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	STANDARD: **FMVSS 105 & OSHA 29 CFR 1910.1200**	AUDIT FREQUENCY: **Monthly Audit**

Hydraulic Brake Air System Audit Sop Template

Operational Scope: This Standard Operating Procedure establishes the mandatory audit requirements for commercial vehicle hydraulic-assisted and air brake systems to mitigate catastrophic brake failure risks. It ensures strict compliance with federal fleet safety regulations through systematic component verification and defect logging.

MANDATORY PPE:	Safety Glasses (ANSI Z87.1), Nitrile Chemical-Resistant Gloves, Steel-Toe Safety Boots (ASTM F2413), High-Visibility Safety Vest, Bump Cap or Hard Hat
PREREQUISITES:	Vehicle safely chocked and parked on a level surface with the parking brake fully engaged. | Engine locked out / tagged out (LOTO) per facility protocol where applicable. | System pressure completely bled down to zero before mechanical line inspection.

PNEUMATIC & AIR COMPRESSOR INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Air Compressor Drive Belt**	Check belt tension, alignment, and absence of glazing, cracking, or dry rotting. Deflection must not exceed manufacturer spec under thumb pressure.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
2	**Air Governor Operation**	Verify governor cuts out air compressor at designated psi (approx. 120-130 psi) and cuts back in at drop threshold (approx. 85-100 psi).	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
3	**Air Reservoir Tanks & Moisture Drains**	Inspect tanks for corrosion, physical dents, or secure mounting brackets. Open manual drain valves to check for excessive oil or moisture accumulation.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
4	**Air Brake Pressure Relief Valve**	Ensure safety pop-off valve functions correctly and is uncompromised by paint, debris, or mechanical damage.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A

HYDRAULIC BOOSTER & MASTER CYLINDER ASSESSMENT

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
5	**Hydraulic Brake Booster (Hydro-Max / Vacuum)**	Check booster housing and power steering assist lines for fluid leaks, secure fittings, and unusual operating noise during application.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
6	**Master Cylinder Reservoir & Fluid Level**	Verify brake fluid level is within operating parameters and fluid is free of contamination, discoloration, or moisture intrusion.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
7	**Brake Lines, Hoses, and Fittings**	Examine flexible hoses and steel lines for chafing, bulging, kinking, or weeping connections under operational pressure.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
8	**Brake Pedal Reserve and Travel**	Measure pedal free play and reserve travel; pedal must not sink toward the floor under sustained holding pressure.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

OPERATIONAL PERFORMANCE & WARNING SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
9	**Low Air Pressure Warning Alarm**	Verify dashboard buzzer and visual indicator activate immediately when system air pressure drops below 60 psi.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
10	**Parking Brake Spring Chamber**	Inspect emergency spring brake chambers for structural cracks, clamped-band integrity, and manual release bolt security.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
11	**Static Pressure Leak Test**	With fully charged system and brakes applied, air pressure loss must not exceed 3 psi per minute for combination vehicles.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A

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

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