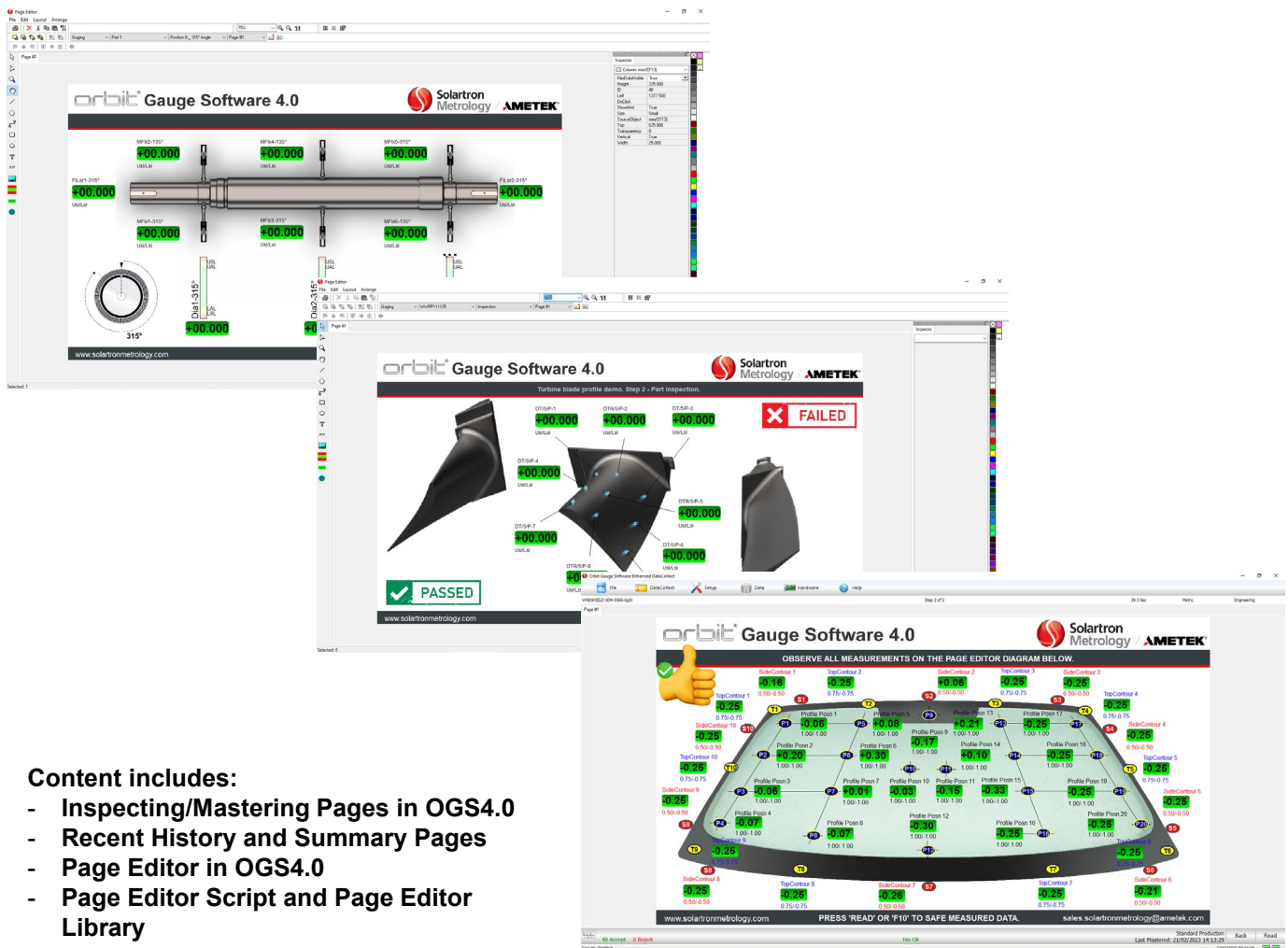


orbit[®]

Gauge Software 4.0



Intuitive User Interface in OGS4.0



Content includes:

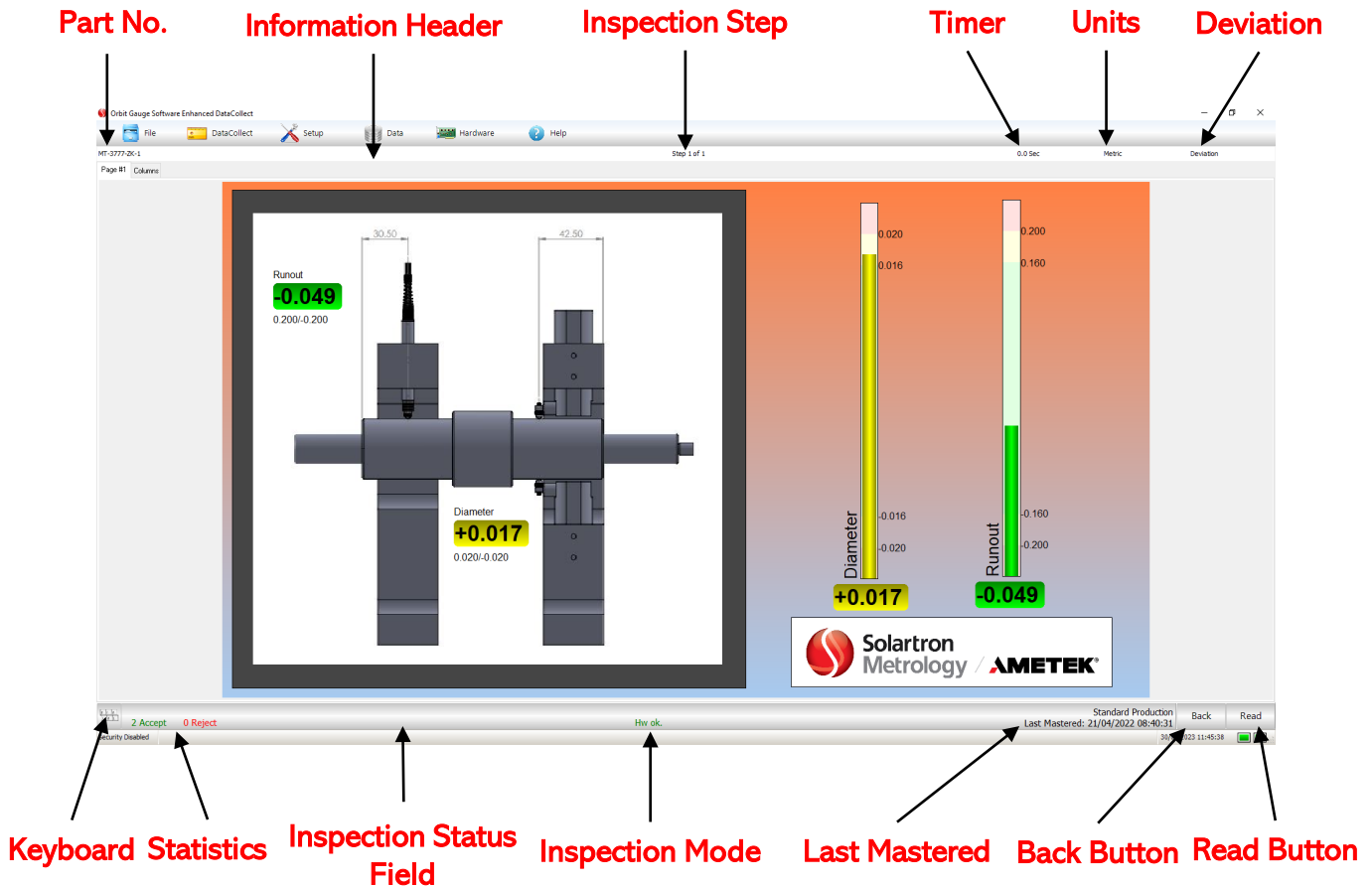
- Inspecting/Mastering Pages in OGS4.0
- Recent History and Summary Pages
- Page Editor in OGS4.0
- Page Editor Script and Page Editor Library

```
Result := _seqStatusStayInDuring;
addLogItem( _logAlertOnly, _seqStatusStayInDuring );
Sleep(5000); // allow menu to be displayed
end;
```

Precision Quality. Reliability

Inspection/Mastering Pages in OGS4.0

The Page Editor is used to create screens providing measurement results and inspections to users. The editor provides an easy interactive method for creating intuitive interfaces to inspection equipment.



User Interface is one of the most complicated tasks when creating inspection sequences for any of gauge equipment. It must be simple, user friendly and intuitive so that the user understands its behavior and effect without the use of reason, experimentation, assistance or special training. Solartron Metrology's software design team considered to include some standard functionality which allows for controlling each part inspection, monitoring program status and traceability of the parts during/after inspection.

The **Part Number** is in the information header field. The **Serial Number**, if exists, can be added to the label. The label value will be displayed in the **Inspection Status** field of the **Summary Page** and stored in the database with the other collected during inspection data and can be exported at any time.

The **Inspection Step** allows for monitoring which sequence step is currently displayed. Note some applications require multiple steps and some steps can be skipped from the inspection sequence. Cycle timer, units and deviation status are displayed in the **Information Header**.

The **Internal Keyboard** can be accessed directly from the inspection page if touch screen display is used.

The **Statistics** displayed in **Inspection Status** field shows current number of accept and reject measurements.

Current Inspection Mode and when the part was **Last Mastered** can be observed on the same OGS4.0 field.

The **Back Button** which on the Click backups one inspection step.

The **Read Button** or **F10** which on the click will complete current inspection step and proceed on to the next step.

Recent History and Summary Pages in OGS4.0

The **Recent History** display shows recently inspected parts before inspecting a new part. The color coding of the screen makes it easy for an operator to recognize consecutive limit faults so action can be taken in a timely manner. The **Continue Button** will start pat inspection. Also, **Recent History** page includes an area for display of script-controlled messages on automatic or semi-automatic systems.

Orbit Gauge Software Enhanced DataCollect

FileDataCollectSetupDataHardwareHelp

LYC115BKAX15

Step 50.0 SecMetricDeviation

1YC115BKAX15

	Description	LSL	USL	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7	Part 8	Part 9	Part 10	Part 11	Part 12	Part 13	Part 14	Part 15
				07:33	07:32	07:31	07:28	07:27	08:18	08:18	08:11	08:11	08:10	08:10	08:09	08:09	08:08	08:08
				09/03/2023	09/03/2023	09/03/2023	09/03/2023	09/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023	06/03/2023
				Caution	Caution	Caution	Caution	Caution	Caution	Caution	Accept	Reject	Caution	Caution	Caution	Caution	Caution	Caution
1	MaxOD1_FR	-0.4500	0.4500	0.0468	0.2309	0.1253	0.0835	0.0514	0.0360	-0.0040	0.0852	0.0896	0.0044	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
2	MaxOD2_FR	-0.4500	0.4500	-0.0228	-0.0275	0.1181	0.0808	0.0498	0.0477	0.0685	0.1694	0.0934	0.0983	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
3	Average OD2	-0.4500	0.9000	-0.1002	-0.0648	0.0558	-0.0063	-0.0116	-0.0379	0.0014	0.0354	-0.0024	0.0210	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
4	Max Roundness RearShaft	0.0000	0.9000	0.1548	0.2248	0.1848	0.1980	0.1228	0.1712	0.1860	0.2918	0.1985	0.1547	0.0000	0.0000	0.0000	0.0000	0.0000
5	Max Roundness FrontShaft	0.0000	0.9000	0.2243	0.3330	0.1848	0.1980	0.1244	0.1712	0.2585	0.3761	0.2024	0.1622	0.0000	0.0000	0.0000	0.0000	0.0000
6	MaxOD3_FR	-0.4500	0.4500	0.0660	-0.0543	-0.0416	-0.0105	0.1714	0.0546	0.2362	0.1946	0.1678	0.0906	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
7	MaxOD4_FR	-0.4500	0.4500	0.1523	0.0800	0.0475	0.0123	-0.0088	0.0454	0.0893	0.0735	0.0838	0.1358	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
8	MaxOD5_FR	-0.4500	0.4500	0.1824	0.0692	0.1109	0.0063	0.1084	0.1173	0.0515	0.0985	0.0347	0.1726	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
9	Average OD3	-0.4500	0.4500	-0.0297	-0.0822	-0.0598	-0.0573	-0.0191	-0.0047	0.1046	-0.0112	0.0692	0.0058	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
10	Max Roundness PinR	0.0000	0.9000	0.3785	0.1320	0.2326	0.2553	0.3810	0.1777	0.3631	0.4117	0.2145	0.2347	0.0000	0.0000	0.0000	0.0000	0.0000
11	Max Roundness PinF	0.0000	0.9000	0.3785	0.1900	0.2326	0.2553	0.3810	0.1949	0.5100	0.4117	0.3300	0.2516	0.0000	0.0000	0.0000	0.0000	0.0000
12	MaxOD1 Pin R	-0.4500	0.4500	0.0717	0.0170	-0.0324	0.2316	0.1854	0.0624	0.2513	0.0765	0.6608	0.0239	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
13	MaxOD2 Pin R	-0.4500	0.4500	0.0463	0.0482	-0.0675	0.0409	0.0979	0.0327	0.1225	0.0394	0.6608	0.1364	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
14	MaxOD1,OD2 PinR	-0.4500	0.4500	0.0717	0.0482	-0.0324	0.2316	0.1854	0.0624	0.2513	0.0765	0.6608	0.1364	-0.1792	-0.1792	-0.1792	-0.1792	-0.1792
15	Max Roundness PinR	0.0000	0.9000	0.1010	0.2369	0.0584	0.2807	0.3858	0.1417	0.3260	0.2690	0.8120	0.2189	0.0000	0.0000	0.0000	0.0000	0.0000
16	Max Roundness PinF	0.0000	0.9000	0.1154	0.2680	0.0935	0.2889	0.3858	0.1713	0.4548	0.3060	0.8120	0.2189	0.0000	0.0000	0.0000	0.0000	0.0000
17	MaxOD1 Pin F	-0.4500	0.4500	0.0978	0.0631	-0.0508	0.1153	0.0422	0.0780	0.0796	0.2211	0.0771	0.0926	0.1669	-0.1792	-0.1792	-0.1792	-0.1792
18	MaxOD2 Pin F	-0.4500	0.4500	0.2027	0.0100	-0.0104	0.1199	0.0349	0.1928	0.1435	0.1219	0.0401	0.1741	0.0583	-0.1792	-0.1792	-0.1792	-0.1792
19	MaxOD1,OD2 PinF	-0.4500	0.4500	0.2027	0.0631	-0.0104	0.1199	0.0422	0.1928	0.1435	0.2211	0.0771	0.1741	0.1669	-0.1792	-0.1792	-0.1792	-0.1792
20	Max Roundness PinF	0.0000	0.9000	0.2894	0.2063	0.0000	0.2298	0.1058	0.2250	0.1911	0.2677	0.1187	0.2513	0.1988	0.0000	0.0000	0.0000	0.0000
21	Max Roundness PinF	0.0000	0.9000	0.3943	0.2594	0.0404	0.2344	0.1131	0.3399	0.2550	0.2856	0.1187	0.2513	0.2677	0.0000	0.0000	0.0000	0.0000
22	Eccentricity Front	-0.4500	0.4500	-0.0788	-0.0888	-0.0233	-0.0837	-0.0493	-0.0443	-0.0602	-0.0591	-0.2898	-0.1202	-0.0643	0.0000	0.0000	0.0000	0.0000
23	Eccentricity Rear	-0.4500	0.4500	-0.1199	-0.0683	-0.0679	-0.1027	-0.0481	-0.0674	-0.1116	-0.0106	-0.2898	-0.0378	-0.1067	0.0000	0.0000	0.0000	0.0000

14 Accept 1 Reject

Standard Production

Last Mastered: 03/03/2023 09:06:00

Continue

30/03/2023 15:20:01

The **Part Summary** page shows overall part status and the number off measurements exceeding each limit type, measurement results for all inspection steps that were performed. This standard OGS4.0 page usually is the last page in the sequence cycle and has two buttons. One button is **Regage** which discards current measurement results and regauge part. Second button **Accept** will store part measurement results. If active, data export will take place at this time also.

Orbit Gauge Software Enhanced DataCollect

FileDataCollectSetupDataHardwareHelp

LYC115BKAX18

MetricDeviation

Hide NVal

	Name	Value	Nominal	Lsl	Usl	Lsl	Usl	Lsl	Usl
1	MaxOD1_FR	-0.1706	15.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
2	MaxOD2_FR	0.0388	15.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
3	Average OD2	0.0388	15.0000	-0.4500	0.9000	-0.1125	0.5625	-2.5000	2.5000
4	Max Roundness RearShaft	0.0000	0.0000	0.0000	0.9000	0.2250	0.6750	-2.5000	2.5000
5	Max Roundness FrontShaft	0.2094	0.0000	0.0000	0.9000	0.2250	0.6750	-2.5000	2.5000
6	MaxOD3_FR	-0.0130	16.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
7	MaxOD4_FR	-0.0358	16.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
8	MaxOD5_FR	0.1733	16.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
9	Average OD3	-0.0130	16.0000	-0.4500	0.4500	-0.2250	0.2250	-2.5000	2.5000
10	Max Roundness PinR	0.0000	0.0000	0.0000	0.9000	0.2250	0.6750	-2.5000	2.5000
11	Max Roundness PinF	0.2092	0.0000	0.0000	0.9000	0.2250	0.6750	-2.5000	2.5000
12	MaxOD1 Pin R	0.0538	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
13	MaxOD2 Pin R	-0.0204	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
14	MaxOD1,OD2 PinR	0.0538	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
15	Max Roundness PinR	0.2232	0.0000	0.0000	0.9000	0.0900	0.8100	-2.5000	2.5000
16	Max Roundness PinF	0.2232	0.0000	0.0000	0.9000	0.0900	0.8100	-2.5000	2.5000
17	MaxOD1 Pin F	0.0538	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
18	MaxOD2 Pin F	-0.0204	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
19	MaxOD1,OD2 PinF	0.0538	24.6000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
20	Max Roundness PinF	0.0790	0.0000	0.0000	0.9000	0.0900	0.8100	-2.5000	2.5000
21	Max Roundness PinF	0.1051	0.0000	0.0000	0.9000	0.0900	0.8100	-2.5000	2.5000
22	Eccentricity Front	0.0067	0.0000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000
23	Eccentricity Rear	-0.0982	0.0000	-0.4500	0.4500	-0.3600	0.3600	-2.5000	2.5000

23 Accept 0 Reject

Standard Production

Last Mastered: 03/03/2023 09:06:00

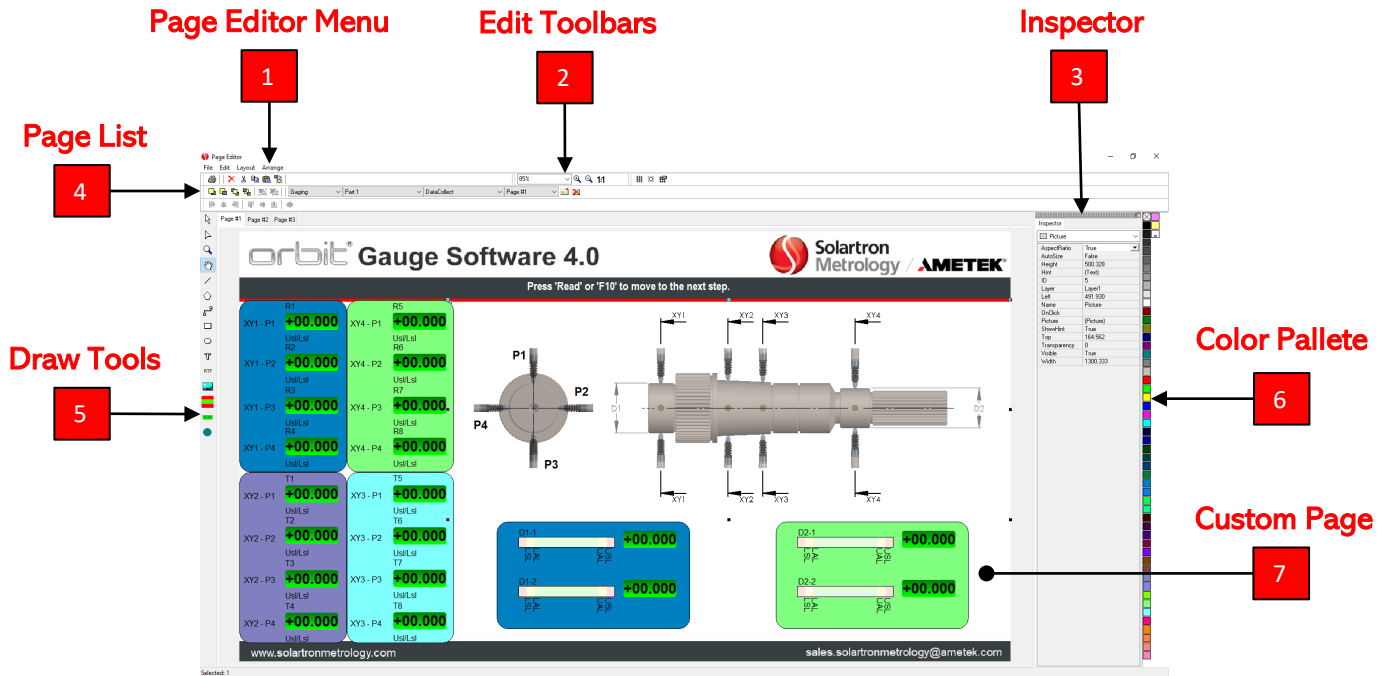
Regage

Accept

30/03/2023 15:23:02

Page Editor in OGS4.0

Orbit Gauge Software 4.0 Page Editor contains Paige Editor Menu, Edit Toolbars, Page List, Draw Tools, Inspector and Color Palette.



1 The **Page Editor Menu** provides options to print or preview the current page, to cut, copy, paste, delete current selected items. Provides options to create a new page or delete the current page. Allows to change selected items display order, group or ungroup selected items etc.

2 The **Edit Toolbars** is a panel to provide quick access to options for manipulating selected objects. It also provides the means to select which inspection step is currently being viewed.

3 The **Object Inspector** shows property values for the selected object. Each object has its own set of properties that define its appearance. Clicking an object will display its properties in the inspector so that they can be modified.

4 The **Page List** defined pages for the current step are shown in the page list. Each page can be selected for viewing by clicking its corresponding tab.

5 The **Draw Tools** toolbar provides access to supported page editor objects. Clicking a tool on the page objects can be placed on the screen by clicking desired location.

6 The **Color Palette** can be used to quickly fill boxes, circles, polygons and RTF backgrounds. Additional options for backgrounds can be set using the Brush property of the respective objects.

7 The **Custom Paige** is area to configure a custom interface. These pages will be displayed during the inspection sequence and contain process instructions, inspected part images, floats and scales, faults and fault clear instructions, input and output states, etc.

Page Editor Script and Page Editor Library

Scripting allows the base functionality of Data Collect to be extended to accommodate special setup needs. It is used to automate the inspection sequence and handle other special needs. Scripting can be added to the part inspection sequence and to the computer sequence.

The page script runs during part inspection and will be active while the part is being inspected. It is not active when the part selection screen is displayed or when Data Collect screens are displayed.

The page script is executed as part of the main DataCollect thread. This means that all user interaction, ie display of script-based forms or messages should be placed in the script.

```

1 procedure InitStep1PE;
2 var
3
4 ClickLocateTxt:boolean;
5 InstrLocateTxt:boolean;
6 WaitingLocateTxt:boolean;
7 ClickAirTxt:boolean;
8 DoneLocateTxt:boolean;
9 ThumbUp2PE:boolean;
10 InstrAirOnTxt:boolean;
11 DoneAirOnTxt:boolean;
12 ThumbUp3PE:boolean;
13
14 begin
15
16 ClickLocateTxt:=19;
17 InstrLocateTxt:=22;
18 ClickAirTxt:=21;
19 WaitingLocateTxt:=32;
20 DoneLocateTxt:=33;
21 ThumbUp2PE:=29;
22 InstrAirOnTxt:=23;
23 DoneAirOnTxt:=34;
24 ThumbUp3PE:=30;
25
26 peControl1[ClickLocateTxt].visible :=true;
27 peControl1[InstrLocateTxt].visible :=false;
28 peControl1[WaitingLocateTxt].visible :=false;
29 peControl1[ClickAirTxt].visible :=false;
30 peControl1[DoneLocateTxt].visible :=false;
31 peControl1[ThumbUp2PE].visible :=false;
32 peControl1[InstrAirOnTxt].visible :=false;
33 peControl1[DoneAirOnTxt].visible :=false;
34 peControl1[ThumbUp3PE].visible :=false;
35 end;
36
37 procedure ShowPartStatus;
38 var
39 SMpassedId1      : boolean;
40 SMfailedId1      : boolean;
41 SMpassedId2      : boolean;
42 SMfailedId2      : boolean;
43
44 begin
45 // control images with part accept/reject status
46 SMpassedId1 := 53; // image ID from Page Editor
47 SMfailedId1 := 54; // image ID from Page Editor
48 SMpassedId2 := 35; // image ID from Page Editor
49 SMfailedId2 := 36; // image ID from Page Editor
50 if partAccept then
51 begin
52 peControl1[SMpassedId1].visible := true;
53 peControl1[SMfailedId1].visible := false;

```

```

53 var
54 ClickAirTxt:boolean;
55 WaitingLocateTxt:boolean;
56 DoneLocateTxt:boolean;
57 InstrAirOnTxt:boolean;
58 DoneAirOnTxt:boolean;
59 ThumbUp3PE:boolean;
60 begin
61 ClickAirTxt:=21;
62 WaitingLocateTxt:=32;
63 DoneLocateTxt:=33;
64 InstrAirOnTxt:=23;
65 DoneAirOnTxt:=34;
66 ThumbUp3PE:=30;
67 peControl1[ClickAirTxt].visible :=false;
68 peControl1[WaitingLocateTxt].visible :=false;
69 peControl1[DoneLocateTxt].visible :=true;
70 peControl1[InstrAirOnTxt].visible :=true;
71 peControl1[ThumbUp3PE].visible :=true;
72 peControl1[DoneAirOnTxt].visible :=true;
73 end;
74
75
76 // Step 2 On-Click procedure //
77
78
79 procedure ClickAirOffFunc;
80 var
81 ClickAirOff:boolean;
82 InstrAirOff:boolean;
83 WaitingAirOff:boolean;
84 ClickRemove:boolean;
85 ThumbUp2_1PE:boolean;
86 begin
87 ClickAirOff:=35;
88 InstrAirOff:=28;
89 WaitingAirOff:=37;
90 ClickRemove:=38;
91 ThumbUp2_1PE:=46;

```

The page script is global at the part level. That is, the same script executes the entire time the part is being inspected. The script is executed approximately every 500 ms and should always be designed to function with pass through functionality. That is, it should never enter a loop waiting for something to occur that may never occur. Since it executes in the main thread, endless loops in the script will cause the main thread, including the user interface to appear frozen.

The Page Editor library provides functions allowing scripts to interact with pages created with the Orbit Gauge Software 4.0 Page Editor. For example:

```

peControl1[25].text := 'Clear Error'; //sets control text to 'Clear Error'
peControl1[18].visible := false; //hides control on screen
glBool1[12].v:= peFlashState; //boolean 12 flashing at the same rate as a page item on the flash layer.

```



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