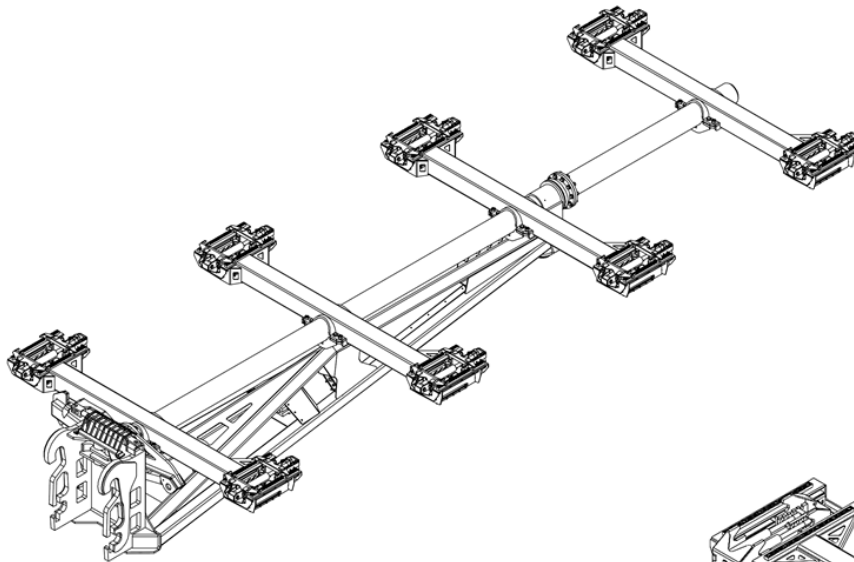


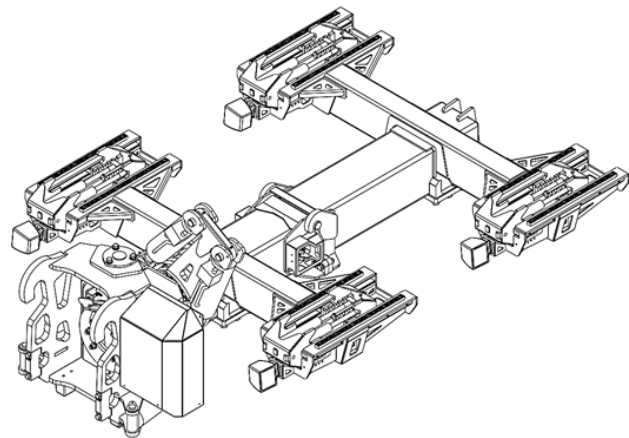
# InnovaTech MezzMaster Series

## EQUIPMENT OPERATION & SAFETY

MZM-Series



MZM-100



MZM-150

**INNOVATECH**  
ENGINEERED TO DO MORE.

**MZM-Series**

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MZM-MNL01-R04

# Manual Version

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## Document Info

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This manual is intended as a basic source of information on the safe operation and maintenance of InnovaTech Manufacturing's MezzMaster Series, including **MZM-100 and MZM-150** and their upfits. This manual provides general information as well as specific warnings, instructions, and information that operators using this equipment must read, understand, and follow to safely accomplish the panel positioning process.

This manual is not intended as an all-encompassing "rule-book" on operation safety. Instead, InnovaTech Manufacturing presents this information as a reference and guide only. It is the purchaser's and operator's responsibility to identify specific safety hazards and determine proper procedures to prevent those hazards from inflicting injury. The user bears ultimate responsibility for following the warnings, instructions, and information contained in this manual as well as all applicable regulations, safety rules of their employer, and/or any state or federal law.

InnovaTech Manufacturing believes that safety is paramount in the operation of its equipment. A copy of this manual should be made available to all persons involved in the hoisting and rigging process. Copies of this manual are also available online at <https://innova.tech>.

All information in this manual is based on the latest product information at the time of publication. However, there may be design improvements from time to time so that photographs, text, and sketches within the body of this manual may not exactly match your equipment. InnovaTech Manufacturing's responsibility, financial or otherwise, for any consequences arising out of the use of this manual or its equipment is limited by our product warranty. The information contained herein is subject to change, and revisions may be issued to advise of such changes. InnovaTech reserves the right to make product changes at any time without obligation.

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If you have any questions or concerns about the content of this service and maintenance guide or, if you would like to request updated information, we want to hear from you.

Please contact us:

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The InnovaTech Manufacturing's Mezzmaster is under US PATENT PENDING protection.

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# Overview

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## Innovatech Panelization System

The InnovaTech Panelization System is an industrial equipment solution designed to work in conjunction with other common construction equipment to create a safe and efficient workplace for employees involved in the erection of steel structures.

A key piece of equipment involved in the InnovaTech Panelization System is the InnovaTech MezzMaster. This equipment is paired with standard material handling equipment such as telescopic boom forklift handlers, and cranes, as well as welding equipment strategically positioned to streamline the assembly of panelized building modules. So, utilizing assembly line principles, worker safety and efficiency is vastly improved.

The telescopic handler fitted with the MezzMaster is best utilized by working in conjunction with the InnovaTech Panelization Table for templating and constructing the mezzanine floor modules and roof modules. Once a module is assembled on the Panelization Table (PT-100 or newer), the telescopic handler positions the MezzMaster underneath the module to lock onto the crossbeams or joists which are temporarily being supported by the Panelization Table. Paired with the standard movements of the telehandler, the navigation of the boom forklift to the location of installation is eased by the MezzMaster being able to position the roof or floor module at an angle sideways to maneuver between columns, as well as raising the module up between columns to the point of installation. The MezzMaster attachment is designed to firmly lock onto each cross beam or truss and act as support while module is raised to its mounting position within the pair of girders. In addition to the standard boom rotation, the MezzMaster is designed with an additional pivot motion that is used to further enhance the ability to position the module for final alignment and bolting.



## InnovaTech MezzMaster

The MezzMaster is a jib attachment for a telehandler, which provides additional capability to lock onto and handle a beam(s) or joist(s) that are pre-constructed to form a module. The module is typically composed of two or more I-beams arranged at a set spacing with corrugated steel deck sheets attached to the top flanges. The jib is adjusted to match the spacing and number of the beams composing the module. It is especially designed to lock onto the module at the lower flanges of each I-beam and raise by means of the telehandler boom, navigate to position, and fine-tune its position for bolting and to the building columns and girders.

By traditional erection methods, a crane or telehandler must raise or hoist individual joist cross beams into position where a worker must install structural fasteners to each end of the joist cross beam, attaching them to girders supported by the building columns. After a sufficient number of joist cross beams are installed, a decking crew must then receive a load of corrugated decking material via crane or boom forklift and spread and fasten the decking material over the cross beams. It is apparent that this method is a dangerous and laborious task. Great physical labor is required in climbing to position, and bolting cross beams, as well as shifting and attaching the decking. Both tasks expose a number of workers to a serious fall risk.

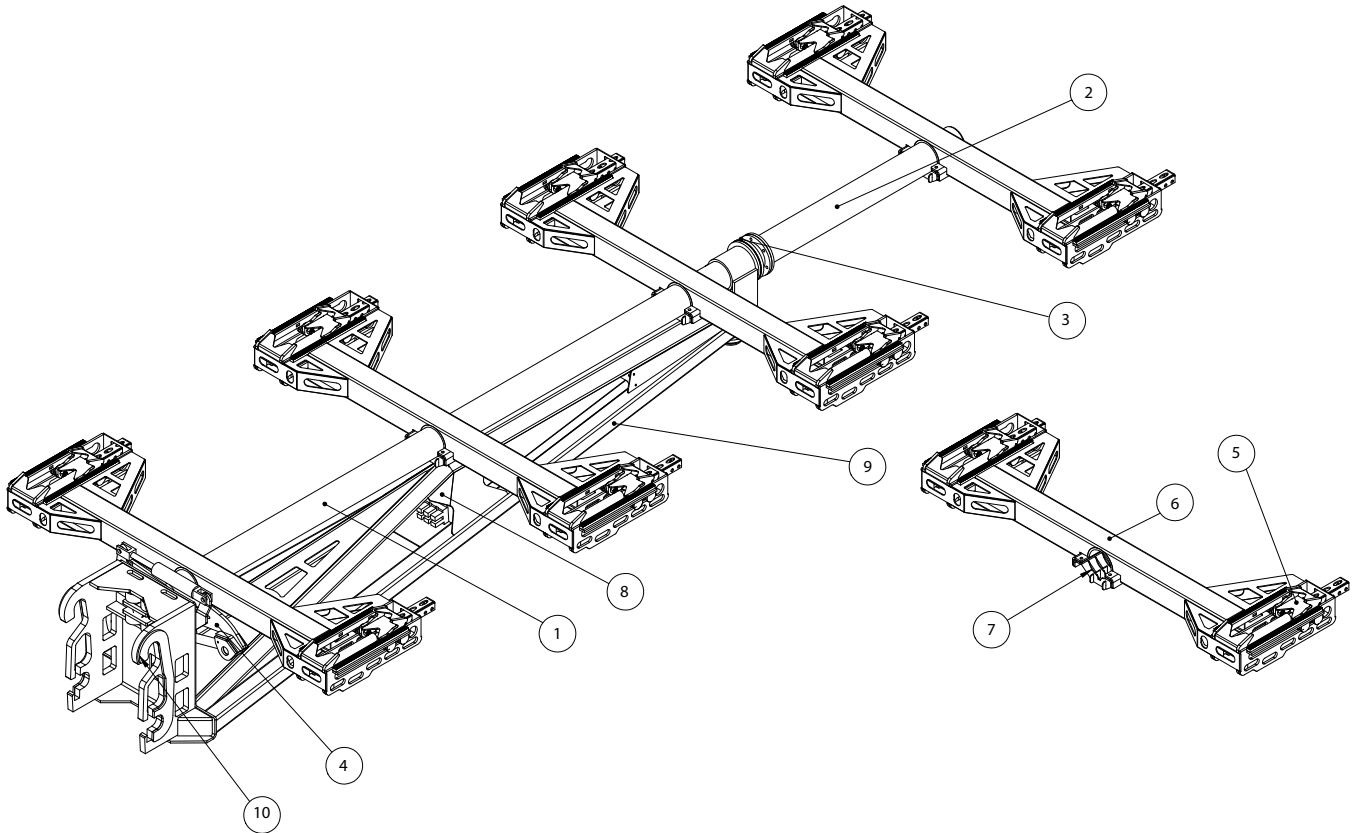
The MezzMaster is designed to enable the performance of most of this operation with crew and materials at ground level, which reduces the number of workers to fall risks, increases efficiency, and lowers the labor requirements.

### *Safety Features*

The main aspect of MezzMaster's safety centers around its ability to lock onto the I-beam sets that it will be handling.

- The hydraulic circuit controls will not allow deactivation of the clamp action if the MezzMaster is not level.
- Each hydraulic cylinder has a pressure switch monitor which ensures a tightly engaged clamp position.
- An LED light indicates to the operator when the clamp is engaged or disengaged.

## MZM-100 Nomenclature



1. **Axle** - A large tube with a keyway that swivels and rotates the array of Clamp Arms (6).
2. **Axle Extension** - An accessory that extends the axle 5'-8". Note: Unit #781 (Serial Number MZM110-09-21020129) has been upfitted for an Axle Extension accessory (781A) that extends the axle 12'-0".
3. **Axle Extension Connection** - A bolted flange connecting Axle Extension (2) to Axle (1).
4. **Axle Rotation Mechanism** - The load-bearing and pivot point for rotation of Axle (1).
5. **Beam Clamp** - The adjustable clamping mechanism for attaching to, and handling an I-beam or open-web joist of the roof or mezzanine panel.
6. **Clamp Arm** - The weldment that attaches anywhere along Axle (1) to which Beam Clamps (5) are attached.
7. **Clamp Arm Connection** - The saddle clamp that aligns and fastens Clamp Arm (6) to Axle (1)
8. **Hydraulic Valve Bank** - The electrically controlled hydraulic valve assembly.
9. **Jib Frame** - The structural frame that supports Axle (1).
10. **Telehandler D-Carriage Connection** - The telehandler attachment point of MZM-100.

## MZM-100 Specifications

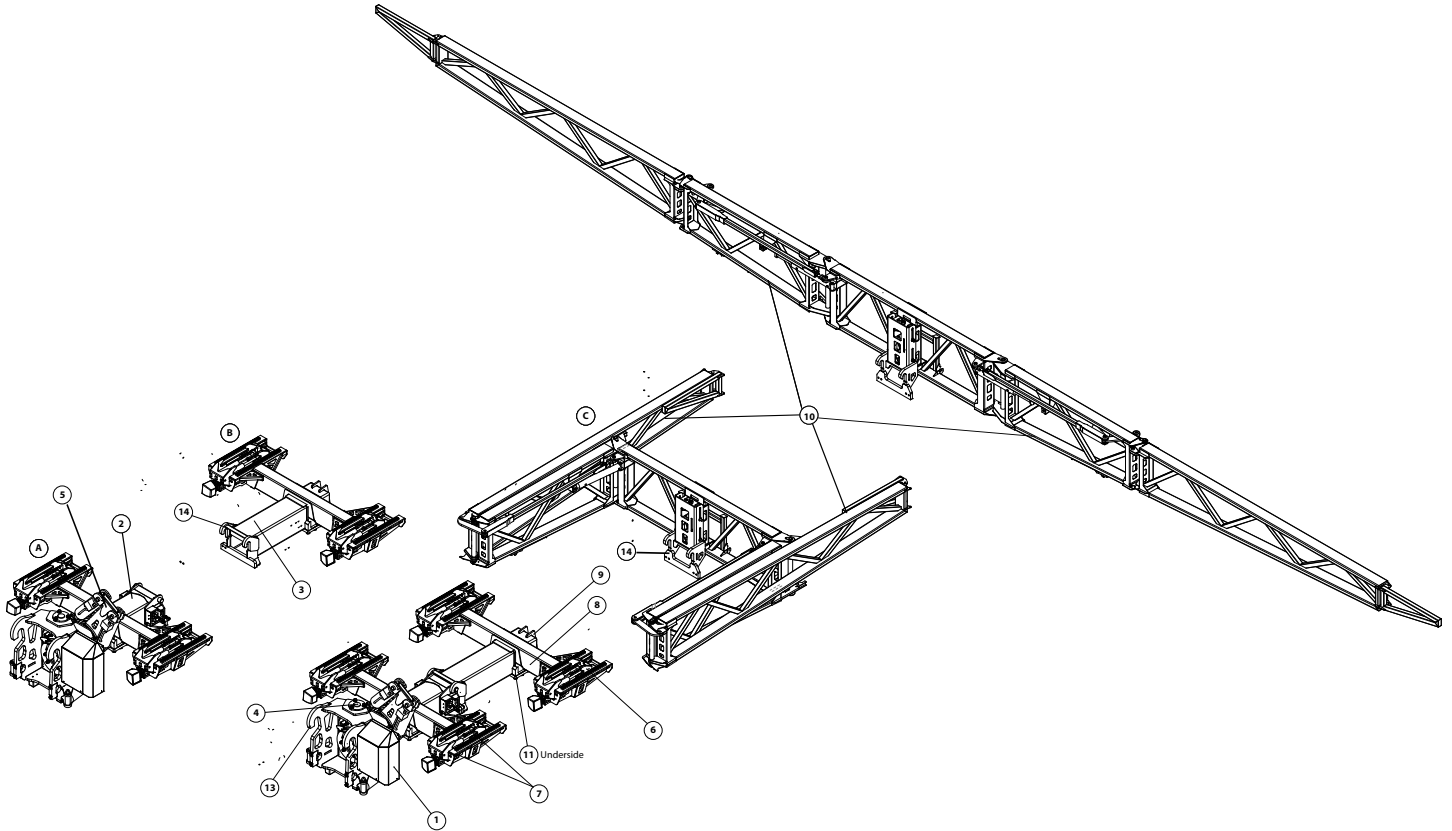
Dimensions, weights, and capacities are listed below.

Description	Base	with 5'-8" Extension	with 12'-0" Extension**
<b>Transport Weight</b>	4,100 lbs	4,650 lbs	5,010 lbs
<b>Hydraulic System</b>	Auxiliary Hydraulic Power (Source: Telehandler)	*	*
<b>Panel Lift Capacity</b>	15,000 lbs	10,000 lbs	7,000 lbs
<b>Jib Lift Capacity</b>	4,000 lbs	*	*
<b>Overall Length</b>	16 ft - 8 in	18 ft - 0 in	24 ft - 4 in
<b>Overall Width</b>	8 ft - 4 in	same	same
<b>Overall Height</b>	2 ft - 11 in	same	same
<b>Axle Rotation Angle</b>	-7° +45°	same	same
<b>Clamp Arm Pivot Angle</b>	4.75° (9.5 in L/R stroke @ quick-connect)	same	same
<b>Beam Clamp Weight</b>	125 lbs	same	same
<b>Clamp Arm Weight</b>	150 lbs	same	same
<b>Beam Clamp Jaw Capacity</b>	11 inch stroke (Accepts flange sizes 3-14 inch)	same	same
<b>Quick Connect Type</b>	Telehandler D-Carriage (Xtreme MFG. Telescopic Handler XR-3034, XR-2450)	*	*
<b>Hydraulic Connection</b>	Parker 660 Series, size 8	same	same

\*not applicable to configuration

\*\*Unit #781 (Serial Number MZM110-09-21020129) has been upfitted for an Axle Extension accessory (781A) that extends the axle 12'-0".

## MZM-150 Nomenclature



### A. Axle Assembly

### B. Axle Extension Assembly

### C. Deck Support Assembly

1. **Automation Control Box** - A box containing automation hardware of MZM-150
2. **Axle** - A large tube with a keyway that swivels and rotates the array of Clamp Arms (8)
3. **Axle Extension** - An accessory that extends the number of Clamp Arms (8) that can be installed and the total reach of Axle (2)
4. **Axle Rotation Mechanism** - The load-bearing and pivot point for rotation of Axle (2)
5. **Axle Torque Arm** - The mechanical lever that attaches to the hydraulic cylinder to power the rotary motion of Axle (2)
6. **Beam Clamp** - The adjustable clamping mechanism for attaching to, and handling of, an I-Beam or open-web joist of the roof or mezzanine module
7. **Beam Clamp Adjustment** - A weldment with adjustable points that set the jaw opening of Beam Clamp (6)
8. **Clamp Arm** - The weldment that attaches anywhere along Axle (2) to which Beam Clamps (6) are attached
9. **Clamp Arm Connection** - The saddle clamp that aligns and fastens Clamp Arm (8) to Axle (2)
10. **Deck Support Arms** - Parts of Deck Support Assembly that support decking of a single-beam module
11. **Jib Pick Point** - A jib feature for hoisting materials or other items
12. **Quick-Connect MZM-150 to Telehandler D-Carriage** - The telehandler attachment point of MZM-150
13. **Quick-Connect Axle Extension to Axle** - Connection of Axle Extension (3) to Axle (2)
14. **Quick-Connect Deck Support to Axle Extension** - Connection of Deck Support Assembly (11) to Axle (2) or Axle Extension (3)



## MZM-150 Specifications

Dimensions, weights, and capacities are listed below.

Description	Base	Extended	Deck Support
<b>Net Weight</b>	4,100 lbs.	4,650 lbs.	5,000 lbs.
<b>Hydraulic System</b>	Auxiliary Hydraulic (Power Source from Telehandler)	*	*
<b>Panel Lift Capacity</b>	12,500 lbs.	same	*
<b>Jib Lift Capacity</b>	4,000 lbs	4,000 lbs	*
<b>Overall Length</b>	6 ft 3 in	11 ft 2 in	7 ft 6 in
<b>Overall Width</b>	3ft 10 in	7 ft 6 in	Folded - 10 ft 6 in Extended - 55 ft 4 in
<b>Overall Height</b>	4 ft	same	same
<b>Clamp Arm Axle Rotation Angle</b>	-10deg / +60deg	same	same
<b>Clamp Arm Pivot Angle</b>	25deg Overall Motion	same	same
<b>Beam Clamp Assembly Weight</b>	750 lbs.	same	same
<b>Clamp Arm Axle Extension Weight</b>	365 lbs.	same	same
<b>Clamp Arm Axle Extension Pick Point Lift Capacity</b>	*	Limited 5,000 lbs.	*
<b>Deck Support Capacity</b>	*	*	1,800 lbs
<b>Beam Clamp Jaw Capacity</b>	Adjustable 1.5-inch increments from 8-inch through 18-inch flange sizes (8 in stroke)	*	*
<b>Quick Connect Type</b>	Telehandler D-Carriage (Xtreme MFG. Telescopic Handler XR-3034, XR-2450)	Extension to Base	Deck Support to Base or Extension
<b>Hydraulic Connection</b>	Parker 660 Series, size 8	same	*

\*not applicable to configuration

# Safety

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This equipment was specifically designed to enhance safety in the steel construction work environment. InnovaTech endeavors to maintain a positive reputation in the industry by preventing accidents and creating a safe, efficient, and productive work environment.

## Pre-Task Safety Analysis

Although the MezzMaster is designed to enhance safety, it remains important for workers to carefully analyze the work to be performed. Identifying work methods, planning actions, communicating clearly, maintaining a positive attitude, teamwork, and compliance to worksite authority, all contribute to a safe worksite.

Use of the MezzMaster should be included in a steel erection pre-task safety analysis at the beginning of each shift. Some topics to consider during pre-task safety analysis may include weather conditions, worksite surface conditions, underground features, site specific plans, and restricted access zones. This Equipment Operation and Maintenance Manual provides information needed to safely operate the MezzMaster.

### Notice

**This Safety, Equipment Operation and Maintenance Manual provides information needed to safely operate the MezzMaster. This manual should be considered an appurtenant part of the MezzMaster, and kept in the protective enclosure located on the attachment.**

**Before operating the MezzMaster, read this operators manual completely and carefully to understand the safety instructions and the operation of controls and safety equipment. You must comply with all DANGER, WARNING, and CAUTION notices. Refer to the Safety Markers section for detailed information on safety marker definitions.**

**Safety information provided in this manual is a basic guide to help improve safety and prevent accidents. InnovaTech Manufacturing cannot foresee every circumstance that might involve a potential hazard. Warnings in this manual and on the MezzMaster do not encompass all potential safety hazards. You are responsible for safe operation of the Panelization System and all attachments. You must satisfy yourself that the techniques, operating procedures, work methods, and systems are safe and will work for your situation.**

**The safety of everyone around the MezzMaster depends significantly on your knowledge and understanding of all correct and safe operating practices and procedures. You can help prevent accidents by remaining alert and recognizing potentially hazardous situations.**

**Follow State and Federal health and safety rules and/or local regulations for operating and maintaining the MezzMaster. This manual does not replace any laws and regulations. The operator is required to comply with all applicable laws and regulations.**

## Safety Markers

Safety Markers are provided to remind the operator of hazardous situations. InnovaTech Manufacturing provides these symbols to help inform all operators, regardless of reading and language skills, of as many potential hazards as possible. These symbols cover many, but not all, potential dangers and hazards associated with operating the MezzMaster.

Make safety the priority while operating the MezzMaster. Learn and follow all safety messages in this manual and on MezzMaster labels to prevent death, serious injury, or equipment damage.

The following pages include a list of some of the safety symbols that may be used on this MezzMaster.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO THE POTENTIAL PERSONAL INJURY HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO AVOID POSSIBLE INJURY OR DEATH.

### CAUTION

INDICATES A POTENTIALLY HAZARDOUS SITUATION. IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. IT MAY ALSO ALERT AGAINST UNSAFE PRACTICES. THIS DECAL WILL HAVE A YELLOW BACKGROUND.

### WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION. IF NOT AVOIDED COULD RESULT IN SERIOUS INJURY OR DEATH. THIS DECAL WILL HAVE AN ORANGE BACKGROUND.

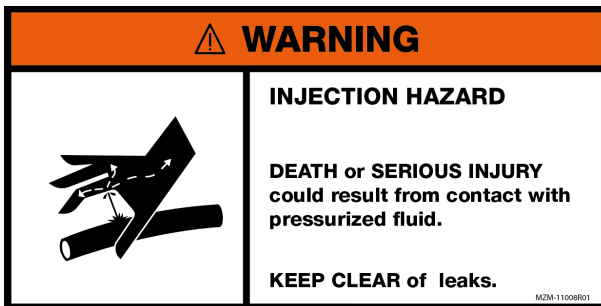
### DANGER

INDICATES AN IMMINENTLY HAZARDOUS SITUATION. IF NOT AVOIDED, WILL RESULT IN SERIOUS INJURY OR DEATH. THIS DECAL WILL HAVE A RED BACKGROUND.

## Hazards

Here is a list of potential hazards to consider. Listed hereafter are various warning decals that may be affixed to the MezzMaster:

- Hydraulic Leak Injection. Pressurized fluid streams are dangerous and potentially lethal.
- Overhead/Suspended Loads. Avoid bringing loads above where people are standing or working.
- Unbalanced Load. Before handling a load, follow procedures to best determine the center of gravity of the load.
- Beam Clamps not connected, adjusted improperly, or jammed/inactive.
- Collision Hazards. Avoid sudden changes of direction and keep within established travel zones.
- Pinch Points. Moving components can pose a hazard to yourself and others.



## Operator Qualifications

All operators must be trained before operating the MezzMaster. Training standards must be approved by InnovaTech. Operators must use the MezzMaster according to ALL appropriate safety regulations. Operator trainees must remain under constant observation and supervision of an experienced operator. Operators must be in good physical and mental condition, with appropriate reflexes, reaction time, vision, depth perception, and hearing.

Operators must read this manual completely and carefully to understand the safety instructions and the operation of controls. A brief description of controls, indicators, and instruments are provided as a convenience for the operator. These descriptions DO NOT provide complete operation instructions, and should not be substituted for proper operator training.

Operators must have the required training, skills, and tools to perform installation, operation, maintenance, or repair procedures properly and safely. The operator is responsible to operate and maintain the MezzMaster (and attachments) according to manufacturer's instructions.

If any doubt or question arises about the correct or safe methods for operating the MezzMaster, operators must not proceed until obtaining expert assistance from a qualified person.

Operators must understand and comply with all DANGER, WARNING, and CAUTION notices. (Refer to the Safety Markers section for detailed information on safety marker definitions.)

### WARNING



**The Panelization System is potentially dangerous if proper safety procedures are not followed. Workers who operate, maintain, or work near the MezzMaster can be at risk of run over incidents or can be crushed or caught by the MezzMaster or its parts which could result in death or serious injury if the MezzMaster is not properly operated or maintained.**

Read the Operation and Safety Manual BEFORE operating the MezzMaster. Follow all safety instructions and labels. Only operate the MezzMaster if you understand the safety instructions and warnings in all applicable manuals and technical publications. Always follow all State and Federal health and safety laws and/or local regulations. You must have the required training, skills, and tools to perform installation, operation, maintenance, or repair procedures properly and safely. Make sure the MezzMaster and attachments will not be damaged or made unsafe by any procedures you choose.

BEFORE operating the MezzMaster, do the following:

- Read the Operation and Safety Manual
- Read all the Safety Labels on the MezzMaster
- Clear all people out of the way of any moving parts
- Establish an erection path and restricted access zone

Educate yourself and practice safe use of the MezzMaster controls in a safe, clear area, BEFORE you operate this MezzMaster on a worksite.

It is your responsibility to observe applicable laws and regulations and to follow the manufacturer's instructions on the MezzMaster operation and maintenance.

## Personal Protection Equipment (PPE)

PPE should be utilized according to the type of work and environmental conditions a worker is exposed to. These items may include reflective vests, gloves, helmets, eyewear, face shields, hearing protection, respiratory protection, and fall protection.

## Pre-Operation Inspection Checklist

Perform a pre-operation inspection and functional tests at the beginning of each work shift. Perform the Visual Inspection first. Visual Inspection must be performed while Mezzmaster is disconnected from telehandler. **DO NOT** perform the pre-operation inspection with the engine running or hot. Contact with moving or heated parts could cause death or serious injury.

- Perform the pre-operation inspection and functional tests in an open area and away from any other obstacles or equipment. Inspections and functional tests may require assistance. Keep the assistant visible and a safe distance from the MezzMaster to prevent death or serious injury.
- Become familiar with all safety and hazard labels, regulations, and procedures. Make sure all proper safety and hazard labels are attached to the MezzMaster and remain legible.
- A brief description of controls, indicators, and instruments is provided as a convenience for the operator. These descriptions **DO NOT** provide complete operation instructions.
- Read and understand the entire manual to prevent death, serious injury, or equipment damage.
- Keep fingers and feet away from moving parts or pinch points to prevent pinching or crushing. **DO NOT** allow anyone between the tires and the MezzMaster frame while operating the MezzMaster. Doing so can result in death or serious injury.

### Visual Inspection

Walk around the **ENTIRE** MezzMaster while visually performing the pre-operation inspection.

- Verify “Do Not Operate” tags (lock-out, tag-out) have not been placed on the MezzMaster.
- Verify Operation and Safety Manual is in the protective case and legible.
- Check for loose or missing bolts and nuts.
- Check hydraulic reservoir sight gauge on the tele-handler for proper fluid level. Add hydraulic fluid, if necessary.
- Check for fluid leaks.
- Check electrical wires and connectors.
- Check that all labels are present and legible. Replace any damaged or illegible labels.
- Check for cracked or bent members on the following items:
  - Main frame
  - Clamp arms
  - Torque arms and cylinder connect points
- Inspect cabling and hoses for snags and kinks

### Functional Test

- Unclamp and tilt (verify safe clamp)
- Test clamp, tilt, and swivel actions (observe full motion)

## Modifications

### WARNING

Modifications to the MezzMaster or attachments could affect capacity and/or stability which could result in death or serious injury. **DO NOT** make modifications to the MezzMaster or attachments without prior written approval from InnovaTech, LLC. Where such authorization is granted, capacity, operation, and maintenance instruction plates, tags, or labels shall be changed accordingly.

- Unauthorized modifications or alterations will void the warranty.
- **DO NOT** modify, disable, or bypass any safety devices.
- **DO NOT** burn or drill holes in attachments.

## Connecting/Disconnecting

### WARNING

Failure to use proper safety procedures when connecting and disconnecting the MezzMaster could result in death or serious injury.

- Keep connections clear of dirt, mud, snow, ice, debris, and other hazards.
- **DO NOT** climb beneath equipment without proper support columns in place.
- **DO NOT** use the controls as hand holds or steps. Avoid accidentally engaging or disengaging a control.
- **DO NOT** jump from the MezzMaster. Clothing can get caught. Landing on uneven surfaces could result in death or serious injury.

## Worksite Safety

### WARNING

Use proper safety procedures and avoid hazardous situations while operating the MezzMaster to prevent death, serious injury, or property damage.

- Keep the work site clear of any hazards while operating the MezzMaster.
- Check the work area for debris, drop-offs, loose soil conditions, and overhead power lines, and temporary bracing.
- Follow load charts to ensure stability.
- Know about underground hazards.
- **DO NOT** allow bystanders in the work area.
- Follow established site-specific safety plans for erection paths on the work site.
- Follow work site signs and signals.
- Stop for poor visibility conditions, such as dust, smoke, fog, etc. Wait until visibility improves before continuing.
- Operate the MezzMaster in an enclosed area only if there is a ventilation system capable of routing hazardous fumes outside. Engine exhaust contains products of combustion that could cause death or serious injury.

- **DO NOT** operate the MezzMaster if you are using drugs, alcohol, or any medication that might impair your judgment or ability.
- You must be 18 years of age or older to operate the MezzMaster.

### **WARNING**

**Check warning indicators and gauges frequently during operation.** If a warning indicator is illuminated or a gauge shows abnormal readings, stop use of the MezzMaster, follow proper shut down procedures. Have a qualified mechanic service or repair the MezzMaster before placing it into service again. Ignoring warning indicators can result in death, serious injury, or property damage.

## Maintenance

Follow the manufacturer's instructions for proper maintenance to make sure the MezzMaster continues to meet manufacturer's specifications. Failure to properly maintain the MezzMaster can result in improper performance, which could cause death, serious injury, or property damage.

- Before performing any maintenance or repair, **completely disconnect Mezzmaster from telehandler.**
- **DO NOT** operate the MezzMaster attachment if it requires repair.
- Make sure basic maintenance is completed and service problems are corrected.
- Death or serious injury can result from operating the MezzMaster before all repairs have been made and all proper maintenance is completed.

## Support Equipment

In conjunction with the Panelization System, workers should adhere to the safety requirements and the proper operation and maintenance of support equipment such as welders, fastening tools, lifting equipment, material handling equipment, etc., as well as maintaining a realistic understanding of your own physical strength and endurance.



# Setup

A general overview describing steps to follow before utilizing the MezzMaster Jib attachment.

## Connecting/Disconnecting

All hydraulic and electrical communication connections are contained within the cavity of the Jib Attachment Quick Connect. When making connections and attaching the MezzMaster to the telehandler, be sure all cables and hoses are routed properly to avoid damage. Insert all locking pins back into their proper positions.

**NOTE: Change-Over 2-Position Switch must be actuated according to the accessory attached to the telehandler.** See Auxiliary Controls table.

## Beam Clamp Setup MZM-100, MZM-150

Installation of the Beam Clamps should be performed by someone who is trained in this procedure. Care must be given to position the Jib Arms according to the layout of the building module. Carefully set the distance between the proper number of Beam Clamps to match the required layout. The weight of the Beam Clamp Assembly is approximately 400 lbs. Use proper rigging techniques during setup. Be sure all Jib Arm Clamp Saddles are secure. Test all controls and connections before proceeding with material handling. Before raising first panelized module, visually inspect each Beam Clamp to assure that each is securely locked onto the I-beams. Set the size adjustment of the Beam Clamps to match the width of the flange of the I-beam being handled. See decal below for size range.

**⚠ Warning: Failure to test connections and verify jaw pin settings could result in Beam Clamps not being connected, adjusted properly, or jammed/inactive, leading to possible equipment damage, severe injury, or death.**

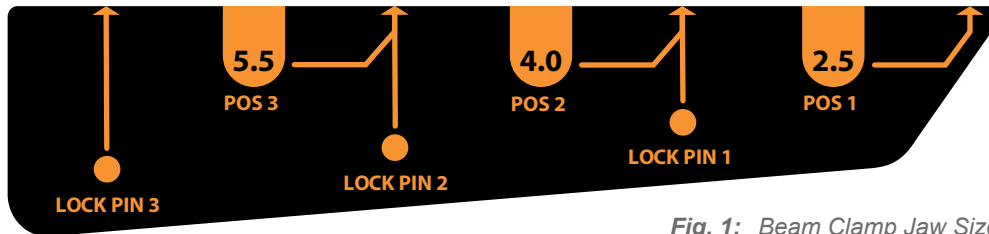


Fig. 1: Beam Clamp Jaw Size Decal

# Operation

## Auxiliary Switches

### MZM-100

There are two switches located within the operator cab of the telehandler. The Beam Clamp Auxiliary Switch is located near the Joystick Controls for convenient and safe activation of the Beam Clamp positions. The Change-Over Auxiliary Switch is located below the driver controls. The Change-Over Switch performs the function of disabling the controls associated with the MezzMaster and routes the controls to the four-way switch of the joystick to operate the Swing Carriage Attachment (see Joystick Controls table).

Description	Action 1	Action 2
Clamp (2 Position Switch)	Position 1: Beam Clamps Engaged (Green LED on Joystick)	Position 2: Beam Clamps Disengaged (Red LED on Joystick)
Change-Over (2-Position Switch)	Position 1: MezzMaster Jib	Position 2: Swing Carriage

## MZM-150

Description	Action 1	Action 2
<b>Change-Over (2-Position Switch)</b>	Position 1: MezzMaster Jib	Position 2: Swing Carriage
<b>Clamp (2 Position Switch)</b>	Position 1: Beam Clamps Engaged (Green LED on Joystick)	Position 2: Beam Clamps Disengaged (Red LED on Joystick)
<b>Deck Support</b>	Position 1: Fold for return travel	Position 2: Extend for decking support and delivery
<b>Lighting</b>	Position 1: Up = ON	Position 2: Down = OFF

## MZM-100, 150

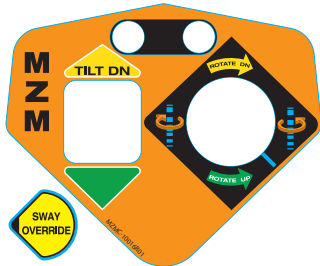


Fig. 2: Joystick Controls Decal



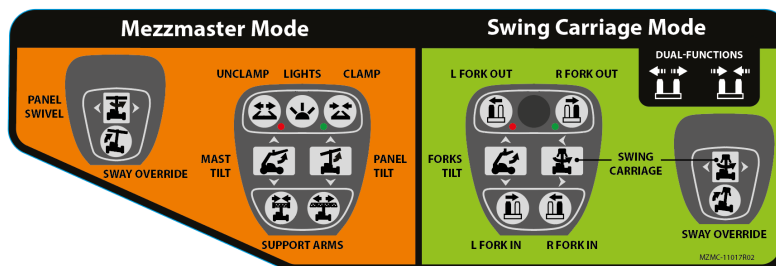
Fig. 3: MZM-100 Needle Indicator Decal (affixed to jib attachment quick connect)

Description	Action	Action 2
<b>2-way Rocker Up</b>	Tilt MezzMaster Jib Down	
<b>2-way Rocker Down</b>	Tilt MezzMaster Jib Up	
<b>4-way Rocker Up</b>	Rotate Panel Down (CW)	
<b>4-way Rocker Down</b>	Rotate Panel Up (CCW)	
<b>4-Way Rocker Left</b>	Swivel Panel Left, (Needle Indicator Left) (CW)	Swing Carriage Attachment, Left
<b>4-Way Rocker Right</b>	Swivel Panel Right, (Needle Indicator Right) (CCW)	Swing Carriage Attachment, Right
<b>Trigger Push-Button</b>	Telehandler Carriage - Sway Override	
<b>Green LED Indicator</b>	Beam Clamps Engaged	
<b>Red LED Indicator</b>	Beam Clamps Disengaged	

## MZM-100 Joystick

The MZM-100 joystick control has two modes: Mezzmaster and Swing Carriage. The appropriate mode is automatically engaged when attachment is installed on telehandler.

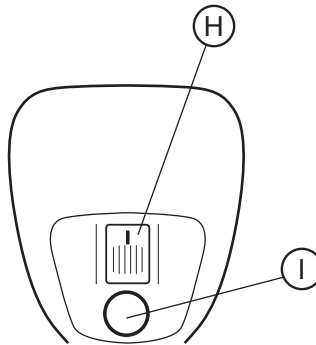
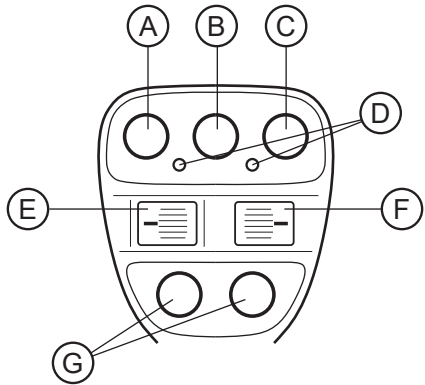
**Note:** The MZM-100 joystick has a capacitive touch sensor in the handle that affects the “Unclamp” button, meaning joystick must sense hand on handle for unclamp function to be active. If glove is worn, gently squeeze joystick handle to activate sensor.



**Mode**

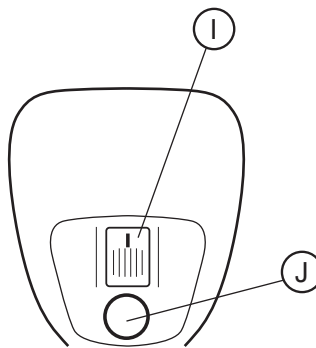
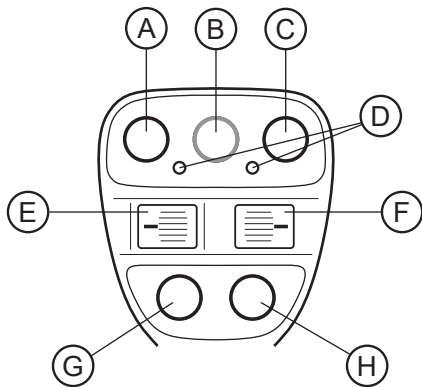
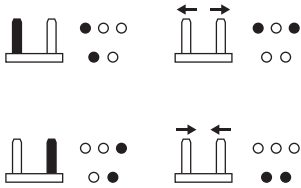
**Button Actions**

Mezzmaster



- A. Unclamp (hold for 2 sec)
- B. Mezzmaster lights
- C. Clamp
- D. LED indicators (see LED Light Patterns section below)
- E. Mast Tilt
- F. Panel Tilt
- G. (no action in this mode)
- H. Panel Swivel
- I. Sway Override

Swing Carriage



- A. Left Fork Slide Right
- B. (no action in this mode)
- C. Right Fork Slide Left
- D. LED indicators (see LED Light Patterns section below)
- E. Forks Tilt
- F. Swing Carriage
- G. Left Fork Slide Left
- H. Right Fork Slide Right
- I. Swing Carriage
- J. Sway Override

**LED Light Patterns**

Pattern	Definition
Green on solid	Fully clamped
Red on solid	Fully unclamped
Wig-wag (red-green-red-green)	Transition between clamp and unclamp
Red flashing fast, green on solid	Unclamp not allowed
Both red and green flash (1 sec flash cycle)	Unknown clamp condition, typical start-up state

Red flashing (x2/sec)	Unsafe condition Unclamp attempted when panel is tilted beyond 15° (Mezzmaster will not unclamp in this state)
LED lights inactive	Swing Carriage Mode active

### Panel Tilt Safety Feature

To ensure the safety of the Panel Tilt function, the Mezzmaster is programmed to stop the operator from handling panels if the proximity sensor has failed.

<p><b>If you see this:</b></p> <p>Red LED, Green LED, and main light simultaneous 1/4 sec flash pattern</p>	<p><b>Do this:</b></p> <p>Engage and hold Panel Tilt UP for 30 seconds. When safe, unclamp from panel.</p> <p>When unclamped, main lights will stop blinking.</p> <p>If reclamped, main lights will start blinking again.</p> <p>If failed sensor has been replaced, power cycle</p>
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### Mezzmaster Upfit 110 Hydraulics

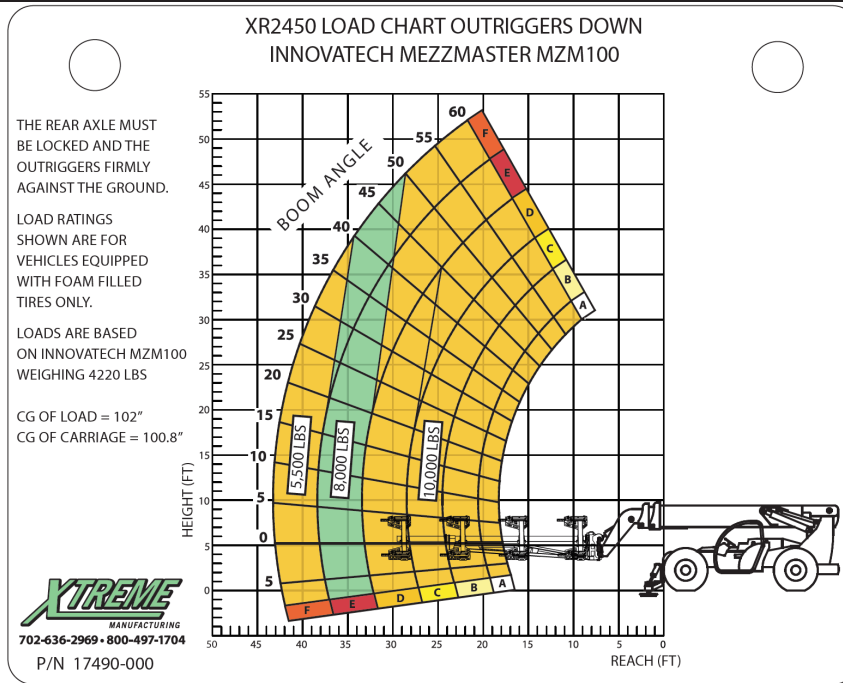
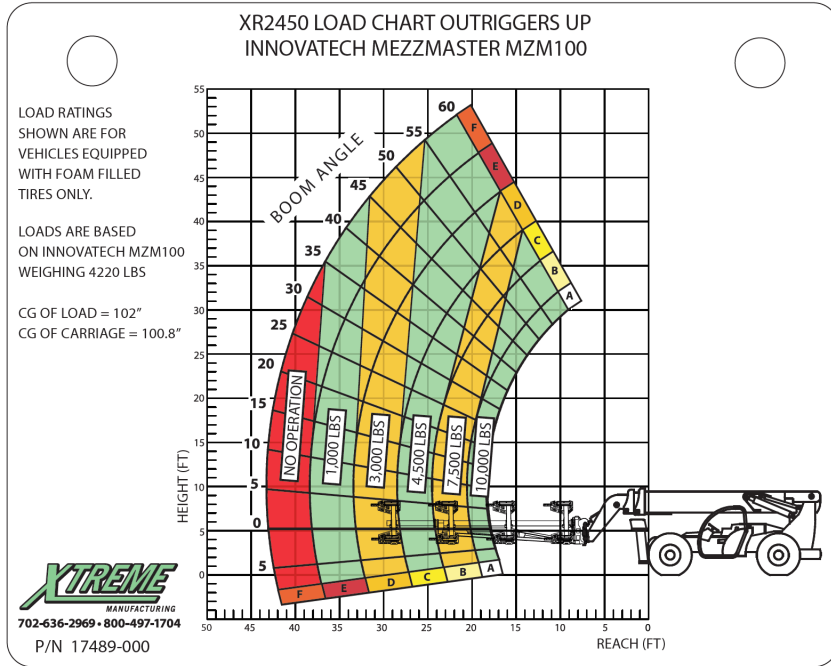
The upfitted Extreme 2450 control system activates Aux B, which shifts the Aux Manual Control Lever away from operator (toward the window) and should pressure right hand aux line (from operator position) at the end of the boom. Should the hydraulics not shift as this describes, they must be switched.

# Material Handling

Before operating the MezzMaster, refer to the Load Chart supplied and calculate the load of the panelized module you will be handling. Do not exceed ratings specified in the Load Chart. Failure to adhere to ratings specified could result in equipment damage and/or property damage, severe injury, or death.

## LOAD CHART FOR INNOVATECH MezzMaster ON XTREME TELEHANDLER XR2450

General Reference Only. See published load chart provided with equipment.)



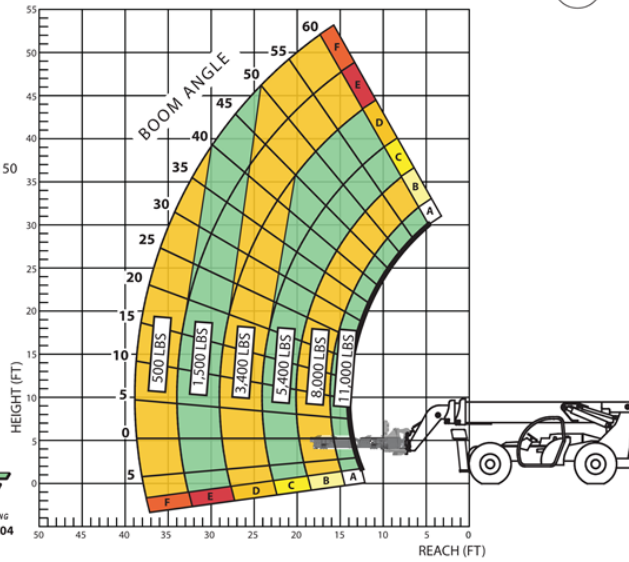
**XR2450 LOAD CHART OUTRIGGERS UP  
INNOVATECH MEZZMASTER MZM150**

LOAD RATINGS SHOWN ARE FOR VEHICLES EQUIPPED WITH FOAM FILLED TIRES ONLY.

LOADS ARE BASED ON INNOVATECH MZM150 WEIGHING 4120 LBS

CG OF LOAD = 84"  
CG OF CARRIAGE = 48"

**XTREME**  
MANUFACTURING  
702-636-2969 • 800-497-1704  
P/N 17511-000



**XR2450 LOAD CHART OUTRIGGERS DOWN  
INNOVATECH MEZZMASTER MZM150**

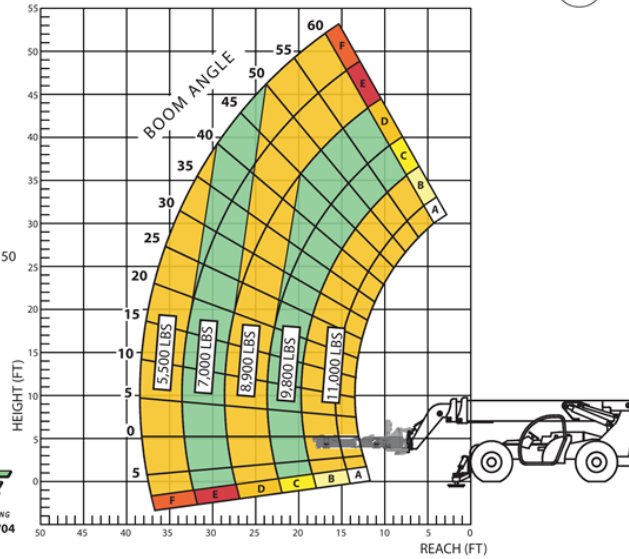
THE REAR AXLE MUST BE LOCKED AND THE OUTRIGGERS FIRMLY AGAINST THE GROUND.

LOAD RATINGS SHOWN ARE FOR VEHICLES EQUIPPED WITH FOAM FILLED TIRES ONLY.

LOADS ARE BASED ON INNOVATECH MZM150 WEIGHING 4120 LBS

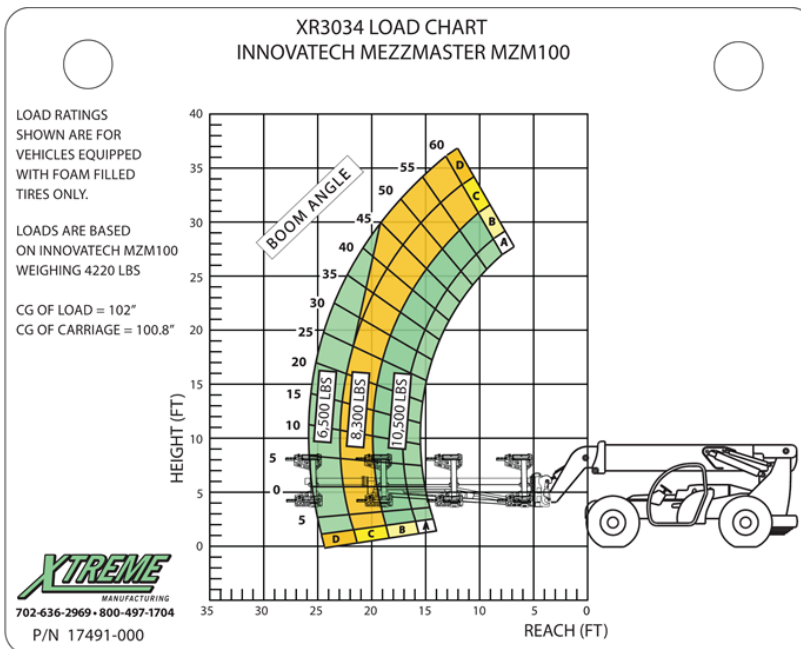
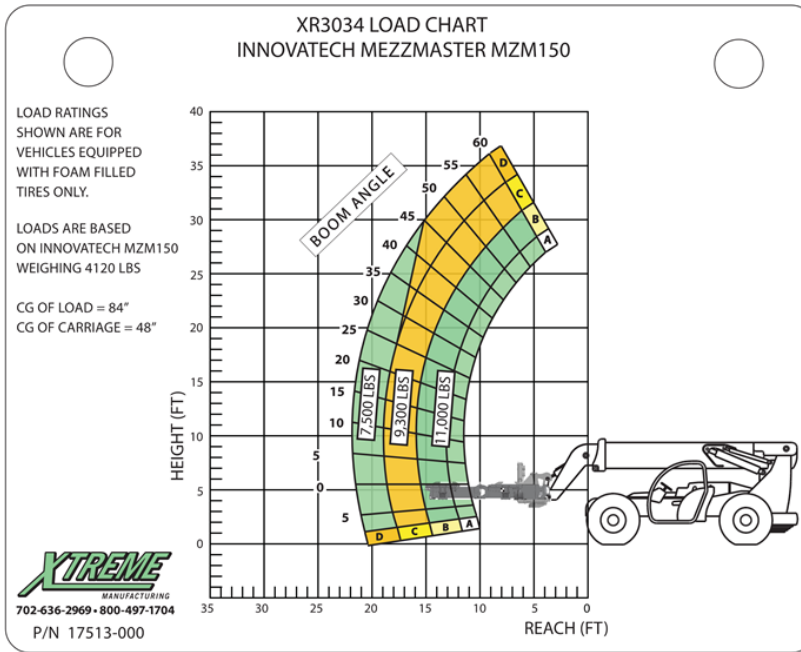
CG OF LOAD = 84"  
CG OF CARRIAGE = 48"

**XTREME**  
MANUFACTURING  
702-636-2969 • 800-497-1704  
P/N 17512-000



# LOAD CHART FOR INNOVATECH MezzMaster ON XTREME TELEHANDLER XR3034

General Reference Only. (See published load chart provided with equipment.)



# Maintenance

In order to maintain the highest level of safety and operation efficiency, InnovaTech recommends an established service interval. Contact your service representative for recommendations. See Lubrication chart.

## Lubrication

There are seven lubrication points to service at established usage intervals. Refer to the diagram below. Decals affixed to the MezzMaster will indicate the location and the recommended volume/pumps of lubricant per point:

MZM-100	Volume	Interval
1. Main Swivel (1)	10 pumps	weekly
2. Rotate and Tilt Cylinder (1)	2 pumps	weekly
3. Butt End Tilt Cylinder (1)	2 pumps	weekly
4. Tilt Bearings (1)	5 pumps	weekly
5. Swivel Bearings (1)	5 pumps	weekly
6. Swivel Bearings (1)	5 pumps	weekly
7. Swivel Bearings (1)	5 pumps	weekly
(Total of 8 points)		



MZM-150	Volume	Interval
1. Main Tilt Front facing (2)	20 pumps	weekly
2. Main Tilt Rear facing (2)	20 pumps	weekly
3. Tilt Cylinder Rod end (2)	5 pumps	weekly
4. Tilt Cylinder Barrel end (2)	5 pumps	weekly
5. Main Swivel Top (1)	10 pumps	weekly
6. Main Swivel Bottom (1)	10 pumps	weekly
7. Swivel Cylinder Rod end (2)	5 pumps	weekly
8. Swivel Cylinder Barrel end (2)	5 pumps	weekly
9. Wing Extend Cylinder (2) Rod end	3 pumps	weekly
10. Wing Extend Cylinder Barrel end (2)	3 pumps	weekly
(Total of 18 points)		

## Hydraulic Pressure Relief

The hydraulic pressure relief valve may be used to release pressure in hydraulic lines when reconnecting hydraulic hoses. The valve is located on the right side of the Mezzmaster, near the telehandler connection. (This feature may not be installed on your model of Mezzmaster.)

## Replacement Parts

Contact InnovaTech for information regarding replacement parts. In the event repairs need to be made on the job, parts may be able to be sourced from areas local to the Panelization System's job location. Your InnovaTech service agent will assist in identifying appropriate replacement parts.



## Service Life

If any portion of the equipment is deemed unsafe, or in poor repair, appropriate procedures should be initiated for repair or replacement. InnovaTech recommends complete service procedures be performed prior to site deployment. If onsite repairs are necessary, appropriate Lock-Out/Tag-Out procedures must be initiated. No portion of damaged equipment should be operated for any length of time.

## Supplemental Equipment Manuals

The manuals to each of the support equipment specified in this document can be found on our website or from a link to the manufacturers website. Manufacturer documentation may be available for download via these websites. This list may be incomplete. Contact an InnovaTech representative for information on compatible support equipment.

[www.xtrememfg.com](http://www.xtrememfg.com)

## Replacement Manuals, Decals

Replacement manuals and decals for the MezzMaster can be obtained by contacting us by phone, mail, email.

## Model/Serial

When contacting our service representatives, please have the MezzMaster serial number available. The serial number can be determined by noting the digits represented by the \*\* following the model number MezzMaster-00-00000000. (For example, MezzMaster-01-18050049)

## Contact Us

<https://support.innova.tech>

[support@innova.tech](mailto:support@innova.tech)

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