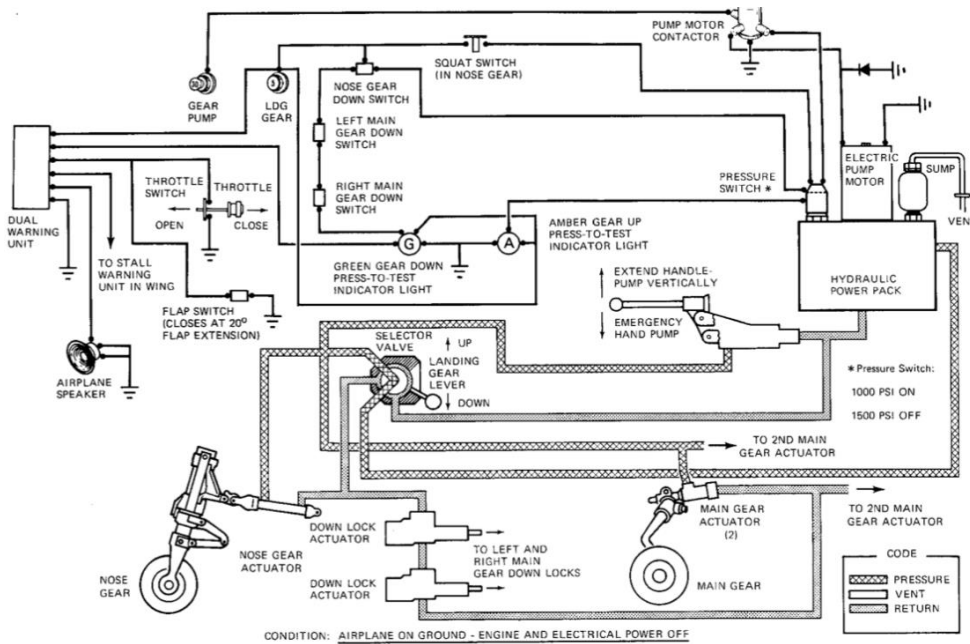


# Retractable landing gear system for the 172RG

- Hydraulic power is supplied by an electrically-driven hydraulic power pack.
- The only function of this hydraulic power pack is to supply hydraulic power for operating the retractable landing gear.

**“Hmmm...no green, that’s not good!” Remember the rule: 3 landing gear down checks before landing equals a happy airplane! A lot less noise too!**



- Actuator cylinders receive hydraulic pressure that either extend or retract the landing gear.
- The hydraulic system operates at 1000 to 1500 psi protected by relief valves which prevent pressure damage to the pump and other components of the system. Nose gear has mechanically actuated wheel well doors.
- A “Squat” switch is located on the back side of the nose gear and electrically prevents operation of the hydraulic system when the airplane is on the ground and the nose gear is compressed by the weight of the airplane.
- The electrical portion of the power pack is protected by a 30-amp push pull type circuit breaker switch, labeled “gear pump”.
- Moving the gear selector switch rotates a selector valve which applies hydraulic pressure in the direction selected.
- Hydraulic pressure will continue to build until the power pack pressure switch turns the power pack off.
- A green light indicates gear is down and locked. Amber light is gear is up.
- Pushing the “illuminated” green indicator light during preflight inspection and hearing an audible warning alarm indicates gear warning system is functioning. In flight if you decrease the manifold pressure below 12” or more than 20 degrees of flaps without lowering the landing gear the horn will activate.

**“Houston we have a problem!” Remember, fly the plane!**

- **Keep it simple! First check the light bulb!** Most airplanes with retractable landing gear have lights that can be easily removed and tested with a light you know is working.
- In the event of a gear malfunction, a manual hydraulic hand pump can be utilized to lower and lock the landing gear. You should pump until you have a green light, approximately 33 pumps. Manual gear extension procedure calls for a reduction of airspeed, put the gear selector switch in the “down” position and start pumping. Stop once you observe a green light. Visually verify left and right mains are down and use a mirror if able to verify the nose gear. Any doubt, a low pass at a towered airport can give you additional information about your landing gear status. Take note, you will never hear the words “your gear is down and locked”, only, “they appear to be down”.
- If you suspect your gear is NOT locked, consider burning fuel by circling overhead. Engine off landing is recommended once landing is assured. This may prevent possible engine damage from a prop strike. Land with a nose high attitude and land tail low. Exit airplane immediately

## Preflight action:

- Verify gear selector switch is in the down position.
- Verify gear horn is operating.
- Make sure the landing gear is inspected and no leakage of hydraulic fluid is present.
- Verify no obstructions in the wheel wells.