

ZODIAC CH 601 XL Updates included in 2nd edition 5th revision; drawing list December 23, 2004

Summary of revisions from 04/04 to 12/04

AIRFRAME

6-X-0 DRAWING LIST December 23, 2004

6-X-1 **12/04** THREE VIEW

- 1) 2nd edition 5th revision (12/04)
- 2) Added text: For amateur built aircraft reference FAA AC 20-27F (08/04)
- 3) Added V-speed to design speed limitations (calibrated airspeed)
Vc = 140MPH, change Vf to Vfe, Vs1 = 51MPH, Vso = 44 MPH (08/04)
- 4) Added airspeed markings: Red line = Vne, yellow arc = Vc to Vne, green arc = Vs1 to Vc, white arc = Vso to Vfe
- 5) Added text: for LSA class aircraft refer to the aircraft POH (08/04)

6-T-0 **12/04** TAIL EXPLODED VIEW

- 1) top right diagram: moved L angle to drawing 6-T-1 (12/04)

6-T-1 **08/04** STABILIZER AIRFOIL

- 1) 6T1-3 REV 1, change the flange width from 18mm to 19mm, change dl=120 to dl=122 (08/04)
- 2) 6T1-4 REV 1, change the flange width from 18mm to 19mm, change dl=112 to dl=114 (08/04)
- 3) 6T1-2 clarification: when cutting the form block from 6T1-1, 300 is measured 19mm from the aft end of the block 6T1-1. (08/04)
- 4) Added L angle from drawing 6-T-0 to bottom right (08/04)

6-T-2 **12/04** STABILIZER ATTACHMENTS

- 1) redrew the aft edge of the doublers 6T1-5HD, 6T1-6HD and 6T1-7HD flush with the edge of the spar flange (08/04)
- 2) 6T2-4 Rev 1 change length from 2245 to 2240mm (12/04)

6-T-3 **09/04** ELEVATOR

- 1) bottom middle diagram: delete "the" from text (08/04)
- 2) right middle diagram: re-drew 6T3-7 with hidden lines (09/04)
- 3) bottom left diagram; Added L angle and Horn in middle of skin (09/04)

6-T-4 **11/04** VERTICAL TAIL RIBS

- 1) 6T4-4 Rev 1, deleted 3.5 degrees closed at top (side flanges). (08/04)
- 2) redrew hidden lines for doublers 6T4-5 inside spar 6T4-4 (08/04)
- 3) 6T4-4, bottom corner of side flange, left square (corner is not cut on angle) (08/04)
- 4) 6T4-7 angle of front flange, change 7 degrees open to 5 degrees open (11/04)
- 5) Added spar flange width 6T4-6 = 100, 6T4-7 = 83, 6T5-8 = 69, 6T4-9 = 52 (11/04)

6-T-5 **08/04** VERTICAL TAIL SKELETON

- 1) Middle diagram. Rivet line: replace hidden lines with dotted lines (08/04)

6-T-6 **02/03** RECESSED ELEVATOR TRIM TAB

6-W-0 **09/04** EXPLODED VIEW

- 1) changed direction of spar flange on rear ribs (09/04)
- 2) Repositioned nose ribs (09/04)
- 3) Rear ribs #4 installed with web on the O/B side (09/04)

- 4) Redrew L angles on rear ribs 2 and 3, installed on O/B side (09/04)
- 5) Part number correction: fuel tank, changed 6W11-1 to 6K1-1 (09/04)
- 6) Added Aileron access cover 6W9-3 and tank end cover 6K1-2 (09/04)

6-W-00 09/04 RIGHT WING ASSEMBLY

- 1) Renumbered nose ribs 1 to 7
Deleted nose rib in line with rear rib #2
Repositioned nose rib in line with RR#3 midway between RR#1 and RR#3
Repositioned nose rib in line with RR#7 (09/04)
- 2) Angle between rear channel and rear ribs, changed 87degrees to 86.7 degrees
Deleted 87 degrees on ailerons and flap ribs (09/04)
- 3) Rear Rib #4 installed with rib flanges pointing inboard (for wing locker) (09/04)
- 4) Added part number for wing ribs, aileron and flap ribs R and L (09/04)

6-W-1 12/04 FLAPS

- 1) 6W1-1 REV 1, form block, change height at rear from 8mm to 5.5mm. Part description, change "flap rib" to "flap ribs" (06/04)
- 2) bottom left diagram: closed parenthesis change to "(3 END RIVETS = A5 PITCH 20) (06/04)
- 3) 6W1-3 Rev. 1, turned plate 90 degree, 60mm side is parallel to the top of the flap surface. Added a 15mm long slot centered on ¼" hole (slot is horizontal) (12/04)

6-W-2 12/04 AILERONS

- 1) 6W2-4 changed length from 302 to 300 (12/04)
- 2) 6W2-3, added 45mm (overhang of skin along front of aileron (12/04)
- 3) Bottom left diagram: deleted 85mm, location of 5/16" hole in horn. Horn is installed with the bottom flush with the bottom skin 6W2-3 (12/04)

6-W-3 10/04 OUTBOARD WING SPAR ASSEMBLY

- 1) 6W3-1 length of web, change "length after forming" to length after bending" (09/04)
- 2) Bottom left diagram: 4 rivets A4 through web 6W3-1 (instead of 4 rivets A4) (09/04)
- 3) bottom diagram: section A-A redrew solid rivets in middle of spar cap (09/04)
- 4) 6W3-1 Rev 1, new location for pilot hole in web for Rear ribs, 1 to 4, #6 and #8 (ribs made with spar flange bent in same direction as top and bottom flange) changed location of rib angle 6W9-3 for nose ribs
rear rib station to center of flange: 190, 270, 390, 990, 1510, 2030, 2590
Rib angles rivet line 170, 250, 490, 1490, 2010, 2570
Middle diagram: rib angle rivet line is IB of the rib spar flange (except for nose rib at IB end of tank) (09/04)
- 5) deleted nose rib in line with rear rib #3. (09/04)
- 6) Repositioned NR2 from 250 to 330 midway between rear ribs #2 and #4 (09/04)
- 7) Add legend to show solid rivets, #40 pilot hles, A5 rivets and bolt holes (09/04)
- 8) Added rib angle at station 1750 for new nose rib location for long range fuel tanks (09/03)
- 9) Long range fuel tank option (replaces auxiliary tanks) see 6LRO-1 (09/04)
- 10) Reposition I/B long hat stiffener 160mm from LRA 1750 (deleted hat section between rear ribs #7 and #8) (09/04)
- 11) top right diagram: re-label pilot holes in web, RR#2 (10/04)
- 12) Location of flanged lightening hole, change from 200 to 250 (10/04)
- 13) 6W3-9, changed to description: Nose Rib Angle (10/04)

6-W-4 10/04 CENTER WING SPAR

- 1) Added rivet legend, show solid rivets as black dot (instead of +) (10/04)
- 2) Added AN4-10A bolt to outboard spar (10/04)

6-W-5 12/04 SPAR TIP / NOSE RIBS

- 1) top right diagram: re-numbered nose rib through spar tip, changed NR#8 to NR#7

- 2) 6W5-2 change quantity from 8 to 7L + 7R (12/04)
- 3) Bottom right diagram: location of grommets for fuel line through ribs: renumbered nose ribs, new vertical height for middle rib = 56mm (12/04)

6-W-6 09/04 REAR RIBS

- 1) new page layout (09/04)
- 2) 6-W-6 rear ribs 1 to 4 and #6 Rev 2, all rear ribs made with the spar flange bend in the same direction as the top and bottom rib flange (09/04)
- 3) L angles on RR 1 to 4, installed between the top and bottom rib flange (on same side as rib flange) (09/04)

6-W-7 09/04 REAR CHANNEL

- 1) left middle diagram: side view; part number correction, change 6W5-2 to 6W7-2 (09/04)
- 2) Bottom diagram: update drawing to show rear ribs with spar flange bend in same direction as top and bottom rib flange (09/04)
- 3) left middle diagram: delete text: round corners to fit inside spar (09/04)
- 4) 6W7-3 Rev 1, change width of bottom flange from 18mm to 15mm (no overhang past aft edge of bottom flange of rear channel) (09/04)

6-W-8 09/04 WING SKINS

- 1) Bottom right diagram: re-drew nose ribs 1 to 3 (09/04)

6-W-9 11/04 TIEDOWN RING

- 1) 6W9-3 add nutplates (riveted to cover) (09/04)
- 2) bottom middle diagram: change 30 to 40 (09/04)
- 3) 6W9-6 and 6W9-7 supplied length l=1220 (trim to fit) (09/04)
- 4) 6W9-3 description : change "access cover" to "aileron access cover" (09/04)
- 5) Y bottom 6W8-2, change 353 to 365mm, also on diagram, change co-ordinate (0,353) to (0,365) 11/04
- 6) 6W9-2 cal also be made out of aluminum (11/04)

6-W-10 12/04 AILERON CONTROLS

- 1) 6W10-5 replace steel rod with stainless steel rod (better thread quality) (12/04)
- 2) bottom right diagram: clarification: replace "2 washers under nut" by "with 2 washers" (12/04)

6-K-1 09/04 LEADING EDGE WING TANKS

- 1) new page layout: nose rib #2 is position midway between rear rib #1 and RR#4
- 2) 6K1-1 Rev 1, replace filler neck with a threaded bushing (to fit 2.25" THREADED FLANGE CAP ASSE., LOCKING FUEL CAP P/N SPRL-2-L-G/S 604.
Change dimensions of fuel tank ends to accommodate thread filler neck.
Add dl = 922mm
Changed length form 1005 to 1010mm
Changed bending sequence for fuel tank skin, tanks is welded long the top instead of at the front: rolled bead moved from front to top back.
Change location of grounding tab from front to top.(09/04)
- 3) 6K1-2 Rev 1 change width from 100 to 120 change length from 150 to 210. Radius ends similar to 6W9-3 with R60 Nutplates are riveted to inside of cover plate, cover plate overlaps on inside of bottom skin (09/04)
Change location and size of cutout on bottom side of nose skin 6W8-1 radius at end R40, length = 170 with = 80
Changed description from "fingerscreen access cover" to "tank end access cover"(09/04)

6-K-2 12/04 CENTER CONSOLE/ FUEL FLOW DIAGRAMS/ GASCOLATOR

- 1) Attaching front edge of 6K1-2 to 6B7-2, replace overlap with top flange with piece of L angle in bottom rivet through 6B7-2 (12/05)

- 2) Removed fuel pump from right middle diagram (12/04)
 - 3) location of gascolator, 100mm forward of spar web (12/04)
- 6-B-0 10/04 FUSELAGE EXPLODED VIEW**
- 1) correct part number for 6B17-6 (10/04)
 - 2) added part number 6B6-1 (10/04)
 - 3) bottom right, redrew: gear channel 6B5-5 overlaps on top of floor skin 6B10-1 (10/04)
- 6-B-1 11/04 FUSELAGE BOTTOM SKIN H.T. FRAMES**
- 1) 6B1-5 added up arrow, 23mm flange rivets to HT frame (11/04)
 - 2) 6B1-6 added up arrow, 25mm flange rivets to HT frame (11/04)
 - 3) Removed standard L angle (shows on drawing 6-T-1) (11/04)
- 6-B-2 11/04 REAR BOTTOM LONGERONS**
- 1) 6B1-8 and 6B1-9 Clarification: length = 5mm and 4.2mm (11/04)
 - 2) Clarification: A5 pitch 40 bottom longerons 6B2-3 to skin 6B1-4 (11/04)
 - 3) Clarification: A4 pitch 40 rear longerons 6B2-1 to skin (04/05)
- 6-B-3 12/04 REAR SIDE SKINS**
- 1) 6B3-1 REV 1 front of skin cut to 77.5 degrees, changed 117 to 110mm (06/04)
 - 2) 6B3-1 clarification: coordinate for bottom aft corner, 100mm horizontal to right from top aft corner down 90 degrees 380mm (11/04)
 - 3) Bottom left diagram: replace what looks like solid rivets with lines. (11/04)
 - 4) Joggle flange, L angles that over bottom longeron 6B2-3(12/04)
 - 5) move location of L angles on side skins from middle diagram to top diagram 6B3-1 (11/04)
 - 6) bottom fuselage access door, see 6-ADO-1 (12/04)
- 6-B-4 11/04 REAR FUSELAGE RIVETING**
- 1) Clarification: bottom left diagram: replace what looks like solid rivet with straight line, also right middle diagram. (11/04)
 - 2) Add rivet line along front edge of 6B2-6 for 6B12-3, Rivet pitch for bulkhead 6B12-3, see top left diagram on 6-B-12 (11/04)
- 6-B-5 11/04 REAR FUSELAGE ASSEMBLY**
- 1) bottom left diagram: A4 rivets in L angles. (11/04)
 - 2) bottom left diagram: re-drew bottom cutout in side skin 6B3-1, Ref 6-B-3 top right diagram (11/04)
- 6-B-6 12/04 FIREWALL & STIFFENER**
- 1) 6B6-1 Added orientation arrows: 25mm flange is towards the front and up (12/04)
- 6-B-7 11/04 FIREWALL RIVETING**
- 1) top right diagram: no rivet zone in middle of top reinforcement angle 6B7-2, 140mm for I angle Ref 6-K-2 (11/04)
- 6-B-8 11/04 NOSE GEAR UPPER BEARING**
- 1) 6B8-7 change 230 to 235 and 335 to 340 (11/04)
 - 1) 6B8-8 Rev. 1 change length from 900 to 880, change 40 to 45mm (front cutout) (11/04)
- 6-B-9 12/04 RUDDER PEDALS**
- 1) Top right diagram: rudder pedal position, change 245 to 200, delete note ref most forward position (also updated drawing 6-b-10 and 6-B-15) Note: move rudder pedal forward to 200 instead of 190 to make room for lower engine mount fittings 6B6-5) (12/04)
- 6-B-10 12/04 FRONT FLOOR SKIN**

- 1) Top middle diagram: location of heel support 6B8-8, change 330 to 285 and 230 to 275 (12/04)
- 6-B-11** **06/04 UPPER FRONT LONGERONS**
 1) 6B11-2 change 1900 to 1884, aft angle cut to 77.5 degrees, added 110mm dimension for diagonal cut (06/04)
- 6-B-12** **12/04 FUSELAGE BULKHEADS**
 1) Replaced notations B6, B5, B4 , B1 by their part numbers. (12/04)
 2) 6B12-4 named description, change bulkhead panel (instrument panel) (12/04)
- 6-B-13** **10/04 WING JIG**
 1) Added length dimension to spar insert = 212mm change 3 solid rivets to 2 solid rivets, 45 and 85mm from the O/B end (10/04)
- 6-B-14** **12/04 JOINING FUSELAGE ASSEMBLIED**
 1) Top left diagram: redrew rivets through 6B11-1 and 6B2-1, replaced what looks like solid rivet with vertical line (12/04)
 2) Bottom left diagram: change number of rivets in 6B11-4 and 6B5-5, change 5 rivets to 9 rivets A5 (12/04)
 3) Clarification: rivets in Gusset 6B10-4 see 6-B-15 (12/04)
- 6-B-15** **12/04 FORWARD FUSELAGE STIFFENERS**
 1) Clarification: rivets in Gusset 6B10-4 A5 pitch 20 in side flange (8 rivets), 11 rivets through longeron 6B10-3, 9 rivets along O/B edge of cabin floor 6B10-1 (12/04)
 2) Bottom left diagram: removed grommet for auxiliary tanks (12/04)
 3) Bottom left diagram: position of vertical L angle, change from 400 to 355 (12/04)
 4) Gusset 6B15-3, add a note to trim: cut to fit bottom O/B point (12/04)
- 6-B-16** **12/04 SEAT BACK SUPPORT**
 1) 6B16-4, correct dl , changed dl=70 to dl=53 (12/04)
- 6-B-17** **04/04 CONTROL STICK**
6-B-18 **03/04 ARM REST / SEAT BELT**
- 6-B-19** **08/04 FLAP CONTROLS**
 1) bottom right text, change "see 6-S-2" to see 6-B-20 (08/04)
- 6-B-20** **06/03 FRESH AIR VENT / FLAP CIRCUIT**
- 6-B-21** **12/04 FUSELAGE TOP SKIN**
 1) bottom middle diagram: rivets through B2,edge distance = 8mm (12/04)
 2) bottom left diagram: clarification: rivet pitch to attach rear top skin 6B21-6 aft of bulkhead 6B12-3, A4 pitch 20 see 6-B-4(12/04)
 3) Replace notation for B6, B5, B4 with part numbers (12/04)
 4) 6B21-1 change in description: First tube frame (12/04)
 5) 6B21-2 change in description: Second tube frame (12/04)
- 6-B-22** **03/04 CABLE FAIRLEADS**
6-B-23 **09/03 CONTROL CABLE ENDS**
- 6-C-1** **12/04 CANOPY HINGE**
 1) Bottom right diagram: part number correction 6B2-3 (instead of 6B2-1) (12/04)
 2) bottom middle diagram : change "instrument bulkhead" to instrument panel (12/04)
 3) 6C1-4 material dimension below description, changed 600 to 570 (12/04)

- 6-C-2** **01/03** CANOPY SIDES
6-C-3 **01/03** CANOPY FRAME
6-C-4 **06/03** CANOPY RELEASE
- 6-G-1** **11/04** NOSE GEAR STRUT ASSEMBLY
1) 6G1-5 Rev 1 Added new part: Fork Doubler 6061-T6 t=3/16" sides 170mm dl=454 bent to fit over wheel fork 6G1-2, attached with 2 bolts An3-6A each side.
(with wheel fairings, AN3-7A with 6-WFO-1-3 (11/04)
2) Matco nose wheel P/N WHLNW51-CC uses 5/8" sealed ball bearings, torque 15 to 20 in-lbs (11/04)
3) New page layout.
4) Added note: "file a radius along front edge of plate to prevent wear on bungee" bungee retainer pin welded on nose gear leg 6G1-1 (11/04)
5) Bungee, renamed to: shock chord/ring (11/04)
6) 6G1-2, drill #30 hole for cotter pin 8mm from end of axel (11/04)
- 6-G-2** **12/04** NOSE GEAR BEARING
1) Part number correction, 6G2-2 (right middle diagram) (12/04)
2) 6G2-1 Rev. 1 change slopes from 12 degrees to 8 degrees, width changed from 97 to 94mm (12/04)
- 6-G-3** **10/04** MAIN SPRING GEAR
1) 6G3-4 chamfered corners (10/04)
2) 6G3-1 added part number for Grove axel (10/04)
3) 6G3-1 deleted remark. Notches, revised text: file R1/4" notch 3.5mm deep to make room for 1/2" studs welded on 6B11-4. Check gear is centered in channel 6B5-5 (10/04)
4) 6G3-5 revision to angles: aft angle change 105 degrees to 163 degrees, front flange, change 120 degrees to 150 degrees (10/04)
- 6-S-2** **08/04** INSTRUMENT PANEL LAYOUT
1) top right diagram - Battery cable, change 6awg to 4AWG (welding cable) (4 places) (08/04)
2) bottom right diagram – only one electric fuel pump required, delete 5A Fuel pump P3 (08/04)
3) flap fuse or circuit breaker, change 10A to 15A (08/04)
4) bottom right, wire gauge for strobe light, 16AWG (08/04)
- 6-S-3** **12/04** WING ATTACHMENT, FLAP TEMPLATE
1) Wings square to fuselage center line: added tolerance, dL = dR +/- 50mm (12/04)
2) rear wing bolt attachment, change AN5-7A to AN5-5A (12/04)
- 6-S-4** **03/04** INSTALLATION OF STABILIZER
- 6-S-5** **12/04** RUDDER ATTACHMENT
1) Top right diagram: correction CL to HL (hinge line) (12/04)
2) left diagram: replaced what look like solid rivets with straight line (12/04)

POWERPLANT

- 6-E-3** **12/04** ENGINE MOUNT ROTAX 912S
1) Bottom left diagram: vertical height, changed 255 to 225 (12/04)
- 6-E-5** **06/03** DUAL THROTTLE
6-E-6 **12/02** OIL TANK BRACKETS
- 6-JE-1** **12/04** JABIRU 3300 ENGINE MOUNT
1) top left diagram, clarification replace CG symbol with "x" for the crankshaft (12/04)

- 6-CE-1 11/04 CONTINENTAL 0-200 STRAIGHT ENGINE MOUNT**
 1) top left diagram, clarification replace CG symbol with "x" for the crankshaft (11/04)
 2) bottom right diagram: delete 10mm between crankshaft and longeron (11/04)
 3) Top left diagram: Add 150mm. vertical distance between the 3/8" hole in upper firewall attachment and upper engine mount
 4) Top left diagram: replace 6.00" and 5.56" with 11.56" (vertical distance between top and lower engine attachment) (12/04)
 5) top left diagram: Gusset change t=.125" to t=.080" (11/04)
- 6-YE-1 12/04 LYCOMING 0-235 CONICAL ENGINE MOUNT**
 1) top left diagram, clarification replace CG symbol with "x" for the crankshaft (12/04)
 2) Top left diagram: replace 6.20" and 3.36" with 9.56" (vertical distance between top and lower engine attachment) (12/04)
- 6-YE-2 04/04 LYCOMING 0-235 DYNAFOCAL ENGINE MOUNT**

OPTIONS

- 6-ADO-1 12/04 ACCESS DOOR OPTION (BOTTOM FUSELAGE)**
 1) New drawing (12/04)
- 6-ATO-1 02/04 XL AILERON TRIM TAB OPTION**
- 6-LLO-1 06/04 LANDING / TAXI LIGHT OPTION**
 1) top left diagram: leading edge cutout = 235mm (deleted 15mm from edge of riblet to O/B edge of cutout. 3 RIVETS A5 in each flange of the Riblet 6-LLO-1-2 (06/04)
 2) Bottom left diagram: Location of channel 6-LL1-1-1, top: 225 from spar rivet line to rivet line top flange, (instead of 235 from spar rivet line to front of channel – web), Bottom: 240 from spar rivet line to rivet line in bottom flange (instead of 250 from spar rivet line to channel web). (06/04)
 3) 6-LLO-1-7, change length from 325 to 290mm (06/04)
- 6-LRO-1 09/04 LONG RANGE TANK OPTION**
 1) New drawing, replace 6-WKO-1 (09/04)
- 6-NSO-1 12/03 NAV/STROBE LIGHT OPTION**
- 6-WFO-1 11/04 WHEEL FAIRING OPTION**
 1) Added wheel fork doubler: new part 6G1-5. Replaced 3 rivets A6 with 2 bolts AN3-7A with 2 washers, changed 47 to 70mm (vertical location of bolt) (11/04)
 2) 6WFO-1-3 Rev 1 change 50 to 60 and 16 to 11 (11/04)
- 6-WLO-1 10/04 WING LOCKER OPTION**
 1) 6WLO-1-2 change length from 498 to 518mm (10/04)
 2) 6WLO-1-1, aft edge of the L angle is 25mm from the aft edge of the sheet, Radius aft corners.(10/04)
 3) Bottom left diagram: change 450 to 440mm (10/04)
- 6-WKO-1 04/03 AUXILIARY FUEL TANKS OPTION**
 1) Deleted drawing, replaced with 6-LRO-1 Long Range Tank Option (09/04)

CONFIGURATION OPTIONS

- 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

6-TD-1 10/04 TAIL DRAGGER CONFIGURATION: TAIL SPRING PICK UP

1) Middle of page, part number correction, change 6TD1-91 to 6TD2-32 and 6TD1-91 to 6TD2-31 (10/04)

2) 6TD1-7 spelling correction

3) Top right diagram, added the position of the rudder pedals, distance from center bolt on 6B8-4 to firewall = 230mm

6-TD-2 03/04 TAIL DRAGGER CONFIGURATION: LOWER FRONT LONGERONS

6-TD-3 04/04 TAIL DRAGGER CONFIGURATION: GEAR UPRIGHTS

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