

# MUSTANG AERONAUTICS, INC.

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## Mustang II & Midget Mustang Service Letter

Date: Jan 3, 2020

Subject: Torque Value for Main Wing Spar Attach Bolts

The Main Wing Spar Attach Bolts (p/n 220.0020 or 120.0002) are typically secured with either AN365-918 (MS20365-918) standard elastic stop nuts or AN364-918 (MS20364-918) thin or low profile elastic stop nuts. There has been repeated questions about the torque value for these bolts.

The Main Wing Spar Attach Bolts should only have the nuts tightened to a snug fit and NOT torqued. This is indicated on drawing 230.001 for the Mustang II and drawing #24 for the Midget Mustang.

These bolts are strictly transferring a shear load from the main wing spar capstrips to the fuselage steel wing attach fittings. As such a snug fit of the nut to simply hold the bolt in place is good. Because of the 0.040" gap between the center capstrips created by the main wing spar web (p/n 230.301 or 130.301) the capstrips can potentially be damaged if the Main Wing Spar Attach Bolts are tightened too much. Excessive tightening without a filler piece (p/n 230.311 & 230.312) will squeeze and bend the capstrips together damaging them.

If there is slop in the wing attach bolt holes, tightening the nuts will not correct the situation and only potentially mask the problem during a preflight inspection. The tip of the main wing spar is allowed 0.25" of movement due to slop in the attach bolt holes. If the holes are oversized enough to allow more movement than this than oversize bolts will need to be installed. These bolts are available in .015" and .030" oversize from Mustang Aeronautics along with the appropriate hand reamers.