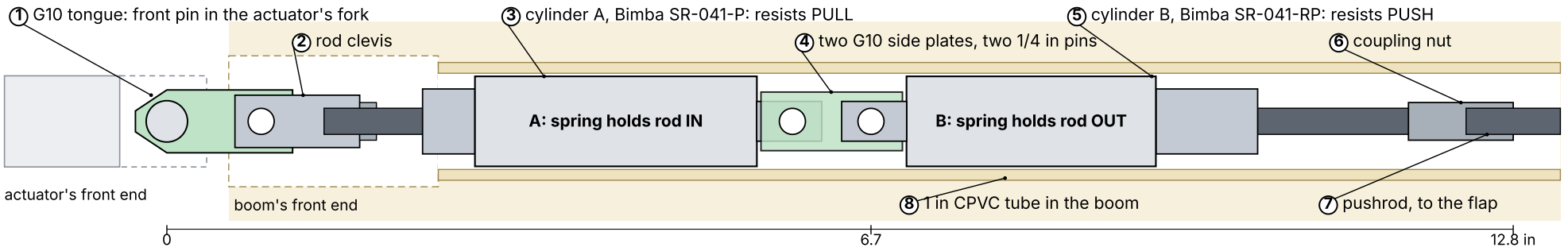
SPRING LINK FROM TWO BOUGHT SPRING CYLINDERS

inches, not to scale

Oct 29, 2026 · proposed, not decided

The idea: two small stainless air cylinders, used with no air at all, only for the spring inside each. They join end to end and take the made link's place inside the boom. Nothing is machined: the only made pieces are three small G10 plates.



HOW IT GIVES

- **Pulled harder than the setting:** cylinder A's rod comes out against its spring. B's rod is already fully out, so B stays solid.
- **Pushed harder:** cylinder B's rod goes in against its spring. A's rod is already fully in, so A stays solid.
- Either way, when the wind eases the spring pushes it back. Nothing to reset.

THE NUMBERS (BIMBA CATALOG)

- Each spring: 3 lb at rest, 6 lb at the full 1 in. So it starts to give at 3 lb plus the rub of its seal, which Bimba does not give (my guess: under 1 lb), so about 3 to 4 lb. The Trim Guide starts at 4 lb.
- At 0.4 in, enough for the flap to swing straight, it pushes about 4.2 lb: under 1-1/2 times the start, as the Trim Guide asks.
- The heavy spring (4 lb, rising to 10) gets too stiff once it gives, so not that one.
- About 12.9 in from the front pin to the nut, against 7.5 for the made link; both cylinders together about 0.46 lb.

WHAT IS WORSE THAN THE MADE LINK

- The cylinders' end pieces are aluminum, and Bimba does not say what the spring is made of. Inside the boom they stay out of the spray but not out of damp air (inferred).
- The setting is fixed. To change it, change cylinders.
- Each cylinder breathes through its air port; leave both ports open.
- The G10 plates break the metal path to the pushrod. If the lightning plan needs the pushrod tied in, a short braided wire crosses each plate.
- The CPVC tube grows from 9-1/2 to about 15 in.

PARTS

	PART	HOW MANY	WHERE TO BUY
3	Cylinder A: Bimba SR-041-P, 3/4 in bore, 1 in stroke, spring return, rear pivot, stainless rod	1	TSI Solutions, $37.60
5	Cylinder B: Bimba SR-041-RP, same size, spring extend (rod normally out)	1	TSI Solutions, $48.98
2	Rod clevis for 1/4-28, 1/4 in pin, slot 0.25 in	1	Bimba D-166-3 is plated steel; a stainless one still to pick
6	Coupling nut, 1/4-28, 316, round 0.36 in	1	McMaster 93282A160, price not checked
4	Pins, 1/4 in 316 clevis pins with clips, for the side plates	2	Still to pick
1, 4	G10: tongue 0.22 in thick (two holes), two side plates 1/8 in (two holes each)	3	From the G10 sheet on hand, like the other pocket pieces
8	1 in CPVC tube, now about 15 in long	1	Home Depot, $19.51 for 10 ft