

## GENERAL DESCRIPTION

The airplane has two main landing gears and a single nose gear. Each main gear is a conventional two-wheeled landing gear. The nose gear is a conventional steerable two-wheeled unit. Hydraulic power for retraction, extension, and nose wheel steering is supplied by the green hydraulic system. An alternate electrical override system for landing gear extension and an emergency free-fall extension system are also provided.

The normal brake system is powered by the hydraulic systems, with the outboard pair being supplied by the green hydraulic system and the inboard pair by the blue hydraulic system. The emergency braking system is powered by the blue hydraulic system. Antiskid protection is also provided.

## **LANDING GEAR**

### **ACTUATION SYSTEM**

The landing gears are normally controlled by the LANDING GEAR Lever. On the ground, a lever lock prevents the LANDING GEAR Lever from moving to the up position. In flight, the air/ground system automatically releases the lever lock.

### **LANDING GEAR RETRACTION**

Two pairs of doors enclose each landing gear bay. The aft pair of doors is mechanically linked to each landing gear and the forward pair of doors is hydraulic actuated. When the gear is down, the aft pair of doors is open and the forward pair of doors is closed.

When the LANDING GEAR Lever is moved to UP, the forward pair of doors opens, allowing the landing gear to be retracted to the stowed position. During retraction, the brakes automatically stop rotation of the main landing gear and snubbers stop rotation of the nose landing gear. After retraction, the doors are closed and the gears are held in place by mechanical uplocks.

If the LANDING GEAR Lever cannot be moved UP, the downlock release button may be pressed to release the LANDING GEAR Lever downlock.

### **LANDING GEAR EXTENSION**

When the LANDING GEAR Lever is moved to DOWN, hydraulic pressure is used to release the uplocks, the landing gear extends by hydraulic pressure, gravity and air loads.

Overcenter mechanical and hydraulic locks hold the gear at full extension.

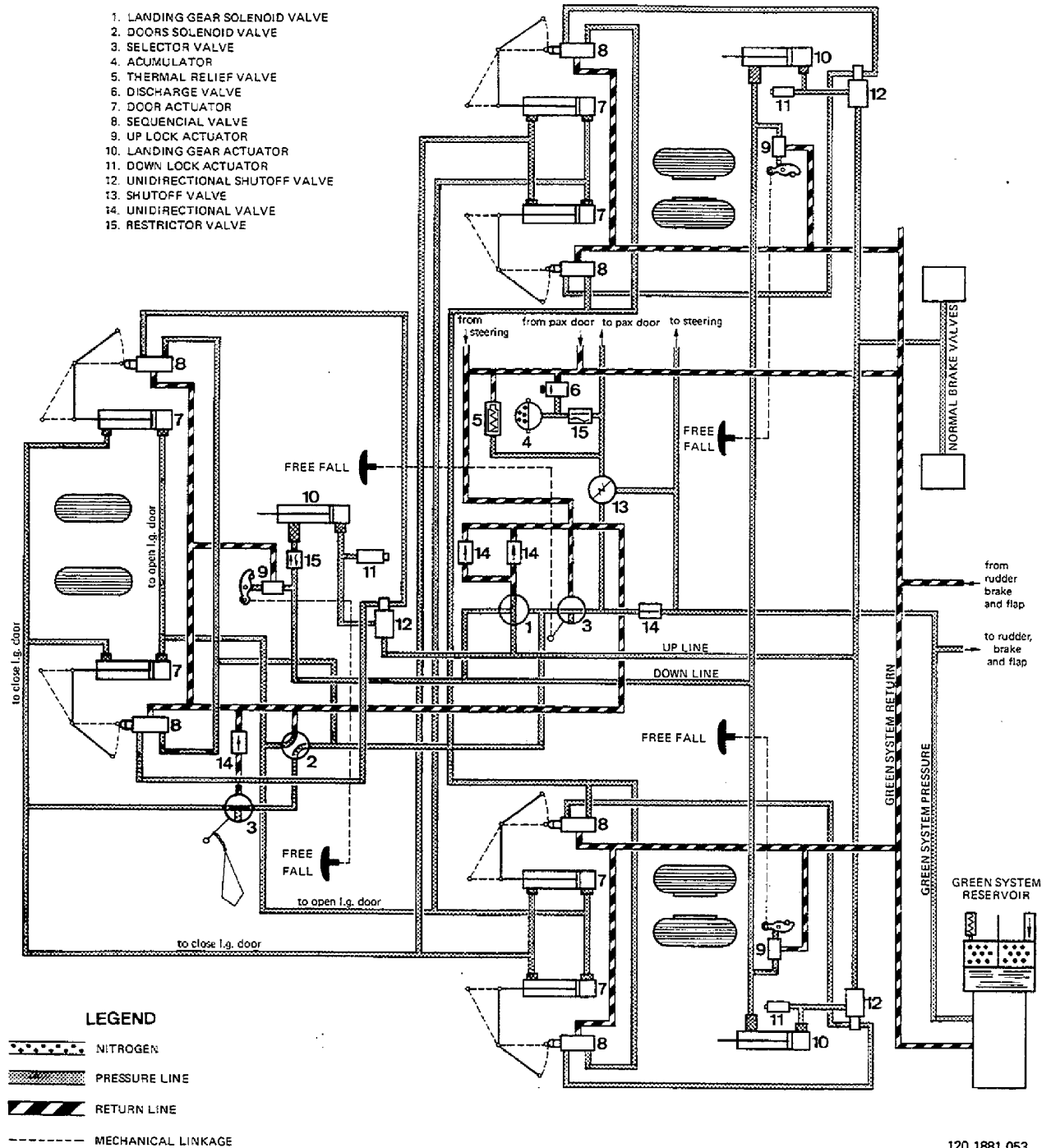
After extension, the forward pair of doors is closed.

The alternate actuation system consists of an electrical override down command. Should any electric component failure preclude gear extension when the landing gear control lever is moved to the DOWN position, the alternate electrical override down command should be used.

This system is operated by a guarded three-position switch located in a compartment on the floor, on the copilot's seat left side.

With the landing gear control lever selected to the DOWN position, the copilot should move the switch to the DOORS position and wait at least 3 seconds to allow the doors to open and then move the switch to the GEAR/DOORS position. When the landing gear is locked down, the switch should be commanded to the NORMAL position, allowing the doors to close.

The emergency free-fall extension system is to be used in case of failure of both normal and alternate electrical override gear actuation systems. It is a mechanical system, commanded by cables, which act directly on the uplock hooks. Once the command device is actuated the landing gear will be unlocked, fall freely and be locked down by gravity.



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LANDING GEAR HYDRAULIC SYSTEM-SCHEMATIC































