



## Ricon Wheel Chair Lifts

### Tech Tip #09-0625-2ACREVA

### Ricon Wheel Chair Lifts

**UPDATE 7/24/17-** Attached please find the Adjustment Procedures and Wiring Schematics for the Ricon S and K Series lifts.

**UPDATE: 7/17/17-** Thank you to all who attended the 2<sup>nd</sup> Annual “Team Blue Bird” Summer Training on July 13<sup>th</sup>. We apologize that a representative was unable to attend a training we had scheduled. There were questions concerning oil, the tool kit part number and lubrication. We had done this Tech Tip which covers those subjects and as promised during the training, it is below. If you need further information or have more questions please feel free to contact John Johnston at [jjohnston@newyorkbussales.com](mailto:jjohnston@newyorkbussales.com) or at [315-263-0766](tel:315-263-0766).

During a training session which we hosted yesterday for Harry Folkemer at Duanesburg Central School as the CASDA Head Mechanic Association President and presented by J.F. Viau from Ricon Corporation there were some good points that were picked up on –

**UPDATE – 8/20/09-** Dominic Barse and the gang at Malone Central School hosted the Northern Tier Head Mechanics meeting today and there is one important item which I originally missed.

- **If you are having an issue with lift operation – Check for the “GREEN” LED light on top of the pump housing.**
  - o **If the light is GREEN then there is an issue with the interlock system**
  - o **If the light is NOT lit then there is an issue with the lift**

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Or at the [New York Head Mechanic website](#)

- Availability of tool kit – Part#V2-SH-57 – sold as all tools are through NYBS at cost
- (+) freight \$164.40
- Use 15W Aircraft Hydraulic Oil with a MIL SPEC of H5606
- Automatic Transmission will work but will cause issues
  - Slow operation in cold weather
  - Premature leaks as it wears seals
  - Lubrication-
    - Use Silicone/Teflon spray on springs
    - DO NOT Lube pins and bushings as that will cause premature wear due to their design – They just need to be kept clean. ➤ 5 Year Warranty on cylinders and pumps
  - Cylinders are re-buildable and now have updated seals – kits will come new glad nuts and new end nuts which have seals already installed.
  - If you have a “stow lock solenoid” which has failed – Check the deploy switch for sticking as if that switch sticks the design of that solenoid will not handle the current for more than 2-3 minutes before the solenoid burns out.
  - There are 4 Basic adjustments to the “S” series lift
    1. Floor Level-
      - From Ground
      - From Deploy
    2. Platform “Pitch”
  - 3. Weight Switch – 50 lbs.
  - 4. Stow Lock
    - The “K” Series has 2 additional adjustments
      1. Adjust hinge point gaps from side to side
      2. Roll Stop in Stow Position
    - Technical and Service Info is available at <http://www.riconcorp.com>
      - Click on Support Tab
      - Click on Technical Documents
      - Answer the disclaimer with: “I agree”
      - Here you will find all sorts of bulletins, tech tips, service manuals, etc.

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## CONTACT OUR SERVICE OR PARTS DEPARTMENT WITH ANY QUESTIONS

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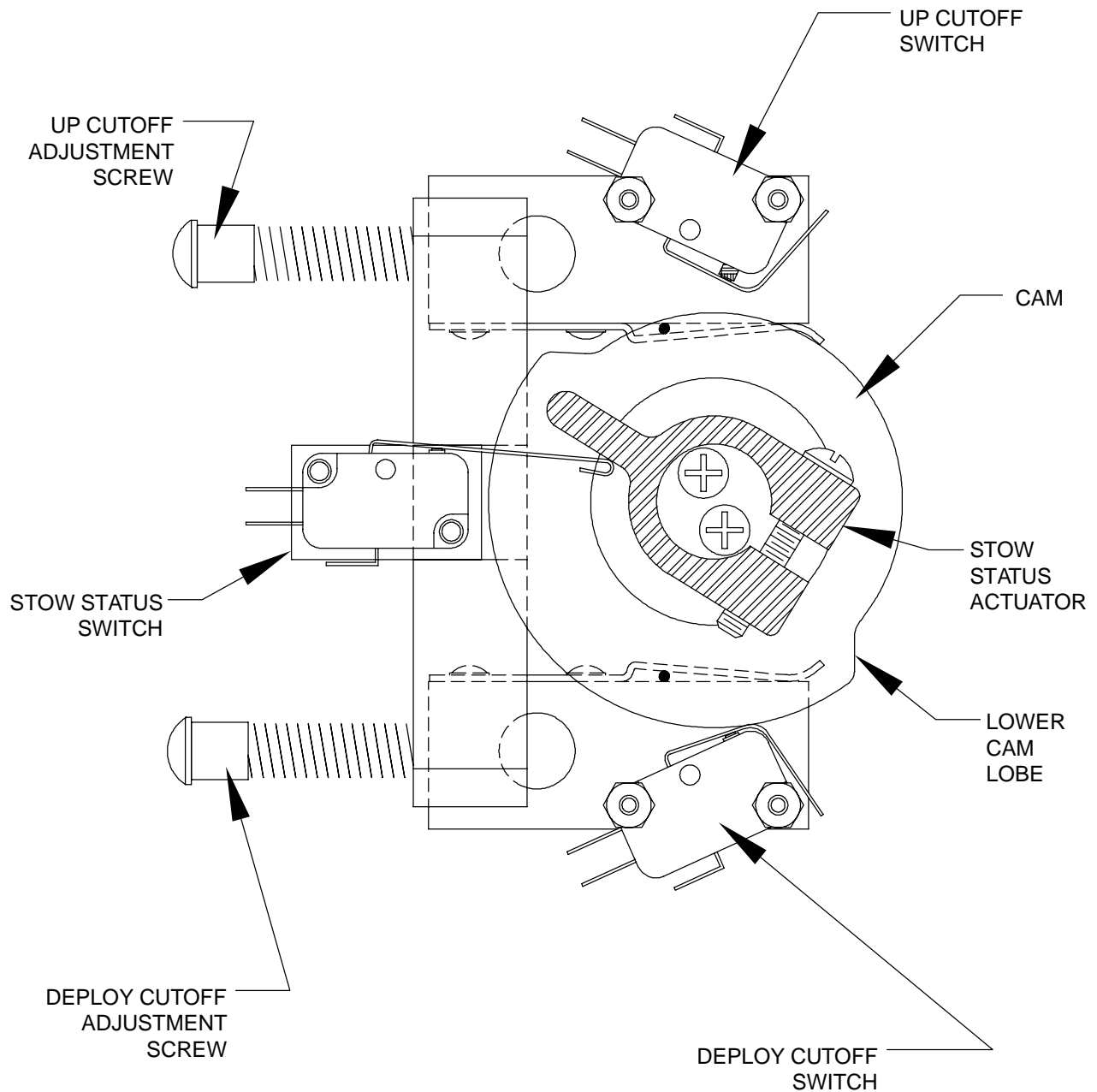
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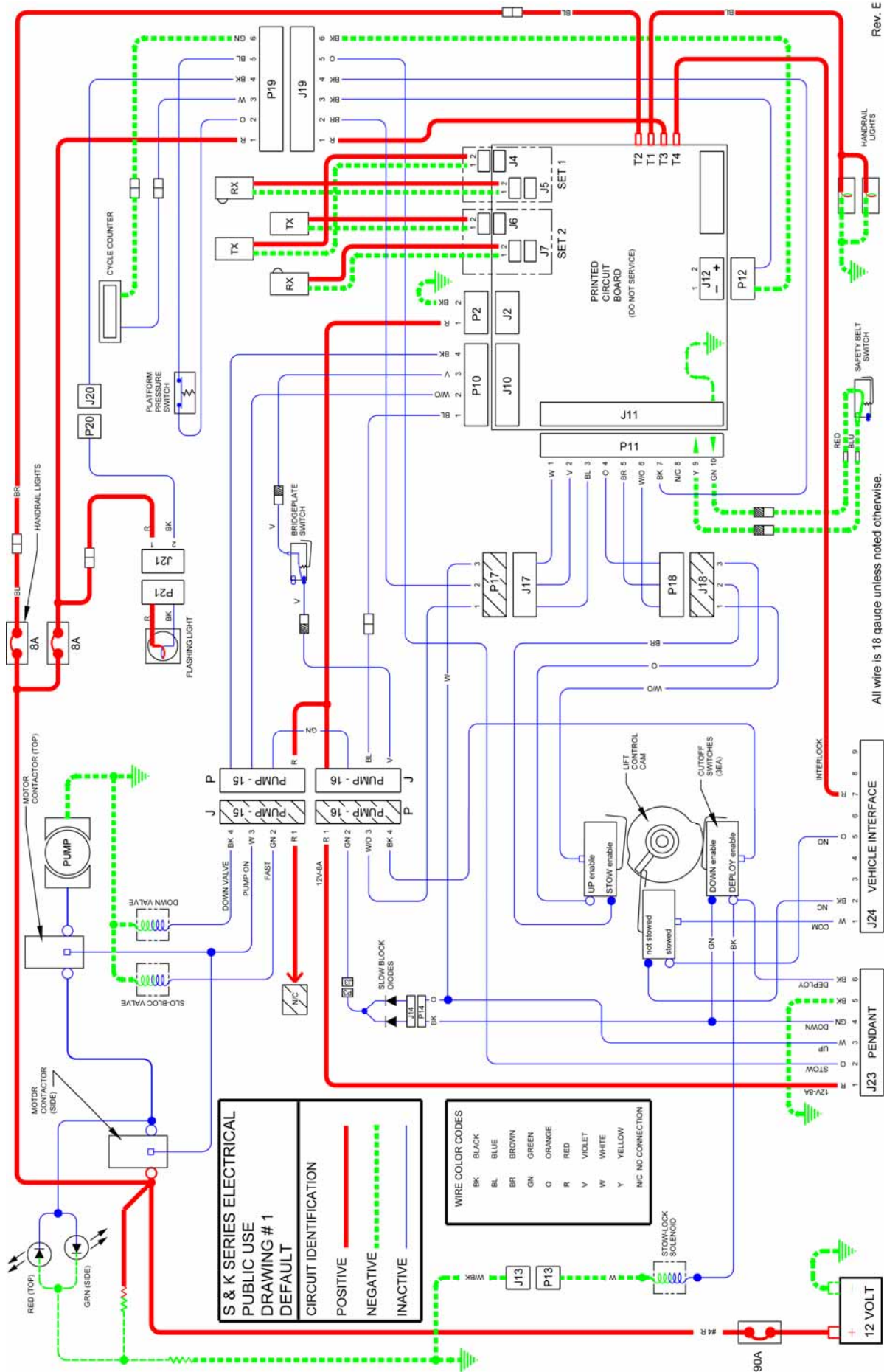
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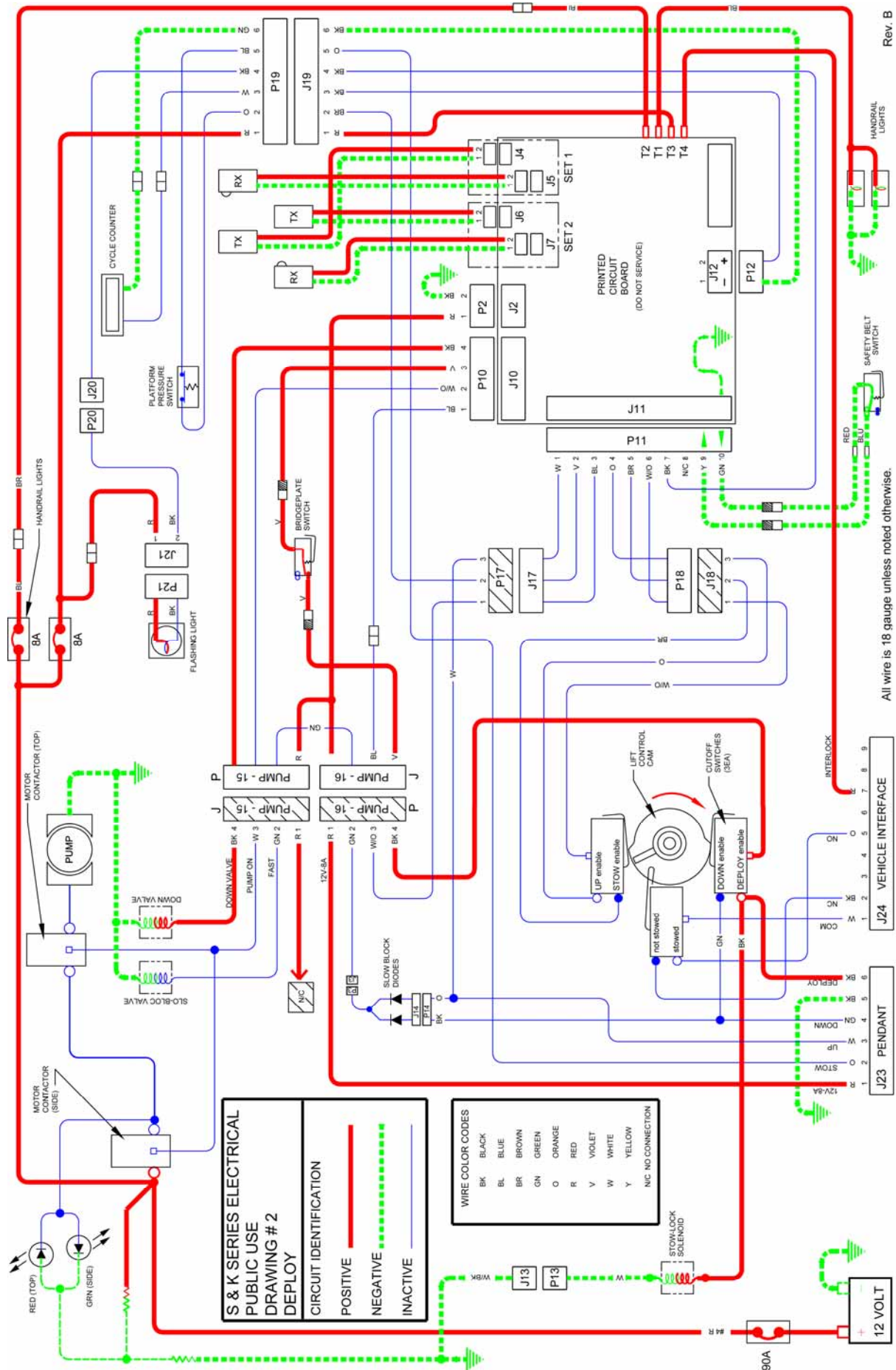




RSB0001300

Limit Switch Adjustment Diagram





**S & K SERIES ELECTRICAL**  
**PUBLIC USE**  
**DRAWING # 2**  
**DEPLOY**

**CIRCUIT IDENTIFICATION**

POSITIVE ——— (Red line)  
 NEGATIVE - - - - - (Green dashed line)  
 INACTIVE \_\_\_\_\_ (Blue solid line)

**WIRE COLOR CODES**

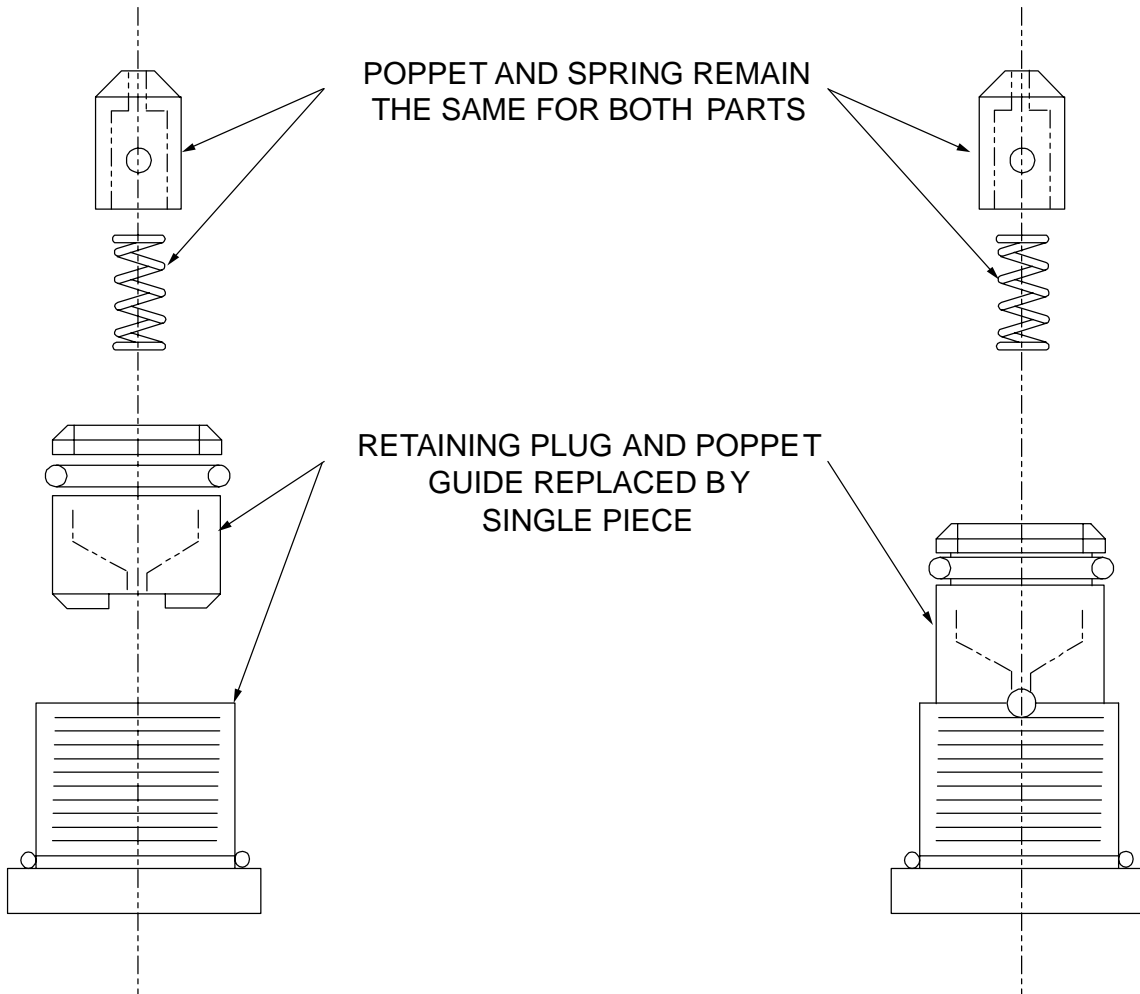
- BK BLACK
- BL BLUE
- BR BROWN
- GN GREEN
- OR ORANGE
- R RED
- V VIOLET
- W WHITE
- Y YELLOW
- N/C NO CONNECTION

Rev. B

All wire is 18 gauge unless noted otherwise.

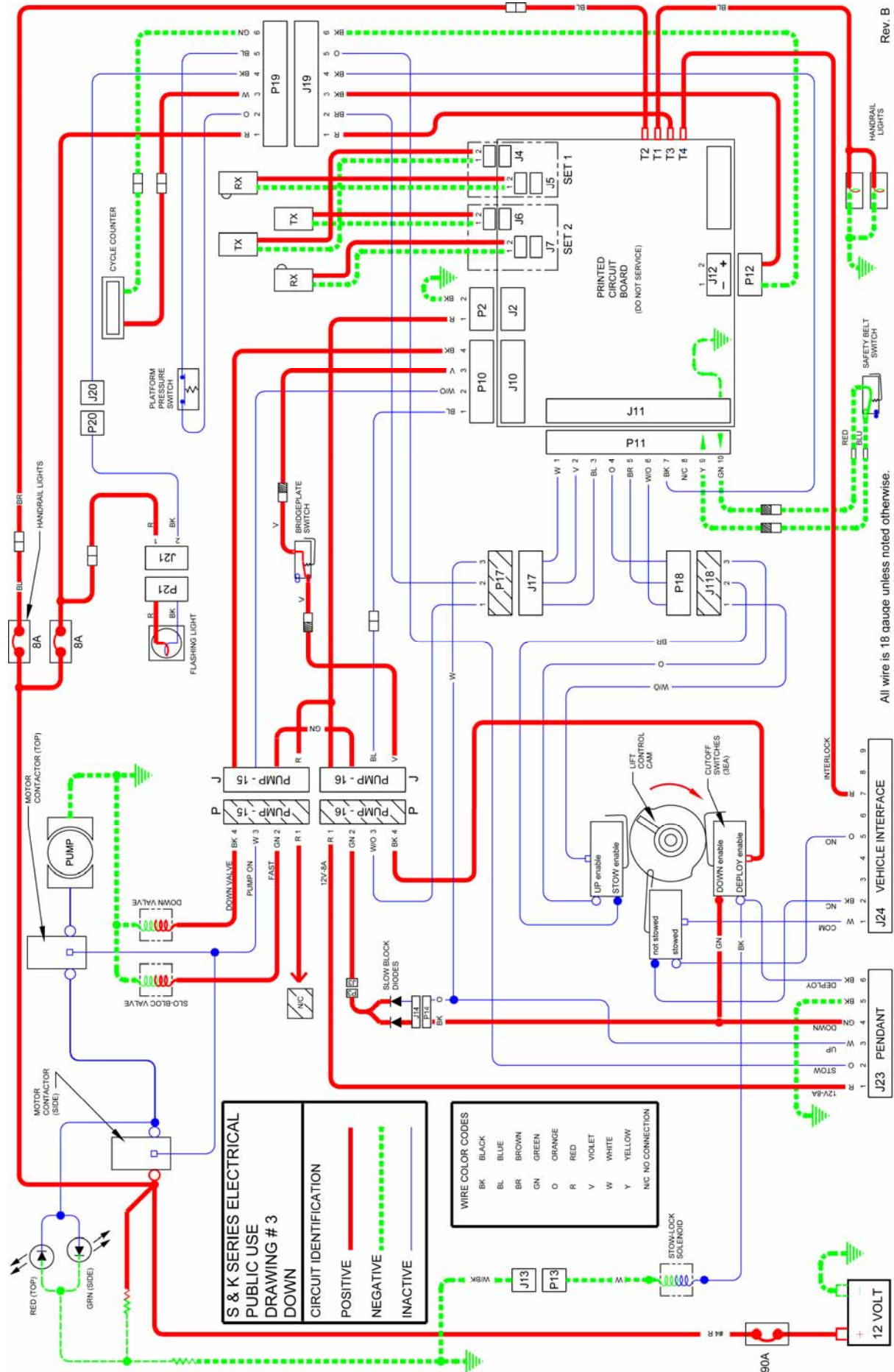
OLD ASSEMBLY

NEW ASSEMBLY



RSB0001400

S-Series Deceleration Valve



**S & K SERIES ELECTRICAL  
PUBLIC USE  
DRAWING # 3  
DOWN**

**CIRCUIT IDENTIFICATION**

POSITIVE ————

NEGATIVE - - - - -

INACTIVE \_\_\_\_\_

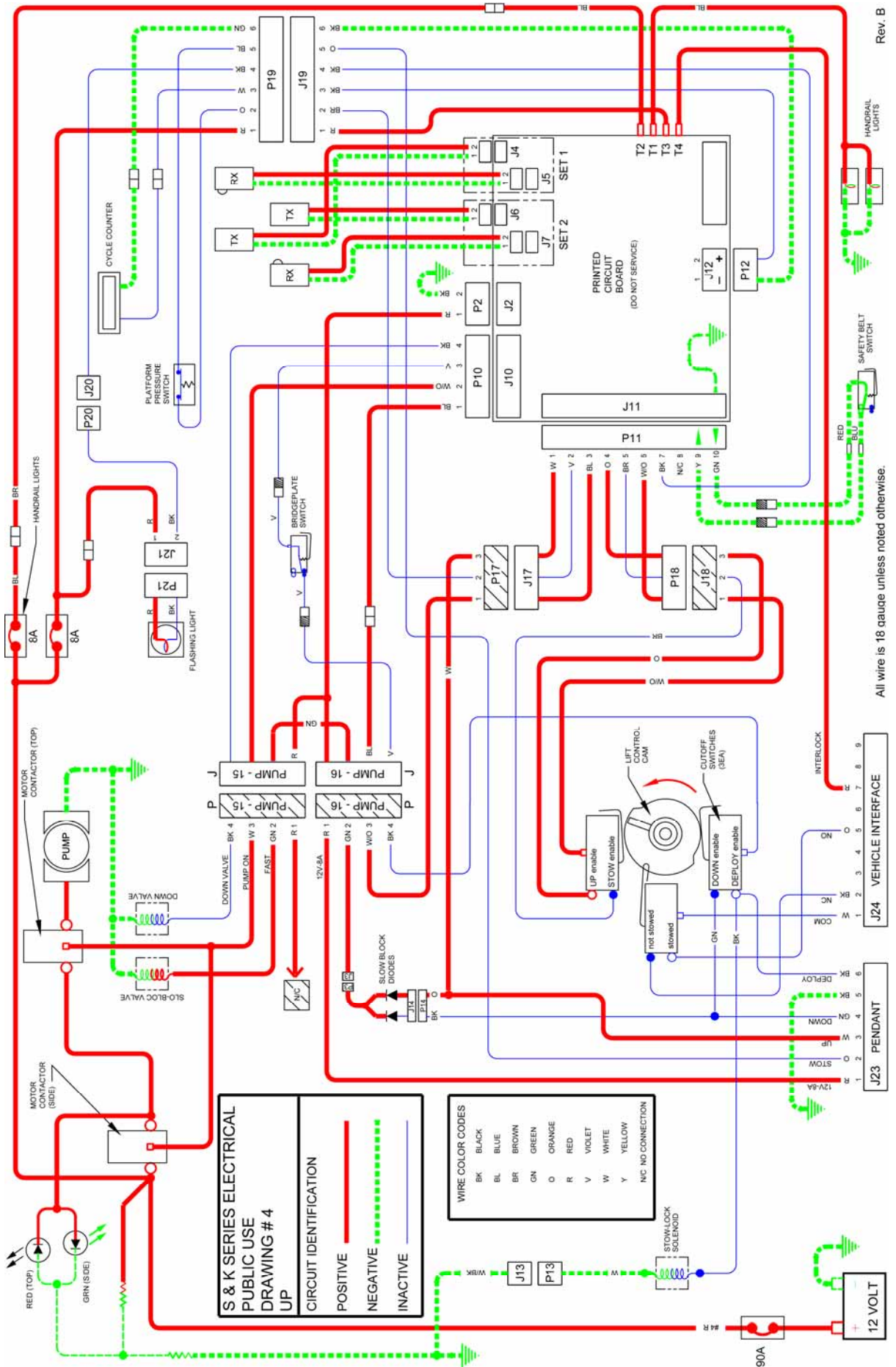
**WIRE COLOR CODES**

BK BLACK  
BL BLUE  
BR BROWN  
GN GREEN  
OR ORANGE  
R RED  
V VIOLET  
W WHITE  
Y YELLOW  
N/C NO CONNECTION

All wire is 18 gauge unless noted otherwise.

Rev. B





**S & K SERIES ELECTRICAL  
PUBLIC USE  
DRAWING # 4  
UP**

**CIRCUIT IDENTIFICATION**

POSITIVE ———

NEGATIVE - - - - -

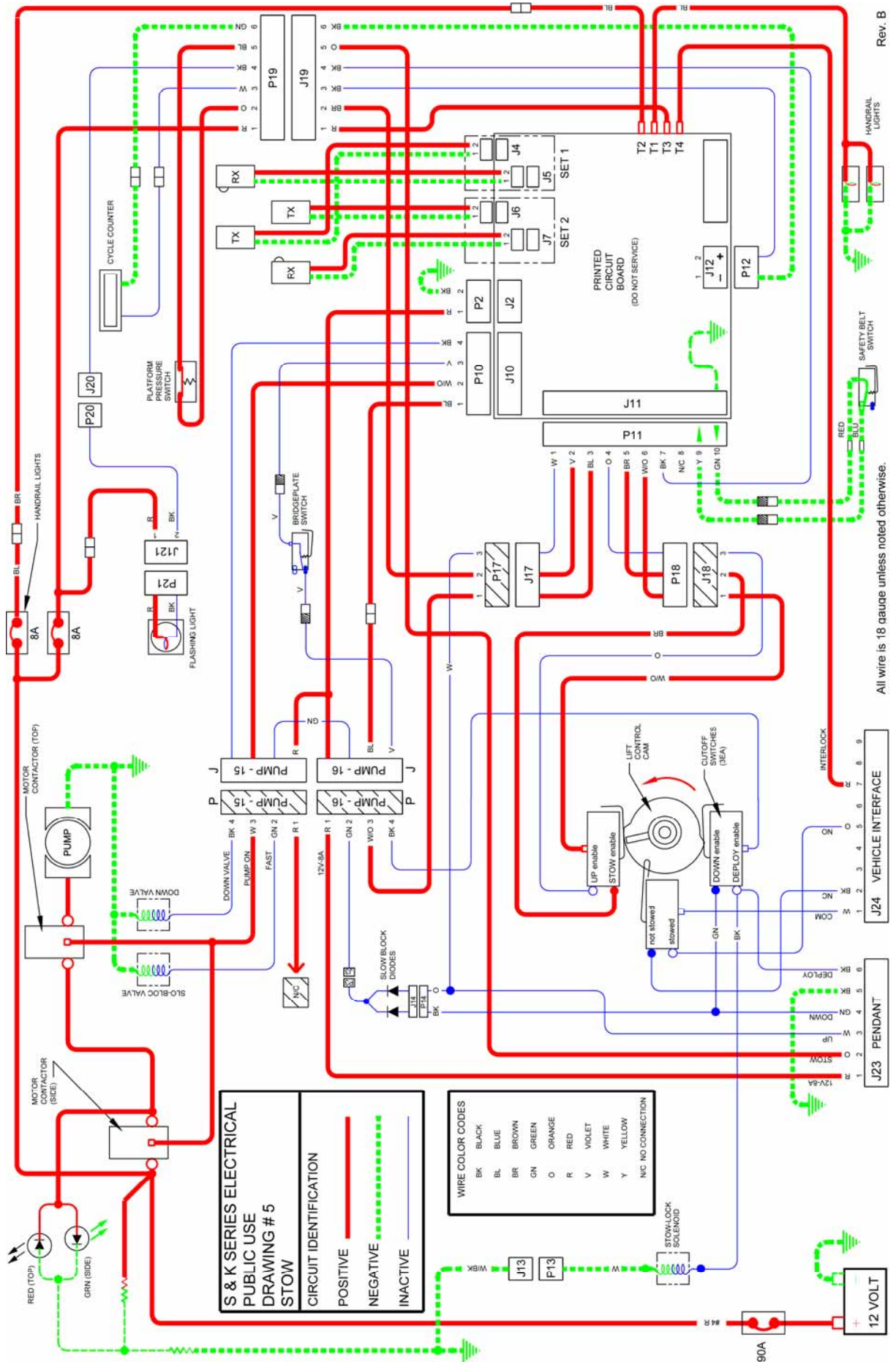
INACTIVE \_\_\_\_\_

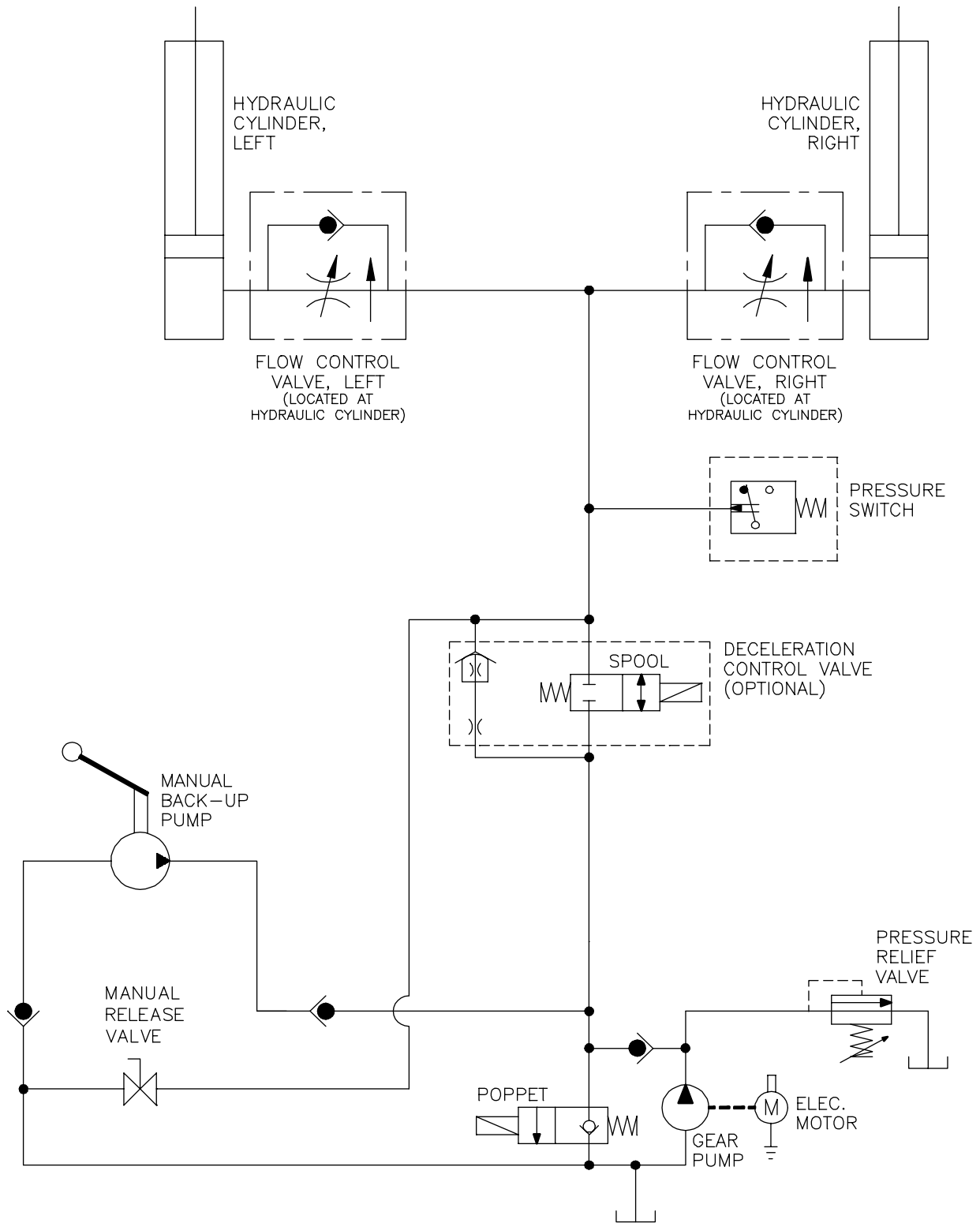
**WIRE COLOR CODES**

BK	BLACK
BL	BLUE
BR	BROWN
GN	GREEN
OR	ORANGE
RD	RED
VT	VIOLET
WH	WHITE
YL	YELLOW
NC	NO CONNECTION

All wire is 18 gauge unless noted otherwise.

Rev. B





RSM0005500

S-Series Hydraulic Circuit

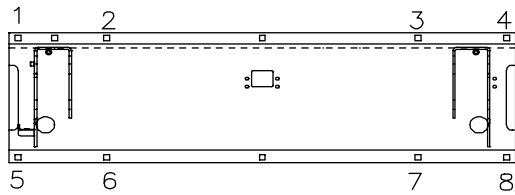


FIG. 1

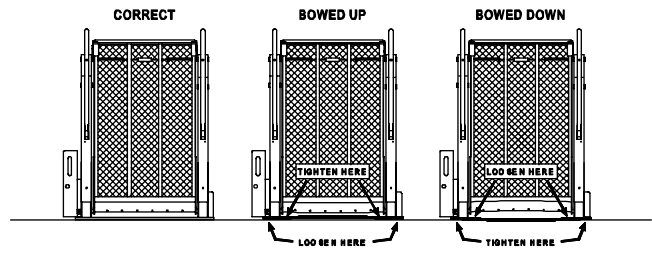


FIG. 2

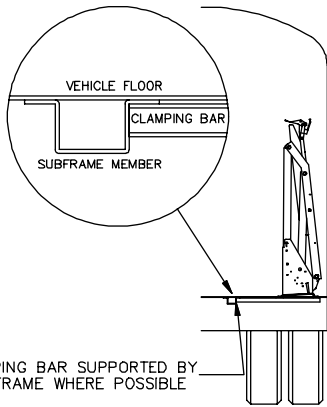


FIG. 3

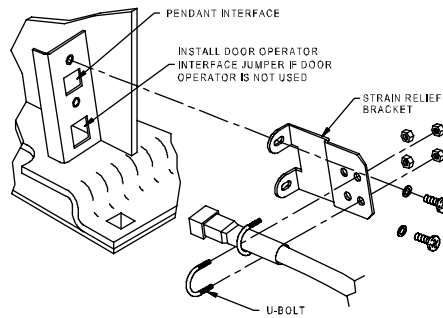


FIG. 4

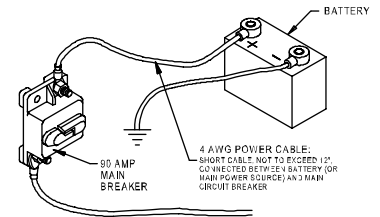


FIG. 5

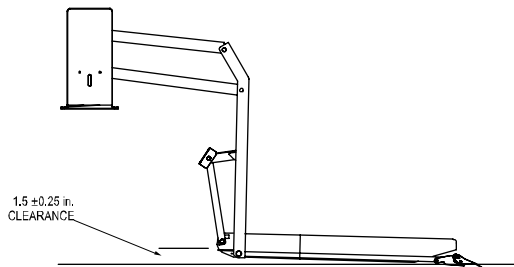


FIG. 6

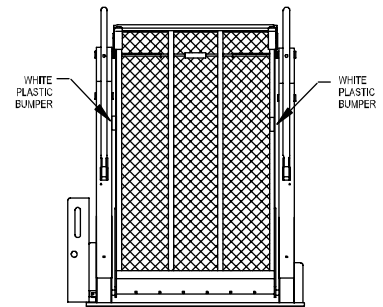


FIG. 7

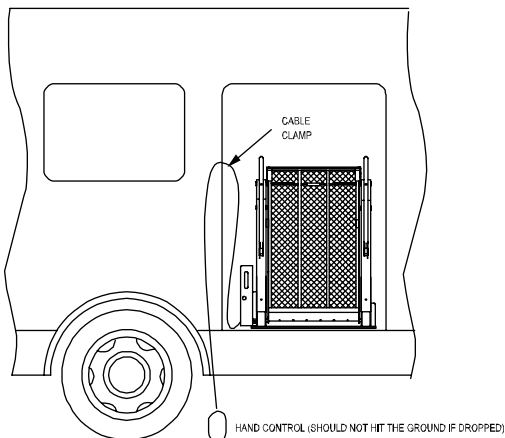


FIG. 8

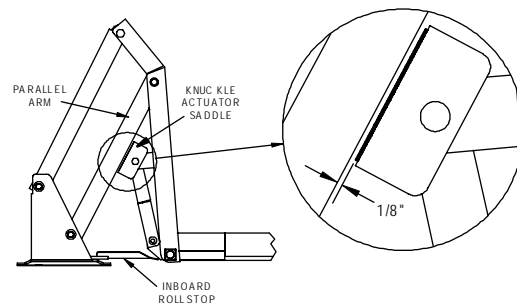


FIG. 9

RSB0001500

## S AND K-SERIES ADJUSTMENT PROCEDURE

S-SERIES: If your adjusting a K-Series lift, move the link adjusting rollers all the way up.

1. Floor Level

To prepare to make this adjustment, turn both of the adjusting screws CCW two to three turns. (Always bump the back of the screwdriver prior to removal from the screw head).

- a. While depressing the deploy button, turn the down adjusting screw until the saddle block on the right side of the platform opens a gap of approximately  $\frac{1}{4}$  inch between itself and the lower parallel arm. (Hold the deploy button on the pendant down until the  $\frac{1}{4}$  inch is achieved). Release the deploy button.
  - b. While depressing the up button, turn the up adjusting screw until the saddle block on the right side of the platform opens a gap similar to the gap set in (a) above between itself and the lower parallel arm. (Hold the up button on the pendant until the proper adjustment is achieved). Release the up button.
  - c. If the lift being adjusted is an FMVSS compliant lift, after each of the above adjustments, make a final adjustment based on the relationship of the rear of the bridgeplate to the bridgeplate safety switch. You would like to see the back of the black block but not the rivet relief hole in the block.
  - d. At floor level check the relationship of the bridgeplate to the baseplate safety switch. If there is too much weight on the switch it may not allow the lift to travel down. To correct this, move the cable attachment point out one hole at a time until the bridgeplate is positioned just above the baseplate safety switch. (It is possible that these cables will not be in the same hole on each side).
2. Platform pitch (while making this adjustment make sure that there is an even gap between the hinge point flanges. This can be done by turning the adjusters on the outer platform half link rods. (This is to be used if working on a K-Series).

To prepare to make this adjustment, position the platform on the ground so that the rollstop is just touching the ground. Measure this gap (between vertical arm and ground). The gap should be 1.50 inches plus or minus .25 inch.

To adjust, turn the allen head screws at the back of the platform. (Turning the screws CW brings the front of the platform up, turning the screws CCW brings the front of the platform down). Remember to keep the screw adjusters in balance so the platform remains flat.

3. Weight Switch

To prepare to make this adjustment, it will be necessary to remove the lock screw from weight switch. It is a good idea to turn the screw out approximately 2 turns and retry the stow function. If there is not change in the lift stowing characteristics, you are turning the lock plug and not the adjusting screw. If there is a change, there is not lock plug and you are turning the adjusting screw.

- a. Turn the adjusting screw inward until you can hear the lift turn off and then back on when you touch the stow button. A quick off then right on (five to eight clicks) is the correct adjustment.
  - b. Reinstall the lock plug and turn it in CW until you feel it just touch the adjuster. This will create a thread jamb and lock the adjustment in place.
  - c. If the lift has the new barrel type adjuster, loosen the allen screw. This new switch adjusts the same as above. CW less clicks, CCW more clicks.
4. Fold Cut-Off Switch

To prepare to make this adjustment, manually pump the lift up to the stowed position (you should feel the manual pump tighten).

- a. Turn the Phillips head screw on the stow switch adjuster CCW until loose.
  - b. Rotate the adjuster toward the front of the lift until you are the adjuster will not touch the fold cut-off switch. (Do not let this switch turn the lift off).
  - c. Turn the Phillips head screw on the stow switch CW until tight.
5. Stow-lock Adjustment reference Service Bulletin subject: Stow Latch Adjustment (attached)

This completes the S-Series Adjustments

K-Series Adjustments: Do the adjustments described above with the addition of the following two. These adjustments are only on the K-Series product.

6. Move the lift approximately 6 inches below floor level. At this point use the two adjusters on the outer platform half adjusting rods to bring the hinge point flanges so that a gap of approximately  $1/16^{\text{th}}$  inch is seen on both sides. Make sure that the weight is evenly shared between the tow rods. Tighten the lock nuts.
7. Push inward on the lower portion of the platform causing the rollstop to deploy. While holding the platform outer half tight against the folded inner half, move the adjusting roller down against the link rods and tighten the bolts. Release pressure on outer half and deploy lift part way out, then stow lift. If the rollstop is down and tight you are done. If the rollstop is too loose, you need to move both adjusting rollers down equally to tighten.

## SERVICE BULLETIN

**Subject:** Stow Lock Latch Adjustment  
**Applicable Products:** S-Series and K-Series  
**Effectivity:** Serial numbers 32,000 and above

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Ricon service bulletins are for use by professional service technicians, and are not intended for use by non-professionals (do-it-yourselfers). Service Bulletins alert technicians to issues that may occur with Ricon products, and are intended to assist the technician in the proper service of those products.

Professional service technicians have the background and knowledge to perform maintenance work properly and safely. An issue described by a service bulletin does not necessarily apply to every unit in a product line. A Ricon authorized service technician will be able to determine which units can benefit from the information provided here.

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**Introduction**

This bulletin outlines an adjustment procedure for the stow lock. The lift hydraulic system can leak down over time, and allow the platform to move outward and contact the vehicle door. The stow lock is an electro-mechanical locking device that is designed to hold the stowed platform securely and prevent it from moving outward and damaging the door. The stow lock is also a safety device because it prevents unintentional platform movement when the vehicle door is open.

**Incorporation**

Ricon recommends the incorporation of this service bulletin at the next scheduled maintenance.

**Related Bulletin**

[Fold cutoff switch adjustment](#)

**Information**

The fold cut-off switch must be properly adjusted before checking and adjusting the stow lock latch (See related bulletin).

**Corrective Action**

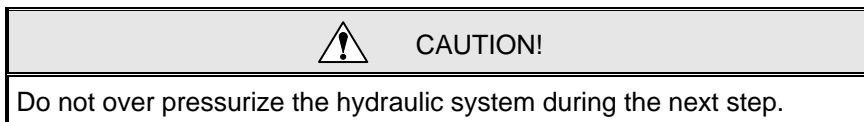
Determine need for adjustment:

The stow lock latch is fastened to the lower surface of the bridgeplate (**Figure 1**). Engagement occurs at the end of the stow cycle when the bridgeplate slides over the baseplate. The latch then engages a catch that is fastened to the top surface of the baseplate (**Figure 2**). When the stow lock is properly engaged there is a gap between the latch and catch of 1/8" maximum (**Figure 3**). An adjustment is needed if the gap is greater than 1/8".

Make the adjustment:

The bridge plate has four installation positions for the stow lock latch (**Figure 4**). The latch itself is designed so that it can be installed in one of two possible orientations (**Figure 5**). Note that the distance from the two screw holes to the flat edge of the latch is different on the top and bottom sides. This provides eight possible positions for installing the latch, and each position will result in a different gap.

1. Verify that the fold cut-off switch is properly adjusted.



2. Verify that platform is fully stowed by using the manual back-up pump (with the lift in the stowed position) to pressurize the hydraulic system. Refer to the manual operation section of the operator manual for back-up pump operating instructions.
3. Measure the gap between the latch and catch. Continue to next step if the gap is greater than 1/8".

**CAUTION!**

Install the latch with the 90° edge facing towards the bridgeplate hinge. This orientation will result in the rounded edge being able to ride over the catch during stow. When fully stowed, the 90° edge will fall behind the catch.

4. Remove the two screws that fasten the latch and reposition the latch to achieve the 1/8" or less measurement. Tighten screws.

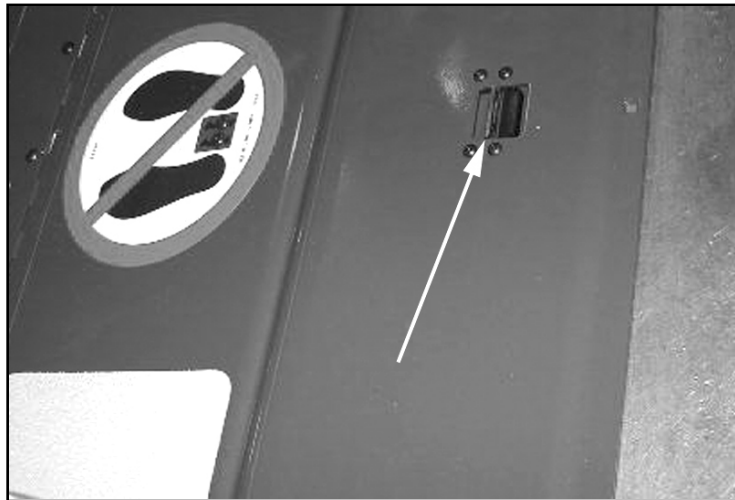
**NOTE:** Rattling and vibration of the platform will be reduced when the gap is made as small as possible.

5. Test the adjustment by deploying and stowing the platform several times to verify the stow lock latch engages the catch every time.





**FIGURE 1: STOW LOCK LATCH**



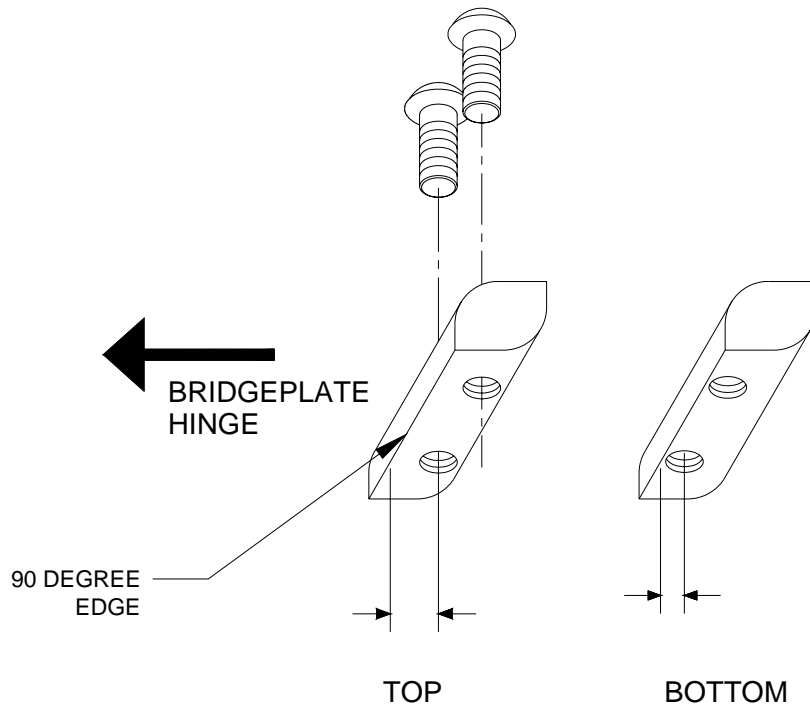
**FIGURE 2: STOW LOCK CATCH**



**FIGURE 3: STOW LOCK GAP**



**FIGURE 4: INSTALLATION POSITIONS FOR LATCH**



**FIGURE 5: ORIENTATIONS FOR LATCH**