## THRUST REVERSER DESCRIPTION

The engines of the Citation Latitude are equipped with clamshell-type thrust reversers to reduce landing roll distance. The reversers are electrically controlled and hydraulically operated.

The thrust reversers are available on the ground with all three squat switches indicating weight on wheels and are designed with redundant systems to prevent an inadvertent deployment. In addition to the 3 squat switches, the electrically controlled isolation valve, four mechanical locks and a design that allows the aerodynamic forces from high speed flight to ensure they do not deploy all contribute to prevent an in-flight deployment.

The thrust reversers are on the aft section of the engine and blend into the nacelle of the engine forming the exhaust nozzle. They deploy vertically and are held in the stowed position by mechanical locks and aerodynamic forces. During deployment, hydraulic pressure is used to hold the reversers in the deploy position.

Aircraft electrical power is required to operate the isolation and control valves. If power is lost, the thrust reversers are inoperable.

TRU SIMULATION + TRAINING A Textron Company ProFlight Pilot Training Citation Latitude POWERPLANT

## THRUST REVERSER CONTROLS AND INDICATORS

### Thrust Reverser Levers

Finger lift-style thrust reverser levers are located at the top of the throttles and control the deployment and stowing of the reverser panels. Inputs from all three landing gear squat switches are required to enable thrust reverser operation.

### T/R Emergency Stow Buttons

Each T/R Emer Stow button, located below the respective engine's RUN/STOP button, will flash in the event of an inadvertent unlock or deployment of it's respective thrust reverser in flight. The T/R EMER STOW Buttons do not flash during ground operation of the thrust reversers. Pressing the button opens the isolation valve and directs hydraulic flow and pressure to forcing the TR's to the stow position.

### Thrust Reverser EIS Indications

| Description | On Ground Indication | In Flight Indications |
|---|---|---|
| Thrust reverser armed | T/R ARM | T/R ARM |
| Thrust reverser unlocked | T/R UNLOCK | T/R UNLOCK |
| Thrust reverser deployed | T/R DEPLOY | T/R DEPLOY |

**Thrust Reverser Operation**

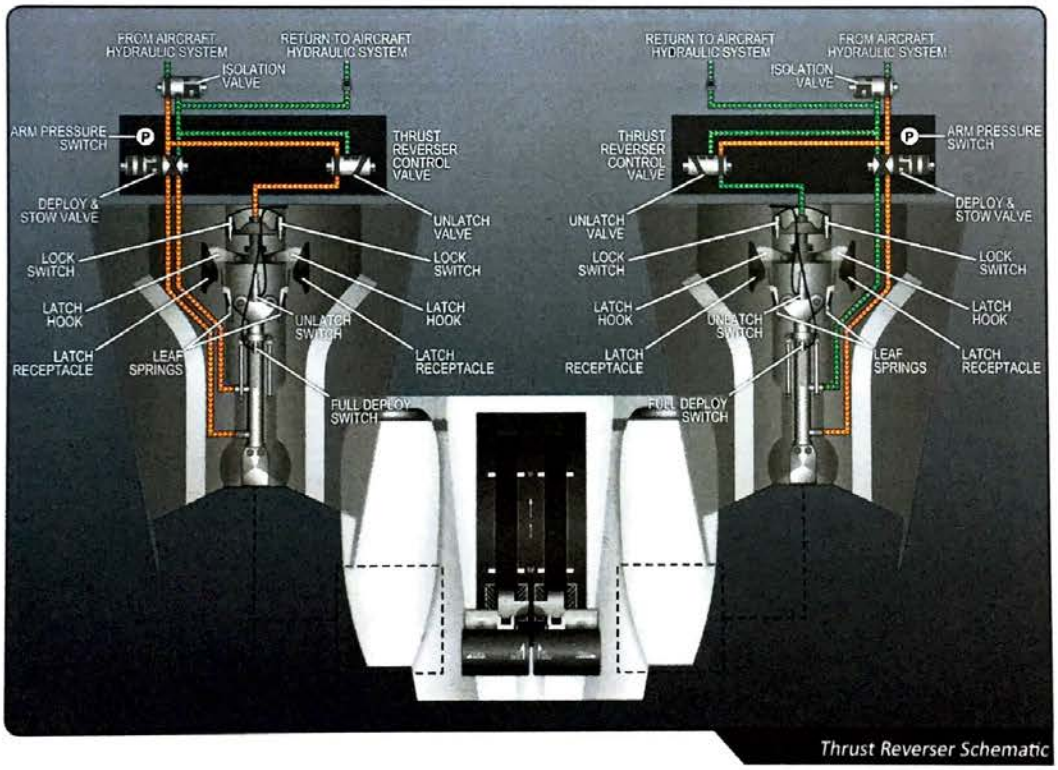
The thrust reversers are checked on the ground as part of the taxi checklist:

1. With the throttles at IDLE, the reversers are deployed while the flight crew checks for all three EIS status messages, activated in sequence
2. The flight crew activates the T/R EMER STOW Buttons and again checks for the appropriate EIS messages (sequenced in reverse of the deployment messages, above). The Buttons should show steady illumination
3. The panels are stowed using the thrust reverser levers on the throttles, while the flight crew confirms that the ARMED indication remains (because the EMER STOW switches are still active)
4. The T/R EMER STOW Buttons are deselected and the flight crew confirms that the ARMED message extinguishes

Reverse thrust power can be increased during landing rollout once the reversers have fully deployed and T/R DEPLOY message is displayed. System logic prevents both early deployment of the panels and any increase of thrust until the panels are fully deployed.

If a thrust reverser deploys in flight, the associated FADEC will reduce engine RPM to flight IDLE. The flight crew should consult the appropriate checklist or the AFM for approved response procedures.

ProFlight Pilot Training Citation Latitude POWERPLANT



*Thrust Reverser Schematic*