

# Flightfax 5

## RQ-7B LAUNCHER MAINTENANCE

RQ-7B Shadows are unique in that they require a nitrogen charged launcher to propel the air vehicle (AV) for takeoff. The launcher accomplishes AV launch by using stored energy from a nitrogen accumulator powering a hydraulic launch cylinder. The accumulator assembly stores energy as compressed nitrogen and hydraulic fluid. Prior to the launch sequence, nitrogen fills both the accumulator and a nitrogen tank. Nitrogen pre-charge pressure must be regularly maintained as it can reduce over time due to temperature changes and leakage. Improper maintenance of the launcher and under-pressurization can lead to catastrophic loss of AVs.

### Q&A

**1. Nitrogen pre-charge pressure is temperature sensitive. A 22°C (40°F) temperature variation will result in how much of a pre-charge pressure variation?**

**Answer:** A pre-charge pressure variation of approximately 150 psi (TM 1-1550-1689-10, Chapter 8).

**2. A higher pre-charge pressures is required when launching with a tail wind. True or False?**

**Answer:** True (TM 1-1550-1689-10, Chapter 8).

**3. How long must you wait for the bottle pressure to equalize before servicing the launchers nitrogen?**

**Answer:** 30 minutes (TM 1-1550-689-23&P, Nitrogen System Servicing WP 1092).

**4. After servicing the nitrogen, how long must you let the temperature and pressure to settle, in a near consistent temperature environment?**

**Answer:** 4 hours (TM 1-1550-689-23&P, Nitrogen System Servicing WP 1092).

**5. How often must the launcher's nitrogen system must be vented/purged to 0 psi?**

**Answer:** 6 months (TM 1-1550-689-23&P, Nitrogen System Servicing WP 1092).



References

- [Aircraft Mishap Rates - Updated 6 June 2021](#) CAC login required
- [Crash Rescue Products | Aviation Posters](#)
- [AAAR Guide](#)
- [AGAR Guide](#)
- [UASAR Guide](#)
- [Leaders Guide to Endurance](#) CAC login required
- [Flight Surgeon Guide](#)
- [Aviation Directorate Staff](#)
- [Other Links and Resources](#)

**Flightfax**  
Read current and past issues and subscribe to receive Flightfax by email.

[See More](#)

### Subscribe to Flightfax

<https://safety.army.mil/ON-DUTY/Aviation/Flightfax.aspx>  
If you have comments, input, or contributions to Flightfax, feel free to contact the Aviation Division, U.S. Army Combat Readiness Center at com (334) 255-3530, DSN 558-3530.

### Review archived issues of Flightfax:

<https://safety.army.mil/ON-DUTY/Aviation/Flightfax/Archives.aspx>



**SUBSCRIBE TO SAFETY PRODUCTS**

**CONTACT US**

