



Aerosmith Fastening Systems – March, 2018

Technical Bulletin #106

2359N SHEAR TEST MATRIX

(All coupons to be from 50 ksi steel; Results reported in Average Ultimate Pounds-lbs.)

Base Material (To right in this row)	20 ga.(structural)				22 ga.			
Upper Mat'l (Below in this column)	Sample #	Max. Load, lbs.	Avg. Load, lbs.	Failure Mode Type	Sample #	Max. Load, lbs.	Avg. Load, lbs.	Failure Mode Type
18 ga.	1-2a	734	684.6	C	1-3a	626	604.6	C
	1-2b	747		C	1-3b	589		C
	1-2c	704		C	1-3c	704		C
	1-2d	704		C	1-3d	577		C
	1-2e	534		C	1-3e	527		C
20 ga.	*** 722.25 If sample e discounted				2-3a	553	492	C
					2-3b	492		C
					2-3c	446		C
					2-3d	465		C
					2-3e	504		C

Note 1: Testing by Progressive Engineering was per AISI Standard CF 92-1 *Test Methods for Mechanically Fastened Cold-Formed Steel Connections* except that only one fastener was used per test sample vs. two called for.

***All maximum loads in pound force.

Note 2: BASE MATERIAL MUST BE FOLLOWED-HEAVIER GAUGE IS BEING ATTACHED TO LIGHTER GAUGE.

Note 3: Failure defined as point of loss of maximum tensile load.

Note 4: Loading rate range = 300 pounds/min. to 500 pounds/min.

Note 5: CONTACT YOUR DESIGN PROFESSIONAL FOR THE ACCEPTED USE FOR THE ABOVE VALUES.

Failure Mode Types
A = Pin Fastener Pull-out B = Pin Fastener Sheared C = Base Material Tear or Fastener Hole Elongated

Color Codes of Steel Ga. Of Sample Coupons
18 ga. = Pink/Red = 0.048 INCH 20 ga (structural). = White = 0.0355 INCH 22 ga. = Blue = 0.0293 INCH