

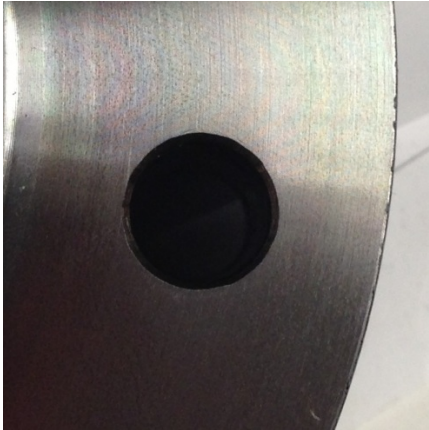


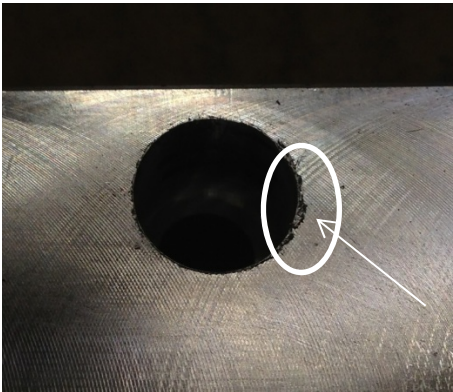
MTS-Test Workmanship Standards

Workmanship Standards Number: 02-02

Rev: A

- 1.1 Name: Machining – Chips, Burrs and Sharp Edges
- 1.2 Workmanship Standards Category: Metal Fabricated Materials
- 1.3 Purpose/Description (why/when/how): The existence of burrs, chips and sharp edges creates unacceptable risks. These risks are to the safety of persons handling the materials and risks to meeting function and quality requirements of assembled components and subsequent operations.
- 1.4 Illustration:
The following illustrations depict “Acceptable” and “Unacceptable” workmanship results.

Acceptable Workmanship	Acceptable Notes
	<p>Entire length of hole is free of burrs.</p> <p>Exposed edges have been broken and are free of burrs, sharp edges and metal slivers.</p> <p>EXCEPT WHERE NOTED ON PRINT THAT SHARP EDGES ARE REQUIRED OR ACCEPTABLE.</p>

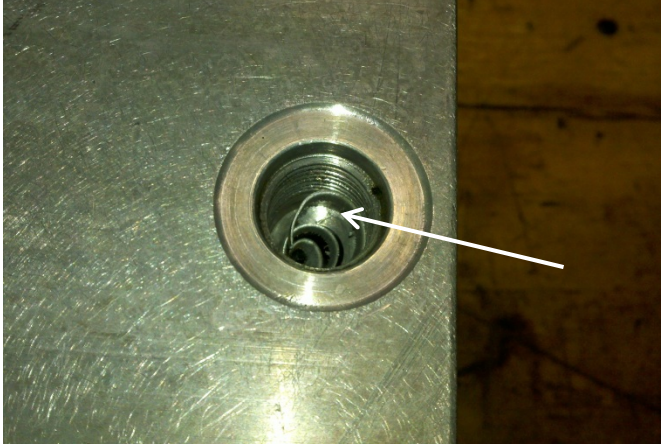

Unacceptable Workmanship	Unacceptable Notes
	<p>Hole has burrs, and/or loose and hanging metal slivers inside and/or outside.</p> <p>Burrs can result in scratching and marking of mating parts during assembly and can make assembly difficult or impossible. They can also impede the correct fit of components causing misalignment issues.</p>



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Unacceptable Workmanship	Unacceptable Notes
	<p>Hole has loose chip inside.</p> <p>Parts cannot be assembled with chip inside and could lead to marking, tearing, or destroying the threads and/or hole. This can lead to leaking ports or incorrectly tightened components.</p> <p>Chips also pose a high risk to contaminate hydraulic systems and could lead to entire system failure.</p>
Acceptable Workmanship	Acceptable Notes
	<p>All sharp edges are smoothed out with gentle radius within print tolerances.</p>



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Unacceptable Workmanship	Unacceptable Notes
	<p>Sharp edges caused by deburr tool area unacceptable. These can lead to cracking of the part during heat treating.</p>



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2 REVISION HISTORY & APPROVAL

REVISION HISTORY			
Rev	Description of Change	Author	Effective Date
A	Initiated	Jim Fischer	

APPROVAL OF CURRENT REVISION		
Name / Function	Signature	Date
Stephen Jordheim / Workmanship Standards Process Owner		
Alan Rivers / Workmanship Standards Co-Pilot		