LOADSHACKLE / BLANK GEOMETRY REVIEW WORKSHEET

Two-leg geometry and assembly review worksheet

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BLANK EDUCATIONAL REVIEW SHEET. Not a lift plan, hardware rating, operating instruction or approval. Symmetric static calculations do not establish permitted shackle side loading.

1 - Identify force and angle definitions

Project / company / country / sketch reference: _____

Arrangement: ideal symmetric static two-leg / other unresolved

Total force W and explicit unit (kN / metric tf / lbf): _____

Include the load carried by the modelled legs. Mass conversion, if needed, must state its gravity convention.

Entered angle and definition: _____

theta: included between legs; alpha: one leg from vertical; beta: one leg from horizontal. Page symbols may differ from other manuals.

For this symmetric model: theta=2*alpha; beta=90deg-alpha.

2 - Record the ideal result and its assumptions

T per leg = W / [2*cos(alpha)] = W / [2*sin(beta)].

Ideal per-leg tension and explicit units: _____

Vertical component per leg W/2: _____

Horizontal component magnitude per leg: _____

Assumed: centred load, equal sharing, static equilibrium, two legs. No dynamic, shock, off-centre or three/four-leg result is established.

At the horizontal singularity no finite result is available. Mathematical results outside actual equipment instructions do not permit a lift.

3 - Review shackle direction separately

Actual assembly maker / model / manual and drawing revisions: _

Reported side-load angle phi and its manual-defined datum: ____

Screw/bolt / instrumented / round-pin / unknown hardware: _____

Shackle location: one leg (T) / common collector (resultant W): __

Source instruction, size and loading-plane scope: _____

Permitted assembly WLL/direction evidence and reviewing party: _

The sling angle is not automatically the shackle side-load angle. Original-body source factors do not automatically apply to an instrumented assembly.

4 - Resolve before release

CG / unequal sharing / dynamics / contact / retention unknowns: _

Component identities, actual ratings and instructions required: _

Measurement channels/readouts/calibration scope, if needed: ____

Open item / owner / next action / date: _____

Attach the actual sketch and manuals to your own email. A completed worksheet or calculated force does not approve hardware, a lift or a changed assembly.