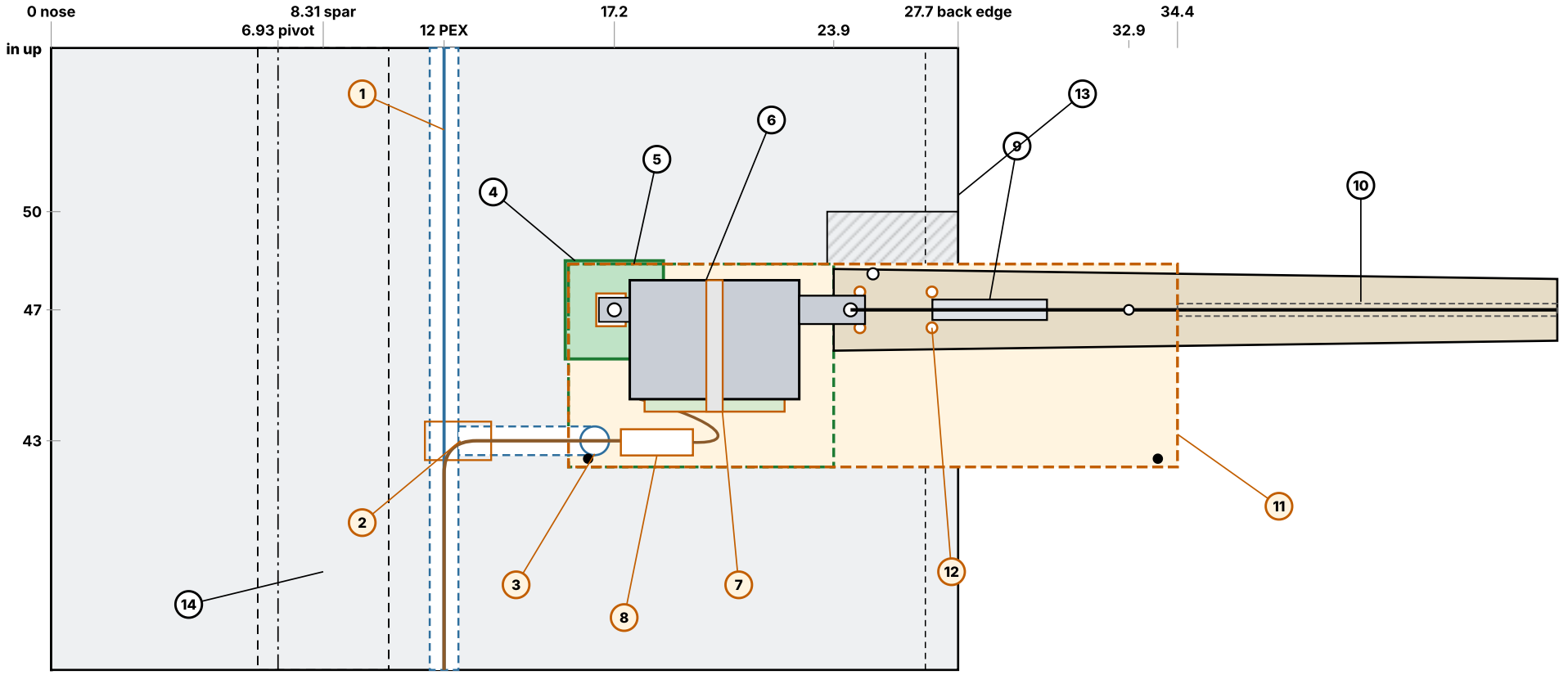
TRIM ACTUATOR FORWARD · LAYOUT

boom face of the wing, side view, about 1 : 4.5 · numbers across the top: inches back of the nose; down the side: inches up from the wing root



wing cable — actuator cable — build into the wing now — proposed (P), in no guide — inside the wing, under the skin

1 **PEX, vertical,** 7/8 in outside, in a channel in the boom face, root to tip, **12 in back of the nose**. Carries both cables up from the root; the wing cable goes on to the tip. P

2 **Corner pocket at 43 in up,** cut in the foam, lined smooth with epoxy: the actuator cable turns aft on a 1 in radius (the 18/4 pulls through 1 in, Mike). P

3 **Short PEX branch,** 43 in up, from the pocket back to its mouth at 16.6 in, inside the fairing. P

4 **HARDPOINT, BUILD IN NOW:** solid G10 or thickened epoxy, 3 × 3 in, flush, centered 17.2 in back and 47 in up. Takes the rear pin's push, up to 56 lbf (Thomson).

5 **FIRM BASE, BUILD IN NOW:** solid fill or doubled glass under the fairing, 15.8 to 23.9 in back, 42.2 to 48.4 in up.

6 Electrak MD to its catalog size, **hanging**: rod line 47 in up, motor below.

7 G10 cradle under the motor housing, with one stainless strap round it, so it cannot swing down round the rear pin. P

8 Plug joining the 18/4 to the actuator's own lead, greased and booted, so it comes out without cutting. P

9 Spring link, about 8-1/2 in pin to pin (Trim Guide sec 6 parts).

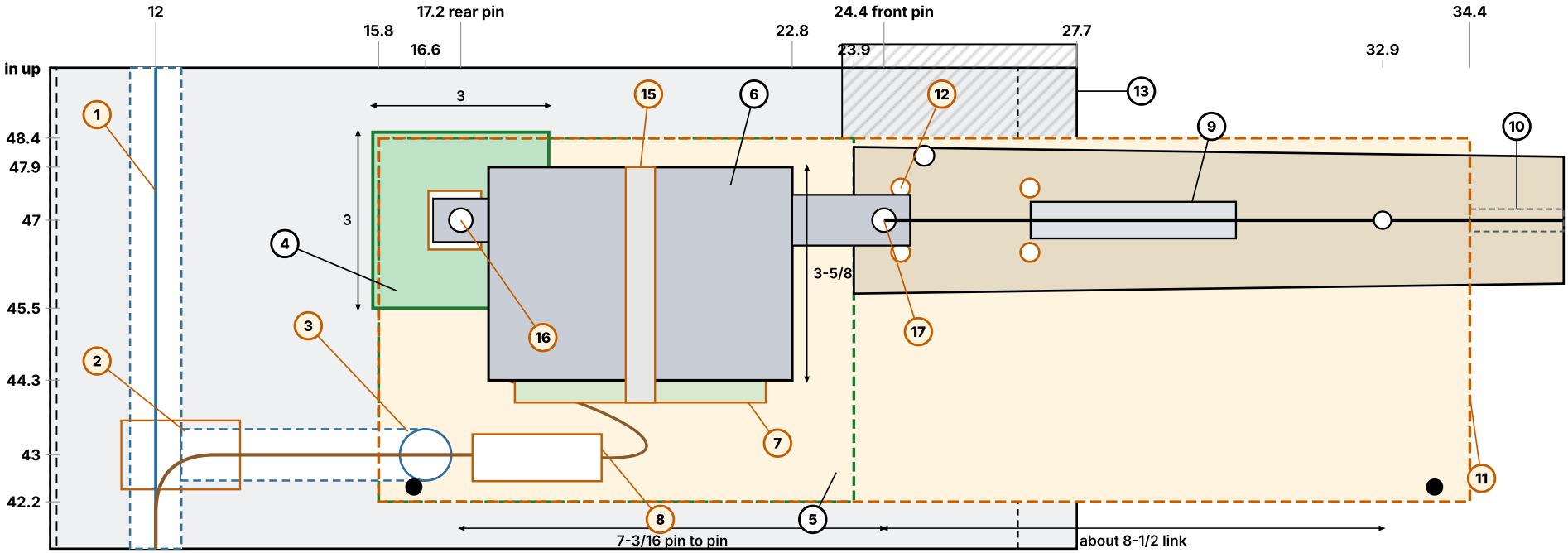
10 Pushrod in its lined conduit along the boom, to the tail flap (Stage 12).

11 Fairing, 15.8 to 34.4 in back, 42.2 to 48.4 in up: gasketed lid over the whole face, breather at the top, drains at the low edge (Trim Guide sec 4). P

12 Boom, front end 23.9 in, and its four 5/16 in bolts. Positions P.

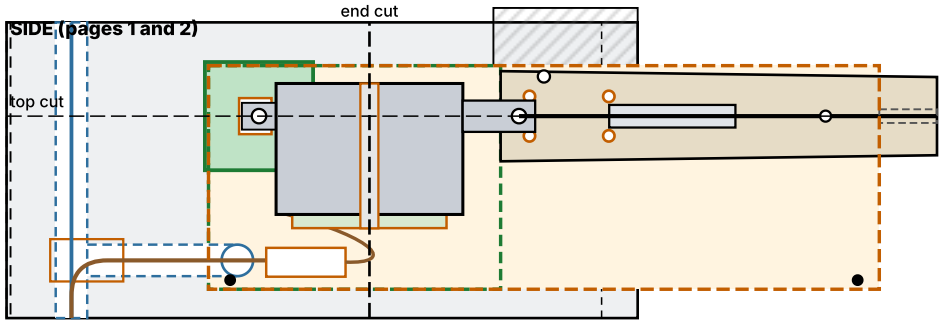
13 Wing back edge, 27.7 in; boom root solid zone 44 to 50 in up (Stage 10).

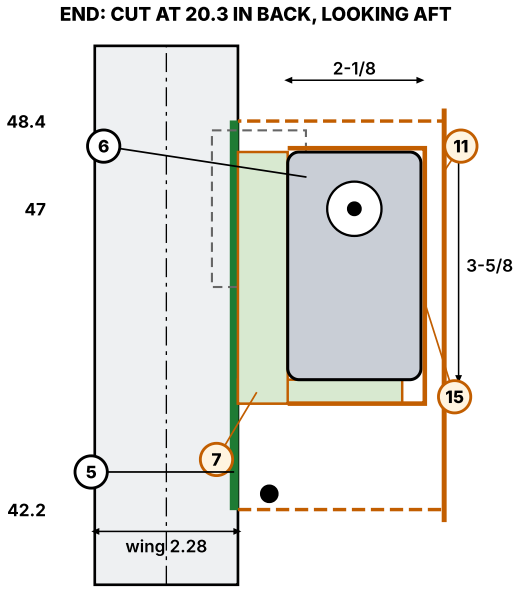
14 Box spar, 6.3 to 10.3 in back (Stage 3). The PEX at 12 in clears it by 1-1/4 in.

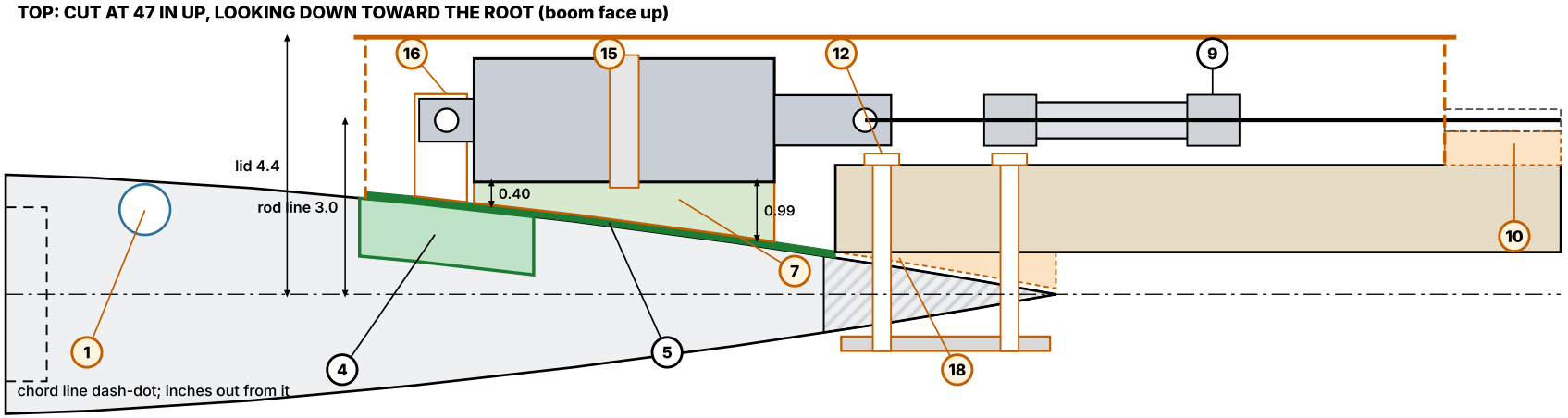


1	Vertical PEX, 12 in back	**2**	Corner pocket, 43 in up, 1 in radius	**3**	Branch mouth, 16.6 in back, 43 in up, inside the fairing
4	Hardpoint 3 × 3 in, centered 17.2 back, 47 up: build in now	**5**	Firm base 15.8 to 23.9 back, 42.2 to 48.4 up: build in now	**6**	Actuator, hanging; body 17.7 to 22.9 back, 44.3 to 47.9 up
7	G10 cradle under the motor housing. P	**8**	Plug on the actuator lead. P	**9**	Spring link
10	Pushrod conduit mouth at the fairing's back wall, 34.4 in. P	**11**	Fairing outline. P	**12**	Boom bolts. P
13	Wing back edge, 27.7 in	**15**	Stainless strap round the housing and cradle. P	**16**	Rear 10 mm pin on a G10 lug over the hardpoint. P
17	Front 10 mm pin to the link's eye, 24.4 in. P				

Out without cutting: lid off, unplug, loosen the strap, pull the two 10 mm pins, lift out. **Gains over the boom-root spot:** about 26 inch-pounds less tail-heavy (2.4 lb about 11 in nearer the pivot); the mount is on the wing; the branch is 4-1/2 in long. **Costs:** about 11 in more pushrod and conduit; the pads and cradle are built up as a wedge, because the wing is 3.1 in thick at 17 in and 1.8 in at 22 (rib table). Positions are proposed from Thomson's sizes and the rib table. Only the hardpoint, the firm base, the PEX, its pocket and its branch have to go in before the skin.







1 PEX, 12 in back, flush in the boom-face channel

4 Hardpoint under the skin; depth about 1 in. P

5 Firm base: doubled glass on the boom face under the fairing

6 Actuator, hanging

7 Cradle and pads, a wedge: thicker toward the back, where the wing thins. P

9 Spring link; its caps clear the boom bolt heads

10 Pushrod conduit on a strip, on the rod line. P

11 Fairing lid. P

12 Boom bolt heads, Belleville and nut under the plate. P

15 Strap round housing and cradle. P

16 Rear lug on the hardpoint. P

18 Filler wedge under the flat boom on the sloped wing face. P

The rod line sits 3.0 in out from the chord line, so the link's 7/8 in end caps clear the boom's bolt heads; the lid is 4.4 in out, about 2.9 in above the wing face at the rear pin. All of it proposed (P) from Thomson's sizes and the rib table.