



FIELD REFERENCE MANUAL

OQ40 – OQ120

OilQuick Safety System

OQSS Factory Control - OEM Switch Control



1. Table of Contents

- 1. Table of Contents 2
- 2. System Status Screens 3
- 3. Sensor Adjustment Procedure 4
 - 3.1. Field Sensor Adjustment Check Procedure 4
- 4. Hydraulic schematic (OQE06747) 5
- 5. Electrical schematic - Full System (OQE07856) 6
- 6. Electrical schematic CAT Next Gen (OQE07857) 7
- 7. Wiring diagram - (OQE07855) 8
- 8. Troubleshooting - OQSS 10

2. System Status Screens

System Status page shows current state of electronically controlled / monitored system components. There are two status screens, all shown below with example status. The buttons below the left / right arrow icons are used to navigate between pages. The button below the text EVENT LOG on page two can be pressed to enter the event log screens.

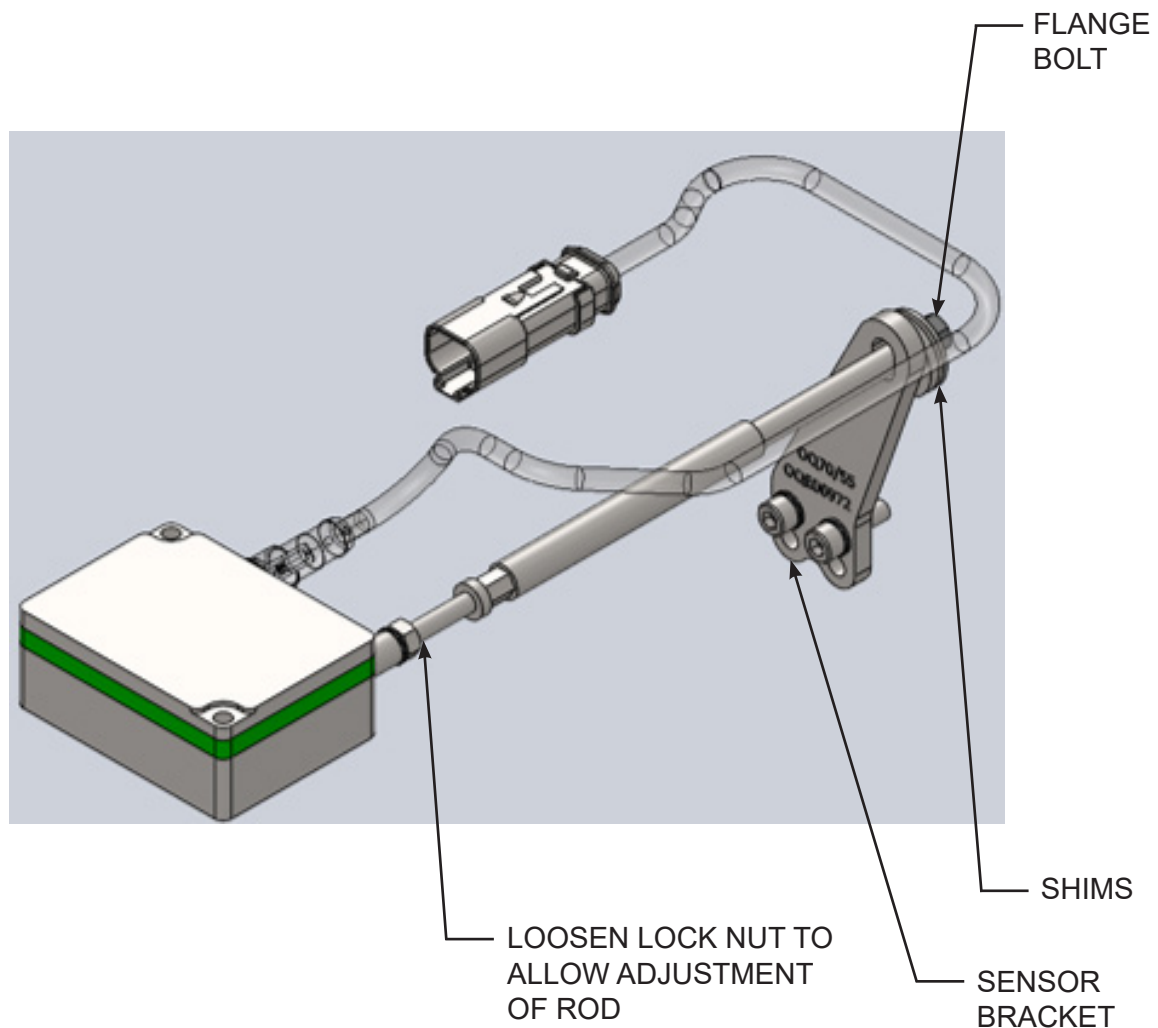
Monitored components with descriptions are listed below:

- LOCK SWITCH - Status of machine QC lock switch. HI, LOW
- LOCK SENSOR – Status of OQSS lock sensor. ON is locked, OFF is not locked
- ALARM BUZZER – Status of Alarm Buzzer. ON, OFF, or FAULT
- RELIEF VALVE 1 – Status of Relief valve 1 solenoid. ON, OFF, or FAULT (if disabled, status is not shown)
- RELIEF VALVE 2 – Status of Relief valve 2 solenoid. ON, OFF, or FAULT (if disabled, status is not shown)
- LOCK PRESSURE - Actual pressure in the lock port (if disabled, status not shown)
- SYSTEM STARTUPS - Number of times OQSS has powered on
- NORMAL LOCK CYCLES - Number of times coupler has locked into an attachment
- EMPTY LOCK CYCLES - Number of times coupler has closed without an attachment
- NON-OQ LOCK CYCLES - Number of times lock switch has cycled in NON-OQ mode
- EMERGENCY LOCK CYCLES - Number of times lock switch has cycled in EMERGENCY override
- SYSTEM HOURS - Records total number of OQSS system operating hours



3. Sensor Adjustment Procedure

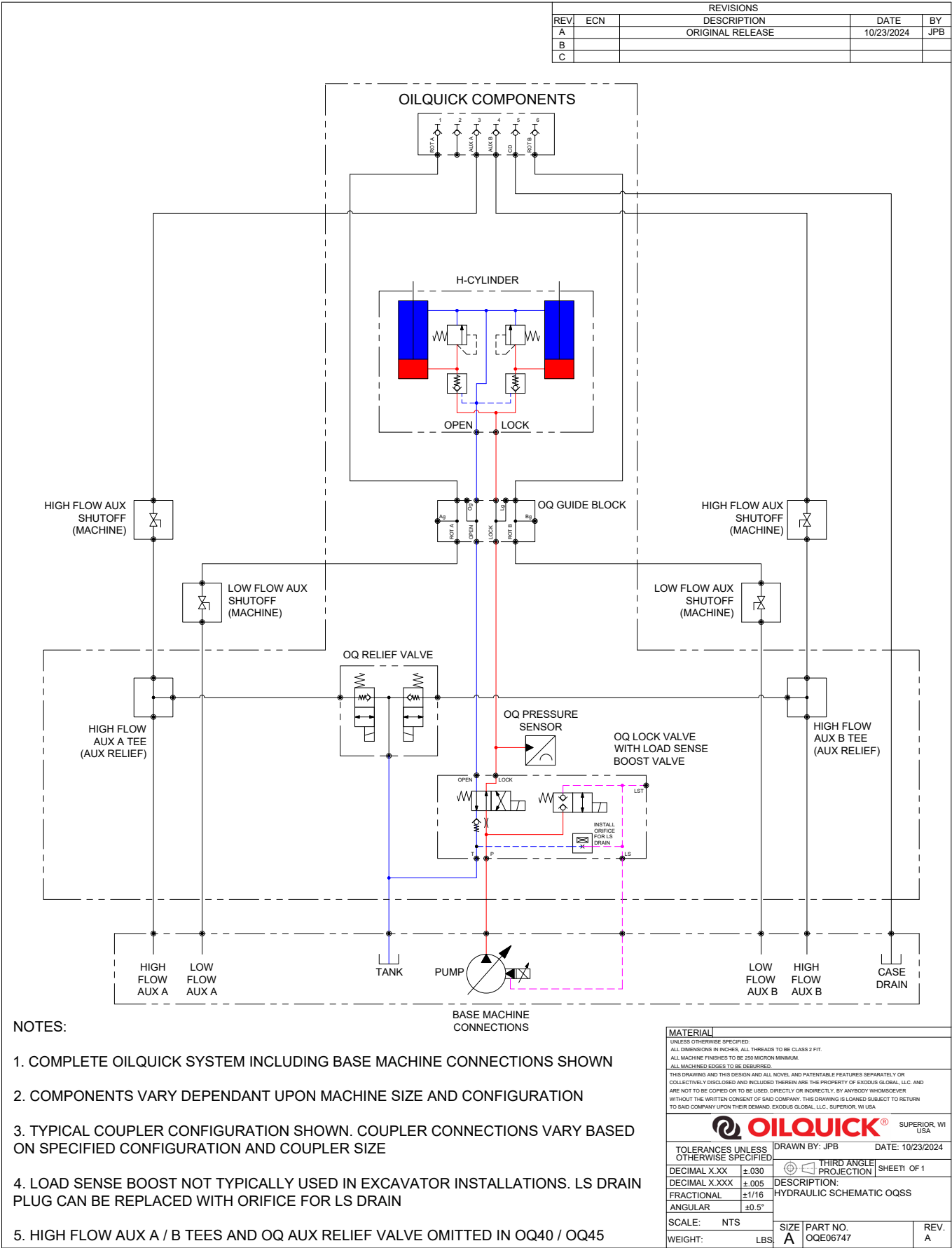
1. Couple into attachment, check if green light on sensor is lit.
2. If light is on pull rod out (this will cause fault in control system).
 - A. Light should turn off after 1/8" of rod movement.
 - B. Shims can be inserted between flange nut and sensor bracket to measure actuation.
 - 1/8" SHIM – LIGHT ON.
 - 3/16" SHIM – LIGHT OFF.



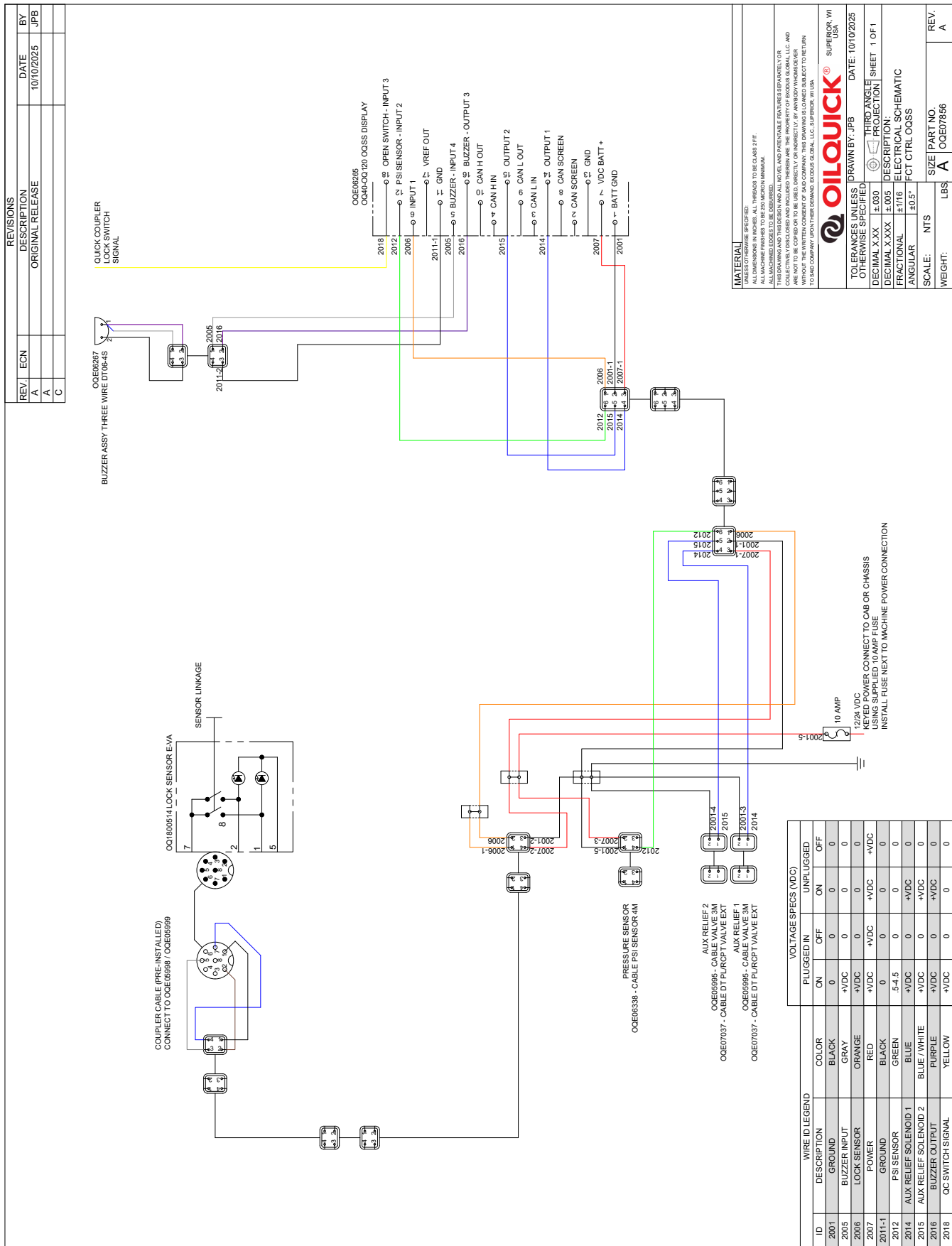
3.1 - Field Sensor Adjustment Check Procedure

1. Remove guard assembly to access lock sensor linkage (if required).
2. Loosen lock nut and thread rod out of sensor until light turns off.
3. Thread rod 2 full turns into sensor and tighten lock nut.
4. Perform adjustment check per above.

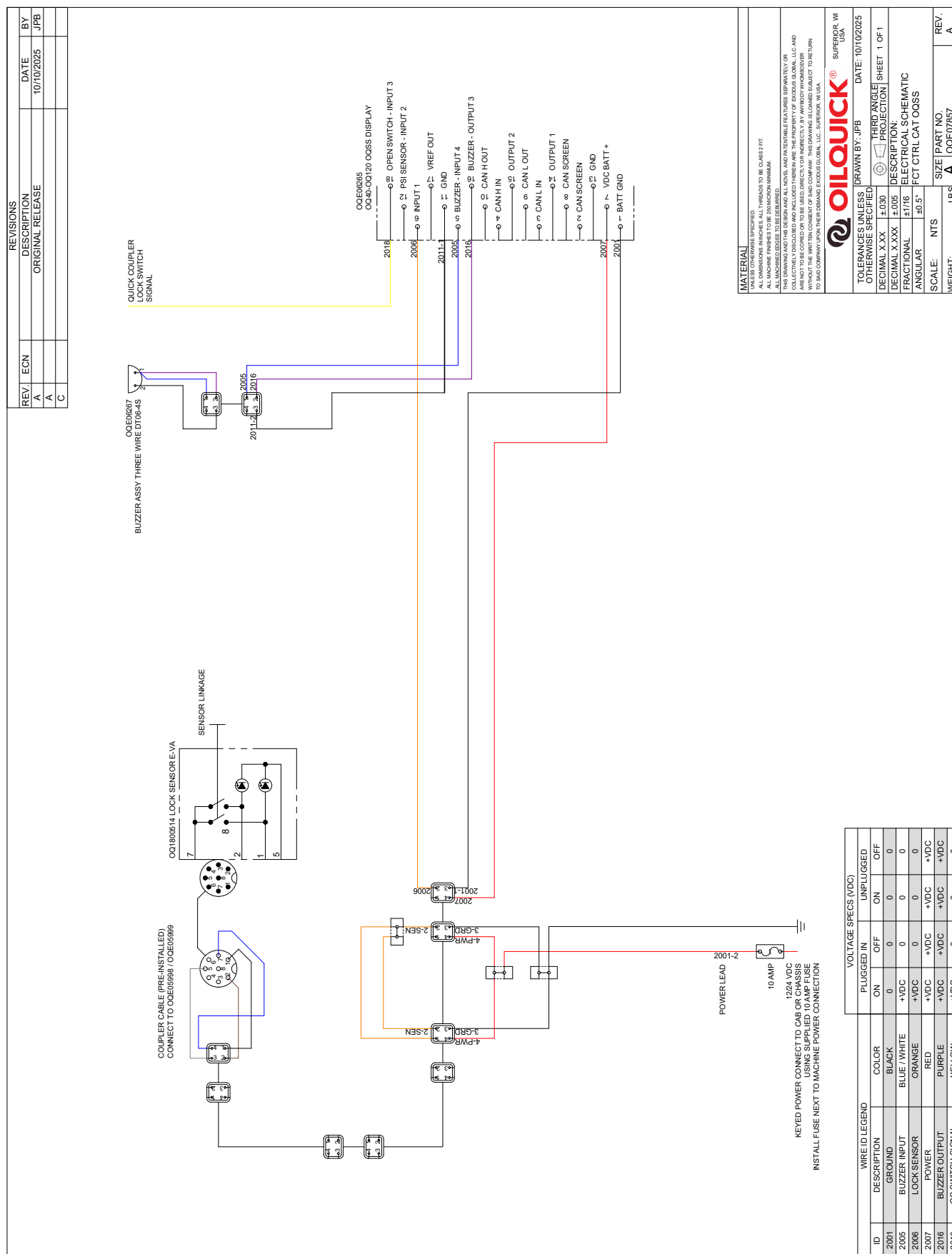
4. Hydraulic schematic (OQE06747)



5. Electrical schematic - Full System (OQE07856)



6. Electrical schematic CAT Next Gen (OQE07857)



7. Wiring diagram - (OQE07855) - sheet 1

FULL SYSTEM INSTALLATION SHOWN
COMPONENTS SUPPLIED AND INSTALLED DEPENDANT UPON COUPLER SIZE AND MACHINE CONFIGURATION

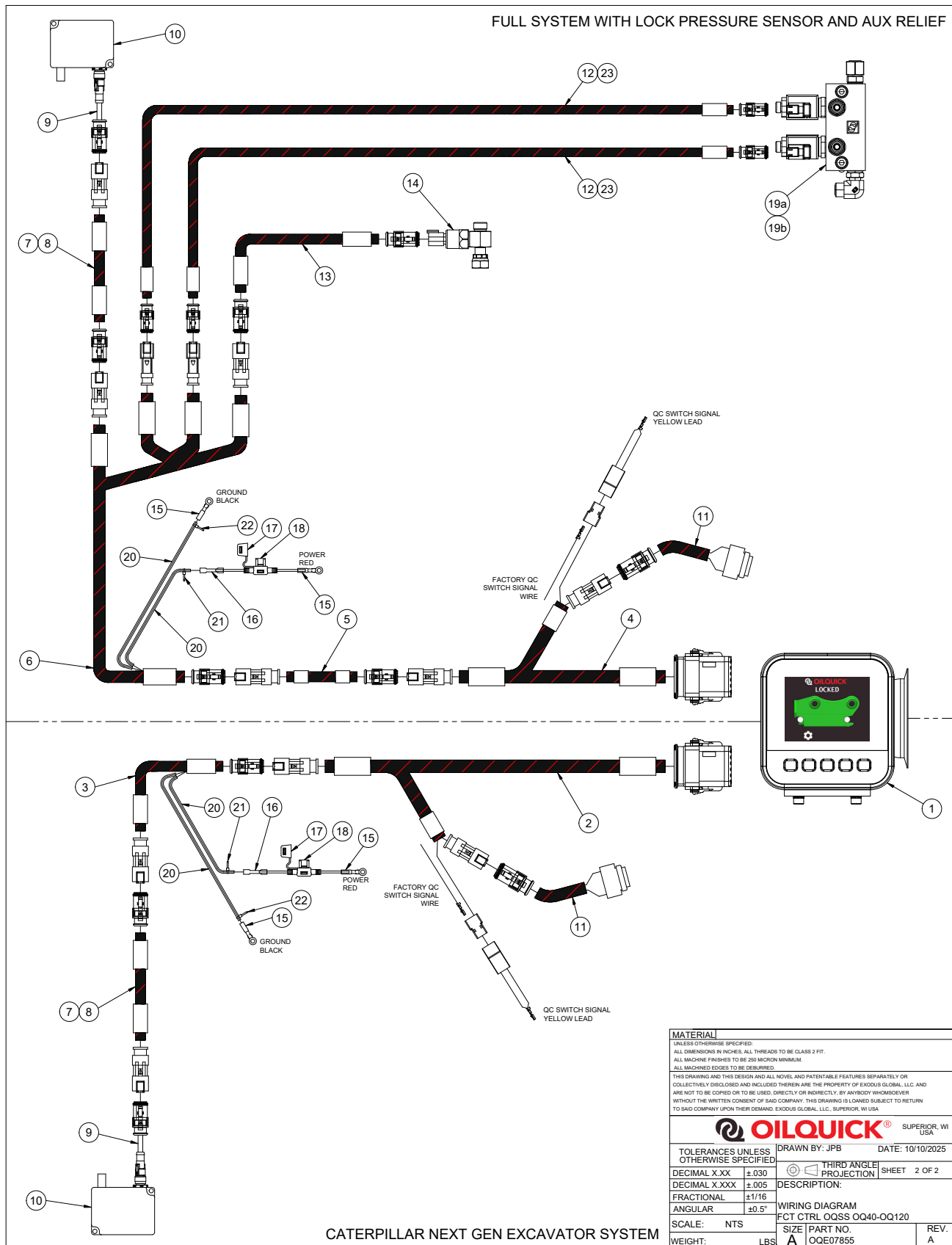
REVISIONS				
REV.	ECN	DESCRIPTION	DATE	BY
A		ORIGINAL RELEASE	10/10/2025	JPB
A				
C				

- HARNESS LABELS DESIGNATE CONNECTION TO BE MADE AT EACH END.
 - HARNESS KITS VARY PER COUPLER SIZE AND CONFIGURATION.
 - "CABLE 8-POS FEMALE M12/PL 3M" (ITEM 8) PRE-INSTALLED ON COUPLER.
 - HYDRAULIC VALVES SHOWN FOR REFERENCE.
- DEPRESSURIZATION VALVE (ITEM 19A/B) NOT USED IN OQ 40 / OQ45 COUPLERS.
 - OQE07037 CABLE DT PL/RCPT VALVE EXT 3M SUPPLIED UPON REQUEST.

ITEM	PART#	NAME	QTY	UOM
1	OQE07464	FACTORY CONTROL OQSS DISPLAY	1	EA
2	OQE07283	HARNESS DISPLAY OQSS CAT	1	EA
3	OQE07282	CABLE CAB DT PL/RCPT SENSOR / POWER	1	EA
4	OQE07494	HARNESS DISPLAY OQSS FACTORY CONTROL	1	EA
5	OQE07493	CABLE DT PL/RCPT 6 PIN CAB EXT 3M	1	EA
6	OQE07492	HARNESS CAB OQSS FACTORY CONTROL	1	EA
7	OQE05998	CABLE DT PL/RCPT SENSOR 4 M	1	EA
8	OQE05999	CABLE DT PL/PL PSI SENSOR 10M	1	EA
9	OQE07560	CABLE 8-POS FEMALE M12/PL 3M	1-3	EA
10	OQ1800514	LOCK SENSOR E-VA	0-1	EA
11	OQE06267	BUZZER ASSY THREE WIRE DT06-4S	0-2	EA
12	OQE05995	CABLE DT PL/PL VALVE 3M	1	EA
13	OQE06338	CABLE DT PL/PL PSI SENSOR 4M	1	EA
14	OQE06340	SENSOR PRESSURE 7500 PSI 04MB DT	1-3	EA
15	30-00864	HEAT SHRINK 22-18 RING TERMINAL, 10-24	2	EA
	30-00865	HEAT SHRINK 22-18 RING TERMINAL, 1/4"	2	EA
	30-00866	HEAT SHRINK 22-18 RING TERMINAL, 3/8"	2	EA
	30-00879	HEAT SHRINK 16-14 RING TERMINAL, 10-24	1	EA
	30-00880	HEAT SHRINK 16-14 RING TERMINAL, 1/4"	1	EA
16	30-00465	16-14 AWG Blue Crimp Butt Splice	3	EA
	30-00801	22-18 AWG Red Crimp Butt Splice	3	EA
17	30-00862	INLINE FUSE HOLDER MINI	1	EA
18	30-00863	FUSE 10 AMP MINI	1	EA
19a	OQ4123124	VALVE - DEPRESSURIZATION 24V DT (OQ60-5 - OQ120)	1	EA
19b	OQ4123125	DEPRESSURIZATION VALVE DOUBLE, 12V (OQ60-5 - OQ120)	1	EA
20	30-00894	CORRUGATED SPLIT LOOM .125" ID	30	FT
21	30-00892	ZIP TIE .098" X 3.9" BLACK	15	EA
22	30-00893	ZIP TIE .098" X 3.9" RED	15	EA
23	OQE07037	CABLE DT PL/RCPT VALVE EXT 3M	0-3	EA

MATERIAL				
UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES, ALL THREADS TO BE CLASS 2 FIT. ALL MACHINE FINISHES TO BE 320 MICRON MINIMUM. ALL MACHINED EDGES TO BE DEBURRED.				
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TOLERANCES UNLESS OTHERWISE SPECIFIED:		DRAWN BY: JPB	DATE: 10/10/2025	
DECIMAL X.XX	±.030	 THIRD ANGLE PROJECTION	SHEET 1 OF 2	
DECIMAL X.XXX	±.005			
FRACTIONAL	±1/16			
ANGULAR	±0.5°	DESCRIPTION:		
SCALE: NTS		WIRING DIAGRAM		
WEIGHT: LBS		FCT CTRL OQSS OQ40-OQ120		
SIZE A		PART NO.	REV. A	
		OQE07855		

7. Wiring diagram - (OQE07855) - sheet 2



8. Troubleshooting - OQSS Factory Control Fault Table

Fault	Possible cause	Action
Control panel does not start on machine start	Faulty power connection / wiring	Check voltage at keyed power connection with a multimeter. If machine voltage is present, inspect fuse. Check chassis module power light. If this is lit, the chassis module is receiving power. Inspect wire harness between chassis module and display module.
	Faulty fuse at power connection	Inspect fuse at power connection.
	Faulty OQSS display module	Test power and ground connections to the OQSS display module (test for machine voltage at display connector (pin 7, wire ID 2007), and check continuity between wire harness display plug ground (pin 1, wire ID 2001) and chassis ground connection.
Buzzer fault	Faulty buzzer, Faulty wiring	Open the coupler to turn the buzzer to a pulsed tone. If the buzzer is sounding, back probe pin 5 on OQSS display plug (wire ID 2005). Machine voltage should be present when the buzzer is on. If not, inspect wire 2005 from display module to buzzer. If buzzer does not sound, unplug and test for voltage at buzzer plug pin 2 (wire ID 2016). If machine voltage is present replace buzzer ASSY.
Pressure sensor fault	Faulty pressure sensor, Faulty wiring	Check power and ground at pressure sensor plug (pin 2 power, pin 1 ground). If power and ground are verified to be good, test continuity between pressure sensor cable plug pin 4 (wire ID 1010) and chassis module plug pin 10. If continuity is confirmed, replace pressure sensor. If there is no continuity, determine if faulty wire is in sensor cable or HARNESS CONTROL MODULE. Replace or repair harnesses as needed.
Lock Sensor Fault	Faulty sensor wire, Improper adjustment of sensor linkage, H-cylinder retracted while attachment locked	Inspect lock sensor at coupler with machine running while locked into an attachment. If both lights are on, test continuity in wires 1005 and 1006 between sensor and Display module and replace / repair cables as needed. If both lights are off, unplug sensor cable at coupler and test for machine power between pins 4 (pwr) and 3 (grd). If power is present, manually move sensor linkage to see if the lights can be turned on. If they turn on when the linkage is extended, adjust linkage. If they do not turn on, replace sensor. If power is not present test wires 1012-4 and 1001-4 in sensor cable between coupler and chassis module for continuity. Replace or repair as needed.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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