERMOMETER FITTING.

OIL FILLER

OVERFLOW AREA (SEE LUBRICATION SYSTEM NOTES)

PROP HUB

6.00 DIA.

1.625 ENGINE BEARER WIDTH (REF)

OIL LEVEL FLOAT

MAGNETO

MAGNETO ADVANCE LEVER

TACHOMETER CONNECTION

OIL PRESSURE CONNECTION

THROTTLE LEVER

FUEL CONNECTION

CHOKE LEVER

HISTORICAL AVIATION ALBUM

MOREHOUSE 29 H.P. AIRCRAFT ENGINE

1925

SCALE : 1/16 (3/4" = 1")

DRAWN BY : ROB LAMBERT

© HISTORICAL AIRCRAFT ALBUM 1966

GENERAL SPECIFICATIONS

WEIGHT EMPTY 2480 lbs.
 USEFUL LOAD 520 lbs.
 GROSS WEIGHT 3000 lbs.
 MAXIMUM SPEED 209 m.p.h. DURING RACE
 FUEL CAPACITY 56 gals. (337 lbs. incl. in useful load)
 OIL CAPACITY 4 gals.
 LANDING SPEED 71.2 m.p.h.
 WING AREA 180 sq. ft., incl. ailerons

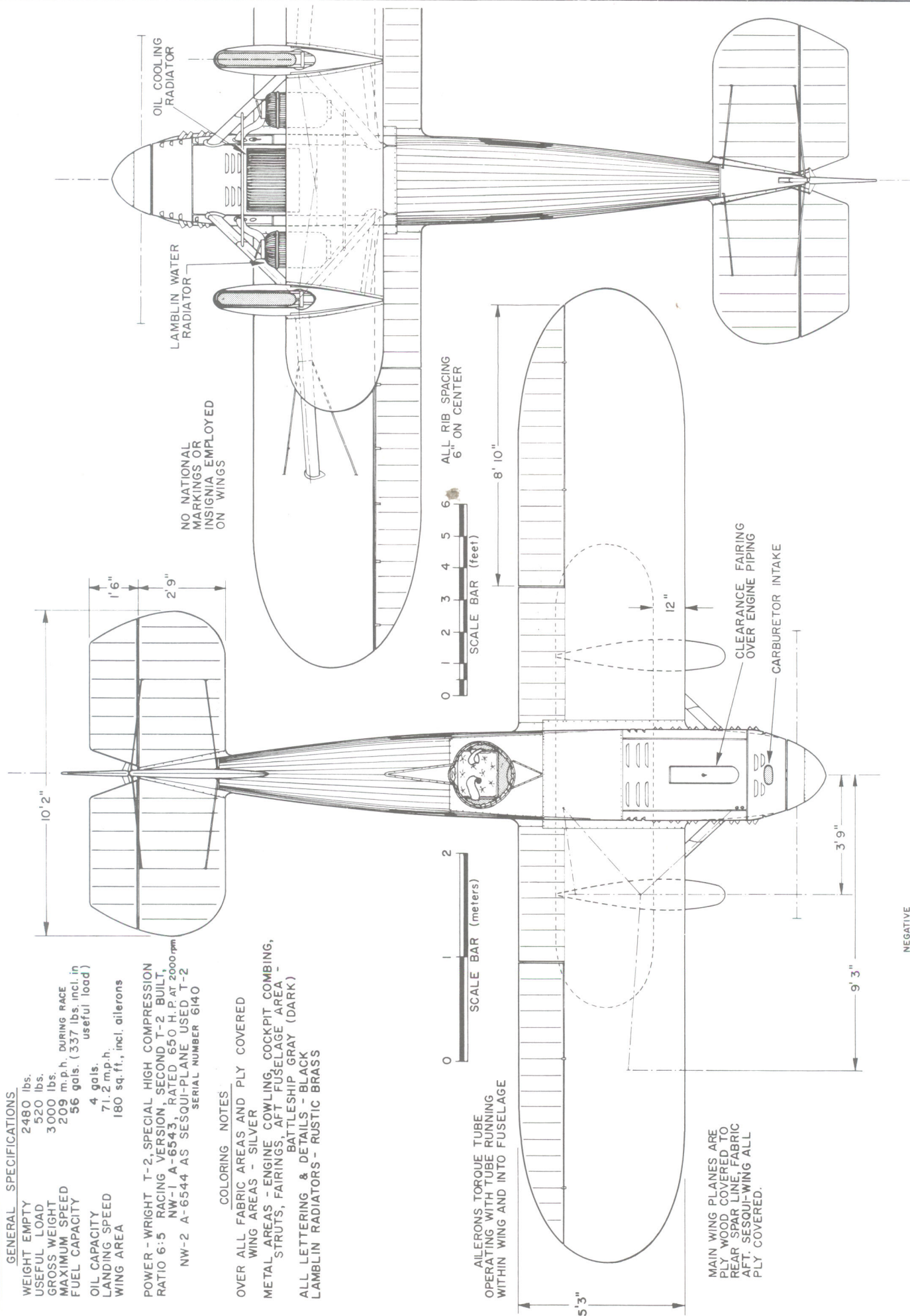
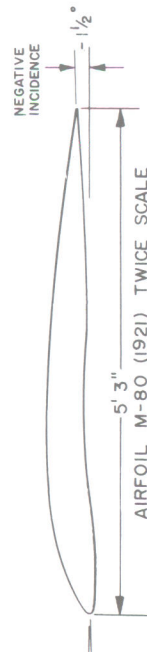
POWER - WRIGHT T-2, SPECIAL HIGH COMPRESSION
 RATIO 6:5 RACING VERSION, SECOND T-2 BUILT,
 NW-1 A-6543, RATED 650 H.P. AT 2000 rpm
 NW-2 A-6544 AS SESQUI-PLANE USED T-2
 SERIAL NUMBER 6140

COLORING NOTES

OVER ALL FABRIC AREAS AND PLY COVERED
 WING AREAS - SILVER
 METAL AREAS - ENGINE COWLING, COCKPIT COMBING,
 STRUTS, FAIRINGS, AFT FUSELAGE AREA -
 BATTLESHIP GRAY (DARK)
 ALL LETTERING & DETAILS - BLACK
 LAMBLIN RADIATORS - RUSTIC BRASS

AILERONS TORQUE TUBE
 OPERATING WITH TUBE RUNNING
 WITHIN WING AND INTO FUSELAGE

MAIN WING PLANES ARE
 PLY WOOD COVERED TO
 REAR SPAR LINE. FABRIC
 AFT. SESQUI-WING ALL
 PLY COVERED.



HISTORICAL
 AVIATION
 ALBUM

NAVY WRIGHT NW-1

1922

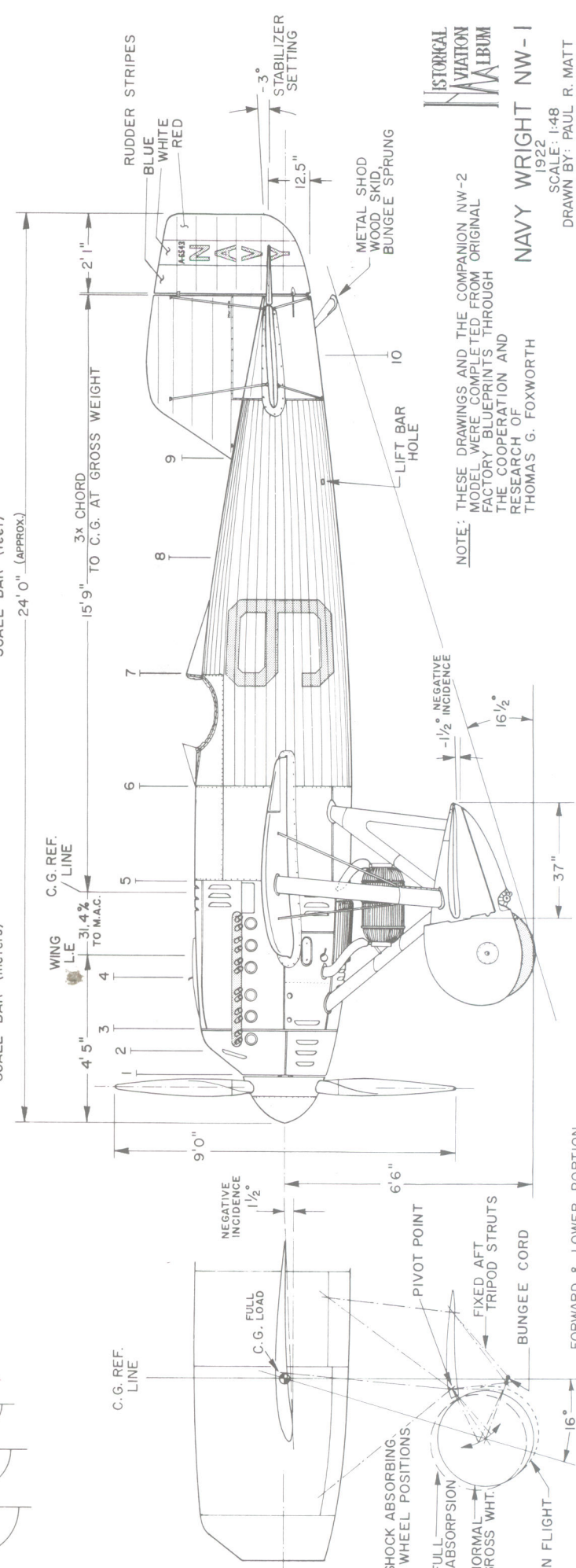
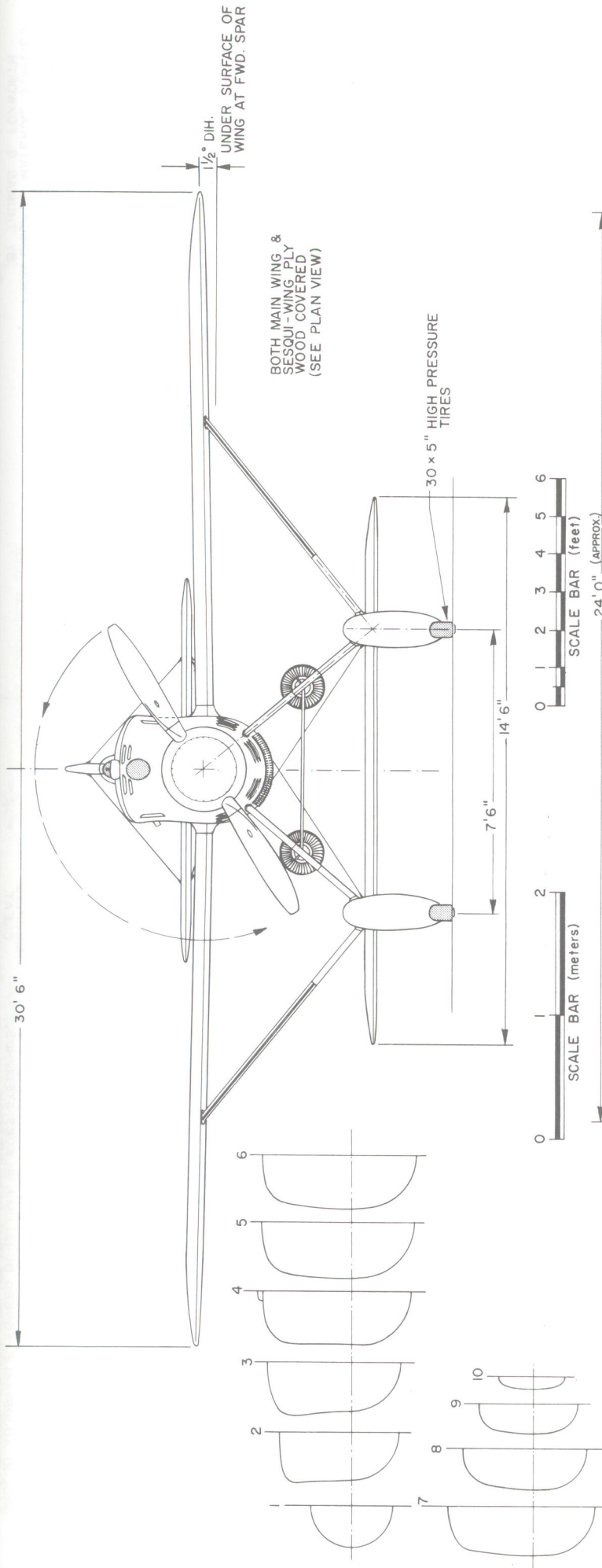
SCALE: 1:48

DRAWN BY: PAUL R. MATT

© HISTORICAL AVIATION ALBUM 1967

DRAWING No. 4-31-A

PLATE 1 of 2



HISTORICAL AVIATION ALBUM

NAVY WRIGHT NW-1

1922

SCALE: 1:48

DRAWN BY: PAUL R. MATT

NOTE: THESE DRAWINGS AND THE COMPANION NW-2 MODEL WERE COMPLETED FROM ORIGINAL FACTORY BLUEPRINTS THROUGH THE COOPERATION AND RESEARCH OF THOMAS G. FOXWORTH

GENERAL SPECIFICATIONS

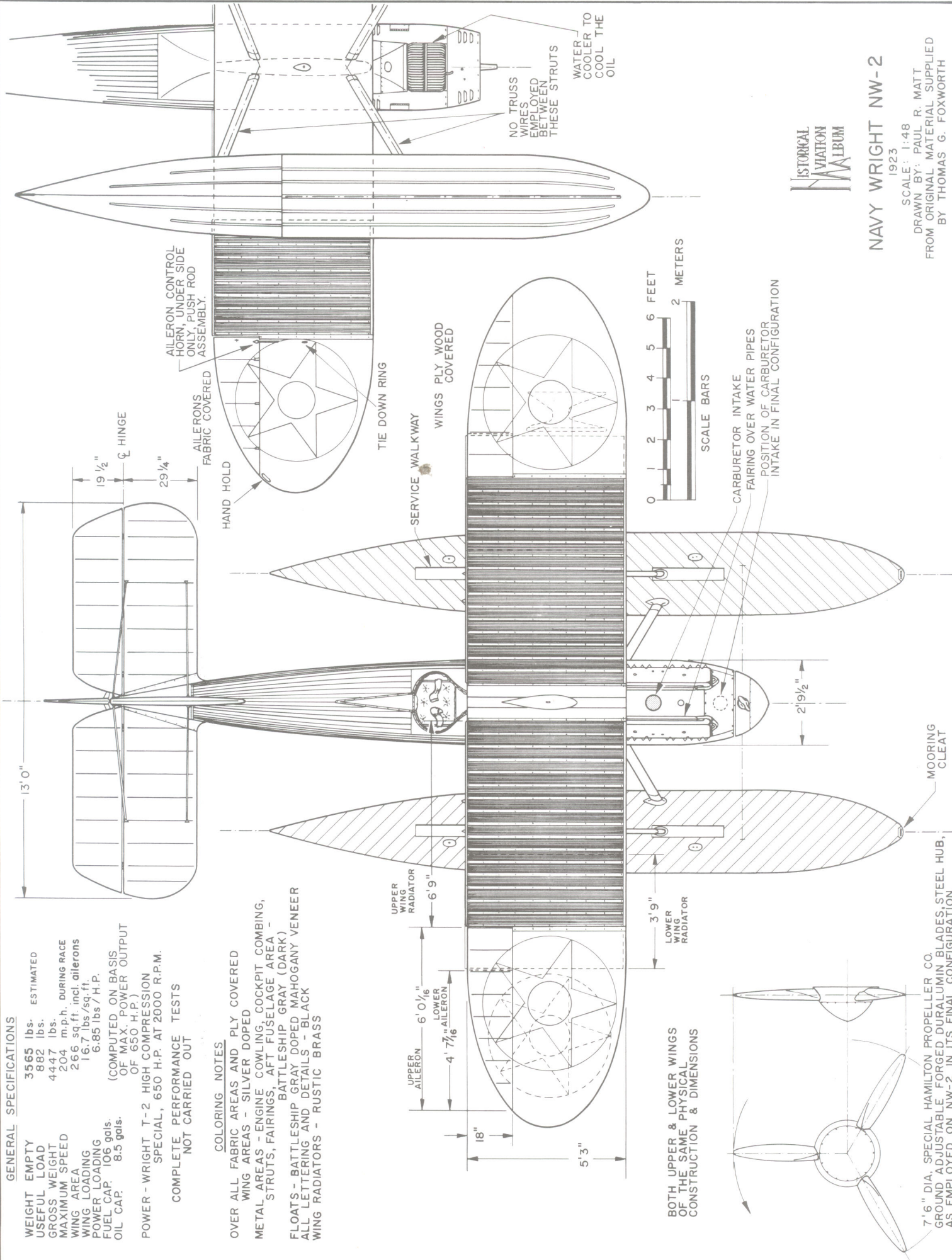
WEIGHT EMPTY 3565 lbs. ESTIMATED
 USEFUL LOAD 882 lbs.
 GROSS WEIGHT 4447 lbs.
 MAXIMUM SPEED 204 m.p.h. DURING RACE
 WING AREA 266 sq.ft. incl. ailerons
 WING LOADING 16.7 lbs/sq.ft.
 POWER LOADING 6.85 lbs / H.P.
 FUEL CAP. 106 gals.
 OIL CAP. 8.5 gals.
 (COMPUTED ON BASIS OF MAX. POWER OUTPUT OF 650 H.P.)

POWER - WRIGHT T-2 HIGH COMPRESSION SPECIAL, 650 H.P. AT 2000 R.P.M.

COMPLETE PERFORMANCE TESTS NOT CARRIED OUT

COLORING NOTES

OVER ALL FABRIC AREAS AND PLY COVERED WING AREAS - SILVER DOPED
 METAL AREAS - ENGINE COWLING, COCKPIT COMBING, STRUTS, FAIRINGS, AFT FUSELAGE AREA - BATTLESHIP GRAY (DARK)
 FLOATS - BATTLESHIP GRAY DOPED MAHOGANY VENEER
 ALL LETTERING AND DETAILS - BLACK
 WING RADIATORS - RUSTIC BRASS



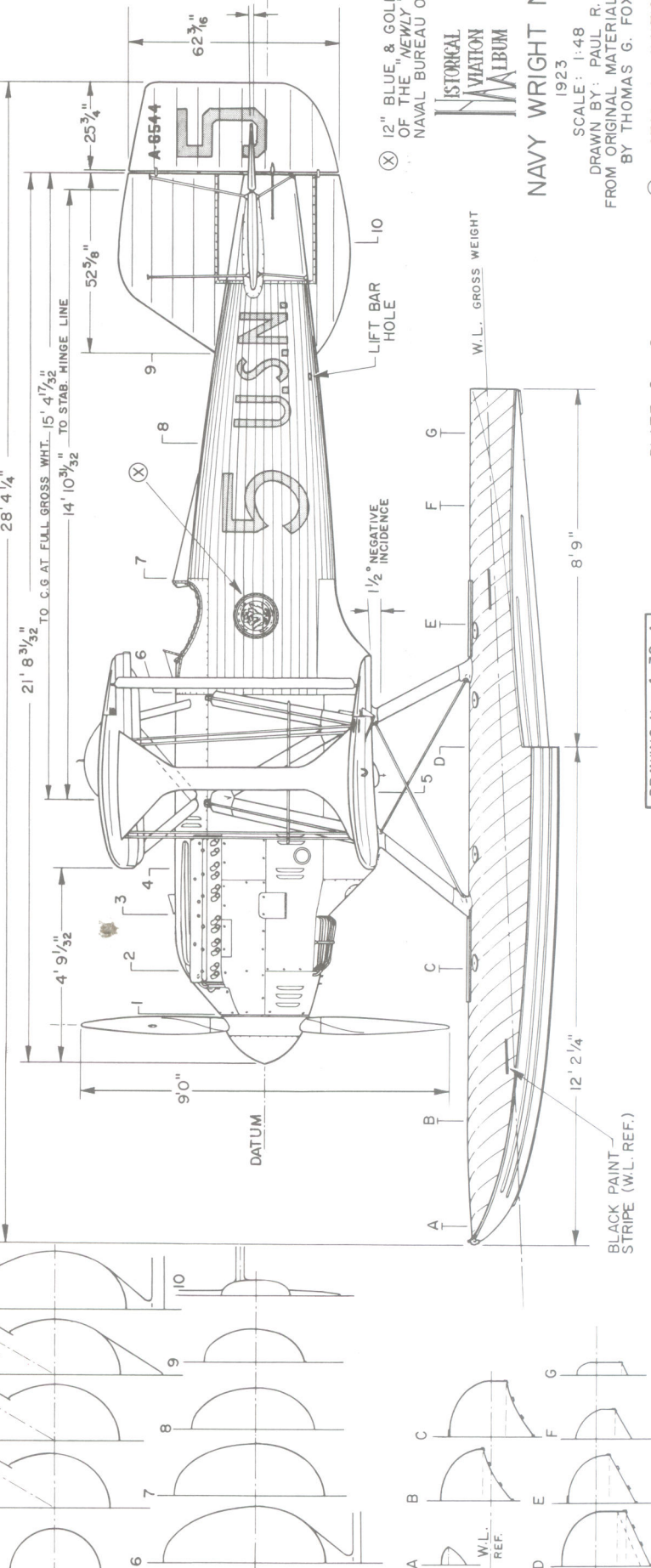
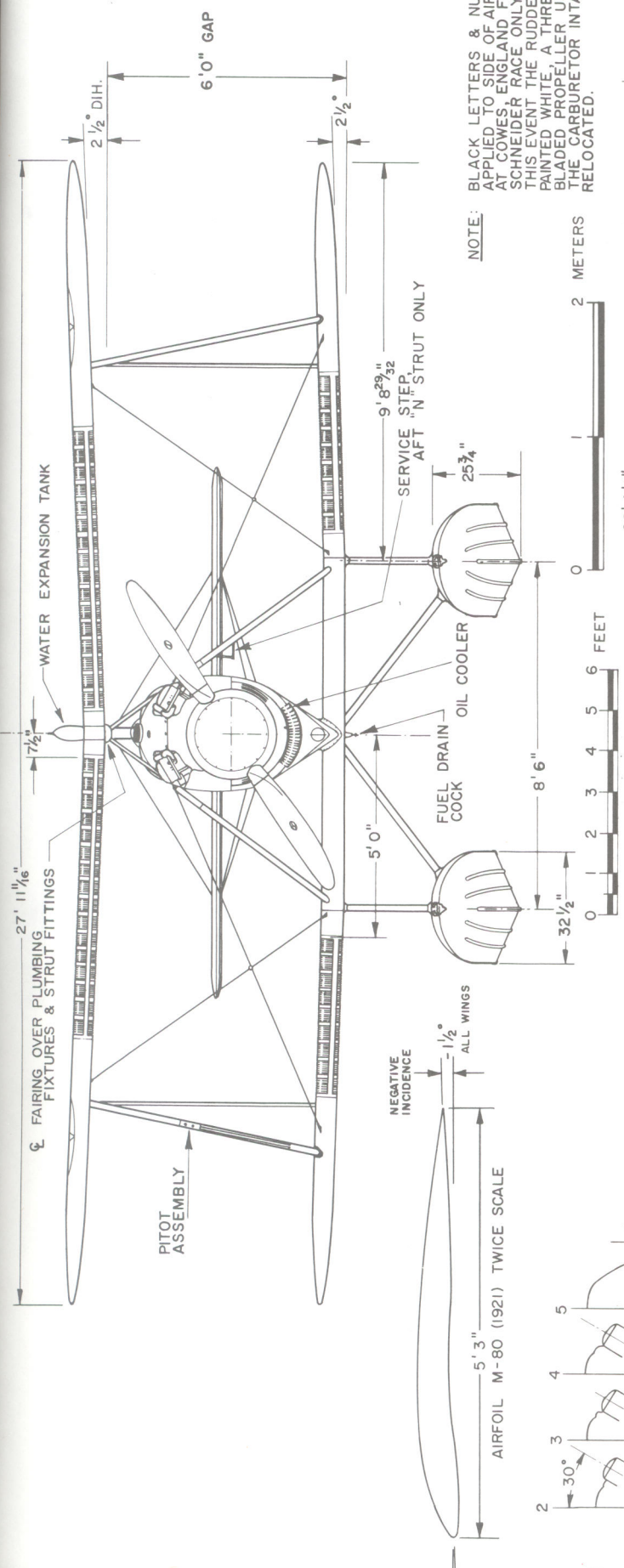
HISTORICAL AVIATION MUSEUM

NAVY WRIGHT NW-2

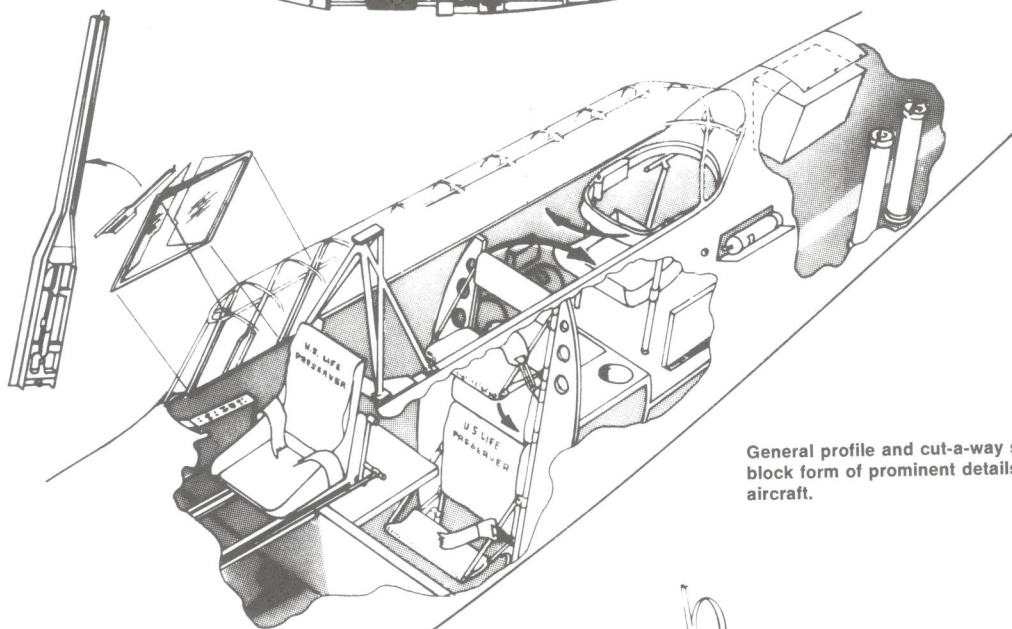
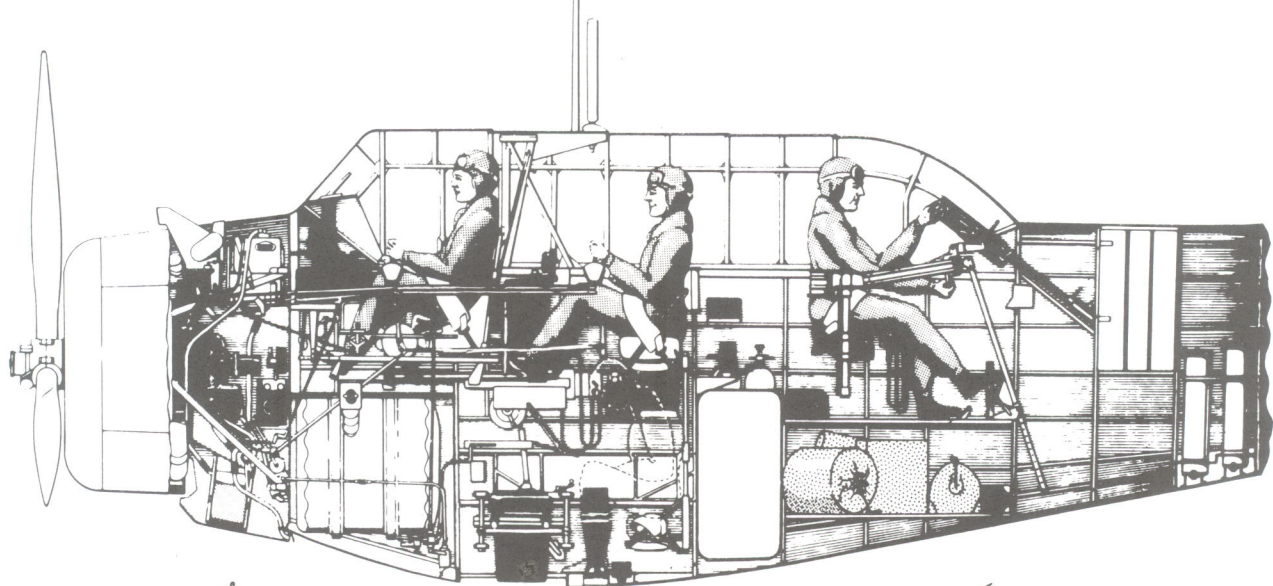
1923

SCALE: 1:48

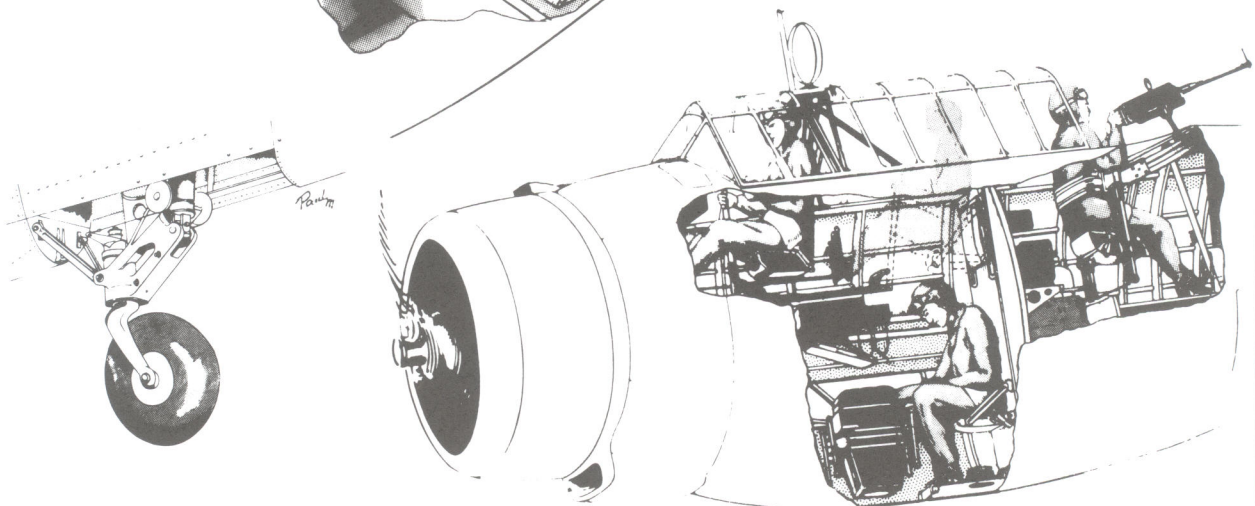
DRAWN BY: PAUL R. MATT
 FROM ORIGINAL MATERIAL SUPPLIED BY THOMAS G. FOXWORTH

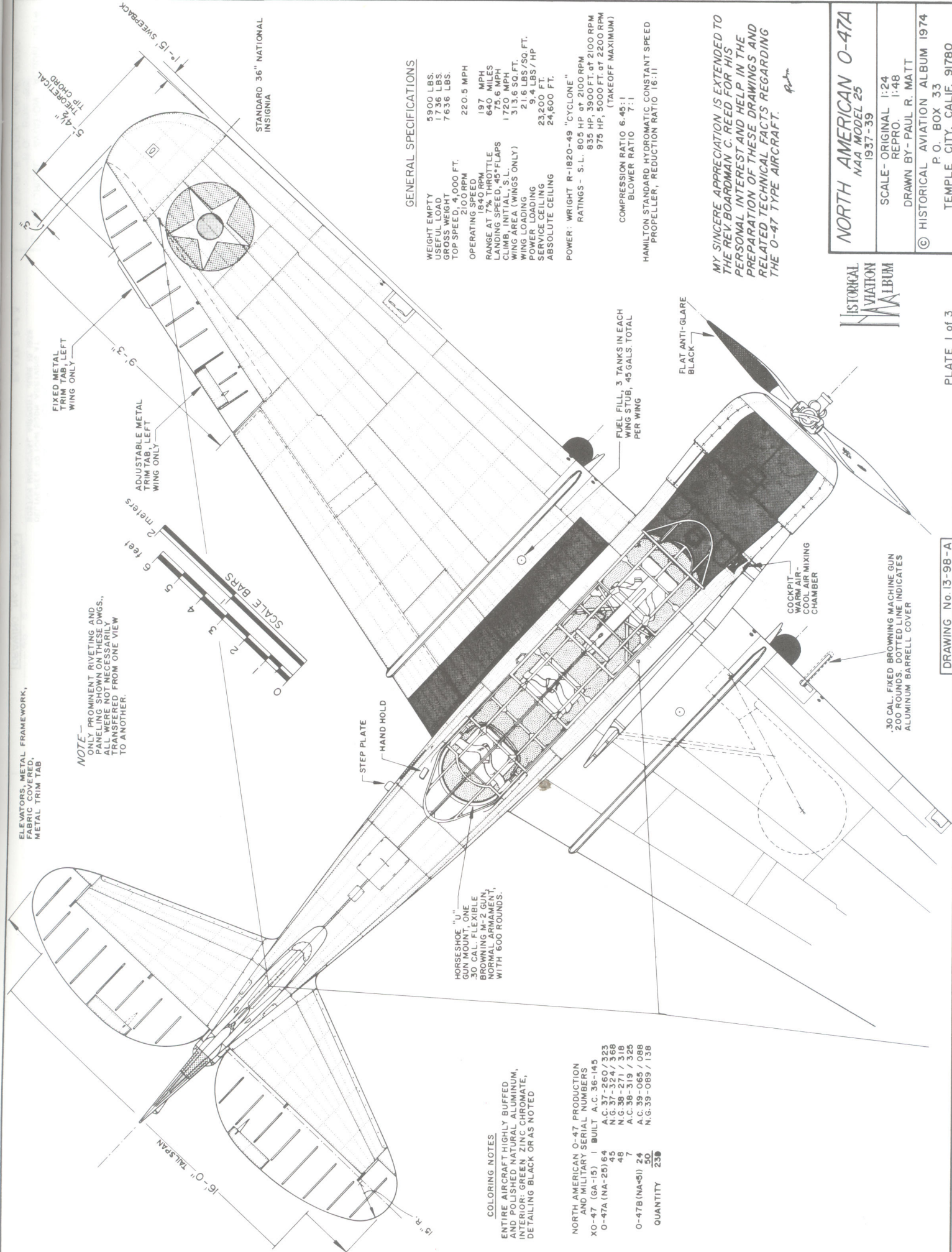


North American O-47A



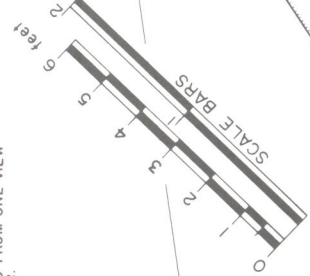
General profile and cut-a-way sketches in block form of prominent details. NAA O-47 aircraft.





ELEVATORS, METAL FRAMEWORK, FUEL TANK COVERED, METAL TRIM TAB

NOTE—PROMINENT RIVETING AND PANEL LINES SHOWN IN THE WINGS, ALL WERE NOT NECESSARILY TRANSFERRED FROM ONE VIEW TO ANOTHER.



STANDARD 36" NATIONAL INSIGNIA

GENERAL SPECIFICATIONS

WEIGHT EMPTY 5900 LBS.
 USEFUL LOAD 1736 LBS.
 CRUISE WEIGHT 7636 LBS.
 TOP SPEED 4,000 FT. 220.5 MPH
 OPERATING SPEED 2100 RPM 1840 RPM
 RANGE AT 7% THROTTLE 197 MPH
 LANDING SPEED 45 FLAPS 640 MILES
 CLIMBING SPEED 175.6 MPH
 WING AREA (WINGS ONLY) 173.6 SQ. FT.
 WING LOADING 21.6 LBS./SQ. FT.
 POWER LOADING 9.4 LBS./HP
 SERVICE CEILING 23,200 FT.
 ABSOLUTE CEILING 24,600 FT.

POWER: WRIGHT R-1820-49 "CYCLONE"
 RATINGS - S.L. 805 HP at 2100 RPM
 835 HP, 3900 FT. at 2100 RPM
 975 HP, 5000 FT. at 2200 RPM
 (TAKEOFF MAXIMUM)

COMPRESSION RATIO 6.45:1
 BLOWER RATIO 7:1

HAMILTON STANDARD HYDROMATIC CONSTANT SPEED
 PROPELLER, REDUCTION RATIO 16:1

MY SINCERE APPRECIATION IS EXTENDED TO THE REV. BOARDMAN C. REED FOR HIS PERSONAL INTEREST AND HELP IN THE PREPARATION OF THESE DRAWINGS AND RELATED TECHNICAL FACTS REGARDING THE O-47 TYPE AIRCRAFT.

HISTORICAL AVIATION ALBUM

NORTH AMERICAN O-47A
 NAA MODEL 25
 1937-39

SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY - PAUL R. MATT

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STEP PLATE

HAND HOLD

HORSESHOE "U"
 GUN MOUNT ONE
 30 CAL. FLEXIBLE
 BROWNING M-2 GUN,
 NORMAL ARMAMENT,
 WITH 600 ROUNDS.

FUEL TANKS, 3 TANKS IN EACH
 WING STUB, 45 GALS. TOTAL
 PER WING

FLAT ANTI-GLARE
 BLACK

COCKPIT -
 WARM AIR -
 COOL AIR MIXING
 CHAMBER

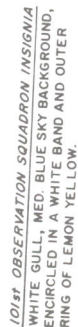
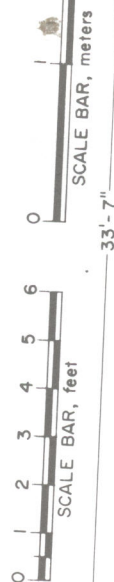
.30 CAL. FIXED BROWNING MACHINE GUN
 200 ROUNDS. DOTTED LINE INDICATES
 ALUMINUM BARRELL COVER

COLORING NOTES

ENTIRE AIRCRAFT HIGHLY BUFFED
 AND POLISHED NATURAL ALUMINUM,
 INTERIOR: GREEN ZINC CHROMATE,
 DETAILING BLACK OR AS NOTED

NORTH AMERICAN O-47, PRODUCTION
 AND MILITARY SERIAL NUMBERS

XO-47 (GA-15) 1 BUILT A.C. 36-145
 O-47A (NA-25) 64 A.C. 37-260 / 323
 45 N.G. 37-324 / 368
 48 N.G. 38-271 / 318
 7 A.C. 38-319 / 325
 O-47B (NA-41) 24 A.C. 39-065 / 088
 50 N.G. 39-089 / 138
 QUANTITY 239



—

AIRCRAFT PORTRAYED -
9th AIRCRAFT OF THE 101st OBSERVATION
SQUADRON, 26th DIVISION AVIATION,
MASSACHUSETTS NATIONAL GUARD,
S/N N.G. 38-307, C/N 25-584
COMPLETED JUNE 9, 1939, FLIGHT
DELIVERED TO 101st SQDN. ARRIVING AT
BOSTON MUNICIPAL AIRPORT JUNE 15, 1939

HISTORICAL AVIATION ALBUM

NORTH AMERICAN 0-47A

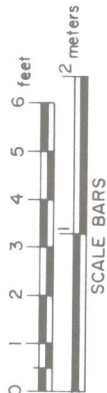
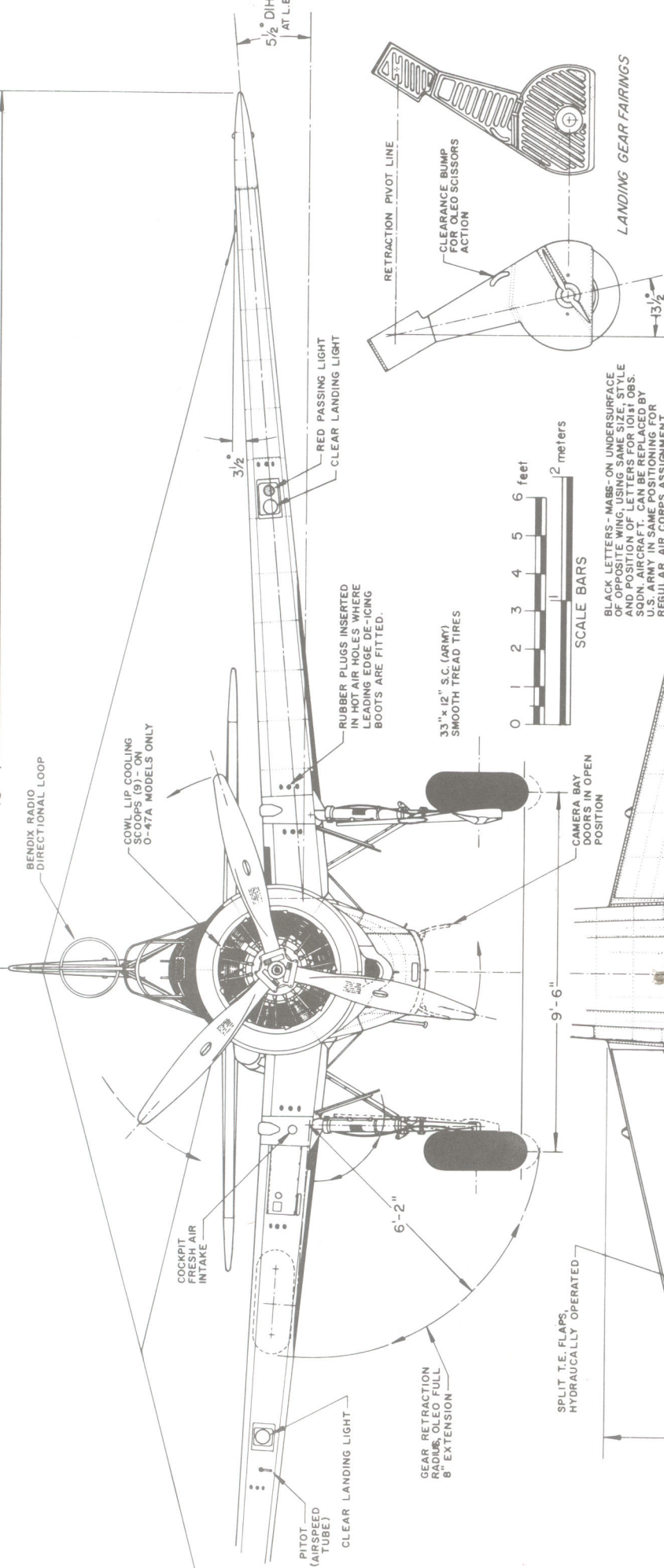
66-1031

ORIGINAL 1:24

REPRO. 1:48
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46'-4" WINGSPAN



BLACK LETTERS - MABS-ON UNDERSURFACE OF OPPOSITE WING, USING SAME SIZE, STYLE AND POSITION OF LETTERS FOR 101st OBS. SQDN. AIRCRAFT. CAN BE REPLACED BY U.S. ARMY IN SAME POSITIONING FOR REGULAR AIR CORPS ASSIGNMENT.

AILERONS, METAL FRAMEWORK FABRIC COVERED

DETACHABLE WING TIPS

SPLIT T.E. FLAPS HYDRAULICALLY OPERATED

AT ENTRANCE 10'-1" INTO FUSELAGE ROOT RIB 10'-0"

EACH OUTER WING PANEL CONTAINED FIVE SEPARATE OIL-WATER TIGHT COMPARTMENTS FOR EMERGENCY WATER FLOTATION. ALL WERE INTERCONNECTED TO DRAIN TO THE LOWEST POINT WHERE A HAND OPERATED BILGE PUMP LOCATED IN THE AFT COCKPIT COULD BE USED TO REMOVE SEEPAGE.

FIXED VERTICAL CAMERA WINDOW.

OBSERVERS VIEWING WINDOWS. HAND CRANK OPERATED DOORS FOR A VARIETY OF OPEN AIR OPERATIONS, PASSAGE DROPS PICKUPS, TOW TARGET SLEEVE OPERATIONS, PLUMBING, DRAIN COCKS.

ACCESS TO FUSELAGE FUEL TANK, PLUMBING, DRAIN COCKS.

HISTORICAL AVIATION ALBUM

NORTH AMERICAN O-47A
NAA MODEL 25
1937-39

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY - PAUL R. MATT

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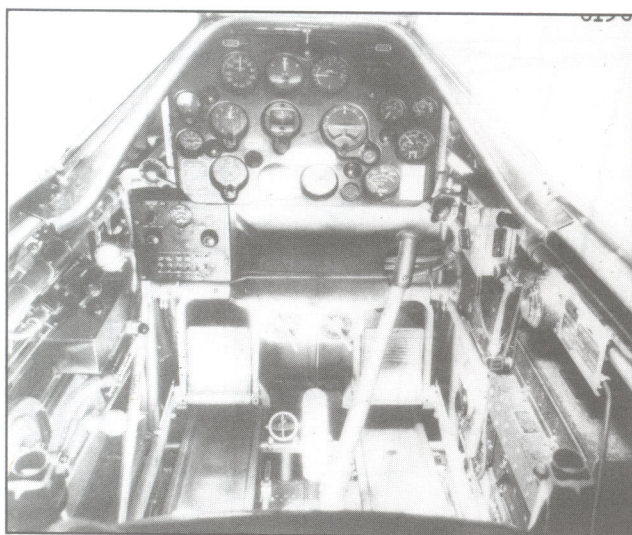
DRAWING No. 13-98-A

PLATE 3 of 3

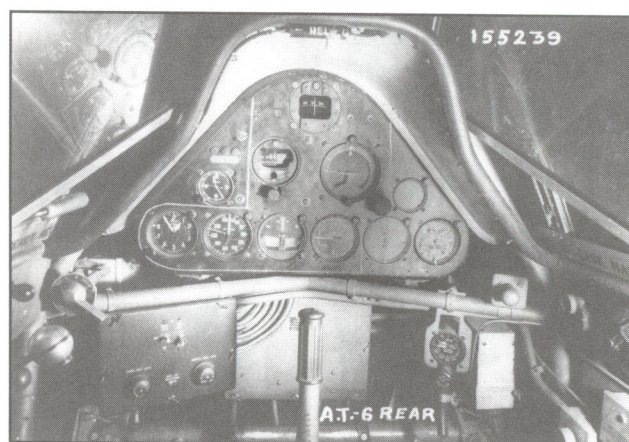
North American AT-6D "Texan"



North American AT-6D, September 6, 1948.



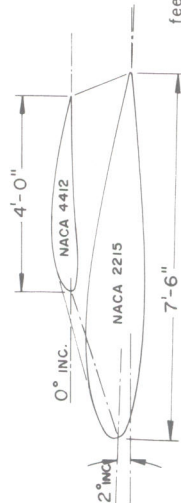
North American BT-9C. Front cockpit.



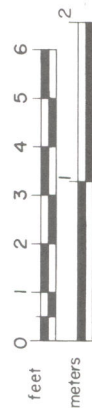
North American AT-6. Rear cockpit.

WEIGHT EMPTY	4250 lbs.
USEFUL LOAD	905 lbs.
GROSS WEIGHT	5155 lbs.
TOP SPEED	210 mph
CRUISING SPEED	146 mph
LANDING SPEED (WITH FLAPS)	67 mph
RANGE (AT 70% POWER)	629 miles
WING AREA (INCL. AILERONS)	253.73 sq. ft.
WING LOADING	22.2 lbs./sq. ft.
POWER LOADING	9.37 lbs./HP
SERVICE CEILING	24,700 ft.
FUEL CAPACITY (2 WING TANKS)	110 U.S. GALS.
OIL CAPACITY (INCL. EXPANSION SPACE - 2 GAL.)	12.2 U.S. GALS.

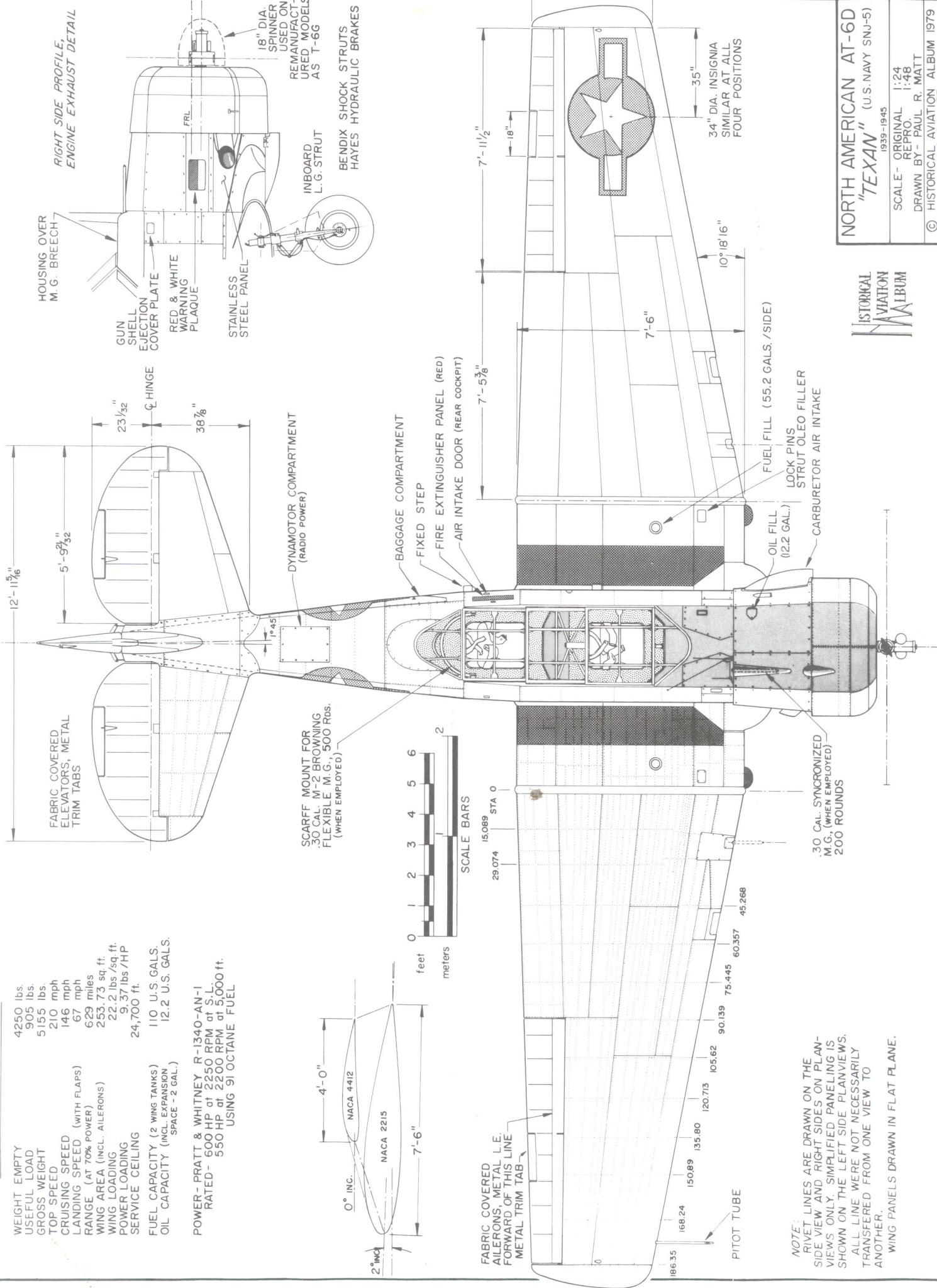
POWER- PRATT & WHITNEY R-1340-AN-1
RATED- 600 HP at 2250 RPM at S.L.
550 HP at 2200 RPM at 5,000 ft.
USING 91 OCTANE FUEL



FABRIC COVERED
AILERONS, METAL L.E.
FORWARD OF THIS LINE
METAL TRIM TAB



SCARFF MOUNT FOR
 .30 CAL. M-2 BROWNING
 FLEXIBLE M.G., 500 RDS.
 (WHEN EMPLOYED) —



NOTE: RIVET LINES ARE DRAWN ON THE SIDE VIEW AND RIGHT SIDES ON PLAN-VIEWS ONLY. SIMPLIFIED PANELING IS SHOWN ON THE LEFT SIDE PLANVIEWS. ALL LINE WERE NOT NECESSARILY TRANSFERRED FROM ONE VIEW TO ANOTHER.

...DRAWING PANELS DRAWN IN FLAT PLANE;

Historical Aviation Album

NORTH AMERICAN AT-6D
"TEXAN" (U.S. NAVY SNJ-5)

1939-1945

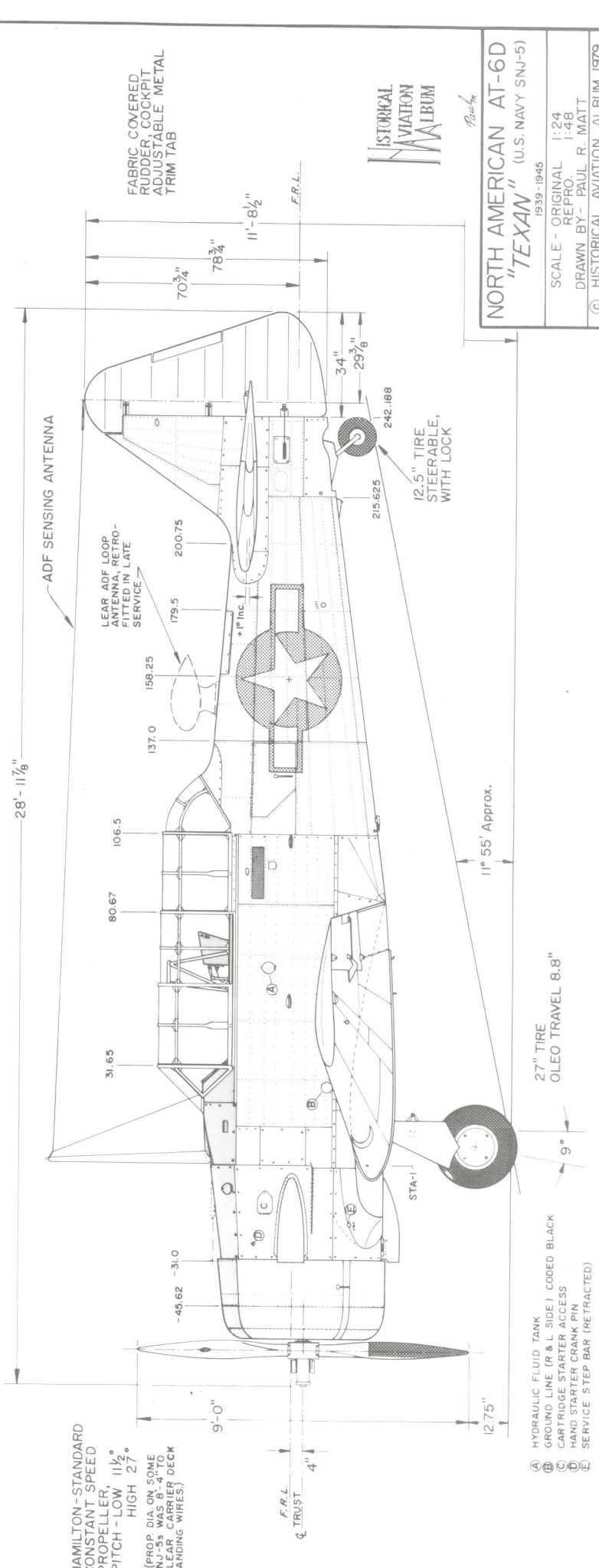
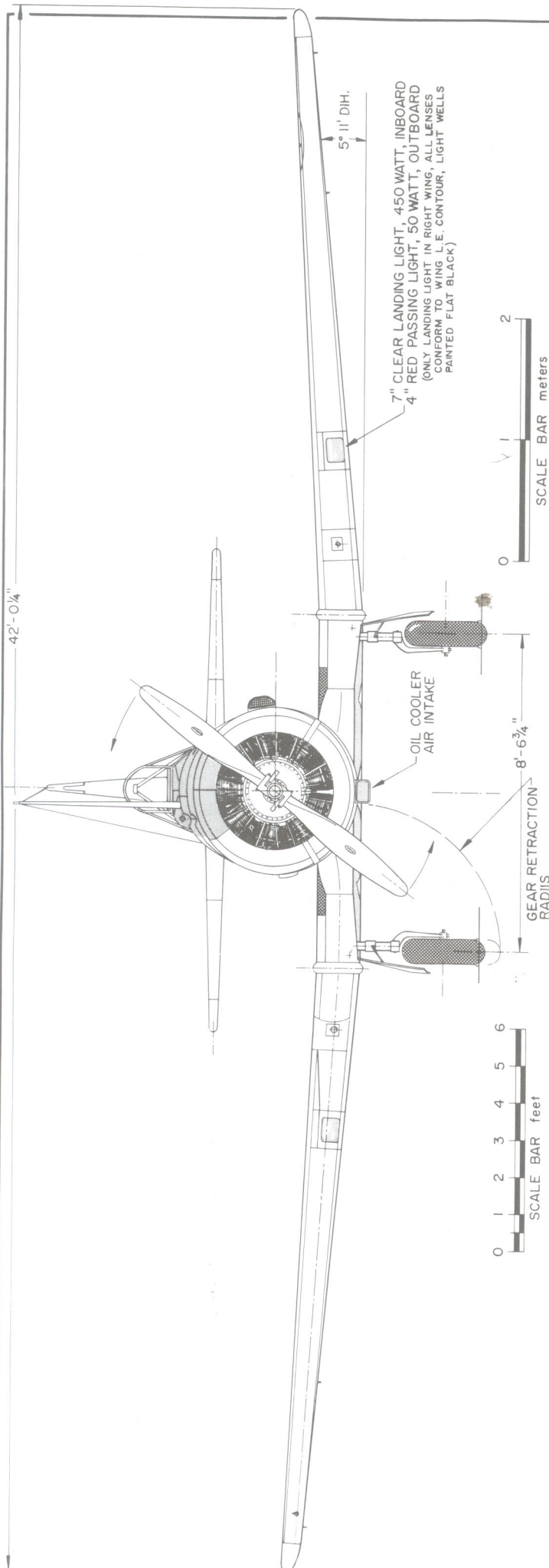
SCALE - ORIGINAL 1:24

REPRO. 1:48
DRAWN BY - PAUL R. MATT

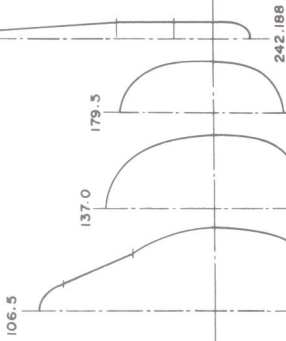
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PLATE 1 of 3

DRAWING No. 16-106-A



FUSELAGE TEMPLATES REFERENCE TO PLATE 2



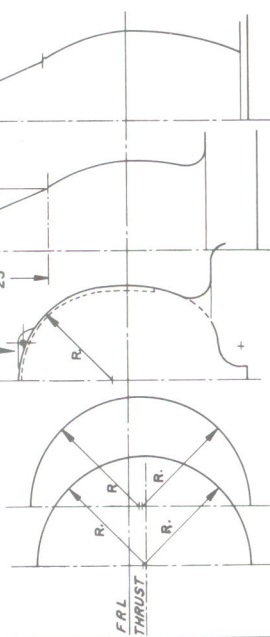
31.65

HOUSING OVER M.G.,
RIGHT SIDE ONLY

80.67

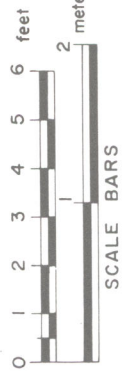
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STA-1

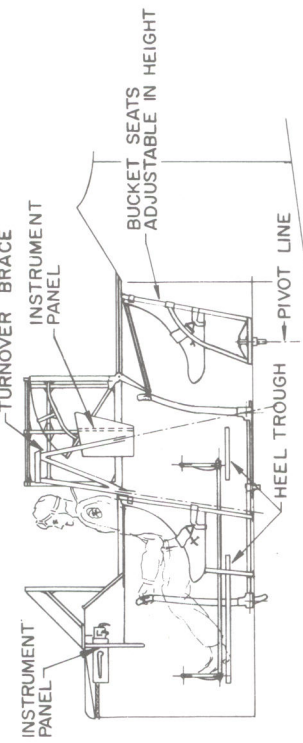


COLORING NOTES

ENTIRE AIRCRAFT NATURAL ALUMINUM
FABRIC COVERED CONTROL SURFACES - SILVER DOPED
ANTI-GLARE FUSELAGE DECKING - EARLY, FLAT BRONZE-GREEN
LATE, FLAT BLACK
INTERIOR - ZINC-CHROMATE YELLOW-GREEN PRIMER
INSTRUMENT PANELS - BLACK CRINKLE FINISH
SEATS & DETAILING - EARLY, FLAT BRONZE-GREEN
LATE, FLAT BLACK

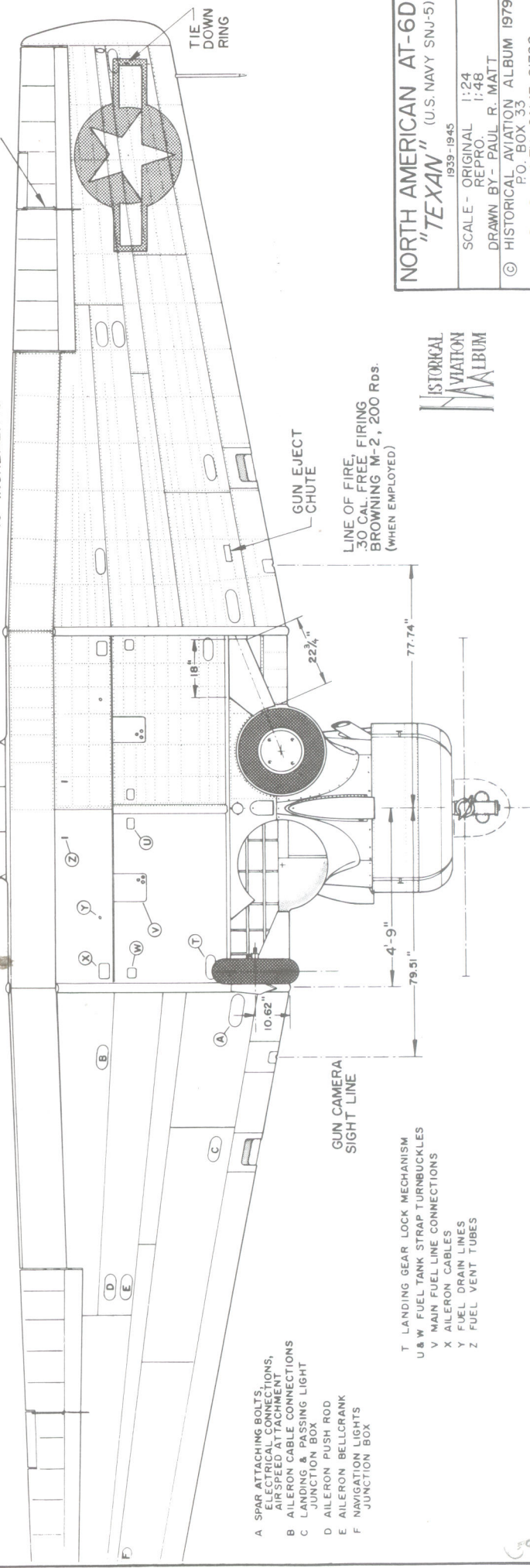


SIMPLIFIED COCKPIT LAYOUT



LANDING FLAPS
45° MAX. DEFLECTION, IN
10° INCREMENTS

GROUND ADJUSTABLE
TRIM TABS ON WINGS
POSITION LOCKING ARM



- A SPAR ATTACHING BOLTS
- B ELECTRICAL CONNECTIONS, AIR SPEED INDICATOR
- C AILERON CABLE CONNECTIONS, LANDING GEAR LOCK MECHANISM
- D AILERON PUSH ROD
- E AILERON BELL CRANK JUNCTION BOX
- F NAVIGATION LIGHTS

- T LANDING GEAR LOCK MECHANISM
- U & W FUEL TANK STRAP TURNBUCKLES
- V MAIN FUEL LINE CONNECTIONS
- X AILERON CABLES
- Y FUEL DRAIN LINES
- Z FUEL VENT TUBES

HISTORICAL
AVIATION
ALBUM

NORTH AMERICAN AT-6D
"TEXAN" (U.S. NAVY SNJ-5)
1939-1945

SCALE - ORIGINAL 1:24
REPRO. 1:48
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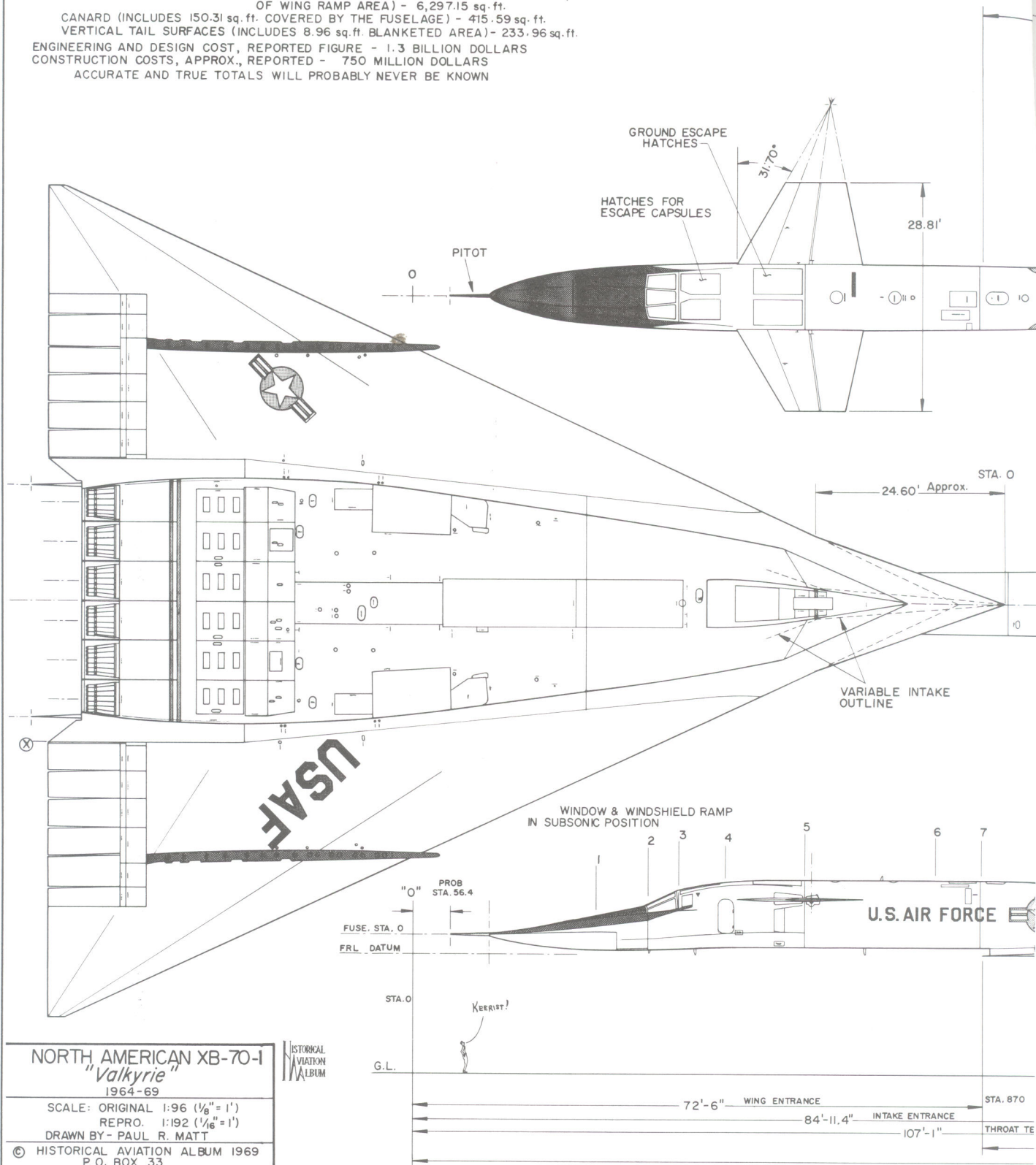
GENERAL SPECIFICATIONS AND DATA

MAXIMUM GROSS WEIGHT - 550,000 lbs.
 TOP SPEED - MACH 3 (2,000 m.p.h.) AT 70,000 FEET
 POWER - SIX GENERAL ELECTRIC YJ-93 TURBO JETS, 30,000 lbs. THRUST EACH
 FUEL - 11 TANKS, 47,000 gals. TOTAL CAPACITY
 TAKEOFF AT 500,000 lbs., 200 knots IN 7,000 feet
 AT 400,000 lbs., 180 knots IN 4,000 feet
 LANDING APPROACH SPEED - 270 knots
 AREAS,

TOTAL WING (INCLUDES 2,482.34 sq. ft. COVERED BY FUSELAGE BUT NOT 33.53 sq. ft. OF WING RAMP AREA) - 6,297.15 sq. ft.
 CANARD (INCLUDES 150.31 sq. ft. COVERED BY THE FUSELAGE) - 415.59 sq. ft.
 VERTICAL TAIL SURFACES (INCLUDES 8.96 sq. ft. BLANKETED AREA) - 233.96 sq. ft.
 ENGINEERING AND DESIGN COST, REPORTED FIGURE - 1.3 BILLION DOLLARS
 CONSTRUCTION COSTS, APPROX., REPORTED - 750 MILLION DOLLARS
 ACCURATE AND TRUE TOTALS WILL PROBABLY NEVER BE KNOWN

COLORING NOTES

ENTIRE AIRCRAFT - GLOSS WHITE
 ENGINE BAYS AREA - NATURAL STEEL FINISH
 TIRES - ALUMINUM PAINTED
 ANTI-GLARE PANEL - FLAT BLACK
 TURBO JET ENGINES - BLACK
 ALL LETTERING - BLACK
 WING TIP FOLD FAIRING - GLOSS BLACK
 NATIONAL INSIGNIA - RED, WHITE & BLUE



NORTH AMERICAN XB-70-1
"Valkyrie"
 1964-69

SCALE: ORIGINAL 1:96 (1/8" = 1')

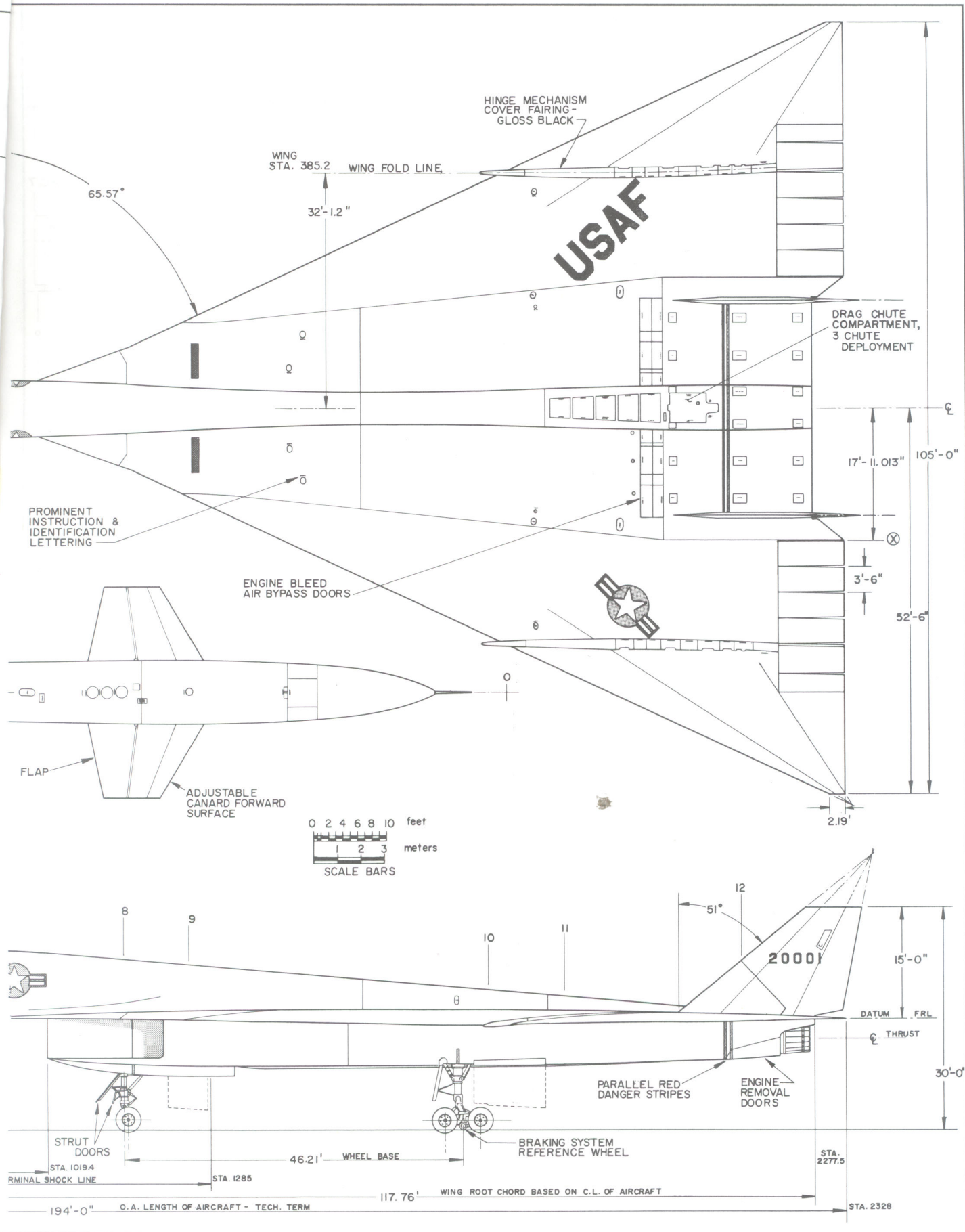
REPRO. 1:192 (1/16" = 1')

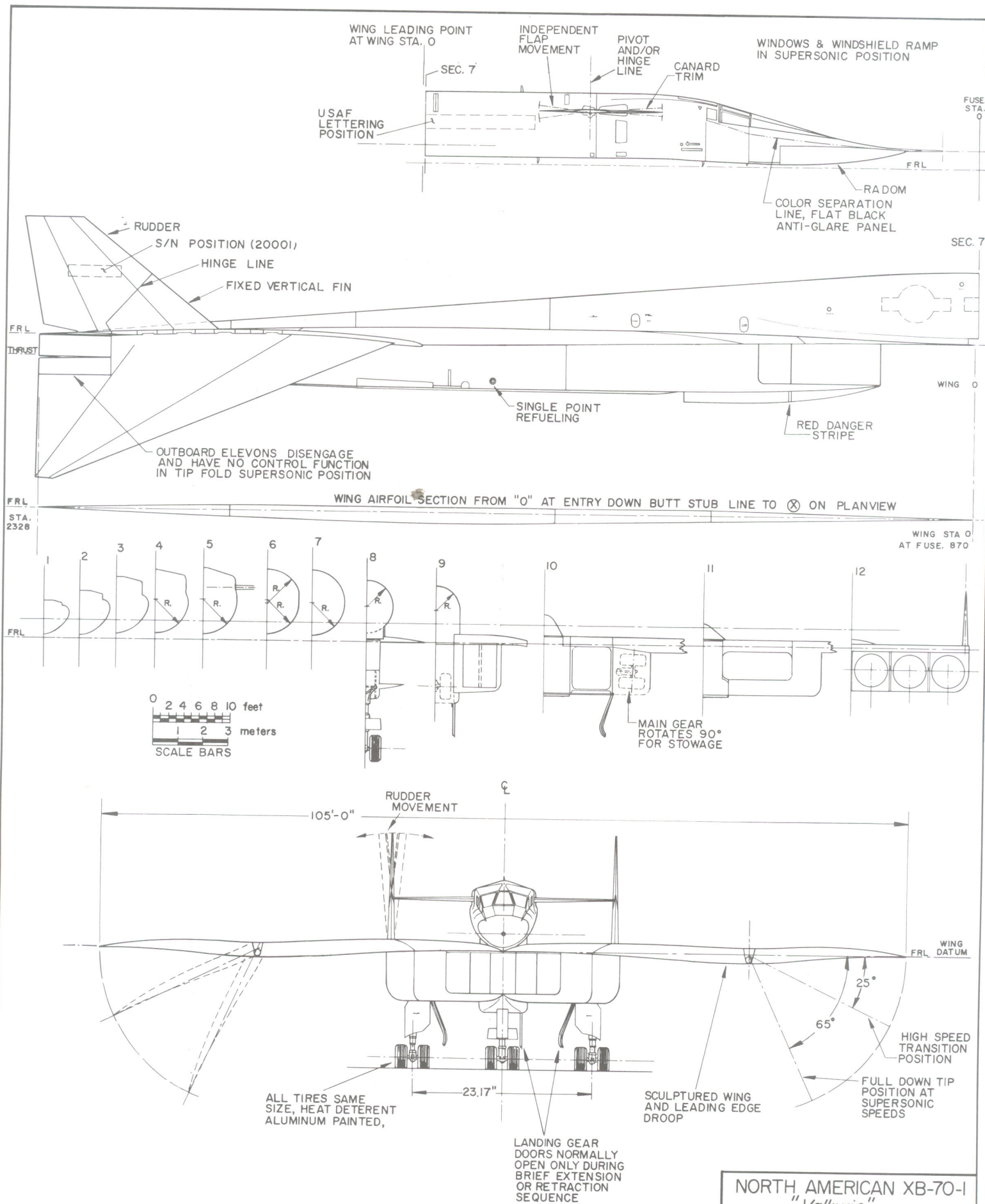
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NORTH AMERICAN XB-70-I
"Valkyrie"

1964-69

SCALE: ORIGINAL 1:96 (1/8" = 1')

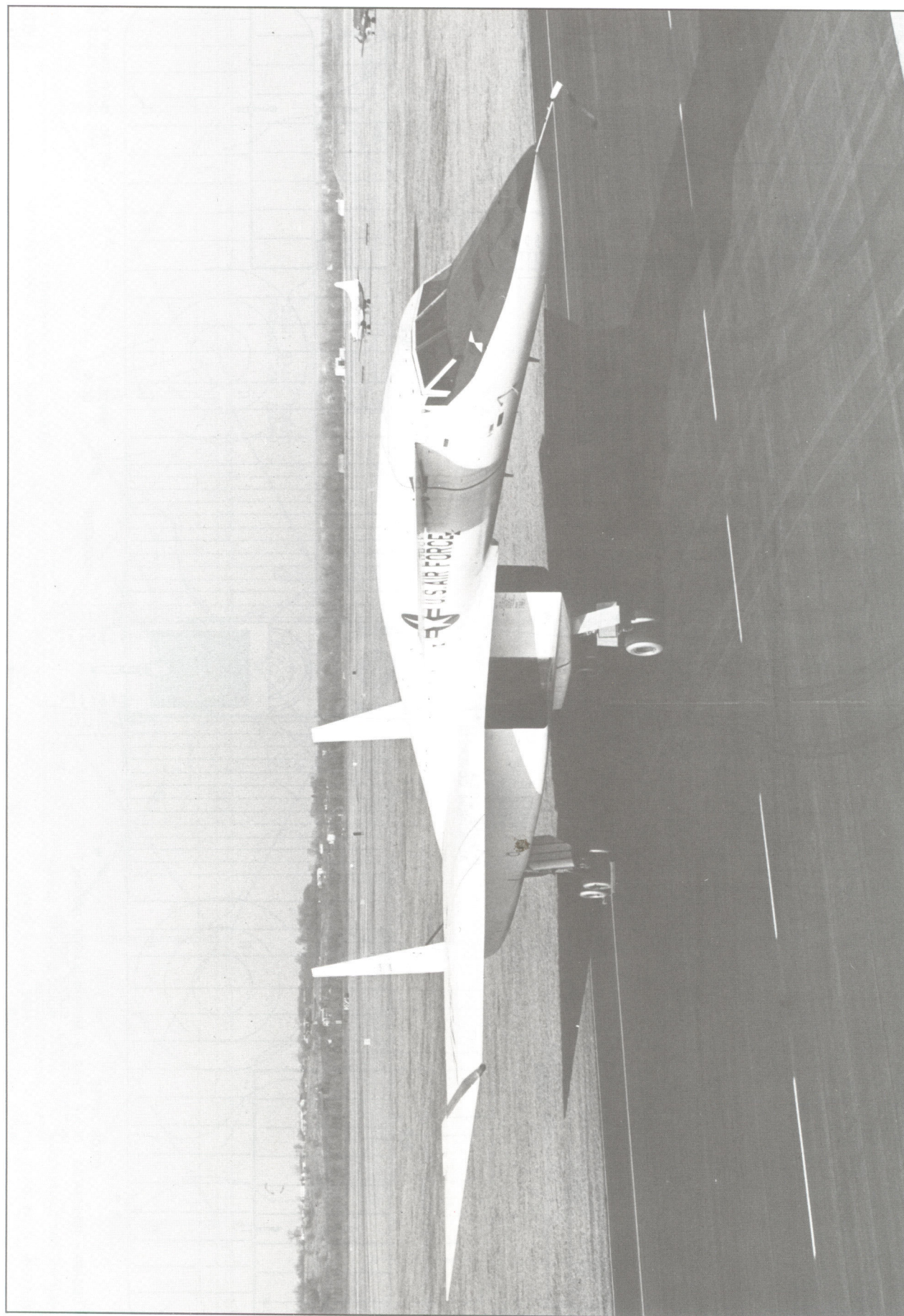
REPRO. 1:192 (1/16" = 1')

DRAWN BY - PAUL R. MATT

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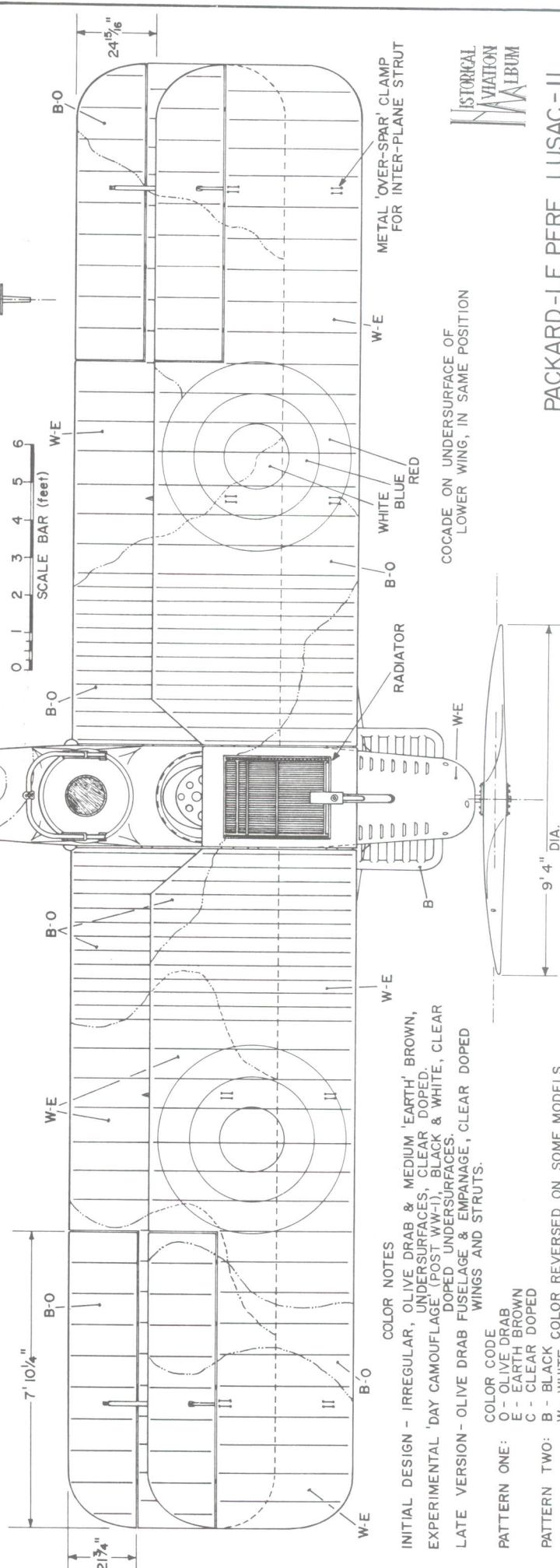
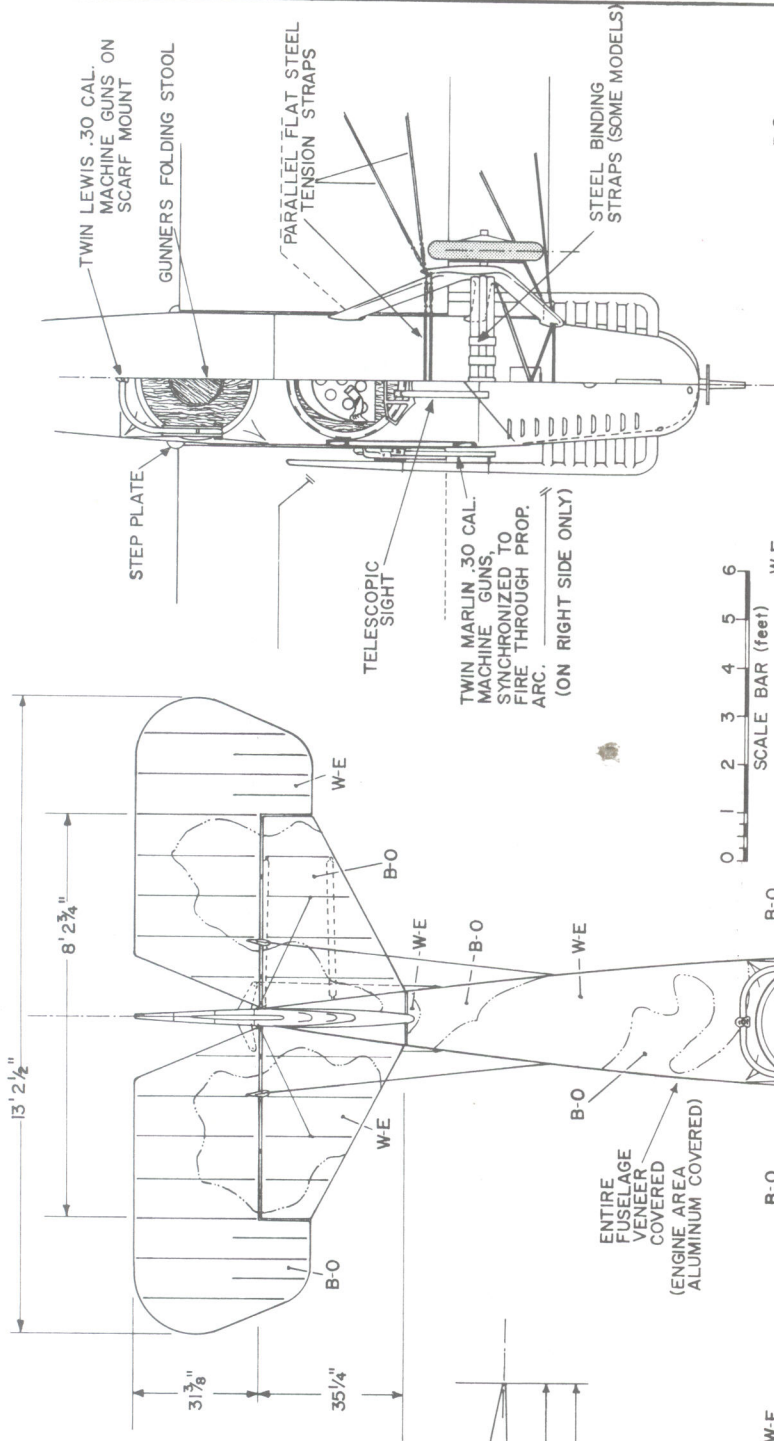


North American XB-70-I "Valkyrie"

GENERAL SPECIFICATIONS

WEIGHT EMPTY 2468 lbs.
 PILOT & GUNNER 360 " "
 FUEL & OIL 475 " "
 ARMAMENT 352 " "
 GROSS WEIGHT 3655 " "
 TOP SPEED at SEA LEVEL (136) 132 mph
 10,000 ft. 127 " "
 20,000 ft. 102 " "
 SERVICE CEILING 23,000 ft.
 WING AREA (INCL.AILERONS) 415.6 sq. ft.
 WING LOADING 84 lbs./sq. ft.
 ENDURANCE, CRUISE at 10,000 ft. 5 hrs.
 CRUISING SPEED 112 mph
 LANDING SPEED 50 "

AIRFOIL (TWICE SCALE)



COLOR NOTES

INITIAL DESIGN - IRREGULAR, OLIVE DRAB & MEDIUM 'EARTH' BROWN, UNDERSURFACES, CLEAR DOPED.
 EXPERIMENTAL 'DAY CAMOUFLAGE' (POST WW-I), BLACK & WHITE, CLEAR DOPED UNDERSURFACES.
 LATE VERSION - OLIVE DRAB FUSELAGE & EMPANAGE, CLEAR DOPED WINGS AND STRUTS.

COLOR CODE

PATTERN ONE: O - OLIVE DRAB
 E - EARTH BROWN
 C - CLEAR DOPED
 PATTERN TWO: B - BLACK COLOR REVERSED ON SOME MODELS
 W - WHITE
 BASIC CAMOUFLAGE PATTERN AND OUTLINE DID NOT CHANGE
 COLOR LINE

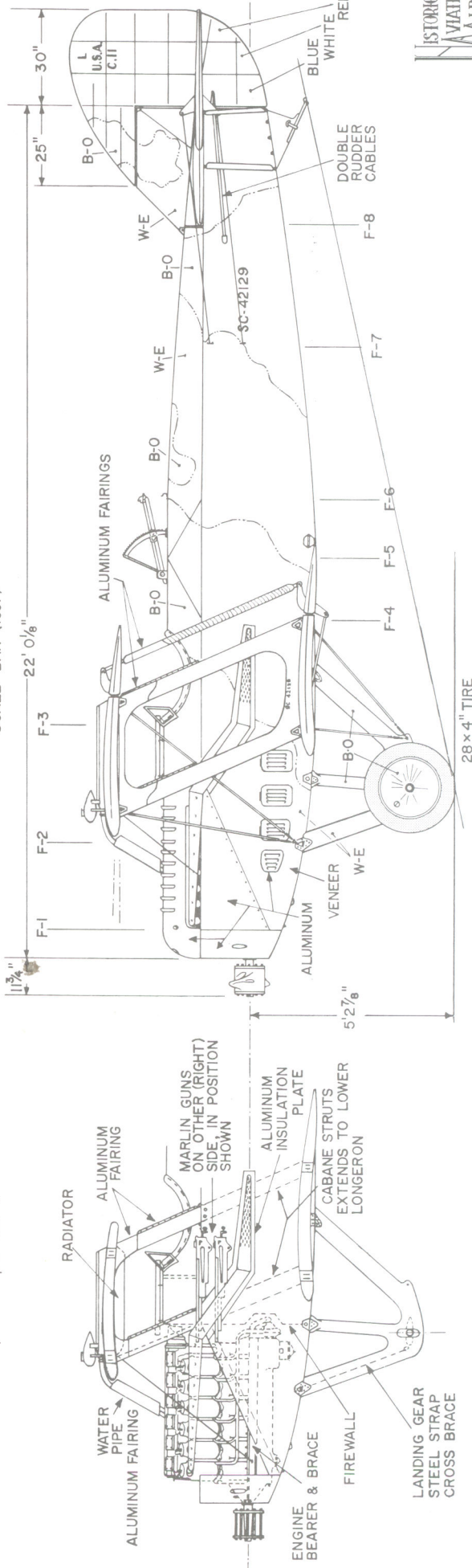
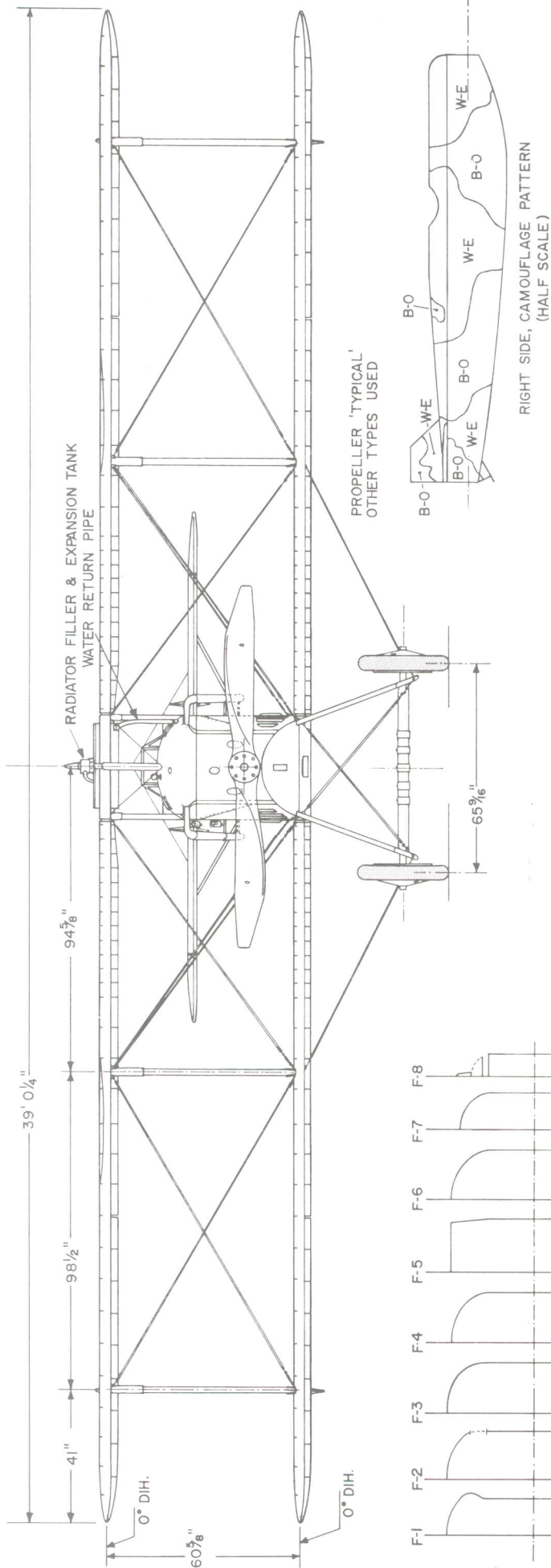
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PACKARD-LE PERE LUSAC-II

(1918)

SCALE: 1:48

PLATE



INTERPLANE STRUTS SAME COLOR AS CONTACT AREA OF LOWER WING FOLLOWING CAMOUFLAGE PATTERN. ALUMINUM FAIRINGS LEFT NATURAL.

SERIAL NUMBER ASSIGNMENT
40013-40029
42129-42141
(42130-42133 TO FRANCE, A.E.F.)



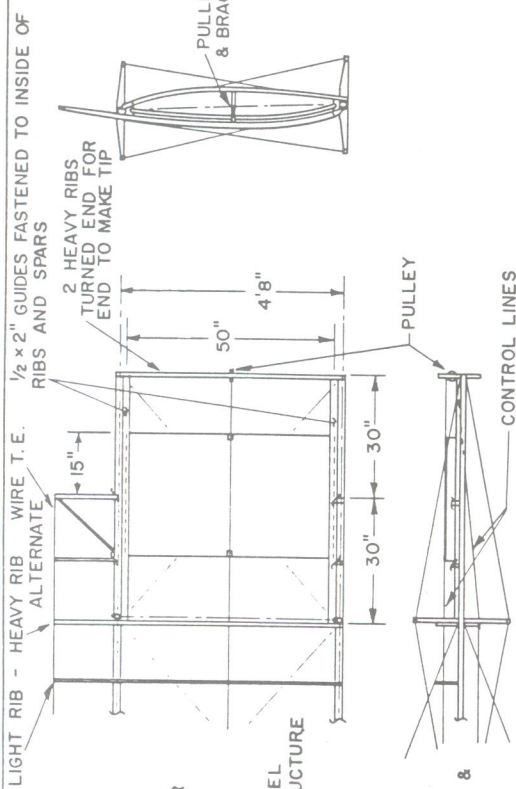
PACKARD-LE PERE LUSAC-II

(1918)

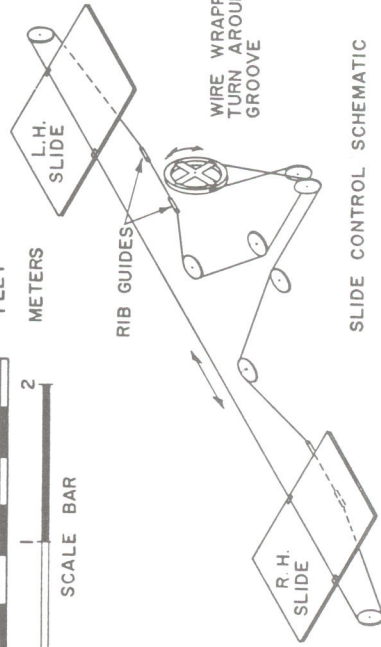
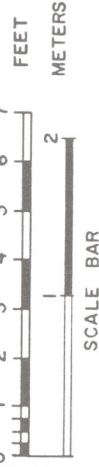
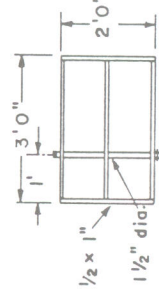
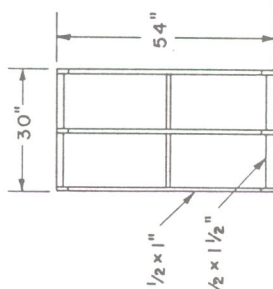
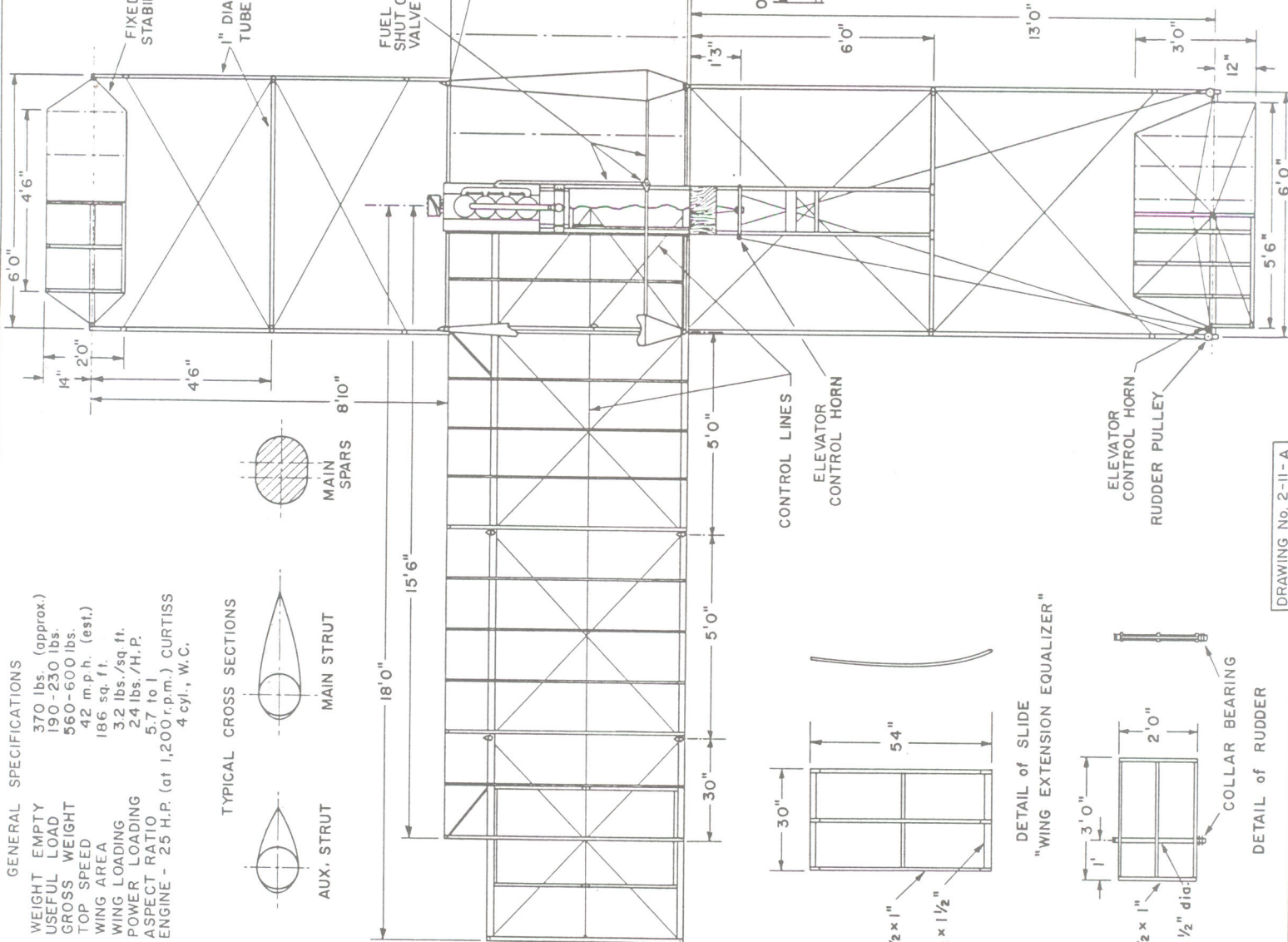
GENERAL SPECIFICATIONS

WEIGHT EMPTY 370 lbs. (approx.)
 USEFUL LOAD 190 - 230 lbs.
 GROSS WEIGHT 560 - 600 lbs.
 TOP SPEED 42 m.p.h. (est.)
 WING AREA 186 sq. ft.
 WING LOADING 3.2 lbs./sq. ft.
 ASPECT RATIO 24 lbs./H.P.
 ENGINE - 25 H.P. (at 1,200 r.p.m.) CURTISS
 4 cyl., W.C.

TYPICAL CROSS SECTIONS

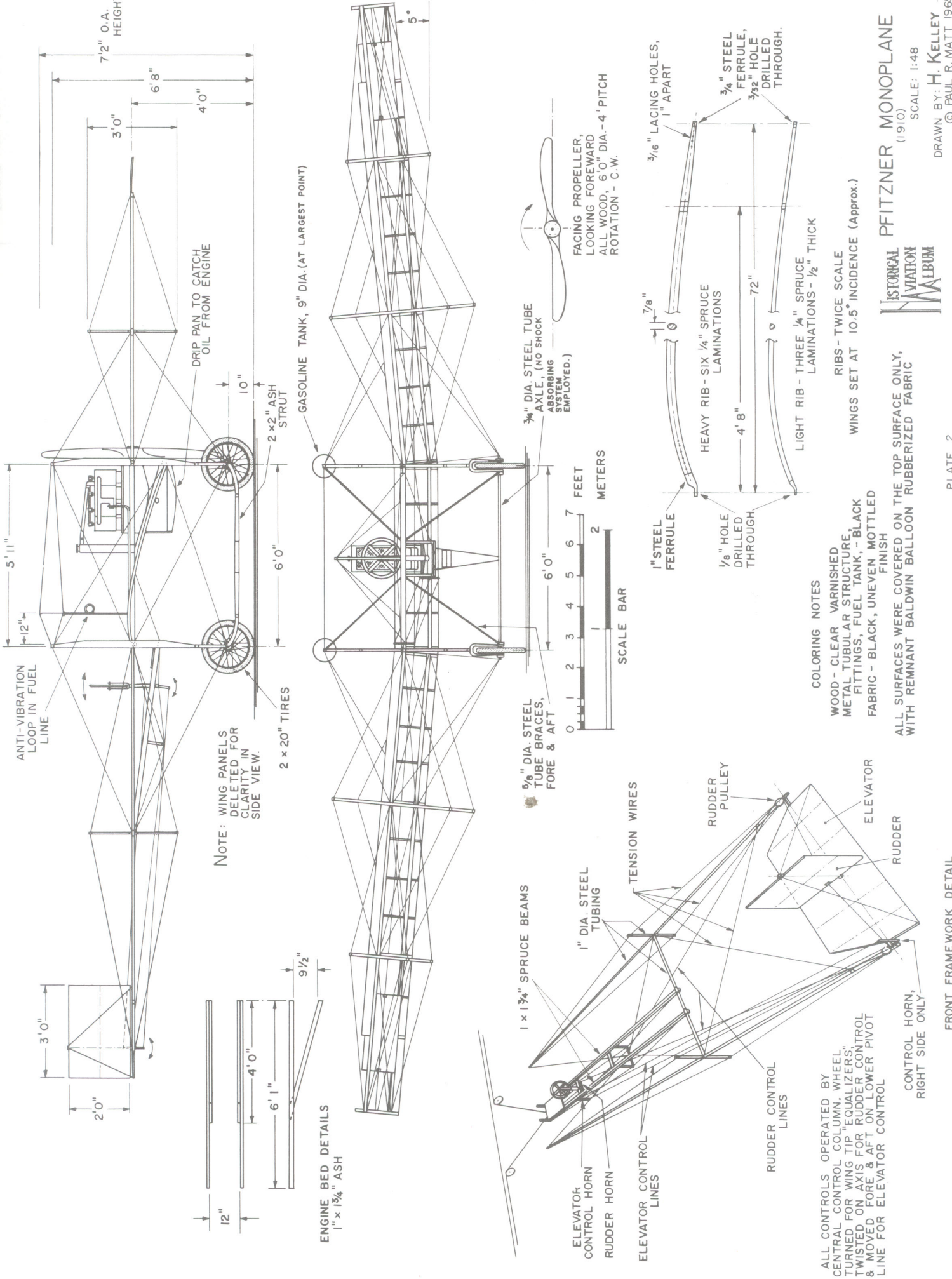


Note: WINGS
 DRAWN IN TRUE
 PLANFORM NOT
 AS 5° DIHEDRAL
 PROJECTION



PFITZNER 1910 MONOPLANE
 SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY: HERB KELLEY
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PFITZNER MONOPLANE
(1910)
SCALE: 1:48
DRAWN BY: H. KELLEY
© PAUL R. MATT 1961

GENERAL SPECIFICATION

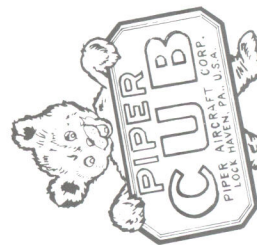
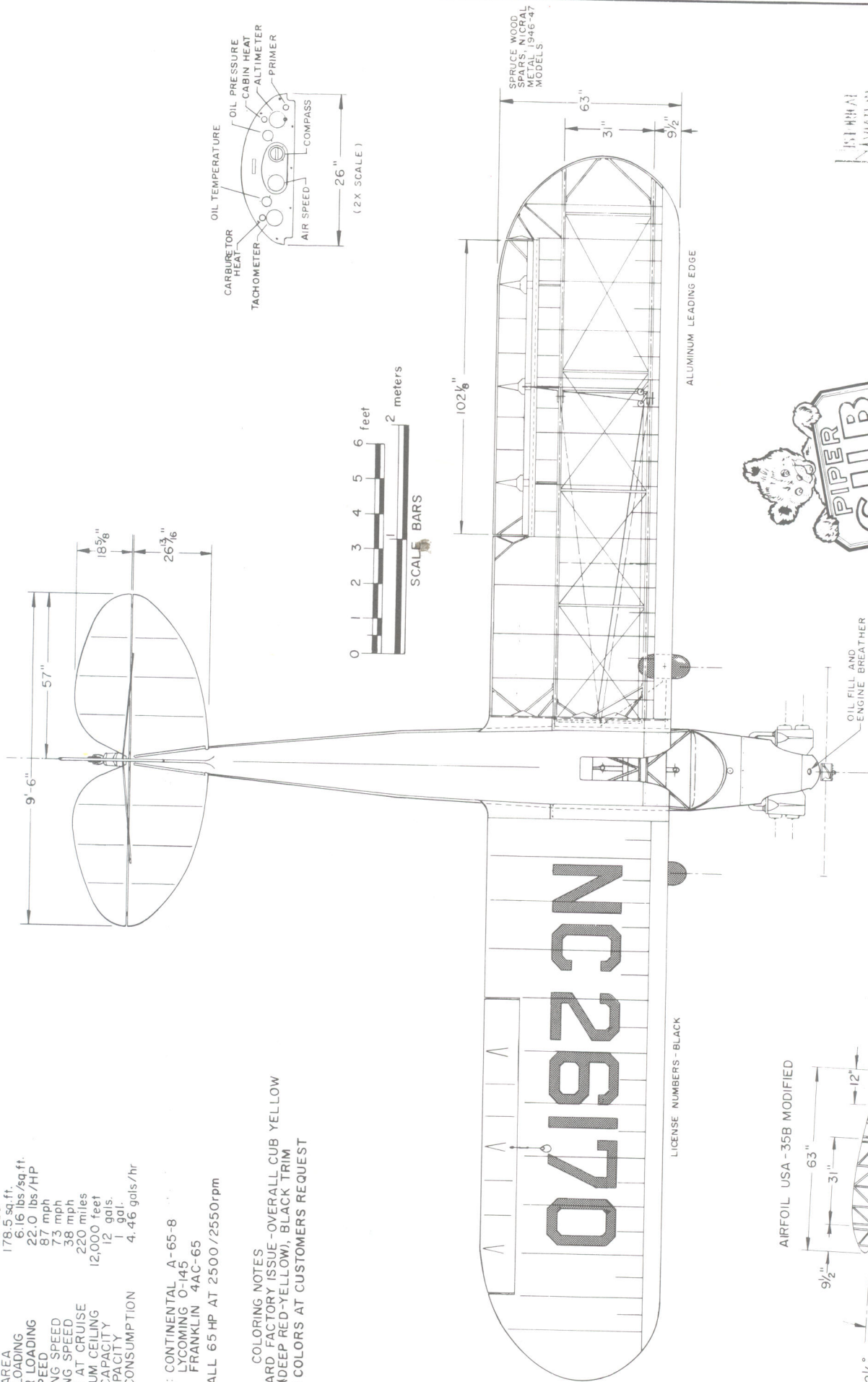
WEIGHT EMPTY 680 lbs
 USEFUL LOAD 540 lbs
 GROSS WEIGHT 1100 lbs
 WING AREA 178.5 sq. ft.
 POWER LOADING 6.16 lbs/sq. ft.
 TOP SPEED 22.0 lbs/Hp
 CRUISING SPEED 87 mph
 LANDING SPEED 73 mph
 RANGE AT CRUISE 38 mph
 MAXIMUM CEILING 220 miles
 FUEL CAPACITY 12,000 feet
 OIL CAPACITY 12 gal.
 FUEL CONSUMPTION 4.46 gals/hr

POWER: CONTINENTAL A-65-8
 LYCOMING O-145
 FRANKLIN 4AC-65

ALL 65 HP AT 2500/2550rpm

COLORING NOTES

STANDARD: FACTORY ISSUE - OVERALL CUB YELLOW
 (DEEP RED-YELLOW), BLACK TRIM
 OTHER COLORS AT CUSTOMERS REQUEST



COLORING
 CUB - LIGHT BROWN
 EYES - WHITE
 TONGUE - RED
 DETAILING IN BLACK
 SIGN: MAROON - RED, "PIPER CUB"
 WHITE, OUTLINED IN BLACK
 LETTERING - BLACK

LOGO CENTERED ON FIN
 FIGURE APPROX 10" HIGH

Paul R. Matt

PIPER J-3 "CUB"
 1937-47

SCALE: ORIGINAL - 1:24

REPRO. - 1:48

DRAWN BY: PAUL R. MATT

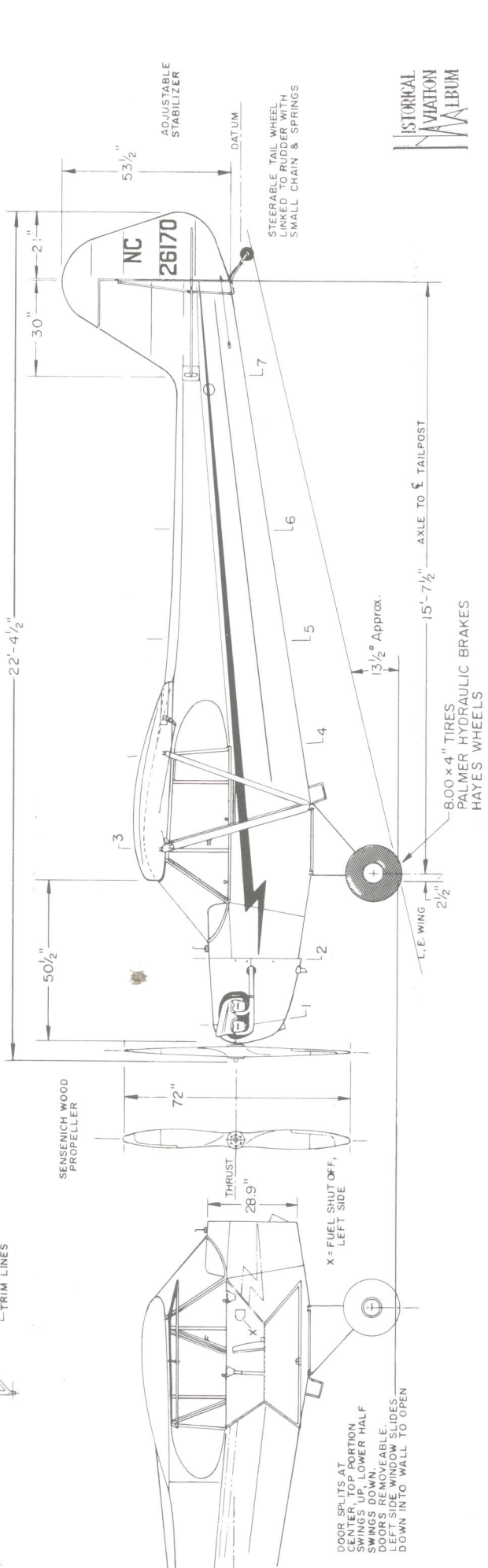
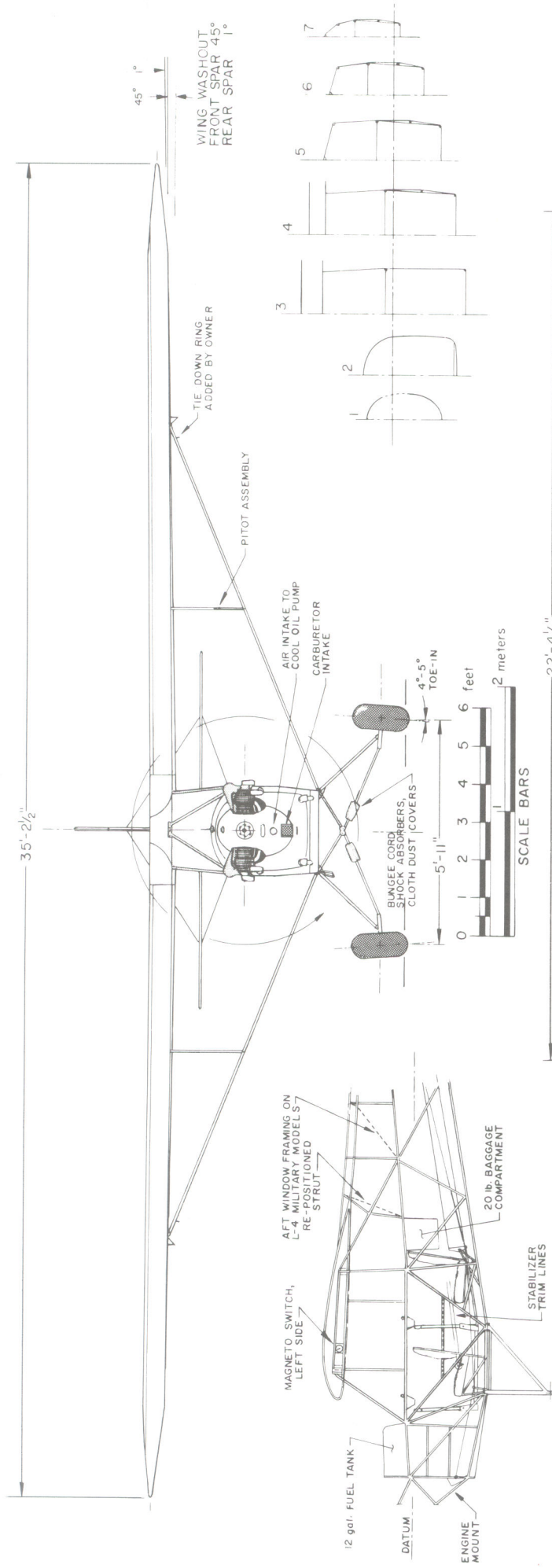
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PLATE 1 of 2

DRAWING No. 18-121-A



PIPER J-3 "CUB"
1937-47

SCALE: ORIGINAL - 1:24
REPRO. - 1:48

DRAWN BY: PAUL R. MATT

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GENERAL SPECIFICATIONS

CONTINENTAL A-75-B, 75 HP	LYCOMING O-145, 65 HP
WEIGHT EMPTY 800 lbs.	800 lbs.
USEFUL LOAD 520 lbs.	401 lbs.
GROSS WEIGHT 1400 lbs.	1301 lbs.
WING AREA 183 sq.ft.	7.1 lbs/sq.ft.
WING LOADING 18.65 lbs/sq.ft.	20.0 lbs/HP
POWER LOADING 18.65 lbs/HP	87 mph
TOP SPEED 96 mph	73 mph
CRUISING SPEED 83 mph	35 mph
LANDING SPEED 38 mph	12,000 feet
SERVICE CEILING 12,000 feet	340 miles
RANGE AT CRUISE 25 gals.	16 gals.
FUEL CAPACITY 1.25 gals.	4 gals at S.L.
FUEL CONSUMPTION 5 gal at S.L.	

POWER: CONTINENTAL A-75-B,

75 HP AT S.L. AT 2600 rpm

OR: LYCOMING O-145

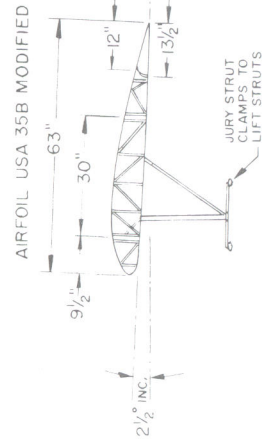
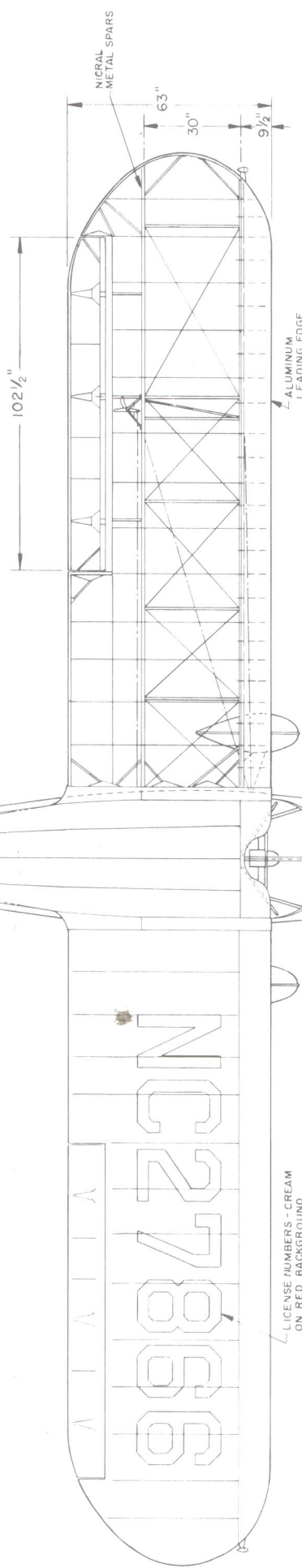
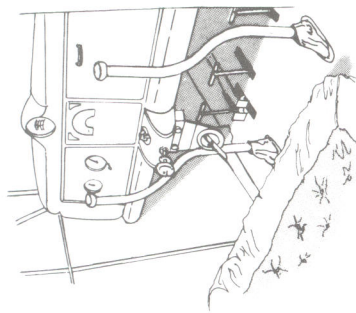
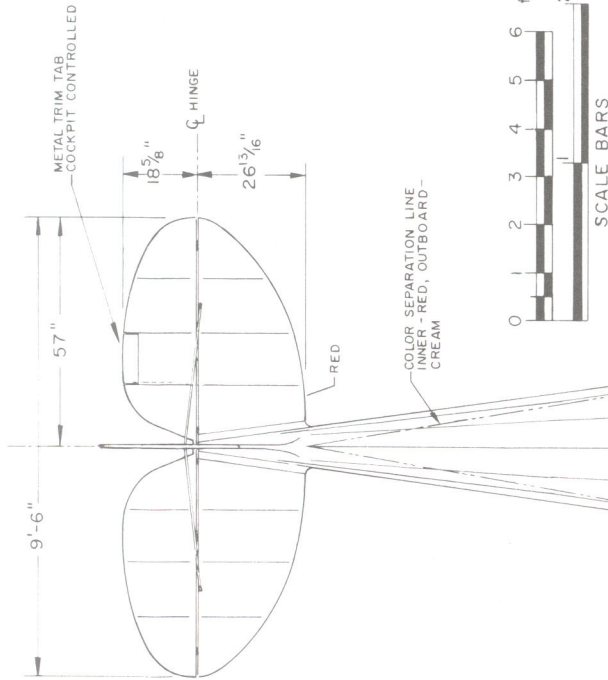
65 HP AT S.L. AT 2550 rpm

MAXIMUM POWER, TAKE OFF & EMERGENCY

COLORING NOTES

STANDARD FACTORY SCHEME - FUSELAGE, VERTICAL
TAIL SURFACES & LANDING GEAR - CREAM.
HORIZONTAL TAIL SURFACES, WINGS & PROFILE
TRIM - RED... OR REVERSE COLORS.

OTHER COLORS USED - BLUE & CREAM AS WELL AS
SOLID COLORS OVERALL



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SINCERE THANKS TO PAUL
MCDANIEL, JOHN UNDERWOOD
AND PIPER AIRCRAFT FOR
THEIR HELP IN THE PREPARA-
TIONS OF THESE DRAWINGS.

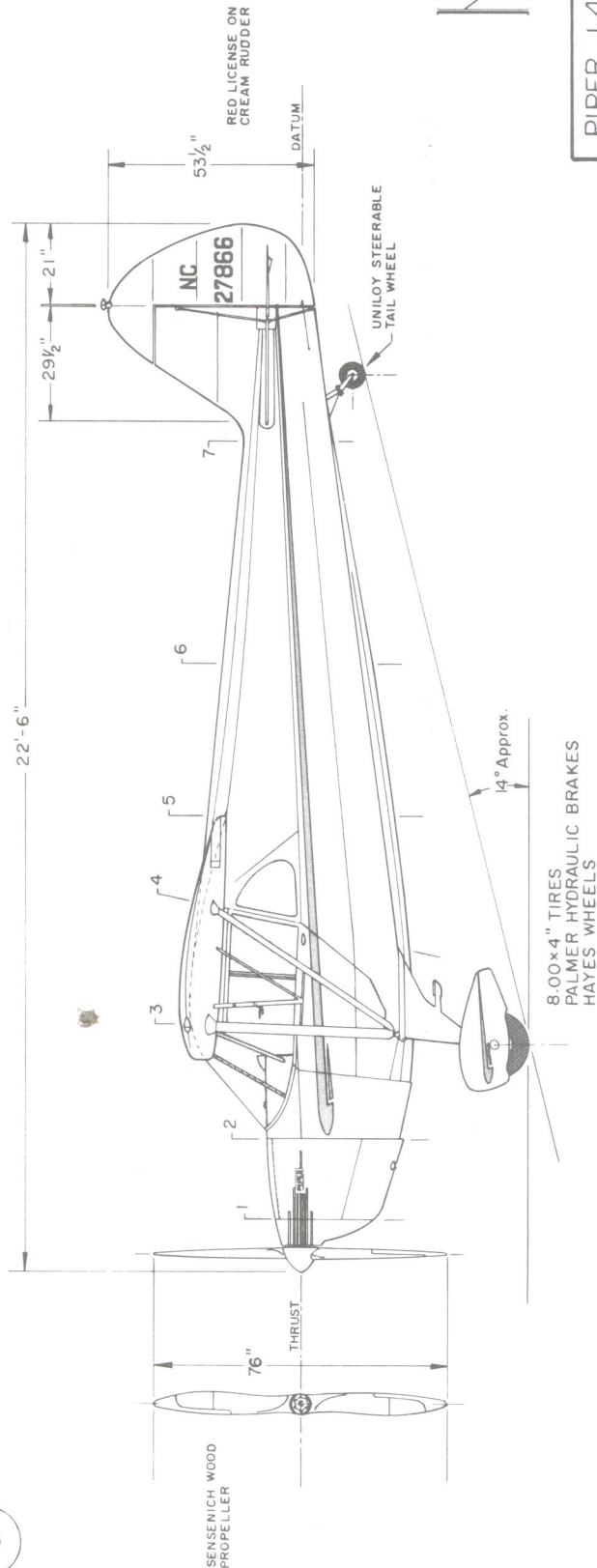
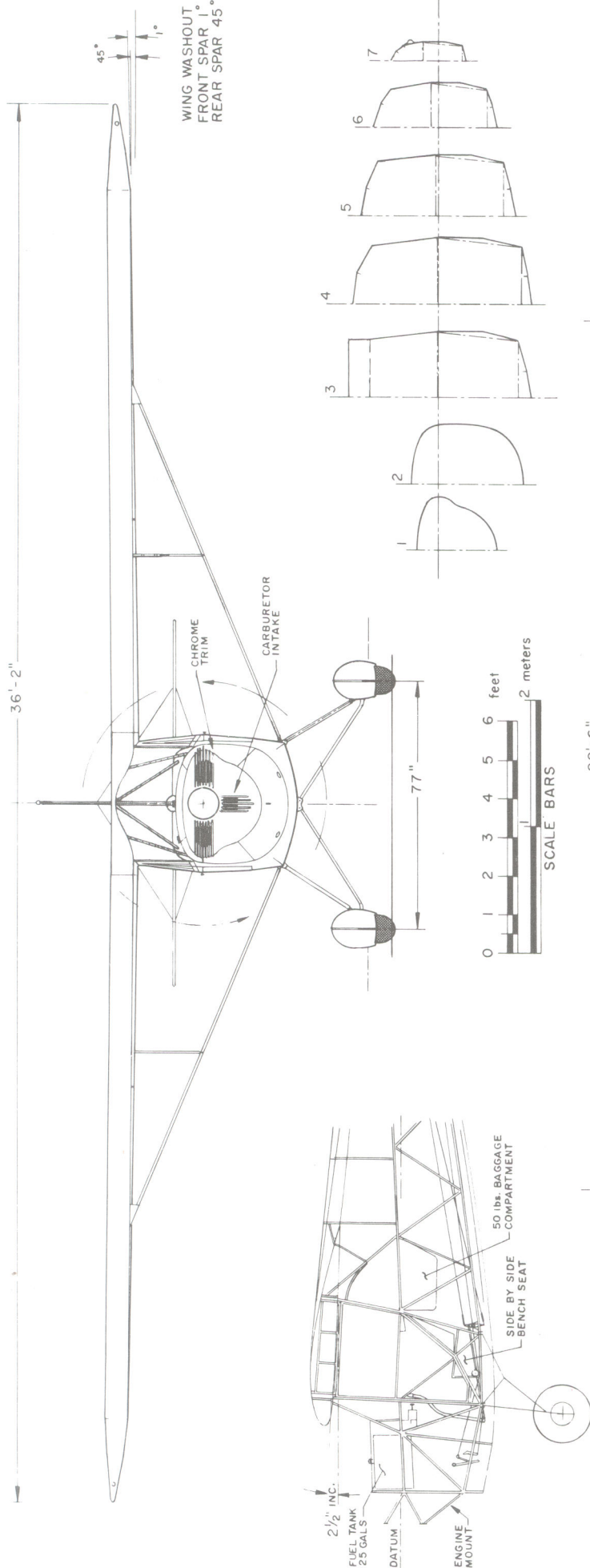
PIPER J-4E "CUB COUPE"
1941 MODEL

SCALE: ORIGINAL - 1:24

REPRO. - 1:48

DRAWN BY: PAUL R. MATT

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PIPER J-4E "CUB COUPE"
1941 MODEL

SCALE: ORIGINAL - 1:24

REPRO. - 1:48

DRAWN BY: PAUL R. MATT

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PLATE 2 of 2

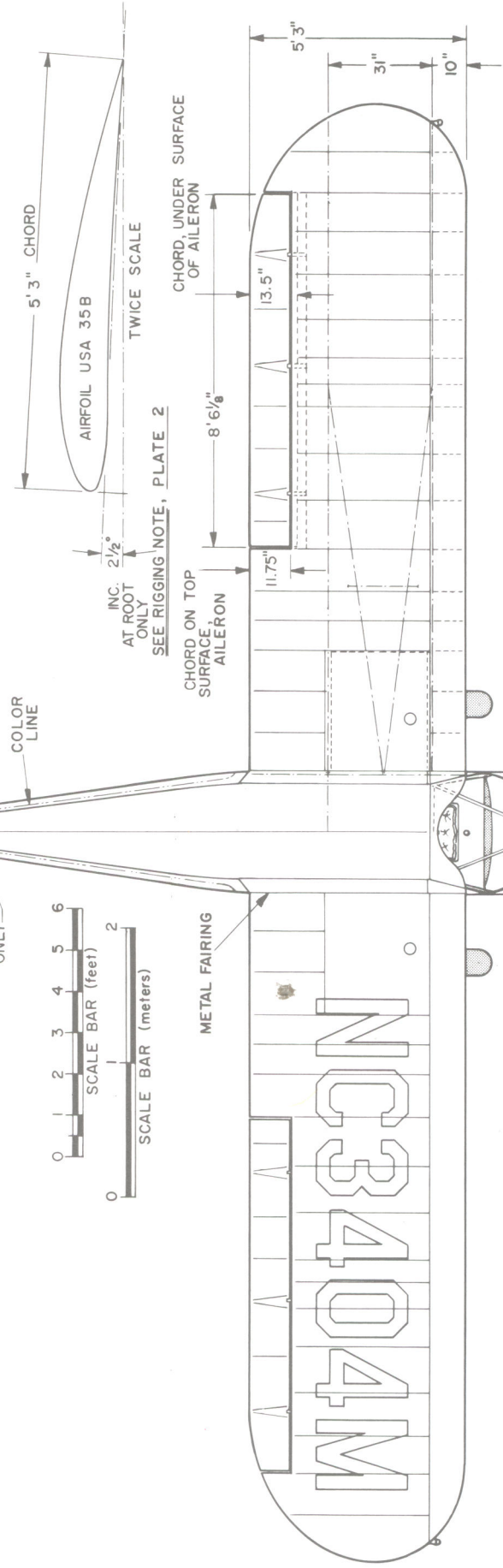
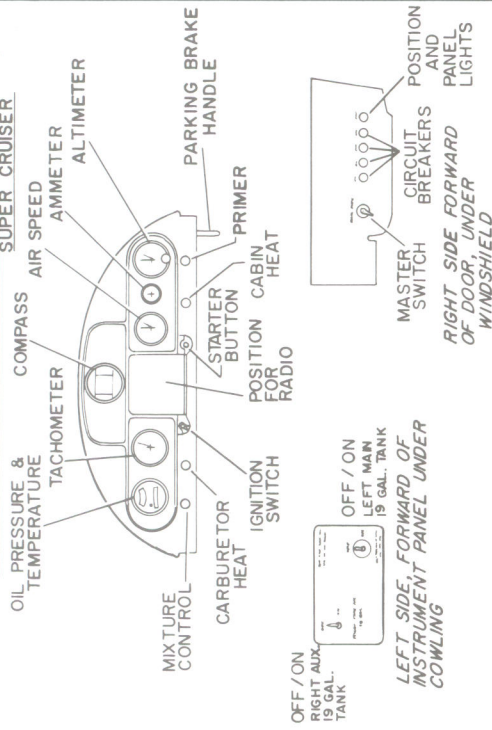
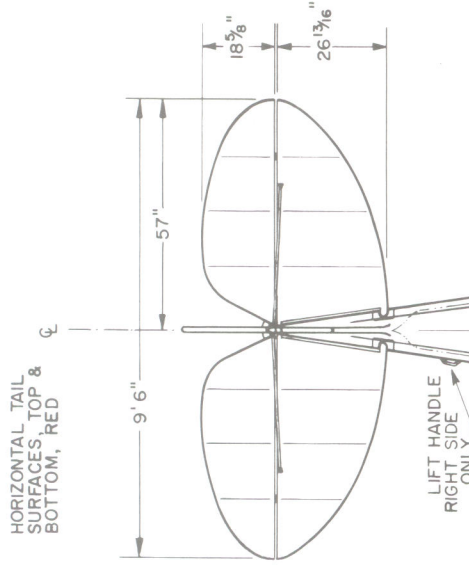
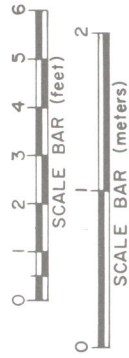
DRAWING No. 18-122-A

GENERAL SPECIFICATIONS

NORMAL		UTILITY	
WEIGHT EMPTY	950 lbs.	GROSS WEIGHT	1500 lbs.
POWER LOADING	17.5 lbs./H.P.	WING LOADING	15 lbs./sq. ft.
BAGGAGE CAPACITY	41 lbs.	CRUISING SPEED	103 m.p.h.
RED LINE DIVING SPEED	110 m.p.h.	RED LINE DIVING SPEED	138 m.p.h.
STALLING SPEED	49 m.p.h.	STALLING SPEED	148 m.p.h.
RATE OF CLIMB, S.L.	600 ft./min.	RATE OF CLIMB, S.L.	750 ft./min.
BEST CLIMB SPEED	75 m.p.h.	BEST CLIMB SPEED	70 m.p.h.
CRUISING RANGE	600 miles	CRUISING RANGE	600 miles
SERVICE CEILING	12,600 feet	SERVICE CEILING	15,700 feet
ABSOLUTE CEILING	15,500 feet	ABSOLUTE CEILING	18,000 feet
GLIDING RATIO	11:1	GLIDING RATIO	11:1
FUEL CAPACITY	(73/80 OCTANE) 38 gals.	FUEL CAPACITY	38 gals.
OIL CAPACITY	6 quarts	OIL CAPACITY	6 quarts

POWER- LYCOMING O-235-C 100 H.P. at 2600 r.p.m.
OR LATER
LYCOMING O-235-C1 108 H.P. at 2600 r.p.m.

THE -C1 ENGINE BOOSTED CRUISING SPEED
TO 105 m.p.h.



PLAN VIEW SURFACES, RED
LICENSE NUMBERS, CREAM

PIPER PA-12 SUPER CRUISERS BUILT
LOCK HAVEN, PA. S.N. 12-1 to 12-1900,
12-2001 to 12-3625, 3,525 TOTAL
PONCA CITY, OKLA. S.N. 12-1901 to 12-2000,
12-3901 to 12-4039, 239 TOTAL

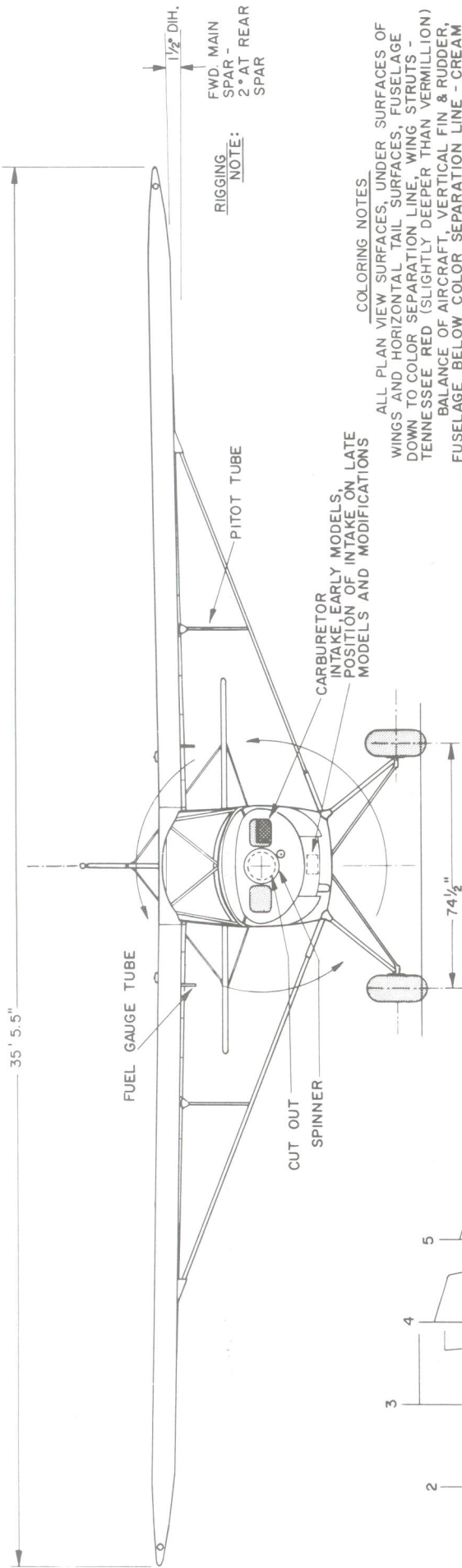
AIRCRAFT PORTRAYED IS ONE OF THREE PIPER PA-12s
USED BY THE GAME WARDENS, STATE OF MAIN, 1946-50.
AIRCRAFT WERE ALSO EQUIPPED WITH SKIS AND
PONTONS. NOSE SPINNERS WERE REMOVED WHEN
KOPPERS AEROMATIC PROPELLERS WERE INSTALLED
IN 1947.



PIPER PA-12 SUPER CRUISER

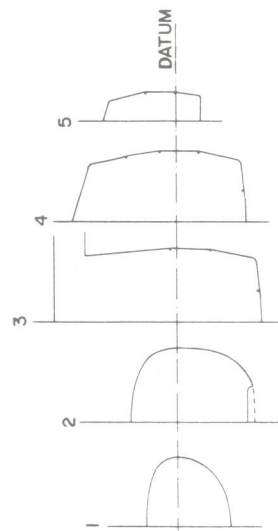
1946-48
SCALE - 1:48

DRAWN BY: PAUL R. MATT

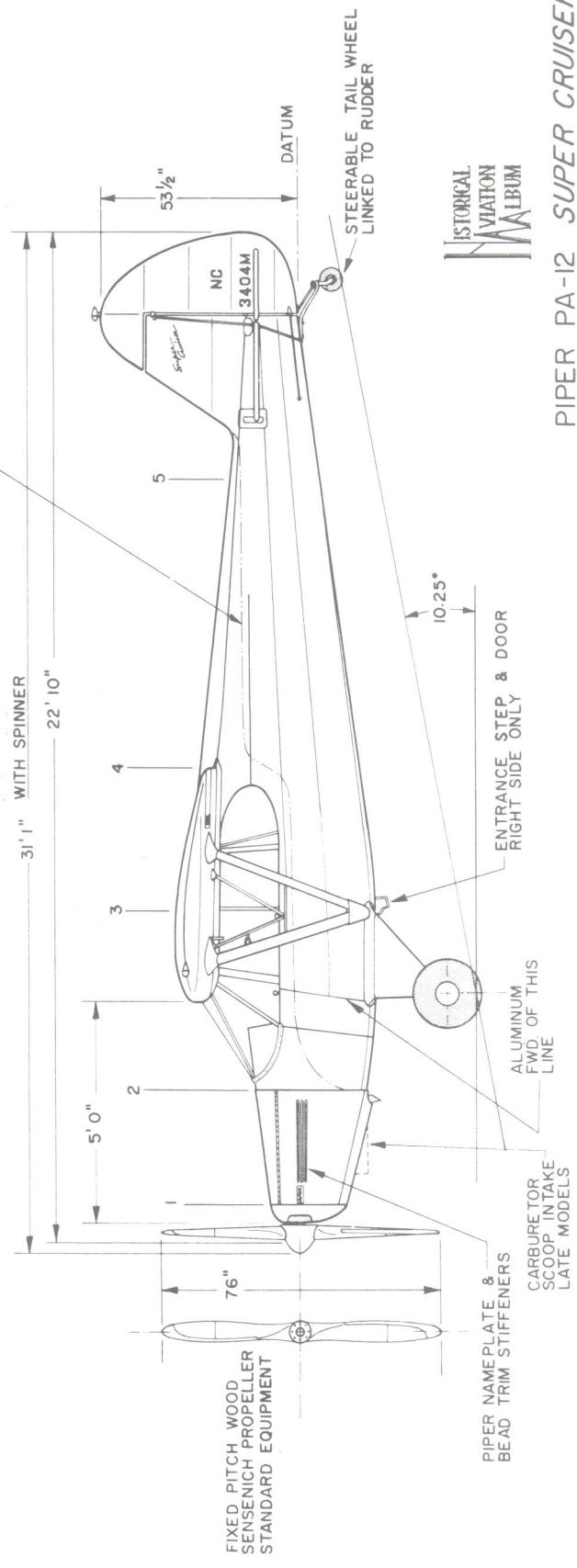


COLORING NOTES

ALL PLAN VIEW SURFACES, UNDER SURFACES OF WINGS AND HORIZONTAL TAIL SURFACES, FUSELAGE DOWN TO COLOR SEPARATION LINE, WING STRUTS - TENNESSEE RED (SLIGHTLY DEEPER THAN VERMILLION) BALANCE OF AIRCRAFT, VERTICAL FIN & RUDDER, FUSELAGE BELOW COLOR SEPARATION LINE - CREAM LICENSE NUMBERS - BLACK ON RUDDER, CREAM ON WINGS



COLOR SEPARATION LINE, RED ABOVE, CREAM BELOW



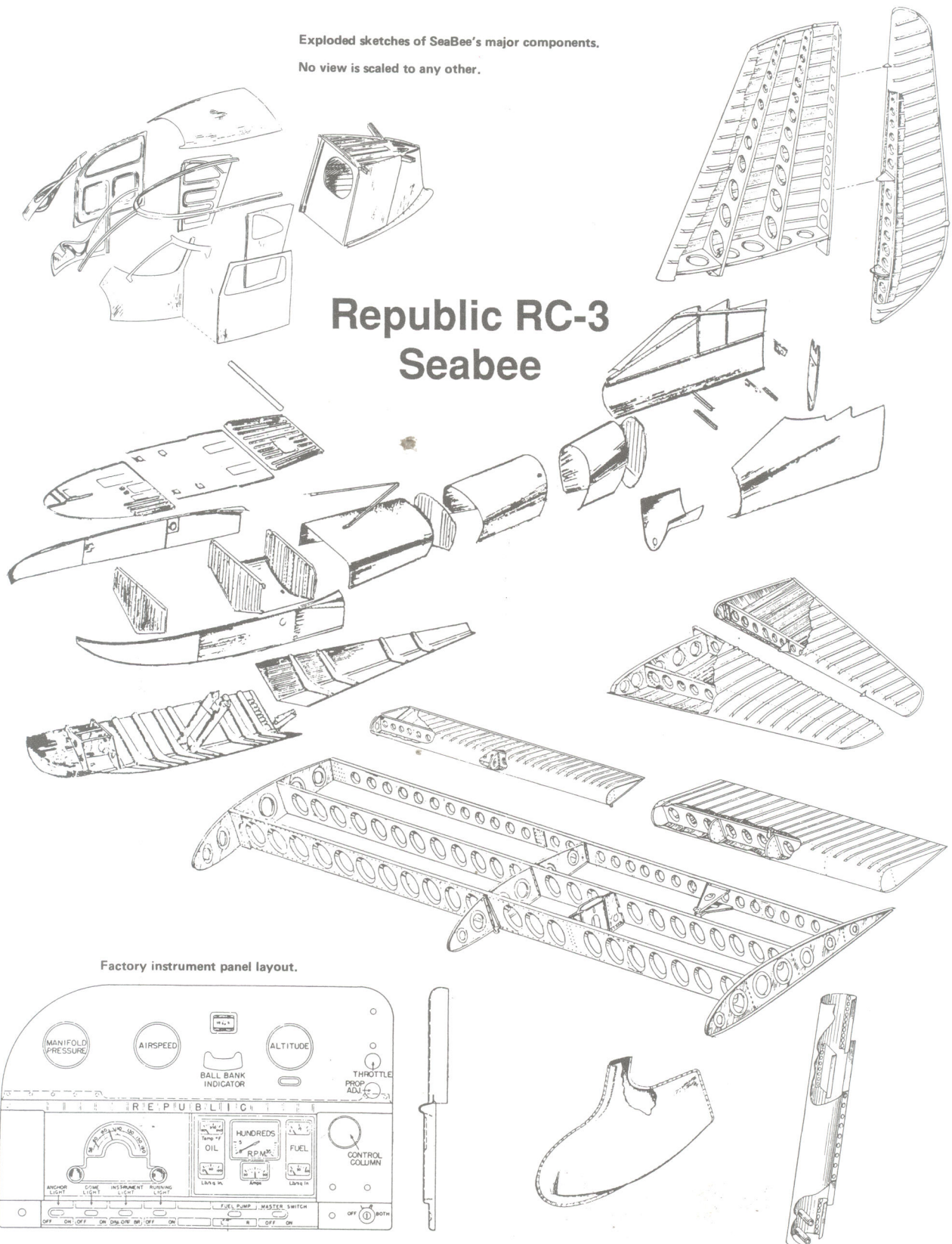
PIPER PA-12 SUPER CRUISER

1946-48
SCALE: 1:48

DRAWN BY: PAUL R. MATT

Exploded sketches of SeaBee's major components.

No view is scaled to any other.



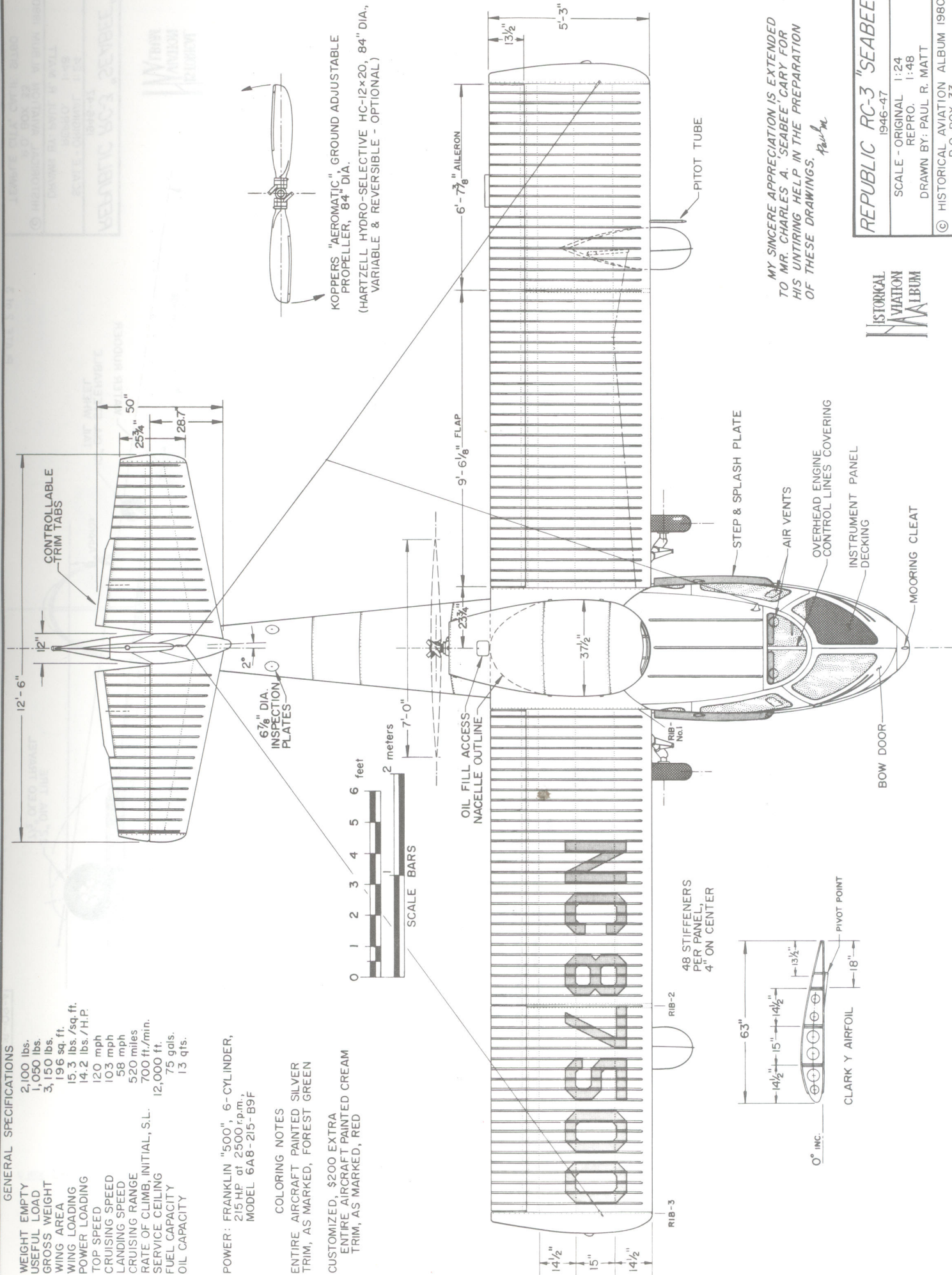
GENERAL SPECIFICATIONS

WEIGHT EMPTY 2,100 lbs.
 USEFUL LOAD 1,050 lbs.
 GROSS WEIGHT 3,150 lbs.
 WING AREA 196 sq. ft.
 POWER LOADING 15.3 lbs./sq. ft.
 14.2 lbs./H.P.
 TOP SPEED 120 mph
 CRUISING SPEED 103 mph
 LANDING SPEED 58 mph
 CRUISING RANGE 520 miles
 RATE OF CLIMB, INITIAL, S.L. 700 ft./min.
 SERVICE CEILING 12,000 ft.
 FUEL CAPACITY 75 gals.
 OIL CAPACITY 13 qts.

POWER: FRANKLIN "500", 6-CYLINDER,
 215 HP at 2500 r.p.m.,
 MODEL 6A8-215-B9F

COLORING NOTES

ENTIRE AIRCRAFT PAINTED SILVER
 TRIM, AS MARKED, FOREST GREEN
 CUSTOMIZED, \$200 EXTRA
 ENTIRE AIRCRAFT PAINTED CREAM
 TRIM, AS MARKED, RED



MY SINCERE APPRECIATION IS EXTENDED
 TO MR. CHARLES A. SEABEE FOR
 HIS UNTIRING HELP IN THE PREPARATION
 OF THESE DRAWINGS. *Paul R. Matt*

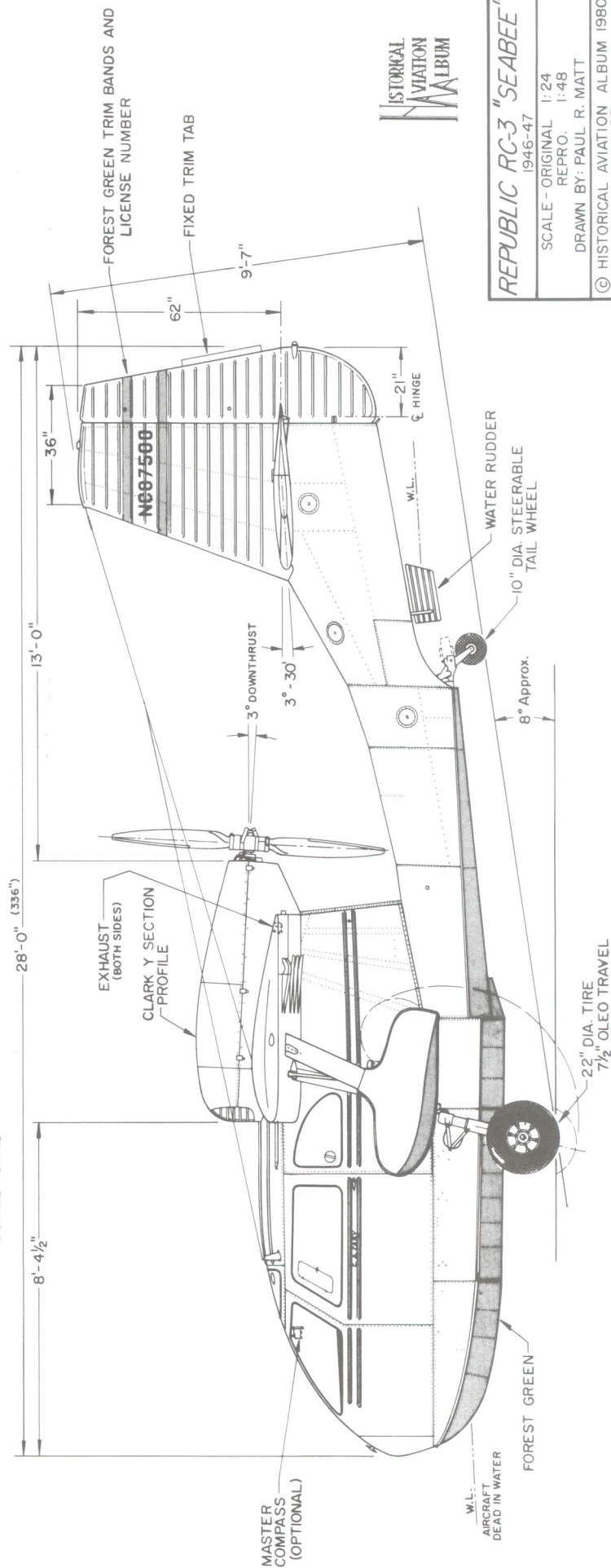
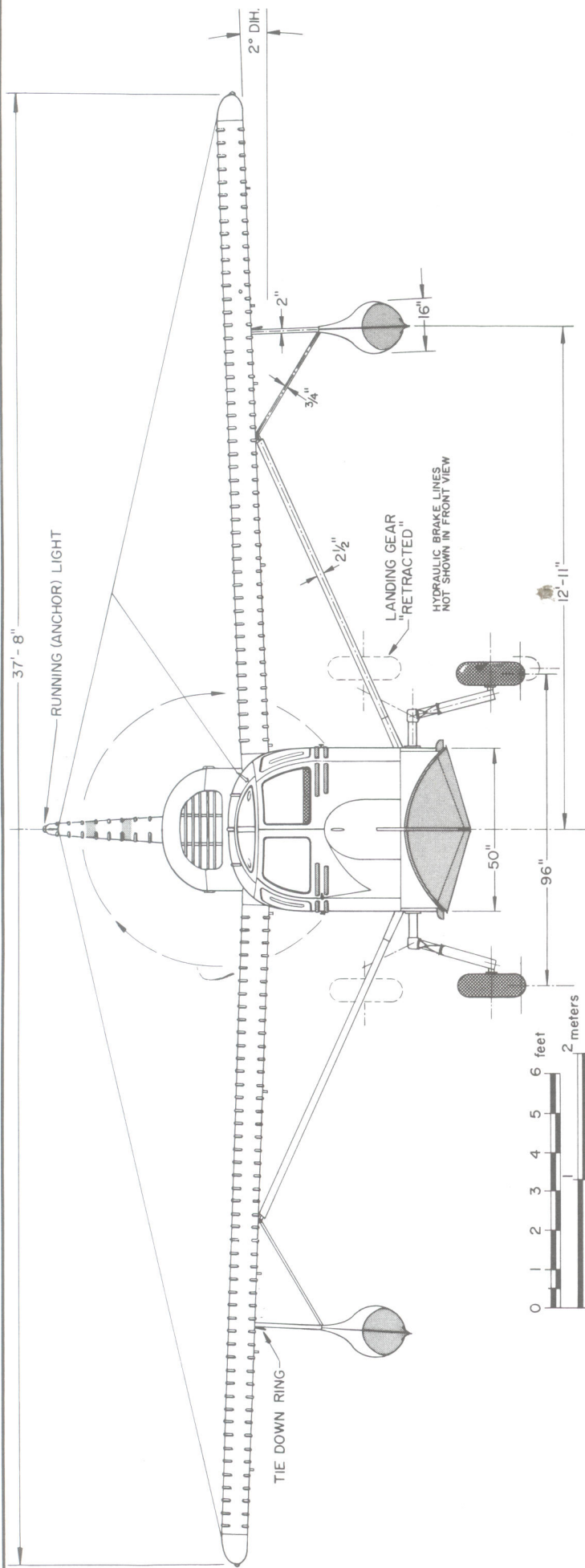
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REPUBLIC RC-3 "SEABEE"
 1946-47

SCALE - ORIGINAL 1:24
 REPRO. 1:48

DRAWN BY: PAUL R. MATT

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REPUBLIC RC-3 "SEABEE"

1946-47

SCALE - ORIGINAL 1:24

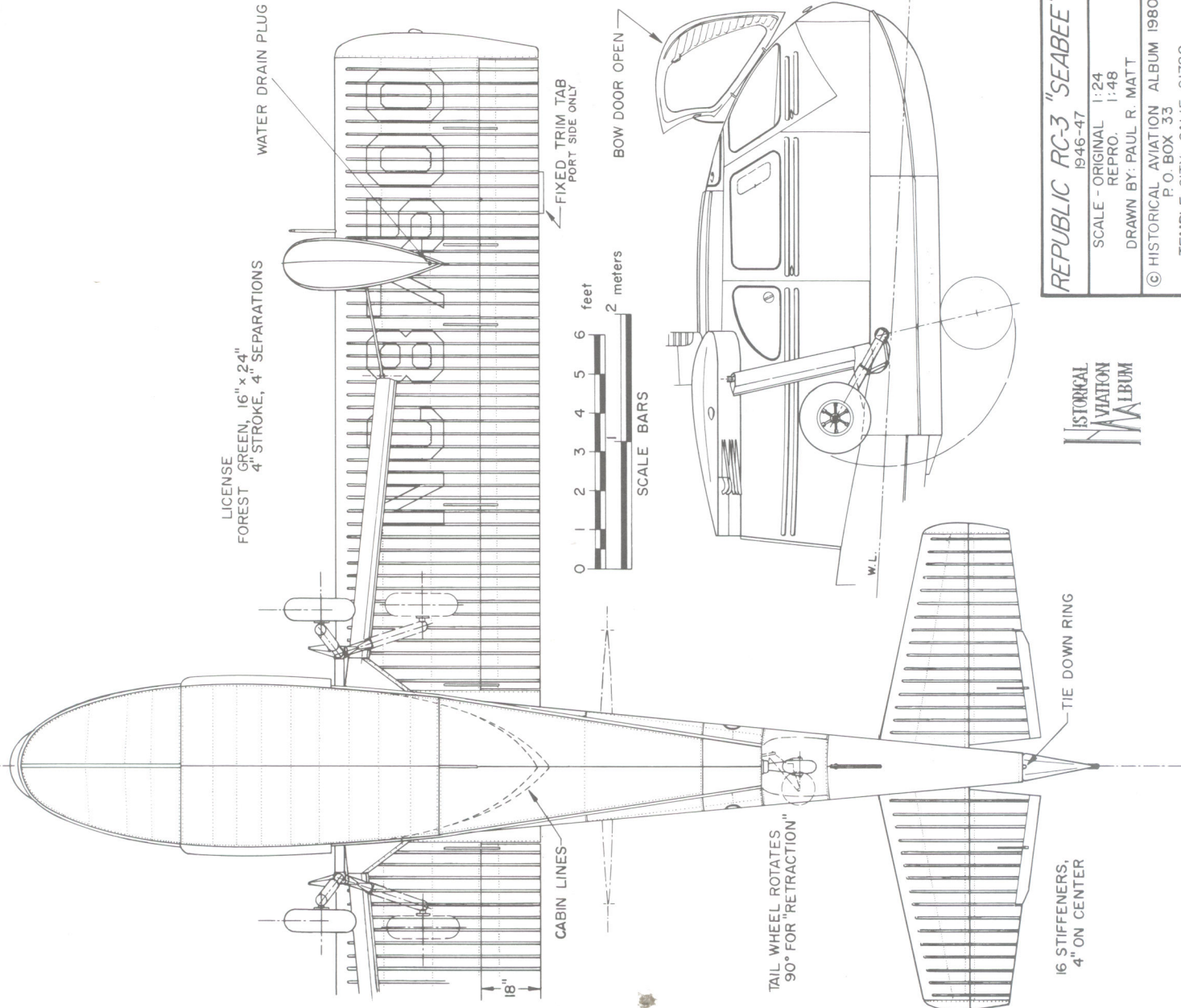
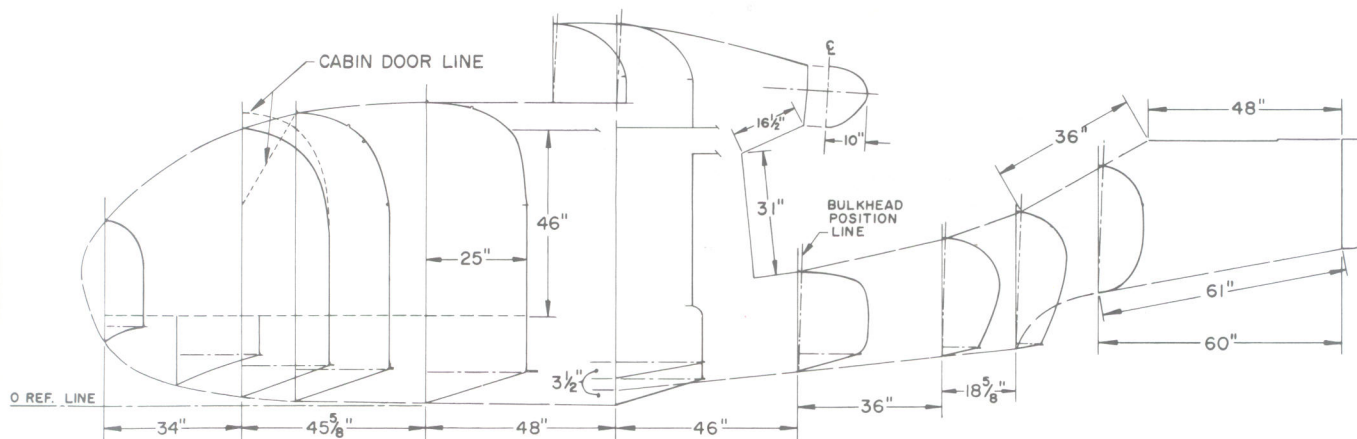
REPRO. 1:48

DRAWN BY: PAUL R. MATT

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REPUBLIC RC-3 "SEABEE"
1946-47

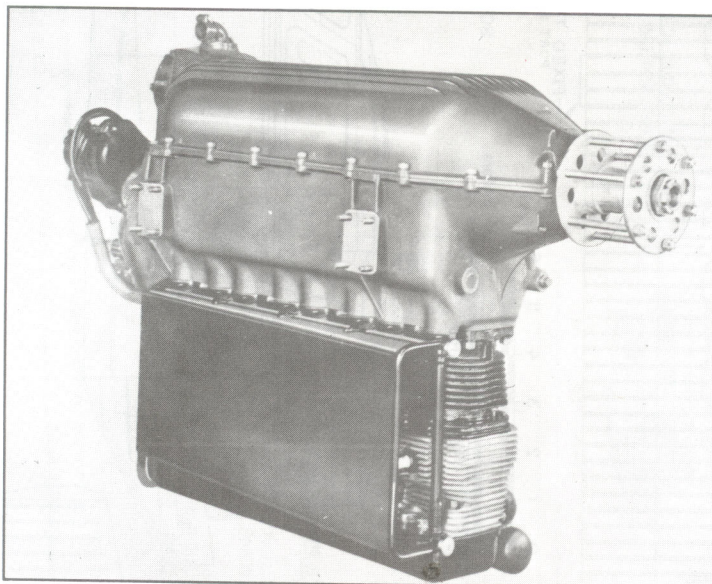
SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY: PAUL R. MATT

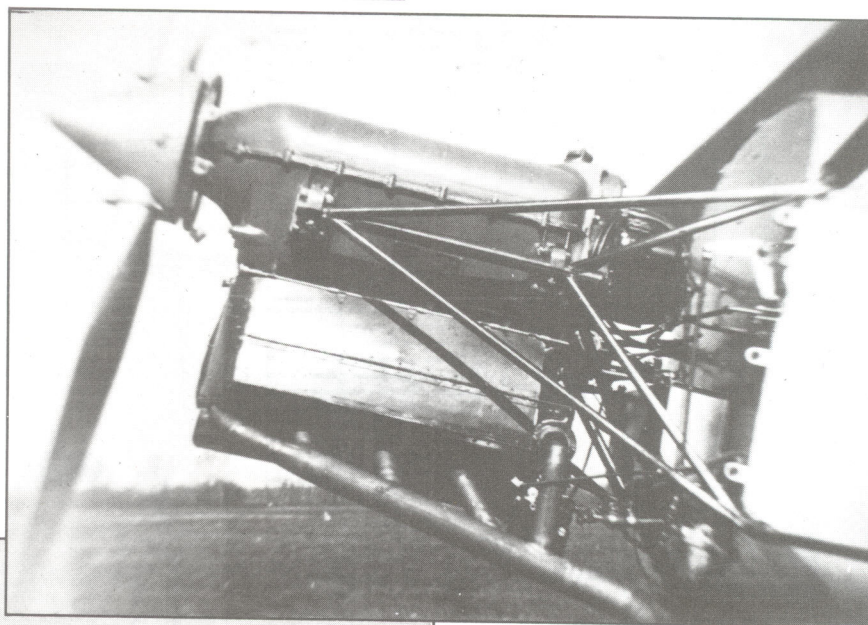
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Rover Aviation Engine



*Rover
Aviation
Engine*



*Rover engine
installation in
Driggs "Skylark".*



*Fairchild 22
with Rover
engine.*

BORE - 4.125"
STROKE - 3.000"
DISPLACEMENT - 267.28 cu. in. TOTAL
WEIGHT DRY - 51:1
FUEL CONSUMPTION - .55-.58 lbs./H.P. HOUR
OIL CONSUMPTION - .010-.015 lbs./H.P. HOUR
RATED H.P., NORMAL - 75 H.P. at 1975 r.p.m.
DEPT. OF COMMERCE APPROVED TYPE CERTIFICATE No. 37

RATINGS FROM BUREAU OF STANDARDS
POWER CURVE GRAPH

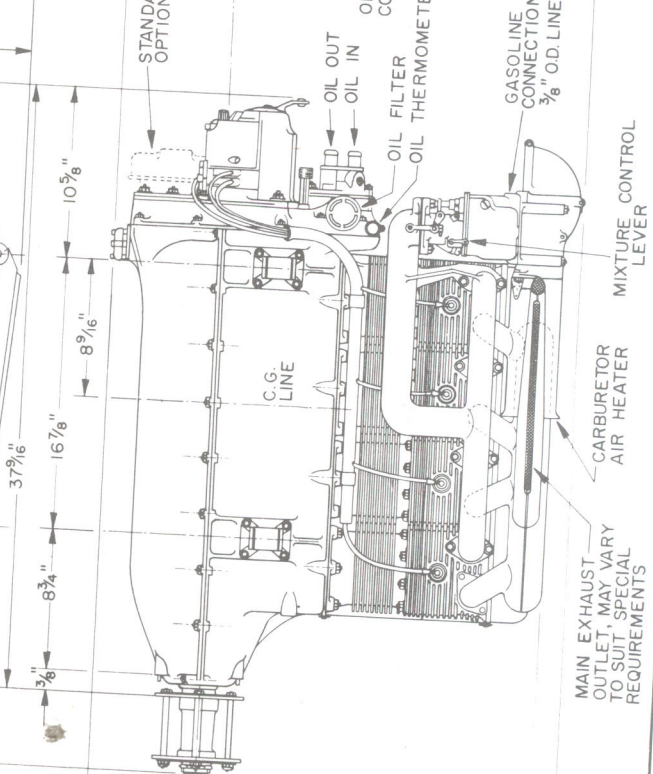
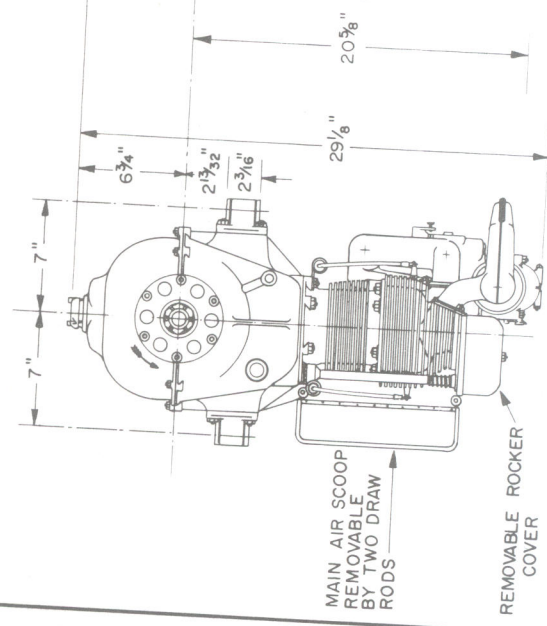
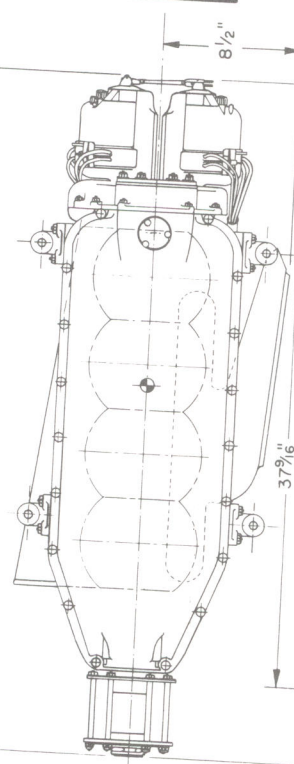
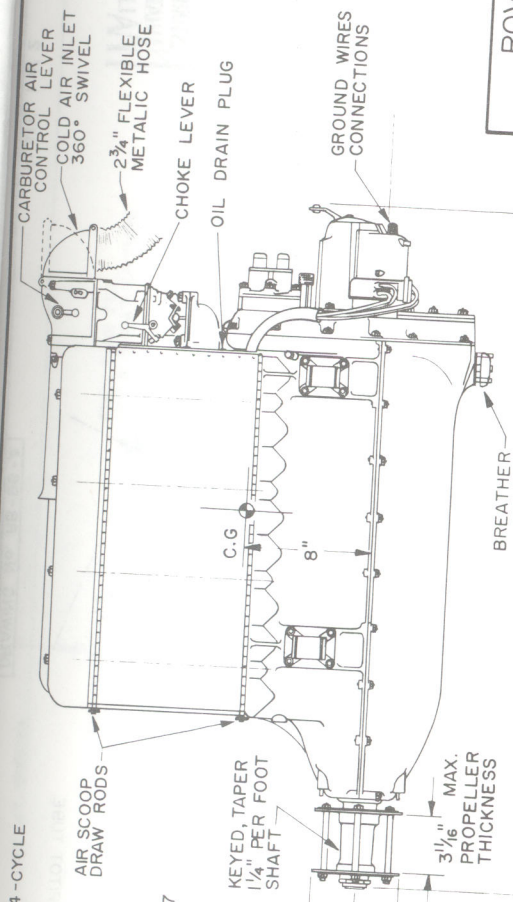
71 H.P. at 1800 r.p.m.
67 H.P. at 1700 r.p.m.
63 H.P. at 1600 r.p.m.
58 H.P. at 1500 r.p.m.

CARBURETION - STROMBERG MA-R-3
IGNITION - SCINTILLA MAGNETOS, DUAL IGNITION
LUBRICATION - OIL DRAWN BY CONVENTIONAL
TWO GEAR PRESSURE PUMP

MATERIAL

CRANKCASE - DEEP WELL RIBBED ALUMINUM ALLOY CASTING
CRANKSHAFT - 4 THROW, S BEARING, HOLLOW BORED,
MACHINED ALLOY STEEL
CONNECTING RODS - H SECTION, FORGED DURALUMIN,
BABBITT LINED, SHRUNK BRONZE
PISTONS - FULL TRUNK, RIBBED TYPE DIE CAST
ALUMINUM ALLOY
CYLINDERS - ALUMINUM ALLOY HEADS, BOLTED TO CAST
NICKLE IRON CYLINDERS
VALVES - STEEL, BRONZE VALVE SEATS
CAMSHAFT - SINGLE FIVE BEARING, MACHINED STEEL
VALVE GEAR - BRONZE BUSHED CAM FOLLOWERS,
ALEMITE LUBRICATED

WE EXTEND OUR SINCERE APPRECIATION
TO MR. HAROLD MOREHOUSE FOR HIS
ASSISTANCE INTEREST AND PATIENCE IN
THE PREPARATION OF THIS DRAWING
AND ACCOMPANYING ARTICLE.



ROVER AVIATION ENGINE
Model L-267
CIRCA 1929 - 32

DESIGNED BY - HAROLD E. MOREHOUSE
MANUFACTURED BY - MICHIGAN AERO-ENGINE CORP.
DIVISION OF MICHIGAN SCREW PRODUCTS CORP.
LANSING, MICH.

SCALE, ORIGINAL 1:6 (2" = 1")
DRAWN BY - PAUL R. MATT
1:12 (1" = 1")

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TEMPLE CITY, CALIF, 91780

COLORING NOTES

OVERALL SILVER DOPED,
DETAILING BLACK.
ALUMINUM NOSE AREA, BURNISHED
CABIN WINDOWS AND DOORS,
STAMPED ALUMINUM SHEET

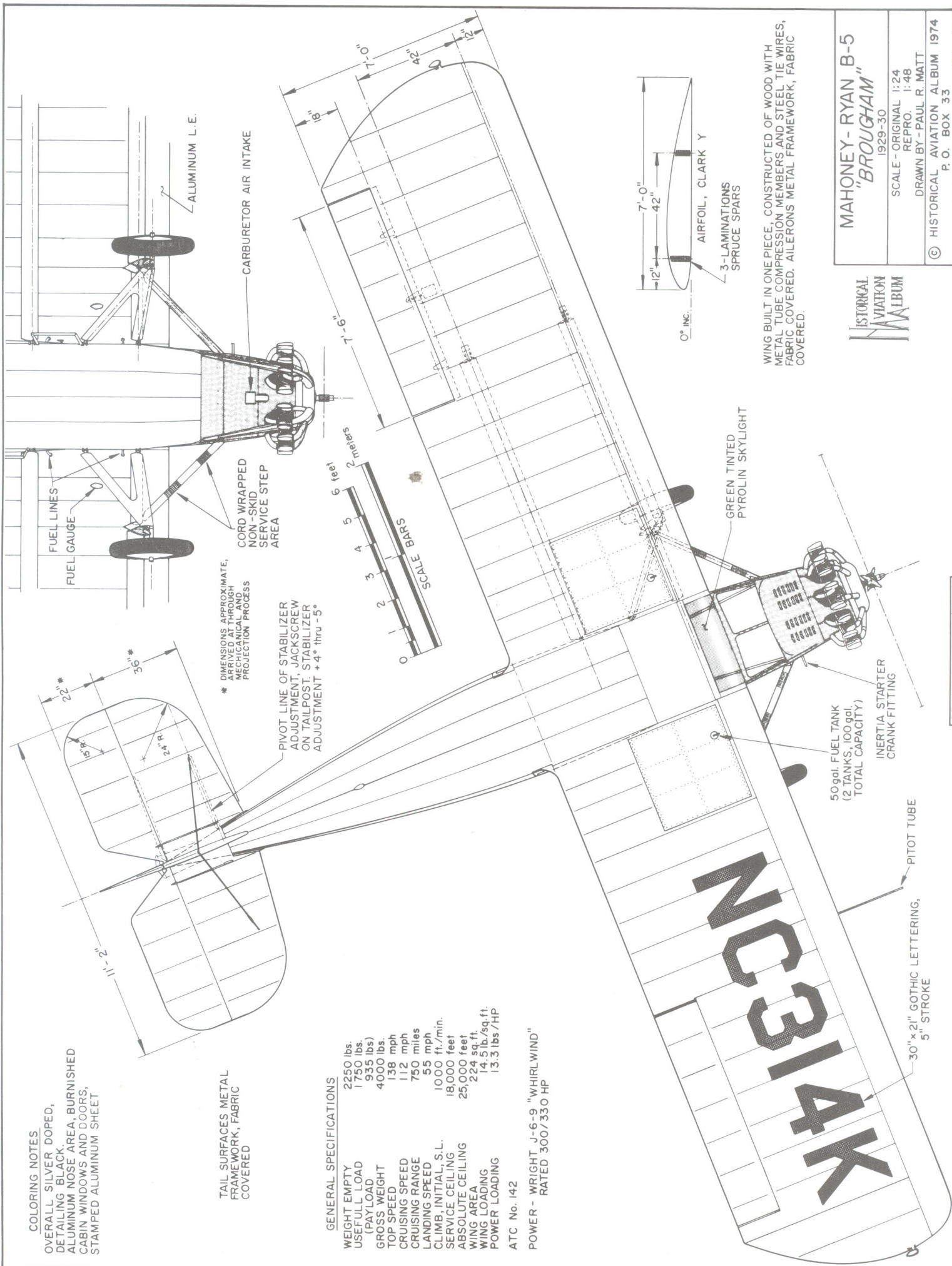
TAIL SURFACES METAL
FRAMEWORK, FABRIC
COVERED

GENERAL SPECIFICATIONS

WEIGHT EMPTY	2250 lbs.
USEFUL LOAD	1750 lbs.
(PAYLOAD)	935 lbs)
GROSS WEIGHT	4000 lbs.
TOP SPEED	138 mph
CRUISING SPEED	112 mph
CRUISING RANGE	750 miles
LANDING SPEED	55 mph
CLIMB, INITIAL, S.L.	1000 ft./min.
SERVICE CEILING	18,000 feet
ABSOLUTE CEILING	25,000 feet
WING AREA	224 sq.ft.
WING LOADING	14.5 lb./sq.ft.
POWER LOADING	13.3 lbs./HP

ATC No. 142

POWER - WRIGHT J-6-9 "WHIRLWIND"
RATED 300/330 HP



HISTORICAL
AVIATION
MUSEUM

MAHONEY-RYAN B-5
"BROUGHAM"
1929-30

SCALE - ORIGINAL 1:24

REPRO. 1:48

DRAWN BY - PAUL R. MATT

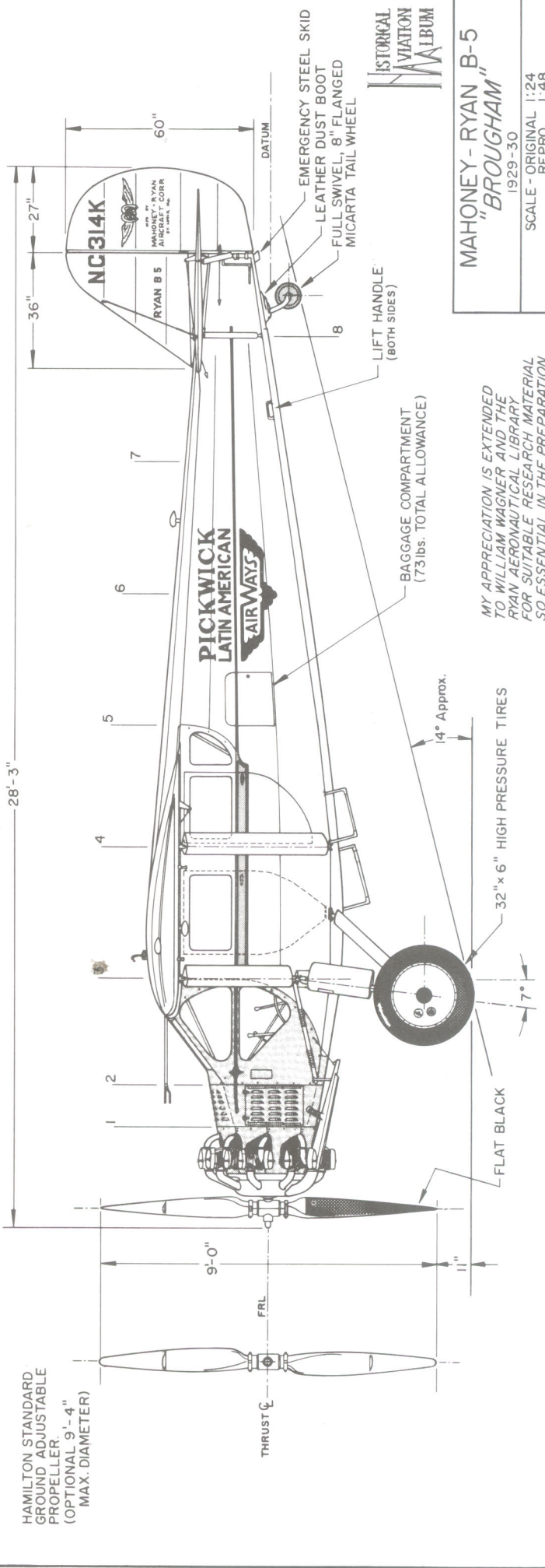
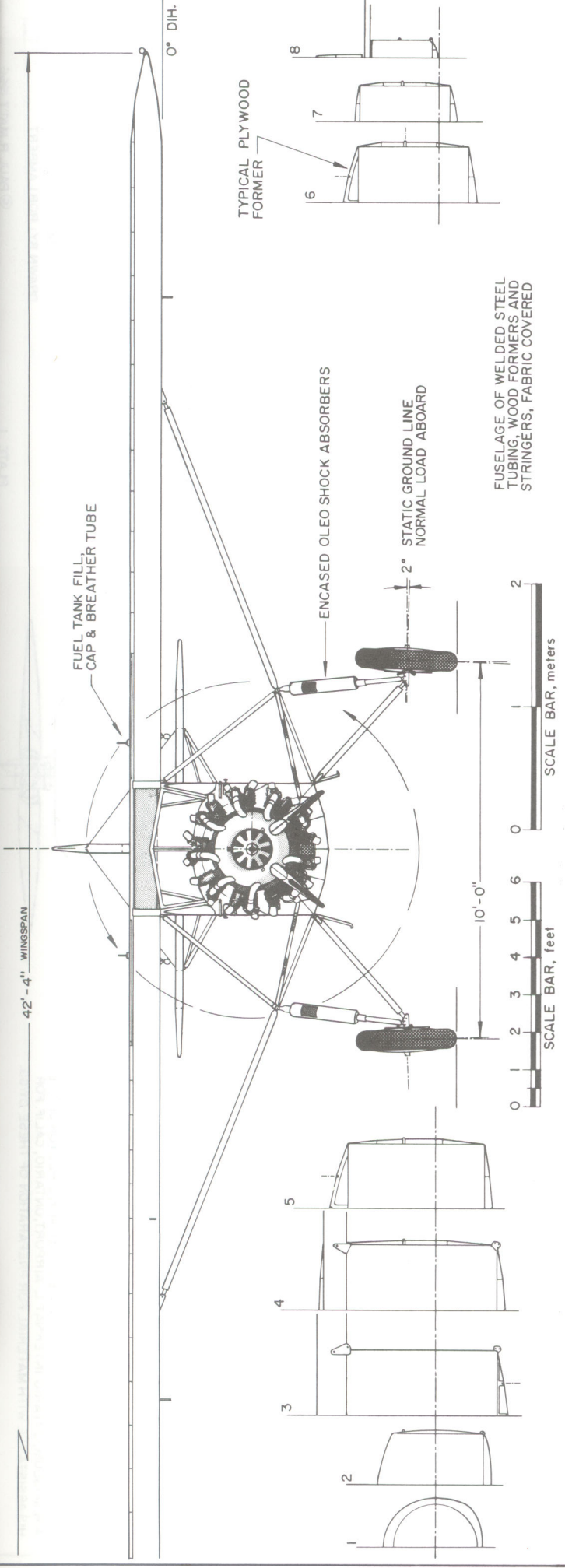
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DRAWING No. BB-96-A

PLATE 1 of 2



MY APPRECIATION IS EXTENDED TO WILLIAM WAGNER AND THE RYAN AERONAUTICAL LIBRARY FOR SUITABLE RESEARCH MATERIAL SO ESSENTIAL IN THE PREPARATION OF THESE DRAWINGS

MAHONEY - RYAN B-5 "BROUGHAM"	
1929-30	
SCALE - ORIGINAL	1:24
REPRO.	1:48
DRAWN BY - PAUL R. MATT	
© HISTORICAL AVIATION ALBUM 1974	
P.O. BOX 33	
TEMPLE CITY, CALIF., 91780	

GENERAL SPECIFICATIONS -

PERFORMANCE DATA

MAX SPEED (BOTH ENGINES) @ 18,000 FT. — 425 MPH
 MAX SPEED (BOTH ENGINES) @ SEA LEVEL — 399 MPH
 MAX SPEED (PISTON ENGINE ONLY) — 320 MPH
 CRUISE SPEED (PISTON ENGINE ONLY) — 153 MPH
 MAX SPEED (JET ENGINE ONLY) — 300 MPH
 CLIMB TO 20,000 FT. (BOTH ENGINES) — 5.6 MIN
 INITIAL CLIMB RATE (BOTH ENGINES) — 4,800 F.P.M.
 SERVICE CEILING — 40,000 FT.
 RANGE (PISTON ENGINE ONLY @ 153 MPH) — 1,030 MILES

WEIGHTS

EMPTY — 7,635 LBS.
 NORMAL LOADED — 9,958 LBS.
 MAX GROSS A.W. — 10,595 LBS.

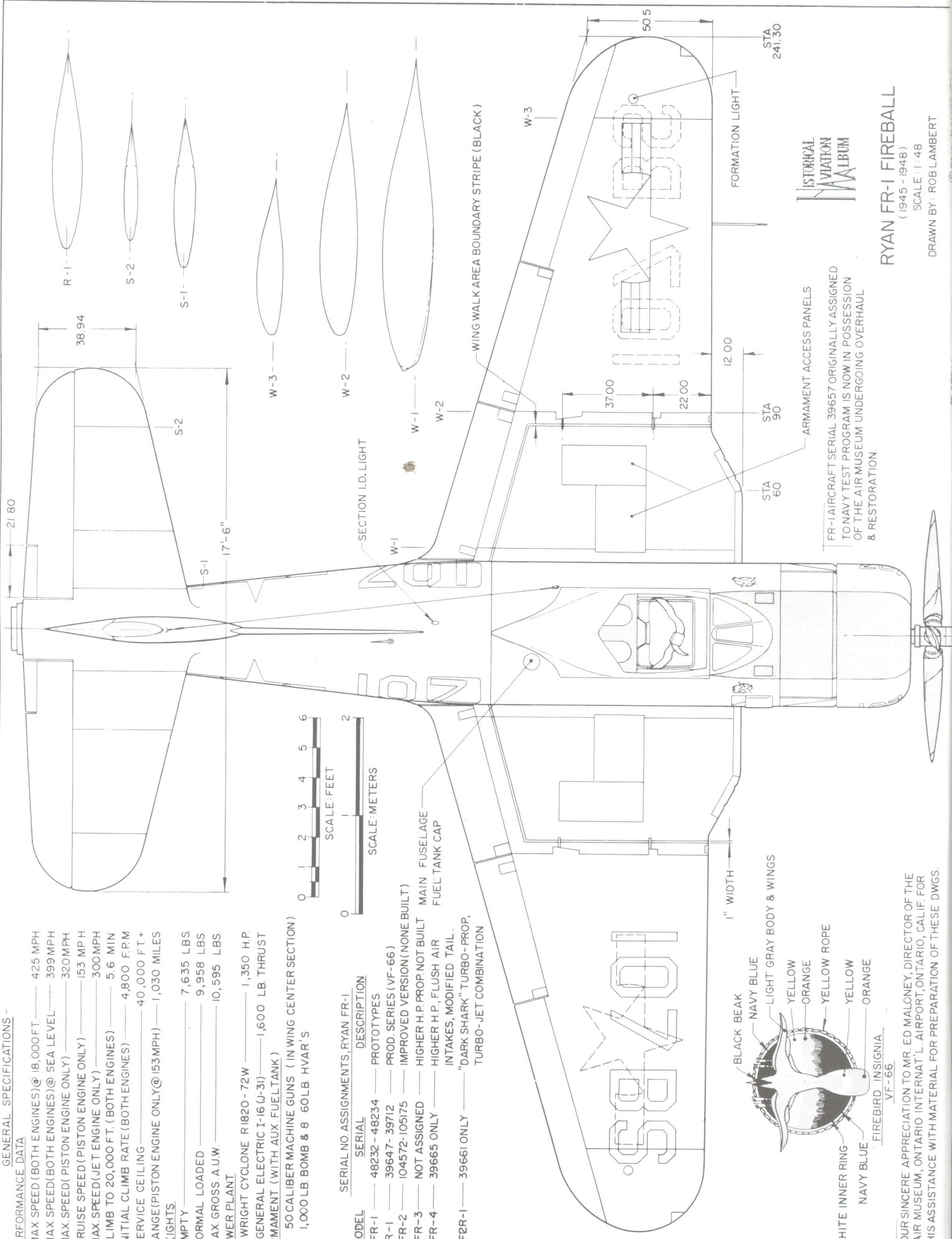
POWER PLANT

1 WRIGHT CYCLONE R1820 - 72W — 1,350 H.P.
 1 GENERAL ELECTRIC I-16 (J-31) — 1,600 LB. THRUST
 ARMAMENT (WITH AUX. FUEL TANK)

4 50 CALIBER MACHINE GUNS (IN WING CENTER SECTION)
 1 1,000 LB BOMB & 8 60 LB HVAR'S

SERIAL NO. ASSIGNMENTS, RYAN FR-1

MODEL	SERIAL	DESCRIPTION
XFR-1	48232 - 48234	PROTOTYPES
FR-1	39647 - 39712	PROD. SERIES (VF-66)
XFR-2	104572-105175	IMPROVED VERSION (NONE BUILT)
XFR-3	NOT ASSIGNED	HIGHER H.P. PROP. NOT BUILT
XFR-4	39665 ONLY	HIGHER H.P. FLUSH AIR INTAKES, MODIFIED TAIL.
XFR-1	39661 ONLY	"DARK SHARK" TURBO-PROP, TURBO-JET COMBINATION



FR-1 AIRCRAFT SERIAL 39657 ORIGINALLY ASSIGNED TO NAVY TEST PROGRAM IS NOW IN POSSESSION OF THE AIR MUSEUM UNDERGOING OVERHAUL & RESTORATION.

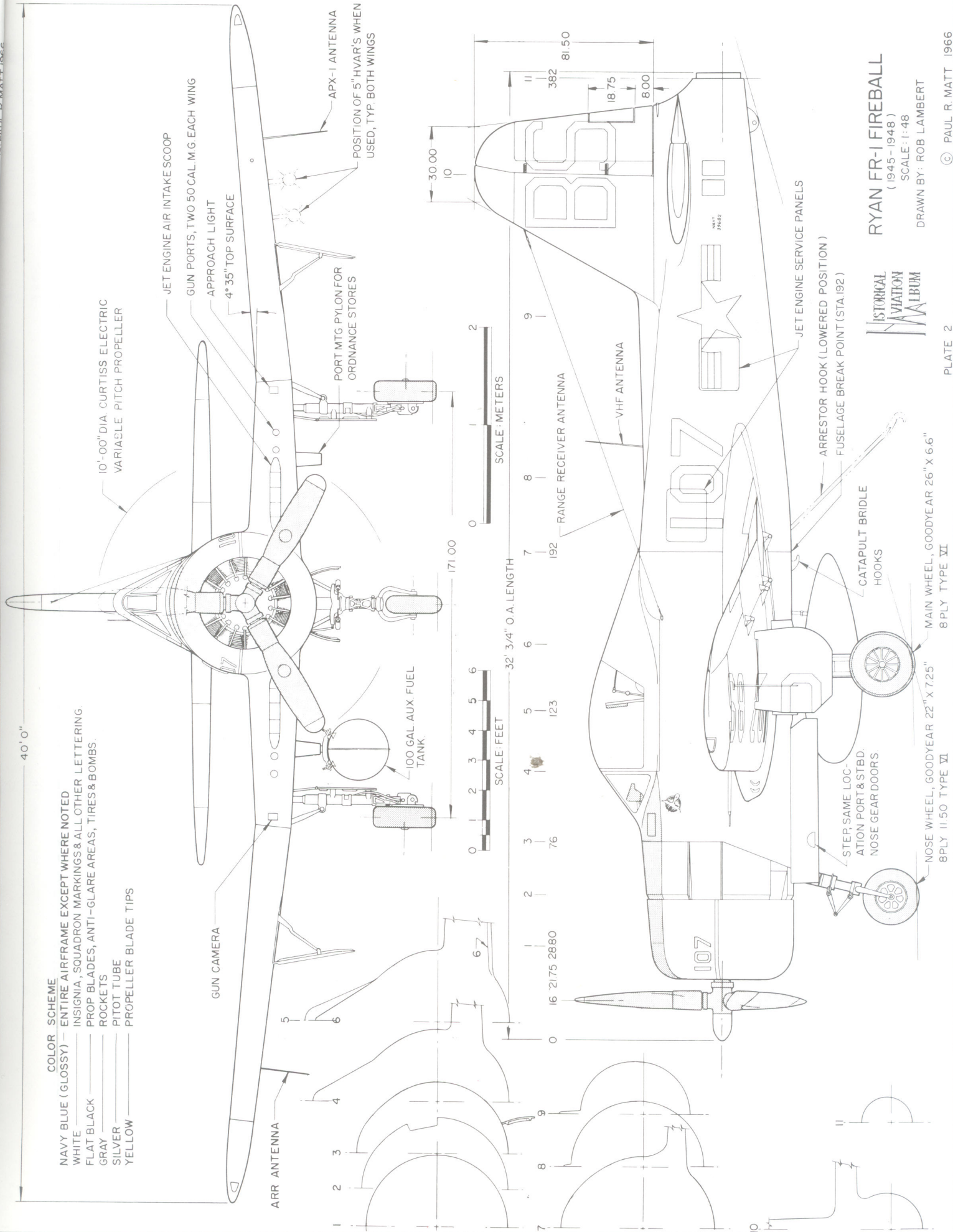
RYAN FR-1 FIREBALL

(1945 - 1948)

SCALE: 1:48

DRAWN BY: ROBLAMBERT

OUR SINCERE APPRECIATION TO MR. ED MALONEY, DIRECTOR OF THE AIR MUSEUM, ONTARIO INTERNATIONAL AIRPORT, ONTARIO, CALIF. FOR HIS ASSISTANCE WITH MATERIAL FOR PREPARATION OF THESE DWGS.



RYAN FR-1 FIREBALL

(1945-1948)

SCALE: 1:48

DRAWN BY: ROB LAMBERT

HISTORICAL
NAVIGATION
MUSEUM

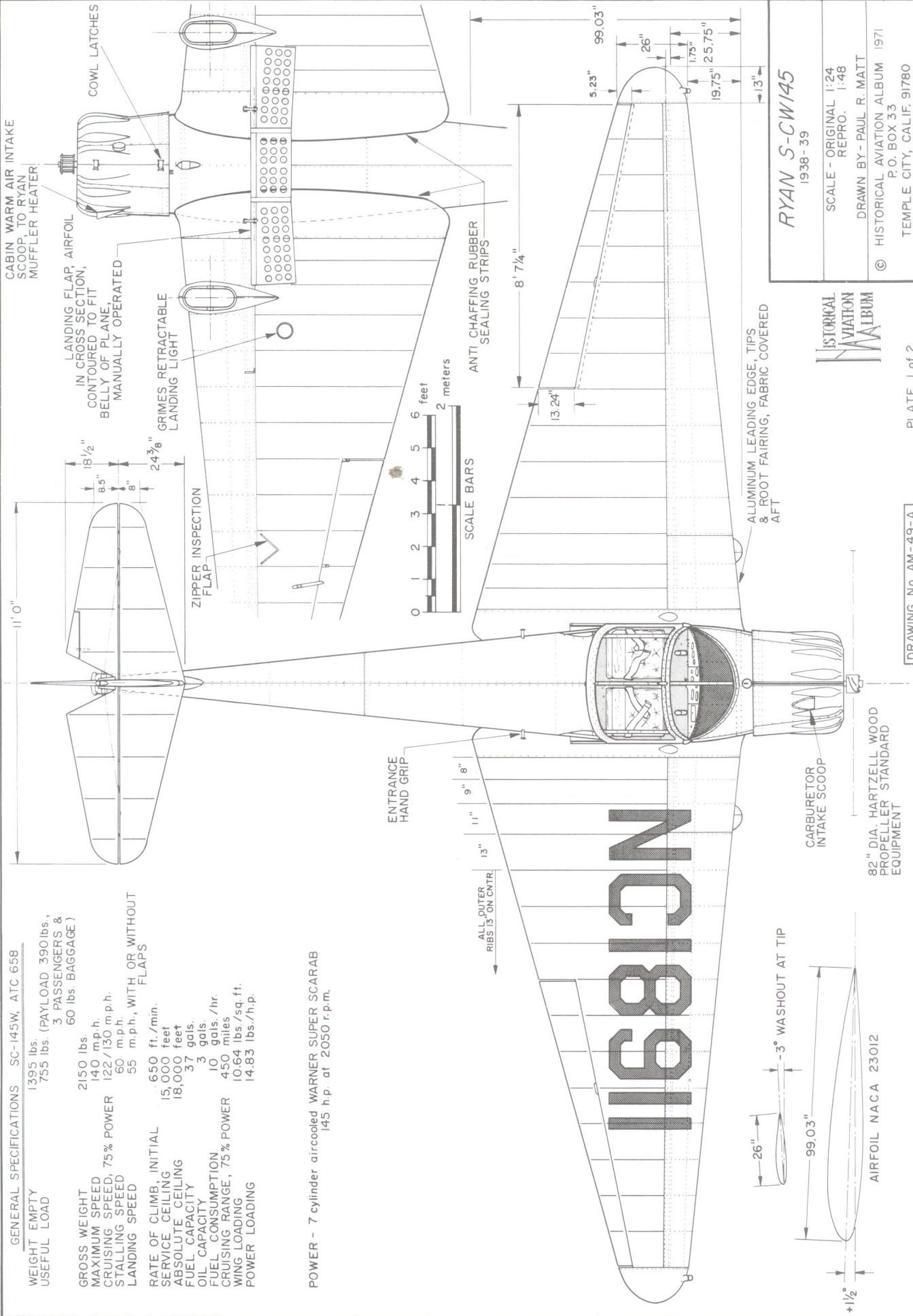
GENERAL SPECIFICATIONS SC-145W, ATC 658

WEIGHT EMPTY 1395 lbs.
USEFUL LOAD 755 lbs. (PAYLOAD 390 lbs., 3 PASSENGERS & 60 lbs. BAGGAGE)

GROSS WEIGHT 2150 lbs.
MAXIMUM SPEED 140 m.p.h.
CRUISING SPEED, 75% POWER 122/130 m.p.h.
STALLING SPEED 60 m.p.h.
LANDING SPEED 55 m.p.h., WITH OR WITHOUT FLAPS

RATE OF CLIMB, INITIAL 650 ft./min.
SERVICE CEILING 15,000 feet
ABSOLUTE CEILING 18,000 feet
FUEL CAPACITY 37 gals.
OIL CAPACITY 3 gals.
FUEL CONSUMPTION 10 gals./hr.
CRUISING RANGE, 75% POWER 450 miles
WING LOADING 10.64 lbs./sq. ft.
POWER LOADING 14.83 lbs./h.p.

POWER - 7 cylinder aircooled WARNER SUPER SCARAB
145 h.p. at 2050 r.p.m.



RYAN S-CW145
1938-39

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY - PAUL R. MATT
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PLATE 1 of 2

DRAWING No. AM-49-A

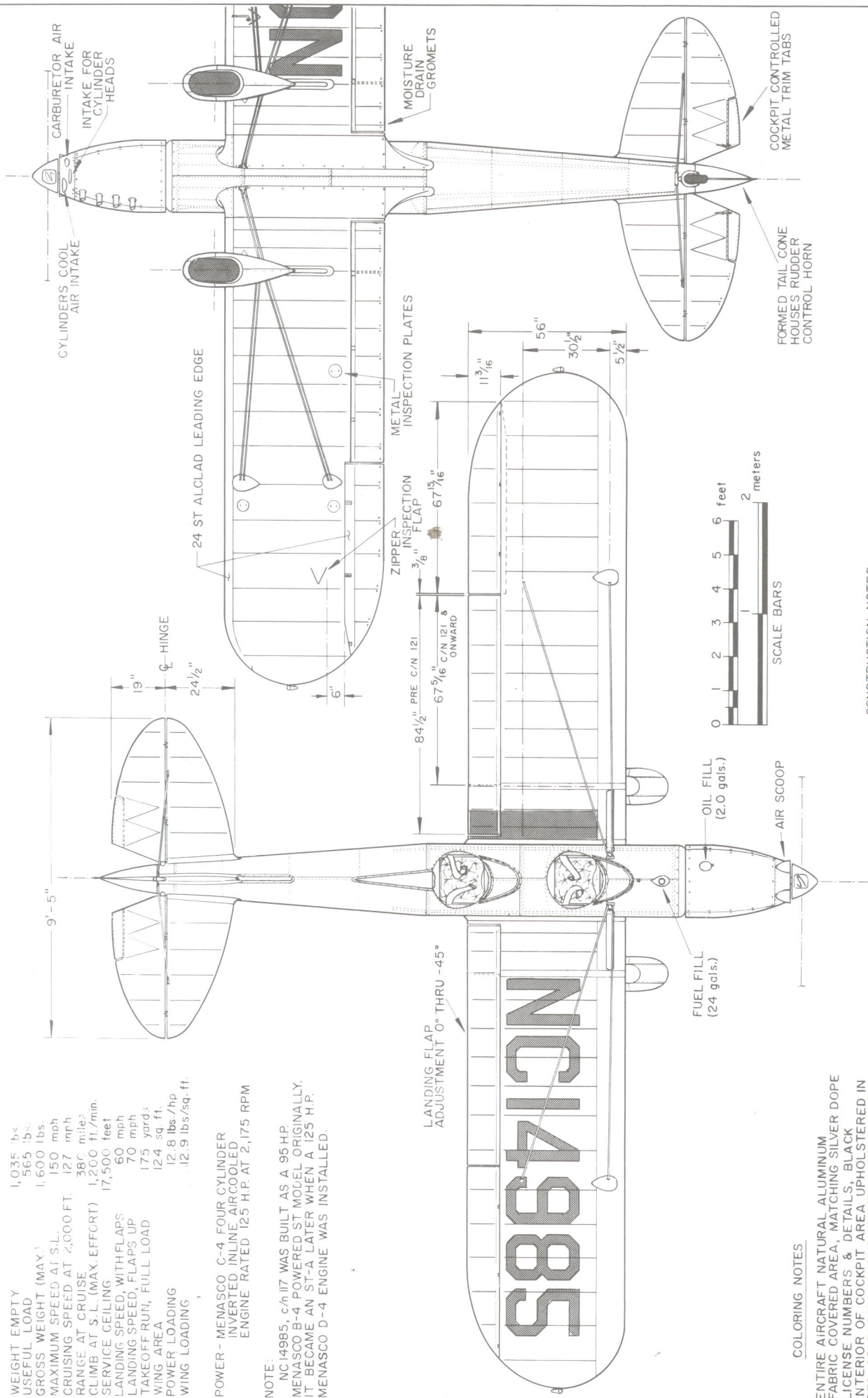
GENERAL SPECIFICATIONS ST-A, MENASCO C-4, 125 hp ENGINE

WEIGHT EMPTY 1,035 lbs.
USEFUL LOAD 565 lbs.
GROSS WEIGHT (MAX.) 1,600 lbs.
MAXIMUM SPEED AT S.L. 150 mph
CRUISING SPEED AT 2,000 FT. 127 mph
RANGE AT CRUISE 380 miles
CLIMB AT S.L. (MAX. EFFORT) 1,200 ft./min.
SERVICE CEILING 17,500 feet
LANDING SPEED, WITH FLAPS 60 mph
LANDING SPEED, FLAPS UP 70 mph
TAKEOFF RUN, FULL LOAD 175 yards
WING AREA 124 sq. ft.
POWER LOADING 12.8 lbs./hp
WING LOADING 12.9 lbs./sq. ft.

POWER - MENASCO C-4, FOUR CYLINDER
INVERTED IN LINE, AIR COOLED
ENGINE RATED 125 H.P. AT 2,175 RPM

NOTE:

NC14985, c/n 117 WAS BUILT AS A 95 HP
MENASCO B-4, POWERED ST. MOGEL. ORIGINALLY,
IT BECAME AN ST-A LATER WHEN A 125 H.P.
MENASCO D-4 ENGINE WAS INSTALLED.



COLORING NOTES

ENTIRE AIRCRAFT NATURAL ALUMINUM
FABRIC COVERED AREA, MATCHING SILVER DOPE
LICENSE NUMBERS & DETAILS, BLACK
INTERIOR OF COCKPIT AREA UPHOLSTERED IN
RED OR BLACK LEATHERETTE, INSTRUMENT
PANEL BLACK "CRINKLE" FINISH, CONTROL
STICK AND WING FLAP CONTROL LEVER
CHROME PLATED.

MY SINCERE APPRECIATION IS EXTENDED TO
MESSRS. T. CLAUDE RYAN, WILLIAM WAGNER,
AND MAC CATRELL OF THE RYAN AERONAUTICAL
CORP., EV. CASSAGNERES AND FLOYD CARTER
FOR THEIR VALUABLE AND UNSELFISH HELP
IN THE PREPARATION OF THESE DRAWINGS

CONSTRUCTION NOTES

FUSELAGE - ALL METAL, MONOCOQUE, ALCLAD 24 ST SKIN.
WINGS - SPRUCE SPARS, STAMPED ALUMINUM ALLOY RIBS,
STEEL TUBE COMPRESSION MEMBERS, STEEL
CABLE TIE LINES, FABRIC COVERED.
AILERONS & WING FLAPS - STEEL TUBE SPAR, ALUMINUM
ALLOY RIBS, FABRIC COVERED.
TAIL SURFACES - RIVETED 24 ST ALUMINUM TUBING AND
ALLOY RIBS, FABRIC COVERED.

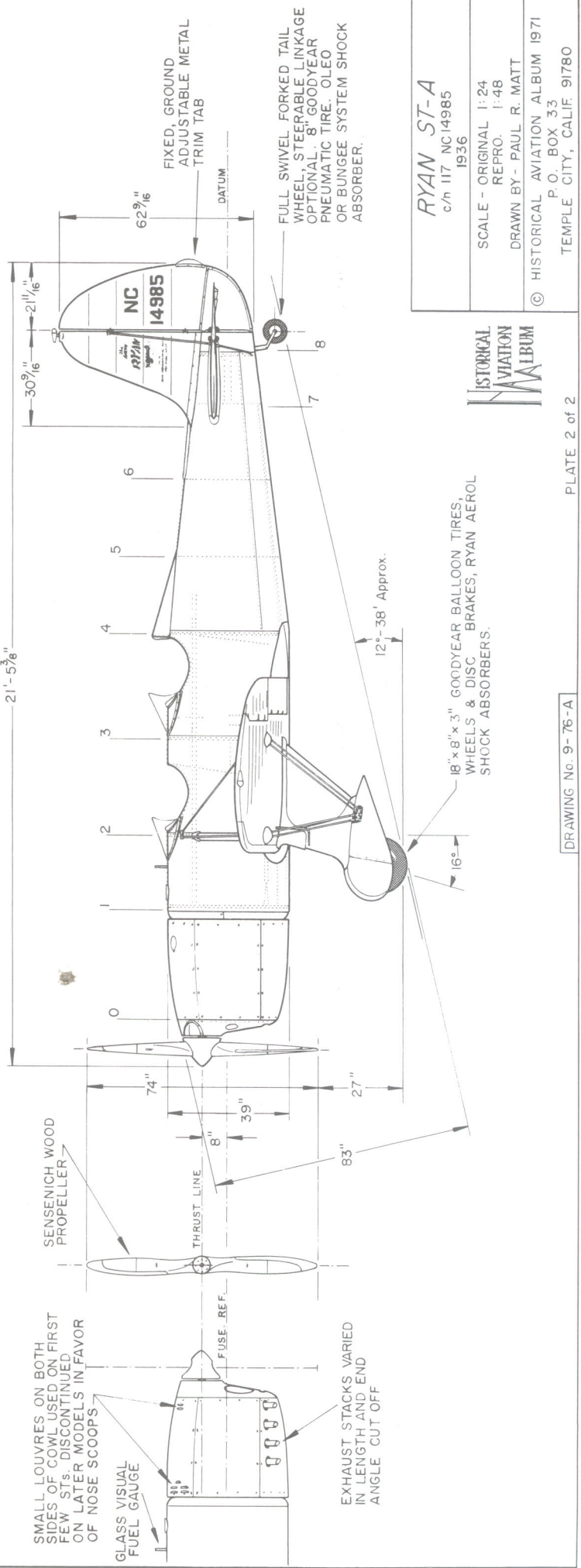
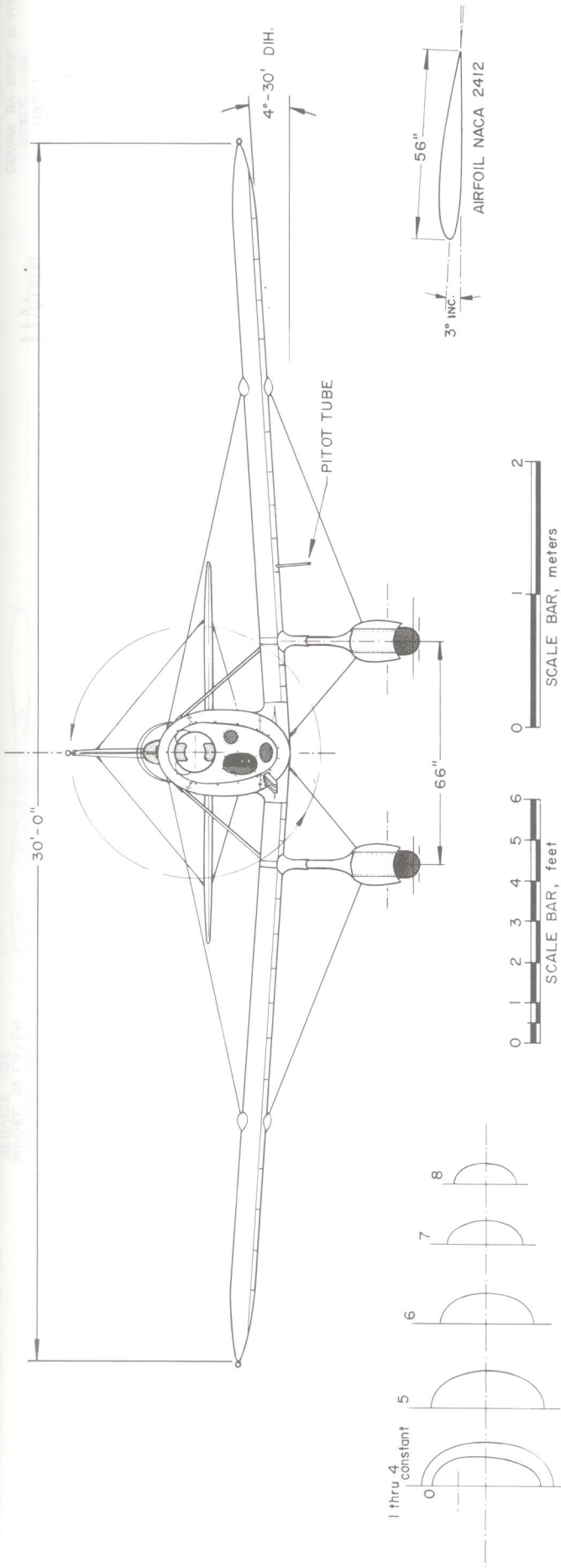
RYAN ST-A
c/n 117 NC14985
1936

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY - PAUL R. MATT

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RYAN ST-A
c/n 117 NC14985
1936

SCALE - ORIGINAL 1:24
REPRO. 1:48

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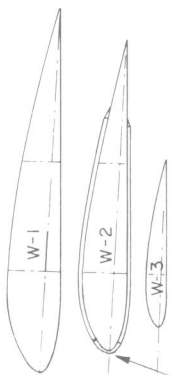
GENERAL SPECIFICATIONS

WEIGHT EMPTY 2730 lbs.
 USEFUL LOAD 1320 "
 GROSS WEIGHT 4050
 TOP SPEED 168 mph
 CRUISING SPEED 120 "
 LANDING SPEED, WITH FLAPS 60 "
 RATE OF CLIMB 650 ft./min.
 FUEL CAPACITY 200 gals.
 OIL CAPACITY 12 "
 SERVICE CEILING 15,000 ft.
 WING AREA, INCL. AILERONS 220 sq ft.

PERFORMANCE FIGURES APPROXIMATE
 BASED UPON PILOT'S EXPERIENCES,
 EXACT DATA NOT AVAILABLE

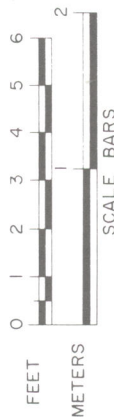
POWER - PRATT & WHITNEY R-985-II
 400 H.P. AT 2,200 rpm at 5,000 ft.
 450 H.P. AT 2,300 rpm - MILITARY RATING

AIRFOILS FULL SCALE

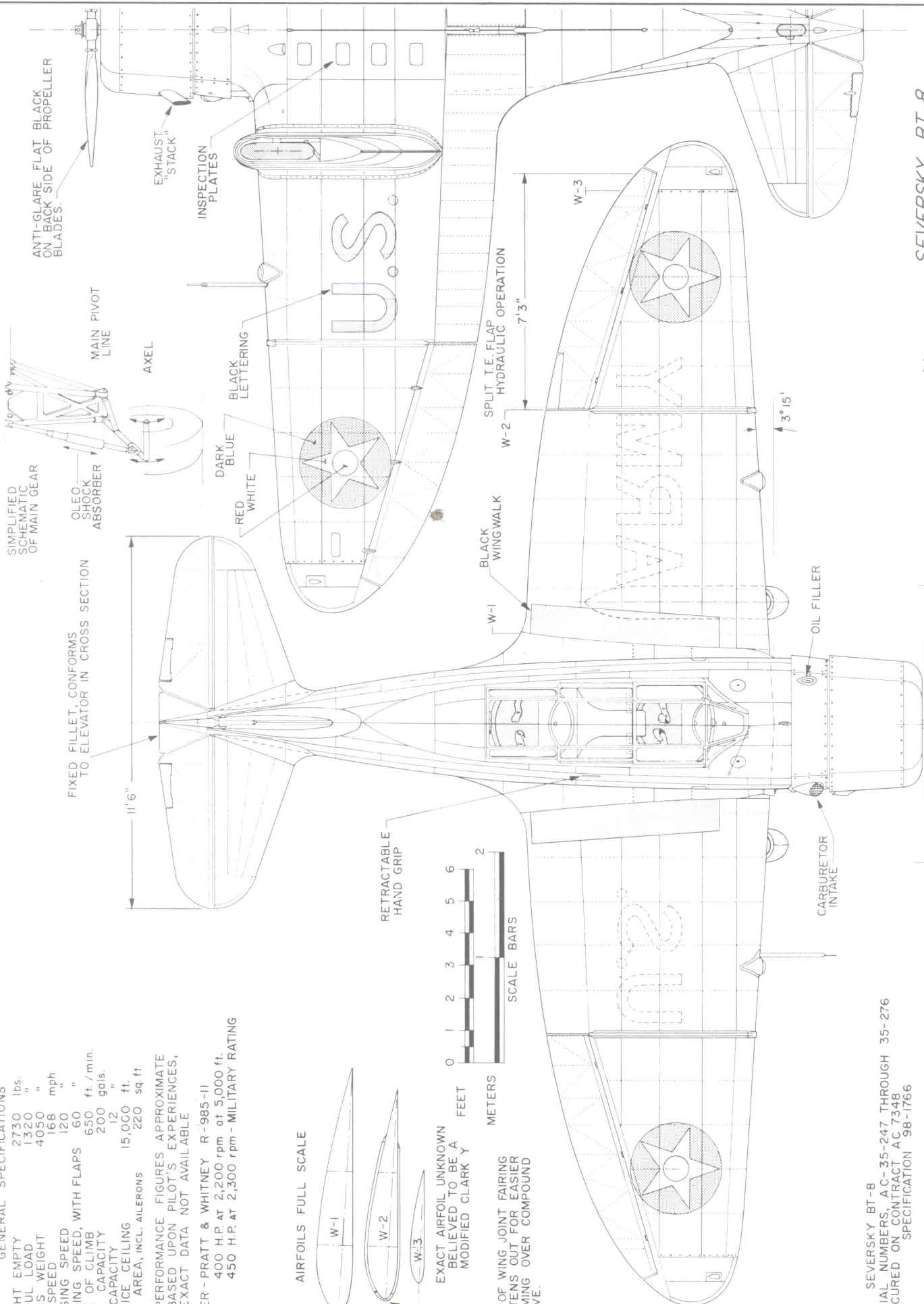


EXACT AIRFOIL UNKNOWN
 BELIEVED TO BE A
 MODIFIED CLARK Y

L.E. OF WING JOINT FAIRING
 FLATENS OUT FOR EASIER
 FORMING OVER COMPOUND
 CURVE.



RETRACTABLE
 HAND GRIP



SEVERSKY BT-8
 SERIAL NUMBERS, AC-35-247 THROUGH 35-276
 PROCURED ON CONTRACT AC 7348
 SPECIFICATION 98-1766

HAMILTON-
 STANDARD GROUND
 ADJUSTABLE PROP.
 REPLACED BY THE
 CONTROLLABLE PITCH
 MODEL IN LATER
 SERVICE USE

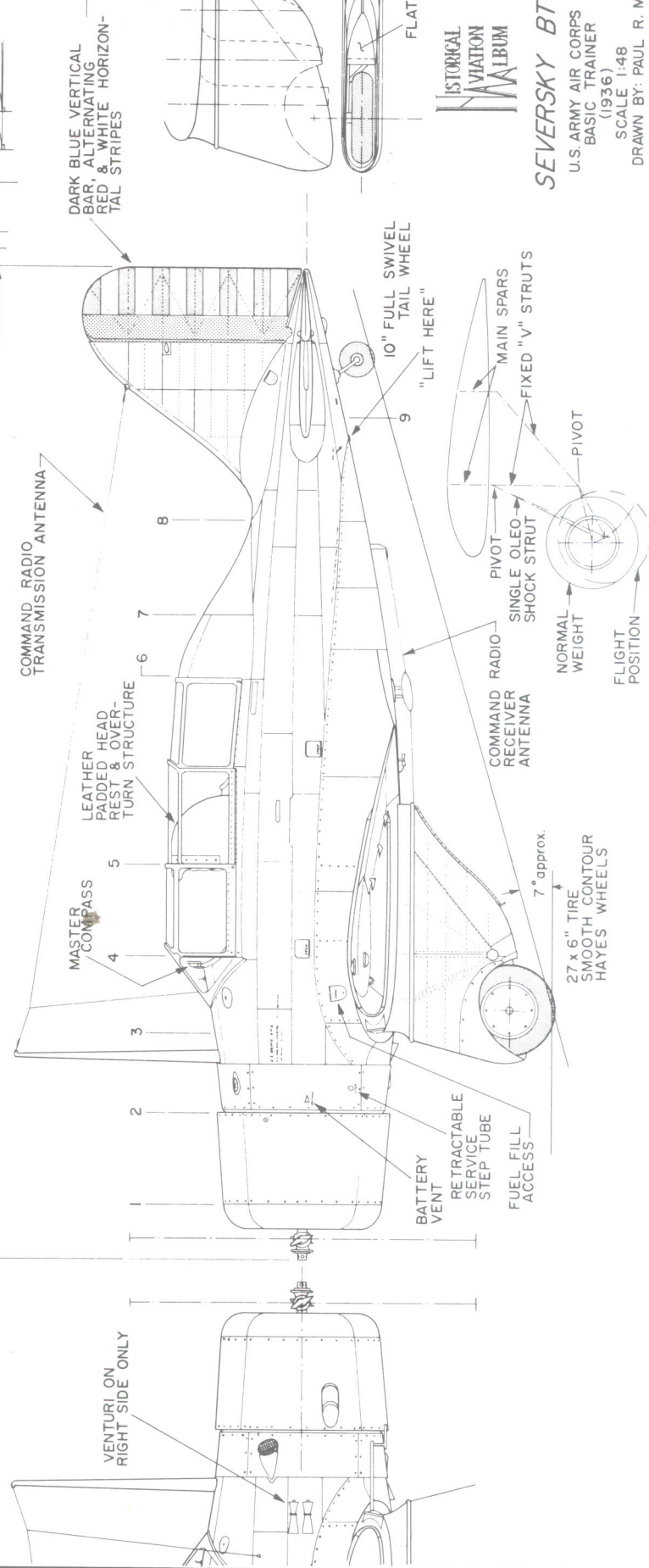
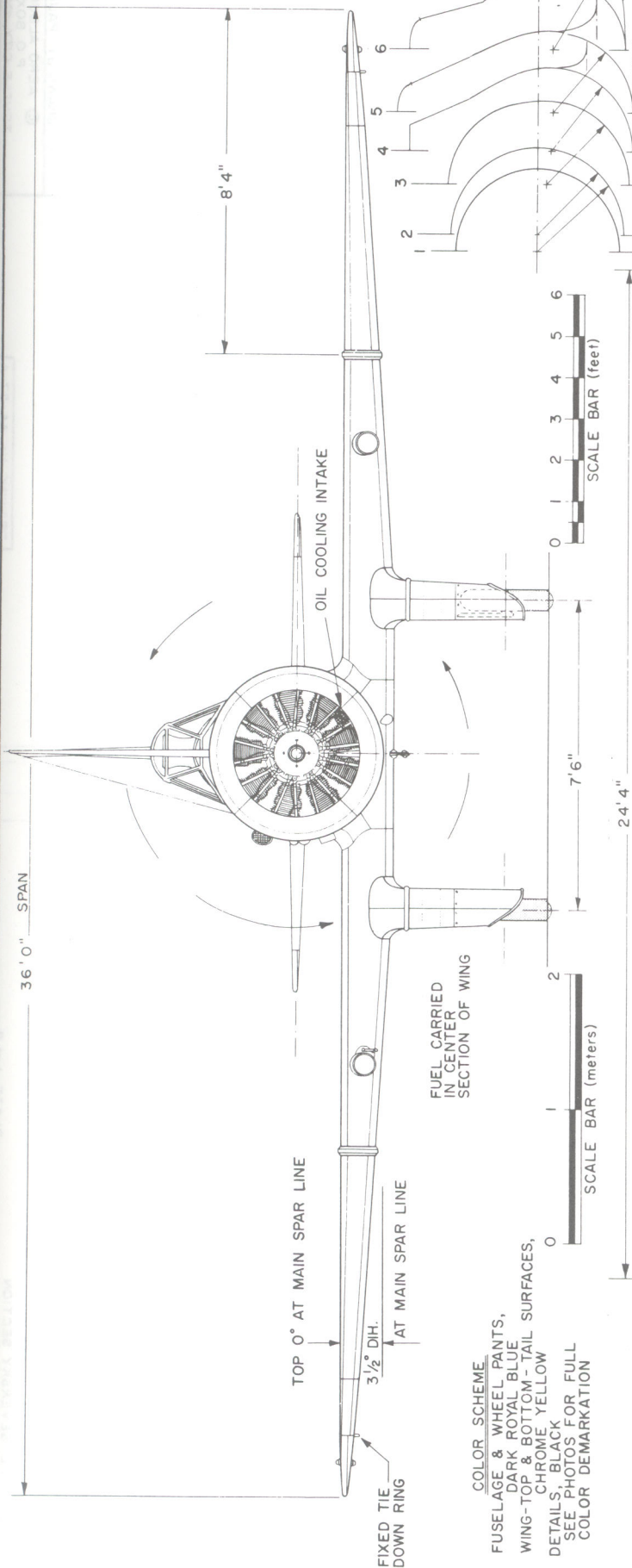
HISTORICAL
 NAVIGATION
 ALBUM

SEVERSKY BT-8

U.S. ARMY AIR CORPS
 BASIC TRAINER
 (1936)

SCALE 1:48

DRAWN BY: PAUL R. MATT



HISTORICAL
AVIATION
MUSEUM

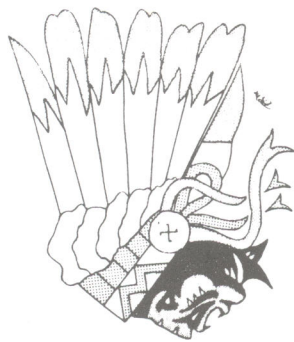
SEVERSKY BT-8

U.S. ARMY AIR CORPS
BASIC TRAINER
(1936)

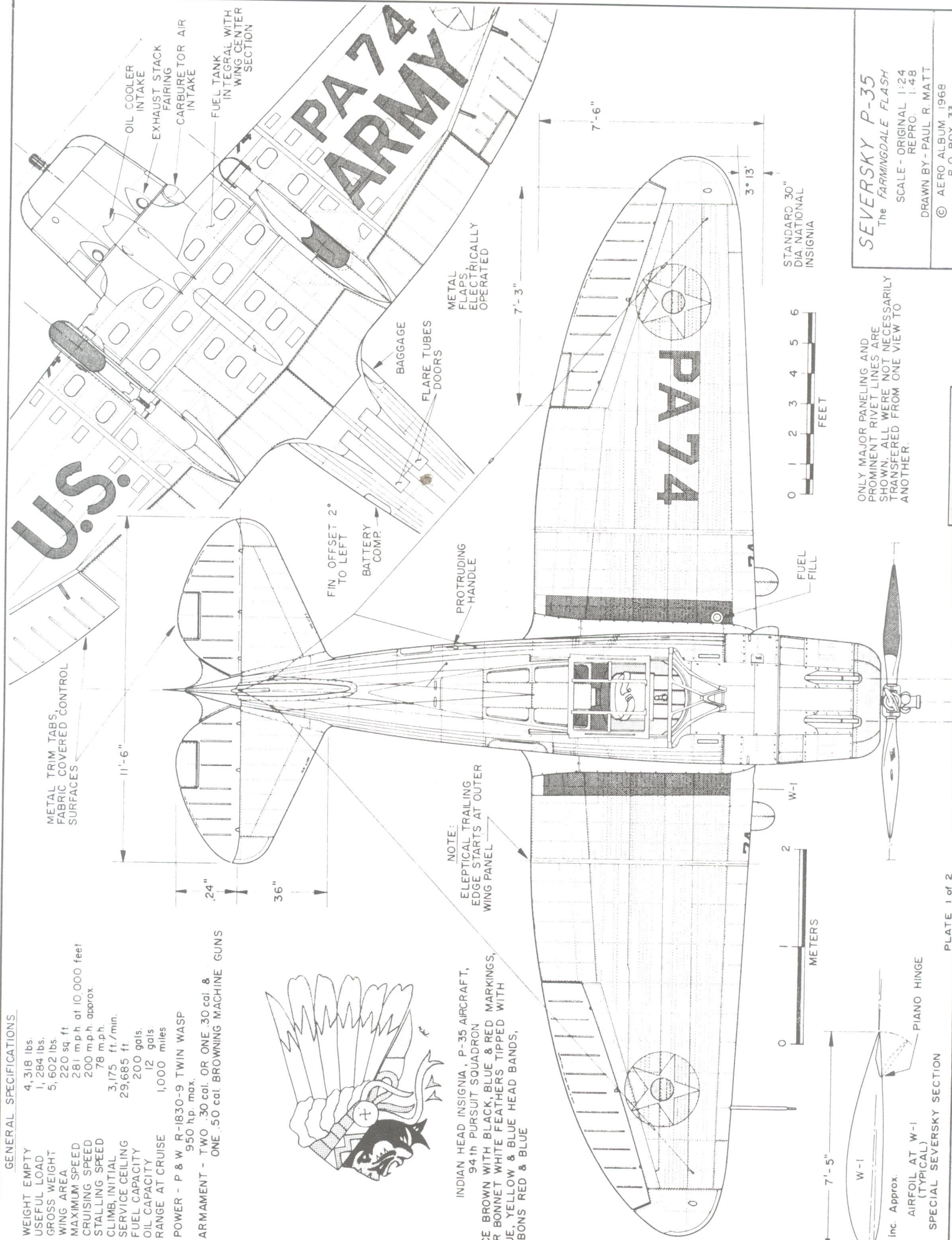
SCALE 1:48
DRAWN BY: PAUL R. MATT

GENERAL SPECIFICATIONS

WEIGHT EMPTY 4,318 lbs.
 USEFUL LOAD 1,284 lbs.
 GROSS WEIGHT 5,602 lbs.
 WING AREA 220 sq ft
 MAXIMUM SPEED 281 m.p.h. at 10,000 feet
 CRUISING SPEED 200 m.p.h. approx.
 STALLING SPEED 78 m.p.h.
 CLIMB, INITIAL 3,175 ft./min.
 SERVICE CEILING 29,685 ft.
 FUEL CAPACITY 200 gals.
 OIL CAPACITY 12 gals.
 RANGE AT CRUISE 1,000 miles
 POWER - P & W R-1830-9 TWIN WASP 950 hp. max.
 ARMAMENT - TWO .30 cal. OR ONE .30 cal. & ONE .50 cal. BROWNING MACHINE GUNS



INDIAN HEAD INSIGNIA, P-35 AIRCRAFT,
 94th PURSUIT SQUADRON
 FACE BROWN WITH BLACK, BLUE & RED MARKINGS,
 WAR BONNET WHITE FEATHERS TIPPED WITH
 BLUE, YELLOW & BLUE HEAD BANDS,
 RIBBONS RED & BLUE

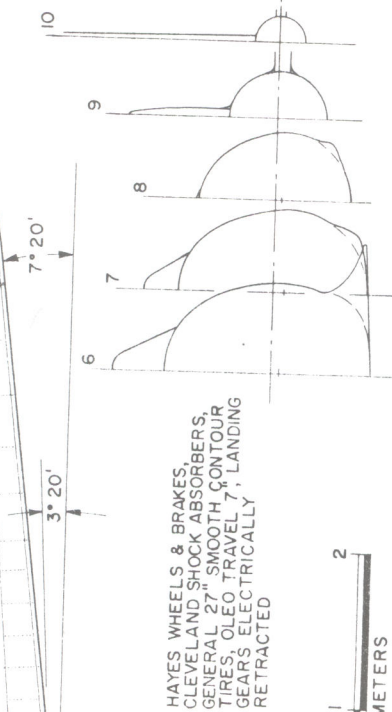
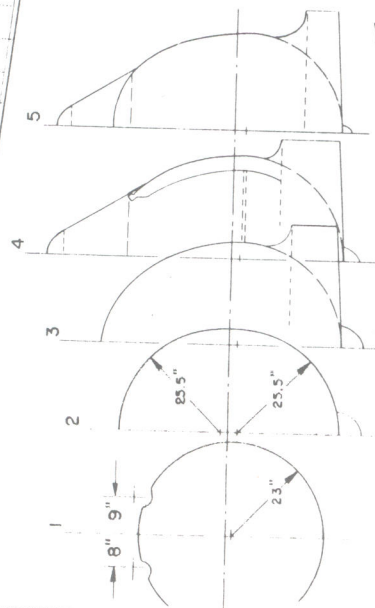


ONLY MAJOR PANELING AND
 PROMINENT RIVET LINES ARE
 SHOWN; ALL WERE NOT NECESSARILY
 TRANSFERRED FROM ONE VIEW TO
 ANOTHER.

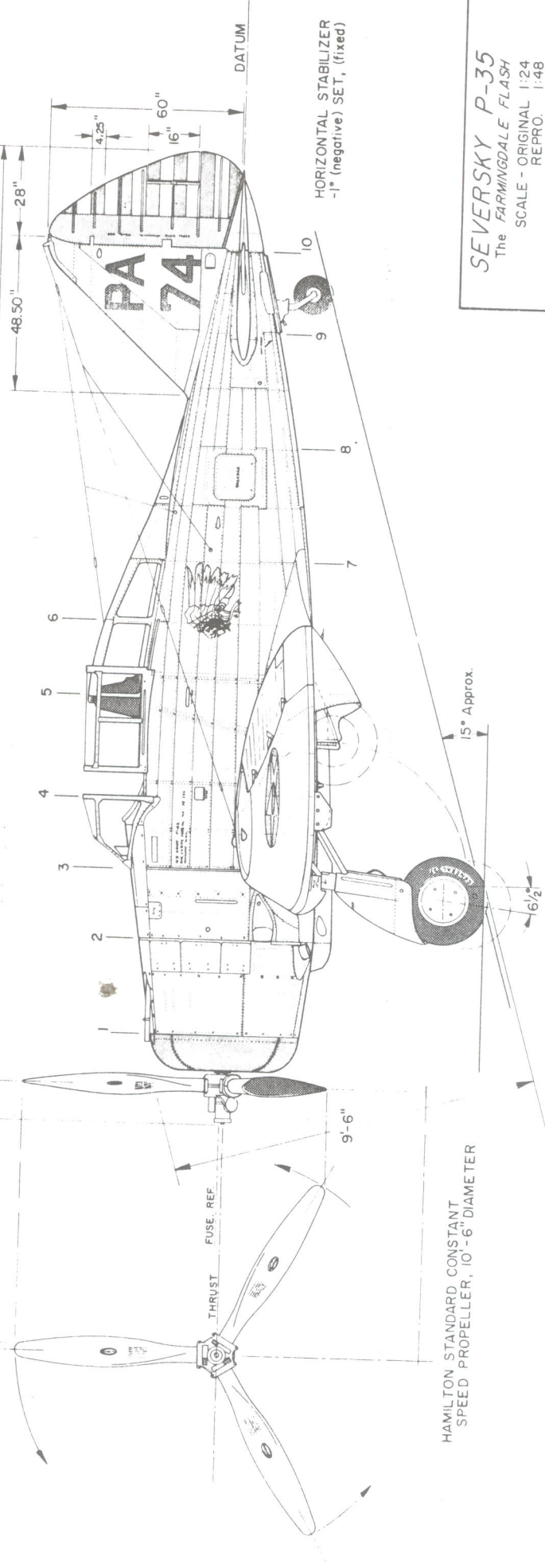
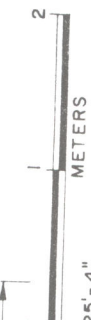
SEVERSKY P-35
 The FARMINGDALE FLASH
 SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY - PAUL R. MATT
 © AERO ALBUM, 1968
 P.O. BOX 33
 TEMPE, ARIZONA 85281

ELECTRICALLY
CONTROLLED,
MIRROR
GUN SIGHT

RED COWL
LIP



HAYES WHEELS & BRAKES,
CLEVELAND SHOCK ABSORBERS,
GENERAL 27" SMOOTH CONTOUR
TIRES, OLEO TRAVEL 7", LANDING
GEARS ELECTRICALLY
RETRACTED



HAMILTON STANDARD CONSTANT
SPEED PROPELLER, 10-6 DIAMETER

15° Approx.

DATUM

HORIZONTAL STABILIZER
-1° (negative) SET, (fixed)

SEVERSKY P-35

The FARMINGDALE FLASH

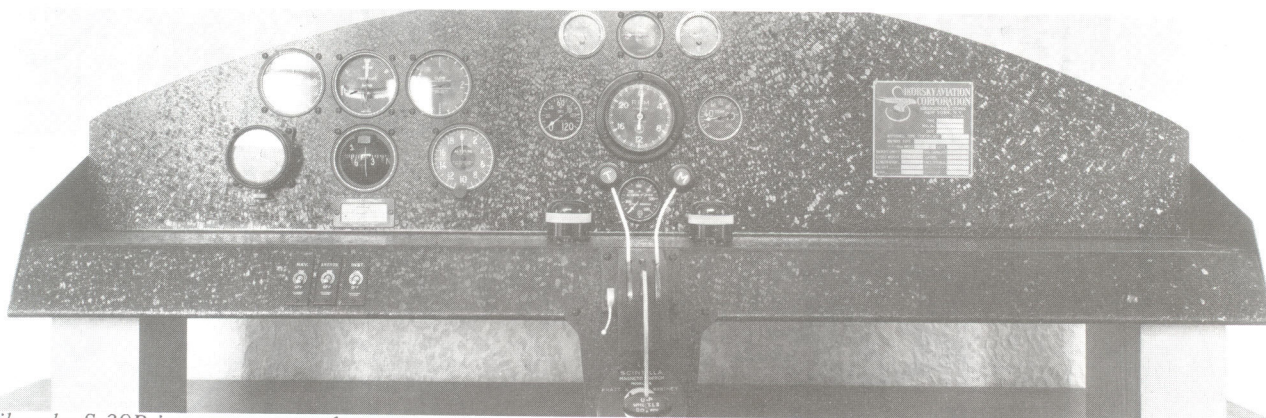
SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY - PAUL R. MATT

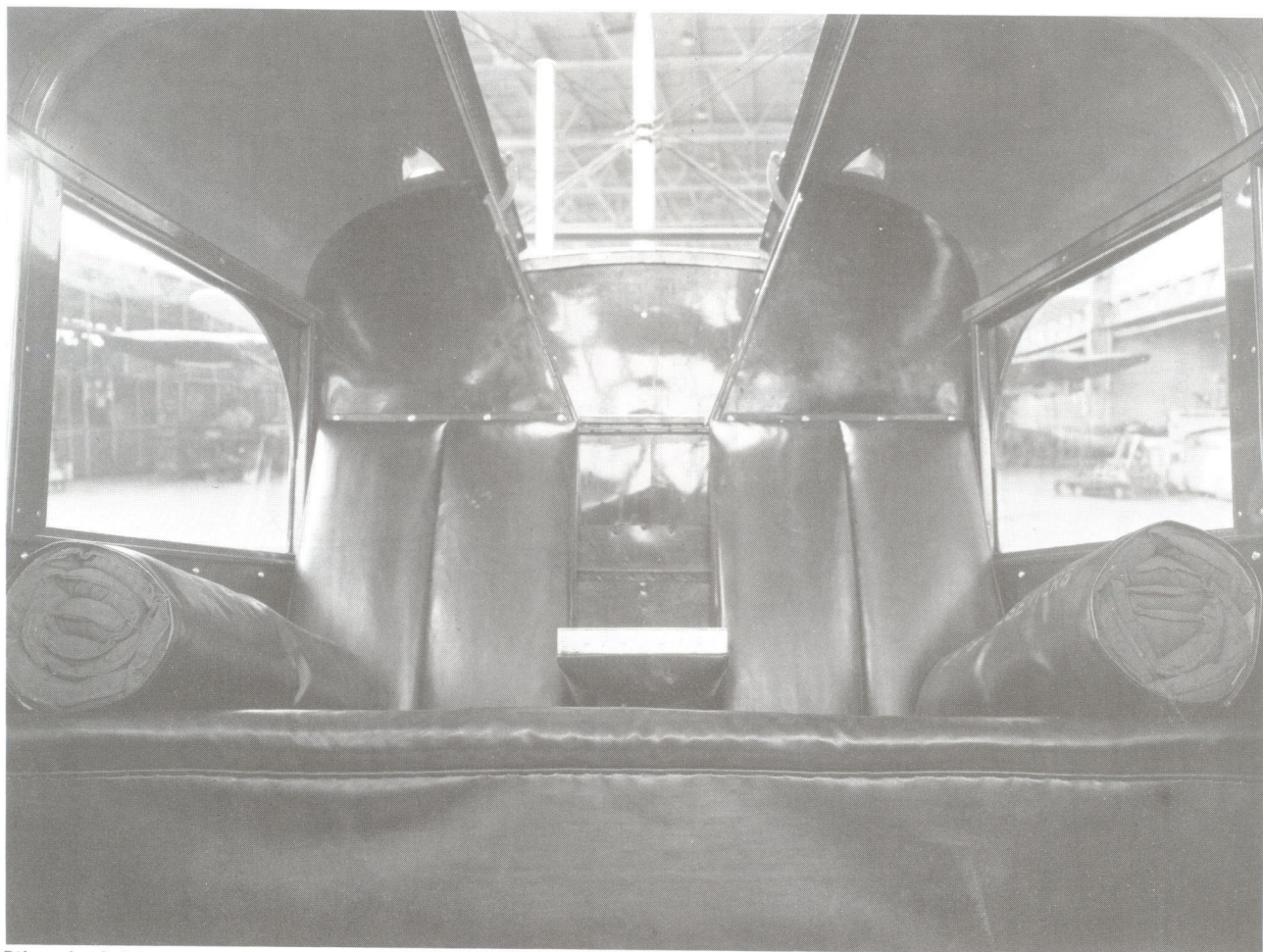
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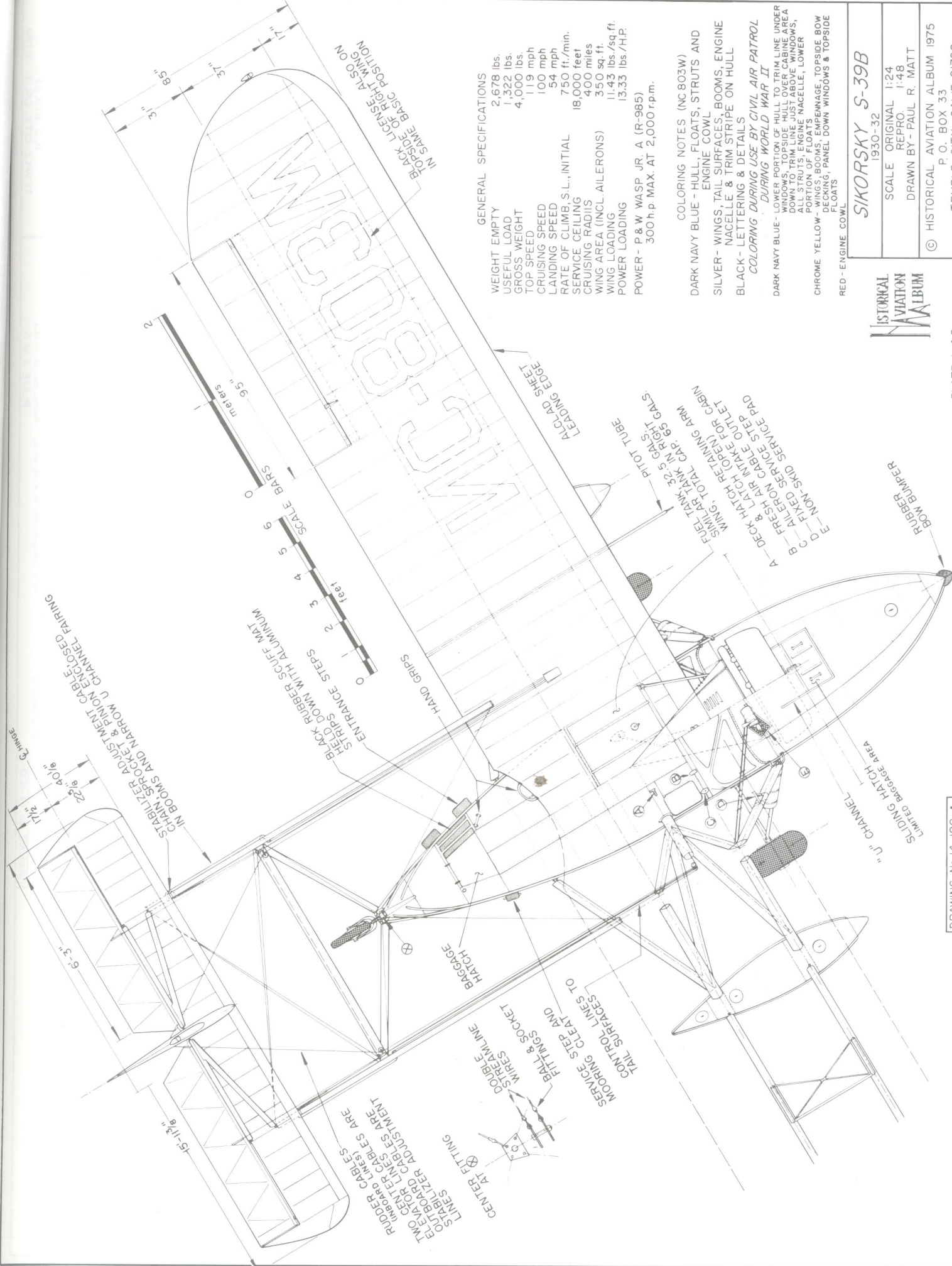
Sikorsky S-39B



Sikorsky S-39B instrument panel.



Sikorsky S-39B interior.



HISTORICAL
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ALBUM

SIKORSKY S-39B
1930-32

SCALE ORIGINAL 1:24
REPRO 1:48

DRAWN BY - PAUL R. MATT

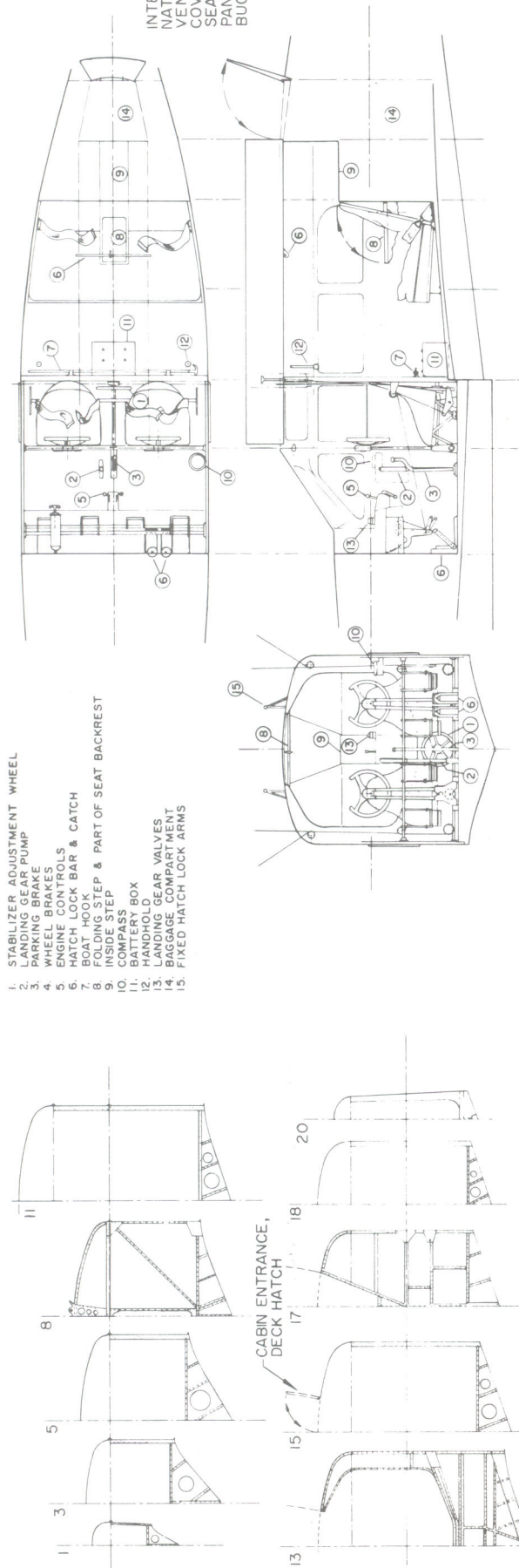
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P.O. BOX 33
TEMPLE CITY, CALIF. 91780

PLATE 1 of 5

DRAWING No. 14-100-A

1. STABILIZER ADJUSTMENT WHEEL
2. LANDING GEAR PUMP
3. PARKING BRAKE
4. WHEEL BRAKES
5. ENGINE CONTROLS
6. HATCH LOCK BAR & CATCH
7. BOAT HOOK
8. FOLDING STEP & PART OF SEAT BACKREST
9. FOLDING STEP
10. COMPASS
11. BATTERY BOX
12. HANDHOLD
13. LANDING GEAR VALVES
14. BAGGAGE COMPARTMENT
15. FIXED HATCH LOCK ARMS

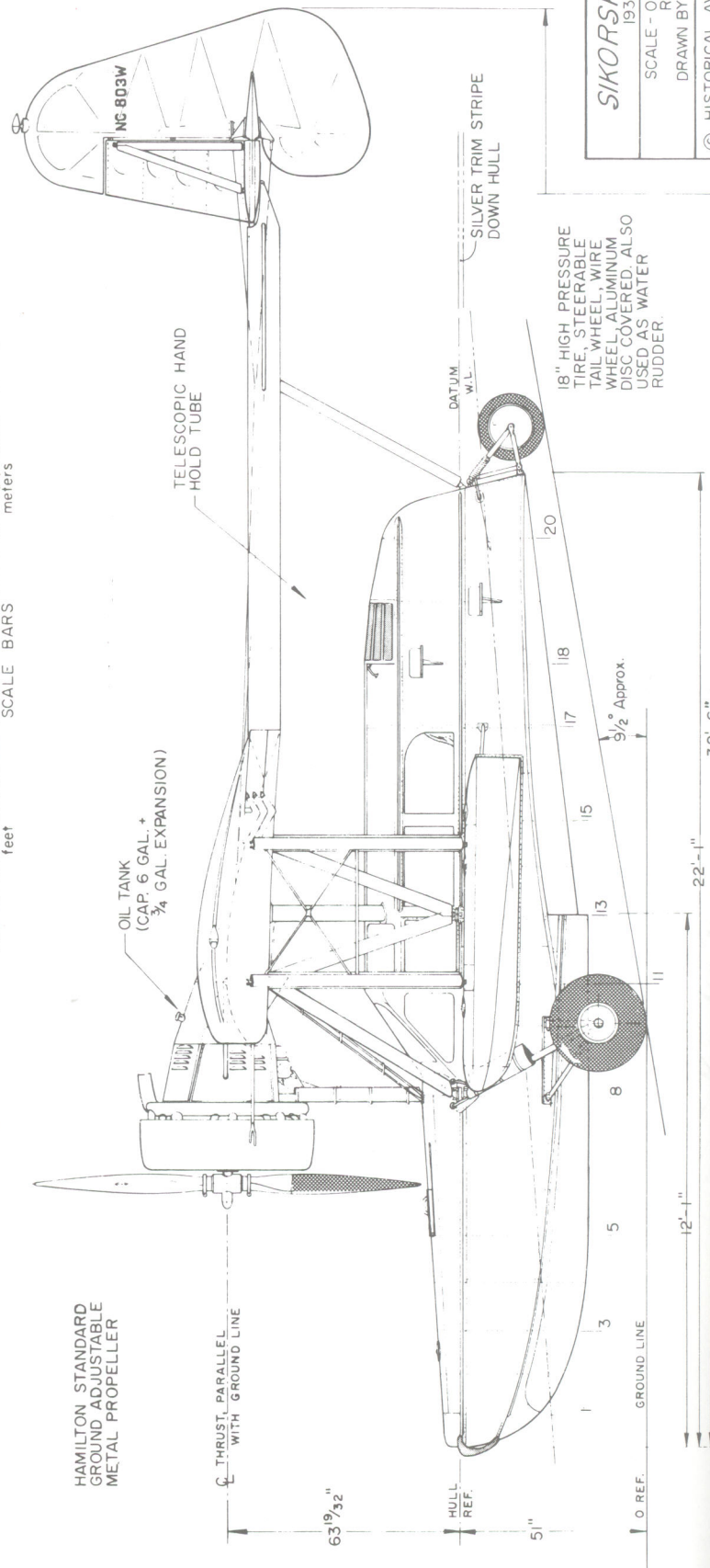
INTERIOR FINISH -
NATURAL MAHOGANY
VENEER, LEATHER BENCH
COVERED REAR BENCH
SEAT, INSTRUMENT
PANEL, CONTROLS, FRONT
BUCKET SEATS - BLACK



0 1 2 3 4 5 6 feet
0 1 2 meters

SCALE BARS

HAMILTON STANDARD
GROUND ADJUSTABLE
METAL PROPELLER



HISTORICAL
AVIATION
ALBUM

SIKORSKY S-39B
1930-32

SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY - PAUL R. MATT

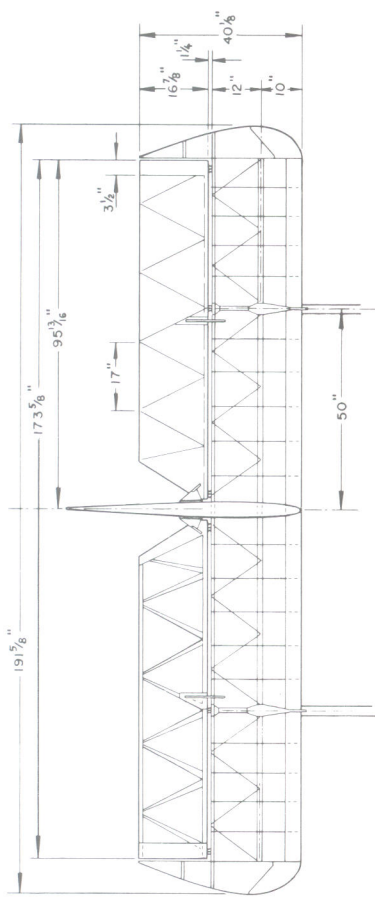
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PLATE 2 of 5

DRAWING No. 14-100-A

ALL DIMENSIONS IN WING PANEL LAYOUT ARE IN INCHES

OUTRIGGER



© HISTORICAL AVIATION ALBUM 1975
P. O. BOX 33

GENERAL SPECIFICATION

WEIGHT EMPTY	1,874 lbs.
INCL. WATER, OIL BUT WITHOUT FUEL	
USEFUL LOAD	426 lbs.
GROSS WEIGHT	2,300 lbs.
WING AREA (INCL. AILERONS)	429 sq.ft.
AILERON AREA, EACH	21 sq.ft.
HIGH SPEED	85 mph
NORMAL CRUISE	68 mph
LANDING SPEED	37 mph
FUEL CAPACITY	30 gals.
OIL CAPACITY	3 gals.

POWER; VIRTUALLY ANY IN-LINE ENGINE
OF THE ERA 90hp TO 180hp

COMMON ENGINES USED:

CURTISS OX-5 90 hp

HALL-SCOTT A-7 90 hp

A-7A 100 hp

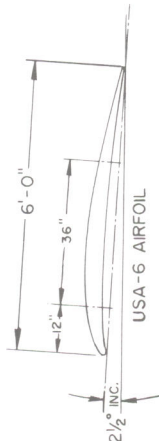
A-5 125 hp
HICDANO-SU17A-A 150 hp

HISPANO-SUIZA-A 150 hp
-B 180 hp

ROBERTS
100 bp
100 bp

BRING NOTES

ENTIRE AIRCRAFT CLEAR DOPED OR SILVER PIGMENTED,
METAL DECKING AND COWLING - COLOR OF OWNERS CHOICE



USA-6 AIRFOIL

NOTE

ALL TRAILING EDGES OF
WINGS AND TAIL SURFACES
ARE FORMED WITH SPRUCE WOOD

ALUMINUM

CELLON WINDOWS TO
HELP LIGHT INSTRUMENT
PANEL

WOOD BENCH SEAT

COMMITTEE ON THE STATUS OF WOMEN

PULLEY & GUIDE TOP & BOTTOM OF UPPER WING

DRAG WIRES
UPPER—
LOWER—

Ⓐ- FUEL GAUGE
Ⓑ- FUEL FILL CAP

MY SINCERE APPRECIATION TO
TO COL. JOHN deVRIES USAF Ret.,
PETE SUTHARD, NATIONAL AIR &
SPACE MUSEUM, KATHERINE CASSITY,
U.S. AIR FORCE MUSEUM AND LEO E.
OPDYCKE, WW I AERO PUBLICATION
FOR THEIR HELP WITH THESE DRAWINGS

STANDARD J-1

ST WAR, CIVIL, MODIFIED
1917-1926

ORIGINAL 1:24

REPRO. 1:48

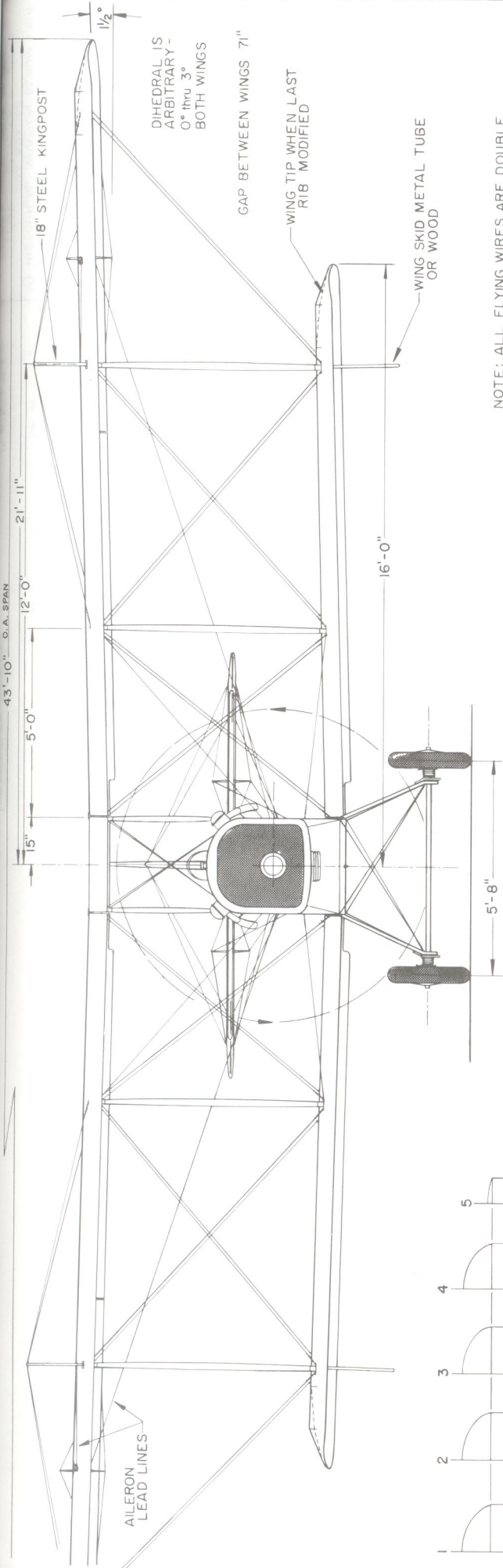
BY: PAUL R. MATT

AVIATION ALBUM 1984

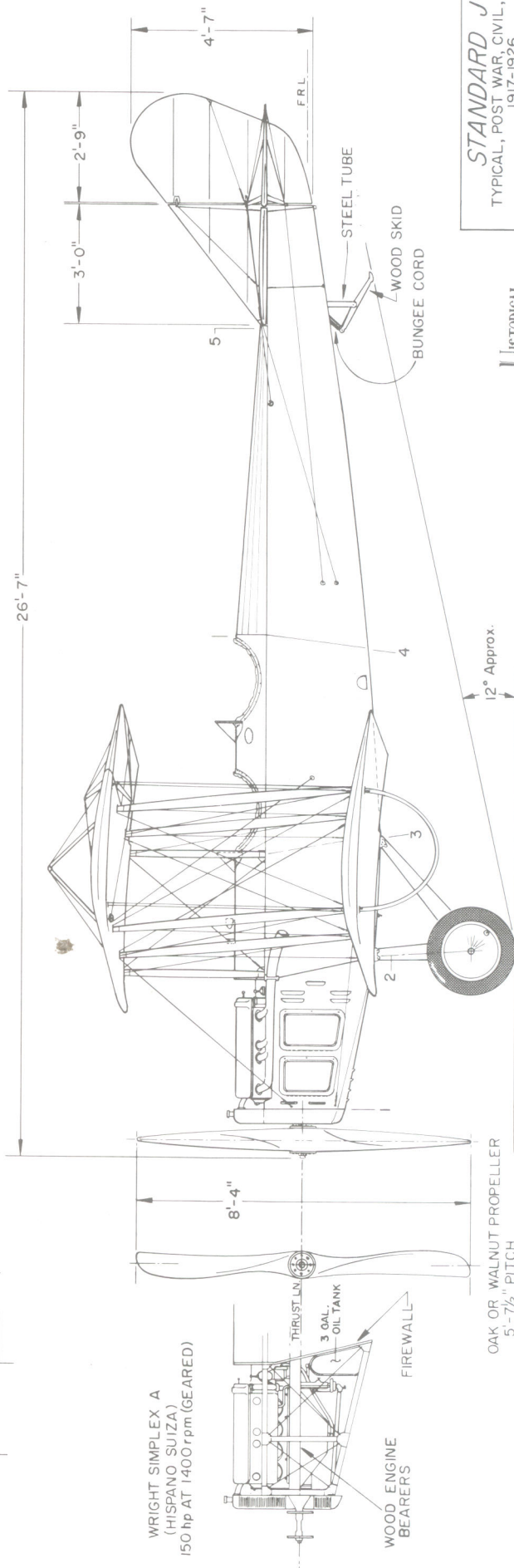
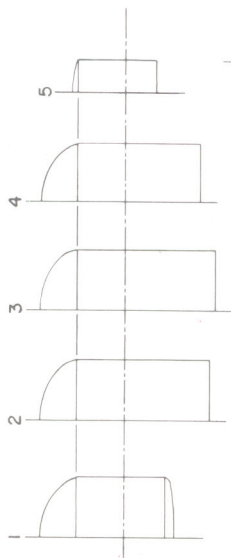
43'-10" O.A. SPAN

2'-11"-

9" STEEL KINGPOST



NOTE: ALL FLYING WIRES ARE DOUBLE, IN CLOSE PARALLEL. THIS IS NOT SHOWN ON DRAWINGS TO SAVE CONFUSION



HISTORICAL
 AVIATION
 ALBUM

STANDARD J-1
 TYPICAL, POST WAR, CIVIL, MODIFIED
 1917-1926

26"x5" TIRE
 STEEL SPOKE-RIM
 30"x6" TIRES OPTIONAL

ALUMINUM COWLING
 FORWARD OF STATION 2
 (FIREWALL)

8'-0" DIA. PROP USED
 ON 90 hp ENGINES

OAK OR WALNUT PROPELLER
 5-7 1/2" PITCH

DRAWING No.17-110-A

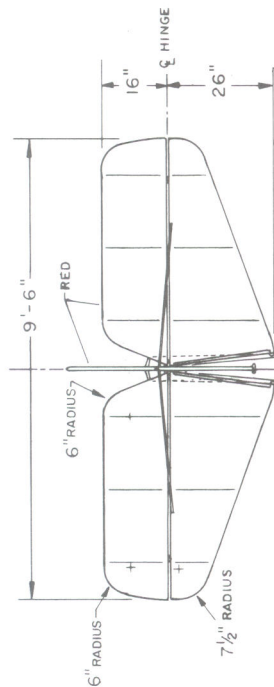
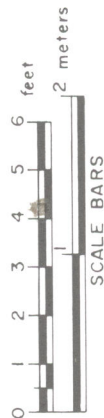
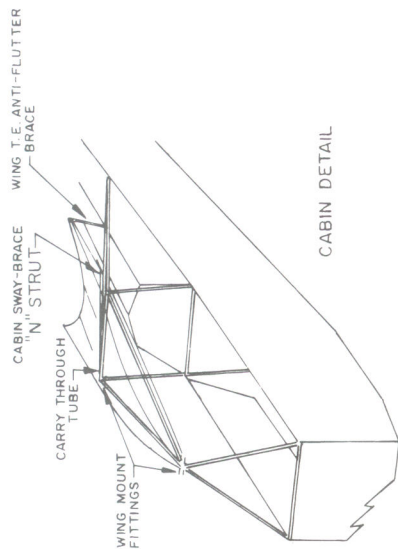
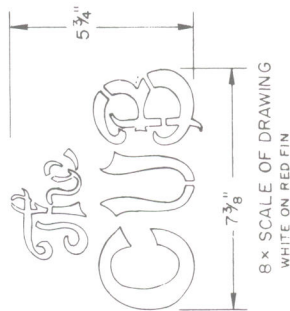
PLATE 2 of 2

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GENERAL SPECIFICATIONS

WEIGHT EMPTY 525 lbs.
 USEFUL LOAD 400 lbs.
 GROSS WEIGHT 925 lbs.
 WING AREA 184 sq. ft.
 WING LOADING 6 lbs./sq. ft.
 POWER LOADING 22 lbs./HP
 MAXIMUM SPEED 80 mph at 3000 feet
 CRUISING SPEED 68 mph
 LANDING SPEED 28 mph
 RANGE AT CRUISE 204 miles
 SERVICE CEILING 12,000 feet
 FUEL CAPACITY 9 gals.
 OIL CAPACITY 4 quarts
 FUEL CONSUMPTION 3 gal./hr.

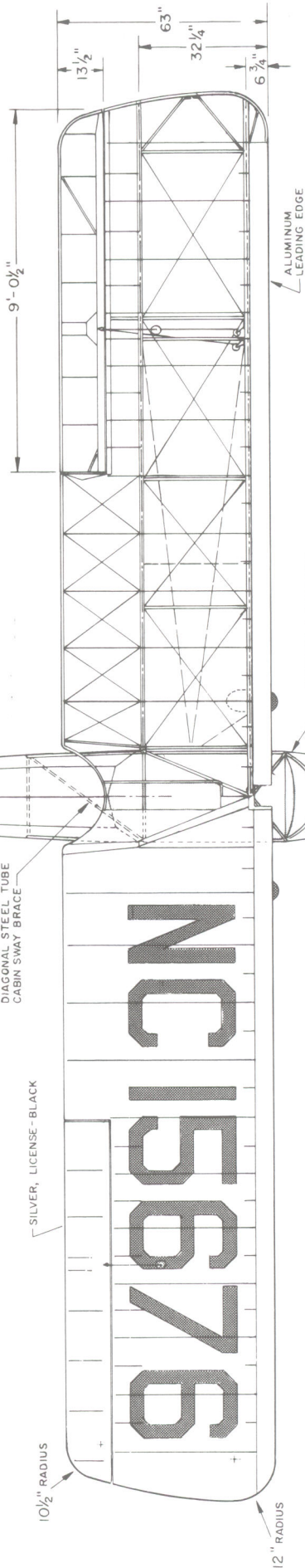
POWER: CONTINENTAL A-40-2,
 35-37 HP at 2,550 rpm



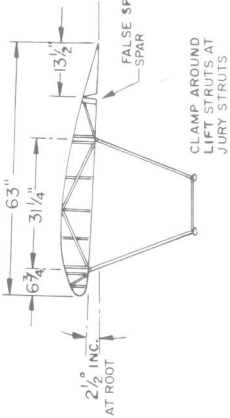
SILVER

DIAGONAL STEEL TUBE
 CABIN SWAY BRACE

SILVER, LICENSE - BLACK



AIRFOIL USA-35B



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TAYLOR E-2 "CUB"
 1931-36

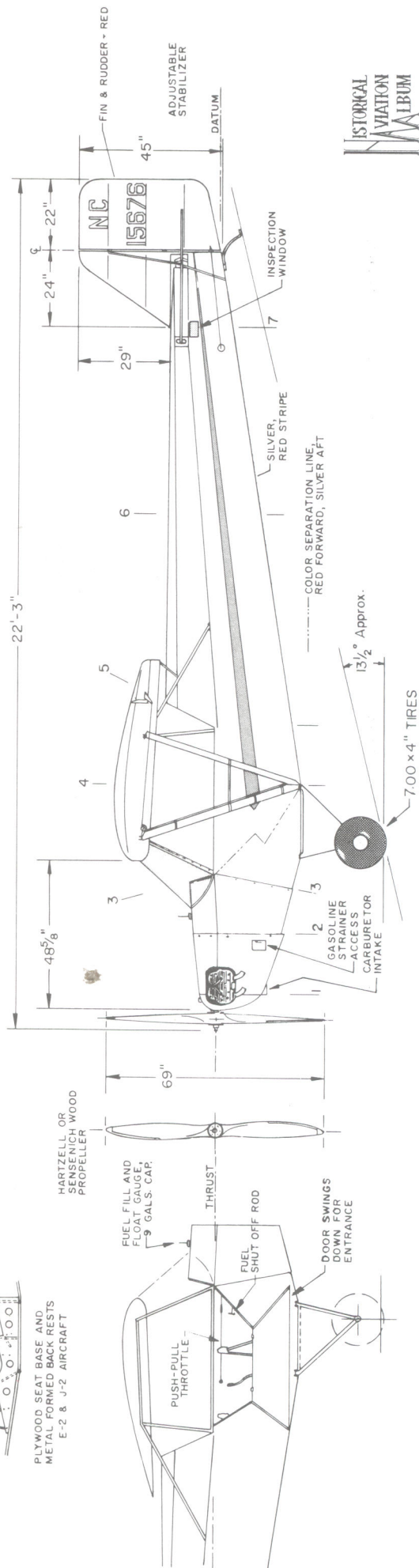
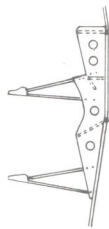
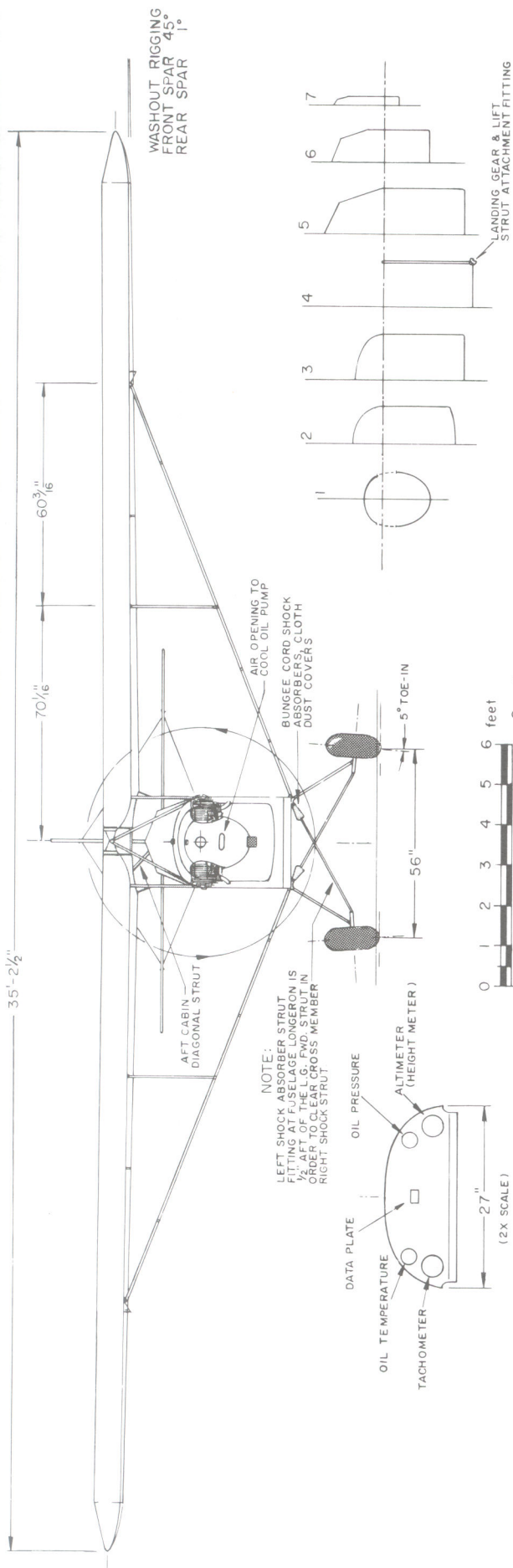
SCALE: ORIGINAL - 1:24
 REPRO. - 1:48

DRAWN BY: PAUL R. MATT

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MY SINCERE APPRECIATION
 TO RICHARD C. "DICK" HILL AND
 BILL KNEPP FOR THEIR HELP IN
 THE PREPARATION OF THESE
 DRAWINGS.

Paul R. Matt



HISTORICAL
AVIATION
ALBUM

TAYLOR E-2 "CUB"
1931-36

SCALE: ORIGINAL - 1:24
REPRO. - 1:48

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GENERAL SPECIFICATIONS

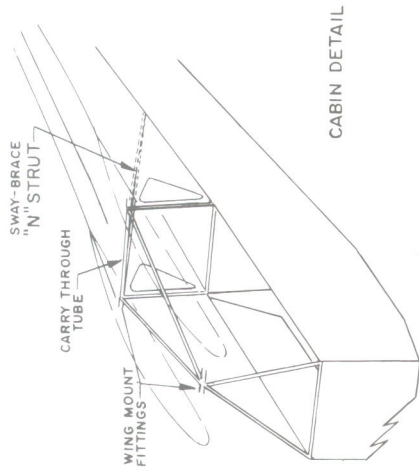
WEIGHT EMPTY 563 lbs.
 USEFUL LOAD 407 lbs.
 GROSS WEIGHT 970 lbs.
 WING AREA 178 sq. ft.
 WING LOADING 5.44 lbs./sq. ft.
 POWER LOADING 25.5 lbs./HP
 MAXIMUM SPEED 85 mph
 CRUISING SPEED 70 mph
 LANDING SPEED 29 mph
 RANGE AT CRUISE 200 miles
 SERVICE CEILING 12,000 feet
 FUEL CAPACITY 9 gals.
 OIL CAPACITY 4 quarts
 FUEL CONSUMPTION 3 gal./hr.

POWER: CONTINENTAL A-40-4,
 37 HP at 2550 rpm
 40 HP at 2575 rpm LIMITED

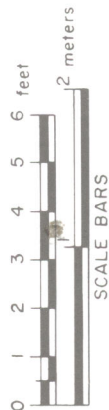
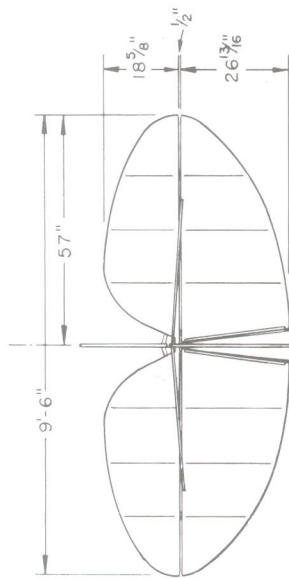
COLORING NOTES

OVERALL SILVER WITH THREE DARK BLUE
 OR RED FUSELAGE STRIPES
 OPTIONAL-RED, BLUE OR GREEN FUSELAGE.
 VERTICAL STRUTS & LANDING GEAR WITH
 SILVER OR YELLOW WINGS & HORIZONTAL
 TAIL SURFACES

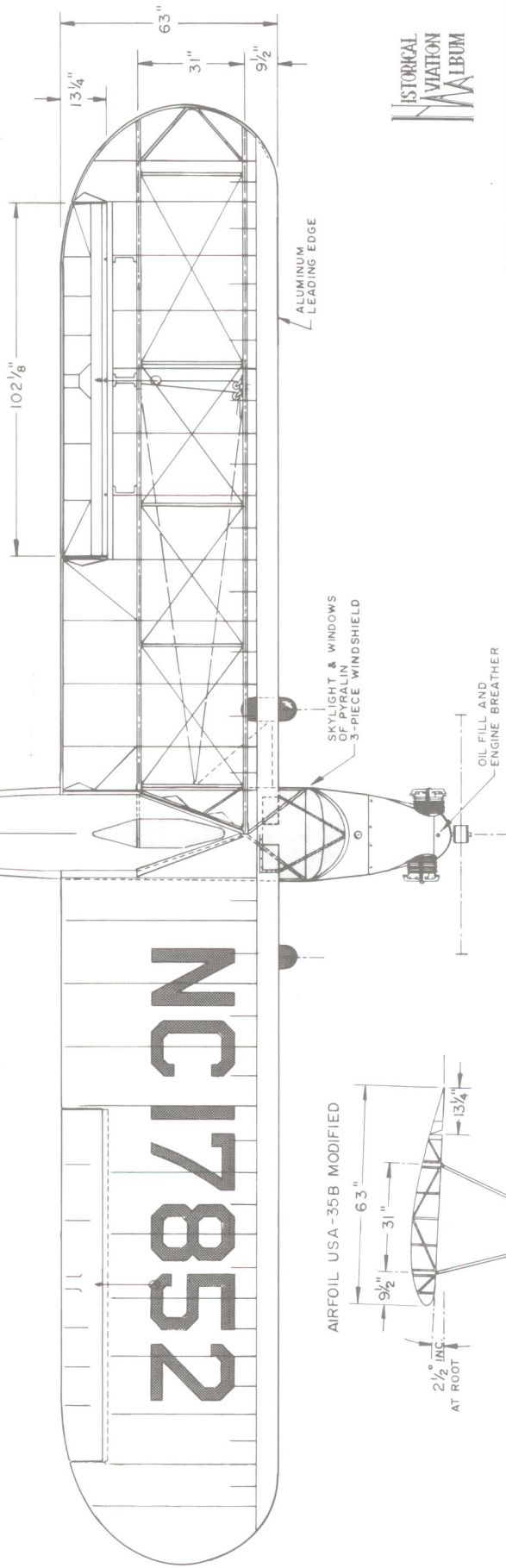
CUSTOM COLORS AVAILABLE INCLUDING
 OVERALL METALLIC BRONZE-GOLD
 WITH RED TRIM



CABIN DETAIL



SCALE BARS



HISTORICAL
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 ALBUM

TAYLOR J-2 "CUB"
 "THE SILVER CUB" 1937

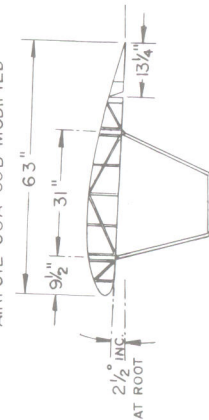
SCALE: ORIGINAL - 1:24
 REPRO. - 1:48

DRAWN BY: PAUL R. MATT

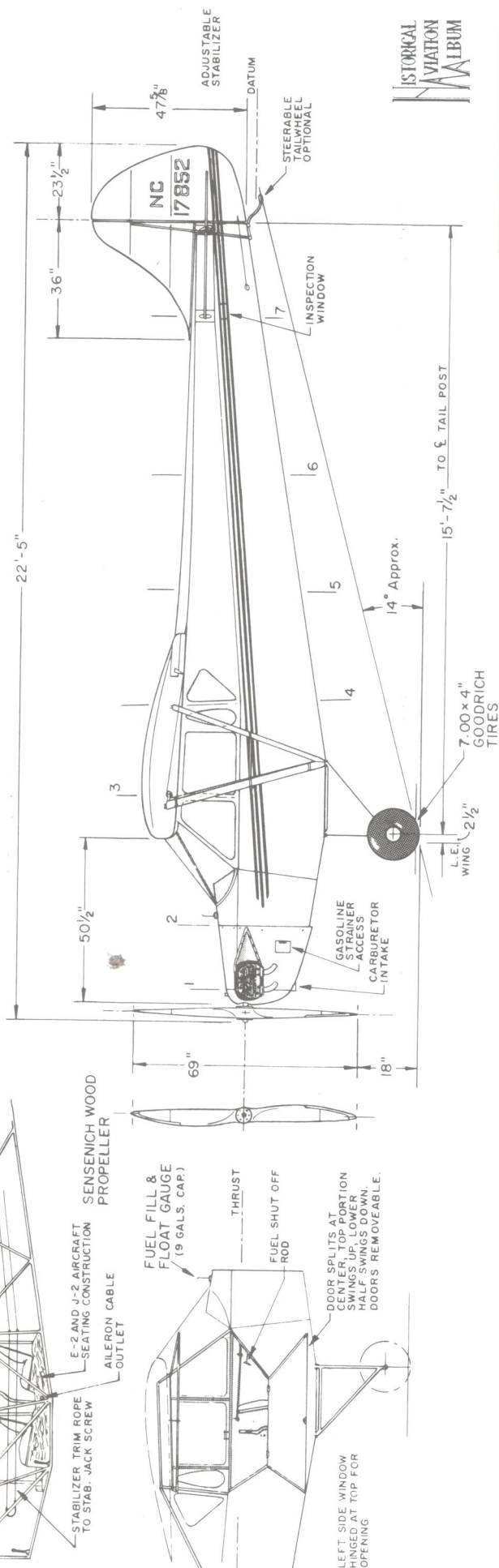
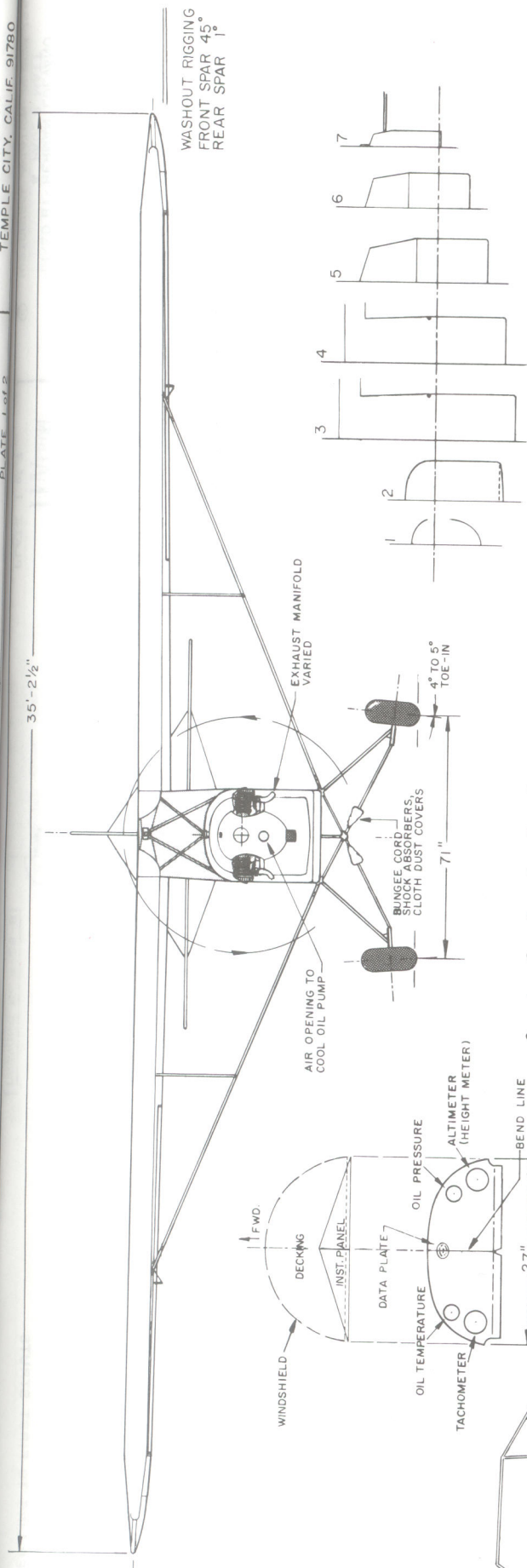
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MY SINCERE APPRECIATION
 TO RICHARD C. "DICK" HILL AND
 BILL KNEPP FOR THEIR HELP IN
 THE PREPARATION OF THESE
 DRAWINGS.

AIRFOIL USA-35B MODIFIED



CLAMP AROUND
 LIFT STRUTS AT
 JURY STRUTS



HISTORICAL
AVIATION
ALBUM

TAYLOR J-2 "CUB"

"THE SILVER CUB" 1937

SCALE: ORIGINAL - 1:24

REPRO. - 1:48

DRAWN BY: PAUL R. MATT

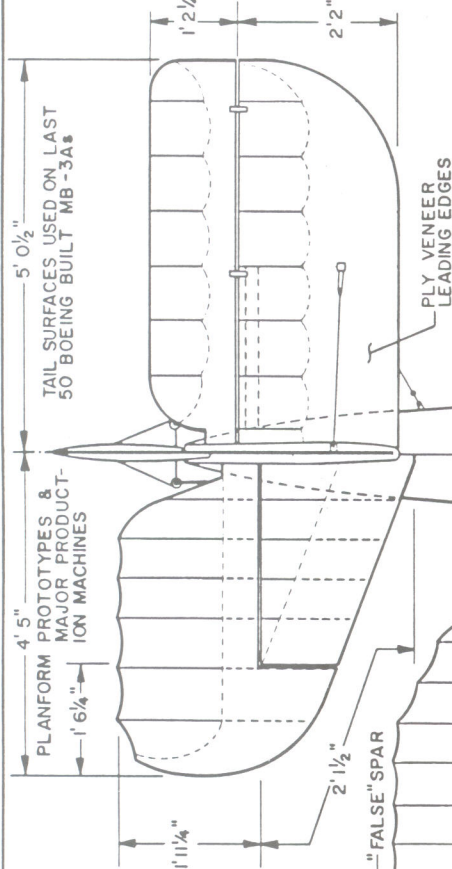
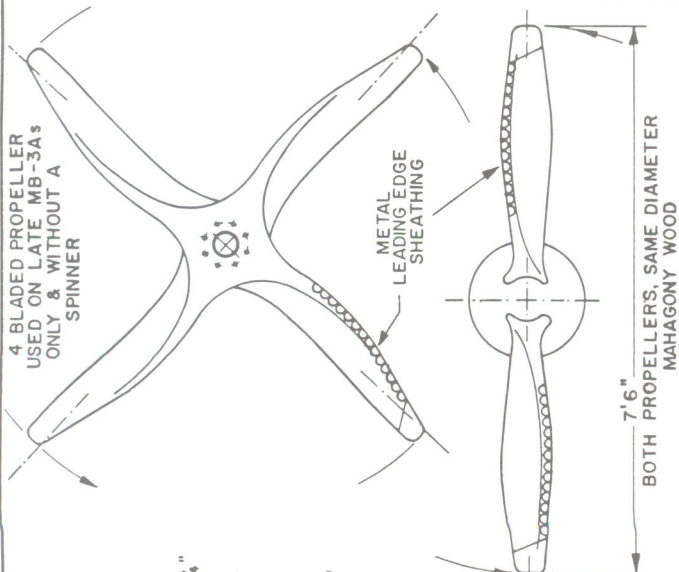
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GENERAL SPECIFICATIONS MB-3A

TOP SPEED 138 to 141 m.p.h.
 CRUISING SPEED 125 m.p.h.
 LANDING SPEED 55 m.p.h.
 INITIAL CLIMB 1230 ft./min. S.L.
 SERVICE CEILING 19,500 ft.
 WEIGHT EMPTY 1716 lbs.
 USEFUL LOAD 823 lbs.
 GROSS WEIGHT 2539 lbs.
 ENDURANCE 2 hrs. 15 min. (45 gals. fuel)
 POWER - 300 h.p. WRIGHT - HISPANO H-3 ENGINE



COLORING NOTES
 ENTIRE AIRCRAFT, OLIVE DRAB,
 BLACK MARKINGS
 EXPOSED STRUTS, CLEAR
 VARNISHED SPRUCE



LOWER WING PLANFORM
 "FALSE" SPARS

MAGNETIC
 COMPASS

PLY VENEER
 AREAS

AUX. FUEL TANK GAUGE

PLY VENEER LEADING EDGE 5'7"

FIXED HOISTING PIN

AUX. FUEL TANK (MAIN TANK
 IN FUSELAGE BETWEEN PILOTS' KNEES)

WATER TANK, FWD.

.50 cal. M.G. BLAST TUBE
 (.30 cal. ON RIGHT)

CARBURETOR INTAKE

PITOT LEAD LINES (2)

AIRFOIL TWICE SCALE

3" x 2" 20"

INC. AT TIP

INC. - CENTER LINE TO FIRST STRUTS

THOMAS-MORSE
 MB-3

BOEING
 MB-3A

1919-29
 SCALE - 1:32

DRAWN BY - HERB KELLEY
 INKED BY - HERMAN LUEVANO
 & PAUL R. MATT

HISTORICAL
 AVIATION
 MUSEUM

DRAWING No. 4-25-R

26'0"

GENERAL SPECIFICATIONS

WEIGHT EMPTY 1663 lbs. (Model C-185)
 USEFUL LOAD 702 lbs.
 GROSS WEIGHT 2365 lbs.
 TOP SPEED 118 mph (100 hp Kinner powered)
 CRUISING SPEED 92 mph
 LANDING SPEED 35 mph
 RATE OF CLIMB, INITIAL 640 ft./min. at S.L.
 SERVICE CEILING 18,000 feet
 CRUISE RANGE 500 miles
 WING AREA (incl. ailerons) 236 sq. ft.

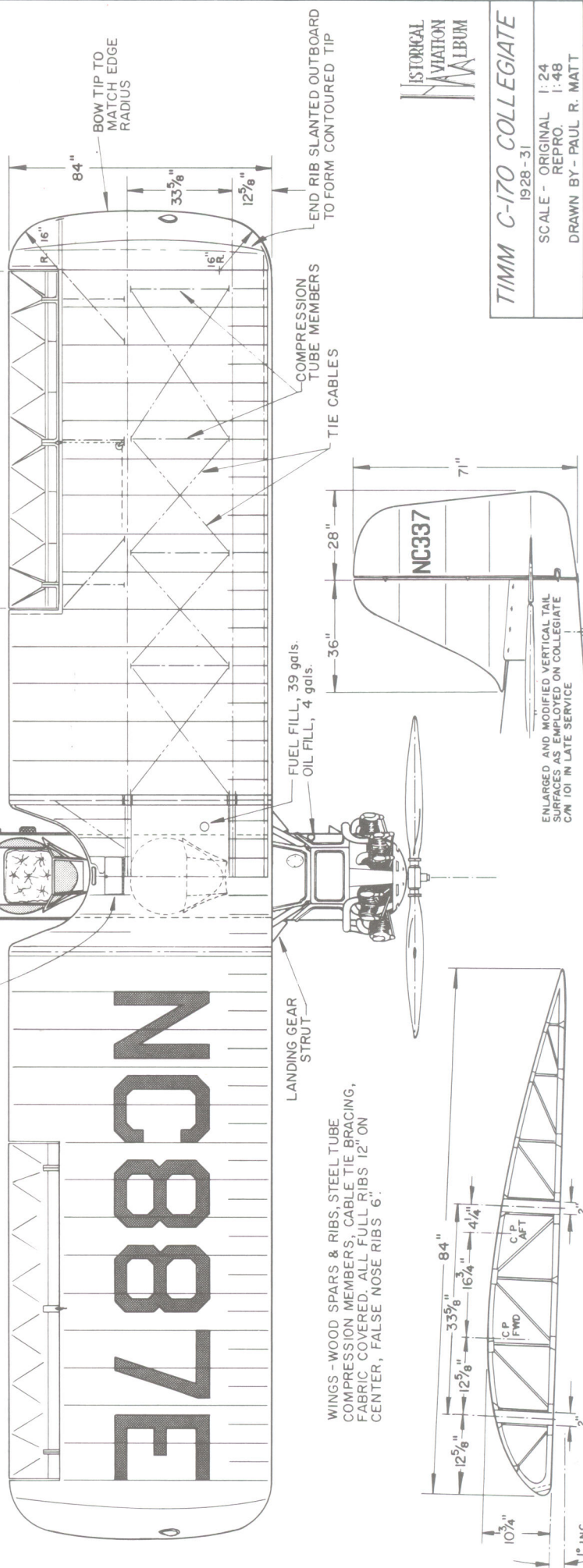
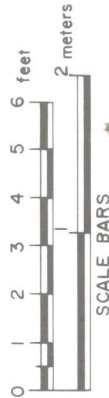
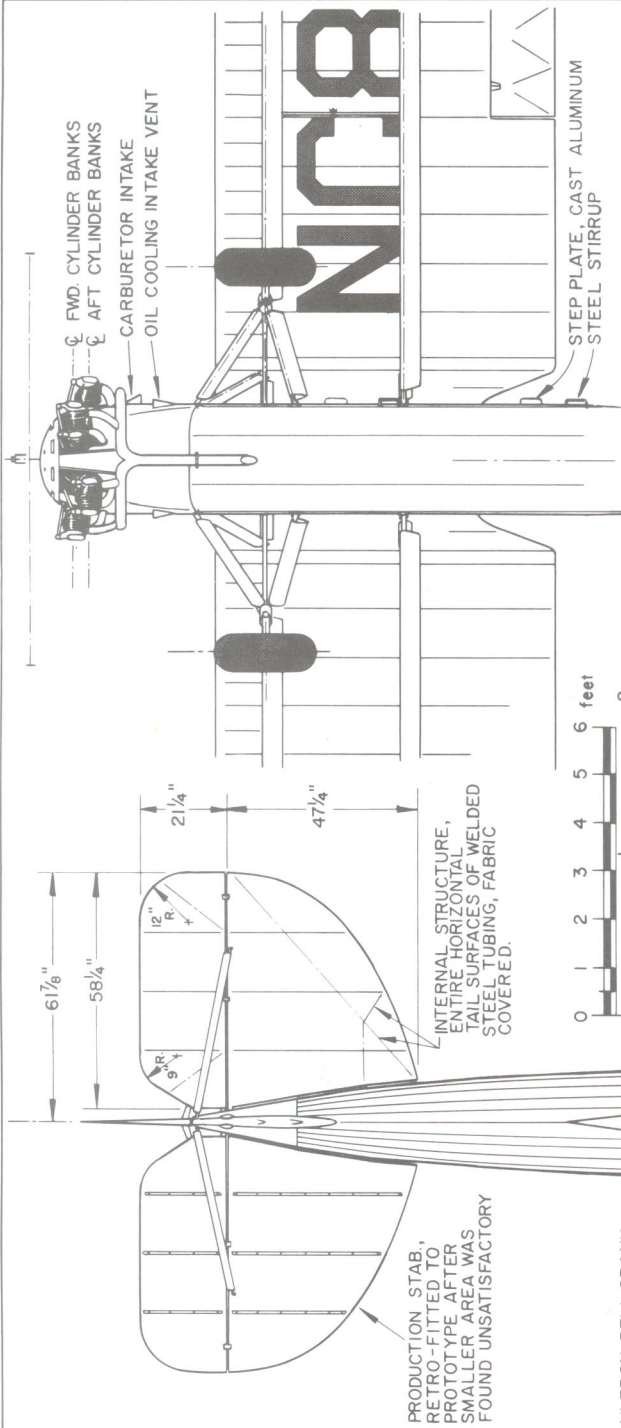
COLLEGIATE NC 887E, PORTRAYED,
 WAS COMPLETED MARCH 12, 1929

POWER- CURTISS R-600 CHALLENGER
 6-CYL. RADIAL, 170 hp at 1800 rpm
 185 hp at 2000 rpm

COLORING NOTES

EXACT COLORING OF NC 887E IS NO LONGER
 REMEMBERED, BUT BELIEVED TO HAVE BEEN
 SILVER WINGS & TAIL SURFACES, DARK BLUE
 FUSELAGE AND BLACK DETAILS.

OUR SINCERE APPRECIATION IS
 EXTENDED TO MR. OTTO TIMM FOR HIS
 PERSONAL HELP AND INTEREST IN
 MAKING THESE DRAWINGS POSSIBLE.
 A SPECIAL THANKS ALSO TO REVEREND
 BOARDMAN C. REED FOR HIS UNTIRING
 PERSONAL INTEREST IN THE TIMM
 COLLEGIATE PROJECT.

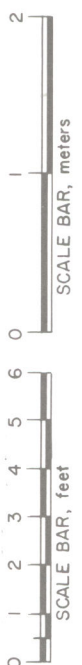
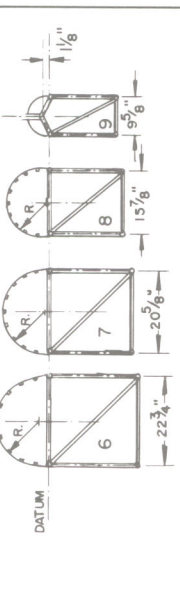
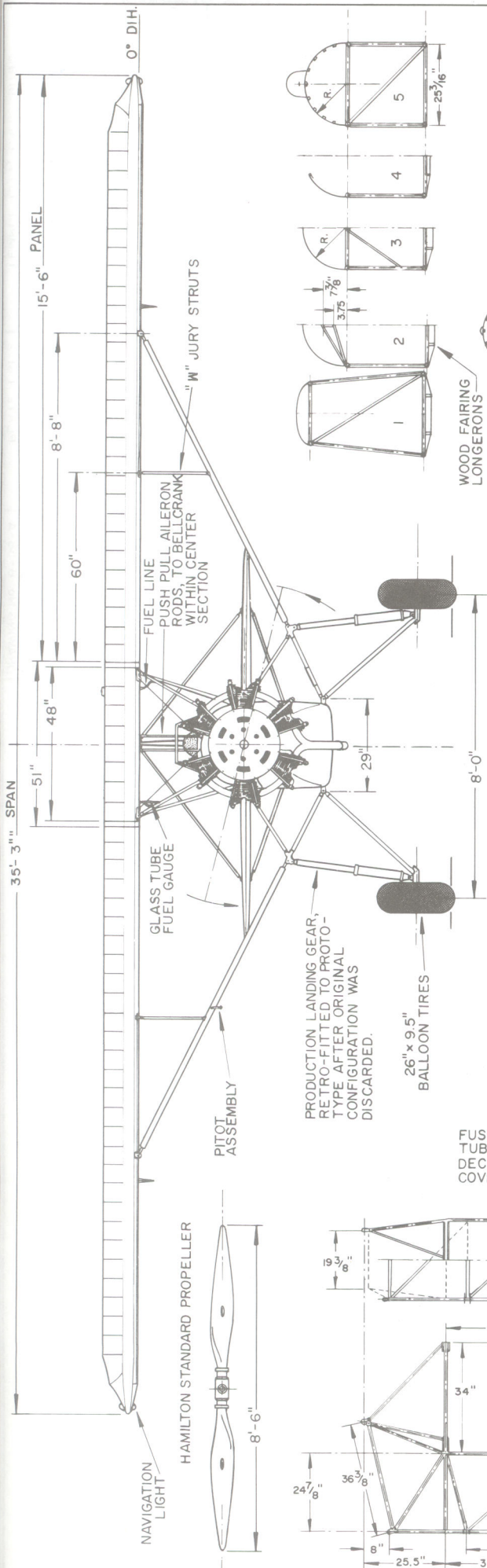


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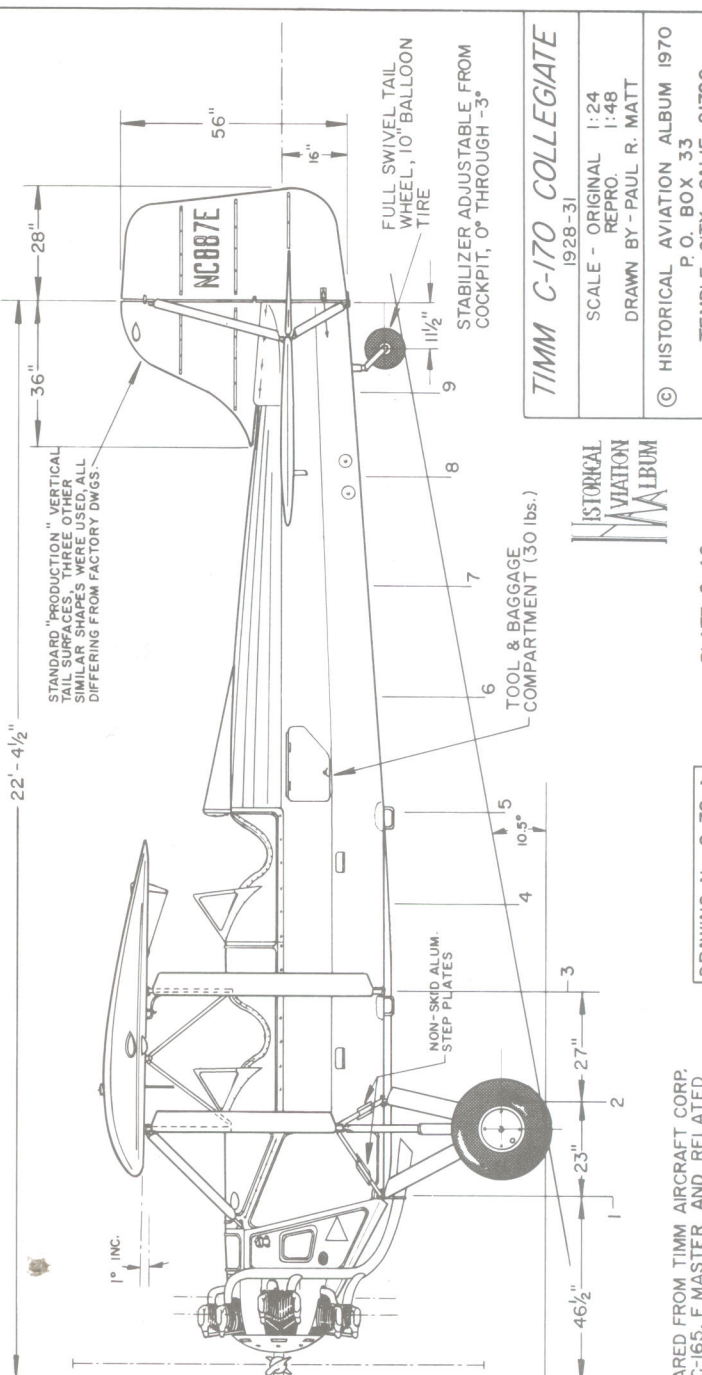
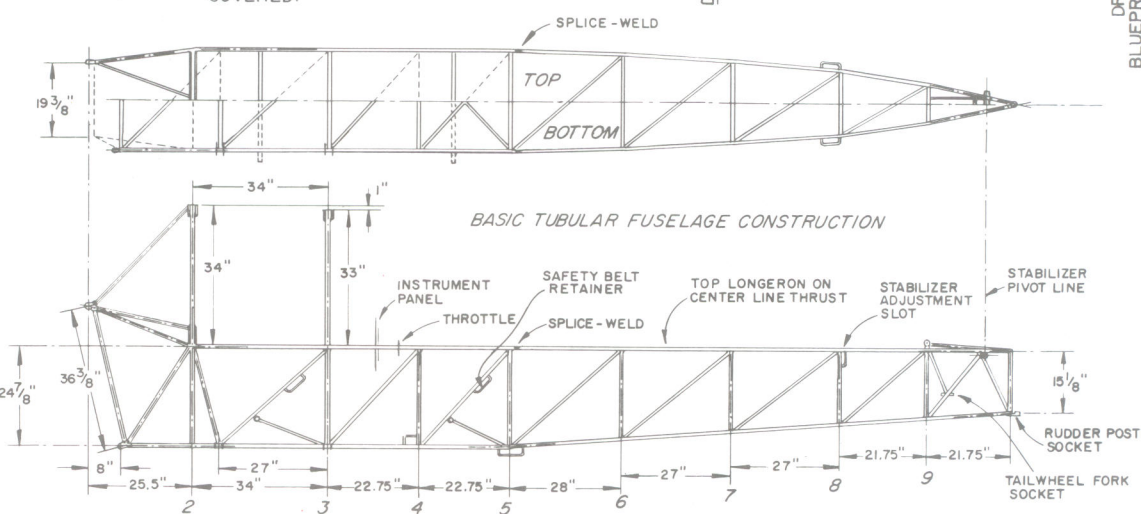
TIMM C-170 COLLEGIATE
 1928-31

SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY - PAUL R. MATT

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FUSELAGE CONSTRUCTION, WELDED STEEL TUBE, WOOD FAIRED, FABRIC COVERED, COCKPIT DECKING, HEADREST & ENGINE AREA METAL COVERED.



TIMM C-170 COLLEGIATE
1928-31
SCALE - ORIGINAL 1:24
REPRO 1:48
DRAWN BY - PAUL R. MATT
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HISTORICAL
AVIATION
ALBUM

GENERAL SPECIFICATIONS R-3 IN FINAL CONFIGURATION

WEIGHT EMPTY	2032 lbs. WITH WATER
USEFUL LOAD	471 lbs. INCLUDING 271 lbs. OF
	DISPOSABLE WEIGHT
GROSS WEIGHT	2503 lbs.
MAXIMUM SPEED	219 m.p.h. I.A.S. at 2400 r.p.m.
	OVER MEASURED TRIANGLE
	COURSE (T.A.S. 235mph)
LANDING SPEED	73.2 m.p.h.
STALLING SPEED	78 m.p.h.
FUEL CAPACITY	40 gals.
OIL CAPACITY	4 gals.
WING AREA	146.5 sq. ft.
POWER - CURTISS D-12	500 h.p. at 2200 r.p.m.
	507 h.p. at 2380 r.p.m.
	(NOT HIGH COMPRESSION ENGINE)

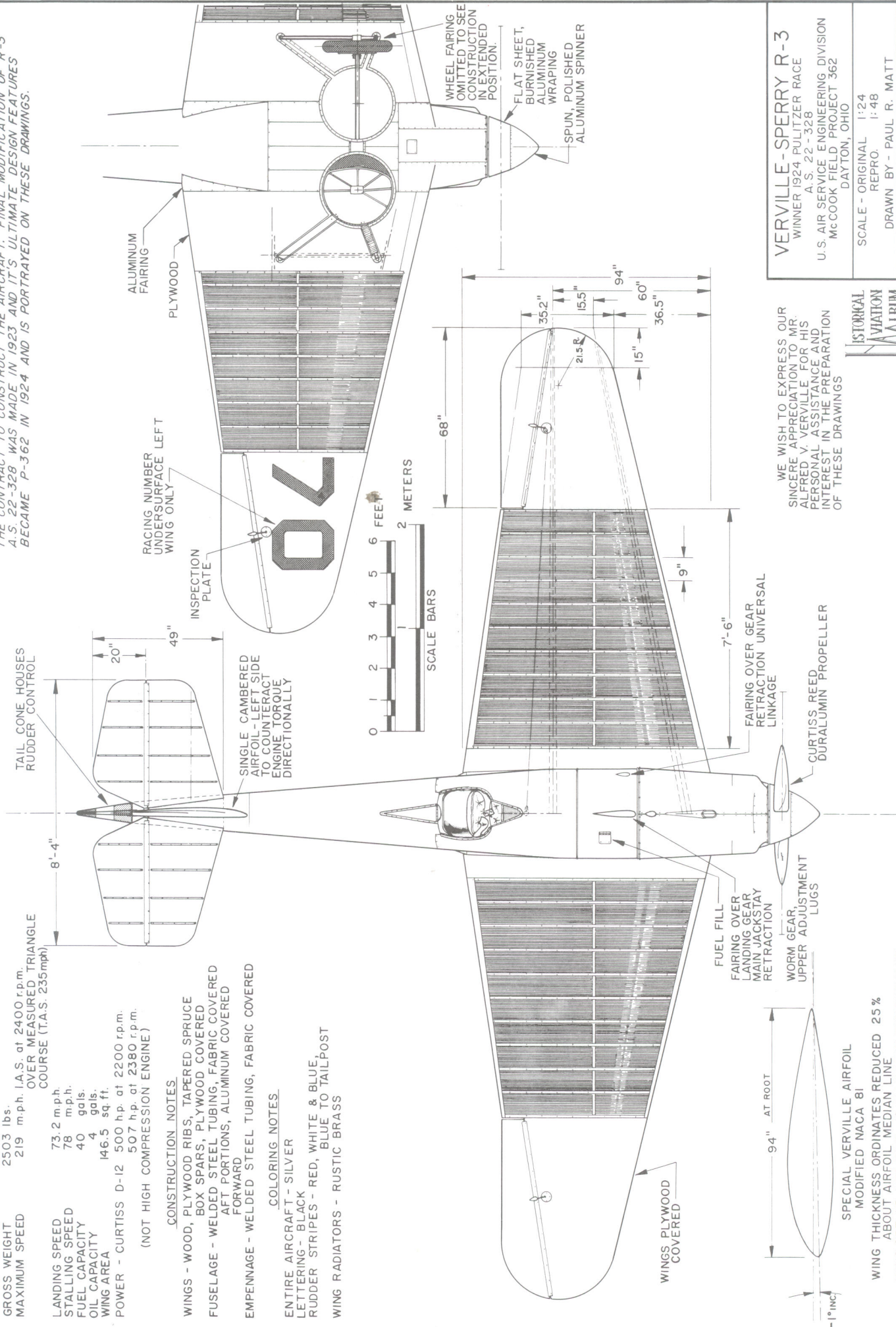
CONSTRUCTION NOTES

WINGS - WOOD, PLYWOOD RIBS, TAPERED SPRUCE
BOX SPARS, PLYWOOD COVERED
FUSELAGE - WELDED STEEL TUBING, FABRIC COVERED
AFT PORTIONS, ALUMINUM COVERED
FORWARD
EMPENNAGE - WELDED STEEL TUBING, FABRIC COVERED

COLORING NOTES

ENTIRE AIRCRAFT - SILVER
LETTERING - BLACK
RUDDER STRIPES - RED, WHITE & BLUE,
BLUE TO TAILPOST
WING RADIATORS - RUSTIC BRASS

THREE R-3s WERE BUILT, A.S. 22-326, 22-327 AND 22-328 (1922). DESIGNED BY ALFRED V. VERVILLE, CHIEF OF PURSUIT AND RACING PLANE DESIGN PROJECTS, U.S. AIR SERVICE ENGINEERING DIVISION, MCCOOK FIELD, DAYTON, OHIO BY DIRECTION OF BRIG. GEN. WILLIAM MITCHELL, ASST. CHIEF U.S. ARMY AIR SERVICE. LAWRENCE SPERRY AIRCRAFT CO., FARMINGDALE, LONG ISLAND WAS AWARDED THE CONTRACT TO CONSTRUCT THE AIRCRAFT. FINAL MODIFICATION OF R-3 A.S. 22-328 WAS MADE IN 1923 AND IT'S ULTIMATE DESIGN FEATURES BECAME P-362 IN 1924 AND IS PORTRAYED ON THESE DRAWINGS.



WE WISH TO EXPRESS OUR
SINCERE APPRECIATION TO MR.
ALFRED V. VERVILLE FOR HIS
PERSONAL ASSISTANCE AND
INTEREST IN THE PREPARATION
OF THESE DRAWINGS



VERVILLE-SPERRY R-3
WINNER 1924 PULITZER RACE
A.S. 22-328
U.S. AIR SERVICE ENGINEERING DIVISION
MCCOOK FIELD, PROJECT 362
DAYTON, OHIO

SCALE - ORIGINAL 1:24

REPRO. 1:48

DRAWN BY - PAUL R. MATT

HISTORICAL AVIATION ALBUM 1969

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DRAWING No. 6-58-A

PLATE 1 of 2

SPECIAL VERVILLE AIRFOIL
MODIFIED NACA 81

WING THICKNESS ORDINATES REDUCED 25%

ABOUT AIRFOIL MEDIAN LINE

WING SET AT NEGATIVE -1° INCIDENCE THROUGHOUT

GENERAL SPECIFICATIONS R-3 IN FINAL CONFIGURATION

WEIGHT EMPTY	2032 lbs.	WITH WATER
USEFUL LOAD	471 lbs.	INCLUDING 271 lbs. OF
GROSS WEIGHT	2503 lbs.	DISPOSABLE WEIGHT
MAXIMUM SPEED	219 m.p.h.	I.A.S. at 2400 r.p.m.
		OVER MEASURED TRIANGLE
		COURSE (T.A.S. 235mph)
LANDING SPEED	73.2 m.p.h.	
STALLING SPEED	78 m.p.h.	
FUEL CAPACITY	40 gals.	
OIL CAPACITY	4 gals.	
WING AREA	146.5 sq. ft.	
POWER - CURTISS D-12	500 h.p. at 2200 r.p.m.	
	507 h.p. at 2380 r.p.m.	
	(NOT HIGH COMPRESSION ENGINE)	

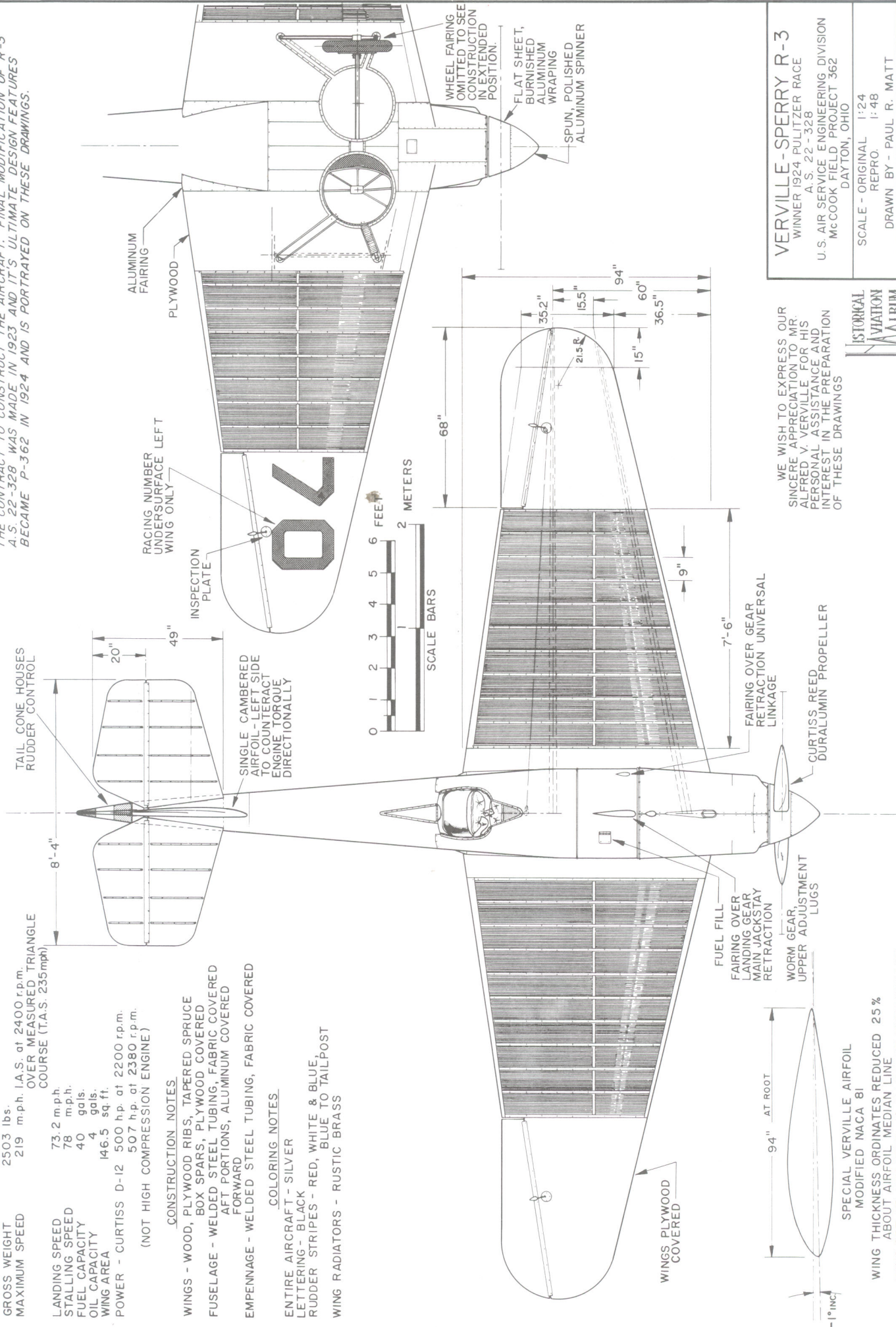
CONSTRUCTION NOTES

WINGS - WOOD, PLYWOOD RIBS, TAPERED SPRUCE BOX SPARS, PLYWOOD COVERED
FUSELAGE - WELDED STEEL TUBING, FABRIC COVERED
AFT PORTIONS, ALUMINUM COVERED
FORWARD
EMPENNAGE - WELDED STEEL TUBING, FABRIC COVERED

COLORING NOTES

ENTIRE AIRCRAFT - SILVER
LETTERING - BLACK
RUDDER STRIPES - RED, WHITE & BLUE,
BLUE TO TAILPOST
WING RADIATORS - RUSTIC BRASS

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VERVILLE-SPERRY R-3

WINNER 1924 PULITZER RACE
A.S. 22-328
U.S. AIR SERVICE ENGINEERING DIVISION
MCCOOK FIELD, PROJECT 362
DAYTON, OHIO

SCALE - ORIGINAL 1:24

REPRO. 1:48

DRAWN BY - PAUL R. MATT

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DRAWING No. 6-58-A

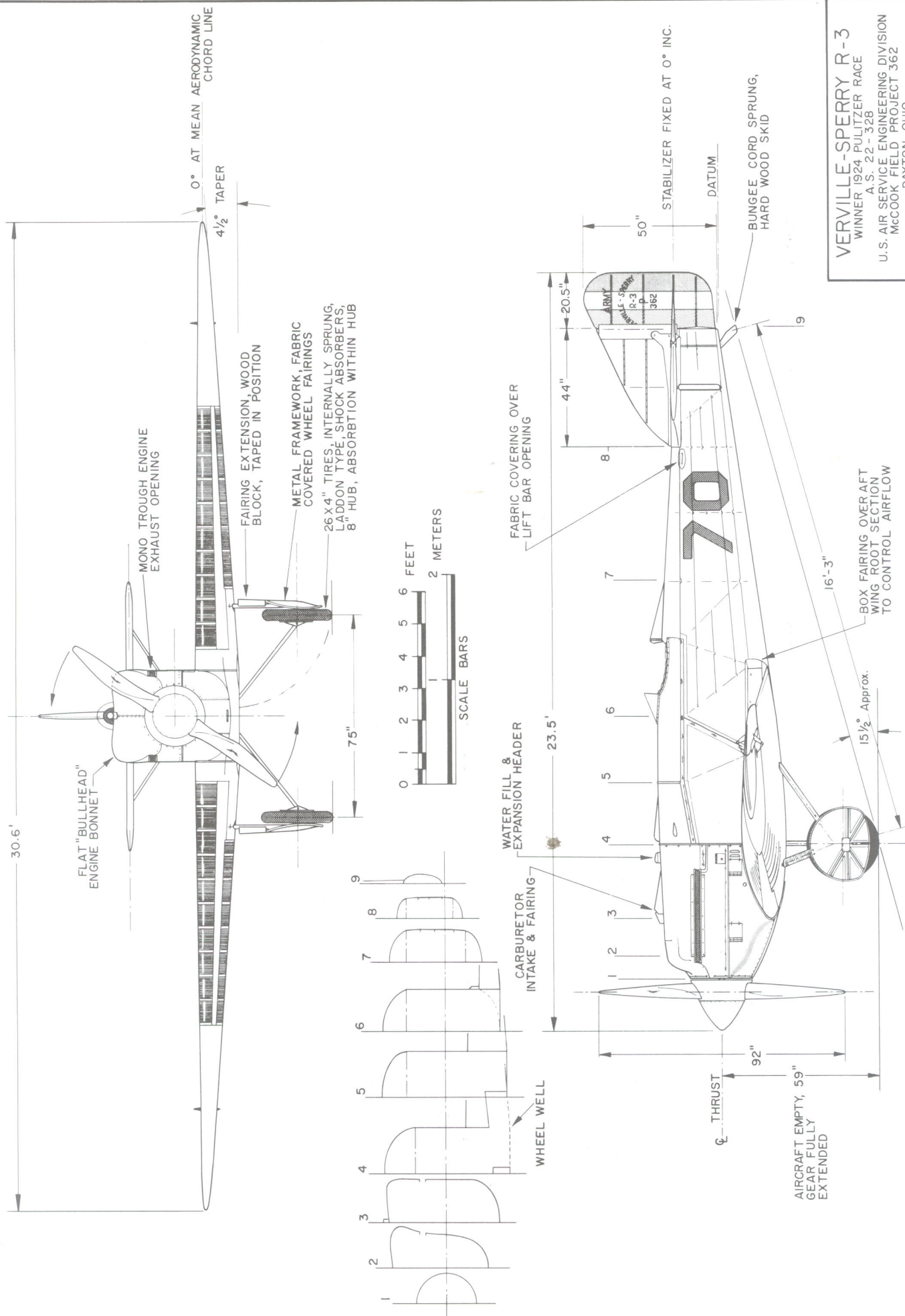
PLATE 1 of 2

SPECIAL VERVILLE AIRFOIL
MODIFIED NACA 81

WING THICKNESS ORDINATES REDUCED 25%

ABOUT AIRFOIL MEDIAN LINE

WING SET AT NEGATIVE -1° INCIDENCE THROUGHOUT



VERVILLE-SPERRY R-3
WINNER 1924 PULITZER RACE
A.S. 22-328
U.S. AIR SERVICE ENGINEERING DIVISION
McCOOK FIELD PROJECT 362
DAYTON, OHIO

SCALE - ORIGINAL 1:24
REPRO. 1:48

DRAWN BY - PAUL R. MATT

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Vought F4U-1 "Corsair"



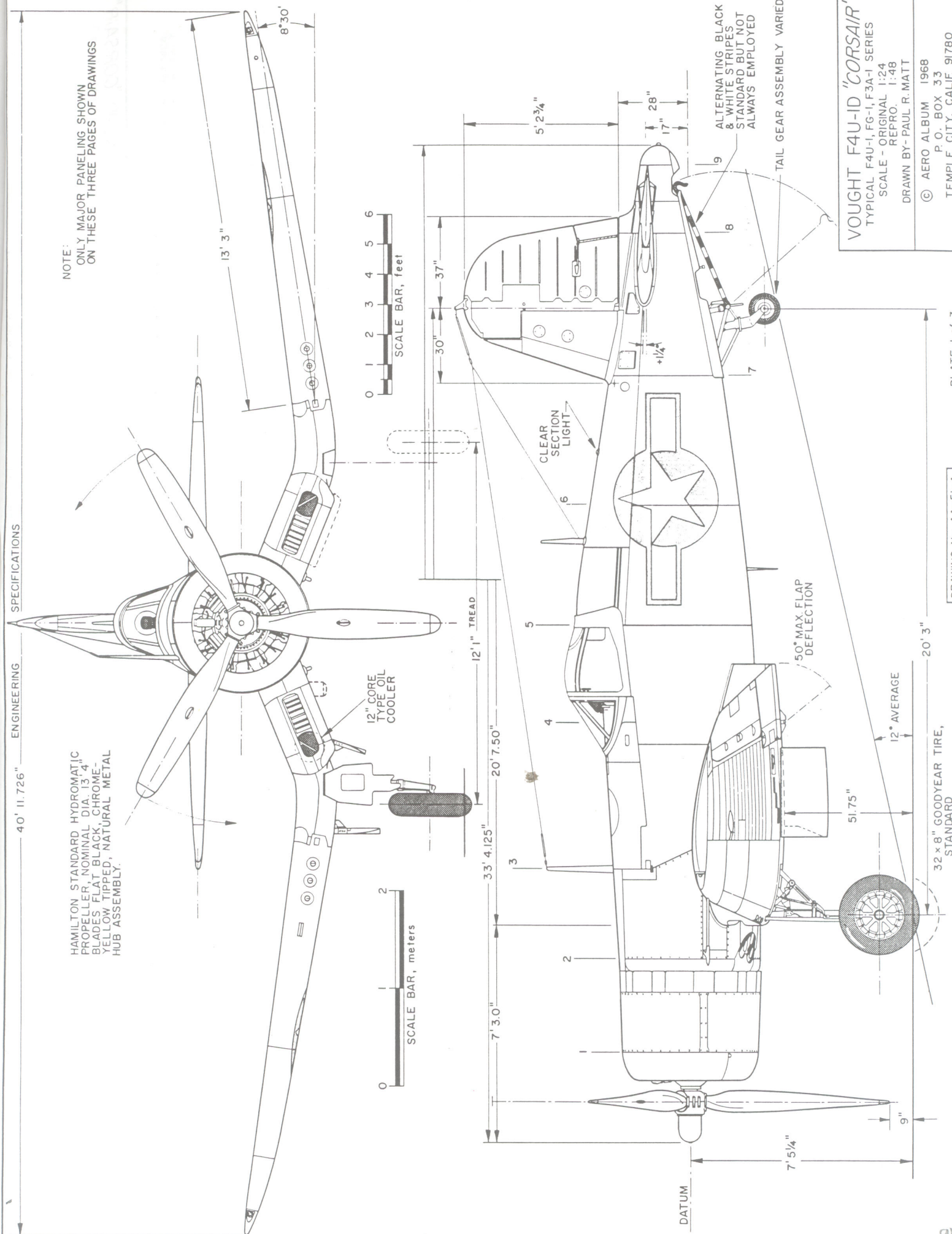
F4U-1D "Corsair", June 6, 1944.



Goodyear FG-1D "Corsair".

HAMILTON STANDARD HYDROMATIC
PROPELLER, NOMINAL DIA. 13' 4"
BLADES FLAT BLACK, CHROME-
YELLOW TIPPED, NATURAL METAL
HUB ASSEMBLY.

NOTE:
ONLY MAJOR PANELING SHOWN
ON THESE THREE PAGES OF DRAWINGS



VOUGHT F4U-ID "CORSAIR"
TYPICAL F4U-I, FG-I, F3A-I SERIES
SCALE - ORIGINAL 1:24
REFRO 1:48
DRAWN BY- PAUL R. MATT

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GUN ACCESS PANELS

GUN CAMERA

HAND GRIP

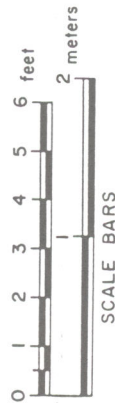
NON SKID STEP PAD

CUT OUT STEP

HAND GRIP

2° OFFSET

CLEAR NAV.
LIGHT



AMMO. BELTS ACCESS PANELS

NOTE:
DUE TO PRONOUNCED INBOARD ANHEDRAL
AND OUTBOARD DIHEDRAL WINGS DRAWN
IN PERSPECTIVE - TRUE MECHANICAL PLAN
VIEW LAYOUT OF OUTER PANEL SHOWN IN
DOTTED LINE.

3/4" CLEARANCE,
NORMAL TOLERANCE

7'6" ACTUAL

POSITION OF FORMATION
LIGHT, WHEN EMPLOYED

LANDING LIGHT
4'10"

105"

DRAWING No. AA-SI-A

PLATE 2-613

VOUGHT F4U-ID "CORSAIR"

TYPICAL F4U-1, FG-1, F3A-1 SERIES

SCALE - ORIGINAL 1:24

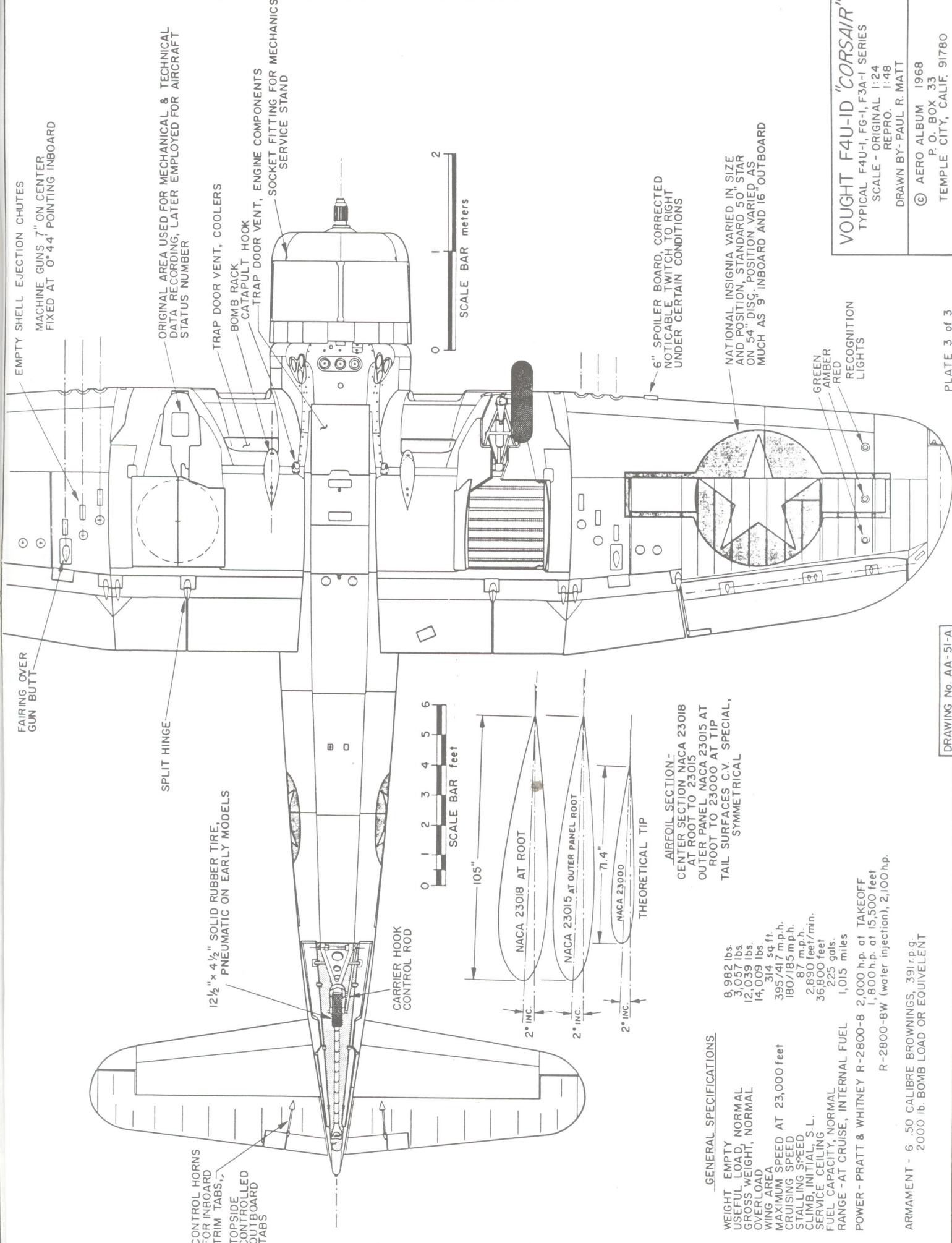
REPRO. 1:48

DRAWN BY-PAUL R. MATT

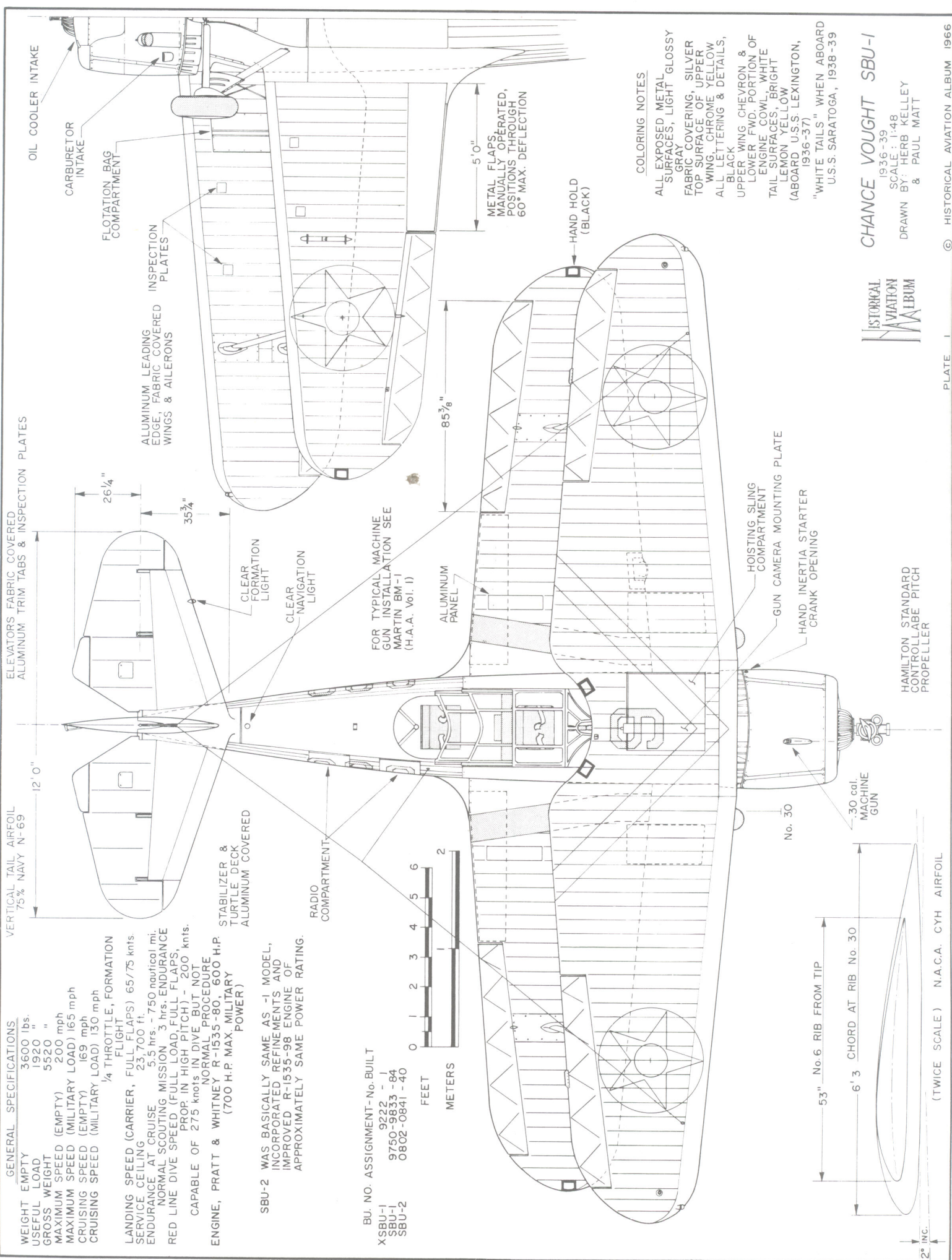
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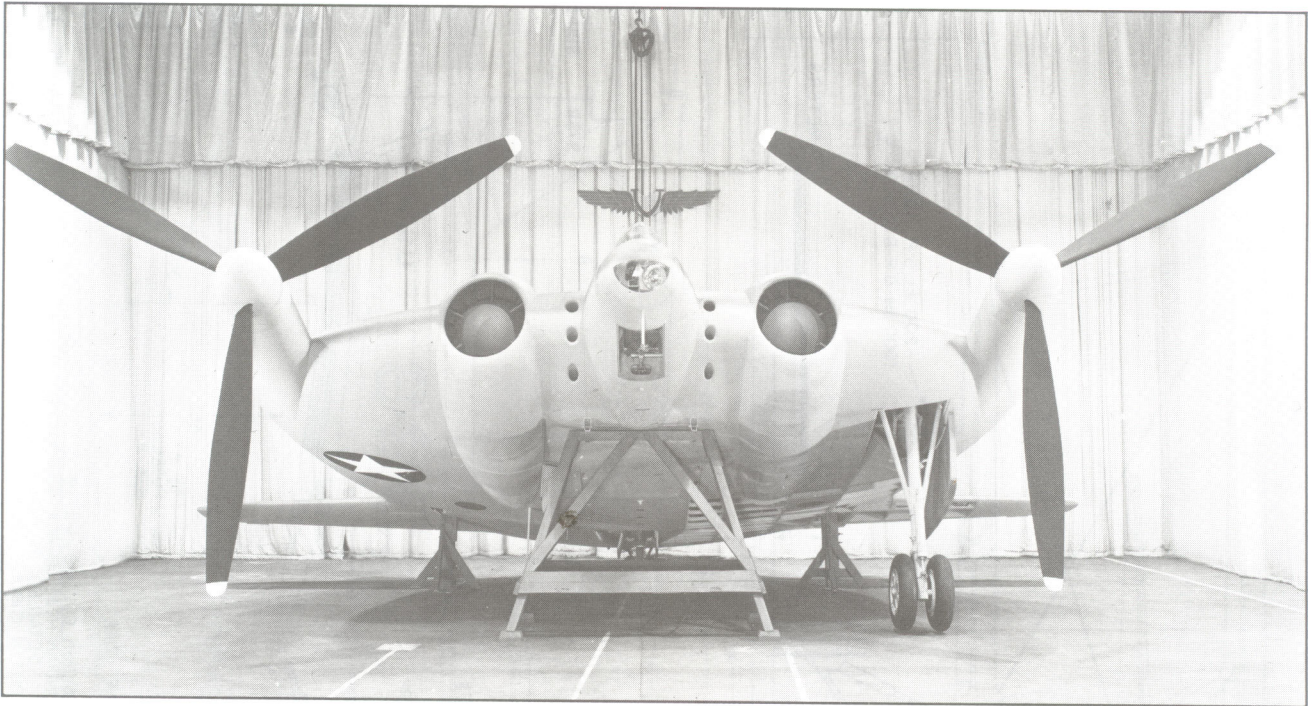
EMPTY SHEET EJECTION CHUTES



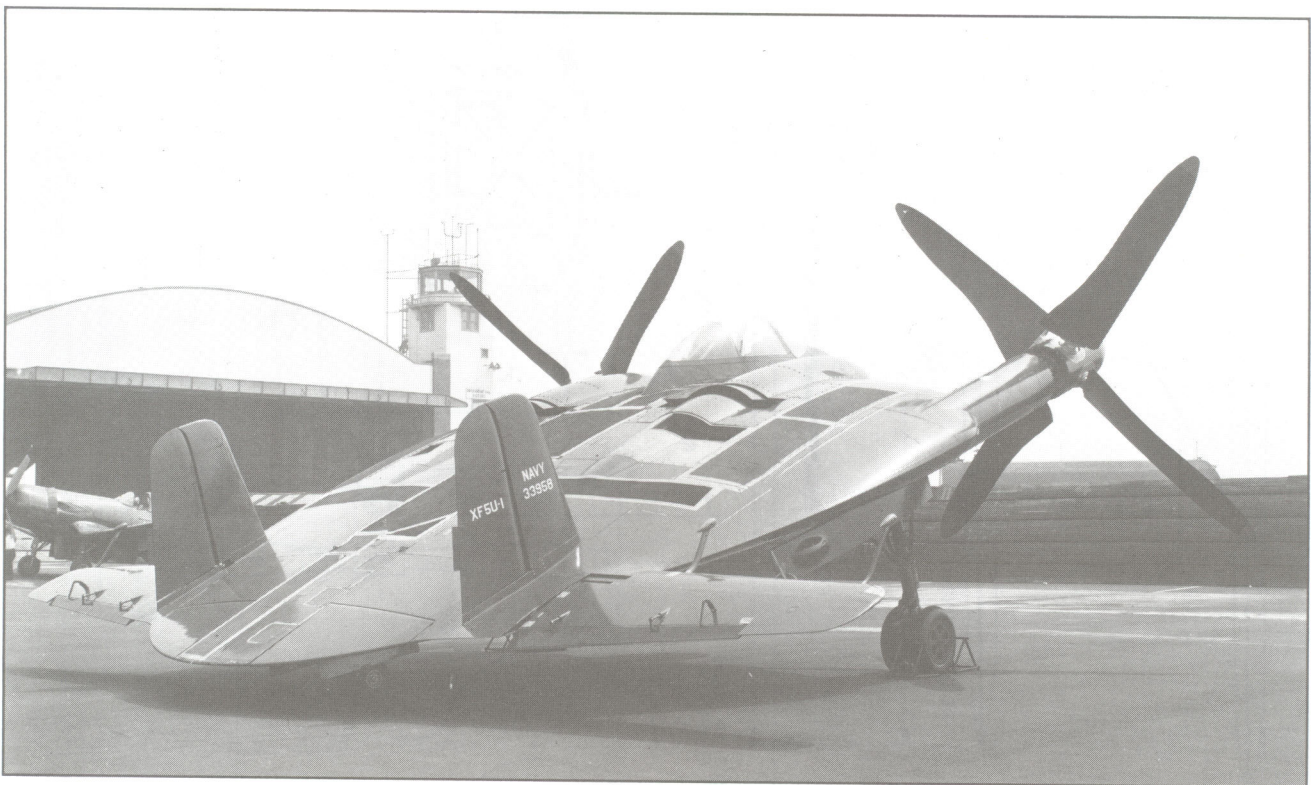
VOUGHT F4U-ID "CORSAIR"
 TYPICAL F4U-1, FG-1, F3A-1 SERIES
 SCALE - ORIGINAL 1:24
 REPRO. 1:48
 DRAWN BY- PAUL R. MATT
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 P.O. BOX 33
 TEMPLE CITY, CALIF. 91780



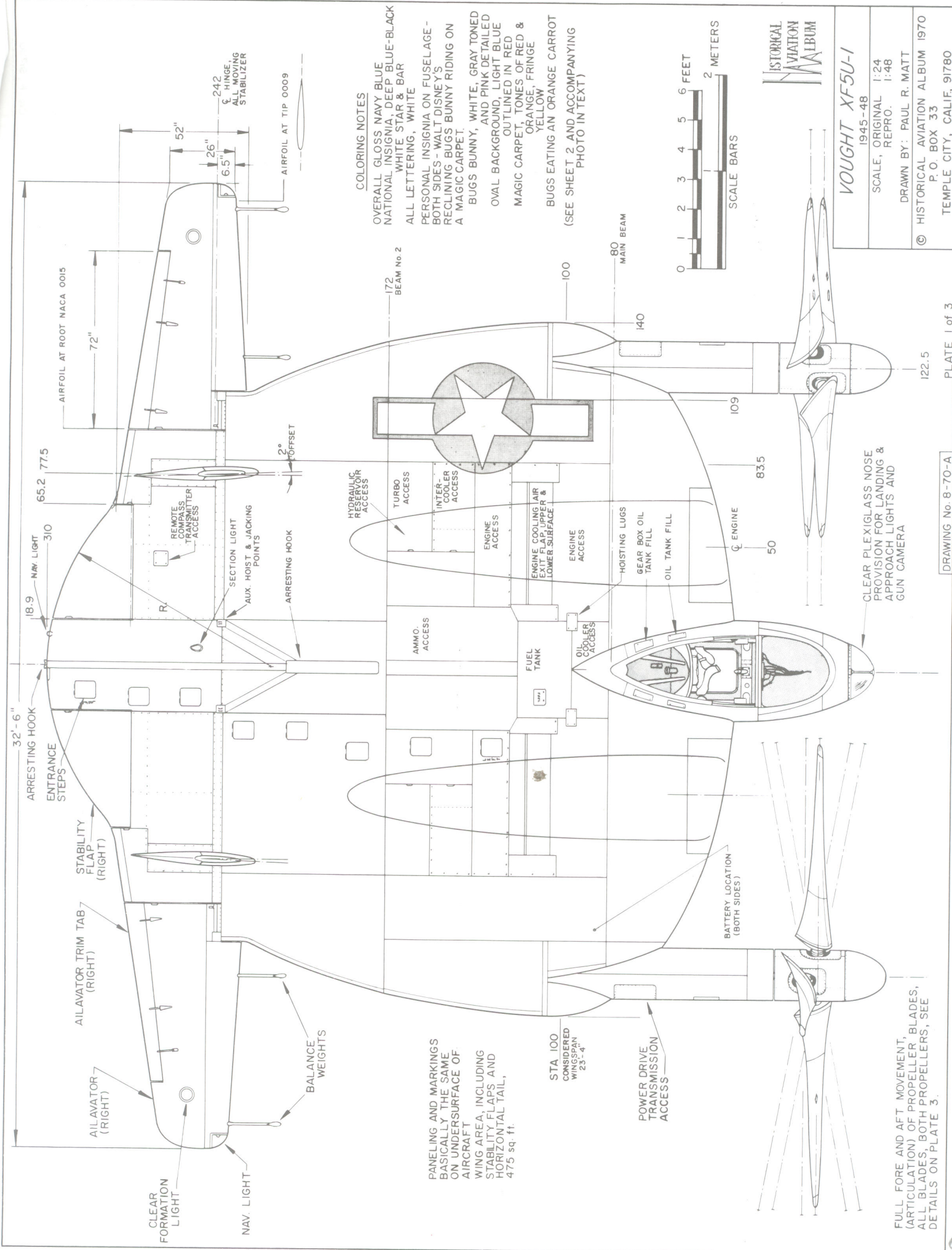
Vought XF5U-1



Vought XF5U-1, mock up completed.



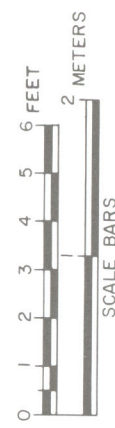
Vought XF5U-1 airplane under ground run conditions, August 21, 1947.



COLORING NOTES

OVERALL GLOSS NAVY BLUE
 NATIONAL INSIGNIA, DEEP BLUE-BLACK
 WHITE STAR & BAR
 ALL LETTERING, WHITE
 PERSONAL INSIGNIA ON FUSELAGE -
 BOTH SIDES - WALT DISNEY'S
 RECLINING BUGS BUNNY RIDING ON
 A MAGIC CARPET.
 BUGS BUNNY, WHITE, GRAY TONED
 AND PINK DETAILED
 OVAL BACKGROUND, LIGHT BLUE
 OUTLINED IN RED
 MAGIC CARPET, TONES OF RED &
 ORANGE, FRINGE
 YELLOW
 BUGS EATING AN ORANGE CARROT
 (SEE SHEET 2 AND ACCOMPANYING
 PHOTO IN TEXT)

PANELING AND MARKINGS
 BASICALLY THE SAME
 ON UNDERSURFACE OF
 AIRCRAFT
 WING AREA, INCLUDING
 STABILITY FLAPS AND
 HORIZONTAL TAIL,
 475 sq. ft.



VOUGHT XF5U-1

1945-48
 SCALE, ORIGINAL
 REPRO. 1:48

DRAWN BY: PAUL R. MATT

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 P.O. BOX 33
 TEMPLE CITY, CALIF, 91780

FULL FORE AND AFT MOVEMENT,
 (ARTICULATION) OF PROPELLER BLADES,
 ALL BLADES, BOTH PROPELLERS, SEE
 DETAILS ON PLATE 3.

GENERAL SPECIFICATIONS. BASED ON ENGINEERING AND GROUND EVALUATION ACTUAL FLIGHT TESTS CANCELLED BY U.S. NAVY

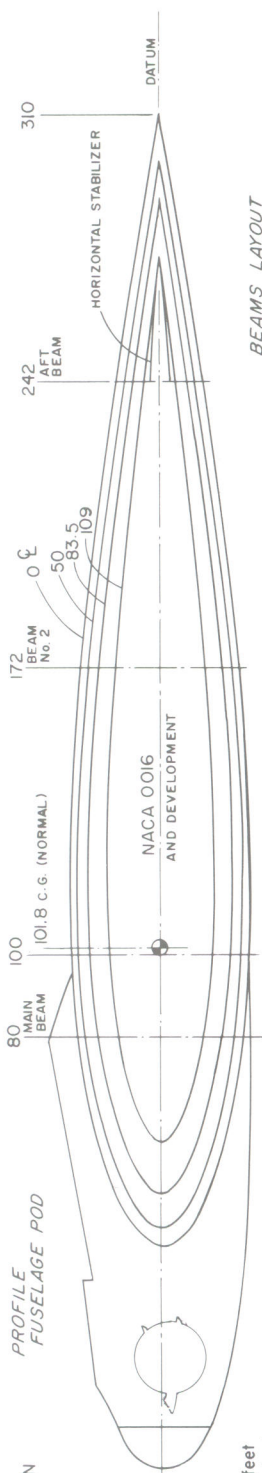
WEIGHT, BASIC (Approx.) 14,500 lbs.
WEIGHT, NORMAL 16,500 lbs.
WEIGHT, MAX. LOADED 18,635 lbs.
TAKEOFF DISTANCE, NO WIND 710 feet
17 KNOT HEADWIND 490 feet
CLIMB, AT 14,550 lbs 3,000 ft./min S.L.
TO 5,000 feet
GRADUATING DOWN TO 1,000 ft./min.
AT 12,000 feet

MAXIMUM SPEED, CONTIGOUS 388 mph at 15,000 feet
368 mph at 20,000 feet
RANGE, MAX. (INTERNAL FUEL) 740 miles
AT CRUISE OF 280 mph at 10,000 feet

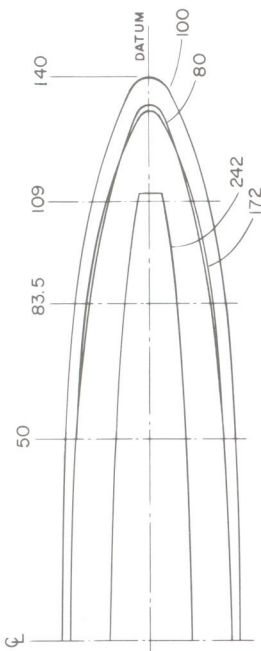
PERFORMANCE BASED ON USE OF TWO P&W R-2000-7
AIR COOLED RADIAL ENGINES OF
1,350 h.p. at 2,700 r.p.m.
1,100 h.p. at 2,550 r.p.m. (NORMAL)

PROPOSED ARMAMENT (NEVER FITTED)
SIX 50 CAL. COLT BROWNING M.G.s. 400 R.P.G. INTERCHANGABLE
WITH FOUR 20 mm CANNON AND/OR TWO 1,000 lb. BOMBS OR
TWO 125 gal. LONG RANGE EXTERNAL FUEL TANKS.
EXTERIOR CONSTRUCTION - CHANGE VOUGHT DEVELOPED METALITE,
ALUMINUM SHEETS BONDED OVER A CORE (SANDWICH) OF BALSA
WOOD. CONSTRUCTION WAS EXCEPTIONALLY STRONG, FINISH
EXTREMELY SMOOTH.

PROFILE FUSELAGE POD



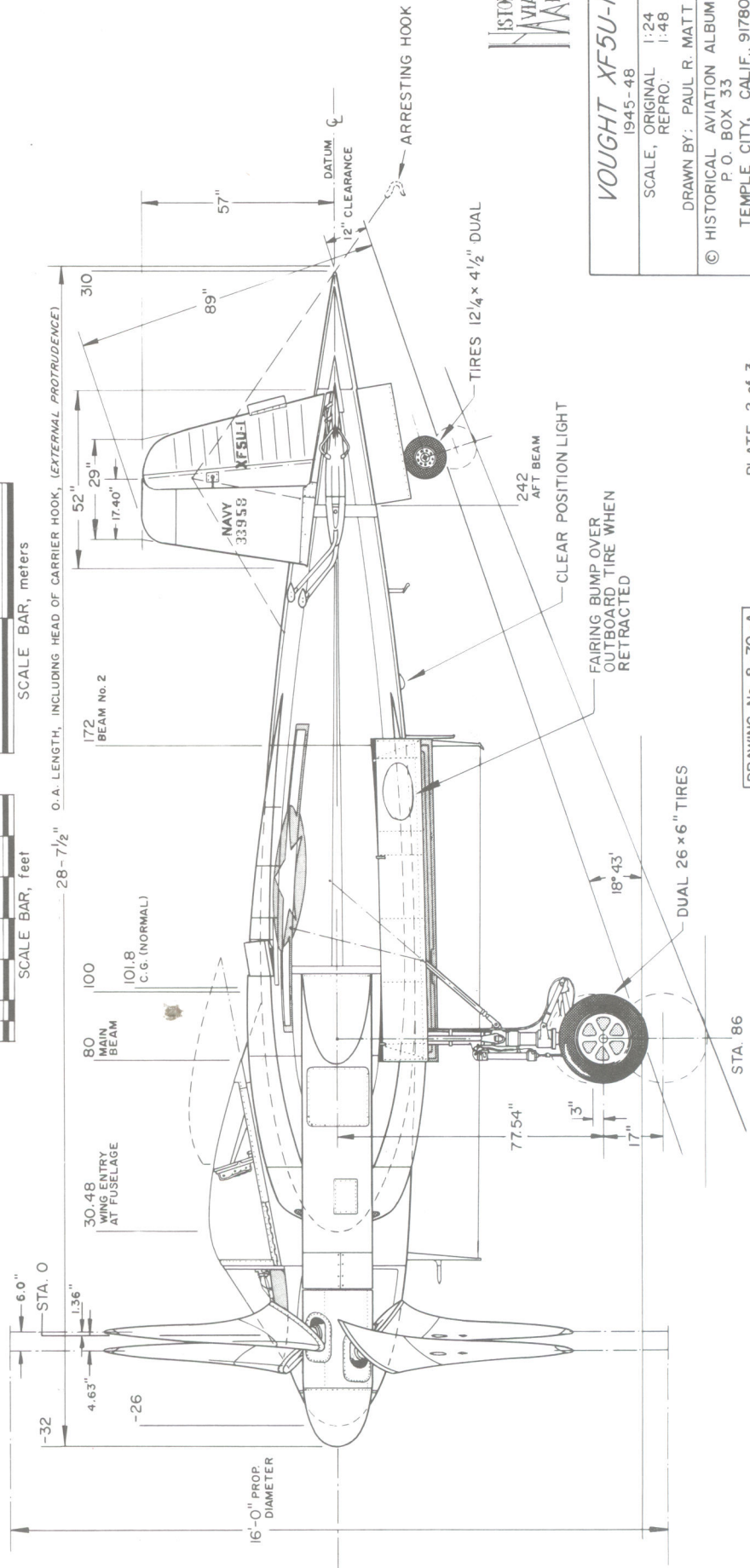
BEAMS LAYOUT



PERSONA INSIGNIA
DISC 18" DIA.
3 x SCALE APPROX.
FOR DETAILS SEE
SHEET-1.



0 1 2 3 4 5 6 SCALE BAR, feet
0 1 2 SCALE BAR, meters
28-7 1/2" O.A. LENGTH, INCLUDING HEAD OF CARRIER HOOK, (EXTERNAL PROTRUDENCE)



HISTORICAL
AVIATION
MUSEUM

VOUGHT XF5U-1

1945-48

SCALE, ORIGINAL 1:24
REPRO. 1:48

DRAWN BY: PAUL R. MATT

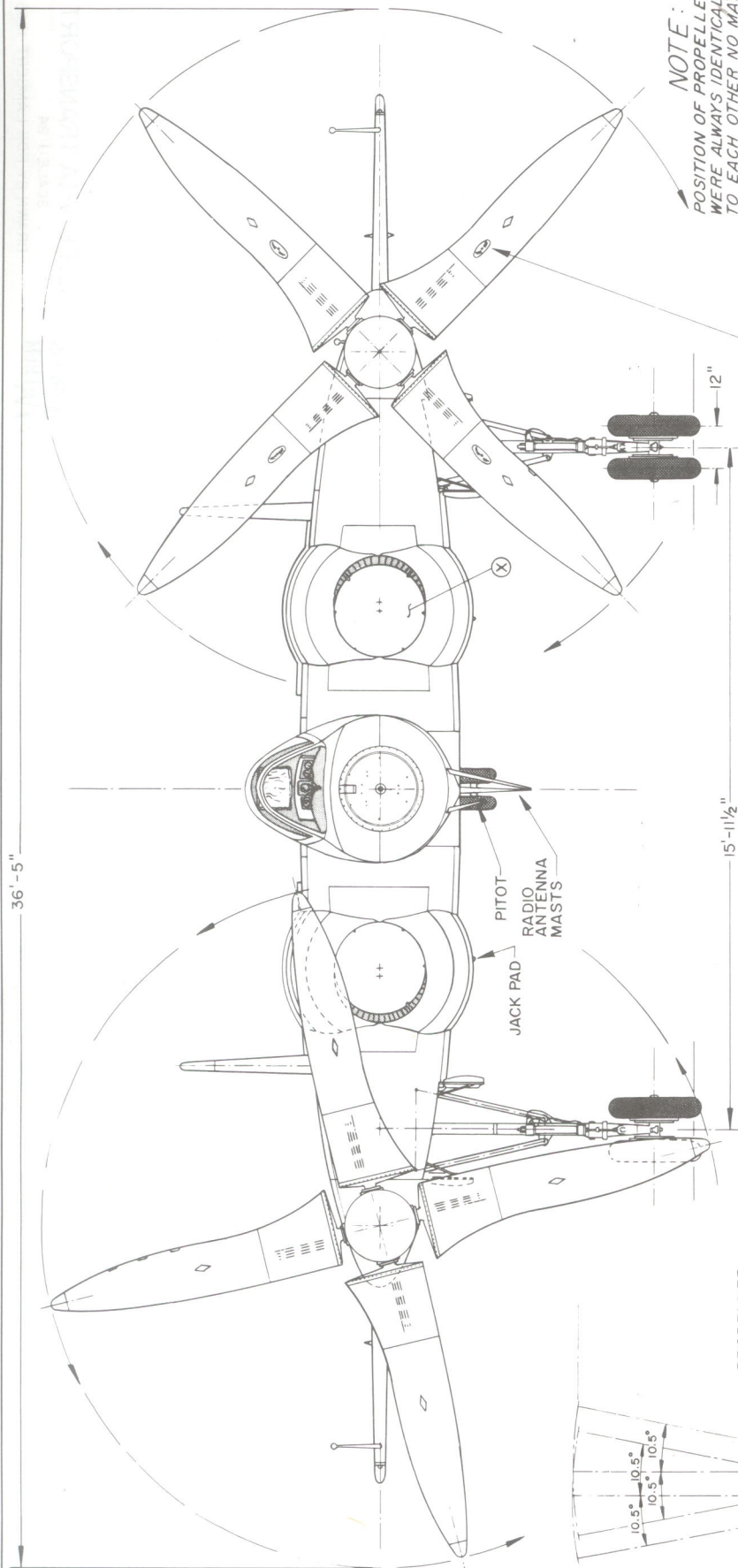
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STA 86

DRAWING No. 8-70-A

PLATE 2 of 3

36'-5"



PROPELLER
ARTICULATION & FEATHERING

FEATHERING ADJUSTABLE FROM COCKPIT
ARTICULATION WAS SELF-ADJUSTING
THRU 21° ARC POSITIONS. BLADES OPERATED
IN A MANNER SIMILAR TO THE
HELICOPTER ROTOR BLADES.
EACH PROPELLER SYSTEM GEARED
TO OPERATE IN HARMONY WITH EACH
OTHER AT ALL TIMES.

20.5" DIA.

8'-0"

13.5"

4.63"

1.36"

STA. 0

SCALE BAR, meters

SCALE BAR, feet

15'-11 1/2"

12"

HAMILTON-STANDARD
PROPELLER TRADEMARK
ON PORT SIDE BLADES
ONLY. WHITE TRACKING
DIAMONDS ON ALL BLADES,
YELLOW TIPPED.

(X) MASTER AIR INTAKE,
ENGINE, OIL COOLING
AND CARBURETOR AIR

NOTE:

POSITION OF PROPELLER BLADES
WERE ALWAYS IDENTICAL OR RELATED
TO EACH OTHER NO MATTER WHAT
POSITION THEY WERE TURNING IN.
STOPPED OR STARTED THEY WERE
GEARED TO HARMONIZE AIR FLOW
AND TORQUE EVENLY AND THE
SAME ON BOTH SIDES OF THE
AIRCRAFT AT ALL TIMES. WE HAVE
MOVED THEM INTO UNRELATED
POSITIONS SO THAT OTHER AFT
DETAILS SHOW MORE CLEARLY.

OUR SINCERE APPRECIATION IS EXTENDED TO
MR. CHARLES ZIMMERMAN, INVENTOR - BOON GUYTON,
CHIEF TEST PILOT - WILLIAM Z. MILLER, CHIEF
DRAFTSMAN - WILLIAM SCHOOLFIELD, CHIEF AERO-
DYNAMICIST ON THE XF5U-1 PROJECT FOR THEIR
TIME, EFFORT AND INTEREST IN REVIEWING, CORRECTING
AND COMMENTING ON THESE DRAWINGS AND THE
ACCOMPANYING ARTICLE BY ARTHUR L. SCHOENI.
A SPECIAL THANKS TO MR. SCHOENI FOR MAKING
IT COME ABOUT. THE ASSISTANCE OF THESE MEN
IS HIGHLY VALUED, MAKING THIS A JOINT EFFORT
AND THE VIEWS HEREWITH AS ACCURATE AS
POSSIBLE.

BLADE SHOWN IN FULL FEATHERED
CONDITION AND FLAT LAYOUT PROFILE
PROPELLERS SPECIALLY DEVELOPED BY
VOUGHT AND HAMILTON STANDARD ENGINEERS.
FORMICA IMPREGNATED WOOD CONSTRUCTION.

HISTORICAL
AVIATION
ALBUM

VOUGHT XF5U-1

1945-48

SCALE, ORIGINAL 1:24
REPRO. 1:48

DRAWN BY: PAUL R. MATT

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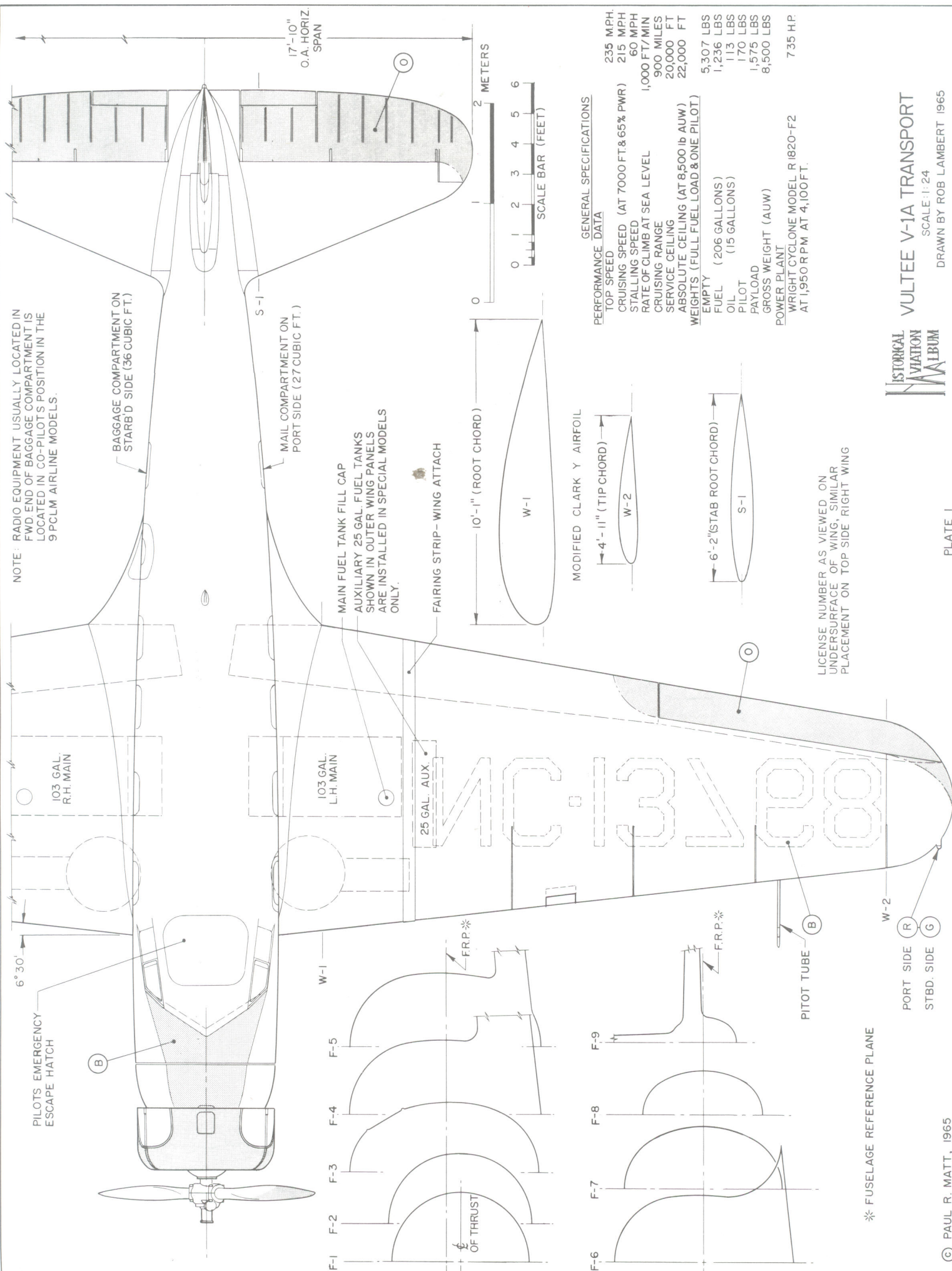
P.O. BOX 33
TEMPLE CITY, CALIF. 91780

DRAWING No. 8-70-A

PLATE 3 of 3

DRAWINGS PREPARED FROM CV 401000 PRINTS
AND RELATED AND PERSONAL CHECKING BY
WILLIAM Z. MILLER - XF5U-1 CHIEF DRAFTSMAN

NOTE: RADIO EQUIPMENT USUALLY LOCATED IN FWD. END OF BAGGAGE COMPARTMENT IS LOCATED IN CO-PILOT'S POSITION IN THE 9PCLM AIRLINE MODELS.



GENERAL SPECIFICATIONS

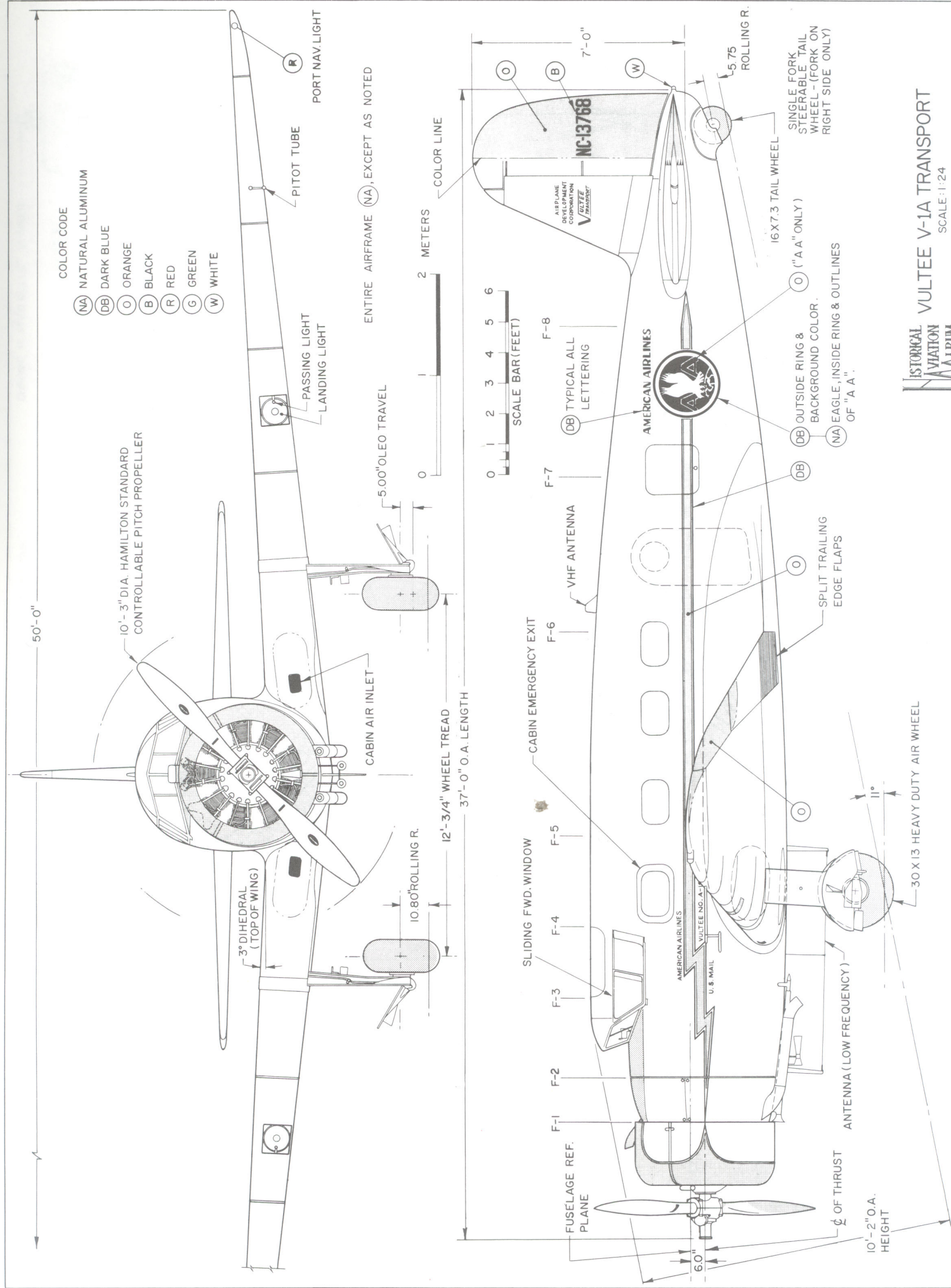
PERFORMANCE DATA	
TOP SPEED	235 MPH.
CRUISING SPEED (AT 7000 FT & 65% PWR)	215 MPH
STALLING SPEED	60 MPH
RATE OF CLIMB AT SEA LEVEL	1,000 FT/MIN
CRUISING RANGE	900 MILES
SERVICE CEILING	20,000 FT
ABSOLUTE CEILING (AT 8,500 lb AUW)	22,000 FT
WEIGHTS (FULL FUEL LOAD & ONE PILOT)	
EMPTY	5,307 LBS
FUEL (206 GALLONS)	1,236 LBS
OIL (15 GALLONS)	113 LBS
PILOT	170 LBS
PAYLOAD	1,575 LBS
GROSS WEIGHT (AUW)	8,500 LBS
POWER PLANT	
WRIGHT CYCLONE MODEL R 1820-F2	735 H.P.
AT 1,950 R.P.M. AT 4,100 FT.	



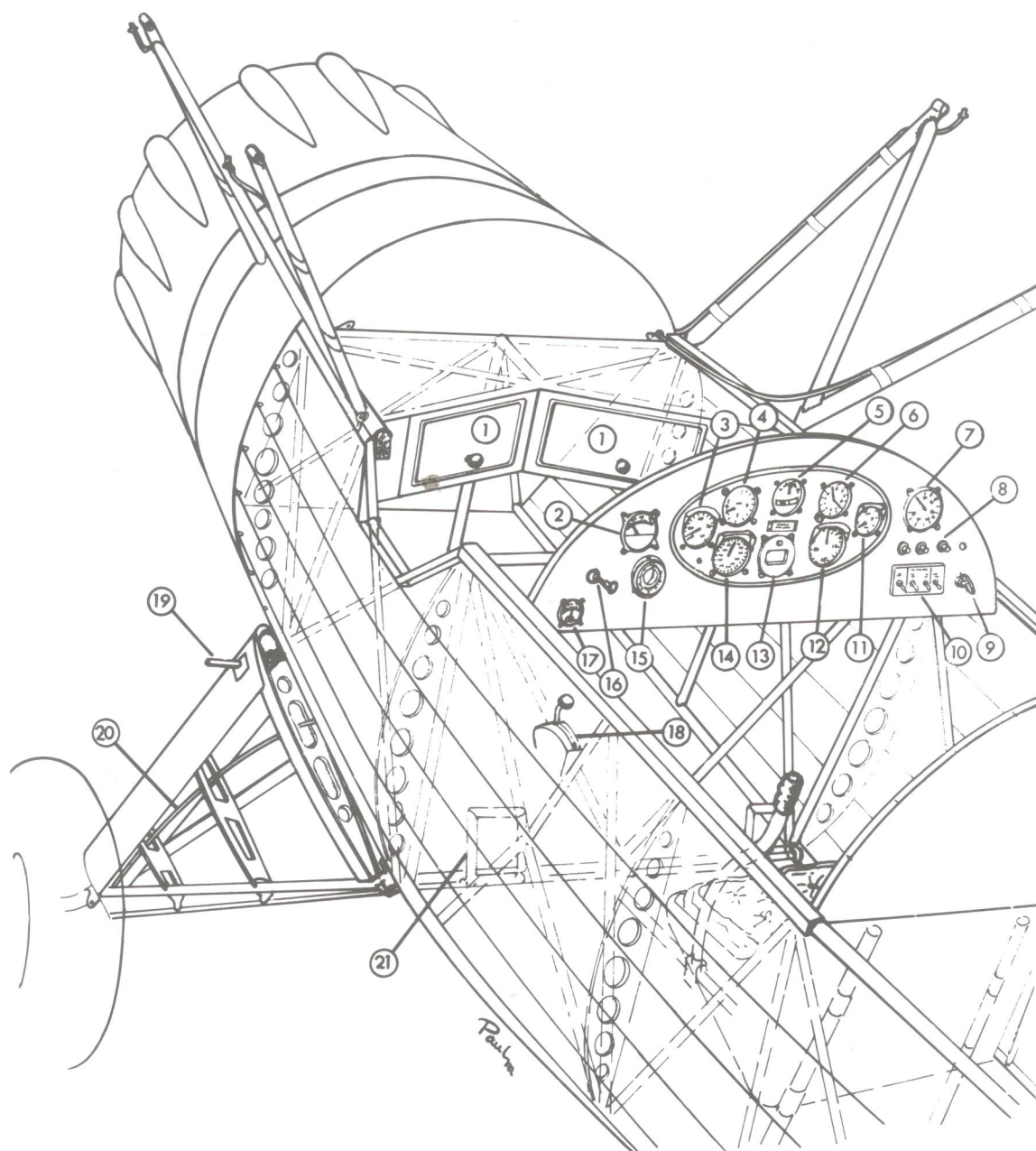
VULTEE V-1A TRANSPORT

SCALE 1:24

DRAWN BY ROB LAMBERT 1965



Waco YMF-5



- | | | | |
|----|---------------------|----|---------------------------------|
| 1 | Glove Compartment | 12 | Tachometer |
| 2 | Cylinder Head Temp. | 13 | Compass |
| 3 | Oil Temp. | 14 | Airspeed |
| 4 | Climb Indicator | 15 | Clock |
| 5 | Turn & Bank | 16 | Engine Primer |
| 6 | Altimeter | 17 | Throttle and
Mixture Control |
| 7 | Manifold Pressure | 18 | Service Step |
| 8 | Electrical Fuses | 19 | Brake Line |
| 9 | Parking Brake Lock | 20 | Rudder Pedal |
| 10 | Ignition Switches | | |
| 11 | Oil Pressure | | |

GENERAL SPECIFICATIONS

	MODEL	MODEL
	UMF	YMF
WEIGHT EMPTY	1485 lbs.	1540 lbs.
USEFUL LOAD	1015 lbs.	960 lbs.
GROSS WEIGHT	2500 lbs.	2500 lbs.
TOP SPEED	143 mph	147 mph
CRUISING SPEED	128 mph	129 mph
LANDING SPEED	47 mph	47 mph
RATE OF CLIMB, INITIAL	1100 ft/min	1250 ft/min
FUEL CAPACITY	50 gals.	50 gals.
OIL CAPACITY	5 gals.	5 gals.
CRUISING RANGE	450 miles	430 miles
SERVICE CEILING	14,500 ft.	16,000 ft.
WING AREA	233.5 sq ft	233.5 sq ft
WING LOADING	10.7 lbs./sq ft	10.7 lbs./sq ft
POWER LOADING	11.9 lbs./h.p.	11.1 lbs./h.p.

POWER: UMF-3/5 7 Cylinder 210 H.P. CONTINENTAL W-670
YMF-3/5 7 Cylinder 225 H.P. JACOBS L-4

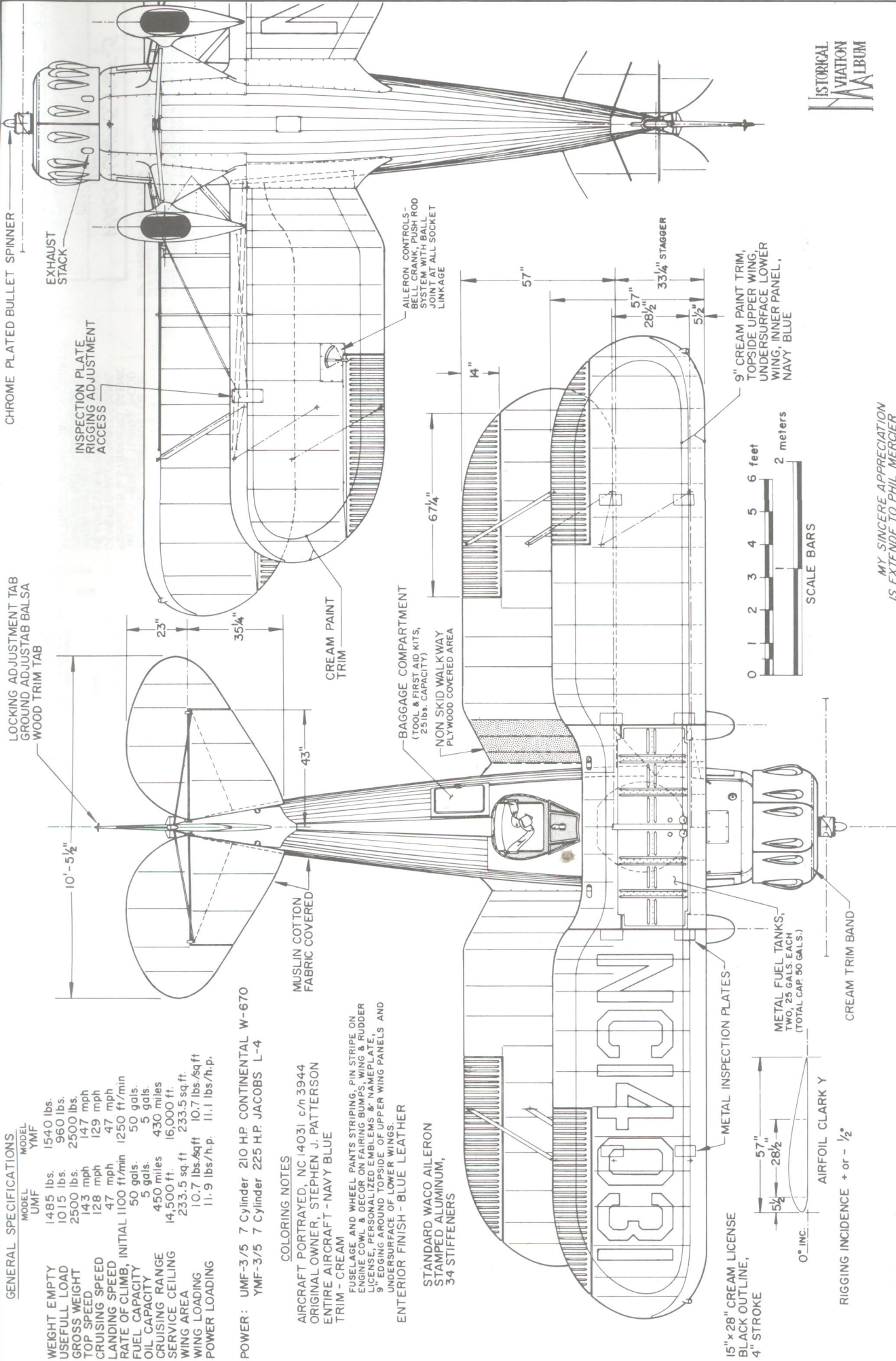
COLORING NOTES

AIRCRAFT PORTRAYED, NC14031 c/n 3944
ORIGINAL OWNER, STEPHEN J. PATTERSON
ENTIRE AIRCRAFT - NAVY BLUE
TRIM - CREAM

FUSELAGE AND WHEEL PANTS STRIPING, PIN STRIPE ON
ENGINE COWL & DECOR ON FAIRING BUMPS, WING & RUDDER
LICENSE, PERSONALIZED EMBLEMS & NAMEPLATE,
9" EDGING AROUND TOPSIDE OF UPPER WING PANELS AND
UNDERSURFACE OF LOWER WINGS.

EXTERIOR FINISH - BLUE LEATHER

STANDARD WACO AILERON
STAMPED ALUMINUM,
34 STIFFENERS



WING CONSTRUCTION, SPRUCE SPARS WITH
SPRUCE & MAHOGANY RIBS, ALUMINUM SHEET
LEADING EDGES, LINEN COVERED.

MY SINCERE APPRECIATION
IS EXTENDED TO PHIL MERCIER
FOR HIS ENTHUSIASTIC AND
UNTIRING INTEREST AND HELP
IN THE PREPARATION OF THESE
DRAWINGS

HISTORICAL
AVIATION
ALBUM

WACO UMF-5, YMF-5

1934 - 35

SCALE - ORIGINAL

1:24

1:48

DRAWN BY - PAUL R. MATT

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PLATE 1 of 3

DRAWING No. 13-97-A

CLEAR NAVIGATION LIGHT
FUEL TANK FILL CAP
EXTERNAL FUEL TANK SUPPORTS
GLASS FUEL GAUGE
COLOR SEPARATION LINE

30'-0"

2° DIH.

PITOT ASSEMBLY

55"

2°

BAGGAGE COMPARTMENT

CENTER SECTION RIBS
CLARK Y-57

FUEL LINES
BATTERY ACCESS
OIL CAP HOLE

FIXED SERVICE
STEP BAR
(LEFT SIDE ONLY)

26'-10"

2° 47'

STATIC GROUND LINE
NORMAL LOAD ABOARD

2

SCALE BAR (meters)

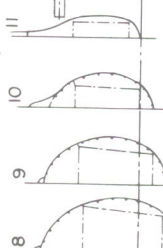
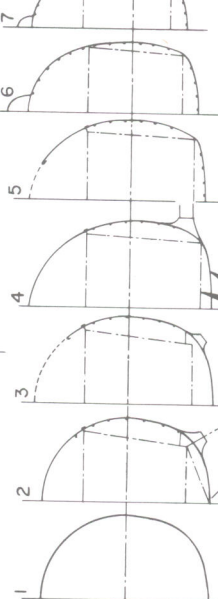
23'-3"

0 1 2 3 4 5 6

SCALE BAR (feet)

74 1/2"

WOOD FORMERS
STEEL TUBE
FRAMEWORK



HARTZELL
FIXED PITCH
WOOD PROPELLER

99" DIA. FIXED PITCH OR
GROUND ADJUSTABLE
HAMILTON STANDARD
METAL PROPELLER
OPTIONAL

STABILIZER ADJUSTABLE
+3° thru -4°

ABOVE IS ARRANGEMENT WHEN THE
FORWARD COCKPIT IS COVERED. THE
EQUIPMENT, OF FLAT SHEET ALUMINUM
AND FOLDED FOR STORAGE WHEN NOT
IN USE. FRONT WINDSHIELD CAME IN A
VARIETY OF PATTERNS, INCLUDING A
ONE PIECE WOLDED AFFAIR AS SHOWN.

63 1/2"

37 1/2"

28 5/8"

DATUM

NC 14031

8" SOLID RUBBER,
FULL SWIVELING,
NON LOCKING TAIL WHEEL

RETRACTABLE
LIFT BAR
(BOTH SIDES)

11

10

9

8

7

6

5

4

3

2

1

15 1/4" Approx.

7.50 x 10" GOODRICH TIRES
8.50 x 10" OPTIONAL
WHEEL PANTS OPTIONAL

PAINT TRIM ON FUSELAGE SIDE VIEW IS
DARKENED TO DIFFERENTIATE THIS DECOR
IN THIS VIEW ONLY. IT IS CREAM ON ACTUAL
AIRCRAFT AND WOULD NORMALLY BE
REVERSED IN TONE.

PAINT TRIM ON
ENGINE COWL ROCKER
ARM FAIRING BUMPS.
HAND PAINTED.
IRREGULAR PATTERN

NAVY BLUE
CREAM

INBOARD WHEEL
PANTS FAIRING

DATUM

96 3/4"

12"

HISTORICAL
AVIATION
ALBUM

THE 12" TRIANGULAR INSIGNIA ON THE FIN IS EMBLEM
OF THE HICKSVILLE, LONG ISLAND, NEW YORK, AVIATION
COUNTRY CLUB. IT HAS NO WACO SIGNIFICANCE. COLORS
WHITE OUTLINE, SILHOUETTE EAGLE & STARS. NAVY BLUE
BACKGROUND, SAME AS AIRCRAFT. WHITE EAGLE ON THE
WING. THE INSIGNIA IS PILOT'S PERSONAL OR FAMILY CREST.
HIS NAME WAS J. PATTERSON, STEPHEN J. PATTERSON
OF BROOKLYN, NEW YORK.

WACO UMF-5, YMF-5
1934-35

SCALE - ORIGINAL 1:24
REPRO 1:48

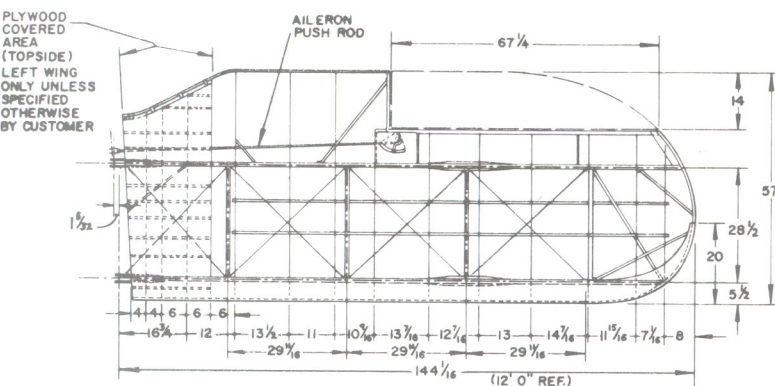
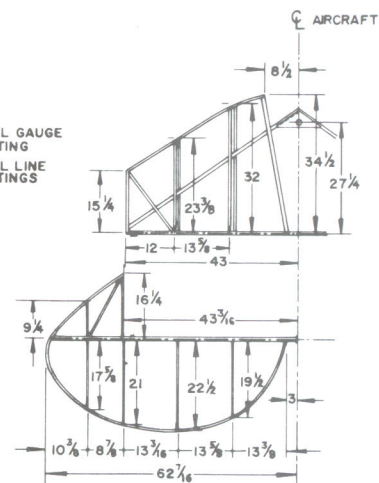
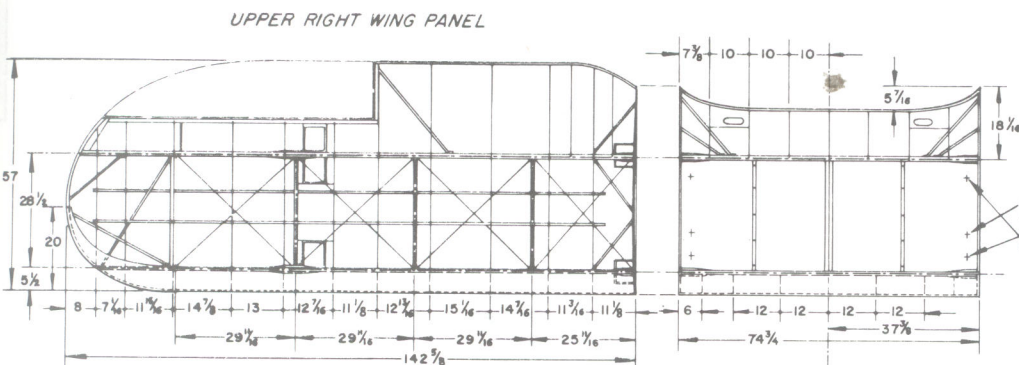
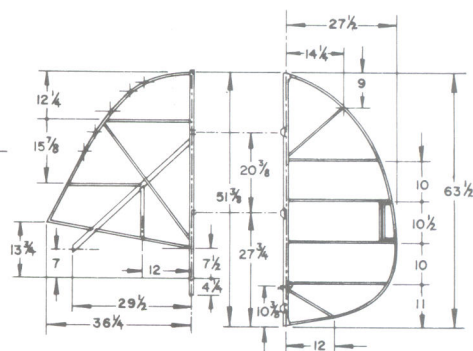
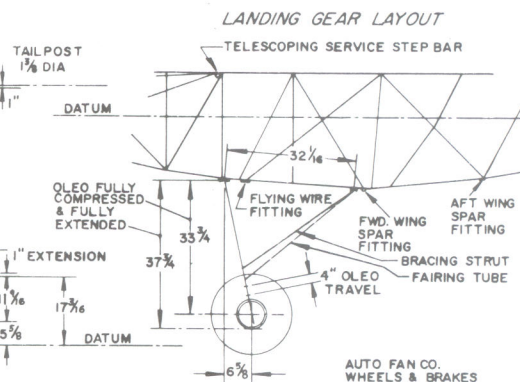
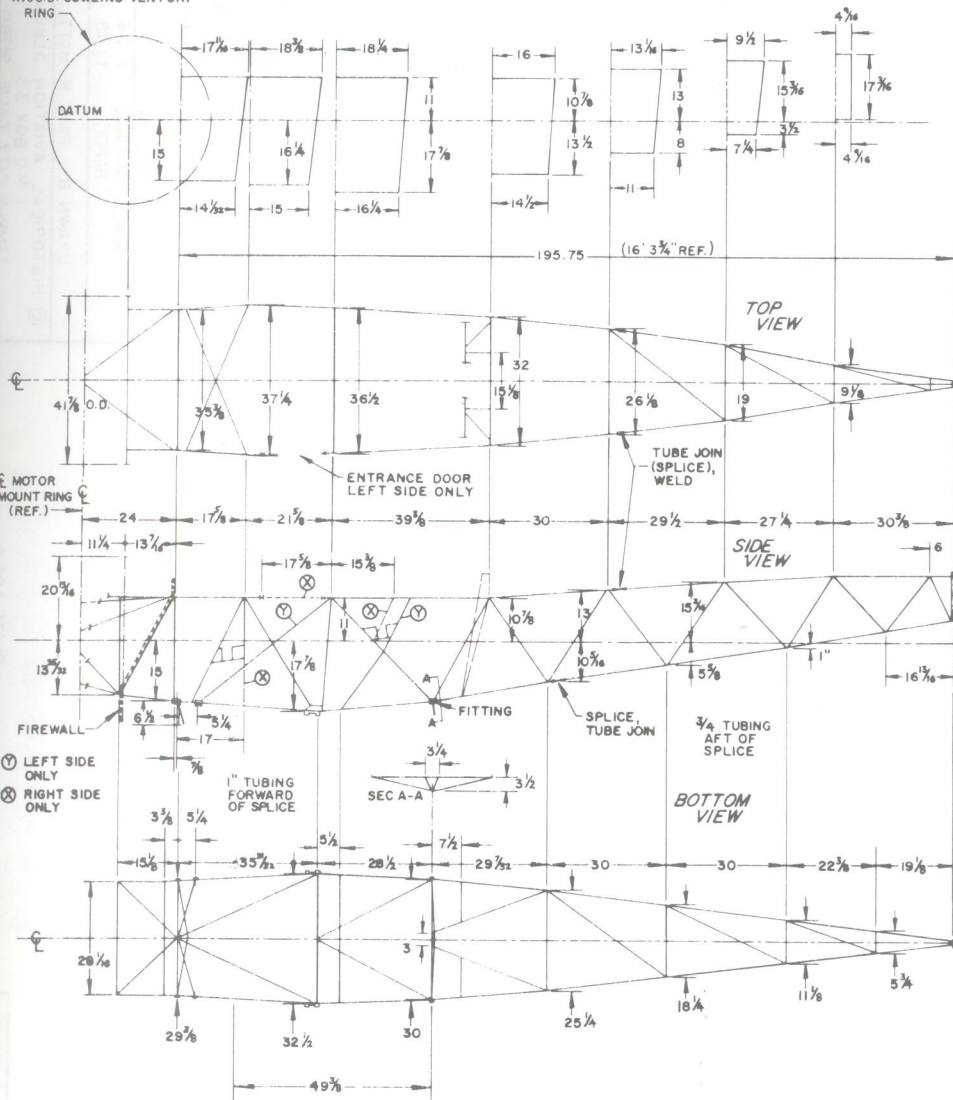
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Aviation Heritage — P.O. Box 2065
Terre Haute, IN 47802

4 1/8 O.D. COWLING VENTURI RING

CENTER LINE LAYOUT OF MAJOR COMPONENTS

ALL DIMENSIONS ARE BETWEEN CENTER LINES UNLESS DRAWN OTHERWISE.
ALL DIMENSIONS ARE IN INCHES.



"KAWNEER" 3/8 x 5/8 STREAMLINE TUBE USED ON ALL TRAILING EDGES, DEEP DRAWN STEEL CHANNEL FORMED WING RIBS AND TAPERED TO SUIT ON TAIL SURFACES.

HISTORICAL AVIATION ALBUM

WACO UMF-5, YMF-5

1934-35
SCALE - ORIGINAL 1:24
REPRO. 1:48
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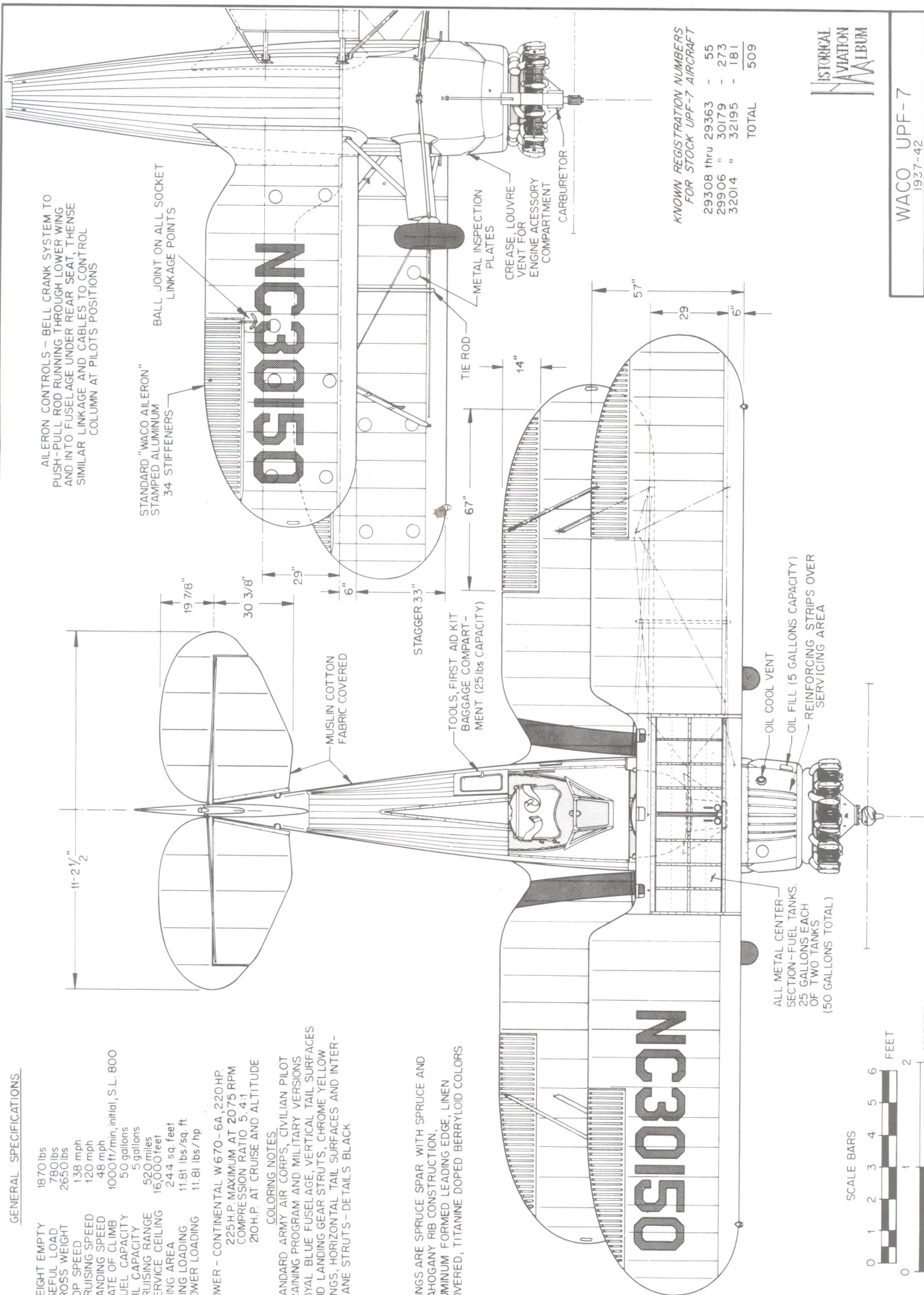
GENERAL SPECIFICATIONS

WEIGHT EMPTY 1870 lbs
 USEFUL LOAD 780 lbs
 GROSS WEIGHT 2650 lbs
 TOP SPEED 138 mph
 CRUISING SPEED 120 mph
 LANDING SPEED 48 mph
 RATE OF CLIMB 1000 ft/min, initial, S.L. 800
 FUEL CAPACITY 50 gallons
 CRUISING RANGE 520 miles
 SERVICE CEILING 16,000 feet
 WING AREA 244 sq. feet
 WING LOADING 11.81 lbs./sq. ft.
 POWER LOADING 11.81 lbs./hp
 POWER - CONTINENTAL W 670-6A, 220 HP
 225 H.P. MAXIMUM AT 2075 RPM
 COMPRESSION RATIO 5.4:1
 210 H.P. AT CRUISE AND ALTITUDE

COLORING NOTES

STANDARD ARMY AIR CORPS, CIVILIAN PILOT
 TRAINING PROGRAM AND MILITARY VERSIONS
 ROYAL BLUE FUSELAGE, VERTICAL TAIL SURFACES
 AND LANDING GEAR STRUTS, CHROME YELLOW
 WINGS, HORIZONTAL TAIL SURFACES AND INTER-
 PLANE STRUTS - DETAILS BLACK

WINGS ARE SPRUCE SPAR WITH SPRUCE AND
 MAHOGANY RIB CONSTRUCTION,
 ALUMINUM FORMED LEADING EDGE, LINEN
 COVERED, TITANINE DOPED BERRYLOID COLORS



KNOWN REGISTRATION NUMBERS
 FOR STOCK UPF-7 AIRCRAFT
 29308 thru 29363 - 55
 29906 " 30179 - 273
 32014 " 32195 - 181
 TOTAL 509

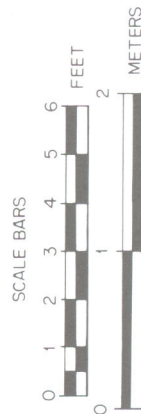
HISTORICAL
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 ALBUM

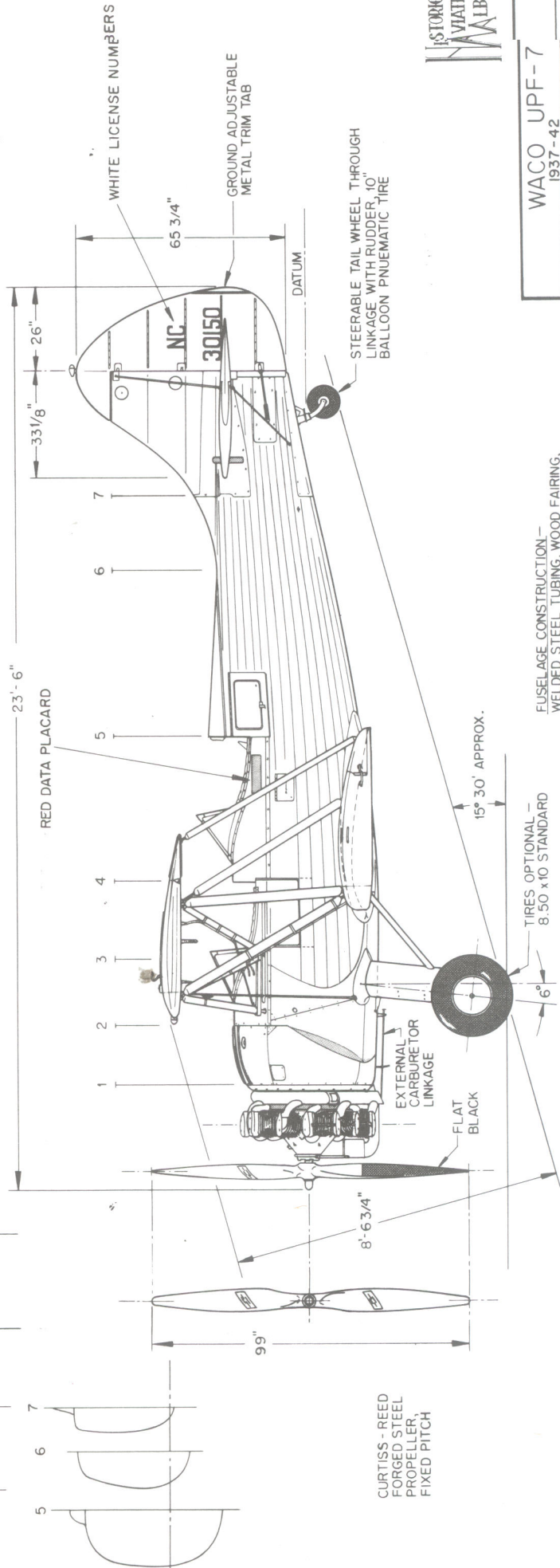
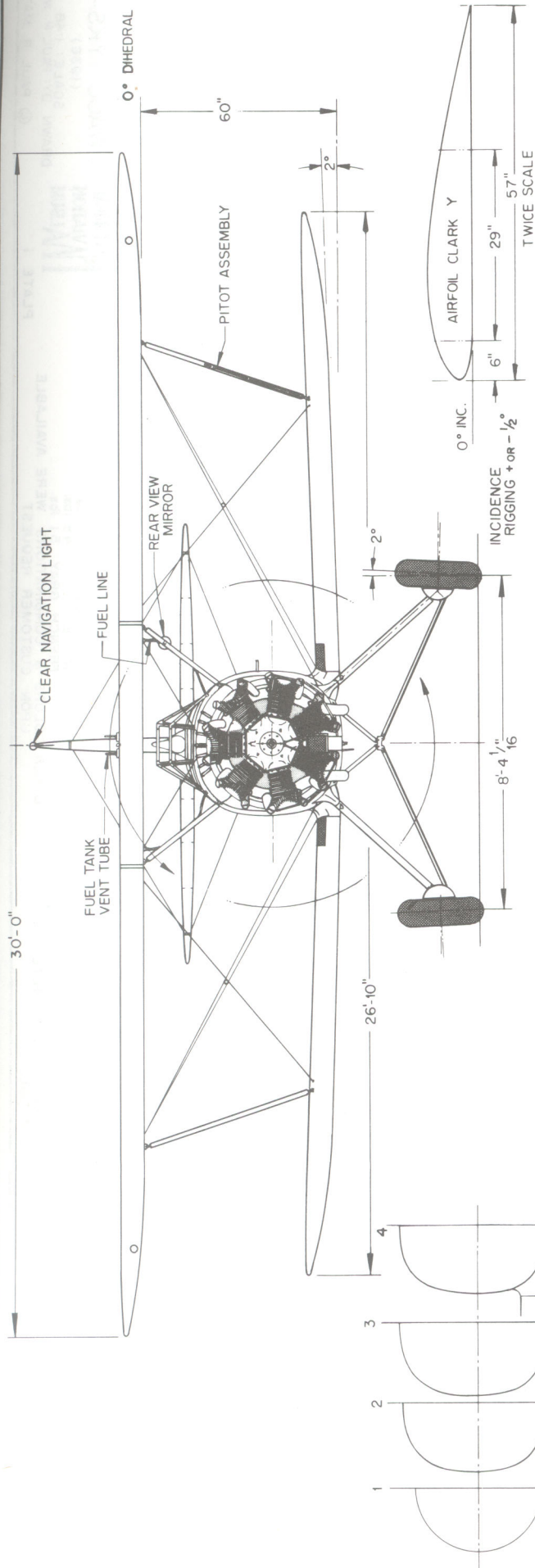
WACO UPF-7
 1937-42

SCALE - ORIGINAL 1:24
 REPRO 1:48

DRAWN BY: PAUL R. MATT

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FUSELAGE CONSTRUCTION -
WELDED STEEL TUBING, WOOD FAIRING,
FABRIC AFT COVERED, ALUMINUM DECKING,
HEADREST, FORWARD ENGINE AREA AND
ALL FILLETING



HISTORICAL
AVIATION
ALBUM

WACO UPF-7		
1937-42		
SCALE - ORIGINAL	1: 24	
REPRO.	1: 48	
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TEMPLE CITY, CALIF. 91780		

GENERAL SPECIFICATIONS

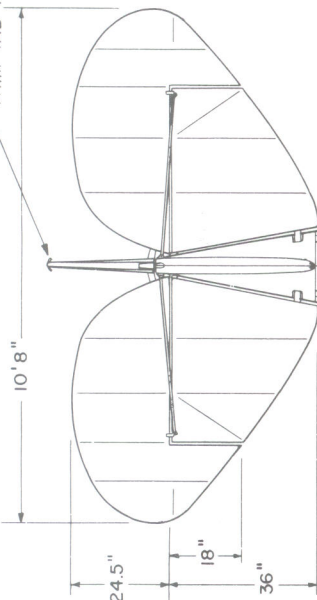
WEIGHT EMPTY 1945 lbs.
 USEFUL LOAD 767 lbs.
 GROSS WEIGHT 2745 lbs.
 TOP SPEED 144 m.p.h. at S.L.
 CRUISING SPEED 135 m.p.h.
 LANDING SPEED 55 m.p.h.
 RATE OF CLIMB 850 ft./min.-initial
 FUEL CAPACITY 70 gals.
 OIL CAPACITY 5 gals.
 CRUISING RANGE 518 miles
 SERVICE CEILING 12,500 ft.
 WING AREA 244 sq. ft.
 WING LOADING 13.32 lbs./sq. ft.
 POWER LOADING 14.44 lbs./H.P.

DATA APPROX. & APPLIES TO BASIC YKS-6
 IN CLASS II CATEGORY UNDER A.T.C.-533

NOTE: THIS DRAWING IS TYPICAL OF THE
 ENTIRE -KS SERIES (YKS, YKS, YKS, YKS, YKS-7F).
 MINOR CHANGES WERE INCORPORATED DURING
 SEVERAL YEARS OF PRODUCTION. DIMENSIONS &
 DESIGN VARIED LITTLE THROUGHOUT THESE YEARS
 O.A. LENGTH WITH PROPELLER USED, FUEL
 CAPACITY 50 to 70 gals., GEAR TREAD ACCORDING TO
 MODIFICATION & WEIGHT CLASS CATEGORY UNDER
 A.T.C. PERMIT. GROSS WEIGHT & USEFUL LOADS
 VARIED ACCORDING TO OPTIONAL EQUIPMENT (INCL.
 ENGINE INSTALLATION) UNDER CLASS PERMIT ISSUED.

YKS-6 PLACARD SPEEDS - LEVEL FLIGHT 140 m.p.h. INDICATED
 GLIDE OR DIVE 168 m.p.h. "

TRIM TAB ADJUSTMENT PLATE



AILERON CONTROLS-BELL CRANK SYSTEM TO
 PUSH-PULL ROD RUNNING THROUGH LOWER WING
 AND INTO FUSELAGE UNDER REAR SEAT, THENCE
 SIMILAR LINKAGE & CABLES TO CONTROL
 COLUMN AT PILOT POSITION.

BALL JOINT ON ALL SOCKET LINKAGE
 POINTS

INSPECTION
 PLATES
 (metal)

METERS 0 1 2

CORRUGATED ALUMINUM
 AILERONS-34 STIFFENERS

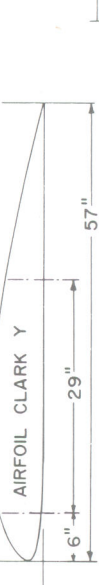
ALUM. FILLET

0 1 2 3 4 5 6 FEET

GRIMES
 RETRACT-
 ABLE LAND-
 ING LIGHT
 (optional)

BRAKE LINKAGE
 FAIRING COVER

WINGS LINEN COVERED,
 BALANCE MUSLIN COTTON FABRIC
 COVERED, TITANINE DOPED,
 BERRYLOID COLORS



COLORING NOTES:

AIRCRAFT PORTRAYED, O.A. SILVER, BLACK TRIM,
 NO PIN STRIPING - s/n 4526
 STANDARD COLORS FOR -KC-KS SERIES:
 GUNMETAL GRAY, SILVER, INSIGNIA BLUE
 WITH BLACK, VERMILLION, WHITE OR
 FRENCH GRAY TRIM

WHEN O.A. COLOR SCHEMES WERE USED-WEIGHT
 PENALTY WAS AS FOLLOWS:
 SILVER NONE
 DARK BLUE 7 lbs.
 BLACK 36 lbs.
 VERMILLION 40 lbs.
 WHITE 48 lbs.
 FRENCH GRAY 51 lbs.
 OTHER COLORS & COMBINATIONS WERE AVAILABLE
 UPON CUSTOMER REQUEST

YKS-6, NC-16592 HAS BEEN FLYING
 REGULARLY FOR OVER 29 YEARS

HISTORICAL
 AVIATION
 MUSEUM

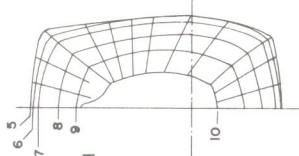
WACO YKS-6
 (1936)

SCALE: 1:48
 DRAWN BY: PAUL R. MATT

PLATE 1

© PAUL R. MATT, 1965

PROGRESSIVE
DEVELOPMENT
OF AFT FUSELAGE



DIAGONAL STRUT FITTING BAR GOES THROUGH
WING AT ROOT TO TOP WHERE BOLT FITTING SECURES
IT TO FUSELAGE CROSS MEMBER.

FUEL TANK
VENT

FUEL TANK
SUPPORT STRIPS
(wood)

FUEL
GAUGE

JACOBS L-4 ENGINE, 225 H.P. at 2000 r.p.m.
(TAKE OFF - MAX. POWER,
1 Minute limit)

CARBURETOR AIR SCOOP

OPTIONAL TIRES - SIZE & MFG.
6.50 x 10, 7.50 x 10 or -
(8.50 x 10) ← CERTIFIED WAR-SURPLUS,
NOT FACTORY EQUIPMENT



7'3" Extended Gross wgt.

28'3"

53"

2°30'

DIH. BOTH
WINGS

WACO
AIRPLANES

66"

63"

10

9

8

7

6

5

4

3

2

1

REEL TYPE
TRAILING ANTENNA

25'3"

GROUND ADJUST-
ABLE TRIM TAB
(SOLID BALSAMWOOD)

ADJUSTABLE
STABILIZER

STEERABLE TAIL WHEEL
THROUGH LINKAGE WITH
RUDDER (OPTIONAL)

ALUMINUM
FAIRING

FAIRING
OVER CARB.
LINKAGE

13° APPROX.

4°

SERVICE
STEP BAR

WHEEL PANTS
OPTIONAL

HAMILTON-
STANDARD
CONTROLLABLE
PITCH PROP.

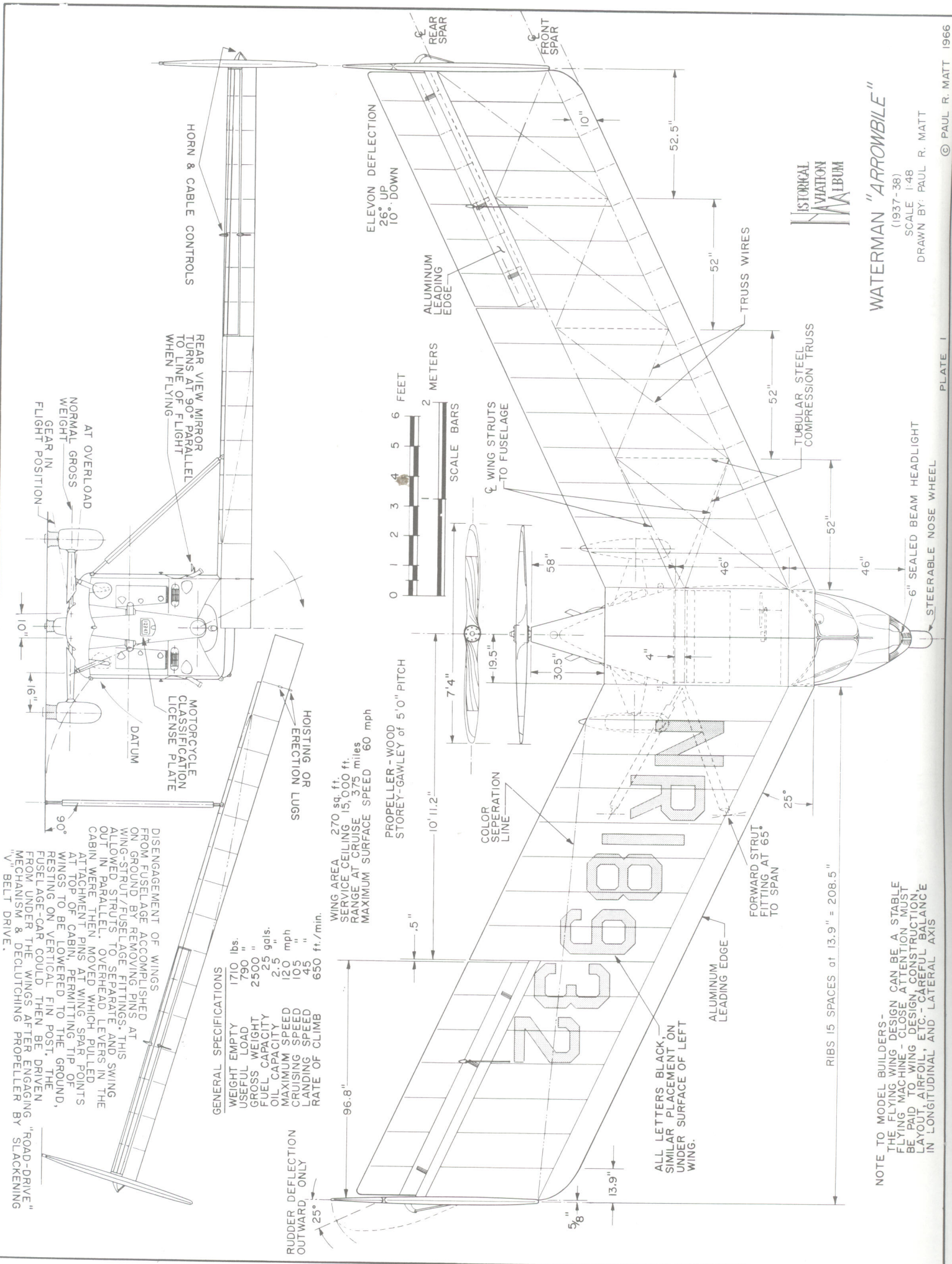
8'3"

9.75"

WACO YKS-6
(1936)
SCALE: 1:48
DRAWN BY: PAUL R. MATT
© PAUL R. MATT, 1965

PLATE 2

109

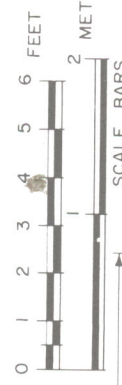


GENERAL SPECIFICATIONS

WEIGHT EMPTY	1710	lbs.
USEFUL LOAD	790	"
GROSS WEIGHT	2500	"
FUEL CAPACITY	25	gals.
OIL CAPACITY	2.5	"
MAXIMUM SPEED	120	mph
CRUISING SPEED	105	"
LANDING SPEED	45	"
RATE OF CLIMB	650	ft./min.

WING AREA 270 sq. ft.
 SERVICE CEILING 15,000 ft.
 RANGE AT CRUISE 375 miles
 MAXIMUM SURFACE SPEED 60 mph

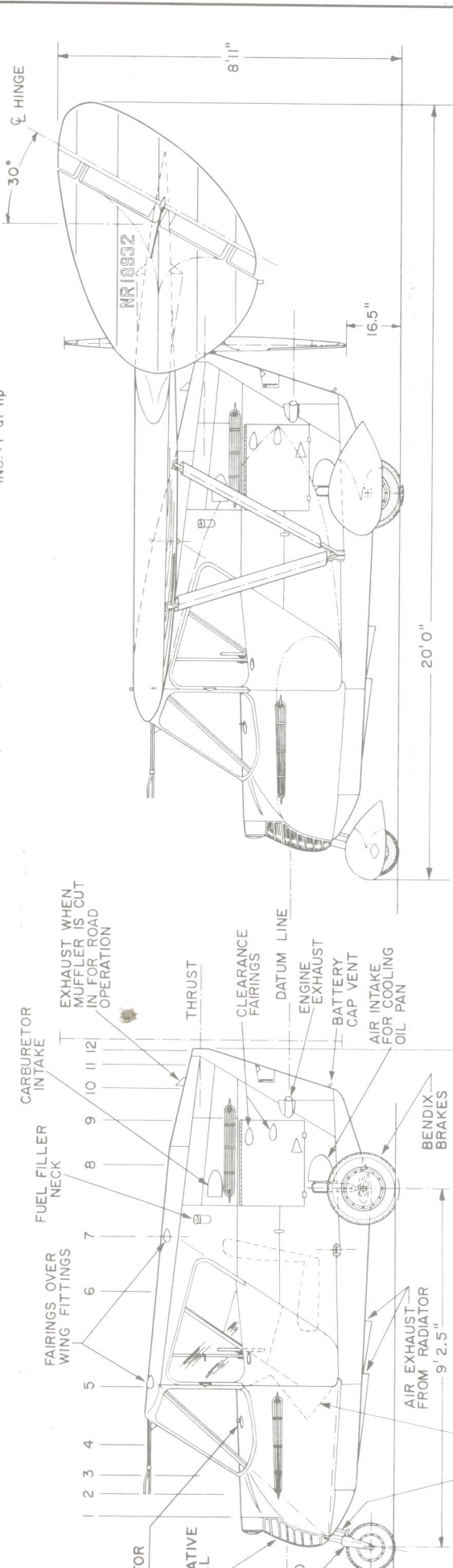
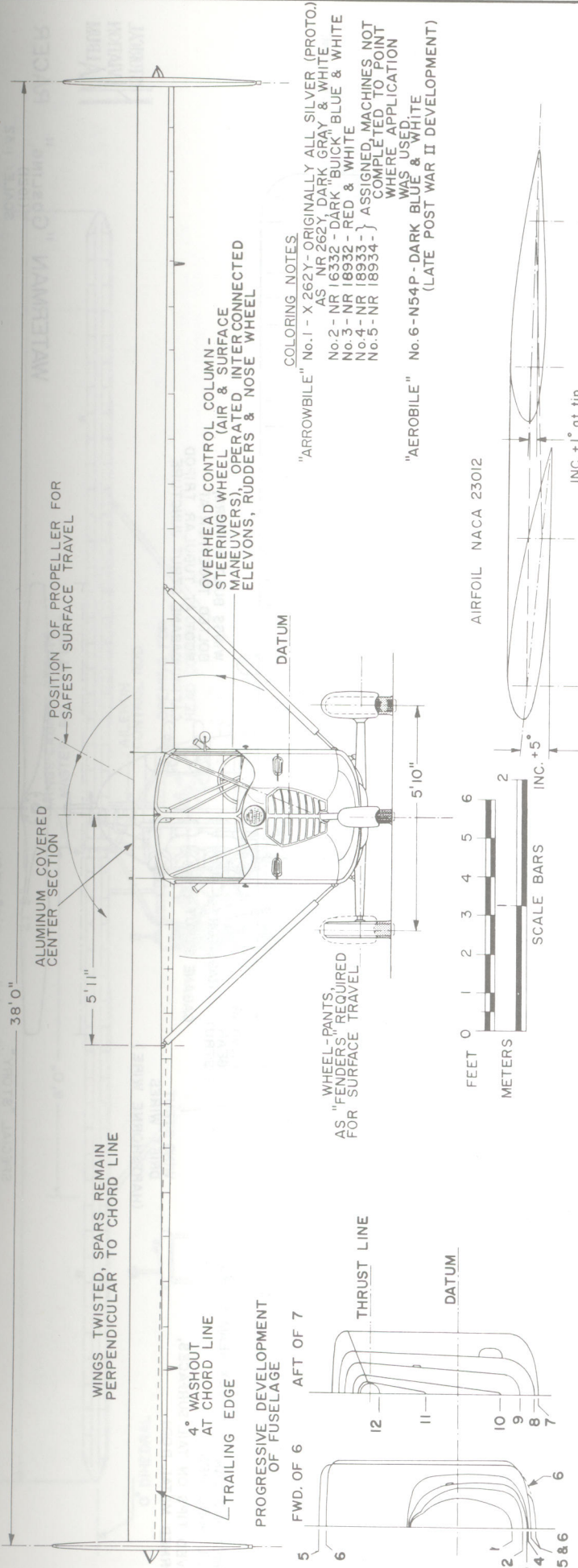
PROPELLER - WOOD
 STOREY-GAWLEY of 5'0" PITCH



NOTE TO MODEL BUILDERS -
 THE FLYING WING DESIGN CAN BE A STABLE
 FLYING MACHINE - CLOSE ATTENTION MUST
 BE PAID TO WING DESIGN, CONSTRUCTION,
 LAYOUT, AIRFOIL, ETC. - CAREFUL BALANCE
 IN LONGITUDINAL AND LATERAL AXIS

WATERMAN "ARROWBILE"

(1937-38)
 SCALE 1:48
 DRAWN BY: PAUL R. MATT



COLORING NOTES
 "ARROWBILE" No. 1 - X 262Y - ORIGINALLY ALL SILVER (PROTO).
 AS NR 262Y - DARK GRAY & WHITE
 No. 2 - NR 1633Z - DARK BUICK BLUE & WHITE
 No. 3 - NR 1893Z - RED & WHITE
 No. 4 - NR 1893Z - RED & WHITE
 No. 5 - NR 1893Z - } ASSIGNED, MACHINES NOT
 COMPLETED TO POINT
 WHERE APPLICATION
 WAS USED.
 "AEROBILE" No. 6 - N54P - DARK BLUE & WHITE
 (LATE POST WAR II DEVELOPMENT)

WATERMAN
ARROWBILE

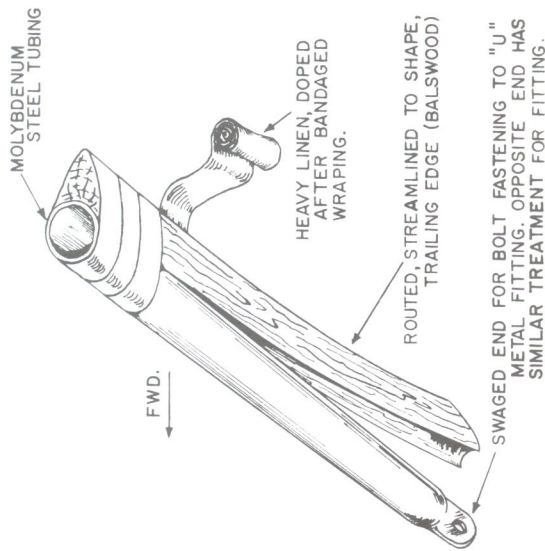
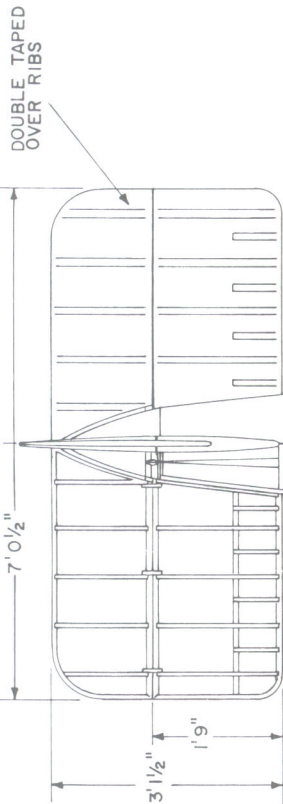
WATERMAN "ARROWBILE"
 (1937-38)
 SCALE 1:48
 DRAWN BY: PAUL R. MATT

GENERAL SPECIFICATIONS

WEIGHT EMPTY	885 lbs.
USEFUL LOAD	245 "
GROSS WEIGHT	1130 "
FUEL CAPACITY	10 gals.
OIL CAPACITY	3 "
SPEED, MAX.	136 mph
LANDING SPEED	60 "
CRUISING SPEED	110 "
WING AREA	112 sq.ft.
WING LOADING	11.1 lbs./sq.ft.
POWER LOADING	12.5 lbs./H.P.
RANGE AT CRUISING	135 miles

COLORING:

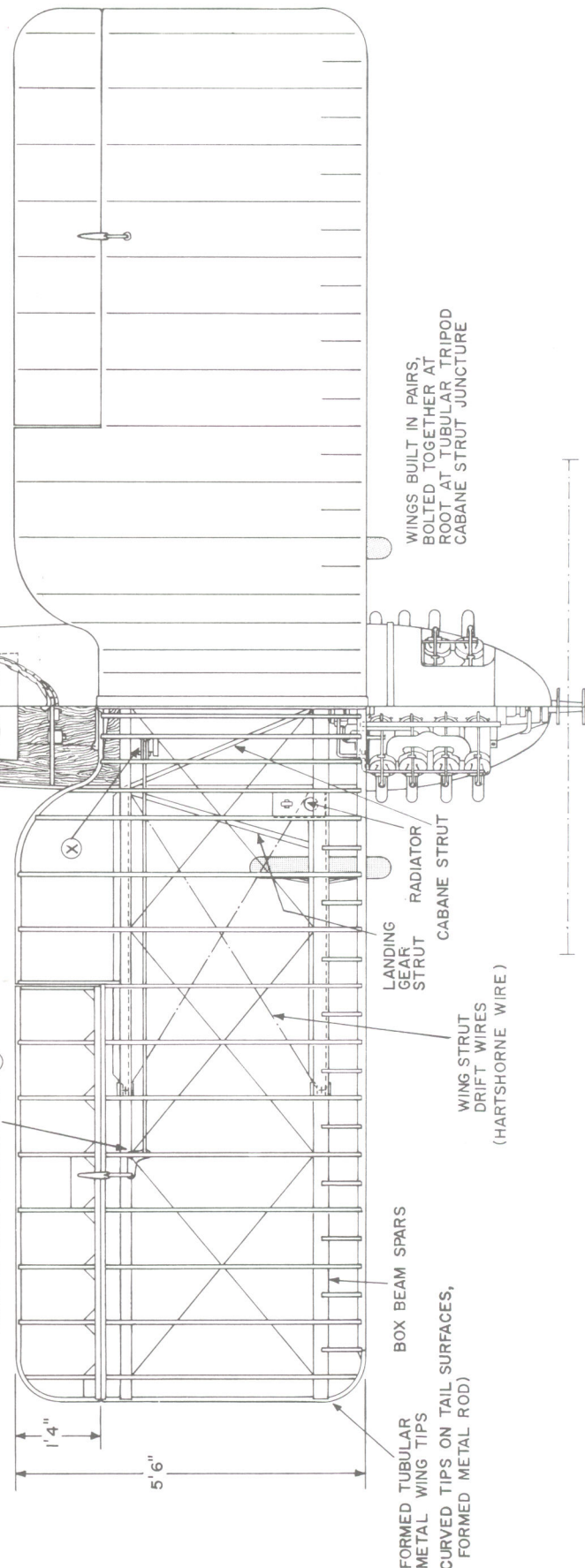
FUSELAGE & ALL STRUTS - GLOSS BLACK
WING & TAIL SURFACES - CRIMSON RED
NO LICENSE OR LETTERING EMPLOYED



TREATMENT OF ALL EXPOSED STRUTS
(THIS IS A TYPICAL METHOD EMPLOYED ON MANY AIRCRAFT
THROUGHOUT HISTORY)



BELL-CRANK AILERON CONTROL,
TO PUSH-PULL ROD, SIMILAR
LINKAGE INTO FUSELAGE AT (X)



SPECIAL "STORY"
WOOD PROPELLER

7'9" DIA. - 7'0" PITCH

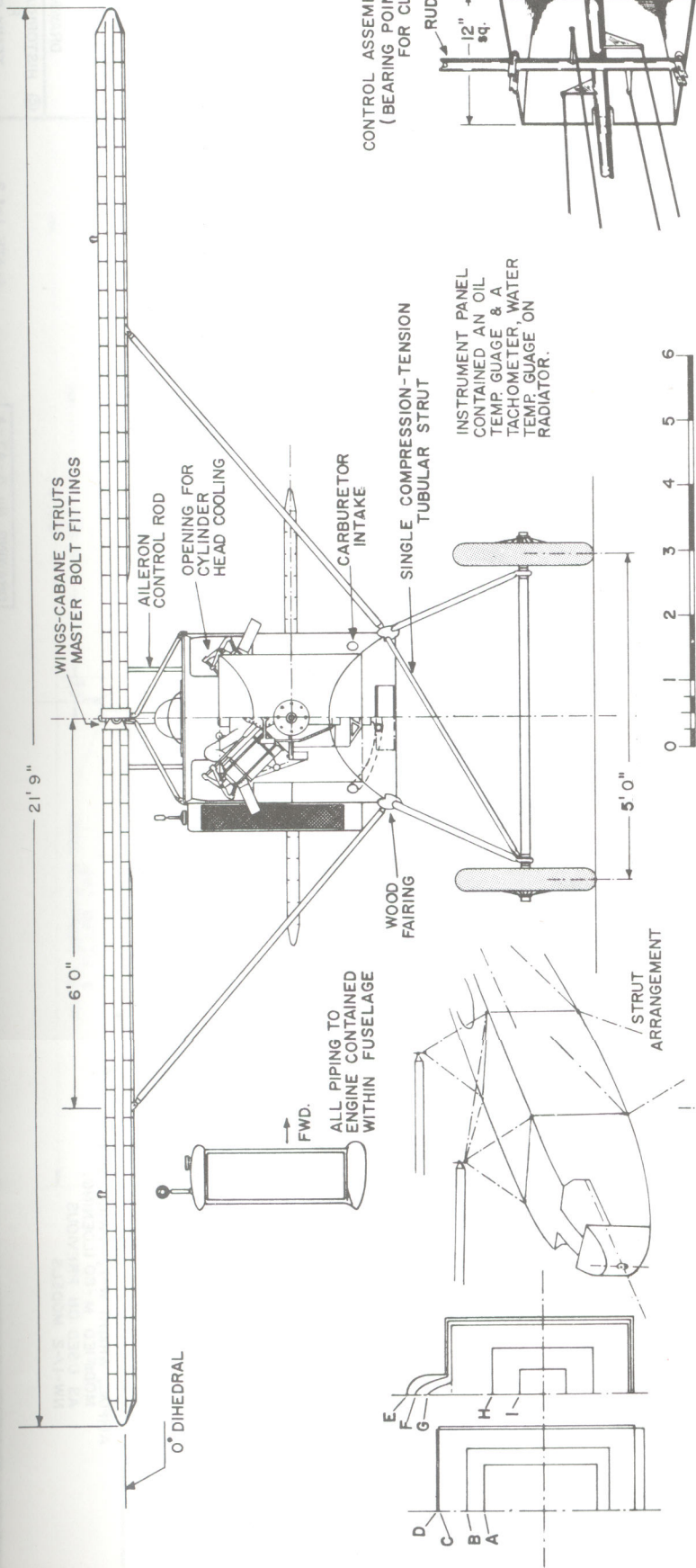
HISTORICAL
NAVIGATION
MUSEUM

WATERMAN "GOSLING" RACER
(1921)

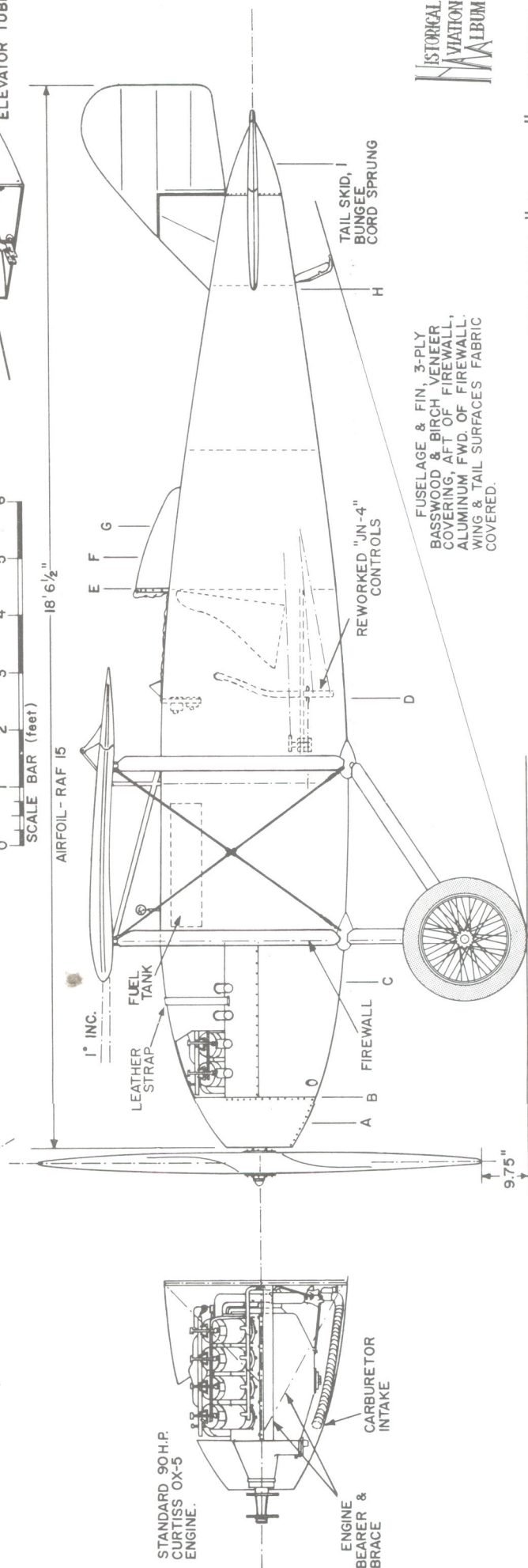
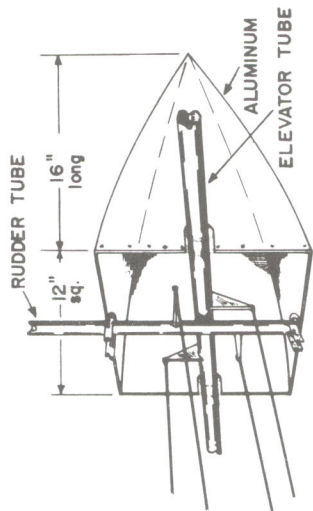
SCALE: 1:32

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PLATE 1



CONTROL ASSEMBLY WITHIN TAIL CONE
(BEARING POINTS NOT SHOWN
FOR CLARITY)



FUSELAGE & FIN, 3-PLY
BASSWOOD & BIRCH VENEER
COVERING, AFT OF FIREWALL,
ALUMINUM FWD. OF FIREWALL.
WING & TAIL SURFACES FABRIC
COVERED.

ISTORICAL
AVIATION
MUSEUM

WATERMAN "GOSLING" RACER (1921)

NO SHOCK ABSORBING
SYSTEM USED ON MAIN
LANDING GEAR

SCALE: 1:32

PLATE 2

DRAWN BY: PAUL R. MATT © 1965

GENERAL SPECIFICATIONS, F2W-1 A-6744

WEIGHT EMPTY 2468 lbs.
 USEFUL LOAD 618 lbs. (not incl. water)
 GROSS WEIGHT 3086 lbs.
 MAXIMUM SPEED 247.7 mph.
 LANDING SPEED 75 mph. approx.
 FUEL CAPACITY 60 gals.
 OIL CAPACITY 31.7 gals. A-6743
 WATER CAPACITY 6.4 gals.
 WING AREA (TOTAL) 174 sq. ft. incl. ailerons
 WING LOADING 16.4 lbs./sq. ft.
 POWER LOADING 3.81 lbs./h.p. (ALL UP WEIGHT)

POWER - WRIGHT T-3, S/N 6372, 750 h.p. max.
 at 2200 r.p.m., SPECIAL 6.5 in. HIGH
 COMPRESSION ENGINE, 5.75" BORE,
 6.25" STROKE, 1947 cu. in. DISPLACEMENT

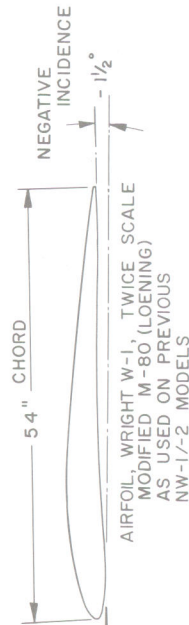
COLORING NOTES

FUSELAGE & NOSE SPINNER - FIRE ENGINE RED
 WINGS, OTHER THAN RADIATORS, TAIL SURFACES,
 LANDING GEAR STRUTS, INTERPLANE STRUTS -
 GLOSS WHITE
 RACING No. 8 - WHITE
 LETTERING ON RUDDER - BLACK
 WING RADIATORS - RUSTIC BRASS

AILERONS ON LOWER WINGS WERE
 TORQUE TUBE OPERATED, UPPER WING
 AILERONS OPERATED THROUGH INTER-
 AILERON STRUT. METAL FRAME,
 LINEN COVERED.

WIND BREAK WITH CRASH
 PAD, NO TRANSPARENT
 WINDSHIELD EMPLOYED

BOTH UPPER & LOWER WING PANELS
 OF SAME BASIC CONSTRUCTION AND
 CONFIGURATION.

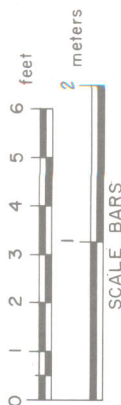


NOTE:
 WIDE AIRFOIL SHAPED 'LIFTING'
 UNDERCARRIAGE SPREADER BAR
 CUT A WAY TO SHOW OIL
 COOLING RADIATOR.

ALUMINUM
 INSPECTION
 PANELS

ALUMINUM
 HEADREST

FUSELAGE
 PLYWOOD
 MONOCOQUE
 CONSTRUCTION



17 1/2"

54"

ELEVATORS STEEL
 FRAME, LINEN COVERED

CARBURETOR
 INTAKE

ALUMINUM
 SPINNER

ALUMINUM
 FAIRING

STABILIZER AND
 VERTICAL FIN,
 SPRUCE WOOD FRAME,
 MAHOGANY PLY
 COVERED.

FAIRING FOR INTERNAL
 RUDDER CONTROL
 HORN.

NOTE:
 THESE DRAWINGS AND THE COMPANION F2W-2 MODEL
 WERE COMPLETED FROM ORIGINAL WRIGHT AERONAUTICAL
 CORP. BLUEPRINTS, 6A100 SERIES, THROUGH THE COOPERATION
 AND RESEARCH OF THOMAS G. FOXWORTH

WRIGHT F2W-1 RACER

1923

SCALE - 1:24

DRAWN BY - PAUL R. MATT

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P.O. BOX 33

TEMPLE CITY, CALIF. 91780

PLATE 1 of 2

DRAWING No. 5-43-A

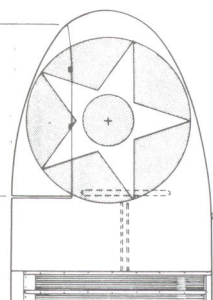
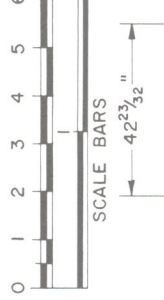
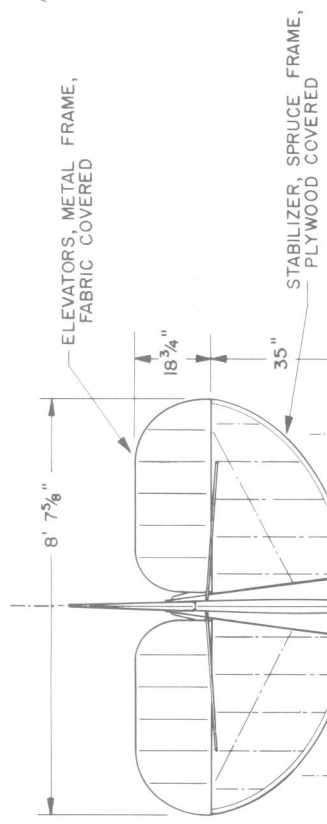
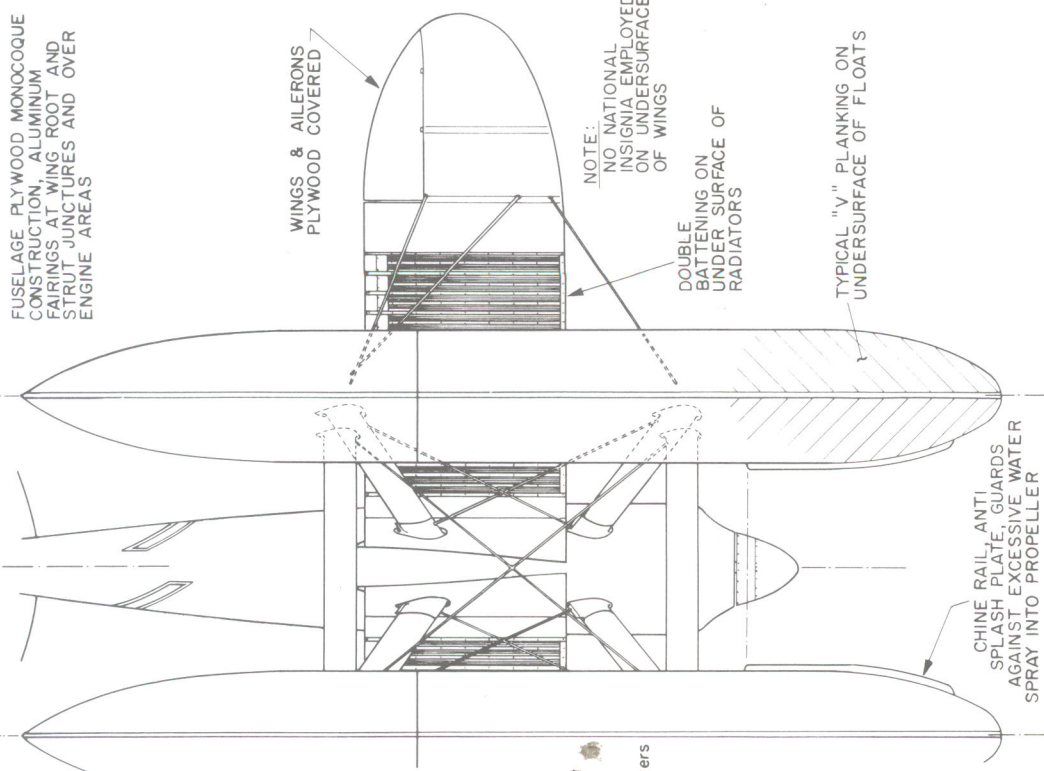
GENERAL SPECIFICATIONS WRIGHT F2W-2, A-6744

WEIGHT EMPTY 3296 lbs.
USEFUL LOAD 865 lbs.
GROSS WEIGHT 4161 lbs.
MAXIMUM SPEED 235 m.p.h. (estimated)
LANDING SPEED 110 m.p.h. (estimated)
FUEL CAPACITY 95 gals.
OIL CAPACITY 9 gals.
WATER CAPACITY 8 gals.
WING AREA 170 sq. ft. (incl. ailerons)

POWER - WRIGHT T-3, 750 h.p. max.
AT 2200 r.p.m., SPECIAL
6.5 to 1 HIGH COMPRESSION
RATIO - 5.75 BORE, 6.25 STROKE

AILERONS TORQUE TUBE OPERATED
THROUGH LOWER WING PANELS
TO BELL-CRANK AND CABLE
SYSTEM UP WITHIN INTERPLANE
STRUTS TO BELL-CRANK OPERATION
OF UPPER AILERONS.

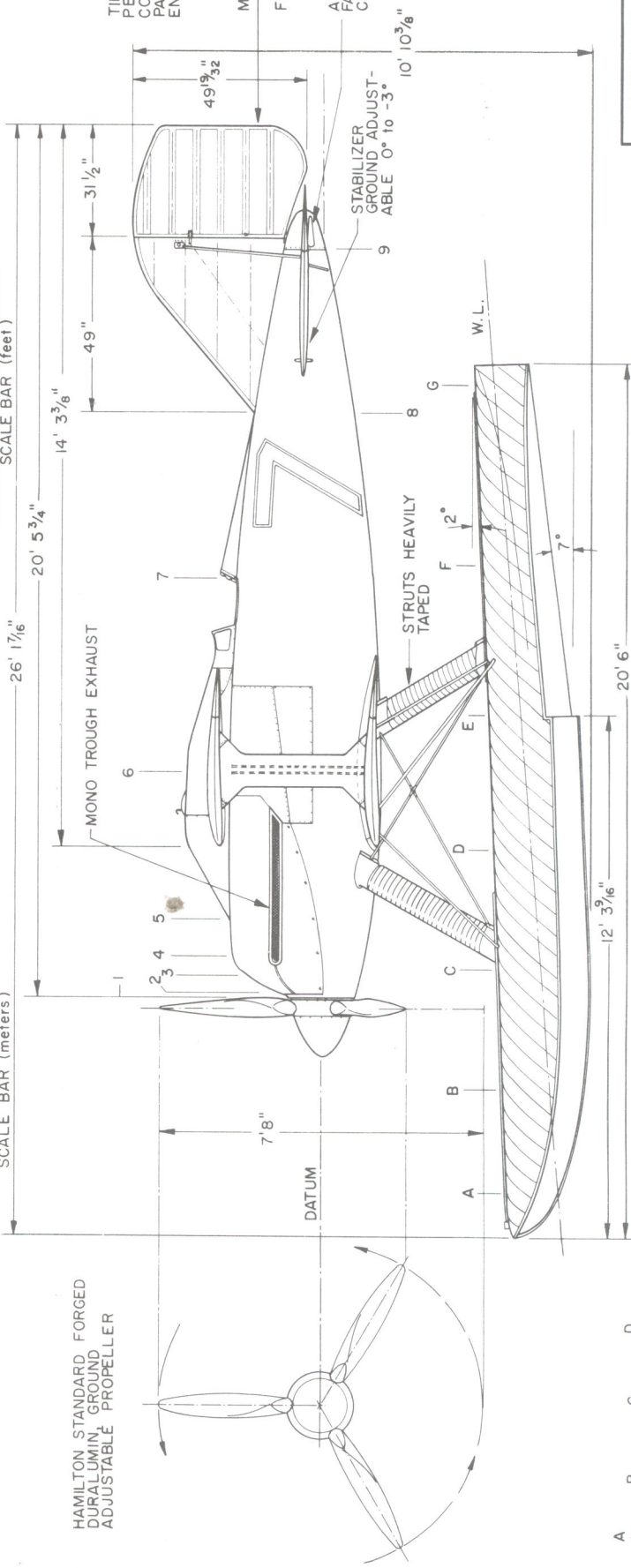
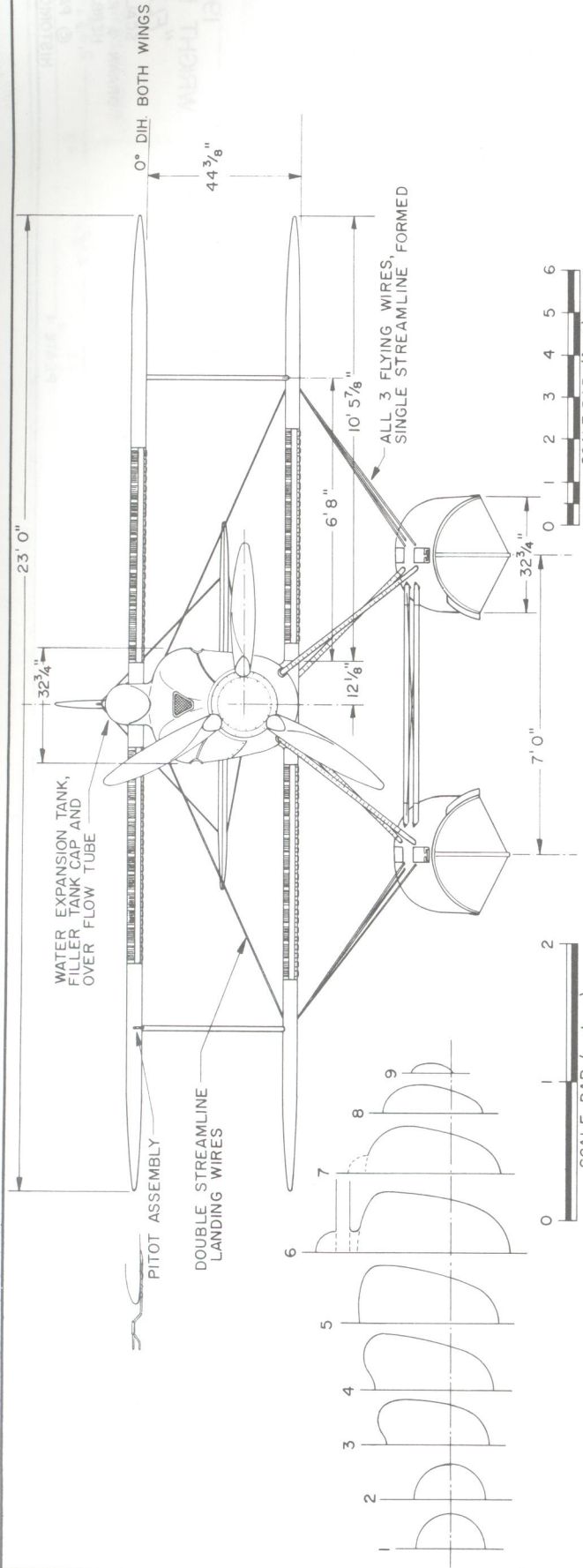
3-PLY MAHOGANY VENEER
WRAPPED ON CRISS CROSS
BASIS AT APPROXIMATELY
45° ANGLES



COLORING NOTES
ENTIRE AIRCRAFT, INCLUDING FLOATS
AND STRUTS - MEDIUM BLUE
NOSE SPINNER - NATURAL ALUMINUM
RUDDER - CLEAR DOPED
RACING No. 7 - WHITE, OUTLINED IN BLACK

WRIGHT F2W-2 RACER
1924
SCALE - 1:48
DRAWN BY - PAUL R. MATT
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TIME LIMIT DID NOT PERMIT SERVICE TRI-COLOR STRIPES TO BE PAINTED ON SECOND ENLARGED RUDDER

METAL FRAME RUDDER, FABRIC COVERED

FIN SPRUCE FRAME, PLYWOOD COVERED

ALUMINUM TAIL CONE FAIRING EXTENDED TO COVER RUDDER CONTROL HORN

STABILIZER GROUND ADJUST-ABLE 0° TO -3°

HISTORICAL AVIATION MUSEUM

WRIGHT F2W-2 RACER

1924

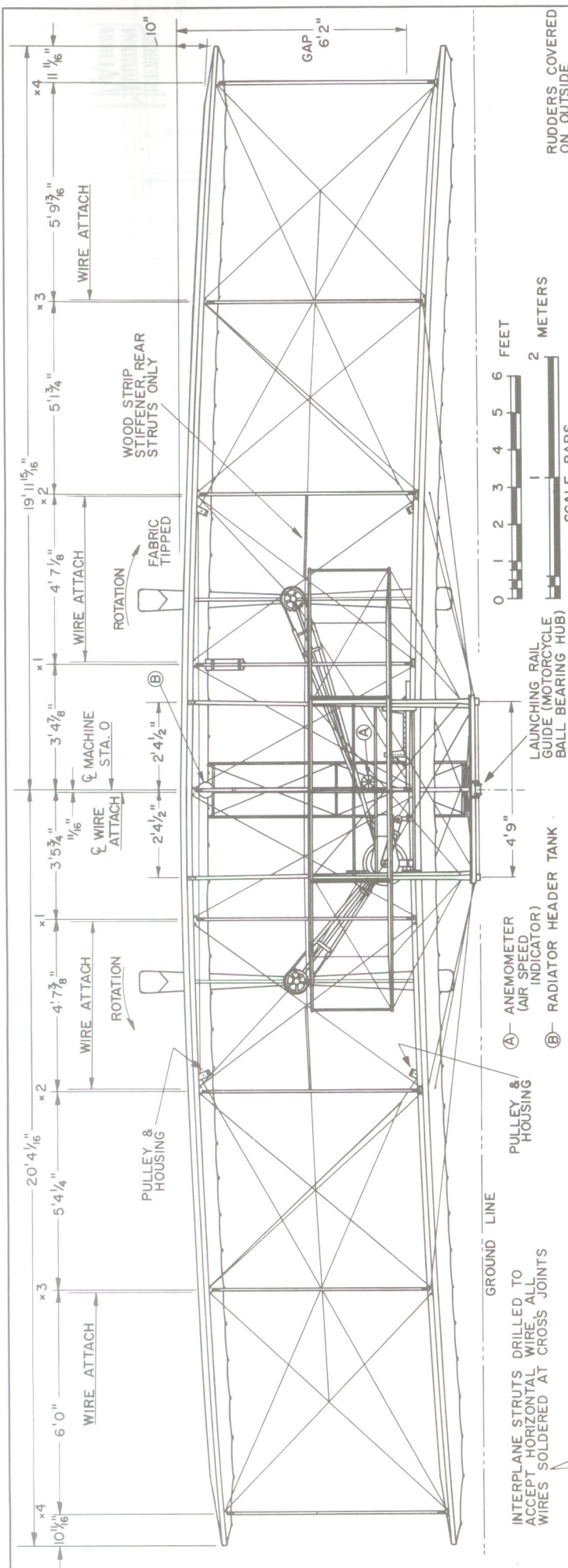
SCALE - 1:48

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SUBMERGED DISPLACEMENT, BOTH FLOATS - 7100 lbs.



GROUND LINE

INTERPLANE STRUTS DRILLED TO ACCEPT HORIZONTAL WIRE, ALL WIRES SOLDERED AT CROSS JOINTS

PULLEY & HOUSING

①—ANEMOMETER
(AIR SPEED
INDICATOR)

⑧—RADIATOR HEADER TANK

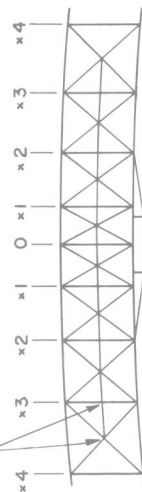
LAUNCHING RAIL
GUIDE (MOTORCYCLE
BALL BEARING HUB)

SCALE BARS

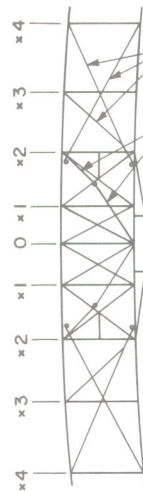
TERS

0 1 2 3 4 5 6 FEET

RUDDERS COVER
ON OUTSIDE
SURFACE ONLY



WIRE TRUSS FRONT STRUTS RIDGED ASSEMBLY



WIRE TRUSS REAR STRUTS
FLEXIBLE ASSEMBLY
TO ALLOW WARPING

WING

PROPELLER WARP
STAY WIRES

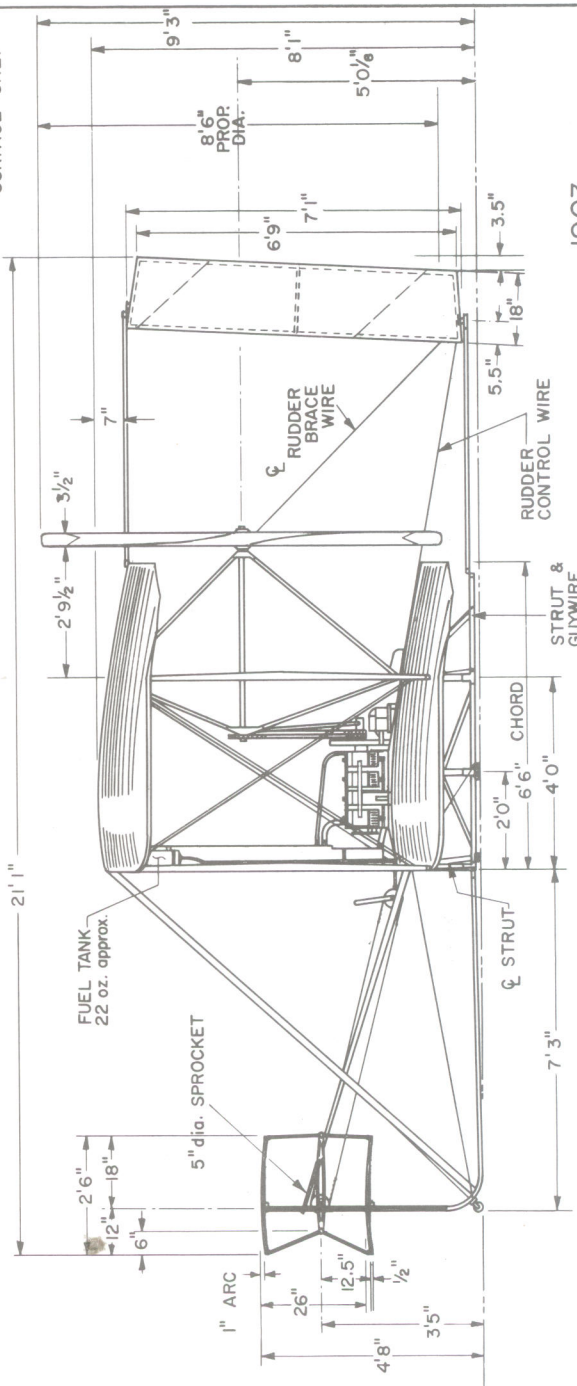
WING



WIRE TRUSS ELEVATOR



STA. 1 STA. 2 STA. 3
LONGITUDINAL WIRE TRUSS



COLORING NOTES

COLORING NOTES
FABRIC, UNBLEACHED, UNDOPED MUSLIN (OFF WHITE)
EXPOSED ASH & SPRUCE, CLEAR VARNISHED
ENGINE & METAL FITTINGS, FLAT BLACK
PROPELLERS, MEDIUM GRAY

1903
WRIGHT BROTHERS
"FLYER"

SCALE: 1:48
DRAWN & RESEARCHED BY:
HERR. KELLEY

PLATE 2

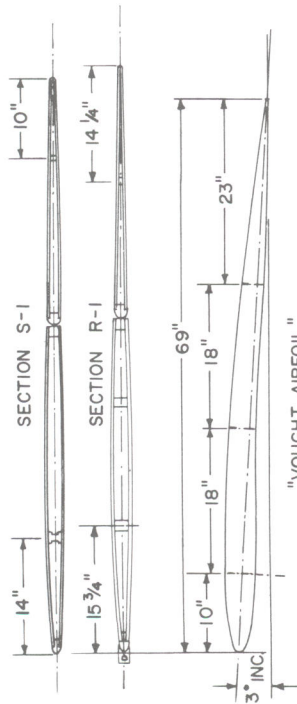
© PAUL R. MATT 1966

GENERAL SPECIFICATIONS

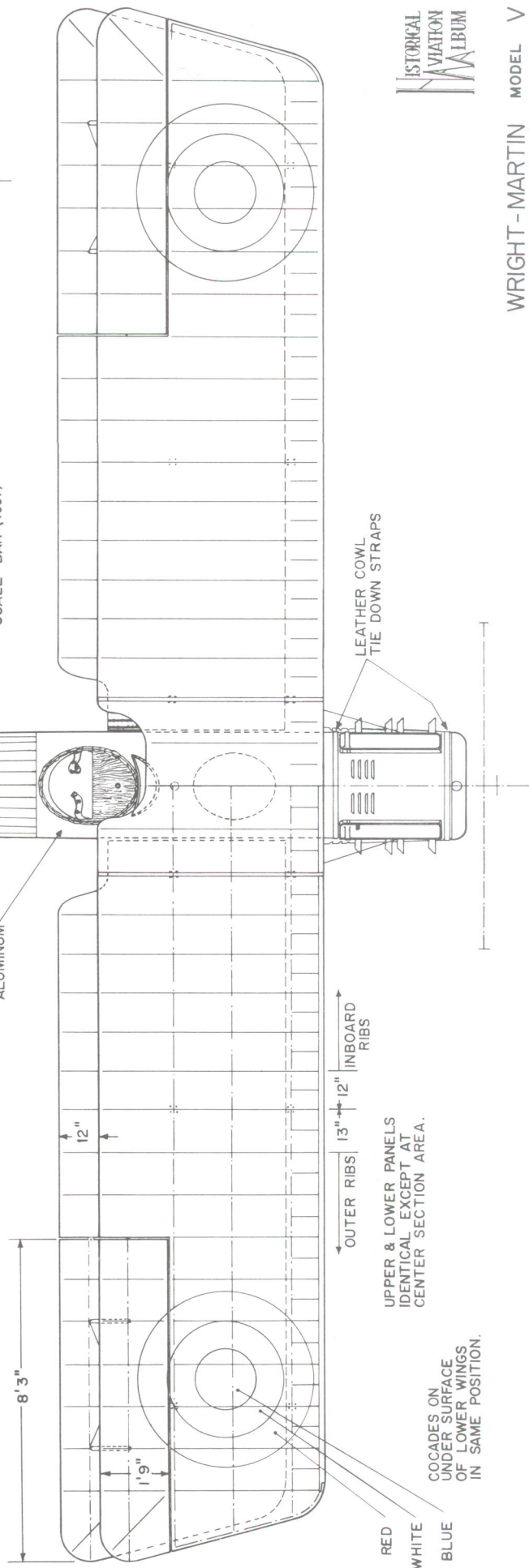
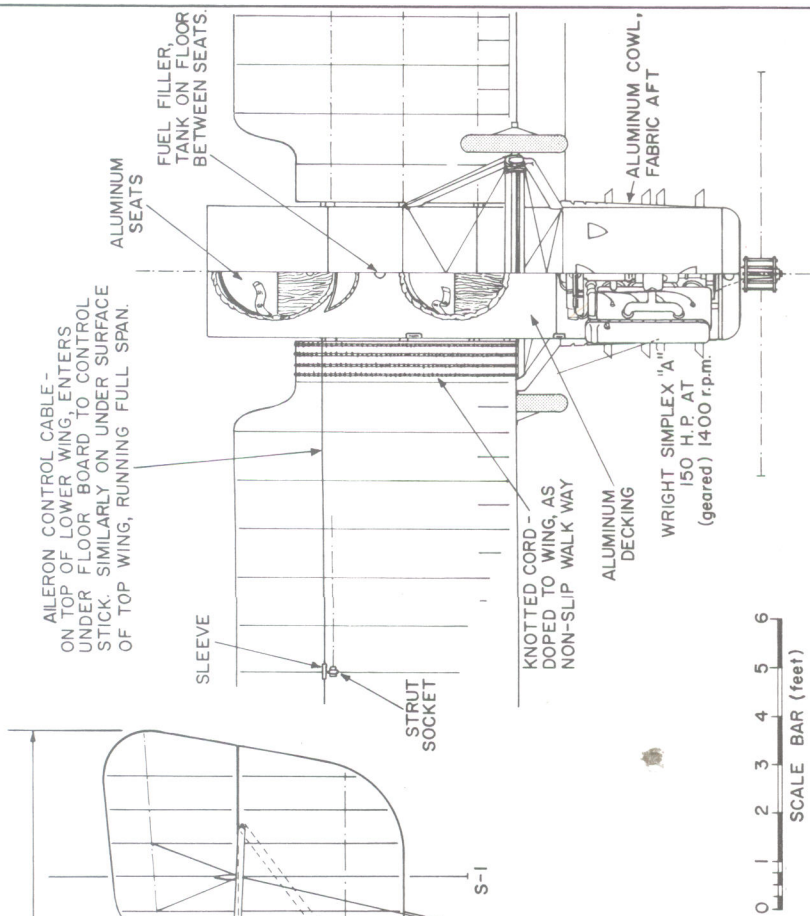
WEIGHT EMPTY 1725 lbs
 USEFUL LOAD 595 "
 GROSS WEIGHT 2320 "
 ENDURANCE AT CRUISE-63mph 6 hrs
 WING AREA (ALERONS EXCLUDED) 430 sq. ft.
 AREA OF ALERONS (4) 64.6 sq. ft.
 WING LOADING 5.86 lbs/sq. ft.
 POWER LOADING 16.86 " "
 TOP SPEED 90 mph

MAIN CONSTRUCTION,
 ASH, SPRUCE & POPLAR,
 LINEN COVERED & DOPED

SECTIONS BELOW, TWICE SCALE

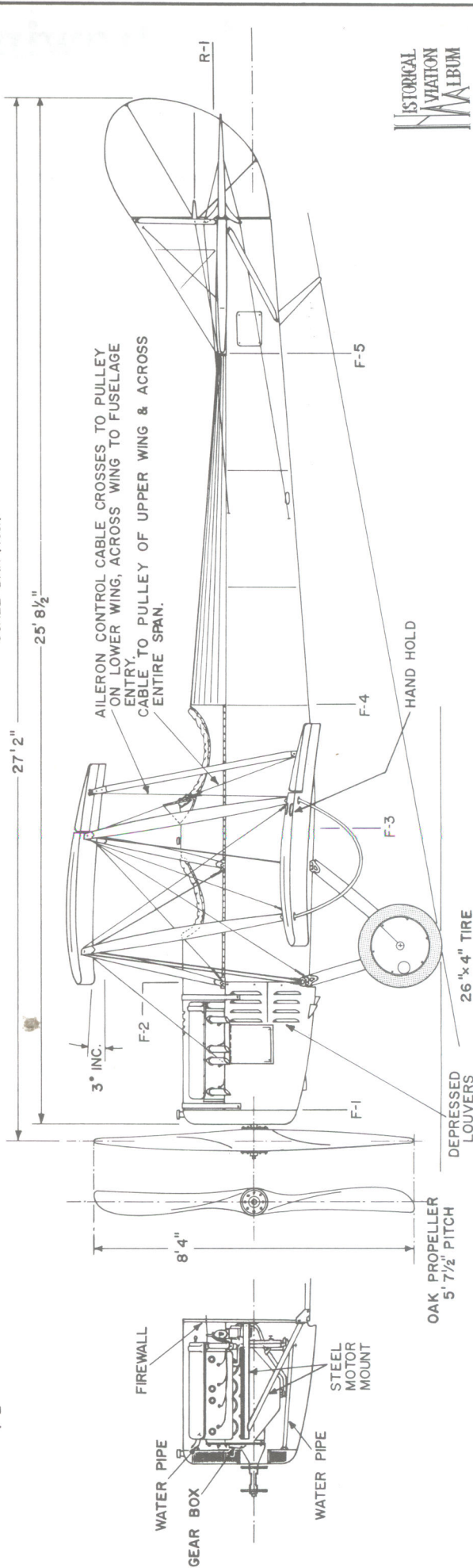
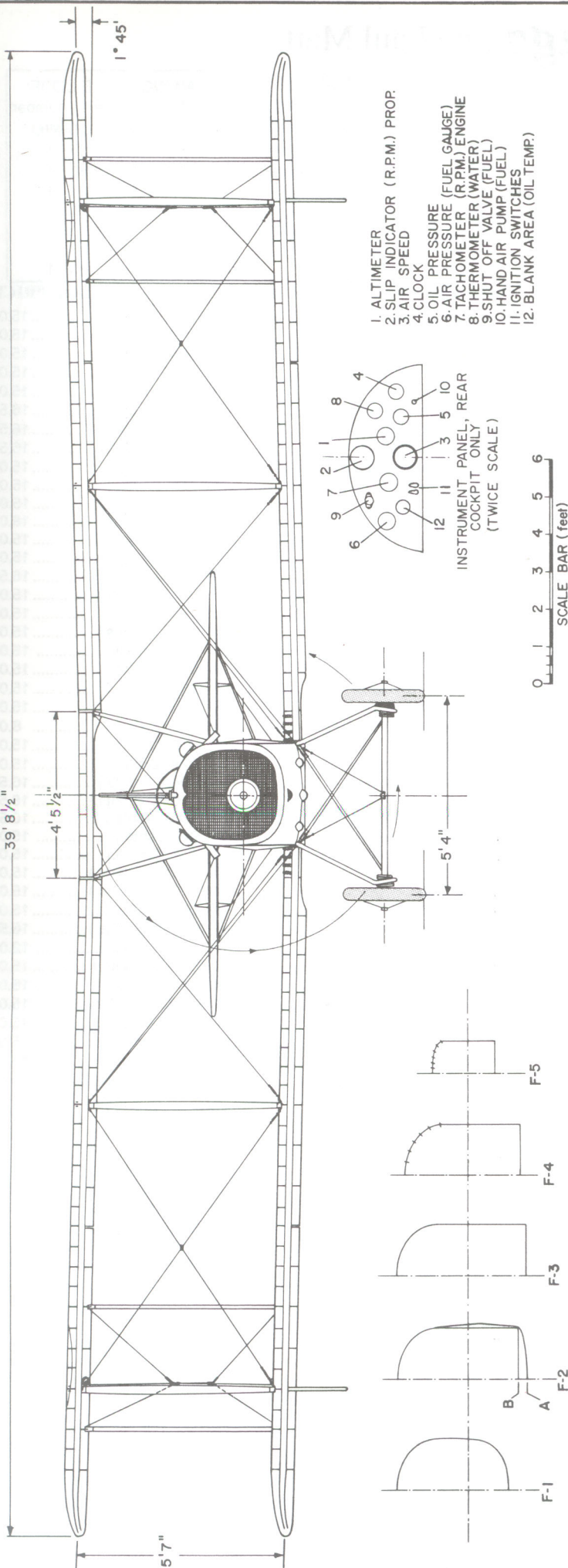


3-SPAR WING CELLULE, CENTER SPAR (FALSE) NON-BEARING



WRIGHT-MARTIN
 (1916)

WRIGHT-MARTIN MODEL V
 (1916)



ENTIRE AIRCRAFT - CLEAR DOPED
ALUMINUM AREAS - NATURAL

HISTORICAL
AVIATION
MUSEUM

WRIGHT-MARTIN MODEL V

(1916)

SCALE: 1:48
DRAWN BY: PAUL R. MATT © 1965

PLATE 2

3-View Scale Drawings by Paul Matt

Volume 1 contains all airplanes listed from A through G. Volume 2 contains all airplanes listed from H through W. If you would like individual, large sheets of any of the below listed scale drawings, send request, catalog #, appropriate fee, and shipping charge of \$3.95. If you want your drawing rolled in a tube — add \$4.00. Clear, concise, uncluttered 3- and 4- view engineering presentations, in large (17" x 22"), easy to work with standard scales. Drawing is highly detailed and is an accurate working print with all dimensions, specifications, airfoils, cross sections, templates, and color scheme included. These drawings are part of the collection of the internationally acclaimed and highly honored *Historical Aviation Album*. All orders are folded unless a tube is ordered. Each has 2 to 6 large sheets. **Rolled in tube — add \$4.00 plus \$3.95 postage. Send to: Aviation Heritage, P.O. Box 665, Destin, FL 32540.**

DRAWING SCALE CODE:
Last letter of catalog number indicates scale of drawing.

A = 1:24 1/2" = 1'
B = 1:16 3/4" = 1'
C = 1:48 1/4" = 1'
D = 1:32 3/8" = 1'
E = 1:8 1 1/2" = 1'
F = 1:6 2" = 1'
G = 1:96 1/8" = 1'

VOLUME 1 CONTENTS:

RETAIL PRICE

Aeromarine 39B	(#9-78A, 3 shts.)	\$16.50
Aeronca 7AC "Champion"	(#AM-41A, 2 shts.)	15.00
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Aeronca C-3 "Collegian"	(#10-81A, 2 shts.)	15.00
Aeronca C-3 "Master"	(#10-82A, 2 shts.)	15.00
Aeronca K	(#15-103A, 2 shts.)	15.00
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Consolidated P2Y-2	(#9-71C, 3 shts.)	16.50
Consolidated PBV-5A "Catalina"	(#17-114C, 3 shts.)	18.00
Curtiss "Carrier Pigeon I"	(#2-15A, 2 shts.)	15.00
Curtiss 1st Milit. Tract. S.C. No. 21/22 1913	(#6-55A, 2 shts.)	15.00
Curtiss A-3B "Falcon"	(#AM-39A, 2 shts.)	15.00
Curtiss AT-9 "Jeep"	(#2-18A, 2 shts.)	15.00
Curtiss B-2 Condor Bomber	(#18-116C, 2 shts.)	15.00
Curtiss B-20 Condor Transport	(#18-117C, 2 shts.)	15.00
Curtiss F Boat	(#1-1A, 2 shts.)	15.00
Curtiss F92 "Sparrowhawk"	(#18-118A, 2 shts.)	15.00
Curtiss MF-K-6 "Seagull"	(#AM-37A, 2 shts.)	15.00
Curtiss P-36 "Hawk"	(#7-62A, 2 shts.)	15.00
Curtiss P-6E "Hawk"	(#5-42A, 2 shts.)	15.00
Curtiss PW-8	(#10-79A, 2 shts.)	15.00
Curtiss R-6 Racer	(#HS-73A, 2 shts.)	15.00
Curtiss SC-1 "Seahawk"	(#1-8A, 2 shts.)	15.00
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Curtiss SO3C-1 "Seagull"	(#AM-34A, 2 shts.)	15.00
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Curtiss-Cox "Texas Wildcat"	(#2-14B, 2 shts.)	15.00
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General Aviation Clark GA-43	(#13-95D, 2 shts.)	15.00
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Grumman FF-1	(#AA-77A, 2 shts.)	15.00
Grumman G-44 "Widgeon"	(#AM5-30A, 2 shts.)	15.00
Grumman J2F-5 "Duck"	(#6-53A, 3 shts.)	16.50

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RETAIL PRICE

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Howard DGA-4 "Mike"	(#13-90A, 2 shts.)	15.00
Howard DGA-5 "Ike"	(#13-91A, 2 shts.)	15.00
Howard DGA-6 "Mr. Mulligan"	(#14-99A, 3 shts.)	16.50
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