

FIGHTER ULTRALIGHT MATERIAL LIST

TAIL GROUP ASSY

Aluminum Tubes 6061-T6 Dia 1" (25,4 mm) .065 (1,651 mm) Wall Thickness

Rudder 7,29 ft (2,222 m)

Rudder axle 4,12 ft (1,255 m)

Fin Axle 4,46 ft (1,360 m)

Fin 6,24 ft (1,902 m)

Stabilizer 12 ft (3,592 m)

Axle 8,20 ft (2,500 m)

Right Elevator 6,12 ft (1,868 m)

Left Elevator 6,12 ft (1,868 m)

Axle 8,20 ft (2,500 m)

Aluminum Tubes 6061-T6 Dia 3/4" (19.05 mm) .065 (1,651 mm) Wall Thickness

Tail group ribs 8,55 ft (2,606 m)

Aluminum Tubes 6061-T6 Dia 5/8" (15,8 mm) .065 (1,651 mm) Wall Thickness

Tail group struts 6,3 ft (1,920 m)

Aluminum Bar Dia 1" (25,4 mm) for long and short bushings 23-5/8" (600 mm)

Aluminum Sheet 2024-T3 .190" (5mm) Thickness

2) 4" x 3-9/16" (100 x 90 mm) Control Tee

304 Stainless Steel .063" (1,5 mm) Thickness

3) 4-9/16" x 2-3/8" (116 x 60 mm) Tail Group Fittings

1) 2-3/4" x 1-3/4" (70 x 45 mm) Upper Link

2) 2" x 3/4" (50 x 20 mm) Lower Link

Hinges: see wing assy.

Hardwood or Nylon bushings Dia 1/2" (12,7 mm) for struts ends and Dia 5/8" (15,8 mm) for tail group ribs -

Length 1-1/2" (38 mm)

Hardware

4) Bolts AN3-15A (control Tee)

4) Self Locking Nuts AN365-1032

4) Flat washers

13) Bolts AN4-15A (for hinges*)

If you wish to replace the stainless steel hinges for Eyebolts, replace these bolts with:

10) Eyebolts AN43-14

10) Self locking nuts for Eyebolts

3) Bolts AN4-15A for struts

3) Self locking nuts AN365-428

4) Clevis Pin AN393-19 for struts with safety key or safety rings

1) Bolt AN4H15A Head drilled for tail fin assy, secured in place with safety wire.

6) Bolts AN4-5A Tail boom fittings

6) Self locking nuts AN368-428

6) Flat washers

50) Cherry rivets MSP45 dia 1/8" (3,175 mm)

FUSELAGE / COCKPIT GROUP

Aluminum Tube Dia 4" (101,6 mm) .050" (1,27 mm) Wall Thickness 154" (3,900 m) - Boom

Aluminum Tube 6061-T6 Dia 1-1/8" (28 mm) .058" (1,5 mm) Wall Thickness 6,8 ft (2,096 m) Central Boom Support

Aluminum Tube 6061-T6 Dia 1-1/8" (28 mm) .058" (1,5 mm) Wall Thickness 9,6 ft (2,942 m) Rear Boom Support

Aluminum Tube 2024-T3 Dia 2" (50,8 mm) .065 (1,5 mm) Wall Thickness - 12ft (3,657 m) Fuselage side and rear members

Aluminum Sheet 2024-T3 Thickness .190" (5 mm) 9-7/8" x 8-5/16" (250 x 210 mm) 2) Required - Nose Plate

Aluminum Sheet 2024-T3 Thickness .190" (5 mm) 3-5/8" x 4-1/4" (92 x 107 mm) 4) Required - Rear Link Plate

Aluminum Sheet 2024-T3 Thickness .190 (5 mm) 12" x 6" (305 x 153 mm) 1) Required Central Plate

Aluminum Sheet 2024-T3 Thickness .125" (3mm) 15" x 3-3/16" (380 x 80 mm) 1) required - Boom Ring

304 Stainless Steel Sheet Thickness .080" (2mm) 5" x 4" (127 x 101 mm) 2) required -Boom Support Bracket

304 Stainless Steel Sheet Thickness .080" (2mm) 4" x 1-1/2" (101 x 38 mm) 2 Required - Central Bracket

304 Stainless Steel Sheet Thickness .080" (2mm) 4" x 3-1/4" (101 x 82 mm) 4) Required -Wing Strut Link

304 Stainless Steel Sheet Thickness .080" (2mm) 5" x 1-1/2" (127 x 38 mm) 2) required -Landing Gear Bracket

304 Stainless Steel Sheet Thickness .080" (2mm) 5" x 1-1/2" (127 x 38 mm) 2) required -Front Mast Bracket

Fiberglass Seat

Bolts to secure seat to fuselage members

Hardware

6) Bolts AN5-32A (Rear fuselage members)

6) Self Locking Nuts AN 363-524 (Rear fuselage members)

5) Bolts AN5-27A (Fuselage front end)

5) Self Locking Nuts AN 363-524 (Fuselage Front end)

Flat washers

10) Bolts AN5-16A (Fuselage-Boom connections-Landing gear)

10) Self Locking Nuts AN 363-524

Flat washers

1) Bolt AN5-27A (Boom ring)

1) Self Locking Nut AN363-524 (Boom ring)

1) Bolt AN7-32A (Front Landing Gear)

1) Self Locking Nut AN363-720 (Front Landing Gear)

Flat Washers

1) Bolt AN7-45A (Central Fuselage/Boom Bracket)

1) Self Locking Nut AN363-720

LANDING GEAR

4130 Steel Tube Dia. 7/8" (22 mm) Wall Thickness .049" (1,2 mm) 12 Ft 3,6 m Landing Gear

4130 Steel Tube Dia. 1/2" (12,7 mm) Wall Thickness .035" (0,9 mm) 4 Ft 1,2 m Landing Gear

4130 Steel Tube Dia 1/2" (12,7 mm) Wall Thickness .083" (2 mm) 8" long - 1) Required - Front Axle

4130 Steel Tube Dia 5/8" (15,8 mm) Wall Thickness .509" (1,47 mm) 3" (76 mm) Axle housing

Steel Flat Stock .080" (2 mm) Thick - 4-7/16" x 2-7/8" (113 x 73 mm) 4) required Landing Gear Pivot Bracket

Steel Flat Stock .1" (2,5 mm) Thick - 3-5/8" x 2-9/16" (92 x 65 mm) 1 Required Front Fitting

Steel Flat Stock .1" (2,5 mm) Thick - 3-5/8" x 6-7/8" (92 x 174 mm) 2 Required Fork Head

Steel Flat Stock .080" (2 mm) Thick - 3" x 3" (76 x 76 mm) 2) Required -Brake Attachment Fittings

1018 Steel Rod Dia 1" x 10" (25,4 x 255 mm) Landing Gear Rear Axle

Wheels/Tire assembly Dia 10" (250 mm) 3 Required

Brake assembly (from scooter or simmlar) 2 Required

Sandows Bungie Cord Dia 5/16" (8mm) Suspension

ENGINE MOUNT

304 Stainless Steel .125" (3 mm) Thick 11" x 2" (280 x 50,8 mm) 2 Required - Upper Bracket

304 Stainless Steel .125" (3 mm) Thick 12-1/2" x 2" (317,49 x 50,8 mm) 2 Required - Lower Bracket

304 Stainless Steel .125" (3 mm) Thick 7" x 2" (180 x 50,8 mm) 4 Required - Side Bracket

Aluminum Bar 1" x 2" x 3" (25,4 x 50,8 x 76 mm) 4 Required - External Adapter

Aluminum Bar 2-1/2" 2" x 5/8" (65 x 50,8 x 15 mm) 4) Required Inner Adapter

Hardware

4) Bolts AN5-17A - Engine mount-boom

4) Self Locking Nut 363-524

Flat Washers

4) Bolts AN5-15A - Engine mount-Upper

4) Self Locking Nut 363-524

Flat Washers

4) Rubber Engine Mounts

Flat Washers

CONTROL SYSTEM

Aluminum Sheet .125" (3 mm) Thick - 8" x 12" (203 x 305 mm) 2) Required Pedal

4130 Steel Sheet .090" (2mm) Thick - 7-1/2" x 1-1/2" (191 x 38 mm) 1 Required - Aileron Mixer

4130 Steel Sheet .090" (2mm) Thick - 3-1/2" x 1-1/2" (90 x 38 mm) 1) Required - Control Arm

304 Stainless Steel Sheet .090" (2mm) Thick - 3" x 1-1/2" (76 x 38 mm) 2 Required - Pedal Tang

4130 Steel Tube Dia. 7/16" (11 mm) 12" long - 1) Required Aileron Control Link

Aluminum Bar Dia. 1" x 12" - 1 Required - Control Stick end - Push Pull Bar end

Grillon/Teflon Bushings Dia. 1-1/2" (38mm) 6)Required

Aluminum Tubes 6061-T6 Dia 1" (25,4 mm) .065 (1,651 mm) Wall Thickness - 5 ft (1,5m) Side Stick - Torque Tube - Pedal Axle

Brake Lever (motorcycle Type)

Brake Cable and Fittings

1) Bolt AN4-15A - Stick- Teleflex

2) Bolt AN4-7A - Control Arm - Teleflex - Pedal-Teleflex

6) Bolt AN4-10A - Control Tee/Teleflex - Aileron Control Arm/Link

9) Self Locking Nut AN363-428

Flat Washers

2) Bolt AN5-34A - Pedal Axle/Fuselage Members

2) Self Locking Nut AN363-524

Flat Washers

2) Rod End Bearings Male Thread

2) Rod End Bearings Male Left Thread

3) Teleflex Control Cables (determine length after assy.)

WING

Aluminum Tube 2024-T3 Dia. 2" (50,8 mm) Wall Thickness .065" (1,65 mm) 15 ft (4,5 m) 4) Required- Spars

Aluminum Tube 6061-T6 Dia. 1-1/2" (38 mm) Wall Thickness .058" (1,47 mm) 15 ft (4,5 m) 2) Required- Aileron Spars

Aluminum Tube 6061-T6 Dia. 1" (25,4 mm) Wall Thickness .058" (1,47 mm) 12 ft (3,5 m) 1) Required- Wing Tip

Aluminum Tube 6061-T6 Dia. 5/8" (15,8 mm) 15 Ft (4,5 m) 2) Required Aileron Trailing edge

Aluminum Tube 6061-T6 Dia. 3/8" (9,5 mm) .035" (0,90 mm) Wall Thickness - 12 Ft (3,5 m) Aileron Ribs

Aluminum Tube 6061-T6 Dia. 3/8" (9,5 mm) .035" (0,90 mm) Wall Thickness - 89 Ft (27 m) Wing Ribs

Aluminum Tube 2024-T3 Dia. 1" (25,4 mm) Wall Thickness .065" (1,65 mm) 9 ft (2,7 m) 2) Required- Compression Struts

304 Stainless Steel Sheet .1" (2,5 mm) Thick 2-1/8" 7-1/2" (54 x 191 mm) 4 Required -Wing Brackets

304 Stainless Steel Sheet - .080" (2 mm) Thick 5" x 2" (127 x 50,8 mm) 4 Required Strut Inner Link
304 Stainless Steel Sheet - .080" (2 mm) Thick 2" x 2" (50,8 x 50,8 mm) 8) Required - Spacer
304 Stainless Steel Sheet - .080" (2 mm) Thick 4-1/2" x 3" (115 x 76 mm) 8) Required - Wing Strut Tip
304 Stainless Steel Sheet - .063" (1,5 mm) 4-1/2" x 5" (115 x 127 mm) 8) Required - Link
304 Stainless Steel Sheet - .063" (1,5 mm) 3" x 1" (76 x 25,4 mm) 28) Required - Hinges
Aluminum Sheet 2024-T3 - .190 (5 mm) Thick 4-1/2" x 4-1/2" (115 x 115 mm) 2) Required - Aileron Control Arm
Aluminum Sheet 2024-T3 - .190 (5 mm) Thick 4-1/2" x 3" (115 x 76 mm) 8) Required - Wing Strut Fitting
Aluminum Sheet 2024-T3 - .025" (0,7 mm) Thick - 6" x 9-1/2" (153 x 242 mm) 2) Required - Aileron Tip
Aluminum Sheet 2024-T3 - .025" (0,7 mm) Thick - 4" x 3" (101 x 76 mm) 36) Required - Wing Rib Attachment
4130 Streamline Tube (Wing Struts)SL23-10-4 (mayor axis 2,360", minor axis 1.00")(59,9 x 25,4 mm) wall thickness .049" (1,24 mm) Lenght 10 Ft. (3 m) 4 Required
Aluminum Tube 6061-T6 Dia. 7/8" (22 mm) .049" (1,24 mm) wall thickness - length 12 Ft (3,6 m)

Hardware

2) Bolt AN7-45A Wing/Boom Bracket

2) Self Locking Nut AN363-720

Flat Washers

8) Bolt AN4-30A Wing Strut Fitting

8) Self Locking Nut AN363-428

8) Bolt AN5-15A Compression Strut

8) self Locking Nut AN363-524

16) Self Locking Nut AN363-524

4) Bolt AN5-24A (Tensor cable link Detail E pag 6)

4) Self Locking nut AN363-524

8) Bolts AN4-30A (Hinge/wing Spar)

8) Bolts AN4-20A (Hinge/Aileron Spar)

16) Self Locking Nut AN363-428

14) Bolts AN3-12 (hinge axle)

14) Self Locking Nut AN363-1032

2) Bolt AN4-12A (Aileron Control horn/Aileron Rib)

2) Self Locking Nut AN363-428

2) Bolt AN4H5 (Aileron Reinforcement Bushing)

4) Bolt AN5-27A (Wing strut Inner Link)

8) Bolt AN5-7A (Wing Strut Tip)

12) Self Locking Nut AN363-524

COVERING

Polyester Fabric Poly-Fiber "Light" 1,7 oz width 70" - 18,5 Yards

Finishing Tape 1" width 50 yards

Poly-Tak (adhesive)

Poly-Brush 2 gallons

Poly-Tone 3.5 gallon

Poly-Fiber UV Blocker - 4 fl oz per gallon of Poly-Tone

Reducer as needed