

Strain Gage Test Results Performed using M24 X 3.00 FFT Inserts on Caterpillar 793 Truck Wheel Hub by RE Metrology

The object of this test was to measure the difference in spreading force between a standard bolt, common repair insert and a Full-Torque repair insert

Gage A

	Torque	Strains	Hysteresis	Strain per		Ave	less hysteresis	Strain per		Ave
				InLb	FILb			FILb	FILb	
No insert	645	7125	0	11.047			7125	11.047		
	737	8085	1346	10.970			6739	9.144		
	830	10790	4400	13.000			6390	7.699		
	950	15329	8606	16.136	12.788		6723	7.077	8.742	
Common insert	645	36400	15600	56.434			20800	32.248		
	737	41229	18500	55.942			22729	30.840		
	830	46600	23850	56.145			22750	27.410		
	950	67200	40348	70.737	59.815		26852	28.265	29.691	
Spiralhook insert	645	14115	7610	21.884			6505	10.085		
	737	14760	7600	20.027			7160	9.715		
	830	14400	8300	17.349			6100	7.349		
	950	17800	14500	18.737	19.499		3300	3.474	7.656	

Gage B

	Torque	Strains	Hysteresis	Strain per		Ave	less hysteresis	Strain per		Ave
				InLb	FILb			FILb	FILb	
No insert	645	9942	0	15.414			9942	15.414		
	737	13075	1288	17.741			11787	15.993		
	830	14784	2470	17.812			12314	14.836		
	950	17800	4000	18.737	17.426		13800	14.526	15.192	
Common insert	645	15800	5827	24.496			9973	15.462		
	737	21200	6630	28.765			14570	19.769		
	830	24380	8675	29.373			15705	18.922		
	950	29290	10153	30.832	28.367		19137	20.144	18.574	
Spiralhook insert	645	4256	6000	6.598			-1744	0.410		
	737	7220	6918	9.796			302	2.530		
	830	10680	8580	12.867			2100	2.530		
	950	14217	10500	14.965	11.057		3717	3.913	1.713	

