



TELEDYNE
TEST SERVICES
A Teledyne Technologies Company

QUIKLOOK II Software

QUIKLOOK Users' Group

2012 Annual Meeting

August 15-16, 2012
Tabor Academy
Marion, MA



- New Features 2011
- New Features 2012
- Software Error Notices
- User discussion, questions, and suggestions



Quiklook II Software

- Version 2011.350
 - Released January.
- Version 2012.061
 - Released March.



- Version 2011.350
 - Error Notice 2011.350-1
 - On a QUIKLOOK acquisition computer if the Monitor screen had been used then trying to close QUIKLOOK with the Quit menu or by clicking the X on the upper right corner of the form QUIKLOOK will not always close.
 - Workaround:
 - Use Task Manager to close QUIKLOOK
 - Reboot Computer
 - Turn off Computer

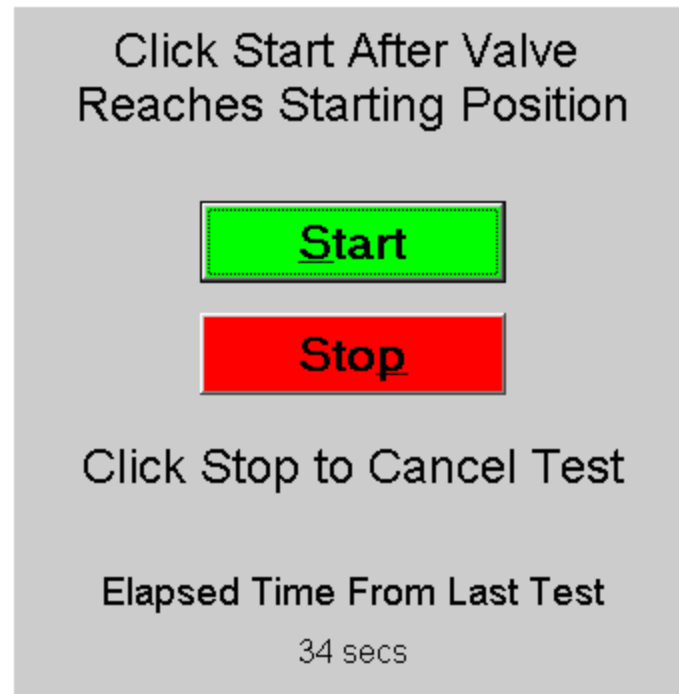


- Acquisition
 - Prompt to confirm Date & Time on Startup on acquisition systems only



- Acquisition
 - Sentry for AOV

- Acquisition
 - Add timer to second start screen – Time since last test ended (MSIV Testing)

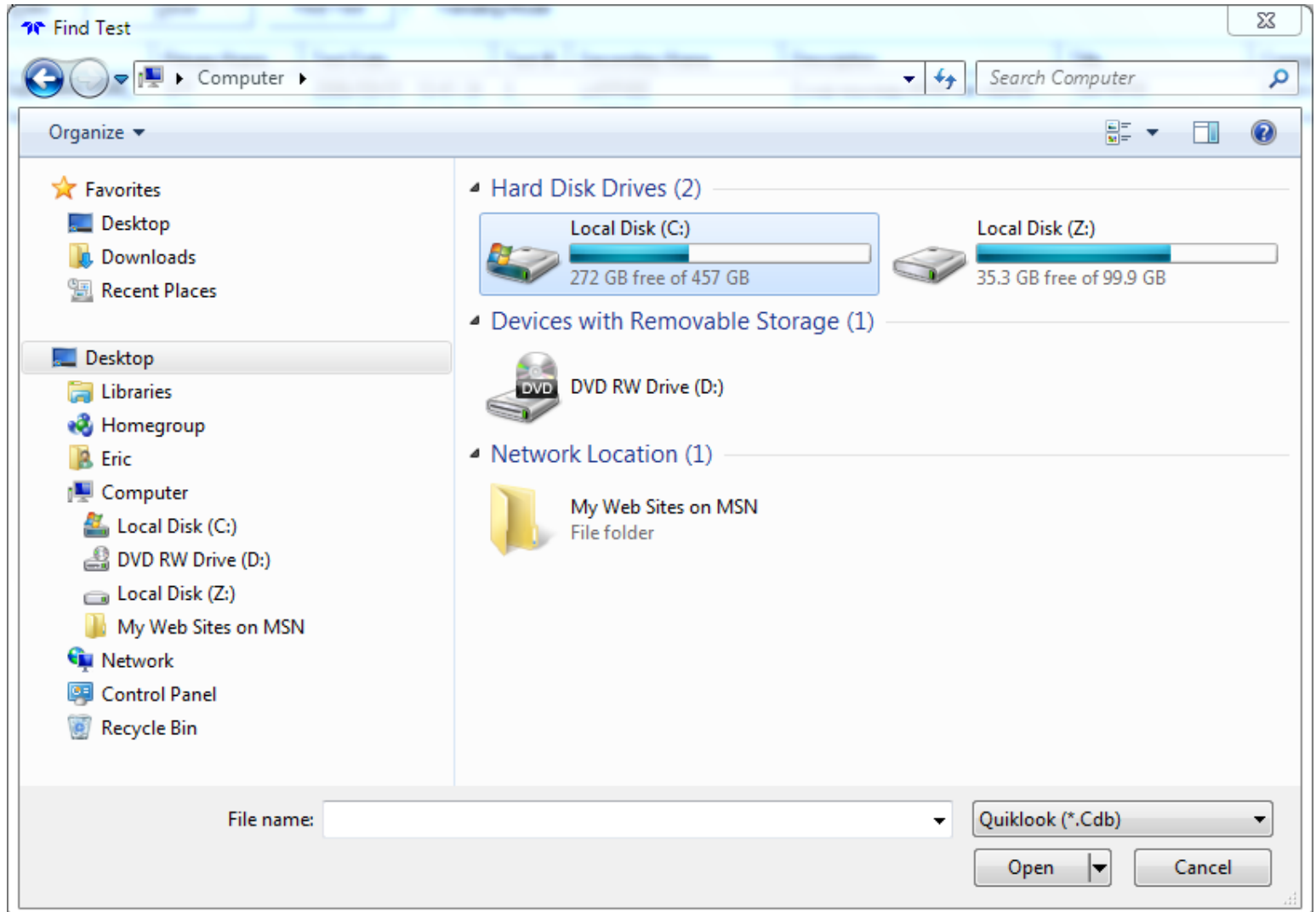




- Monitor
 - Zero all pressure channels option added
 - Warning if pressure channels are not zeroed
 - Add option to Save Config in Monitor Screen
 - Prompt to save config if pressure channels are zeroed
 - Up Arrow increase pressure, down arrow decrease pressure



- Test Menu
 - Find test
 - Made open dialog box Standard Windows dialog
 - Move Recent List to Test Menu





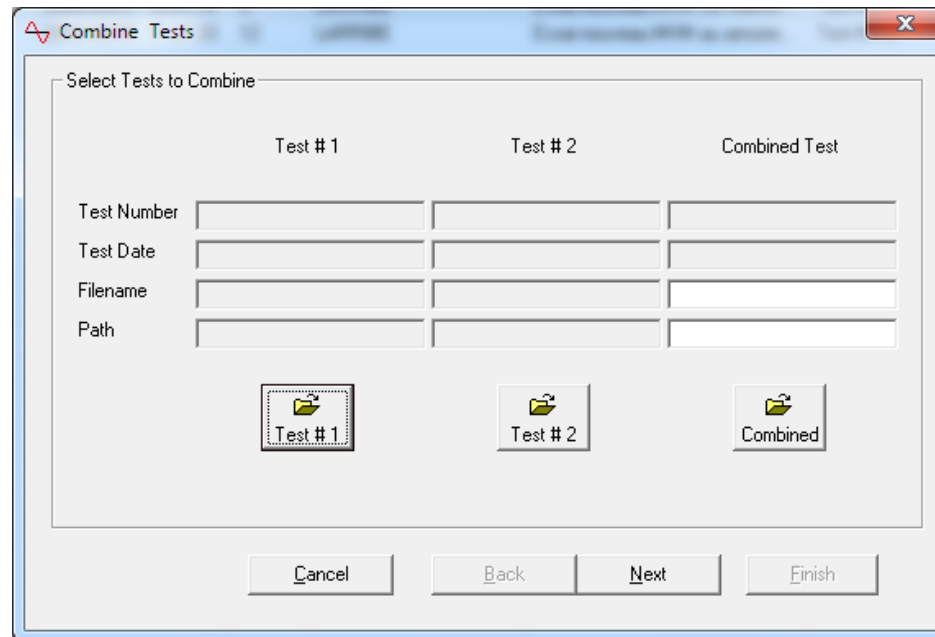
New Features 2011

The screenshot shows the QUIKLOOK II software interface. The title bar reads "QUIKLOOK II - [Test Listing for C:\TestData\EDF\Sent to EDF 2006-09-08\]". The menu bar includes File, Test, Edit, View, Utilities, Reports, Window, Quit, and Help. The "Test" menu is open, showing options: Acquire Data, Find Test, Recent Tests (highlighted), Find Multiple Tests, and Combine Tests. A sub-menu for "Recent Tests" is displayed, listing 15 test files with their full paths. The main window area shows a table with columns for "Filename" and "Comment 2".

Filename	Comment 2
1 C:\TestData\EDF\Sent to EDF 2006-09-08\Close Stroke Original Setup.pdf	
2 C:\TestData\EDF\Sent to EDF 2006-09-08\Tests nouveau MVM SFP 1 Septembre 2006_20060901_1041.cdb	
3 Z:\VB Projects\Quikwin\Verification\2009\CC-140\Tests\Calibration Tests\1st order\00086102.cdb	
4 C:\TestData\Verification\AOV\10069B09.cdb	
5 C:\TestData\TestData 2010\TVA\Browns Ferry\UNIT 1\U1RF8\BFN-1-LCV-006-0001\10312B01.cdb	
6 C:\TestData\Verification\AOV\10069B09.c00	
7 C:\TestData\Verification\Double acting-Linear\11220X01 AL.cdb	
8 C:\TestData\Verification\Spring Pack\00064401.cdb	
9 C:\TestData\Verification\Trending\10055A15.cdb	
10 C:\TestData\Verification\Trending\10055A16.cdb	
11 C:\TestData\Verification\QLII Verification Test Case.cdb	
12 Z:\VB Projects\Quikwin\Verification\2011\CC-141.2\Revision 10\Preliminary Docs\Verification Database\qlIIVer.Cdb	
13 Z:\VB Projects\Quikwin\Verification\2011\CC-141.2\Revision 10\Preliminary Docs\Verification Database\QLII Verification Test Case.cdb	
14 Z:\VB Projects\Quikwin\Verification\2010\CC-153\CC-153.1\Rev. 2\Preliminary Docs\Tests\Rotary\Scotch Yoke\10071B10.cdb	
15 Z:\VB Projects\Quikwin\Verification\2010\CC-153\CC-153.1\Rev. 2\Preliminary Docs\Tests\Linear and Rotary\Double Acting\10079B04.cdb	

At the bottom right of the window, the date and time are displayed as 1/15/2012 7:30 AM.

- Test Menu
 - Combine Test
 - Added cdb option to open dialog box
 - Made open dialog box Standard Windows dialog



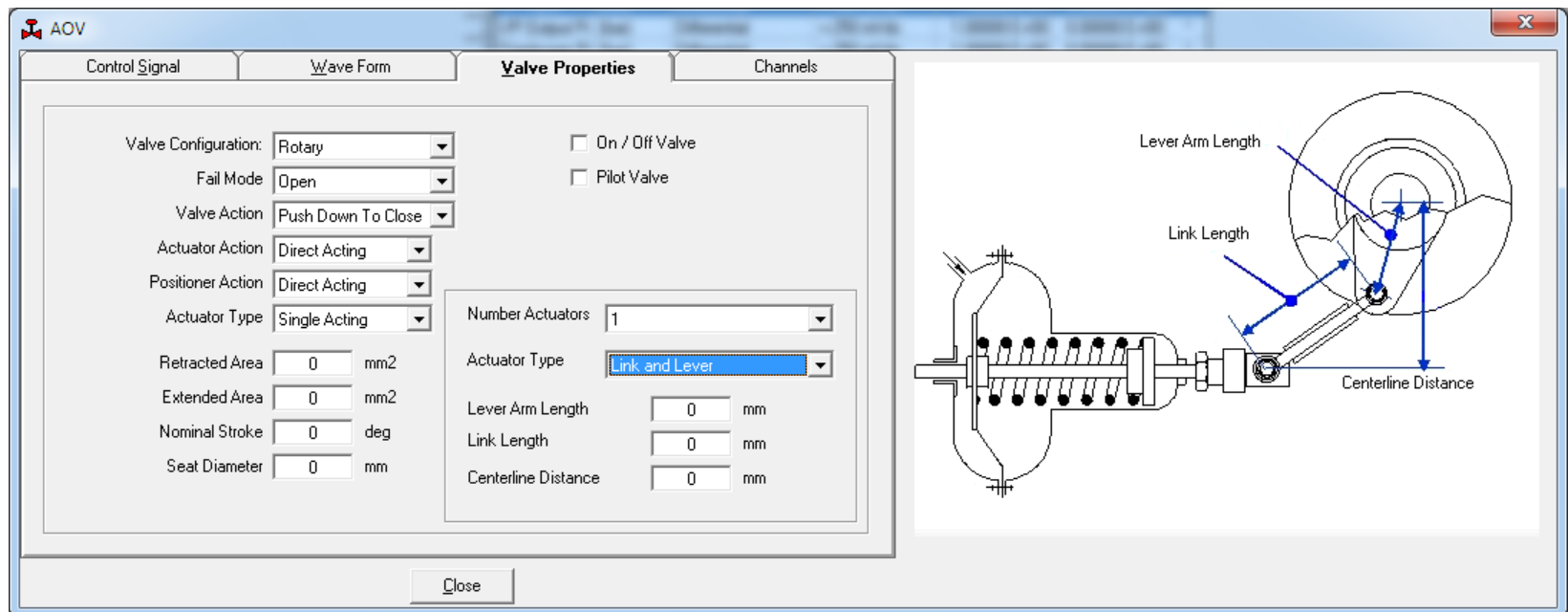


- Preferences
 - Eliminated “Enable AOV” Preference – Set to True
 - Customizable Default Preferences
 - Add Quikstyle “Default”
 - Changed trace colors for the default settings

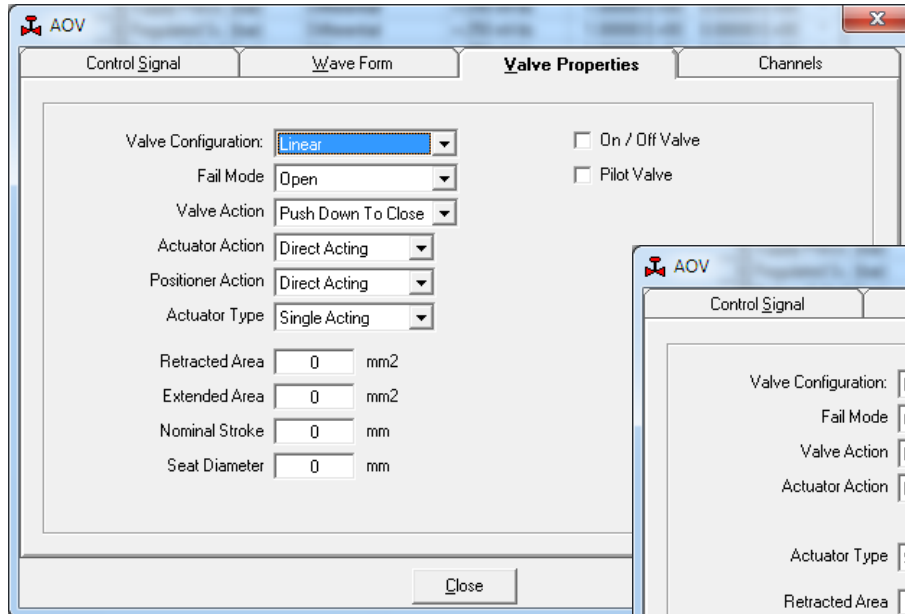


- Configuration
 - First Save of tag file use Primary Name for default
 - Load Config - Made open dialog box Standard Windows dialog
 - Move Recent List & New List to Menu

- Configuration
 - Added a graphic on the valve properties tab for butterfly valves so the user knows what moment arm and distance means.

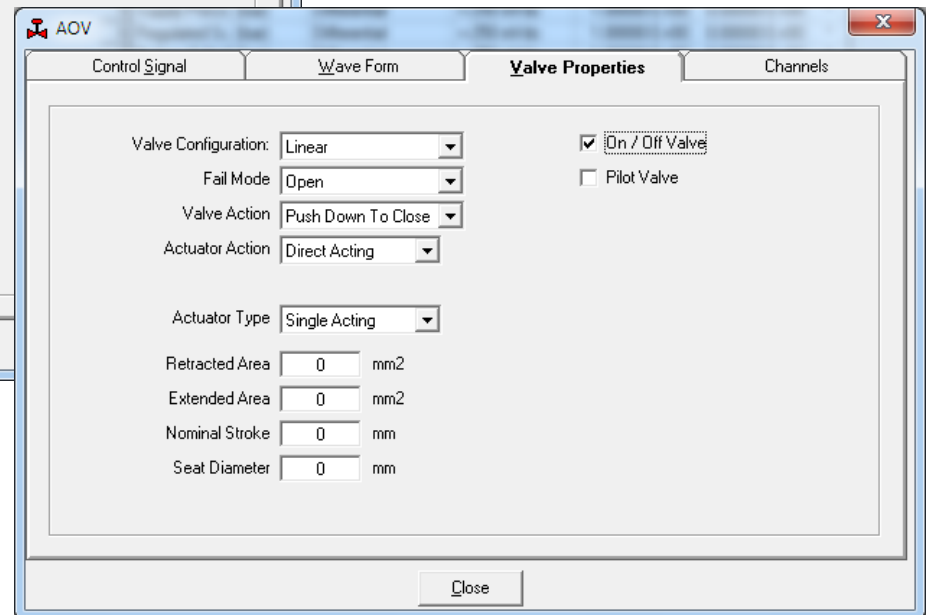


- Configuration
 - Hide Positioner Action if On/Off Valve Checked



The screenshot shows the 'Valve Properties' tab of the AOV configuration window. The 'On / Off Valve' checkbox is unchecked, and the 'Positioner Action' dropdown menu is visible and active.

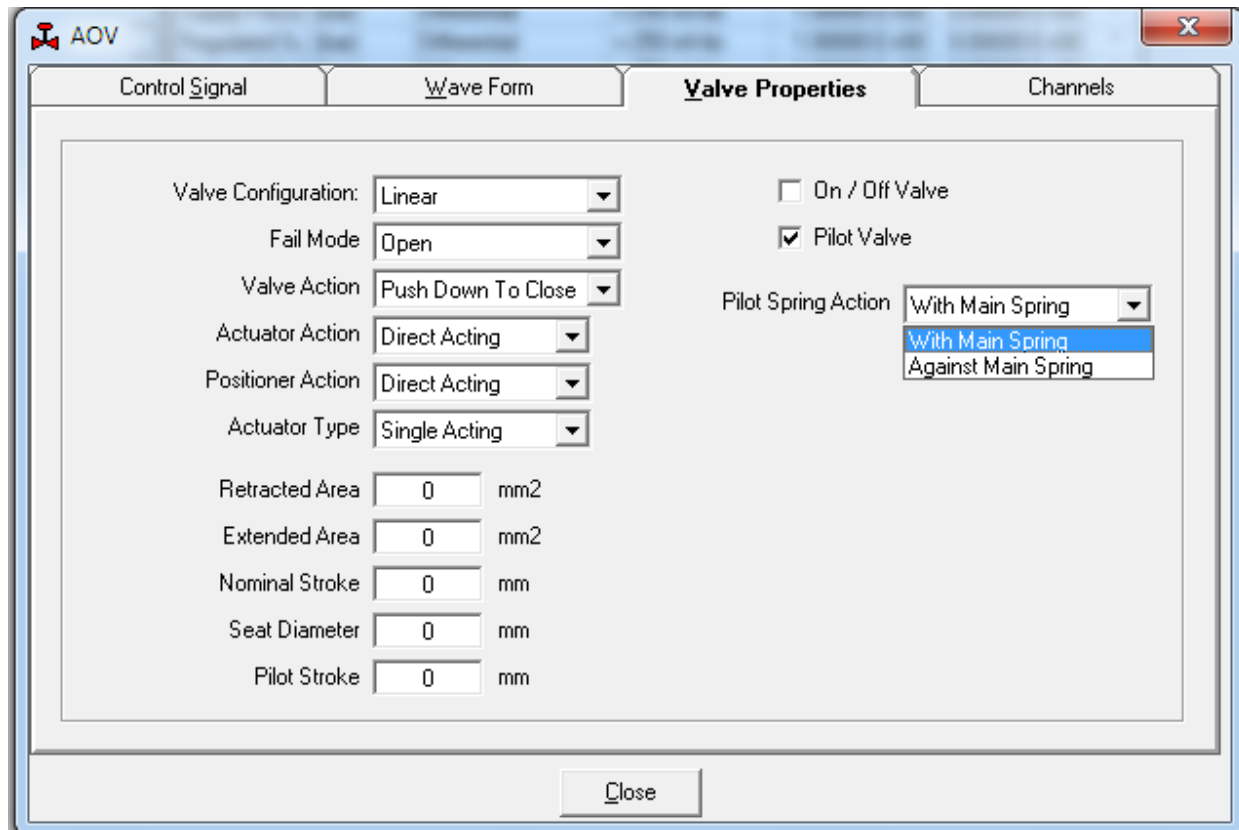
Property	Value
Valve Configuration	Linear
Fail Mode	Open
Valve Action	Push Down To Close
Actuator Action	Direct Acting
Positioner Action	Direct Acting
Actuator Type	Single Acting
Retracted Area	0 mm ²
Extended Area	0 mm ²
Nominal Stroke	0 mm
Seat Diameter	0 mm



The screenshot shows the 'Valve Properties' tab of the AOV configuration window. The 'On / Off Valve' checkbox is checked, and the 'Positioner Action' dropdown menu is hidden.

Property	Value
Valve Configuration	Linear
Fail Mode	Open
Valve Action	Push Down To Close
Actuator Action	Direct Acting
Actuator Type	Single Acting
Retracted Area	0 mm ²
Extended Area	0 mm ²
Nominal Stroke	0 mm
Seat Diameter	0 mm

- Configuration
 - Added Pilot Spring Action Field

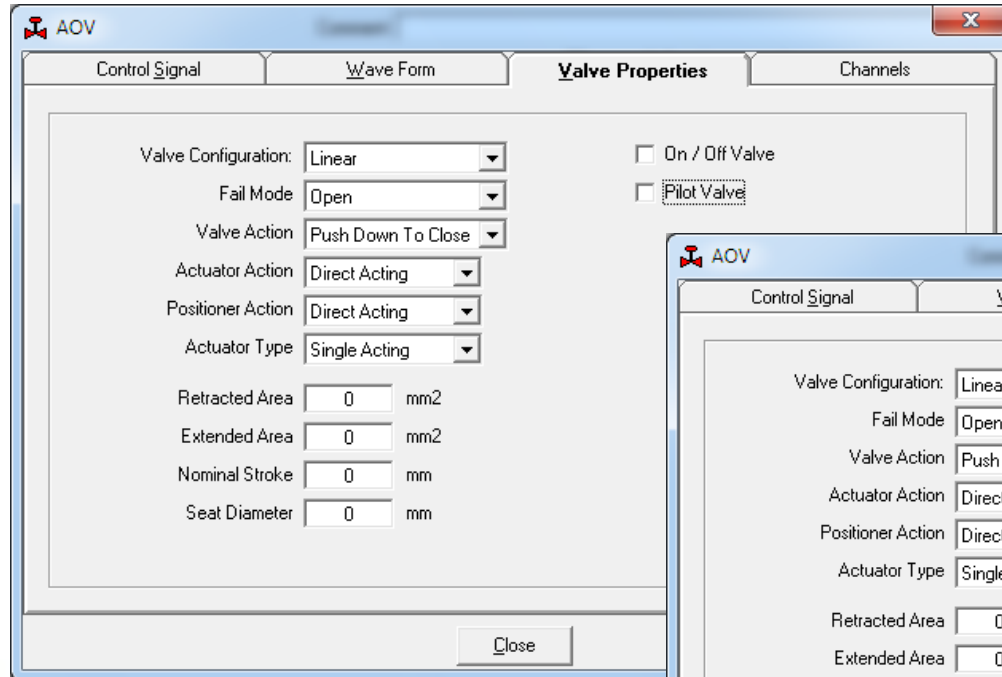


The screenshot shows the 'AOV' software interface with the 'Valve Properties' tab selected. The window contains the following configuration fields:

Valve Configuration:	Linear	<input type="checkbox"/> On / Off Valve
Fail Mode:	Open	<input checked="" type="checkbox"/> Pilot Valve
Valve Action:	Push Down To Close	Pilot Spring Action: With Main Spring
Actuator Action:	Direct Acting	With Main Spring
Positioner Action:	Direct Acting	Against Main Spring
Actuator Type:	Single Acting	
Retracted Area:	0 mm ²	
Extended Area:	0 mm ²	
Nominal Stroke:	0 mm	
Seat Diameter:	0 mm	
Pilot Stroke:	0 mm	

A 'Close' button is located at the bottom center of the window.

- Configuration
 - Hide Pilot Spring Action & Pilot Stroke if Pilot Valve is not checked



AOV

Control Signal | Wave Form | **Valve Properties** | Channels

Valve Configuration: Linear

Fail Mode: Open

Valve Action: Push Down To Close

Actuator Action: Direct Acting

Positioner Action: Direct Acting

Actuator Type: Single Acting

Retracted Area: 0 mm²

Extended Area: 0 mm²

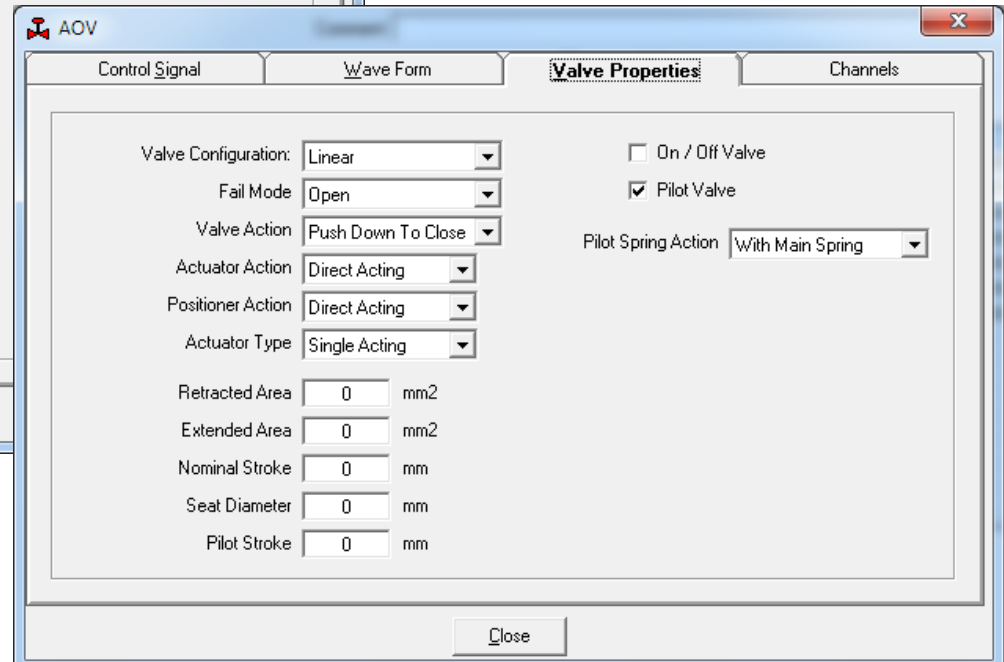
Nominal Stroke: 0 mm

Seat Diameter: 0 mm

On / Off Valve

Pilot Valve

Close



AOV

Control Signal | Wave Form | **Valve Properties** | Channels

Valve Configuration: Linear

Fail Mode: Open

Valve Action: Push Down To Close

Actuator Action: Direct Acting

Positioner Action: Direct Acting

Actuator Type: Single Acting

Retracted Area: 0 mm²

Extended Area: 0 mm²

Nominal Stroke: 0 mm

Seat Diameter: 0 mm

Pilot Stroke: 0 mm

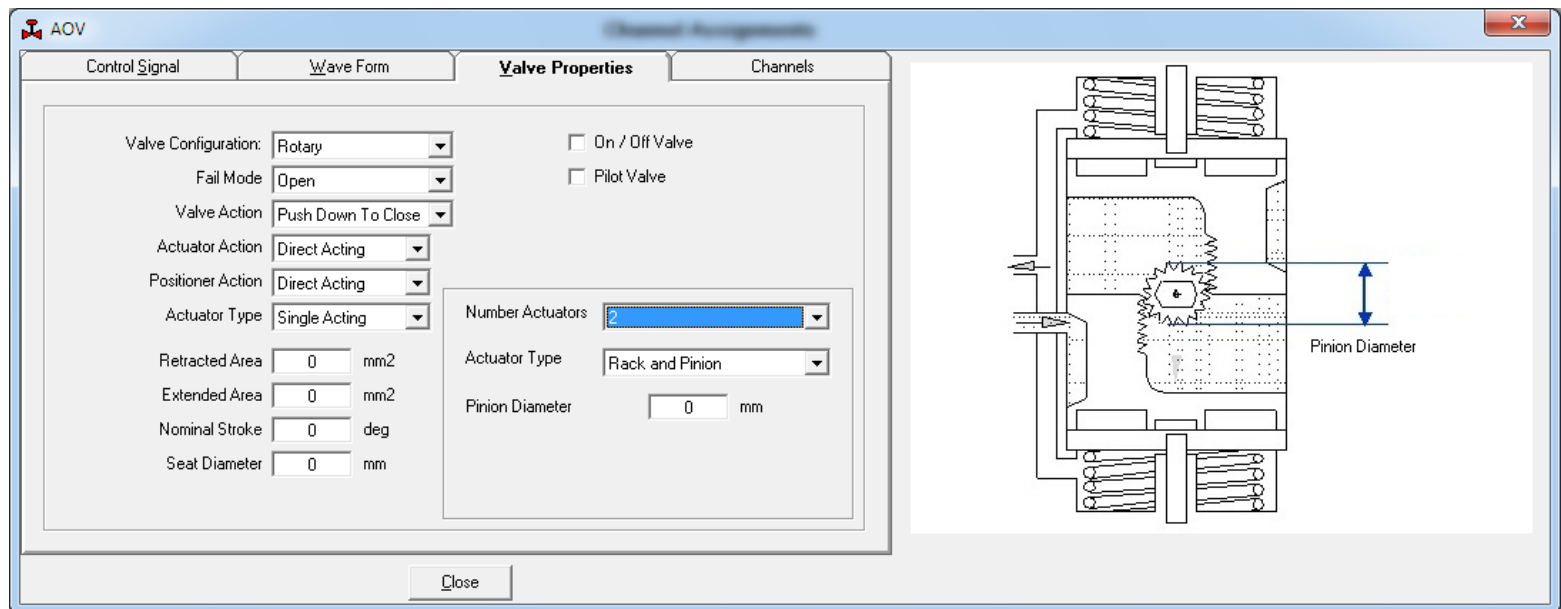
On / Off Valve

Pilot Valve

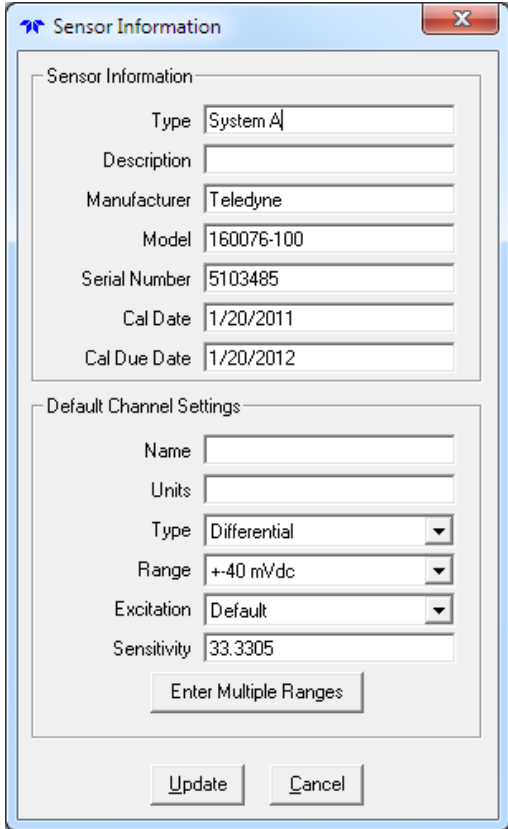
Pilot Spring Action: With Main Spring

Close

- Configuration
 - Add option for number of actuators



- Configuration
 - Load Sensor – Remember Filter



The image shows a software dialog box titled "Sensor Information". It is divided into two main sections: "Sensor Information" and "Default Channel Settings".

Sensor Information Section:

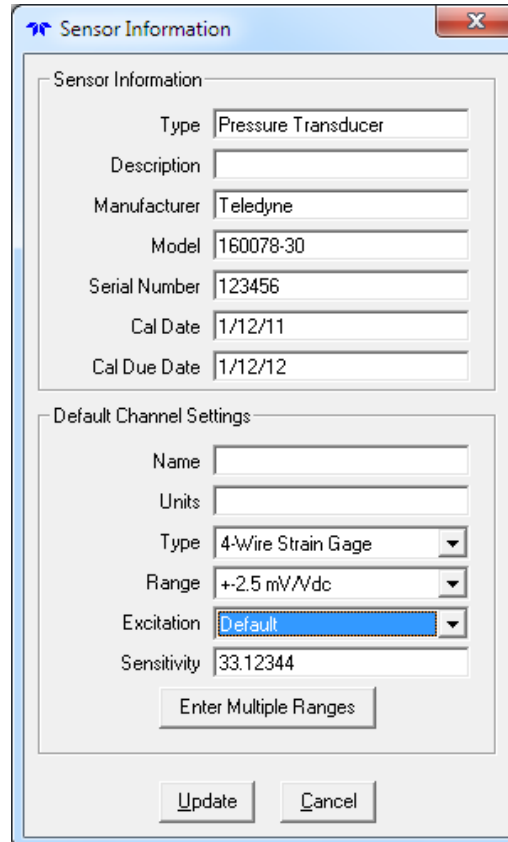
- Type: System A
- Description: (empty)
- Manufacturer: Teledyne
- Model: 160076-100
- Serial Number: 5103485
- Cal Date: 1/20/2011
- Cal Due Date: 1/20/2012

Default Channel Settings Section:

- Name: (empty)
- Units: (empty)
- Type: Differential (dropdown menu)
- Range: +-40 mVdc (dropdown menu)
- Excitation: Default (dropdown menu)
- Sensitivity: 33.3305

Buttons at the bottom of the dialog include "Enter Multiple Ranges", "Update", and "Cancel".

- Sensor Database Utility
 - Added Copy Sensor Function



Sensor Information

Sensor Information

Type: Pressure Transducer

Description:

Manufacturer: Teledyne

Model: 160078-30

Serial Number: 123456

Cal Date: 1/12/11

Cal Due Date: 1/12/12

Default Channel Settings

Name:

Units:

Type: 4-Wire Strain Gage

Range: +2.5 mV/Vdc

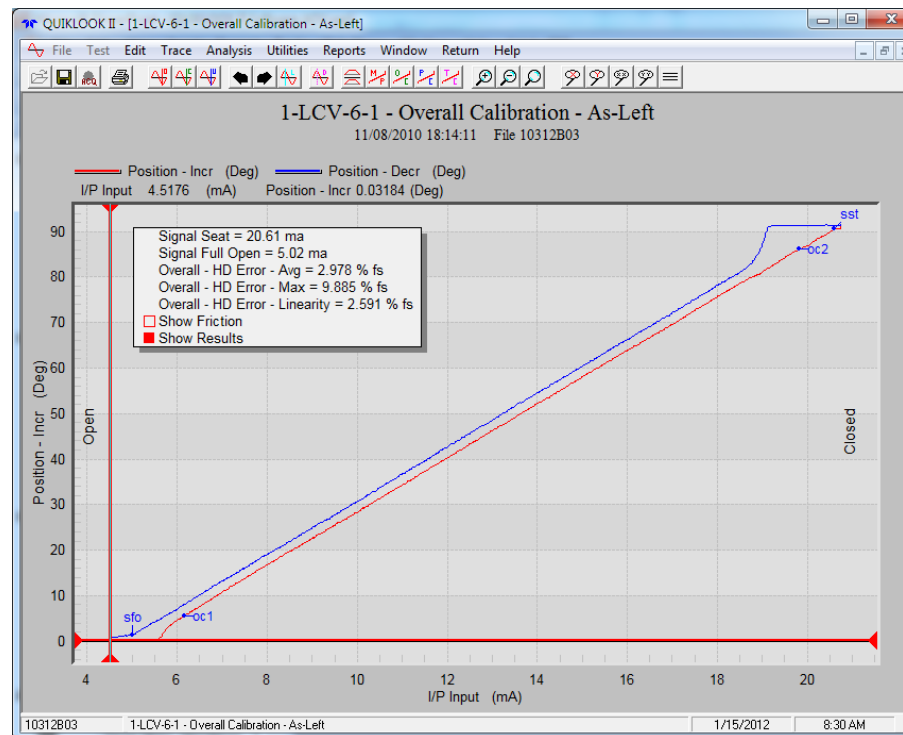
Excitation: Default

Sensitivity: 33.12344

Enter Multiple Ranges

Update Cancel

- Replay
 - AOV special plots only include markers applicable to the plot
 - Added Open Close Labels to Calibration Plots





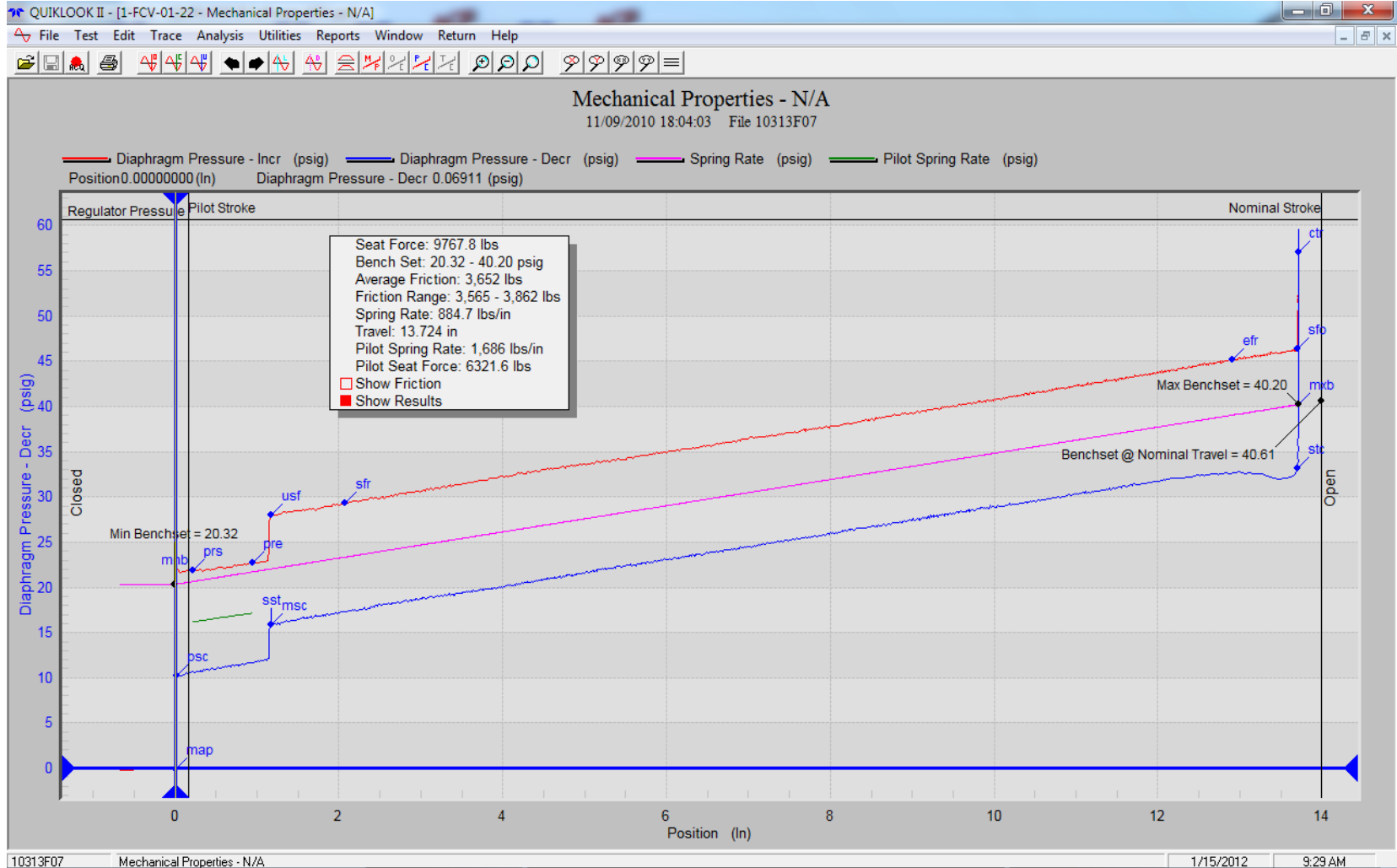
- Analysis
 - Added option to AOV analysis that if ctr marker added then Mechanical Properties Plot is available



- Analysis
 - Mechanical Properties –
 - Benchset @ Nominal Travel added and labeled on graph
 - Added line to trace to show Nominal Travel, from closed
 - Added line to show Regulator Pressure
 - Pilot Valve – Show Rated Travel, from closed, and Pilot Travel, from msc



New Features 2011





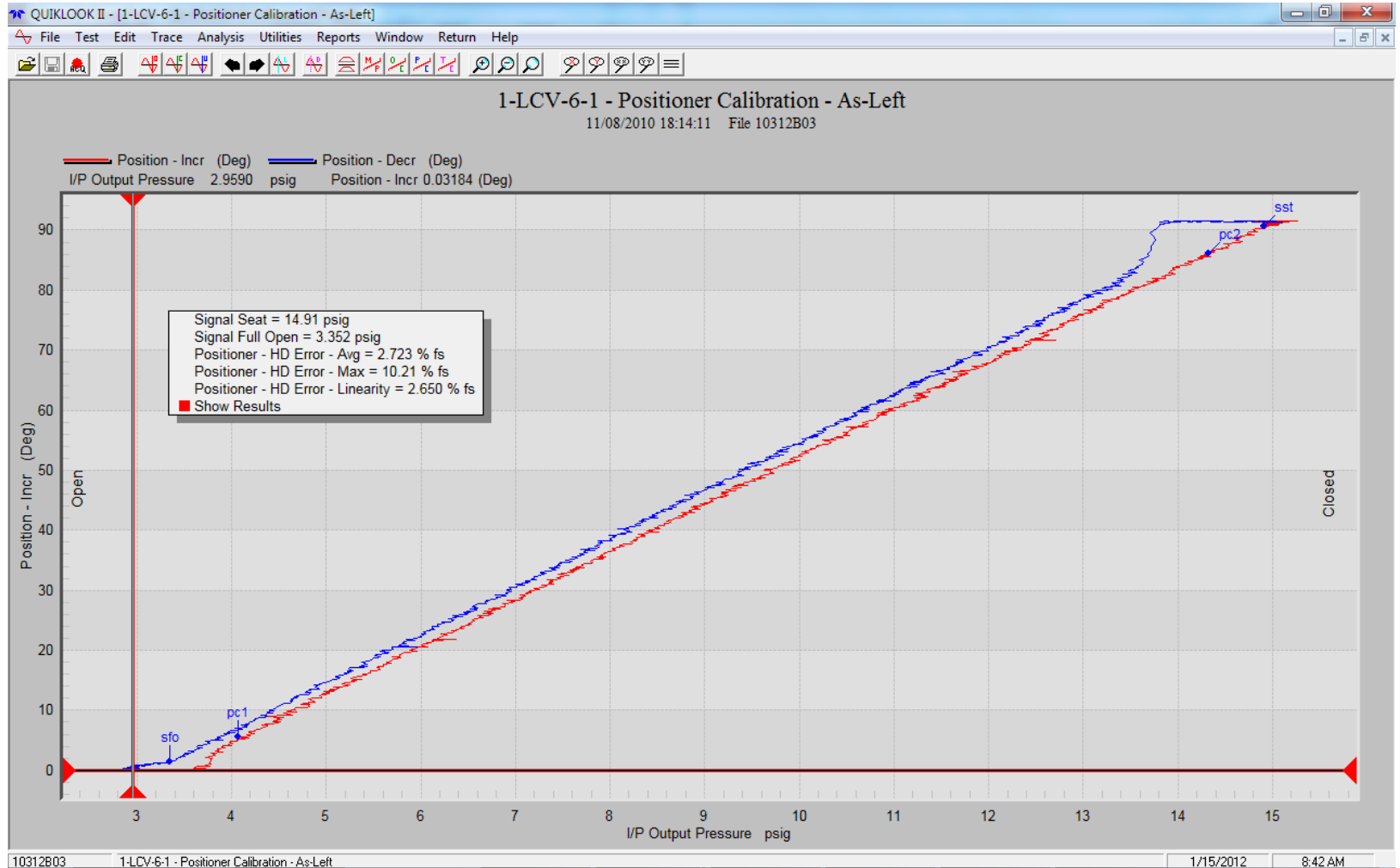
- Analysis

Calibration Plots – Added additional markers for use in calc of errors instead of efr & sfr

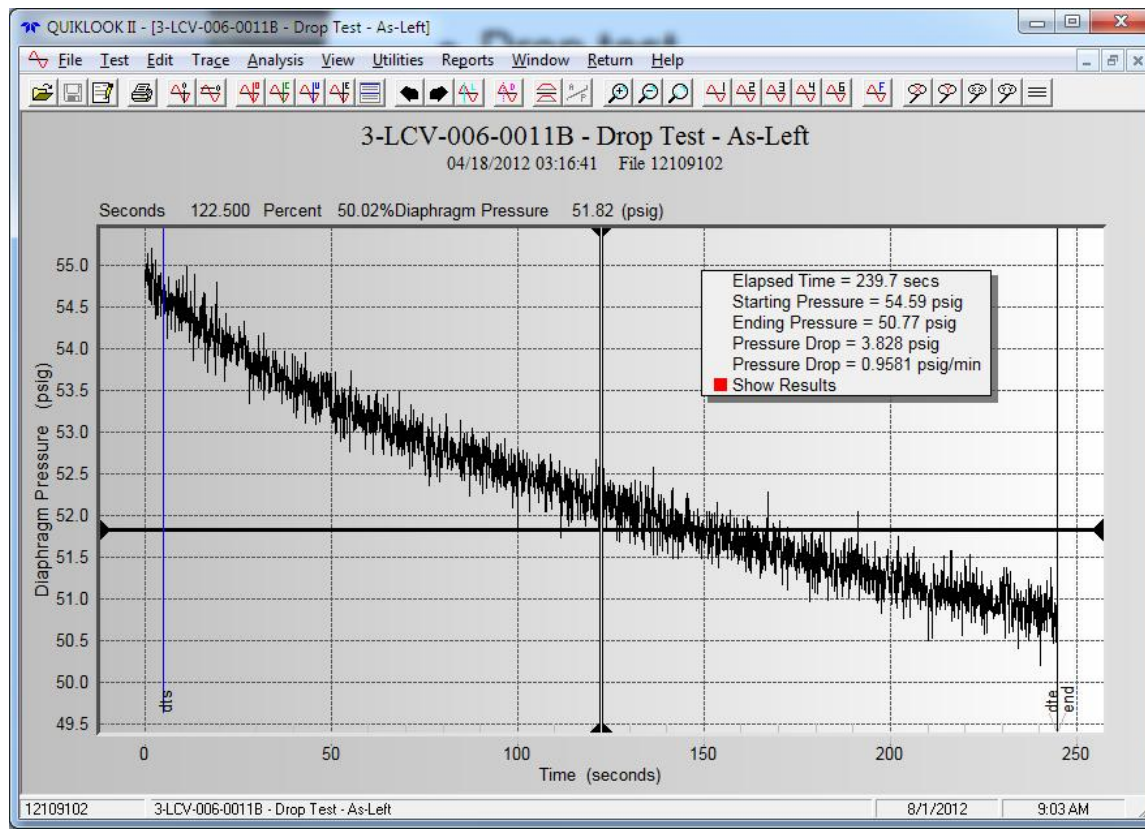
- Positioner Calibration - Markers pc1 & pc2
- Transducer Calibration - Markers tc1 & tc2
- Overall Calibration - Markers oc1 & oc2



New Features 2011



- Drop test
 - Add drop in psi / min
 - Auto mark is placed at end of test





- Analysis
 - Incorporated Pilot Spring Action into Pilot Spring Rate Calc



- Analysis

- Double Acting Valves –

- Always calculate Net Pressure for all test types
 - Net Pressure calc changed to account for valve type:

- Reverse Acting Valves –

- Net Pressure = Bottom Pressure – Top Pressure

- Direct Acting Valves –

- Net Pressure = Top Pressure – Bottom Pressure

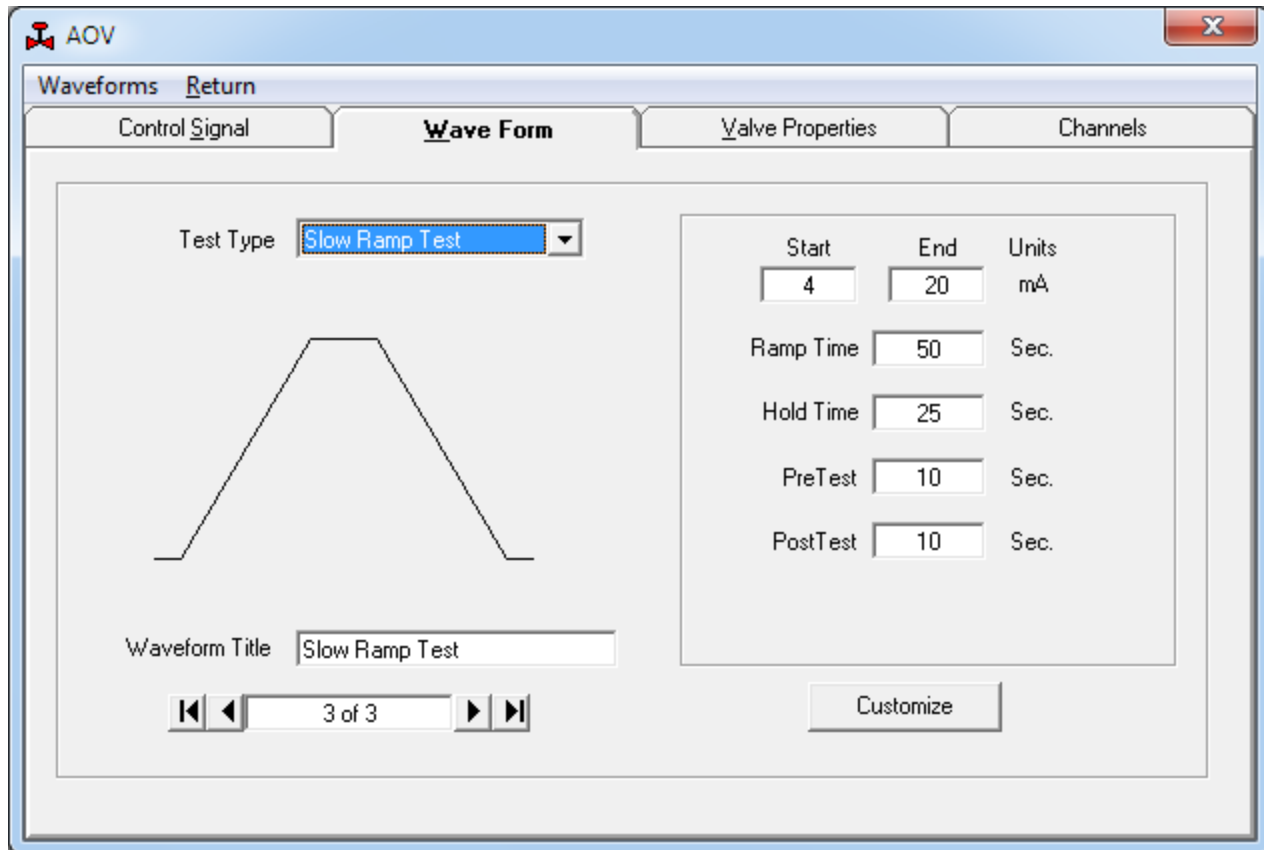


- Analysis
 - Seating, Unseating & Friction loads for rotary valves with Standard units changed to ft-lbs from in-lbs



- To be released fourth quarter.

- AOV Multiple Waveforms



The screenshot displays the AOV software interface, specifically the 'Wave Form' configuration window. The window is titled 'AOV' and has a 'Return' button. It features four tabs: 'Control Signal', 'Wave Form', 'Valve Properties', and 'Channels'. The 'Wave Form' tab is active, showing a 'Test Type' dropdown menu set to 'Slow Ramp Test'. Below this is a graph of a trapezoidal waveform. To the right of the graph is a table of parameters:

Parameter	Start	End	Units
	4	20	mA
Ramp Time	50		Sec.
Hold Time	25		Sec.
PreTest	10		Sec.
PostTest	10		Sec.

Below the graph is a 'Waveform Title' field containing 'Slow Ramp Test'. At the bottom left, there are navigation buttons (back, forward, first, last) and a '3 of 3' indicator. A 'Customize' button is located at the bottom right.



New Features 2012

QUICKLOOK AOV - Demo Valve

Define Graph Trigger Mode View Traces Monitor **Waveform** Return

Open Step Test 1 Date 7/30/2012 8:45:55 AM

Slow Ramp Test
Drop Test
✓ Step Open Step

Technician

Direction N/A

Max Seconds 100000

Elapsed Time / Events 0 0

I/P Input (mA)

Start

AF / AL N/A

Display Time 10

Acquisition Rate 10

The interface displays two empty graphs. The left graph is titled 'I/P Input (mA)' and has a y-axis ranging from -30 to 30 and an x-axis for 'Time (Seconds)' from 0 to 10. The right graph is titled 'I/P Output Pressure (psig)' and has a y-axis ranging from -15 to 15 and an x-axis for 'Time (Seconds)' from 0 to 10. Both graphs are currently blank, showing only the grid.

C:\TestData\TestData 2012\EDF\2012-07-25\ 7/30/2012 8:46 AM

- Configuration
 - Edit Sensor Database from Configuration Screen

Configure 16 Channel Quiklook Test - C:\TestData\TestData 2012\Auto Marking\

Load Valve Save Valve Default Valve Define Graph Channels Edit Sensors Return Help

Primary Name Secondary Name

Description

Title

Comment

Comment

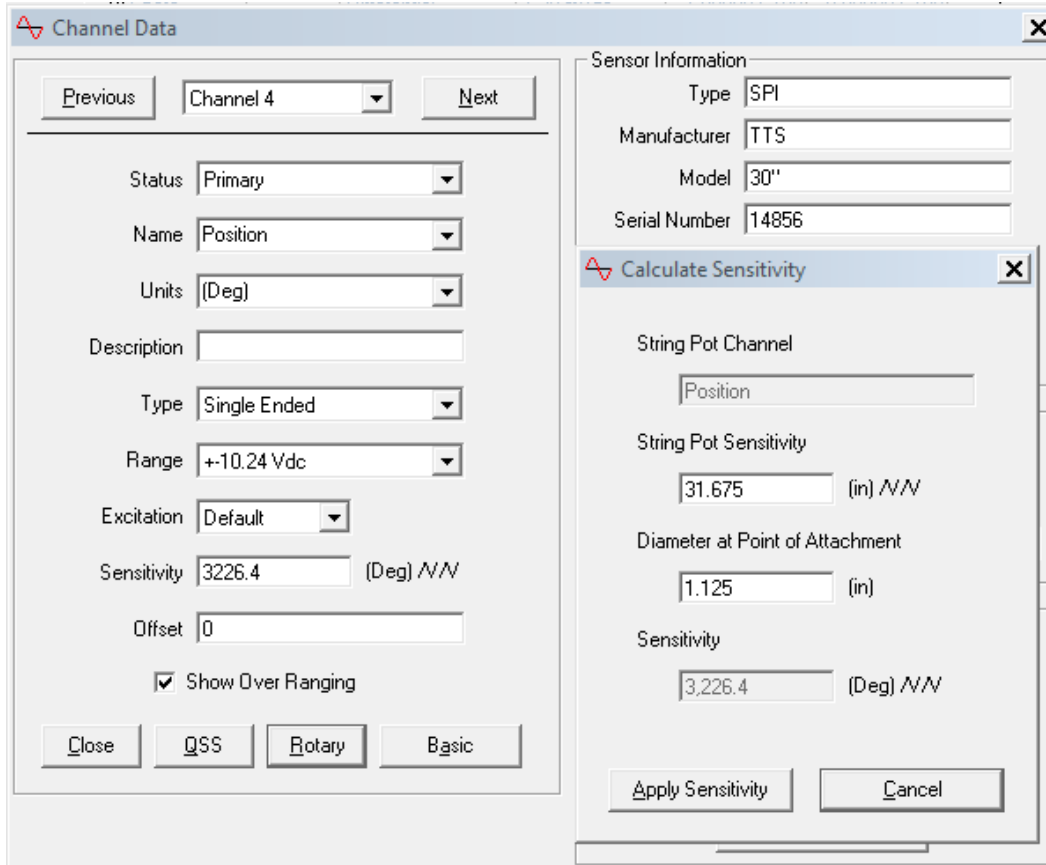
Channel Assignments

Ch	Name	Units	Type	Range	Sensitivity	Offset	Save
1	Current	(Amps)	Differential	+-160 mVdc	1.00000 E+00	0.00000 E+00	*
2	Thrust	(Lbs)	4-Wire Strain Gage	+2.0 mV/Vdc	1.00000 E+00	0.00000 E+00	*
3	Torque	(Ft-Lbs)	4-Wire Strain Gage	+2.0 mV/Vdc	1.00000 E+00	0.00000 E+00	*
4	CST	(mA)	Differential	+1.28 Vdc	1.00000 E+00	0.00000 E+00	*
5	Open	(mA)	Differential	+1.28 Vdc	1.00000 E+00	0.00000 E+00	*
6	Close	(mA)	Differential	+1.28 Vdc	1.00000 E+00	0.00000 E+00	*
7	ByPass	(mA)	Differential	+1.28 Vdc	1.00000 E+00	0.00000 E+00	*
8	SprPack	(In)	Differential	+5.12 Vdc	1.00000 E+00	0.00000 E+00	*
9	Va	(Volts)	Single Ended	+1.28 Vdc	1.38200 E+03	0.00000 E+00	*
10	Ia	(Amps)	Differential	+640 mVdc	1.00000 E+00	0.00000 E+00	*
11	Vb	(Volts)	Single Ended	+1.28 Vdc	1.38200 E+03	0.00000 E+00	*
12	Ib	(Amps)	Differential	+640 mVdc	1.00000 E+00	0.00000 E+00	*
13	Vc	(Volts)	Single Ended	+1.28 Vdc	1.38200 E+03	0.00000 E+00	*
14	Ic	(Amps)	Differential	+640 mVdc	1.00000 E+00	0.00000 E+00	*
15	Spare		Differential	+20 mVdc	1.00000 E+00	0.00000 E+00	
16	Spare		Differential	+20 mVdc	1.00000 E+00	0.00000 E+00	

Test Type

8 Channels
 Quiklook
 MOV
 16 Channels
 Sentry
 ADV

- Configuration
 - Calculate Rotary Sensitivity
 - Remembers String Pot Sensitivity



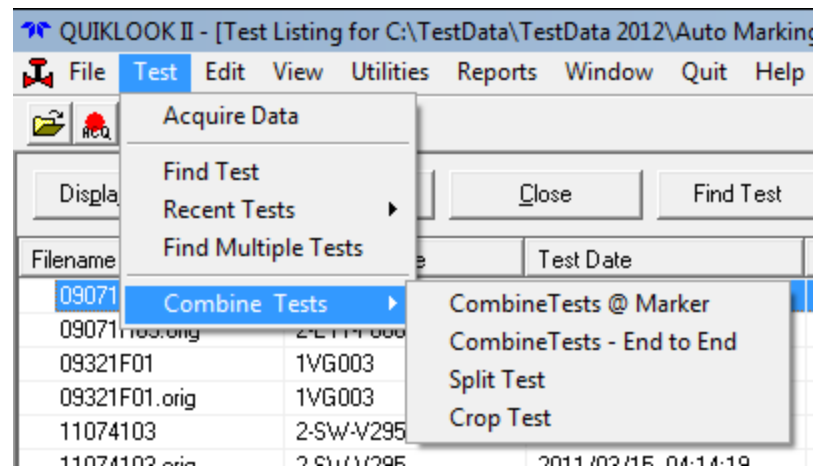
The screenshot displays the 'Channel Data' configuration window, which is divided into two main sections: 'Channel Data' and 'Sensor Information'. The 'Channel Data' section includes fields for 'Status' (Primary), 'Name' (Position), 'Units' (Deg), 'Description', 'Type' (Single Ended), 'Range' (+10.24 Vdc), 'Excitation' (Default), 'Sensitivity' (3226.4 (Deg) /V), and 'Offset' (0). A 'Show Over Ranging' checkbox is checked. The 'Sensor Information' section includes fields for 'Type' (SPI), 'Manufacturer' (TTS), 'Model' (30"), and 'Serial Number' (14856). A 'Calculate Sensitivity' dialog box is overlaid on the 'Sensor Information' section, showing 'String Pot Channel' (Position), 'String Pot Sensitivity' (31.675 (in) /V), 'Diameter at Point of Attachment' (1.125 (in)), and 'Sensitivity' (3,226.4 (Deg) /V). The 'Calculate Sensitivity' dialog box has 'Apply Sensitivity' and 'Cancel' buttons.

- Test Menu

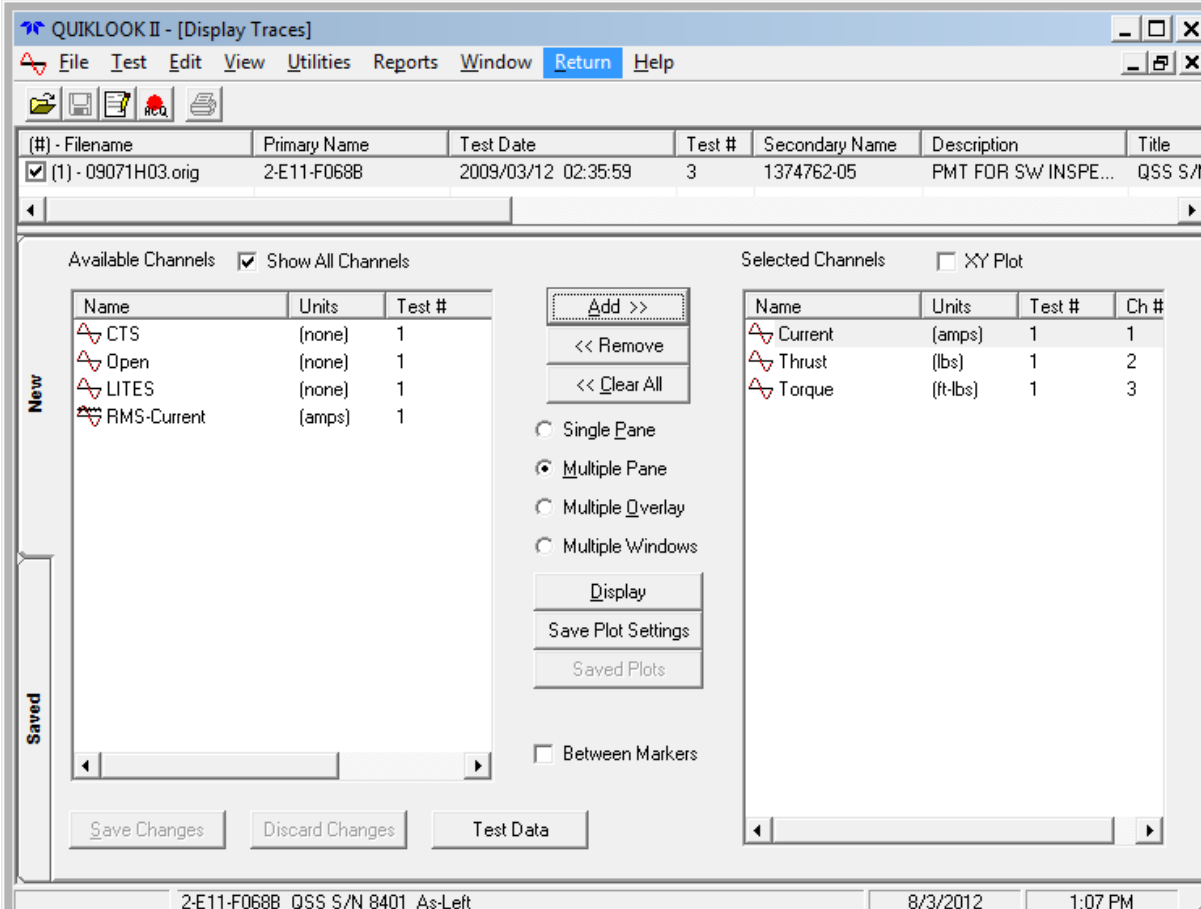
- Combine test

- Combine two tests @ marker
- Combine two tests end to end
- Split test into two tests
- Crop a test saving only data between two markers

- In each case a new test file will be created leaving the original tests intact.



- **Replay**
 - Plot between markers



The screenshot shows the QUIKLOOK II software interface. The main window title is "QUIKLOOK II - [Display Traces]". The menu bar includes File, Test, Edit, View, Utilities, Reports, Window, Return, and Help. The toolbar contains icons for file operations and acquisition. Below the menu bar is a table with the following data:

(#) - Filename	Primary Name	Test Date	Test #	Secondary Name	Description	Title
✓ (1) - 09071H03.orig	2-E11-F068B	2009/03/12 02:35:59	3	1374762-05	PMT FOR SW INSPE...	QSS S/N

Below the table are two panels: "Available Channels" and "Selected Channels".

Available Channels: Show All Channels

Name	Units	Test #
△ CTS	(none)	1
△ Open	(none)	1
△ LITES	(none)	1
△ RMS-Current	(amps)	1

Selected Channels: XY Plot

Name	Units	Test #	Ch #
△ Current	(amps)	1	1
△ Thrust	(lbs)	1	2
△ Torque	(ft-lbs)	1	3

Between the panels are control buttons: "Add >>", "<< Remove", "<< Clear All", "Single Pane", "Multiple Pane" (selected), "Multiple Overlay", "Multiple Windows", "Display", "Save Plot Settings", "Saved Plots", and "Between Markers" (checkbox).

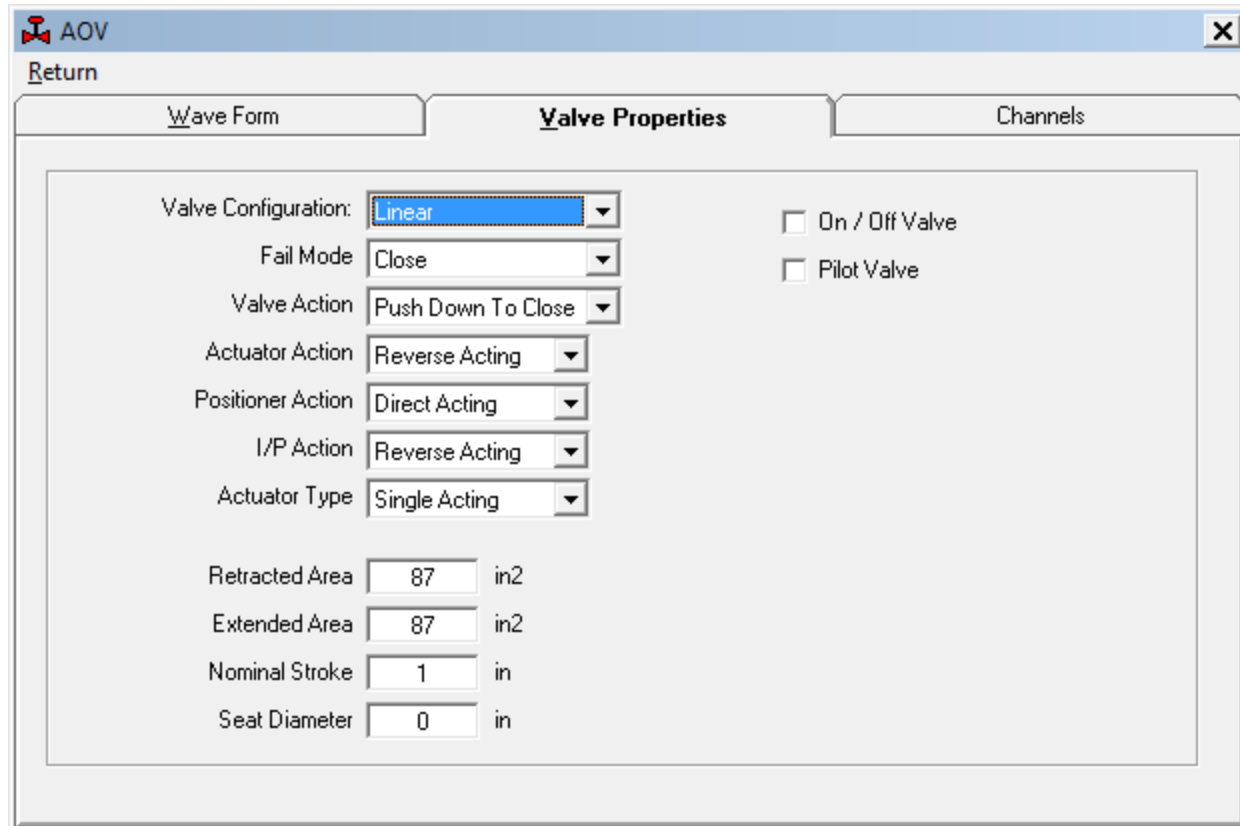
At the bottom of the window are buttons for "Save Changes", "Discard Changes", and "Test Data". The status bar at the very bottom shows "2-E11-F068B QSS S/N 8401 As-Left", "8/3/2012", and "1:07 PM".

- Analysis
 - Automark MOV traces

Name	Time (Seconds)	Time (Percent)	Current (Amps)	Thrust (Lbs)	Torque (Ft-Lbs)	CST (mA)	Green (mA)	Red Light (mA)	Open (mA)	SprPack (In)
c0	1.974	9.87%	0.02899	442.7	7.489	0.3590	-0.00007E	-0.02728	0.000190	0.001081
c1	1.986	9.93%	18.86	521.3	5.044	-0.07397	0.000228	-0.03593	0.001259	0.001189
c4	2.185	10.93%	4.623	-521.3	-5.846	-0.2098	-0.00034E	-0.02846	-0.000381	-0.001117
c6	2.266	11.33%	3.877	-564.0	-4.700	-0.3105	-0.00022E	0.01854	-0.00095E	-0.00115E
c5	8.286	41.43%	0.3815	-478.7	-4.738	0.1225	0.1606	-0.05505	0.000839	-0.00118E
c11	8.402	42.01%	1.497	-521.3	-4.681	0.07637	0.1187	-0.05817	0.000534	-0.00122E
c14	8.863	44.32%	6.657	-9.637	-98.54	-0.2989	-0.2549	-0.01259	-0.000572	-0.01243
c8	8.865	44.33%	6.587	-9.627	-99.27	0.02235	-0.1992	-0.01041	0.000572	-0.01290
c15	8.887	44.44%	-3.117	-9.756	-104.3	0.002480	0.2598	-0.00110E	-0.00003E	-0.001773
t16	8.974	44.87%	-0.03204	-11.332	-115.0	-0.00003E	0.09743	-0.00007E	0.000152	-0.02425
c16	8.985	44.93%	-0.05951	-11.483	-113.0	0.000000	0.1190	-0.00003E	0.000076	-0.02450
c17	10.576	52.88%	0.01373	-11.252	-102.2	-0.00003E	-0.1199	-0.00003E	0.000000	-0.02414
o0	12.168	60.84%	-0.01831	-11.197	-101.4	0.2536	0.1944	-0.00007E	0.01888	-0.02425
o1	12.189	60.95%	-30.70	-11.130	-38.97	0.3097	0.1296	-0.000267	0.01011	-0.02414
o11	12.283	61.42%	2.887	-8.182	-13.70	0.02987	0.1018	-0.000114	0.006409	-0.02378
o9	12.854	64.27%	-5.038	5.394	55.67	0.4104	0.2642	-0.000801	0.01083	0.001729
o13	12.997	64.99%	4.932	614.8	9.285	-0.2872	-0.1403	-0.02495	-0.01553	0.001117
o12	15.909	79.55%	1.718	516.4	8.406	-0.2972	-0.2522	0.04261	-0.1767	0.001081
o14	18.801	94.01%	-3.896	565.6	9.189	0.4096	0.2633	-0.01225	0.3922	0.001189
o15	18.891	94.46%	1.711	573.8	8.444	-0.3122	-0.2734	0.03708	-0.09068	0.001297
o17	18.901	94.51%	-3.976	613.2	9.094	-0.01431	0.01228	-0.01163	0.002022	0.001081
end	19.999	100.00%	0.003052	477.1	7.011	-0.00007E	0.000000	-0.04131	0.000000	0.001153

Close

- Configuration / Analysis
 - Add I/P Action

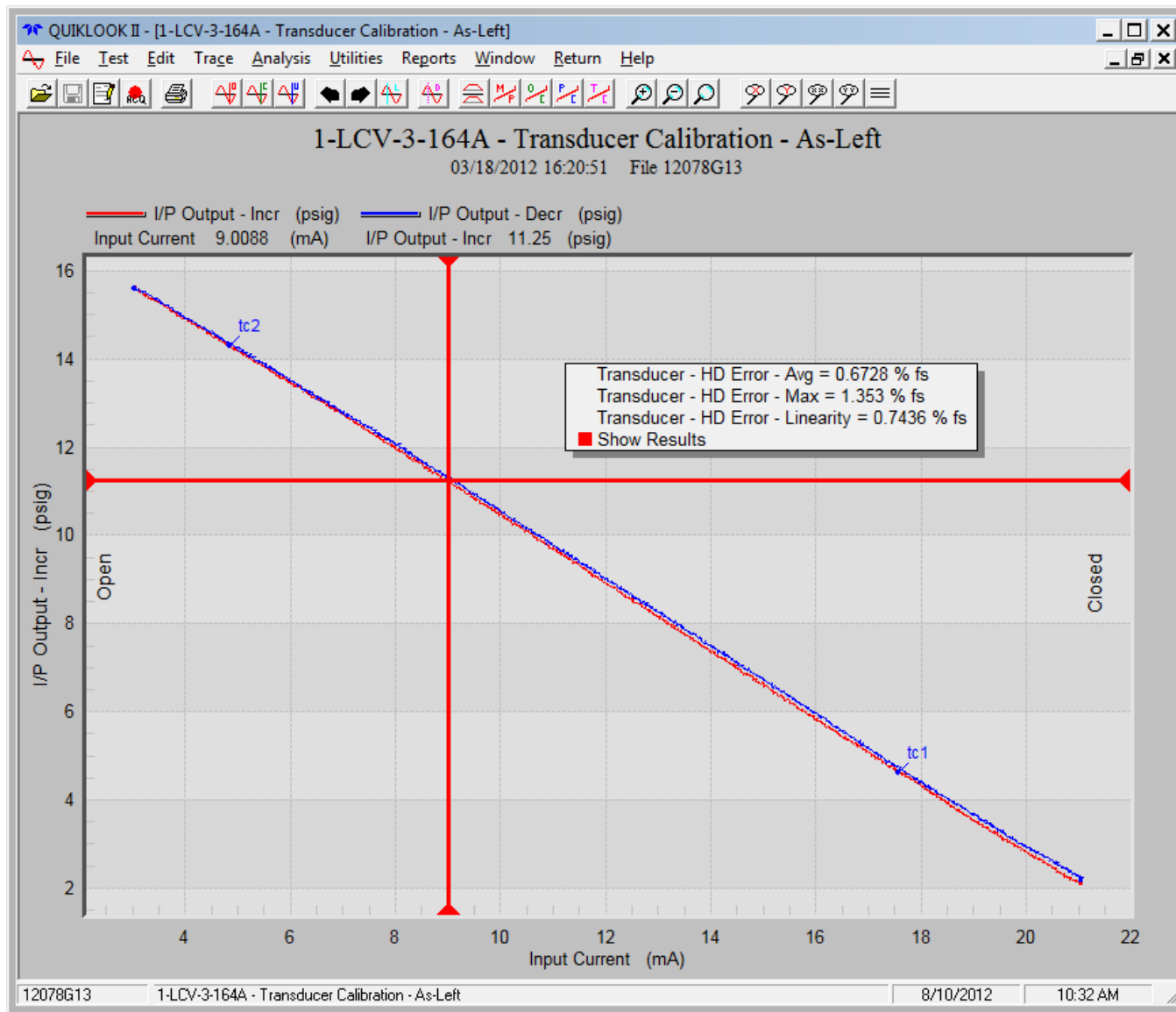


The screenshot shows a software window titled "AOV" with a "Return" button. The window has three tabs: "Wave Form", "Valve Properties", and "Channels". The "Valve Properties" tab is active and contains the following configuration options:

Valve Configuration:	Linear	<input type="checkbox"/> On / Off Valve
Fail Mode	Close	<input type="checkbox"/> Pilot Valve
Valve Action	Push Down To Close	
Actuator Action	Reverse Acting	
Positioner Action	Direct Acting	
I/P Action	Reverse Acting	
Actuator Type	Single Acting	
Retracted Area	87	in ²
Extended Area	87	in ²
Nominal Stroke	1	in
Seat Diameter	0	in

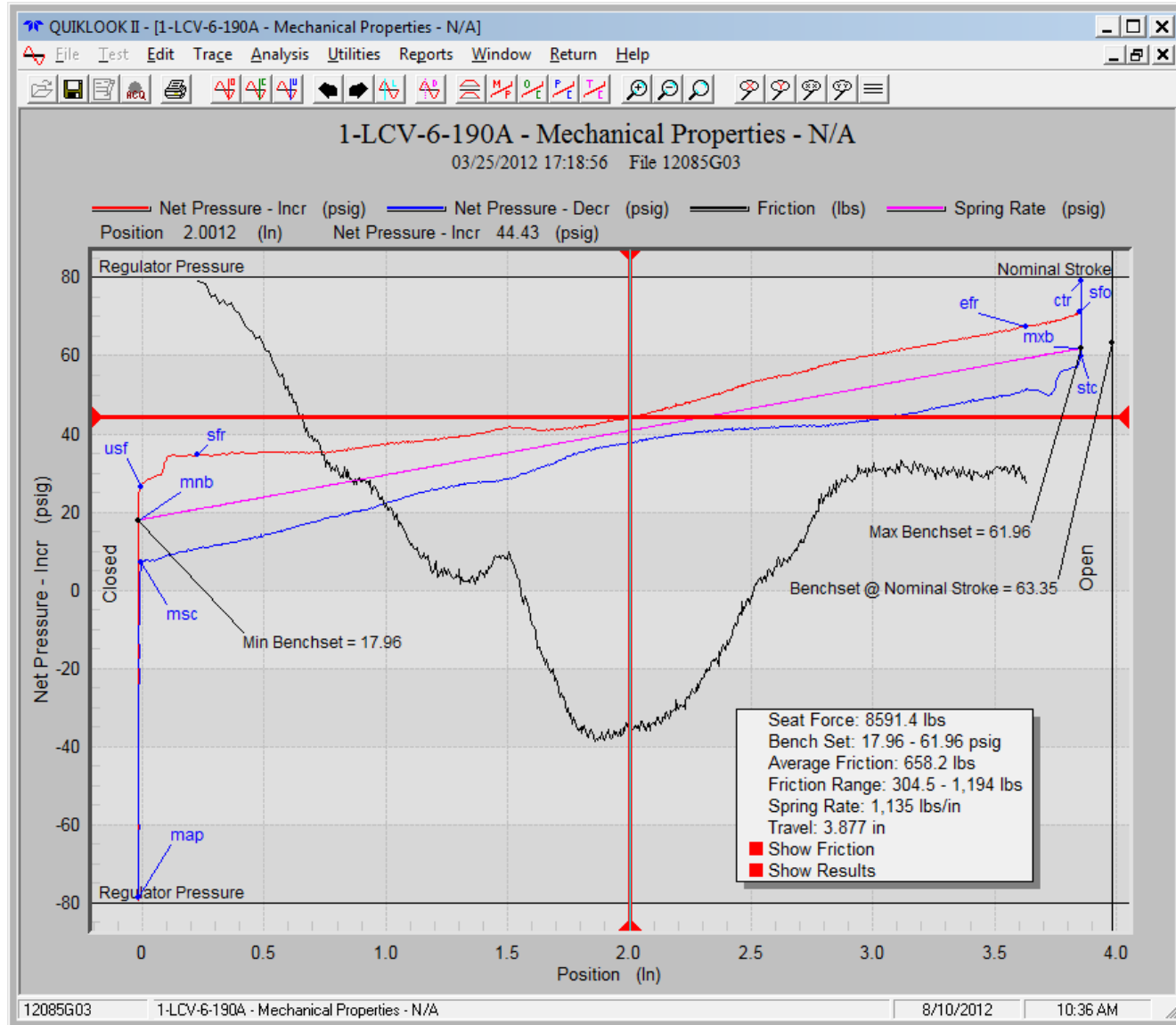


New Features 2012





- Analysis
 - Mechanical Properties –
 - Double Acting Valves
 - Add line to show Negative Regulator Pressure





- Acquisition – Monitor Screen
 - Warning if pressure channels are zeroed with a large offset.
 - Disable zero for I/P Input Channel



- Acquisition
 - Eliminated Analog Out spike on startup. Needs new E/I board.
 - Increase capability of E/I board to drive digital positioners.



- User discussion, questions, and suggestions