



LIMS PROCESS TROUBLESHOOTING

1. Mold Flashing:

- Check mold parting lines and moving parts
- Clean parting line
- Reduce shot size
- Increase clamping force
- Raise switchover position
- Decrease Injection hold pressure
- Reduce injection speed and pressures
- Increase temperature, check heaters and thermocouples
- Check for repeatable shot size

2. Non-filled Parts:

- Increase shot size
- Lower switchover position
- Increase injection hold pressure
- Increase injection speed and pressure
- Increase screw back pressure
- Check mold for vacuum leaks, increase mold vacuum time, replace vacuum seals
- Decrease mold temperature
- Check meter mix/static mixer
- Viscosity of material is low, passing by check ring
- Inspect screw tip/check ring assembly
- Clean system, cured material causing issues
- If running a direct inject system:
 - Cold runner not balanced

- Balance runners and gates
- Check diameter of gates and sprues, might need re-tooled

3. Burn Blisters/Bubbles:

- Check vacuum pump, ensure proper operation
- Check mold vacuum seal for wear/brittleness
- Replace vacuum seal
- Decrease clamp force
- Air in the material – check metering pump
- Material is off-ratio, check metering pump for 1:1 ratio
- Decrease mold temperatures
- Decrease injection speed and pressure
- Decrease screw speed
- Contamination in the system
- Runners are filling uneven – need to be balanced

4. Flowlines:

- Check vacuum pump and mold seal
- Increase injection speeds and pressures
- Partially blocked mold gates/runner, causing too much preheating of material
- Thick parts may not be fully cured, deformed upon removal.
- Lower mold temperatures

5. Parts Not Curing Properly

- Increase the cure time
- Check Heaters and Thermocouples
- Increase the temperature of the mold
- Check uniform heating of mold
- Material is off ratio; possibly air in material
- Viscosities of material are different, check metering system
- Static Mixer is partially cured

- Check for cross contamination of material lines; different vendors of Silicone rubber
- Increase back pressure on screw for better mixing

6. Parts Not Curing Properly – Insert Molding:

- Increase mold temperature or increase cure time
- Pre-heat inserts
- Check for contamination

Poor Adhesion of Material to Substrate:

- Increase injection speed and pressure
- Increase cure time
- Increase mold temperature
- Material compatibility, may need the utilization of a Primer or Plasma treat substrate

7. Black streaking in parts:

- Slow injection speed, possible streaking of abrasive filler or pigment
- Inspect check ring and spring assembly. Possible to be causing too much pressure, causing screw to deflect.
- New Injection screw and barrel

8. Scorch – Orange Peel effect:

- Decrease injection speed and pressure
- Decrease back pressure
- Decrease screw rotation speed
- Decrease mold temperature
- Check mold gates, might need re-tooled

9. Backrind:

- Decrease injection speed and pressure
- Increase back pressure
- Decrease mold temperature
- Mold gates wrong size, need retooled.

10. Varying cycle times:

- Recharge time not consistent
 - Check for cured material in meter mix
 - Check cooling on barrel, mixing block/static mixer
- Increase cooling on system
- Decrease screw back pressure to ensure correct filling
- Operator run press, open times varying
- Check ring not seating properly
 - Low viscosity material, bypassing disc check
 - Not seating properly, need cleaned, surface ground

11. Parts not demolding properly:

- Season cavity surfaces with a standard LIMS product
- Treat mold surface. PTFE or a 6% soap solution
- Longer air blow off time or higher air pressure
- Decrease hold pressure
- Shorten cure time (also helps to release sprue sticking in mold)
- Decrease clamp force
- Increase mold temperature
- Ensure ratio of material is 1:1
- Adjust mold surface, rough surface releases better
- Optimize the undercuts
- Reduce surface area of part sticking in mold

Ensure parts are sticking to mold surface:

- Parts tend to stick to cold surface
- Polish Cavity surface
- Increase cavity surface area of part
- Change angle draft

12. Parts too large:

- Decrease hold pressure
- Decrease shot size

- Check for even mold temperature
- Increase mold temperature

13. Parts too small:

- Increase injection speed and pressure
- Increase hold pressure
- Cure of parts not complete, increase time
- Check for even mold temperatures
- Decrease mold temperatures