



common hot stamp problems

PROBLEM	CAUSE	SOLUTION
Flattened characters when tipping raised letters or beads	Die too hot; too much pressure on die; or excessive dwell time	Lower heater setting or head pressure; reduce dwell timer setting.
Distorted imprint on plastic part	Skidding of die on contact with foil due to fixture deflection	Realign die on head slide so that it is directly under the press ram; modify or redesign fixture.
Blurred image or imprint	Excessive die heat	Reduce heater temperature.
Weak impression or no imprint	Insufficient air pressure	Check for obstruction in air line or need for larger air line.
Inconsistent transfer of decoration to the parts	Variation in parts (thickness, warpage, sink marks) Heat variations at die face	Modify heat, pressure, dwell time settings to optimize for parts from all mold cavities. Check that heat control is holding to pre-set tolerances. Look for air gaps between heater block and die dove-tail due to die shim, or heat loss due to riser block.
Decoration fails to adhere to plastic	Insufficient cure time or strip delay Air trapped under foil Contamination on part Wrong foil used Special coating on plastic	To determine if stripping time is the problem, manually lay a section of foil on the part, cycle the press and peel the foil off. If the imprint is good, stripping must be adjusted, either by reducing head up-stroke speed, or adjusting stripper bar settings. Check foil feed and die contact with foil to determine cause of entrapment. Determine what the contaminant is and its source and eliminate it. Check compatibility of foil; replace with correct foil. Determine what coating is and change to a foil that is formulated to be compatible.
Imprint deeper on one end of part than the other	Machine is not level	Level machine and mount die directly under arm.
Flaking in decoration, feathery edges or fill in	Dwell time too long	Shorten dwell time by adjusting air flow control valves.
Loss of gloss in foil	Dwell time too long	Shorten dwell time.
Inconsistent imprints in multiple part set-ups	Part irregularities, i.e., sinks, thickness variations	Shim the fixtures to compensate for part irregularities.
Inconsistent transfer of decoration to the parts	Die temperature too low, or inadequate pressure Dwell time too short Off-spec foil	If die impresses the plastic, increase die temperature. If imprint does not impress the plastic, boost pressure on die. Lengthen dwell time. Manually place a section of foil from a foil that has run well on a part and cycle the press. If it prints well, replace the roll on the machine.
Uneven imprint	Unevenly heated die. Die head cocked off center. Fixture may have shifted.	Check die temperature, look for cartridge heater outage. Determine why die head is cocked and realign as necessary. Reset fixture as needed.
Repeated void in decoration at same location	Molded-in part feature, i.e., rib or boss, unsupported by fixture	Shim or modify fixture.