



# Propulsion Test Trailer



## Typical Test Firing Timeline

### Mounting the CTN

The fully fueled CTN (engine) and valve is mounted to the oxidizer tank using the mounting trolley. Alignment is checked and bolts are tightened to the specified tolerances.



T-48 hrs

### Moving Time

The test trailer with the fully fueled CTN (engine) is moved from Scaled's hangar to the test site. There it is bolted down, final instrumentation is completed and the system is connected to Mission Control.



T-24 hrs

### The Final Countdown

After final system checks have been made, cameras started, and range safety has been checked, a quick countdown is called and the switch is thrown. The motor controller automatically ignites and fires the engine for a pre-programmed period of time.



T-0

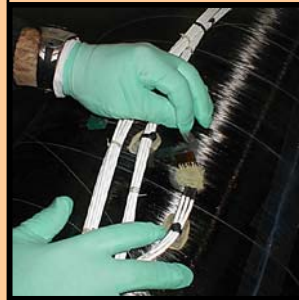


➤ While a typical test firing takes several days to set up, much of the initial work is done in the comfort and security of Scaled's hangar.

➤ On multiple firings, steps such as instrumentation are already done, moving the time-line up.

### Instrumentation and Integration

The motor controller, pressure bottles, actuation valves, and all the sensors are installed and tested on the test bed. New CTNs require new temperature and strain sensors, while CTNs being fired for the second or third time are 'plug and play'.



T-36 hrs

### Filling the Tank

Nitrous Oxide is transferred from the MONODS to the oxidizer tank on the test trailer after it has been brought up to temperature and pressure. Temperatures and pressures must be carefully controlled to ensure a safe transfer.



T-4 hrs

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T-0