

II. INSTALLATION

This chapter provides instructions for installing the RICON UNI-lite Personal Use Wheelchair Lift into most vans; custom installations are also possible into other types of vehicles. Procedures for the specific vans listed in **Table 2-1** below are also included. If a question arises that is not covered in this chapter, contact Ricon Product Support for assistance.

TABLE 2-1: UNI-LITE APPLICATIONS		
VAN TYPE	MAKE/MODEL	DOOR INSTALLATION
Minivan	Chevrolet - Astro	Side w/Sliding Door
	Ford - Aerostar	Side w/Sliding Door
	GMC - Safari	Side w/Sliding Door
Full Size	Dodge (see note below)	Side w/Sliding Door
		Side w/Swing Door
	Ford	Rear Door
		Side w/Sliding Door
		Side w/Swing Door
	GMC	Rear Door
		Side w/Sliding Door
		Side w/Swing Door
	NOTE: When installing the lift into rear of 1994 or newer full size Dodge van, the bumper and bumper brackets must be replaced with bumper and bumper brackets from a 1993 or earlier Dodge van.	
END OF TABLE		

A. REQUIRED TOOLS

- Allen Wrenches (5/32" & 3/16")
- C-Clamps or Locking Pliers
- Drill Bits #7 (.201", 1/4", 9/32", & 1/2")
- Electric Drill
- Hole saws (1" & 1-1/4" or 1-3/16")
- Large Wire Crimping Tool
- Open-end Wrenches (7/16" & 1/2")
- Screwdrivers (Phillips and flat)
- Side-Cutter Pliers
- Utility Knife

B. MECHANICAL INSTALLATION

To install the UNI-lite, refer to the following sections and perform the procedures carefully and in the order that they are presented. Be certain that the installation instructions are followed exactly and do not eliminate any steps or modify the product.

1. VEHICLE PREPARATION

To prepare the vehicle for installation of the UNI-lite, perform this procedure:

- a. Safely park vehicle on a flat, level surface and turn engine off.
- b. The lift will be mounted directly to the vehicle floor and wall. Remove door trim, carpet, plywood, molding, wall paneling or any other material that may interfere with the installation.
- c. At the engine compartment, disconnect the positive (+) cable from the battery terminal.

2. INSTALLATION KIT DESCRIPTION

For descriptions of the Installation Kit components, refer to **Figure 2-1** and **Table 2-2**.

a. Installation Kit Component Descriptions

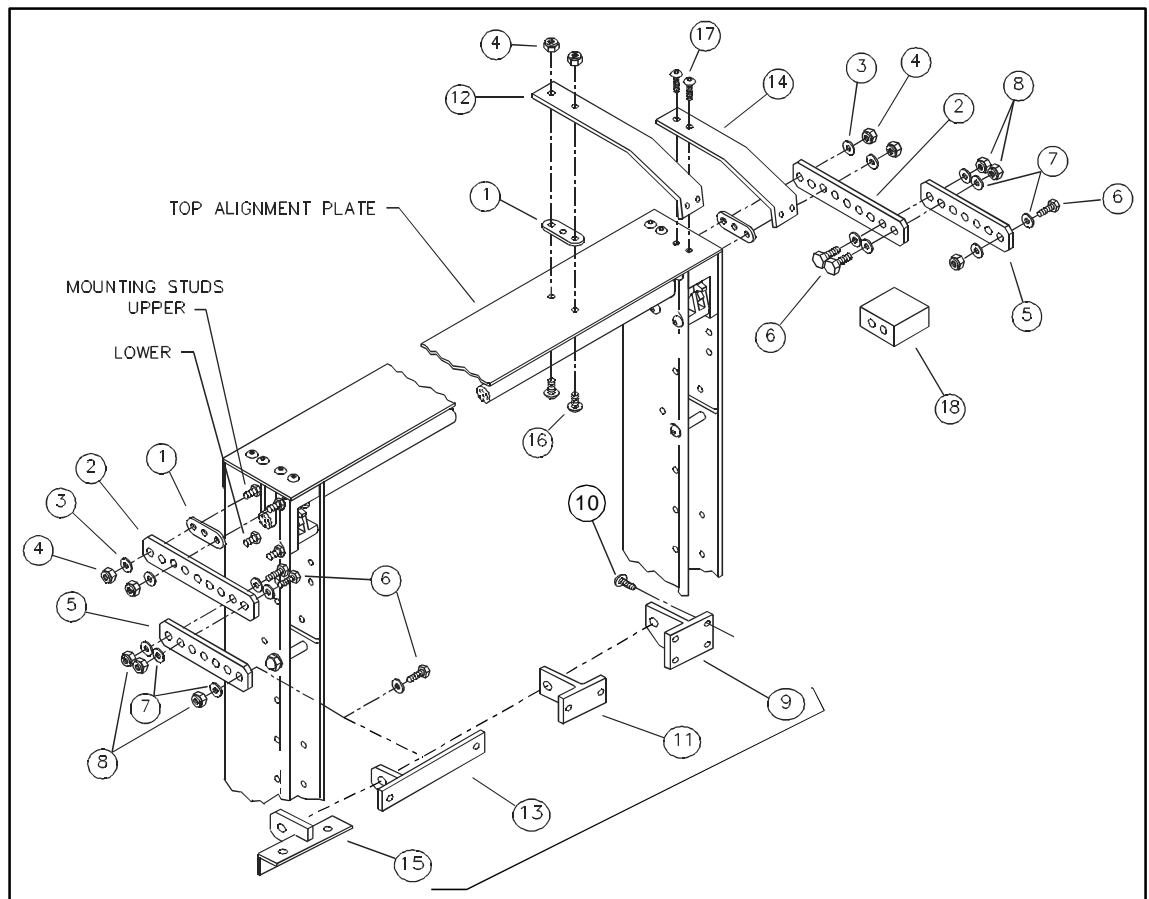


FIGURE 2-1: INSTALLATION KIT COMPONENTS

TABLE 2-2: INSTALLATION KIT COMPONENTS			
REF	DESCRIPTION	REF.	DESCRIPTION
1	Shim Plates (3)	10	#14 Sheet Metal Screws (4)
2	Extension Post Brackets (2) *	11	2-Hole "T" Mounting Brackets (2) *
3	1/4 Flat Washers (4)	12	Top Right Bracket **
4	1/4-20 Self-locking Nuts (6)	13	Top Left Brackets (2) **
5	Intermediate Brackets (2) *	14	Astro/Safari Top Right Bracket
6	5/16-18 Hex Bolts (6)	15	Astro/Safari Top Left Brackets (2)
7	5/16 Flat Washers (12)	16	1/4-20 x 1/2 Button Head Bolts (2)
8	5/16-18 Self-locking Nuts (6)	17	1/4-20 x 3/4 Button Head Bolts (2)
9	4-Hole "T" Mounting Brackets (2)*	18	Right-Side Bracket Offset Block (Chevrolet & GMC Full Size Vans)
NOTES: Brackets listed with (*) are components of the Main Post Bracket Set. Brackets listed with (**) are special order components.			
END OF TABLE			

b. Main Post Bracket Descriptions

For descriptions of the Main Post Bracket components, refer to the following paragraphs:

◆ Extension Post Brackets

The Extension Post Brackets (ref. #2) are designed with a wide range of adjustments to cover as many applications as possible. The brackets are designed to provide maximum upward and downward adjustment angles.

◆ Intermediate Brackets

The Intermediate Brackets (ref. #5) are provided for making the bracket set adjustable in length allowing different tilt angles. The brackets are attached to the Extension Post Bracket by two 5/16-18 hex bolts (ref. #6).

◆ Standard "T" Mounting Brackets

The Standard "T" Mounting Brackets (ref. #9 & #11) are the 2- and 4-hole mounting brackets that are attached to the Intermediate Brackets by one 5/16-18 hex bolt (ref. #6). The brackets are attached to the vehicle structure by sheet metal screws (ref. #10).

3. LIFT PREPARATION

To prepare the lift for installation, follow this procedure:

- a. Remove and collapse cardboard cover and lay cardboard flat on ground.
- b. Unbolt lift base from crate.
- c. Remove shipping straps.
- d. Lay lift platform first onto cardboard.
- e. Using speed wrench, rotate motor shaft to remove tension from drive chain.

4. MAIN POST EXTENSION ADJUSTMENTS

For the vans listed in **Table 2-3** and **Figure 2-2**, perform the appropriate main post extension adjustment procedure:

TABLE 2-3: VANS REQUIRING MAIN POST EXTENSION ADJUSTMENT		
MAKE/MODEL	DOOR INSTALLATION	ADJUSTMENT
Chevrolet - Astro	Side w/Sliding Door	None
Ford - Aerostar	Side w/Sliding Door	None
GMC - Safari	Side w/Sliding Door	None
Dodge	Side w/Sliding Door	SHORTEN, one (1) position
	Side w/Swing Door	SHORTEN, one (1) position
Ford	Rear Door	None
	Side w/Sliding Door	None
	Side w/Swing Door	None
GMC	Rear Door	None
	Side w/Sliding Door	None
	Side w/Swing Door	None
END OF TABLE		

⚠ CAUTION

EXCESS POWER WIRE MUST *NOT* BE COILED WITHIN THE MOTOR COVER. BUNDLE THE EXCESS WIRE WITHIN THE CONTROLLER ENCLOSURE.

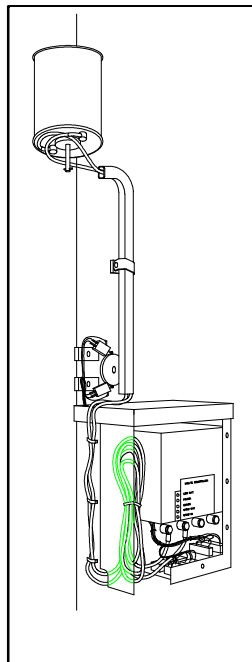


FIGURE 2-2: CONTROLLER WIRE ROUTING DIAGRAM

a. Lengthen Main Posts

To lengthen the Main Posts, refer to **Figures 2-3** through **2-5** and follow this procedure:

- 1) Note locations of left and right fold stops (ref. #3) and spacer bushings (ref. #5).
- 2) Using speed wrench, rotate motor shaft to LOOSEN drive chain.
- 3) Remove left and right extension post retaining bolts (ref. #1 & #2).
- 4) At controller enclosure, remove the front cover to expose wire harness and motor controller. Pull loops of excess motor wire out.



CAUTION

TO PREVENT DAMAGE TO THE DRIVE CHAIN AND MOTOR WIRE DURING THE POST LENGTHENING, LOOSEN CHAIN WITH SPEED WRENCH AND FEED MOTOR WIRE THROUGH ELECTRICAL TUBE AS NEEDED.

- 5) While assistant holds base plate, grasp top-alignment plate and PULL-OUT until desired holes are aligned.
- 6) Loosely install supplied fold stop retaining bolts (ref. #4) through fold stops
- 7) Loosely install spacer bushings and upper extension post retaining bolts.
- 8) Tighten all extension post retaining bolts.
- 9) Re-fold motor wires neatly and tuck into original position in controller enclosure.
- 10) Using supplied tie-wrap, bundle and position wire so that wire is NOT touching edge of enclosure. Reinstall enclosure cover.
- 11) Using speed wrench, rotate motor shaft to TIGHTEN drive chain.

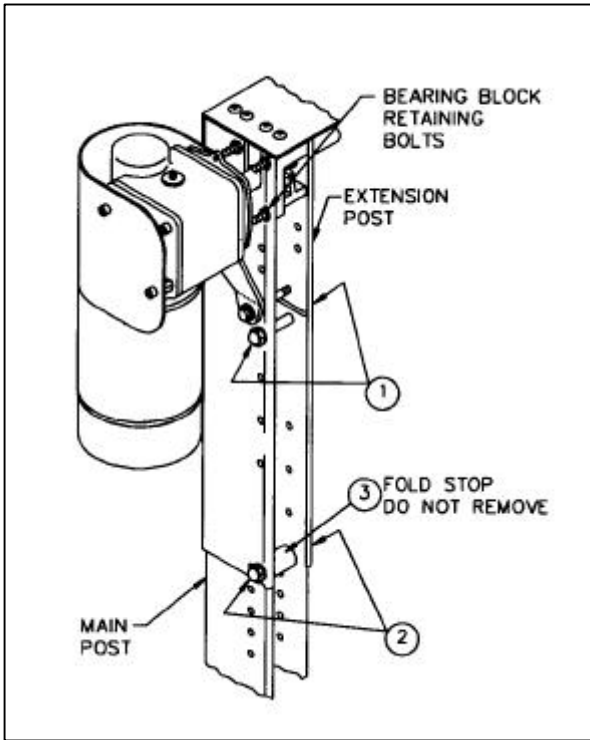


FIGURE 2-3: STANDARD CONFIGURATION - EXTEND

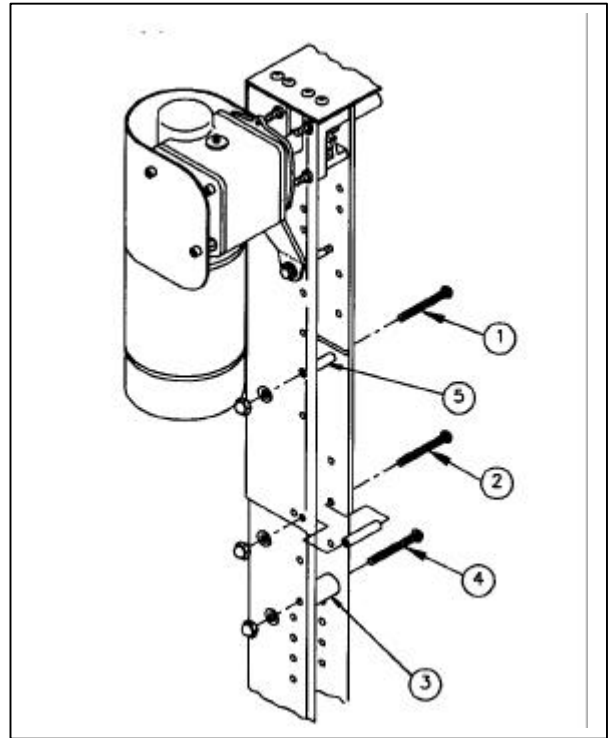


FIGURE 2-4: EXTENDED CONFIGURATION

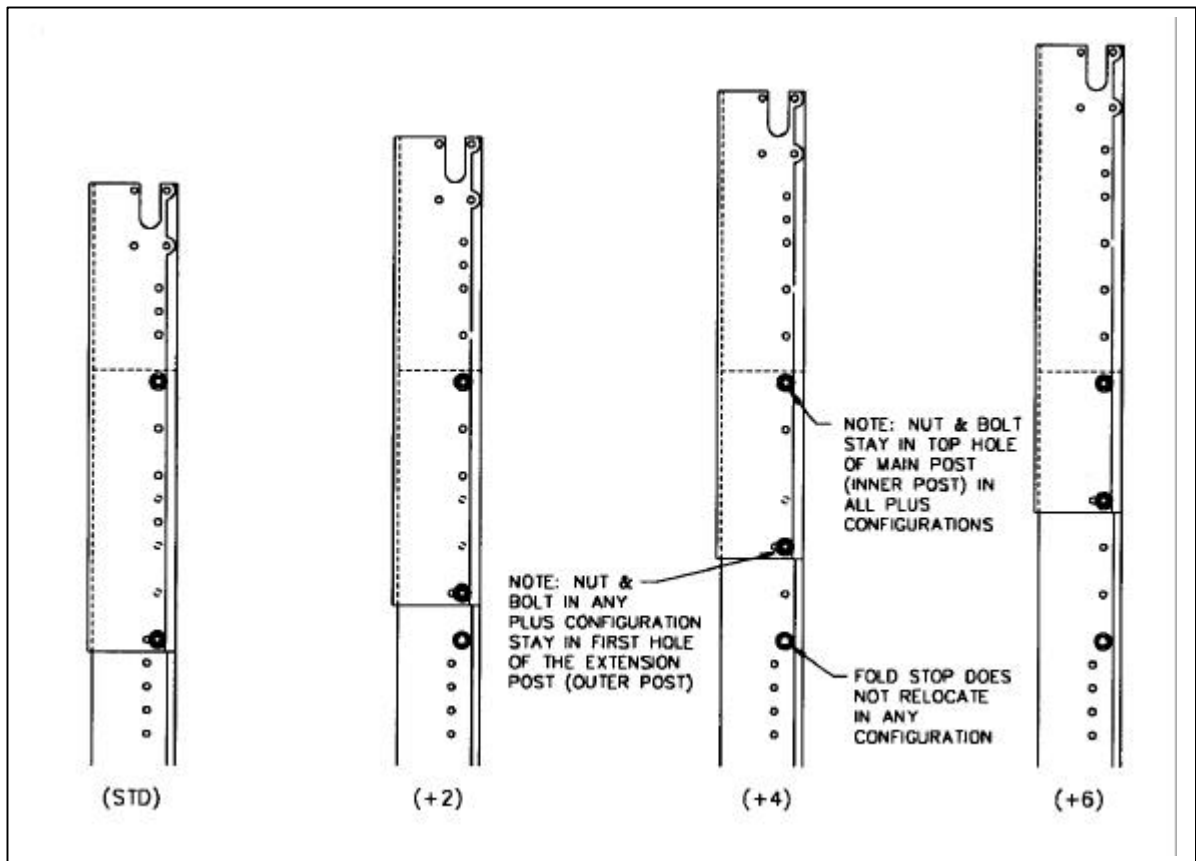


FIGURE 2-5: EXTENDED CONFIGURATION - SIDE VIEWS

b. Shorten Main Posts

To shorten the Main Posts, refer to **Figures 2-6** through **2-9**, and follow this procedure:

- 1) Note locations of left and right fold stops (ref. #3) and spacer bushings (ref. #5).
- 2) Remove torque arm bolt (ref. #4), and rotate gear motor assembly as shown.
- 3) Remove left and right extension post retaining bolts (ref. #1 & #2).
- 4) While assistant holds base plate, grasp top-alignment plate and PUSH-IN until desired holes are aligned.
- 5) Loosely install supplied fold stop retaining bolts (ref. #2) through fold stops.
- 6) Loosely install spacer bushings and upper extension post retaining bolts.
- 7) Loosely install torque arm bolt (ref. #4), rotate gear motor assembly to original position, and tighten torque arm bolt.
- 8) Tighten all extension post retaining bolts.
- 9) Re-fold motor wires neatly and tuck into original position in controller enclosure.
- 10) Using supplied tie-wrap, bundle and position wire so that wire is NOT touching edge of enclosure. Reinstall enclosure cover.
- 11) Bundle excess wire with supplied tie-wrap, position wire into bottom of motor, and reinstall motor cover.
- 12) Using speed wrench, rotate motor shaft to TIGHTEN drive chain.

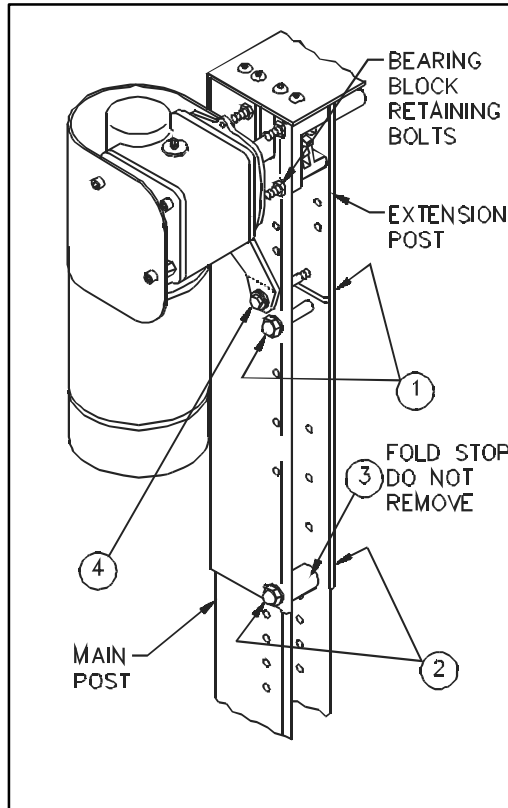


FIGURE 2-6: STANDARD CONFIGURATION - SHORTEN

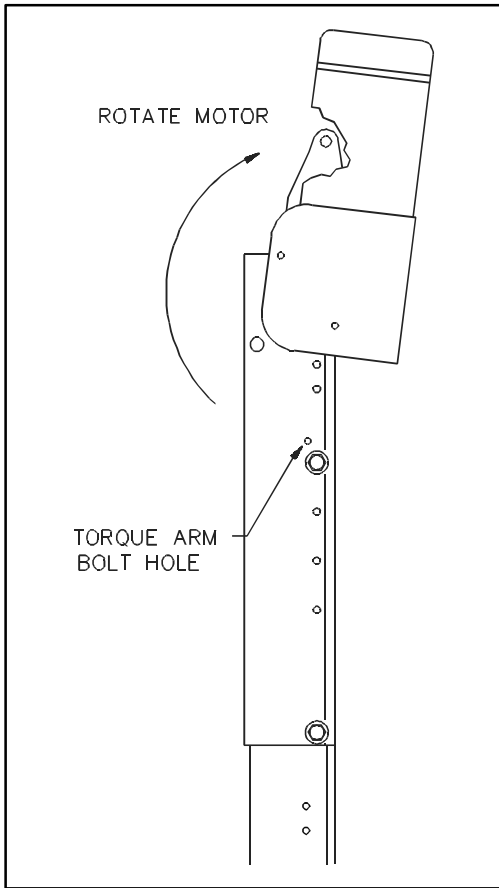


FIGURE 2-7: ROTATE GEAR MOTOR ASSEMBLY

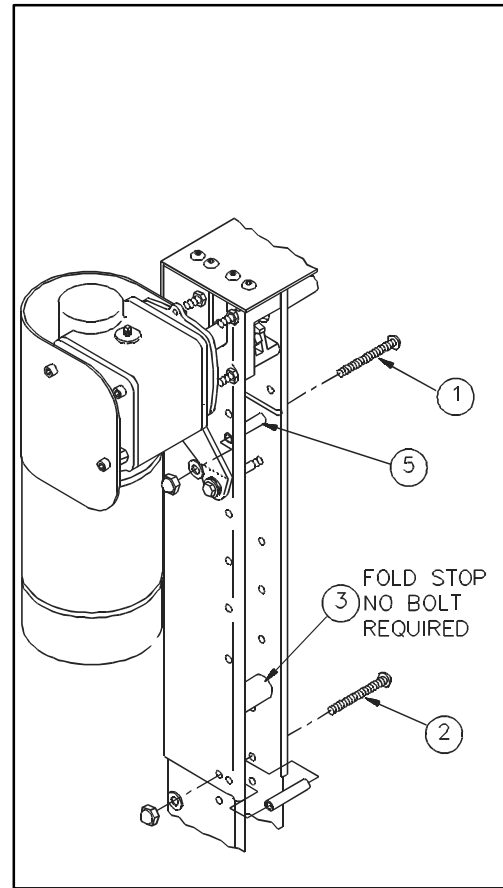


FIGURE 2-8: SHORTENED CONFIGURATION

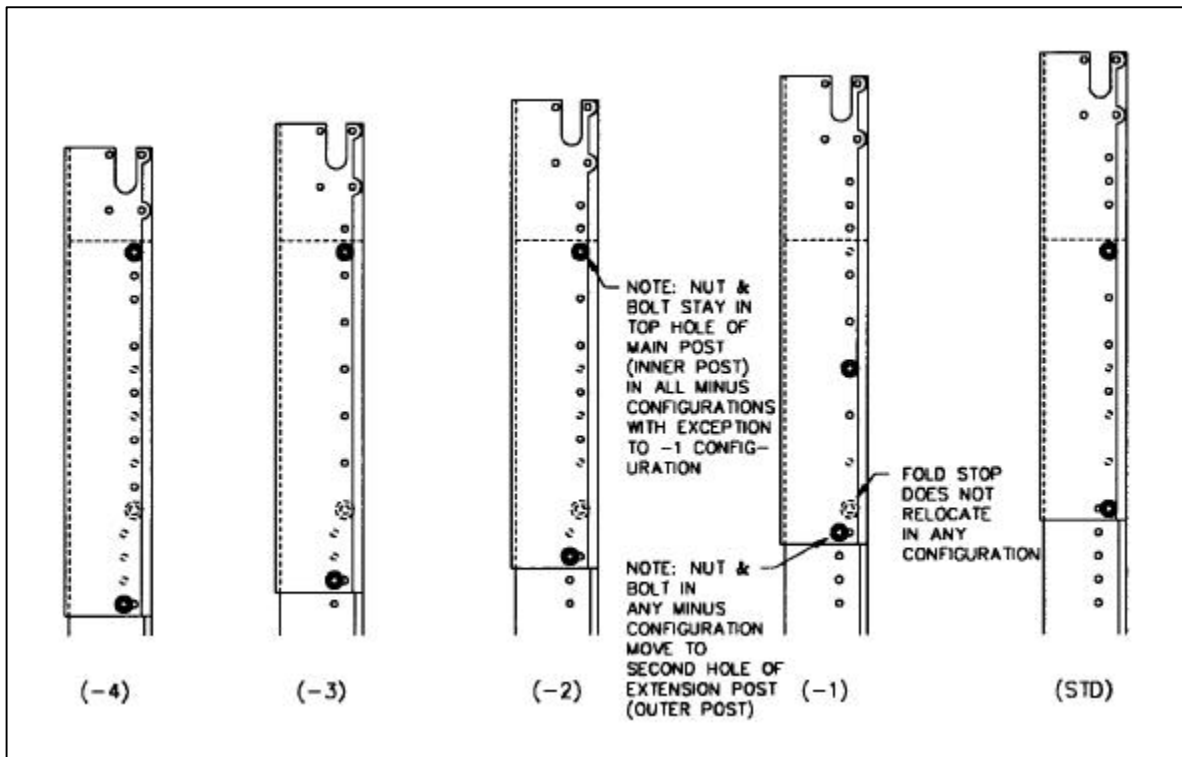


FIGURE 2-9: SHORTENED CONFIGURATION - SIDE VIEWS

5. BASE PLATE ADJUSTMENT

For the vans listed in **Table 2-4** below, perform the base plate adjustment procedure if needed:

TABLE 2-4: BASE PLATE ADJUSTMENT		
MAKE/MODEL	DOOR INSTALLATION	BASE PLATE MOUNT POSITION
Chevrolet - Astro	Side w/Sliding Door	Third / Top
Ford - Aerostar	Side w/Sliding Door	Second / Middle
GMC - Safari	Side w/Sliding Door	Third / Top
Dodge	Side w/Sliding Door	Standard (First / Bottom)
	Side w/Swing Door	Standard (First / Bottom)
Ford	Rear Door	Second / Middle
	Side w/Sliding Door	Third / Top
	Side w/Swing Door	Third / Top
GMC	Rear Door	Second / Middle
	Side w/Sliding Door	Third / Top
	Side w/Swing Door	Third / Top
END OF TABLE		

- a. Remove bolts that attach base plate to left and right Main Posts.

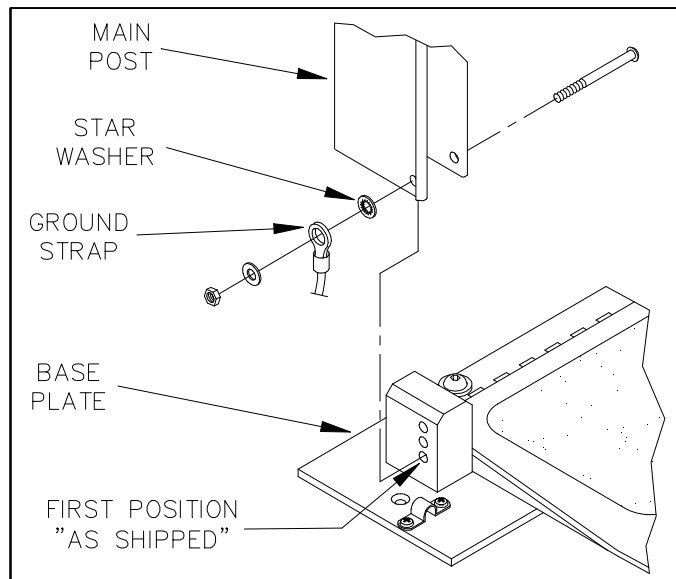


FIGURE 2-10: BASE PLATE MOUNTING

- b. Refer to **Figure 2-10**. Move base plate to appropriate position.
- c. Be sure to replace ground strap under washer, with star washer between ground strap and main post.
- d. Loosely install base plate bolts.

6. POSITION LIFT INTO VEHICLE

To position the lift into the vehicle, follow this procedure:

 WARNING
ALTHOUGH THE UNI-LITE IS CONSTRUCTED OF LIGHTWEIGHT MATERIALS, DO NOT ATTEMPT TO POSITION LIFT USING ONLY ONE PERSON.

- a. Position lift into van according to **Figures 2-11, 2-12, and Table 2-5:**

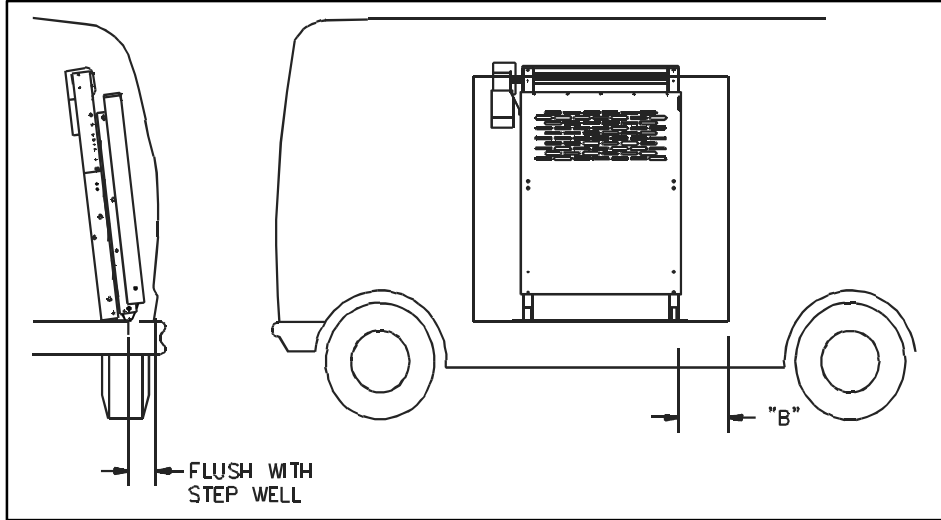


FIGURE 2-11: SIDE DOOR INSTALLATION CLEARANCES

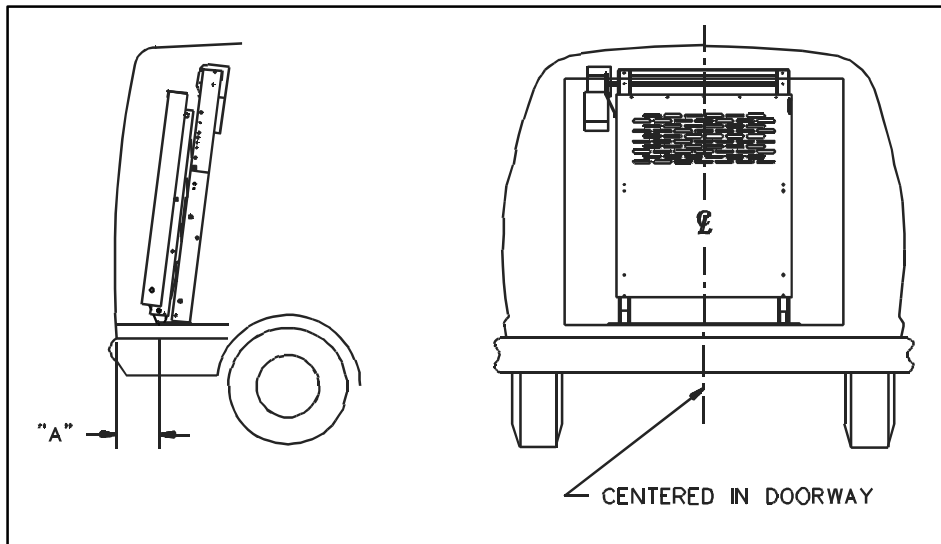


FIGURE 2-12: REAR DOOR INSTALLATION CLEARANCES

TABLE 2-5: VAN LIFT POSITION			
MAKE/MODEL	DOOR INSTALLATION	DISTANCE FROM STEPWELL	POSITION IN DOORWAY
Chevrolet - Astro	Side w/Sliding Door	Flush	Center
Ford - Aerostar	Side w/Sliding Door	Flush	Center
GMC - Safari	Side w/Sliding Door	Flush	Center
Dodge	Side w/Sliding Door	Flush	B = 9"
	Side w/Swing Door	Flush	Center
Ford	Rear Door	A = 10"	Center
	Side w/Sliding Door	Flush	B = 5"
	Side w/Swing Door	Flush	Center
GMC	Rear Door	A = 10"	Center
	Side w/Sliding Door	Flush	B = 5"
	Side w/Swing Door	Flush	Center
END OF TABLE			

- b. With sheet metal screws, temporarily attach base plate to floor.
- c. For Chevrolet Astro or GMC Safari side with sliding door installation, loosely install Top Right Bracket and Shim Plate to RIGHT-SIDE of top alignment plate using existing bolts. (Spacer washers may be needed to clear door track.)

For all other vans, refer to **Figure 2-13**. At top of lift, position extension brackets onto upper mounting studs and loosely install 1/4 flat washers and 1/4-20 self-locking nuts.

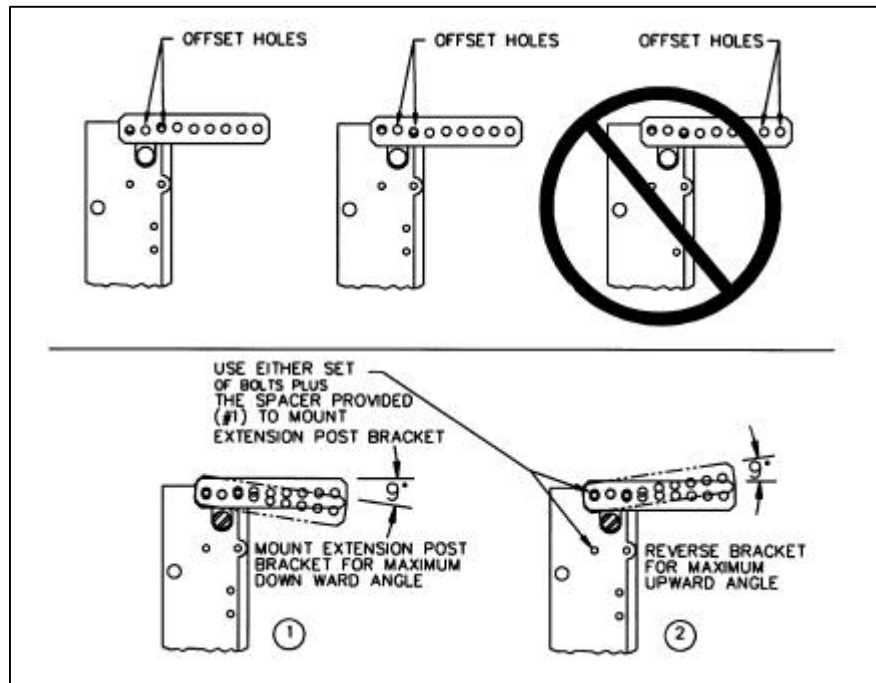


FIGURE 2-13: EXTENSION BRACKET MOUNTING

- d. For all vans EXCEPT RIGHT-SIDE of Chevrolet Astro or GMC Safari side with sliding door installation, refer to **Figure 2-14**. With 5/16-18 hex bolts, 5/16 flat washers, and 5/16-18 self-locking nuts, loosely install intermediate brackets to end of extension brackets.

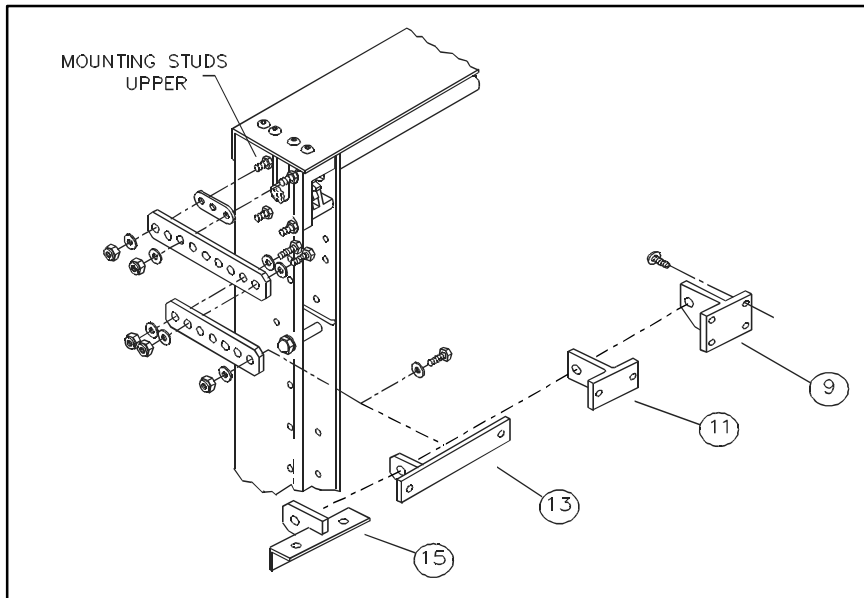


FIGURE 2-14: INTERMEDIATE AND MOUNTING BRACKET INSTALLATION


- e. Refer to **Table 2-6** for mounting bracket applications. With 5/16-18 hex bolts, 5/16 flat washers, and 5/16-18 self-locking nuts, loosely install mounting brackets to end of intermediate brackets.

TABLE 2-6: MOUNTING BRACKET APPLICATIONS			
MAKE/MODEL	DOOR INSTALLATION	LEFT-SIDE MOUNTING BRACKET	RIGHT-SIDE MOUNTING BRACKET
Chevrolet - Astro	Side w/Sliding Door	Astro Top Left	Astro Top Right
Ford - Aerostar	Side w/Sliding Door	2-Hole "T" (ref. #11)	4-Hole "T" (ref.# 9)
GMC - Safari	Side w/Sliding Door	Astro Top Left	Astro Top Right
Dodge	Side w/Sliding Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9)
	Side w/Swing Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9)
Ford	Rear Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9)
	Side w/Sliding Door	4-Hole "T" (ref. #9)	2-Hole "T" (ref. #11)
	Side w/Swing Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9)
GMC	Rear Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9)
	Side w/Sliding Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9) plus Right Side Offset Block
	Side w/Swing Door	4-Hole "T" (ref. #9)	4-Hole "T" (ref. #9) plus Right Side Offset Block
END OF TABLE			

- f. Tilt lift toward door opening to the amount specified in **Table 2-7**. (To achieve the amount of tilt specified, extension bracket and/or intermediate bracket may have to be repositioned or readjusted.)

TABLE 2-7: LIFT TILT SPECIFICATIONS		
MAKE/MODEL	DOOR INSTALLATION	AMOUNT OF TILT
Chevrolet - Astro	Side w/Sliding Door	Top of lift - 7" from door weatherstripping
Ford - Aerostar	Side w/Sliding Door	Top of lift - 6" from door header
GMC - Safari	Side w/Sliding Door	Top of lift - 7" from door weatherstripping
Dodge	Side w/Sliding Door	five degrees (5E)
	Side w/Swing Door	five degrees (5E)
Ford	Rear Door	seven degrees (7E)
	Side w/Sliding Door	ten degrees (10E)
	Side w/Swing Door	ten degrees (10E)
GMC	Rear Door	seven degrees (7E)
	Side w/Sliding Door	seven degrees (7E)
	Side w/Swing Door	seven degrees (7E)
NOTE: All tilt specifications are approximate.		
END OF TABLE		

- g. Using sheet metal screws or clamps, temporarily attach "T" mounting brackets to door header or post.

 WARNING
<ul style="list-style-type: none"> • WEAR PROTECTIVE CLOTHING AND EYE PROTECTION AT ALL TIMES. BATTERIES CONTAIN ACID THAT CAN BURN. IF ACID COMES INTO CONTACT WITH SKIN, IMMEDIATELY FLUSH AFFECTED AREA WITH WATER AND WASH WITH SOAP. • DO NOT SMOKE OR USE OPEN FLAME IN THE VICINITY OF BATTERY. ALWAYS WORK IN PROPERLY VENTILATED AREA. • DO NOT LAY ANYTHING ON TOP OF A BATTERY.

- h. Temporarily connect 12VDC power source to the lift, battery positive (+) terminal to power cable and battery negative (-) terminal to a suitable ground on the lift frame.

- i. Refer to **Figure 2-15**. Using Control Pendant, CAREFULLY DEPLOY lift while observing for any contact with vehicle doorsill, bumper, or external accessories. (If lift does not clear vehicle, reposition or readjust extension bracket, intermediate bracket and/or base plate position.)

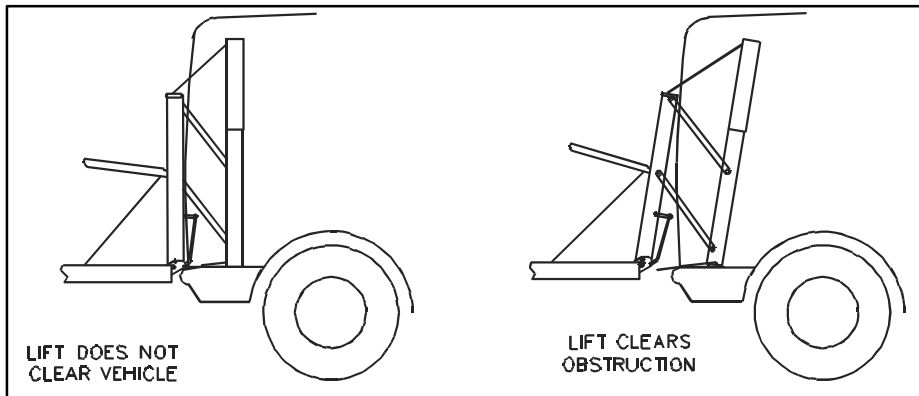


FIGURE 2-15: LIFT OPERATING CLEARANCE

7. BRIDGEPLATE ADJUSTMENT

To adjust the bridgeplate, follow this procedure:

- a. Make sure lift is in DEPLOY position.

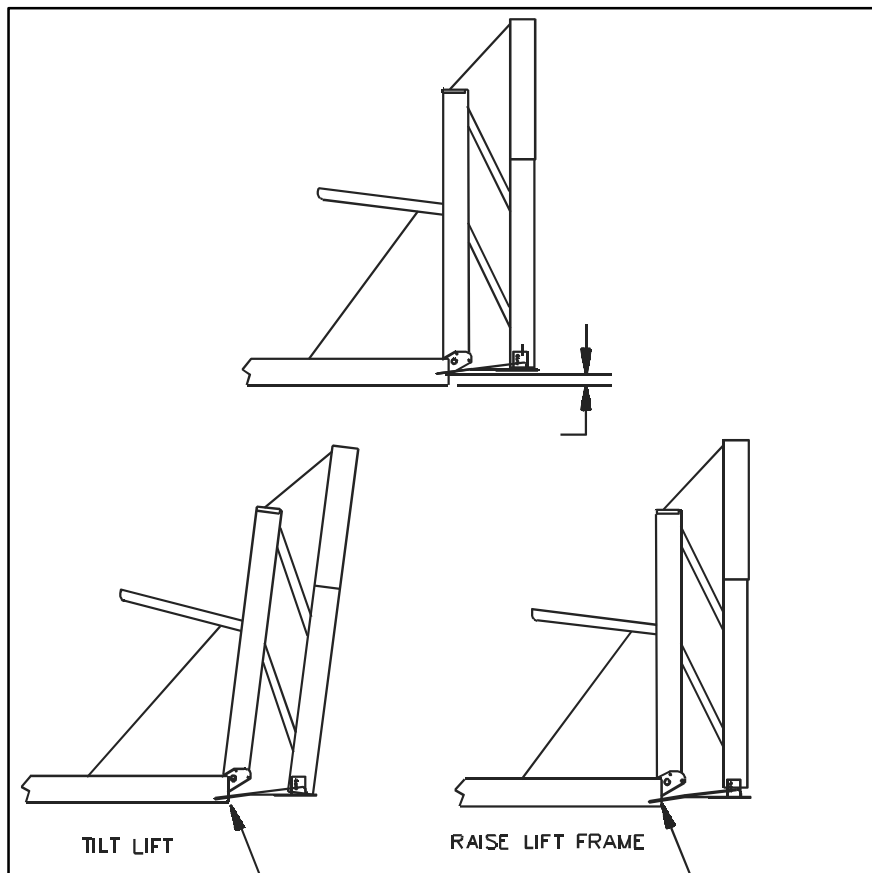


FIGURE 2-16: BRIDGEPLATE/PLATFORM GAP

- b. Refer to **Figure 2-16**. Observe point where Bridgeplate contacts platform top surface.

CAUTION
<p>IF LIFT REQUIRES ADDITIONAL TILT ADJUSTMENT, DO NOT EXCEED 10° OF TILT. TILT IN EXCESS CAN INTERFERE WITH PROPER DEPLOYMENT OF THE PLATFORM.</p>

- c. Reposition or readjust extension bracket, intermediate bracket and/or the base plate mounting position so there is NO GAP between bridgeplate and platform top surface.

8. PLATFORM TILT ADJUSTMENT

To adjust the platform tilt, follow this procedure:

- a. Make sure lift is in DEPLOY position.
- b. Refer to **Figure 2-17**. Using control pendant, position lift DOWN to slightly above ground level.

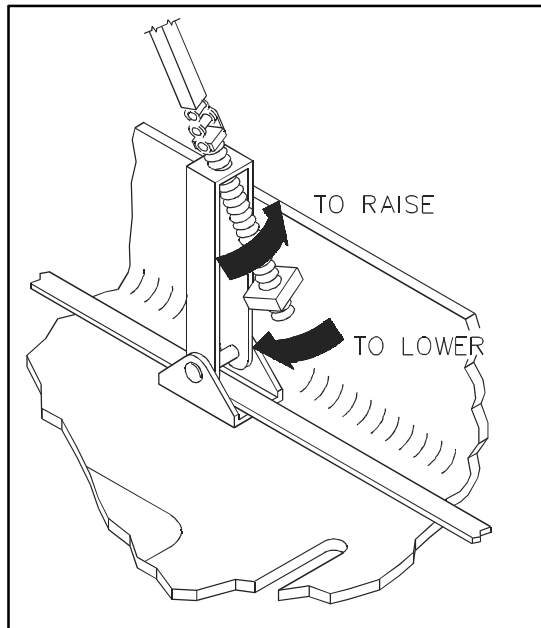


FIGURE 2-17: PLATFORM SUPPORT CHAIN ADJUSTMENT

- c. Adjust platform support chains so platform is parallel with ground.

9. INSTALL LIFT IN VEHICLE

To install the lift into the vehicle, follow this procedure:

- a. Using Control Pendant, cycle test (DEPLOY, DOWN, UP, and STOW) lift to make sure clearances are adequate. Readjust tilt and/or position if necessary.
- b. At each base plate mounting holes, remove temporary sheet metal screws.
- c. Verify size of provided base plate mounting bolts and drill appropriate size holes through van floor at base plate mounting holes.
- d. Insert six mounting bolts through base plate mounting holes.
- e. From beneath van, install fenderwashers and locknuts onto each mounting bolt.
- f. Using sheet metal screws, permanently attach "T" mounting brackets to door header or post.
- g. For Chevrolet Astro or GMC Safari installation, install modified door guide arm, drill through Top Left Bracket holes through track, and install bolts and self-locking nuts.
- h. Securely tighten all upper brackets and their installation bolts and/or self-locking nuts.
- i. Securely tighten main post-to-baseplate bolts and self-locking nuts.

CAUTION

- WEAR PROTECTIVE CLOTHING AND EYE PROTECTION AT ALL TIMES. BATTERIES CONTAIN ACID THAT CAN BURN. IF ACID COMES INTO CONTACT WITH SKIN, IMMEDIATELY FLUSH AFFECTED AREA WITH WATER AND WASH WITH SOAP.
- DO NOT SMOKE OR USE OPEN FLAME IN THE VICINITY OF BATTERY. ALWAYS WORK IN PROPERLY VENTILATED AREA.
- DO NOT LAY ANYTHING ON TOP OF A BATTERY.

- j. Disconnect temporary 12VDC power source from lift and vehicle battery.

C. ELECTRICAL INSTALLATION

NOTE: A good ground is imperative to the proper operation of the lift, especially with heavy loads. If a poor ground is suspected through the lift frame or the lift is not mounted to a grounded surface, a supplementary ground strap is recommended. Using 4 AWG or greater cable with ring terminals on both ends, mount one end of the ground strap under the frame bolt located under the controller and the other end to a steel chassis member. Remove all paint and corrosion from chassis member where the ring terminal will be in contact. It is recommended to do the same from the battery "negative" terminal to the vehicle chassis, because vehicle manufacturer's ground systems are often not designed for high current accessories such as wheelchair lifts.


To install electrical power to the lift, follow this procedure:

 CAUTION
CHECK VEHICLE BEFORE DRILLING. DO NOT DRILL INTO FACTORY WIRING, HYDRAULIC LINES, FUEL LINES, FUEL TANK, ETC.

1. At vehicle engine compartment, mount supplied Main Circuit Breaker within 10" - 12" (25 - 30 cm) of battery.
2. Adjacent to lift electrical cover, drill one 3/4" (19.5-mm) hole through vehicle floor, deburr hole, and install grommet.
3. Insert lift power cable through drilled hole.

 CAUTION
WHEN ROUTING POWER CABLE, AVOID HAZARDS SUCH AS VEHICLE DRIVE SHAFTS, MOVING SUSPENSION PARTS, EXHAUST SYSTEMS, ETC.

4. From beneath vehicle, run cable along vehicle frame to circuit breaker. Make sure cable does not interfere with moving or hot parts and secure with cable ties every 18" (45 cm).
5. At engine compartment, cut and retain 12" (30 cm) section from end of cable.
6. Cut and remove any excess wire from cable.
7. Using wire crimpers, crimp terminal to cable and connect to circuit breaker AUX terminal.
OPTIONAL:
Soldering terminal to end of cable is recommended. Use a soldering iron rated 100w or above. Use only **ROSIN CORE** solder (acid core will damage wire).
8. Crimp supplied terminals to both ends of previously cut 12" (30 cm) section of cable. (Soldering is recommended)
9. Connect end of 12" (30 cm) section of RED wire to circuit breaker BAT terminal.

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10. Connect other end of 12" (30 cm) section of RED wire to POSITIVE (+) terminal of vehicle battery.

D. ELECTRICAL LIMIT SWITCH ADJUSTMENTS

⚠ CAUTION

- THE LIFT WILL OPERATE PROPERLY ONLY WHEN THE LIMIT SWITCHES ARE CORRECTLY ADJUSTED.
- TO AVOID OPERATIONAL DEAD-SPOTS, ALWAYS ADJUST THE OUT CUTOFF SWITCH *BEFORE* THE UP CUTOFF SWITCH.

The UNI-lite electrical limit switches are adjusted at the factory, but may require readjustment after installation. If the switches require adjustment(s), refer to **Figure 2-18** and **Table 2-8** and for the necessary adjustment(s). Contact the Ricon Product Support Department for assistance, if needed.

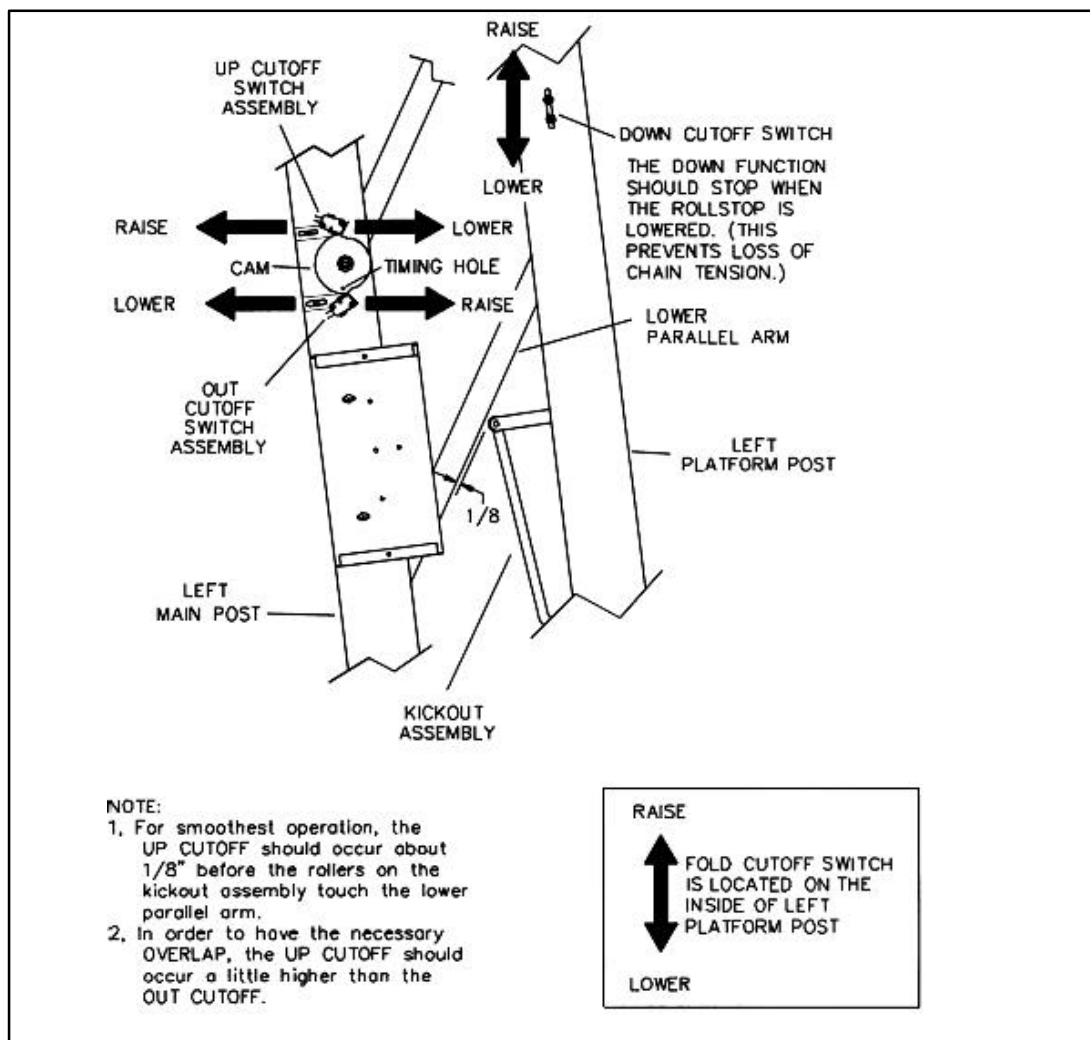
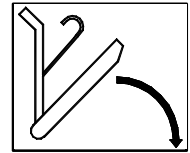


FIGURE 2-18: LIMIT SWITCH ADJUSTMENTS

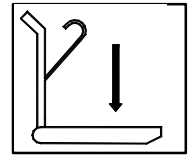
- a. Fully DEPLOY platform.
- b. At UP CUTOFF switch assembly and OUT CUTOFF switch assembly, loosen set screws and lightly tap assemblies approximately 1/4" **outward** (toward outside of vehicle).
- c. Cycle platform to STOW then DEPLOY.
- d. When in DEPLOY position, platform should stop at an angle and NOT even with vehicle floor. If not, lightly tap OUT CUTOFF switch assembly an additional 1/8" **outward**, STOW then DEPLOY platform, then repeat this step.
- e. Cycle platform to UP position.
- f. When in UP position, platform should stop short of vehicle floor level. If not, lightly tap UP CUTOFF switch assembly an additional 1/8" **outward**, cycle platform DOWN then UP, then repeat this step.
- g. Cycle platform to STOW then DEPLOY.

h. Push and hold control pendant DEPLOY/STOW switch in the (DEPLOY) position. Slowly tap OUT CUTOFF switch assembly **inward** until platform “jogs” *down* to vehicle floor level. Make sure that clearance between knuckle actuator saddle and parallel arm is 1/8" minimum (distance may be 1/2" maximum and unequal from left or right arm), stop turning screw and release DEPLOY switch.



i. Position platform DOWN to ground level then UP until it stops.

j. Push and hold control pendant UP/DOWN switch in the (UP) position. Slowly tap UP CUTOFF switch assembly **inward** until platform “jogs” *up* to vehicle floor level. Make sure that clearance between knuckle actuator saddle and parallel arm is 1/8" minimum (distance may be 1/2" maximum and unequal from left or right arm), stop turning screw and release UP switch.



NOTE: If lift does not operate after slight adjustments, cycle the platform UP and DOWN (The UP CUTOFF SWITCH is less sensitive than the OUT CUTOFF SWITCH.)

k. At UP CUTOFF switch assembly and OUT CUTOFF switch assembly, tighten set screws.

l. Cycle platform through all functions (DEPLOY, DOWN, UP, and STOW) to verify correct adjustment. Refer to **Table 2-8** if necessary.

TABLE 2-8: LIMIT SWITCH ADJUSTMENTS

ADJUSTMENT SYMPTOM	COMPONENT TO ADJUST	ADJUSTMENT
Difficult or impossible to adjust floor level cutoffs	CAM	Loosen the bolt in the center of the cam. With lift at vehicle floor level, rotate cam so the timing hole on the cam lines up with the timing hole drilled in the lift post (visible through the timing hole on the lift cam). Tighten center bolt to secure adjustment.
UP position needs adjustment	UP CUTOFF SWITCH	Adjust so the lift stops just before the rollers on the Kickout Assembly touch the underside of the lower Parallel Arm. Roller should be about 1/8" from the lower parallel arm. TO RAISE UP POSITION: adjust switch INWARD. TO LOWER UP POSITION: adjust switch OUTWARD.
DEPLOY position needs adjustment	OUT CUTOFF SWITCH	Perform UP position adjustment first. This will provide the necessary overlap. TO RAISE DEPLOY POSITION: adjust switch OUTWARD. TO LOWER DEPLOY POSITION: adjust switch INWARD.
DOWN position needs adjustment: Excessive chain runout (adjustment too low) OR Rollstop does not open all the way (adjustment too high)	DOWN CUTOFF SWITCH	TO RAISE: adjust switch UPWARD. TO LOWER (INCREASE ROLLSTOP OPENING): adjust switch DOWNWARD.
STOW position needs adjustment: Excessive looseness or lift rattle (adjustment too low) OR Motor stalls or power doors will not close (adjustment too high)	FOLD CUTOFF SWITCH	The Fold Cutoff Switch, not shown, is located inside the Left Platform Post. TO DECREASE FOLD LOOSENESS: raise switch. TO INCREASE FOLD LOOSENESS: lower switch.
END OF TABLE		

E. INSTALLATION VERIFICATION

- Clear the vehicle floor of all loose material, high-plush carpet strands, etc. which may interfere with operation.
- Be certain there is no interference with operation of the lift by interior components (e.g., passenger seat, seat belts, carpeting, tables, etc.) or exterior components (e.g., bumpers, running boards, etc.).

CAUTION

SIDE DOOR INSTALLATIONS MAY REQUIRE THAT THE BACKWARD POSITIONING OF THE FRONT PASSENGER'S SEAT BE RESTRICTED TO PREVENT INTERFERENCE WITH LIFT OPERATION. A BOLT INSTALLED IN THE SEAT TRACK OR INSTALLATION OF A GUARD MAY BE NECESSARY. IF SEAT BELT RELOCATION IS ALSO NECESSARY, CONSULT WITH THE VEHICLE MANUFACTURER FOR PROPER INSTRUCTION.

- Make sure that all fasteners are tightened properly.
- Run the UNI-lite through several cycles of all functions (DEPLOY, DOWN, UP, and STOW).
- Test the UNI-lite at 125% of its rated load capacity (750 pounds).

NOTE: C Voltage at controller power terminals should be greater than 11.5 volts when lift is in operation. Be sure to check while lift is lifting.

NOTE: C If the lift is unable to lift its rated load, it is almost always due to a poor connection in the power loop, or a weak vehicle electrical system. Solder all terminals using a soldering iron rated at 100w or greater and **ROSIN CORE** electrical solder (acid core plumber's solder will damage cable). Use star washers between all power terminals and metal surfaces. Use a fully charged vehicle battery. **DO THE TEST WITH THE ENGINE RUNNING.** If necessary, connect a 250 amp (or greater) booster/charger to battery and set to "boost" during test (refer to booster/charger operating manual for proper operation).

NOTE: C Ricon recommends the installation of a battery rated at 900 cranking amps or greater, or where the vehicle manufacturer has made provision, a dual battery system.

F. CUSTOMER ORIENTATION

* IMPORTANT *

The Sales/Service Personnel must review the Warranty, Operating Instructions of this manual, and all lift decals with the user to be certain that they understand the safe operation of the product. Instruct the user to follow the operating instructions without exception.

- Refer to **Figure 2-19** on following page and ensure that all decals are properly located and affixed to the UNI-lite.

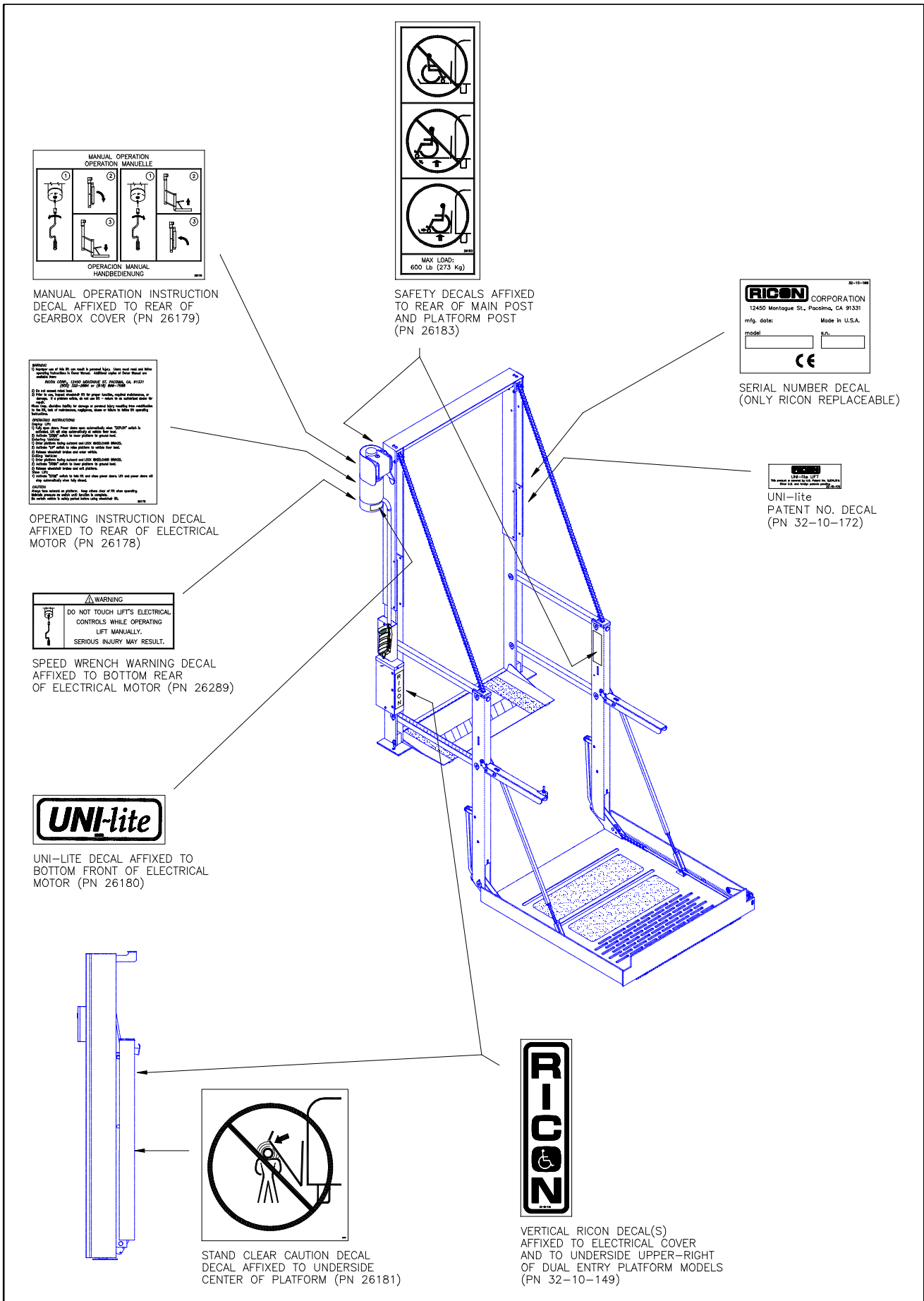


FIGURE 2-19: DECAL LOCATION