

## ITRC TOOL ENGINEERING REPORT LONG FORM

<b>ITRC TAG: 11336</b>		<b>DATE: 3-5-2016</b>	
<b>Customer Name:</b> ABC FASTENING			
Address: 12345 MAIN STREET DETROIT, MI 41544			
Work Requested: Evaluation of CLECO DC tool		Instruction From: Jim Smithwycke Power Tool Manger 248-246-5214	
<b>NATURE OF PROBLEM</b>			
Problem Reported: Tool making grinding noise and producing erratic torques.			
Manufacturer: CLECO		Model 48ES1502ZA	Serial No. TG3249
Call Reported by: PRODUCTION SUPERVISOR		Date: 3-1-2016	Time: 2 <sup>ND</sup> SHIFT
Cycles on Tool: 1,250,148	Cycles since Service: 501,276		Last Service Date: 6-13-2014
<b>SERVICE DETAILS</b>			
<b>Service Rendered:</b> Tool received full tear down for evaluation and quoting. Quote was provided via email to Jim. Pictures of the bad idler gears were included in the quote.			
<b>Engineer's Remarks:</b> Reason for failure was a tool maintenance issue. Tool had not been serviced in over 500,000 cycles. The grease inside had been burned completely up. Thankfully the 1 <sup>st</sup> and 2 <sup>nd</sup> stage, ring gear were still okay. These will not need changed for another 250,000 cycles. The motor sun gear needs changed. But that is a typical wear item on this tool.			Status after Service: <i>(Please highlight)</i> Complete/ Incomplete/ Pending for spares/ Under Observation/ <b>Working solution provided</b>
<b>Defects found on inspection:</b> 3 <sup>rd</sup> stage idlers, handle sleeve, con sleeve, motor cover, lock nut, cover, half bearin, O-rings, motor pinion/sun gear.			
<b>Recommendations From Failure Analysis:</b> Tool needs to be part of a structured PM program. A few more thousand cycles and this would have become a catastrophic failure, with the repair cost of upwards of \$4,000.00.			
<b>Events: ( Date &amp; Time)3-5-2016</b>		Start of Service: 1030 AM	End of service: 1145 AM
<b>PLEASE RATE THIS REPAIR BY TICKING AN OPTION</b>			
Extremely Satisfied	Satisfied	Dissatisfied	Annoyed
<b>CUSTOMER FEEDBACK</b>			
Remarks:			
Name :		Designation:	Phone/Fax:
Email:			
Signature:		Date:	Place:

Please fax your response to 440-953-8029.