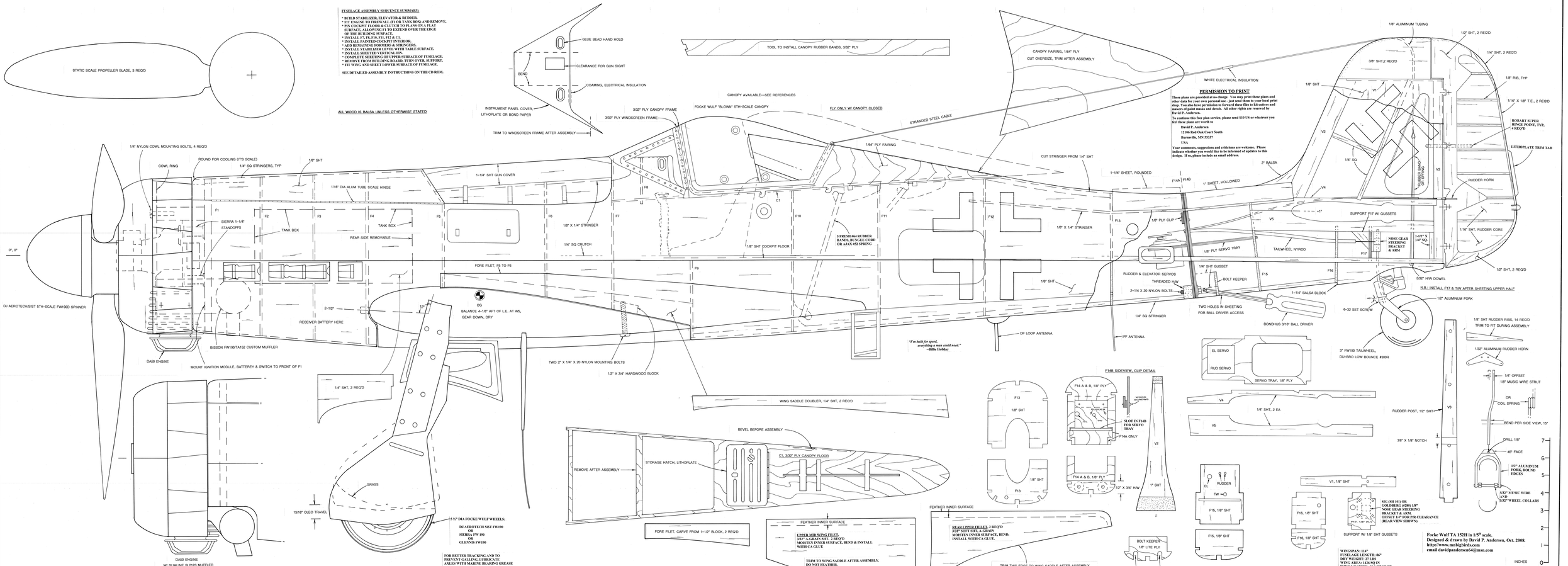
FUSELAGE ASSEMBLY SEQUENCE SUMMARY:

* BUILD STABILIZER, ELEVATOR & RUDDER.
* FIT ENGINE TO FIREWALL (F1 OR TANK BOX) AND REMOVE.
* PIN COCKPIT FLOOR & CLUTCH TO PLANS ON A FLAT SURFACE, ALLOWING IT TO EXTEND OVER THE EDGE OF THE BUILDING SURFACE.
* INSTALL F7, F8, F10, F11, F12 & C1.
* INSTALL PAINTED COCKPIT INTERIOR.
* ADD REMAINING FORWARD FUSELAGE STRINGERS.
* INSTALL SHEETED FUSELAGE WITH TABLE SURFACE.
* INSTALL SHEETED VERTICAL FIN.
* COMPLETE SHEETING OF UPPER SURFACE OF FUSELAGE.
* REMOVE FROM BUILDING BOARD, TURN OVER, SUPPORT.
* FIT WING AND SHEET LOWER SURFACE OF FUSELAGE.

SEE DETAILED ASSEMBLY INSTRUCTIONS ON THE CD ROM.

ALL WOOD IS BALSA UNLESS OTHERWISE STATED



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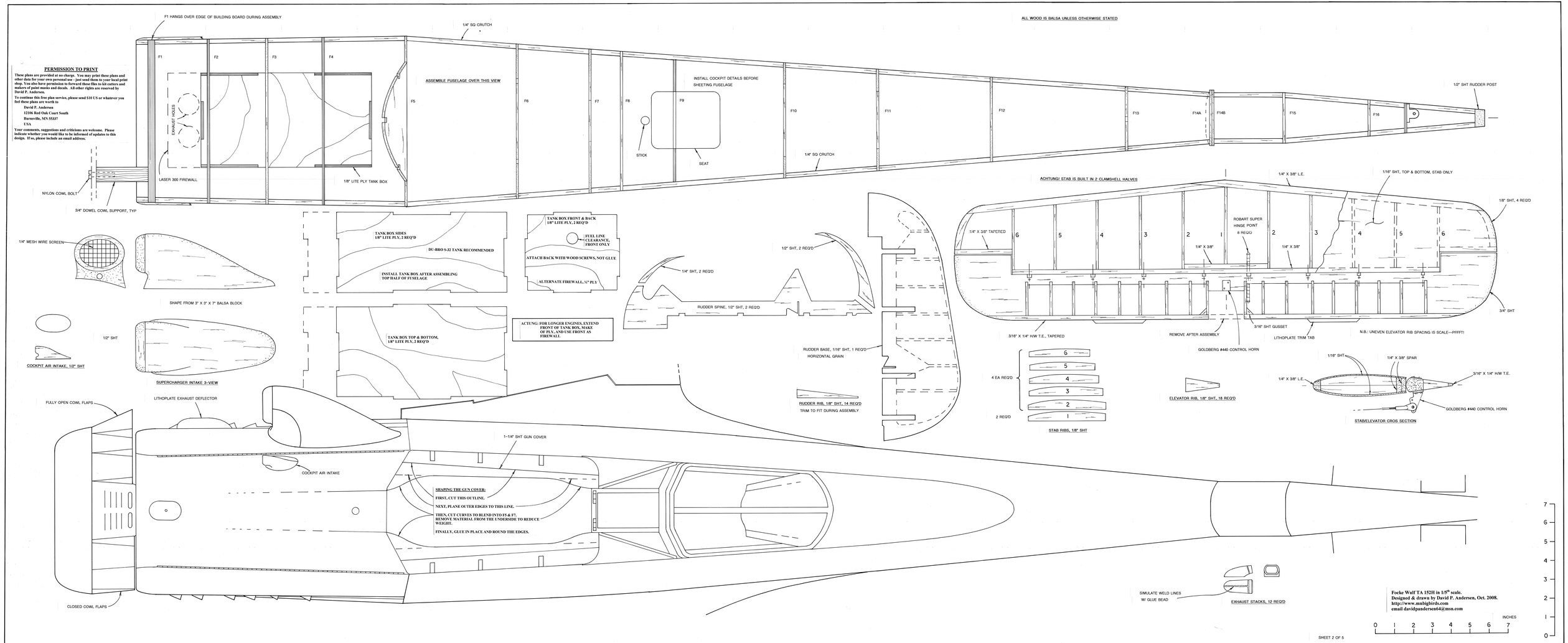
David P. Anderson
12106 Red Oak Court South
Burnsville, MN 55337
USA

Your comments, suggestions and criticisms are welcome. Please indicate whether you would like to be informed of updates to this design. If so, please include an email address.

WINGSPAN: 114"
FUSELAGE LENGTH: 86"
DRY WEIGHT: 27 LBS
WING AREA: 1426 SQ IN
WING LOADING: 43.6 OZ/SQ FT

Focke Wulf TA 152H in 1/5th scale.
Designed & drawn by David P. Anderson, Oct. 2008.
http://www.mnbigbirds.com
email davidpandersen4@msn.com

ALL WOOD IS BALSA UNLESS OTHERWISE STATED



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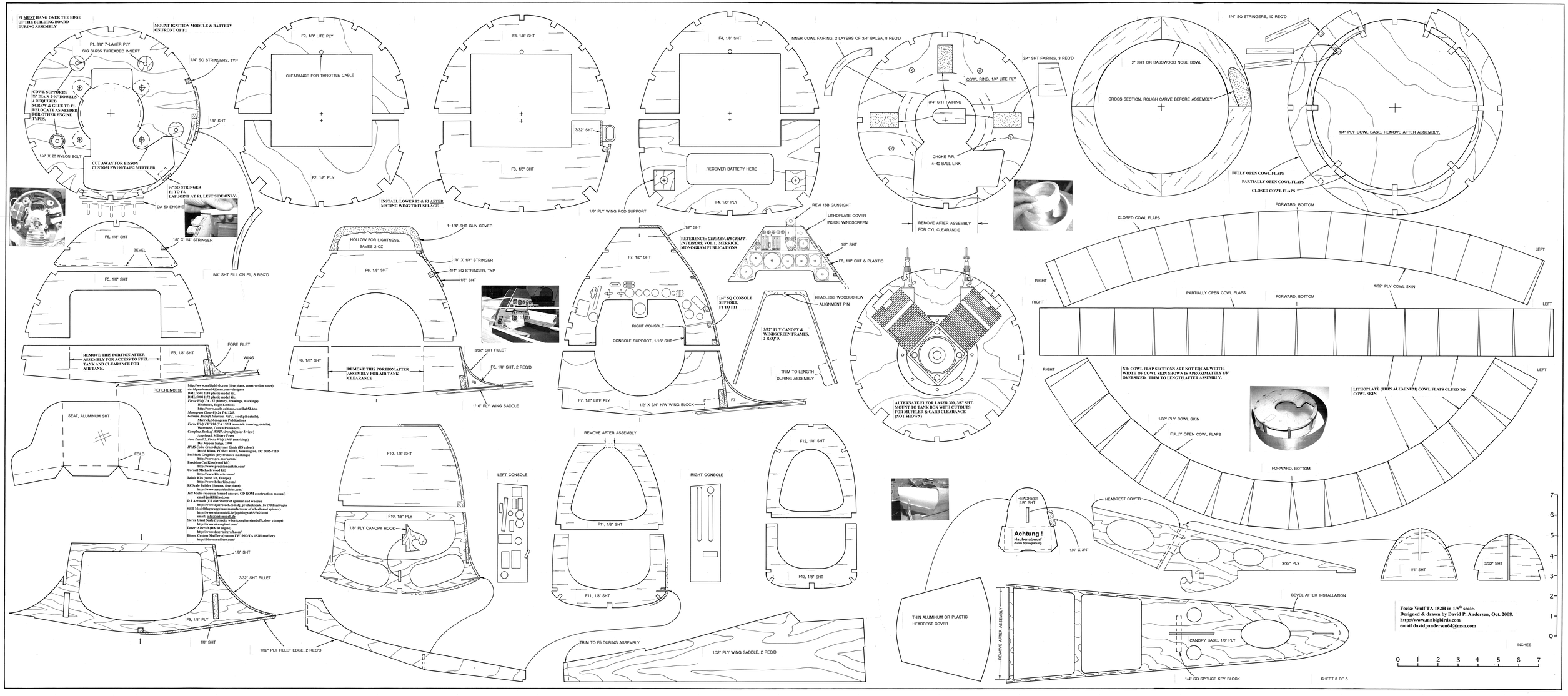

F1 MUST HANG OVER THE EDGE OF THE BUILDING BOARD DURING ASSEMBLY
MOUNT IGNITION MODULE & BATTERY ON FRONT OF F1
F1, 3/8" 7-LAYER PLY
SIG SH735 THREADED INSERT
1/4" SQ STRINGERS, TYP
COWL SUPPORTS, 7/2" DIA X 2-5/2" DOWELS, 4 REQ'D REQ'D. SCREW & GLUE TO F1. RELOCATE AS NEEDED FOR OTHER ENGINE TYPES.
1/8" SHT
1/4" X 20 NYLON BOLT
CUT AWAY FOR BISSON CUSTOM FW190/TA152 MUFFLER
1/2" SQ STRINGER F1 TO F4. LAP JOINT AT F1, LEFT SIDE ONLY.
DA 50 ENGINE
F2, 1/8" LITE PLY
CLEARANCE FOR THROTTLE CABLE
F2, 1/8" PLY
INSTALL LOWER F2 & F3 AFTER MATING WING TO FUSELAGE
F3, 1/8" SHT
3/32" SHT
F3, 1/8" SHT
F4, 1/8" SHT
RECEIVER BATTERY HERE
F4, 1/8" PLY
1/8" PLY WING ROD SUPPORT
INNER COWL FAIRING, 2 LAYERS OF 3/4" BALSA, 8 REQ'D
COWL RING, 1/4" LITE PLY
3/4" SHT FAIRING
CHOKE P/R, 4-40 BALL LINK
3/4" SHT FAIRING, 3 REQ'D
REMOVE AFTER ASSEMBLY FOR CYL CLEARANCE
1/4" SQ STRINGERS, 10 REQ'D
2" SHT OR BASSWOOD NOSE BOWL
CROSS SECTION, ROUGH CARVE BEFORE ASSEMBLY
1/4" PLY COWL BASE. REMOVE AFTER ASSEMBLY.
FULLY OPEN COWL FLAPS
PARTIALLY OPEN COWL FLAPS
CLOSED COWL FLAPS
F5, 1/8" SHT
BEVEL
1/8" X 1/4" STRINGER
5/8" SHT FILL ON F1, 8 REQ'D
F5, 1/8" SHT
HOLLOW FOR LIGHTNESS, SAVES 2 OZ
1-1/4" SHT GUN COVER
1/8" X 1/4" STRINGER
1/4" SQ STRINGER, TYP
1/8" SHT
F6, 1/8" SHT
REFERENCE: GERMAN AIRCRAFT INTERIORS, VOL 1. MERRICK. MONOGRAM PUBLICATIONS
F7, 1/8" SHT
1/8" SHT
REVI 16B GUNSIGHT
LITHOPLATE COVER INSIDE WINDSCREEN
1/8" SHT
F8, 1/8" SHT & PLASTIC
1/4" SQ CONSOLE SUPPORT, F1 TO F11
RIGHT CONSOLE
CONSOLE SUPPORT, 1/16" SHT
HEADLESS WOODSCREW
ALIGNMENT PIN
3/32" PLY CANOPY & WINDSCREEN FRAMES, 2 REQ'D.
TRIM TO LENGTH DURING ASSEMBLY
F7, 1/8" LITE PLY
1/2" X 3/4" H/W WING BLOCK
F7
ALTERNATE F1 FOR LASER 300, 3/8" SHT. MOUNT TO TANK BOX WITH CUTOUTS FOR MUFFLER & CARB CLEARANCE (NOT SHOWN)
CLOSED COWL FLAPS
FORWARD, BOTTOM
LEFT
RIGHT
PARTIALLY OPEN COWL FLAPS
FORWARD, BOTTOM
1/32" PLY COWL SKIN
RIGHT
LEFT
NB: COWL FLAP SECTIONS ARE NOT EQUAL WIDTH. WIDTH OF COWL SKIN SHOWN IS APROXIMATELY 1/8" OVERSIZED. TRIM TO LENGTH AFTER ASSEMBLY.
LITHOPLATE (THIN ALUMINUM) COWL FLAPS GLUED TO COWL SKIN.
1/32" PLY COWL SKIN
FULLY OPEN COWL FLAPS
FORWARD, BOTTOM
REMOVE THIS PORTION AFTER ASSEMBLY FOR ACCESS TO FUEL TANK, AND CLEARANCE FOR AIR TANK.
F5, 1/8" SHT
FORE FILET
WING
REFERENCES:
http://www.mnbigbirds.com (free plans, construction notes)
davidpandersen64@msn.com—designer
DML 5501 1:48 plastic model kit.
DML 5008 1:72 plastic model kit.
Focke Wulf TA 152 (history, drawings, markings)
Hitchcock, Eagle Editions
http://www.eagle-editions.com/Ta152.htm
Monogram Pub. Inc. (cockpit)
German Aircraft Interiors, Vol 1. (cockpit details), Merrick, Monogram Publications
Focke Wulf FW 190 TA 152H isometric drawing, details), Watanabe, Crown Publishers.
Complete Book of WWII Aircraft (color 3-view) Angelucci, Military Press
Aero Detail 2, Focke Wulf 190D (markings) Dai Nippon Kaiga, 1990
IPMS Models of the World, Vol. 1 Guide (FS colors) David Klaus, PO Box 47110, Washington, DC 2005-7110
ProMark Graphics (dry transfer markings) http://www.pro-mark.com/
Precision Cut Kits (wood kit) http://www.precisioncutkits.com/
Cornell Michael (wood kit) http://www.libratus.com/
Belair Kits (wood kit, Europe) http://www.belairkits.com/
RC Scale Builder (forums, free plans) http://www.rcscalebuilder.com/
Jeff Mocko (vacuum formed canopy, CD ROM construction manual) email jmikki@aol.com
D-J Aerotech (US distributor of spinner and wheels) http://www.djaerotech.com/dj_product/scale_fw190.html#opts
SST Models (vacuum formed canopy, reinforcerer of wheels and spinner) http://www.sst-models.de/pagehelpe/a0559w2.html email: info@sst-models.de
Sierra Giant Scale (retracts, wheels, engine standoffs, door clamps) http://www.sierragiant.com/
Desert Aircraft (DA 50 engine) http://www.desertaircraft.com/
Bisson Custom Mufflers (custom FW190D/TA 152H muffler) http://bissonmufflers.com/
SEAT, ALUMINUM SHT
FOLD
1/8" SHT
3/32" SHT FILLET
F9, 1/8" PLY
1/8" SHT
1/32" PLY FILLET EDGE, 2 REQ'D
F10, 1/8" SHT
F10, 1/8" PLY
1/8" PLY CANOPY HOOK
LEFT CONSOLE
REMOVE AFTER ASSEMBLY
F11, 1/8" SHT
F11, 1/8" SHT
RIGHT CONSOLE
F12, 1/8" SHT
F12, 1/8" SHT
TRIM TO F5 DURING ASSEMBLY
1/32" PLY WING SADDLE, 2 REQ'D
3/32" SHT FILLET
F6, 1/8" SHT
REMOVE THIS PORTION AFTER ASSEMBLY FOR AIR TANK CLEARANCE
F6, 1/8" SHT, 2 REQ'D
F6
1/16" PLY WING SADDLE
THIN ALUMINUM OR PLASTIC HEADREST COVER
HEADREST 1/8" SHT
Achtung !
Haubenabwurf
durch Sprengladung
1/4" X 3/4"
HEADREST COVER
3/32" PLY
1/4" SHT
3/32" SHT
REMOVE AFTER ASSEMBLY
BEVEL AFTER INSTALLATION
CANOPY BASE, 1/8" PLY
1/4" SQ SPRUCE KEY BLOCK
Focke Wulf TA 152H in 1/5th scale.
Designed & drawn by David P. Andersen, Oct. 2008.
http://www.mnbigbirds.com
email davidpandersen64@msn.com
INCHES
0 1 2 3 4 5 6 7
SHEET 3 OF 5

LEFT WING BOTTOM VIEW

ASSEMBLE LEFT WING, INVERTED, OVER THIS VIEW

LEAVE 1/8" GAP HERE FOR DB2

DB4—Add after sheeting, shape to match F4 & wing. Fill space behind with spackle

3/8" HARDWOOD DOWEL

DB1

DB2

Add a second layer of 1/8" sheet in this area (W2-W5) after curing is half well. Trim for a flush fit to the floor.

DB1
1/8" PLY, 2 REQ'D

BEVEL AFTER ASSEMBLY

1/2" X 1-1/2" L.E.

W1A

1/8" X 1/4" HW DOOR SUPPORT

1/2" X 3/4" RETRACT BEARERS

SIERRIA 1/5 SCALE FW190 75" RETRACT

4" DIHEDRAL TEMPLATE FOR TILTING W1

86°

INSERT DIHEDRAL BRACES DB2 & DB3 AFTER JOINING WING PANELS

INSTALL W3 AFTER L.E.

TAPER FOR STRUT CLEARANCE

3/4" X 1/2" MED BALSA, TOP
3/4" X 1/2" BASSWOOD, BOTTOM

TRIANGULAR GUSSETS, TYP ALL BEARER JOINTS

5/8" 10/0" BLOCK FOR 8-32 x 3/8" WING BOLT USING BOLTS, LOWER SECO.

1x1 LANDING GEAR 1/8" PHENOLIC TUBE AND SOCKET, W6 TO W10

1/8" SHM

3/32" SHEAR WEB, W11 TO W15

3/32" SHIM UNDER TOP SPAR DURING ASSEMBLY

1/4" X 3/4" BALSA SPAR

120 OZ-IN AILERON SERVO

1/32" SHIM

1/8" SHT

NB: 3° WASHOUT FROM W1 TO W18

1" TIP BLOCK

DB3

W1 W2 W4 W5 W6 W7 W8A W8B W9 W10 W11 W12 W13 W14 W15 W16 W17 W18

1/4" SHIM UNDER TOP SPAR DURING ASSEMBLY

7/32" SHIM

1/8" SHT SHEER WEB

1/4" X 3/4" SPAR TOP & BOTTOM

3/16" SHIM UNDER TOP SPAR DURING ASSEMBLY

5/32" SHIM

1/16" SHIM

1/8" X 1/4"

ROBART 84 PER HINGE POINT, 8 PER AILERON

HINGE LINE

1/8" X 1/4" STIFFENER UNDER UPPER SURFACE

1/8" X 1/4"

WING FILLET OUTLINE

120 OZ-IN FLAP SERVO

1/4" DOWEL

LARGE KLETT OR DUBRO HINGE, 9 PER WING

SCALE FLAP SPLIT

INSTALL W3A AFTER FLAPS

1/8" X 1/4"

LOWER SPAR DETAIL

UPPER SPARS

W1

1/2" X 1/4" TAPERED SPAR DOUBLERS ON LOWER SPARS MAKE 4

WING BOLT SUPPORT, 1/8" LITE PLY

TAPER LOWER SPARS FROM W1 TO DOOR SUPPORT

DIHEDRAL DETAIL

W8A W1 W8A

2" 2"

ELEVATE 2" AT W8 WHEN JOINING CENTER SECTIONS

"VOCES INTIMAE"—JEAN SEBELIUS

NB: Sheet most of the bottom surface of the wing center section first over. Add 1/8" sheet subfloor from W1 to W3 & and W4, upper surface. Fit wing to fuselage and mark the outline of the wing fillet on the wing subfloor. Then sheet the entire upper surface up to the wing fillet marking, overlapping the outer portion of the subfloor. This secures the wing fillet flush with the wing as a scale panel line.

FLAP CROSSSECTION

1/64" PLY SURFACES

3/32" SHT CORE

1/64" PLY

DUBRO OR KLETT HINGE

ASSEMBLE W/ FINISHING RESIN

0.032" ALUMINUM FLAP HORN, 4 REQ'D. EXACTLY ALIKE

SECURE W/ 1/4" SQ & EPOXY

For a one-piece wing, omit W8B, ply sections of W8 & W8B, dowel, gussets and wing tubes. Elevate 2 1/2" at W18 when joining wing halves. This saves 14 ounces of weight.

1/8" SHT W1 TO W8B—
CUT AWAY TO MATCH WING FILLET

3/64" DIA HOLES FOR AIR LINES

1/8" SHT SUBFLOOR, W1 TO W3 & W4 ONLY, TOP SURFACE ONLY

W2, 1/8" PLY, 2 REQ'D

INNER GEAR DOOR

REMOVE AFTER SHAPING INNER DOORS

W5, 1/8" SHT, 2 REQ'D

W5A, 1/8" PLY, 2 REQ'D

3/4" X 1/2" MEDIUM BALSA SPAR, TOP

FLAP HORN

W5A W5

1/8" X 1/4", TAPERED

FLAP SERVO THROW MUST BE 3/4"

TAPER FORWARD BEARER AFTER INSTALLATION, W5 TO W6 FOR STRUT CLEARANCE

3/4" X 1/2" BASSWOOD SPAR, BOTTOM

W7, 1/8" SHT, 2 REQ'D

W7A, 1/8" PLY, 2 REQ'D

W7A W7

1/8" SHT

1/8" PLY

W9, 2 REQ'D, PLY SIDE OUTBOARD

W1, 1/8" LITE PLY, 2 REQ'D

1/8" SHT, 2 REQ'D

W3A

SEPARATE W/ BACKLESS RAZOR SAW

W3, 1/8" PLY, 2 REQ'D

REMOVE AFTER ASSEMBLY

W4, 1/8" SHT, 2 REQ'D

W8, 1/8" SHT, 2 REQ'D

W8A, 1/8" PLY, 2 REQ'D

W8A W6

RECOMMENDED CONTROL SURFACE TRAVEL LIMITS:

AILERONS—3/4" UP AND 3/4" DOWN @ 30% EXPO

ELEVATOR—5/8" UP AND 5/8" DOWN @30% EXPO

RUDDER—1 1/2" LEFT & 1 1/2" RIGHT

FLAPS—0, 15, 60 DEGREES

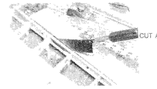
Focke Wulf TA 152H in 1/5th scale.
Designed & drawn by David P. Andersen, Oct. 2008.
http://www.airhighlords.com
email:davidpandersen64@msn.com

INCHES 0 1 2 3 4 5 6 7

SHEET 4 OF 5

There'll be blackbirds over
the white cliffs of Dover
Tomorrow, just you wait and see.

There'll be love and laughter
and peace ever after
Tomorrow, when the world is free.



CUT AILERON FREE W/ BACKLESS RAZOR SAW

W1A
1/8" PLY, 2 REQ'D

DB2 UPPER, 1/8" PLY, 1 REQ'D

DB2 LOWER, 1/8" PLY, 1 REQ'D

DB3 UPPER, 1/8 PLY, 2 REQ'D

DB3 LOWER, 1/8 PLY, 2 REQ'D

INSTALL AFTER JOINING WING PANELS

AILERON SERVO DETAIL

BALSA BLOCK HINGE SUPPORT

CUT BACK AILERON RIBS 3/8" THEN FILL L.E. W/ 3/8" SHT AND CONTOUR AS SHOWN

ROBART SUPER HINGE POINT

GOLDBERG LONG CONTROL HORN

JUST GLUE IT!

4-40 BALL LINK

F4

DB4, 3/8" SHT, 1 REQ'D
INSTALL AFTER SHEETING WING
THEN SHAPE TO F4 AND BLEND INTO WING L.E.

NOTCH END OF SPAR AT W8A

REMOVE SCREWS BEFORE SHEETING UPPER SURFACE

SCREW TOGETHER DURING ASSEMBLY
WAX PAPER BETWEEN

W8A ONLY

W8B

W8A & W8B, 1/8" PLY, 2 EA

OPTIONAL SCALE FLAP RIBS: 56 REQ'D 1" APART
MAKE FROM 1/32" PLASTIC

LEFT WING TOP VIEW

ASSEMBLE RIGHT WING, INVERTED, OVER THIS VIEW

Balsa unless otherwise stated.
Dimensions in inches.

PARTS LIST

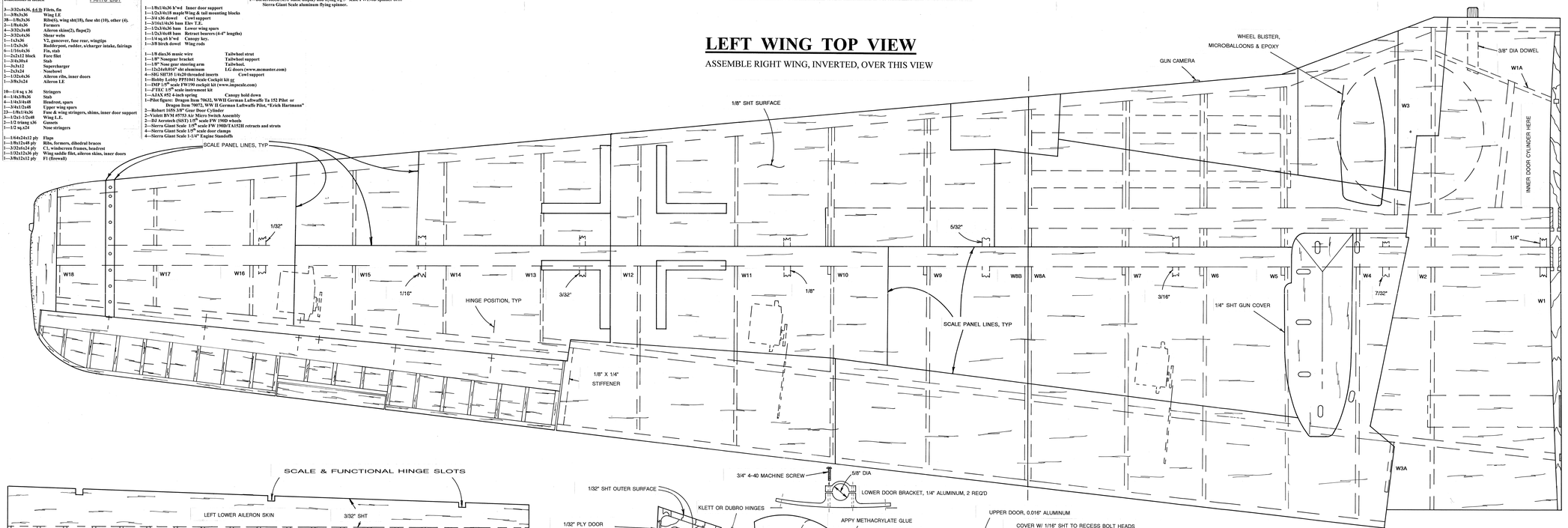
3—3/32x4x36, ~~44 lb~~	Fibrs, fin
1—3/8x3x36	Wing L.E
38—1/8x3x36	Ribs(6), wing sht(18), fuse sht (10), other (4).
2—1/8x4x36	Formers
4—3/32x3x48	Aileron skins(2), flaps(2)
2—3/32x4x36	Shear webs
1—1/2x36	V2, gunover, fuse rear, wingtips
1—1/2x36	Rudderpost, rudder, sirburger intake, fairings
6—1/16x4x36	Fin, stab
1—2x2x12 block	Nose flat
1—3/4x3/8x4	Stop
1—3x3x12	Supercharger
1—2x3x24	Nosebowl
2—1/2x4x36	Aileron ribs, inner doors
1—3/8x3x24	Aileron LE
10—1/4 sq x 36	Stringers
6—1/4x3/8x36	Stab
4—1/4x3/4x48	Headrest, spars
1—3/4x1/2x48	Upper wing spars
23—1/8x1/4x36	Fuse & wing stringers, shims, inner door support
3—1/2x1-1/2x48	Wing L.E.
2—1/2 triang x36	Gussets
1—1/2 sq.x24	Nose stringers
1—1/64x24x12 ply	Flaps
1—1/8x12x48 ply	Ribs, formers, dihedral braces
1—3/32x6x24 ply	C1, windscreen frames, headrest
1—1/32x12x36 ply	Wing saddle filet, aileron skins, inner doors
1—3/8x12x12 ply	F1 (firewall)

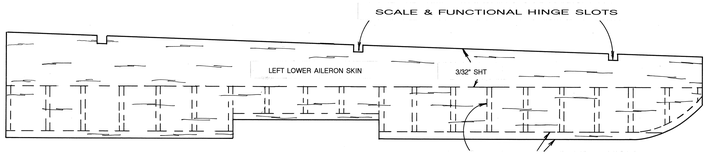
1—1/8x12x48 ply Formers, tankbox
1—1/4x12x12 ply Cowl ring

1—1/8x1/4x36 b'wd Inner door support
1—1/2x3/4x18 maple Wing & tail mounting blocks
1—3/4 x36 dowel Cowl support
1—3/16x1/4x36 bass Elev T.E.
2—1/2x3/4x36 bass Lower wing spars
1—1/2x3/4x48 bass Retract bearers (4-4" lengths)
1—1/4 sq.x6 b'wd Canopy key.
1—3/8 birch dowel Wing rods

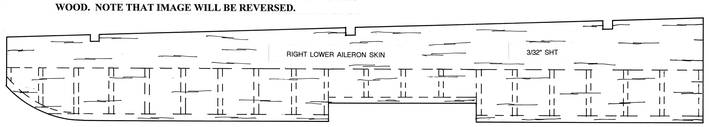
1—1/8 dia x36 music wire Tailwheel strut
1—1/8" Nosegear bracket Tailwheel support
1—1/8" Nose gear steering arm Tailwheel.
1—12x12x0.016" sht aluminum LG doors (www.mcmaster.com)
4—10G SHT38 1/4x20 threaded inserts Cowl support
1—Hobby Lobby PP51041 Scale Cockpit kit gr
1—IMP 1/5th scale FW190 cockpit kit (www.impscale.com)
1—PTEC 1/5th scale instrument kit
1—AJAX #52 4-inch spring Canopy hold down
1—Pilot figure: Dragon Item 70632, WWII German Luftwaffe Ta 152 Pilot or Dragon Item 70072, WW II German Luftwaffe Pilot, "Erich Hartmann"
2—Robart 1655.3/8" Gear Door Cylinder
2—Violett BVM #5753 Air Micro Switch Assembly
2—JA Aerotech (SIST) 1/5th scale FW 190D wheels
2—Sierra Giant Scale 1/5th scale FW 190D/TA152H retracts and struts
4—Sierra Giant Scale 1/5th scale door clamps
4—Sierra Giant Scale 1-1/4" Engine Standoffs

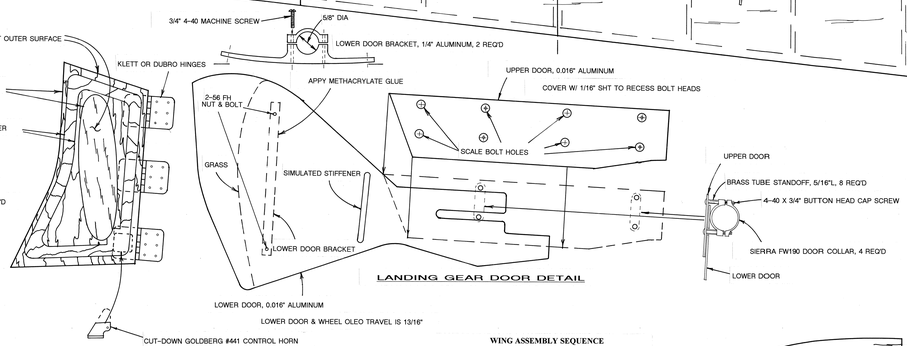
1—CD ROM complete construction article—email davidpandersen64@msn.com
1—DJAerotech/SIST static display and flying fig 5th scale FW190D spinner or.... Sierra Giant Scale aluminum flying spinner.



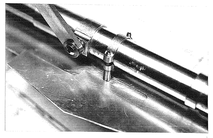


TRACE AILERON PATTERNS ONTO 3/32" SHEET BY IRONING FRESH DARK PHOTOCOPIES OF THESE PATTERNS ONTO THE WOOD. NOTE THAT IMAGE WILL BE REVERSED.

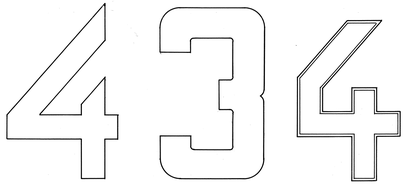




LANDING GEAR DOOR DETAIL

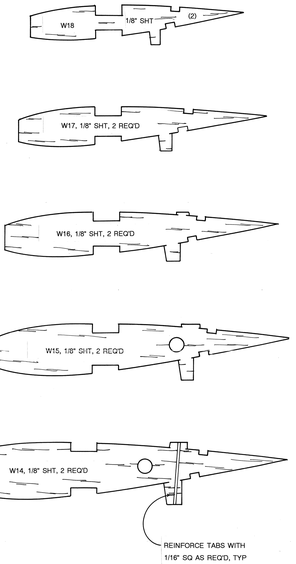


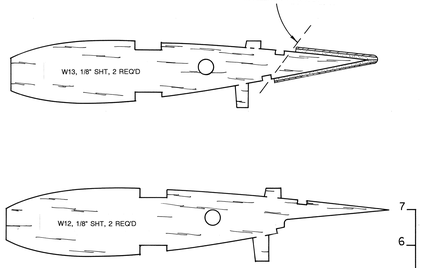
FUSELAGE NUMBER STYLES

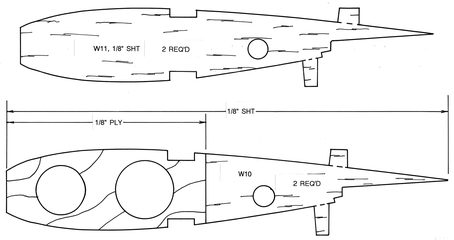


WING ASSEMBLY SEQUENCE

–CUT OUT ALL PARTS. ASSEMBLE FLAPS, AILERON SKINS.
–ASSEMBLE W5 THRU W9 OVER PLANS, INVERTED ON A FLAT SURFACE. DON'T GLUE. MARK BOLT HOLES ON RETRACT BEARERS. REMOVE BEARERS, DRILL, AND INSTALL BLIND NUTS.
–BOLT RETRACT TO BEARERS AND REASSEMBLE WITH WINGTUBE AND W5 THRU W9. EPOXY BEARERS TO RIBS WITH RETRACTS IN PLACE. THIS ASSURES A NON-STRESSED FIT.
–FIT AND SPOT-GLUE WING TUBE SOCKET WITH ALUMINUM TUBE IN PLACE. ADD OTHER RIBS, SPARS, DBI, ETC.
–REMOVE ALUMINUM WING TUBE (MUST SLIDE OUT EASILY).
–SEPARATE OUTER WING PANEL FROM INNER PANEL BY CUTTING THRU WING TUBE AND SPARS WITH A BACKLESS RAZOR SAW.
–COMPLETE GLUING OF WING TUBE. REINFORCE WITH WEBS OF EPOXY.
–ADD AILERON SKINS, TOP AND BOTTOM.
–INSTALL SHEAR WEBS TO INNER SECTION.
–SHEET MOST OF LOWER WING SURFACE, LEAVING ACCESS TO SERVO AREAS.
–CUT LANDING GEAR OPENING. ADD INNER DOORS.
–TURN WING OVER. REMOVE UPPER TABS. ADD SHEAR WEBSING.
–SHEET UPPER SURFACE. NOTE OVERLAP OF SHEETING WITH SUBFLOOR SHEETING, W4 TO W1. ADD UPPER AILERON SKIN.
–CUT AILERON LOOSE. TRIM BACK AILERON RIBS TO ACCEPT AILERON LE. INSTALL AILERON LE. DRILL HOLES FOR ROBART HINGES. ROUND AILERON LE.
–SPAPE WING TE TO MATE WITH AILERON.
–INSTALL AILERON HINGES IN AILERON.
–INSTALL AILERONS AND FLAPS. INSTALL AND TEST AILERON AND FLAP SERVOS.
–BUILD OTHER WING PANEL.
–JOIN WING PANELS PER DETAIL ON SHEET 4. ADD DIHEDRAL BRACES DB1 & DB3.
–FIT TO FUSELAGE. RECESS UPPER SURFACE TO MATCH WING FILLET.
–FIT WING DOWELS AND WING BOLTS.







Focke Wulf TA 152H in 1/5th scale.
Designed & drawn by David P. Andersen, Oct. 2008.
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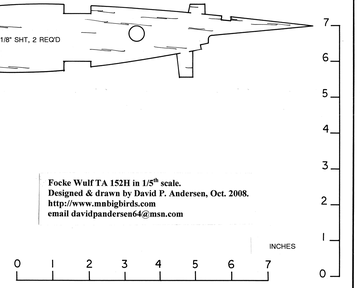

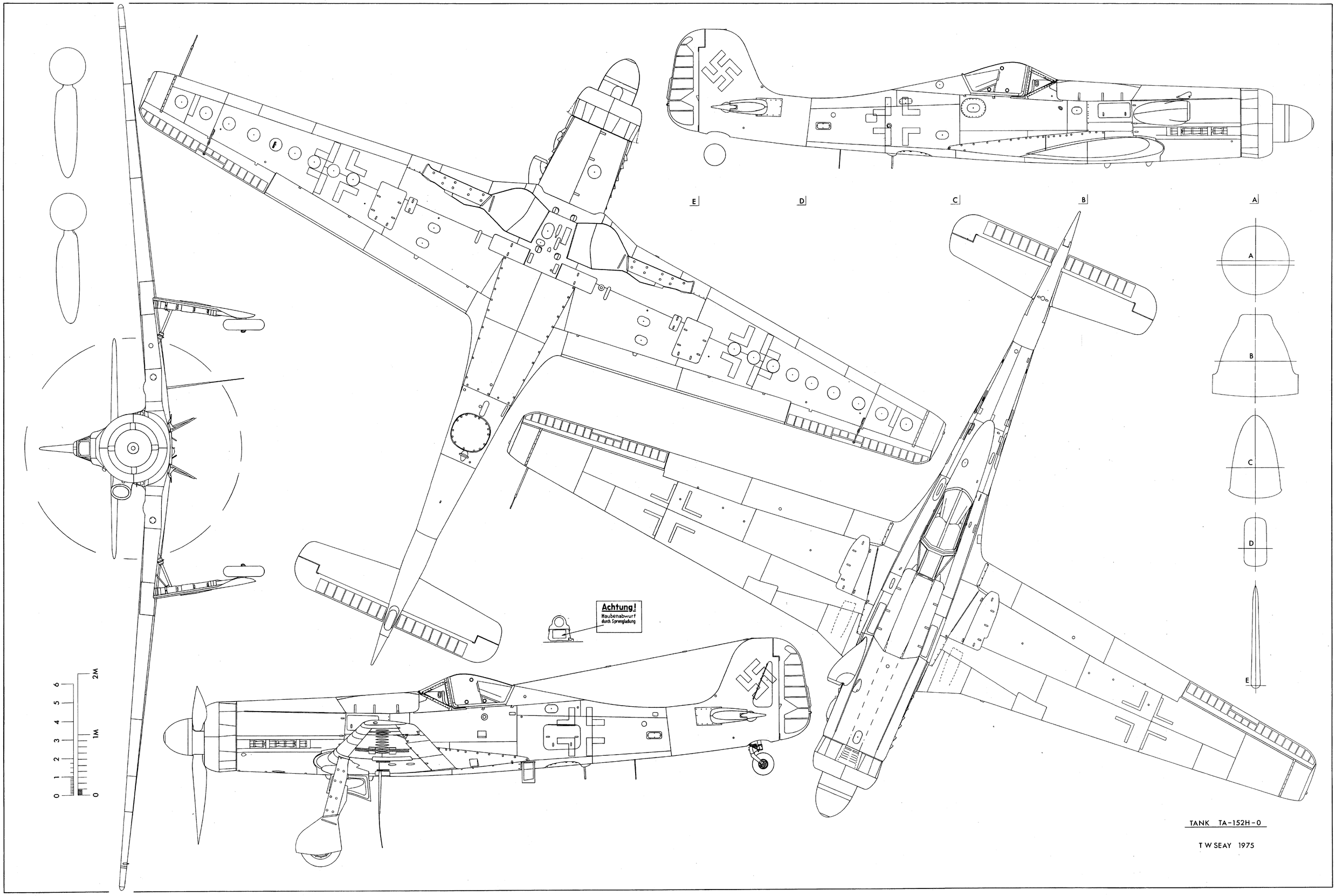

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