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	STANDARD: **ISO 9001:2015 Quality Management Systems & OSHA 29 CFR 1910.212**	AUDIT FREQUENCY: **Per Shift / Bi-Hourly Continuous Monitoring**

Assembly Line Quality Control Inspection Checklist

Operational Scope: This checklist establishes mandatory verification protocols for automated and manual assembly stations to ensure defect-free manufacturing output and machinery safeguarding compliance. Adherence mitigates line-stoppage risks, operator injury, and non-conforming product leakage.

MANDATORY PPE:	Safety Glasses with Side Shields (ANSI Z87.1), Steel-Toe Safety Footwear (ASTM F2413), Cut-Resistant Work Gloves (ANSI/ISEA 105), High-Visibility Safety Vest, Hearing Protection (NRR 25dB min)
PREREQUISITES:	Verify machinery Emergency Stop (E-Stop) circuits are fully functional prior to energizing line. | Review previous shift production logs and open non-conformance reports. | Ensure calibrated gauges, torque wrenches, and optical inspection tools are zeroed.

MECHANICAL ASSEMBLY & FASTENER INTEGRITY

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Torque Verification Systems**	Pneumatic and electric torque drivers record readings within +/- 2% of engineering specification thresholds.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
2	**Component Alignment & Fit**	Sub-assemblies seat completely without excessive force, binding, or structural warpage.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
3	**Fastener & Hardware Seating**	All screws, rivets, and clips are flush, free of stripped threads, and correctly countersunk.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**
4	**Conveyor Drive & Alignment**	Line belt tracking is centered, free of fraying, and maintains smooth variable-speed synchronization.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

AUTOMATED SENSORS & VISION SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
5	**Optical Vision Inspection Cameras**	Lenses are clean, calibration targets pass verification, and software successfully flags simulated defects.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
6	**Barcode / RFID Scanners**	Scanners instantly read 100% of test serial tags on incoming parts without latency or read errors.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
7	**Proximity & Limit Sensors**	Inductive and photoelectric sensors trigger actuation precisely at designated station waypoints.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**

SAFETY INTERLOCKS & WORKPLACE ERGONOMICS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
8	**Machine Guarding & Light Curtains**	Physical interlock barriers and safety light curtains immediately halt line motion upon intrusion.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
9	**Poka-Yoke Error Proofing**	Mistake-proofing fixtures successfully reject incorrectly oriented parts during test insertion.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
10	**Workstation Ergonomics & Lighting**	Task lighting meets minimum 500 lux requirements; material bins are positioned within safe reach zones.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**

Quality Control Inspector / Line Lead Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Operations Manager / Plant Safety Officer Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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