

CLINCH SOLUTIONS

Troubleshooting

<u>Issue</u>	<u>Cause</u>	<u>Solution</u>
Low holding force- Fastener not seated	Punch and anvil faces are not parallel with each other Strip cocked during installation	Ensure that the punch and anvil are flat and parallel to each other Ensure the lifters and strippers are holding the strip perpendicular to the Clinch Fastener Unit
Poor holding force – Fasteners fall out of part.	Inadequate installation force Part material is too hard for fastener material Burr in hole on strip Oversized pre-pierce hole Piercing Operations may locally harden the strip Die side of the strip may have an oversized hole due to the shear & break of the pierced hole	Apply more force (nitrogen pressure) or change the anvil timing Specify appropriate fastener/ material for part hardness Sharpen Die. Do not countersink or deburr hole Properly size pre-pierced hole Sharpen Die and/or add lubrication station to cool pierce operation Close the clearance up between the punch and die section. Also change them simultaneously
Poor Holding Force of Fastener Near Bend in Strip.	Sheet was bent after fastener was installed. This may have caused distortion of the material around the pierced hole Hole is punched prior to bending and hole has become elongated	Bending should be done prior to installation Punch hole after bending the strip

Troubleshooting (2):

<u>Issue</u>	<u>Cause</u>	<u>Solution</u>
Poor holding force of fastner in panel	Hole in anvil too large or chamfered	Use anvil with larger hole per sign-off drawings
Fastener off-center of hole	Oversize mounting hole. Fastener is cocked in hole and shears side of hole when inserted	Punch hole to specified dimension on sign-off. Check that shank of fastener is being held squarely in Clinch Head before inserting
Threads tight – part buckles	Fastener over-squeezed	Reduce installation force
Tight threads - cracked	Shank length extends through sheet	Choose fastener with proper shank length for part thickness
Fastener does not fit into hole Fastener deforms or shears during installation Sheet metal may extrude into installation tooling causing tool to stick or not work properly	Undersized mounting hole	Change pre-pierce size of mounting hole
Part buckles badly with fastener installed	Lack of countersink in anvil	Provide countersink in anvil to specified dimensions
Head of flush-head stud or standoff cups	Punch diameter too small or not hard and flat	Punch must be larger than head of stud or standoff and preferable equal to anvil diameter
Edge of panel bulges	Mounting hole impedes specified minimum edge distance Nut is over-squeezed	Move mounting hole away from edge Reduce installation force if possible