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# Purpose:

### To provide instructions for Technicians in the process and procedures necessary for sandblasting.

# Responsibilities

### The Production Manager and Manufacturing Engineers are responsible for maintaining this procedure for continual suitability for all sandblasting processes.

### The Production Manager and Technicians are responsible for adhering to and effectively carrying out this procedure.

# Safety Considerations

## Eye Protection

### Sandblasting produces the potential for damage to the eyes. As such, eye protection is required for entrance to and utilization of the sandblast area.

### Eye protection will be provided and is located outside of the entrance to the sandblast area.

## Electrical Hazards

### The sandblaster stations as well as vacuum system can reach potentially lethal voltage levels.

# Grit and suggested uses

## Micro grit (Micro Abrasive Blaster): (Accubrade-27 abrasive powder, blend#1, 27 micron)

### Used for surface preparation for epoxy bonding applications. Reference router/assembly procedures.

### Micro abrasive blaster operating range is 30 ± 10 psi.

## Light grit: Mil 8 Glass Beads

### Used for sensor finish

## Heavy Grit (220)

### Remove etching on sensors with heavy grit then go over with light grit to complete finish.

### Remove discoloration on high temp sensors with heavy grit then go over with light grit to complete finish.

### Surface preparation on strain gage sensors.

# Specifications and limitations

## Specifications

### Operating range for ICP sensors is 50 +/- 10 psi unless otherwise stated on the sandblasting machine.

### Do not exceed 40 PSI when sandblasting aluminum Teardrop sensors due to the material thickness.

## Limitations

### Do not sandblast diaphragms.

### Do not sandblast cables

### Do not sandblast off ground plates.

### Do not sandblast face of magnet.

# Sandblasting the parts

## Clean the Parts before Sandblasting

### The sandblast technician must inspect each part for cleaniness prior to mounting and sandblasting.

### If parts are found to be uncleaned, follow the steps listed below:

#### Clean the sensor, threads and mounting stud with Q-Tip and Isopropyl Alcohol (if necessary, a brush can be use to clean the threads.

#### Besure to remove any adhesive material (such as epoxy and silicon) left by the mounting of the sensor during the calibration process.

#### Remove excess alcohol with air nozzle.

#### Inspect part for proper cleanliness using a minumun 10X microscope magnification.

## Mount the Parts onto the Fixture *(if applicatble)*

### Verify the serial numbers on the parts match to accompanying serialization sheet.

### Select appropriate shorting fixture by referencing the BOM. When a shorting fixture is not listed on the BOM, the following table has frequently used shorting fixture part numbers used with ICP sensors.

|  |  |  |
| --- | --- | --- |
| **Connector Thread** | **Type** | **Part number** |
| 10-32 | Cap | 46425-01 |
| 10-32 | Bar | 26718-01, 58426-01 |
| 5-44 | Bar | 51811-01 |
| M3 | Bar | 51811-02 |
| 2 pin, 3 pin MIL | Spring/Polishing Fixture | 100-8986-00, 23025-01, 40170-01 |
| 2 pin, 3 pin, 4 pin Bayonet | Spring | 100-8986-00 |

### Remove previous marks on applicable fixture.

### Place parts on fixture in order by serial number. Only hand tighten parts to avoid potential damage.

### Write the corresponding serial number on the fixture. If applicable, follow the arrow on the fixture when attaching parts.

### Place fixture with parts in proper container for transport.

## Sandblast Parts

### Put on safety glasses before entering the sandblast area

### Verify that the vacuum system is turned on.

### Ground yourself to the sandblasting machine.

### Ensure that the correct grit of sand and pressure is within operating range for the type of sensor or part to be sandblasted.

### Ground shorting caps or fixtures to the sandblasting cabinet using clamp located inside.

### Point nozzle away from sensor or part when first depressing pedal for sand as the pressure buildup could potentially damage the part.

### Sandblast the part.

### Once sandblasting operation is complete, wait until sand settles down before opening machine and removing the parts.

### Use the air hose located within each station to blow off residual sand particles from the components, sensors and fixtures.

## Inspect and Clean the Parts

### Inspect all parts using a minimum of 10X microscope magnification for proper finish. (Refer to QA133 Visual Standard-Sandblasting to ensure proper sandblast quality)

### Check inside all thread holes and any cavitys. If excess sand is present, remove with Isopropyl Alcohol and/or use air hose to blow off the part.

# Area shutdown

### Check area to ensure that it is clear of components / jobs.

### Turn off Vacuum System and lights in sandblasting room at the end of the shift or when not in use.