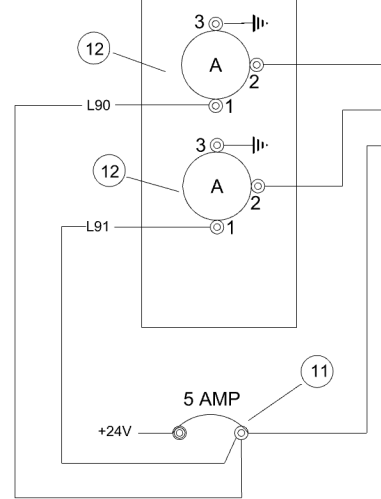
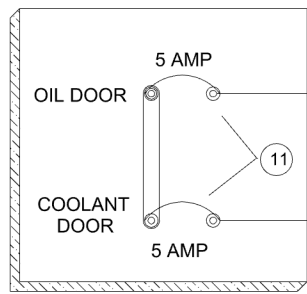
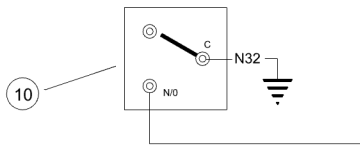


# INSTRUMENT PANEL OIL & COOLANT ALARMS



## OIL PRESSURE SWITCH



R.H. SW. BOX



Wings 51

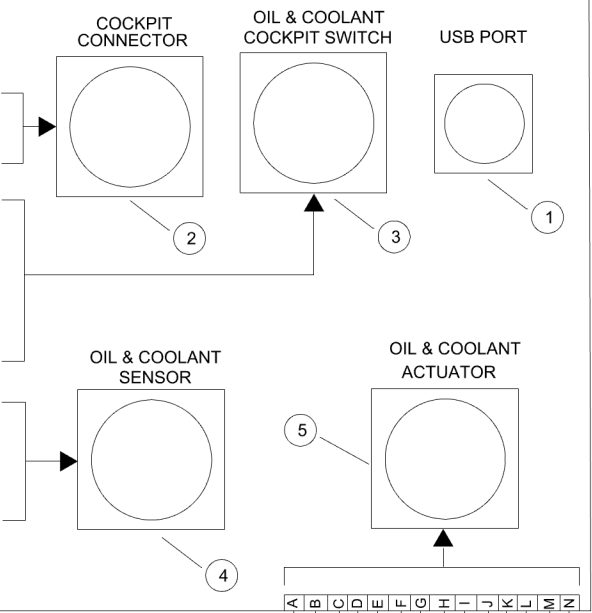
**WINGS 51, LLC**

1420 RED BUTTE DRIVE  
ASPEN, CO 81611

- C: GRD
- D: OIL ALARM
- E: COOLANT ALARM
- G: ENGINE ON
- I: +24V COCKPIT

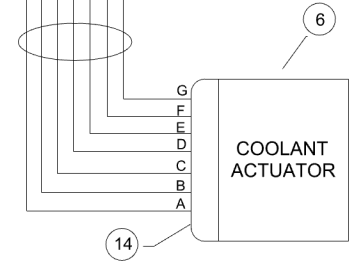
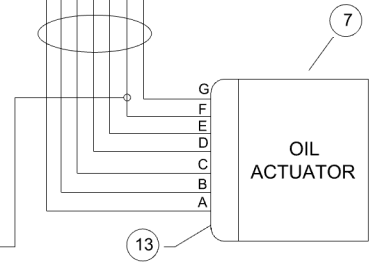
- A: MANUAL CLOSE
- B: AUTOMATIC
- C: MANUAL OPEN
- D: +24V OIL
- E: GROUND
- F: MANUAL CLOSE
- G: AUTOMATIC
- H: MANUAL OPEN
- J: +24V COOL
- K: GROUND

- A: BIAS
- B: TEMP P
- C: TEMP N
- D: GROUND
- E: BIAS
- F: TEMP P
- G: TEMP N
- H: GROUND



- A: MANUAL CLOSE
- B: MANUAL OPEN
- C: CLOSE LIMIT
- D: OPEN LIMIT
- E: INTERRUPTER
- F: ID/PRESENCE
- G: GROUND


- H: MANUAL CLOSE
- I: MANUAL OPEN
- J: CLOSE LIMIT
- K: OPEN LIMIT
- L: INTERRUPTER
- M: ID/PRESENCE
- N: GROUND



## TITLE: COOLANT & OIL DOOR DIGITAL CONTROLLER

DRAWN BY: <b>JOSE ROCHA</b>	AIRCRAFT REGISTRATION NUMBER: <b>N6168C</b>	REV. <b>A</b>
DATE: JANUARY 11, 2019	DRAWING # ASI 1-1A	SHEET: 1 OF 3

	10	9	8	7	6	5	4	3	2	1								
H	PARTS LIST				WIRE DIAGRAM						H							
	ITEM	QTY	PART NUMBER	DESCRIPTION	DRAWING	ITEM	GUAGE	LENGTH	PART NO.	QTY	PART NO.	QTY						
	1	1	USBF 22G	CONNECTOR	ASI 1-1A	COCKPIT CONNECTOR	22 AWG - SHIELDED 5 CONDUCTOR	277"			34108	1						
	2	1	MS3102A18-1P	CONNECTOR	ASI 1-1A	GROUND												
		1	MS3106A18-1S	CONNECTOR	ASI 1-1A	OIL ALARM												
	3	1	MS3102A18-19P	CONNECTOR	ASI 1-1A	COOLANT ALARM												
		1	MS3106A18-19S	CONNECTOR	ASI 1-1A	ENGINE ON												
	4	1	MS3102A18-19S	CONNECTOR	ASI 1-1A	+24V COCKPIT					34108	1						
		1	MS3106A18-19P	CONNECTOR	ASI 1-1A													
G	5	1	MS3102A20-27P	CONNECTOR	ASI 1-1A	OIL COCKPIT							G					
		1	MS3106A20-27S	CONNECTOR	ASI 1-1A	MANUAL CLOSE					34108	1						
	6	1	XI	COOLANT ACTUATOR	ASI 1-1A	AUTOMATIC	16 AWG - SHIELDED 3 CONDUCTOR	300"			34108	1						
	7	1	X2	OIL ACTUATOR	ASI 1-1A	MANUAL OPEN					34108	1						
	8	2	M12C-SIL-4-S-F-34	TEMP PROBE	ASI 1-1A	+24V OIL	16 AWG - SHIELDED 3 CONDUCTOR	300"			34108	1						
F	9	2	8905K608	SWITCH	ASI 1-1A	GROUND					34123	1	F					
	10	1	76575-4	PRESSURE SWITCH	ASI 1-1A													
	11	2	7277-2-5	5 AMP BREAKER	ASI 1-1A	COOLANT COCKPIT												
	12	2	MS25041-4	PUSH TO TEST	ASI 1-1A	MANUAL CLOSE					34108	1						
		1	MS3102R16S-1P	CONNECTOR	ASI 1-1A	AUTOMATIC	16 AWG - SHIELDED 3 CONDUCTOR	300"			34108	1						
	13	1	MS3106A16S-1S	CONNECTOR	ASI 1-1A	MANUAL OPEN					34108	1						
		1	MS3102R16S-1PW	CONNECTOR	ASI 1-1A	+24V OIL	16 AWG - SHIELDED 3 CONDUCTOR	300"			34108	1						
E	14	1	MS3106A16S-1SW	CONNECTOR	ASI 1-1A	GROUND					34123	1	E					
	15	1	PA-111114-820-1	AIRSPEED SWITCH	ASI 1-1A													
						OIL SENSOR												
						BIAS												
						TEMP_P	22 AWG - SHIELDED 4 CONDUCTOR	197"										
						TEMP_N												
						GROUND												
						COOLANT SENSOR												
						BIAS												
						TEMP_P	22 AWG - SHIELDED 4 CONDUCTOR	197"										
						TEMP_N												
						GROUND												
D						OIL ACTUATOR							D					
						MANUAL CLOSE												
						MANUAL OPEN												
						CLOSE LIMIT	16 AWG - SHIELDED 3 CONDUCTOR	130"										
						OPEN LIMIT												
						INTERRUPTER												
						ID/PRESENCE												
						GROUND	16 AWG - SHIELDED 3 CONDUCTOR	130"										
						COOLANT ACTUATOR	16 AWG - SHIELDED	130"										
						MANUAL CLOSE												
						MANUAL OPEN												
						CLOSE LIMIT	16 AWG - SHIELDED 3 CONDUCTOR	64"										
						OPEN LIMIT												
						INTERRUPTER												
						ID/PRESENCE												
C						GROUND	16 AWG - SHIELDED 3 CONDUCTOR	64"					C					
							16 AWG - SHIELDED	64"										
B													B					
A													A					

	10	9	8	7	6	5	4	3	2	1	
H	<div>THE FOLLOWING NOTES PROVIDE INFORMATION ON WIRING. ALL NOTES APPLY UNLESS OTHERWISE INDICATED.</div> <div>1. ALL WIRE AND WIRE MATERIALS MEET THE REQUIREMENTS OF AC43.13-1B CHAPTER 11</div> <div>2. ALL WIRE IS SIZED IN ACCORDANCE WITH THE REQUIREMENTS OF AC43.13-1B CHAPTER 11</div> <div>3. ALL WIRING IS INSTALLED AND SECURED IN ACCORDANCE WITH THE REQUIREMENTS OF AC43.13-1B CHAPTER 11</div> <div>4. ALL WIRING IS MARKED IN ACCORDANCE WITH THE REQUIREMENTS OF AC43.13-1B CHAPTER 11</div> <div>5. ALL WIRE TERMINALS, CONNECTORS, AND THERE INSTALLATIONS MEET THE REQUIREMENTS OF AC43.13-1B CHAPTER 11</div> <div>6. ALL BONDING AND GROUNDING COMPLIES WITH THE REQUIREMENTS OF AC43.13-1B</div> <div>7. ALL ELECTRICAL INSTALLATION IS INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF AC43.13-1B CHAPTER 11 AND NORTH AMERICAN ERECTION AND MAINTENANCE INSTRUCTIONS AN01-60JE-2 FOR P-51D, P-51K, P-51M SERIES AIRCRAFT.</div> <div>8. THE AIRPLANE SHALL BE BONDED IN ACCORDANCE WITH N.A.A PROCESS MANUAL SPEC. EL1-1 DATED 7-31-43, IN SO FAR AS IS APPLICABLE TO THIS TYPE OF AIRPLANE.</div> <div>9. WIRES ENTERING INDIVIDUAL TERMINALS OF PLUGS SHALL HAVE INSULATION ON WIRES COME AS CLOSE TO EDGE OF TERMINALS AS POSSIBLE WITHOUT BURNING INSULATION ON WIRES IN SOLDERING TO TERMINALS. INSULATION SHALL NOT BE FURTHER AWAY THAN 1/8 INCH FROM EDGE OF TERMINAL.</div> <div>10. ALL OPEN WIRING SHALL BE SECURED TO OTHER PARTS OR CABLES WITH CLIPS OR CLAMPS AND PROTECTED WHERE NECESSARY WITH "SURCO" TUBING (OR EQUIV.) OR TAPED TO PREVENT CHAFING. 6. 1. ITEMS CODED THUS ARE PARTS OF AS -62/APS-13 ANTENNA EQUIPMENT.</div> <div>11. ALL WIRES SHALL BE CONTINUOUS AND UN-SPLICED BETWEEN TERMINALS.</div> <div>12. SEE N.A.R PROCESS MANUAL SPEC. EL2-12 FOR OPERATIONS ADJUSTMENT OF ELECT. POWER SYSTEM.</div> <div>13. All WIRES SHALL BE IDENTIFIED PER PROCESS MANUAL SPEC. EL3-1A</div> <div>14. ALL PARTS &amp; EQUIPMENT EXCEPT WIRE &amp; MATERIAL NECESSARY TO MANUFACTURE WIRE ASSEMBLIES ARE LISTED FOR REFERENCE ONLY.</div> <div>15. FOR INSTALL OF ELECT. EQUIP. REFER TO THE FOLLOWING DRAWINGS:</div> <div><div><div><div>PITOT HEAD</div><div>SPEC. 27389</div></div><div><div>ENGINE SECTION</div><div>109-54011</div></div><div><div>FIREWALL</div><div>109-54012</div></div><div><div>FUSELAGE FRONT SECTION</div><div>109-54013</div></div><div><div>FUSELAGE REAR SECTION</div><div>106-54016</div></div><div><div>WINGS</div><div>109-54014</div></div><div><div>WING TIPS</div><div>106-14014</div></div><div><div>RUDDER</div><div>73-24002</div></div></div><div>16. THE BLE DONGLE IS SHOWN PLUGGED DIRECTLY INTO THE DIGITAL CONTROLLER, HOWEVER THE DONGLE CAN BE PLUGGED INTO A USB EXTENSION CABLE WHICH IS THEN PLUGGED INTO THE DIGITAL CONTROLLER.</div><div>17. THE DIGITAL CONTROLLER CAN BE POWERED BY +24V PROVIDED BY (+24 OIL, AND OR +24 COOL AND OR +24 COCKPIT). THESE +24V POWER INPUTS ARE DIODED OR'D IN THE CONTROLLER TO PREVENT BACK FEEDING +24V.</div></div>										
G											
F											
E											
D											
C											
B											
A	<div><div><div>PROPRIETARY AND CONFIDENTIAL TO WINGS 51, LLC. COPYRIGHT 2022. ALL RIGHTS RESERVED.</div><div> Wings 51</div><div><div>WINGS 51, LLC</div><div>1420 RED BUTTE DRIVE ASPEN, CO 81611</div></div></div><div><div><div>TITLE:</div><div>COOLANT &amp; OIL DOOR DIGITAL CONTROLLER</div></div><div><div>DRAWN BY:</div><div>JOSE ROCHA</div></div><div><div>DATE:</div><div>JANUARY 11, 2019</div></div></div><div><div><div>NOTES:</div><div></div></div><div><div>AIRCRAFT REGISTRATION NUMBER:REV.</div><div>N6168CA</div></div><div><div>DRAWING #</div><div>ASI 1-1A</div></div><div><div>SHEET:</div><div>3 OF 3</div></div></div></div>										
	10	9	8	7	6	5	4	3	2	1	