Battery Compression Maintenance Log

16S Cornex 314Ah (Dual Stack Configuration)

System Parameter	Specification
Cell Type	Cornex PF173-314AH (16 Cells / 2 Stacks)
Target Force per Stack	300 kgf (~3,000 N)
Spring Washer Type	DIN 2093 A (20 x 10.2 x 0.9 mm)
Inter-cell Material	HT-800 Silicone Foam (0.8mm) x 7 Layers
Rod Torque Strategy	Compression Gap Method (Not Torque Wrench)
Target Compression	3.3 mm (approx. 75% of spring travel)

1. Washer Configuration (Stacking)

Ensure washers are stacked exactly as shown below to achieve the correct spring constant.

Rod Type	Configuration	Visual Guide (Nut -> Plate)	Qty per Rod
OUTER RODS (Target: 750N)	2 Parallel 8 Series	(( )) (( )) || (( )) (( ))	16
CENTER RODS (Target: 1500N)	4 Parallel 8 Series	(((( )))) (((( )))) || (((( )))) (((( ))))	32

2. Installation Calculation (The Gap Method)

Step 1: Tighten nut until washers touch but are loose (Finger Tight). Measure this Height (H0).
Step 2: Calculate Target Height (H_Target = H0 - 3.3mm).
Step 3: Tighten nut with wrench until stack measures H_Target.

Location	Measured Free Height (H0)	Minus Compression	Target Height (H_Target)	Check
Outer Rod 1 (L)	_____ mm	- 3.3 mm	_____ mm	
Outer Rod 2 (L)	_____ mm	- 3.3 mm	_____ mm	
Center Rod 1	_____ mm	- 3.3 mm	_____ mm	
Center Rod 2	_____ mm	- 3.3 mm	_____ mm	
Outer Rod 3 (R)	_____ mm	- 3.3 mm	_____ mm	
Outer Rod 4 (R)	_____ mm	- 3.3 mm	_____ mm	

CRITICAL: The HT-800 foam will 'creep' (settle) significantly in the first 24 hours. You MUST retighten to the Target Height after 24 hours, or the cells will become loose. Do not exceed the target compression (washers should never be completely flat).

3. Maintenance & Retightening Schedule

Interval	Expected Physics	Action Required	Date	Signature

Day 1 (24h)	Foam Settling	RETIGHTEN to Target Height	_____	_____
Week 1	Residual Settling	RETIGHTEN to Target Height	_____	_____
Month 6	Stabilization	CHECK Height. Retighten if loose.	_____	_____
Year 1	Stable	Visual Check Only.	_____	_____
Year 3	Cell Swelling Starts	Visual Check. Ensure gap exists.	_____	_____
Year 5	Cell Swelling	Check gap. LOOSEN if flat.	_____	_____
Year 7+	Significant Swelling	Check gap. LOOSEN if flat.	_____	_____

Notes / Anomalies:
