

TM 9-2330-294-14

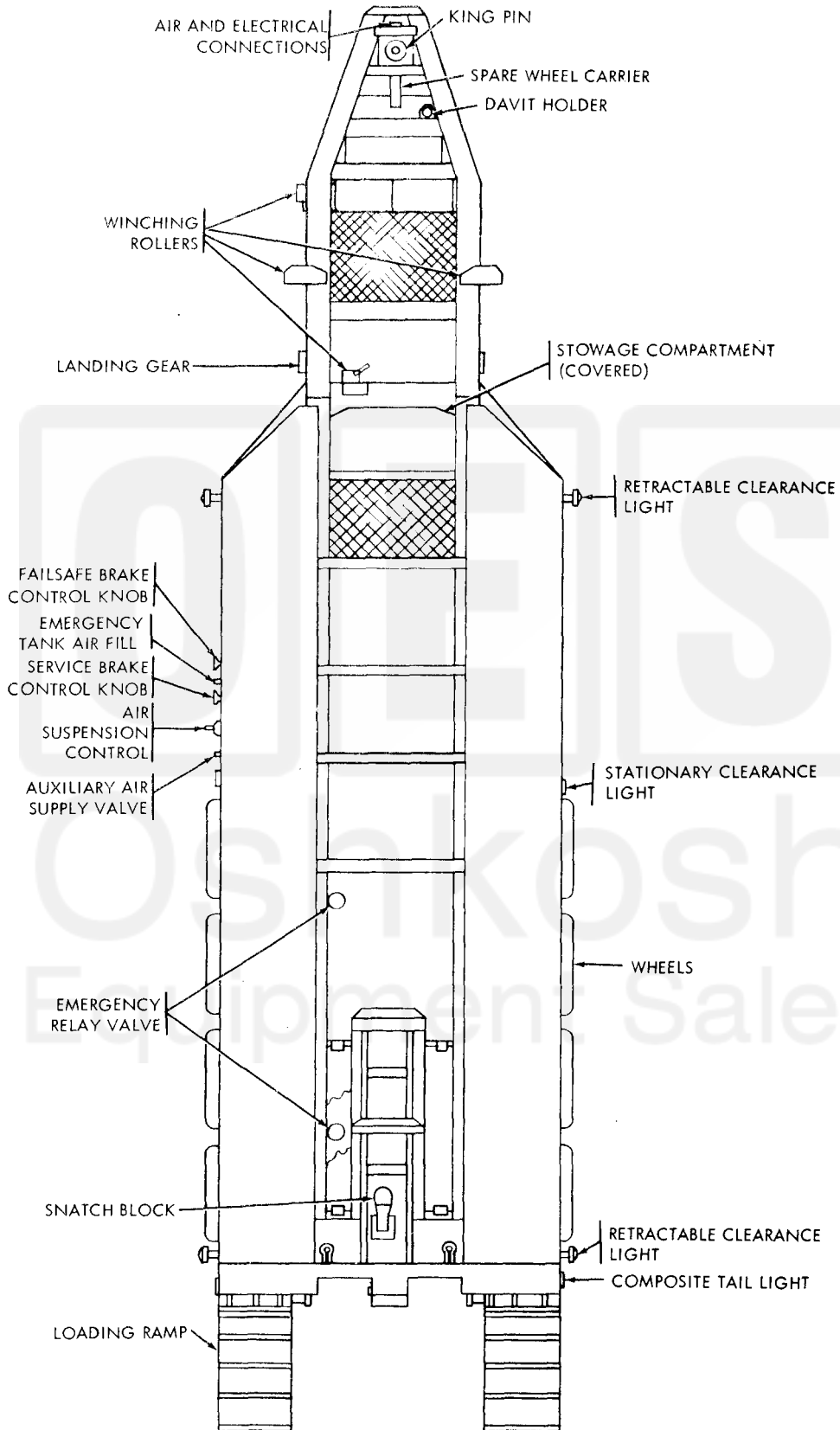


Figure 2-1. Controls and components location

2-2. Service Brakes

The service brakes are actuated by the semitrailer air system which is maintained at 90-120 psi air pressure by the towing vehicle. The controls are located in, and are a part of, the towing vehicle. The service brakes are activated when the towing vehicle brake pedal is depressed and an air pressure signal is transmitted through the semitrailer service air line to the emergency relay valves. The emergency relay valves then operate automatically to route reservoir air through the service brake air supply lines to the air chambers to apply the brakes. Conversely, when the towing vehicle brake pedal is released, the pressure signal ceases and the emergency relay valves vent air pressure and release the brakes. The semitrailer service brakes will also activate automatically if the semitrailer breaks away from the towing vehicle. When the towing vehicle parking brake is applied, the semitrailer emergency air line is exhausted and the emergency relay valves route captive air to apply the service brakes. When the service brakes are applied as a result of a severe leak or uncoupling from the towing vehicle, the brakes can be released by pushing the service brake release knob on the semitrailer left side. Refer to paragraph 2-4 for operating instructions of the brake release controls.

2-3. Fail-safe Brake Unit

(fig. 2-2)

One brake air chamber on each axle end is equipped with a fail-safe unit. These units will automatically apply the semitrailer brakes in the event air pressure in the reservoir air line falls below 65 psi. When air pressure has been restored to 65 psi or more the fail-

safe units will automatically unlock and release the brakes. When the semitrailer is parked and uncoupled, the fail-safe units will gradually become applied as the air pressure will eventually drop below 65 psi which is required to hold back the fail-safe springs. When parked, or when the air system is disabled, the semitrailer can be moved without charging the whole air system by utilizing air from the fail-safe release air tank (para 2-4b). If the fail-safe release system is inoperative, the fail-safe unit springs must be compressed manually, as follows, before moving the semitrailer:

WARNING

Block wheels to prevent semitrailer from rolling free when fail-safe brakes are released.

CAUTION

Stripping of the release bolt threads may result if the release bolt is forced beyond its natural step when being turned in either direction.

Turn release bolt approximately 25 full turns clockwise on each fail-safe unit. The 25 full turns should provide sufficient travel of the spring loaded piston within the fail-safe unit to release the brake. After moving semitrailer, block wheels and release the fail-safe power springs by turning release bolt approximately 25 full turns counterclockwise on each fail-safe unit. The 25 full turns should provide sufficient travel of the springs loaded piston within the fail-safe unit to apply the brake. Refer to figure 4-25 and 4-26 for a schematic representation of the fail-safe unit.

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