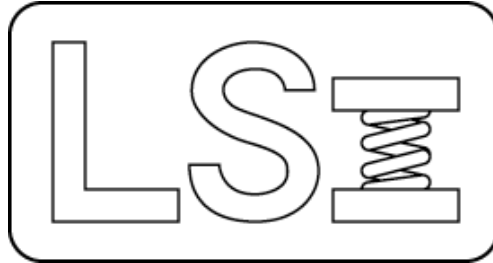


# *Larson Systems Inc.*



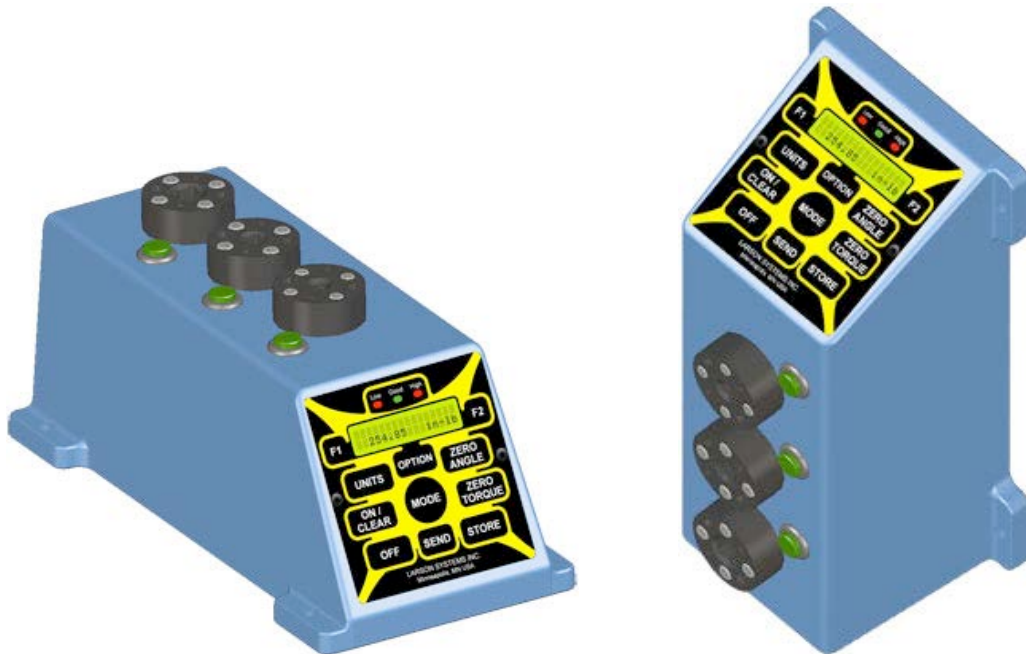
## *UTWCS Parts List*

*050-0000-0134-00*

*Ultra Torque Wrench Calibration System – Standard*

*050-0000-0134-02*

*Ultra Torque Wrench Calibration System – Custom*





050-0000-0134-00

# Parts List

UTWCS - Triple Load Cells Standard

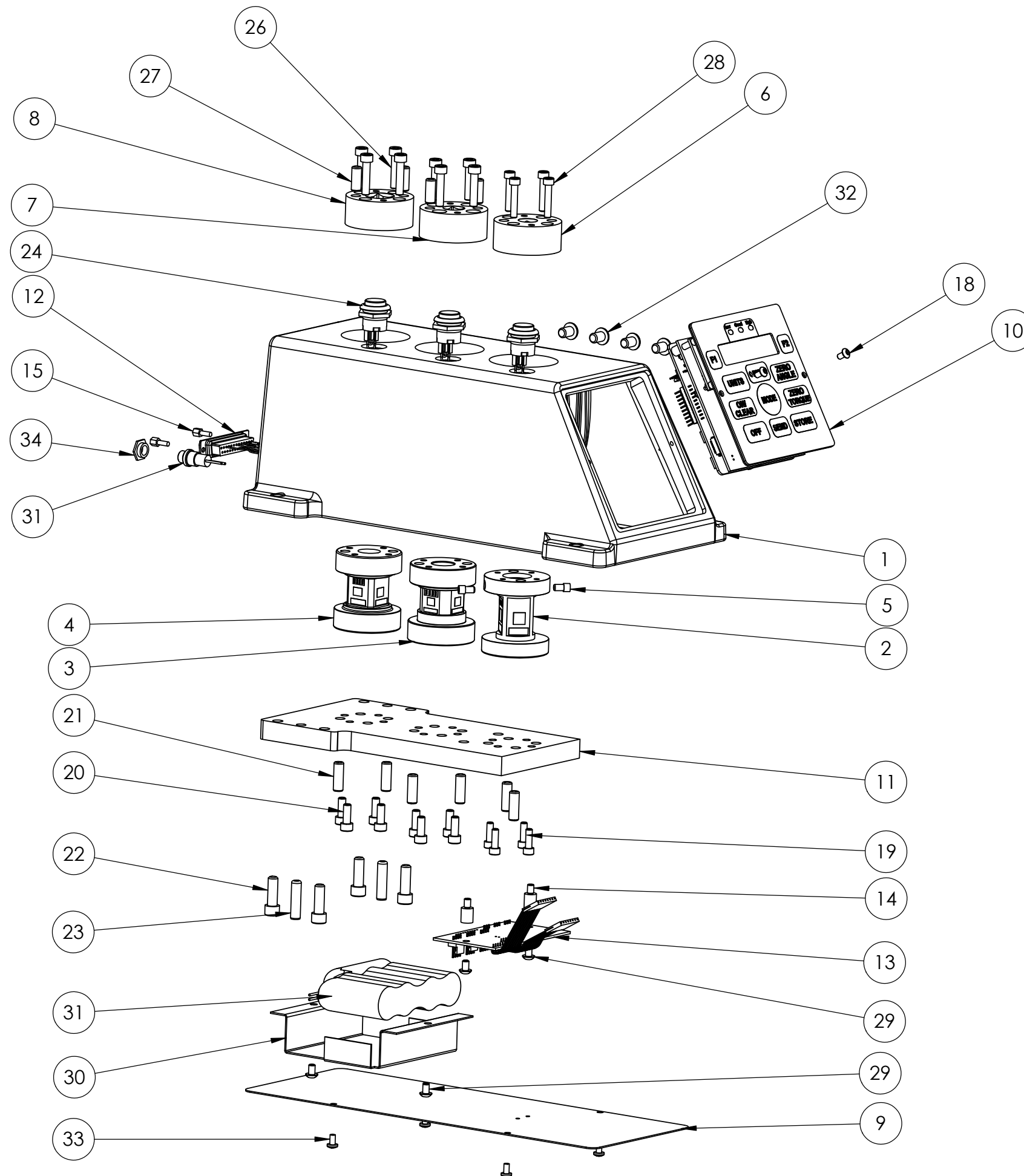
| Rev | By  | Date       | Description |
|-----|-----|------------|-------------|
|     | KMP | 10-27-2006 |             |
|     |     |            |             |
|     |     |            |             |
|     |     |            |             |

| Item | Qty | Part Number      | Rev | Part Name   | PCB Location | Part Length |
|------|-----|------------------|-----|---|--------------|-------------|
| 1    | 1   | 025-0000-0454-01 | B   | UTWCS Triple Load Cell Assembly 200 in-lb, 108 ft-lb, |              | in.         |
| 2    | 1   | 060-1000-0045-00 | E   | User Manual - TWCS Series                             |              | in.         |
| 3    | 1   | 059-0000-0038-00 | A   | Shipping Crate - TWCS Series                          |              | in.         |
| 4    | 1   | 025-1000-0396-00 |     | Power Supply, 100-240 VAC 50-60 Hz (USA Plug)         |              | in.         |
| 5    | 1   | 060-2000-0035-01 | A   | Parts List - UTWCS Triple Load Cell (Standard and     |              | in.         |
| 6    | 1   | 025-6000-0008-01 |     | Sticker Assembly - UTWCS Series                       |              | in.         |
| 7    | 1   | 025-2000-0132-00 | A   | Schematic, UTWCS Triple Torque Cell Assembly          |              | in.         |

Approved by: 

Date: June 1, 2007


| REV | DATE | DESCRIPTION | DRW | APP |
|-----|------|-------------|-----|-----|
|     |      | SEE SHEET 4 |     |     |

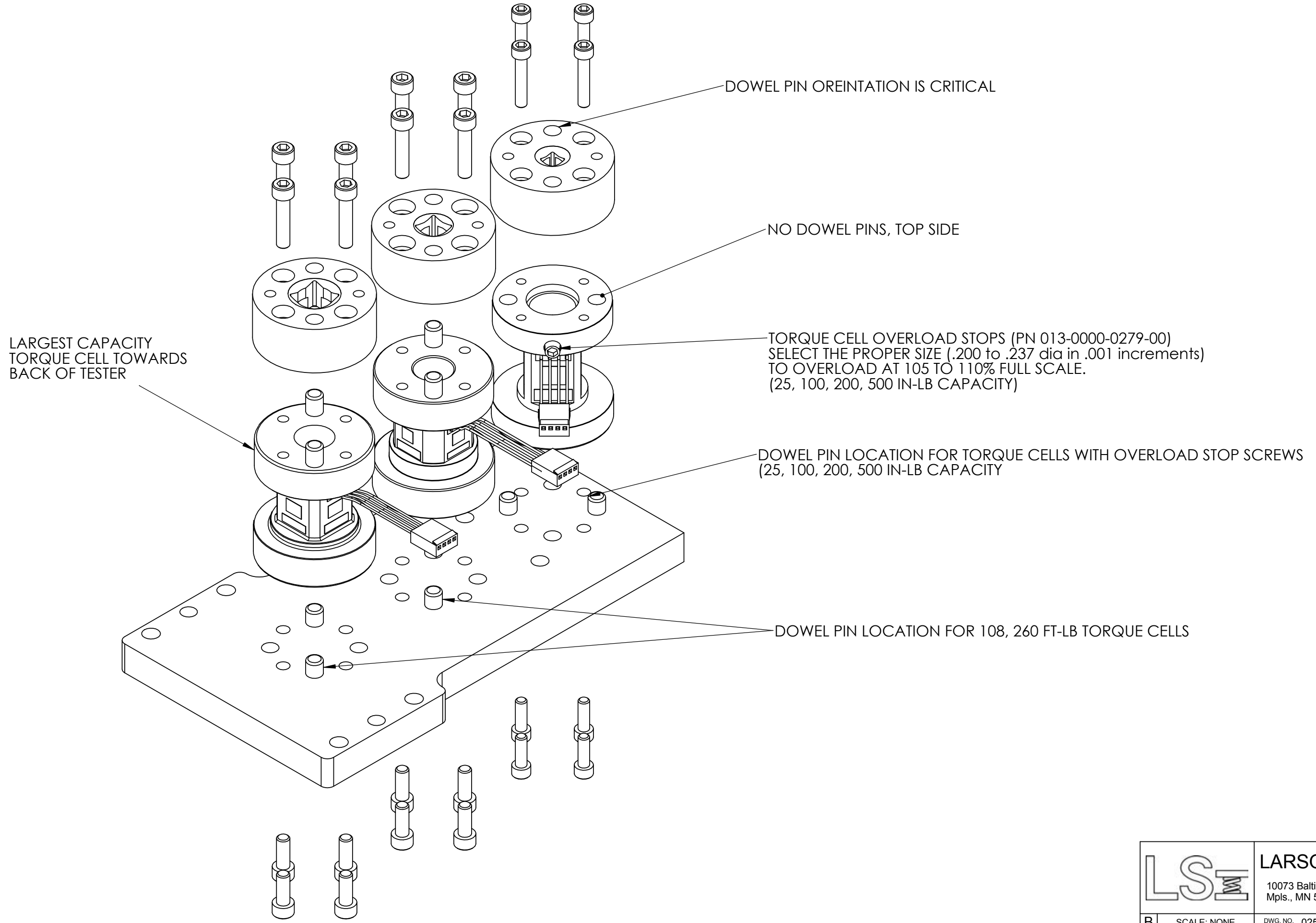


NOTE: SET UP LOAD CELL SELECTOR LIGHTS/ BUTTONS (SOFTWARE VS 4.25 AND EARLIER)

(CHANGE POLARITY OF OUTPUTS 6, 7 AND 8)

1. TURN TESTER ON
2. PRESS "OPTION" 5 TIMES TO "USERS SETUP" SCREEN
3. PRESS "F1"
4. SCREEN PROMPTS FOR PASSWORD, PRESS "UNITS", "SEND", "F1"
5. USER SETUP SCREEN IS DISPLAYED, PRESS "OPTION" 6 TIMES TO DISPLAY "I/O POLARITY"
6. PRESS "F1" TO DISPLAY INPUT SCREEN
7. PRESS "OPTION" TO DISPLAY OUTPUT SCREEN
8. PRESS "F1" TO ADVANCE THE CURSER TO OUTPUT #6
9. PRESS "F2" TO CHANGE OUTPUT #6 FROM L TO H
10. PRESS "F1" TO ADVANCE THE CURSER TO OUTPUT #7
11. PRESS "F2" TO CHANGE OUTPUT #7 FROM L TO H
12. PRESS "F1" TO ADVANCE THE CURSER TO OUTPUT #8
13. PRESS "F2" TO CHANGE OUTPUT #8 FROM L TO H

|   |  |          |                                |
|---|--|----------|--------------------------------|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>.XX ± .01<br>.XXX ± .005 |  <b>LARSON SYSTEMS INC.</b><br>10073 Baltimore St. NE PH. 763-780-2131<br>Mpls., MN 55449 FAX. 763-780-2182 |          |                                |
|   |  |          | MATERIAL -                     |
| FINISH -  | DRAWN KMP  | 10-26-06 | STWCS Three load Cell Assembly |
| HEAT TREAT  | APP.   |          | B DWG. NO. 025-0000-0454-XXB   |
|   | APP.   |          | SCALE: NONE SHEET 1 OF 6       |



LARGEST CAPACITY  
TORQUE CELL TOWARDS  
BACK OF TESTER

DOWEL PIN OREINTATION IS CRITICAL

NO DOWEL PINS, TOP SIDE

TORQUE CELL OVERLOAD STOPS (PN 013-0000-0279-00)  
SELECT THE PROPER SIZE (.200 to .237 dia in .001 increments)  
TO OVERLOAD AT 105 TO 110% FULL SCALE.  
(25, 100, 200, 500 IN-LB CAPACITY)

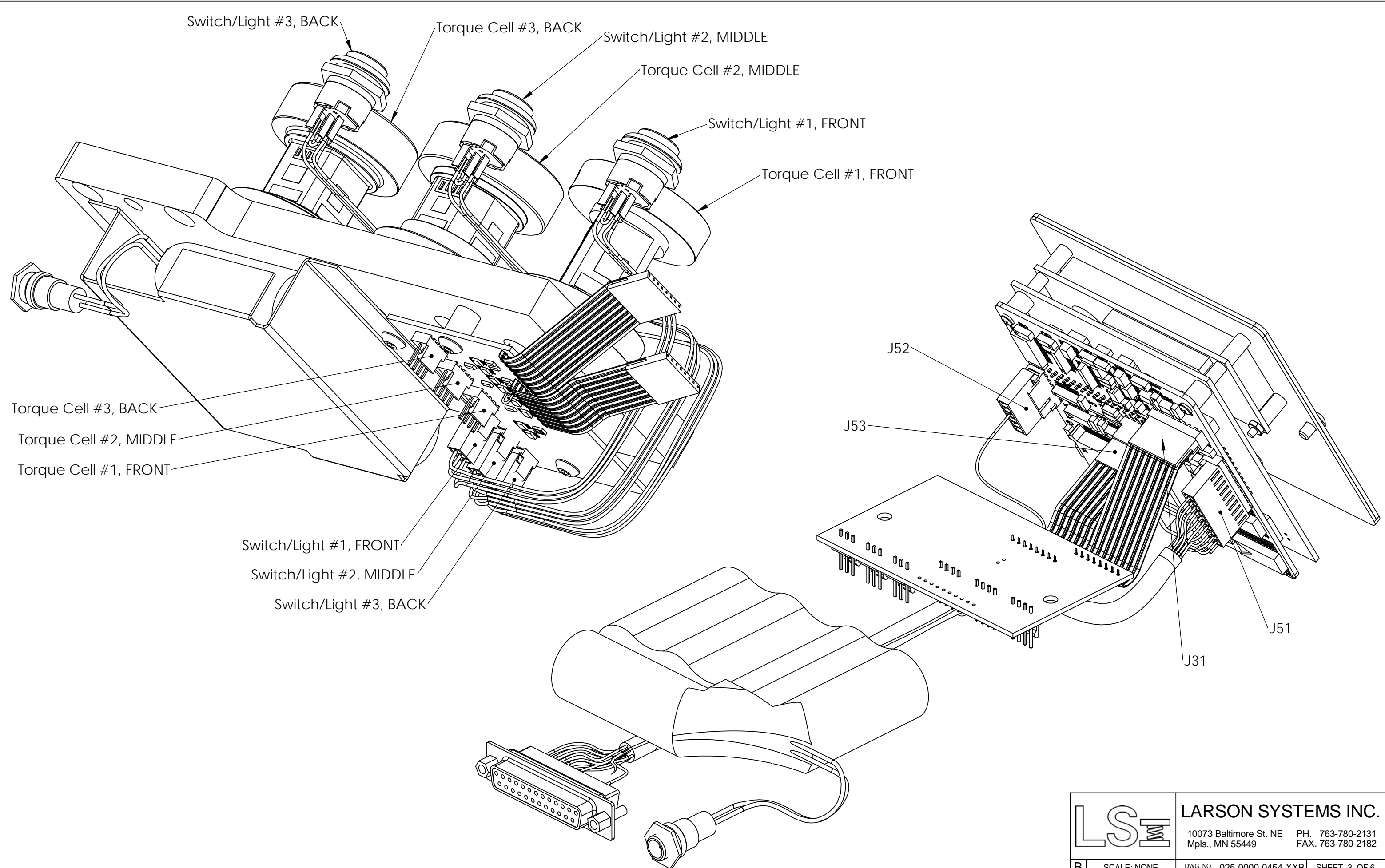
DOWEL PIN LOCATION FOR TORQUE CELLS WITH OVERLOAD STOP SCREWS  
(25, 100, 200, 500 IN-LB CAPACITY)

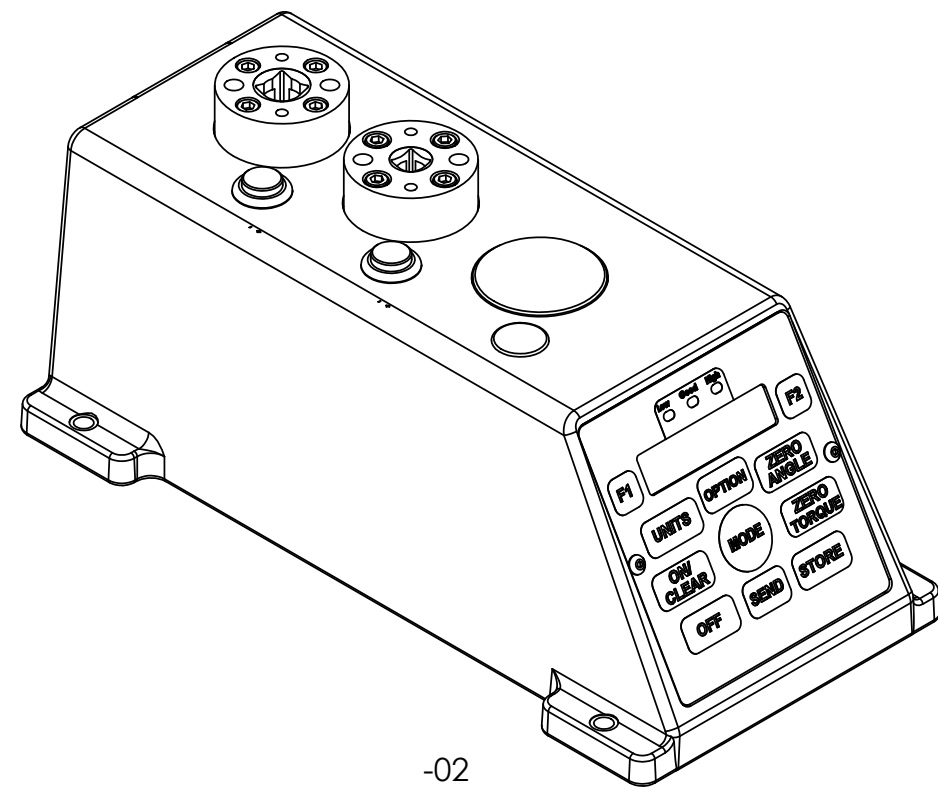
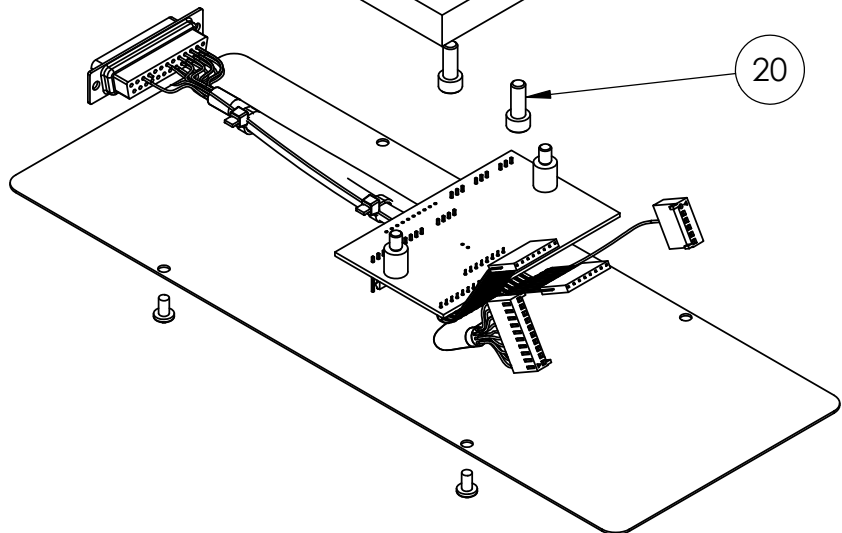
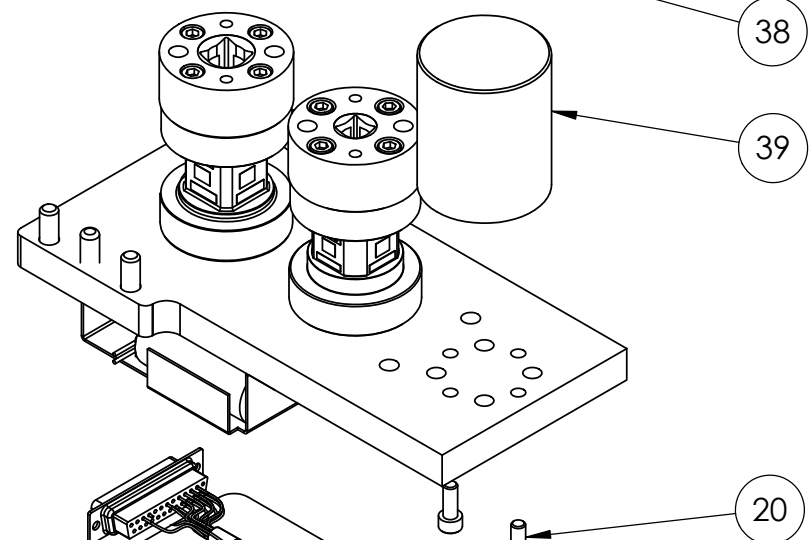
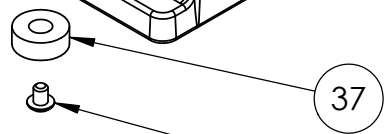
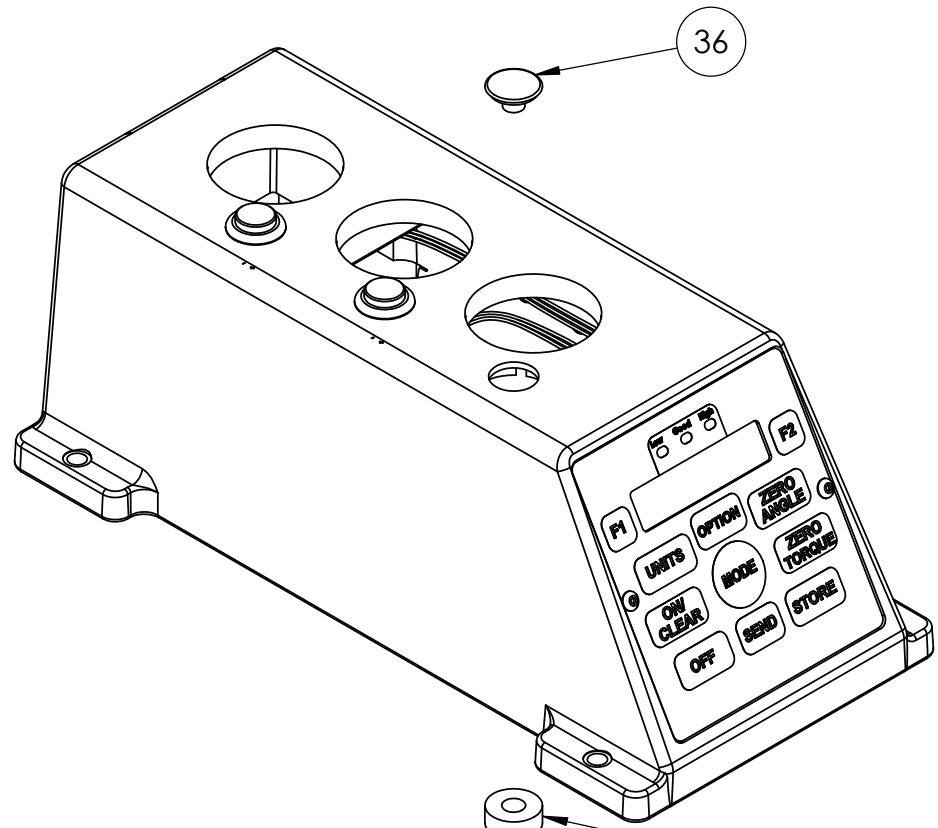
DOWEL PIN LOCATION FOR 108, 260 FT-LB TORQUE CELLS



**LARSON SYSTEMS INC.**

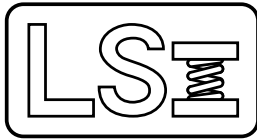
10073 Baltimore St. NE PH. 763-780-2131  
Mpls., MN 55449 FAX. 763-780-2182





**LARSON SYSTEMS INC.**

10073 Baltimore St. NE PH. 763-780-2131  
 Mpls., MN 55449 FAX. 763-780-2182



# 025-0000-0454-01 B

# Parts List

## UTWCS Triple Load Cell Assembly 200 in-lb, 108 ft-lb,

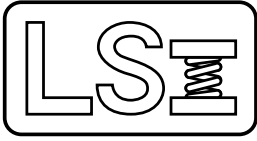
| Rev | By  | Date       | Description  |
|-----|-----|------------|--|
|     | KMP | 10-26-2006 |  |
| A   | DAL | 04-30-2008 | del 4 ea #18 013-0000-0077-00 added 4ea 013-0000-0195-00, del 025-1000-0251-00, del 018-0000-2160-00 |
| B   | DAL | 07-10-2009 | Added pages 2,3 and note on page 1   |

| Item | Qty | Part Number      | Rev | Part Name  | PCB Location | Part Length |
|------|-----|------------------|-----|--|--------------|-------------|
| 1    | 1   | 018-0000-1884-01 | B   | STWCS Three Load Cells Housing                     |              | in.         |
| 2    | Ref | 025-0000-0697-00 | A   | Torque Cartridge - 25 in-lb (1/4" Drive Sug)       |              | in.         |
| 2    | Ref | 025-0000-0697-01 | A   | Torque Cartridge - 100 in-lb (1/4" Drive Sug)      |              | in.         |
| 2    | 1   | 025-0000-0697-02 | A   | Torque Cartridge - 200 in-lb (1/4" Drive Sug)      |              | in.         |
| 3    | Ref | 025-0000-0697-03 | A   | Torque Cartridge - 500 in-lb (3/8" Drive Sug)      |              | in.         |
| 3    | 1   | 025-0000-0697-04 | A   | Torque Cartridge - 108 ft-lb (3/8" Drive Sug)      |              | in.         |
| 4    | 1   | 025-0000-0697-05 | A   | Torque Cartridge - 260 ft-lb (1/2" Drive Sug)      |              | in.         |
| 5    | Ref | 013-0000-0279-00 |     | 8-32 X 1/4 SHCS, Stainless                         |              | in.         |
| 6    | Ref | 018-0000-2468-00 | A   | 1/4 Drive Adapter, TWCS, 1.25 Dia BC, 8-32 screws  |              | in.         |
| 6    | Ref | 018-0000-2468-01 | A   | 1/4 Drive Adapter, TWCS, 1.25 Dia BC, 10-32 screws |              | in.         |
| 7    | Ref | 018-0000-1892-02 | E   | 3/8 Drive Adapter, TWCS, 1.25 Ø BC, 10-32 screws   |              | in.         |
| 7    | Ref | 018-0000-1892-00 | E   | 3/8 Drive Adapter, TWCS, 1.25 Dia BC, 8-32 screws  |              | in.         |
| 8    | Ref | 018-0000-1674-02 | K   | 1/2 Drive Adapter, TWCS, 1.25 Dia BC, 10-32 screws |              | in.         |
| 9    | 1   | 018-0000-0877-00 | E   | Base Bottom Cover                                  |              | in.         |
| 10   | 1   | 025-0000-0345-00 | D   | Front Panel Assembly - TST / STWCS                 |              | in.         |
| 11   | 1   | 018-0000-2897-00 | B   | Mounting Plate, 3 Load Cell, STWCS                 |              | in.         |
| 12   | 1   | 025-1000-0287-03 | K   | INTERNAL RS232 CABLE TO TRI-CELL SDHT              |              | in.         |
| 13   | 1   | 025-1000-0557-00 |     | Three Load Cell STWCS PCB Assy                     |              | in.         |
| 14   | 2   | 018-0000-2845-00 |     | Stand Off 8-32 x .375 Male-Female                  |              | in.         |
| 15   | 2   | 013-1000-0010-00 |     | Female Screw Lock                                  |              | in.         |
| 18   | 2   | 013-0000-0077-00 |     | 6-32 X 1/4 Button Head Cap Screw                   |              | in.         |
| 19   | 4   | 013-0000-0181-00 |     | 8-32 X 1/2 SHCS                                    |              | in.         |
| 20   | 8   | 013-0000-0196-00 |     | 10-32 X 1/2 SHCS                                   |              | in.         |
| 21   | 6   | 013-2000-0172-00 |     | 1/4 X 3/4" Dowel Pin                               |              | in.         |
| 22   | 4   | 013-0000-0087-00 |     | 1/4-28 X 3/4 SHCS                                  |              | in.         |
| 23   | 2   | 013-2000-0057-00 |     | 1/4 X 1" DOWEL PIN                                 |              | in.         |
| 24   | 3   | 025-1000-0554-00 |     | Switch / Light, 3 Load Cell STWCS                  |              | in.         |
| 26   | Ref | 013-0000-0294-00 |     | 10-32 X .875 SHCS                                  |              | in.         |
| 27   | Ref | 013-2000-0210-00 |     | 1/4 x 5/8 dowel pin                                |              | in.         |
| 28   | Ref | 013-0000-0295-00 |     | 8-32 X 7/8 SHCS                                    |              | in.         |

Approved by: 

Date: July 14, 2009

**SEE ATTACHED 4 DRAWINGS**



# 025-0000-0454-01 B

# Parts List

## UTWCS Triple Load Cell Assembly 200 in-lb, 108 ft-lb,

| Rev | By  | Date       | Description  |
|-----|-----|------------|--|
|     | KMP | 10-26-2006 |  |
| A   | DAL | 04-30-2008 | del 4 ea #18 013-0000-0077-00 added 4ea 013-0000-0195-00, del 025-1000-0251-00, del 018-0000-2160-00 |
| B   | DAL | 07-10-2009 | Added pages 2,3 and note on page 1   |
|     |     |            |  |

| Item | Qty | Part Number      | Rev | Part Name                                       | PCB Location | Part Length |
|------|-----|------------------|-----|---|--------------|-------------|
| 29   | 4   | 013-0000-0028-00 |     | 8-32 X 1/4 BHSCS                                |              | in.         |
| 30   | 1   | 018-0000-1831-01 | B   | Battery Retainer for SFM ( No PEM Nuts)         |              | in.         |
| 31   | 1   | 025-1000-0240-00 | N   | Rechargeable Battery, 6V, SDHT, molex connector |              | in.         |
| 32   | 4   | 013-0000-0128-00 |     | 1/4-20 X 3/8 BHSCS                              |              | in.         |
| 33   | 4   | 013-0000-0195-00 |     | 6-32 X 1/4 Phillips Pan Machine Screw           |              | in.         |
| 34   | 1   | 018-0000-2160-00 | A   | Power Jack Nut / Insulator                      |              | in.         |
| 35   | Ref | 018-1000-0048-00 |     | Alignment Fixture, UTWCS                        |              | in.         |
| 36   | na  | 018-0000-2906-00 |     | Switch Plug, STWCS 3 Load Cell                  |              | in.         |
| 37   | na  | 018-0000-2906-01 |     | Switch Plug Spacer, STWCS 3 Load Cell           |              | in.         |
| 38   | na  | 013-0000-0120-00 |     | 10-24 X 1/4 BHSCS                               |              | in.         |
| 39   | na  | 018-0000-2905-00 | A   | Load Cell Plug, STWCS 3 Load Cell               |              | in.         |

Approved by:

Date:

July 14, 2009

**SEE ATTACHED 4 DRAWINGS**

Printed on 07-14-2009, 1:43:12 PM by DAL

Page 6 of 6





050-0000-0134-02

# Parts List

UTWCS - Triple Load Cells (add load cell prices)

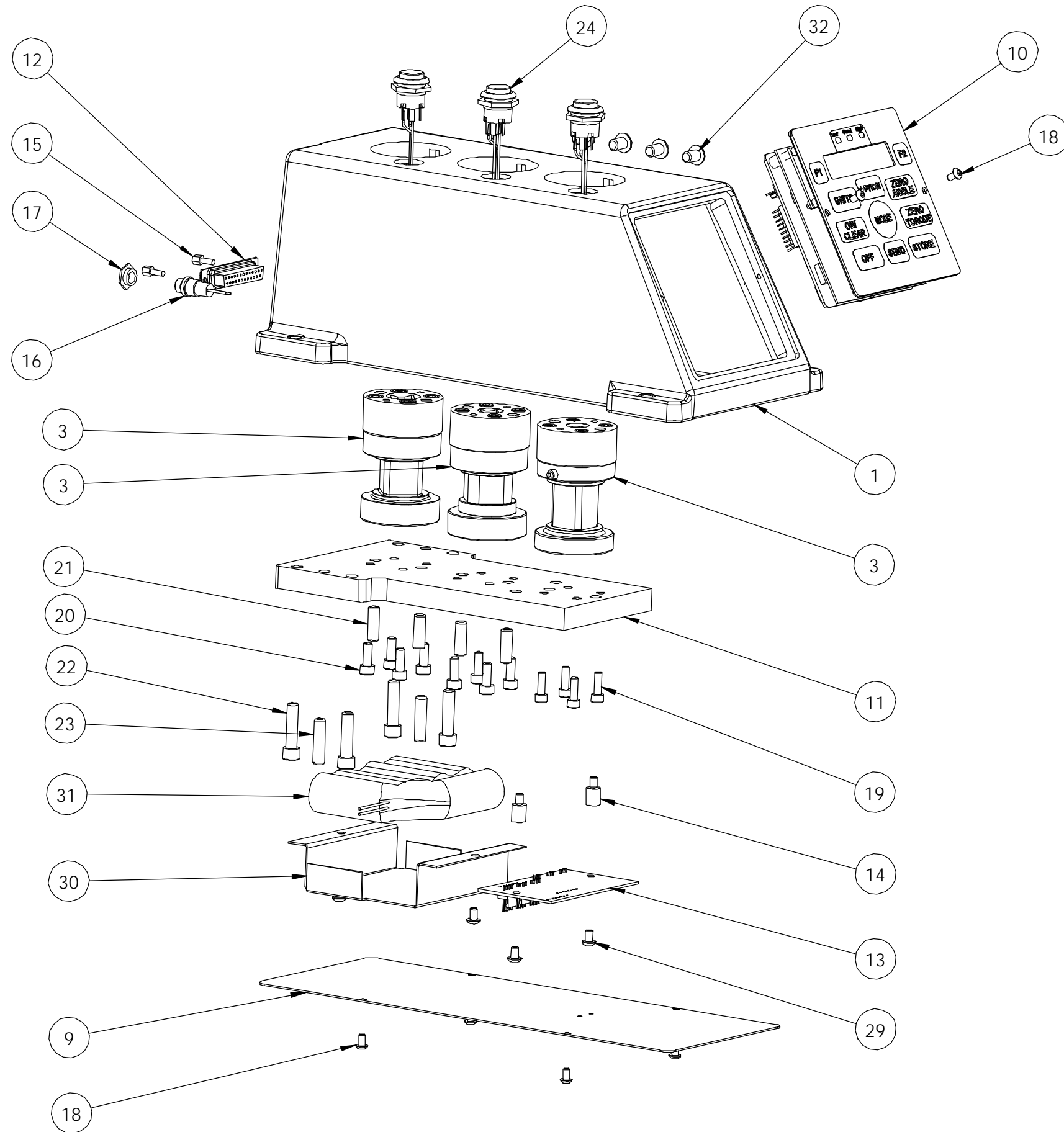
| Rev | By  | Date       | Description |
|-----|-----|------------|-------------|
|     | KMP | 11-30-2006 |             |
|     |     |            |             |
|     |     |            |             |
|     |     |            |             |


| Item | Qty | Part Number      | Rev | Part Name   | PCB Location | Part Length |
|------|-----|------------------|-----|---|--------------|-------------|
| 1    | 1   | 025-0000-0454-03 | B   | UTWCS Triple Load Cell Assembly (add load cell    |              | in.         |
| 2    | 1   | 060-1000-0045-00 | E   | User Manual - TWCS Series                         |              | in.         |
| 3    | 1   | 059-0000-0038-00 | A   | Shipping Crate - TWCS Series                      |              | in.         |
| 4    | 1   | 025-1000-0396-00 |     | Power Supply, 100-240 VAC 50-60 Hz (USA Plug)     |              | in.         |
| 5    | 1   | 060-2000-0035-01 | A   | Parts List - UTWCS Triple Load Cell (Standard and |              | in.         |
| 6    | 1   | 025-6000-0008-01 |     | Sticker Assembly - UTWCS Series                   |              | in.         |
| 7    | 1   | 025-2000-0132-00 | A   | Schematic, UTWCS Triple Torque Cell Assembly      |              | in.         |

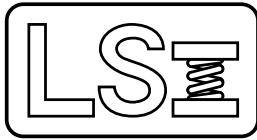
Approved by: 

Date: June 1, 2007

| REV | DATE | DESCRIPTION | DRW | APP |
|-----|------|-------------|-----|-----|
|     |      | SEE SHEET 2 |     |     |



|   |                    |  |
|---|--------------------|--|
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES<br>TOLERANCES ARE:<br>.XX ± .01<br>.XXX ± .005 |                    |  <b>LARSON SYSTEMS INC.</b><br>10073 Baltimore St. NE PH. 763-780-2131<br>Mpls., MN 55449 FAX. 763-780-2182 |
| MATERIAL  | APPROVALS          |  |
| FINISH  | DATE               | STWCS Three load Cell Assembly, Custom   |
| HEAT TREAT  | DRAWN KMP 12-29-06 |  |
|   | APP.               | B DWG. NO. 025-0000-0454-03  |
|   | APP.               | SCALE: NONE SHEET 1 OF 2   |



025-0000-0454-03

# Parts List

STWCS Three load Cell Assembly (add load cell)

| Rev | By  | Date       | Description |
|-----|-----|------------|-------------|
|     | KMP | 11-30-2006 |             |
|     |     |            |             |
|     |     |            |             |
|     |     |            |             |

| Item | Qty | Part Number      | Rev | Part Name  | PCB Location | Part Length |
|------|-----|------------------|-----|--|--------------|-------------|
| 1    | 1   | 018-0000-1884-01 | A   | STWCS Three Load Cells Housing for Moment Arm Assy           |              | in.         |
| 3    | Ref | 025-0000-0697-00 |     | Torque Cell 25 in-lb STWCS Three Load Cell (1/4" Drive Sg)   |              | in.         |
| 3    | Ref | 025-0000-0697-01 |     | Torque Cell 100 in-lb STWCS Three Load Cell (1/4" Drive Sg)  |              | in.         |
| 3    | Ref | 025-0000-0697-02 |     | Torque Cell 200 in-lb STWCS Three Load Cell (1/4" Drive Sg)  |              | in.         |
| 3    | Ref | 025-0000-0697-03 |     | Torque Cell 500 in-lb STWCS Three Load Cell (3/8" Drive Sg)  |              | in.         |
| 3    | Ref | 025-0000-0697-04 |     | Torque Cell 108 ft-lb STWCS Three Load Cell (3/8" Drive Sg)  |              | in.         |
| 3    | Ref | 025-0000-0697-05 |     | Torque Cell 260 ft-lb STWCS Three Load Cell (1/2" Drive Sg)  |              | in.         |
| 9    | 1   | 018-0000-0877-00 |     | Base Bottom Cover  |              | in.         |
| 10   | 1   | 025-0000-0345-00 | C   | Front Panel Assembly - TST / STWCS / SFM (DSUL)              |              | in.         |
| 11   | 1   | 018-0000-2897-00 |     | Mounting Plate, 3 Load Cell, STWCS                           |              | in.         |
| 12   | 1   | 025-1000-0287-00 | H   | MTT Internal RS 232 Cable                                    |              | in.         |
| 13   | 1   | 025-1000-0557-00 |     | Three Load Cell STWCS PCB Assy                               |              | in.         |
| 14   | 2   | 018-0000-2845-00 |     | Stand Off 8-32 x .375 Male-Female                            |              | in.         |
| 15   | 2   | 013-1000-0010-00 |     | Female Screw Lock  |              | in.         |
| 16   | 1   | 025-1000-0251-00 | E   | Internal Power Cable (025-1000-0396-XX power supplies, Plugs |              | in.         |
| 17   | 1   | 018-0000-2160-00 | A   | Power Jack Nut / Insulator                                   |              | in.         |
| 18   | 6   | 013-0000-0077-00 |     | 6-32 X 1/4 Button Head Cap Screw                             |              | in.         |
| 19   | 4   | 013-0000-0181-00 |     | 8-32 X 1/2 SHCS  |              | in.         |
| 20   | 8   | 013-0000-0196-00 |     | 10-32 X 1/2 SHCS   |              | in.         |
| 21   | 2   | 013-2000-0322-00 |     | 1/4 X 3/4" DOWEL PIN   |              | in.         |
| 22   | 4   | 013-0000-0087-00 |     | 1/4-28 X 3/4 SHCS  |              | in.         |
| 23   | 2   | 013-2000-0057-00 |     | 1/4 X 1" DOWEL PIN   |              | in.         |
| 24   | 3   | 025-1000-0554-00 |     | Switch / Light, 3 Load Cell STWCS                            |              | in.         |
| 29   | 4   | 013-0000-0028-00 |     | 8-32 X 1/4 BHSCS   |              | in.         |
| 30   | 1   | 018-0000-1831-01 | B   | Battery Retainer for SFM ( No PEM Nuts)                      |              | in.         |
| 31   | 1   | 025-1000-0240-00 | M   | Rechargeable Battery, 6V, SDHT, orange molex connector       |              | in.         |
| 32   | 4   | 013-0000-0128-00 |     | 1/4-20 X 3/8 BHSCS   |              | in.         |

Approved by:

Date:

January 4, 2007

**SEE ATTACHED DRAWING**



**Larson Systems Inc.**  
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Minneapolis, MN 55449-4425  
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[info@larsonsystems.com](mailto:info@larsonsystems.com)

