

Test Sample Condition: Undamage Damaged (Bend Negative value)	Group_Date-Time (G_M-D-Year-Time)	Fatigue.....			Cycles	Tensile.....				
		Fatigue Force = Stress*Area (Kips)	Fatigue Cross-sectional of Test Area (in <sup>2</sup> )	Fatigue Stress (Ksi) $\sigma\% =$		Ultimate Tensile Force (Kips)	Tensile Cross-sectional of Test Area (in <sup>2</sup> )	Ultimate Tensile Stress Stress = Force/Area (Ksi) variable = $\sigma$	% of Ultimate Tensile Stress variable = %	Fatigue Stress (Ksi) $\sigma\% =$
		Calculated	Measured		MTS Test Result	MTS Test Result	Measured	Calculated	Entered	Calculated
U	G1_02-19-2020-1_00pm	4.2989	0.0596	72.13	91,706.50	5.1349	0.0598	85.87	84.00%	72.13
D (-0.1875 or 3/16)	G1_03-04-2020-1_00pm	3.6137	0.0501	72.13	84,986.50	Final cross-sectional Area->	0.0311			
	Compression Force---->	2.1140 Kips				Fracture Final Force----->	3.8381			
						Fracture Final Stress----->	123.4116			
						Extensometer Break----->	Middle			
U	G2_02-12-2020-1_00pm	4.1963	0.0607	69.13	148,147.50	5.1090	0.0606	84.31	82.00%	69.13
D (-0.1875 or 3/16)	G2_02-26-2020-1_00pm	4.1756	0.0604	69.13	73,844.00	Final Cross-sectional Area->	0.0463			
	Compression Force---->	2.1588 Kips				Fracture Final Force----->	3.6900			
						Fracture Final Stress----->	79.6976			
						Extensometer Break----->	Middle			
U	G3_02-05-2020-1_00pm	4.1084	0.0605	67.91	114,722.50	5.1355	0.0605	84.88	80.00%	67.91
D (-0.1875 or 3/16)	G3_03-25-2020-1_00pm	0.0000		67.91	0.00	Final Cross-sectional Area->	0.0326			
	Compression Force---->					Fracture Final Force--update-->	3.6013			
						Fracture Final Stress----->	110.4693			
						Extensometer Break----->	Out			
U	G4_01-29-2020-1_00pm	4.9009	0.0575	85.23	14,023.00	5.3481	0.0571	93.66	91.00%	85.23
D (-0.1875 or 3/16)	G4_03-18-2020-1_00pm	5.3270	0.0625	85.23	0.00	Final Cross-sectional Area->	0.0369			
	Compression Force---->					Fracture Final Force--update-->	3.8229			
						Fracture Final Stress----->	103.6016			
						Extensometer Break----->	Out			
U	G5_02-19-2020_3_00pm	4.1342	0.0600	68.90	67,923.00	5.1596	0.0629	82.03	84.00%	68.90
D (-0.1875 or 3/16)	G5_03-04-2020_3_00pm	4.1756	0.0606	68.90	42,576.50	Final Cross-sectional Area->	0.0341			
	Compression Force---->	2.1772 Kips				Fracture Final Force----->	3.8140			
						Fracture Final Stress----->	111.8475			
						Extensometer Break----->	Above			
U	G6_02-12-2020_3_00pm	4.3698	0.0613	71.28	88,547.00	5.1617	0.0601	85.89	83.00%	71.28
D (-0.1875 or 3/16)	G6_02-26-2020_3_00pm	4.2414	0.0595	71.28	36,030.00	Final Cross-sectional Area->	0.0290			
	Compression Force---->	2.0410 Kips				Fracture Final Force----->	3.7356			
						Fracture Final Stress----->	128.8138			
						Extensometer Break----->	Middle			
U	G7_02-05-2020-3_00pm	4.1453	0.0600	69.09	129,222.00	5.1176	0.0600	85.29	81.00%	69.09
D (-0.1875 or 3/16)	G7_03-25-2020-3_00pm	4.3180	0.0625	69.09	0.00	Final Cross-sectional Area->	0.0320			
	Compression Force---->					Fracture Final Force--update-->	3.7570			
						Fracture Final Stress----->	117.4063			
						Extensometer Break----->	Out			
U	G8_01-29-2020-3_00pm	4.7739	0.0624	76.51	26,318.00	5.5264	0.0614	90.01	85.00%	76.51
D (-0.1875 or 3/16)	G8_03-18-2020-3_00pm	4.7816	0.0625	76.51	0.00	Final Cross-sectional Area->	0.0369			
	Compression Force---->					Fracture Final Force--update-->	3.7846			
						Fracture Final Stress----->	102.5637			
						Extensometer Break----->	Out			
U	G9_02-18-2020-1_00pm	4.3216	0.0598	72.27	54,340.00	5.1620	0.0600	86.03	84.00%	72.27
D (-0.1875 or 3/16)	G9_03-03-2020_1_00pm	4.3361	0.0600	72.27	65,122.00	Final Cross-sectional Area->	0.0379			
	Compression Force---->	2.1461 Kips				Fracture Final Force--update-->	3.8305			
						Fracture Final Stress----->	101.0686			
						Extensometer Break----->	Below			

Notes:  
 $\sigma$  ("Sigma" code: 03C3) = Stress  
 $\epsilon$  ("Epsilon" code: 03F5) = Strain  
 $\Delta$  ("Delta" code: 0394) = change in  
P = Axial Force  
A = Area  
L = Length  
Stress  $\sigma = P/A$  ->units "Ksi"  
Strain  $\epsilon = \Delta L/L$  ->units "in/in"