

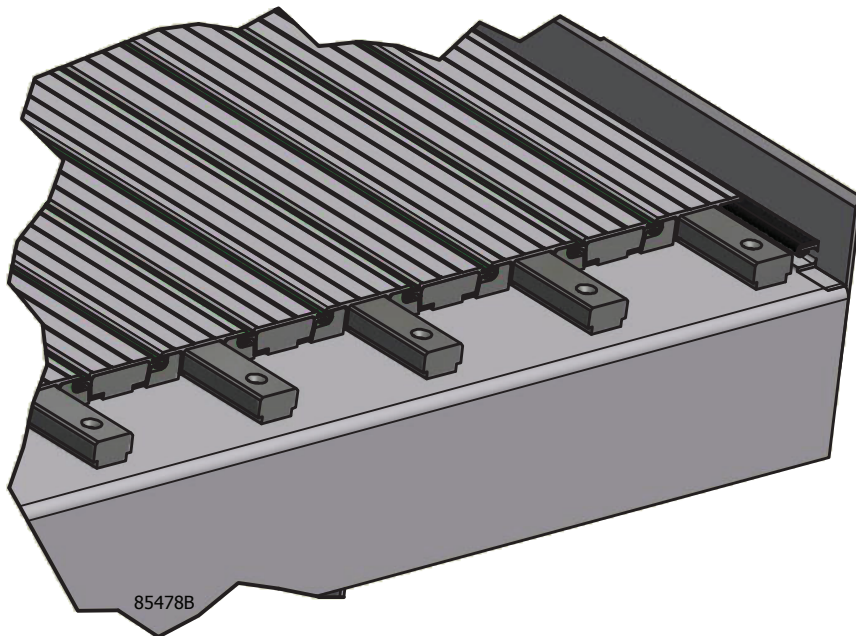
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KEITH® PRESSURE SEAL® Lite Installation Manual Original Instructions

www.keithwalkingfloor.com

Revised 8/30/17

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Chapter 1 INTRODUCTION

This manual explains procedures for installing the KEITH® RUNNING FLOOR II® PRESSURE SEAL® Lite Flooring (PSL). Many variables affect the installation, but the general process remains constant. Details of the installation vary according to trailer features, kit selections, and installer preferences. Optional sets of instructions are given for some operations to allow for flexibility.

This manual focuses on the installation of a 250mm (10") stroke system with PSL flooring.

Installation time varies and is between 35 and 100 hours, depending upon the experience of the installer and the adaptability of the trailer. If the trailer is not yet built, there are some trailer preparations found ([Chapter 2](#)) that will save time and effort. One person with welding skills can complete the entire installation.

An efficient installation requires appropriate tools and accessible materials. A list of tools is found in Appendix 1. Appendix 2 lists materials. Several reference drawings accompany this manual. The KEITH® RUNNING FLOOR II® owner's manual contains more detailed information about the system and operation procedures.

Direct any questions to KEITH Manufacturing Co. or one of our international offices listed on our website.

WARNING: Installing the *WALKING FLOOR*® system will require some alterations to your trailer. Changes made without approval of the trailer manufacturer may void the trailer's warranty.

Chapter 2 TRAILER PREPARATIONS

The trailer requires preparation before the system is installed. Planning ahead for the *WALKING FLOOR*® installation requirements saves significant preparation time, especially when building a new trailer.

2.1 Drive unit compatibility

There are three styles of *RUNNING FLOOR II*® drive units. The trailer’s frame determines which style should be used. Check the compatibility of the drive unit with the trailer before making any alterations to the trailer.

If the frame rails extend the full length of the trailer (Figure 1), use a drive unit without frame rails (Figure 2).

Figure 1

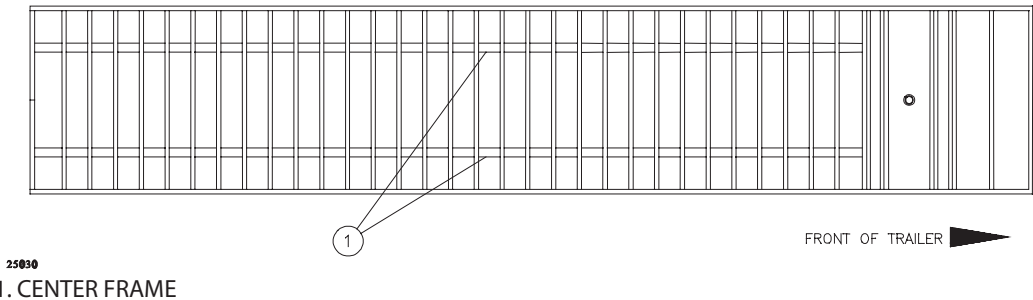
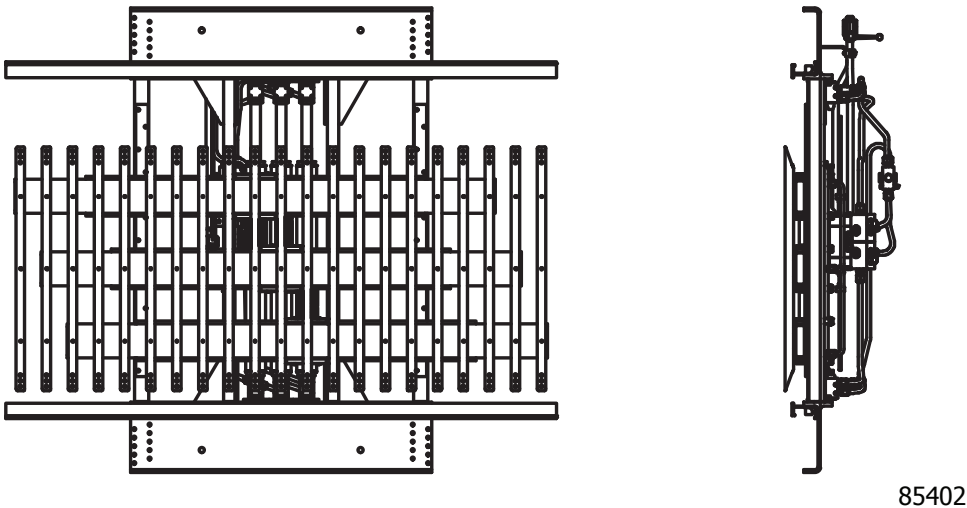


Figure 2



If the trailer is “frameless” (Figure 3), use a drive unit equipped with tapered frame rails (Figure 4).

Figure 3

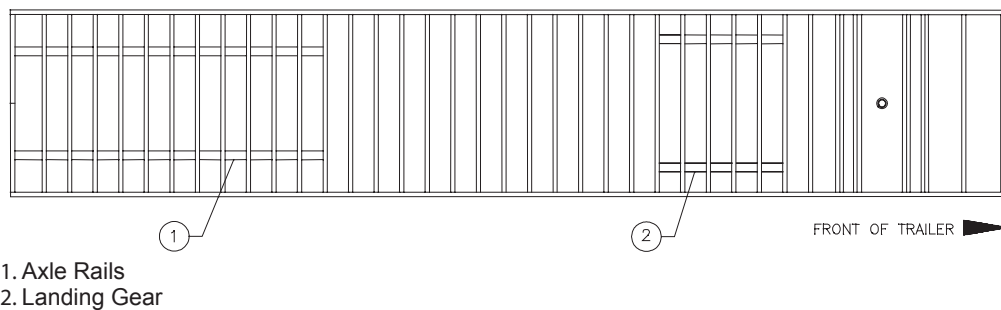
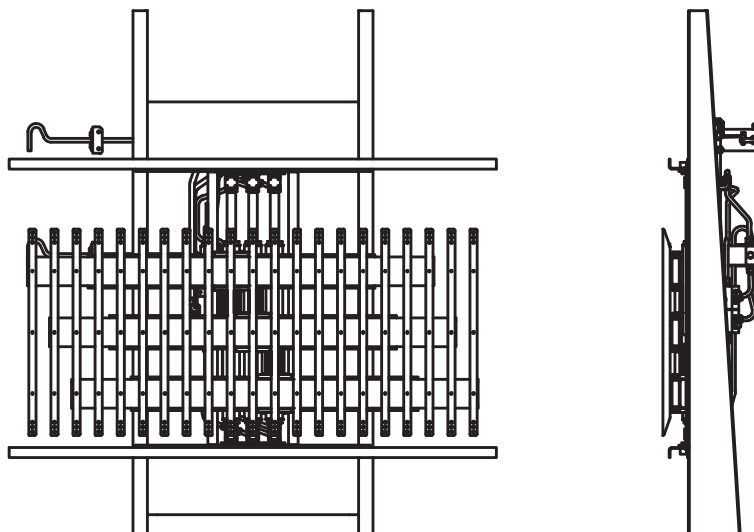


Figure 4



NOTE: Manufacturers of frameless trailers may want to consider extending their axle rails far enough forward that a frameless drive unit can be installed (extend 2.87m for 255mm (10”) stroke.)

If the drive is going to be mounted away from the frame rails, use a drive unit with an outside perimeter frame. Figures 5 & 6.

Figure 5

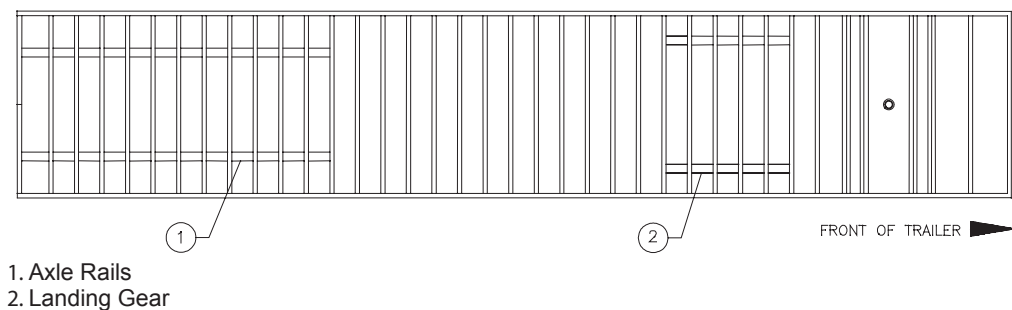
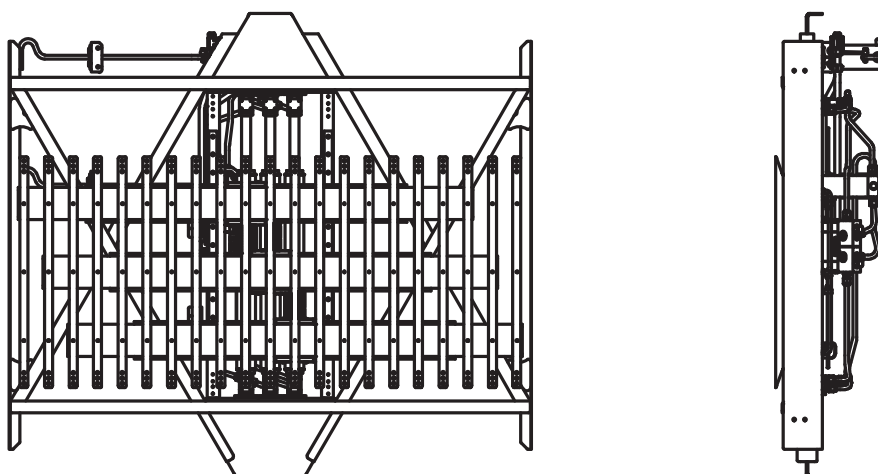


Figure 6



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Chapter 4 discusses the drive unit installation process in more detail.

2.2 Trailer alignment

1. Adjust the trailer to meet these conditions:

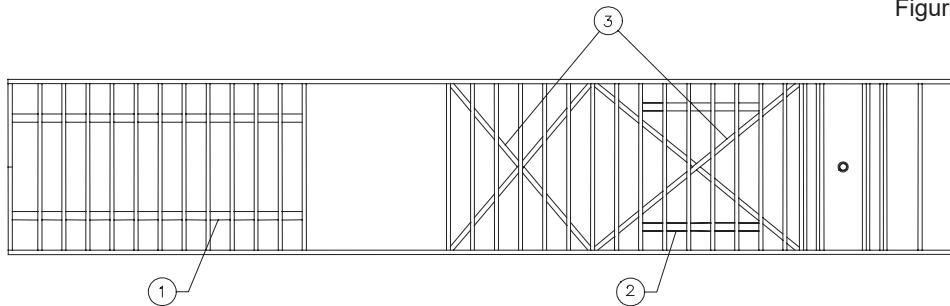
A) The trailer must be straight to allow for proper parallel movement of the planks/slats. Determine straightness by sighting down a floor plank/slat positioned in the trailer.

B) The cross-members on which the sub-deck mounts must be level, because the friction based principle of the *WALKING FLOOR*® system requires a flat floor. If there are deviations exceeding 3mm (1/8"), make corrections. Ensure that the last beam of the trailer at the rear door threshold is level with the cross members.

2.3 Bracing

Trailer bracing prevents warping.

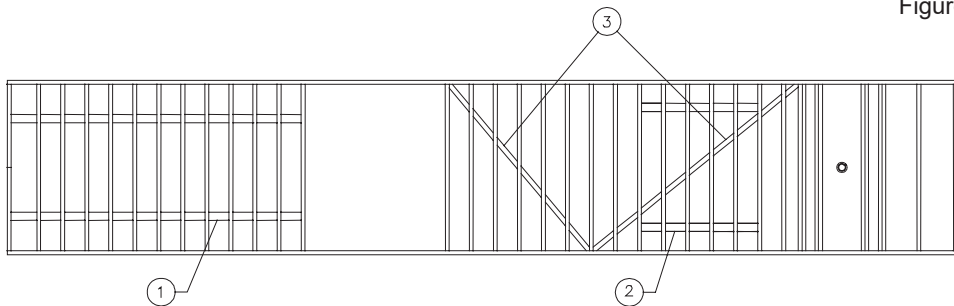
Figure 7



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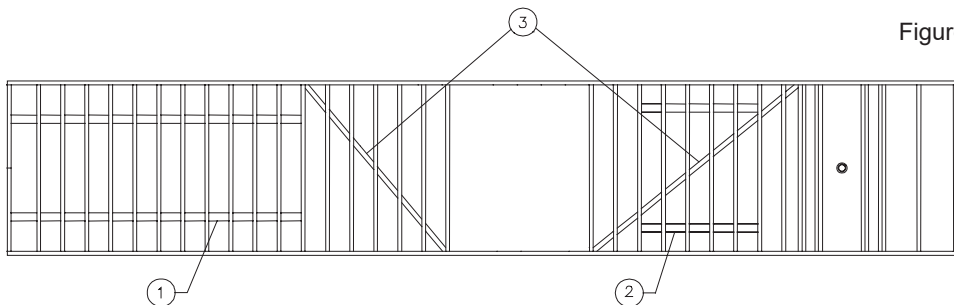
- 1. AXLE FRAME
- 2. LANDING GEAR FRAME
- 3. BRACES

Figure 8



25032a

Figure 9



25032a

1. Install bracing as shown in Figures 7, 8 and 9.

It is best to add bracing before removing the old floor because the floor keeps the trailer straight. If flat bar is used, make a cross-bracing because it will buckle easily under compression. Steel angle does not require a cross. Make sure there is enough wheel clearance when installing steel angle. The bracing reaches to the drive opening. Weld or bolt the braces to each intersecting cross member.

2. Remove old flooring.

2.4 Hydraulic tubing locations

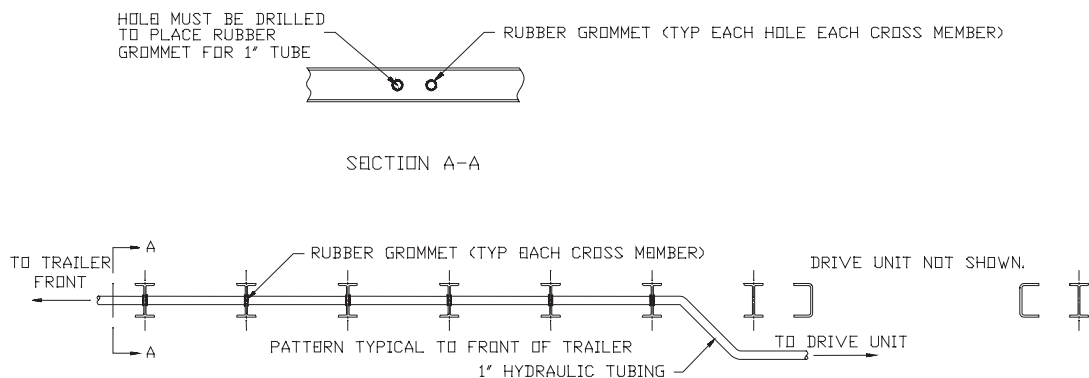
Hydraulic pressure, generated by the tractor's wet kit, powers the drive unit. Tubing must connect the drive unit to the tractor.

1. Consider the location of the hydraulic tubing. Chapter 6 provides more information on this subject. A central location is preferable for the quick-couplers in front of the trailer. This keeps hose lengths down, if they stay connected while driving.

There are two options available:

- A) Routing the hydraulic tubing through the cross-members (Figure 10). Make two 35mm (1 3/8") holes per cross-member. The holes should be close to the sides of the trailer to maintain the structural integrity of the cross-members. Access holes must be cut or drilled through the nose of the trailer, in line with where the tubes will pass through cross-members. Patch the holes after the tubing is in place. The tubes may drop below the cross-members anywhere behind the landing gear and attach to the under side of cross-members.

Figure 10



25017

B) Routing the tubing underneath the cross-members.

This option is not recommended, as it can cause problems with truck tire clearance and it makes the tubing very vulnerable.

2. Make sure that brake lines and electrical wires will not interfere with moving parts. If necessary, reroute them to protect them from damage.

2.5 Cross-members

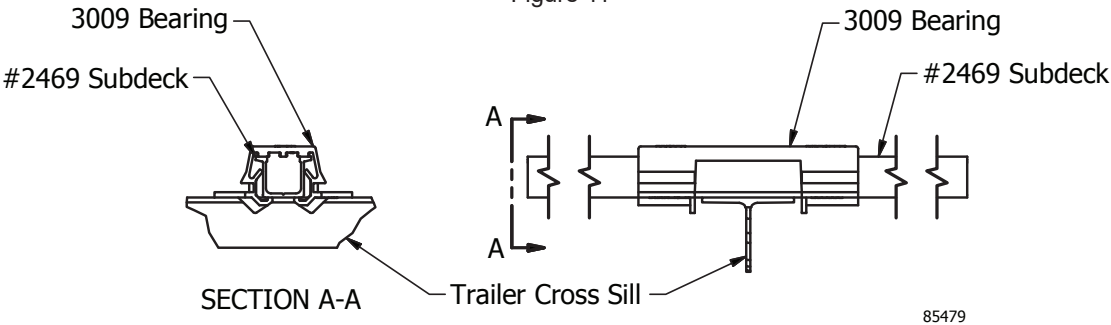
Cross-members function as support for the sub-deck and the cross-member's flanges prevent the slide bearings from moving.

1. Compare the trailer cross-member height to the formed cross sills on the drive unit. They should be the same. If they differ, contact KEITH Manufacturing Co. or one of our international offices.

2. Check cross-member flange width for proper bearing fit (Figures 11 and 12). Please note that Figure 11 is for 300309 Hold Down Bearings and Figure 12 is for 2468 Splash Guard Hold Down Bearings.

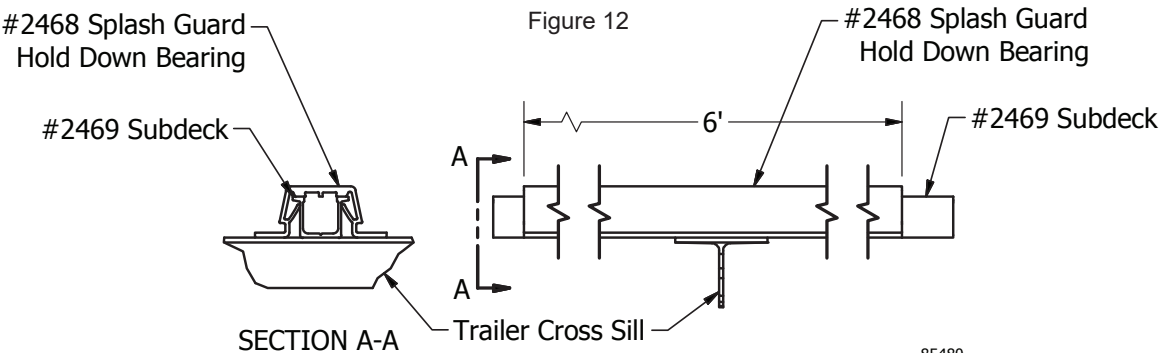
The bearings are designed to fit flanges smaller than 62mm (2 7/16"). If the surface is wider than 62mm (2 7/16"), standard bearings cannot mount on the top. The bearings can be specially milled to fit a 100mm (4" maximum.)

Figure 11



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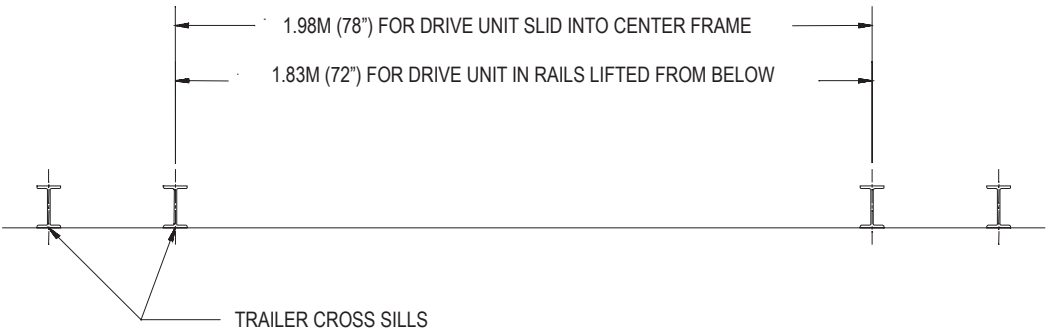
Figure 12



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1. Remove cross-members to create an adequate gap for the drive unit (Figure 13). See Chapter 4 for more information about drive unit location.

Figure 13



25016

2. Reposition cross-members if necessary.

The rear most cross-member should be mounted a minimum of 432mm (17") inside the trailer doors.

NOTE: Holes for the hydraulic tubing should be made through cross-members before they are mounted on a new trailer.

2.6 Front of The Trailer

See Figure 14 and 15

Figure 14

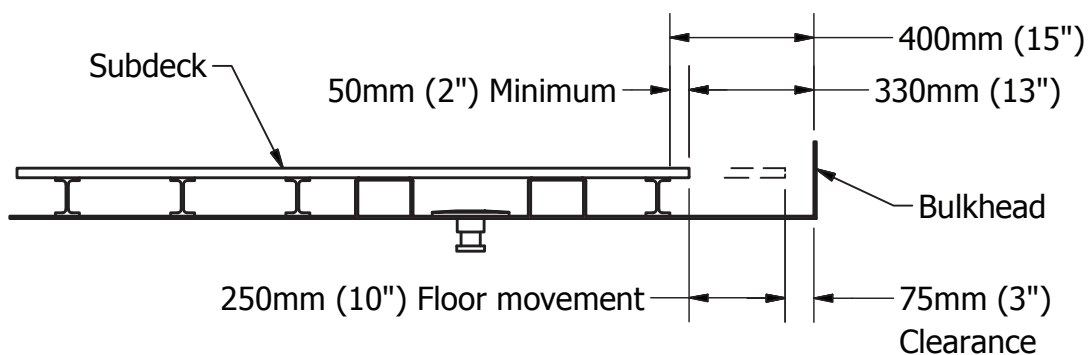
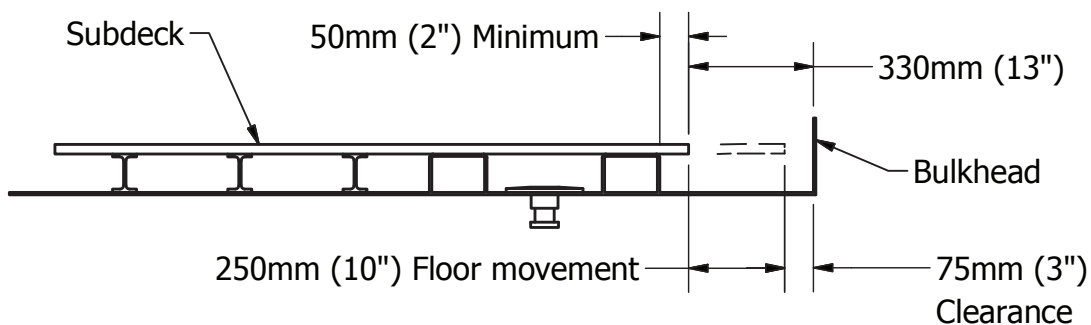


Figure 15



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3 SUB-DECK

The sub-deck is the structure directly above the cross-members and underneath the floor planks/slats. The sub-deck consists of U-shaped aluminum profiles. The U-shaped aluminum profiles mount on top of the cross-members. Plastic floor bearings connect to the U-shaped aluminum profiles.

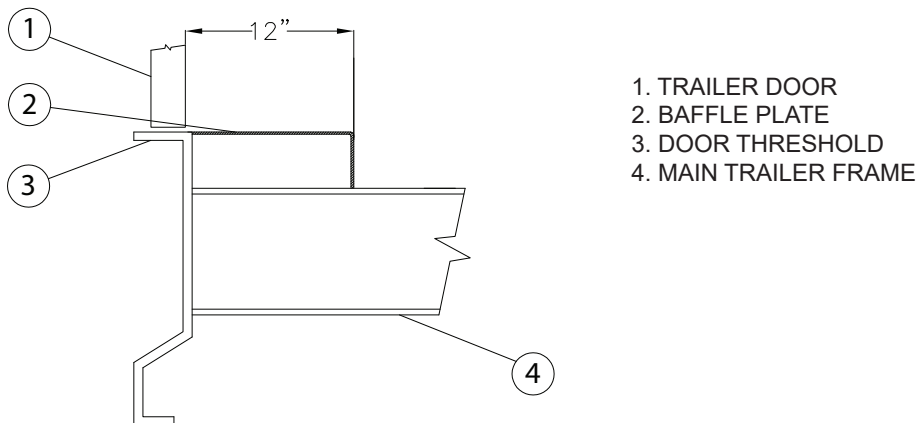
3.1 Baffle plate

A baffle plate extends forward from the door threshold to prevent material from sifting through the floor when slats are in the forward position.

1. Determine the dimensions of the baffle plate (Figure 16).

The baffle plate must be level with the cross-members and is welded to the inside of the last beam of the trailer (threshold). The thickness depends on the type of load. For light materials (e.g. sawdust), use 2mm plate. 3mm plate is recommended for heavy, abrasive materials (e.g. solid waste). The plate bends down 355mm (14") inside the closed door, leaving an opening so that material will not build up underneath the slats. For fine materials, the baffle plate connects to the nearest cross-member to prevent material from sifting through. Holes may be cut in the plate to let small amounts of fine material drop through. This prevents buildup from exerting upward pressure on slats.

Figure 16



25033

2. Cut and form the baffle plate to the proper dimensions.

3. Install the baffle plate.

Weld the plate in position. Then grind welds flat. Make sure it is level with the cross-members.

Rear of trailer side view

Figure 17

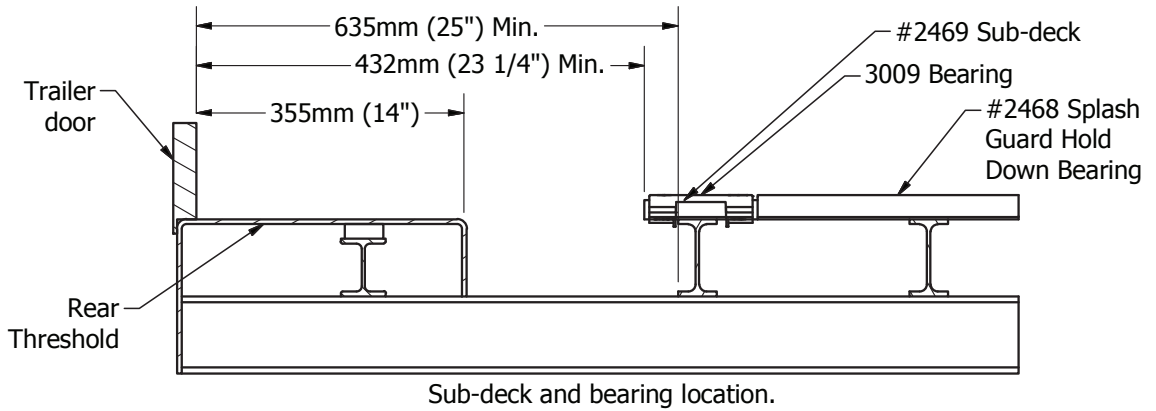


Figure 18

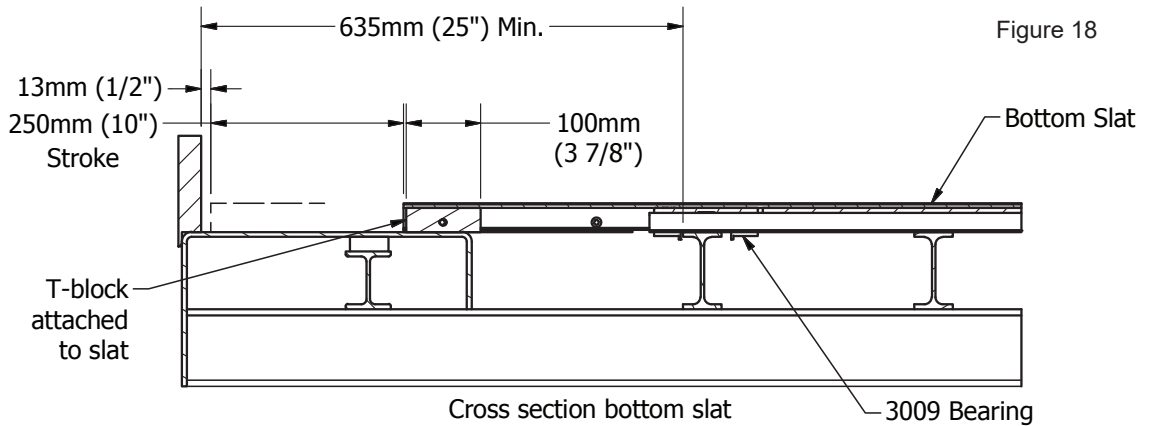
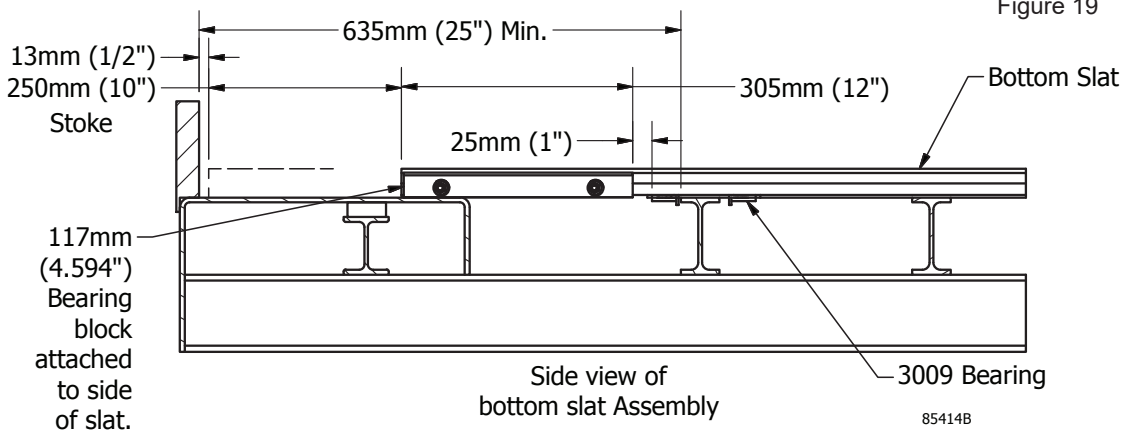


Figure 19



85414B

3.2 U-Shaped Aluminum

The proper installation of the U-shaped aluminum is critical for maintaining drive alignment, floor straightness and for optimal performance of the seal located between the floor planks/slats. U-shaped aluminum is usually applied before the drive unit is positioned, unless the drive unit is dropped from above. Please note that the center frame drive (Chapters 2 & 4) should be positioned before the square tubing is applied.

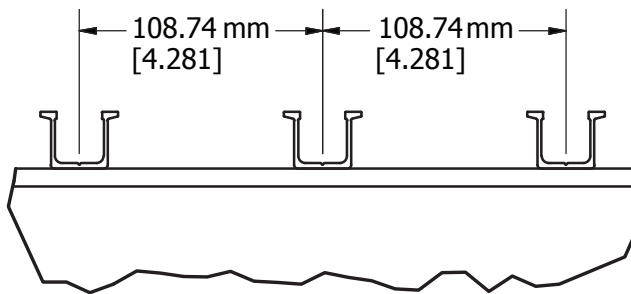
2. Cut U-shaped aluminum to proper length according to your trailer measurements and your end sub-deck selection. The number of U-shaped aluminum installed equals the number of floor slats.

All sub-deck U-shaped aluminum must extend beyond cross-members by 50mm (2"), because bearings require at least 50mm (2") of tubing on both sides of a cross-member for proper attachment.

3. Position and mount the U-shaped aluminum.

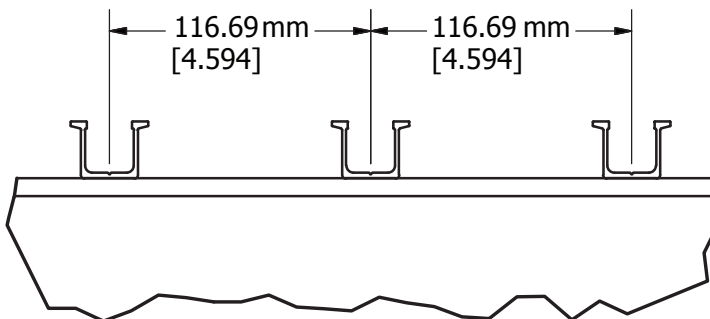
U-Shaped Aluminium for PSL flooring is on 108.74mm (4.281") centers. (Figure 20) or on 116.69mm (4.594") centers. (Figure 21)

Figure 20



Minimum inside trailer width
2328mm (91' 5/8")

Figure 21



Minimum inside trailer width
2482mm (97' 11/16")

Start at the rear of the trailer. Lay the two outside U-shaped subdeck in the trailer and separate them with spacing jigs. Center the jigs so the tubes are the same distance from the side walls. Lay out the remaining U-shaped subdeck across the width of the trailer, spacing them with jigs. Keeping the jigs above the cross-members, clamp the jig and U-shaped subdeck to every other cross-member. Be sure all U-shaped subdeck attain the minimum overhang of 50mm (2"). Remember to plan for the formed cross sill attached to the drive unit. Plan the overhang into the drive gap according to the drive unit being installed (Figure 22).

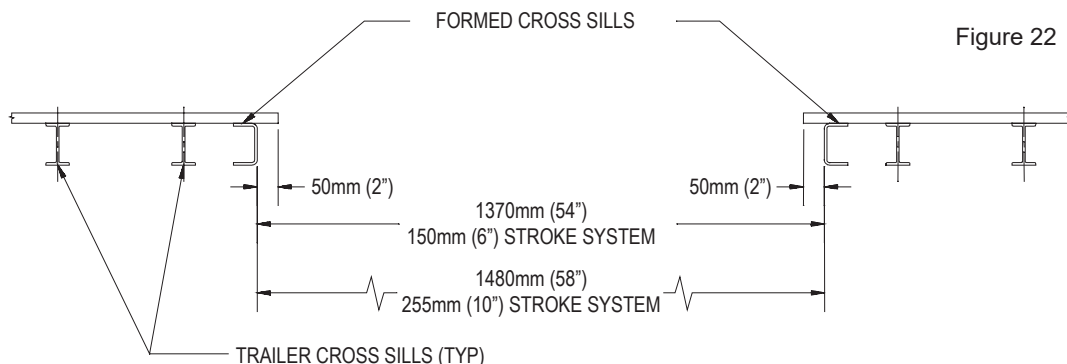


Figure 22

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Weld, bolt, or huck bolt the U-shaped subdeck to the cross members between the jigs. Move the jigs and make a connection at each intersection of a tube and a crossmember. Welds should be 3mm (1/8") fillet, 20mm (3/4") to 30mm (1 1/8") long, and centered on the flange. Excessive welding and too little cooling will cause cross-members to warp.

Figure 23 suggests a welding pattern. Starting each pass on the same side of the trailer gives sufficient cooling time.

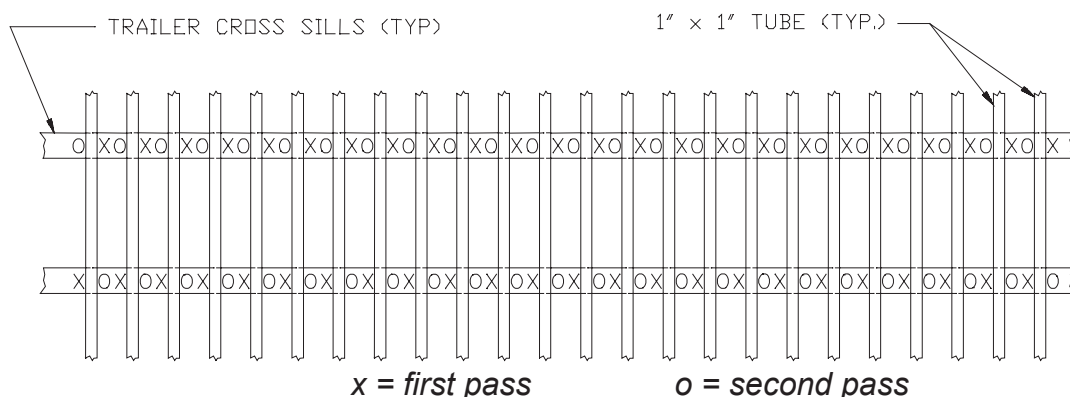


Figure 23

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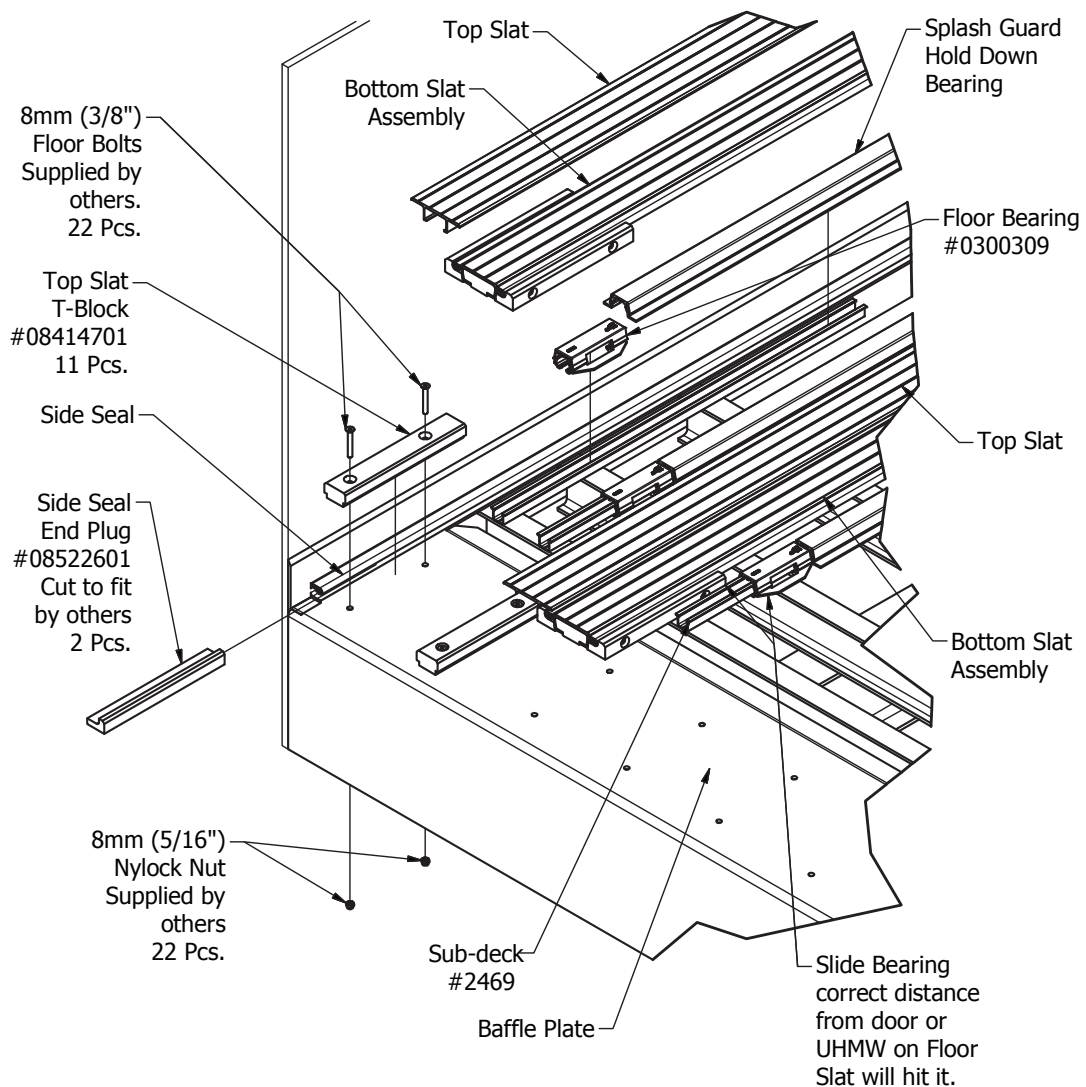
Packing tape or paint should separate aluminum profiles from steel cross-members to prevent metal decay.

3.3 End sub-deck

The unloading end of the sub-deck needs special attention because the area is fully exposed with the floor planks/slats in the forward position.

Unload end of trailer

Figure 24



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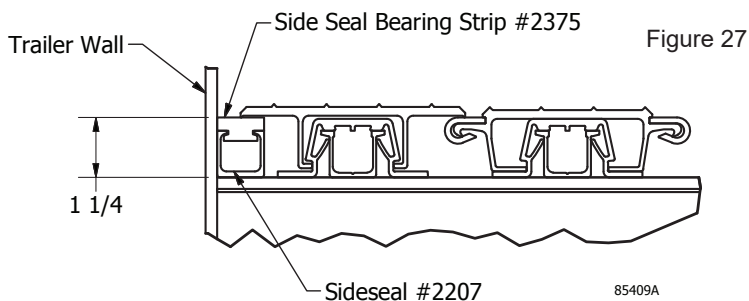
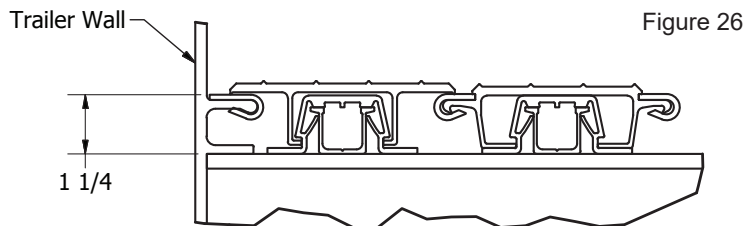
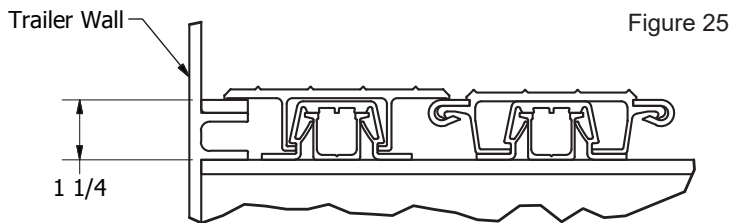
3.4 Side seal support

Side seal options are discussed in Section 5.3. Some of the options require support from the sub-deck.

1. Select a side seal option from Section 5.3.
2. Install support for the selected side seal option if necessary.

Plan the support so the top of the side seal will be level with the rest of the flooring. Pieces of tube or angle can be attached on every other cross-member to support the side seal. If hydraulic tubing will be routed under the side seal, make sure that the support will not obstruct it.

Side Seal Suggestions



4 DRIVE UNIT

Drive unit installation in a center frame trailer differs from an installation in a frameless trailer. Chapter 4 examines the two installations separately.

4.1 Center frame trailer

1. Decide on the location of the drive unit.

The drive unit should be installed as close to the rear of the trailer as is practical.

2. Position drive unit.

The drive should be positioned, but not welded, before the sub-deck is installed. Remove the formed cross-members from the drive unit. The system can be lifted into an open top trailer from above with a crane.

If the trailer top is closed or a lifting mechanism is not available, use the following method:

- A. Set a sheet of plywood inside the rear of the trailer.
- B. Place blocking on the sheet to protect hydraulic tubing.
- C. Lay the drive unit on the sheet.
- D. Slide the sheet forward into the drive gap.
- E. Raise the rear of the unit so the front stiffener plate will fit under the forward cross sill.
- F. Slide the unit forward so the rear stiffener clears the rear cross sill.
- G. Lower the unit and slide to position.

NOTE: A minimum drive gap of 1981mm (78") is necessary to maneuver the drive unit.

Replace the formed cross-members after setting the drive end plates on the trailer frame rails. The formed sills should be tightened to a torque of 125 ft.-lbs.

IMPORTANT: Do not damage piston rods. Do not lift drive unit by the hydraulic crossover tubes on the cylinders or any other hydraulic components

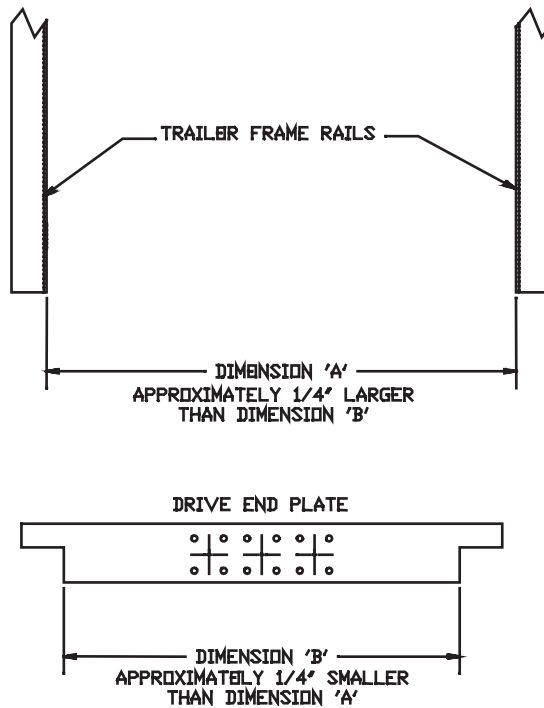


Figure 28

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2. Align and level drive unit.

Front to rear alignment

Center the drive unit in the drive gap. The U-shaped profile tubing should extend 50mm (2") past the formed cross sills at each end of the drive unit. The 50mm x 150mm (2" x 6") crossdrive tubing should be parallel to trailer cross-members.

Side to side alignment

Recommended method:

After the sub-deck is welded or bolted down, use a straight edge to align punched holes in the drive shoes with centers of respective U-shaped profile. Do this with at least two shoes on each side of the trailer (Figure 29).

Optional method if trailer is perfectly straight:

Align the drive unit's center punch marks with the trailer's centerline.

Height

- A.** Place plastic bearings on U-shaped profile at sides and center of trailer at each end of drive area.
- B.** Lay a straight edge from bearing to bearing across the drive.
- C.** Raise the drive so the top of the drive shoe touches the straight edge across the shoe length on each straight edge. The 6mm (1/4") dimension from the top of the U-shaped profile to the top of the drive shoe is critical. Make height adjustments by shimming or grinding ears of the drive unit end plates.

This method gives the proper drive height as bearings are 6mm (1/4") above the U-shaped profile and the drive shoes connect directly to floor slats (Figures 29 & 30).

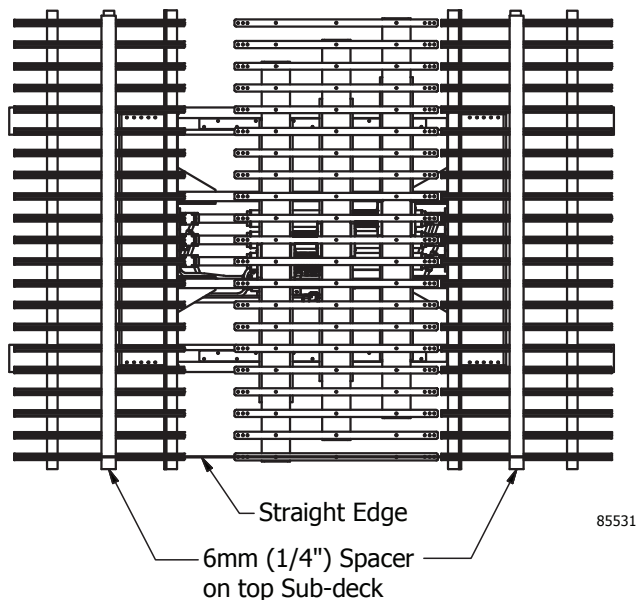


Figure 29

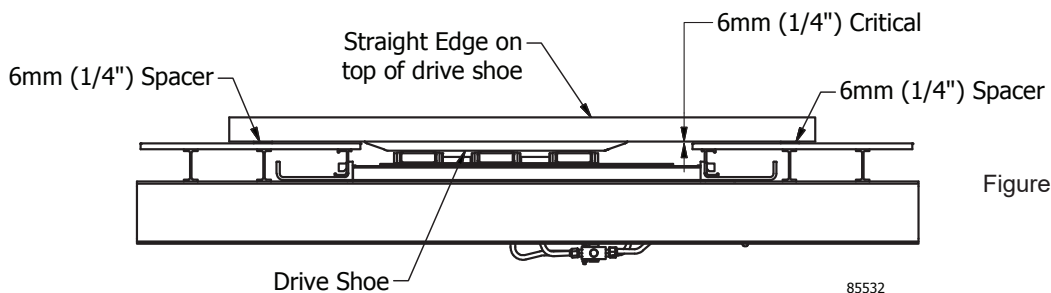


Figure 30

3. Weld the drive unit in place.

Weld according to reference drawing C-10797A. Remember to connect the U-shaped profile to the drive unit's formed cross sill.

4. Install cross-drive support tubes.

Slide the support tubes into position between the 150mm x 50mm (6" x 2") cross drives and trailer frame rails. Place the tubes where they will support the crossdrives over a full stroke.

The steel tubes can be shimmed to create a close drive to UHMW fit. Do not shim too much as an extremely tight fit could tear the UHMW from the steel. Bolt the tubes in place with one 9mm X 25mm (3/8" x 1") bolt at each end.

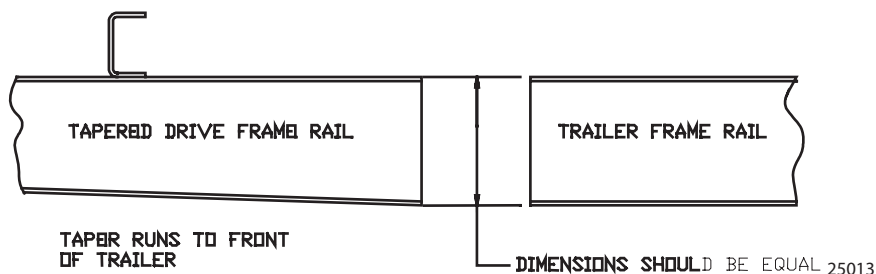
4.2 Frameless trailer

NOTE: Manufacturers of frameless trailers may want to consider extending their axle rails far enough forward that a frameless drive unit can be installed (extend 2.87m (113" for 10") stroke, 2.77m for 150mm stroke (109" for 6" stroke)).

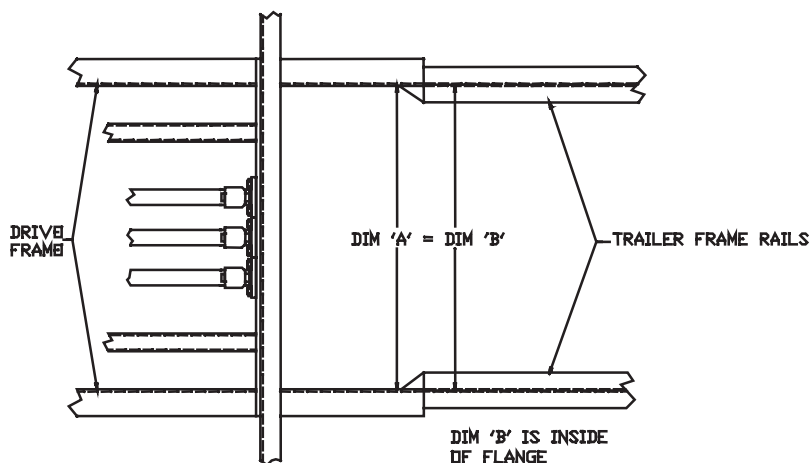
1. Position drive unit in the drive gap.

Check to be sure drive unit dimensions fit the location. The rail heights should be close, (Figure 31) and dimension A should equal dimension B (Figure 32). The system can be lifted from above with a crane or from below with a forklift. Raise the tapered drive frame rail tight against the bottom of the cross sills.

IMPORTANT: Do not damage piston rods. Do not lift drive unit by the hydraulic crossover tubes on the cylinders or any other hydraulic components.



NOTE: Exact alignment of the U-shaped profile with the drive shoes is more important than alignment of the drive unit frame with the trailer's axle beams.



2. Align and level drive unit.

The ends of the formed cross sills should rest on the trailer side rails.

Front to rear alignment

Butt the tapered drive frame rails tight against the ends of the axle beams (Figure 34). A transfer plate may be placed between the two beams if a flat surface does not exist on either the drive frame or the axle beam.

Side to side alignment

Recommended method:

After the sub-deck is welded or bolted down, use a straight edge to align punched holes in the drive shoes with centers of respective U-shaped profile. Do this with at least two shoes on each side of the trailer (Figure 34).

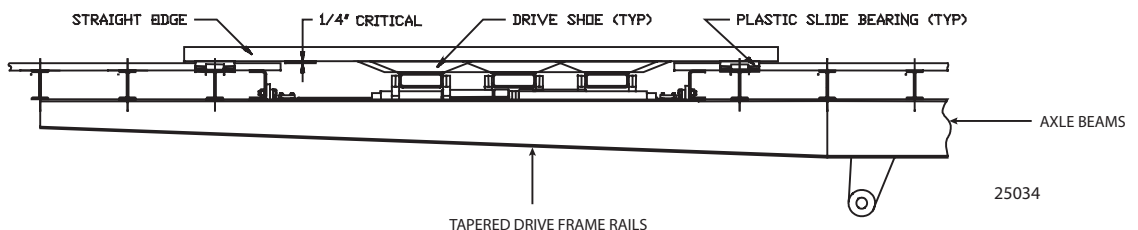
Optional method if trailer is perfectly straight:

Align the drive unit's center punch marks with the trailer's centerline.

Height (Figure 33)

- A.** Place plastic bearings on U-shaped profile at sides and center of trailer at each end of drive area.
- B.** Lay a straight edge from bearing to bearing across the drive.
- C.** Raise the drive so the top of the drive shoe touches the straight edge across the shoe length on each straight edge. The 6mm (1/4") dimension from the top of the U-shaped profile to the top of the drive shoe is critical. Raise or lower the drive unit accordingly.

Figure 33



3. Weld the drive unit in place.

Weld according to reference drawing C-10797A. (See Appendix 5.) Remember to connect the U-shaped profile to the drive unit's formed cross sill.

4. Weld bracing to side walls as shown in reference drawing C-10797A. (See Appendix 5.)

4.3 Painting

The factory paints drive units with oxide primer.

1. Confirm that the drive unit is coated well with primer.

2. Treat the drive unit and sub-deck with a finishing paint.

IMPORTANT: Make sure that the following parts are protected when painting: cylinder chrome rods, switching valve chrome rod, serial plate and any decals.

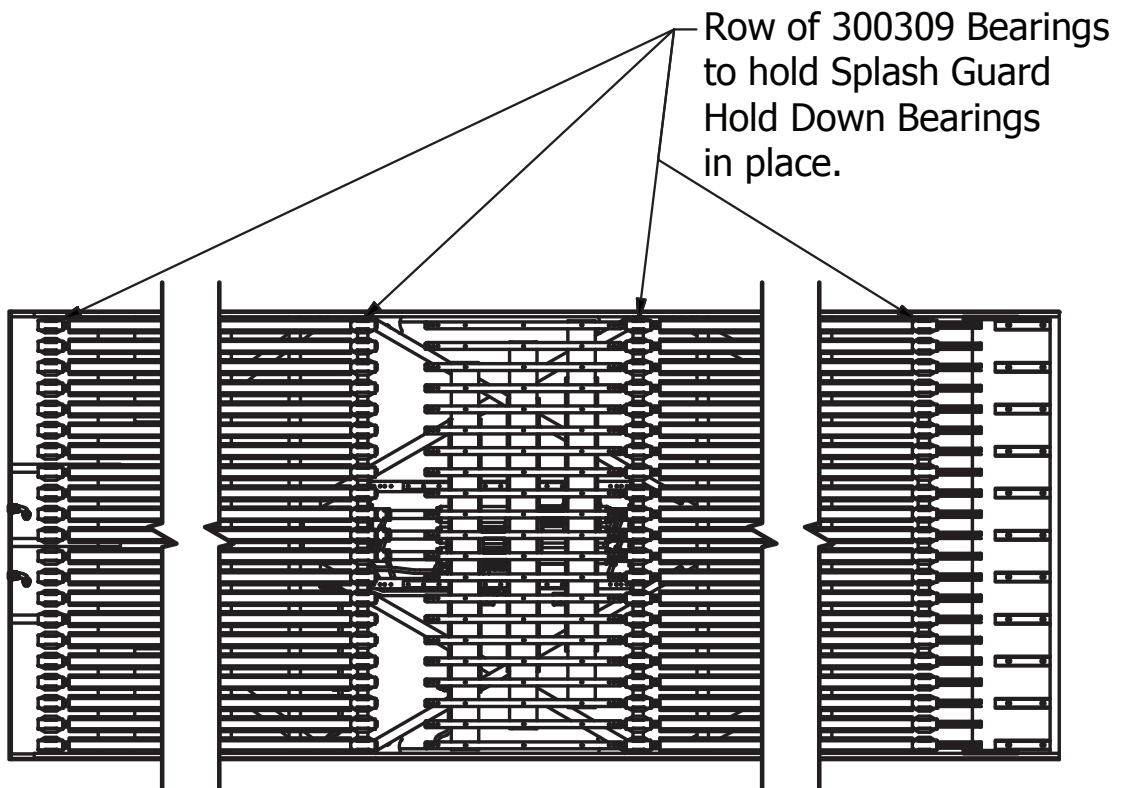
5 FLOORING

After paint dries, the flooring can be installed. The planks/slates slide on plastic bearings. The aluminum floor slats are bolted to shoes on the cross drives.

5.1 Slide bearings

1. Compare 300309 bearing dimensions with cross-member flange width.
The gap in the bearing should exceed the flange width of the cross-member.
The standard bearing gap is 62mm (2 7/16"). Milling can enlarge the gap to 100mm (4").

Figure 34



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2. Snap bearings on the U-shaped profile.
No tools are needed. (Figure 34).

IMPORTANT: Do not put a bearing on the front cross-member of the trailer if the floor planks/slat will slide beyond the center of this bearing in the backward position.

5.2 Floor planks/slats

1. Determine length of floor planks/slats.

The planks/slats have to reach from 12mm (1/2") from the doors to a minimum of 300mm (13") 230mm for a 150mm stroke system (9" for a 6" stroke system) from the closest point on the front wall at floor level. This implies that the maximum length of the planks/slats is 345mm (13' 1/2") 240mm for a 150mm stroke system (9' 1/2" for a 6" stroke system) shorter than the inner length of the trailer. For example, maximum plank/slat length for a 255mm (10") stroke unit in a 13.72m (45') trailer is 13.37mm (43'-10 1/2").

WARNING: Make sure that the planks/slats do not bump the front wall; watch for round shaped walls. Be particularly careful with bull nosed trailers.

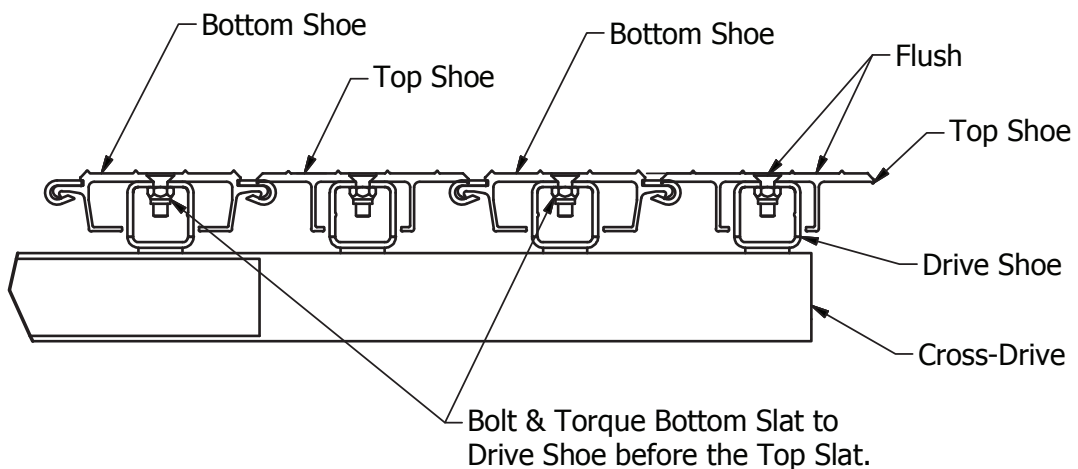
IMPORTANT: Cylinders must be in the very rear position to attach the floor planks/slats to the right place on the cross-drives. Carefully tap them to this position with a dead blow hammer.

It is most convenient to snap the planks/slats onto the bearings, although it is also possible to slide planks/slats on from the end. Start with the plank/slats bottom first, then install top plank/slats on top of bottom plank/slats. (Figure 36). When snapping, lay the floor slat on top of the bearings and knock it down with something heavy that does not damage the slat.

2. Mount floor planks/slats onto shoes. (Figure 35).

Attaching Slat to Cross-Drive

Figure 35



A. Align the rear end of all planks/slats 12mm (1/2") from inside of doors and make sure that all cylinders are collapsed to the rear of the trailer.

B. Drill holes in the planks/slats from underneath through the drive shoes. (Some holes may need to be drilled from above if planks/slats are over frame rails.)

C. Countersink the holes so that the floor bolts are flush with the floor top.

IMPORTANT: Do not over-countersink. This will make a weak connection and cause the floor slat to come loose. Use extra caution when countersinking thin flooring.

D. Bolt floor planks/slats down tightly.

Use Countersunk Socket Head Cap Screws with Nylock nuts. 8mm bolts (5/16") bolts attach 88.9mm (3 1/2") flooring to the shoes. Recommended torque is shown in Appendix 4.

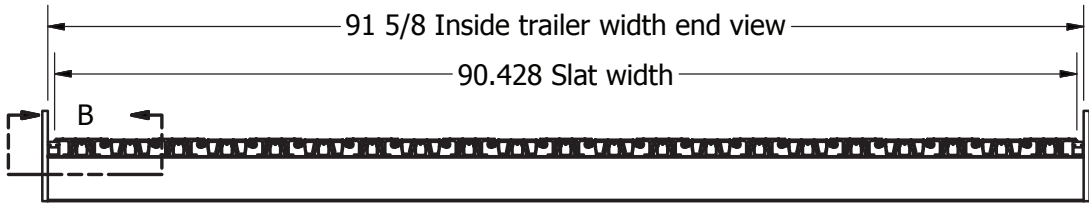
IMPORTANT: Correct torque on floor bolts is necessary for long floor life.

5.3 Side seal options

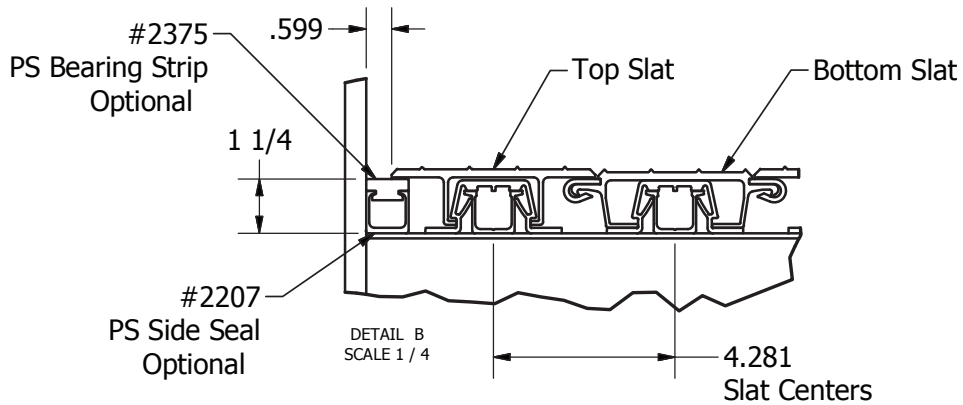
The side seal fills the gap between the moving floor planks/slats and the side walls. Several options are available. A seal is needed between the moving floor planks/slats and the side seal.

96" Narrow trailer slat layout

Figure 36

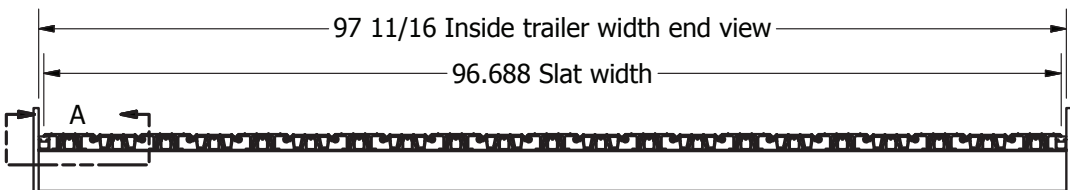


85411

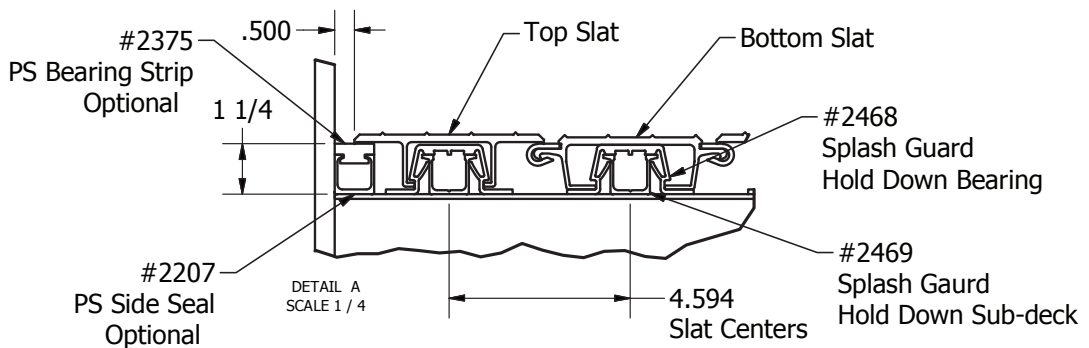


102" Wide trailer slat layout

Figure 37



85410



5.4 Front shield

1. Determine dimensions (Figure 38).

The width is equal to the inner trailer width. The front shield is angled about 45 degrees. When the floor slats are in the rear position, the slide strip must still lie fully on top of the floor planks/slats.

2. Fabricate front shield. (KEITH Manufacturing Co. supplies this in most cases.)

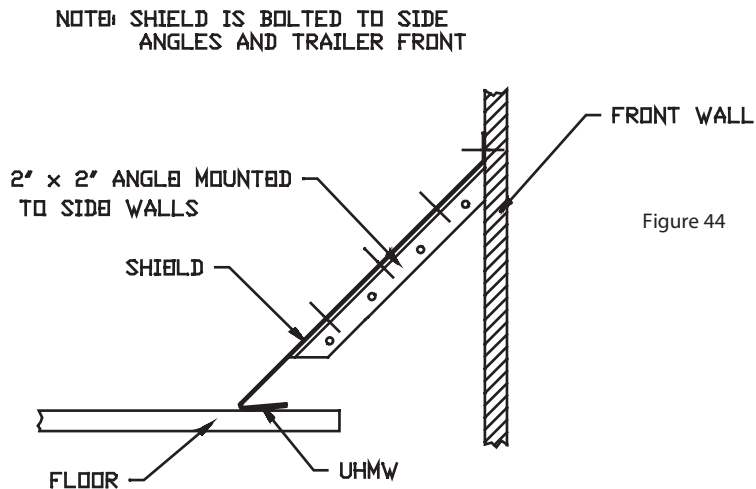
Form the plate and attach angle steel for support. Rivet the plastic slide strip to the shield.

3. Mount front shield.

Screw the plate to the side of the trailer.

Provide clean-out holes below the slope sheet.

Figure 38



25027

6 HYDRAULIC TUBING

Section 2.4 discusses the location of hydraulic tubing.

IMPORTANT: All components and tubing must be kept absolutely clean to prevent dirt from entering the system.

1. Determine tube locations and lengths.

Keep bends to a minimum. Make all bends with sweeping elbows to reduce heat build up.

2. Cut tubes to length.

3. Position tubes.

Use rubber grommets or PVC tubes to protect the tubing when installing tubes through cross-members. Installing the tubes underneath the side seal or cross members requires fastening with clamps.

1" hoses can be used to connect the tubes to the drive unit.

4. Mount quick couplers at front of trailer.

Connect the male coupler on the pressure line (line to switching valve port stamped "pump"). Connect the female coupler to the return line (line to switching valve port stamped "res") (Figure 39). Apply hydraulic sealant.

5. Connect tubes to drive unit.

Connect the pressure line to switching valve port labeled "PUMP" and return line to switching valve port labeled "RES". Make sure that rubber hoses are not twisted.

FRONT OF TRAILER

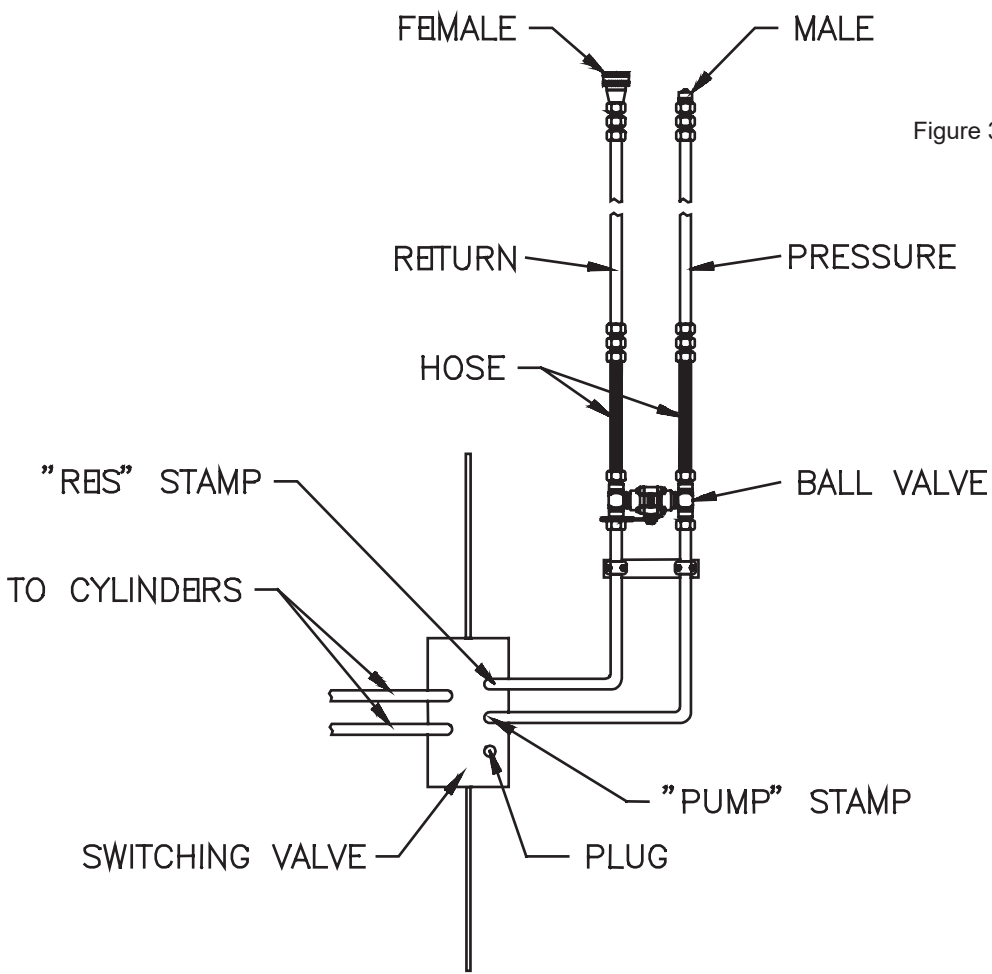


Figure 39

DRIVER'S SIDE

25044

7 MISCELLANEOUS

7.1 Trailer wires and lines

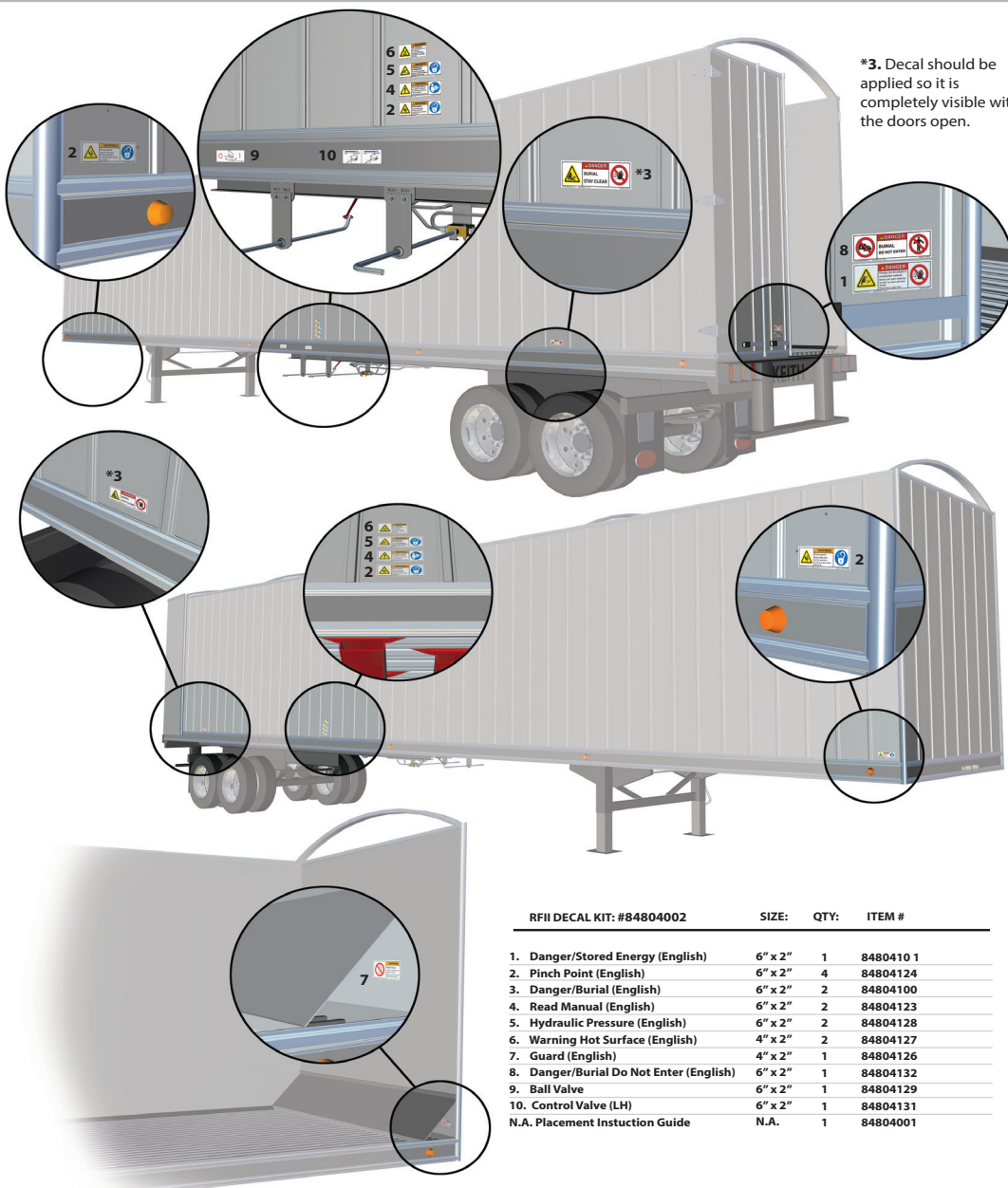
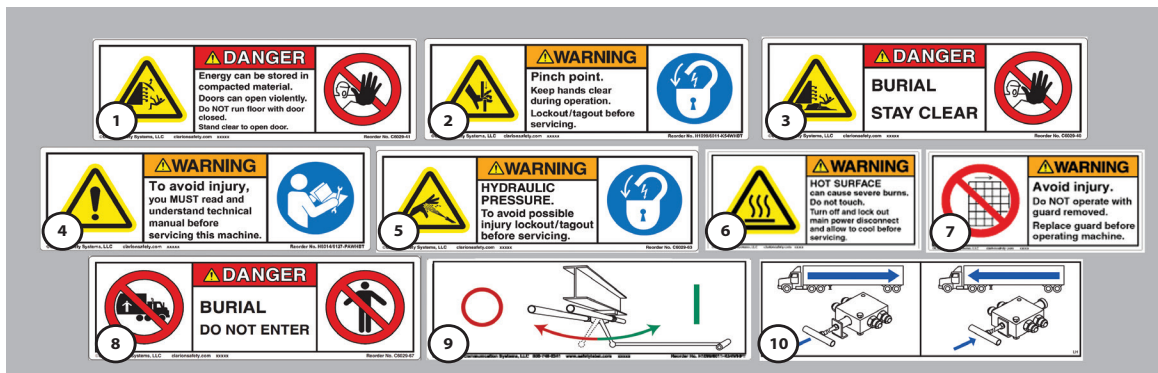
Make sure that wires and lines cannot be damaged by moving parts. Mount them so they cannot rub against other parts. Check proper light and brake performance.

7.2 Front guard

A front guard should deny access to the underside of the front end of the slats so they cannot shear anything entering from below. A screen or plate similar to the rear baffle plate is adequate if one does not already exist.

7.3 Caution decals

Affix caution decals to the side of the trailer at the locations shown.



*3. Decal should be applied so it is completely visible with the doors open.

RFII DECAL KIT: #84804002	SIZE:	QTY:	ITEM #
1. Danger/Stored Energy (English)	6" x 2"	1	8480410 1
2. Pinch Point (English)	6" x 2"	4	84804124
3. Danger/Burial (English)	6" x 2"	2	84804100
4. Read Manual (English)	6" x 2"	2	84804123
5. Hydraulic Pressure (English)	6" x 2"	2	84804128
6. Warning Hot Surface (English)	4" x 2"	2	84804127
7. Guard (English)	4" x 2"	1	84804126
8. Danger/Burial Do Not Enter (English)	6" x 2"	1	84804132
9. Ball Valve	6" x 2"	1	84804129
10. Control Valve (LH)	6" x 2"	1	84804131
N.A. Placement Instruction Guide	N.A.	1	84804001

APPENDIX 1

TOOLS

Tools provided by KEITH Manufacturing Co.

- Spacer jigs (for alignment of the sub-deck)

Basic tools not supplied with kit

- End wrench set up to 38mm (1 1/2")
- 6mm (3/8") ratchet set with 300mm (12") extension
- Allen wrenches
- Hack saw
- Hand grinder
- 10 m (25') tape measure
- 20 C-clamps 11 R
- 6mm (3/8") and/or 12mm (1/2") hand drill, bit set, 35mm (1 3/8") hole saw
- Straight edges
- Dead blow hammer

Special tools

- Flow meter
- Flaring tool for 25mm (1") pipe
- 8mm (5/16") drill bit, 300mm (12" long)
- Countersink bit, 90° with 12mm (1/2") shank, 20mm (3/4") single flute
- Torque wrench up to 70 N°m (50 ft-lbs)
- Torque wrench up to 250 N°m (180 ft-lbs)
- Mig welder (wire welder)
- Rivet gun
- overhead crane (hoist or forklift)
- Circular saw
- Cutting torch
- Floor planks/slat stomper

Optional tools

- Knee pads
- Band saw

Miscellaneous

- Hydraulic sealant
- Paint

APPENDIX 2

MATERIALS

Standard kit

- Drive unit
- Floor planks/slats
- Slide strips (NOT with T-blocks or slat plugs)
- Ball seal
- 38mm (1 1/2") screws (for ball seal)
- Slide bearings
- Hold down bearings
- Floor bolts, Nylock nuts
- Slide strip (for self-fabrication of front shield)
- Caution decals

NOT provided with standard kit

- Sub-decking 25mm x 25mm (1" x 1" steel tubing/aluminum profile)
- 25mm (1") hydraulic tubing
- Hydraulic quick couplers
- Hydraulic hose (for connecting drive unit to tubes)
- Steel plate (3mm gauge or 2mm gauge (12 gauge or 14 gauge) to fabricate baffle plate)
- Steel profile (side seal support)
- Front shield

Options

- Splash seal
- Aluminum wear strips
- Tube clamps
- Plastic T-blocks
- Tubing end caps
- Floor plank/slat plugs
- Rubber grommets
- 25mm (1") I.D. PVC pipe

APPENDIX 3

CHECK LIST

Carefully check the items on this list. They are essential for optimal floor performance.

Before installation

1. The trailer should be straight.
2. The trailer should have cross bracing.
3. Cross-members should be level with other cross-members and kingpin plate.

During installation

4. The 25mm x 25mm (1" x 1") tubing must be centered in the trailer.
5. The drive unit must be properly aligned.
 - A. The top of the drive shoes must be 6mm (1/4") higher than the top of the 25mm x 25mm (1" x 1") tubing.
 - B. The drive shoes must align with respective 25mm x 25mm (1" x 1") tubes.
6. The cylinders must be entirely collapsed before drilling boltholes through floor planks/slats.
7. A front guard should deny access to the underside of the front end of the trailer so planks/slats cannot shear anything entering from below.
8. The slide bearings should seat properly on the sub-deck and the flooring should seat properly on the bearings.

After installation

9. The pressure and return lines should connect to the correct switching valve port.
10. Caution decals should be visible.

Run the system following the instructions in the owner's manual.

After operation

11. Check for leaks and unnecessary rubbing.
12. Refer to the owner's manual and adjust the switching valve.

APPENDIX 4
TORQUE CHART

BOLT	LOCATION	CLASS	TORQUE (N•m)
M6 x 1	Tube Clamp at Ball Valve	5.8	10
M8 x 1.25	Tube Clamp to Cylinder	5.8	24
M8 x 1.25	Check Valve	5.8	24
M8 x 1.25	Flooring	10.9	32
M10 x 21.5	Flooring	10.9	60
M16 x 1.5	Barrel Clamp	5.8	170
M16 x 1.5	Drive End Plate	5.8	170

BOLT	LOCATION	CLASS	TORQUE (ft. lbs.)
1/4-20	Tube Clamp at Ball Valve	5	8
5/16-18	Tube Clamp to Cylinder	5	17
5/16-18	Check Valve	5	17
5/16-18	Flooring	8	24
3/8-16	Flooring	8	45
5/8-11	Barrel Clamp	5	125
5/8-11	Drive End Plate	5	125

APPENDIX 5

Drawing 10797A

