



**Presenting the  
HYD-LDG-BRK**

- Fully functional simulator delivered ready to operate, requires 110 VAC power (220 VAC optional) AC Mil spec. 5606 hydraulic fluid.
- Oleo strut specially modified internally contains no hydraulic fluid so students can collapse the strut actuating the safety squat switch. (Optional operation strut can be provided)
- Electric switches as follows; Down lock switch attached to the upper and lower drag links, squat switch attached to the scissor links, up lock switch attached to the up lock hook, and throttle warning horn attached to the throttle quadrant. Master switch controlling the DC power supply (optional). Gear indicator lights included are “gear up” “Gear down”.
- Up lock hook spring loaded closed, hydraulically sequenced open upon gear down actuation.
- Down lock hook hydraulically actuated.
- Separate reservoir with sight glass, AN3 hydraulic fluid filter with replacable elements
- Hydraulic gear pump, driven by a 90 volt DC motor, AC powered.
- 500 CC piston hydraulic accumulator charged with air pressure providing emergency extension.
- 4 way landing gear hydraulic control valve.
- Dual acting hydraulic cylinder. 18.5” overall length, Ram dia. .5” barrel dia. 1.45” Actuating distance 6.5”.
- Emergency hand pump dual acting, with check valves.
- Throttle quadrant with micro switch.
- Electrical schematics designed and marked to comply with ATA codes, Supplied in paper and transparency format.
- I.A.T.S. approved curriculum.
- All hoses, hard lines, electrical systems are new.
- Optional brake consisting of one master cylinder including internal reservoir, rudder pedal, wheel caliper, disc and wheel assembly.

## **Safety features**

- Emergency stop valve, simply hit the handle located on the top of the gear trainer and all system pressure is dumped leaving the system totally movable.
- Circuit protection provided on the simulator
- 110 volt AC (220 volts by request) On off switch provided for the hydraulic pump.
- Electric solenoid dumps accumulator pressure when power is removed.

**Included are;**

Operational brake with pedal (not included in base model)

Master cylinder (not included in base model)

Wheel and tire

Throttle with sensor activating a warning horn

Position indicator lights

Roll-around locking caster shop stand

Electrically driven hydraulic pump driven by a 110 volt AC motor (220 VAC optional)

Landing gear control

Emergency hand pump

Fluid reservoir

Adjustable main pressure relief valve

External fluid reservoir and external filter

Accumulator for emergency extension, (replaces the CO2 blow down bottle and shuttle valve)

Cessna sequence valve and up lock hook

Panic valve for safety

Squat switch to prevent gear actuation on the ground

All components are powder coated for lasting beauty.

24 VDC power supply

- ✈ **We discontinued the landing gear doors and added a Cessna sequence actuator with an up lock hook;** We feel there is minimal training to watch landing gear doors be pulled up by two non-hydraulic steel rods. We decided to add a hydraulically sequence actuator instead. This actuator really teaches the student hydraulic sequencing not electrically sequencing, since this is a hydraulic simulator we thought it appropriate to demonstrate this important theory!
- ✈ **We discontinued the power pack and gave you separate components;** we decided that the hydraulic power pack hides your landing gear control, emergency hand pump, fluid reservoir, thermal relief valve, and main relief valve and they are impossible to see! All the components on our simulator are separate allowing the student to see and analyze each component and its respective job in the hydraulic system. Not to mention the very high cost and complexity of any repairs required to the power pack.
- ✈ **We added a panic button;** Located on the top of our simulator is a large hydraulic button that you simply hit with your hand and all fluid pressure is dumped instantly stopping the gear that is in motion in case of student entanglement.
- ✈ **We removed the CO2 blow down bottle and added an accumulator.** This important fluid energy storage component will give you emergency extension with stored hydraulic fluid again reinforcing our commitment to a full hydraulic gear simulator.
- ✈ **On our new Hyd series we are now demonstrating actuator sequencing** with a gear up lock hook actuator. Hydraulic sequencing with the up lock hook and actuator is in clear view of the students .
- ✈ **We can add a flap and actuator** to the trainer, The flap and actuator is mounted to the side of the unit
- ✈ **Complete curriculum;** Complete operations manual that is written clearly using color photography. Hydraulic flow schematics with over head transparencies The wiring in our electrical schematics follows ATA wire coding identity (not just numbered wires).
- ✈ **We no longer use the hydraulic power pack,** we give you separate components. We decided that the hydraulic power pack hides your landing gear control, emergency hand pump, fluid reservoir, thermal relief valve, and main relief valve making them impossible to see and harder to understand. All the components on our simulator are separate allowing the student to see and analyze each component and its respective job in the hydraulic system. Hydraulic Power packs are almost never disassembled in the shop environment due to their complexity and costs.
- ✈ **All components are operational,** removable, and re-buildable. Parts kits for these common components are available through many parts dealers.

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- ✈ **12 Month Parts and 6 month Labor Warranty**
  - ✈ **Sequenced actuator**, the new HYD-1 now demonstrates actuator sequencing. The Cessna actuator has a hydraulically sequenced double-check ball to time the main actuator with fluid pressure, not just electrical switching
  - ✈ **New safe low-pressure system** and panic valve. Our HYD-1 relieves system pressure at 450 PSI maximum. We have incorporated a push style system relief valve that instantly dumps all system pressure, stopping all motion and allowing for manual manipulation in the event of entanglement.
  - ✈ **Complete** operation manual in full color.
  - ✈ **Completely portable** requiring only 110 volt (220 VAC optional) AC and Mil spec. 5606 fluid to operate

Approximate shipping weight is 650 pounds

Approximate size;

5 feet tall

5 feet wide

3.5 feet wide



