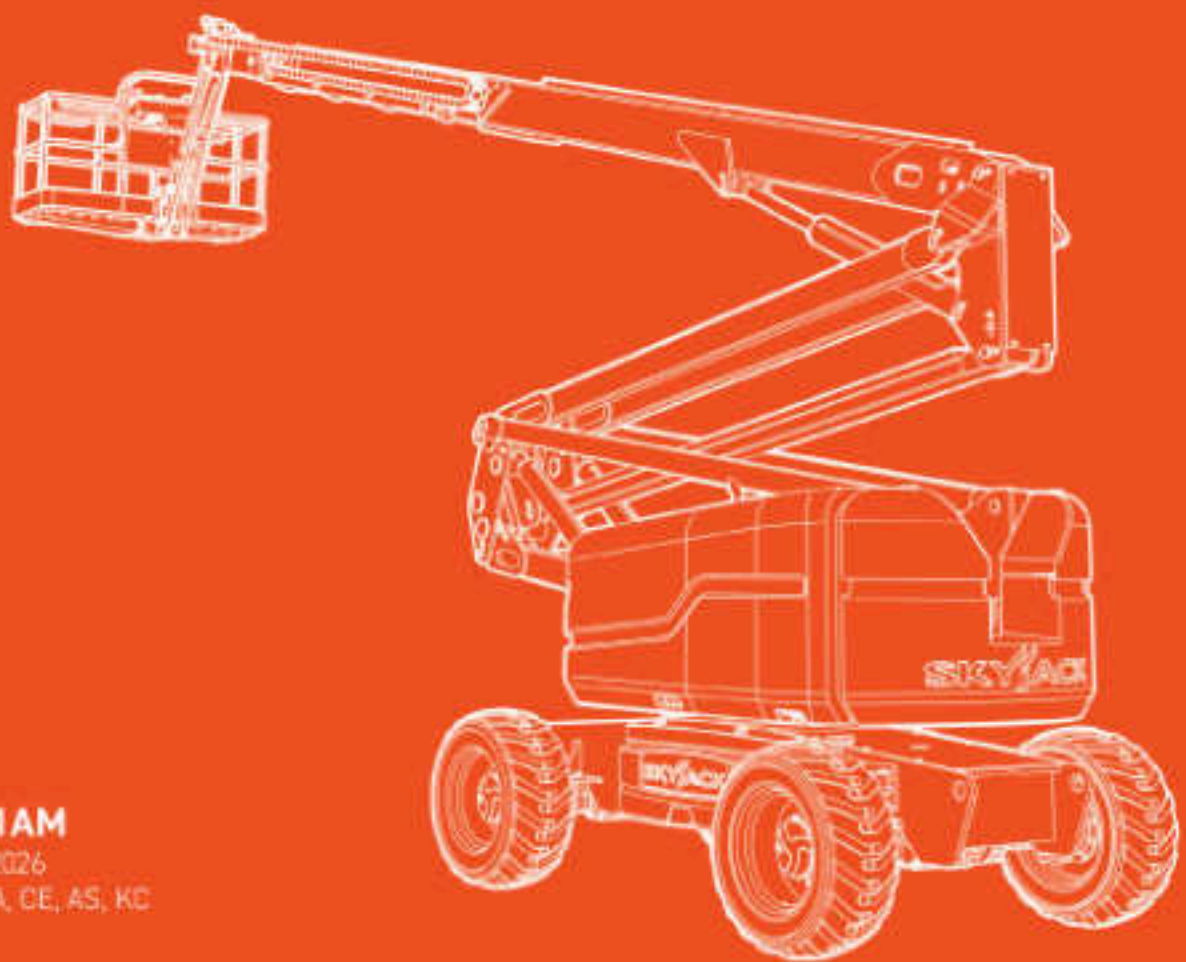
SKYJACK

# SERVICE MANUAL

## SJ85AJ

ARTICULATING BOOM



**210341AM**
June 30 2026
ANSI/CSA, CE, AS, KC

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# Table 2.2 Torque Specifications for Fasteners (US)

| Size | Torque Type | SAE 2 | | SAE 5 | | SAE 8 | |
|---|---|---|---|---|---|---|---|
| | | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| 4-40 | (in-lb) | (5) | (4) | (8) | (6) | (12) | (9) |
| | Nm | 0.6 | 0.5 | 0.9 | 0.7 | 1.4 | 1.0 |
| 4-48 | (in-lb) | (6) | (5) | (9) | (7) | (13) | (10) |
| | Nm | 0.7 | 0.6 | 1.0 | 0.8 | 1.5 | 1.1 |
| 6-32 | (in-lb) | (10) | (8) | (16) | (12) | (23) | (17) |
| | Nm | 1.1 | 0.9 | 1.8 | 1.4 | 2.6 | 1.9 |
| 6-40 | (in-lb) | (12) | (9) | (18) | (13) | (25) | (19) |
| | Nm | 1.4 | 1.0 | 2.0 | 1.5 | 2.8 | 2.1 |
| 8-32 | (in-lb) | (19) | (14) | (30) | (22) | (41) | (31) |
| | Nm | 2.1 | 1.6 | 3.4 | 2.5 | 4.6 | 3.5 |
| 8-36 | (in-lb) | (20) | (15) | (31) | (23) | (43) | (32) |
| | Nm | 2.3 | 1.7 | 3.5 | 2.6 | 4.9 | 3.6 |
| 10-24 | (in-lb) | (27) | (21) | (43) | (32) | (60) | (45) |
| | Nm | 3.1 | 2.4 | 4.9 | 3.6 | 6.8 | 5.1 |
| 10-32 | (in-lb) | (31) | (23) | (49) | (36) | (68) | (51) |
| | Nm | 3.5 | 2.6 | 5.5 | 4.1 | 7.7 | 5.8 |
| 1/4-20 | (in-lb) ft-lb | (66) | (50) | 8 | (75) | 12 | 9 |
| | Nm | 7.5 | 5.6 | 11 | 8.5 | 16 | 12 |
| 1/4-28 | (in-lb) ft-lb | (76) | (56) | 10 | (86) | 14 | 10 |
| | Nm | 8.6 | 6.3 | 14 | 9.7 | 19 | 14 |
| 5/16-18 | ft-lb | 11 | 8 | 17 | 13 | 25 | 18 |
| | Nm | 15 | 11 | 23 | 18 | 34 | 24 |
| 5/16-24 | ft-lb | 12 | 9 | 19 | 14 | 25 | 20 |
| | Nm | 16 | 12 | 26 | 19 | 34 | 27 |
| 3/8-16 | ft-lb | 20 | 15 | 30 | 23 | 45 | 35 |
| | Nm | 27 | 20 | 41 | 31 | 61 | 47 |
| 3/8-24 | ft-lb | 23 | 17 | 35 | 25 | 50 | 35 |
| | Nm | 31 | 23 | 47 | 34 | 68 | 47 |
| 7/16-14 | ft-lb | 32 | 24 | 50 | 35 | 70 | 55 |
| | Nm | 43 | 33 | 68 | 47 | 95 | 75 |
| 7/16-20 | ft-lb | 36 | 27 | 55 | 40 | 80 | 60 |
| | Nm | 49 | 37 | 75 | 54 | 108 | 81 |
| 1/2-13 | ft-lb | 50 | 35 | 75 | 55 | 110 | 80 |
| | Nm | 68 | 47 | 102 | 75 | 149 | 108 |
| 1/2-20 | ft-lb | 55 | 40 | 90 | 65 | 120 | 90 |
| | Nm | 75 | 54 | 122 | 88 | 163 | 122 |

| Size | Torque Type | SAE 2 | | SAE 5 | | SAE 8 | |
|---|---|---|---|---|---|---|---|
| | | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| 9/16-12 | ft-lb | 70 | 55 | 110 | 80 | 150 | 110 |
| | Nm | 95 | 75 | 149 | 108 | 203 | 149 |
| 9/16-18 | ft-lb | 80 | 60 | 120 | 90 | 170 | 130 |
| | Nm | 108 | 81 | 163 | 122 | 230 | 176 |
| 5/8-11 | ft-lb | 100 | 75 | 150 | 110 | 220 | 170 |
| | Nm | 136 | 102 | 203 | 149 | 298 | 230 |
| 5/8-18 | ft-lb | 110 | 85 | 180 | 130 | 240 | 180 |
| | Nm | 149 | 115 | 244 | 176 | 325 | 244 |
| 3/4-10 | ft-lb | 175 | 130 | 260 | 200 | 380 | 280 |
| | Nm | 237 | 176 | 353 | 271 | 515 | 380 |
| 3/4-16 | ft-lb | 200 | 150 | 300 | 220 | 420 | 320 |
| | Nm | 271 | 203 | 407 | 298 | 569 | 434 |
| 7/8-9 | ft-lb | 170 | 125 | 430 | 320 | 600 | 460 |
| | Nm | 230 | 169 | 583 | 434 | 813 | 624 |
| 7/8-14 | ft-lb | 180 | 140 | 470 | 360 | 660 | 500 |
| | Nm | 244 | 190 | 637 | 488 | 895 | 678 |
| 1-8 | ft-lb | 250 | 190 | 640 | 480 | 900 | 680 |
| | Nm | 339 | 258 | 868 | 651 | 1220 | 922 |
| 1-12 | ft-lb | 270 | 210 | 710 | 530 | 1000 | 740 |
| | Nm | 366 | 285 | 963 | 719 | 1356 | 1003 |
| 1-14 | ft-lb | 280 | 210 | 730 | 540 | 1020 | 760 |
| | Nm | 380 | 285 | 990 | 732 | 1383 | 1030 |
| 1 1/8-7 | ft-lb | 350 | 270 | 800 | 600 | 1280 | 960 |
| | Nm | 475 | 366 | 1085 | 813 | 1735 | 1302 |
| 1 1/8-12 | ft-lb | 400 | 300 | 880 | 660 | 1440 | 1080 |
| | Nm | 542 | 407 | 1193 | 895 | 1952 | 1464 |
| 1 1/4-7 | ft-lb | 500 | 380 | 1120 | 840 | 1820 | 1360 |
| | Nm | 678 | 515 | 1519 | 1139 | 2468 | 1844 |
| 1 1/4-12 | ft-lb | 550 | 420 | 1240 | 920 | 2000 | 1500 |
| | Nm | 746 | 569 | 1681 | 1247 | 2712 | 2034 |
| 1 3/8-6 | ft-lb | 670 | 490 | 1460 | 1100 | 2380 | 1780 |
| | Nm | 908 | 684 | 1979 | 1491 | 3227 | 2413 |
| 1 3/8-12 | ft-lb | 750 | 560 | 1680 | 1260 | 2720 | 2040 |
| | Nm | 1017 | 759 | 2278 | 1708 | 3688 | 2766 |
| 1 1/2-6 | ft-lb | 870 | 650 | 1940 | 1460 | 3160 | 2360 |
| | Nm | 1180 | 881 | 2630 | 1979 | 4284 | 3200 |
| 1 1/2-12 | ft-lb | 980 | 730 | 2200 | 1640 | 3560 | 2660 |
| | Nm | 1329 | 990 | 2983 | 2224 | 4827 | 3606 |

**NOTE:** *Lubed includes lubricants such as lubrizing, oil, grease, and some uncured thread lockers. Refer to the specific thread locker manufacturer's instructions for specific torque adjustments.* *1374AB*



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# Section 4 – Troubleshooting Information

## 4.1 Introduction

The following pages contain a table of Troubleshooting for locating and correcting most service trouble which can develop. Careful and accurate analysis of the systems listed in the table of Troubleshooting will localize the trouble more quickly than any other method. This manual cannot cover all possible troubles and deficiencies that may occur. If a specific trouble is not listed, isolate the major component in which the trouble occurs, isolate whether the problem is electrical or hydraulic, and then isolate and correct the specific problem.

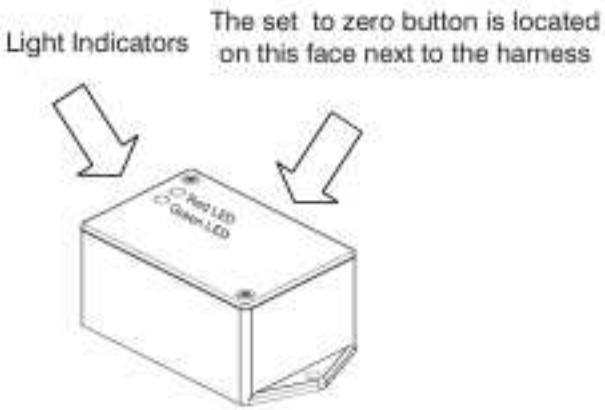
The content of this section is separated into "probable cause" and "remedy". See the example below for clarification.

| | |
|---|---|
| **1.** Probable cause. | **Remedy.** |



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## Reprogram the Existing Tilt Switch




### NOTE

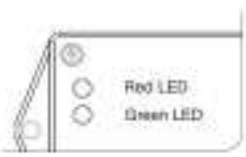
*The tilt circuit is only powered when the controls are powered.*

1. Turn the main disconnect switch to the ON position.
2. Turn the base/off/platform key switch to the base position.
3. Pull out both emergency stop buttons.
4. Verify the switch is powered (the red or green LED will be solid).

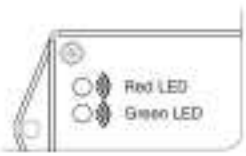



5. Reprogram the Tilt Switch:

   a. Press and hold the set to zero button for 5 seconds.
   **Results:** Both LEDs turn off.




   b. Both LEDs flash.




### IMPORTANT

**Step *b* must be completed within a five second period or the switch will automatically exit program mode and return to normal operation using the previously stored data.**

   c. Press and release the set to zero button three times.
   d. If the five second period has expired prior to completion, repeat steps *a*, *b*, and *c*.
   e. Observe the program delay/stabilization time (only the red LED blinks for four seconds).



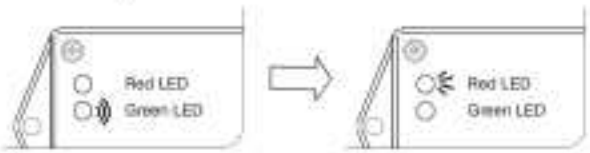

   f. Both LEDs flash for one second.
   **Meaning:** The switch is learning the new zero position.




   g. Both LEDs turn on for one second.
   **Meaning:** The new zero position has been calculated.




   h. The green LED flashes and then the red LED turns on for two seconds.
   **Meaning:** The switch is verifying the new zero position.




   i. The green LED turns on.
   **Meaning:** The switch is ready for normal operation.




6. Turn the main power disconnect switch to the off position.
7. Push in the emergency stop buttons.
8. Proceed to *Verify the Tilt Circuit*.



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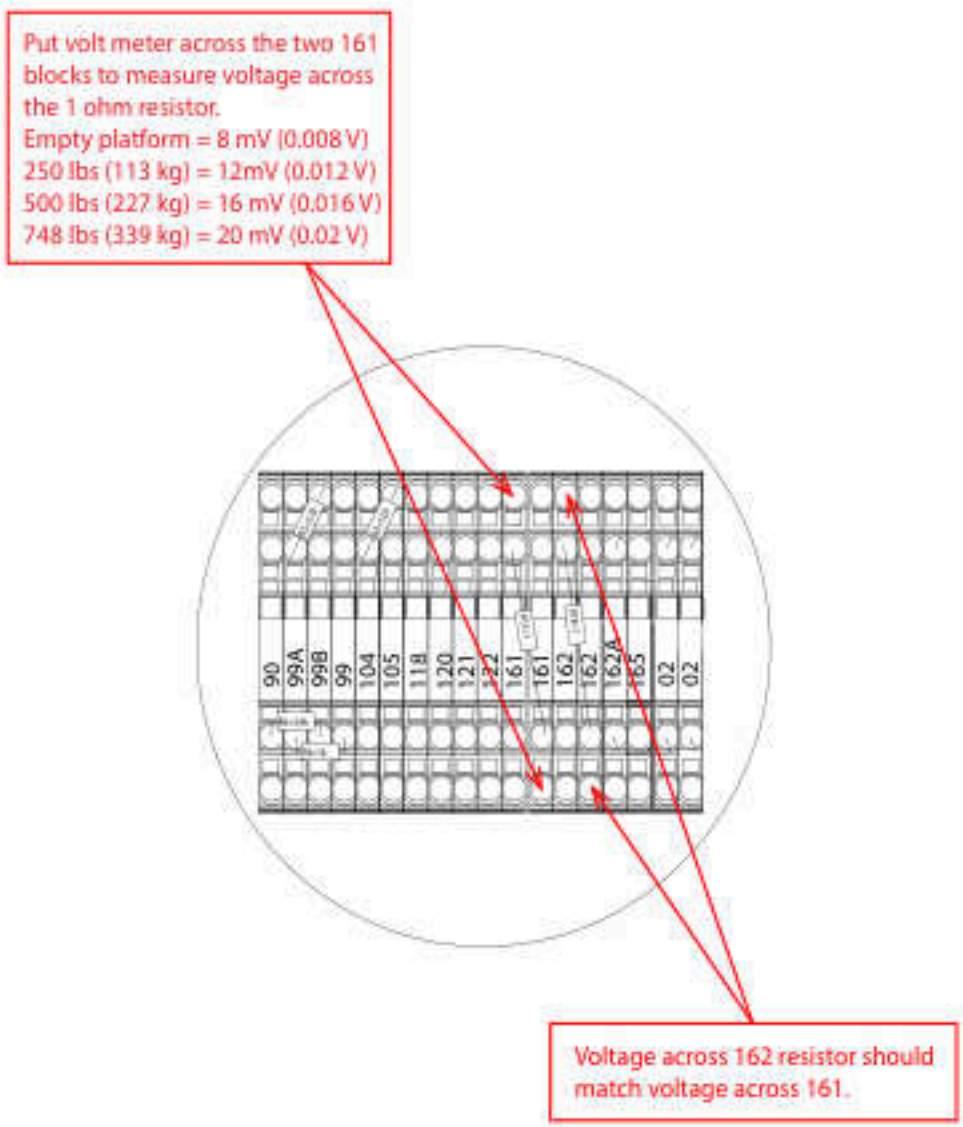
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## 4.2-14 Green LED on Load Sense/Dual Load Zone Module is not On

| | |
|---|---|
| 1. Loose or broken wires #9 and #02 at base terminal block to load sense/dual load zone module white connector J4-pins #8 and #1. | **Check for loose or corroded connections. Check for voltage (12V).** |

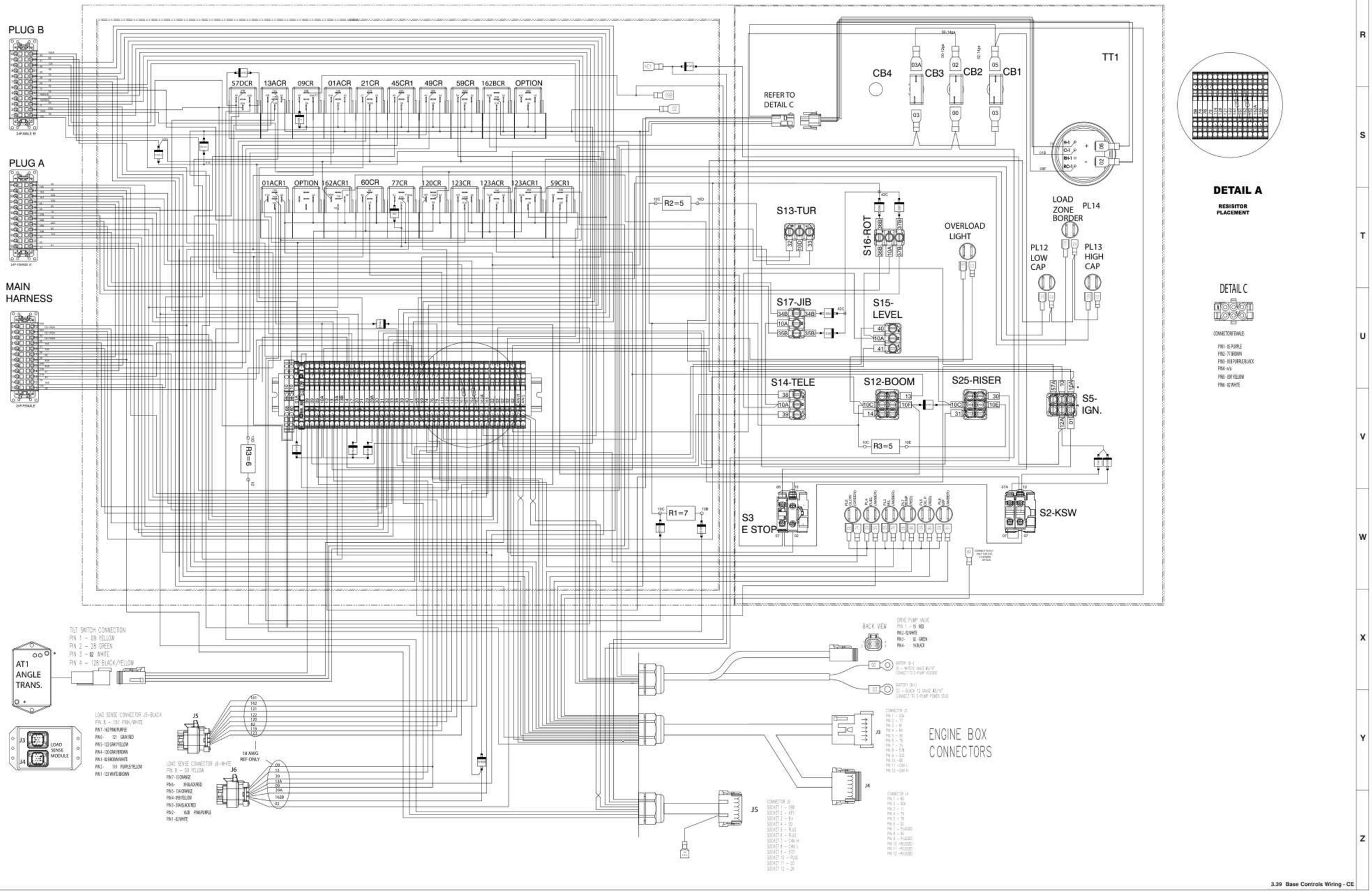
## 4.2-15 Load Sense Indicates Overload or Overload Warning with Platform Empty or Below Weight

| | |
|---|---|
| 1. Load sense module mis-calibration. | **Refer to calibration procedure for recalibration of load cell.** |
| 2. Load cell circuit not operating. | **Check Voltage across 1Ω (ohm) resistors 161 and 162 in base control console.** |






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3.39 Base Controls Wiring - CE



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