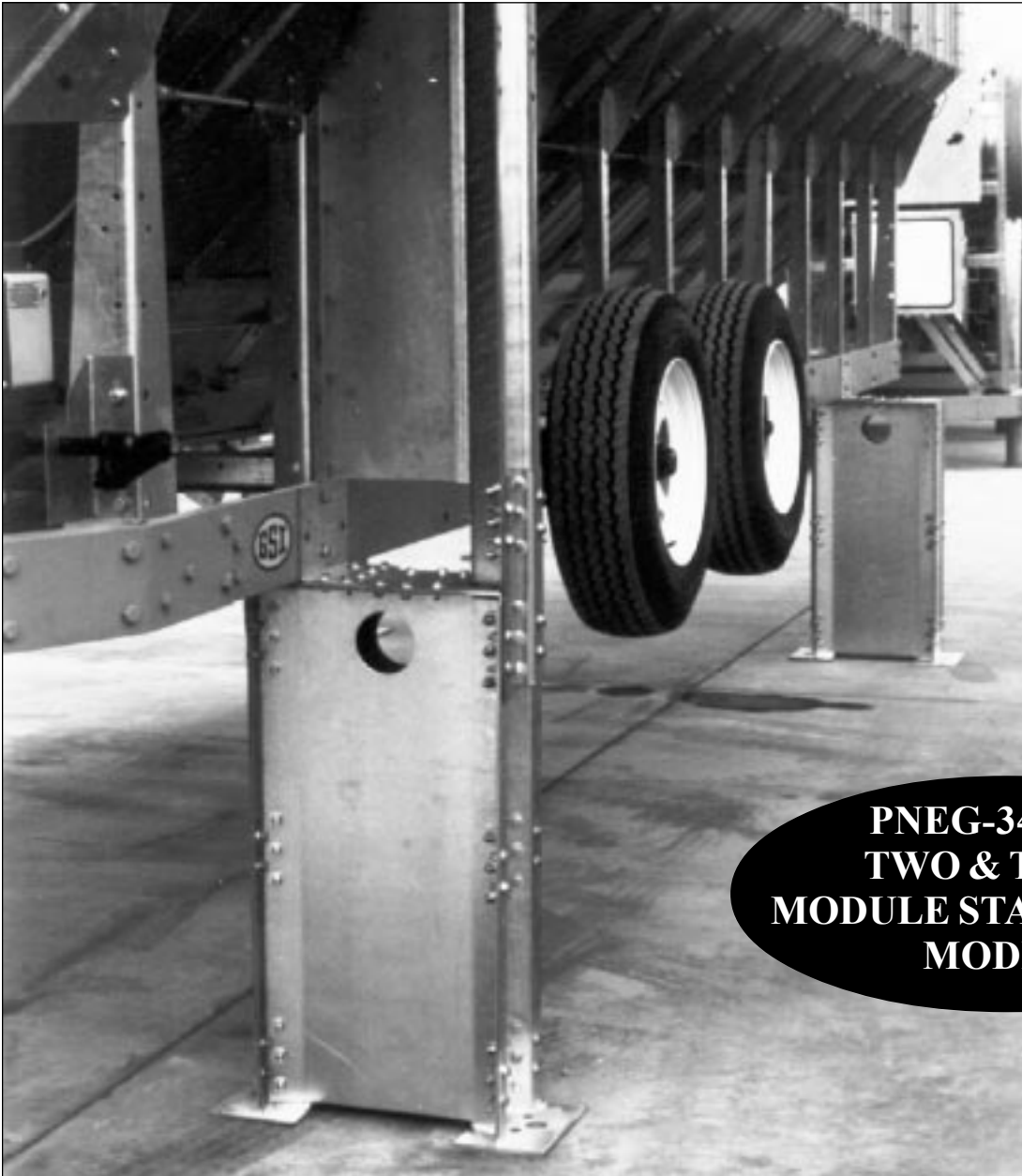


SERVICE PLATFORM & STIFFENER INSTALLATION

REVISED 2004



**PNEG-349REV
TWO & THREE
MODULE STACK DRYER
MODELS**



A DIVISION OF
THE GSI GROUP



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Service Platform and Stiffener Installation

Thank you for choosing a GSI product. It is designed to be a reliable support system for GSI grain dryers.

This manual describes the installation of the GSI platform and GSI stiffener package. These systems are designed for multi-module grain dryers, and accommodate different dryer lengths.

The principal concern of the GSI Group, Inc. ("GSI") is your safety and the safety of others associated with grain handling equipment. This manual is written to help you understand safe installation

procedures, and some of the problems that may be encountered by the operator or other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards and precautions exist, and to inform all personnel associated with the equipment, or who are in the area. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation, where serious injury or death may occur.

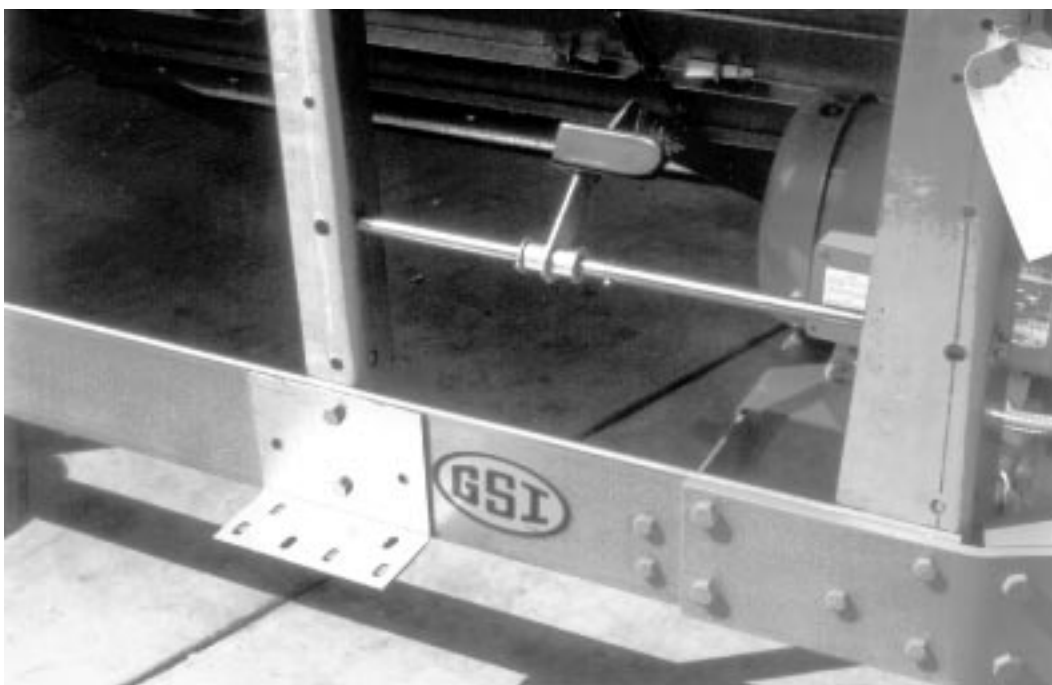
Safety Alert Symbol

The symbol shown is used to call your attention to instructions concerning your personal safety. Watch for this symbol; it points out important safety precautions. It means "ATTENTION", "WARNING", "CAUTION", and "DANGER". Read the message and be cautious to the possibility of personal injury or death.



WARNING! BE ALERT!

Personnel operating or working around equipment should read this manual. This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.



Stiffener caption.



Platform Support Channels

Airstream service platform units are designed for use with Airstream two and three module grain dryers. The two module models require a service platform on the upper module, and the three module units use a platform on both the upper and center modules.

For ease of assembly, the platform should be fully installed before the module is lifted and installed.

Install the platform support channels and related parts within the platform package number one as follows:

1. If required, connect a platform attachment bracket, D61-0054, onto each side of the dryer as shown. Using the existing large bolts through the round set of bracket holes.

Loosely connect the two rear anchor channels, D61-0055, to the platform attach brackets using $\frac{3}{8}$ " x 1" bolts with washers.

2. Remove hitch tongue from the dryer, and support the front end of the dryer under the frame side rails.

Loosely connect the main support channel, D01-2033, to the front end of the dryer hitch weldment. Use four $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolts with washers on slot ted side. The channel side with the large round holes must be up.

Figure 1, Right:
Connecting rear
anchor chan-
nels. Figure 2,
Below: Mount-
ing the main
support channel.





Figure 3: Bolting reinforcement plate to main support channel.

3. Attach the D61-0056 reinforcement plate to the main floor support channel using 5/16" x 3/4" whiz bolts.
4. Position the left-hand side channel, D61-0058, and the right-hand side channel, D61-0057, so the sides with the dimpled holes are up. Connect them to the rear anchor channels and the main support channel. Use the special 5/16" diameter flat head allen capscrews to secure the top side of the two side channels. Use 5/16" x 3/4" bolts at the bottom side.



Figure 4: Attaching side channels.



Figure 5: Placing rear tie angle on platform.

5. Position the rear angle tie, D01-2034, and connect it onto the rear anchor channels using 5/16" x 1" carriage head bolts.
6. Position the front channel, D61-0061, so the side with the large holes is up and connect it to the two side channels. Use flat-head allen capscrews to secure the top side.



Figure 6: Tighten the rear frame tie angle to the side frame.

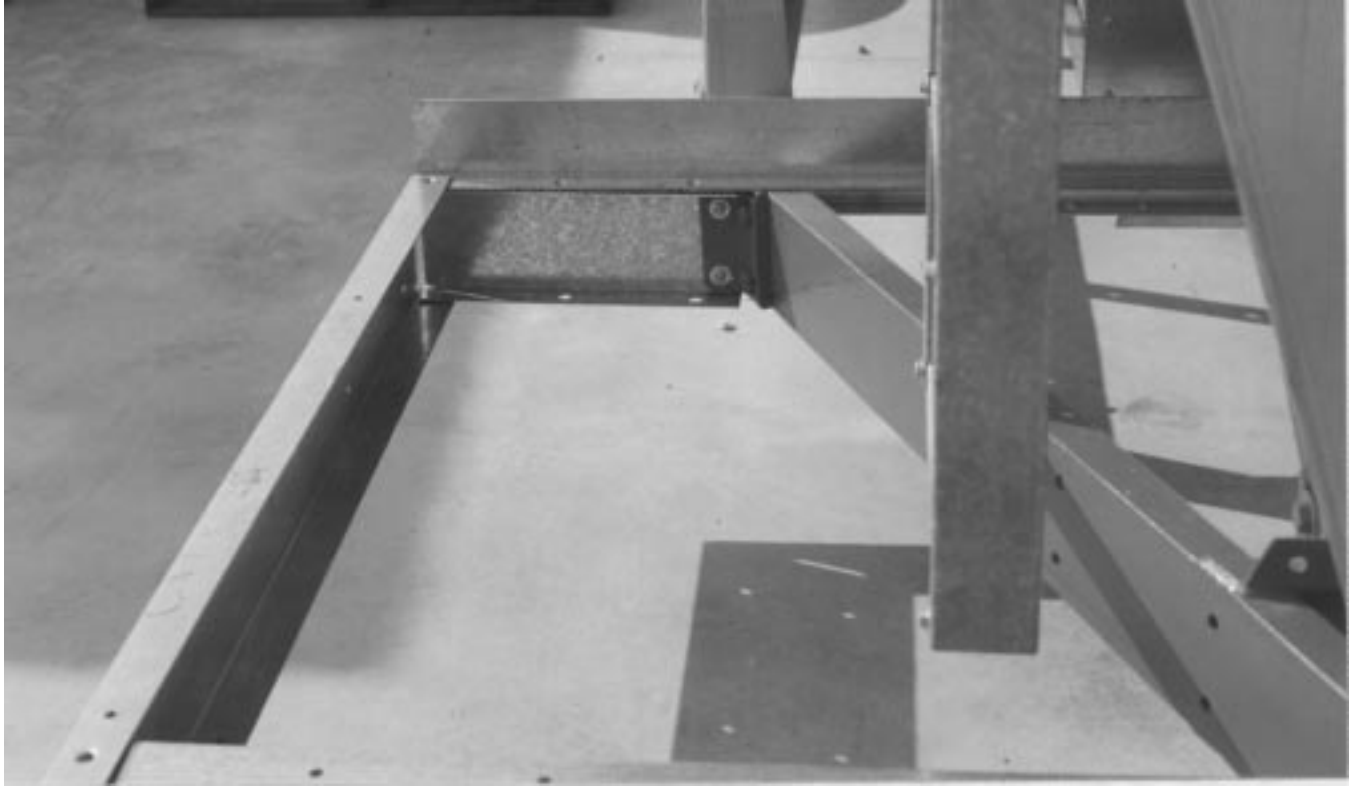


Figure 7: Close-up of rear portion of frame.



Figure 8: Attaching front channel.

7. Use two flathead allen capscrews and connect the center floor support, D61-0062, to the front and main support channels.
8. Use a carpenter square and check the squareness of the assembled unit, between the main channel and the side channels. If necessary, shift the position of the main channel slightly, using the slotted attaching holes, until the unit is properly squared. Then fully tighten all channel bolts.



Figure 9: Center floor support placement.



Figure 10: Check for square and tighten bolts.

Floor Support Angles

Install the floor support angles as follows:

1. Use two flathead allen capscrews and connect the left floor support angle, D01-2030, to the rear angle tie and main support channel.
2. Connect the rear access door support, D01-2037, frame between the support angle and the left-hand side channel.
3. Install the front access door support frame, D01-2036, to the side frame and front left-hand floor support. Use the 5/16" whiz bolts and nuts to bolt it in place.
4. The forward frame goes under the top edge of the side channel and over the front left-hand floor support.



Figure 11: Installing forward frame on the access door.



Figure 12: Close-up of forward and rear door frame installation.

Inner Guard Rail

Install the inner guard rail supports and related parts within platform package number two as follows:

1. Connect the right-hand rear inner guard rail support angle (D01-2043). Use 5/16" x 3/4" bolts.
2. Use 5/16" x 3/4" bolts and connect the left-hand inner guard rail support angle (D01-2042).
3. Connect a lower inner guard rail angle on each side (D01-2043).

Outer Guard Rail Supports

Install outer guard rail support channels, door hinge channel and floor panels contained within platform package number two and number three as follows:

1. Use 5/16" x 3/4" bolts and loosely connect the seven guard rail support channels (D61-0037) to the platform support channels.
2. Connect the outer door hinge channel (D61-0066) using 5/16" x 3/4" bolts.



Figure 13: Location of inner guard rail support angles.



Figure 14: Install remaining support channels.



Figure 15: Connecting outer front toe board to guard rail support channels.

Platform Toe Board Angles And Flooring

Use 5/16" x 3/4" bolts and install the platform floor toe board angles. When two toe boards are listed, the bottom toe board must be positioned to capture the floor panels. The additional upper toe board acts as a narrow foot rail to provide added safety protection. When connecting upper toe boards, install bolts so the head ends are located within the platform. The long flanges of the toe boards point up.



Figure 16: Connecting left-hand front toe board to guard rail support channel.



Figure 17: Installing four short floor panels.

1. Connect one left-hand outer rear toe boards.
2. Connect the left-hand inner rear toe board.
3. Connect one left-hand front toe boards.
4. Connect one right-hand outer toe boards.
5. Connect one outer front toe boards.



Figure 18: Installing center long floor panels.

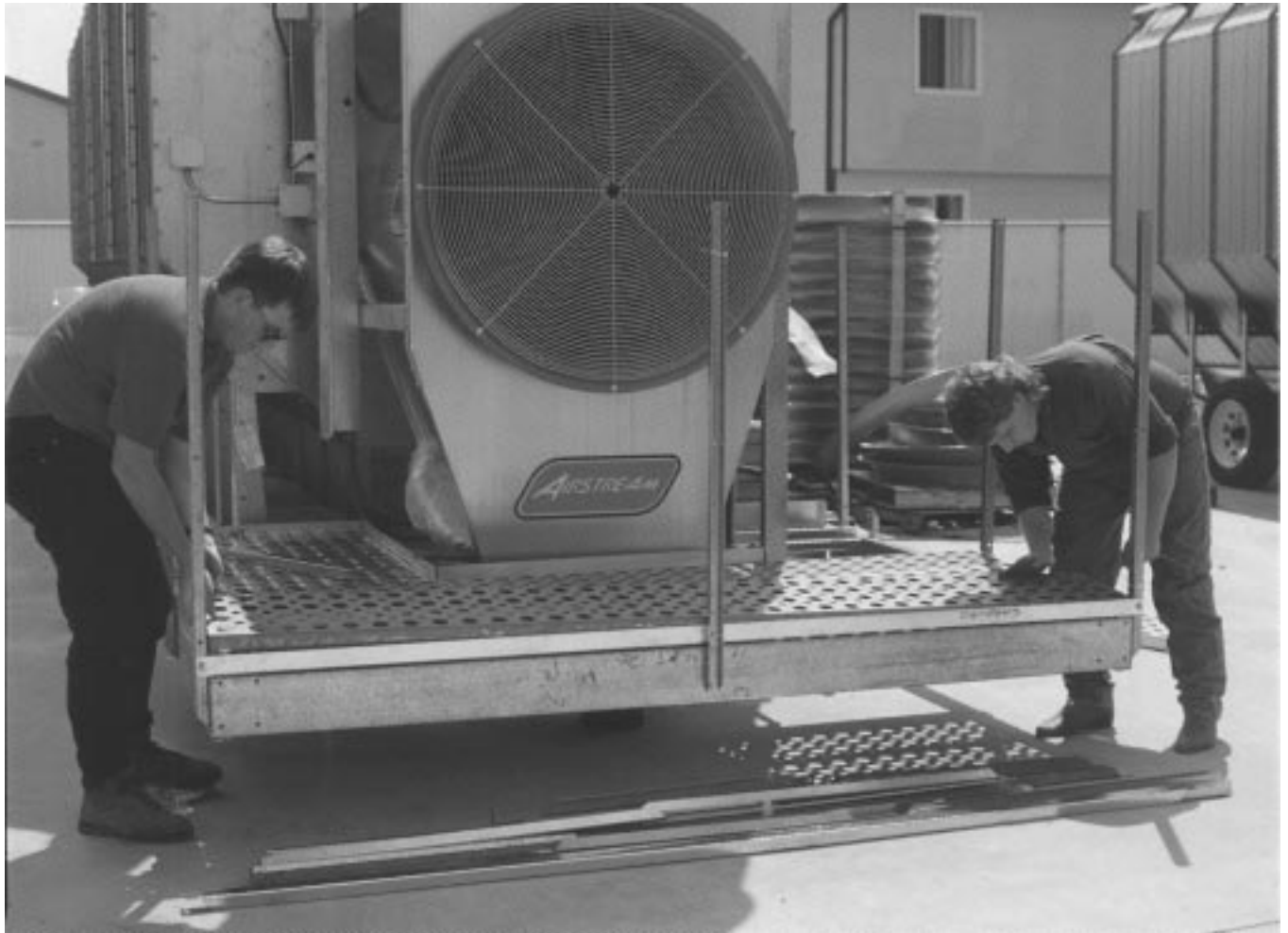


Figure 19: Installing front long floor panel.



Figure 20: Installing the remaining toe boards.

6. Connect the right-hand inner toe board.
7. Place the short wide floor panels on the left-hand side of the platform at the rear.
8. Place the four short floor panels on the right-hand side at the rear.
9. Place the three long floor panels across the front end of the platform.
10. Connect the remaining toe boards around the platform.



Figure 21: Installation of the short wide floor panel, left-hand outer rear toeboards and hinge channel.



Platform Guard Rails

Use 5/16" x 3/4" bolts and install platform guard rails within platform package #4. Guard rails should be installed so that the smooth rail surfaces and bolt heads are within the compartment to provide maximum body protection from corners and angle edges.

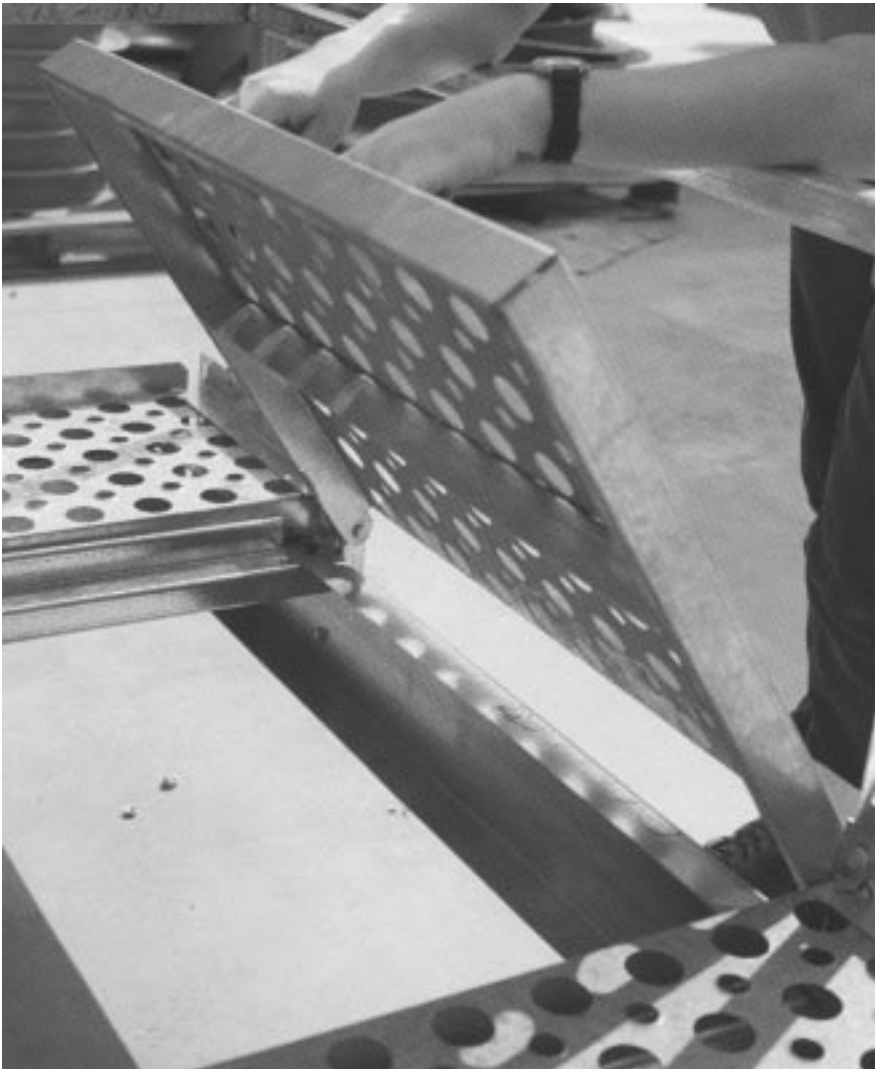
1. Connect the upper side guard rail onto each side.
2. Connect the upper front guard rail.
3. Connect two rear guard rails onto each rear side of platform.
4. Connect two lower front guard rails.
5. Connect the lower front side guard rail, and the lower rear side guard rail onto each side platform. Connect the access door clip on the left side of the platform.
6. Fully tighten all guard rail bolts, including the seven guard rail support channels not tightened earlier.



Figure 22, top: Installing front and side upper guard rails. Figure 23, above: Installing lower side guard rails. Figure 24, right: Installing lower rear guard rail.



Figure 25, right: Installing access door. Figure 26, below: Make sure door opens freely and lies on frame angles.



Access Door

Install the platform access door and related parts as follows:

1. Install access door in place with the hinge ends located outward.
2. Use two $\frac{3}{8}$ " x $1\frac{1}{2}$ " bolts as hinge pins and install them with the heads positioned inward.
3. Secure each hinge pin in place by installing nuts on each side of the outer channel leg. Adjust the position of the hinge pins, as necessary, to center the door properly. Tighten nuts securely to lock pins in place.

Inspect the completed service platform unit. Make sure all parts are properly installed and fully tightened.



Figure 27: Close-up of access door clip on guard rail.



Figure 28: Check to make sure every bolt is tight and door opens freely.



Figure 29: Finished platform on an Airstream upper module.



Figure 30: Ladder side view of platform on a dryer module.

Service Platform Parts**Platform Support Channels and Floor Support Angles**

Item	Part Number	Description	Quantity Per Platform
1	D61-0055	Rear Anchor Channels	2
2	D01-2034	Rear Angle Tie	1
3	D01-2033	Main Support Channel (102" long)	1
4	D61-0058	Left-hand Side Channel (82" long)	1
5	D61-0057	Right-hand Side Channel (82" long)	1
6	D61-0061	Front Channel (102" long)	1
7	D61-0062	Center Floor Support (35" long)	1
8	D01-2029	Right-hand Floor Support Angle	1
9	D01-2030	Left-hand Floor Support Angle	1
10	D01-2037	Access Door Frame	1
11	OBSOLETE	Front Left-hand Support Angle	1
12	D01-2028	Inner Front Toe Board (44" long)	1
13	D61-0056	Reinforcement Plate	1
14	D01-2036	Access Door Forward Frame	1

Inner and Outer Guard Rail Supports

Item	Part Number	Description	Quantity Per Platform
15	D01-2042	Left-hand Inner Guard Rail Support Angle (44" long)	1
16	D01-2050	Right-hand Front Inner Guard Rail Support Angle (42" long)	1
17	D01-2041	Right-hand Rear Inner Guard Rail Support Angle (44" long)	1
18	D61-0037	Outer Guard Rail Support Channels (50.5")	7
19	D61-0066	Outer Door Hinge Channel (9" long)	1

Floor Panels and Floor Toe Board Angles

Item	Part Number	Description	Quantity Per Platform
20	D01-2039	Left-hand Rear Floor Panels (30" long)	1
21	D01-2038	Right-hand Rear Floor Panels (30" long)	4
22	D61-0069	Front Section Floor Panels (102" long)	3
23	D61-0045	Left-hand Outer Rear Toe Boards (15" long)	2
24	D01-2048	Left-hand Inner Rear Toe Boards (11" long)	1
25	D61-0044	Right-hand Front Toe Boards (35.5" long)	2
26	D61-0042	Right-hand Outer Toe Board (82" long)	2
27	D01-2049	Right-hand Inner Toe Board (34" long)	1
28	D61-0043	Outer Front Toe Boards (105.25" long)	2
29	D01-0581	Platform Access Door	1

Floor Panels and Floor Toe Board Angles

Item	Part Number	Description	Quantity Per Platform
30	D01-2047	Upper Side Guard Rails (80" long)	2
31	D01-2046	Upper Front Guard Rail (105" long)	1
32	D01-2043	Rear Guard Rails (31-1/4" long)	4
33	D61-0032	Lower Front Side Guard Rails (53-1/8" long)	2
34	D61-0033	Lower Front Side Guard Rails (35-1/4" long)	2
35	D61-0034	Lower Rear Side Guard Rails (44-5/8" long)	2
36	D01-2045	Guard Rail Inside Right	1
36	D01-2044	Guard Rail Inside Left	1
37	D61-0054	Platform Attach Bracket	2

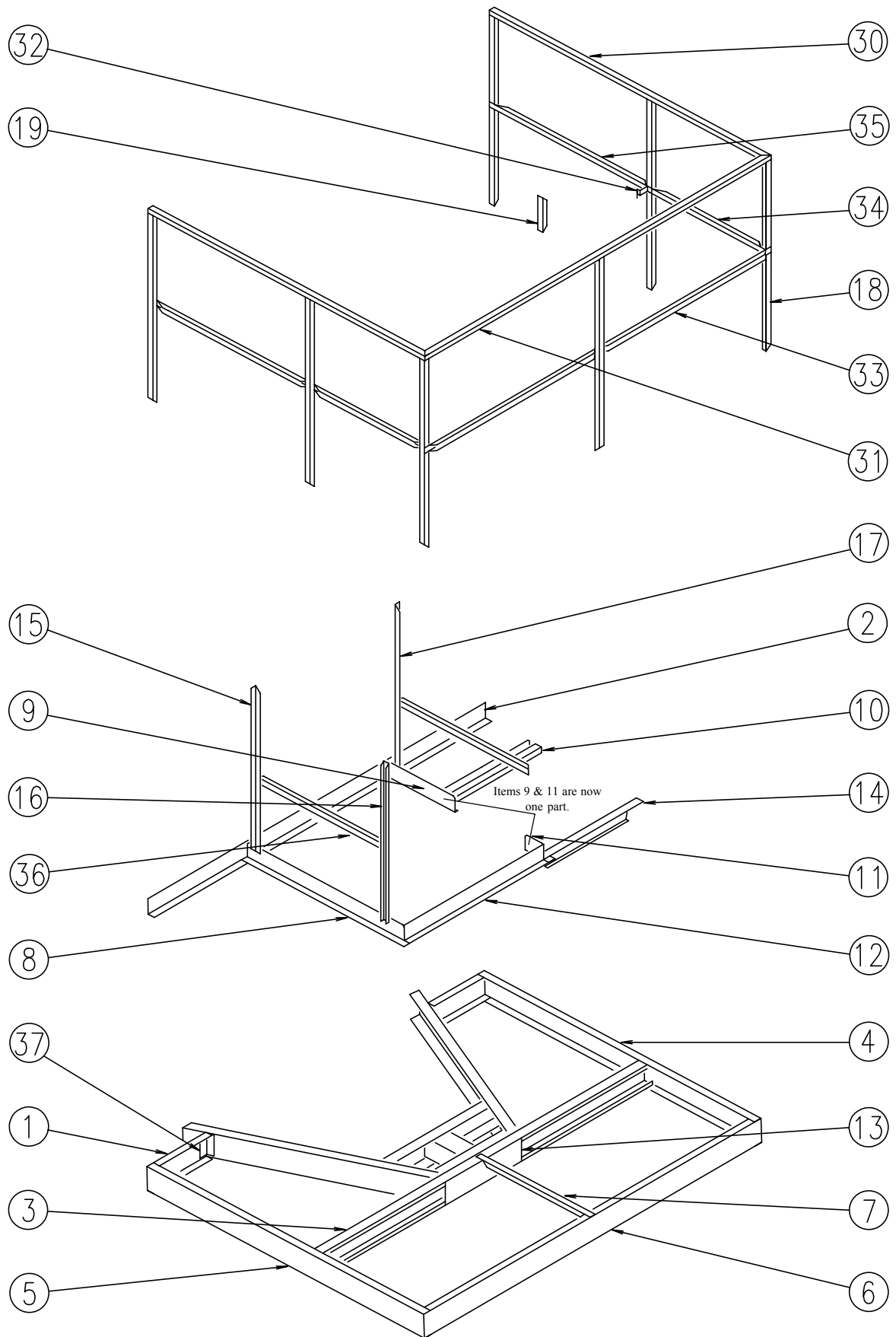


Figure 31: Breakdown of platform parts.

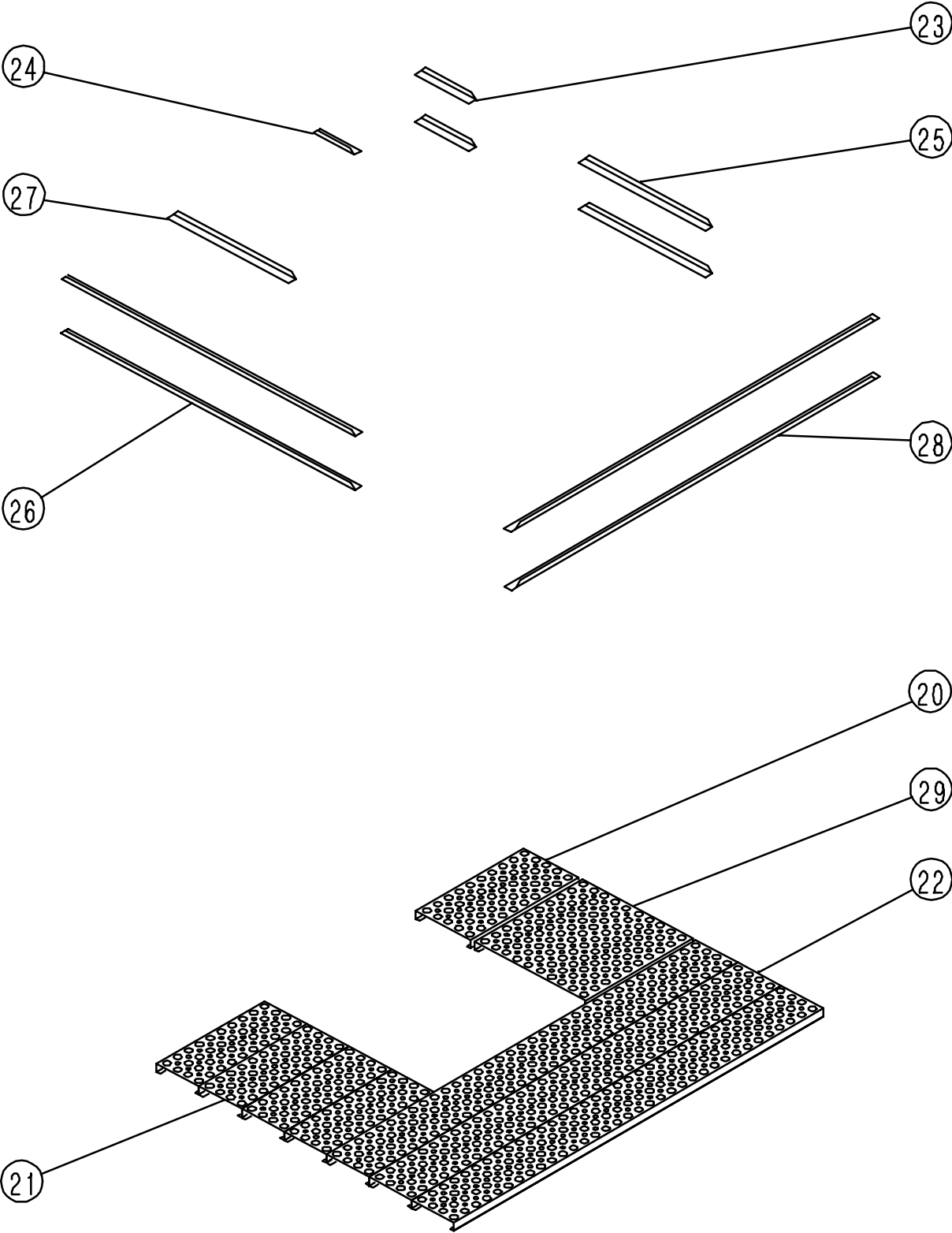
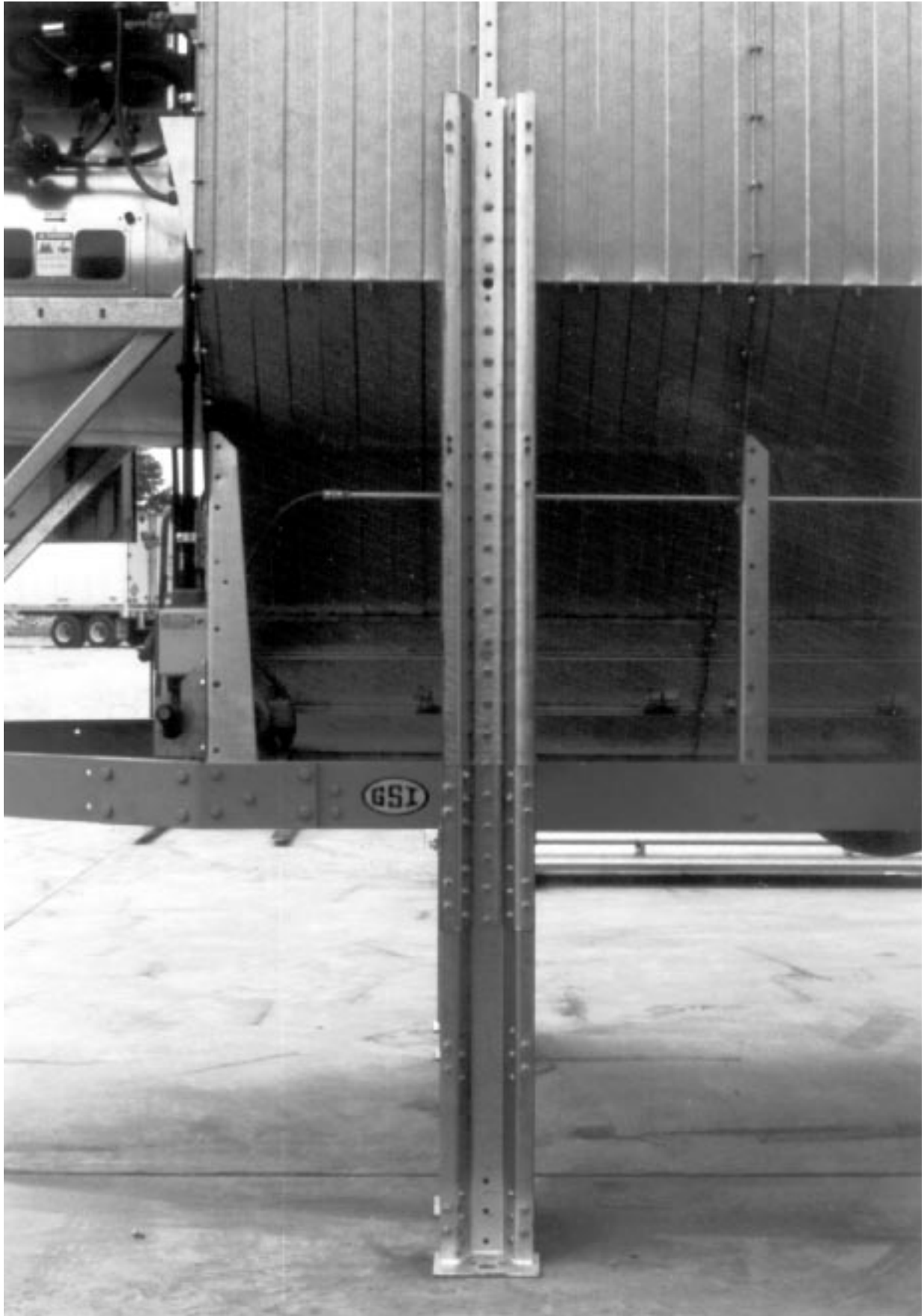


Figure 32: Breakdown of platform floor parts.



STIFFENER ANGLE LOCATION ON BASKET

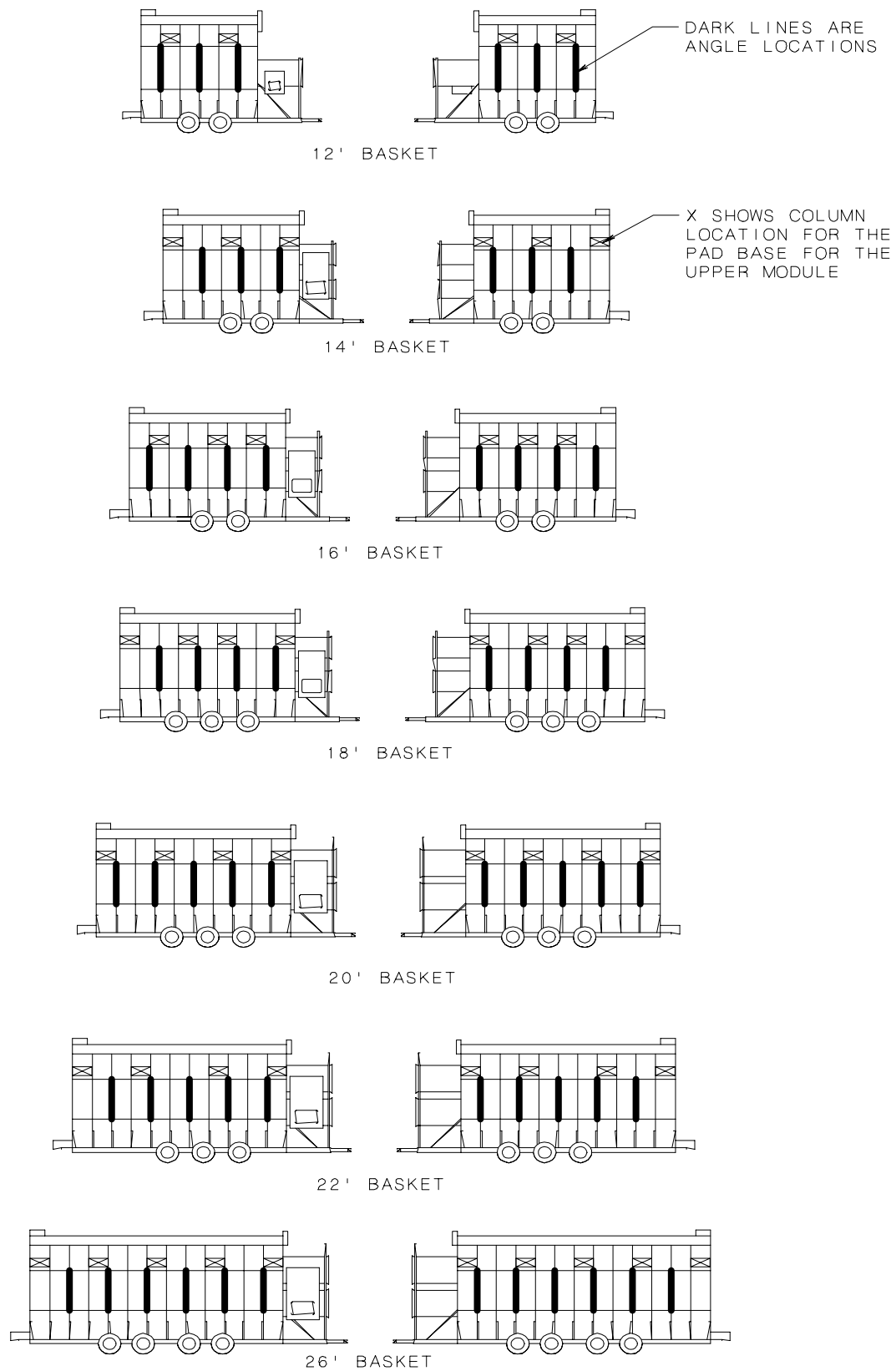


Figure 33: Location of stiffener angles on basket based on length.

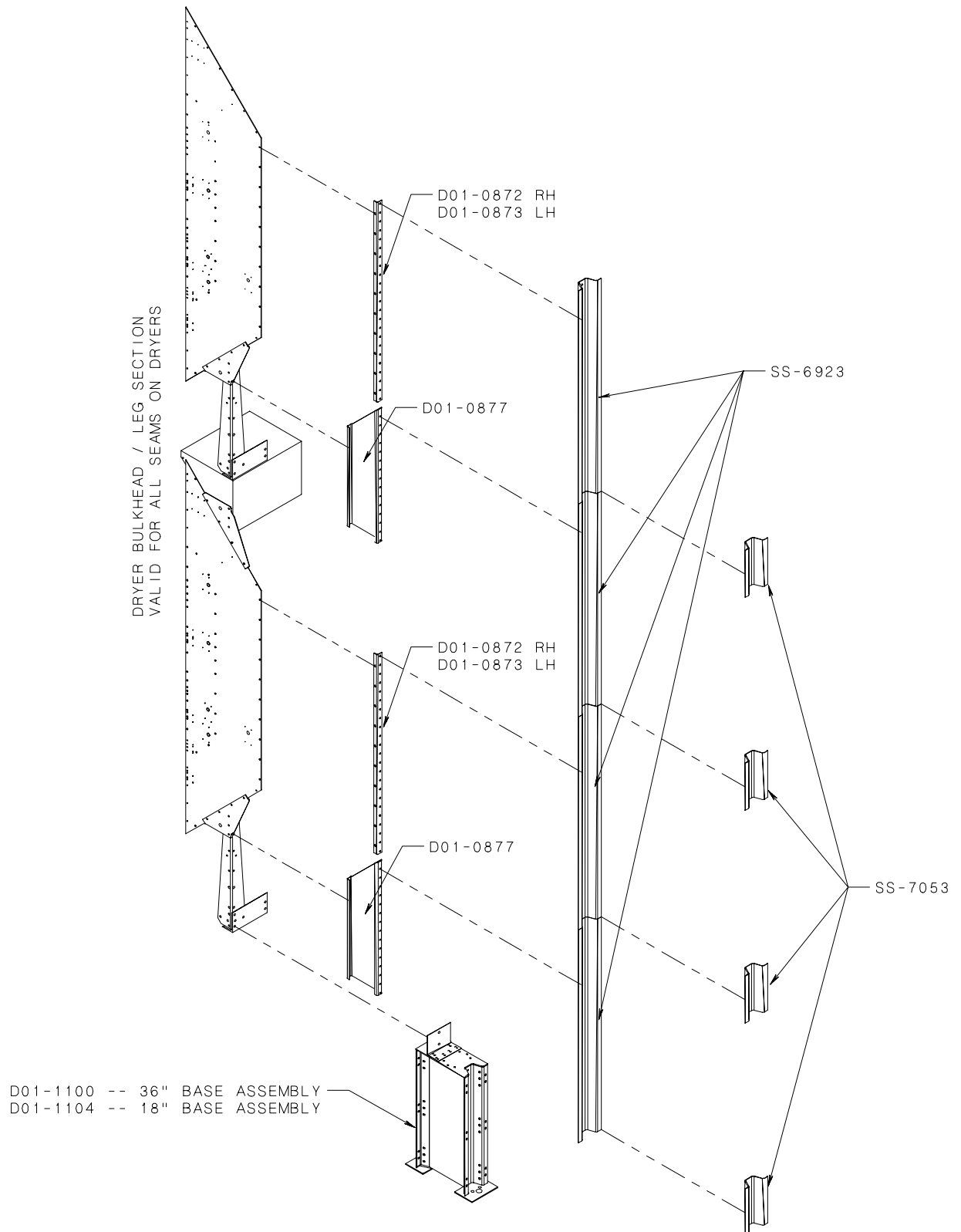


Figure 34: Exploded view of stiffener.

General

This is a guide for assembling and mounting the new Stack Dryer Stiffener Package to the Airstream Stack Series grain dryers. It contains exploded diagrams and text explaining the basic assembly. Please study this carefully before beginning the assembly and use it as a reference guide.

Stiffener Attach Angles

The Left Hand Attach Angle (D01-0873) and Right Hand Attach Angle (D01-0874) are installed at the factory during basket assembly. A comparison should be made with the dryer to be installed and **Figure 33** to make sure the angles are installed in the correct position. A check should be made to see if the Attach Angle points in the same direction as the dryer leg directly below it. If the Attach Angles are in the wrong location or point in the wrong direction, the Attach Angles should be moved before proceeding with the assembly.

Base Module Connector Clip

The Base Module Connector Clip should be attached to the Base Module of the dryer before setting the dryer into place. The Connector Clip attaches at the same place the Gusset Support Leg attaches to the Frame Rail of the dryer. One at a time, unbolt the Gusset Support Leg and bolt the Connector Clip to the outside of the Frame Rail.

Stack Stiffener Leg Channel

The next step in assembling the Stack Stiffener Package should be the attachment of the Stack Stiffener Leg Channel (D01-0877). The Leg Channel attaches to the Dryer Gusset Support Leg below the Stiffener Attach Angle on the dryer basket (Figure 1). This should be done for each module at this time.

Stack Stiffener Base Unit

The Stack Stiffener Base Unit is assembled at the factory. This component assembly should be set into place in the locations specified in the Stack Dryer Concrete Specification Drawings.

Base Unit Hardware

The connection of the Stack Stiffener Base Unit to the Stack Base Module is completed using the following hardware in the hardware package.

PART NUMBER	DESCRIPTION	QTY.
S-248	3/8" wrought iron wash.	12
S-456	3/8"-16 hex nut	6
S-5060	3/8"-16 x 1.5" bin bolt	6

Stack Stiffener Installation

With the Stiffener Base Unit in place and all other preparations finished, the Stack Stiffeners should be attached to the dryer modules. Starting with the base module of the dryer, the first stiffener should be attached so that the bottom of the stiffener is even with the frame. The top three holes should be left open for later attachment of a stiffener splice. The second stiffener can be attached to the stiffener angle on the basket above the first with approximately 19.25" above the attach angle. The bottom three holes should be left open for the splice. The stiffeners can now be sliced together using the Stiffener Splice (SS-7053). The base module is now ready to be set into place on the stiffener base units. Once the base module is in place, the Connector Clip should be bolted to the Base Unit. A Stiffener Splice should be bolted on to connect the Stiffener to the Base Unit. Assembly is shown in **Figure 35**.

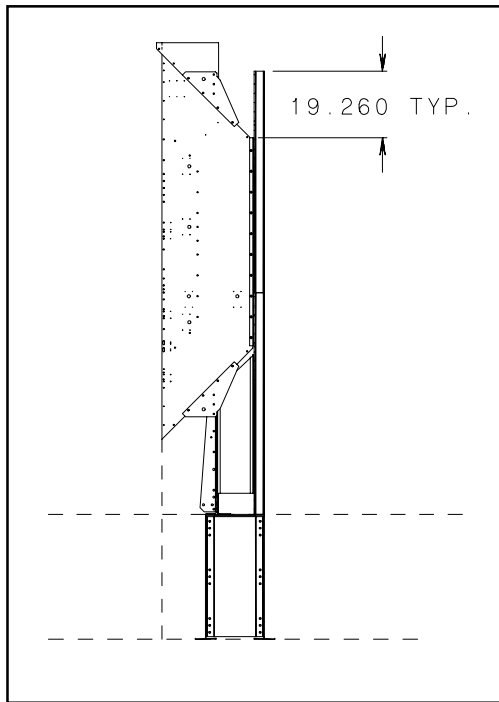


Figure 35: Base module stiffener assembly.

The Second and Third Module Stiffeners are assembled the same way as the base module with only minor variations. For the second module approximately 8.088" of stiffener should be left below the frame of the module. Approximately 11.26" should be left above the attach angle at the top. The splice should be bolted as on the first module. For the third module approximately 16.176" of stiffener should be left below the frame of the module. Approximately 3.26" should be left above the attach angle at the top. Splice the stiffener as before.

Splices should be used to connect the stiffeners as the dryer modules are stacked. All bolts should be checked and made tight to complete the installation.

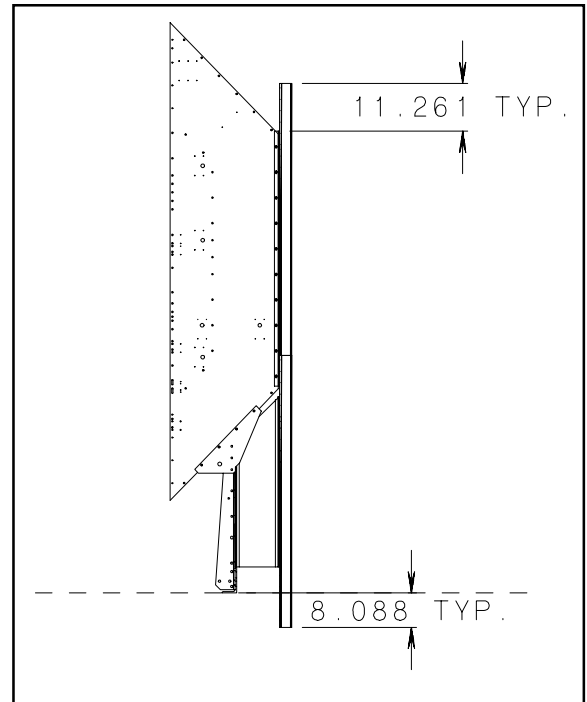


Figure 36: Second module stiffener assembly.

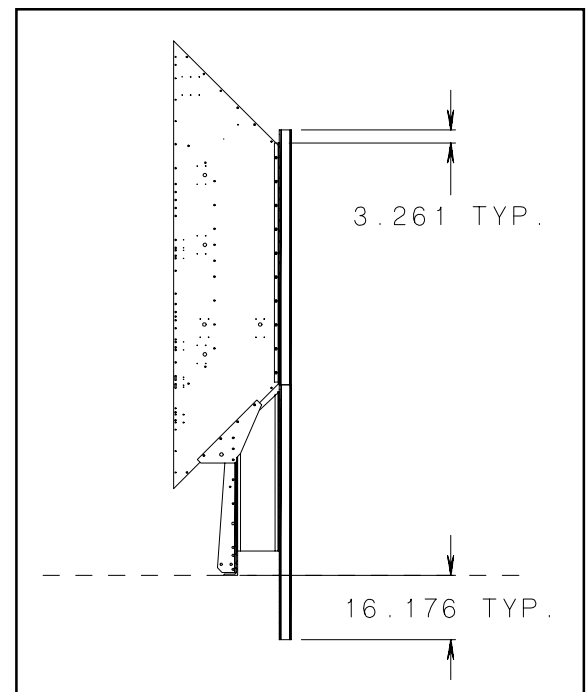


Figure 37: Third module stiffener assembly.

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