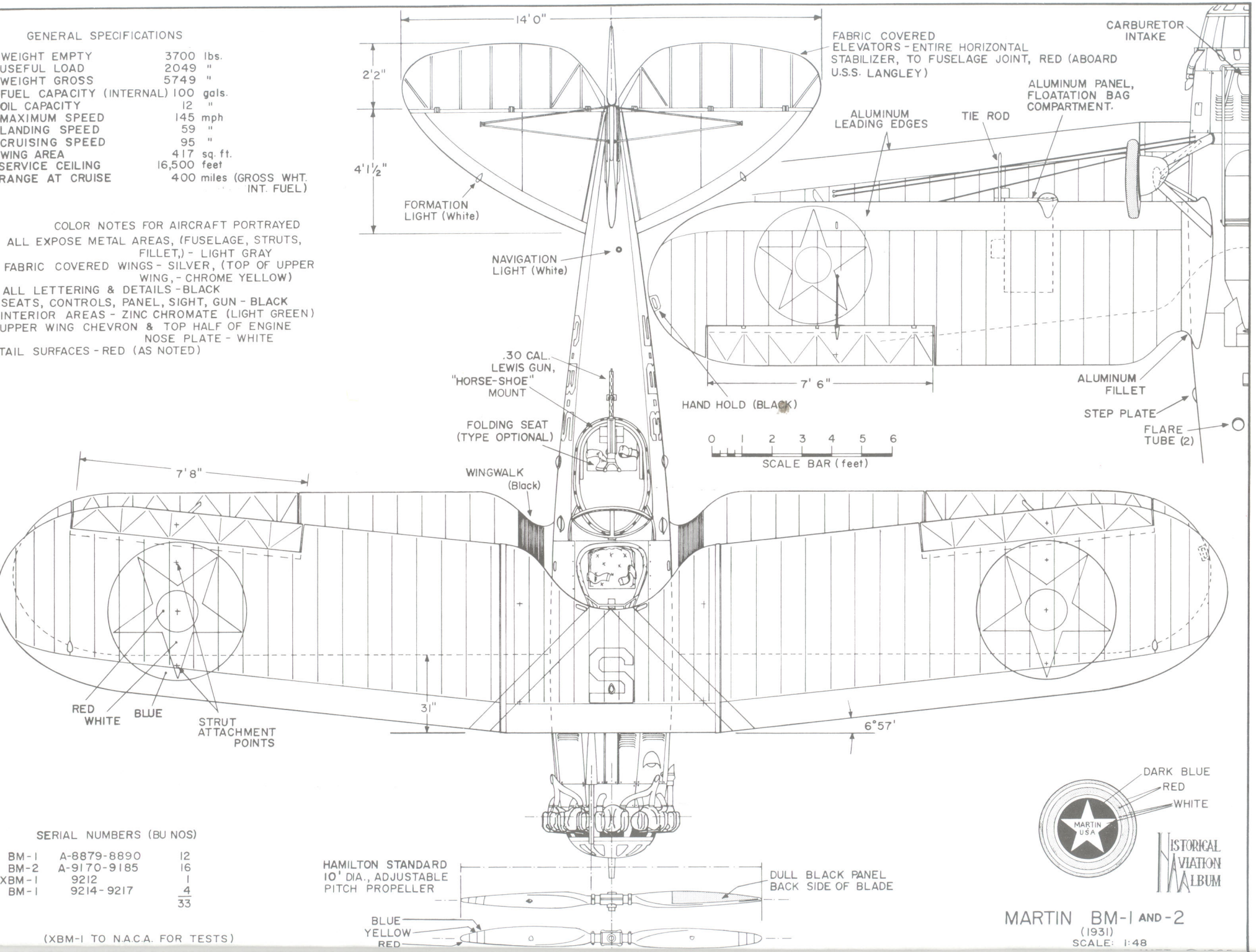
GENERAL SPECIFICATIONS

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
XBM-1	9212	1
BM-1	9214-9217	4
		33

(XBM-1 TO N.A.C.A. FOR TESTS)

HISTORICAL AVIATION ALBUM

MARTIN BM-1 AND -2

(1931)

SCALE: 1:48

(XBM-1 TO N.A.C.A. FOR TESTS)

YELLOW
RED

(1931)
SCALE: 1:48
DRAWN BY: PAUL R. MATT © 1965

41'0"
17'0"
3'6"
GREEN NAV. LIGHT
FORMATION LIGHT (White)
COLOR SEPERATION LINE CHROME YELLOW, TOP - SILVER UNDER
RED NAV. LIGHT
DIH.
1°
VENTURI
6'2"
6'5.5"
5 STRAND, IN PARALLEL - ANTENNA, SIMILAR AT (X)
PITOT TUBE
(X)
LANDING LIGHT
TIE DOWN RING, FWD. AILERON HORN, AFT.
0° DIH.
6"
SHOCK ABSORBING UNIT, HOUSING
2°
7'9"
0 1 2 3 4 5 6
SCALE BAR (feet)

A B C D E F

28'4.5"
50.6"
29"
A B C D E F
0° INC.
ADJUSTABLE WINDSCREEN
.30 CAL. BROWNING
TOP HALF WHITE, GRAY BELOW
8880
BM-1
FIN & RUDDER, RED, TO LINE (Y)
3-B-5
U.S.NAVY
TIE DOWN RING
CARRIER HOOK FULCRUM POINT
6×2.5" SOLID RUBBER TIRE
FUEL DUMP CHUTE
1,000 lb. BOMB (OPTIONAL, 60 gal. AUX. FUEL TANK)

CENTER SECTION at ℄
TOP WING
6'2"
LOWER WING
5'5"

FWD AREA CODE
ⓐ ENGINE STARTING CRANK COUPLING
ⓑ FOOT REST BAR
ⓒ FUEL TANKS & FILLER CAP
ⓓ INTER-PLANE TIE ROD
ⓔ 5 STRAND ANTENNA (STBD. ONLY)

1'1" EMPTY
2'3"
BOMB IN RELEASE POSITION
AFT VIEW

HISTORICAL AVIATION ALBUM

MARTIN BM-1 AND-2
(1931)
SCALE: 1:48
DRAWN BY: PAUL R. MATT © 1965

PLATE 2

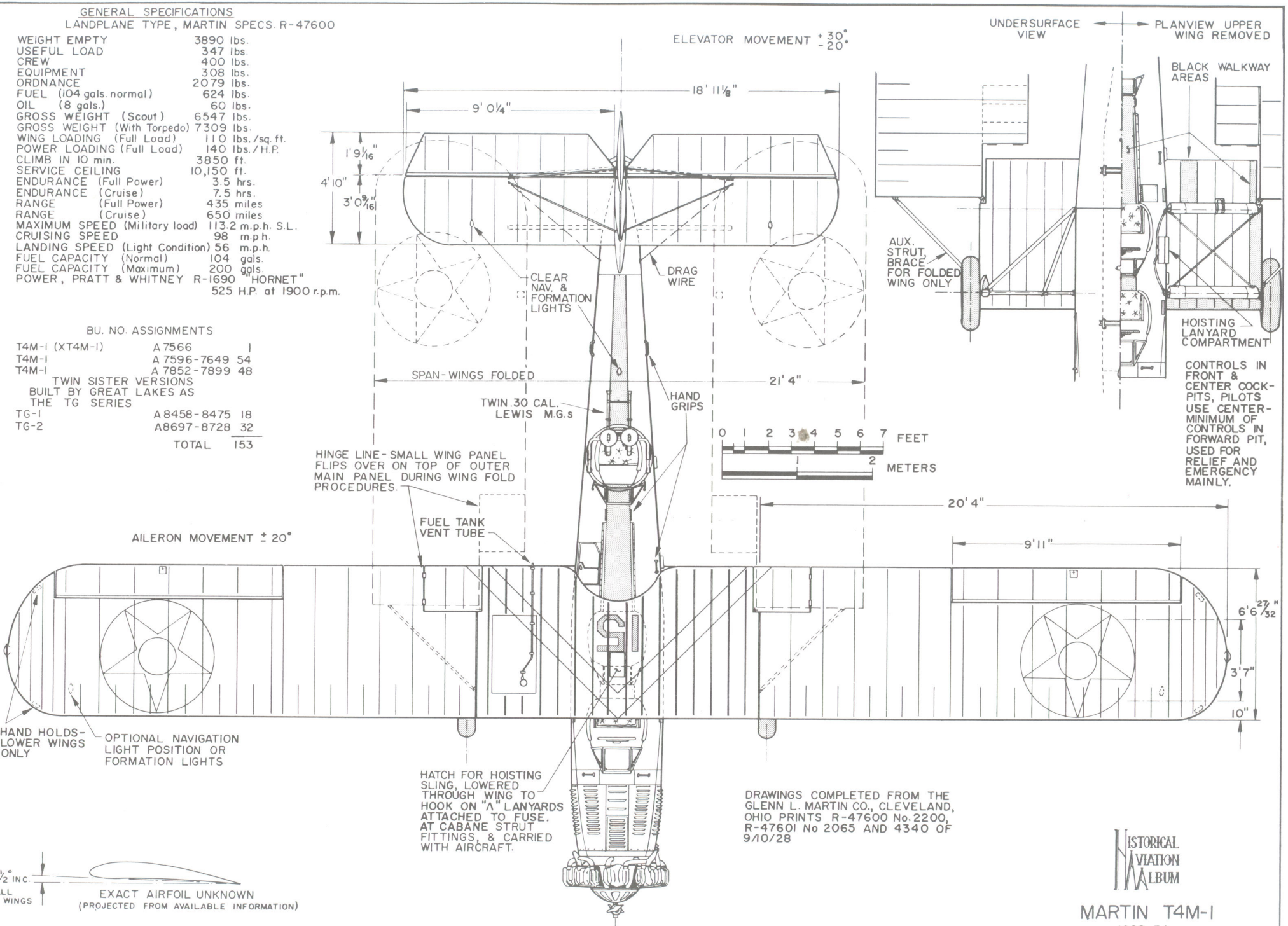
GENERAL SPECIFICATIONS

LANDPLANE TYPE, MARTIN SPECS. R-47600

WEIGHT EMPTY	3890 lbs.
USEFUL LOAD	347 lbs.
CREW	400 lbs.
EQUIPMENT	308 lbs.
ORDNANCE	2079 lbs.
FUEL (104 gals. normal)	624 lbs.
OIL (8 gals.)	60 lbs.
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 (Full Power)	435 miles
RANGE (Cruise)	650 miles
MAXIMUM SPEED (Military load)	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	A8458-8475	18
TG-2	A8697-8728	32
	TOTAL	153



½° INC. LL WINGS

EXACT AIRFOIL UNKNOWN
(PROJECTED FROM AVAILABLE INFORMATION)

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 ALBUM

MARTIN T4M-1

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

DRAWING No. 4-29-D

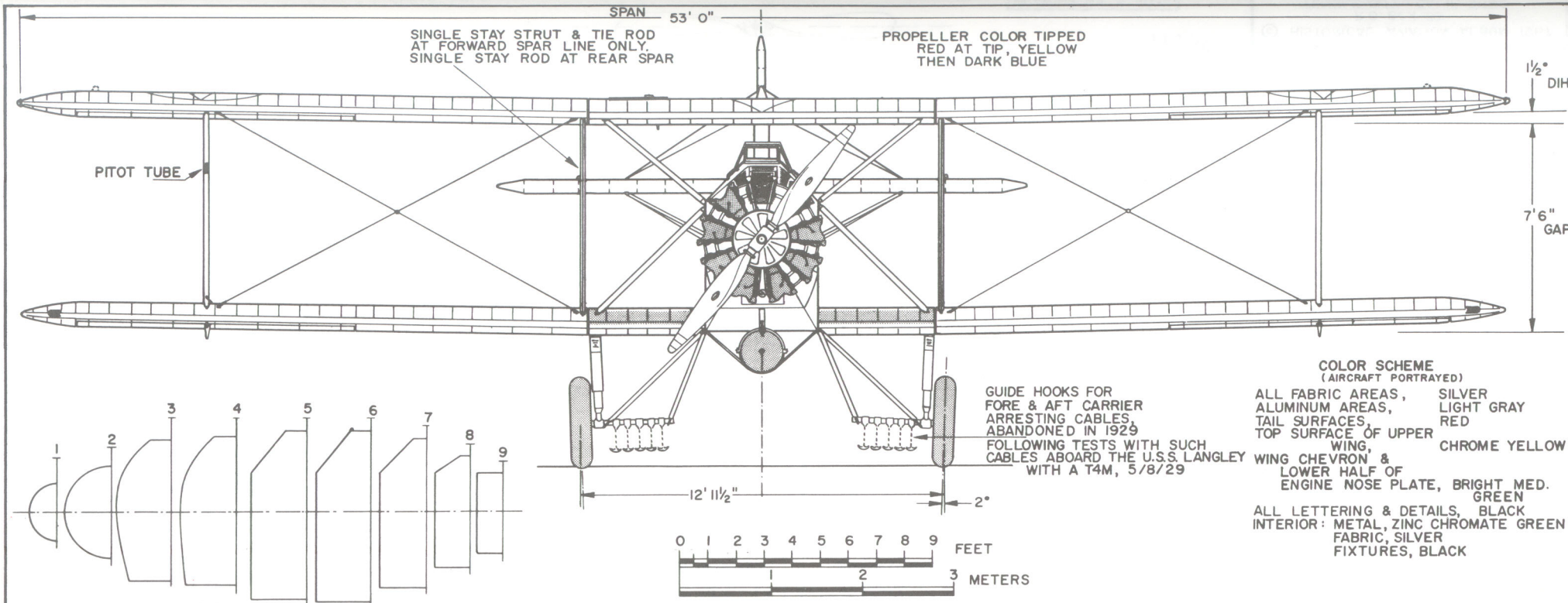
PLATE 1 of 2

© HISTORICAL AVIATION ALBUM, 1967

SPAN 53' 0"

SINGLE STAY STRUT & TIE ROD

 © HISTORICAL AVIATION ALBUM, 1967



COLOR SCHEME
(AIRCRAFT PORTRAYED)

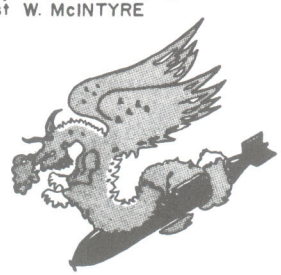
ALL FABRIC AREAS,	SILVER
ALUMINUM AREAS,	LIGHT GRAY
TAIL SURFACES,	RED
TOP SURFACE OF UPPER WING,	CHROME YELLOW
WING CHEVRON & LOWER HALF OF ENGINE NOSE PLATE,	BRIGHT MED. GREEN
ALL LETTERING & DETAILS,	BLACK
INTERIOR: METAL,	ZINC CHROMATE GREEN
FABRIC,	SILVER
FIXTURES,	BLACK

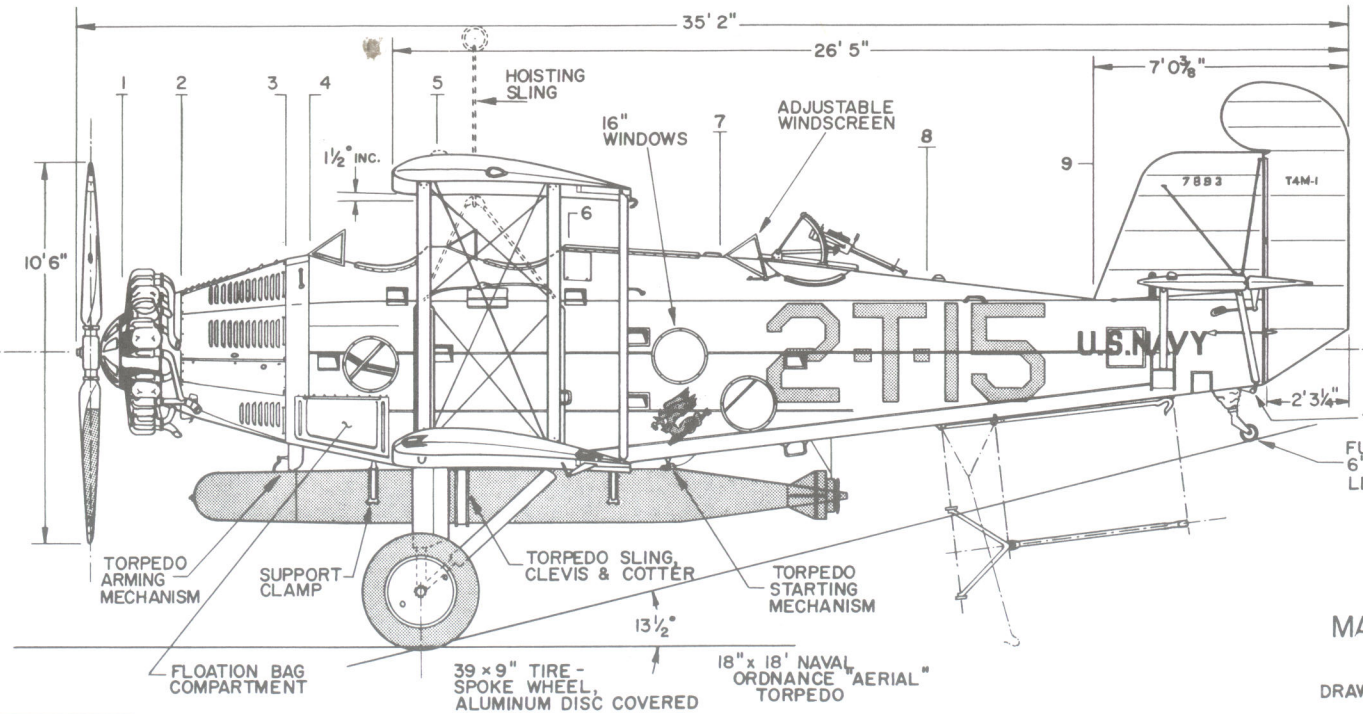
FUSELAGE FABRIC COVERED AFT OF TEMPLATE 4, ALUMINUM FORWARD AS WELL AS FAIRINGS AND INSPECTION PLATES.

HAMILTON STANDARD GROUND ADJUSTABLE PROPELLER

VT-2B
(TORPEDO SQUADRON TWO)
FIRE BREATHING FLYING DRAGON
DRAGON - RED
SPINE - GREEN
CLAWS & TAIL TIP - YELLOW
TORPEDO - BLACK

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





RUDDER MOVEMENT ±30°
STABILIZER SETTING 0° TO +2°

HISTORICAL AVIATION ALBUM

MARTIN T4M-1

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

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GENERAL SPECIFICATION

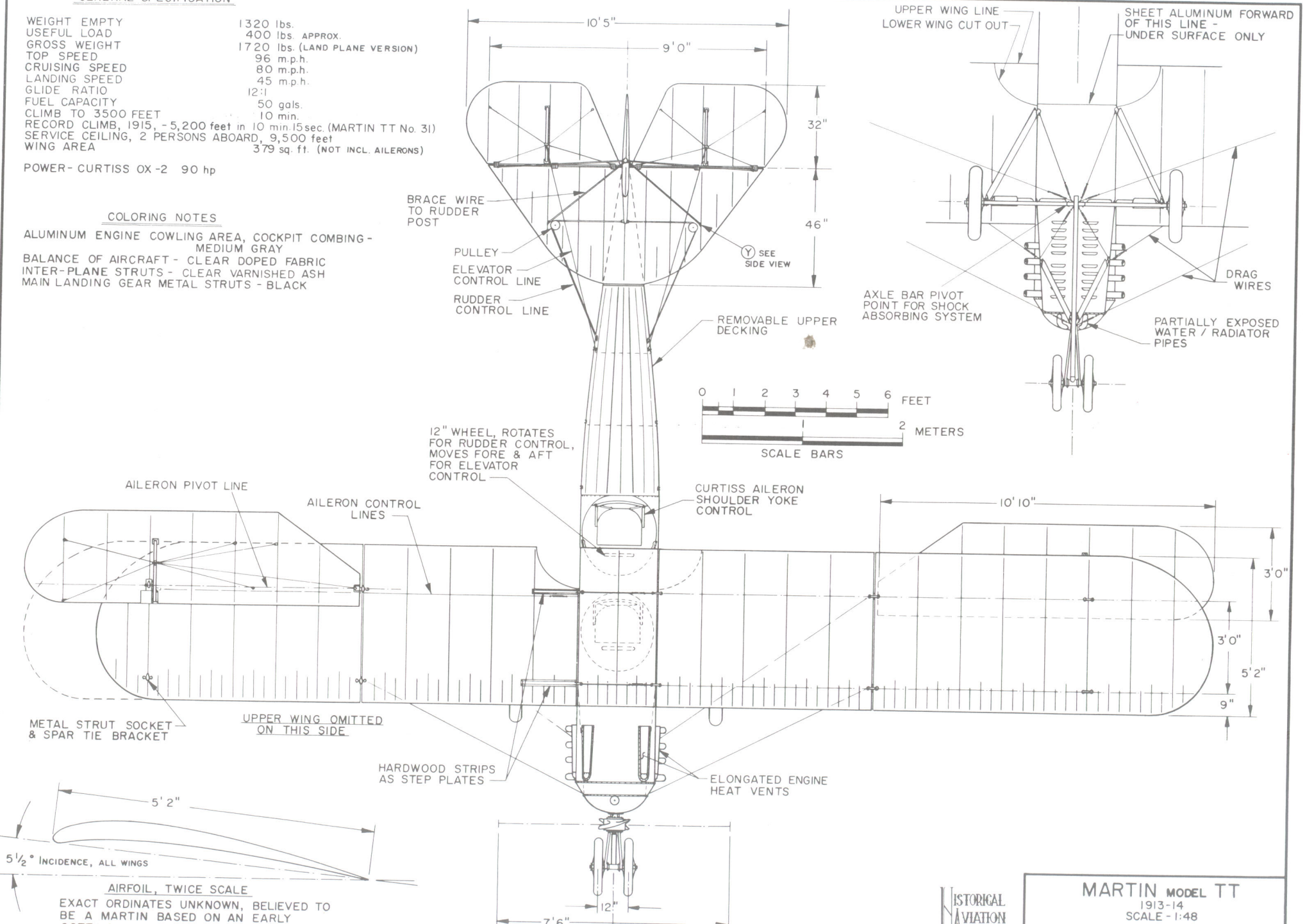
WEIGHT EMPTY	1320 lbs.
USEFUL LOAD	400 lbs. APPROX.
GROSS WEIGHT	1720 lbs. (LAND PLANE VERSION)
TOP SPEED	96 m.p.h.
CRUISING SPEED	80 m.p.h.
LANDING SPEED	45 m.p.h.
GLIDE RATIO	12:1
FUEL CAPACITY	50 gals.
CLIMB TO 3500 FEET	10 min.

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



AIRFOIL, TWICE SCALE

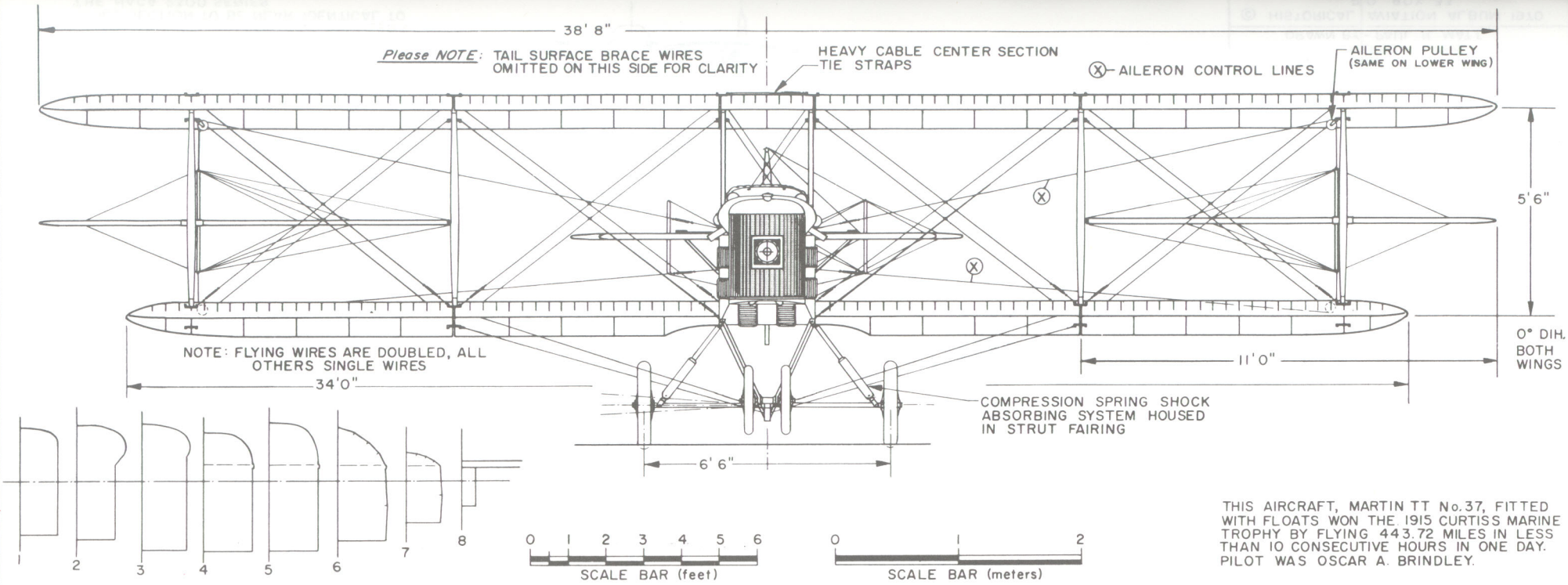
EXACT ORDINATES UNKNOWN, BELIEVED TO BE A MARTIN BASED ON AN EARLY

HISTORICAL AVIATION

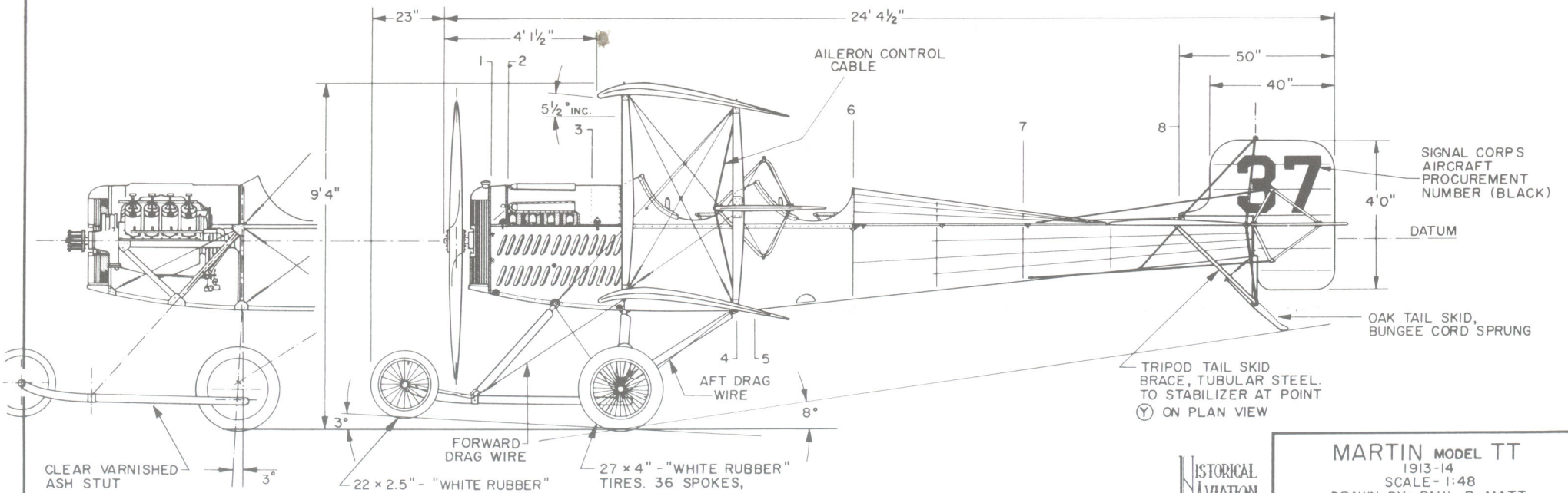
MARTIN MODEL TT

1913-14
SCALE - 1:48

© HISTORICAL AVIATION ALBUM 1967
P. O. BOX 33



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

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TEMPLE CITY, CALIF. 91780

DRAWING No. 5-40-A

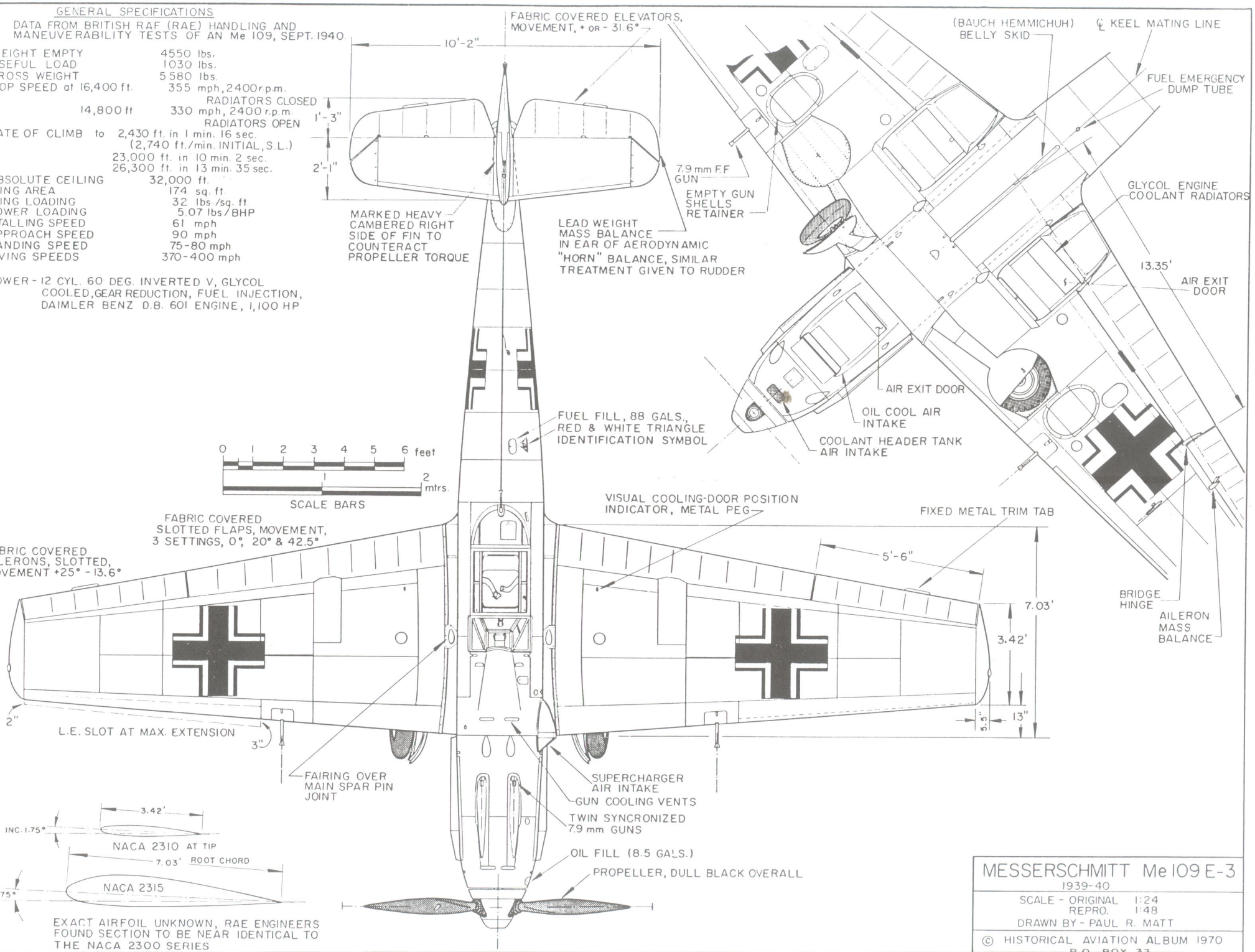
PLATE 2 of 2

GENERAL SPECIFICATIONS

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

EIGHT EMPTY	4550 lbs.
SEFUL LOAD	1030 lbs.
ROSS WEIGHT	5580 lbs.
OP SPEED at 16,400 ft.	355 mph, 2400 r.p.m.
	RADIATORS CLOSED
14,800 ft	330 mph, 2400 r.p.m.
	RADIATORS OPEN
ATE 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.
BSOLUTE CEILING	32,000 ft.
ING AREA	174 sq. ft.
ING LOADING	32 lbs./sq. ft.
OWER LOADING	5.07 lbs/BHP
TALLING SPEED	61 mph
PPROACH SPEED	90 mph
ANDING SPEED	75-80 mph
VING SPEEDS	370-400 mph

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



EXACT AIRFOIL UNKNOWN, RAE ENGINEERS FOUND SECTION TO BE NEAR IDENTICAL TO THE NACA 2300 SERIES

MESSERSCHMITT Me 109 E-3

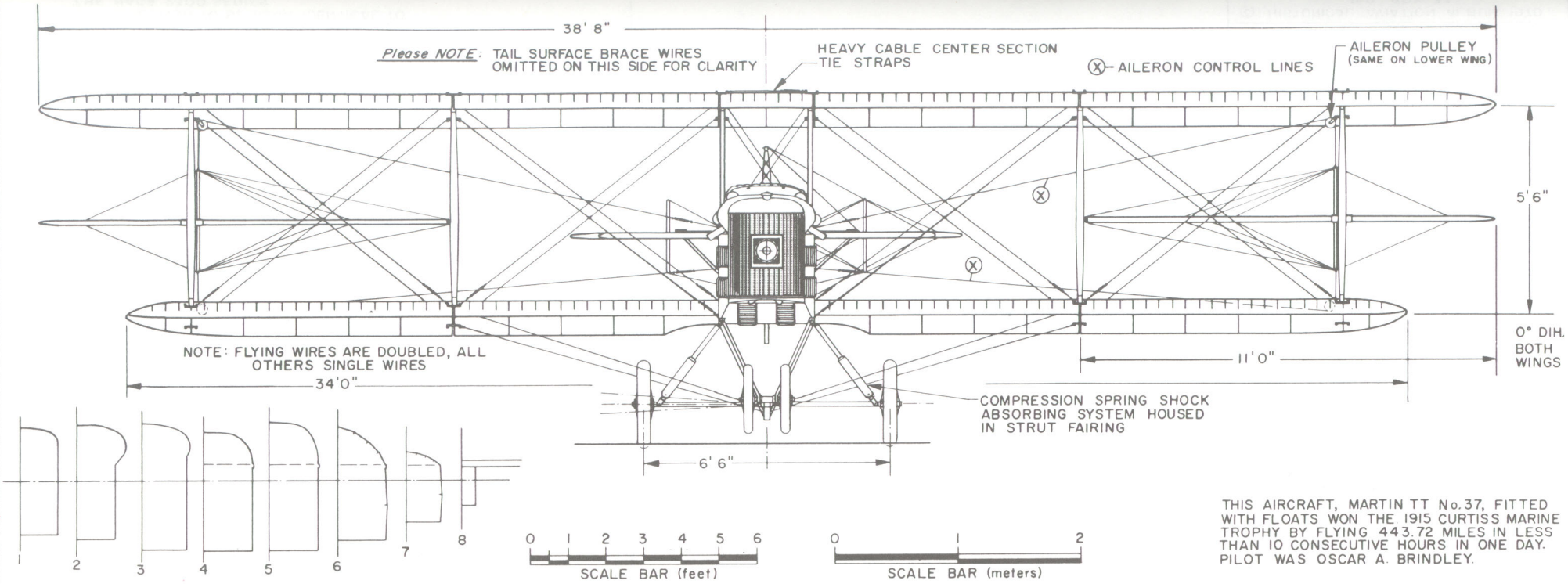
1939-40

SCALE - ORIGINAL 1:24
REPRO. 1:48

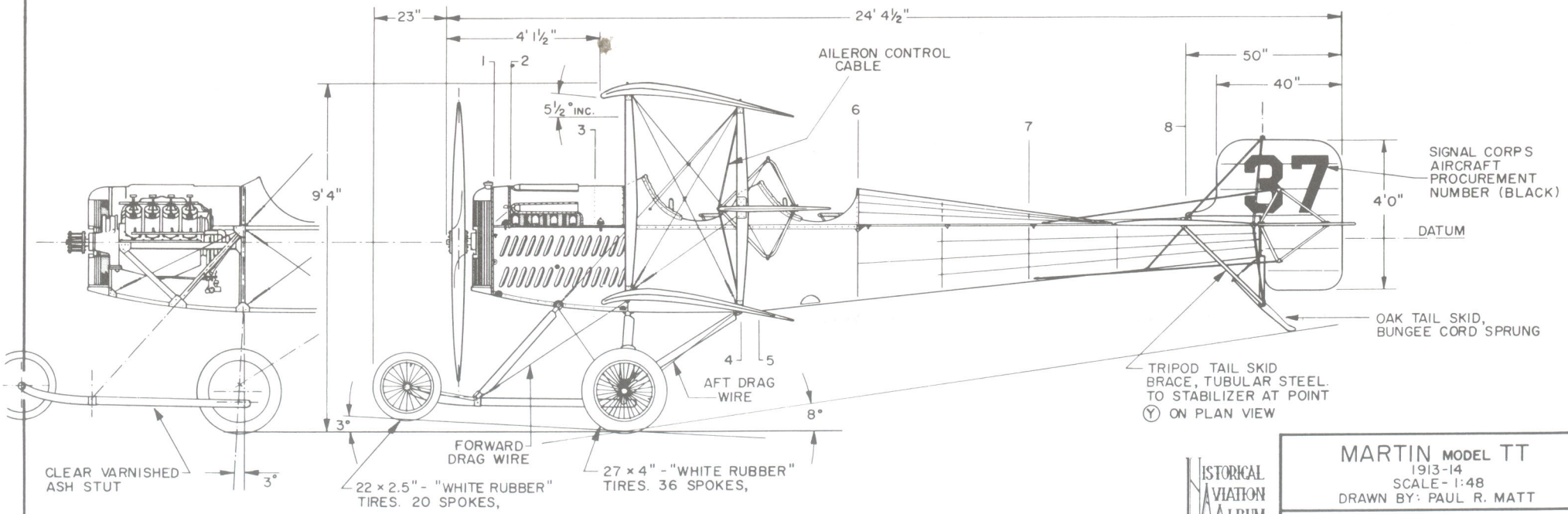
DRAWN BY - PAUL R. MATT

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



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HISTORICAL AVIATION ALBUM

MARTIN MODEL TT

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

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SEFUL LOAD	1030 lbs.
ROSS WEIGHT	5580 lbs.
OP SPEED at 16,400 ft.	355 mph, 2400 r.p.m. RADIATORS CLOSED
14,800 ft	330 mph, 2400 r.p.m. RADIATORS OPEN
ATE 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.
BSOLUTE CEILING	32,000 ft.
ING AREA	174 sq. ft.
ING LOADING	32 lbs./sq. ft.
OWER LOADING	5.07 lbs/BHP
TALLING SPEED	61 mph
PPROACH SPEED	90 mph
ANDING SPEED	75-80 mph
VING SPEEDS	370-400 mph

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

FABRIC COVERED ELEVATORS, MOVEMENT, + OR - 31.6°

10'-2"

1'-3"

2'-1"

MARKED HEAVY CAMBERED RIGHT SIDE OF FIN TO COUNTERACT PROPELLER TORQUE

LEAD WEIGHT MASS BALANCE IN EAR OF AERODYNAMIC "HORN" BALANCE, SIMILAR TREATMENT GIVEN TO RUDDER

7.9 mm F.F GUN

EMPTY GUN SHELLS RETAINER

(BAUCH HEMMICHUH) BELLY SKID

℄ KEEL MATING LINE

FUEL EMERGENCY DUMP TUBE

GLYCOL ENGINE COOLANT RADIATORS

13.35'

AIR EXIT DOOR

AIR EXIT DOOR

OIL COOL AIR INTAKE

COOLANT HEADER TANK AIR INTAKE

FUEL FILL, 88 GALS., RED & WHITE TRIANGLE IDENTIFICATION SYMBOL

0 1 2 3 4 5 6 feet

2 mtrs.

SCALE BARS

FABRIC COVERED SLOTTED FLAPS, MOVEMENT, 3 SETTINGS, 0°, 20° & 42.5°

BRIC COVERED LERONS, SLOTTED, OVEMENT +25° - 13.6°

VISUAL COOLING-DOOR POSITION INDICATOR, METAL PEG

FIXED METAL TRIM TAB

5'-6"

7.03'

3.42'

BRIDGE HINGE

AILERON MASS BALANCE

2"

L.E. SLOT AT MAX. EXTENSION

3"

FAIRING OVER MAIN SPAR PIN JOINT

SUPERCHARGER AIR INTAKE

GUN COOLING VENTS

TWIN SYNCRONIZED 7.9 mm GUNS

OIL FILL (8.5 GALS.)

PROPELLER, DULL BLACK OVERALL

3.42'

INC. 1.75°

NACA 2310 AT TIP

7.03' ROOT CHORD

NACA 2315

75°

EXACT AIRFOIL UNKNOWN, RAE ENGINEERS FOUND SECTION TO BE NEAR IDENTICAL TO THE NACA 2300 SERIES

MESSERSCHMITT Me 109 E-3

1939-40

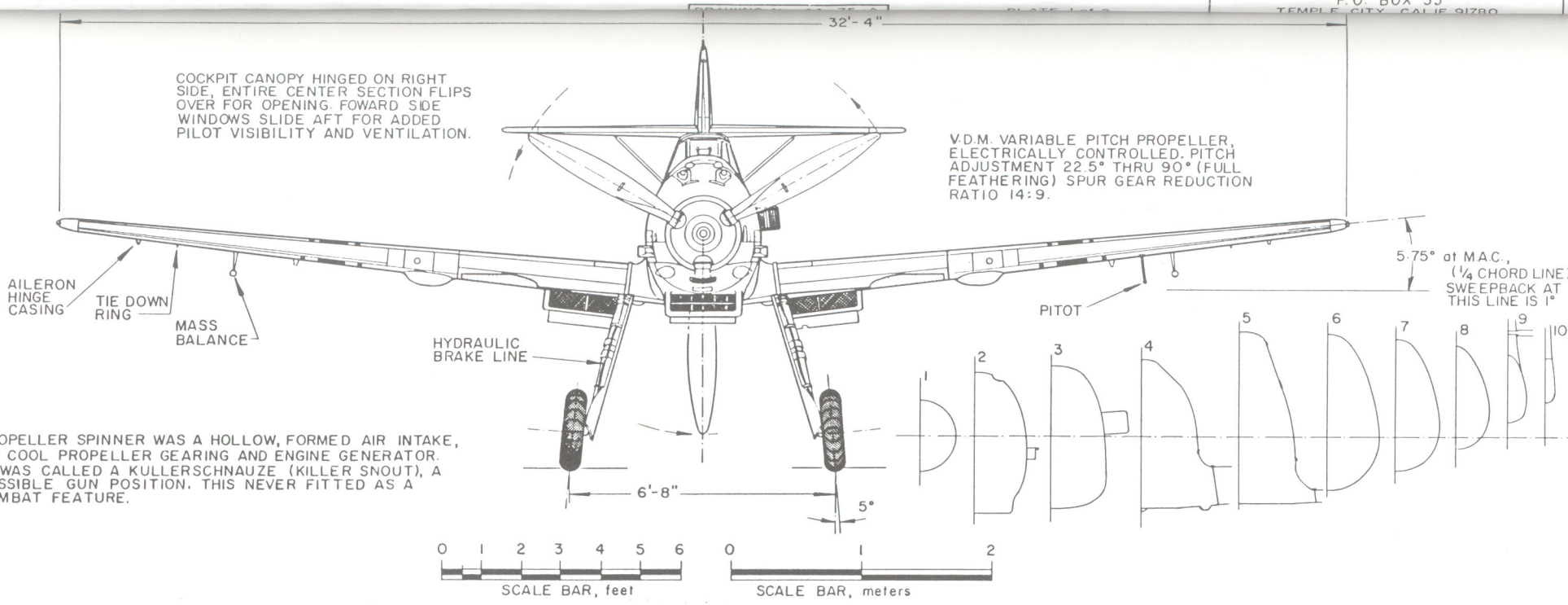
SCALE - ORIGINAL 1:24
REPRO. 1:48

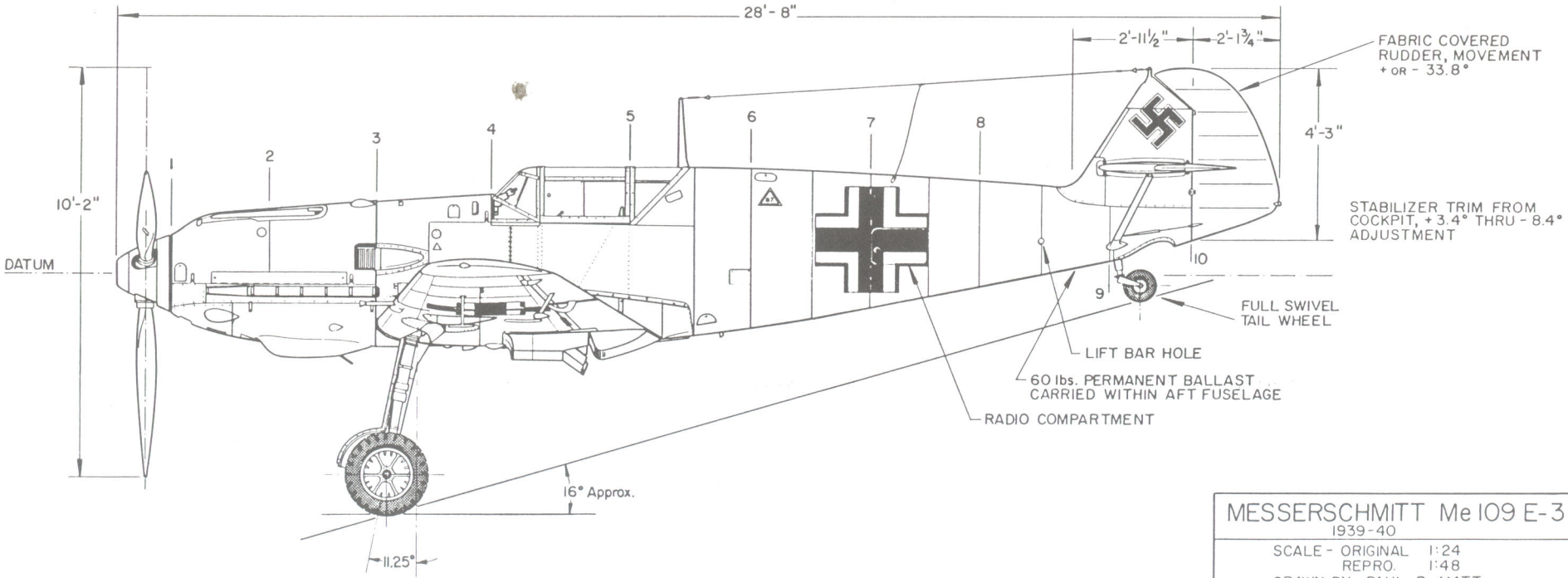
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P.O. BOX 33

FOUND SECTION TO BE NEAR IDENTICAL TO
THE NACA 2300 SERIES

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MESSERSCHMITT Me 109 E-3
1939-40

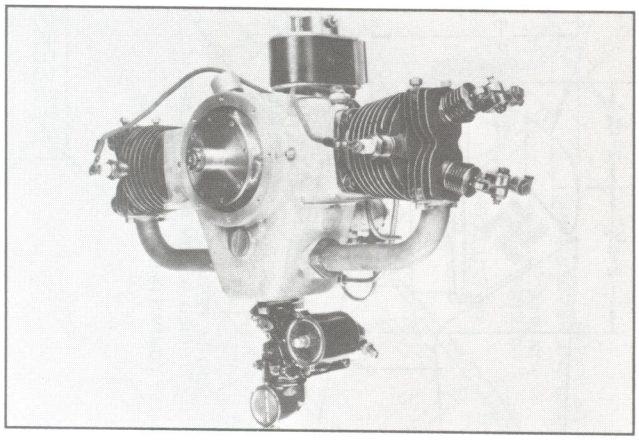
SCALE - ORIGINAL 1:24
REPRO. 1:48
DRAWN BY PAUL R. MATT

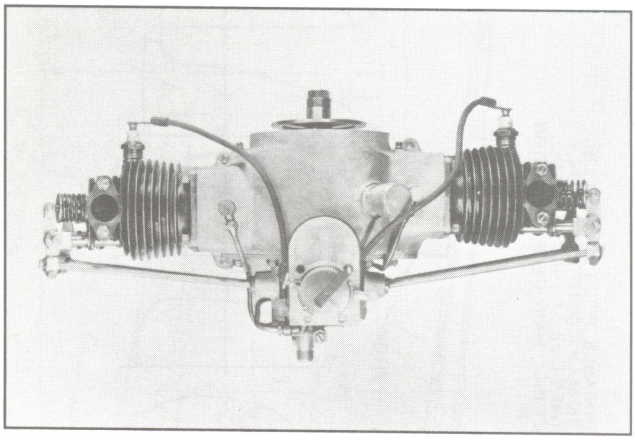
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TEMPLE CITY, CALIF. 91780

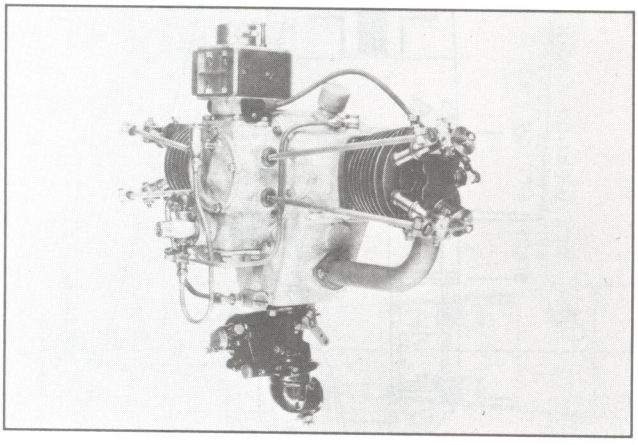
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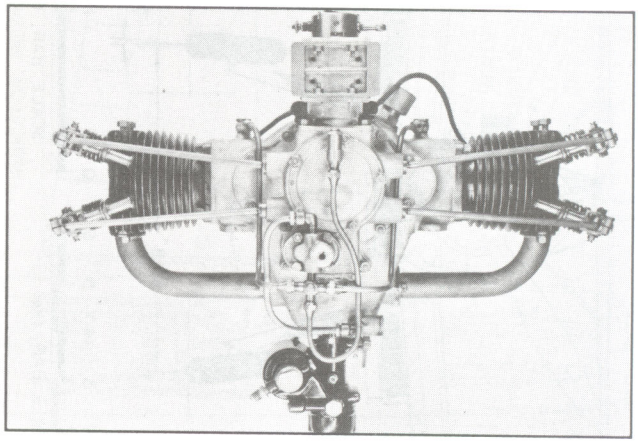
Morehouse 29.IH.P. Aircraft Engine

1925









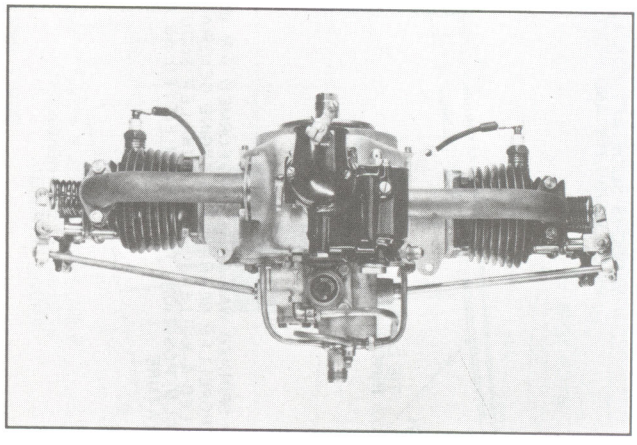
Top left: Front view

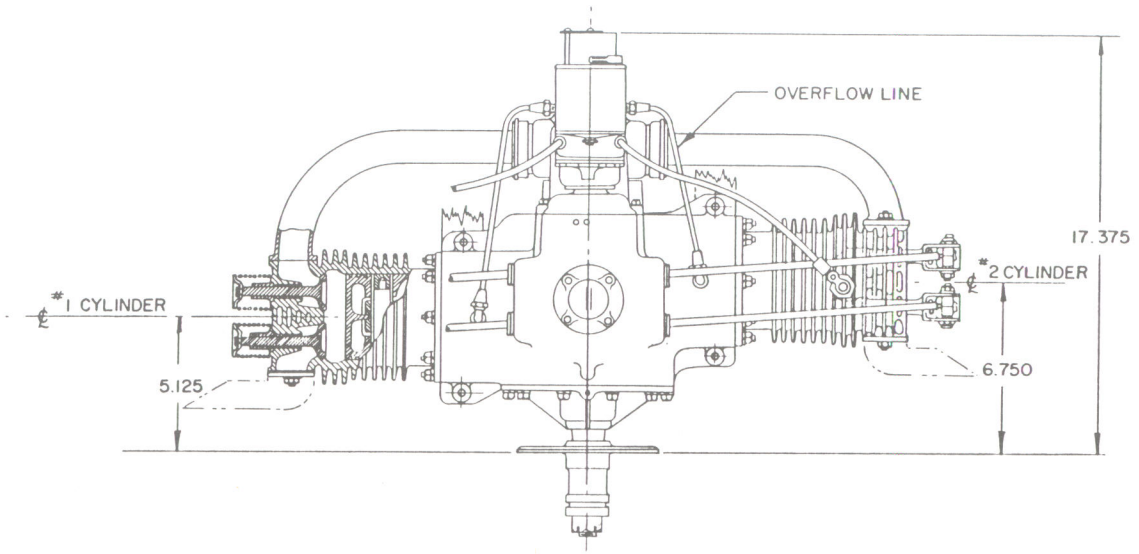
Top right: Top view

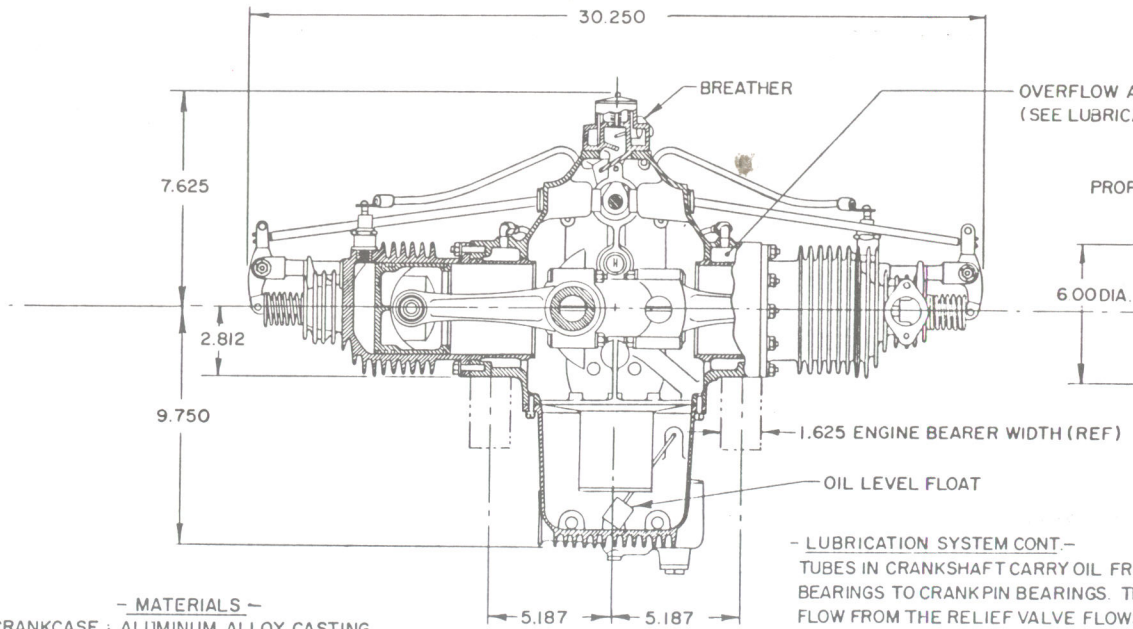
Middle left: Right rear view

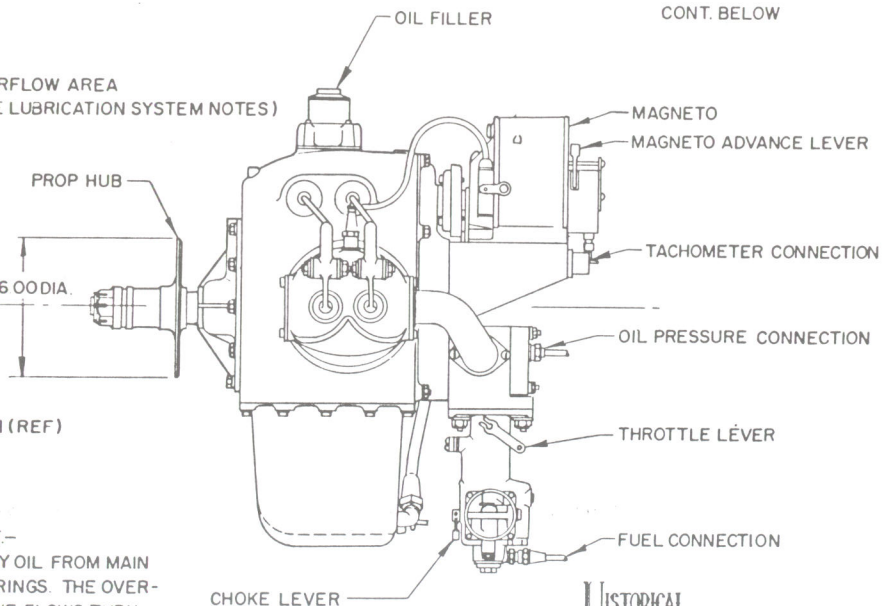
Middle right: Direct rear view

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 RPM AT SEA LEVEL
WEIGHT DRY : 89.50 LBS.
OIL PRESSURE AT CRUISE R.P.M. : 12.16 LB./SQ. IN.
FUEL CONSUMPTION : .513 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.

CARBURETION: 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 TEETOR 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.

HISTORICAL AVIATION ALBUM

MOREHOUSE 29.1 H.P. AIRCRAFT ENGINE

1925
SCALE: 1:16 (3/4" = 1')
DRAWN BY: ROB LAMBERT

© HISTORICAL AIRCRAFT ALBUM 1966

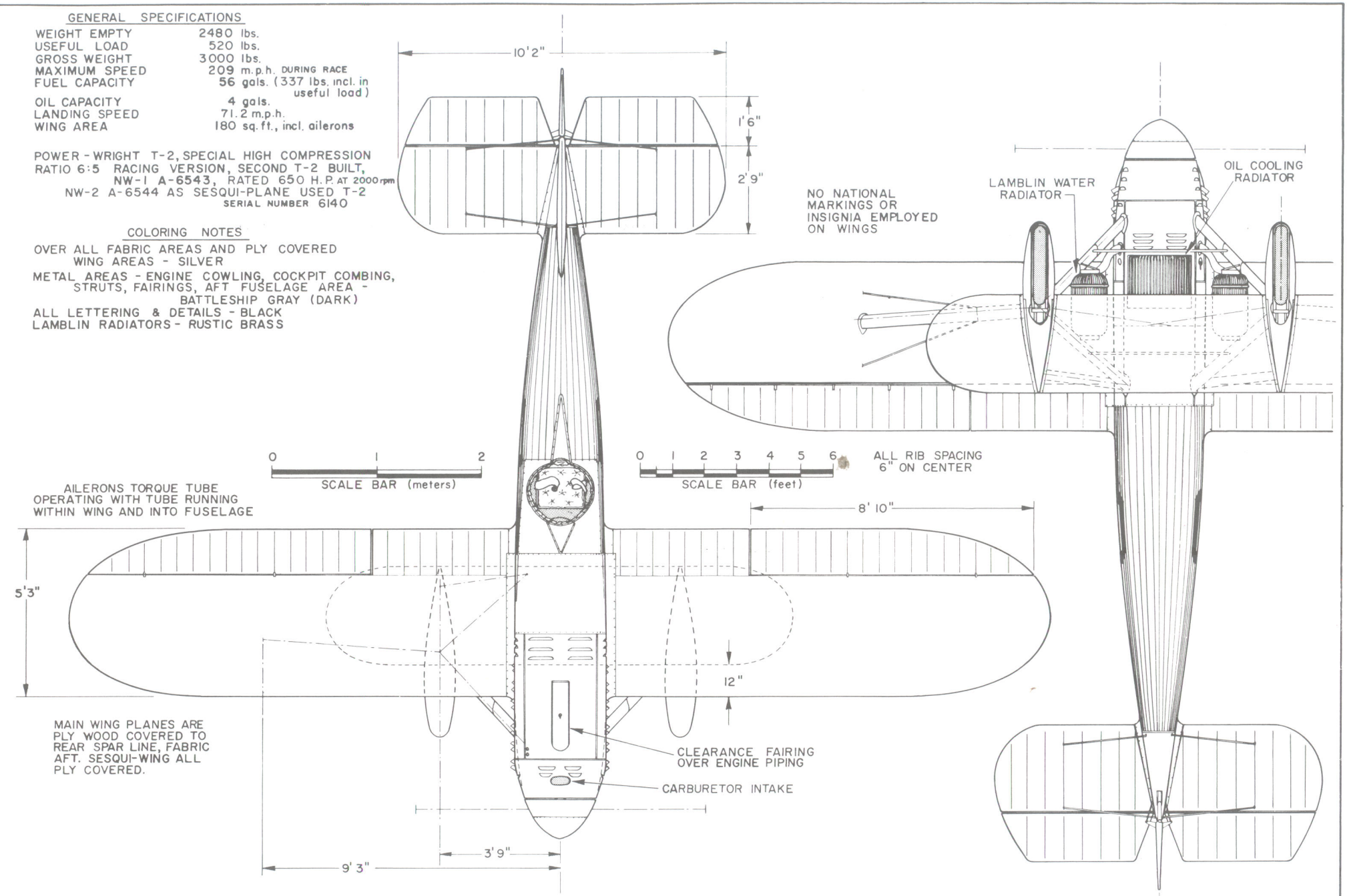
GENERAL SPECIFICATIONS

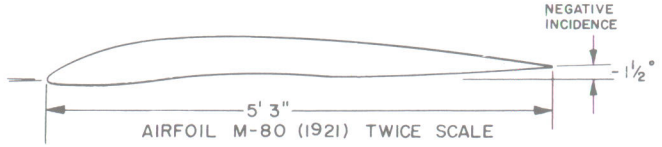
WEIGHT EMPTY	2480 lbs.
USEFUL LOAD	520 lbs.
GROSS WEIGHT	3000 lbs.
MAXIMUM SPEED	209 m.p.h. DURING RACE
FUEL CAPACITY	56 gals. (337 lbs. incl. in useful load)
OIL CAPACITY	4 gals.
LANDING SPEED	71.2 m.p.h.
WING AREA	180 sq. ft., incl. ailerons

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





NAVY WRIGHT NW-1

1922
SCALE: 1:48
DRAWN BY: PAUL R. MATT

HISTORICAL AVIATION ALBUM

DRAWING No. 4-31-A

PLATE 1 of 2

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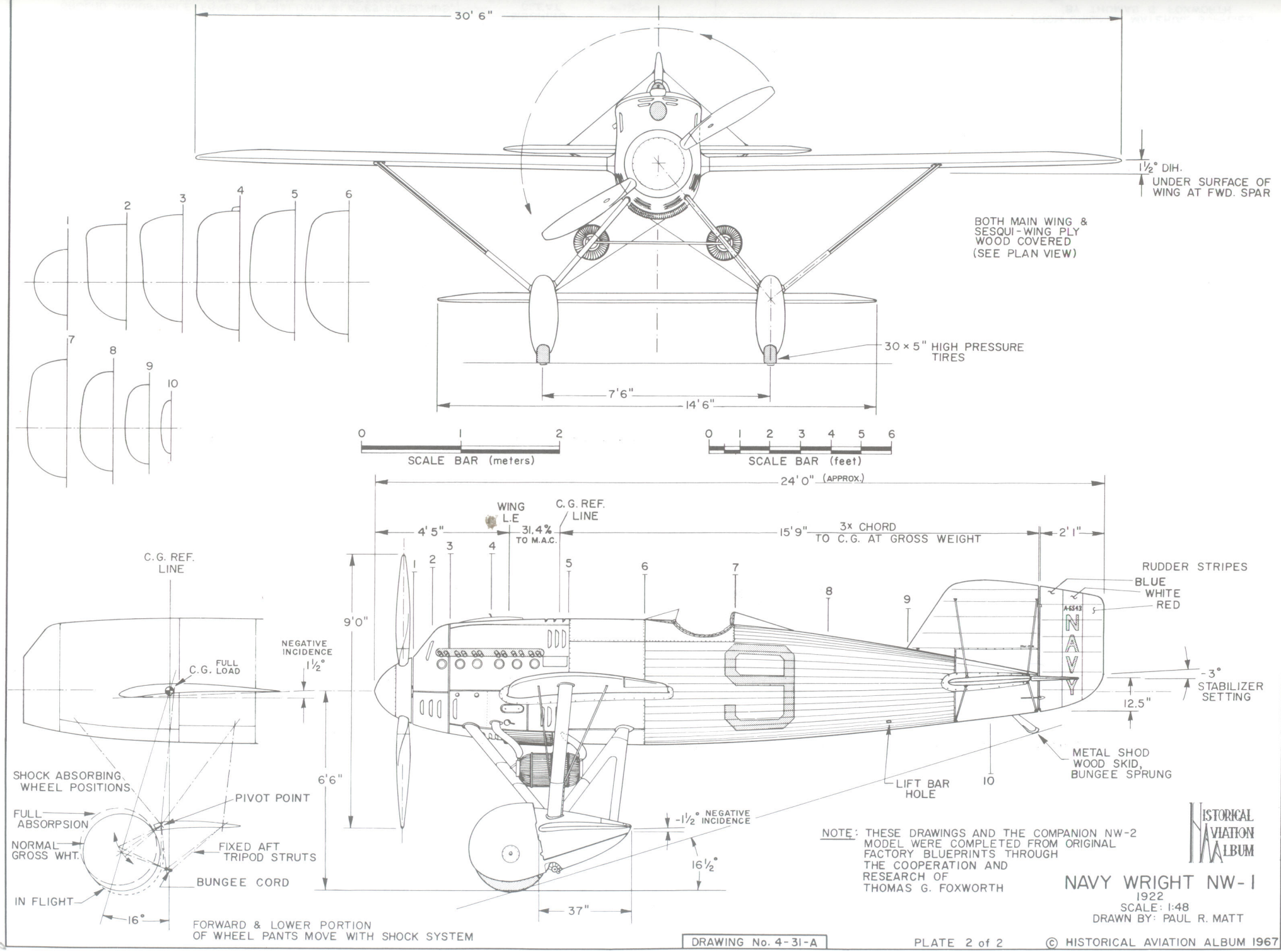
30'6"

AIRFOIL M-80 (1921) TWICE SCALE

DRAWING No. 4-31-A

PLATE 1 of 2

© HISTORICAL AVIATION ALBUM 1967



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

HISTORICAL AVIATION ALBUM

NAVY WRIGHT NW-1

1922

SCALE: 1:48

DRAWN BY: PAUL R. MATT

DRAWING No. 4-31-A

PLATE 2 of 2

© HISTORICAL AVIATION ALBUM 1967

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

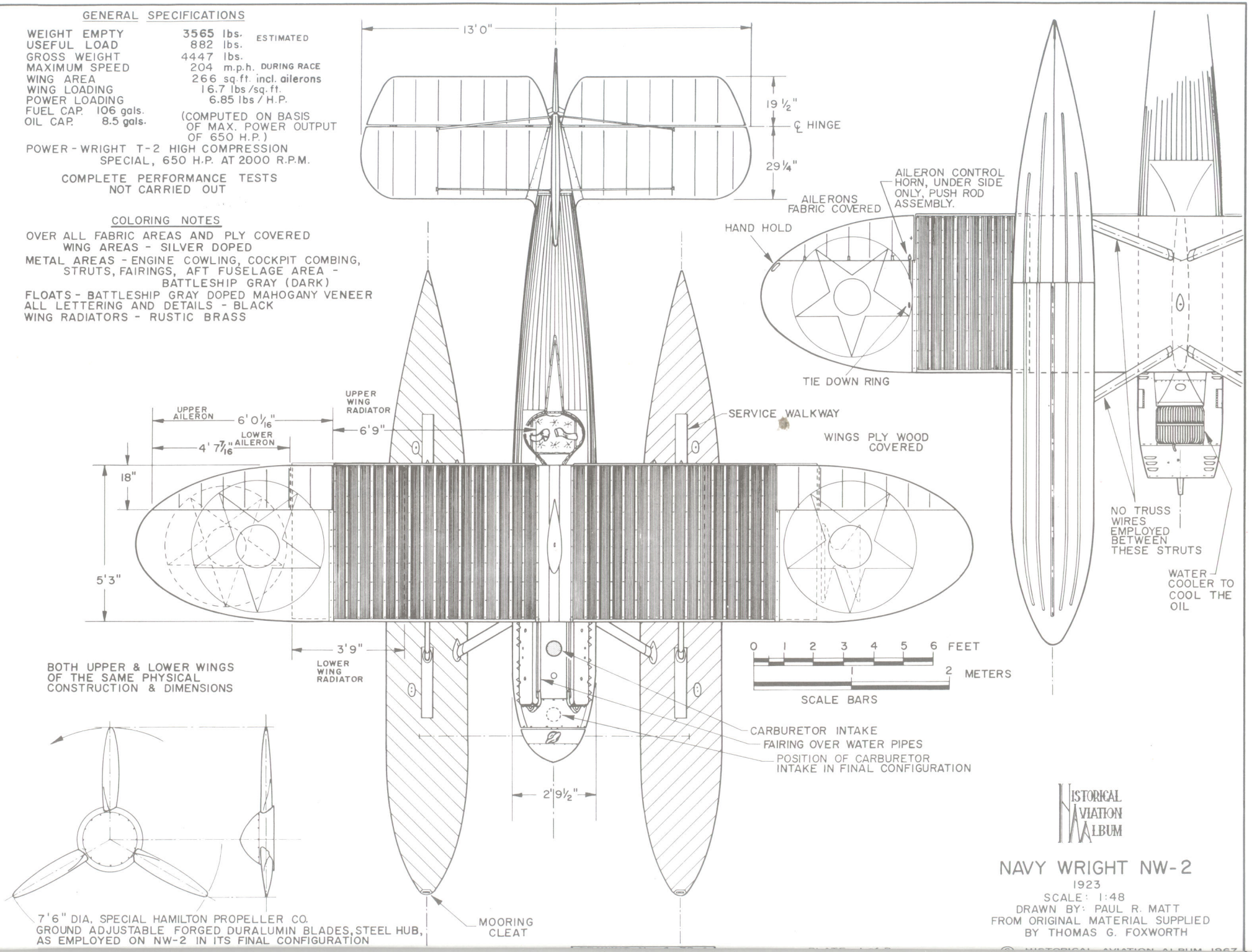
OVER ALL FABRIC AREAS AND PLY COVERED WING AREAS - SILVER DOPED

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 ALBUM

NAVY WRIGHT NW-2

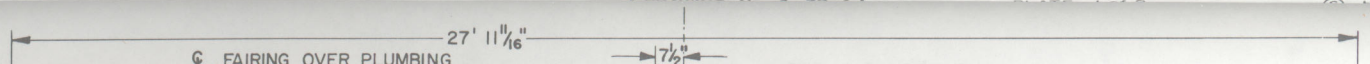
1923

SCALE: 1:48

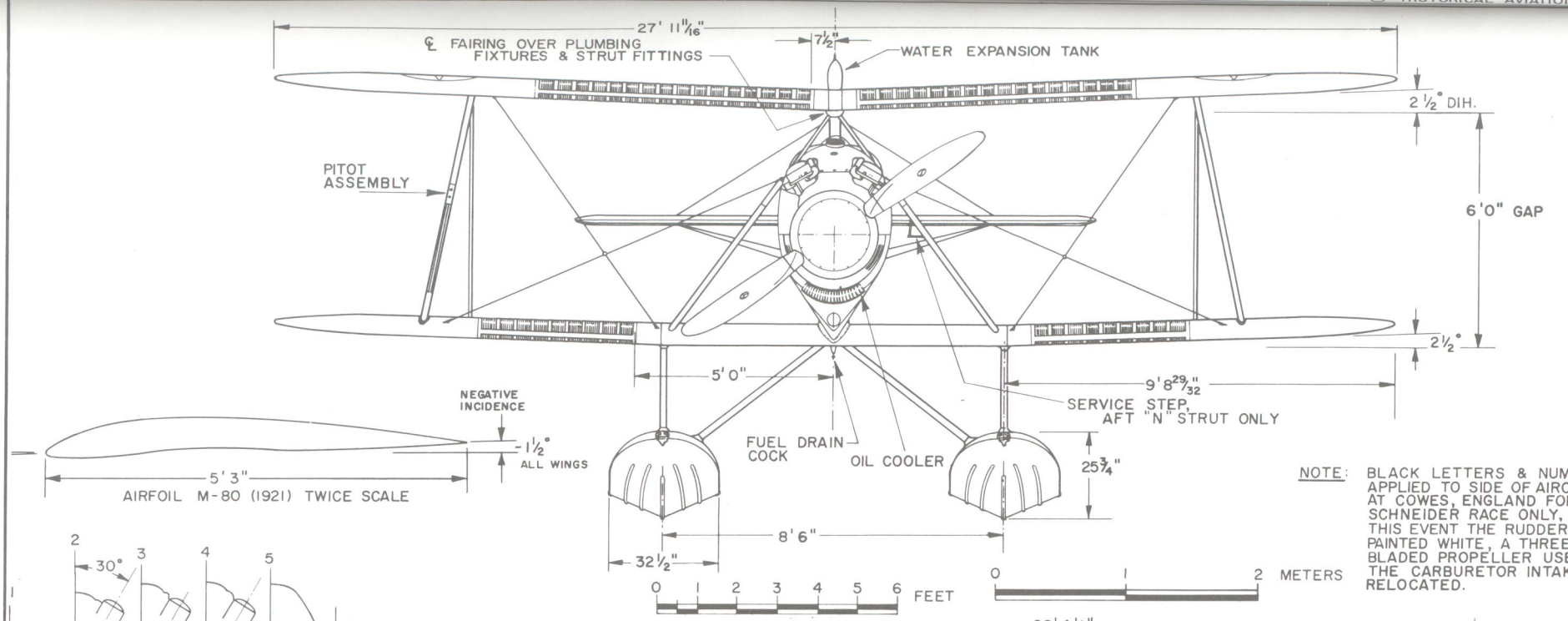
DRAWN BY: PAUL R. MATT

FROM ORIGINAL MATERIAL SUPPLIED BY THOMAS G. FOXWORTH

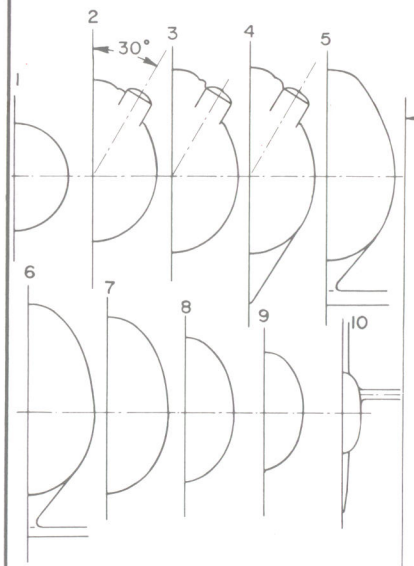
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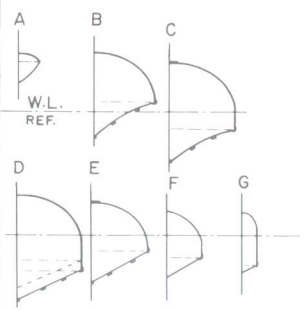


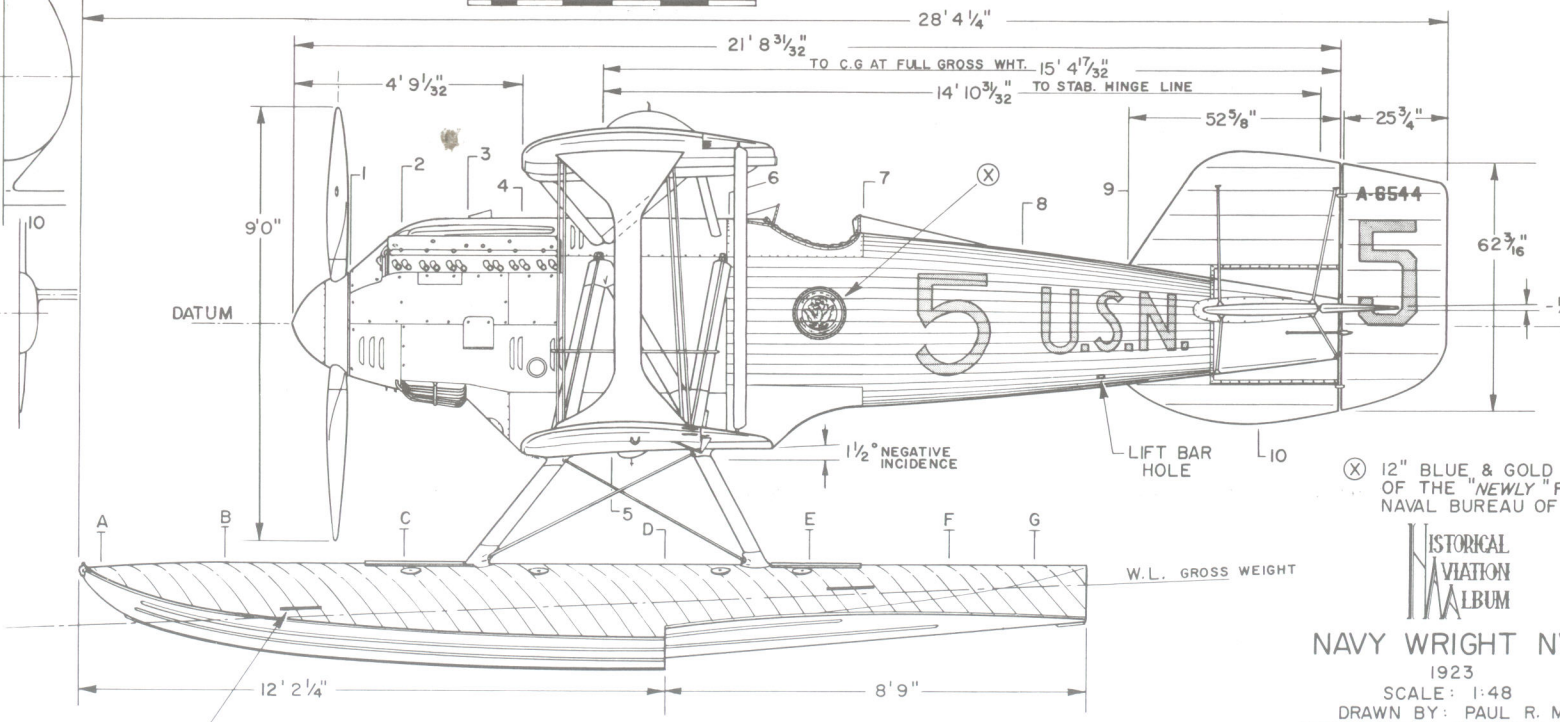
BY THOMAS G. FOXWORTH © HISTORICAL AVIATION ALBUM 1967



NOTE: BLACK LETTERS & NUMBERS APPLIED TO SIDE OF AIRCRAFT AT COWES, ENGLAND FOR THE SCHNEIDER RACE ONLY. FOR THIS EVENT THE RUDDER WAS PAINTED WHITE, A THREE BLADED PROPELLER USED & THE CARBURETOR INTAKE RELOCATED.







Ⓧ 12" BLUE & GOLD EMBLEM OF THE "*NEWLY*" FORMED NAVAL BUREAU OF AERONAUTICS

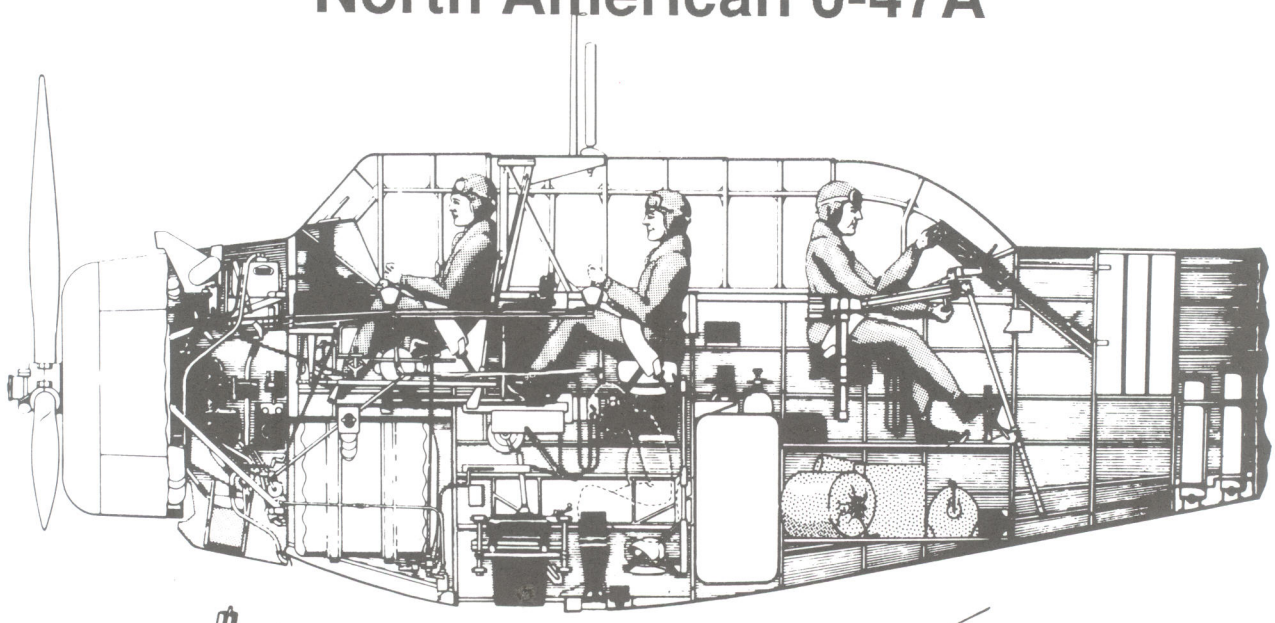
HISTORICAL AVIATION ALBUM

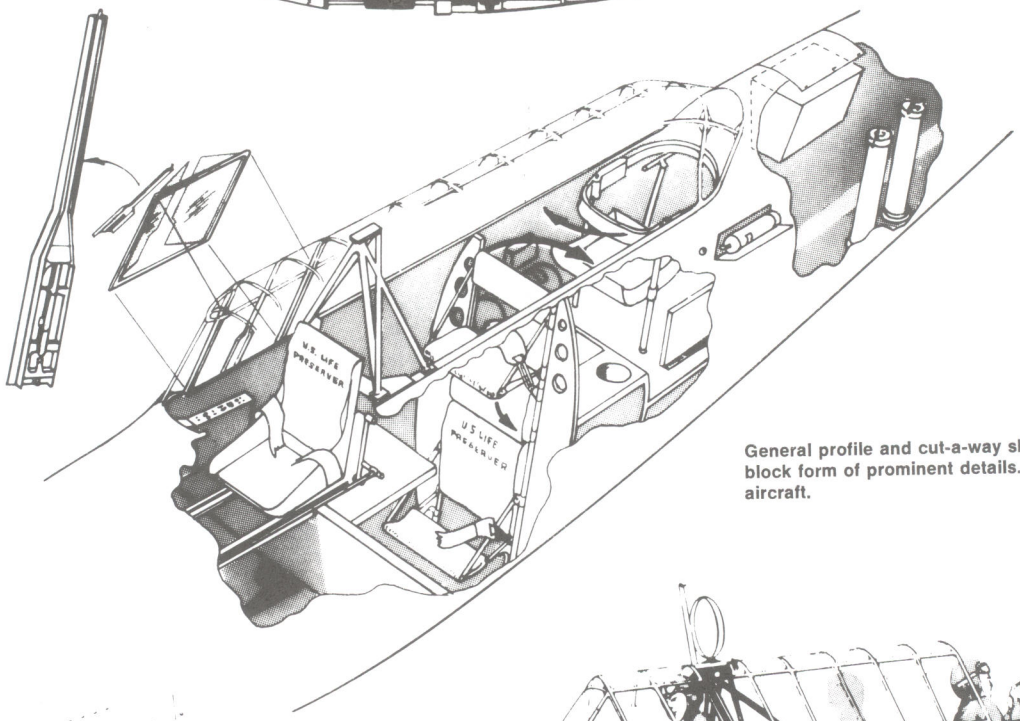
NAVY WRIGHT NW-2

1923
SCALE: 1:48
DRAWN BY: PAUL R. MATT
FROM ORIGINAL MATERIAL SUPPLIED BY THOMAS G. FOXWORTH

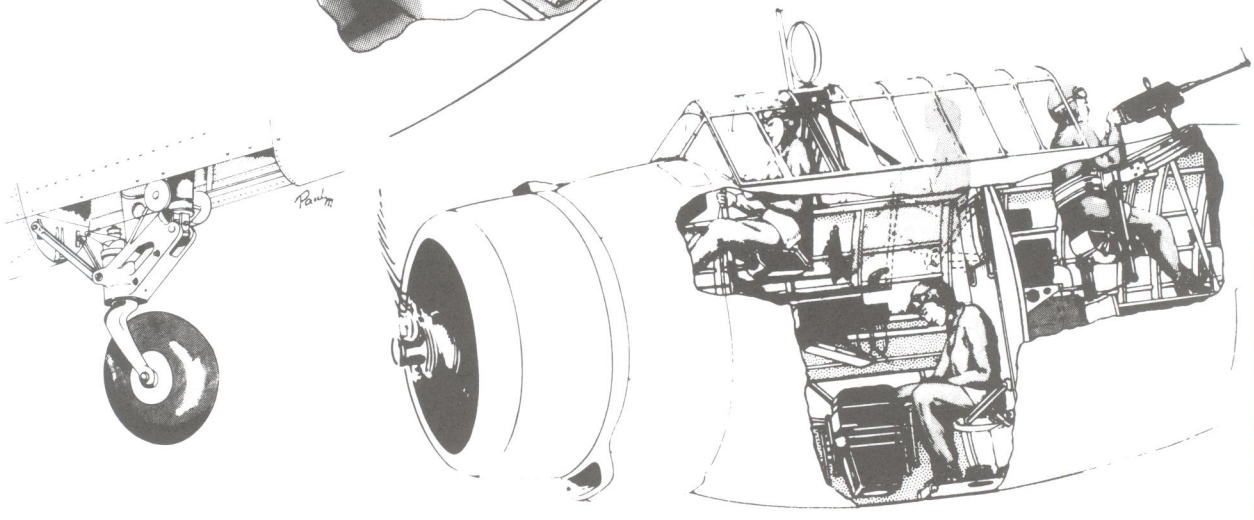
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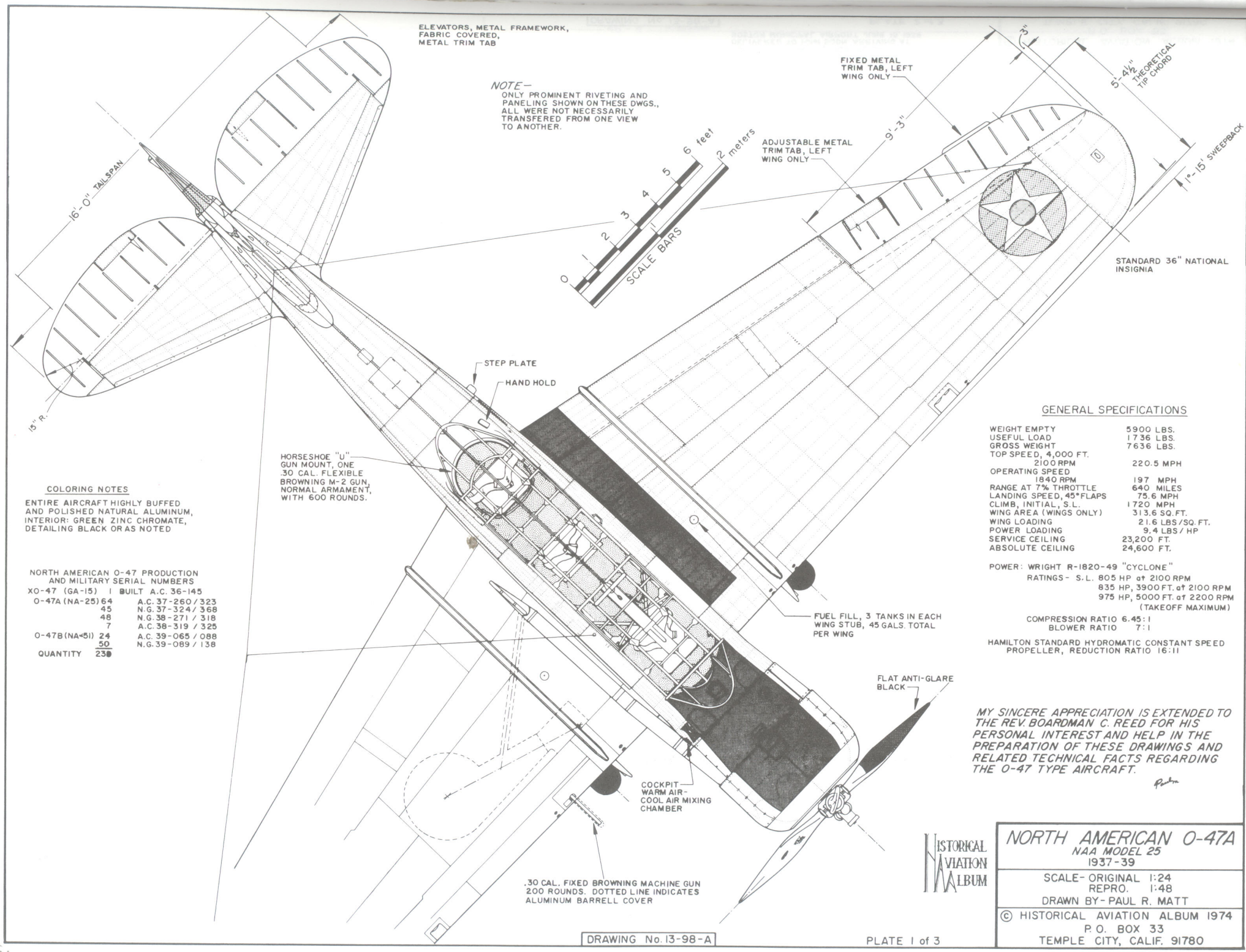
North American 0-47A





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





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-51)	24	A.C. 39-065 / 088
	50	N.G. 39-089 / 138
QUANTITY	238	

GENERAL SPECIFICATIONS

WEIGHT EMPTY	5900 LBS.
USEFUL LOAD	1736 LBS.
GROSS WEIGHT	7636 LBS.
TOP SPEED, 4,000 FT. 2100 RPM	220.5 MPH
OPERATING SPEED 1840 RPM	197 MPH
RANGE AT 7% THROTTLE	640 MILES
LANDING SPEED, 45° FLAPS	75.6 MPH
CLIMB, INITIAL, S.L.	1720 MPH
WING AREA (WINGS ONLY)	313.6 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 16:11

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

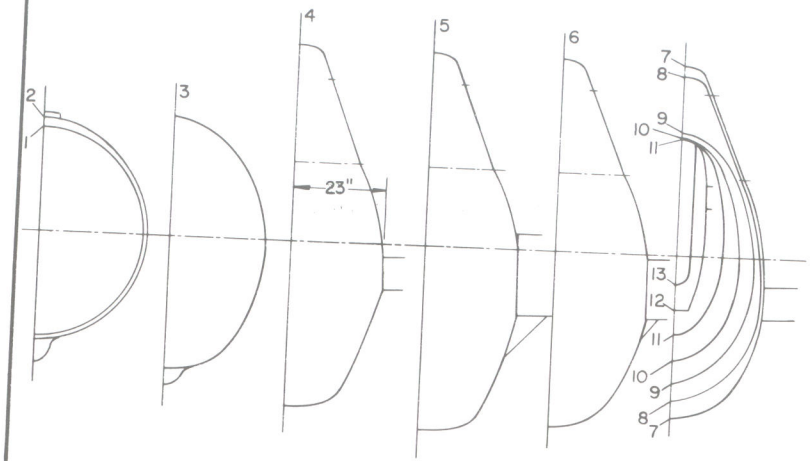
NORTH AMERICAN O-47A

NAA MODEL 25
1937-39

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

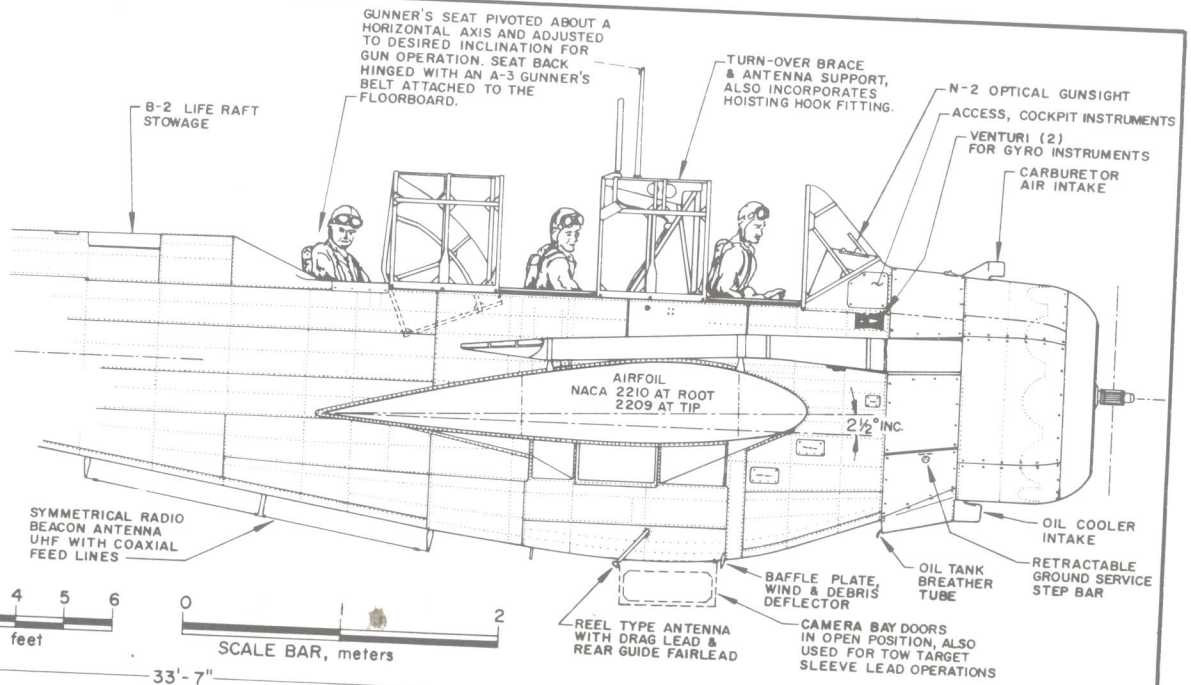
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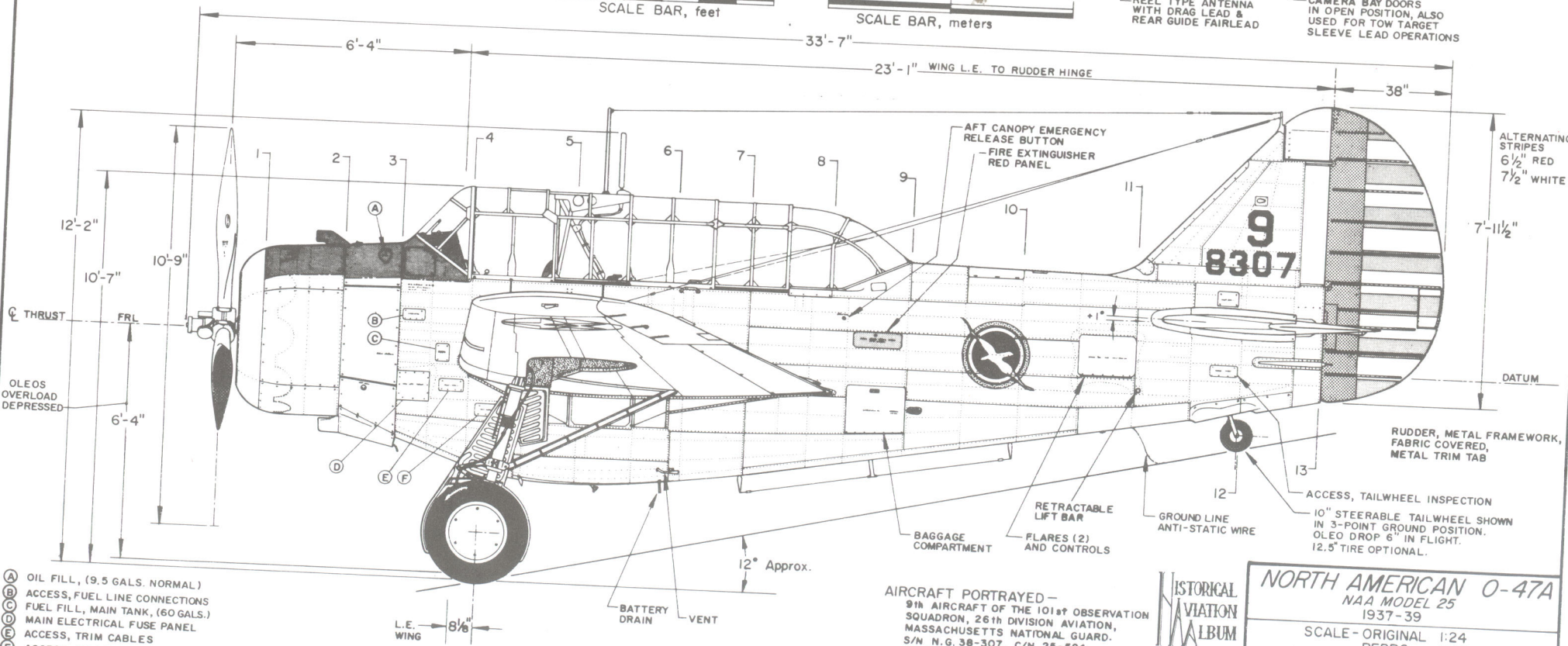
DRAWING No. 13-98-A



101st OBSERVATION SQUADRON INSIGNIA

WHITE GULL, MED. BLUE SKY BACKGROUND, ENCIRCLED IN A WHITE BAND AND OUTER RING OF LEMON YELLOW.





Ⓐ OIL FILL, (9.5 GALS. NORMAL)
Ⓑ ACCESS, FUEL LINE CONNECTIONS
Ⓒ FUEL FILL, MAIN TANK, (60 GALS.)
Ⓓ MAIN ELECTRICAL FUSE PANEL
Ⓔ ACCESS, TRIM CABLES
Ⓕ ACCESS, PULLEYS

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

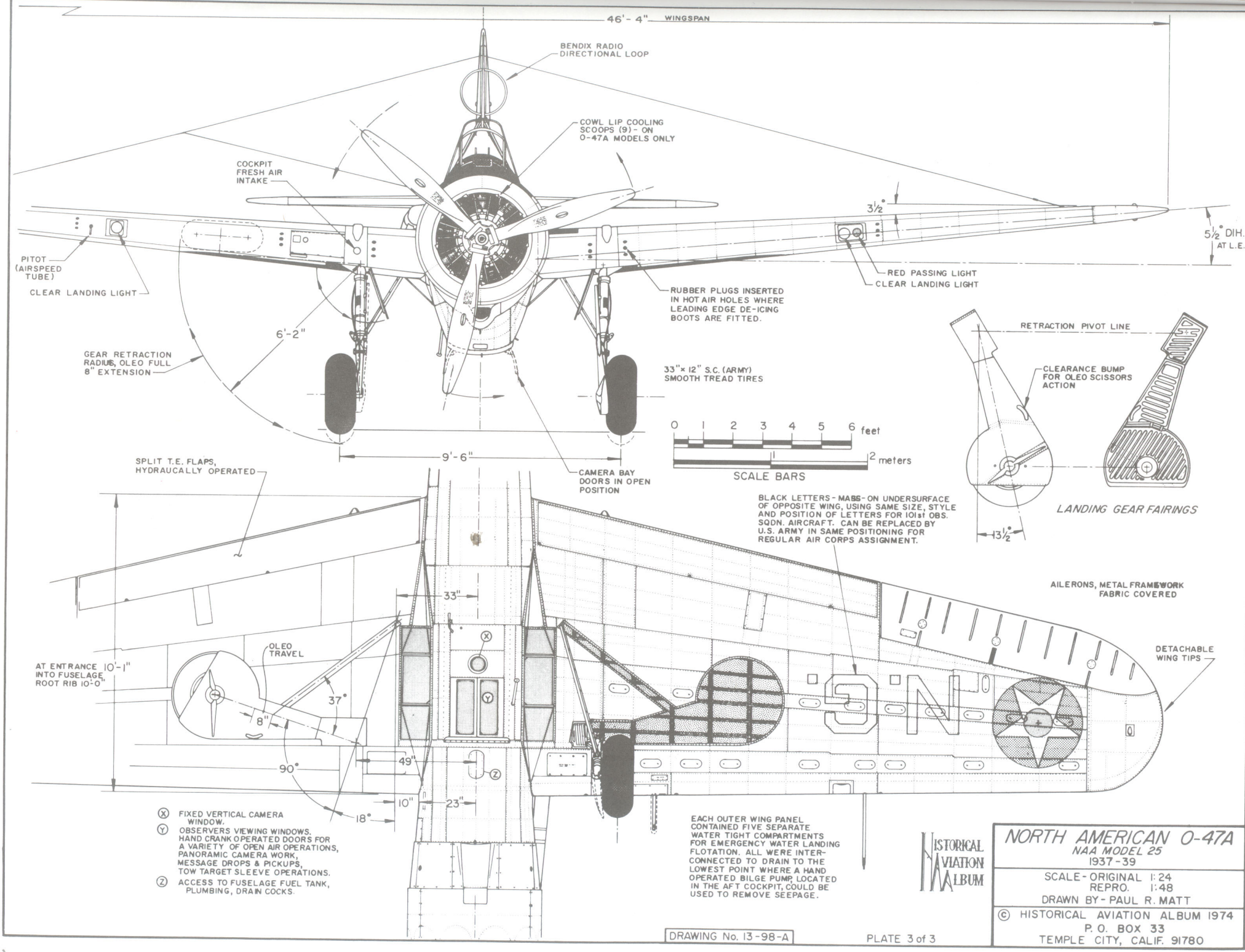
NORTH AMERICAN O-47A

NAA MODEL 25
1937-39

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

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Ⓧ FIXED VERTICAL CAMERA WINDOW.

Ⓨ OBSERVERS VIEWING WINDOWS. HAND CRANK OPERATED DOORS FOR A VARIETY OF OPEN AIR OPERATIONS, PANORAMIC CAMERA WORK, MESSAGE DROPS & PICKUPS, TOW TARGET SLEEVE OPERATIONS.

Ⓩ 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

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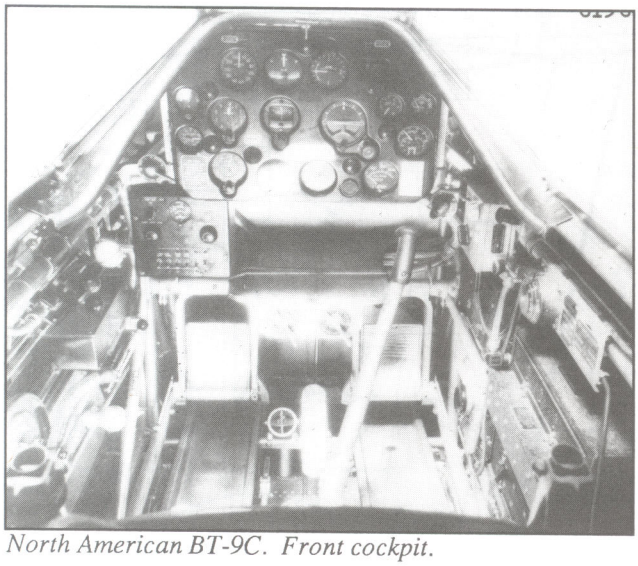
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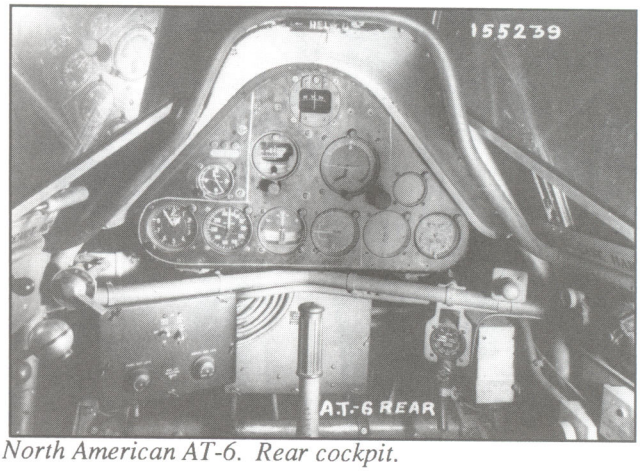
North American AT-6D "Texan"



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



North American BT-9C. Front cockpit.



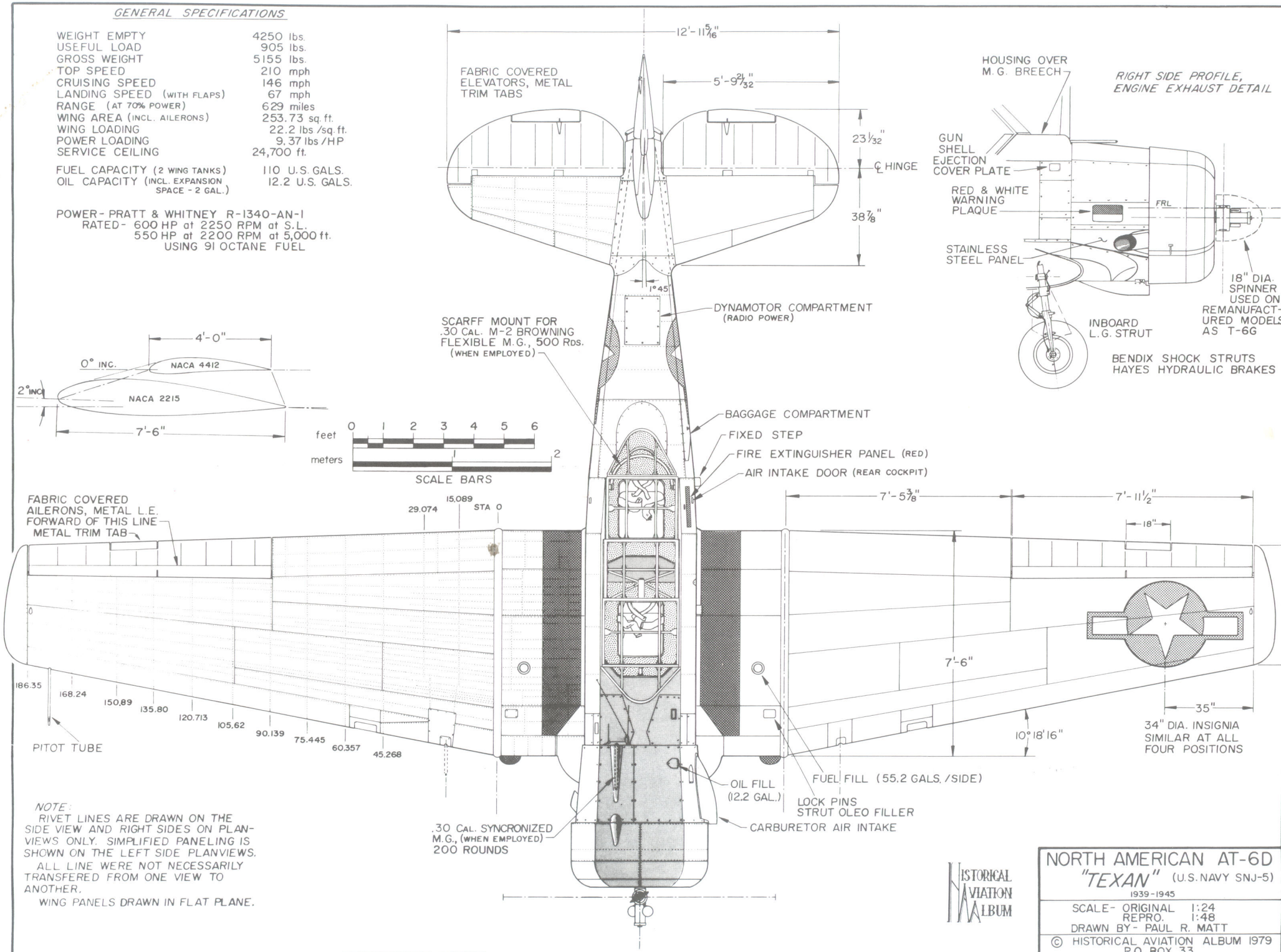
North American AT-6. Rear cockpit.

GENERAL SPECIFICATIONS

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

SCALE BARS



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 TRANSFERED FROM ONE VIEW TO ANOTHER.
WING PANELS DRAWN IN FLAT PLANE.

HISTORICAL AVIATION ALBUM

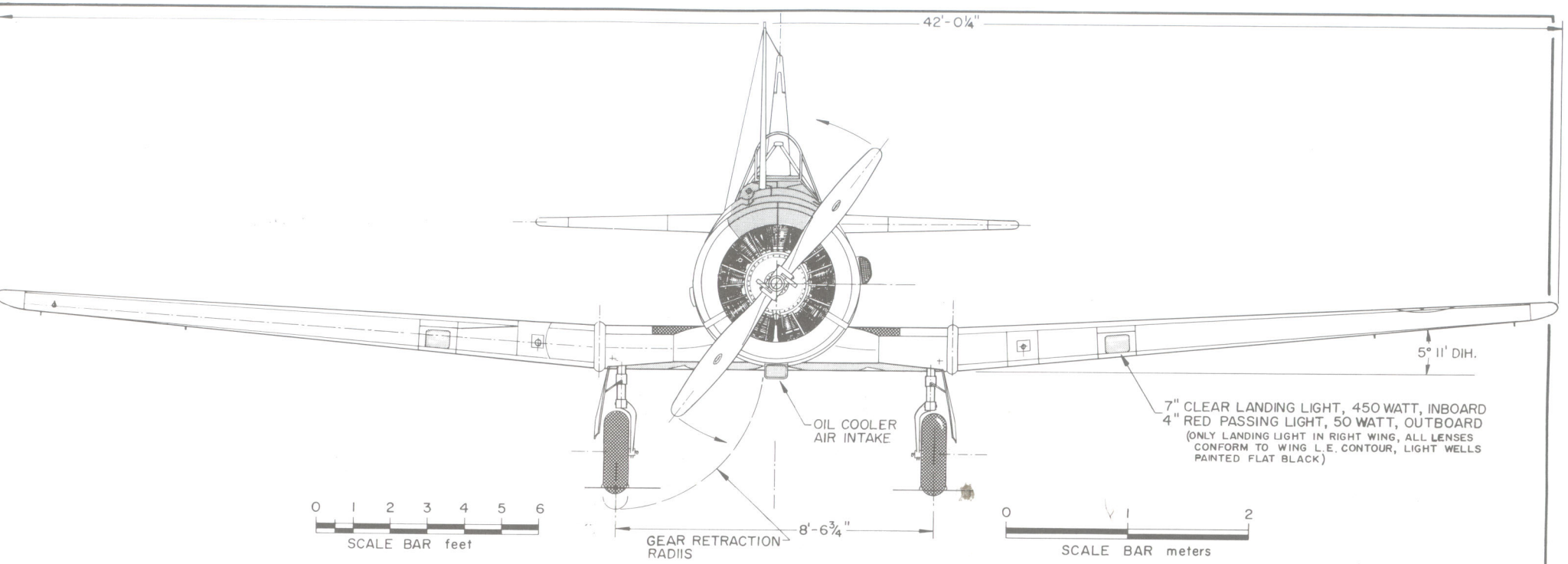
NORTH AMERICAN AT-6D "TEXAN" (U.S. NAVY SNJ-5)

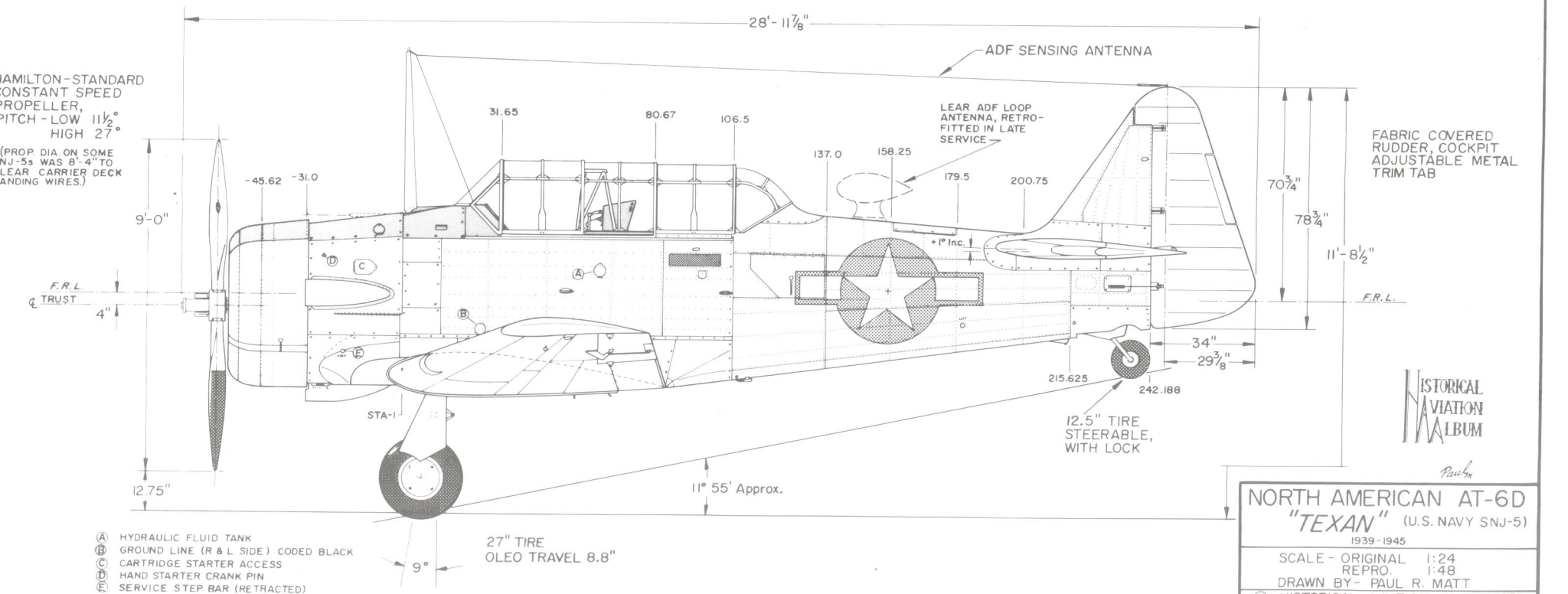
1939-1945

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

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DRAWING No. 16-106-A





HISTORICAL AVIATION ALBUM

Paul R. Matt

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

1939-1945

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

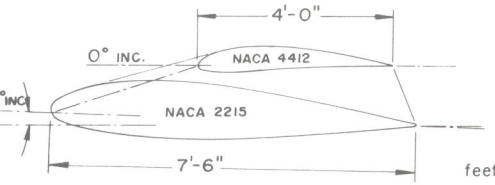
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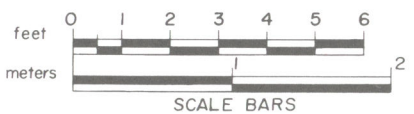
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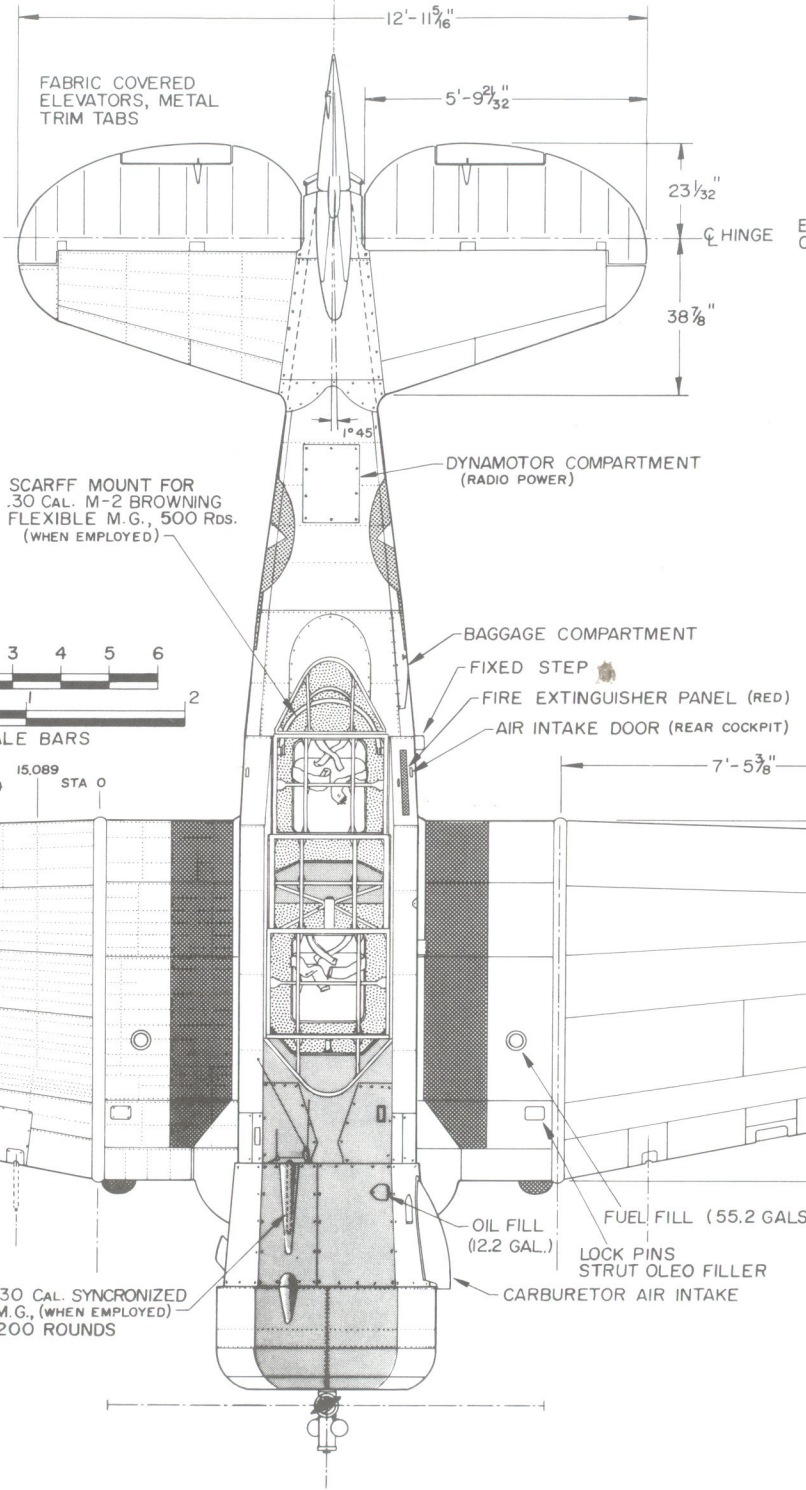
GENERAL SPECIFICATIONS

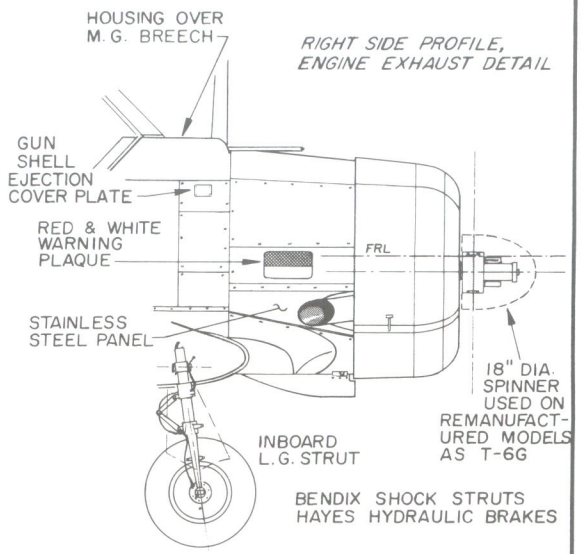
WEIGHT EMPTY	4250 lbs.
USEFUL LOAD	905 lbs.
GROSS WEIGHT	5155 lbs.
TOP SPEED	210 mph
CRUISING SPEED	146 mph
LANDING SPEED (WITH FLAPS)	67 mph
RANGE (AT 70% POWER)	629 miles
WING AREA (INCL. AILERONS)	253.73 sq. ft.
WING LOADING	22.2 lbs /sq. ft.
POWER LOADING	9.37 lbs /HP
SERVICE CEILING	24,700 ft.
FUEL 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









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 TRANSFERED FROM ONE VIEW TO ANOTHER.
WING PANELS DRAWN IN FLAT PLANE.

HISTORICAL AVIATION ALBUM

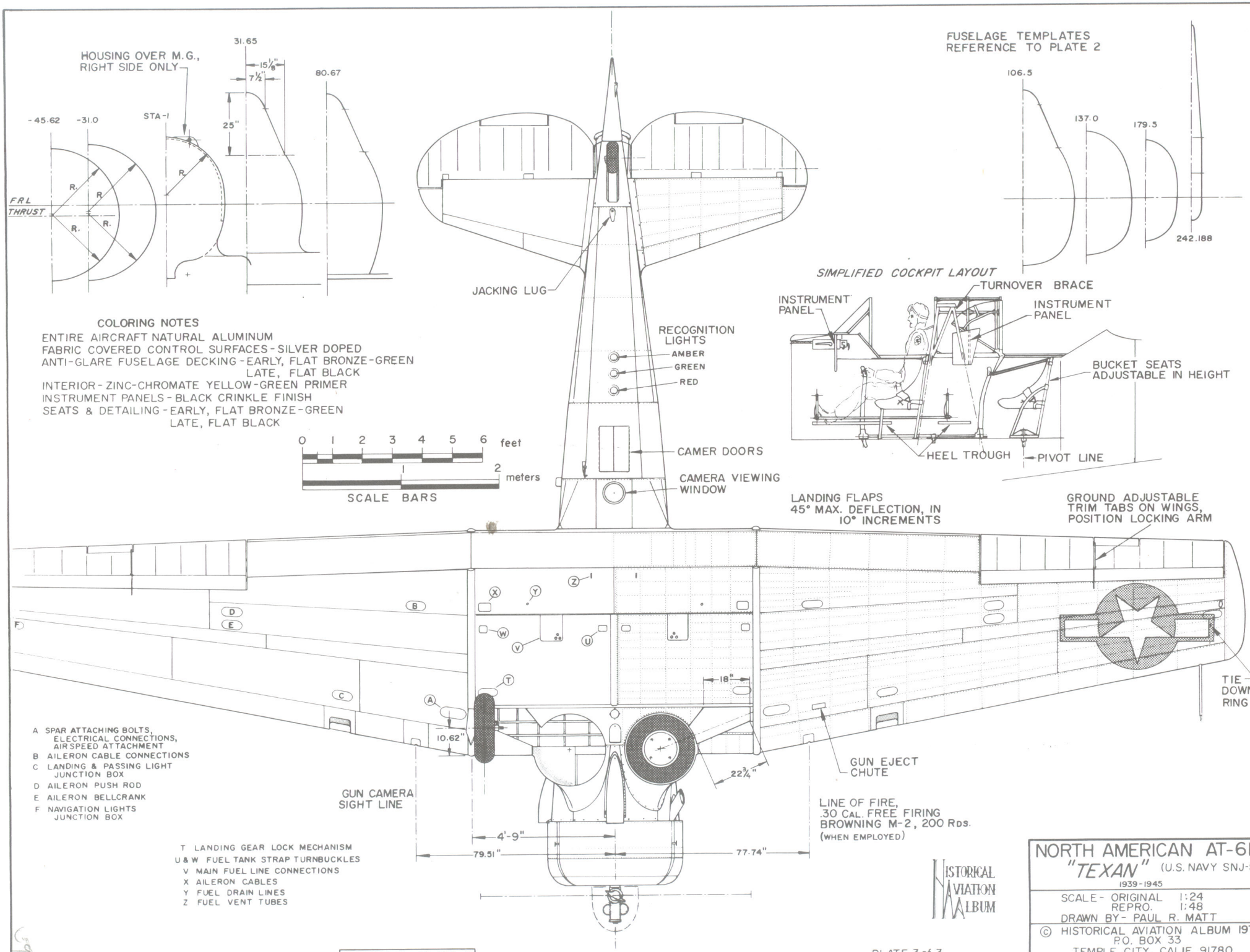
NORTH AMERICAN AT-6D "TEXAN" (U.S. NAVY SNJ-5)

1939-1945

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

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TEMPLE CITY, CALIF 91780

DRAWING No. 16-106-A



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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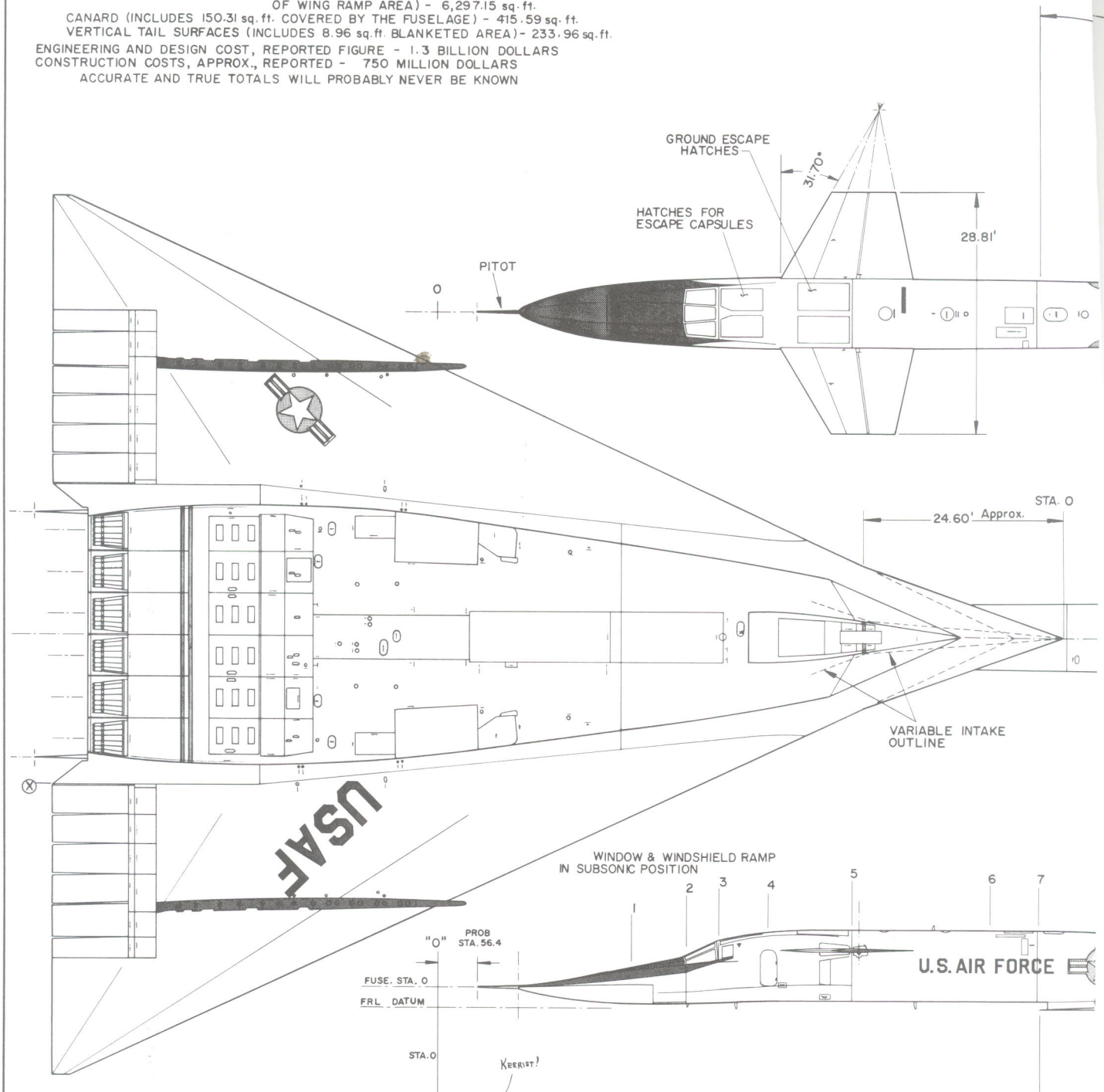
DRAWING No. 16-106-A

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



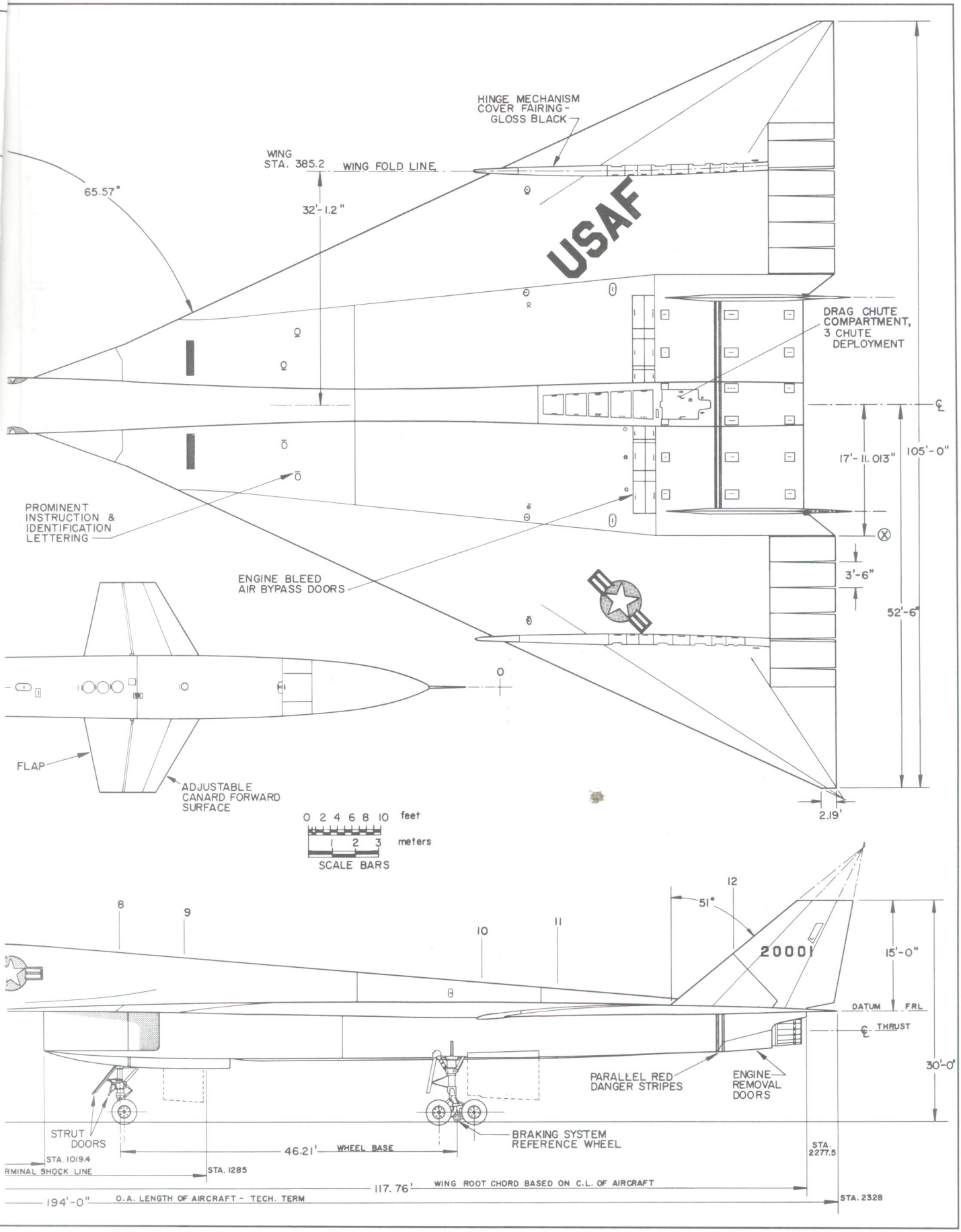
NORTH AMERICAN XB-70-1
"Valkyrie"
1964-69

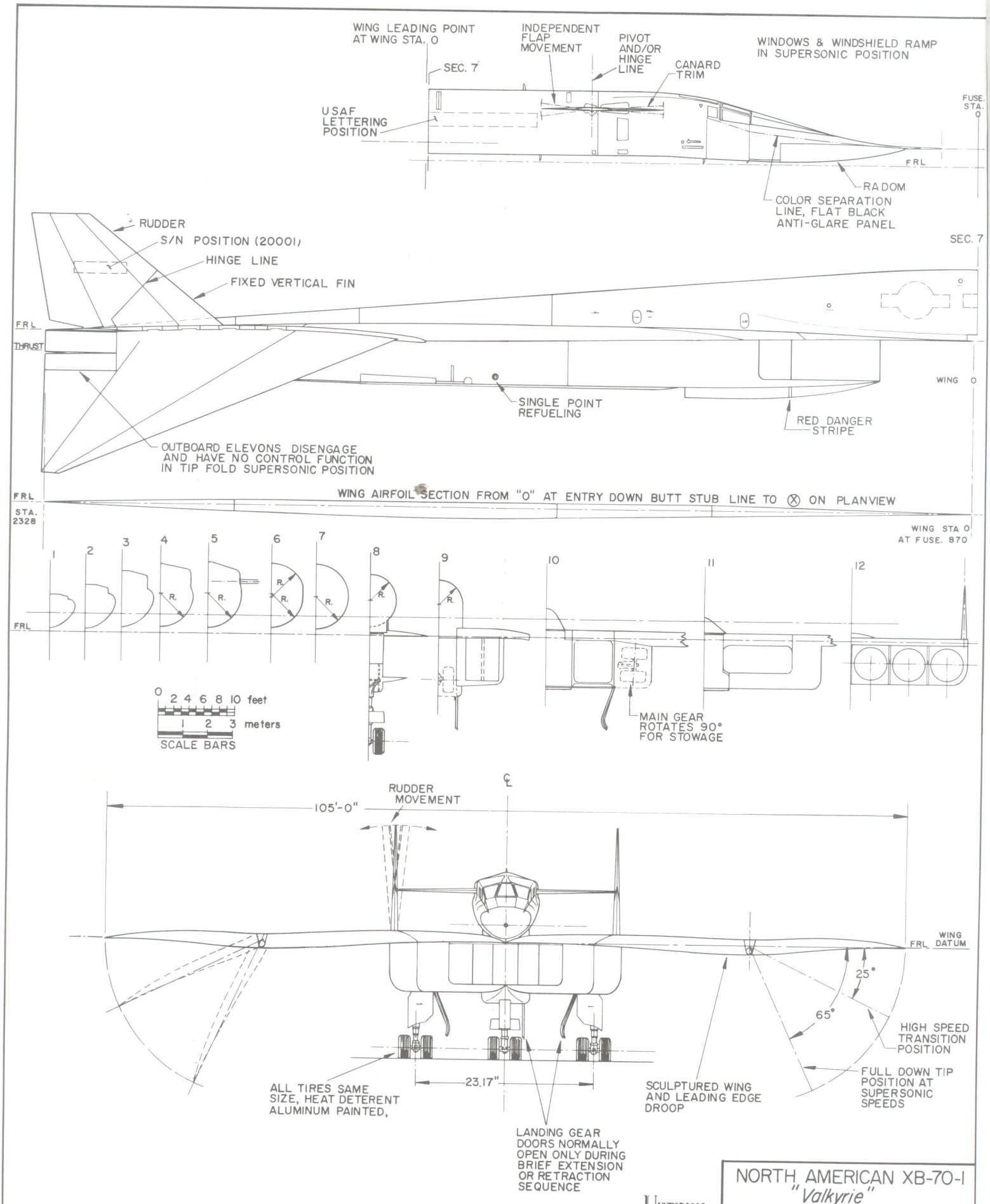
SCALE: ORIGINAL 1:96 (1/8" = 1')
REPRO. 1:192 (1/16" = 1')
DRAWN BY - PAUL R. MATT

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DRAWING No. 7-66-G


HINGE MECHANISM COVER FAIRING - GLOSS BLACK
WING STA. 385.2
WING FOLD LINE
65.57°
32'-1.2"
USAF
DRAG CHUTE COMPARTMENT, 3 CHUTE DEPLOYMENT
17'-11.013"
105'-0"
PROMINENT INSTRUCTION & IDENTIFICATION LETTERING
ENGINE BLEED AIR BYPASS DOORS
3'-6"
52'-6"
FLAP
ADJUSTABLE CANARD FORWARD SURFACE
2.19'
0 2 4 6 8 10 feet
1 2 3 meters
SCALE BARS
8
9
10
11
12
51°
2000!
15'-0"
DATUM F.R.L.
THRUST
30'-0"
PARALLEL RED DANGER STRIPES
ENGINE REMOVAL DOORS
STRUT DOORS
46.21' WHEEL BASE
BRAKING SYSTEM REFERENCE WHEEL
STA. 1019.4
RMINAL SHOCK LINE
STA. 1285
STA. 2277.5
117.76' WING ROOT CHORD BASED ON C.L. OF AIRCRAFT
194'-0" O.A. LENGTH OF AIRCRAFT - TECH. TERM
STA. 2328



NORTH AMERICAN XB-70-1 "Valkyrie"

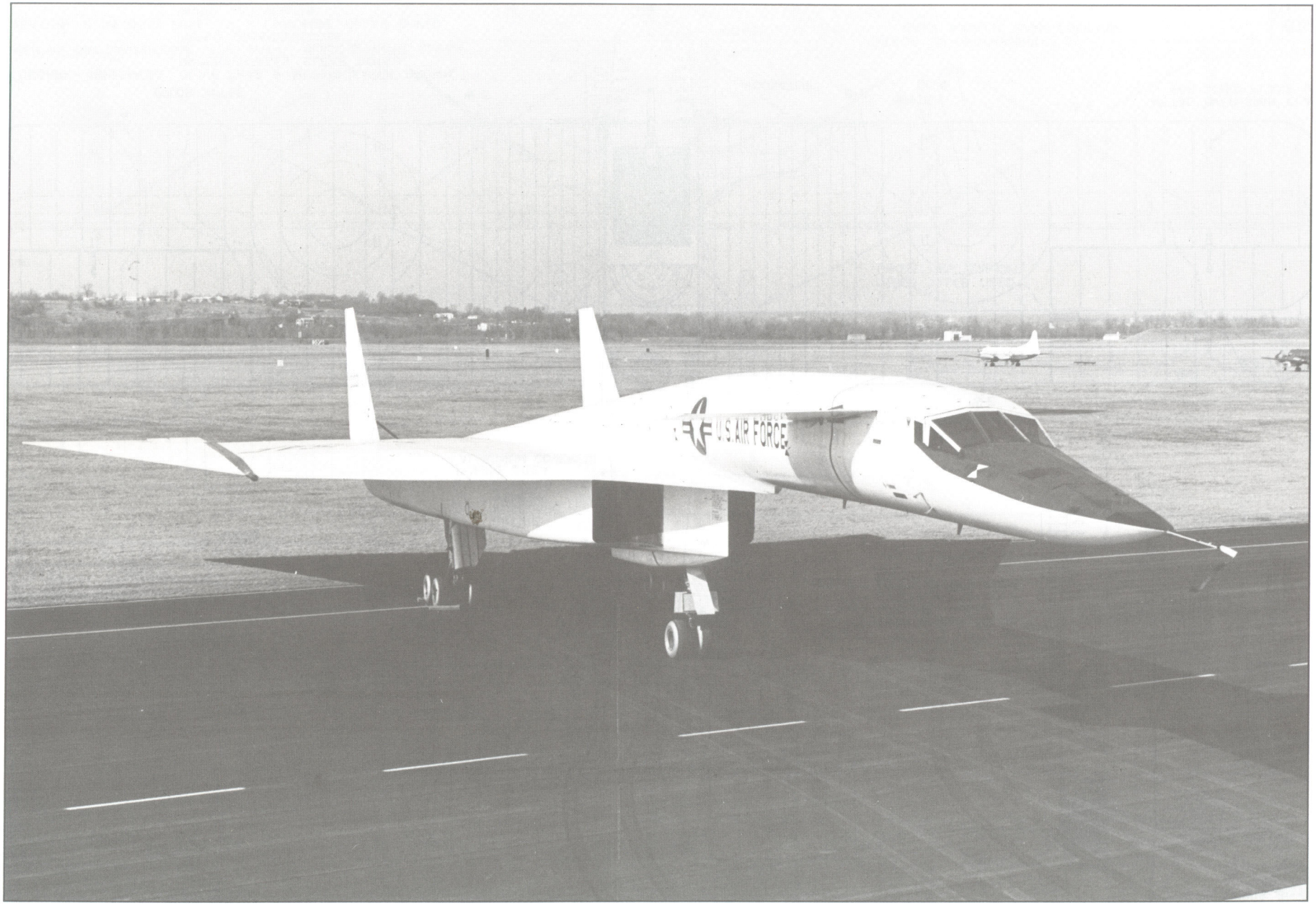
1964-69

SCALE: ORIGINAL 1:96 (1/8" = 1')
REPRO. 1:192 (1/16" = 1')
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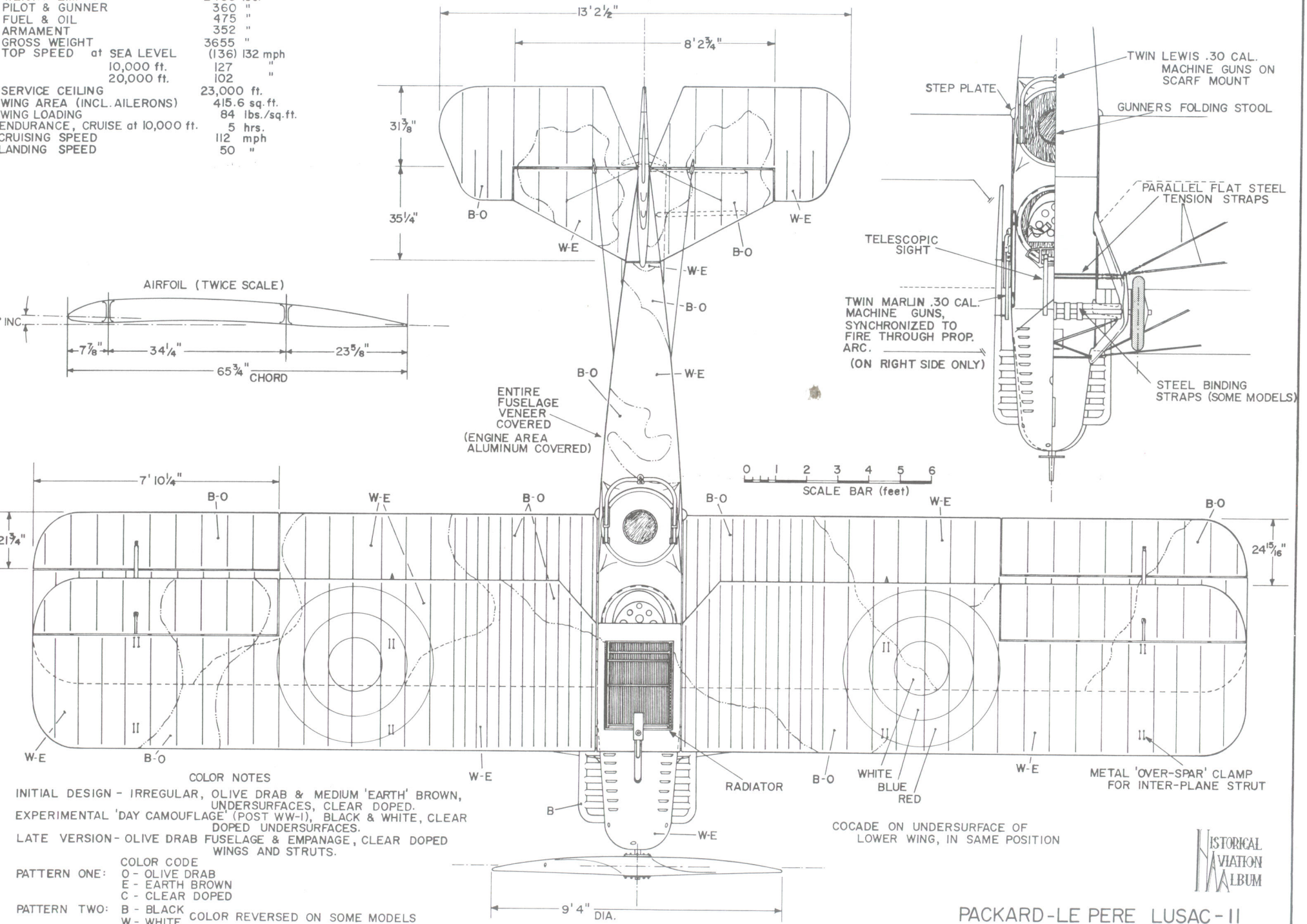
DRAWING No. 7-66-G



North American XB-70-1 "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 "



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
W - WHITE
COLOR REVERSED ON SOME MODELS

BASIC CAMOFOUFLAGE PATTERN AND OUTLINE DID NOT CHANGE

COLOR LINE — · — · — · —

COCADE ON UNDERSURFACE OF LOWER WING, IN SAME POSITION

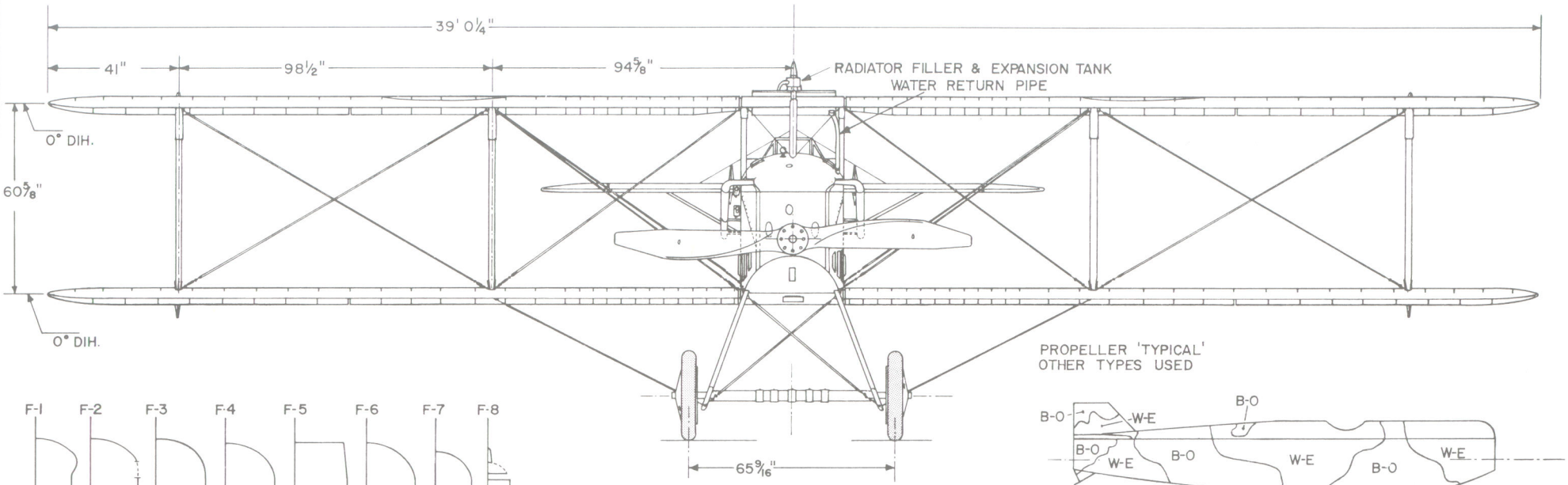
HISTORICAL AVIATION ALBUM

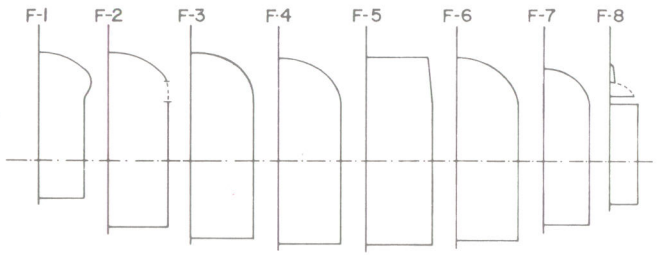
PACKARD-LE PERE LUSAC-11

(1918)

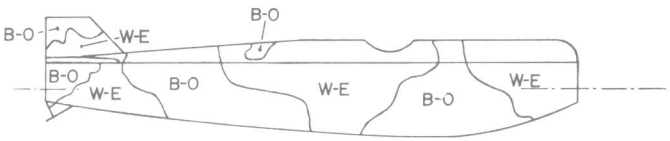
SCALE: 1:48

PLATE



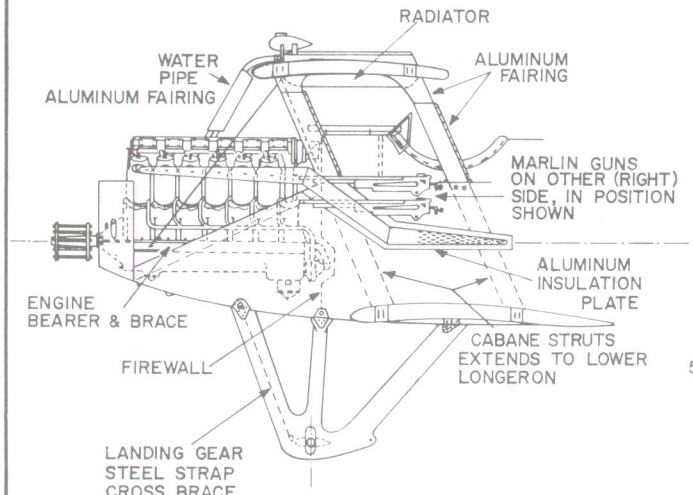


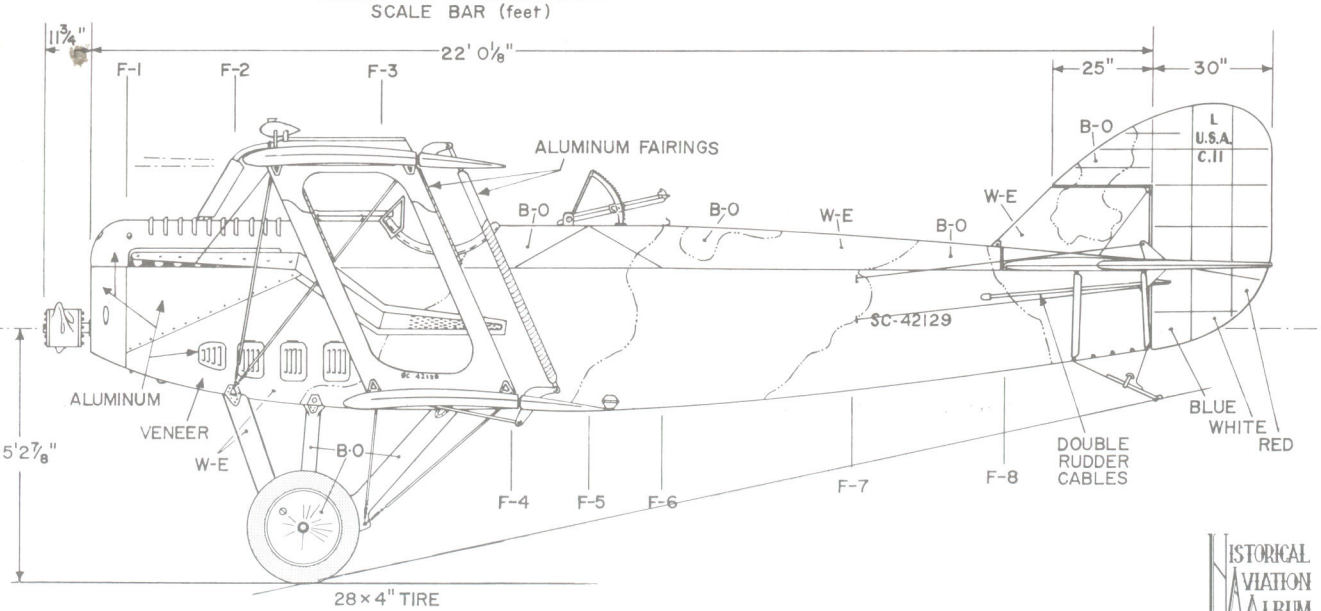
PROPELLER 'TYPICAL'
OTHER TYPES USED



RIGHT SIDE, CAMOUFLAGE PATTERN
(HALF SCALE)







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

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

HISTORICAL AVIATION ALBUM

PACKARD-LE PERE LUSAC-11

(1918)

SCALE: 1:48

PLATE 2

DRAWN BY: PAUL R. MATT

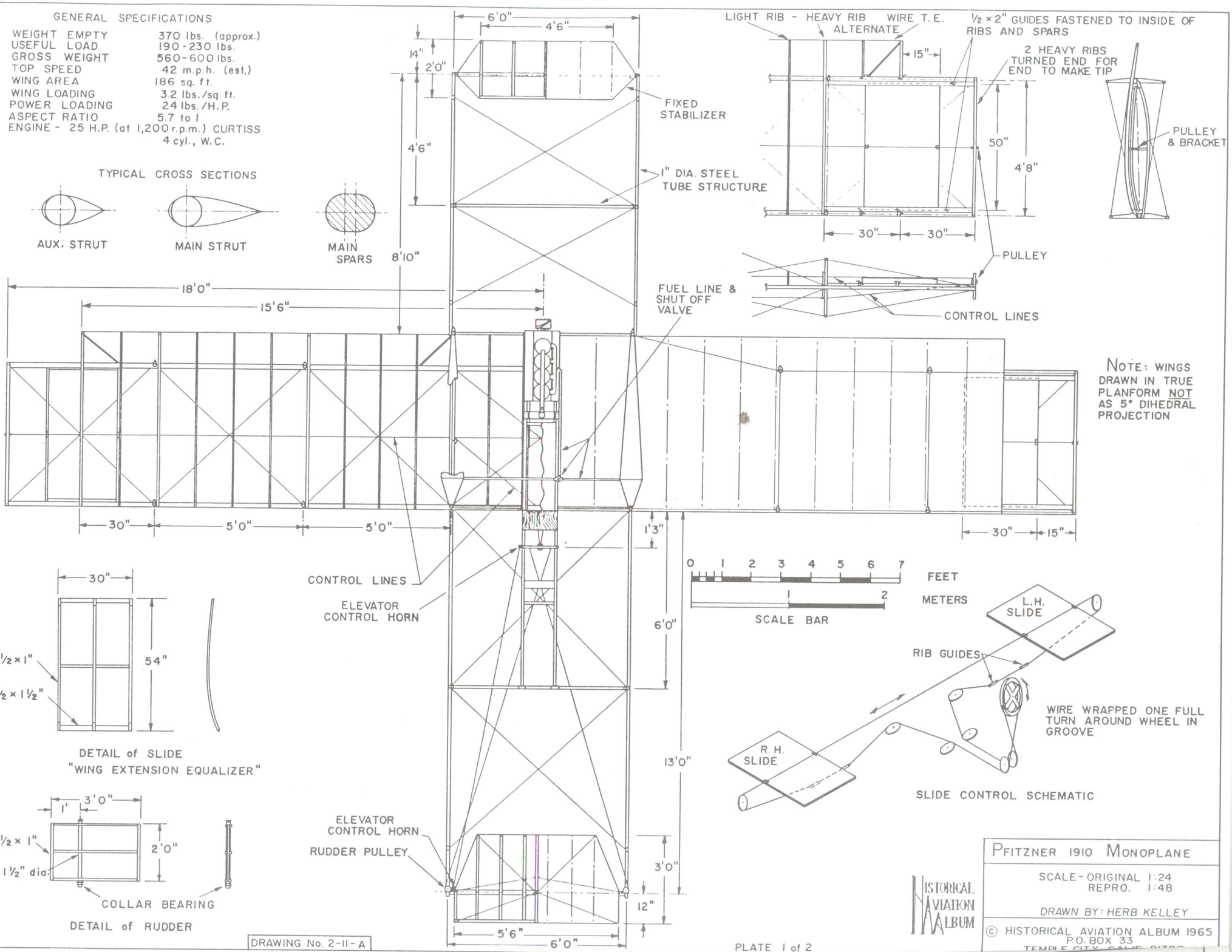
© 1965

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.
POWER LOADING	24 lbs./H.P.
ASPECT RATIO	5.7 to 1

ENGINE - 25 H.P. (at 1,200 r.p.m.) CURTISS 4 cyl., W.C.

TYPICAL CROSS SECTIONS



DRAWING No. 2-11-A

PLATE 1 of 2

PFITZNER 1910 MONOPLANE

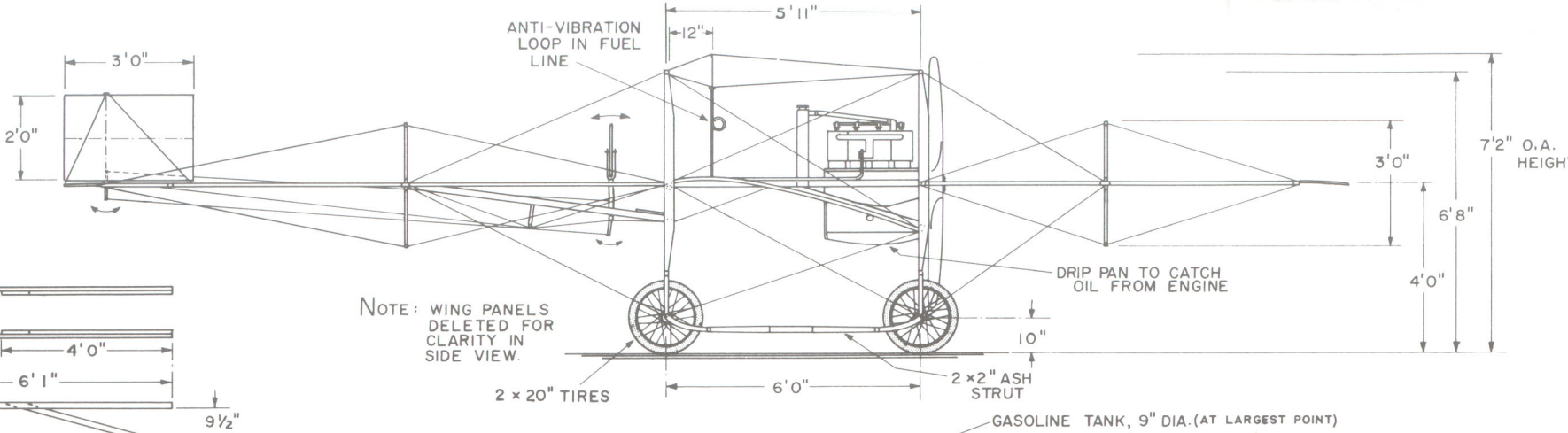
SCALE - ORIGINAL 1:24
REPRO. 1:48

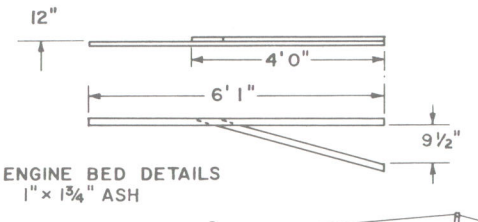
DRAWN BY: HERB KELLEY

HISTORICAL AVIATION ALBUM

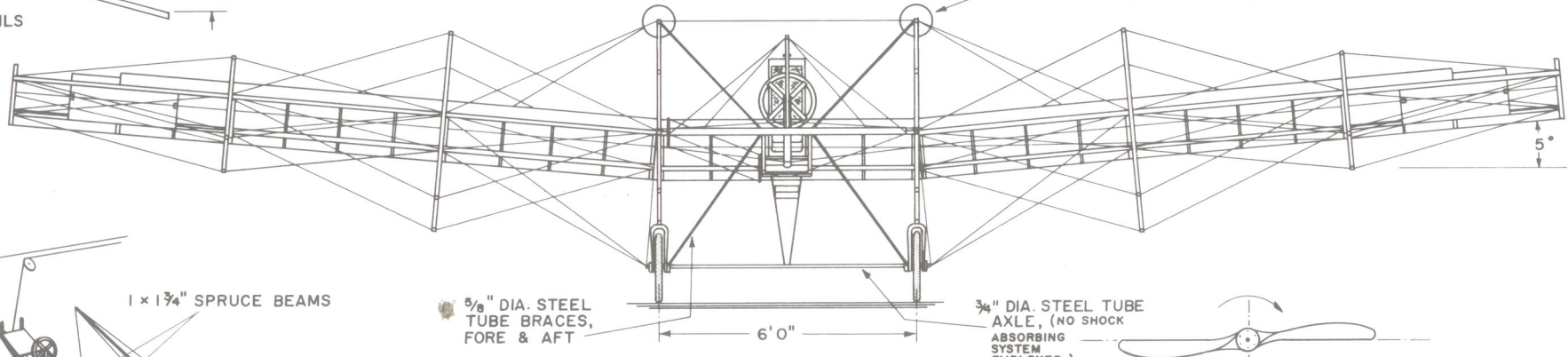
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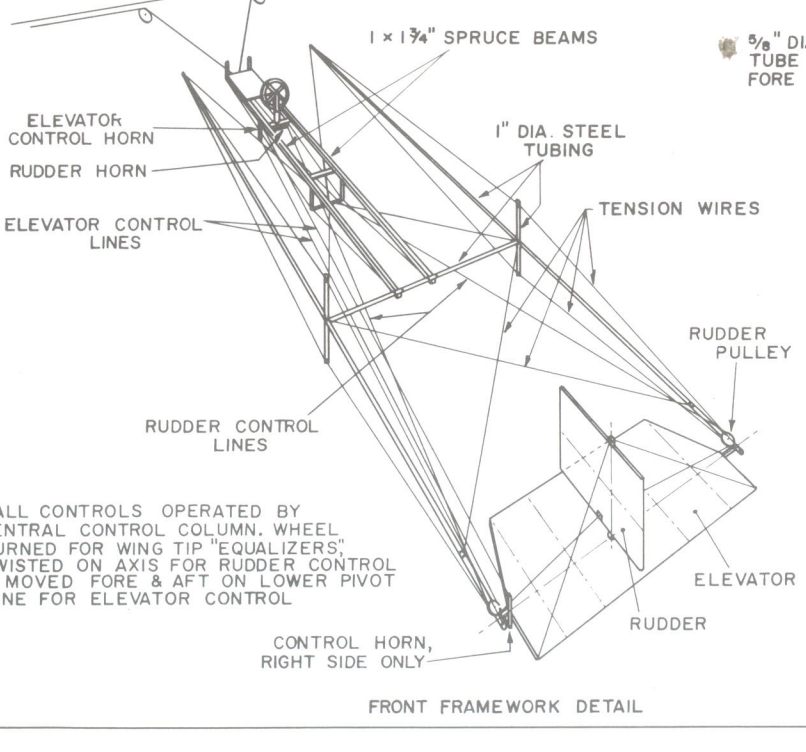
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ENGINE BED DETAILS
1" × 1¾" ASH





FRONT FRAMEWORK DETAIL

ALL CONTROLS OPERATED BY CENTRAL CONTROL COLUMN. WHEEL TURNED FOR WING TIP "EQUALIZERS," TWISTED ON AXIS FOR RUDDER CONTROL & MOVED FORE & AFT ON LOWER PIVOT LINE FOR ELEVATOR CONTROL

⅝" DIA. STEEL TUBE BRACES, FORE & AFT

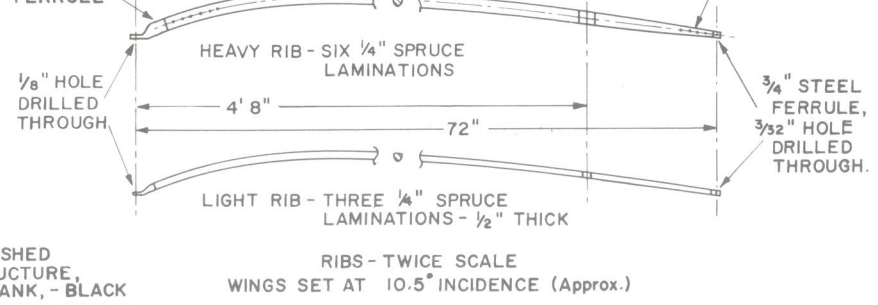
6'0"

¾" DIA. STEEL TUBE AXLE, (NO SHOCK ABSORBING SYSTEM EMPLOYED.)





FACING PROPELLER, LOOKING FOREWARD
ALL WOOD, 6'0" DIA. - 4' PITCH
ROTATION - C.W.



COLORING NOTES

WOOD - CLEAR VARNISHED
METAL TUBULAR STRUCTURE, FITTINGS, FUEL TANK, - BLACK
FABRIC - BLACK, UNEVEN MOTTLED FINISH

ALL SURFACES WERE COVERED ON THE TOP SURFACE ONLY, WITH REMNANT BALDWIN BALLOON RUBBERIZED FABRIC

RIBS - TWICE SCALE
WINGS SET AT 10.5° INCIDENCE (Approx.)

HISTORICAL AVIATION ALBUM

PFITZNER MONOPLANE
(1910)

SCALE: 1:48

DRAWN BY: H. KELLEY

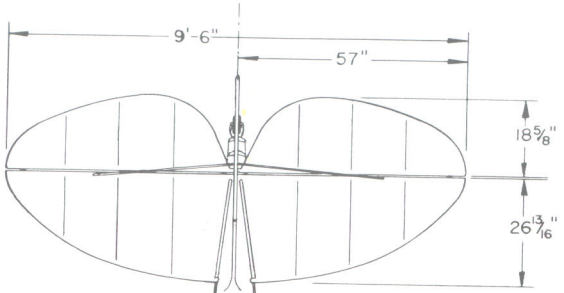
© PAUL R. MATT 196

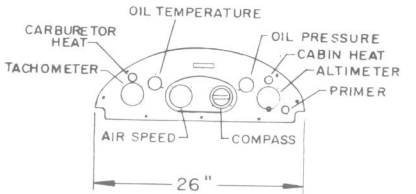
GENERAL SPECIFICATION

WEIGHT EMPTY	680 lbs.
USEFUL LOAD	540 lbs.
GROSS WEIGHT	1100 lbs.
WING AREA	178.5 sq.ft.
WING LOADING	6.16 lbs/sq.ft.
POWER LOADING	22.0 lbs/HP
TOP SPEED	87 mph
CRUISING SPEED	73 mph
LANDING SPEED	38 mph
RANGE AT CRUISE	220 miles
MAXIMUM CEILING	12,000 feet
FUEL CAPACITY	12 gals.
OIL CAPACITY	1 gal.
FUEL CONSUMPTION	4.46 gals/hr

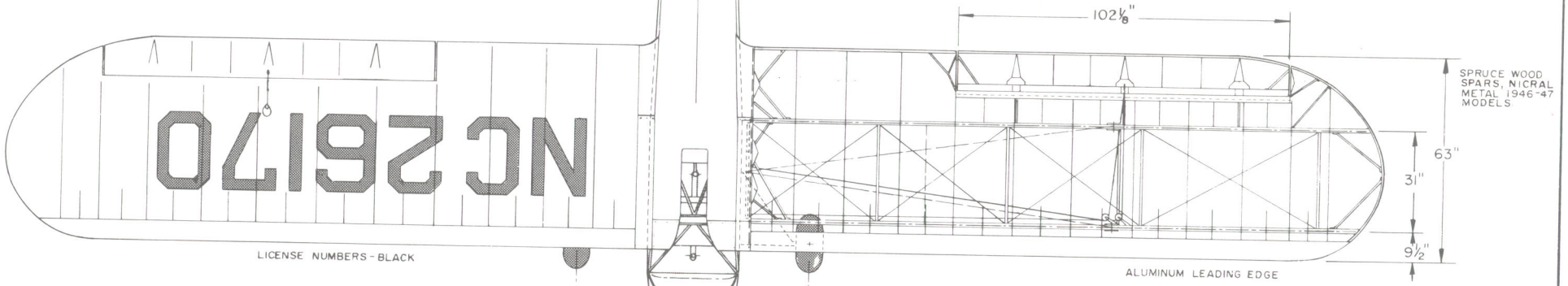
POWER: CONTINENTAL A-65-8
LYCOMING O-145
FRANKLIN 4AC-65
ALL 65 HP AT 2500/2550rpm

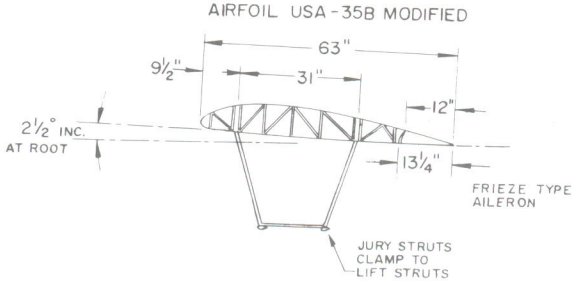
COLORING NOTES
STANDARD FACTORY ISSUE - OVERALL CUB YELLOW (DEEP RED-YELLOW), BLACK TRIM
OTHER COLORS AT CUSTOMERS REQUEST

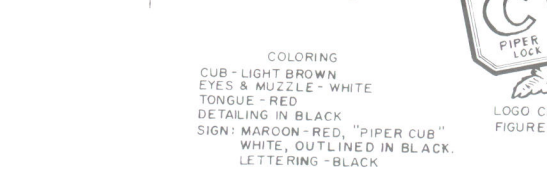




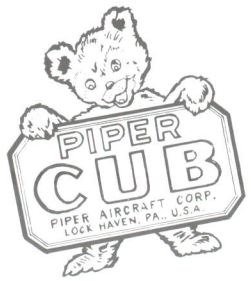








COLORING
CUB - LIGHT BROWN
EYES & MUZZLE - WHITE
TONGUE - RED
DETAILING IN BLACK
SIGN: MAROON-RED, "PIPER CUB" WHITE, OUTLINED IN BLACK.
LETTERING - BLACK



LOGO CENTERED ON FIN
FIGURE APPROX 10" HIGH

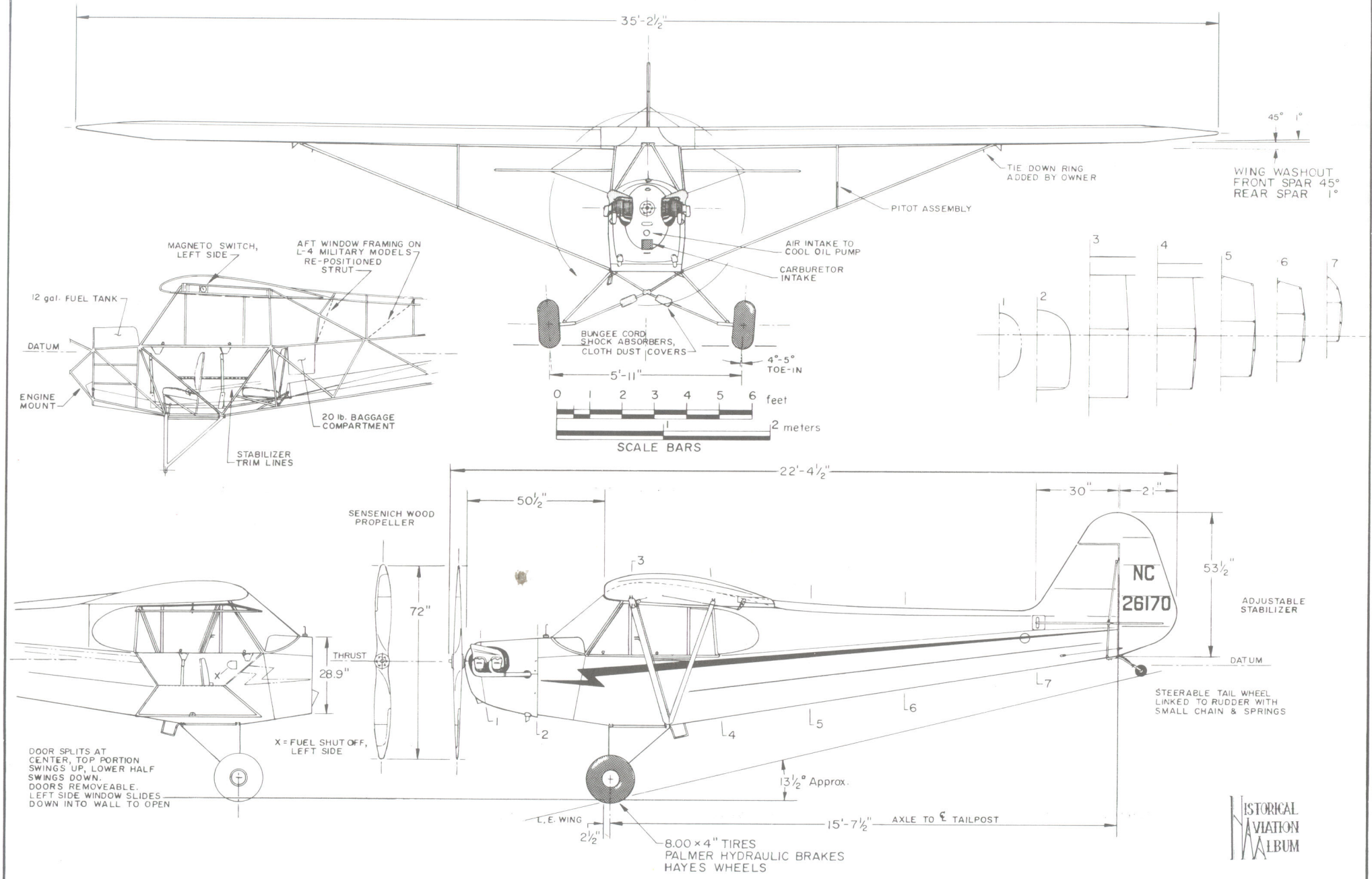
HISTORICAL AVIATION ALBUM

PIPER J-3 "CUB"
1937-47

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

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DRAWING No. 18-121-A



HISTORICAL AVIATION ALBUM

PIPER J-3 "CUB"
1937-47

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

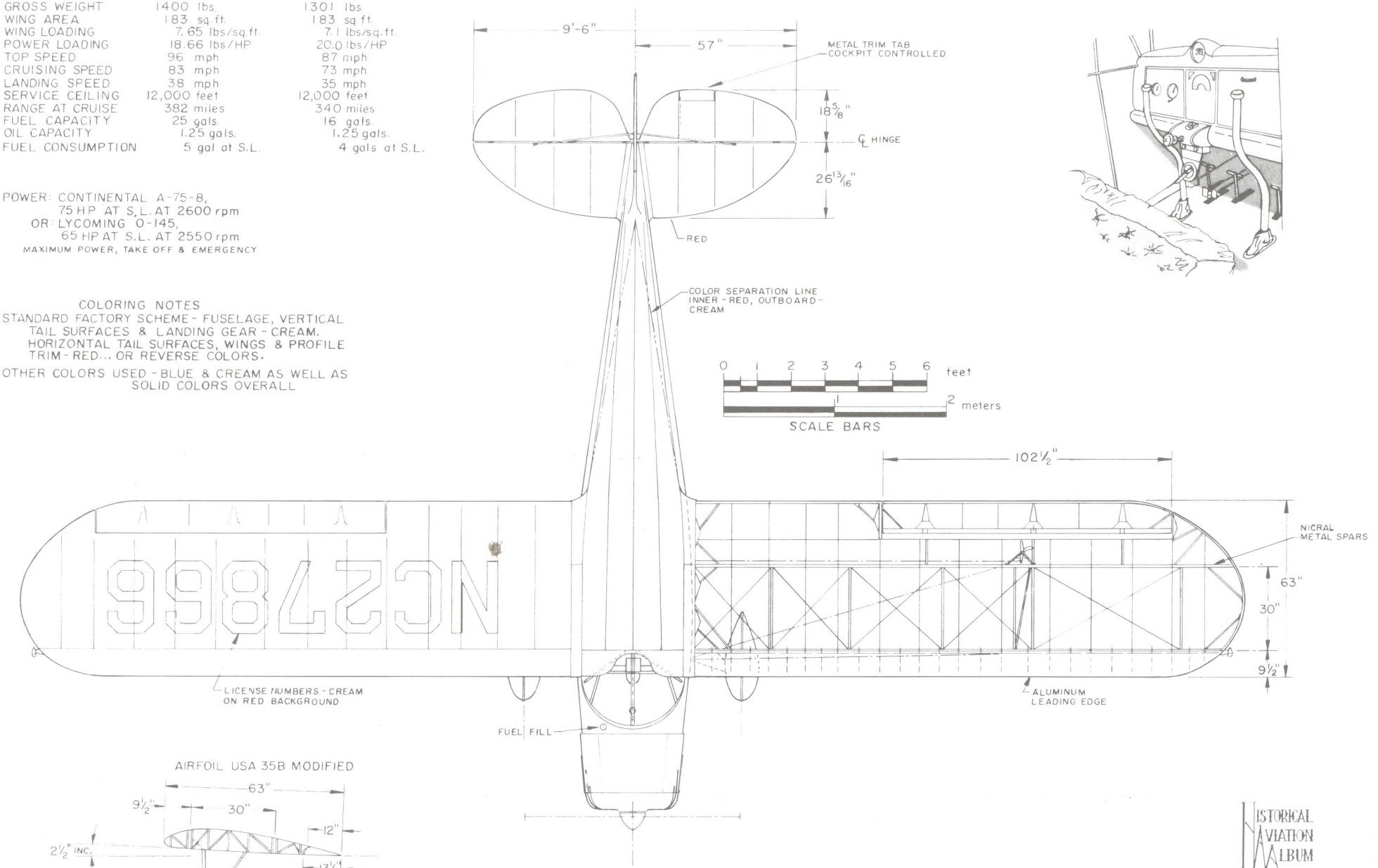
	CONTINENTAL A-75-8, 75 HP	LYCOMING O-145, 65 HP
WEIGHT EMPTY	880 lbs.	800 lbs.
USEFUL LOAD	520 lbs.	401 lbs.
GROSS WEIGHT	1400 lbs.	1301 lbs.
WING AREA	183 sq.ft.	183 sq.ft.
WING LOADING	7.65 lbs/sq.ft.	7.1 lbs/sq.ft.
POWER LOADING	18.66 lbs/HP	20.0 lbs/HP
TOP SPEED	96 mph	87 mph
CRUISING SPEED	83 mph	73 mph
LANDING SPEED	38 mph	35 mph
SERVICE CEILING	12,000 feet	12,000 feet
RANGE AT CRUISE	382 miles	340 miles
FUEL CAPACITY	25 gals.	16 gals.
OIL CAPACITY	1.25 gals.	1.25 gals.
FUEL CONSUMPTION	5 gal at S.L.	4 gals at S.L.

POWER: CONTINENTAL A-75-8,
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

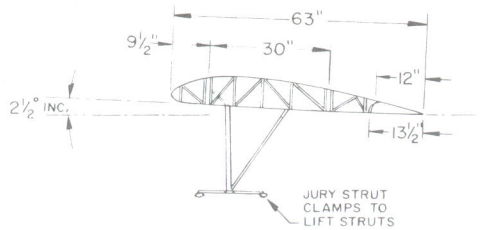
COLORING NOTES

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



AIRFOIL USA 35B MODIFIED



SINCERE THANKS TO PAUL McDANIEL, JOHN UNDERWOOD AND PIPER AIRCRAFT FOR THEIR HELP IN THE PREPARATIONS OF THESE DRAWINGS.
Paul M

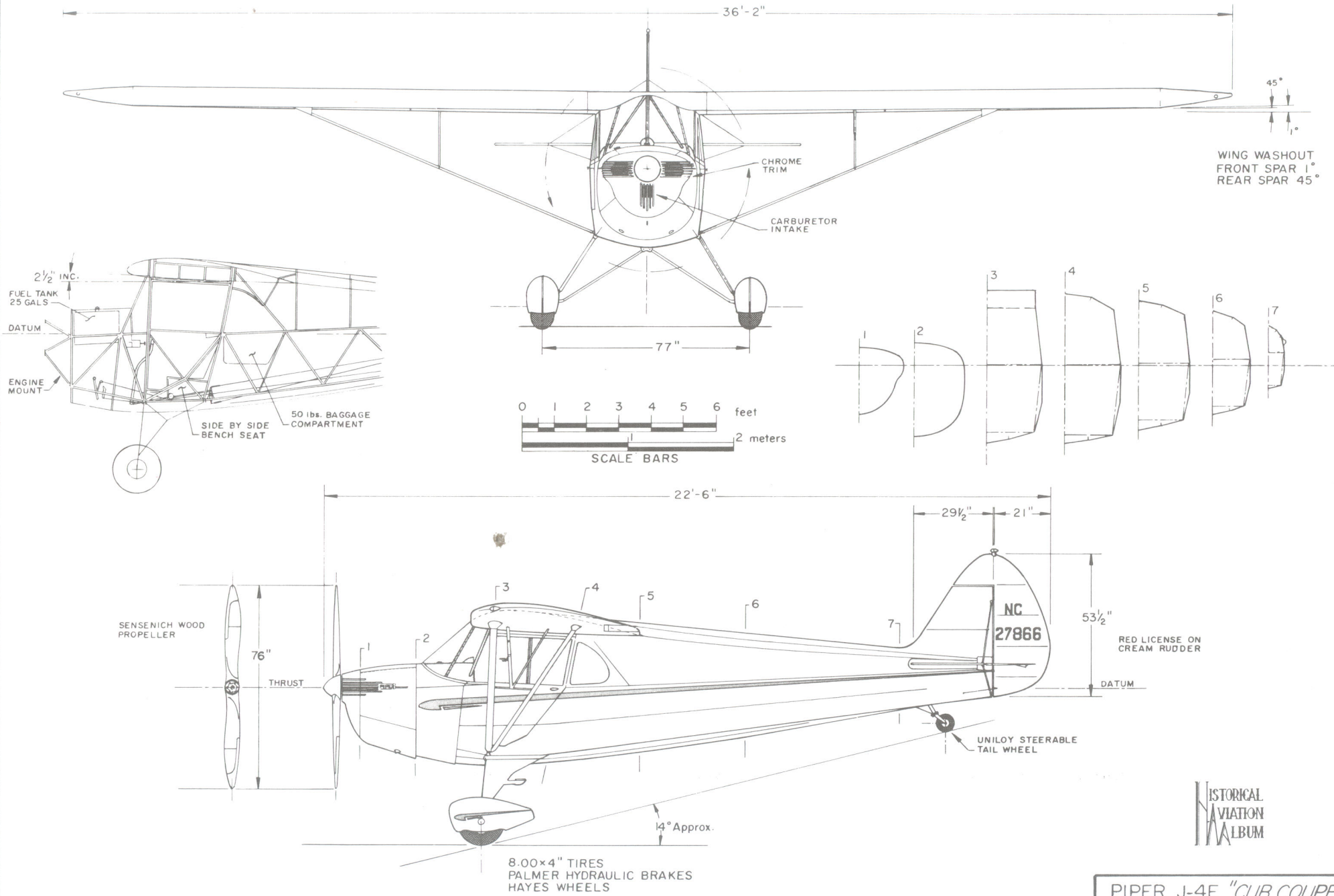
HISTORICAL AVIATION ALBUM

PIPER J-4E "CUB COUPE"

1941 MODEL

SCALE: ORIGINAL - 1:24
REPRO. - 1:48
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HISTORICAL AVIATION ALBUM

PIPER J-4E "CUB COUPE"

1941 MODEL

SCALE: ORIGINAL - 1:24
REPRO. - 1:48
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DRAWING No. 18-122-A

PLATE 2 of 2

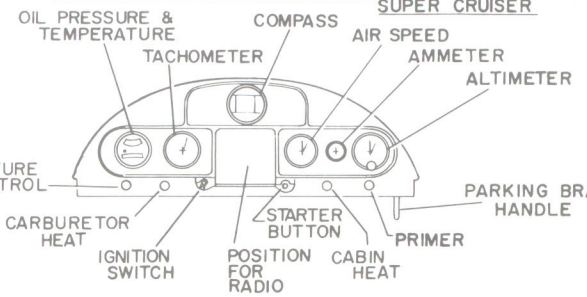
GENERAL SPECIFICATIONS

	NORMAL	UTILITY
WEIGHT EMPTY	950 lbs.	950 lbs.
GROSS WEIGHT	1750 lbs.	1500 lbs.
POWER LOADING	17.5 lbs./H.P.	15 lbs./H.P.
WING LOADING	9.8 lbs./sq. ft.	8.36 lbs./sq. ft.
BAGGAGE CAPACITY	41 lbs.	---
CRUISING SPEED	103 m.p.h.	103 m.p.h.
LIMITED TOP SPEED	110 m.p.h.	138 m.p.h.
RED LINE DIVING SPEED	138 m.p.h.	148 m.p.h.
STALLING SPEED	49 m.p.h.	---
RATE OF CLIMB, S.L.	600 ft./min.	750 ft./min.
BEST CLIMB SPEED	75 m.p.h.	70 m.p.h.
CRUISING RANGE	600 miles	600 miles
SERVICE CEILING	12,600 feet	15,700 feet
ABSOLUTE CEILING	15,500 feet	18,000 feet
GLIDING RATIO	11:1	11:1
FUEL CAPACITY (73/80 OCTANE)	38 gals.	38 gals.
OIL CAPACITY	6 quarts	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.

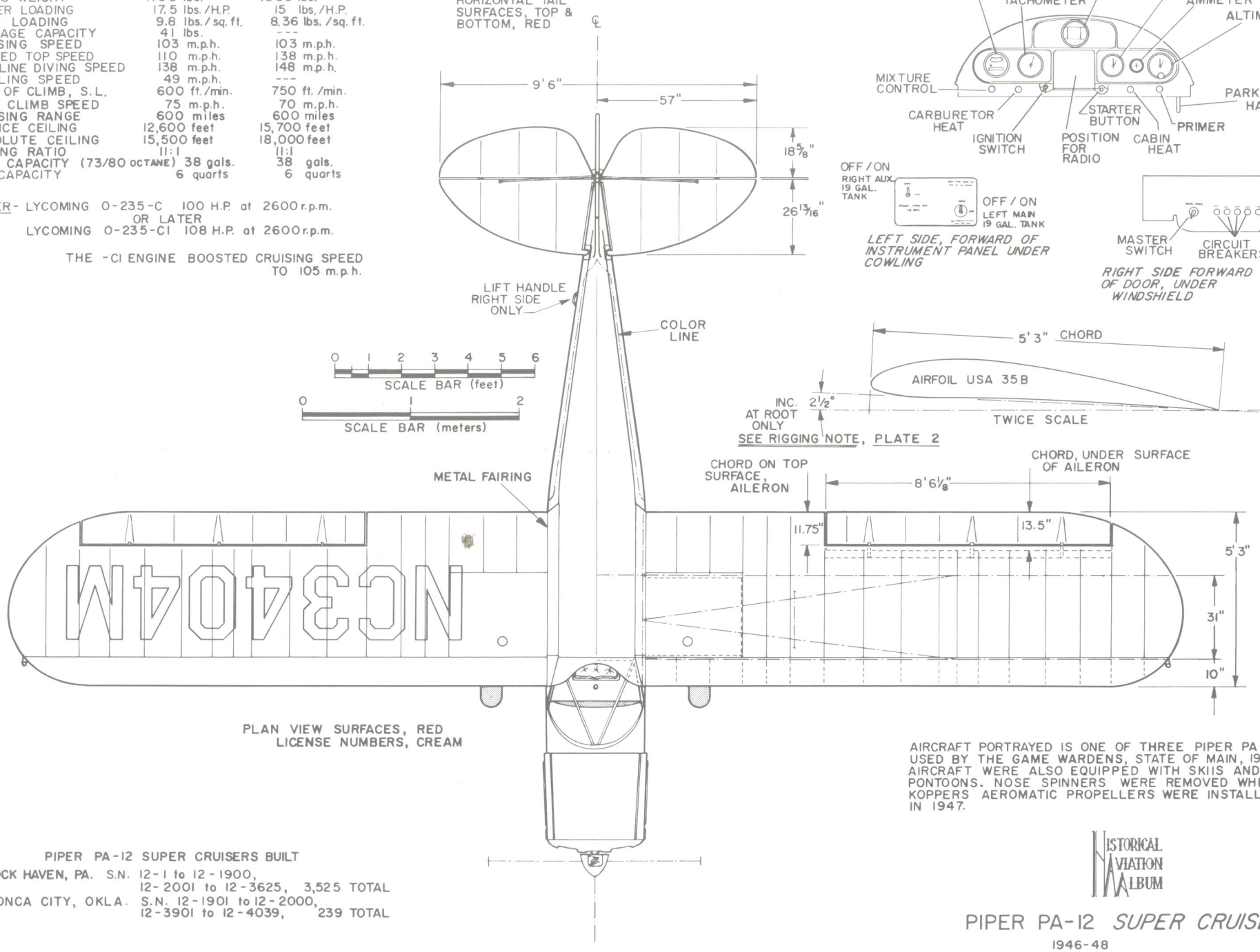
TYPICAL INSTRUMENT PANEL, STANDARD PIPER PA-12 SUPER CRUISER



LEFT SIDE, FORWARD OF INSTRUMENT PANEL UNDER COWLING



RIGHT SIDE FORWARD OF DOOR, UNDER WINDSHIELD



PLAN VIEW SURFACES, RED
LICENSE NUMBERS, CREAM

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

PIPER PA-12 SUPER CRUISERS BUILT

LOCK HAVEN, PA. S.N. 12-1 to 12-1900,
12-2001 to 12-3625, 3,525 TOTAL

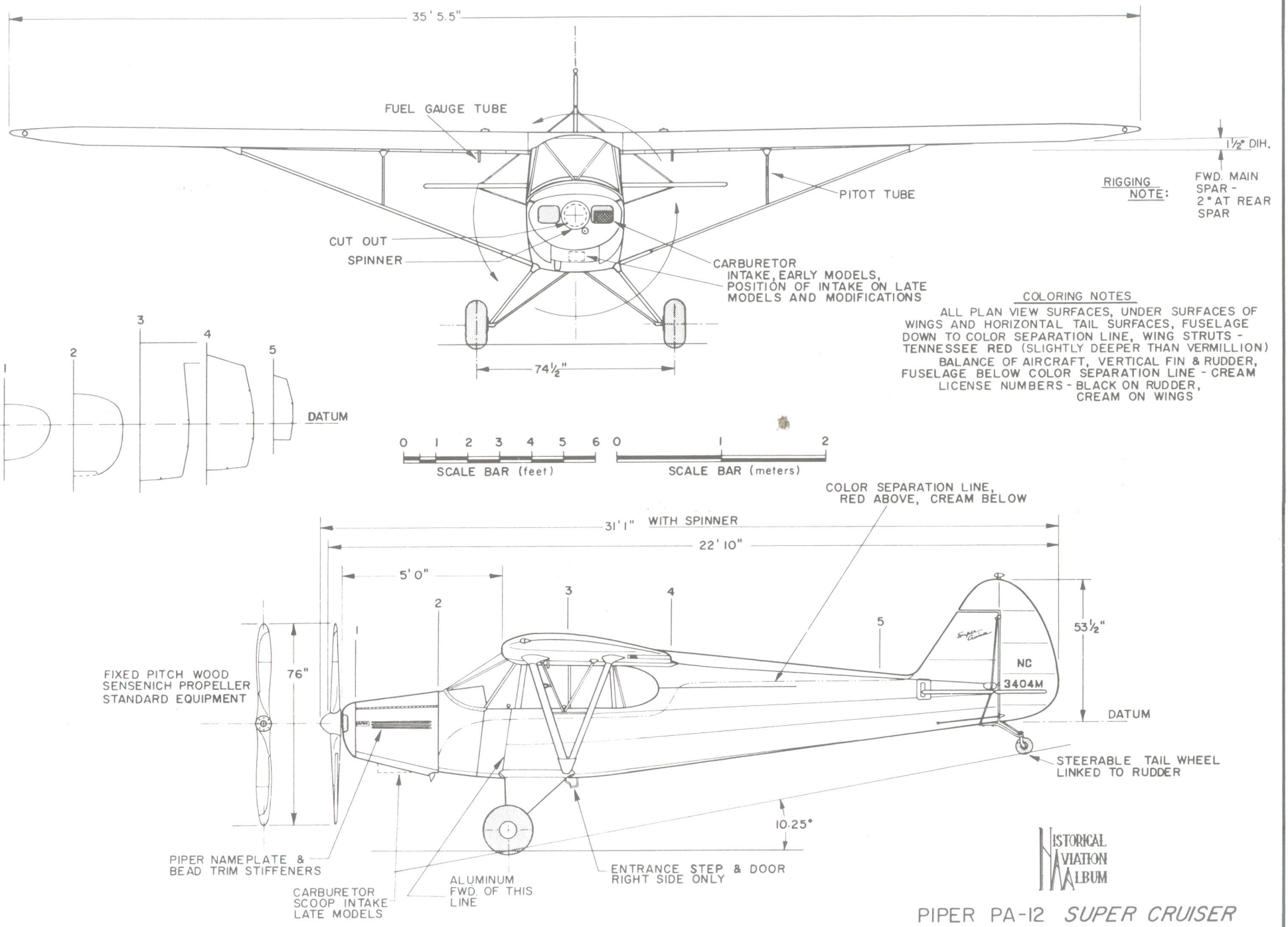
PONCA CITY, OKLA. S.N. 12-1901 to 12-2000,
12-3901 to 12-4039, 239 TOTAL

HISTORICAL AVIATION ALBUM

PIPER PA-12 *SUPER CRUISER*

1946-48
SCALE - 1:48
DRAWN BY: PAUL R. MATT

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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

HISTORICAL AVIATION ALBUM

PIPER PA-12 *SUPER CRUISER*

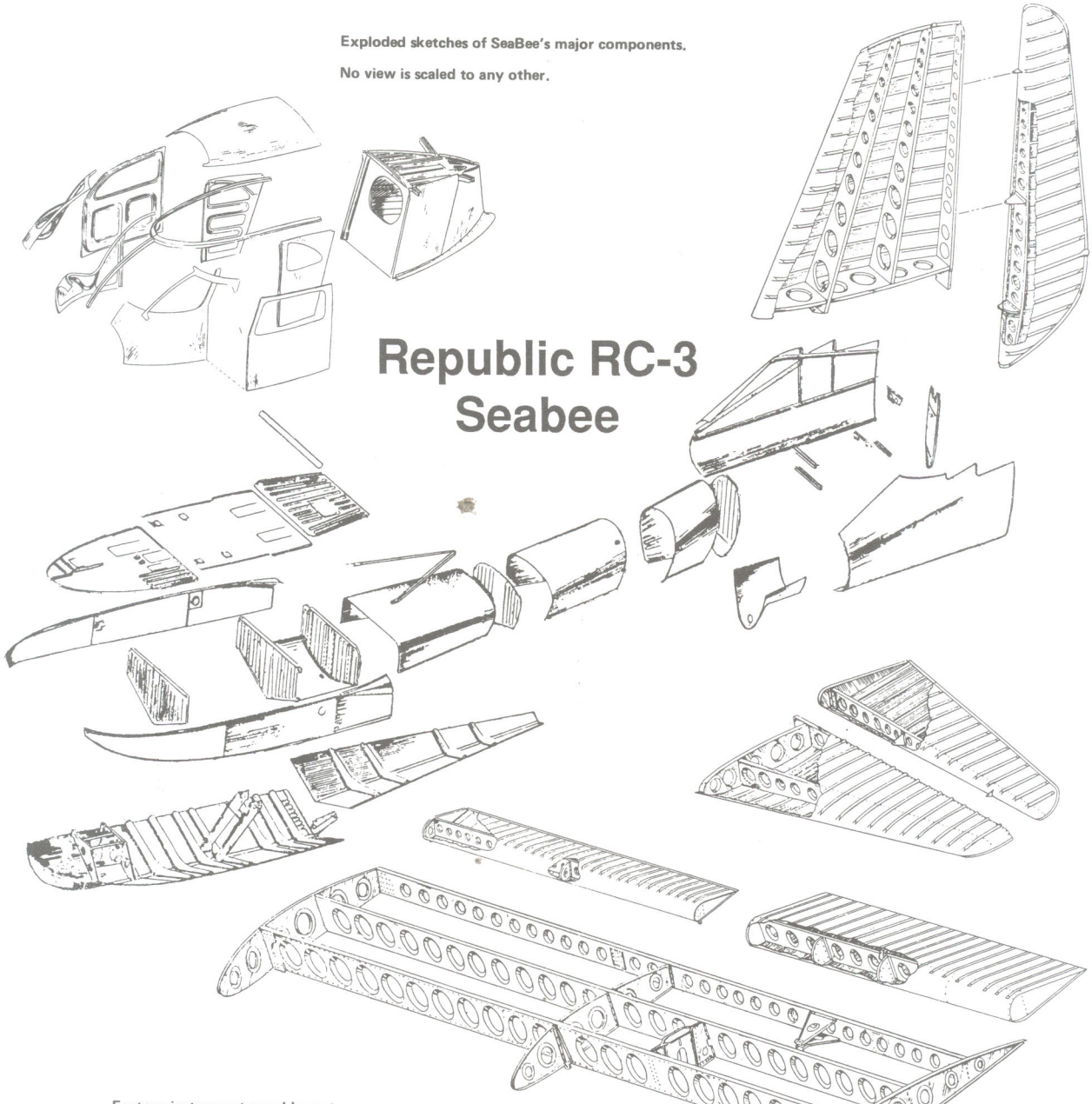
1946-48
SCALE: 1:48
DRAWN BY: PAUL R. MATT

DRAWING No. 4-36-A

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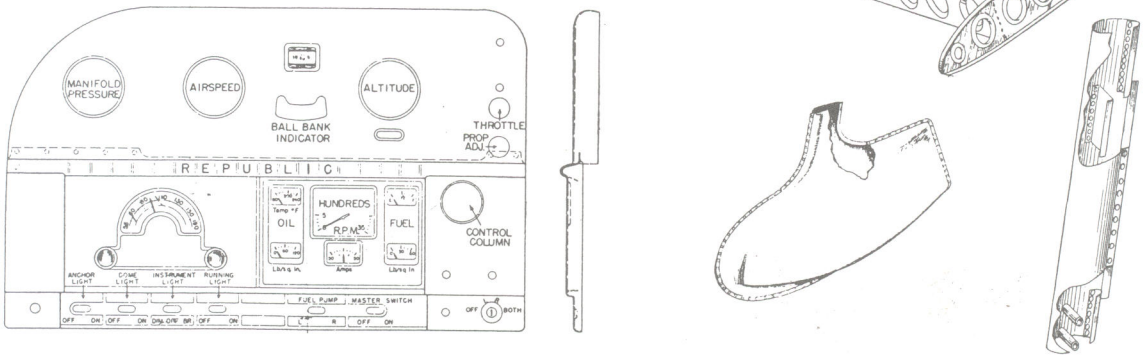
Exploded sketches of SeaBee's major components.

No view is scaled to any other.



Republic RC-3 Seabee

Factory instrument panel layout.



GENERAL SPECIFICATIONS

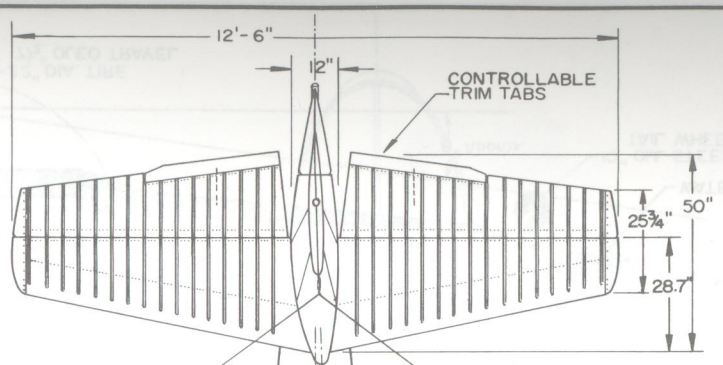
WEIGHT EMPTY	2,100 lbs.
USEFUL LOAD	1,050 lbs.
GROSS WEIGHT	3,150 lbs.
WING AREA	196 sq. ft.
WING LOADING	15.3 lbs./sq. ft.
POWER LOADING	14.2 lbs./H.P.
TOP SPEED	120 mph
CRUISING SPEED	103 mph
LANDING SPEED	58 mph
CRUISING RANGE	520 miles
RATE OF CLIMB, INITIAL, S.L.	700 ft./min.
SERVICE CEILING	12,000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

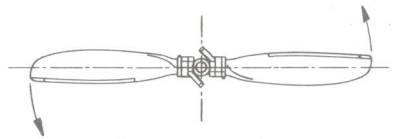
POWER: FRANKLIN "500", 6-CYLINDER,
215 H.P. at 2500 r.p.m.,
MODEL 6A8-215-B9F

COLORING NOTES

ENTIRE AIRCRAFT PAINTED SILVER
TRIM, AS MARKED, FOREST GREEN

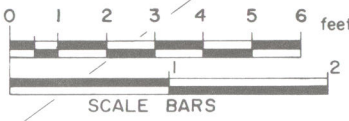
CUSTOMIZED, $200 EXTRA
ENTIRE AIRCRAFT PAINTED CREAM
TRIM, AS MARKED, RED

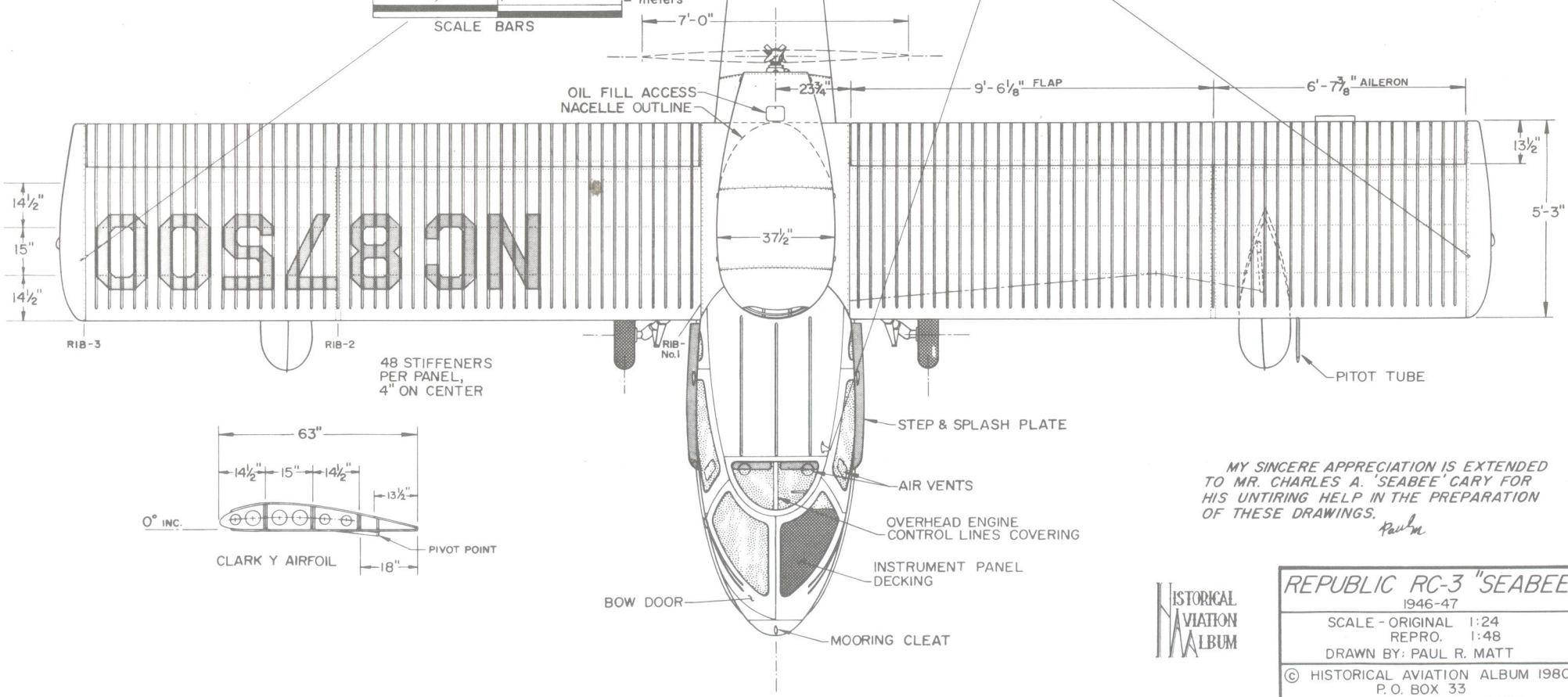




KOPPERS "AEROMATIC", GROUND ADJUSTABLE PROPELLER, 84" DIA.

(HARTZELL HYDRO-SELECTIVE HC-12×20, 84" DIA., VARIABLE & REVERSIBLE - OPTIONAL)





MY SINCERE APPRECIATION IS EXTENDED TO MR. CHARLES A. 'SEABEE' CARY FOR HIS UNTIRING HELP IN THE PREPARATION OF THESE DRAWINGS.
Paul M

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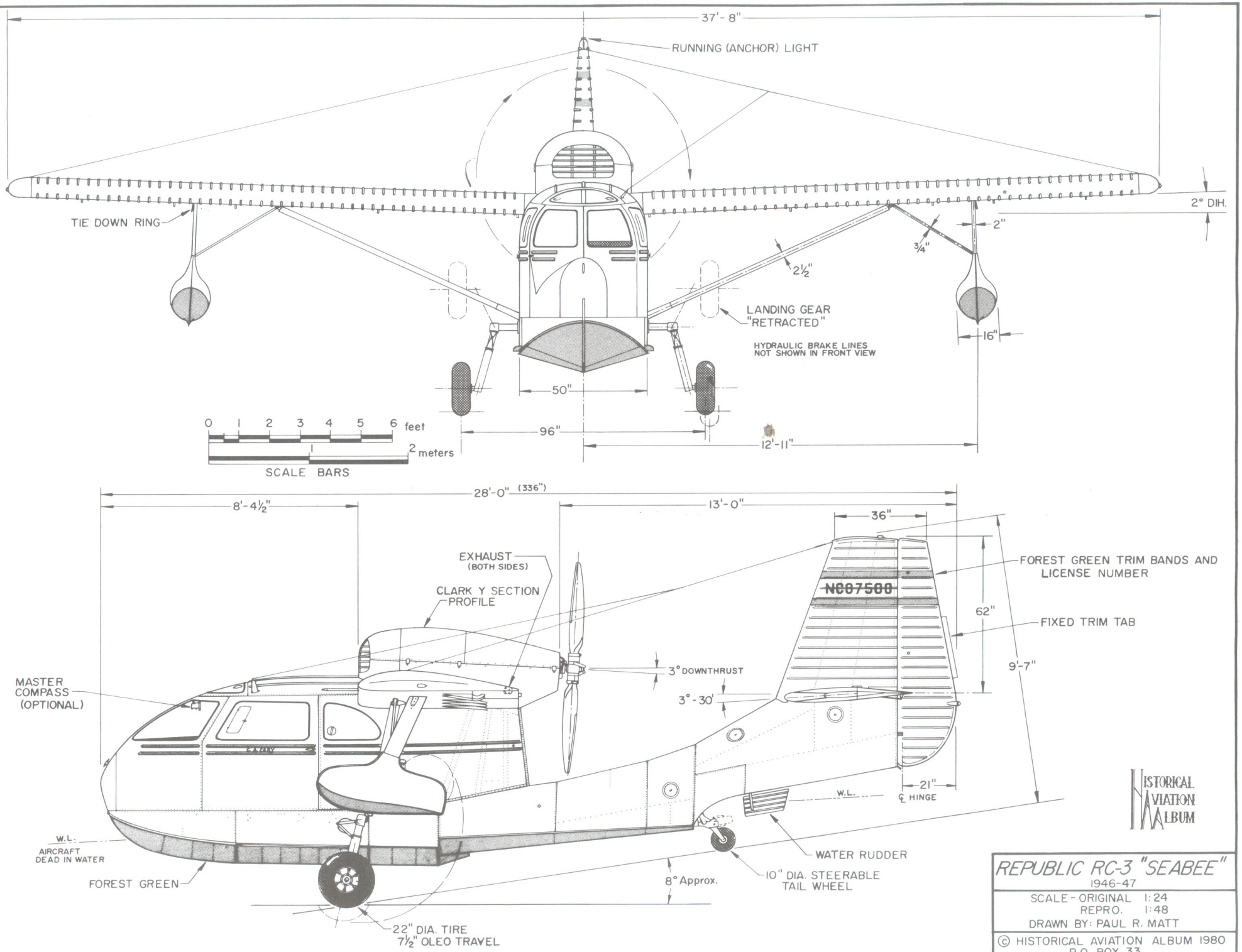
REPUBLIC RC-3 "SEABEE"

1946-47

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

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DRAWING No. 16-109-A



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REPUBLIC RC-3 "SEABEE"

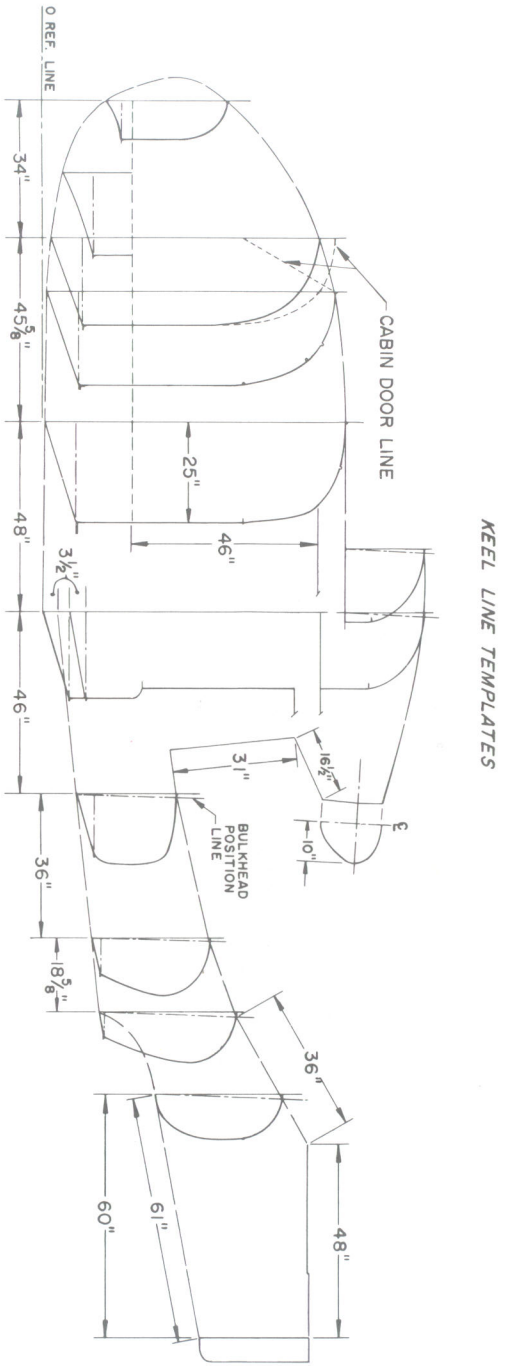
1946-47

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

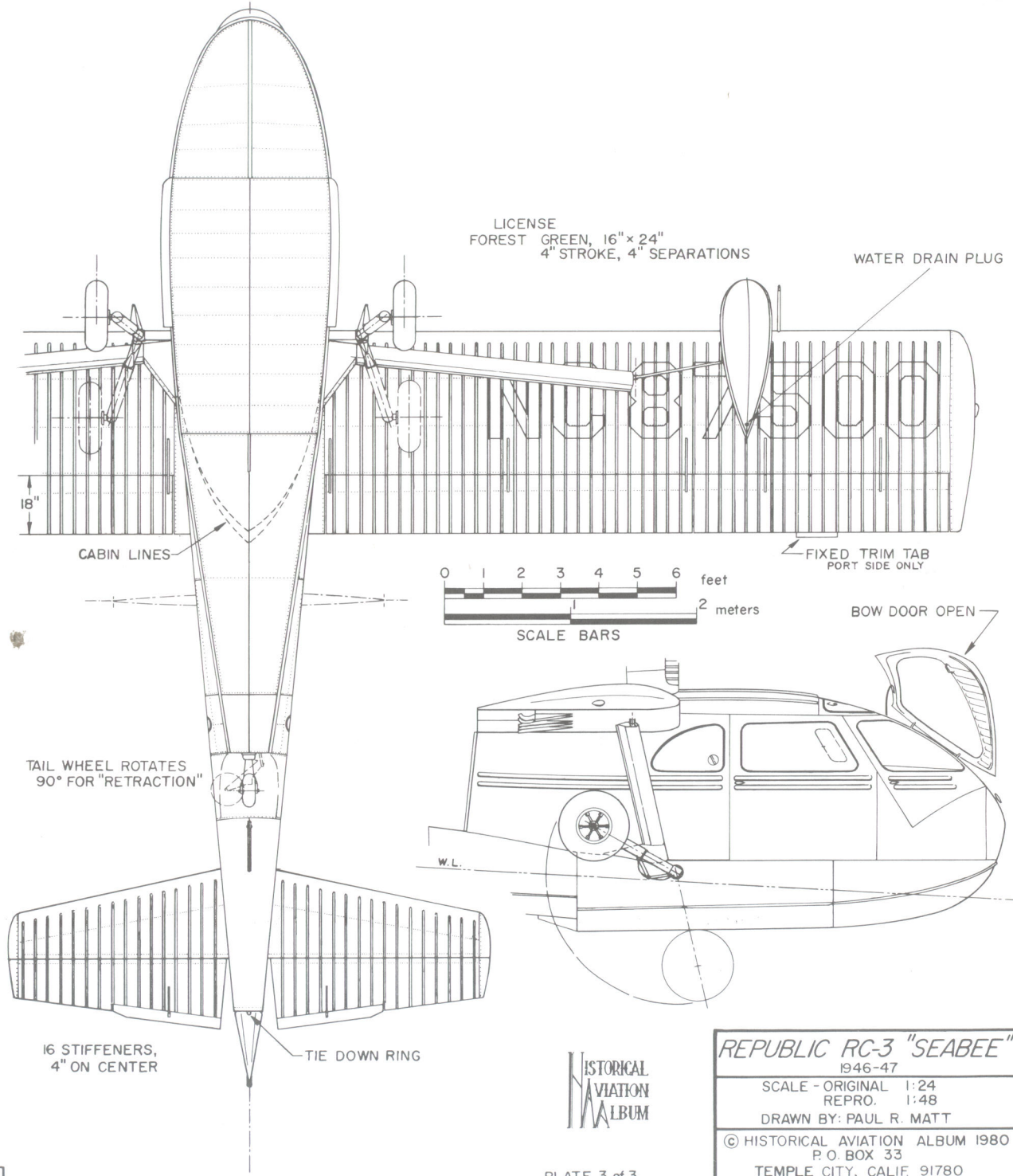
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7½ OLEO TRAVEL



KEEL LINE TEMPLATES



REPUBLIC RC-3 "SEABEE"

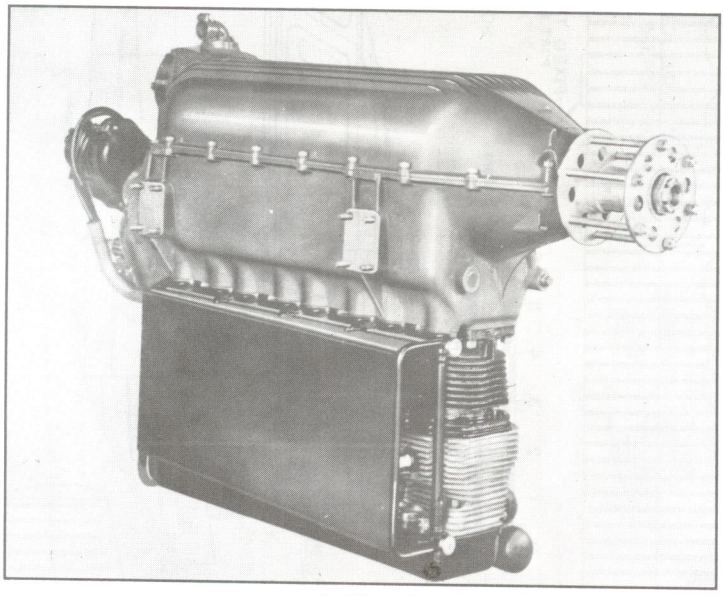
1946-47

SCALE - ORIGINAL 1:24
REPRO. 1:48

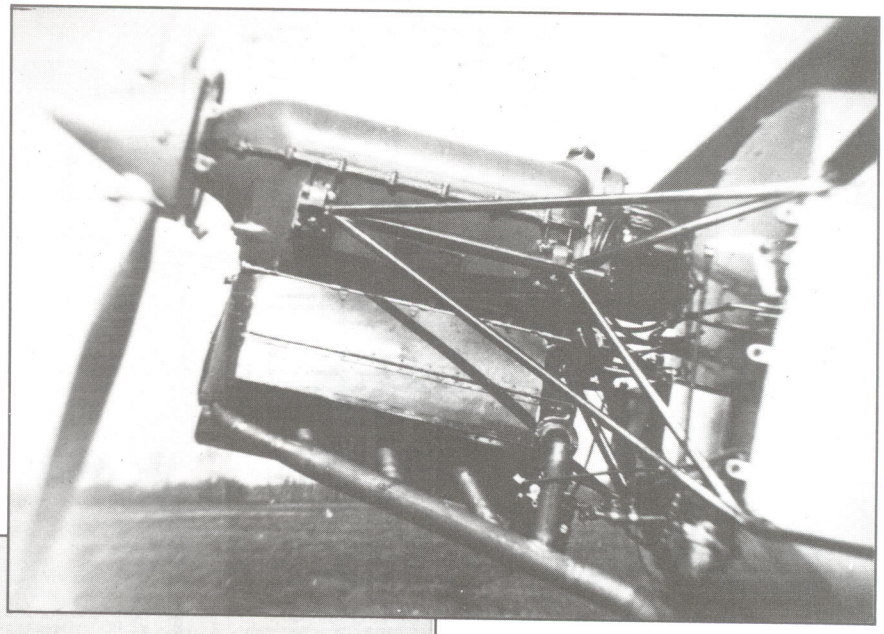
DRAWN BY: PAUL R. MATT

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Rover Aviation Engine



Rover Aviation Engine



Rover engine installation in Driggs "Skylark".



Fairchild 22 with Rover engine.

GENERAL SPECIFICATIONS

TYPE - FOUR CYLINDER IN-LINE, INVERTED AIR COOLED 4-CYCLE

CARBURETOR AIR CONTROL LEVER

BORE - 4.125"
STROKE - 5.000"
DISPLACEMENT - 267.28 cu. in. TOTAL
COMPRESSION RATIO - 5.1 : 1
WEIGHT DRY - 240 lbs.
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

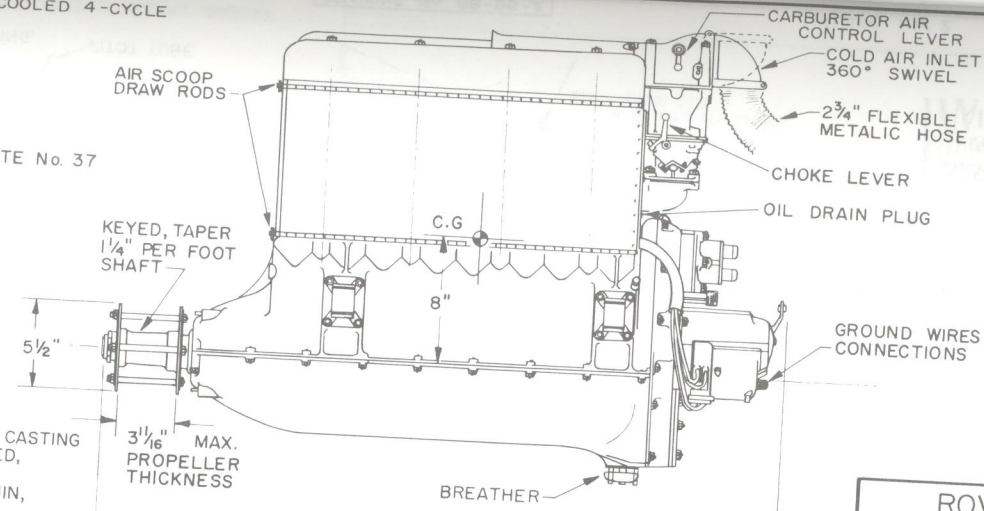
71 H.P. at 1800 r.p.m.
67 H.P. at 1700 r.p.m.
63 H.P. at 1600 r.p.m.
58 H.P. at 1500 r.p.m.

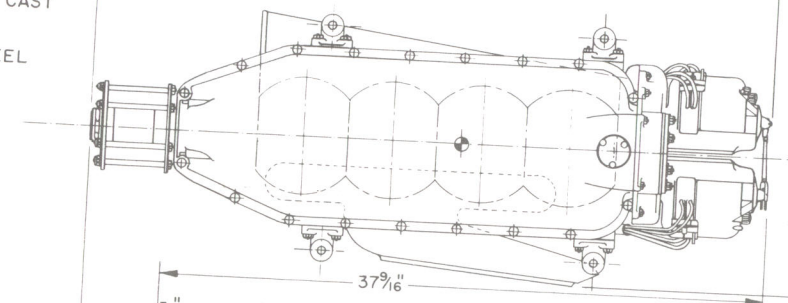
CARBURETION - STROMBERG NA-R-3
IGNITION - SCINTILLA MAGNETOS, DUAL IGNITION
LUBRICATION - OIL DRAWN BY CONVENTIONAL TWO GEAR PRESSURE PUMP

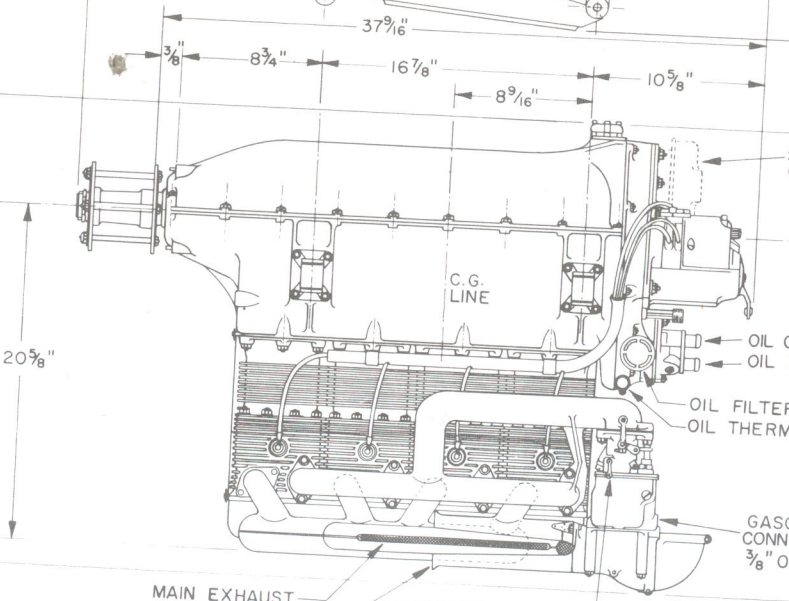
MATERIAL

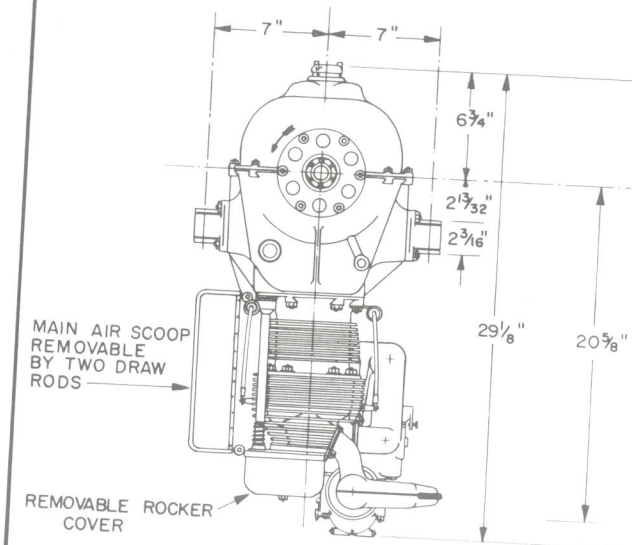
CRANKCASE - DEEP WELL RIBBED ALUMINUM ALLOY CASTING
CRANKSHAFT - 4 THROW, 5 BEARING, HOLLOW BORED, MACHINED ALLOY STEEL
CONNECTING RODS - H SECTION, FORGED DURALUMIN, BABBITT LINED, SHRUNK BRONZE PISTON PIN BUSHINGS
PISTONS - FULL TRUNK, RIBBED TYPE DIE CAST ALUMINUM ALLOY
CYLINDERS - ALUMINUM ALLOY 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

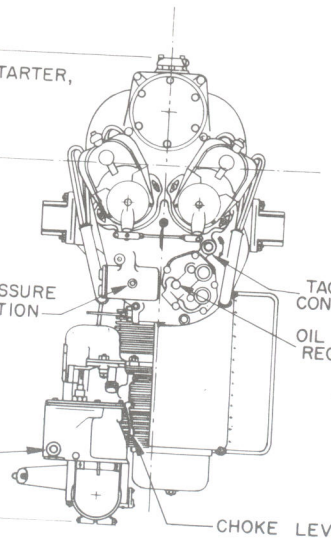
WE EXTEND OUR SINCERE APPRECIATION TO MR. HAROLD MOREHOUSE FOR HIS ASSISTANCE, INTEREST AND PATIENCE IN THE PREPARATION OF THIS DRAWING AND ACCOMPANYING ARTICLE.











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')
REPRO. 1:12 (1" = 1')
DRAWN BY - PAUL R. MATT

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HISTORICAL AVIATION ALBUM

PLATE 1 of 1

DRAWING No. 5-45-F

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COLORING NOTES

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

TAIL SURFACES METAL FRAMEWORK, FABRIC COVERED

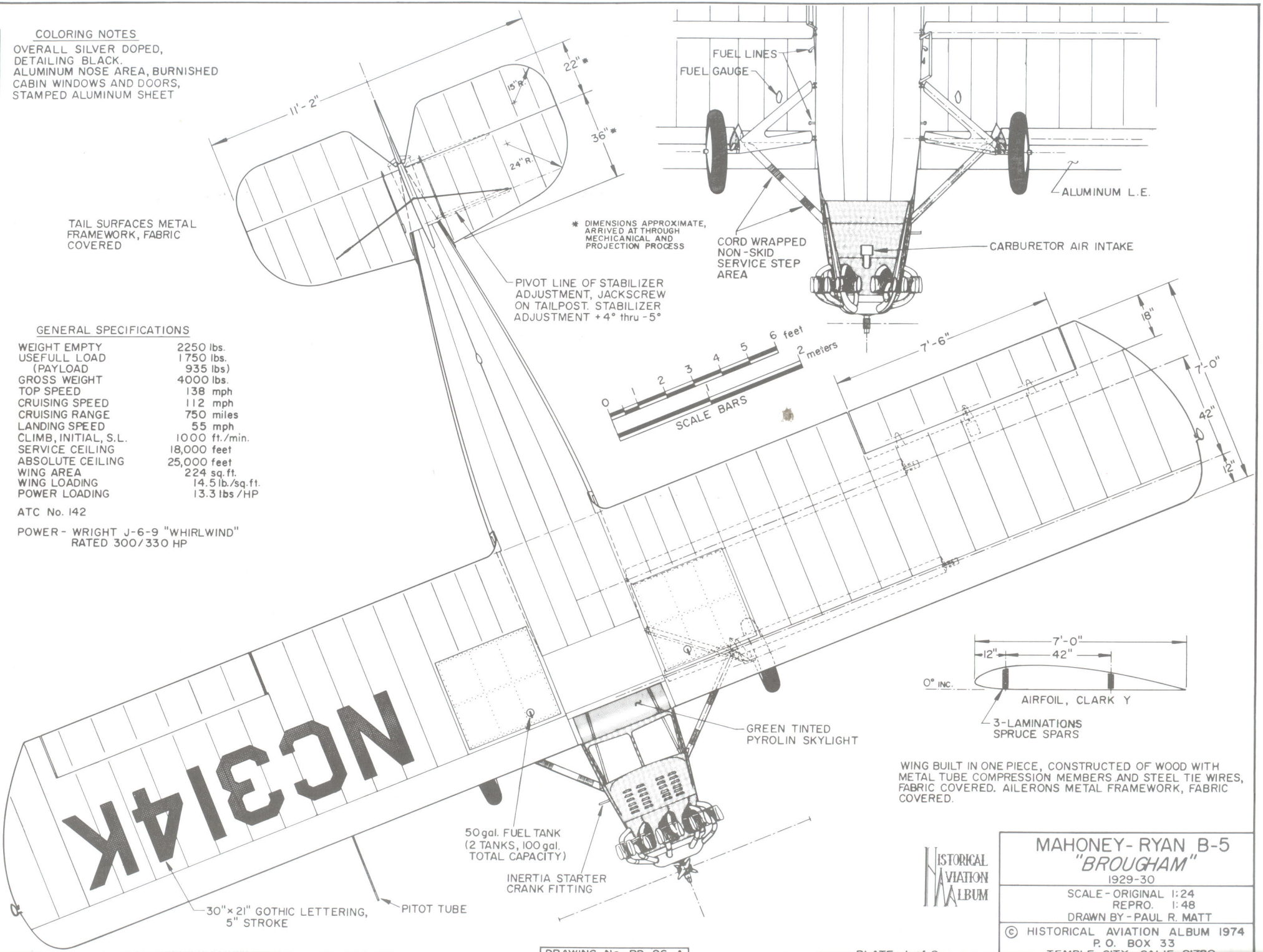
* DIMENSIONS APPROXIMATE, ARRIVED AT THROUGH MECHICANICAL AND PROJECTION PROCESS

GENERAL SPECIFICATIONS

WEIGHT EMPTY	2250 lbs.
USEFULL 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



WING BUILT IN ONE PIECE, CONSTRUCTED OF WOOD WITH METAL TUBE COMPRESSION MEMBERS AND STEEL TIE WIRES, FABRIC COVERED. AILERONS METAL FRAMEWORK, FABRIC COVERED.

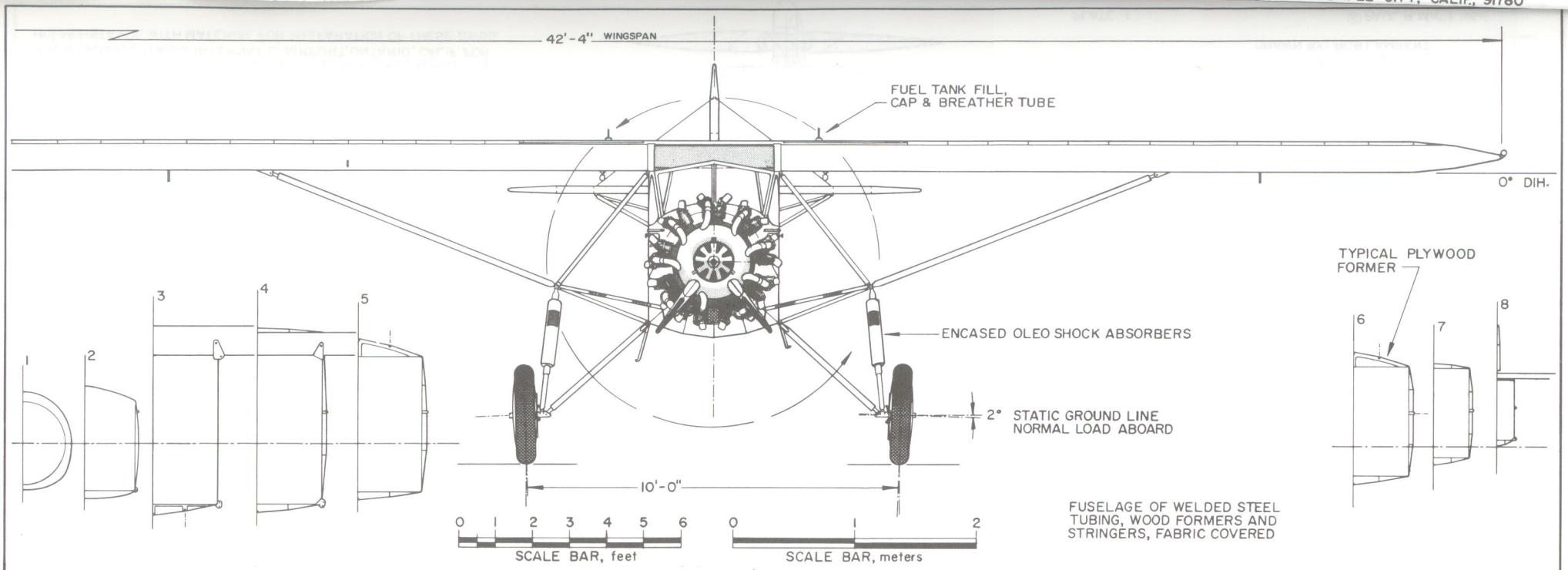
HISTORICAL AVIATION ALBUM

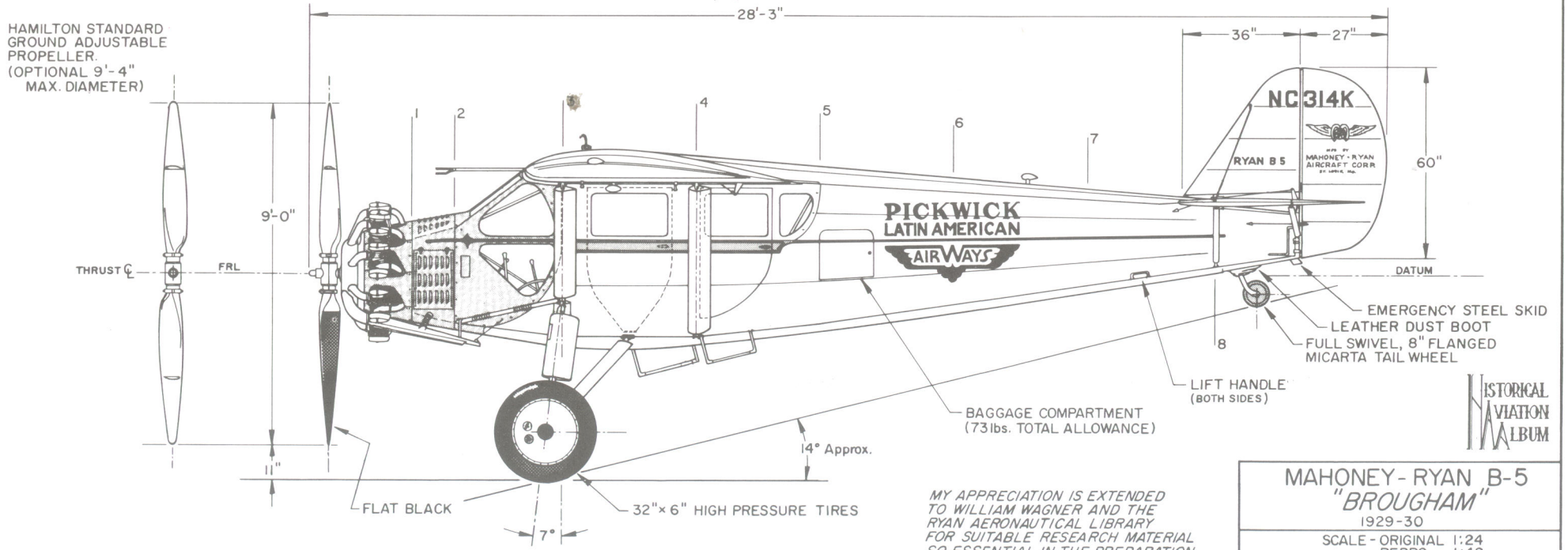
MAHONEY-RYAN B-5
"BROUGHAM"
1929-30

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

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

HISTORICAL AVIATION ALBUM

MAHONEY-RYAN B-5 "BROUGHAM"

1929-30

SCALE - ORIGINAL 1:24
REPRO. 1:48
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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.U.W.	10,595 LBS.

POWER PLANT

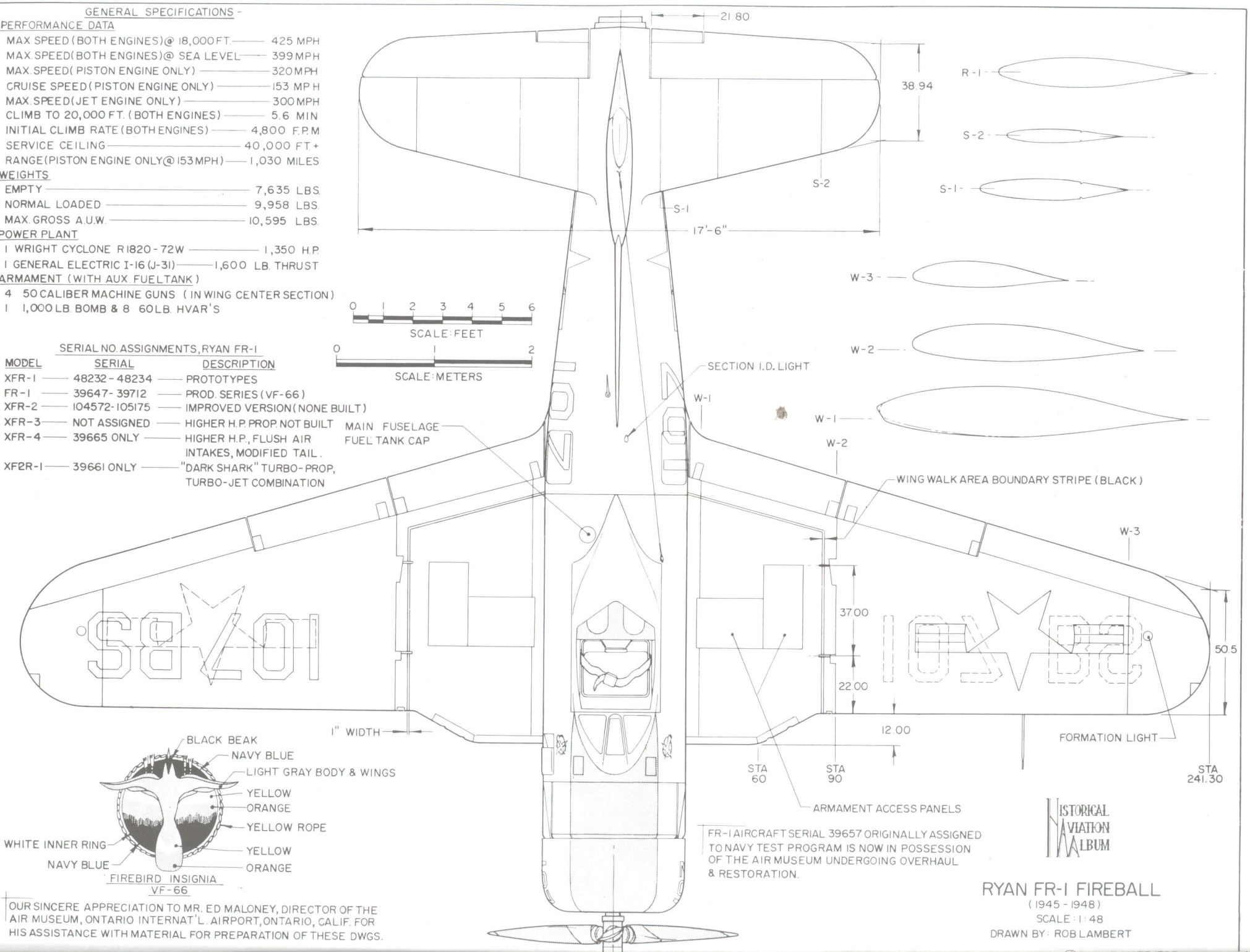
1 WRIGHT CYCLONE R1820-72W — 1,350 H.P.
1 GENERAL ELECTRIC I-16 (J-31) — 1,600 LB. THRUST

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.
XF2R-1	39661 ONLY	"DARK SHARK" TURBO-PROP, TURBO-JET COMBINATION



FIREBIRD INSIGNIA
VF-66

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

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

HISTORICAL AVIATION ALBUM

RYAN FR-1 FIREBALL

(1945 - 1948)

SCALE: 1:48

DRAWN BY: ROB LAMBERT

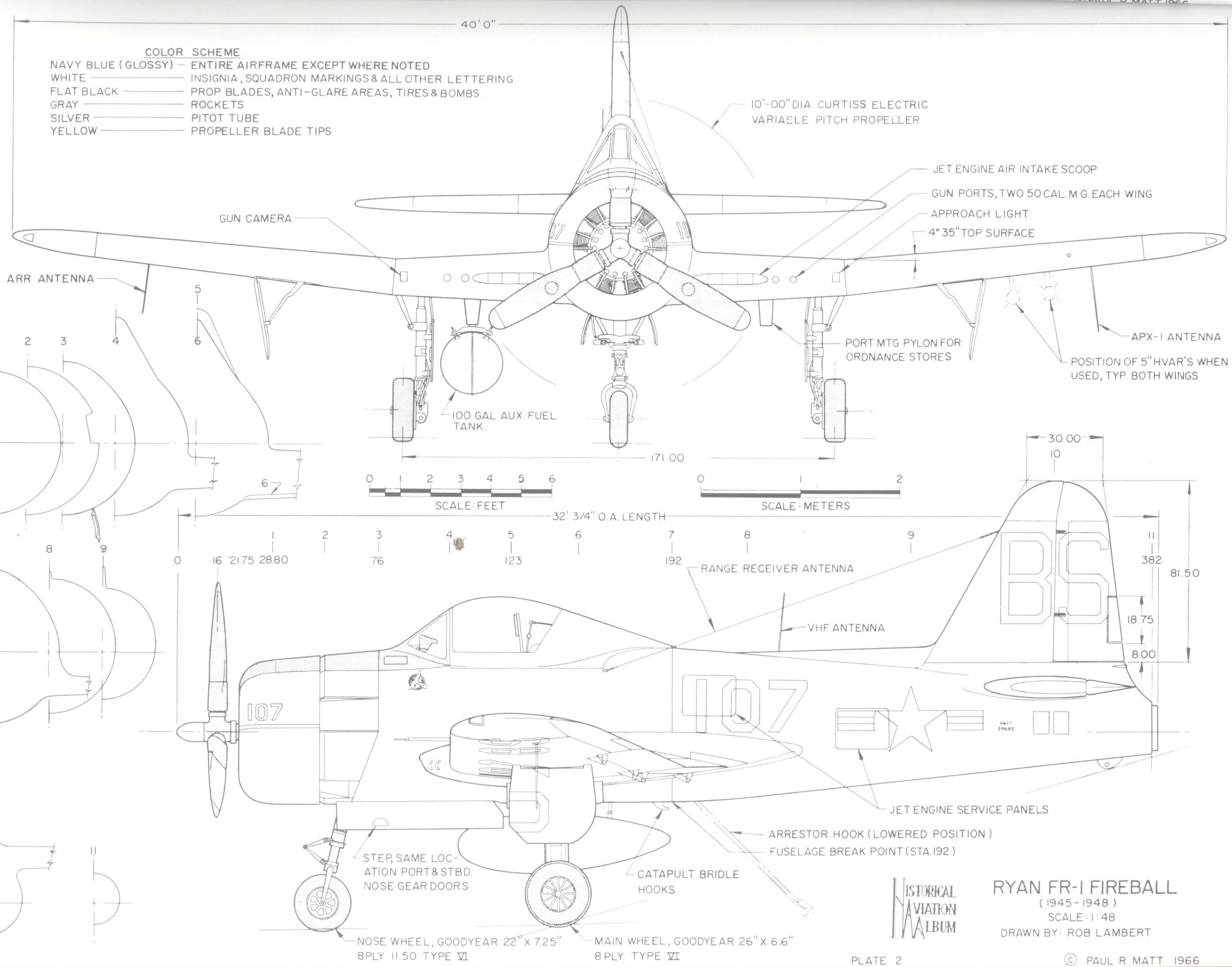
© PAUL R. MATT 1966

DRAWN BY: ROB LAMBERT

40'0"

COLOR SCHEME

NAVY BLUE (GLOSSY)	ENTIRE AIRFRAME EXCEPT WHERE NOTED
WHITE	INSIGNIA, SQUADRON MARKINGS & ALL OTHER LETTERING.
FLAT BLACK	PROP BLADES, ANTI-GLARE AREAS, TIRES & BOMBS.
GRAY	ROCKETS
SILVER	PITOT TUBE
YELLOW	PROPELLER BLADE TIPS



HISTORICAL AVIATION ALBUM

RYAN FR-1 FIREBALL

(1945-1948)

SCALE: 1:48

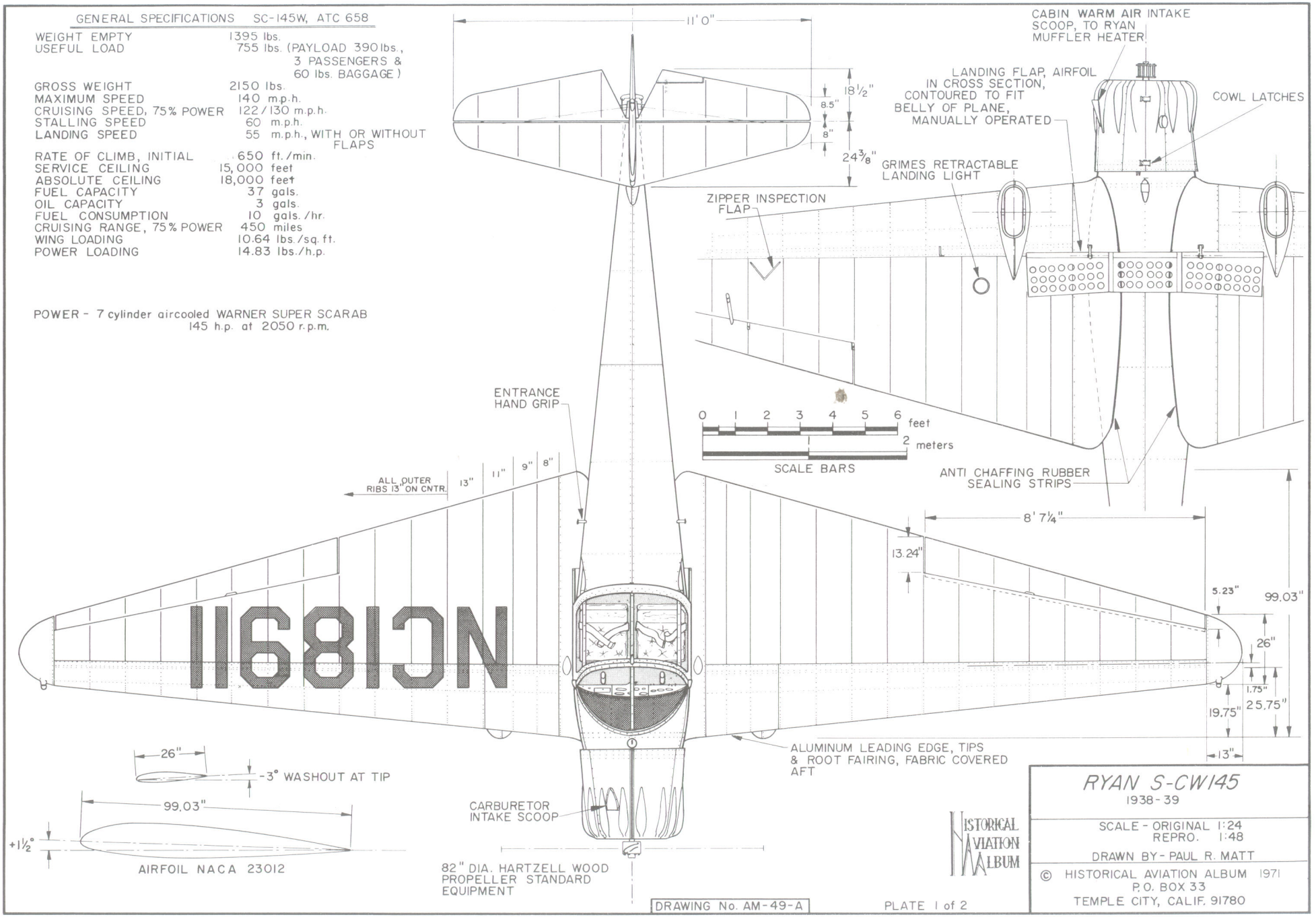
DRAWN BY: ROB LAMBERT

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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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DRAWING No. AM-49-A