ZODIAC CH 601 XL Updates included in 3rd edition 1st revision: April 2005

Summary of revisions from 12/04 to 04/05

AIRFRAME

6-X-0 DRAWING LIST April 29, 2005

6-X-1 **04/5** THREE VIEW

1) top right diagram: changed gear orientation, changed gear distance: change 52 (1.22m) to 48" (1.22m) (01/05)
2) 3rd edition 1ST.revision 04/2005
3) change fuel capacity from 24 to 30 gallons (114 liters) (01/05)
4) change gross weight from 1300 to 1320 lbs (600kg) (01/05)
5) change design load factor from +/- 6g at 1300 to +/- 6 G @ 1320 lbs
6) Bottom left text, change construction manual to construction standards (01/05)
7) Va = 103MPH, 166 Km/h (04/05)
8) Vc = 124 MPH, 200 Km/h (04/05)
9 Vne = 160 MPH, 260 Km/h (04/05)

6-T-0 **04/05** TAIL EXPLODED VIEW

1) Added 6T4-10 fiberglass rudder tip (01/05)
2) Added 6T3-8 strip
3) Added trim tab (04/05)

6-T-1 **02/05** STABILIZER AIRFOIL

1) 6T1-3 Rev. 2 change material thickness from t=.025" to t=.032", change dl from 122 to 118 (02/05)
2) 6T1-4 Rev. 2 Changed material thickness from t=.025 to t=.040", change dl from 116 to 113 (02/05)
3) Top right diagram, location of first 2 rivets from center line, change 30 to 35 and 65 to 70mm (02/05)
4) 6T1-1 added 18x18mm cutout in bottom flange (aft end) (02/05)
5) Right diagram, 6T1-3 and 6T1-4, number of rivets "+" between ribs, change 8 to 7 (02/05)

6-T-2 **02/05** STABILIZER ATTACHMENTS

1) new location of 6T2-1 and 6T2-2 to fit HT Frame 6B1-1 (01/05)
2) Top right diagram: delete 214mm, delete detail of point of intersection ref 6T2-2 (02/05)
3) Block distance to set 6T2-2, change 219 to 233mm (02/05)
4) bottom right diagram cross section stabilizer skin riveting: added doublers on front and rear spar, added 4 rivet in front and rear flange of center ribs 6t1-2 (02/05)
5) 6T2-1 Rev 1 change angle from 99.5 to 10 degrees (02/05)
6) 6T2-2 Rev 1 change angle from 80.5 to 79 degrees (02/05)
7) 6T2-3 Rev. 1 change angle from 80.5 to 79 degrees (02/05)
8) top middle diagram: distance from end of piano hinge to end of stabilizer, change 188 to 205mm (02/05)
9) New page layout: added rib 6T1-3 to right diagram (02/05)

6-T-3 **03/05** ELEVATOR

1) New page layout (01/05)
2) 6T3-8 Strip new part (01/05)
3) A5 rivets in center area (01/05)

4) Added AS5 stainless steel rivet through 6T3-8, horns and center channel (01/05)
5) 6T3-4 Rev 1 change t=063" to t=.090", change 40 to 42mm, bottom flange changed to 25mm (02/05)
6) 6T3-5 Rev 2 change t=.063" to t=.090", bottom flange changed to 25mm , change 31 to 36mm (03/05)
7) Rivets in L angle in corner of rib and channel (top right diagram) change A4 to A5 top right diagram, bottom right diagram (02/05)
8) Rivets angle 6T3-7 and front of skin 6T3-3, change A4 to A5 (02/05)

6-T-4 **02/05** VERTICAL TAIL RIBS
1) Deleted Tip Rib 6T4-2 (02/05)
2) 6T4-10 new part: fiberglass rudder tip (02/05)
3) Middle diagram: distance between upper bearings 6T4-3 changed 5 to 10mm (02/05)

6-T-5 **01/05** VERTICAL TAIL SKELETON
1) Replaced tip rib 6T4-2 with fiberglass rudder tip 6T2-10 (01/05)

6-T-6 **02/05** RECESSED ELEVATOR TRIM TAB
1) New page layout
2) 6T6-1 Rev 2, trim tab installed aft of trailing edge, full length on left side of stabilizer, length = 955mm dl = 150 (01/05)
3) 6) deleted 6T6-3 (01/05)
4) 6T6-4 Rev 1, piano hinge, change length to 900 (01/05)
5) 6T6-6 Rev 1, new dimension for horn (02/05)
6) 6T6-7 and 6T6-8 new parts (01/05)

6-W-0 **01/05** EXPLODED VIEW
1) Repositioned nosed rib outboard of 15 gallon tank (01/05)

6-W-00 **01/05** RIGHT WING ASSEMBLY
1) Repositioned nosed rib outboard of 15 gallon tank (01/05)
2) Removed Hat stiffener between RR#7 and RR#8 (01/05)
3) Removed Nose rib Angle in line with RR#6 (01/05)

6-W-1 **03/05** FLAPS
1) 6W1-1 Added 15mm long horizontal slot centered on ¼" hole (03/05)

6-W-2 **12/04** AILERONS

6-W-3 **04/05** OUTBOARD WING SPAR ASSEMBLY
1) 6W3-1 Rev. 2 removed hat stiffener between RR#7 and RR#8. Removed nose rib angle at station 1490 (01/05)
2) 6W3-8 change quantity for long , change 4 from 2 req'd, (01/05)
3) 6W3-9, change qty for long angle from 8 to 6 req'd . (01/05)
4) Note bottom of page, corrected 6B3-1 to 6W3-1 (02/05)
5) 6W3-1 Rev. 2, deleted nose rib angle 6W3-9 for nose rib #4 at station 1490, delete hat stiffeners 6W3-8 between rear ribs #7 and #8.
6) Top view middle diagram: removed reference to drawing 6LRO1-1 (04/05)

6-W-4 **10/04** CENTER WING SPAR

6-W-5 **03/05** SPAR TIP / NOSE RIBS
1) bottom right text, changed C3 to C1, top middle diagram, nose rib in line with RR#9 = NR#6 (03/05)

6-W-6 **09/04** REAR RIBS

6-W-7 **01/05** REAR CHANNEL
1) Repositioned NR#4 for 15 gallon tank (01/05)
2) bottom middle: removed reference to long range tanks (01/05)
3) Removed NR rib numbering, added distance between rib flange center (01/05)

6-W-8 **01/05** WING SKINS
1) Repositioned NR#4 for 15 gallon tank (01/05)

6-W-9 **04/09** TIEDOWN RING / ACCESS COVER
1) **6W9-1 REV. 1** made 15mm bigger all around, changed 240 to 270, changed 140 to 170, changed R70 to R85. Location of cutout, changed 89 to 105, changed 510 to 500, changed 100 to 130, changed R50 to R65 (04/05)

6-W-10 **04/05** AILERON CONTROLS
1) 6W10-4 Rev. 1 Aileron Stop: replace bent angle with a channel installed with 2 addition rivets in rear channel web 6W7-1. (04/05)
2) top right box: delete reference to 6-S-3 (04/05)

6-K-0 **04/05** STANDARD 12 GALLON LEADING EDGE WING TANKS
1) New drawing, shows 6W3-1 Rev. 1 and 6K1-1 Rev. 1 for installation of standard 12 gallon LE wing tanks. (04/05)

6-K-1 **04/05** LEADING EDGE WING TANKS
1) 6K1-1 Rev. 2 change length from 1010 to 1265mm (01/05)
2) re-drew fuel sender unit (04/05)

6-K-2 **04/05** CENTER CONSOLE/ FUEL FLOW DIAGRAMS/ GASCOLATOR
1) right middle diagram: added “forward to pump” fuel line after gascolator (03/05)
2) New part 6K2-3 Rev 1 Side Fairing t=.025” approximately size length=300 height=500 between cabin floor to support channel (replaces corner gusset) (04/05)

6-B-0 **02/05** FUSELAGE EXPLODED VIEW
1) deleted 6B1-3, one piece 6B1-4 (12/04)
2) Added fuselage bottom access panel and Z angles, new diagram top right (02/05)
3) Removed Gussets 6B3-5 (01/05)
4) Part number change: replace 6b3-3 with 6B1-8 and 6B3-4 with 6B1-9 (02/05)

6-B-1 **02/05** FUSELAGE BOTTOM SKIN H.T. FRAMES
1) 6B1-4 Rev. 1, one piece bottom skin t=.025” (deleted 6B1-3), side are straight line from end of fuselage to beginning of curvature at cabin. (12/04)
2) 6B1-1 Rev. 1 deleted 214, added width dimension to form block = 232mm, change angle from 9.5 to 11 degree (02/05)
3) 6B1-2 Rev. 1 deleted 106, added with dimension of form block = 104mm, change angle from 9.5 to 11 degrees (02/05)
4) 6B1-5 Rev. 2 increase width from 208 to 228 (12/04)
5) New page layout, Added part number 6B1-8 and 6B1-9 (HT attachment previously shown on 6B3-3 and 6B3-4 Ref 2nd edition). Location of cross stiffeners now shown on drawing 6-B-3 (12/04)
6) New part, Z angles (12/04)

6-B-2 **04/05** REAR BOTTOM LONGERONS
1) 6B2-7 Rev. 1 change material thickness from 1/8” to 3/16” t=.1875” (01/05)
2) 6B2-7 changed bolt length from AN3-4A to AN3-5A qty=2 (01/05)

3) 6B2-4 and 6B2-5 replace rivets between tie down ring and longerons with AN3-5A bolts (03/05)
4) 6B2-7 Rev. 1 change 60 to 56, with 72 to 69mm 904/05)
5) 6B2-8 Rev. 1 change length from 5 to 10mm (04/05)

6-B-3 **04/05** REAR SIDE SKINS

1) new page layout: Moved 6B3-3 and 6B3-4 to drawing 6-B-1 (01/05)
2) 6B3-1 Rev. 2 change material thickness from t=.016" to t=.025" (12/04)
3) 6B3-2 deleted battery access option (area is now accessible through bottom access panel) (12/04)
4) 6B3-6 Rev 1 new width at front and rear, changed 67 to 61 , 251 to 272mm (03/05)
5) New parts 6B3-7 and 6B3-8 piano hinge and bottom fuselage access panel. (12/04)
6) Re-positioned 6B1-7 between the Z and 6B5-2 (12/04)
   note: the aft rivet line through the fairing 6G3-2 is the same rivet line through the piano hinge and Z angle.(12/04)
7) Deleted Gusset 6B3-5 (01/05)
8) Add nutplate 21075L3 (02/05)
9) Added A4 pitch 20 bottom skin 6B1-4 into 6B1-1 (02/05)
10) middle diagram: 340mm between rivets for the H.T frames (measured on center line) (03/05)
11) top right diagram: riveting L angles to side skin 6B3-1 changed pitch from 60 to 40 (04/05)

6-B-4 **02/05** REAR FUSELAGE RIVETING

1) Revised location for front HT frame 6B1-1, moved from 320 to 340 (02/05)
2) left middle diagram: moved the 340 to bottom left diagram, measured along the bottom skin (02/05)
3) left middle diagram, change 325 to 346mm distance between HT frames measured on side skins (02/05)
4) top middle diagram, change 375 to 395 location of cable outlet fairing 6B4-2 (02/05)
5) Top left diagram, change length of L angles from 340 to 360 (02/05)
6) part number correction, change 6B3-3 to 6B1-8 and 6B3-4 to 6B1-9 (02/05)

6-B-5 **02/05** REAR FUSELAGE ASSEMBLY

1) 6B5-2 Rev. 1, change length from 580 to 590 (02/05)

6-B-6 **01/05** FIREWALL & STIFFENER

1) 6B6-1 Rev. 1 change bottom flange from 22 to 25mm (01/05)
2) 6B6-5 location of front AN3-5A bolt, changed 13 to 16mm (01/05)

6-B-7 **04/05** FIREWALL RIVETING

1) 6B7-1 Rev 2 change 160 to 190, dl=137 (01/05)
2) New part 6B7-3 Rev 1 Side Gusset (riveted along tapered ends of 6B7-1). (01/05)
3) top middle diagram: added new dimension: 495mm from the bottom of the firewall to the top surface of the firewall top stiffener (5/16" engine mount centered 10mm up from the bottom edge of stiffener). (04/05)
4) top left diagram: L angle in corner of stop stiffener 6B7-1 and the firewall, (length = 520mm), change A4 to A5 for rivet line through firewall. (shown correctly in middle diagram. (04/05)

6-B-8 **04/05** NOSE GEAR UPPER BEARING

1) New page layout (01/05)
2) Deleted parts 6B8-4 and 6B8-5 (01/05)

3) 6B8-1 Rev 1 changed length from 120mm to 330mm, distance across bottom = 54mm(01/05)
4) 6B8-2 Rev. 1 outside to outside distance = 98mm , bend radius = ¼" , width of side flange at bottom = 23, and 43 at top, dl=140mm (03/05)
5) 6B8-3 Rev. 1 changed width from 95 to 155mm, changed length from 90 to 785mm (length across front 715mm) dl = 190(01/05)
6) New part 6B8-10 Forward Gusset 42x200mm (01/05)
7) New part 6B8-11 Upper Angle, R1/4" (04/05)
8) 6B8-7 Rev. 1, change distance to bottom cutout from 340 to 330mm (03/05)
9) top right diagram: added cross section A-A, 30mm from front side of web 6B8-7 to front side of web 6B8-2 (03/05)
10) 6B8-9 distance between bolts, changed 38 to 45mm (03/05)

6-B-9 **04/05** RUDDER PEDALS
1) Deleted 6B8-4 and 6B8-5, show larger rudder pedal channel 6B8-3 Rev 1 (01/05)
2) Added dual toe brake option on passenger side , right middle diagram (04/05)
3) Top right diagram: 95mm from front edge of cabin floor 6B10-1 to front flange of channel 6B8-3 (03/05)
4) 13mm spacing between brake cylinder supports 6B9-6 (03/05)

6-B-10 **01/05** FRONT FLOOR SKIN
1) Deleted parts 6B8-4 and 6B8-5 (01/05)

6-B-11 **04/05** UPPER FRONT LONGERONS
1) 6B11-1 Rev. 1, no thread portion on ½" bolts, change 23 to 27mm (04/05)

6-B-12 **03/05** FUSELAGE BULKHEADS
1) 6B12-1 Rev. 1 wider bulkhead, changed angles of side flanges, 89degrees at top (01/05)
2) 6B12-3 Rev. 1 wider bulkhead, changed angles of side flange, 89 degrees at top , sides open 11 degrees (01/05)
3) 6B12-2 Rev. 1 wider bulkhead changed angles of side flange, 89 degrees at top , sides open 11 degrees (02/05)
4) top left diagram changed 657 to 650 distance along side skin between bulkheads (02/05)
5) 6B12-4 Rev. 1 change width from 469 to 467mm (02/05)
6) Added more end co-ordinates to bulkheads. (03/05)

6-B-13 **02/05** WING JIG
1) 6B13-1 Rev. 1 change material thickness from t=.040" to t=.063" deleted bend radius = ¼" changed length from 470 to 480 (02/05)
2)

6-B-14 **03/05** JOINING FUSELAGE ASSEMBLIES
1) Delete 3 degrees plywood template for cabin floor (03/05)
2) Added 19x19 spacer block between level surface and bottom skin in line with front bottom corner of side skin 6B3-1. Added vertical distance from bottom flange of gear channel to top of longeron 6B11-1 = 497mm (03/05)

6-B-15 **04/05** FORWARD FUSELAGE STIFFENERS
1) Middle right diagram: Rivets along front edge of gusset 6B10-4 (through rear spar flange) changed 3 rivets to 2 rivets (02/05)

2) Top right diagram: delete 3 degrees to cabin floor (03/05)
3) middle diagram: front rivets in gusset 6B10-4 into 6W4-2, 2 rivets A5 (04/05)

6-B-16 **04/05** SEAT BACK SUPPORT
1) Top middle diagram: moved ¾" holes 10mm to the right (off from center line), also in bottom left diagram. Corrected spelling for elevator (02/05)
2) top left diagram, removed reference to B2 for 6B12-4 (02/05)
3) 6B16-1 Rev. 1 change 1090 to 1085mm, deleted 1115mm across the front of sheet, deleted side aft cutout (04/05)
4) Bottom middle diagram: deleted gusset 6B3-5 (04/05)

6-B-17 **04/04** CONTROL STICK
6-B-18 **03/04** ARM REST / SEAT BELT
6-B-19 **08/04** FLAP CONTROLS

6-B-20 **04/05**H AIR VENT / FLAP CIRCUIT
1) delete parts 6B20-1 to 6B20-3. 6B20-4 added or equivalent (04/05)

6-B-21 **02/05** FUSELAGE TOP SKIN
1) bottom left diagram: distance between bulkheads, changed 600 to 605, change 645 to 635 Deleted 90 degrees between top skin 6B21-6 and bulkheads, Added 84 degrees between longerons and bulkhead (02/05)

6-B-22 **02/05** CABLE FAIRLEADS
1) Bottom right diagram: Fairleads for ailerons, added slot to 1/8" hole, added note: safety wire to prevent cable from jumping out (01/05)
2) top right diagram: move cable to right side (off from aircraft center line) (02/03)

6-B-23 **02/05** CONTROL CABLE ENDS
1) Removed details E, F, S and T from drawings, removed cable thimble and cable shackles (01/05)
2) Added cable tension 30lbs +/- 5lbs

6-C-1 04/05 CANOPY HINGE
1) top right middle diagram: added "handle" extrusion 3/4x3/4x.093" length = 120 or equivalent A5 PITCH 20 904/05)

6-C-2 **01/03** CANOPY SIDES
6-C-3 **01/03** CANOPY FRAME

6-C-4 **04/05** CANOPY RELEASE
1) top right diagram, change quantity from 2 to 4 for nico press sleeve S-11-002 (04/05)
2) right middle diagram: added gusset between canopy frame 6C2-3 and front tube 6C3-2, with 3 rivets A5 in each leg (04/05)

6-G-1 **04/05** NOSE GEAR STRUT ASSEMBLY
1) 6G1-3 Rev. 1 nose wheel axel change 5/8" to ¾" solid rod 6061-T6 or equivalent, change threads to ¾"x16NF, change length of threaded portion from 24 to 35mm (for towbar attachment) (12/04)
2) 6G1-4 Rev. 1 spacer, change tube OD from ¾" to .840" x .040"wall or equivalent
3) Axle hole in 6G1-2 change from 5/8 to ¾"
4) Changed bearings on nose wheel, tapered roller bearings: Matco wheel part number WHLN51-CC.75R (01/05)

5) Bottom left diagram: change castle nut and washer for nose wheel axle. AN310-12 and AN960-1216 (01/05)
6) Nose wheel rim: Matco WHLNW51-CC.75R or equivalent (04/05)
7) 6G1-1 gear leg. Material thickness, delete .058" wall (04/05)

6-G-2 **04/05** NOSE GEAR BEARING

1) 6G2-1 Rev. 2 changed slopes to 12 degrees. (04/05)
2) left diagram, removed 6G2-2 (03/05)

6-G-3 **04/05** MAIN SPRING GEAR

1) 6G3-1 Changed orientation, diagonal side towards the rear (straight edge along front) 01/05
2) Axel 1-1/4" diameter. Grove P/N 5013 or equivalent
   Main wheels with brakes: Grove 60-1 or equivalent
   Tires: condor 500x5 6Ply or equivalent
   Tire tubes: TR-67 or equivalent (04/05)
3) 6G3-5 Rev. 1 fairing, change dl from 180 to 200 (04/05)

6-S-2 **08/04** INSTRUMENT PANEL LAYOUT

Drawing not included in this edition.

6-S-3 **04/05** WING ATTACHMENT, FLAP TEMPLATE

1) Moved NR#4 (01/05)
2) new page layout, deleted aileron deflection template (02/05)
3) Added vertical dimensions from wing to level longeron reference line, leading =400, aft edge to top rear skin =325mm, spar web =245 (03/05)
4) Flap neutral position: 6mm gap between front of flap and aft edge of channel top flange 903/05).
5) Added new diagram, detail of rear wing attachment: 1 to 3mm gap between the top end of the rear channel 6W7-1 and fuselage side skins 6B11-2 (04/05)
6) Delete middle diagram of aircraft with spar in vertical position (04/05)

6-S-4 **04/05** INSTALLATION OF STABILIZER

1) Elevator deflections, change up minimum from 27 to 30 degrees, minimum down deflection change 25 to 27 degrees, (01/05)
2) new page layout (02/05)
3) deleted plywood templates (02/05)
4) Added tolerance: stabilizer is square to aircraft center line, dL = dR +/- 20mm, center line of stabilizer is parallel to top fuselage longerons, tolerance = 0 degrees nose down, 2 degrees nose up (02/05)
5) changed total deflection from 52 to 57 degrees
6) Elevator upper stops: Add piece of bent L angle (30 degrees closed) length = 100mm to the aft edge of the saddle 6B21-5 (one on each side with 4 rivets A5) (04/05)

6-S-5 **04/05** RUDDER ATTACHMENT

1) 6S5-1 new part number for rudder stops (01/05)
2) 6S5-1 change 3 rivets A5 to 4 rivets A5 (3 location on drawing) (03/05)
3) to middle diagram re-drew spacing between 6B2-7 and 6T4-3 (made gap smaller) (04/05

POWERPLANT: drawings not included in this edition.

6-E-3 **12/04** ENGINE MOUNT ROTAX 912S
6-E-5 **06/03** DUAL THROTTLE
6-E-6 **12/02** OIL TANK BRACKETS
6-JE-1 **12/04** JABIRU 3300 ENGINE MOUNT
6-CE-1 **11/04** CONTINENTAL 0-200 STRAIGHT ENGINE MOUNT
6-YE-1 **12/04** LYCOMING 0-235 CONICAL ENGINE MOUNT
6-YE-2 **04/04** LYCOMING 0-235 DYNAFOCAL ENGINE MOUNT

OPTIONS

6-ATO-1 **01/05** XL AILERON TRIM TAB OPTION
1) New page layout
2) 6-ATO-1-1 Rev 1 one piece trim tab (01/05)
3) 6-ATO-1-3 Rev.1

6-LLO-1 **06/04** LANDING / TAXI LIGHT OPTION

6-NSO-1 **04/05** NAV/STROBE LIGHT OPTION
1) Position of tail light on rudder, top right diagram: change 160mm to 60mm. Middle diagram change 135 to 35mm (04/05)

6-WFO-1 **11/04** WHEEL FAIRING OPTION
6-WLO-1 **01/05** WING LOCKER OPTION

DRAWINGS AVAILABLE SEPARATELY

DUAL STICK OPTION
6-PH-1 **01/04** PIANO HINGED AILERONS
6-DS-1 **04/04** DUAL STICK CONFIGURATION: MODIFIED TORQUE TUBE
6-DS-2 **04/04** DUAL STICK CONFIGURATION: CONTROL CONNECTION
6-DS-3 **01/04** DUAL STICK CONFIGURATION: CONTROL COLUMNS
TAIL DRAGGER OPTION
6-TD-1 **10/04** TAIL DRAGGER CONFIGURATION: TAIL SPRING PICK UP.
6-TD-2 **03/04** TAIL DRAGGER CONFIGURATION: LOWER FRONT LONGERONS
6-TD-3 **04/04** TAIL DRAGGER CONFIGURATION: GEAR UPRIGHTS
POWERPLANT
6-E ENGINE MOUNT ROTAX 912S
6-JE JABIRU 3300 ENGINE MOUNT
6-CE CONTINENTAL 0-200
6-YE LYCOMING 0-235

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