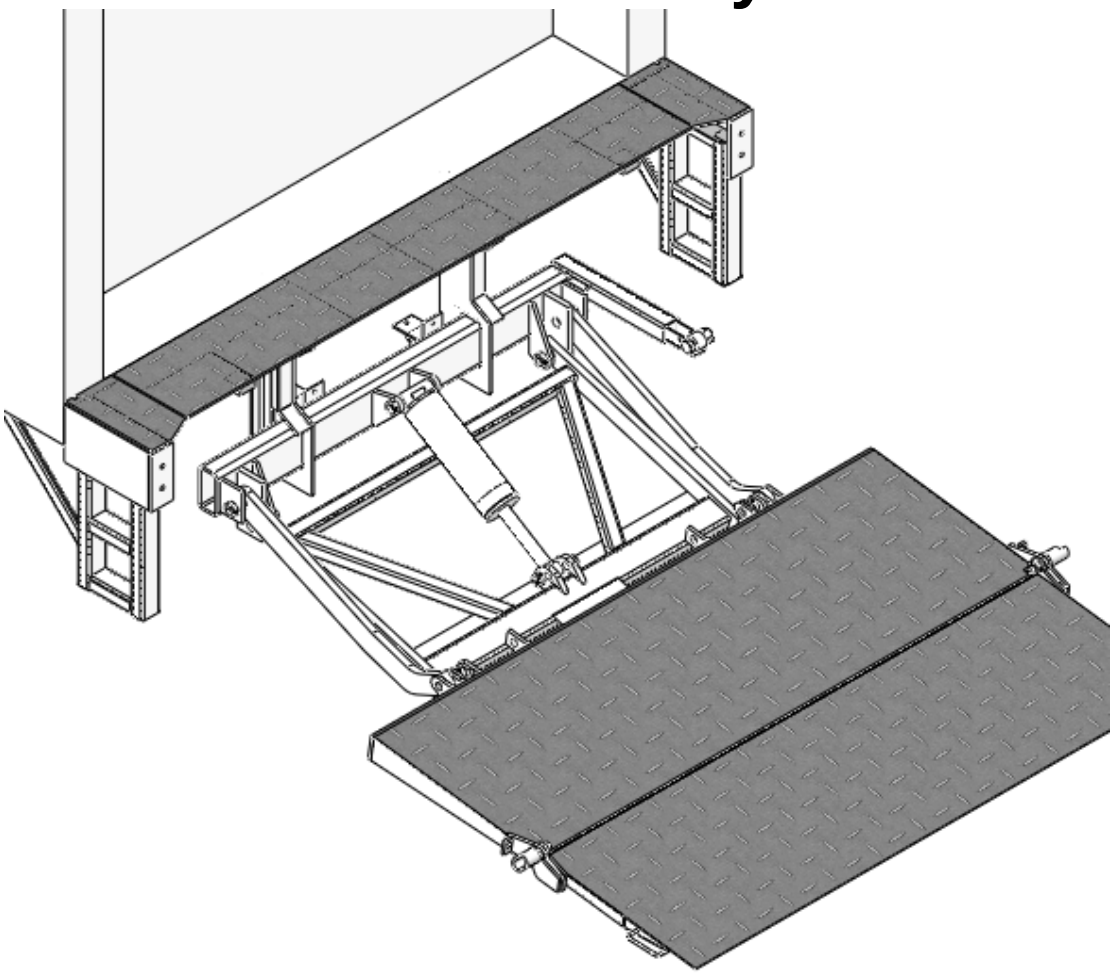
LEYMAN
LIFT GATES
Innovation. Service. Solutions.

Installation Manual

SLP Hide-A-Way®
Tuckunder Style



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WORDS OF CAUTION

1. Before any maintenance is performed on this unit, read and understand this manual completely.

2. Do not stand on or behind the platform when operating gate in the folded position.

3. Make sure the ground is clear under the platform when lowering.

4. Do not stand in front of platform when lowering from vertical position or operating in any manner.

5. Never exceed the rated load capacity of this gate.

6. Do not allow persons to operate the unit unless they have been properly trained to do so.

7. Use only factory authorized parts for replacement.

8. Check the area around the unit for persons before operating the lift gate.

9. This lift gate should operate smoothly and the only noise that should be heard is the power unit. Any audible sounds other than the normal power unit operation sound should be thoroughly investigated, and the cause of the noise should be pinpointed and corrected.

10. Do not overload – the maximum rated capacity is based on an evenly distributed load all over the platforms flat surface.

11. Always load as close to the center of the platform and as close to the truck sill as possible.

12. 150 Amp circuit breaker (not supplied) must be installed between the starter solenoid and the battery source.
    Order from factory as Option #111-Circuit Breaker.

We urge the installation of a safety cut-off switch for all truck mounted lift gates. These are installed in the cab of the vehicle, so the power to the lift gate can be turned on/off.

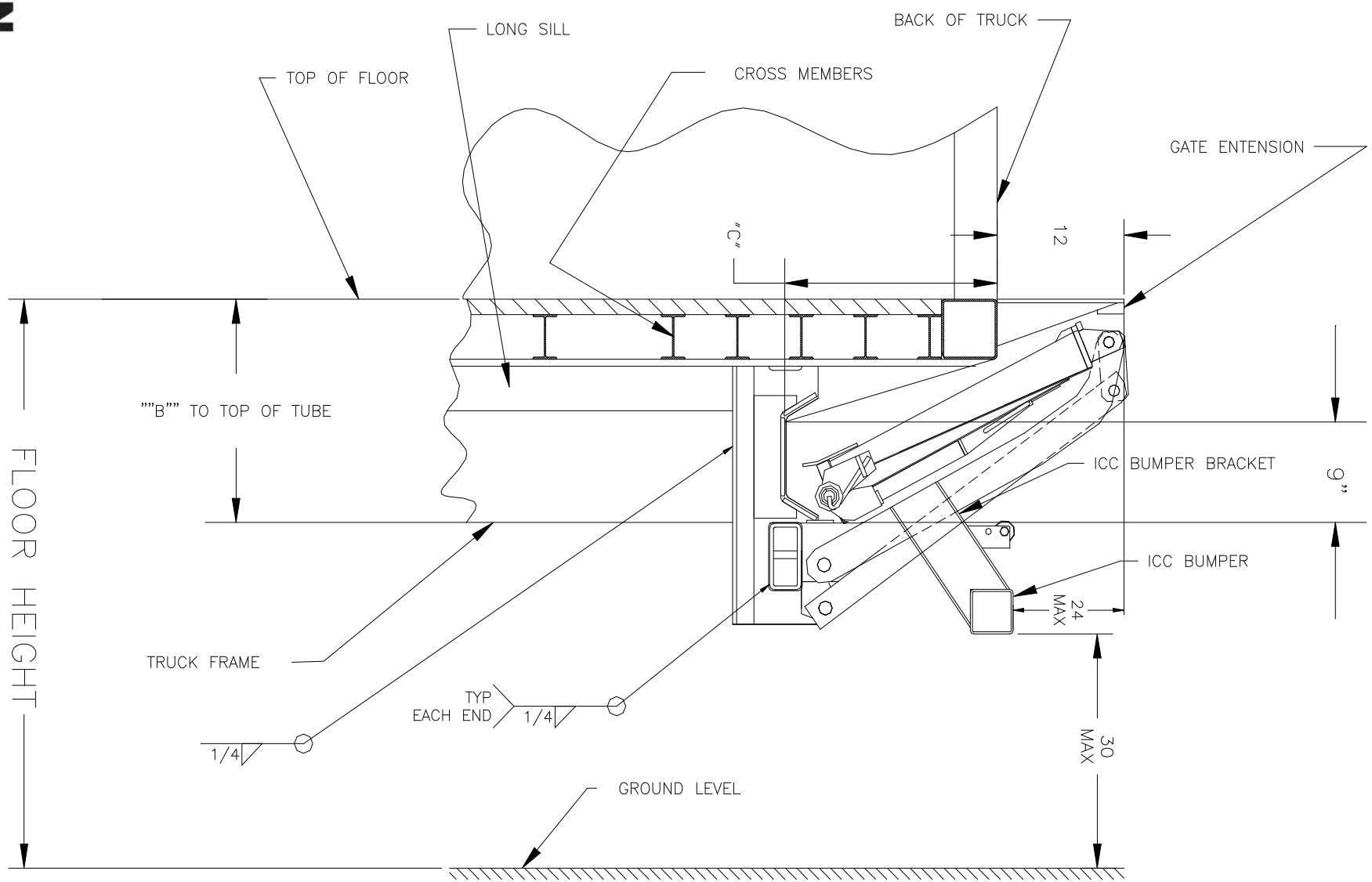
WARNING: Pressure relief valve in power unit must NEVER be set above 2500 psi. Pressure above 2500 psi can damage lifting arms. Failure to follow this warning could result in accident or injury.

CAUTION: Since this gate has greaseless bearings in the main pivot points, (Tension and Compression Arms and platform parts) any welding on these parts must be grounded or you will damage the cylinder and / or hose.

GENERAL VIEW, TRUCK MOUNTING

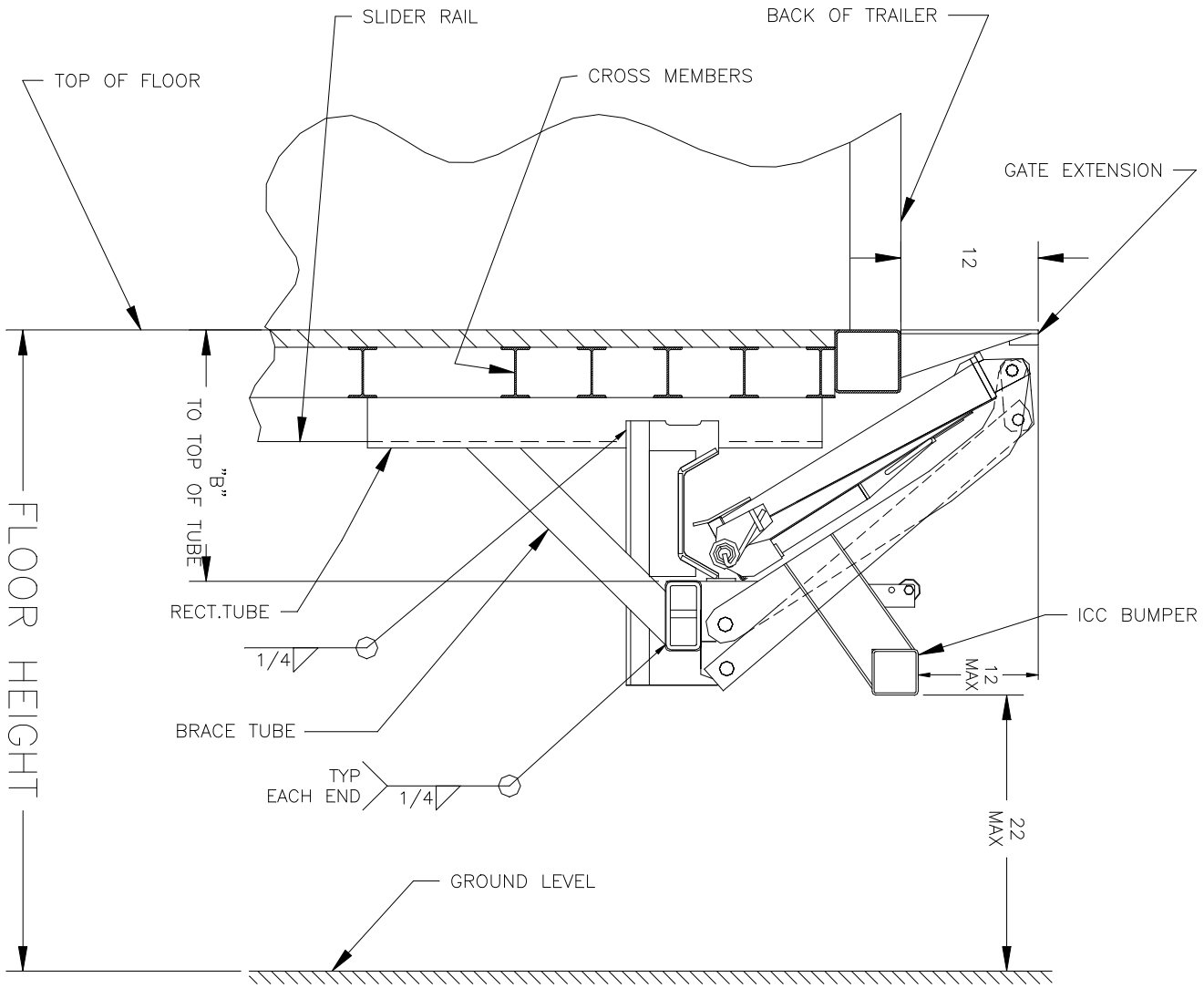
SLP GATE WITH OR WITHOUT ICC BUMPER

SEE CHART "C"



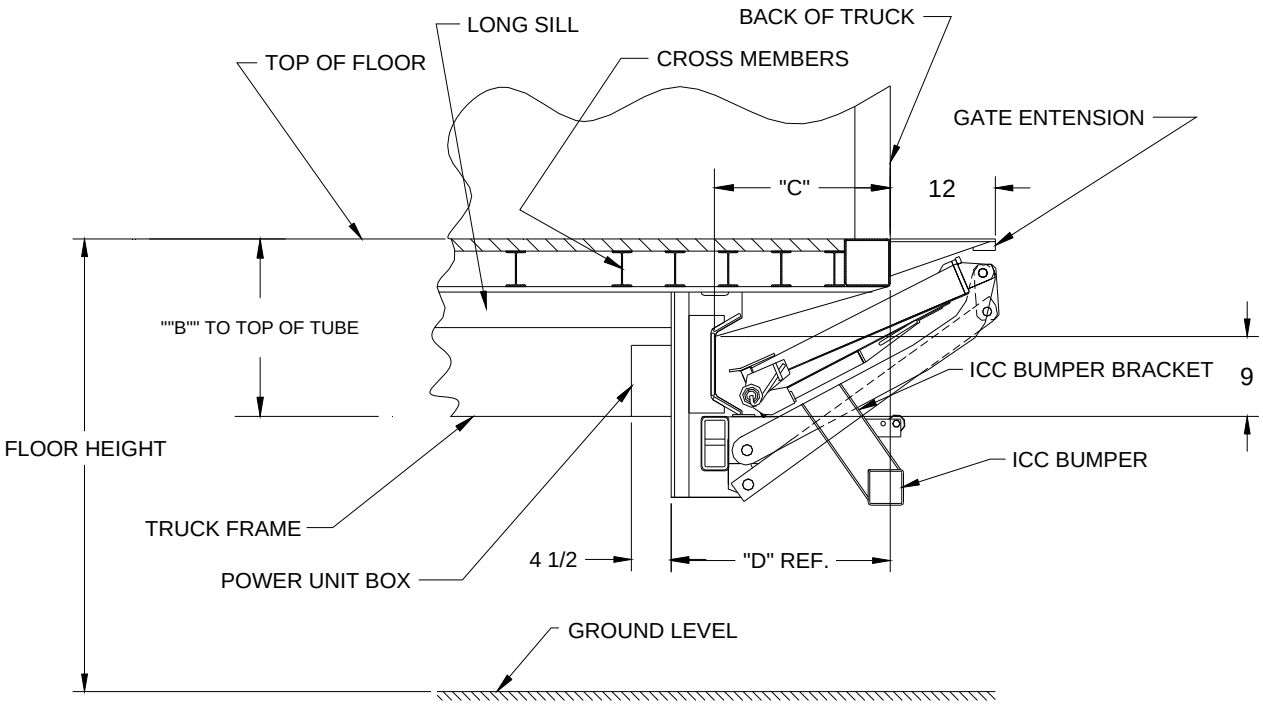
GENERAL VIEW, TRAILER MOUNTING

SLP GATE WITH ICC BUMPER MOUNTING DIMS. SEE CHART "C"



Step 1: TRUCK-PREP BEFORE MOUNTING GATE

See Chart “C” for Mounting Dimensions - Illustration “A”



MOUNTING DIMENSIONS – CHART “C”

GATE	FLOOR HGTH.	“B”	“C”	“D” REF	“E” MAX
SLP2500WLB	36 – 40	16	18	26-1/2	3
SLP2500WLB	40 – 42	16	18	26-1/2	4-1/4
SLP2500WLB	42 – 44	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	45	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	46	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	47	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	48	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	49	19	20	24-1/2	4-1/4
SLP2500W / 3000W / 3500W	50	20	20	23-5/8	5-1/8
SLP2500W / 3000W / 3500W	51	20	20	23-5/8	5-1/8
SLP2500W / 3000W / 3500W	52	21	19	22-3/4	5-3/4
SLP2500W / 3000W / 3500W	53	21	19	22-3/4	5-3/4
SLP2500W / 3000W / 3500W	54	23	17-1/2	20-1/2	6-1/4
SLP2500W / 3000W / 3500W	55	23	17-1/2	20-1/2	6-1/4
SLP2500W / 3000W / 3500W	56	23	17-1/2	20-1/2	6-1/4

Note: Add 4-1/2” to Dim. “D” for over-all length

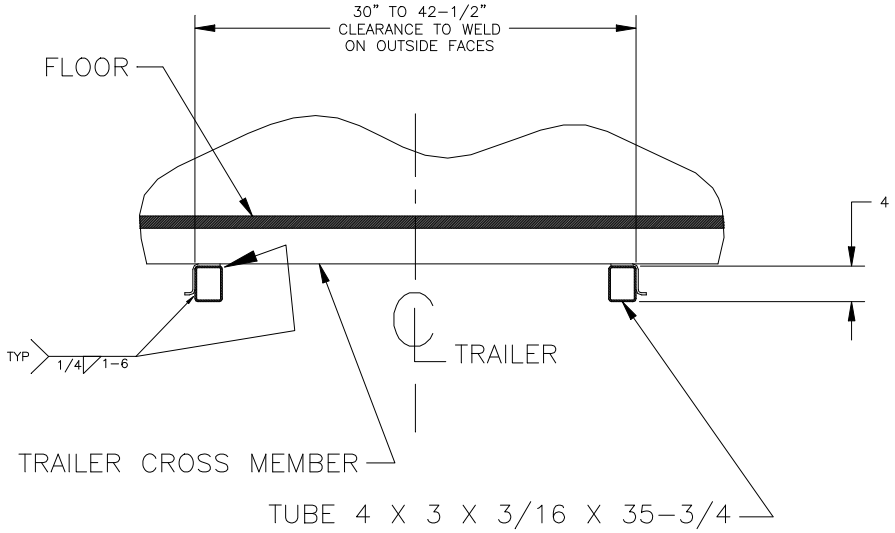
Note: Max. spread of gate mounting plates is 42-1/2” inside to inside.
Min. spread of gate mounting plates is 30” inside to inside.

Step 1: TRAILER-PREP BEFORE MOUNTING GATE

Weld 4 x 3 x 3/16 x 35-3/4 rect. tube inside the trailer slider rails. Mount within 2 inches of rear sill (see sketch below). Diagonal braces must also be used for trailer mounting.

ILLUSTRATION "B"

REAR VIEW—SECTION



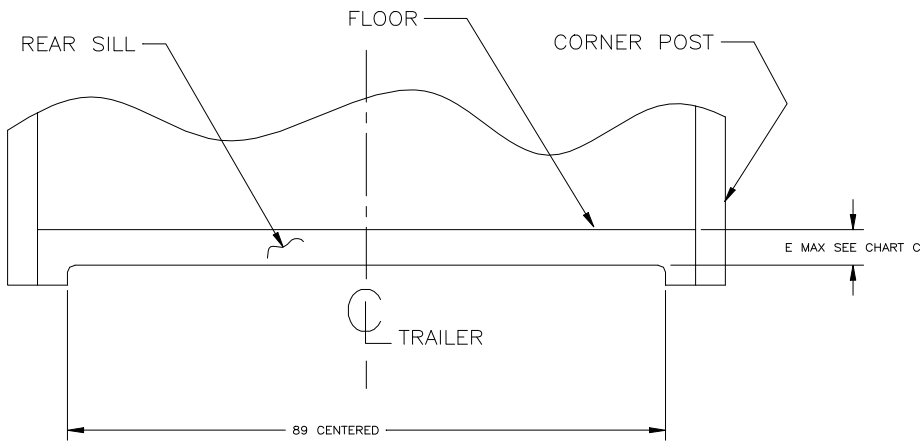
Step 2: TRUCK AND TRAILER – NOTCH REAR SILL

Notch rear sill, if necessary. Check the height of the rear sill. See chart "C". If the height of the rear sill is larger than the dimension E maximum, the sill must be notched (see sketch D below).

Note: After notching rear sill, add material to reinforce such as 3 x 3 x 3/8 angle or 1" square bar etc. The area cut away must be rebuilt to maintain strength.

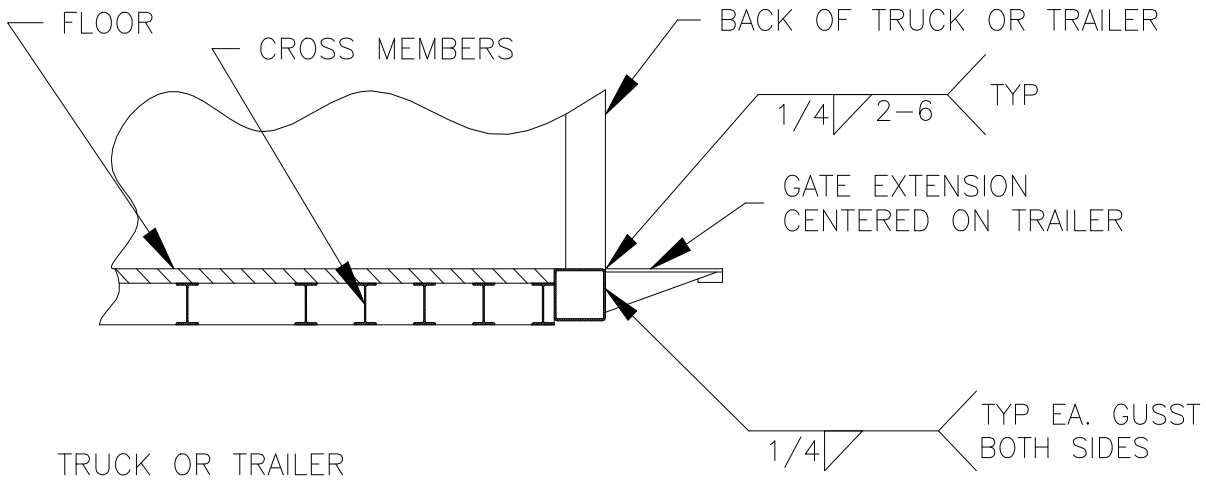
ILLUSTRATION "D"

REAR VIEW



Step 3: WELD EXTENSION TO REAR SILL

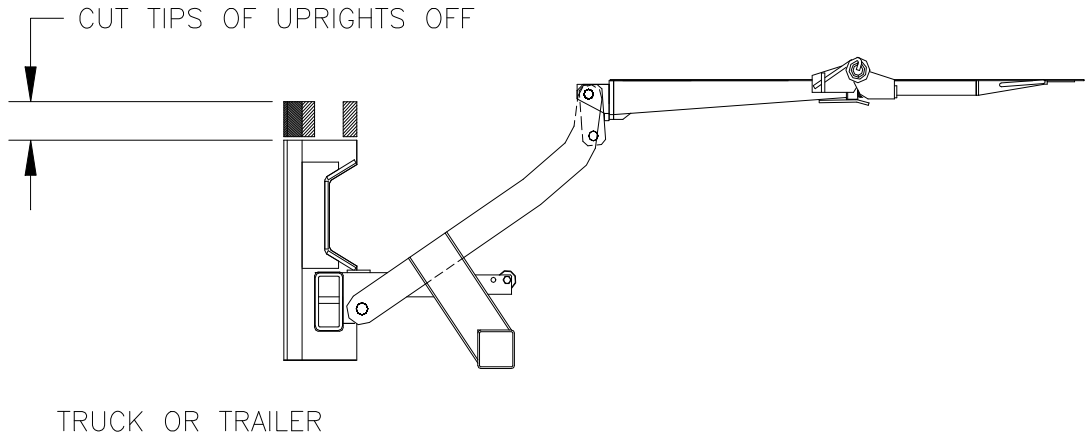
Illustration “E”



Step 4: CUT TIPS OF UPRIGHTS OFF

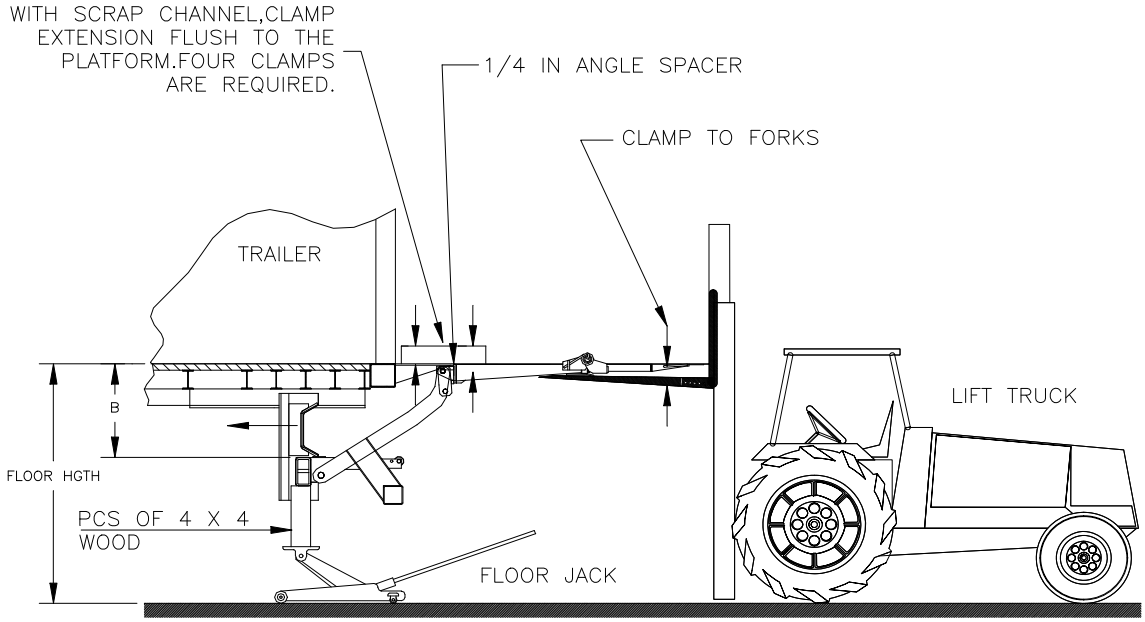
Illustration “F”

Depending on the dimension of your truck body and chassis, this cut may not be necessary if the mounting brackets fit well and do not interfere with the body.



Step 5: MOUNTING GATE TO TRUCK OR TRAILER

Illustration "G"



Bed Extension must be welded to rear sill as shown in Step 3 previously.

1. Unfold secondary platform. Clamp the secondary platform to the forks of the lift truck, with lift gate approximately centered (see illustration above).

2. Lay two angles on the top of the Bed Extension to space the platform out 1/4 inch (see sketch above). Any ¼" thick angles or spacers will work.

3. Pick up the gate assembly, center it carefully on the Bed Extension and push it against the Bed Extension. With two pieces of scrap channels or angles, clamp platform flush with floor. Use four clamps. Clamp channels to extension and platform.

4. With a floor jack and a piece of 4 x 4 wood, swing and raise the main tube until it is at dimension "B" (NOTE: Trailer - the mounting plates should be outside the tubes that you welded near the slide rails. Trucks - these plates should be outside of the truck frame).

5. With a large pipe wrench rotate the main 4 x 6 tube, so that it is vertical then check the rod of the lifting cylinder. You should see about ½ inch of the shiny rod. If not, rotate the main tube back until you see this ½ inch shiny rod.

6. Now tack weld the main support plates and tube in position, strong enough to hold, so you can run the gate up and down without a load on it. This is to check the gate functions properly later.

7. Unclamp the four clamps holding the back of the platform next to Bed Extension. ***Caution:*** Do not unclamp the tip of the platform.

8. Let the lift truck forks down slowly until they will not go anymore. They will stop about ½-way down, when they meet resistance from the oil in the lifting cylinder.

9. Install the gate control switch as shown on the following page and route the wire to the power unit. Slide a piece of supplied shrink tube over the thermal switch wire and connect the black control wire using the butt connector pre-installed on the wire. Move the shrink tube to cover the connection and heat to seal the connection. Connect the white control wire to the lowering valve in the same manner. Attach the green control wire with ring terminal to the battery post of the starter solenoid.

10. For temporary power – use a 12 volt battery as a temporary power source. Run a wire from the battery to the starter solenoid. Connect a ground wire.

11. Lower the platform to the ground and then check the oil level in the power unit. Add oil as needed to bring the level up to approximately 1" from the top. Refer to page 20 for recommended oils. Run the gate up and down to check its operation. If correct, finish-weld the main plates and main tube.

12. Trailers – install 45 degree brace tubes as shown in General Trailer drawing.

13. Weld shims to stop blocks on platform for proper slope and preload. 14 Gauge shims provided in kit will give proper slope for average installation. (See Step 5-15, Illustration "K"). Empty platform should slope slightly toward truck and platform tip should reach ground.

14. Weld on stop block for latch, which holds the gate up in the stored position. There should be a 1/16 gap between the block and the latch shaft. (See Step 5-16, Illustration "J").

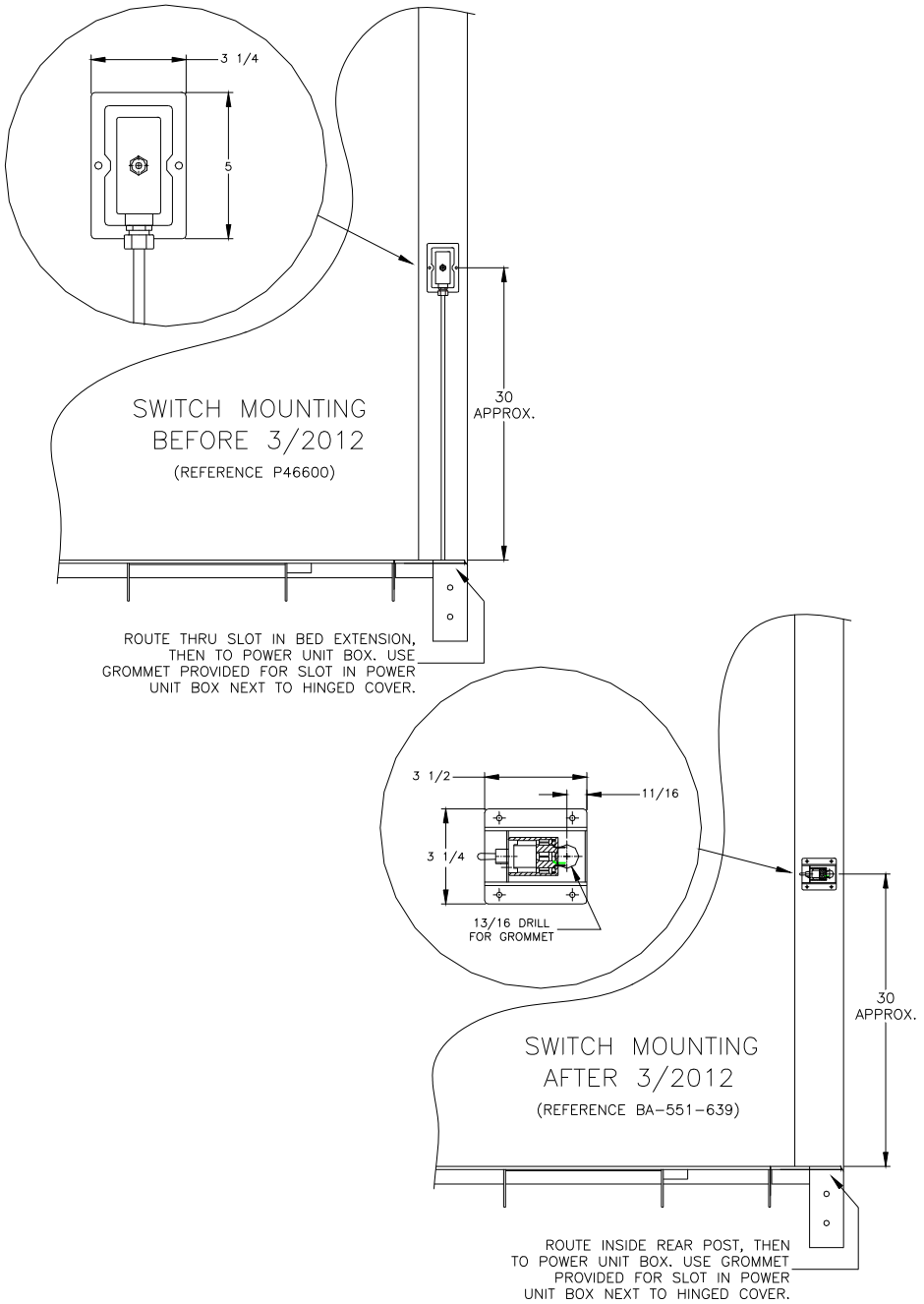
15. Trailers – install charging line. Drill 1-7/8 diameter hole through aluminum front bottom rail. Use "0" gauge wire only. When installing charge line, ensure the cable goes through a minimum of three "I" beams past the 5th wheel plate and through the clear vinyl loom, (or split loom). Mount the remaining cable with loom clamps and self tapping screws to the "I" beams. Install 4-gauge ground cable from power unit to trailer frame. Trailer applications require lift gate batteries on the trailer.

16. Trucks – Run 2-gauge power line from starter on the gate to the truck battery. ***Caution:*** Make sure there is a ground wire from battery to chassis. Install 4-gauge ground cable from power unit to chassis.

17. If purchased, install optional step assemblies.

18. Paint unit – apply decals, lubricate all grease fittings, check oil in power unit tank when platform is on ground. Level should be 1" from top of tank. See recommended hydraulic oils.

INSTALLATION OF UP / DOWN SWITCH

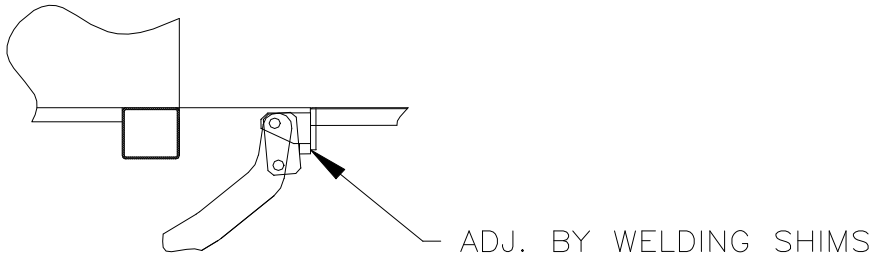


Switch Housing must be located at a height that can be reached while standing on the ground on the curb side of the vehicle, and also while standing on the platform when at bed height.

Switch cable is routed to power unit box as noted in each sketch. Connect as shown on wiring diagram. Green wire connects to battery post on start solenoid. Black wire butt connects to motor temperature switch lead, unless equipped with option Maintenance Minder 2. White wire butt connects to drain valve. Use heat shrink provided to seal butt connectors.

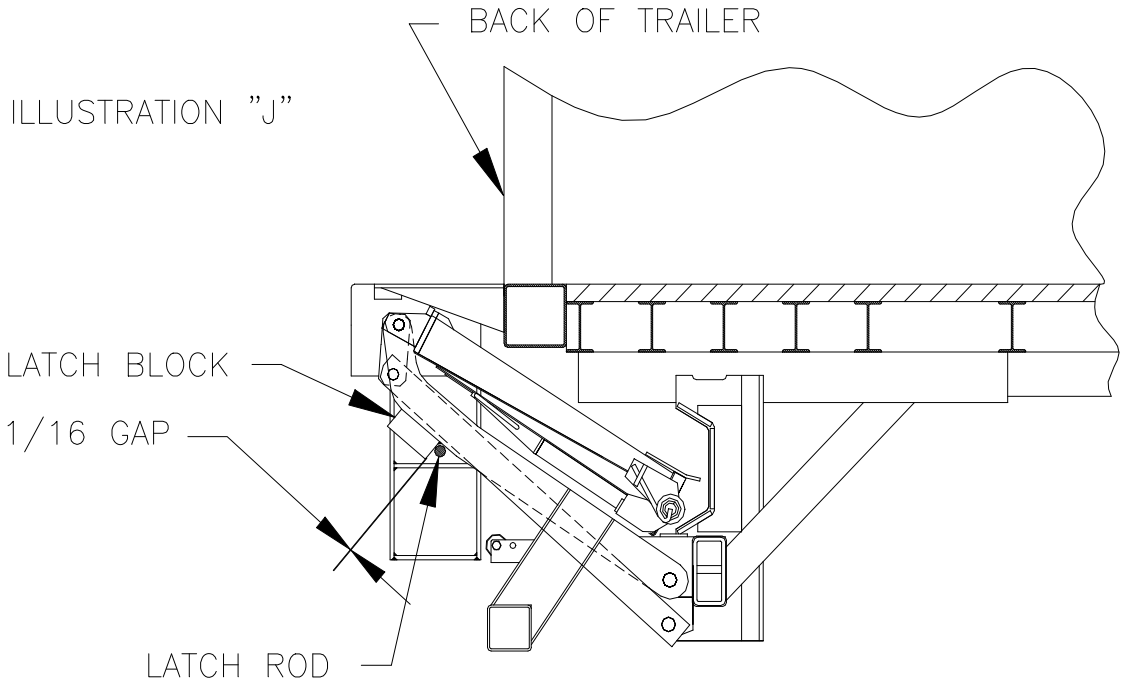
Step 5-15: WELD PLATFORM SHIMS (Illustration “K”)

Weld shims to stop blocks on platform for proper slope and preload. View with platform unfolded and in the full up position. Proper slope is approximately 1.5” - 2” toward the Bed Extension.
Caution: Ground stop blocks before welding shims.



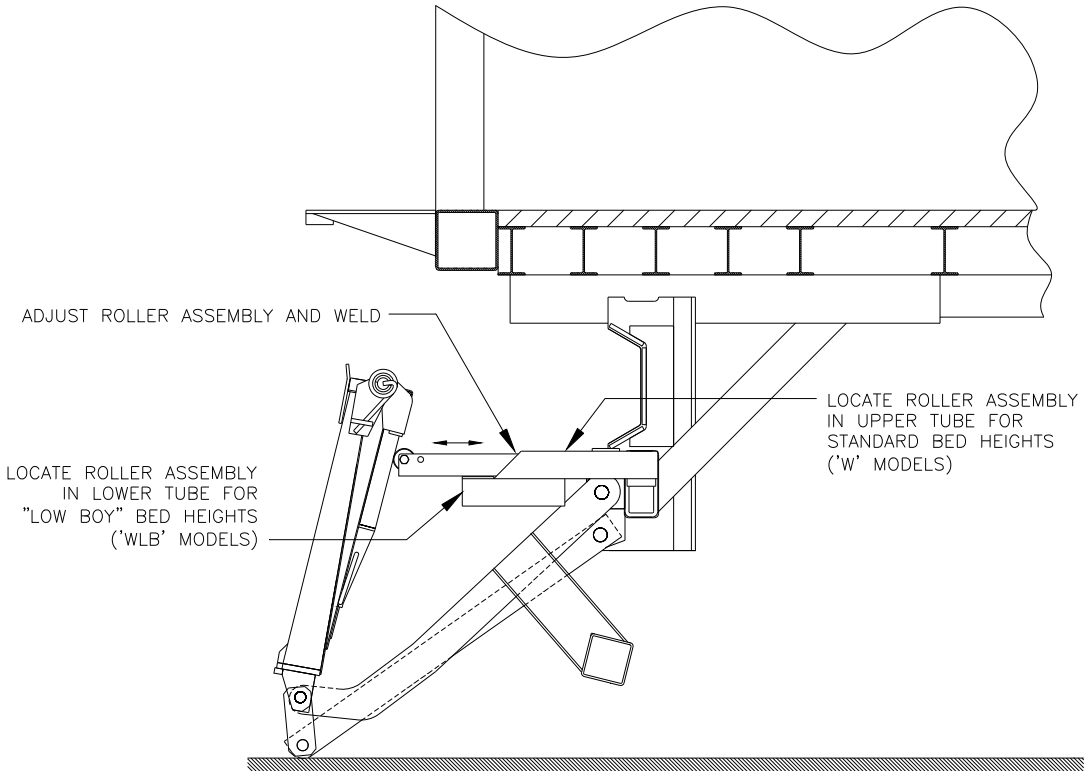
Step 5-16: WELD ON LATCH

Weld latch block to tension arm, maintain 1/16 gap. This block will hold the gate in the over the road position in the event of hydraulic failure.
Caution: Ground arms before welding latch block.



Step 6: ADJUST RADIUS ARM ROLLER (Illustration “L”)

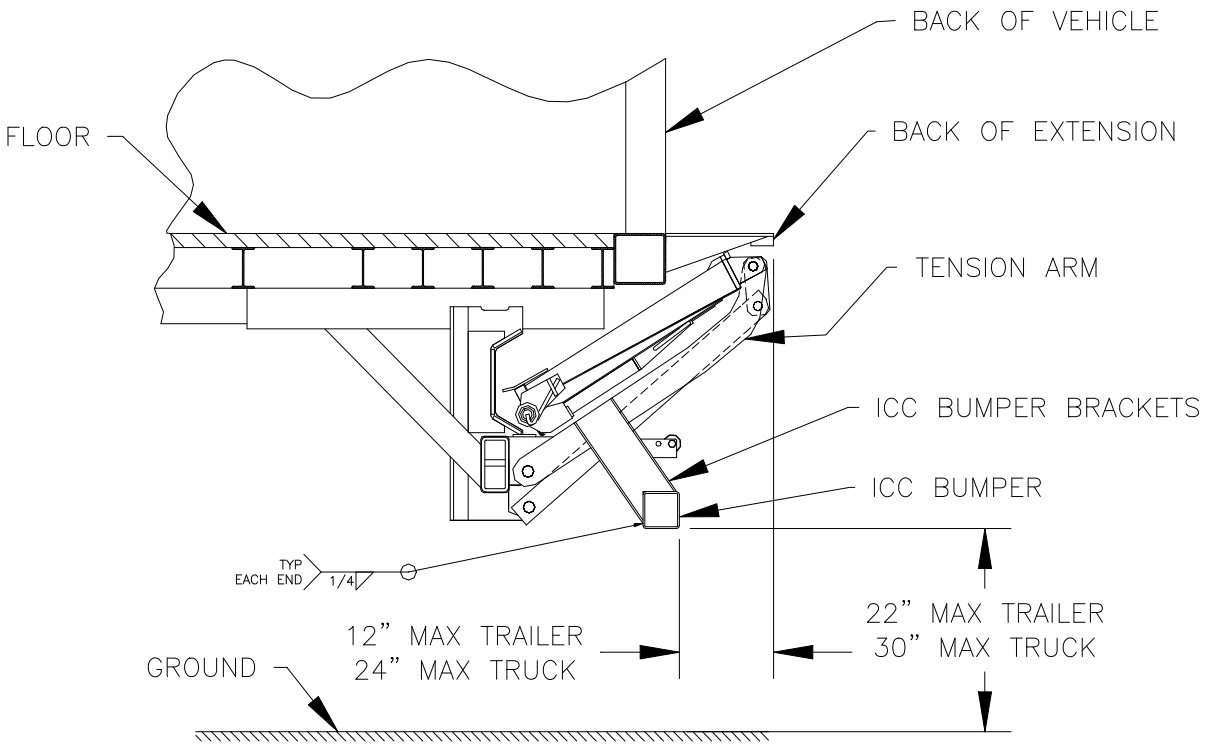
With platform in position shown, (folded vertical, leaning slightly toward front of the truck) adjust and weld roller assembly. Please notice the roller assembly should be adjusted in or out of the square tube and welded in the **upper** frame tube for standard bed heights (W models). For “low boy” installations (WLB models), place the roller assembly in the **lower** square tube and adjust in or out as required.
Caution: Ground frame tube before welding roller assembly.



ICC BUMPER INSTALLATION

1. Set height of bumper. Follow dimension given for trucks or trailers.
2. Center bumper with width of vehicle.
3. Set front to back dimension. Follow dimension given for trucks or trailers.
4. Tack weld together
5. Operate gate - check clearances. Bumper should clear ground when platform is on ground.
6. If ok – weld 1/4 fillets completely around all mounting points.
7. If the ICC brackets are sticking above the tension arms and are interfering with the platform, they may be cut off.
8. Paint – apply reflective tape and DOT decal.

Caution: Ground tension arms before welding ICC brackets.



INSTALLING OPTIONAL ADJUSTABLE STEPS

General method:

1. Measure bed height UNLADEN.
2. Refer to the chart that covers a range of bed heights. Use the corresponding line in the chart that your measurement most closely matches to determine assembly dimensions. Curb side view is shown. Driver's side view is a mirror image.
3. Trim the lower portion of the Step Mounting Tubes, if required. Use a method that generates minimal heat so paint damage is reduced. An Extreme Shield Touch-Up Kit is provided to re-paint ends.
4. Assemble Step Rung Assembly to Step Mounting Tubes using the appropriate holes referenced in the chart. Leave hardware loose. Then bolt Step Mounting Tubes to Bed Extension using pre-drilled holes. Verify distance from top step to Bed Extension. Enough hardware was shipped to cover all possible cases, so not all hardware may be used for your case.
5. Assemble Cover Plate if required. Drill #11 (0.191) holes and use pop rivets.
6. Assemble Step Gusset as shown. C-channel will need to be trimmed at top end. Any extra materials needed to anchor top end of gusset to vehicle is the installer's responsibility. Tighten all hardware.

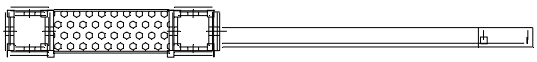
The following parts are included in the kit. Kits are specific to each model of gate so some parts listed may not be included.

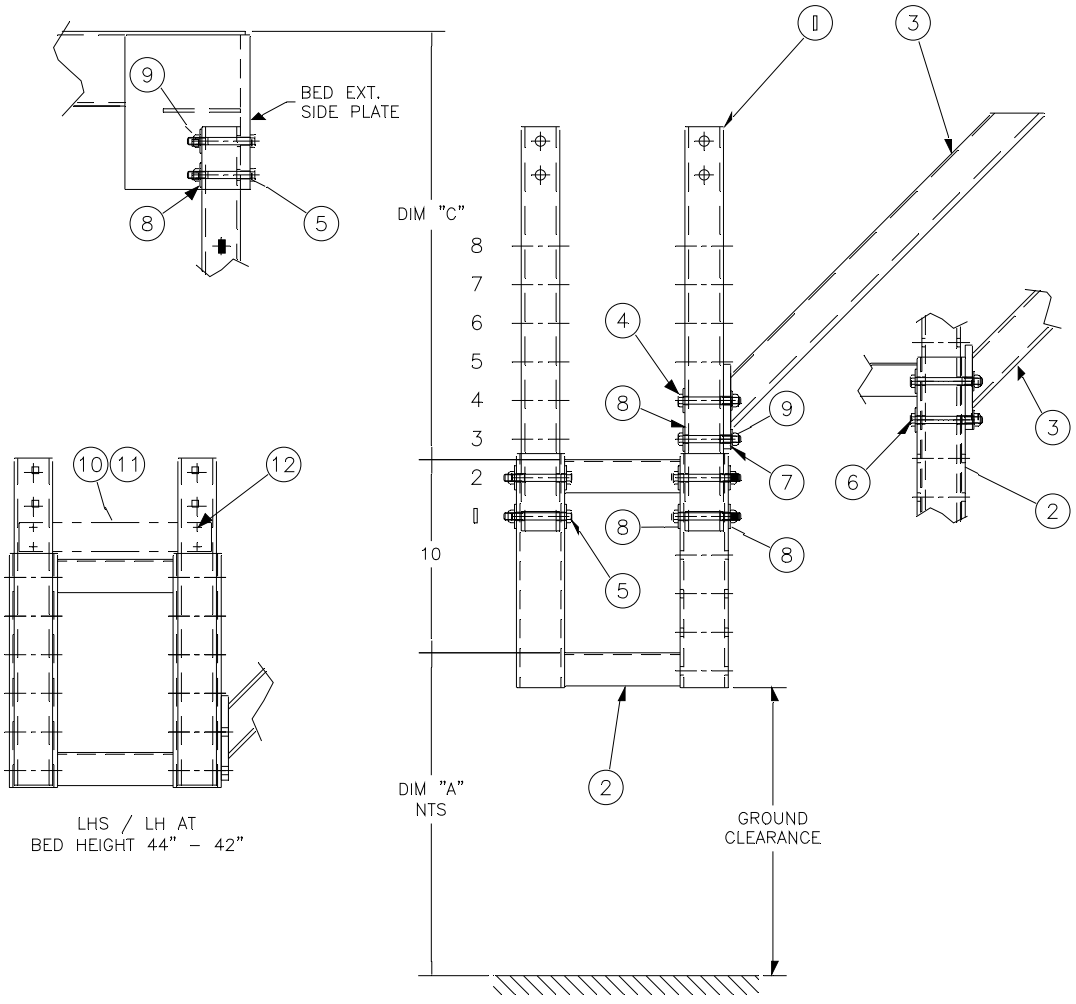
Index	Req'd	Part No.	Description	Mat'l Size	SLP	SLP-WLB
1	4	BP-802-190	STEP MOUNTING TUBE		✓	
1	4	BP-802-205	STEP MOUNTING TUBE			✓
2	2	BA-802-191	STEP RUNG ASSEMBLY		✓	
2	2	BA-802-206	STEP RUNG ASSEMBLY			✓
3	1	BA-802-194	STEP GUSSET - RH		✓	
3	1	BA-802-207	STEP GUSSET - RH			✓
4	4	P11061	HEX HD CAP SCREW	3/8-16 X 3	✓	✓
5	16	P11037	HEX HD CAP SCREW	3/8-16 X 3-1/4	✓	✓
6	4	P11060	HEX HD CAP SCREW	3/8-16 X 3-1/2	✓	✓
7	4	P26501	FLAT WASHER	3/8 STD	✓	✓
8	28	P26523	FLAT WASHER	3/8 HEAVY	✓	✓
9	20	P23501	LOCK NUT	3/8-16	✓	✓
10	2	AP-802-195	COVER PLATE 1.5"		✓	
11	2	AP-802-196	COVER PLATE 3.5"		✓	
12	8	P49097	POP RIVET	3/16 DIA.	✓	
13	1	BA-802-203	STEP GUSSET - LH		✓	
13	1	BA-802-211	STEP GUSSET - LH			✓

ADJUSTABLE STEPS - SLP

SLP

BED HT.	DIM "A"	DIM "C"	TRIM ITEM 1	GROUND CLEARANCE	RUNGS USED	COVER PLT REQ'D	ASSEMBLE IN HOLE #
56 – 54.06	23.81–21.88	22.19	NO	22.00 – 20.06	2	NO	1 & 2
54 – 52.06	23.81–21.88	20.19	NO	22.00 – 20.06	2	NO	2 & 3
52 – 50.06	23.81–21.88	18.19	NO	22.00 – 20.06	2	NO	3 & 4
50 – 48.06	23.81–21.88	16.19	NO	22.00 – 20.06	2	NO	4 & 5
48 – 46.06	23.81–21.88	14.19	NO	22.00 – 20.06	2	NO	5 & 6
46 – 44	23.81–21.81	22.19	YES	22.00 – 20.00	1	YES(3.5")	6 & 7

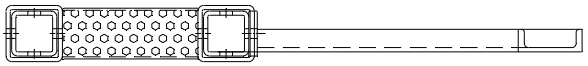


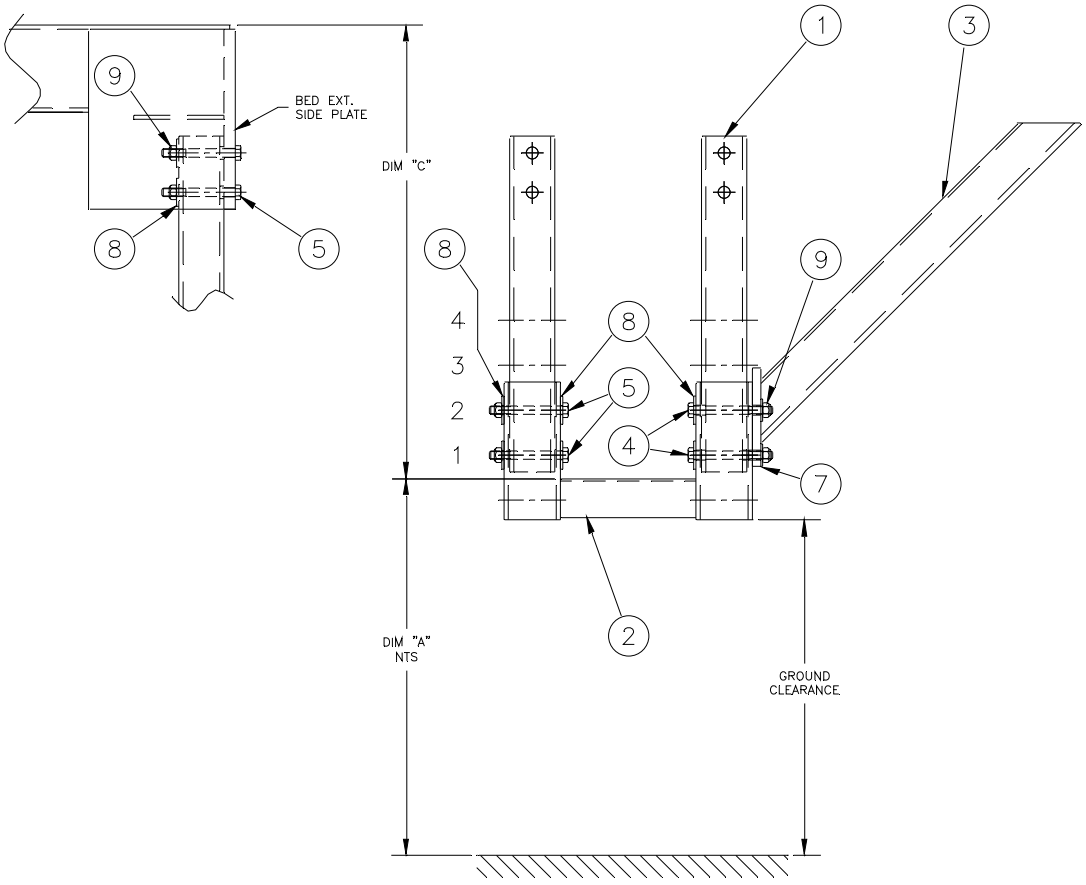


ADJUSTABLE STEPS - SLP-WLB

SLP–WLB

BED HT.	DIM "A"	DIM "C"	TRIM ITEM 1	GROUND CLEARANCE	RUNGS USED	COVER PLT REQ'D	ASSEMBLE IN HOLE #
44 – 42.06	23.81–21.88	20.19	NO	22.00 – 20.06	1	NO	1 & 2
42 – 40.06	23.81–21.88	18.19	NO	22.00 – 20.06	1	NO	1 & 2
40 – 38.06	23.81–21.88	16.19	YES	22.00 – 20.06	1	NO	3 & 4
38 – 36	23.81–21.81	14.19	YES	22.00 – 20.00	1	NO	3 & 4

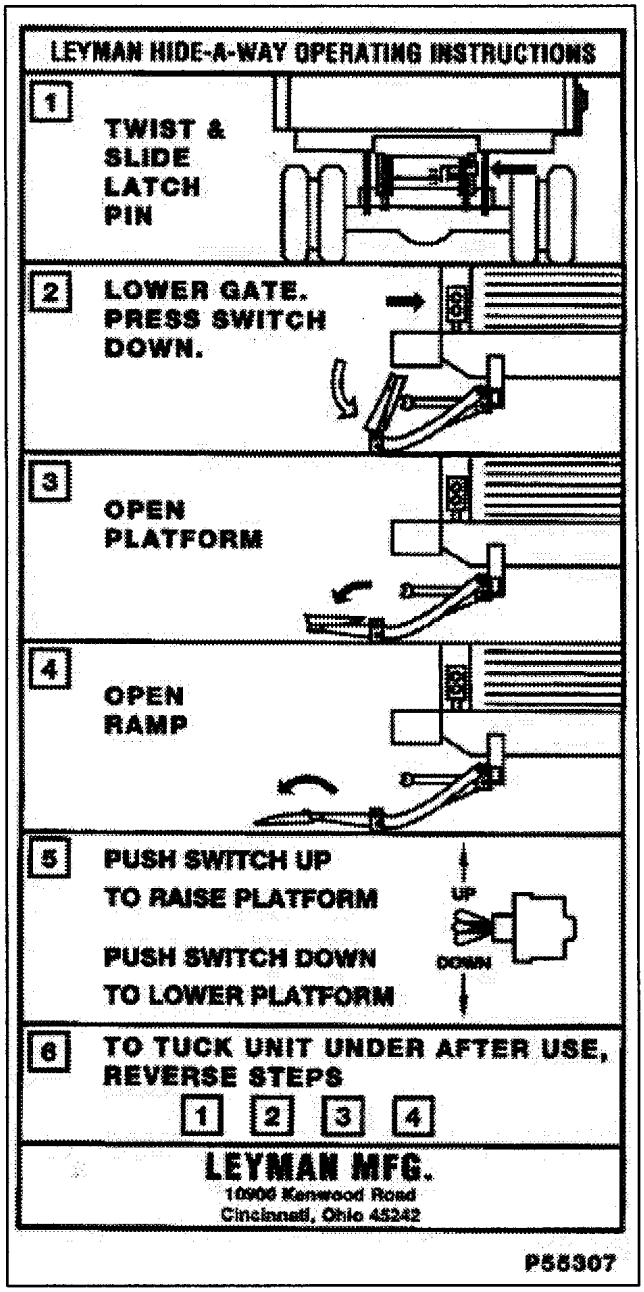




OPERATION OF THE LIFT GATE

- Before operating the lift, read and understand this decal, Urgent Warning decal, and the Owner's Manual.

- Do not stand behind the lift gate while unfolding or using the platform.



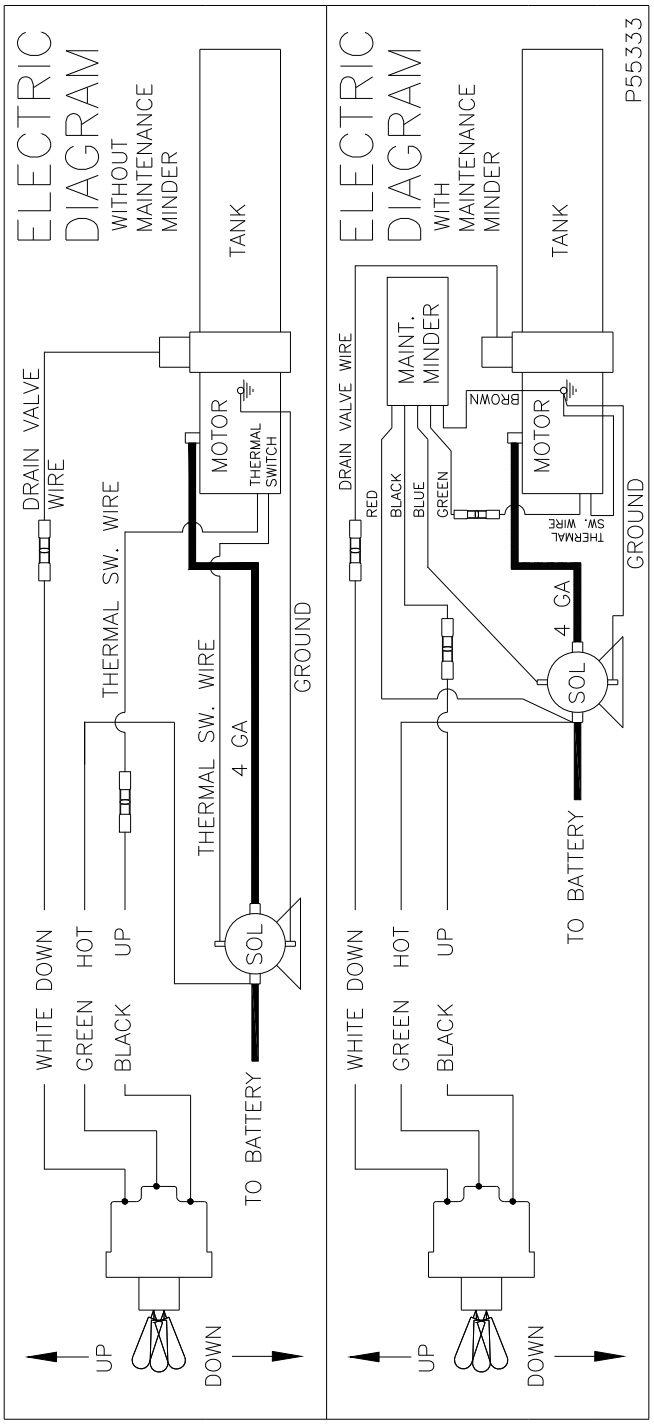
TROUBLE SHOOTING CHART

ALL SLP MODELS

PROBLEM	*PROBABLE CAUSE*	*REMEDY*
The motor is running, but the platform will not go up, or reach floor of vehicle or gate will not lift rated load.	1. Insufficient oil in power unit tank. 2. Lowering valve stuck partially or fully open. 3. Power unit relief valve is set too low.	1. Fill tank. 2. Clean or replace. 3. Check pressure relief setting. Should be 2500 psi maximum.
The platform will not go up or reach floor level and the motor does not run.	1. Battery is low. 2. Power line is loose. 3. Poor switch connections. 4. Cab switch is turned off. 5. Defective starter solenoid. 6. Tripped circuit breaker.	1. Recharge the batteries. 2. Check connections, if loose, tighten. Also, check for corrosion and clean if necessary. 3. See #2. 4. Turn the switch on. 5. Replace part. 6. Reset the circuit breaker.
Platform will not lower.	1. Battery is low. 2. Bad ground or electrical connection. 3. Lowering valve is bad.	1. Recharge the batteries. 2. Check for corrosion and tighten. 3. Check the coil.
Platform creeps downward.	1. Defective cylinder or piston seal. 2. Lowering valve or check valve is not seating, or is partially open.	1. Check vent line – activate to see if there is significant oil in vent line. 2. Clean and inspect.
Platform goes down slowly.	1. Lowering valve not fully open or is clogged. 2. Lines are restricted or flow control is clogged.	1. Clean and replace the lowering valve. 2. Check for bent or pinched lines. Clean or replace the flow control.
Bent latch pin.	1. Latch block welded too far from the latch pin-allows mechanism to bounce. 2. Cylinder piston seal leaking.	1. Weld block 1/16 away from pin. 2. Check vent line –activate to see if there is significant oil in vent line. Replace cylinder.
Hydraulic oil leak from cylinder rod end.	1. Gland nut too loose. 2. Cylinder rod pitted.	1. Turn gland nut ½ turn – do not over tighten. Some cylinders do not have gland nuts. 2. Replace cylinder.

SLP WIRING

SLP Gates with Monarch Power Unit
Thermal Switch in Motor (P33991A)



LIFT GATE SPECIFICATION SHEET

HIDE-A-WAY® TUCKUNDER STYLE GATE MODEL SLP

HYDRAULIC OILS	MANUFACTURER	TYPE	TEMP. RANGE
Level 1 Normal Cond.	Mobile	DTE 11	-15º F to + 150º F
	Shell	TELLUS-T15	-15º F to + 150º F
	Chevron	RYKON ISO-15	-15º F to + 150º F
Level 2 Cold Conditions	Mobile	AERO-HFA	-50º F to + 80º F
	Shell	AERO FLUID#4	-50º F to + 80º F
	Chevron	AVIATION-A	-50º F to + 80º F

HYDRAULIC TANK CAPACITY
3 quarts

LUBRICATION	
Grease	Militec #1 (or Lithium base NLGI grade 1 grease)

BATTERIES
Two (2) 12 V D.C. Group 31 Heavy Duty Lead Acid Dual Purpose or AGM

ELECTRICAL COMPONENTS CONNECTIONS
Use Fluid Film Rust and Corrosion Protection by Eureka, except on Start Solenoid On Start Solenoid, use Color Guard by Loctite, or Liquid Electrical Tape

AMPERAGE DRAW OF MOTOR
When raising platform (empty) approximately 130 AMP @ 12 volts. At bypass approximately 210 AMP @ 12 volts

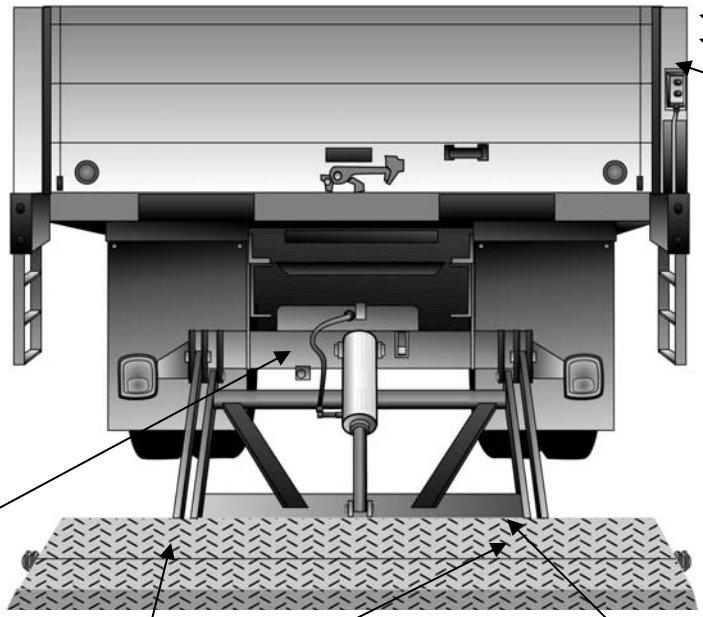
LIFTING PRESURE SETTING
With platform at floor level and pump in bypass 2500 psi maximum

MINIMUM VEHICLE FLOOR HEIGHT LADEN
36” vehicle floor height

MAXIMUM VEHICLE FLOOR HEIGHT UNLADEN
56” vehicle floor height

APPROXIMATE TIME EMPTY AT 80º F WITH 2 153 AMP HOUR BATTERIES
Time up: 8 – 12 seconds Time down: 9 -12 seconds

DECAL PLACEMENT



Extreme Shield Decal
P55439

Stand Clear
(bottom of platform)
P55198 (2)

Secure Latch
(under Comp. Arm)
P55202

Operation of Lift Gate
P55307

Max Capacity Decal

Urgent Warning
P55199

Read and Understand
P55203

Shut Off Power
P55201

FINAL INSTALLATION INSPECTION
HIDE-A-WAY® TUCK-UNDER STYLE GATE MODEL LH/LHR/LLB/SLP/TSG

CUSTOMER:		
LOCATION:		
VEHICLE#:	**LIFT GATE MODEL#:**	**LIFT GATE SERIAL#:**

√ = OK N = NOT APPLICABLE

	WELDING/ADJUSTMENTS
	Gate is welded secure to vehicle (mounting plates are welded to chassis frame – continuous welds).
	Mounting plates are welded to lift gate Frame Tube – continuous welds.
	Extension is welded to vehicle (12-2" or 3" welds across floor, and gussets welded inside and out).
	Corners and steps welded to vehicle. Steps are optional.
	Reinforcement braces for corners and steps welded to cross members.
	Battery box welded or bolted secure to cross members (trailer installation).
	All bolts are tight and secure.
	ICC bumper bar tube installed (optional).
	Lock block welded on tension arm right side (for safety latch rod).
	ELECTRIC'S
	Check that battery holds downs are anchored securely
	Check battery(ies) for proper charge level. PROPER CHARGE LEVEL:
	Check all wiring connections for tightness (batteries, switches, etc.)
	Inspect and check all circuit breakers / fuses.
	Charge line / power line (through cross members with rubber grommets if you prefer).
	Charge line / power line (clamped to bottom of cross members with loom clamps).
	Switch cable to power pack routed and protected (through cross members with rubber grommets if you prefer).
	Switch cable to power pack routed and protected (clamped to bottom of cross members with loom clamps).
	Check operation of toggle switch.
	HYDRAULIC/GREASE
	Check reservoir for correct amount of fluid (platform should be open and down when checking). 1" from top of tank.
	Verify pressure relief valve set at 2500 psi.
	Check hydraulic hoses, fittings, and cylinder for leaks.
	Grease safety latch rod.
	OPERATION OF GATE
	Open and close lift gate. Observe for correct operation (platform folds and unfolds properly)
	Raise lift gate. Platform is level with floor of vehicle.
	Lower lift gate. Platform brackets hit the ground and platform tilts so tip of platform hits the ground.
	ICC bumper does not hit the ground when gate is all the way down with platform on the ground.
	PAINTING AND SAFETY STICKERS
	Repaint where needed
	Check hydraulic cylinder rods for over spray
	Install all safety and operation stickers

SERVICED BY: DATE:

NOTES