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Gravity Probe B Relativity Mission

PROCEDURE FOR INSTALLATION OF GYROSCOPE HARDWARE

GP-B P0085 Rev -

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PROCEDURE FOR INSTALLATION OF GYROSCOPE HARDWARE

Purpose:

Installation of Gyroscope hardware which includes Suspension, Ground, and Spin-Up Nozzle.

Drawing Number 23206-101
Drawing Number 23207-101

Process Conditions:

- Authorized personnel only to make measurements
- Use only a calibrated DVM.
- Use ONLY non-magnetic tools.
- Gyroscope has completed “rotor support lands”, “spin-up lands” (if applicable), “electrode coatings”, and “ground plane coating”.
- Gyroscope has been inspected and any visible shorts between electrode and ground plane have been etched.
- Gyroscope has been low temperature cycled and an adhesion test has been performed.
- Gyroscope has been video taped during final inspection.
- All Gyro hardware has passed magnetic screening.
- Assemble hardware using Gyro Assembly drawings 23206-101 and 23207-101
- Gyroscope assembly traveler is available.

Procedure:

1. In Class 100 cleanroom, at the Gyroscope cleaning facility, have the gyroscope halves and the gyro hardware on the clean assembly bench.
2. Install electrode pins, washers, and connectors to “S” half electrodes per assembly drawing 23206-101 Rev-.
3. Install ground pin, washers, and connector to “S” half ground plane per assembly drawing 23206-101 Rev-.
4. Install spin-up nozzle at spin-up inlet per assembly drawing 23206-101 Rev-.
5. Install electrode pins, washers, and connectors to “R” half electrodes per assembly drawing 23207-101 Rev-.
6. Install ground pin, washers, and connector to “R” half ground plane per assembly drawing 23206-101 Rev-.
7. Using a DVM, touch one lead to the electrode and the other lead to the respective electrode’s connector on the outside of the housing. Repeat this step for each set of electrodes. Resistance should be < 1 ohm.
8. Repeat step 7 for the Ground plane on each Gyro half. Resistance should be < 1 ohm.