PSSR Compliance & Accumulator Safety Checklist

Prevent catastrophic failures - Improve safety - Improve reliability – Stay compliant

MGR Fluid Engineering

Part 1 — Why Accumulators Are High-Risk

Hydraulic accumulators store dangerous energy. Common failures include:

- Bladder rupture
- Incorrect pre-charge
- Over-pressurisation
- Poor inspection routines
- PSSR non-compliance

This checklist helps you identify compliance gaps.

Part 2 — PSSR Compliance Checklist

Written Scheme of Examination

- Exists and is up to date
- Includes accumulator, relief valves, gauges
- Specifies inspection intervals
- Signed by a competent person

Inspection & Testing

- Pre-charge checked at correct intervals
- Shell inspected for dents, scratches and corrosion
- Gauges calibrated
- Relief valves tested
- Records stored securely

Safety Controls

- Isolation valves labelled
- Pressure gauges visible
- Pre-charge tools calibrated & maintained
- Nitrogen bottles stored correctly

Technician Competency

- Staff trained in accumulator safety
- Staff understand stored energy hazards
- Staff can perform safe pre-charge
- Staff can identify failure modes

Part 3 — Top 10 Accumulator Failure Causes

1. Incorrect pre-charge
2. Nitrogen leakage
3. Bladder wear
4. Wrong accumulator type
5. Poor mounting
6. Incorrect sizing
7. Contamination
8. Temperature extremes
9. High accumulator flow
10. Lack of inspection

Part 4 — Pre-Charge Quick Reference

Formula: Pre-charge = 0.9 × minimum system pressure (Adjust for duty cycle, temperature, and application)

Section 5 — Next Step

Train your team to inspect, maintain, and comply with PSSR.

Hydraulic Accumulators Course — **Dates & Booking Email**: mike@mgrfluideng.co.uk **Phone**: 0793190449