## Service Bulletin

On Riverhawk Tensioners' Service Life

As part of Riverhawk Company's commitment to continuous improvement of its line of hydraulic tensioning tools, this service bulletin has been developed to offer guidance to General Electric and its customers on their preventative maintenance procedures regarding Riverhawk tools.

Riverhawk tensioning tools are designed for a long service life. Most of the tool's components will last beyond the service life of the turbine equipment. Nevertheless, the most highly stressed component of the hydraulic tool is its puller screw and it will eventually require replacement.

To determine when the puller screw needs to be replaced, Riverhawk Company has tested its service life and has developed the following servicing guidelines; provided the hydraulic tensioning tool has not been damaged by overload, misuse, corrosion or other damaging effects.

Based on these tests, Riverhawk Company has determined that the puller screw should only be subjected to the full load stresses, associated with removing and installing a stud, a maximum of 2000 times or cycles. Riverhawk Company, in consultation with General Electric, recommends to its customers that they should begin considering replacing the puller screw starting at 1500 cycles.

Riverhawk Company recognizes the inherent difficulty in counting the number of cycles. To help our customers determine the number of cycles, we have created the following tables that list the number of outages the tool can be used on before the puller screw needs to be replaced. The total outages count needs to include all of the tool's use on a site with multiple turbine units as well as all use on other sites the tooling may have been loaned to.



Some Typical Riverhawk Tensioning Tools



Some Typical Riverhawk Puller Screws



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GREEN LIGHT: Go for hydraulic tensioning tools with fewer than 1500 full load cycles

Frame	Outages
5P	0 – 30
6B & 6C	0 - 14
6F	0 – 12
7E	0 – 24

Frame	Outages
7F	0 - 21
7H	0 – 36
9E	0 – 19
9FA	0 – 21

Frame	Outages
9FB	0 –19
9H	0 – 33

**Action:** No repair service is required. Riverhawk Company does recommend a routine servicing inspection be scheduled after each outage.



YELLOW LIGHT: Caution for hydraulic tensioning tools with more than 1500 full load cycles, but fewer than 2000 full load cycles

Frame	Outages
5P	31 – 40
6B & 6C	15 - 19
6F	13 – 17
7E	25 – 32

Frame	Outages
7F	22 - 28
7H	37 – 49
9E	20 – 26
9FA	22 – 28

Frame	Outages
9FB	20 –26
9H	34 – 44

**Action:** Riverhawk Company recommends servicing the tool at Riverhawk Company's factory. Contact Riverhawk Company to schedule a repair service.



RED LIGHT: Stop for hydraulic tensioning tools with more than 2000 full load cycles

Frame	Outages
5P	41 +
6B & 6C	20 +
6F	18 +
7E	33 +

Frame	Outages
7F	29 +
7H	50 +
9E	27 +
9FA	29 +

Frame	Outages
9FB	27 +
9H	45 +

**Action:** Riverhawk Company requires servicing of the tool at Riverhawk Company's factory. Contact Riverhawk Company to schedule a repair service.

If the Riverhawk tensioning tool has been damaged by overload, misuse, corrosion or other damaging effects, please contact Riverhawk Company to make arrangements for the tool to be returned to the factory for an inspection and repair service.



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SB-08001 11/19/08 To schedule an inspection or repair service with Riverhawk Company, first contact Riverhawk Company with the following information:

 A) Riverhawk tool part number and its serial number located on the body of the hydraulic tensioning tool (for example: HT-0342 S/N 768), the turbine number, and if possible an estimated cycle count

- or -

B) Turbine type, GE part number of the supplied hardware set (for example: Frame 7FA, GE 358A7202P001), the turbine number, and if possible an estimated cycle count.

Riverhawk Company will also need a site name and a site contact information (for example: contact name, phone number, email address, shipping address)

After scheduling a service time, package the tool in its original shipping container or other suitably strong container. Also, clearly mark on the shipping container and on the accompanying documents the Return Material Authorization code (RMA number) issued by Riverhawk Company.



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