

Young & Franklin Inc. Electric Gas Valves and Actuators



Turn-Key Solutions for the 7FA Fleet

Mission Statement

- Young & Franklin works with End-Users like you to reduce operations and maintenance costs by providing drop-in Electric Gas Valves and Guide Vane Actuators
 - Each product meets or exceeds OEM requirements
 - YF's EMA accept existing servo and trip commands eliminating command logic changes to your control system
 - 4-20mA command scheme also available
 - Qualified for 96,000 hour maintenance intervals significantly reduce operating costs
 - Over 600 units installed worldwide

Electric Stop/Ratio Valve



- Fail Safe to closed position is accomplished by the use of two torsion springs
- Maximum 200ms trip time
- Class VI V-Ball Valve with Composite Seat limits leakage due to composite build-up
 - Class IV is available for heated fuel
- The actuator is suitable for fuel modules in Class 1 Div 2 Hazardous Locations
- V300 or SS-260 versions available

3010 Gas Control Valve



- Rated to 450°F gas temperatures
- 10% better pressure recovery factor than legacy valves
- Non-Plated valves eliminate downstream contamination
- Fail Safe Spring to quickly close the valve
- Maintenance/Service free actuator

Inlet Guide Vane Actuator



- Qualified to 40,000 lbf
- Trip times within OEM specification
- Various mounting & stroke options
- Eliminates high pressure oil from turbine compartment

How do we get this done....

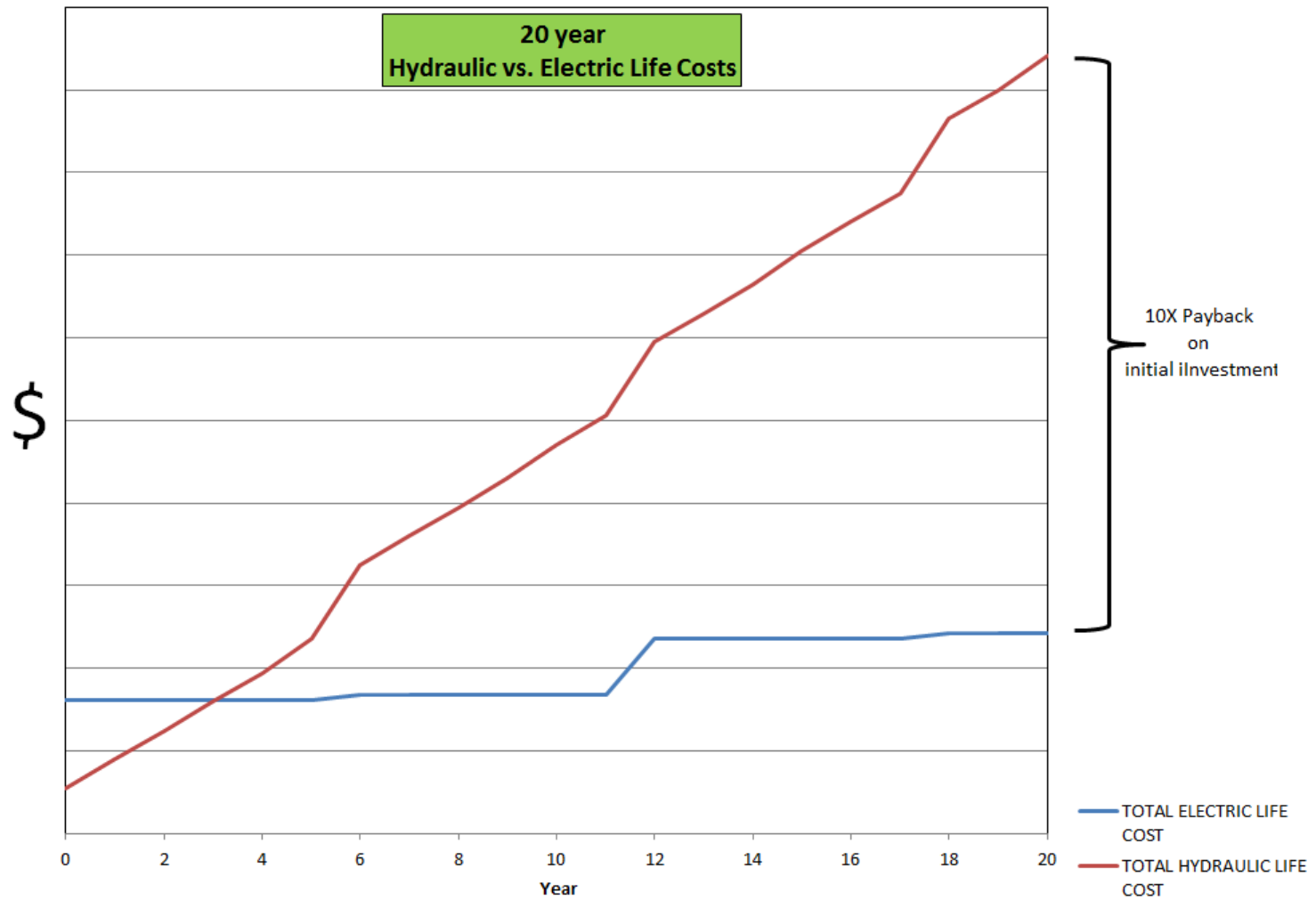
..... It's easier than you think

First Step, Justifying The Investment

- Adding up the costs of maintaining your hydraulic system
 - Typical Maintenance
 - Cost of stocking and replacing Servo's & Filters
 - Cost and frequency of Overhauls
 - Failures
 - Cost of failed parts
 - Cost of down time
 - Environmental and Safety Issues
 - Cost of Insurance
 - Potential liability of oil leaks
 - Commercial Issues
 - Capacity payments and fines

In 20 Minutes, Y&F Can Personalize Your Return On Investment

Typical Return on Investment



Next Step, Site Survey

Control System		Questions
	1	Exact model of turbine
	2	What is the control system - MK5, 6, 6E, Ovation (picture is preferable, with doors open)
	3	Date of control upgrade, if applicable
	4	Any plans for future updates
	5	Command protocol - (4-20Ma OR -8 TO 8Ma)
	6	Direction of positive and negative servo commands
	7	Is customer interested:
		Enable
		Reset
		Fault
		4-20 analog feedback
	8	Does customer want to remove hydraulic system or cap
	9	Is there independent lift oil
DMC's		Questions
	1	Where will DMC's be mounted (picture of PEECC is preferable)
	2	How far from Batteries /Breaker
	3	How far from Actuator
GCV's/SRV		Questions
	1	Gas Temperature
	2	P2 set point
	3	Part numbers of existing valves
	4	Orientation of valves
	5	Fisher Ball Valve type
	6	Is flow testing of valves required
IGV		Questions
	1	Part Number of existing IGV (also need arrangement drawing)
	2	Stroke
	3	Bolted or Welded base
	4	IGV Link Length (pin to pin)
	5	Is a new link preferred
	6	Side or Belly Mount

Last Step, Installation

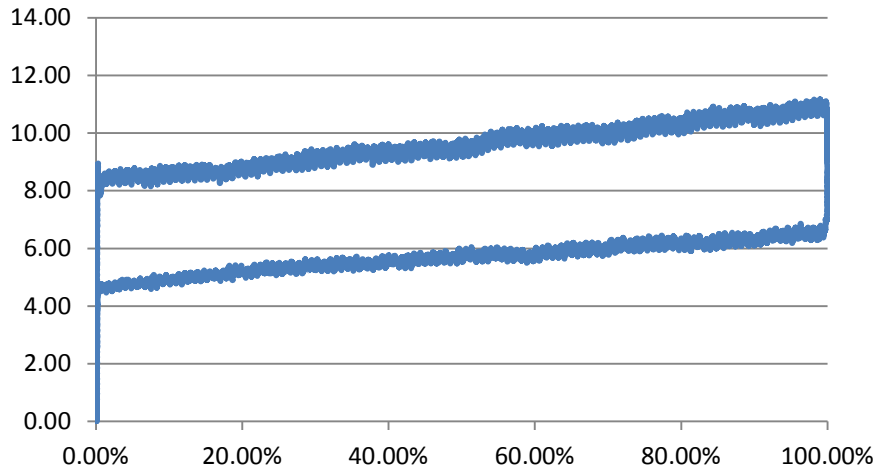
- Determine Level of Support
 - Full Mechanical and Electrical Installation available with TC&E
- Pre-Outage
 - Run electrical cables
 - Mount Digital Motor Controllers
 - Total Duration: 5 days
- Mechanical installation
 - Total Duration: 3 days
- Calibration and Commissioning
 - Total Duration: 1 day

Diagnostic Capabilities

Slow Ramp Current Test

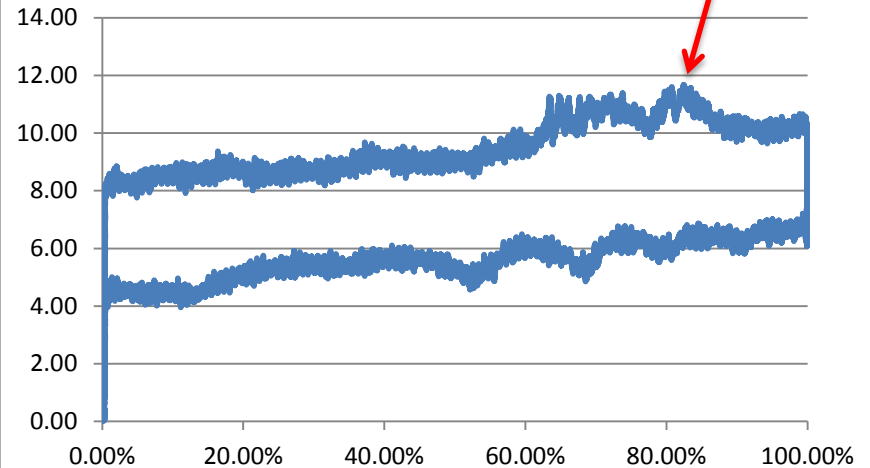
Current Spike Corresponding To Wear Point

Slow Ramp Current Draw
P/N 3010E531-G001, S/N YF22404



Factory Acceptance Test

Slow Ramp Current Draw
P/N 3010E531-G001, S/N YF21037



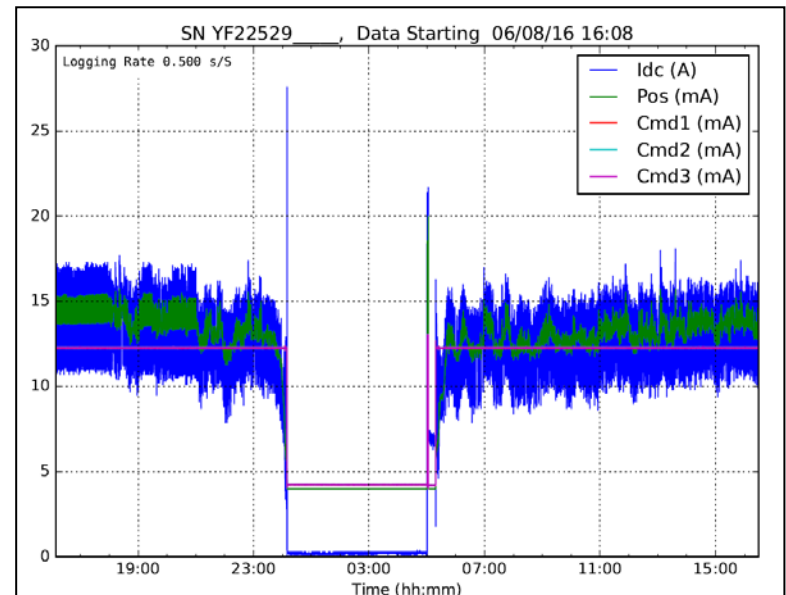
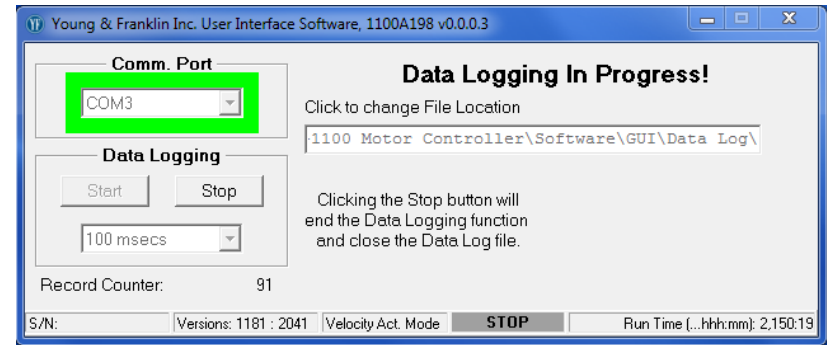
Test of Field Unit

Test Gives Insight Into Health of the Actuator

Diagnostic Capabilities

Data Logging

- The Data logger collects up to 100 samples/second for the following fields:
 - Command (Up to 3 channels)
 - Position Feedback
 - Motor Current
 - Supply Voltage
- Trends can be analyzed to monitor for increased motor current
- MODBUS output available for additional data collection



North America

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