

Fuses, breakers and fusible links

What each device protects, why a fuse blows again, and why upsizing one is how harnesses catch fire.

PROCEDURE

- 1 Confirm it is really open**
Check across the fuse in place, with the circuit powered — you should read near zero volts across a good fuse and full battery voltage across a blown one.
- 2 Find out why**
A fuse that blows instantly points to a hard short. One that blows after a while points to an overload or a dragging motor.
- 3 Measure the load**
Current draw on the circuit against spec. This is what tells you whether the fuse or the load is the problem.
- 4 Replace like for like**
Same rating, same type. If the correct fuse will not hold, the fault is still there.

NUMBERS

Blade fuse colours	5 A tan, 10 A red, 15 A blue, 20 A yellow, 25 A clear, 30 A green	standard ATO/ATC colour code
Sizing rule of thumb	about 125–150% of normal load	and never above the wire's rating
Fusible link	about 4 gauge sizes smaller than the wire	must be link wire, not ordinary wire
Good fuse, powered	under 0.1 V across it	in-circuit check, no need to pull it

COMMON MISTAKES

- Fitting a bigger fuse because the right one keeps blowing.
- Testing a fuse by eye. Cracked elements can look intact, especially in high-amp cartridge fuses.
- Replacing a fusible link with plain wire of the same gauge, removing the protection entirely.
- Missing an auto-reset breaker cycling — a rhythmic flash is the clue, not a bad lamp.

Overhaul Prep · overhaulprep.app/learn/fuses-and-breakers · practice and prep material, not a substitute for the manufacturer's service information.