The Hercules Owner's Club Application: Performance Tests

Date of flight test:

Departure Airfield: Ground Temperature: ° C

All up weight for test: LBS / KGS

Max. static RPM:

Rate of climb tests:

Best climb speed: KTS / MPH / KPH at RPM

Starting altitude: feet (AMSL)

Time taken to climb 1000 feet: seconds

***Average**:*

Speed tests:

Altitude of tests (AMSL): feet

Max. IAS with full throttle, straight and level KTS / MPH / KPH

Maximum engine RPM with full throttle, straight and level

Economy cruise speed KTS / MPH / KPH at RPM

Were speeds GPS cross-calibrated? YES* / NO

*Calibration: Flown IAS: KTS / MPH / KPH
Average GPS speed: KTS / MPH / KPH

Any additional testing comments:

Pilots Guidance Notes:

The performance tests should be carried out on a calm, smooth day (not thermally active) with adequate cloudbase.

Max. static RPM is an optional performance test as it needs to be conducted by applying FULL throttle on the ground with the aircraft either tied down or chocked.

Rate of climb tests MUST be conducted with the aircraft fully established in the climb, with FULL throttle and the aircraft fully settled at a CONSTANT best climb angle, at the aircraft's 'best climb speed', as stated in the Pilot's handbook (or otherwise accepted). Engine RPM should also be noted once the aircraft is fully stable in the climb.

Three separate ***rate of climb tests*** should be conducted, all commencing at the same starting altitude (between 1000-1500' AMSL is recommended). The time taken to climb 1000' should be recorded for all three tests, after which an average should be calculated by adding together the times, then dividing by three.

Speed Tests:
The aircraft should be established at a fixed altitude in a stable state, trimmed absolutely straight and level and allowed to settle to its maximum airspeed. Max. engine RPM with full throttle may in some cases exceed red-line, please give us the true number if you are comfortable to do so. If you record at red-line RPM rather than full throttle please note in the comments box.

Please record your nominal 'economy' cruise speed and RPM (i.e. your normal operating settings)

GPS Calibration:
To negate for any possible ASI instrument reading errors we recommend a GPS speed check as follows:
Fly three opposing courses (360°, 120°, 240°) at a fixed indicated airspeed and altitude, noting GPS groundspeed on each leg. Add the recorded GPS speeds together and divide by three to give the average, wind-corrected groundspeed – this should be directly comparable to your IAS.