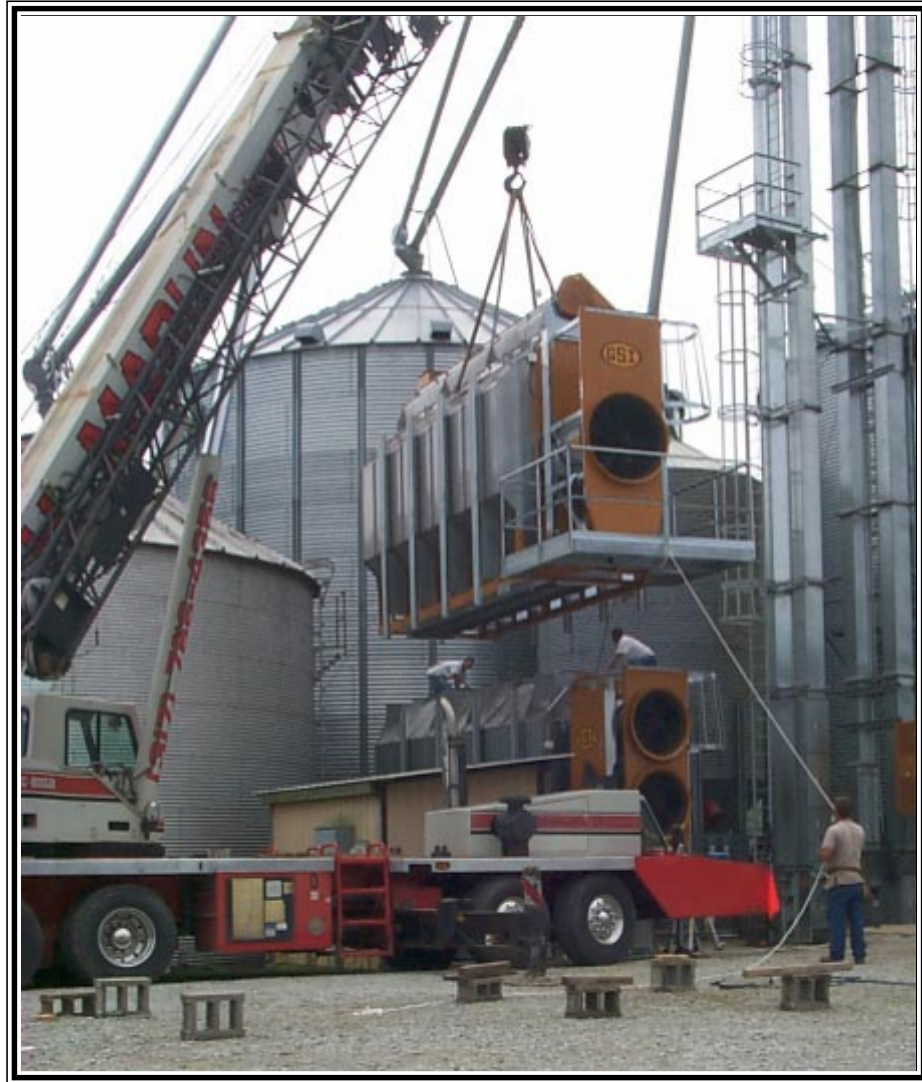

MULTI-MODULE DRYER STACKING MANUAL

(REVIEW OF STACKING A DRYER)



a division of
THE GSI GROUP



PNEG-902

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GSI ASSUMES NO RESPONSIBILITY FOR FIELD MODIFICATIONS OR ERECTION DEFECTS WHICH CREATE STRUCTURAL OR STORAGE QUALITY PROBLEMS. MODIFICATIONS TO THE PRODUCT NOT SPECIFICALLY COVERED BY THE CONTENTS OF THIS MANUAL WILL NULLIFY ANY PRODUCT WARRANTY THAT MIGHT HAVE BEEN OTHERWISE AVAILABLE.

THE FOREGOING WARRANTY SHALL NOT COVER PRODUCTS OR PARTS WHICH HAVE BEEN DAMAGED BY NEGLIGENT USE, MISUSE, ALTERATION OR ACCIDENT. THIS WARRANTY COVERS ONLY PRODUCTS MANUFACTURED BY GSI. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED. GSI RESERVES THE RIGHT TO MAKE DESIGN OR SPECIFICATION CHANGES AT ANY TIME.

PRIOR TO INSTALLATION, PURCHASER HAS THE RESPONSIBILITY TO RESEARCH AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL CODES WHICH MAY APPLY TO THE LOCATION AND INSTALLATION.

SAFETY PRECAUTIONS

General Safety Statements

The GSI Group Inc.'s Principal concern is your safety and the safety of others associated with grain handling equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

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



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

BE ALERT!

Danger!



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

Important!

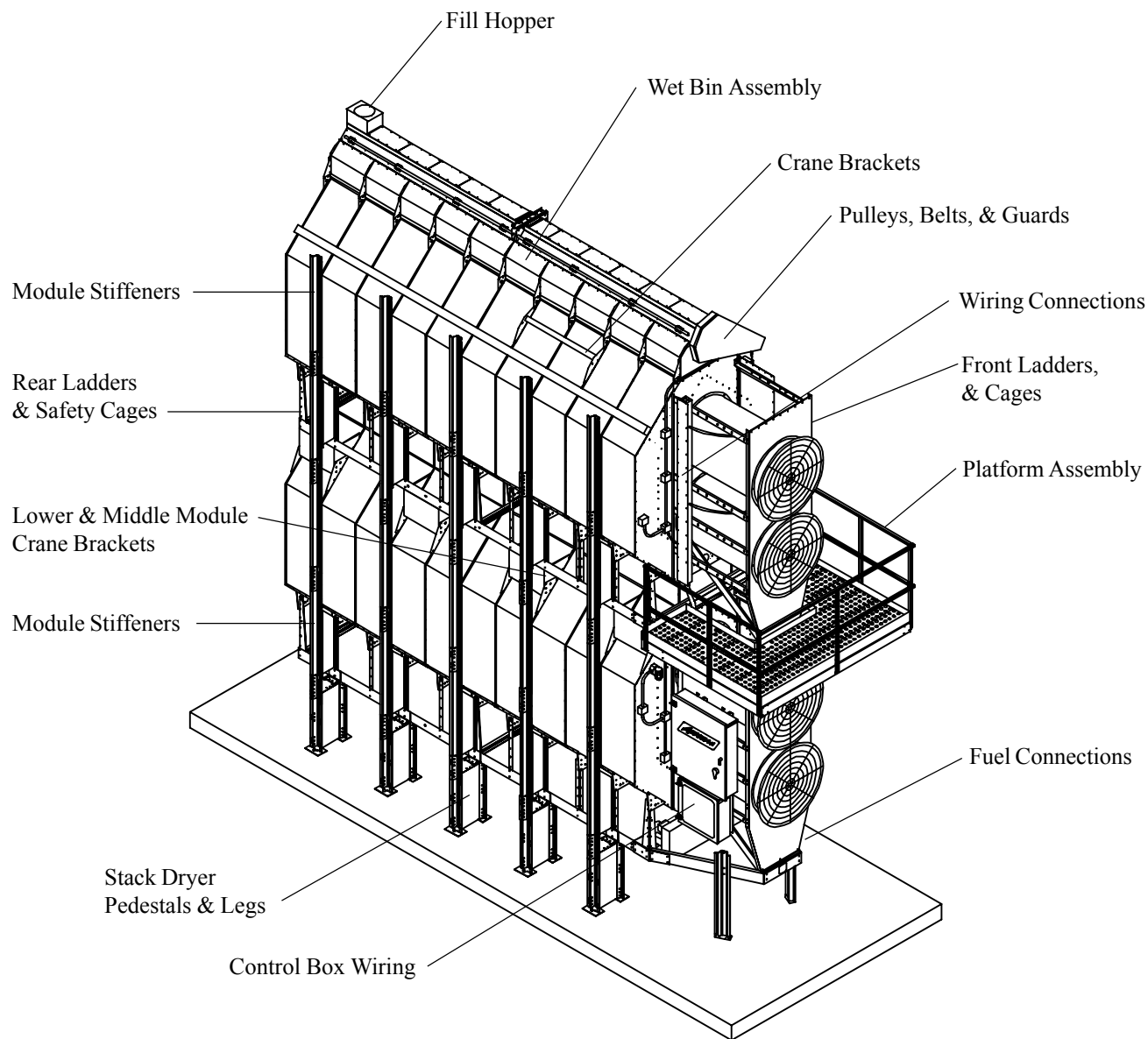
This product may have sharp edges! To avoid injury handle sharp edges with caution and use proper protective clothing and equipment at all times.

If you have any questions regarding installation and safety, please contact your GSI, Inc. representative.

MULTI - MODULE STACKING MANUAL

STACK DRYER COMPONENT CALLOUT

The following information is intended to help outline the steps required in stacking a Network Dryer.



MODULE PREPARATION



CAUTION

This product may have sharp edges! To avoid injury handle sharp edges with caution and use proper protective clothing and equipment at all times.

- Identify all parts shipped in crates or in the back of the dryer.
- Group parts for each of the assemblies together to have them at hand as needed.
- Attach the Rear Ladders and Safety Cages to the rear of all modules if not already installed (see appendix B of this manual).
- Attach the Front Safety Cages to the Front Ladder of all modules (see appendix A of this manual).

See PNEG-1273 for reference.

- Raise the Top Auger to its installed position.
- Install the Wet Bin Side Panels and attach them to the Top Auger Housing.
- Install the Pulleys, Belts, and Guards to the Top Auger and/or to the Bottom Auger.
- Install the Fill Hopper.

See PNEG-349REV for reference.

- Assemble the Service Platform onto the Top Module and/or the Middle Module.
- Attach all of the Stiffener Supports each Module.

- Double check to see if all parts are installed as needed.

Proceed to the Crane Bracket Placement Section >>

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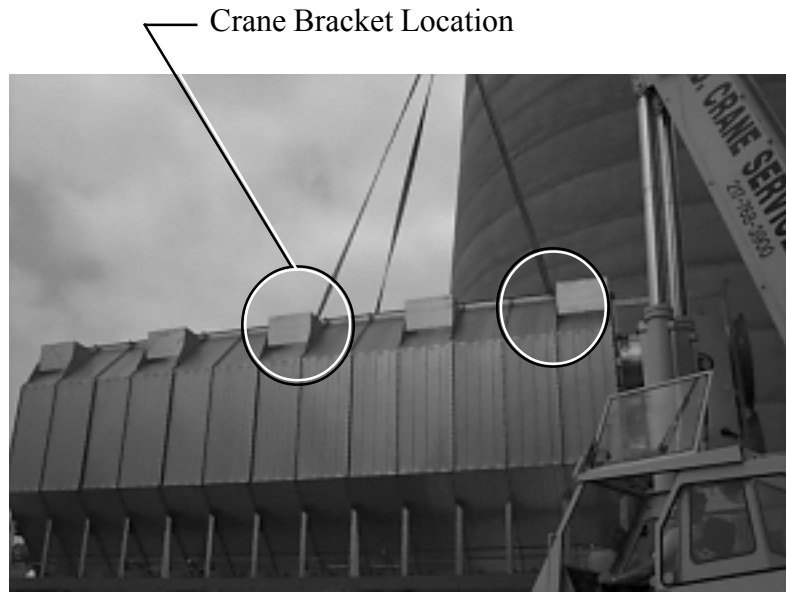
CRANE BRACKET PLACEMENT

Install the Crane Brackets onto the modules if not already installed.

Base Modules and Middle Modules utilize four crane brackets. Brackets mount to stack module support pads.

Lifting usually occurs between the 2nd column from fan end to the 6th column from fan end. This will vary with model number.

The module should remain parallel to the earth as it is lifted.



Base Module crane brackets

Top Modules utilize 2 crane brackets with 4 lifting points and a spreader bar between. These mount to column seams on the roof screen.

Lifting usually occurs between the 2nd column from fan end to the 6th column from fan end.

The module should remain parallel to the earth as it is lifted.

A crane of sufficient lifting capability should be used.

Loads of 5,000 to 15,000 pounds should be expected.



Top Module crane brackets

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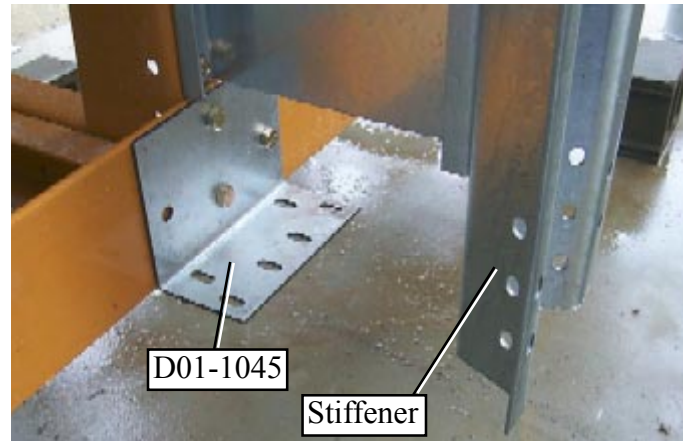
SETTING LOWER MODULE ON PEDESTALS



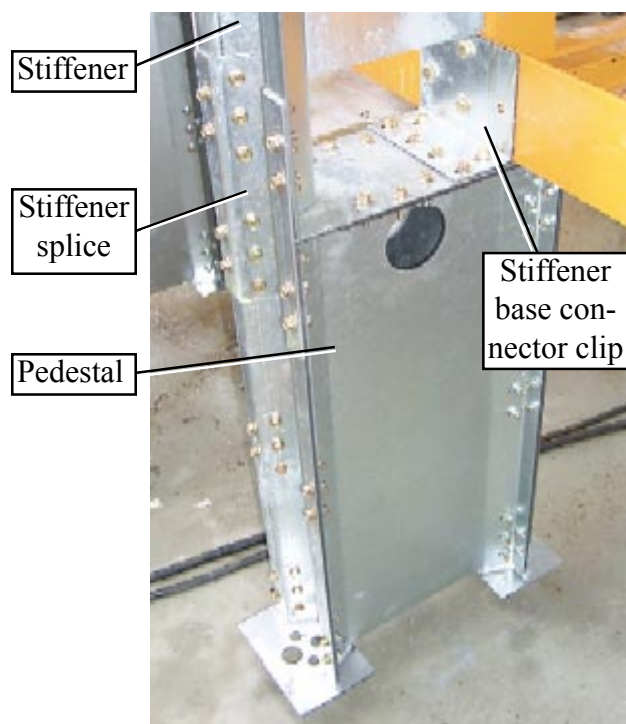
BE ALERT!

Personnel working around this equipment while it is lifted into position must use extreme caution. Lifting equipment (crane and rigging) must be of proper lifting capability for the unit size and weight. All local safety precautions and procedures must be followed.

1. Install stiffeners and service platform in accordance with PNEG-349REV. At each stiffener/pedestal location remove the 1/2" bolts and nuts that attach the dryer frame leg to the frame rail. Use that hardware to attach a stiffener base connector clip (D01-1045).



2. Lift base module and position it in the location the dryer is to occupy. **NOTE: Crane brackets may need to be adjusted to ensure that the module will be parallel to the ground when lifted.** With the base module in position bolt a pedestal to each stiffener base connector clip using 3/8"-16 x 1 1/2" bolts (S-7928).



3. With a stiffener splice (SS-7053), splice the pedestal to stiffener at each pedestal location. Now make sure any nuts and bolt used so far have all been tightened.



When splicing pedestal to stiffener use 3/8"-16 X 1 1/2" bolts (S-7928) where circled, use 3/8"-16 x 1" (S-7927) in all other holes.

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ANCHORING LOWER MODULE TO FOUNDATION

4. Set the lower module into final position and check level. Use shims (SS-6953) to level lower module if needed.



Shims



5. Anchor lower module to foundation. If anchor bolts were not set when the concrete was poured, then drill holes in the foundation to accept anchor bolts (use 3/4" x 9 5/8" minimum anchors with epoxy resin).

GSI has 1" x 12" anchor bolts (Part no. S-8957), tubes of epoxy (GTC-0004), and mixing nozzles for epoxy tubes (GTC-0005). An epoxy gun will be needed.



Basket length	14'	18'	20'	22'	26'
No. of anchors needed	16	20	22	24	28



LEG STAND

6. Attach front (BLK-10058) and back (BLK-10057) leg anchor plates to legs using 5/16"-18 x 3/4" bolts (S-6606), and 5/16"-18 nuts (S-3611) as shown in the photo on the right.

BLK-10058

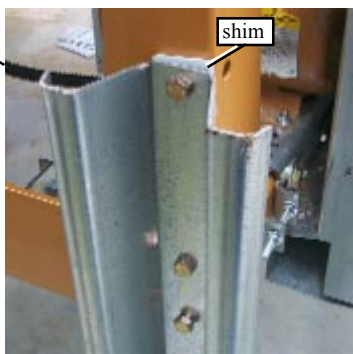
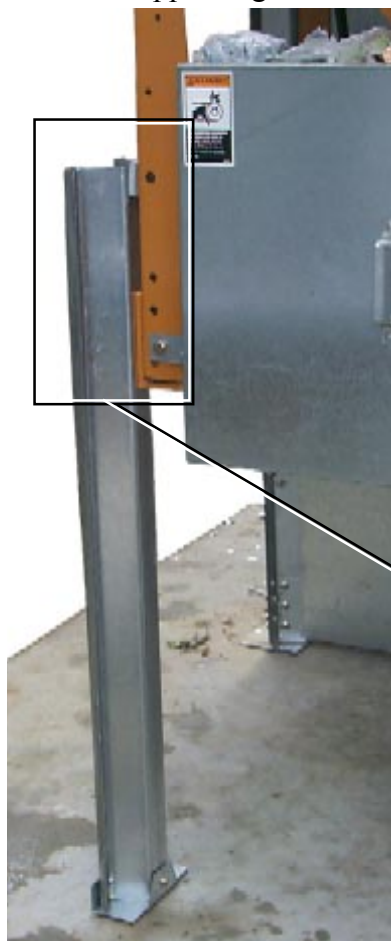


BLK-10057

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INSTALLING SUPPORT LEGS

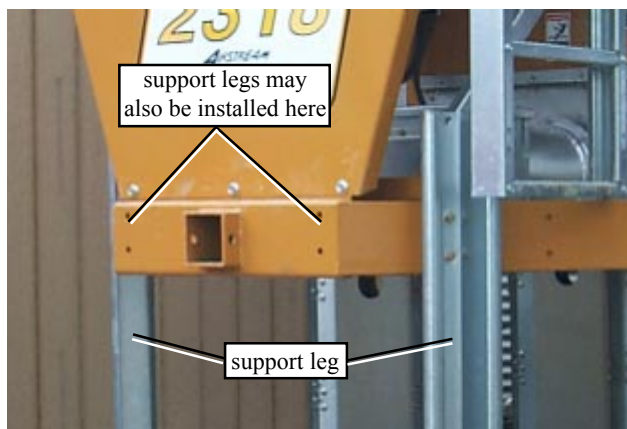
Left rear support leg.



Right rear support leg.



7. **NOTE:** If the dryer is a twenty foot dryer then this step is not required. Use 1/2"-13 x 1 3/4" bolts (S-3883), and 1/2"-13 lock nut (S-6493) to attach support leg assemblies to rear corners of the dryer frame. Use the grey shim (D01-1221) to fill the gap between the support leg and dryer frame. On the right side it may be necessary to remove the cotter pin and slide the clean out door pivot rod forward enough to insert the top bolt.



8. Use 1/2"-13 x 1 3/4" bolts (S-3883), and 1/2"-13 lock nut (S-6493) to attach support legs to hitch weldment as shown in left photo.

Once installed anchor the support legs to the foundation.

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LIFTING UPPER MODULE

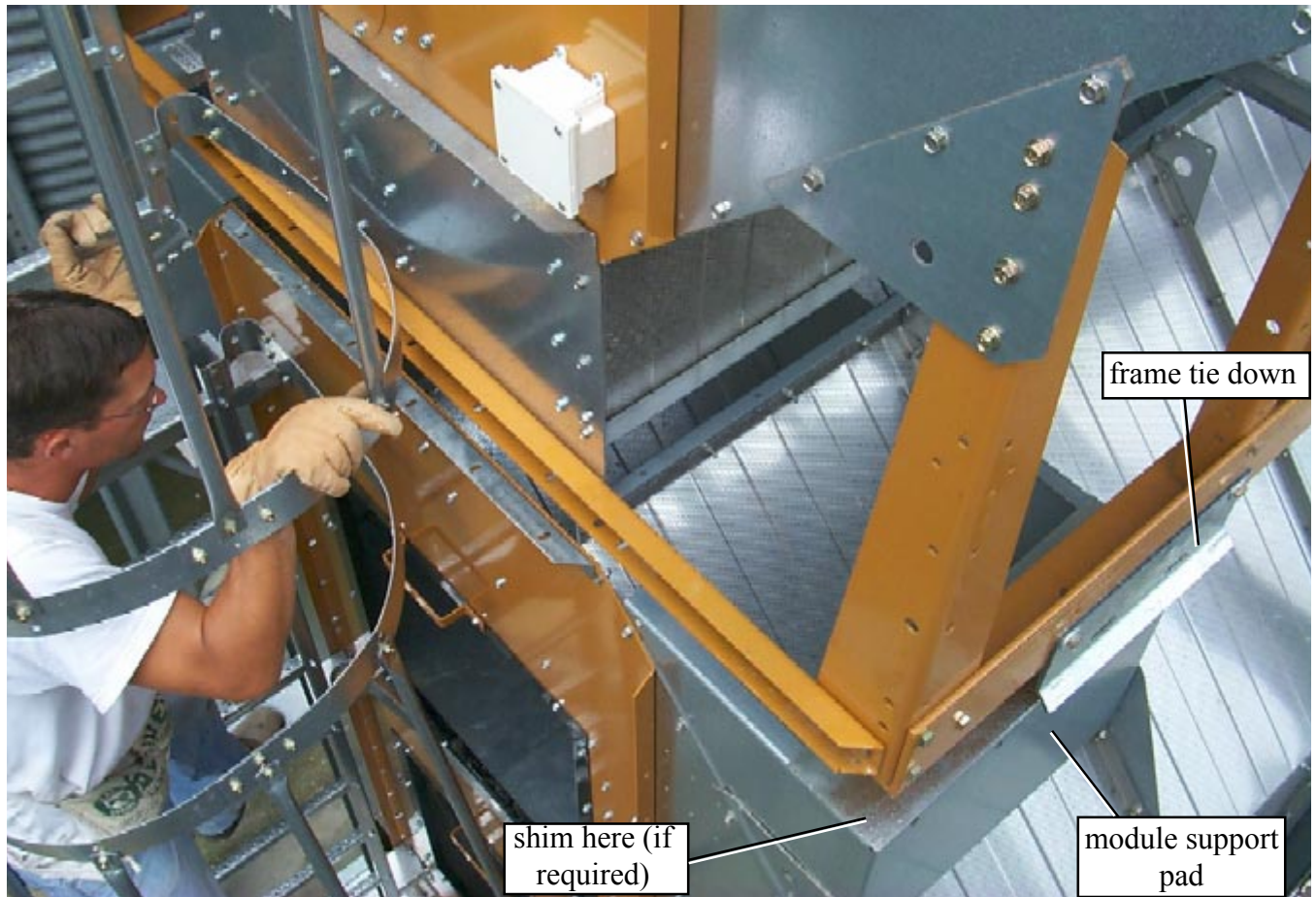


9. Attach a frame tie down (D61-0011) at each of the corners of the upper module frame using existing and supplied 1/2" bolt (S-3728), washer (S-2120), and nut (S-6493) as shown in photos above.

10. Lift upper module and move into place over lower module. Use a guide line to keep module steady while it is being moved.

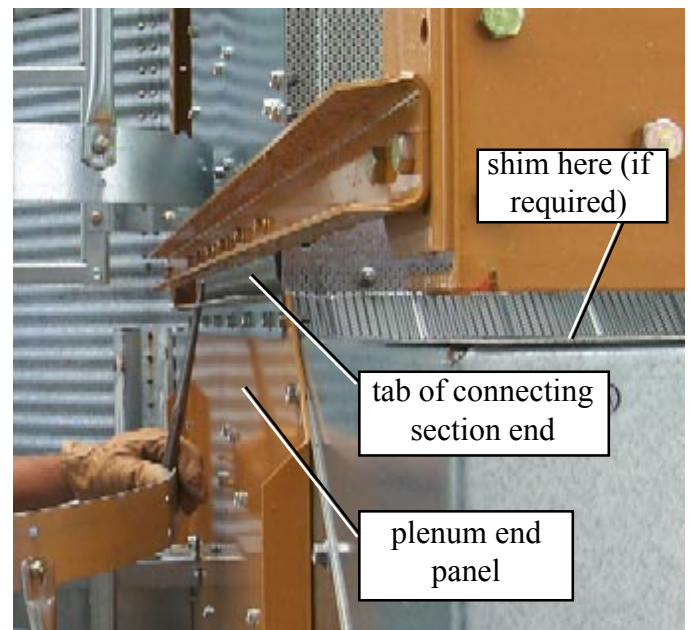
MULTI - MODULE STACKING MANUAL

SETTING UPPER MODULE IN PLACE



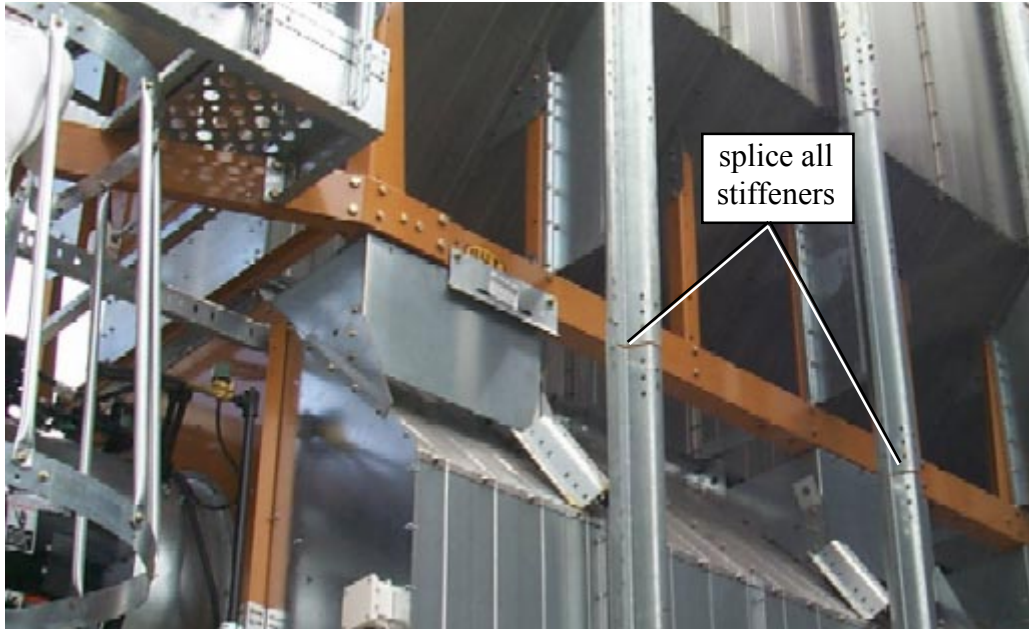
11. Once upper module is in place over lower module slowly start to lower upper module while making sure that the frame tie downs (D61-0011) come down to the outside of the module support pads they will later be bolted to. Also you will notice that the connecting section end (factory installed) has a tab that extends below module frame, this tab will slide into the lower module just behind the plenum end panel.

12. When the upper module is set in place and the crane is bearing none of the weight check the upper module for level. It may be necessary to shim the upper module to level it. If the upper module is not level then place module support shims (D61-0089) on the module support pads (it may be necessary to raise the upper module a little to place these shims).



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SECURING UPPER MODULE

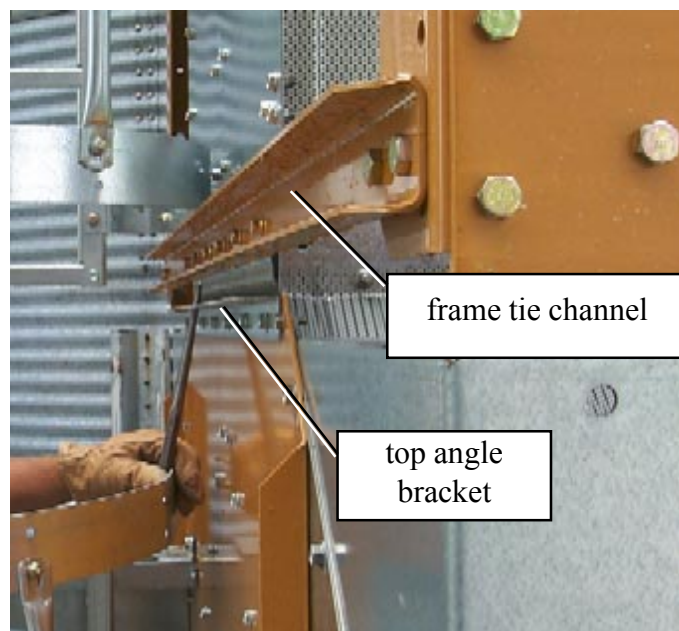
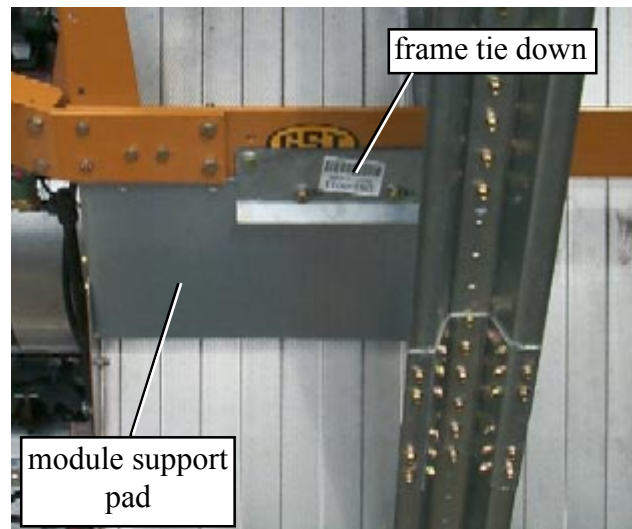


13. Once the upper module is set and level use 1/2"-13 x 1 1/2" bolts (S-3728), 1/2" washers (S-2120), 1/2"-13 lock nut (S-6493) and bolt the frame tie down (D61-0011) on the upper module to the module support pad of the lower module.

14. Use 3/8"-16 x 1" (S-7927), 3/8"-16 nut (S-968), and a stiffener splice (SS-7053) to splice the stiffeners of the lower module to the upper module.

15. Use 3/8"-16 x 1" (S-7927), 3/8"-16 nut (S-968) to connect the top angle bracket of the lower module to the frame tie channel of the upper module. There may be a small gap between these two parts, if so, the 5/16" bolts connecting the top angle bracket to the lower module can be loosened just enough to adjust the height of this bracket (the holes are slotted). Be careful not to loosen the bolts too much because as you will see there is no convenient way to get to the nuts on these bolts. If the bolts are loosened just enough to adjust this bracket they can be retightened without having to hold the nut on the other side.

16. If you are stacking a three module dryer perform step 9-15 for placing the third module.





Electrical Safety

Provision of an adequate and safe power supply to the Stack Dryer unit is essential to your safety. GSI recommends that a competent and qualified electrician undertake all electrical wiring. All wiring is to be installed to the National Standards and Regulations relevant to your Country and Region.

A Mains Power Isolator should be installed with the Stack Dryer unit and is essential for your safety. This should be installed as indicated in the enclosed installation instructions and in accordance with the relevant Directives in force.

- Connect wiring between modules making sure all connections are secure.
- Contact the Electrical Service Provider to connect power.



Fuel Safety

Provision of an adequate and safe fuel supply to the Stack Dryer unit is essential to your safety. GSI recommends that a competent and qualified fuel serviceman undertake all fuel connections. All fuel connections are to be installed to the National Standards and Regulations relevant to your Country and Region.

A Mains Fuel Isolator should be installed with the Stack Dryer unit and is essential for your safety. This should be installed as indicated in the enclosed installation instructions.

- Connect fuel connections between modules making sure all connections are secure and no leaks are present.
- Contact the Fuel Service Provider to connect fuel supply.

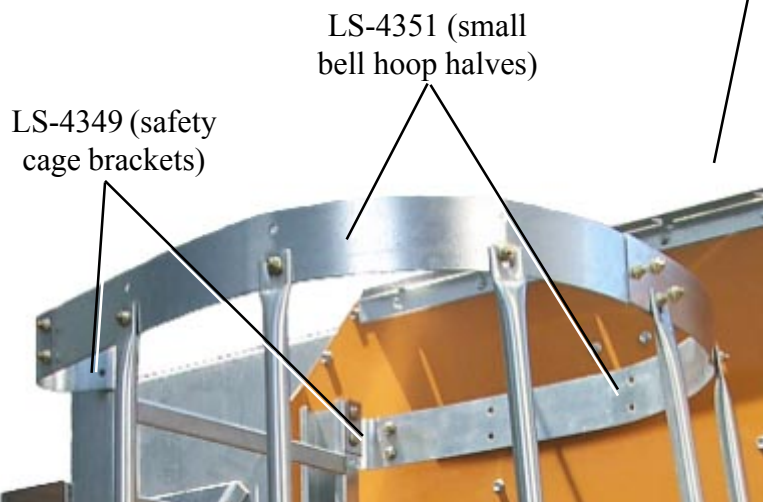
MULTI - MODULE STACKING MANUAL

APPENDIX B - LADDER CAGE INSTALLATION

1. To install the safety cage for the rear ladder of the bottom module first connect two large bell hoop halves together (LS-4352) together, and connect two small bell hoop halves (LS-4351) together. Then attach a safety cage bracket (LS-4349) to each end of those assemblies. Use 5/16"-18 X 3/4" bin bolts (S-275), and 5/16"-18 nuts (S-3611), see photos at the bottom.

2. Use five 44" safety cage vertical supports (LS-4353) and connect the small and large bell hoops assembled in the previous step using 5/16"-18 X 3/4" bin bolts (S-275), and 5/16"-18 nuts (S-3611). **NOTE: Leave one side of this assembly open so the rear access door on the dryer will not be obstructed.**

3. Now locate the safety cage bolt holes on the ladder (see photo right). Use 5/16"-18 X 3/4" bin bolts (S-275), and 5/16"-18 nuts (S-3611) to install safety cage onto the ladder.



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APPENDIX B - LADDER CAGE INSTALLATION

4. Assembly the front ladder safety cage the same way and with the same hardware only use seven 44" safety cage vertical supports (LS-4353). See photo on the right.



5. Assembly eight small hoop halves to make four small safety cage hoops. Connect these hoops together with five 34" vertical supports (D61-0110), and ten 44" vertical supports (LS-4353) to make the cage assembly for the upper module rear ladder shown in the photo on the left.

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