

Stripped Screw Hole in Sheet Metal — Situation, Fix & How Much It Holds

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SITUATION	FIX	HOLDS HOW MUCH?
Sound metal around the hole	Go up a screw size	About as the original
Need a reusable machine thread	Set a rivnut (drill to its OD)	Real load – structural
Can reach the back of the sheet	Bolt through + fender washer	Strongest option
Hole beyond saving	Relocate to fresh metal	As a fresh hole
Trim clip, cover, light bracket	Metal-reinforced epoxy	Light, non-structural only
Screw spins, never snugged	Wrong length/type – swap screw	Not stripped – n/a

Two failures get called stripping: the screw HEAD rounds out (a driver/cam-out problem - same as on the wood side, see whatdrillbit.com/guides/screw-keeps-stripping) or the HOLE strips so the screw spins freely and won't tighten (the sheet-metal threads are gone). This guide covers the stripped hole in sheet metal.

Why sheet metal strips easily: a thin sheet gives a screw only a fraction of a millimetre of thread depth to hold, so an oversized pilot, over-tightening, or driving the screw in and out repeatedly wipes out the few threads it cut. If the screw drives in then spins without ever snugging, the thread may end before the head - the wrong screw length or type for the stack-up, not a stripped hole.

In-scope fixes, easiest first: (1) go up a screw size (fast, if sound metal remains; holds about as well as the original); (2) set a rivnut / threaded insert - drill the hole to the insert's stated OUTSIDE DIAMETER, set it, and bolt into it (a real reusable machine thread in thin sheet, structural-grade); (3) nut and bolt with a fender washer or backer plate if you can reach the back (strongest); (4) relocate to fresh metal; (5) metal-reinforced epoxy for LIGHT, non-structural duty only.

Rivnut drill size is a drill-size question: drill the hole to the insert's outside diameter from its packaging - see whatdrillbit.com/drill-bit-size-converter to match a metric spec to a bit you own, then deburr and set the rivnut with its tool. Re-tapping to a larger thread and Helicoil-type inserts cut threads into the metal (tapping), a different job that is beyond this guide.

Prevent it next time: size the pilot correctly for the gauge and thickness (too big is the main cause - see the self-tapping screw pilot-hole tool at whatdrillbit.com/self-tapping-screw-pilot-hole), don't over-tighten, and use the right screw for the thickness (self-tapping vs self-drilling/TEK). Sheet metal has little to hold with; for structural or critical work follow the fastener manufacturer's data. Wear eye protection - swarf is sharp.