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	STANDARD: **FMVSS 105 & OSHA 29 CFR 1910.178**	AUDIT FREQUENCY: **Monthly Audit**

Hydraulic Brake Air System Audit Compliance Checklist

Operational Scope: This hydraulic brake air system audit compliance checklist governs commercial fleet maintenance operations to mitigate catastrophic mechanical failure and high-pressure fluid hazards. Strict adherence ensures continuous regulatory alignment and safeguards technicians during diagnostic testing.

MANDATORY PPE:	Safety Glasses with Side Shields (ANSI Z87.1), Chemical-Resistant Nitrile Gloves, Steel-Toe Safety Boots (ASTM F2413), High-Visibility Safety Vest, Industrial Mechanics Coveralls
PREREQUISITES:	Verify vehicle is parked on level ground with wheels chocked and parking brake engaged. | Ensure hydraulic and pneumatic pressure systems are fully depleted or safely isolated. | Review previous maintenance logs and confirm calibration status of diagnostic gauges.

PNEUMATIC & HYDRAULIC ACTUATION COMPONENTS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Air Compressor and Governor Assembly**	Compressor drive belt tension is within manufacturer tolerance (1/2 inch deflection); governor cut-in and cut-out pressures align with spec (e.g., 100-120 PSI).	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
2	**Air Reservoirs and Moisture Ejection Valves**	Tanks show no structural corrosion, pitting, or denting exceeding safety thresholds; automatic moisture ejections function without excessive oil blow-by.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
3	**Master Cylinder and Hydraulic Fluid Reservoir**	Fluid is at correct operational level; fluid is clean and free of moisture contamination; reservoir cap seal is intact.	**Standard**	**[ ] PASS [ ] FAIL [ ] N/A**

LINES, VALVES, AND PRESSURE INTEGRITY

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Brake Lines and Hydraulic Hoses**	No signs of chafing, cracking, swelling, or blistering under pressure; flexible hoses are routed away from sharp edges and hot exhaust components.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
5	**Air-Over-Hydraulic Booster Actuator**	Booster unit exhibits no pneumatic or hydraulic fluid leaks; pushrod travel and stroke alignment meet OEM specifications.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
6	**Low Air Pressure Warning Switch and Buzzer**	Audible and visual low-pressure alarms activate reliably before pressure drops below 60 PSI.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
7	**Quick Release and Relay Valves**	Valves exhaust air rapidly upon pedal release without sticking or prolonged exhaust bleed.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**

OPERATIONAL PERFORMANCE AND TESTING

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
8	**Static Pressure Drop Test**	With service brakes applied, air pressure drop does not exceed 3 PSI in one minute for single vehicles.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
9	**Dynamic Brake Responsiveness and Pedal Feel**	Brake pedal maintains firm resistance without spongy travel or excessive lag during initial application.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
10	**Parking Brake Mechanical Hold**	Spring brake chambers securely hold the vehicle on a 20-percent grade without mechanical slippage.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

Certified Fleet Maintenance Technician Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Shop Safety Manager / Operations Director Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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