

MECHANIC STUDY GUIDE

Brakes & Braking Systems

Heavy Duty Trucks

Listed below are a number of items and subjects which make up the mechanic certification tests identified above. An individual's ability to pass the certification test will depend upon the amount of knowledge the person has concerning these items.

Basic Knowledge - 20%

Inversion valve function
Anti-skid brakes
Hydraulic brake line material
Air brake hand valve
Brake chatter
Vacuum booster operation
Air brake line routing
Engine (Jacobs) brake
Air over hydraulic systems

Repair Skills, Air Brakes - 8%

Finding air leaks
Adjusting cam actuated brakes
Brake linkage lubrication
Air line material

Repair Skills, Hydraulic Brakes - 10%

Wheel cylinder assembly
Power booster
Master cylinder residual valve
Master cylinder operation

Diagnosis, Air Brakes - 34%

"S" cam brakes
Air pressures for fail-safe brakes
Cause of excessive air pressure
Dual diaphragm brake chamber operation
Compressor operation
Tractor protection valves
Air brake systems operation
Inoperative trailer brakes
Straight truck air line and operation
Trailer brakes won't release

Diagnosis, Hydraulic Brakes - 14%

Causes of a pulsating pedal
Brake booster operation
Swollen master cylinder diaphragm
Cause of gear lube inside brake drums
Brake lining wear diagnosis
Grabbing brakes

Basic Repair Procedures - 14%

Spring brake repairs
Pushrod travel
Air reservoirs
Slack adjuster and pushrod angle
Grease-soaked brake linings

SAMPLE QUESTION:

Which of the following should a mechanic do before taking apart a spring-type parking brake?

- A. Fill the air reservoir.
- B. Remove the quick release valve.
- C. Remove the diaphragm clamp.
- D. Cage the spring.

ANSWER: D