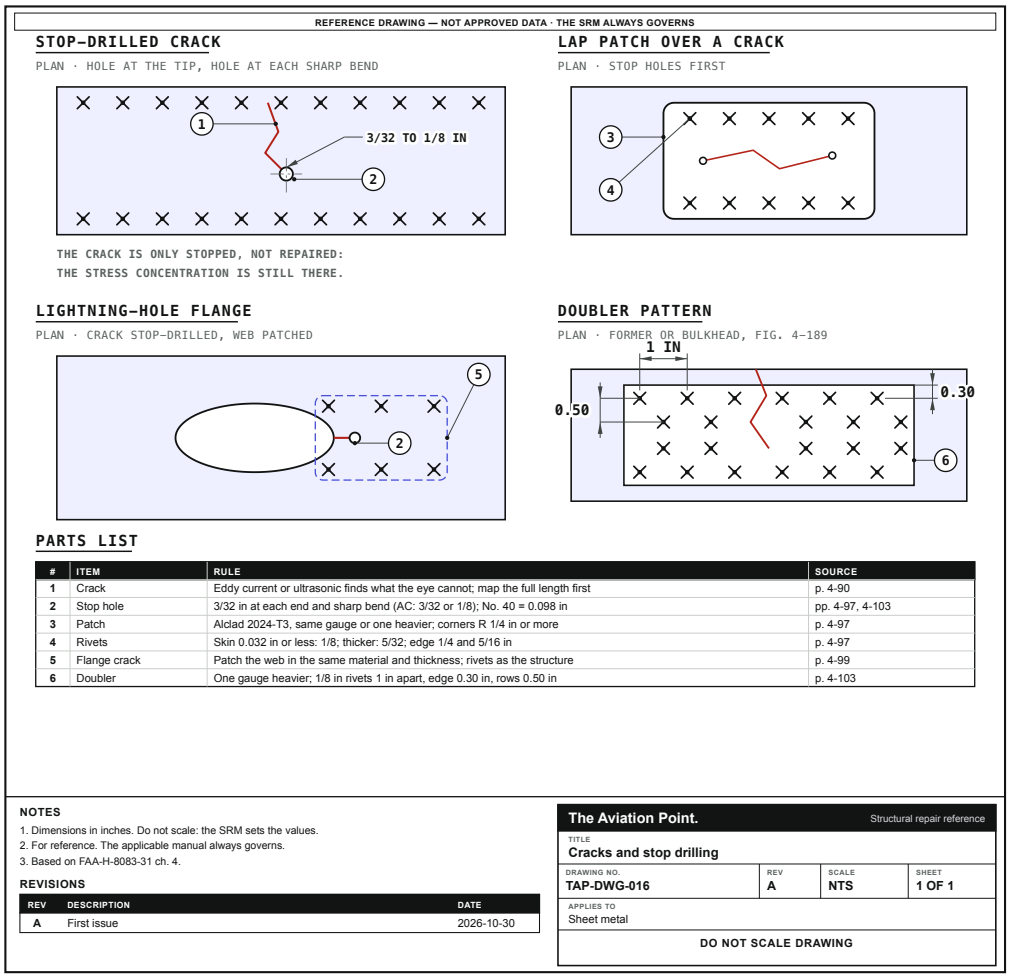
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Cracks in Sheet Metal: Stop-Drill Size, and What Else the Crack Needs

Stop hole · lap patch · flange crack · bulkhead doubler



After FAA-H-8083-31 figs 4-170, 4-174, 4-181 and 4-189, and AC 43.13-1B 4-59. Typical only: the SRM gives the repair.

What each case needs

Case	What to do	Source
Short crack inside the SRM negligible limit	Stop-drill; inspect often to see it has not spread	H 4-91
Skin crack beyond it	Stop-drill each end and sharp bend, then a lap or flush patch	H 4-97
Crack at a lightning-hole flange	Stop-drill or cut out the damage; web patch, same material and thickness	H 4-99
Crack in a former or bulkhead	No. 40 stop holes; doubler one gauge heavier	H 4-103
Cracked steel tube	Straighten, No. 40 stop holes at the ends, split-sleeve reinforcement	AC 4-91
Cracked fitting	Replace it; do not repair a torn, kinked or cracked fitting	AC 4-60

Key points

- **Stop hole** at each end and sharp bend: 3/32 or 1/8 in (AC), No. 40 = 0.098 in.
- **Not a repair:** the stress concentration stays. Reinforce as the SRM shows.
- **Find the real end** with eddy current or ultrasonic.
- **Cracked fitting:** replace it.
- **Patch:** same material, same gauge or one heavier.

Step by step

1. Clean; map the crack with NDI.
2. Stop-drill each end and each sharp bend.
3. Check the SRM limit: negligible, or repair?
4. Fit the patch or doubler; drill, deburr, protect.
5. Rivet; inspect the area often.

SOURCES · FAA-H-8083-31, AMT Handbook — Airframe, Volume 1, Chapter 4 · AC 43.13-1B with Change 1 — Acceptable Methods, Techniques, and Practices

SCAN · OPEN THIS GUIDE
theaviationpoint.com/sheet-metal/cracks/

Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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