Part # 99904801

Refuse Container with Loader Manual

Operation, Safety, Spare Parts

Revised 20111207

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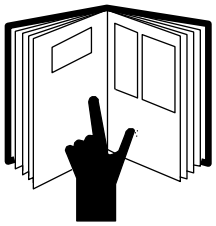
Revisions

DATE	LOCATION	DESCRIPTION
20100202	99904843	DECAL PLACEMENT DRAWING, SMALL PRODUCTION CHANGES
20100211	THROUGHOUT	OPERATOR INSTRUCTION CLARIFICATION
20100224		ADDED HYDRAULIC DESCRIPTION, MAINTENANCE TASKS
20100304	99904800	ECN 11194-SS BOLTS FOR CONTROL HANDLES
20100329	99904795	ADDED PART NUMBERS FOR CONTROL BOX ELECTRICAL PARTS.
		ADDED STABILIZER SPOOL STROKE LIMITERS INSTRUCTION IN MAINTENANCE SECTION.
20100413	51722769	ECN 11206-2 - UPDATED BRACKET IN MANIFOLD ASSEMBLY. ADDED ADDITIONAL SPARE PARTS. ADDED STABILIZER RETAINING PIN REPLACEMENT INSTRUCTIONS TO MAINTENANCE SECTION.
20100519	51722769, 99904818	ECN 11206-3, 11206-4 - ADDED ADAPTERS TO MANIFOLD, ADDED SCHEMATIC TO HYDRAULIC SYSTEM DIAGRAM, ADDED MANUAL CLAMP VALVE PARK POSITION INSTRUCTIONS.
20100715		UPDATED OPERATION INSTRUCTIONS WITH TWO-STEP CLAMP FUNCTIONS. NEW WIRING 99904928, CONTROL BOX 51723040.
20100810	51722769	ADDED ADDITIONAL PARTS FOR VALVE ON MANIFOLD ASSEMBLY.
20111207		ECN 11628 – UPDATED STABILIZER WORDING, DECALS

CHAPTER 1

Introduction



WARNING

READ YOUR MANUAL!! FAILURE TO READ, UNDERSTAND AND FOLLOW ANY SAFETY PROCEDURES APPLICABLE TO YOUR EQUIPMENT MAY RESULT IN EQUIPMENT DAMAGE, SERIOUS INJURY, OR DEATH.

Follow all safety procedures in this refuse container with loader operation manual as well as the crane, hoist, chassis, and any other applicable manuals.

In addition to reading the manual, it is your responsibility to become familiar with government regulations, hazards, and the specific operation of your equipment. Use caution and common sense while operating and maintaining the equipment and follow all safety procedures and regulations. Treat this equipment with respect and service it regularly.

MODIFICATIONS

Modifications to your equipment must be performed with IMT approved accessories, parts and optional equipment. If in doubt, contact IMT prior to making any modifications. DO NOT alter or modify any safety device! All safety devices must be inspected, tested and maintained in proper working condition.

Decals regarding safety and operation are considered safety equipment, and must be kept clean and legible.

The equipment owner and/or designated employee is responsible for informing all operators, maintenance personnel, and others involved in equipment operation about the safe operation and maintenance of the equipment. If questions arise concerning safe operation, contact IMT or your IMT distributor for clarification.

WARRANTY

Warranty of this unit will be void on any part of the unit subjected to misuse due to overloading, abuse, lack of maintenance and unauthorized modifications. No warranty - verbal, written or implied - other than the official, published IMT new machinery and equipment warranty will be valid with this unit.

NOTICE TO THE OWNER / USER

If your equipment is involved in a property damage accident, contact your IMT distributor immediately and provide them with the details of the accident and the serial number of the equipment. If an accident involves personal injury, immediately notify your distributor and IMT Technical Support at:

IOWA MOLD TOOLING CO., INC.
500 HWY 18 WEST
GARNER, IA 50438

641 - 923 - 3711

MANUAL STRUCTURE

Throughout this manual, three means are used to draw the attention of personnel. They are NOTEs, CAUTIONs and WARNINGs and are defined as follows:

NOTE

A NOTE is used to either convey additional information or to provide further emphasis for a previous point.

CAUTION

A CAUTION is used when there is the very strong possibility of damage to the equipment or premature equipment failure.

WARNING

A WARNING is used when there is the potential for personal injury or death.

CHAPTER 2

Operation

In This Chapter

Safety

DANGER

AVOID DEATH OR SERIOUS INJURY! KEEP PERSONNEL, EQUIPMENT AND TOOLS AWAY FROM THE CLAMPING ARMS!

All personnel besides the operator must maintain a minimum distance of 6-feet from either clamp arm before the operator is cleared to move the control panel switch.

CAUTION

The clamping arms open and close automatically based on the switch setting on the control panel.

Switch Setting	Clamp Arm Position
Crane	Closed
Hoist	Open
Off	Same as previous position - no movement.

Follow all safety instructions in the crane and hoist manual in addition to those listed here.

Crane Operation Mode

1 Set Hoist-Crane Selector Switch to the *Off* position.

NOTE

The Hoist-Crane Selector Switch has three positions - Crane (left) / Off (center) / Hoist (right). Even if the *Crane* light is lit, the crane will not operate unless the *Crane Connected* light is also lit. The *Crane Connected* light will not be lit unless the electrical and hydraulic couplings are connected per step #8.

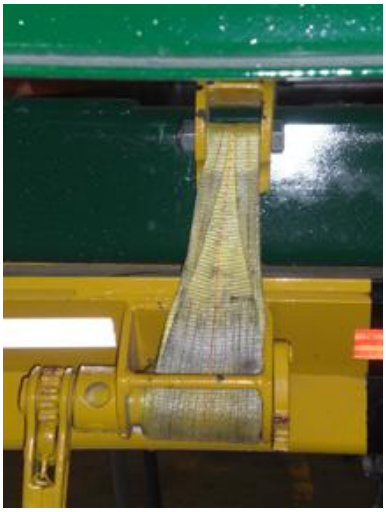
2 Elevate the truck engine speed to the speed noted on the decal in the cab. Engage the PTO or activate the crankshaft driven pump. (The PTO or pump switch is located in the vehicle cab.) Follow all job site safety regulations, including activating the truck hazard lights and strobe lights.

3 Flip Hoist-Crane Selector Switch to *Hoist*.

4 Follow the directions in the Roll-Off Hoist manual to pull the roll-off container onto the chassis.

5 Disengage the PTO or the crankshaft-driven pump.

6 Cinch ratchet strap at both sides of the rear section of the roll-off. This will secure the roll-off and prevent instability.



7 Hook up the electrical and hydraulic connections for the crane. These are located at the rear of the roll-off container, and the crane cannot be operated without them.

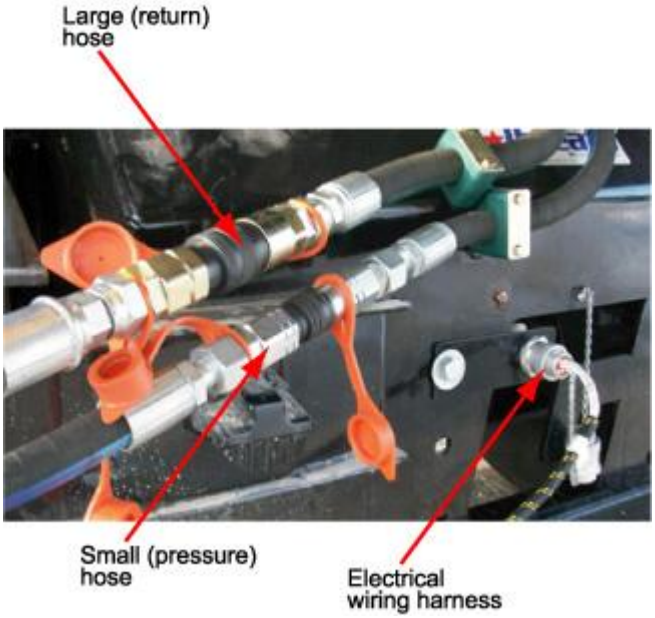
NOTE

Be sure to hook up the connections in the proper order.

a) Large coupling (return)

b) Small coupling (pressure)

c) Electrical cable



⚠CAUTION

AVOID EQUIPMENT DAMAGE!

DISENGAGE PTO before connecting or disconnecting wires and hoses.

ROLL-OFF REMOVAL INSTRUCTIONS

NEVER leave roll-off partly connected!

1) Disconnect wiring.
2) Disconnect small coupling (pressure).
3) Disconnect large coupling (return).

Reverse order to connect.

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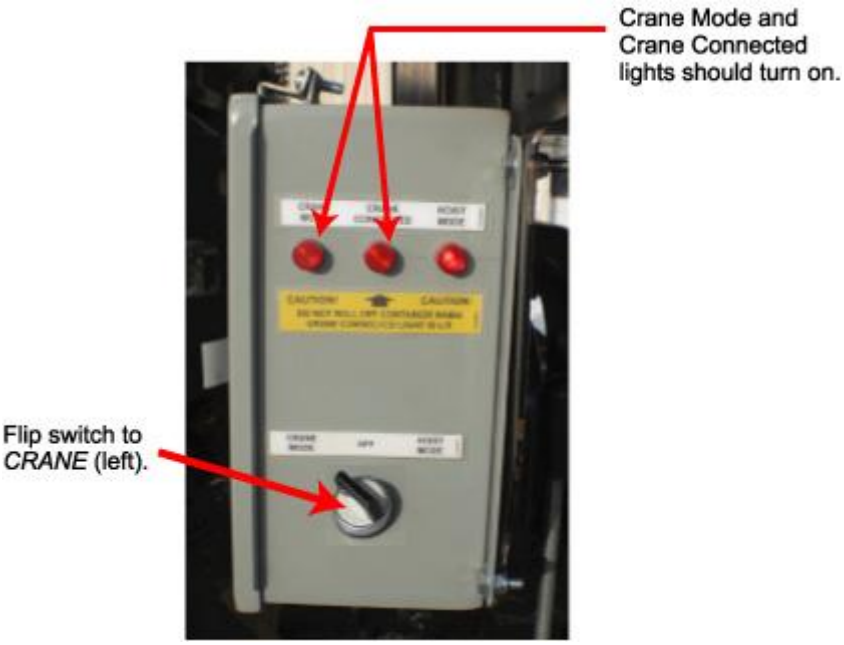
8 Engage PTO or crankshaft-driven pump.

9 Flip the Hoist-Crane Selector Switch to the *Crane* setting. This will cause the clamping arms to close, and will clamp the container in place for crane operation.



DANGER

Avoid Death, Serious Injury or Equipment Damage! Do not place anything in the path of the clamping arms which secure roll-off.

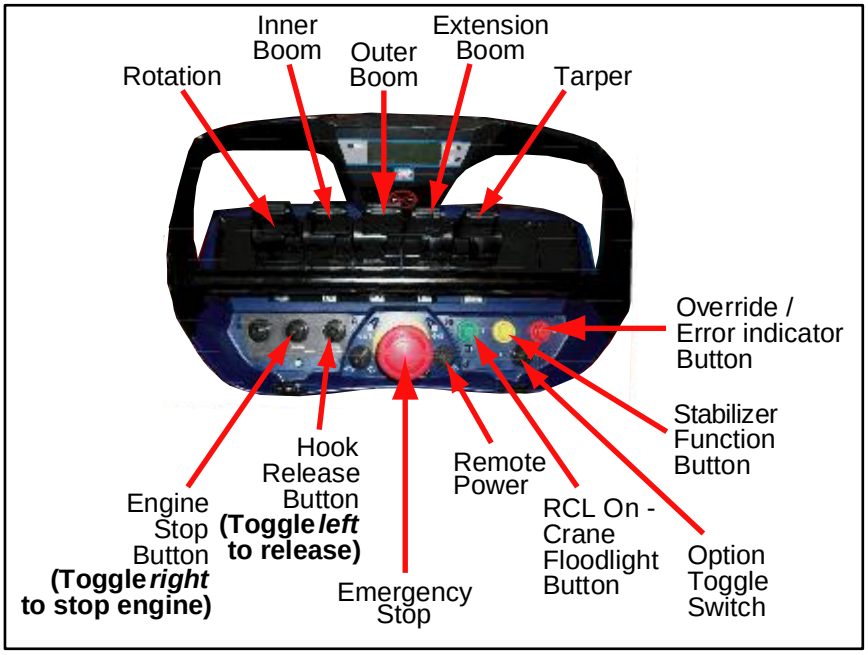
10 The *Crane Connected* light should light at this time.

11 Follow all instructions in the crane manual and on quick guides for safe crane operation.

CAUTION

Flip the Hoist-Crane Selector Switch to *Off* when you aren't operating the crane or hoist to avoid clamp arm activation.

Crane Remote Control



Use the crane remote to set up the stabilizers, run the crane, release the hook, and to perform other crane operations. To start the remote control:

1 Pull out all stop buttons on the RCL control panel and radio remote.

2 Release all control levers to a neutral position.

3 Turn on the remote by pressing and holding the ON button for 2 seconds. (Black button for remote power.)

4 Activate the RCL system by pressing the green button on the front of the remote.

5 Follow the directions in the appropriate sections for additional crane operations.

NOTE

The *Engine Stop* button turns off the truck engine immediately. It will stop the truck engine, which will stop the PTO and hydraulic flow. Use *Engine Stop* in case of a hydraulic hose failure to reduce mess.

The *Emergency Stop* button stops crane function. Use *Emergency Stop* to stop crane operation immediately. *Emergency Stop* stops the crane only, and does not affect the truck engine.

Hydraulic System Operation

This section describes the Refuse Container with Loader hydraulic system operation. See the hydraulic schematic drawing ***99904818*** (see "Hydraulic System (99904818)" on page 57) for detailed information on the flow pattern.

The hydraulic flow originates from the pump, which pumps between 35 and 50 gpm (132 to 190 lpm) of hydraulic oil. The oil flows from the pump to a pressure relief valve with a relief set pressure of 2750 psi. The flow divider can split the flow evenly between the chassis / tank and the crane, but in most cases, the flow is diverted to one of the functions (hoist or crane.) If the Crane-Off-Hoist mode selector switch is switched to *Hoist*, all pump hydraulic oil flows to the chassis roll-off valvebank, and the pressure is regulated by the hoist valve, with a maximum pressure of 1850 psi.

If the Crane-Off-Hoist mode selector switch is switched to *Crane,* the hydraulic oil flows to the crane and stabilizer valves. Excess oil flows to the tank. With the excess oil, the flow divider functions like a pump-motor combination and intensifies the pressure up to 5,000 psi. The crane pressure relief valve is set at 4850 psi, and the clamps are set at 5,000 psi. When the Crane-Off-Hoist mode selector switch is in *Crane* mode, the clamps are activated, and hydraulic flow is used for functions including stabilizers, crane operation, and the roll-off container tarper.

Crane Operation

Complete details on the crane, remote, and RCL are provided in the following manuals:

- 91722392 - 14-98SL Service / Parts Manual
- 99904596 - RCL5300 Manual
- 99903518 - Radio Remote Control Manual

In addition, IMT has developed a set of quick reference guides which can be easily carried with the operator for reference in operating the refuse container with crane unit. The complete set is part number 95722820. The set includes the following guides:

- 71398978 - Quick Guide - Crane Set-up
- 71398895 - Quick Guide - Crane Start-up
- 71398896 - Quick Guide - Stabilizer Set-up
- 71396471 - Quick Guide - Crane Stow/Unstow
- 71398897 - Quick Guide - Overload Conditions
- 71398898 - Quick Guide - Absolute Stop
- 71398899 - Quick Guide - Emergency Mode
- 71398982 - Quick Guide - Hoist Set-up
- 71398900 - Quick Guide - Transport

NOTE

The crane operation notes in this manual are provided as a reference only, and cannot be substituted for a thorough review of the crane, RCL5300 and Radio Remote Control manuals.

Extending Stabilizers

Your refuse container with loader is equipped with power-out / power-down stabilizers with a swing rotation system. You must properly set the stabilizers before operating the crane.

CAUTION

Avoid equipment damage! Check for obstructions before extending the stabilizers.

1 Make sure:

a) The PTO is engaged or the crankshaft-driven pump is activated.

b) The hydraulic hoses and electrical harness are connected.

c) The switch on the electrical panel is set to *Crane.*

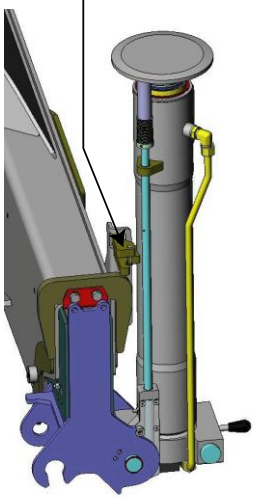
d) The *Crane Connected* light on the electrical panel is lit.

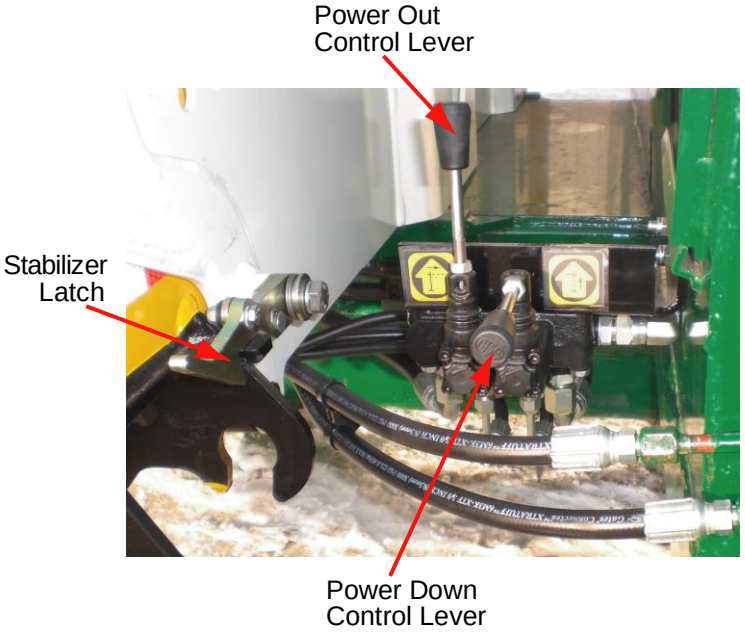
e) See ***Crane Operation Mode*** (on page 8) for details.

2 The stabilizers are operated using cable controls. Stabilizer controls are located on each side of the unit. Each stabilizer must be set up individually. Per the crane operation manual, you must place the crane in stabilizer mode to operate the hydraulic stabilizers. To do this, press the yellow button twice on the RCL control panel or on the remote control transmitter.

3 Make sure the power-down stabilizer is completely retracted and stowed against the rotation stop.

4 Release the manual stabilizer latch on the power-out stabilizer. Fully extend the stabilizer arm, using the Power Out control lever.

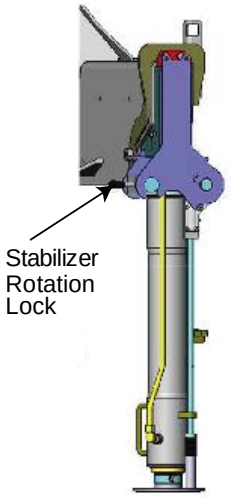




1 **Slowly** operate the Power Down stabilizer control lever to automatically rotate the power-down cylinder into the downward position.

When the power down cylinder foot is positioned just off of the ground, engage the locking pin at the top of the cylinder to lock it into place.

Then extend the power down stabilizer until it touches the ground per the crane operation manual.

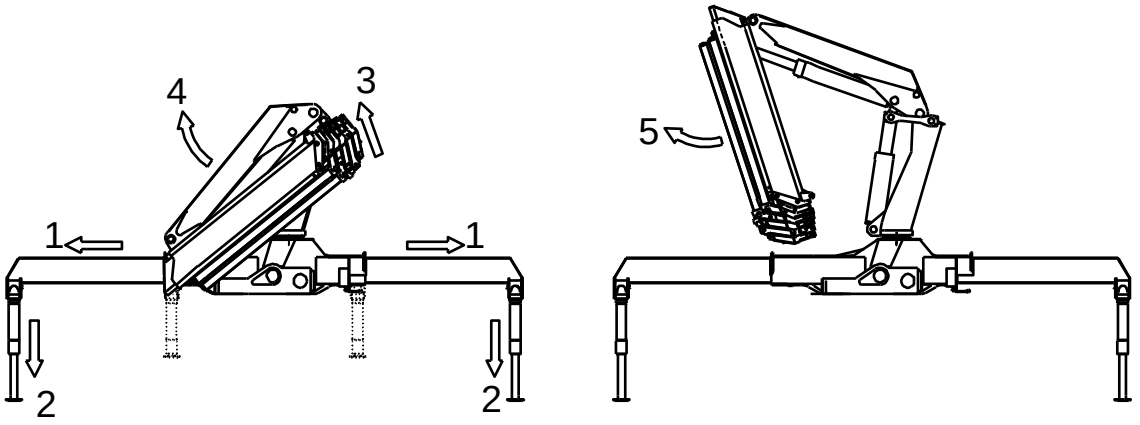


CAUTION

Avoid shearing the pin and damaging the stabilizer auto-rotate system. Operate the Power Down function **slowly**.

1 Avoid danger from moving stabilizers! The unit has swing-up stabilizers that extend 7-feet (2.1 m) from each side of the unit. Stand clear.

Unfolding the Loader



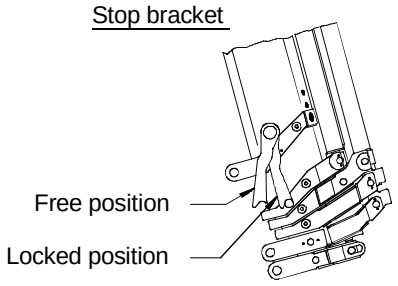
1 Fully extend the stabilizer arms.

2 Rotate and lower the stabilizer legs. Follow the steps in the section, ***Extending Stabilizers*** (on page 14).

3 Using the *outer boom down* control, raise the outer boom to free it from the stowing bracket.

NOTE

The outer boom must be raised, using the *outer boom down* movement of the control, so that the outer boom is released from the bracket.



4 Raise the inner boom to free it from the bracket. Continue to raise the inner boom until it is slightly above horizontal so that the outer boom can be moved freely downwards.

5 Raise the outer boom until it is free of the base.

Crane Capacity

The IMT crane is designed to lift specific loads. These loads are defined on the capacity placard mounted near the operator's station and on the crane. Exceeding the limits presented on the capacity placard will create severe safety hazards and will shorten the life of the crane. The operator and other concerned personnel must know the load capacity of the crane and the weight of the load being lifted!

The capacity chart for each model is located in the specific crane technical specifications manual and on placards on the crane and body.

WARNING

NEVER EXCEED THE RATED LOAD CAPACITY OF THE CRANE OR RIG RELEASE HOOK. DOING SO WILL CAUSE STRUCTURAL DAMAGE AND DAMAGE TO RIG RELEASE HOOK WHICH CAN LEAD TO DEATH OR SERIOUS INJURY.

NOTE

CAPACITY PLACARDS ARE INTENTIONALLY LOCATED NEAR THE OPERATOR TO ASSURE READY REFERENCE IN DETERMINING WHEN A LOAD CAN OR CANNOT BE HANDLED.

LOAD LIMIT INFORMATION ON THE CAPACITY PLACARD IS FORMULATED ON 85% OF TIPPING. TIPPING REFERS TO THE CRANE ACTUALLY TIPPING WITH ITS OPPOSITE STABILIZER AND TIRES HAVING BROKEN CONTACT WITH THE SURFACE.

Prior to lifting a load:

1 Determine the weight of the load.

2 Determine the weight of any load handling devices.

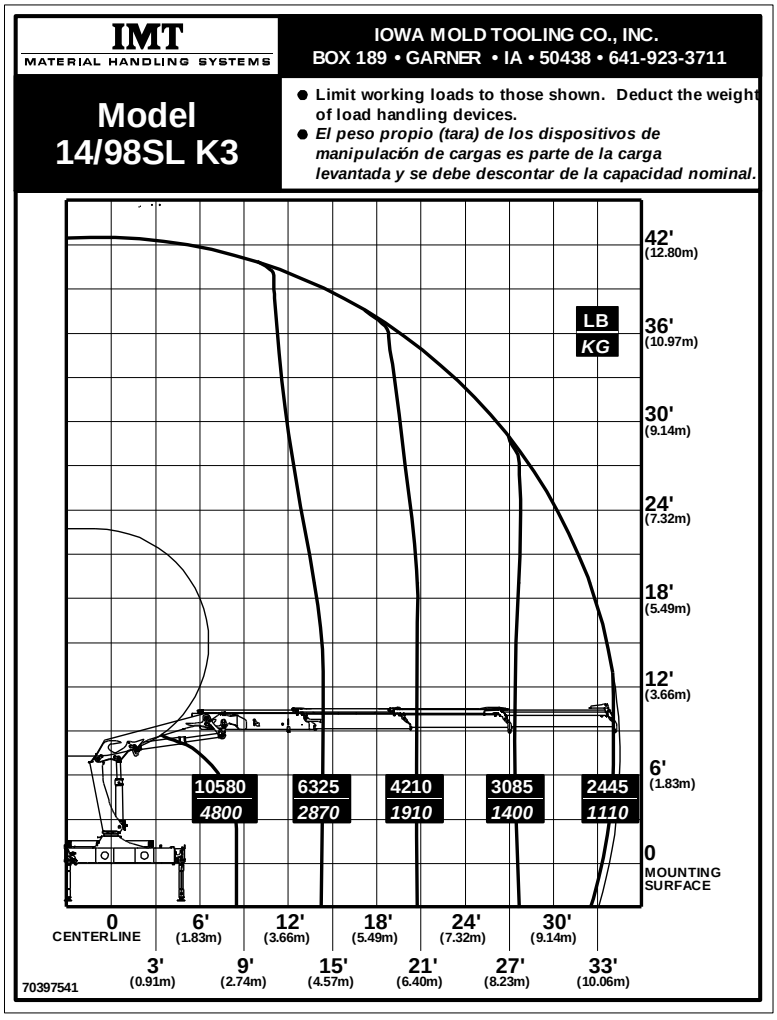
3 Add the weight of the load and the weight of the load handling devices. The sum is the total weight of the load being lifted.

4 Determine the distance from the centerline of crane rotation to the centerline of the load being lifted.

5 Determine the distance from the centerline of crane rotation to the centerline of where the load is to be moved to.

6 The actual distance used should be figured as the larger of items 4 and 5 above.

Capacity Placard



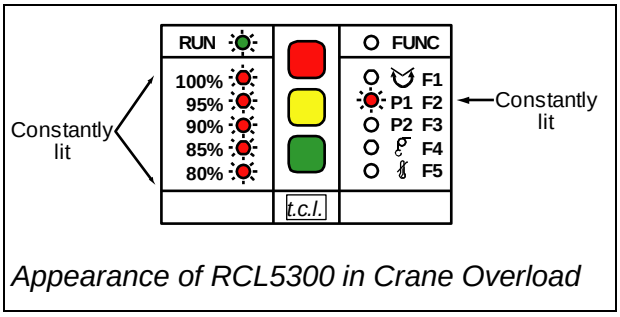
WARNING

AVOID DEATH OR SERIOUS INJURY! The rated capacity of the rig release hook is 5,000 lb (2.5 tons). Although the crane capacity exceeds 5,000 lb in certain positions, do not exceed rig release hook capacity.

Crane Overload

Overload is when your crane load moment is at 100% of capacity. In overload:

- The 80% through 100% red diodes are constantly lit.
- The P1 diode is constantly lit.
- The buzzer on the remote will sound constantly.
- The loader suddenly stops working.
- The RCL display reads t.c.l. (**T**raditional **C**apacity **L**imitation)



Appearance of RCL5300 in Crane Overload

You can begin to get out of overload when:

- You have released all remote levers to neutral positions.
- The buzzer on the remote sounds intermittently.
- The P1 diode flashes.

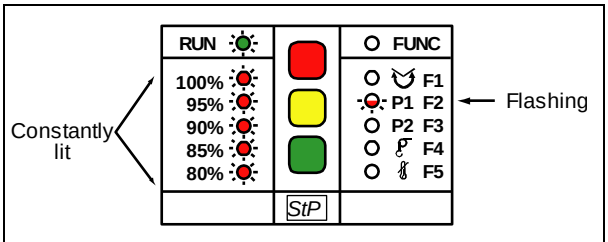
Move the crane into a position which reduces the load moment, such as boom down or extension in, to get out of overload. If the loader won't move, you can push the red override button on the RCL, and you will have five seconds to move the crane into a load reducing position.

Absolute Stop

If you do not reduce the crane load moment and continue to operate the crane in overload conditions, you will reach absolute stop. The crane will not function at all.

In absolute stop:

- The 80% through 100% red diodes are constantly lit.
- The P1 diode will flash.
- The buzzer on the remote will sound constantly.
- The RCL display reads S.t.P.

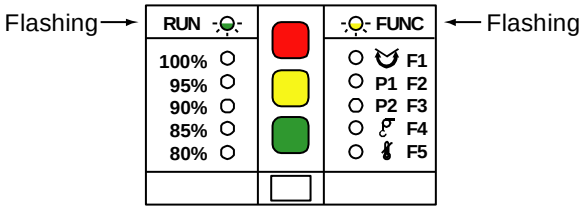


Appearance of RCL5300 in Absolute Stop

You must call an authorized service center to get your crane out of the absolute stop condition.

Crane Radio Failure

If your radio remote fails, the RUN and FUNC diodes on the RCL panel will flash. You will not be able to run the crane with the remote.



Appearance of RCL5300 during Radio Failure

To change to emergency, manual mode,

1 On the RCL panel, press and hold the yellow button while pressing the red button. The RUN and FUNC diodes on the RCL panel will still flash.

2 To verify the crane can be manually controlled, push the red button on the RCL panel. The 100% diode will flash. If it does not, repeat step 1.

3 To return to the remote control mode, repeat step 1.

Stowing the Loader

1 Retract all extensions

2 Rotate the loader to the stowing position, such that the alignment decals on the crane base and mast line up. (Or center the grease zerk on the bottom of the crane mast with the base.)

3 Lower the outer boom until it is positioned at the crane base. (Use the *outer boom up* lever.)

4 Lower the inner boom until it is stowed in the stowing bracket.

5 Retract and stow the stabilizers per the section on ***Retracting Stabilizers.*** (see "Retracting Stabilizers" on page 21)

Retracting Stabilizers

Press the yellow button on the transmitter twice to get into *Stabilizer Mode*.

CAUTION Avoid damage! Retract stabilizers before moving vehicle.

1 Raise the power down cylinder until the cylinder foot is just lifted off the ground.

2 Disengage the locking pin at the top of the cylinder. This will allow the power down cylinder to swing freely and to auto-rotate.

CAUTION

Avoid moving stabilizers! The unit has swing-up stabilizers that extend 7-feet (2.1 m) from each side of the unit. Stand clear.

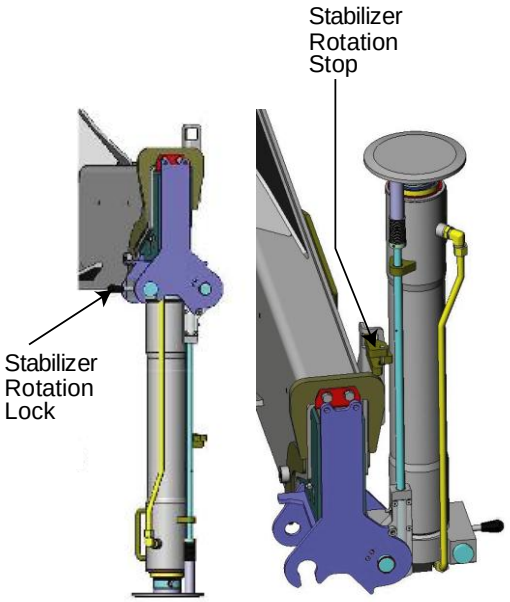
3 Continue to retract / raise the power down cylinder, *slowly*, until the cylinder is completely retracted and the stabilizer has rotated to contact the rotation stop.

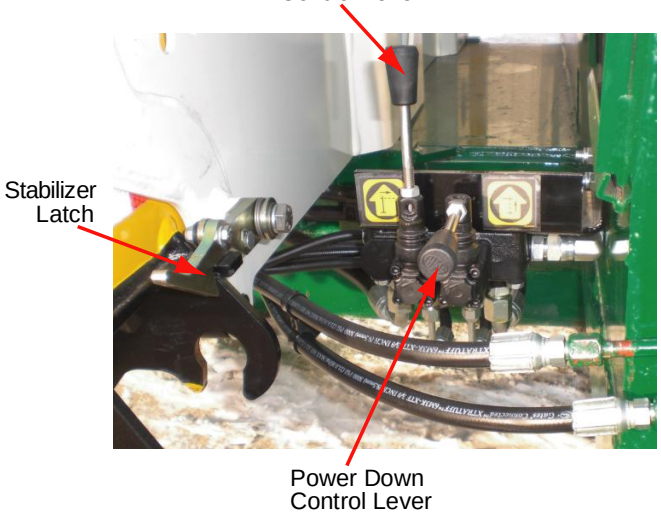
4 Retract the power-out stabilizer arm, using the Power Out control lever.

5 Verify the stabilizer arm is completely retracted and the stabilizer latch has slipped in place.

NOTE

Never retract / raise the power-down cylinder unless rotation lock is disengaged. If the pin is engaged when the stabilizer is retracted, you will damage the auto-rotate mechanism.





Container Tarper

The container tarper operation is controlled using the radio remote. All loads must be tarped before they are transported. Cover the body with the tarp using the tarper control. Follow the tarper manual for tarper operation.

Hoist Operation Mode

Use *Hoist* mode to dump or remove roll-off.

Hoist Mode - Dumping

1 Flip Hoist-Crane Selector Switch to *Hoist* mode.

DANGER Clamp arms will open in *Hoist* mode, if not already open.

2 The *Hoist* light on the electrical panel should be lit.

3 Dump the container per the instructions in the hoist manual.

CAUTION Avoid equipment damage! Never move container backward or forward on hoist with wiring and hydraulic hoses connected.

Hoist Mode - Container Removal

1 Flip Hoist-Crane Selector Switch to *Off* mode.

2 Disengage PTO or crankshaft-driven pump.

3 Disconnect wiring and hoses in proper order.

a) Electrical Cable

b) Small coupling (pressure)

c) Large coupling (return)

4 Avoid equipment damage! Cap each end of the hydraulic hoses and wiring harness when disconnected. Uncapped hoses and wires may get wet or damaged. Use bracket to secure hoses and wire when removing container.

5 Disconnect the ratchet straps.

6 Engage the PTO or crankshaft-driven pump.

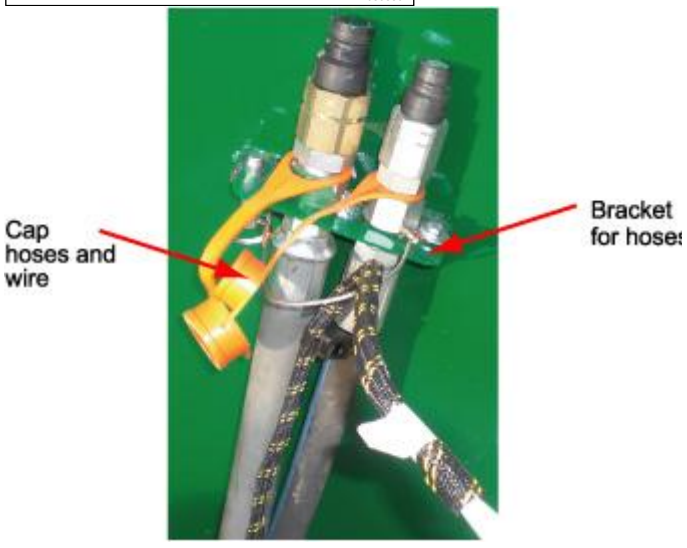
7 Flip Hoist-Crane Selector Switch to *Hoist* mode.

DANGER

Clamp arms will open in *Hoist* mode.

8 The *Hoist* light on the electrical panel should be lit.

9 Remove the container, using the guidelines in the hoist manual.



Transport Mode

Before moving the vehicle to a different location:

1 Stow the crane. Retract and stow the crane stabilizers.

2 Lower the roll-off hoist completely.

3 Make sure the cab-mounted warning light is not lit. It may light due to the crane, hoist, or stabilizers. If it is lit,

a) Check that the hoist is not elevated.

b) Check that the stabilizers are stowed.

c) Check that the crane is stowed.

4 Disengage the PTO or crankshaft-driven pump.

CAUTION

Disengage PTO or crankshaft-driven pump before connecting or disconnecting wires and hoses.

5 Turn the Hoist-Crane Selector Switch to the *Off* position.

6 Make sure the electrical wiring and hydraulic hoses are connected before moving the vehicle. If disconnected, be sure to connect in the proper order:

a) Large coupling (return

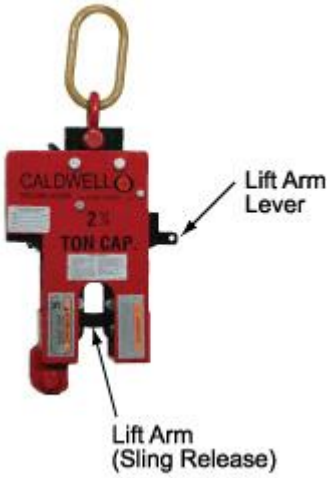
b) Small coupling (pressure)

c) Electrical cable

7 Turn off any job site safety lights, including truck hazard lights and strobe lights, if applicable, before driving the vehicle. Follow all transport safety regulations.

Rig Release Hook

The Rig Release Hook allows you to release the rigging and set loads down from a distance. When loaded, the rig release lift arm locks the sling in place and the rigging cannot be removed. Once the load is set and the loadline is slack, you can release the load using a remote-controlled rigging disconnect, which is part of the crane remote.



Rig Release Hook Warnings

CAUTION

Avoid serious injury or equipment damage! Read and follow rig release hook instructions. Heed all rig release hook warnings.

NOTE

Crane capacity may exceed hook capacity. Do not exceed minimum capacity rating.

1. Before each use, inspect the 12VDC remote-controlled rig release hook for damage or wear. Check for bent or missing components, broken or weak springs, loose bolts, cracked welds, or worn areas. If the inspection reveals any defect, remove the unit from service and report the issue to a designated person. All components must be in place and functioning properly to ensure operation as intended. Missing or defective components may cause an unsafe lifting condition.
2. Never exceed the unit's rated capacity 5,000 lb (2.5 tons) or the riggings' capacity, whichever is less.

3 Rigging weight cannot exceed the maximum rigging load indicated on the unit. The 2.5-ton unit is capable of no more than 20 lb. of rigging weight. Excessive rigging weight prevents the torsion spring from releasing the lift arm assembly. Do not place a web sling directly on the lift arm, as the web sling material prevents proper lift arm release.

4 The minimum load for the rig release hook is 40 lb for a straight pull and 80 lb. for a basket hitch on the arm. This minimum load locks the rig release, engages the release pin linkage, and ensures the lift arm does not release unexpectedly. Lifting a load less than the minimum (40 lb - straight pull or 80 lb - basket hitch) causes an unsafe lifting condition.

5 Four extension springs are installed in the rig release hook. Do not install additional or stronger springs. Use only IMT-approved replacement springs.

6 Always use latches on all hooks.

7 Do not lift people. Do not lift higher than necessary. Do not leave load unattended while suspended.

8 Avoid entangling or catching rigging on objects.

9 When using web slings, attach a steel shackle or steel oblong to the lift arm, then attach the web sling to the steel shackle or steel oblong.

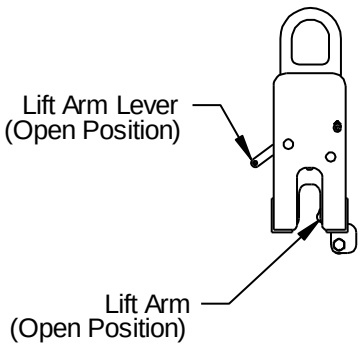
Rig Release Hook Operation

1 Lower the rig release hook to the load. Open the lift arm using the hook release function on the crane radio remote control or by pressing the green manual release button on the side of the hook.

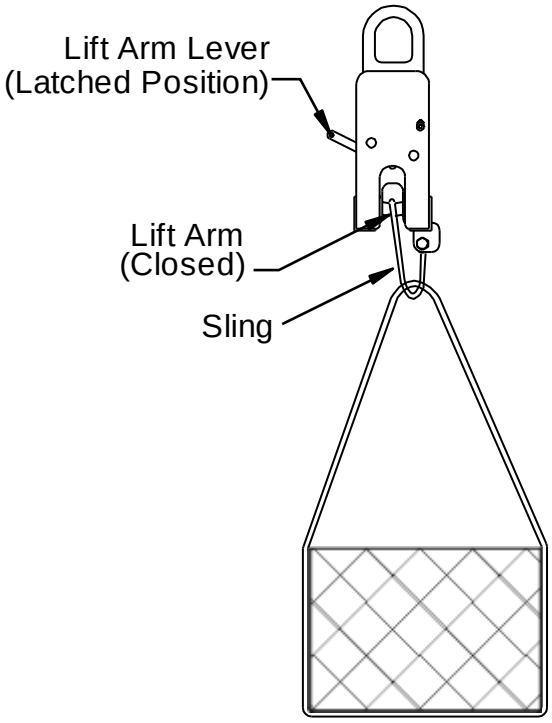
CAUTION

The hook release function on the remote will only operate when there is no load on the hook!

Avoid injury! The spring-operated lift arm on the rig release hook snaps open quickly! Keep clear.



2 Attach the sling to the load using proper hitching methods. If loading bags, route the sling strap through the handles on the bags. Attach the other end of the sling strap, with the metal oblong, to the lift arm.



3 Move the lift arm lever up to the closed position. This will close the lift arm.

CAUTION

Make sure the lift arm catch is completely closed.

4 Move the load to the desired position, keeping tension in the rigging. Carefully set the load down on the ground or in the container, in a completely supported position. The holes in the crane side of the container allow you to see the load. Lower the crane hook to create slack in the load sling. Once there is no load on the hook, use the hook release button on the crane remote or the green manual release button on the rig release hook to open the hook and release the load.

5 Avoid sling damage. Before moving the vehicle, reattach the sling to the lift arm.

Manual Release

The rig release hook is released with the crane remote control. In case of a remote electrical failure, there is a manual release button which releases the hook in a no load position. Before using the manual release, position the crane so the load is on the ground or in a supported position. Then press the green manual release button to release the load from the lift arm.

NOTE

The emergency manual release only works in a *no load* situation. The load must be supported.

Load Weight

Your crane remote is calibrated with a 1,200 lb load with all extension booms retracted and the inner and outer boom straight out, nearly parallel to the ground. When you position another load in this position and the remote is set to indicate load weight, you can determine the weight of that load.

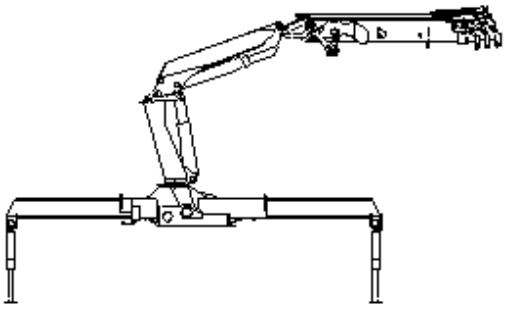
To weigh a load, position the crane as shown:

- Inner and outer boom nearly horizontal
- All extensions retracted.

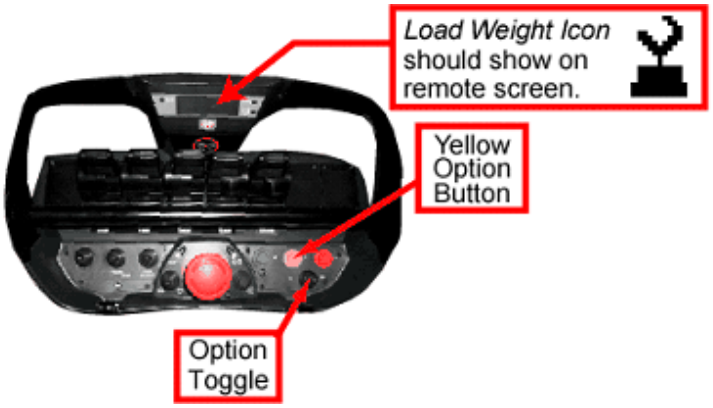
Check the remote control screen. If it shows the *Load Weight Icon*, and the crane is in the right position, the weight of the load will display in the lower right corner of the screen.

If the screen doesn't show the load weight icon,

- Flip the option toggle.
- Scroll through the screen options by pressing the yellow button until you see the load weight icon.
- Then, if the crane is in the right position, the weight of the load will display in the lower right corner of the screen.

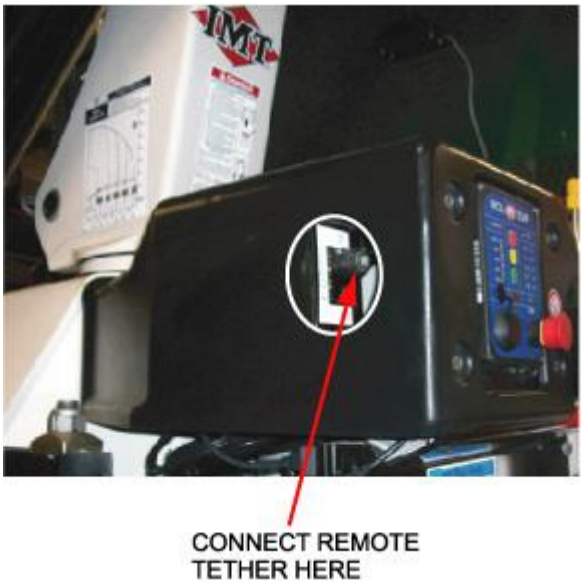


Crane Position for Load Weight



Tethered Remote

In case of radio failure, your crane is equipped with a cable for tethered remote operation. Connect the tether to the fitting inside the RCL box as shown, and to the tethered cable connector on the radio remote.



Emergency Manual Operation

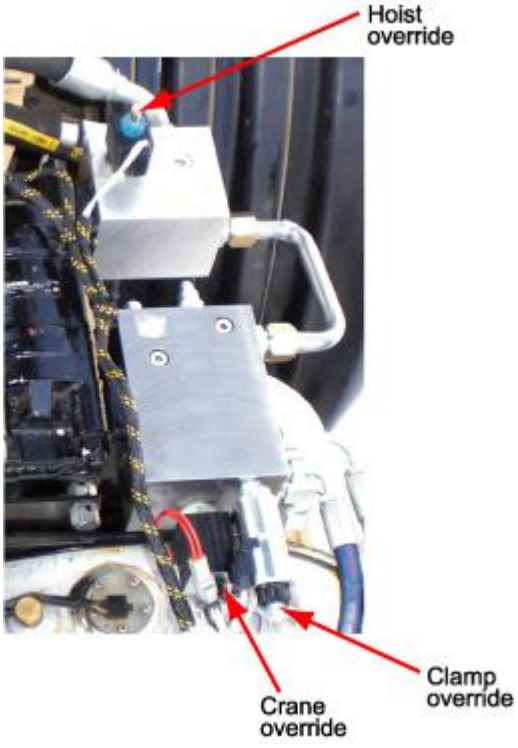
If you experience an electrical failure, you can operate the crane, hoist, or clamping arms manually.

CAUTION

Manual operation is designed for **emergency** use in case of electrical failure only!

CAUTION

Use the manual override on only one system at a time!



The emergency override valves are located on the passenger side of the vehicle.

The manual controls are located on the driver's side of the vehicle.

HOIST

The hoist emergency override is located on the aluminum block. The button on the end of the valve must be pushed in and locked before the hoist can be manually operated. Push the button in and turn it to the *right* to lock. Then operate the hoist using the control levers near the driver's side of the cab.

CRANE

To manually operate the crane, remove the acorn nut on the crane valve block (dark-gray block), loosen the nut, and turn the adjustment screw clockwise approximately 6 turns until it bottoms out. This will override the crane electrical circuit. Use the manual control valves to operate the crane.

CLAMP ARMS

The override valve manually operates the clamp arms. There are no additional levers or valves for the clamps. To manually operate the clamp arms, activate the clamp emergency override by pushing in and turning the button on the end of the valve. Rotate to the *right* and push in to clamp, and rotate to the *left* and pull out to unclamp.

DANGER

Avoid Death, Serious Injury or Equipment Damage! Do not place anything in the path of the clamping arms which secure roll-off.

Dash Warning Lights

The Refuse Container with Loader includes a large red flashing warning light on the dashboard next to the steering wheel. This light will alert the operator when:

- The crane is not stowed.
- The stabilizers are not stowed.
- The cable hoist is not completely lowered and in a level position.

DASH WARNING LIGHT
Indicates:
Cable Hoist Up
Crane Not Stowed
Stabilizers Not Stowed

There is also a PTO light in the cab which lights up when the PTO is engaged.

PTO Light
ON when PTO is engaged.

Troubleshooting

Condition	Possible Cause	Solution
Crane will not work	PTO / crankshaft-driven pump is not activated.	Activate PTO or crankshaft-driven pump.
	Electrical harness and hydraulic hoses are not connected.	Connect electrical harness and hydraulic hoses at the rear of the body are connected. (Deactivate PTO / crankshaft-driven pump before connecting!)
	Hoist-Crane Selector Switch is not set to *Crane*.	Flip Hoist-Crane Selector Switch to *Crane.*
	RCL safety system is not on.	Make sure all emergency stop buttons on the remote and RCL are released. Start the RCL by turning on the remote and pressing the green button.
	Clamps won't close	Check clamp high-pressure switches.
Clamp arms are not clamped.	Hoist-Crane Selector Switch is not flipped to *Crane*.	Flip Hoist-Crane Selector Switch to *Crane*.
	Crane Connected light is not lit.	Make sure electrical harness and hoses are connected at the rear of the body. Make sure PTO is activated.
	Hydraulic failure	Test hydraulic function using the emergency manual override function for the clamps.
	Crane will not function.	Check clamp high-pressure switches.

Condition	Possible Cause	Solution
Hoist will not work.	Hoist light is not lit	Flip Hoist-Crane Selector Switch to *Hoist*.
	Hydraulic failure	Test hydraulic function using the emergency manual override function for the hoist.
	Clamps remain closed.	Check low-pressure switch
Rig release will not work.	Wiring failure	Check wire connections at top of rig release.
		Lower load to ground. Use manual release button.
Vehicle moves very slowly.	Dash-mounted warning light is lit.	Check that the crane and stabilizers are stowed and the hoist is lowered completely.

CHAPTER 3

Decals

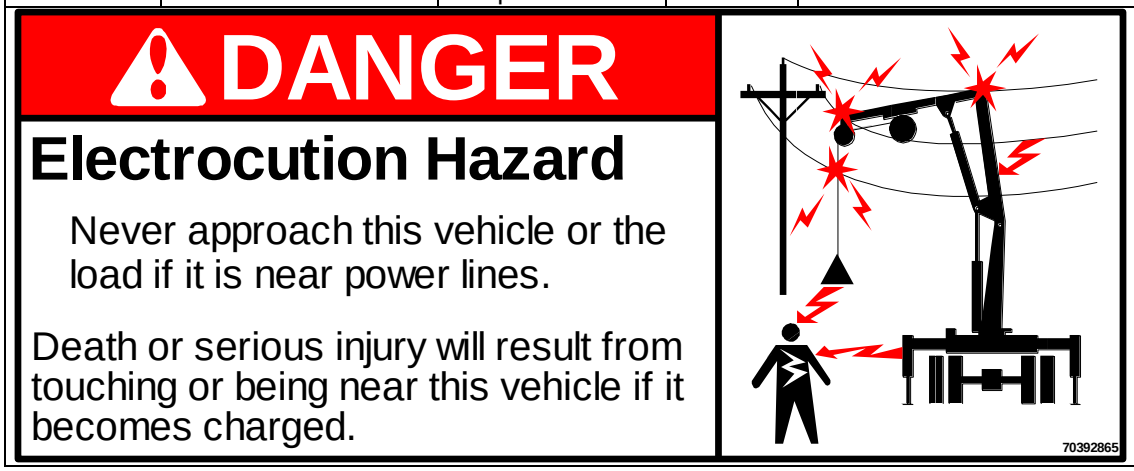
All operators must familiarize themselves with the warning decals shown in this section. Your equipment may have additional safety decals that are not described here. Any safety decals affixed to your equipment must be identified, read and understood.

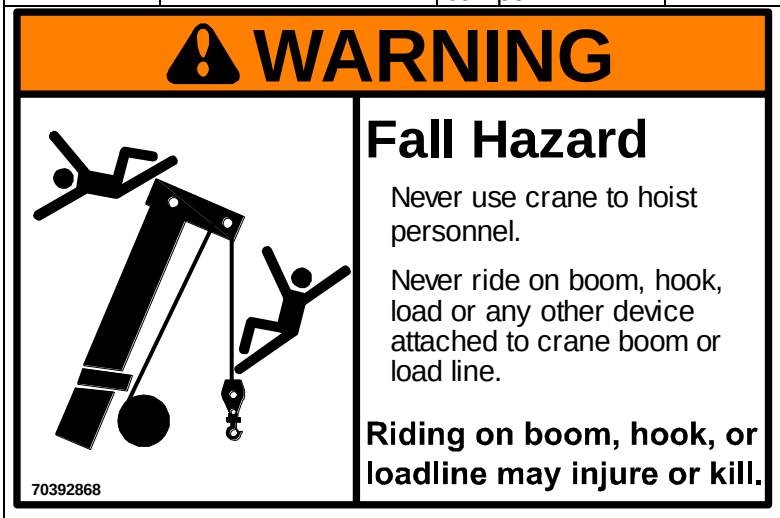
The materials and adhesives used in the production of these decals were designed for maximum durability, adhesion and legibility. Nevertheless, if a decal (including capacity chart) becomes damaged or illegible, replace it at your earliest opportunity. If a crane is repaired or repainted, replace all decals before the crane is put back into service. Individual decals as well as complete decal kits are available from IMT.

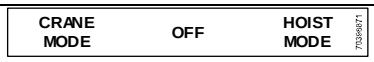
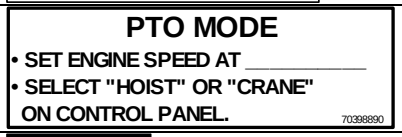
The following figures show examples of the safety decals used on the refuse container with loader, along with an explanation of their purpose, location, and the normal quantity used on each unit. See the decal placement drawing, ***99904843,*** (see "Decal Placement (99904843)" on page 63) for placement information.

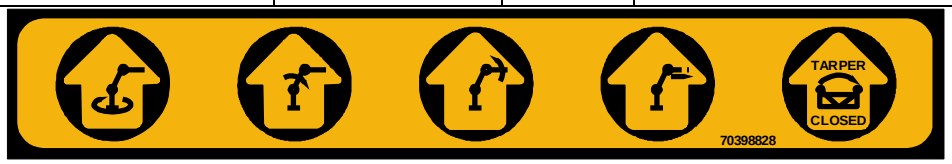
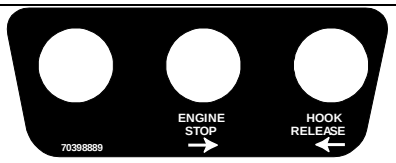
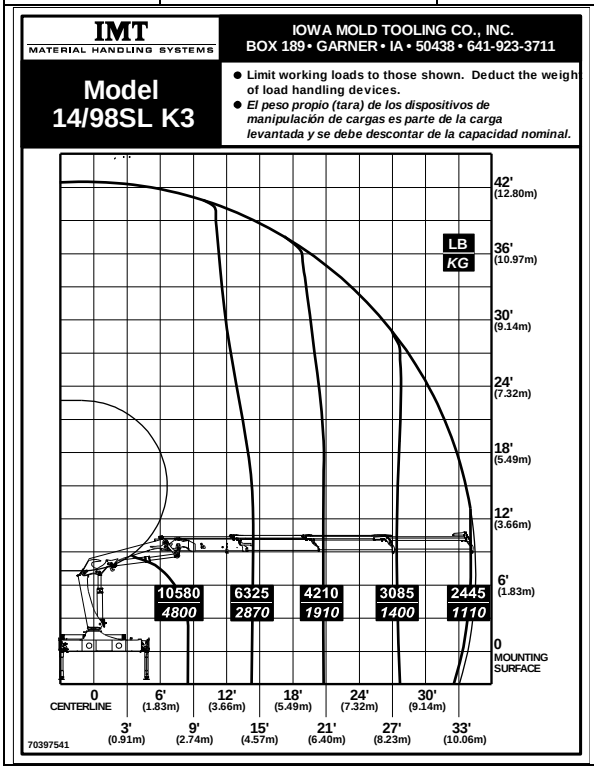
Refuse Container with Loader Decals

Part #	Function	Placement	Quantity	Sample
70392865 - Danger, Crane electrocution	Label warning against overhead powerline hazards.	On the sides and rear of the container, and on the vehicle front bumper.	4	(Decals included with crane decal kit 95720380)



Part #	Function	Placement	Quantity	Sample
70392868 - Warning, Crane loadline	Label warning against the hazards of riding on the crane boom or loadline.	On the sides and rear of the container, and on the vehicle front bumper.	4	(Decals included with crane decal kit 95720380)
				
70398864 - Danger, Pinch Point	Warning about severe pinching hazard between bracket and roll-off container.	On both sides of clamp arm and on body above clamp arm on both sides of crane.	6	
70392864 - Moving stabilizers danger	Label warning against crushing hazard from moving stabilizers.	On each stabilizer leg.	2	
70398829 - Stabilizer Swing Radius Warning	Label warning against 7-foot swing radius of stabilizer leg.	On each stabilizer.	2	

Part #	Function	Placement	Quantity	Sample
70398860 - Crane - Hoist Label	Label to designate whether crane or hoist unit is powered.	On body next to crane / hoist lights.	1	
70398861 - Caution, Crane Connected	Cautions against rolling container off bed when crane connected light is lit (and crane is electrically and hydraulically connected.)	Under Crane - Hoist power switch.	1	
70398871 - Crane-Hoist Switch	Placed below switch on electrical panel to label *crane - hoist - off* switch positions.	Above switch on electrical panel.	1	
70398862 - Roll-off removal instructions	Instructions to disengage PTO and disconnect wires and cables for safe roll-off removal.	On body next to hydraulic connections, and on electrical panel.	2	
70398863 - Height decal	Indicates height of Bagster unit.	In cab.	1	
70398890 - PTO Mode	List speed for engine to run PTO	In cab.	1	
70398865 - Stabilizer Controls	Label designating power-out stabilizer valvebank controls.	On both sides of the body next to the power-out stabilizer valvebank controls.	2	
70398866 - Stabilizer Controls	Label designating power-down stabilizer valvebank controls.	On both sides of the body next to the power-down stabilizer valvebank control.	2	

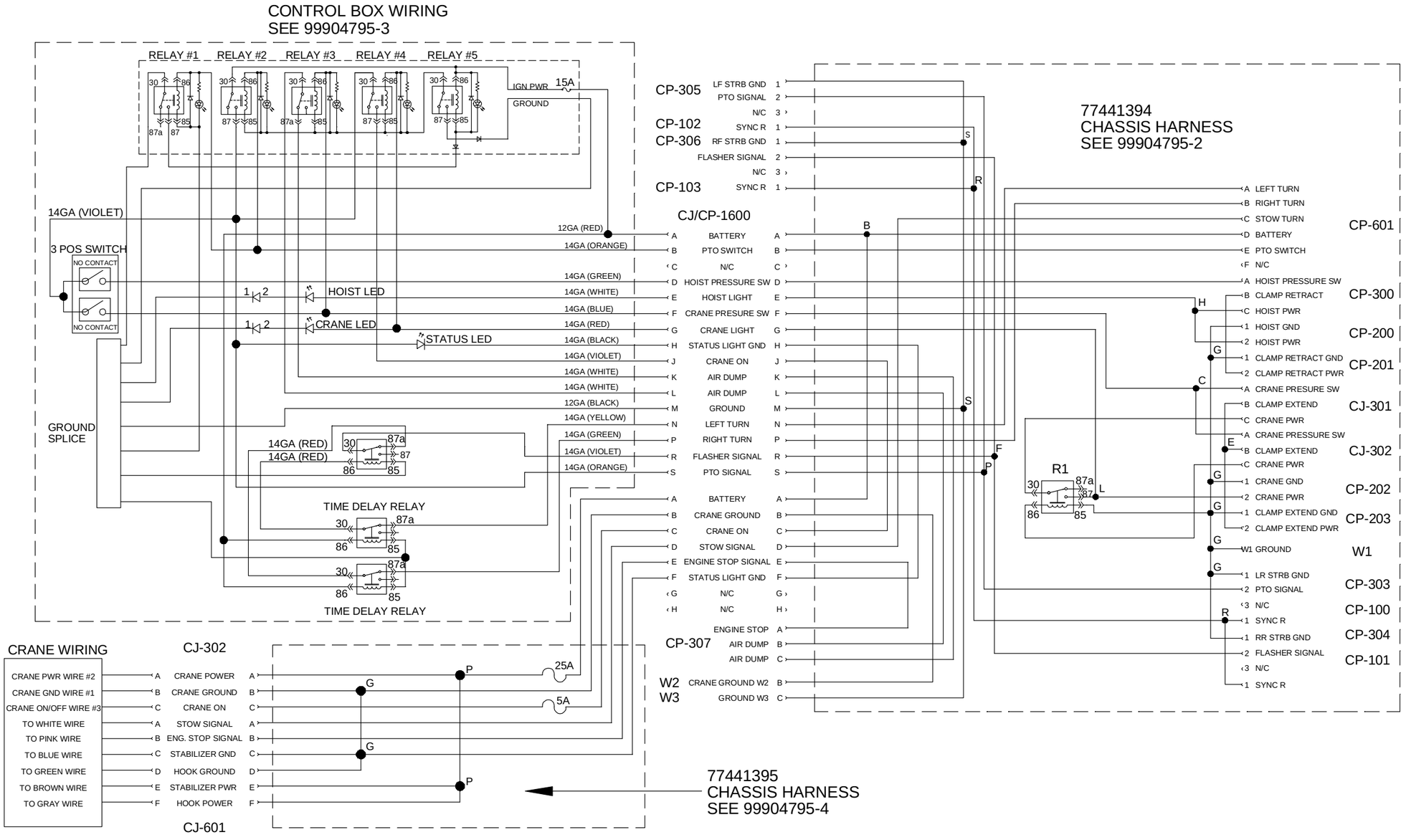
Part #	Function	Placement	Quantity	Sample
70398828- Manual Valvebank Controls	Label designating valvebank control functions.	On the driver's side of the body near the manual valvebank controls.	1	
				
70398888 - Tarper decal for remote	Label indicating tarper remote level.	On remote control.	1	
70398889 - Hook release and engine stop decal for remote	Label indicating hook release and engine stop on remote control.	On remote control	1	
70397541 - Capacity placard, 14/98SL K3	Label showing the capacity of the 14/98SL K3 crane mounted on the refuse container with loader.	On both sides of the container near the cab.	2	
				

CHAPTER 4

Parts

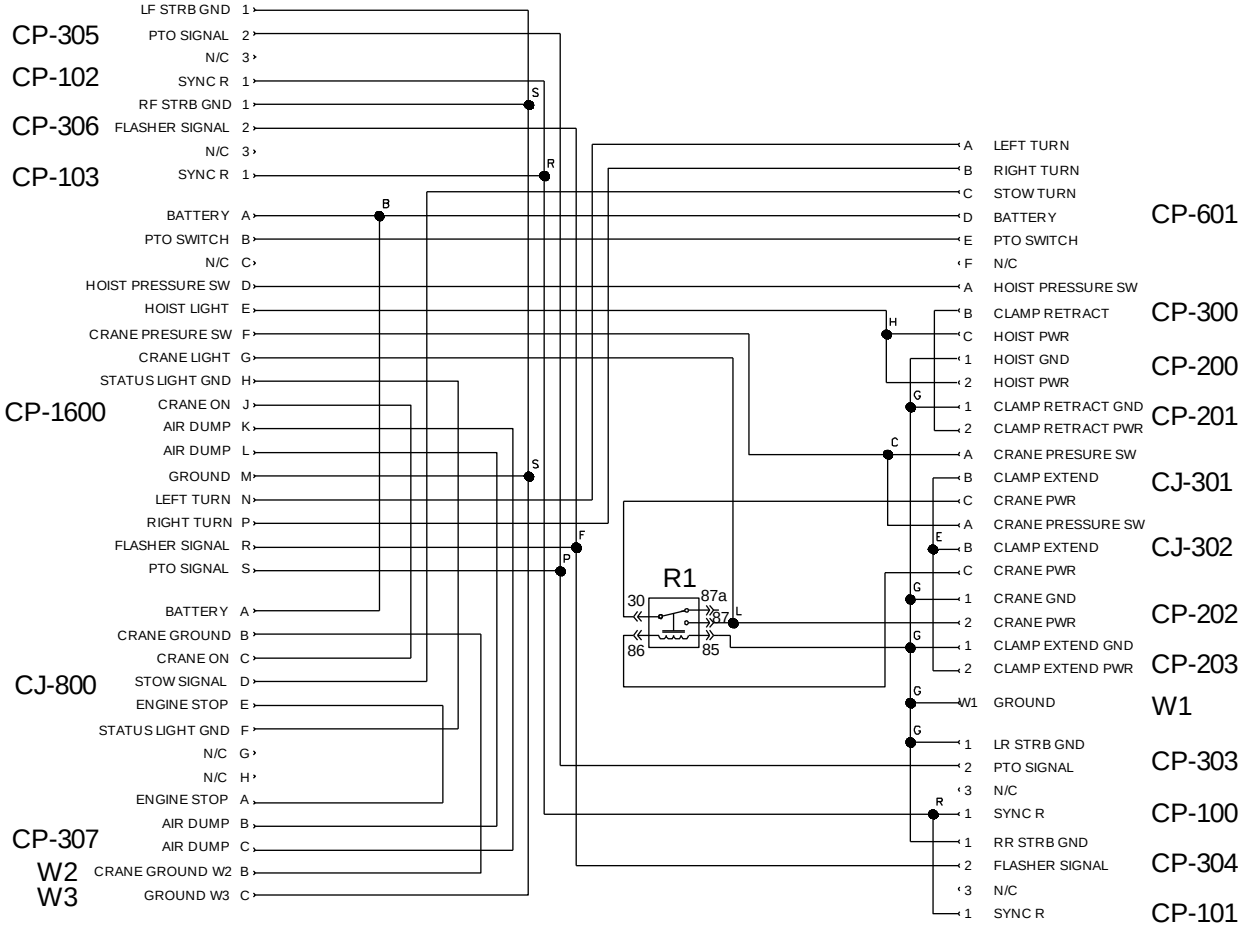
In This Chapter

Control Box Wiring (99904795)



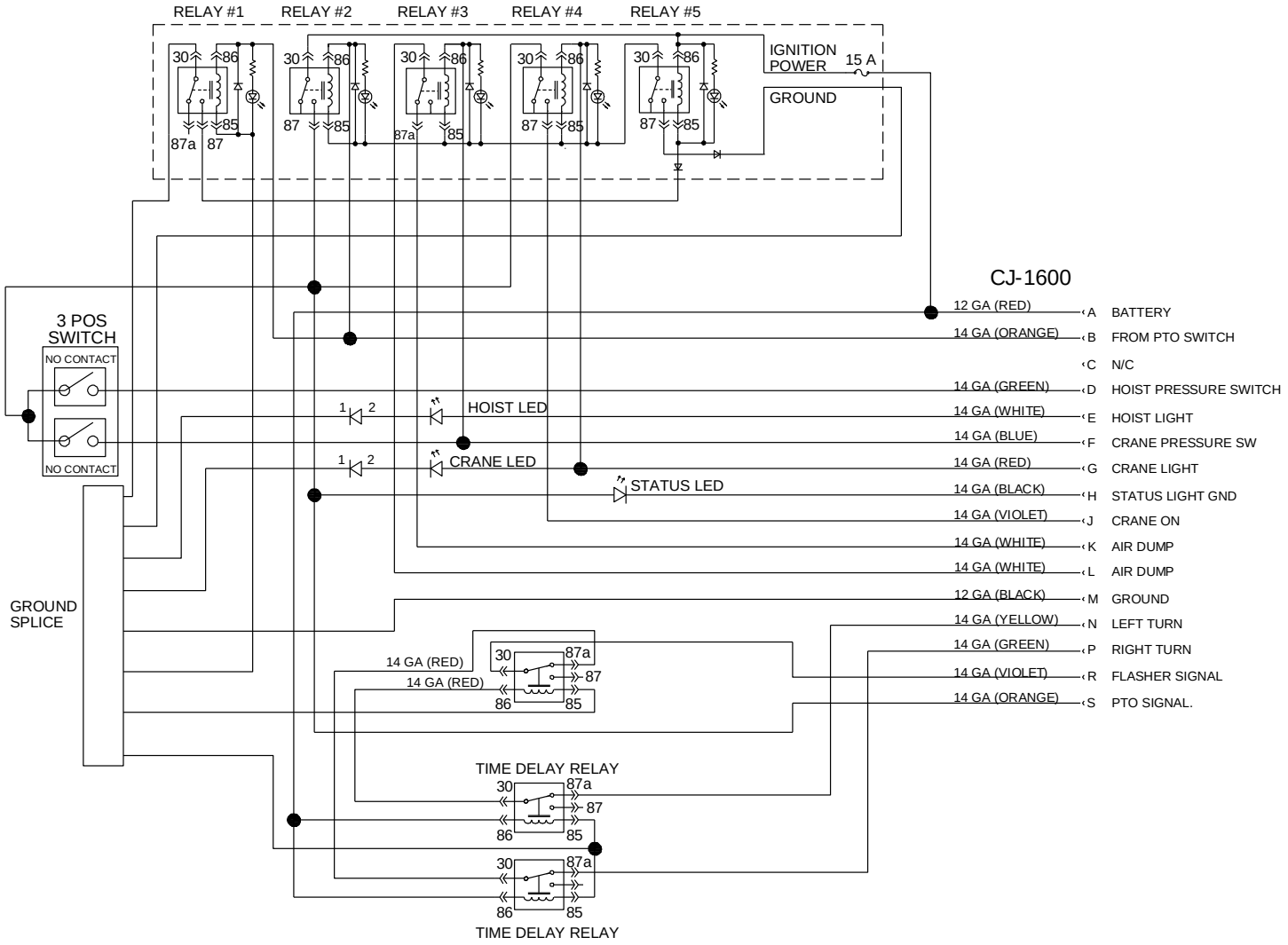
Chassis Harness (99904795-2)

Harness # 77441394



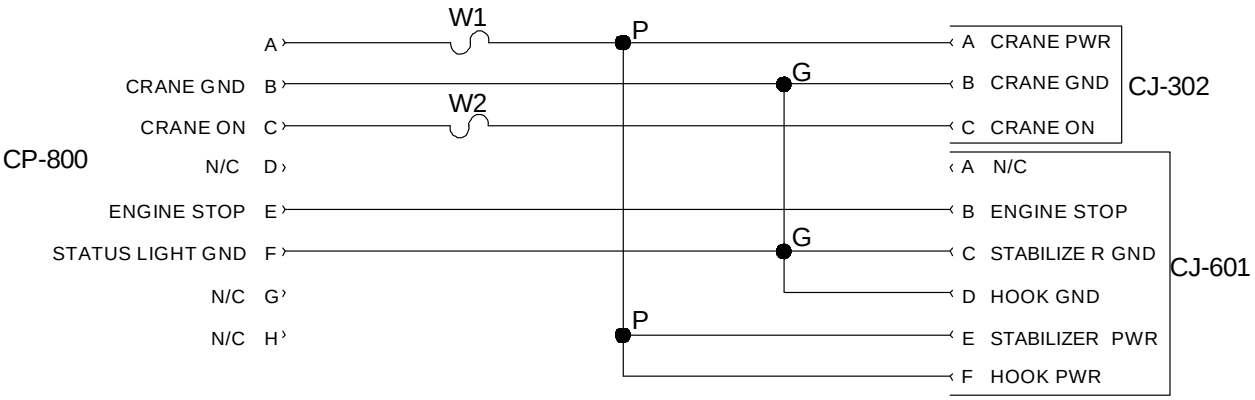
77441394
CHASSIS HARNESS

Control Box Wiring (99904795-3)

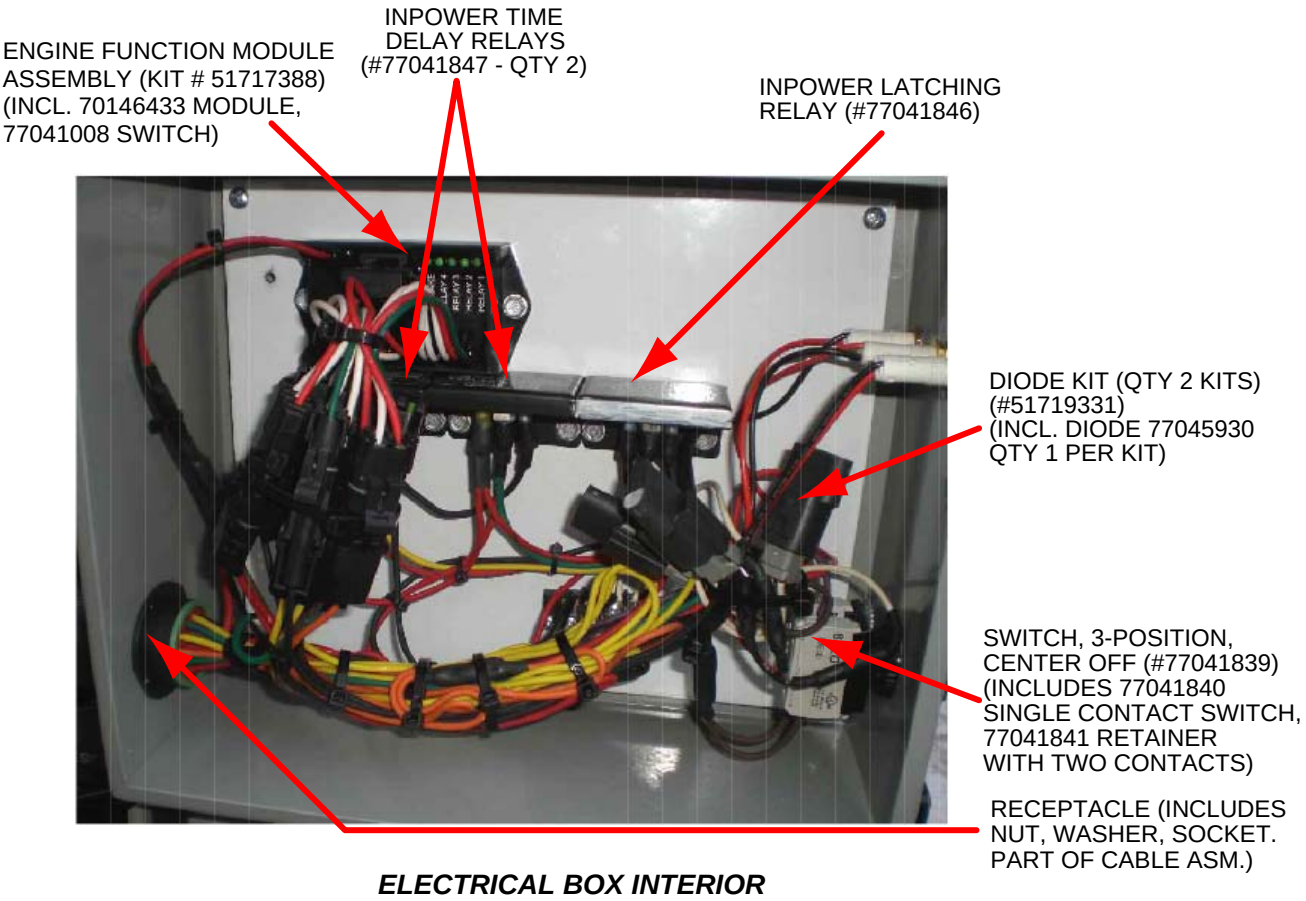


Body Wiring Harness (99904795-4)

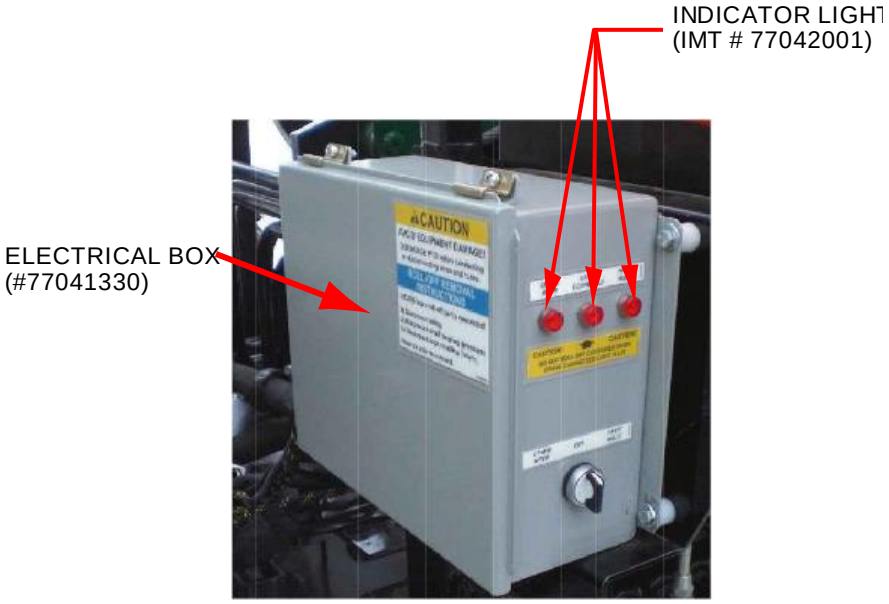
Harness # 77441395



Control Box Wires (99904795-5)



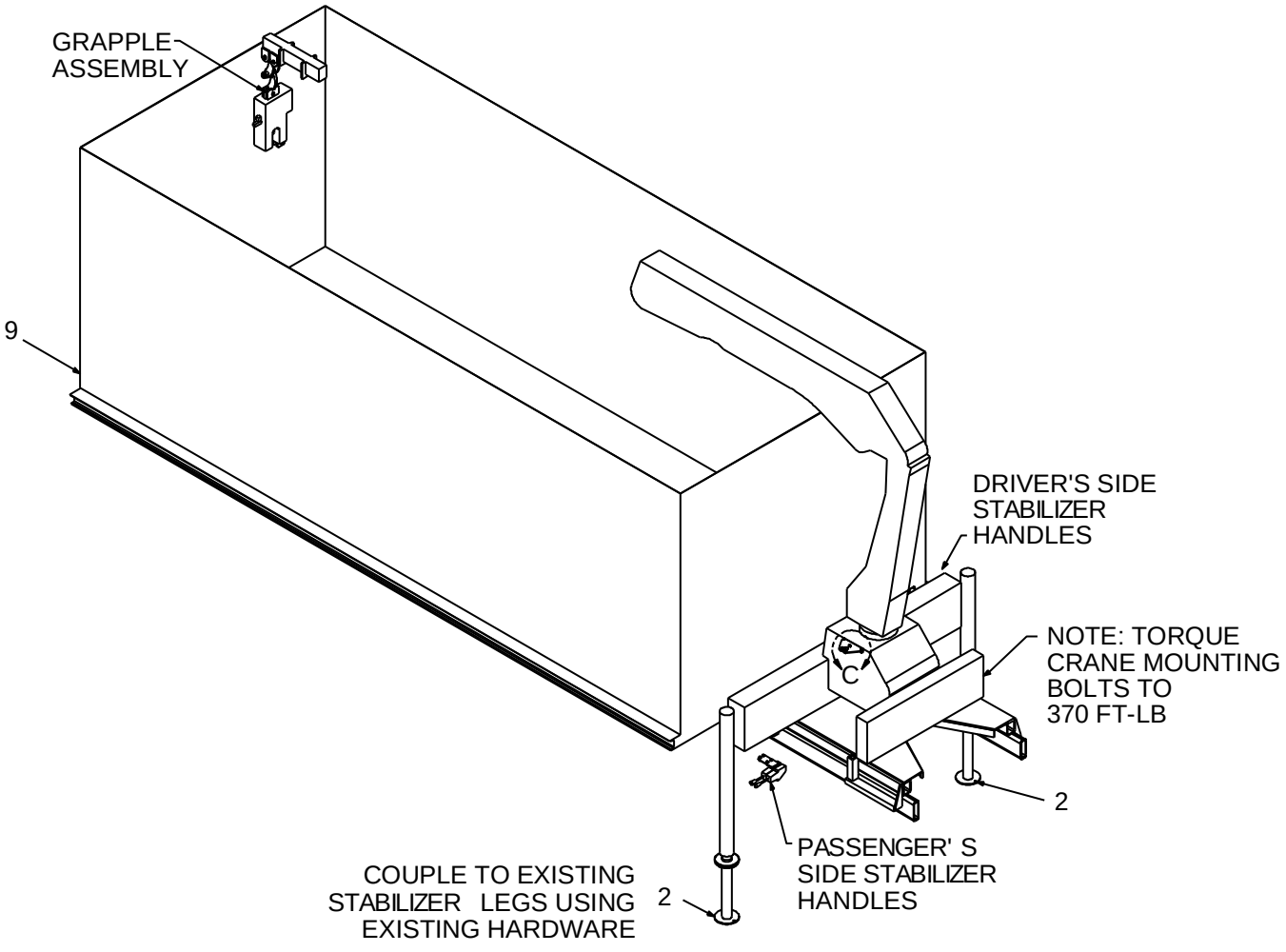
ELECTRICAL BOX INTERIOR

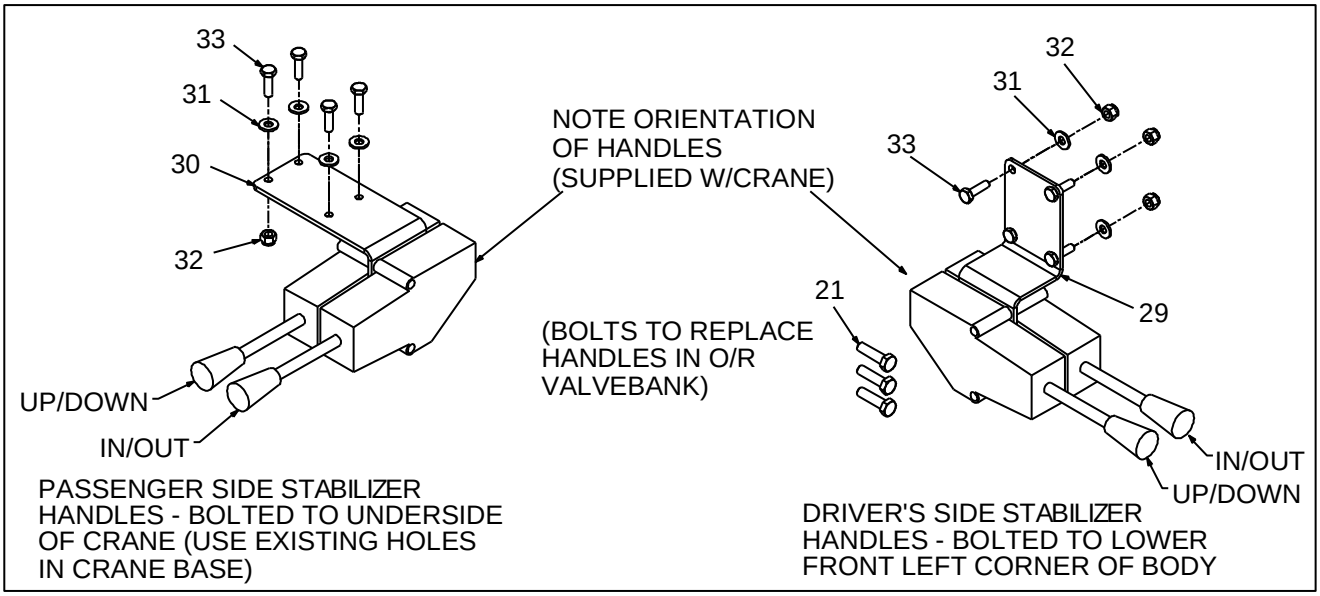


ELECTRICAL BOX EXTERIOR

51722772 - Electrical box, complete (Includes switches, lights, relays, decals)
77441395 - Harness - chassis
77441394 - Harness - crane / body

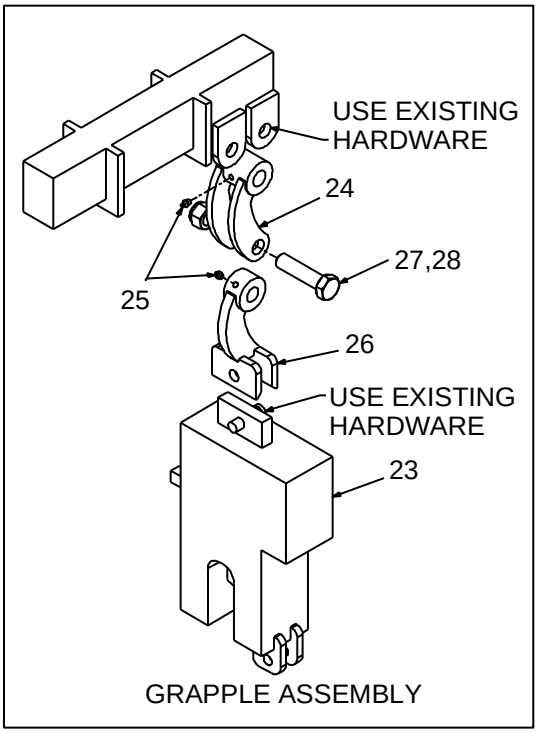
Platform Assembly (99904800)



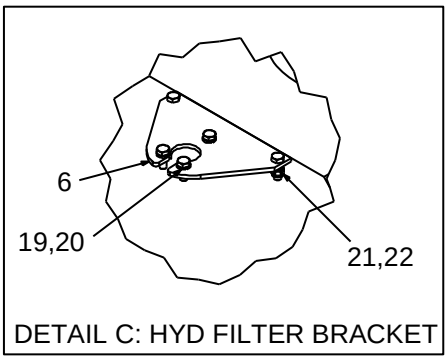


PASSENGER SIDE STABILIZER HANDLES - BOLTED TO UNDERSIDE OF CRANE (USE EXISTING HOLES IN CRANE BASE)

DRIVER'S SIDE STABILIZER HANDLES - BOLTED TO LOWER FRONT LEFT CORNER OF BODY



GRAPPLE ASSEMBLY

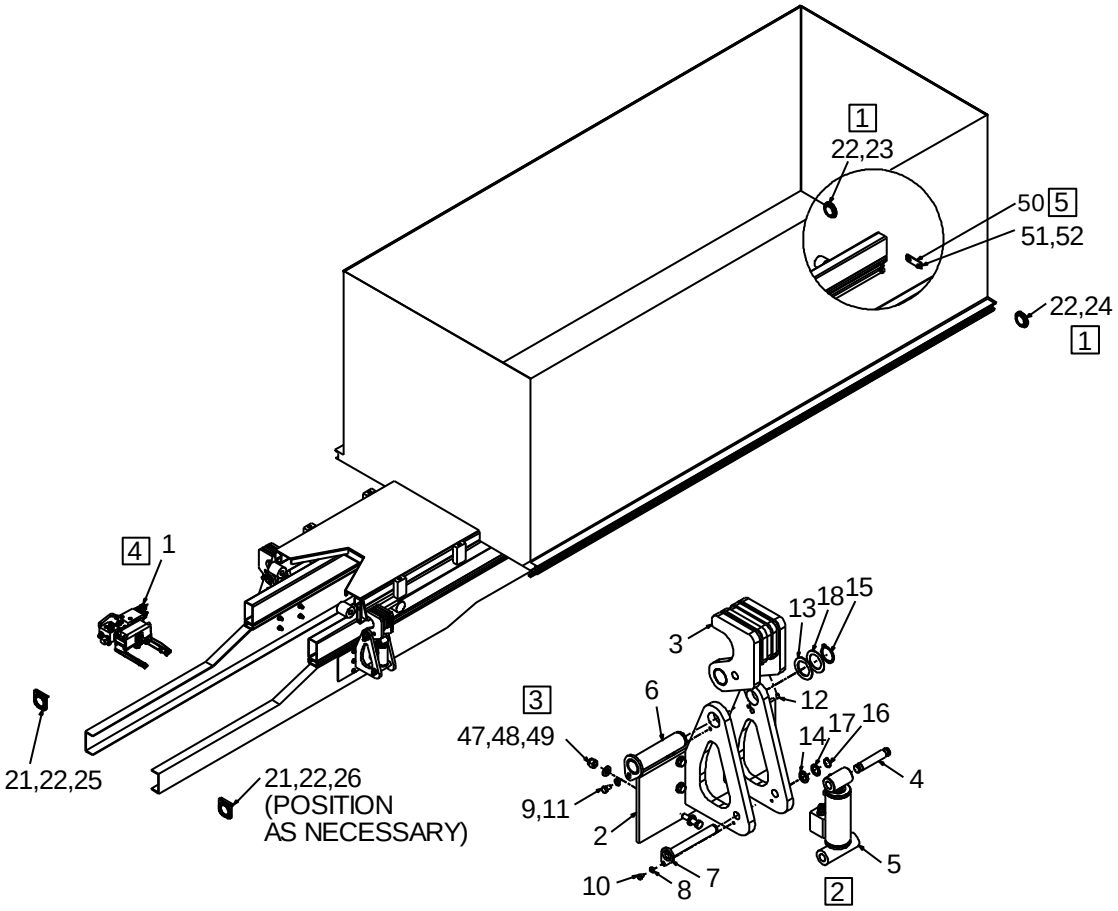


DETAIL C: HYD FILTER BRACKET

99904800 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
2.	52722645	WELDMENT, STABILIZER FOOT	2
6.	60135030	HYD FILTER BRACKET	1
9.	70734492	CONTAINER-ROLL OFF PLATFORM	1
19.	72601797	WASHER-LOCK 8MM	3
20.	72601278	CAP SCREW M 8-1.25X 20 HHZ	3
21.	72602031	CAP SCREW M 8-1.25X 25 HH SS	5

99904800 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
22.	72601952	NUT M 8 X 1.25 HEX NYLOC ZINC	2
23.	71413858	CLAMP-LIFTING ELECT RELEASE 2.5T	1
24.	52722767	LINK-GRAPPLE BAGSTER UPPER	1
25.	72053508	ZERK-NPT .12	2
26.	52722766	LINK-GRAPPLE BAGSTER LOWER	1
27.	72060246	CAP SCREW 1.00- 8X 4.00 HH GR5 Z	1
28.	72062137	NUT 1.00-8 HEX NYLOCK	1
29.	60135417	BRACKET- VALVE BANK STABILIZER LH	1
30.	60135416	BRACKET- VALVE BANK STABILIZER RH	1
31.	72063001	WASHER .25 FLAT	8
32.	72062104	NUT .25-20 HEX NYLOCK	8
33.	72060003	CAP SCREW .25-20X .88 HH GR5 Z	8
REV. B 20100304			

Clamp Installation (99904816)



NOTES (SEE REFERENCE NUMBER IN BOX):

1 STROBE LIGHTS ARE STAMPED WITH IDENTIFICATION NUMBERS. SEE PARTS LIST FOR PROPER POSITIONING.

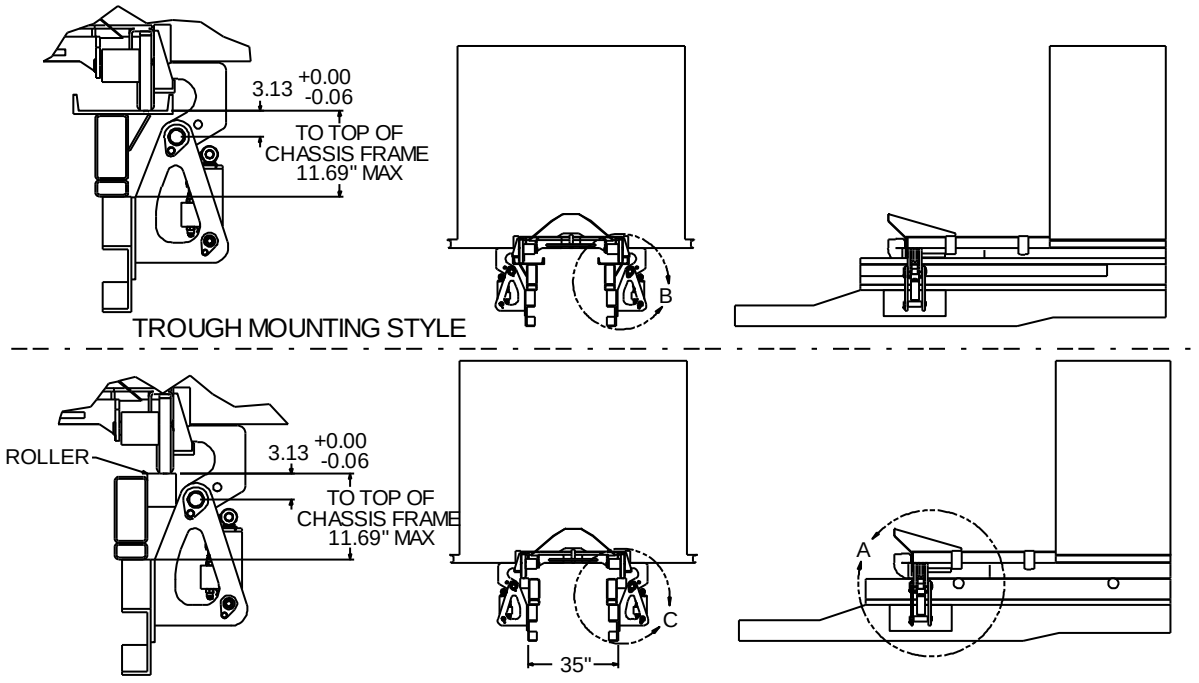
2 ASSEMBLE FITTINGS AND SWITCHES TO CYLINDERS BEFORE ASSEMBLY. SEE HYDRAULIC INSTRUCTIONS.

3 USE 5/8-11 GRADE 8 HARDWARE (6 PLACES). DRILL ø0.69" HOLES AS NEEDED. TORQUE TO 160 FT-LB.

4 MOUNT TO HOIST PLATFORM USING SUPPLIED HARDWARE.

5 MOUNT IN REAR OF HOIST BODY.

INSIDE / OUTSIDE MOUNTING STYLE (99904816-2)

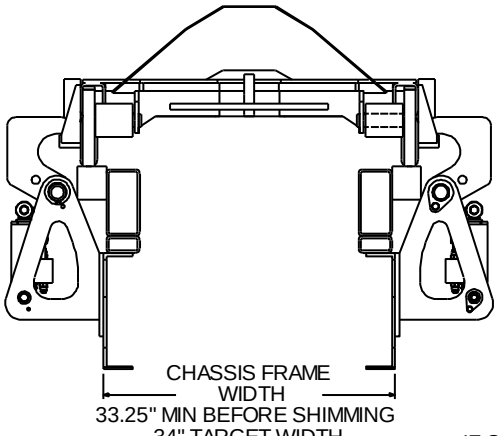


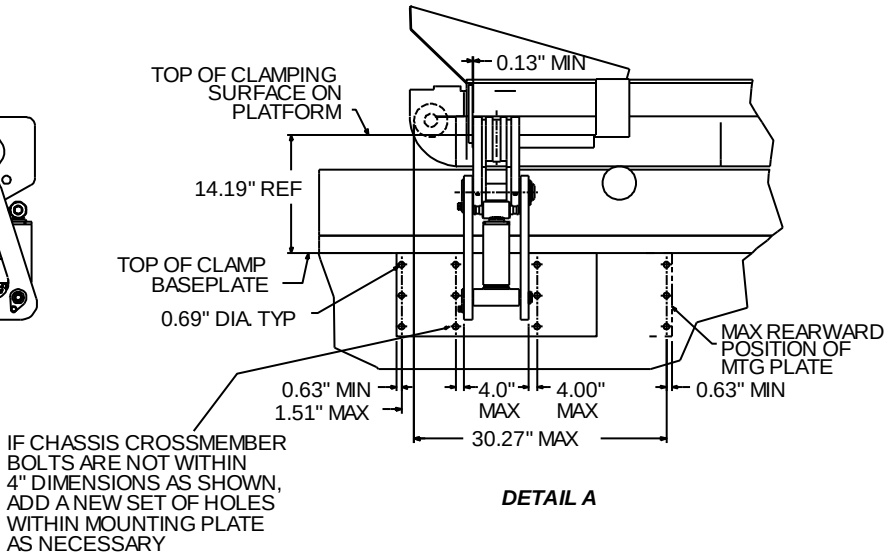
INSIDE/OUTSIDE MOUNTING STYLE

NOTES:

1 THE FORE / AFT POSITION OF THE CLAMPS MUST BE DETERMINED AT ASSEMBLY, BASED ON CHASSIS / HOIST SPECIFICS. ALLOW A MINIMUM GAP OF 1/8" BETWEEN THE CLAMP AND SIDE GUSSETS. THE POSITION OF THE LEFT AND RIGHT COMPONENTS SHOULD BE AS CONSISTENT AS POSSIBLE.

CHASSIS DIMENSIONS (99904816-3)





DETAIL A

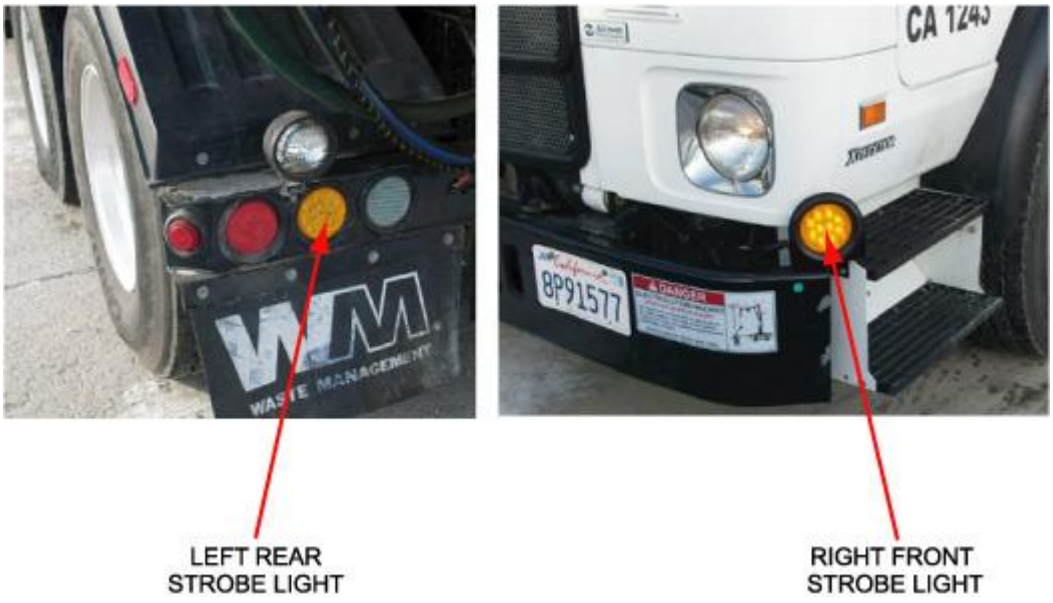
NOTES:

1 THE FORE / AFT POSITION OF THE CLAMPS MUST BE DETERMINED AT ASSEMBLY, BASED ON CHASSIS / HOIST SPECIFICS. ALLOW A MINIMUM GAP OF 1/8" BETWEEN THE CLAMP AND SIDE GUSSETS. THE POSITION OF THE LEFT AND RIGHT COMPONENTS SHOULD BE AS CONSISTENT AS POSSIBLE.

99904816 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	51722769	MANIFOLD ASSEMBLY-BAGSTER 14TM	1
2.	52722787	WELDMENT-BRKT CHASSIS PIVOT	2
3.	52722674	WELDMENT-LATCH HOOK BAGSTER	2
4.	60135055	PIN-TYPE F 1.00 X 5.50	2
5.	71413867	CYLINDER-2.5/1.5 4.00S 10.50CC C	2
6.	52722672	PIN TYPE-II 2.00 X 8.75	2
7.	52722673	PIN-TYPE II 1.00 X 8.43	2
8.	72063051	WASHER .38 LOCK	2
9.	72063053	WASHER .50 LOCK	2
10.	72060042	CAP SCREW .38-16X .50 HH GR5 Z	2
11.	72060089	CAP SCREW .50-13X .75 HH GR5 Z	2
12.	72601851	SET SCREW .38-16X .50 SH SS	4
13.	72063039	MACHY BUSHING 2.00X10 GA NR	2
14.	72063034	MACHY BUSHING 1.00X10 GA NR	2
15.	72066136	RETAINING RING-EXT 2.00 HD	2
16.	72066125	RETAINING RING-EXT 1.00 HD	2
17.	72063033	MACHY BUSHING 1.00X14 GA NR	2
18.	72063038	MACHY BUSHING 2.00X14 GA NR	2
19.	71413852	TUBE ASSEMBLY-HYD 1.00 OD X 216.35	1
20.	71413853	TUBE ASSEMBLY-HYD .75 OD X 220.00	1
21.	60135237	BRACKET-LIGHT 4" RND	2
22.	76392275	GROMMET-RUBBER TAIL LIGHT 4.00	4
23.	77040554	LIGHT-STROBE SMART AMBER 4in RH #1	1
24.	77040553	LIGHT-STROBE SMART AMBER 4in LH #2	1
25.	77040562	LIGHT-STROBE SMART AMBER 4in RH #3	1
26.	77040561	LIGHT-STROBE SMART AMBER 4in LH #4	1
47.	72063119	WASHER .62 FLAT ASTM F436	24
48.	72601482	CAP SCREW .62-11X 2.50 HH GR8 Z	12
49.	72601859	NUT .62-11 HEX ZINC NYLOK GR8	12
50.	60135122	BRACKET-HARNESS MOUNTING	1
51.	72060149	CAP SCREW .62-11 X 1.50 HHGR5Z	1
52.	72062091	NUT .62-11 HEX NYLOCK	1
NEW 20100113			

Refuse Container with Loader Lights

The amber strobe lights are unique per corner. The master light, located at the right rear of the vehicle, includes a computer which controls the other three lights. When ordering replacement strobe lights, check the back of the light for the ID number, which is stamped after the number and the dash on the back of the strobe.



The replacement light part numbers are:

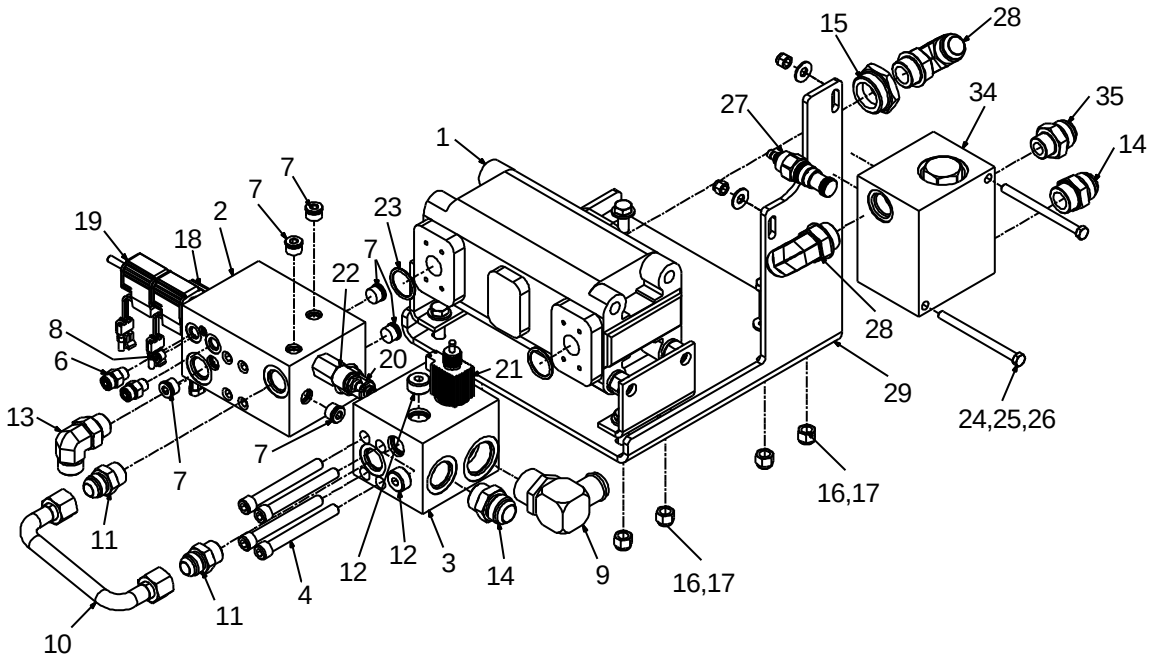
LOCATION	LIGHT ID #	LIGHT PART NUMBER
Right Rear (Master)	# 1	77040554
Left Rear	# 2	77040553
Right Front	# 3	77040562
Left Front	# 4	77040561

Clamp Cylinder (71413867)

Cylinder spare parts

- 94398857 - Seal Kit
- 73054218 - Check Valve, Pilot/Open Nonvent 100 psi

Manifold Assembly (51722769)



NOTE:

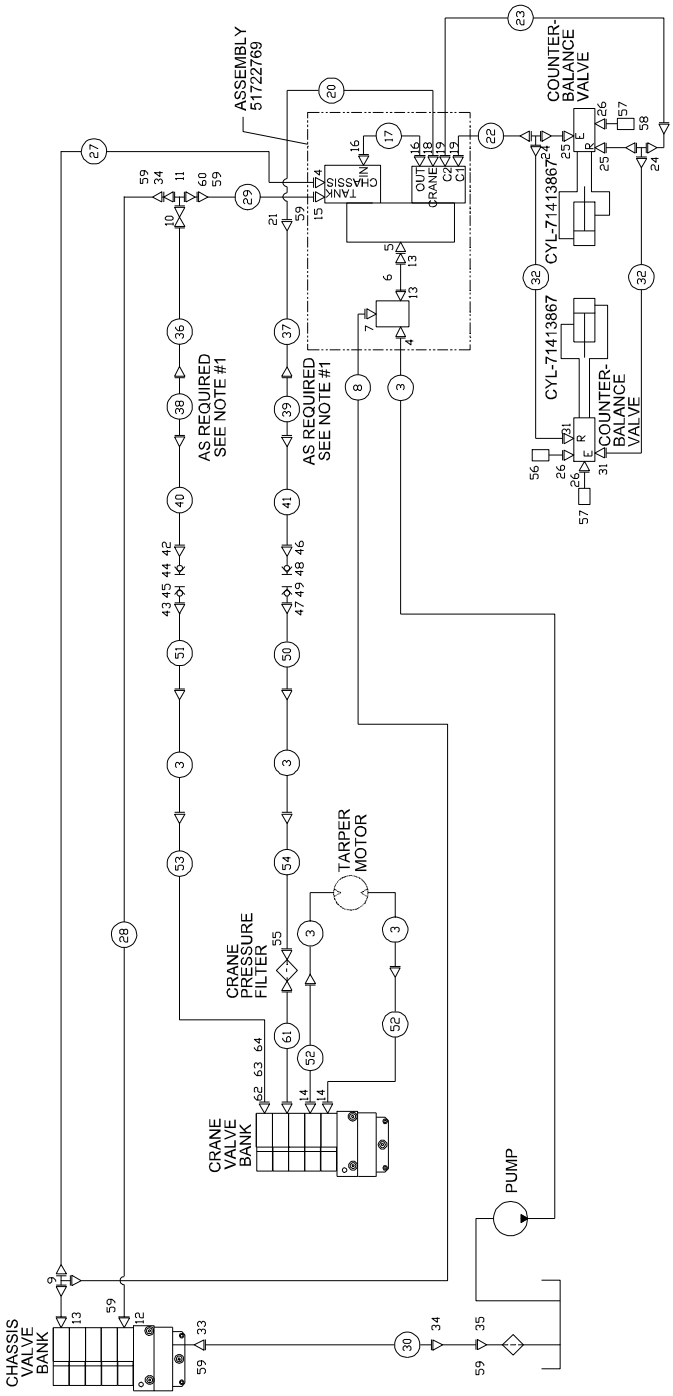
1 PLUG OR CAP ALL FITTINGS AND PORTS PRIOR TO SHIPPING.

51722769 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
1.	73540378	FLOW DIVIDER	1
2.	60135086	MANIFOLD BLOCK-WITH RELIEF	1
3.	60135087	MANIFOLD BLOCK-6 PORT FLANGE MOUNT	1
4.	72601939	CAP SCREW .50-13X 4.50 SH ZC	8
5.	60135104	BRACKET-FLOW DIVIDER	2
6.	72533186	ADAPTER-M FACE/M STR 6 6	2
7.	72534562	PLUG-STR SOC HD STL 8 ZERO LEAK	6
8.	72534560	PLUG-STR SOC HD STL 4 ZERO LEAK	1
9.	72532710	NIPPLE-BEAD 90DEG 20 STR 1.25	1
10.	71413865	TUBE ASM-HYD 0.75 OD X 6.44	1
11.	72532366	ADAPTER-M STR/M JIC 12 12	3
12.	72532662	PLUG-PIPE SOC HEX STL .75	2
13.	72533436	ELBOW-M STR/90/M FACE 12 12	1
14.	72532370	ADAPTER-M STR/M JIC 16 16	2
15.	72534653	ADAPTER-M STR/F STR 24 16	1
16.	72063005	WASHER .50 FLAT	8
17.	72062080	NUT .50-13 HEX NYLOCK	8
18.	73540387	VALVE-SOLENOID SOFT SHIFT	1
	77041837	COIL FOR 73540387	1REF
19.	73540381	VALVE-DIRECTIONAL CONTROL	1

51722769 PARTS LIST			
ITEM	PART #	DESCRIPTION	QUANTITY
	77041838	COIL FOR 73540381	2REF
20.	73540382	VALVE-PRIORITY FLOW CONTROL 4.5 GPM FIXED	1
21a.	73540383	VALVE-2W/2P SPRING OFFSET NORMALLY OPEN	1
	77041836	COIL-12VDC FOR 73540383	1REF
	NOTE: 21a - 73540383 used through REFUSE3101008. Push/turn override function.		
21b.	73540415	VALVE-ASSY 2W2P W/MANUAL OVERRIDE	1
	73540416	VALVE-CARTRIDGE FOR 73540415	1REF
	77041838	COIL-12V DC FOR 73540415	1REF
	73540417	VALVE-MANUAL OVERRIDE FOR 73540416	1REF
	NOTE: 21b - 73540415 used effective REFUSE3101009. Turn knob to override function.		
22.	73540380	VALVE-PRESSURE RELIEF	1
23.	7Q072219	O RING 1.31X 1.56X .12 70	2
24.	72063186	WASHER .38 FLAT ASTM F436	2
25.	72060058	CAP SCREW .38-16X 5.00 HH GR5 Z	2
26.	72062103	NUT .38-16 HEX NYLOCK	2
27.	73540401	VALVE-RELIEF 50 GPM	1
28.	72053770	ELBOW-M STR/90/M JIC 16 16	2
29.	60135601	BRACKET-FLOW DIVIDER	1
30.	72060094	CAP SCREW .50-13X 1.75 HH GR5 Z	8
31.	51398935	HOSE-FF 1.00 X 10.50 (16-16) 100R17	1
32.	72063055	WASHER .62 LOCK	4
33.	72062006	NUT .62-12 HEX	4
34.	73540388	VALVE ASSEMBLY - PRIORITY FLOW CONTROL	1
	73540389	VALVE BODY FOR 73540388	1REF
	73540390	VALVE CARTRIDGE FOR 73540388	1REF
35.	72532369	ADAPTER-MSTR/MJIC 12 16	1
REV. C 20100519			

Hydraulic System (99904818)

Hydraulic Plumbing Layout

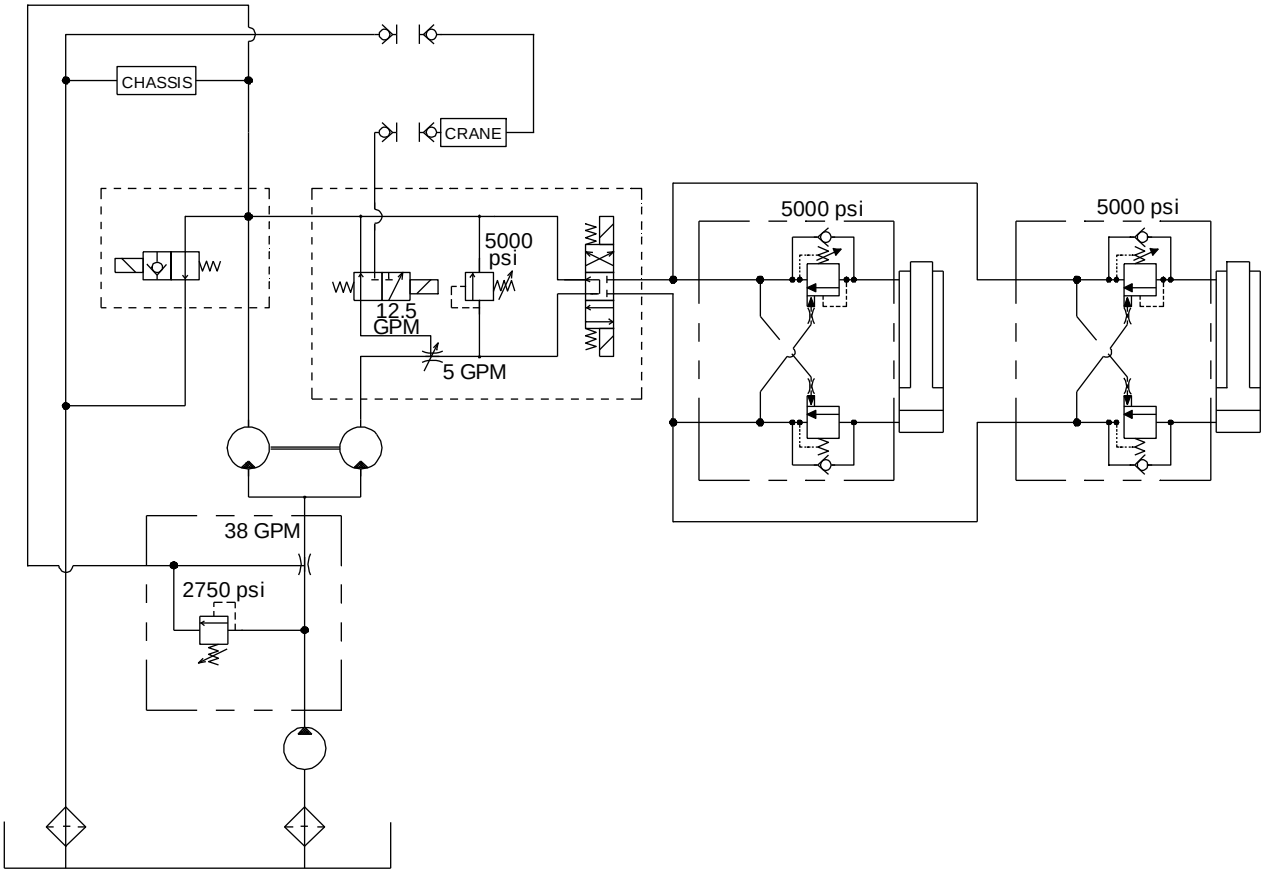


NOTES

1 TUBE EXTENSIONS ARE ONLY REQUIRED ON LONGER CHASSIS.

2 ALL ITEMS INCLUDED IN KIT #2 (91722786) WILL BE INSTALLED AT IMT.

Hydraulic Schematic

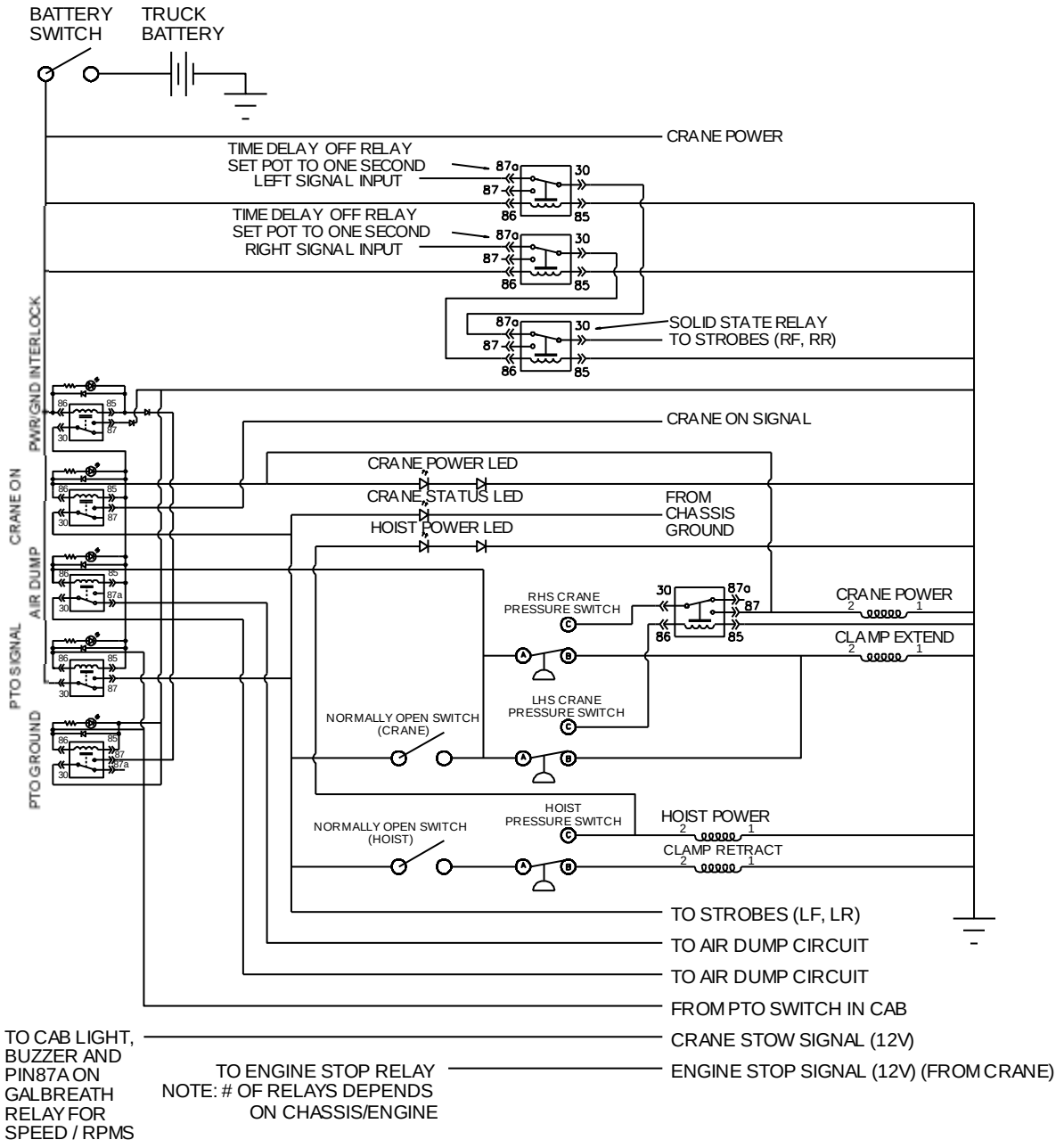


99904818 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
1.	91722774	KIT HYDRAULIC SHIPOUT		REF
2.	91722786	KIT -HYDRAULIC INSTALL		REF
3.	N/A	PROVIDED & INSTALLED BY GALBREATH		REF
4.	72532370	ADAPTER-M STR/M JIC 16 16	PART OF ASSEMBLY 51722769	REF
5.	72534653	ADAPTER-M STR/F STR 24 16	PART OF ASSEMBLY 51722769	REF
6.	51398935	HOSE-F F 1.00 X 10.50 (16-16) 100R17	PART OF ASSEMBLY 51722769	REF
7.	72532369	ADAPTER-M STR/M JIC 12 16	PART OF ASSEMBLY 51722769	REF
8.	51396496	HOSE-F J 1.00 X 50.00 (16-16) 100R17	PART OF KIT # 1	1
9.	72532950	TEE-SWVL NUT RUN JIC 12	PART OF KIT # 1	1
10.	72533564	ADAPTER-M PT /M JIC 1.25 16	PART OF KIT # 1	1
11.	72053615	TEE-STL 1.25	PART OF KIT # 1	1
12.	72532708	NIPPLE-BEAD 90DEG 16 STR 1.25	PART OF KIT # 1	1
13.	72053770	ELBOW-M ST R/90/M JIC 16 16	PART OF KIT # 1	1
14.	72534713	ADAPTER-M BSPP/M JIC 8 6	PART OF KIT # 2	2

99904818 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
15.	72532710	NIPPLE-BEAD 90DEG 20 STR 1.25	PART OF ASSEMBLY 51722769	REF
16.	72532366	ADAPTER-M STR/M JIC 12 12	PART OF ASSEMBLY 51722769	REF
17.	71413865	TUBE ASSEMBLY-HYD 0.75 OD X 6.44	PART OF ASSEMBLY 51722769	REF
18.	72533436	ELBOW-M STR/90/M FACE 12 12	PART OF ASSEMBLY 51722769	REF .
19.	72533186	ADAPTER-M F ACE/M ST R 6 6	PART OF ASSEMBLY 51722769	REF
20.	51398886	HOSE-WX .75 X 40.00 (12-12) 100R13	PART OF KIT # 1	1
21.	72534687	UNION-M F ACE/M FACE 12 12	PART OF KIT # 1	1
22.	51398874	HOSE-WX .38 X 43.00 (6-6) 100R13	PART OF KIT # 1	1
23.	51398875	HOSE-WY .38 X 46.00 (6-6) 100R13	PART OF KIT # 1	1
24.	72533412	TEE-SWVL NUT RUN FACE 6	PART OF KIT # 1	2
25.	72533186	ADAPTER-M F ACE/M ST R 6 6	PART OF KIT # 1	2
26.	72534652	ELBOW-M STR/90/FPT 4 6	PART OF KIT # 1	3
27.	51398876	HOSE-F J 1.00 X 71.00 (16-16) 100R17	PART OF KIT # 1	1
28.	89393401	HOSE-HYD 1.25 100R4 881-20 PAR	PART OF KIT # 1	AS REQ'D
29.	89393401	HOSE-HYD 1.25 100R4 881-20 PAR	PART OF KIT # 1	AS REQ'D
30.	89393401	HOSE-HYD 1.25 100R4 881-20 PAR	PART OF KIT # 1	AS REQ'D
31.	72533415	ADAPTER-M F ACE/M ST R 6 6 LG	PART OF KIT # 1	2
32.	51398877	HOSE-XX .38 X 69.00 (6-6) 100R13	PART OF KIT # 1	2
33.	72534688	NIPPLE-BARB STL 20 ST R 1.00	PART OF KIT # 1	1
34.	72531550	NIPPLE-BARB STL 1.25M PT 1.25	PART OF KIT # 1	2
35.	72531838	REDUCER BUSH-STL 1.50-1.25	PART OF KIT # 1	1
36.	71413852	TUBE ASSEMBLY -HYD 1.00 OD X 216.35	PART OF KIT 93722792	1
37.	71413853	TUBE ASSEMBLY-HYD .75 OD X 220.00	PART OF KIT 93722792	1
38.	71413873	TUBE ASSEMBLY-HYD 1.00 OD X 18.25		AS REQ'D
39.	71413872	TUBE ASSEMBLY -HYD .75 OD X 12.83		AS REQ'D
40.	51398883	HOSE-AAF 1.00 X 24.50 (16-16) 100R17	PART OF KIT # 1	1
41.	51398882	HOSE-CCW .75 X 24.50 (12-12) 100R13	PART OF KIT # 1	1
42.	72532370	ADAPTER-M STR/M JIC 16 16	PART OF KIT # 1	1
43.	72532370	ADAPTER-M STR/M JIC 16 16	PART OF KIT # 2	1
44.	72534647	QUICK DISCONNECT-16 SOCKET	PART OF KIT 93722792	REF
45.	72534648	QUICK DISCONNECT-16 PLUG	PART OF KIT 93722792	REF
46.	72533420	ADAPTER-M F ACE/M ST R 12 12	PART OF KIT # 1	1
47.	72533420	ADAPTER-M F ACE/M ST R 12 12	PART OF KIT # 2	1
48.	72534646	QUICK DISCONNECT-12 SOCKET	PART OF KIT 93722792	REF
49.	72534645	QUICK DISCONNECT-12 PLUG	PART OF KIT 93722792	REF
50.	51398884	HOSE-WW .75 X 60.00 (12-12) 100R13	PART OF KIT # 2	1
51.	51398887	HOSE-AAF 1.00 X 60.00 (16-16) 100R17	PART OF KIT # 2	1
52.	51398881	HOSE-AAJ .38 X 40.00 (6-8) 100R17	PART OF KIT # 2	2
53.	51398878	HOSE-AAJ 1.00 X 43.00 (16-16)100R17	PART OF KIT # 2	1
54.	51398879	HOSE-WX .75 X 111.00 (12-12) 100R13	PART OF KIT # 2	1
55.	72534656	ADAPTER-M BSPP/M FACE 16 12	PART OF KIT # 2	1
56.	77041842	SWITCH-PRESS 1500PSI NO/NC	PART OF KIT 93722792	1
57.	77041843	SWITCH-PRESS 4000PSI NO/NC	PART OF KIT 93722792	2
58.	72533529	ELBOW-M F ACE/90/F F ACE SWVL 6	PART OF KIT # 1	1
59.	72661642	CLAMP-HOSE 1.75 T-BOLT	PART OF KIT # 1	6

99904818 PARTS LIST				
ITEM	PART #	DESCRIPTION	KIT #	QUANTITY
60.	72532711	NIPPLE-BEAD 45DEG 20 STR 1.25	PART OF KIT # 1	1
61.	N/A	PROVIDED WITH CRANE		REF
62.	72534599	ADAPTER-M JIC/M M 12 20 SW	PART OF KIT # 2	1
63.	72534449	ADAPTER-M JIC/F JIC 16 12	PART OF KIT # 2	1
64.	72532971	ELBOW-M JIC/90/F JIC SW 16 16	PART OF KIT # 2	1
REV. D 20100517				

System Schematic (99904821)



Pressure Switches

There are three pressure switches which control the electrical operation of the clamp arms, one switch to open the clamps and two switches to close the clamps. The switch to open the arms is located next to the clamp arm on the driver's side of the vehicle, and it points upward. The switches to close the clamp arms are located next to the clamps on both sides of the vehicle, and they point downward.

The pressure switch part numbers are:

Clamp switch	77041843	2 per unit
Unclamp switch	77041842	1 per unit

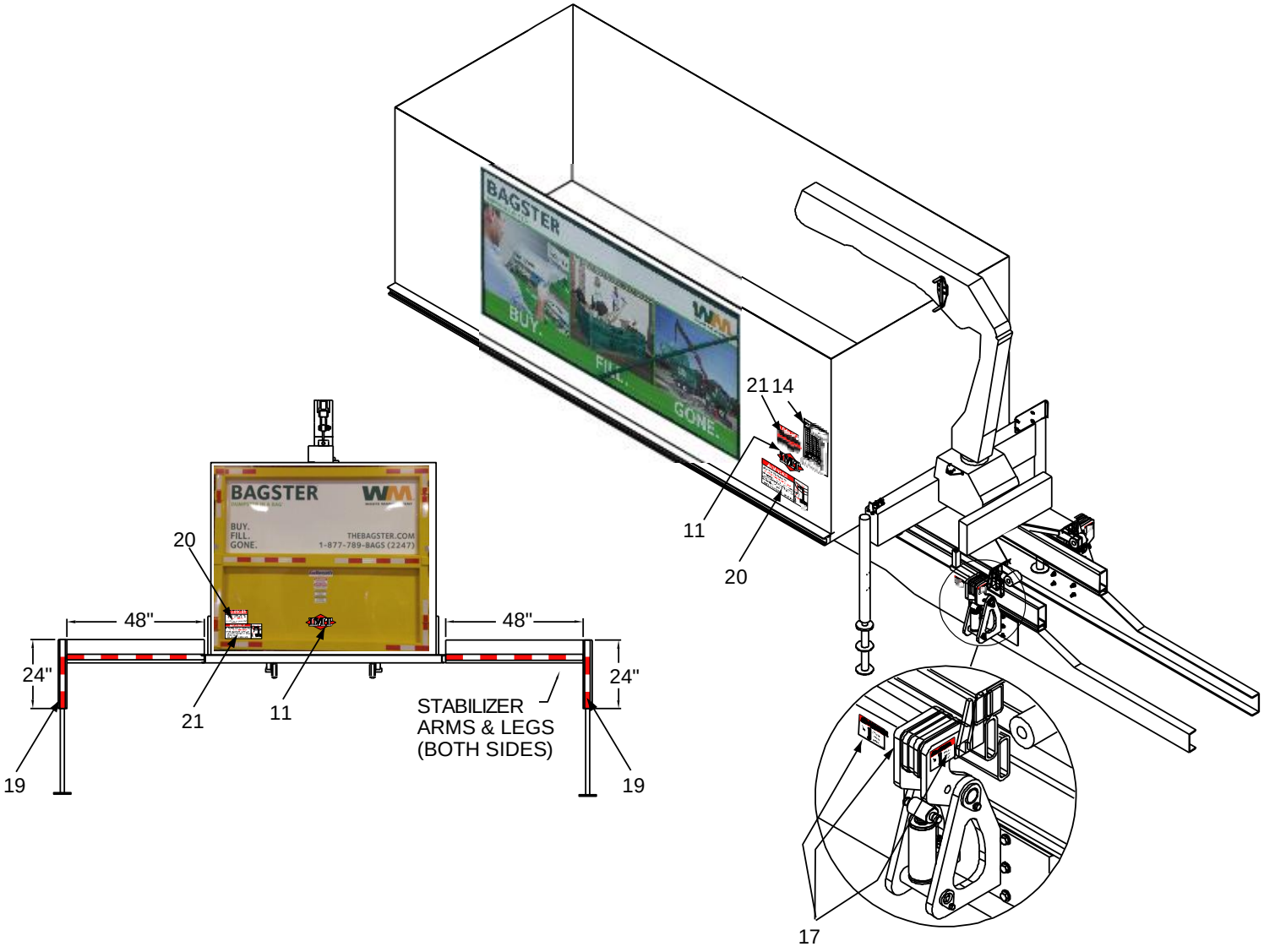
DANGER

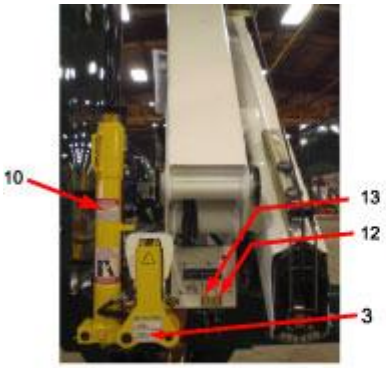
AVOID DEATH OR SERIOUS INJURY! KEEP AWAY FROM CLAMP ARMS WHEN IN MOTION!

Rig Release Parts

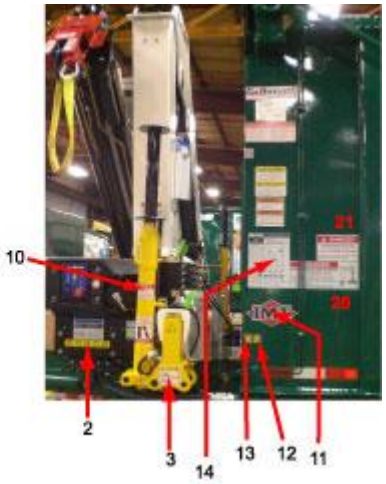
Item	Part #	Quantity	Notes
Wiring harness	77441405	1	This harness, which connects the rig release hook and the crane, feeds through the bracket at the top of the boom tip to prevent the wire from being damaged or pinched.
Replacement nylon sling	71661684	1	

Decal Placement (99904843)

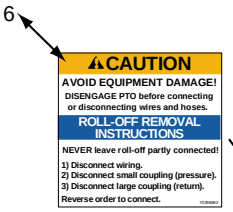




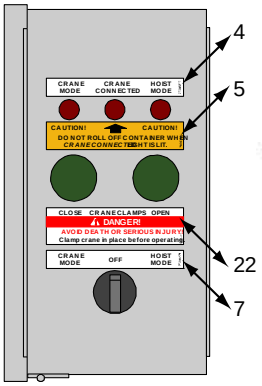
DECALS - PASSENGER SIDE



DECALS - DRIVER'S SIDE



Side of panel near cab



Electrical Control Box Decals

99904843 PARTS LIST				
ITEM	PART #	DESCRIPTION	QTY	PLACEMENT NOTES
1.	95722750	DECAL KIT-INSTALL (INCLUDES 2,3,6 (1), 8-14)	REF	
2.	70398828	DECAL-CONTROL	1	ABOVE CONTROL LEVERS
3.	70398829	DECAL-CAUTION, STABILIZERS	2	LOCATED ON EACH STABILIZER ROTATION BRACKET
4.	70398860	DECAL-CRANE-HOIST CONN	1	ON ELECTRICAL PANEL
5.	70398861	DECAL-CAUTION, CRANE-HOIST	1	ON ELECTRICAL PANEL
6.	70398862	DECAL-INSTR, ROLL-OFF	2	ON ELECTRICAL PANEL AND ON BODY BELOW HOSE BRACKET
7.	70398871	DECAL-CRANE-HOIST SWITCH	1	ON ELECTRICAL PANEL
8.	70398888	DECAL-REMOTE-TARPER	1	ON TARPER LEVER CONTROL (REMOTE)
9.	70398889	DECAL-REMOTE	1	ON REMOTE LOWER LEFT PANEL
11.	70392887	DECAL-IMT DIAMOND 10"	3	ON EACH SIDE, ALIGNED AS SHOWN, AND CENTERED IN REAR
12.	70398865	DECAL-CONTROL, PO STABILIZER	2	ON STABILIZER CONTROL
13.	70398866	DECAL-CONTROL, PD STABILIZER	2	ON STABILIZER CONTROL
14.	70397541	DECAL-CP 14/98SL K3	2	ABOVE IMT DIAMOND ON EACH SIDE OF BODY

99904843 PARTS LIST				
ITEM	PART #	DESCRIPTION	QTY	PLACEMENT NOTES
15.	95722798	DECAL KIT-SHIPOUT (INCLUDES 16-18)	REF	
16.	70398863	DECAL-UNIT HEIGHT	1	IN CAB
17.	70398864	DECAL-DANGER, PINCH POINT	6	LOCATED ON EACH SIDE OF CLAMP AND ON SIDE RAIL
18.	70398890	DECAL-PTO MODE	1	IN CAB
19.	70396734	DECAL-LENGTH INDICATOR	4REF	CUT TO LENGTH. PLACE AS SHOWN.
20.	70392865	DECAL-DANGER,ELEC.	4REF	ON SIDES AND BACK OF BODY, AND ON FRONT BUMPER
21.	70392868	DECAL-DANGER,LOADLINE	4REF	ON SIDES AND BACK OF BODY, AND ON FRONT BUMPER
22.	70398977	DECAL-DANGER, CONTROL BUTTONS	1	ON ELECTRICAL PANEL
REV. A 20100715				

Recommended Spare Parts List

Part #	Description	Quantity Per Unit	Recommended Stock Quantity
Container-related parts			
70146433	ENGINE FUNCTION MODULE (EFM) 12VDC	1	1
77041839	SWITCH-3 POS CENTER OFF LATCHING 45 DEG	1	1
77041840	CONTACT-NORMALLY OPEN BACO	1	1
77041841	SWITCH-CONTACT RETAINER BACO	1	1
77042001	LIGHT-RED INDIC LED .38 DIA	3	1
77041008	SWITCH-PRESS CTL - BRAKE SWITCH 60 LB NC	1	1
77045930	DIODE-DEUTSCH MOLDED DT	3	1
77041846	RELAY-LATCHING 12V SOLID STATE	1	1
77041847	RELAY-TIME DELAY 10 SEC OFF	2	1
77040553	LIGHT-STROBE SMART AMBER 4in LH #2	1	1
77040554	LIGHT-STROBE SMART AMBER 4in RH #1	1	1
77040561	LIGHT-STROBE SMART AMBER 4in LH #4	1	1
77040562	LIGHT-STROBE SMART AMBER 4in RH #3	1	1
73054218	VALVE-CHECK PILOT/OPEN NONVENT 100PSI	2	1
94398857	SEAL KIT-CLAMP CYL BAGSTER	1	1
77041836	COIL-12V DC FOR 73540383	1	1
77041837	COIL-12V DC FOR 73540381	1	1
77041838	COIL-12V DC FOR 73540379	2	1
73540387	VALVE-SOLENOID SOFT SHIFT	1	1
77041842	SWITCH-PRESS 1500PSI NO/NC	2	1
77041843	SWITCH-PRESS 4000PSI NO/NC	1	1
49402	FILTER ELEMENT	1	1
49417	FILTER ELEMENT SEAL KIT	1	1
Crane-related parts			
6340823	STABILIZER PORT TUBE	2	1
64352	LEVER	1	1
31292	ROLL PIN	4	4
6340809	STABILIZER COMPRESSION ROD	2	1
29196	STOP BUTTON	1	1
29197	SWITCH ELEMENT	1	1
29224	CABLE WITH SOCKET	1	1
28850	PRESSURE TRANSDUCER	2	1
28308	WORK LIGHT	2	1
29103	MERCURY SWITCH	1	1
27598	SENSOR	2	1
28262	CABLE	2	1
71413886	STABILIZER PADS	2	2
28243	CABLE WITH SOCKET	1	1
29240	CORD REEL	1	1

CHAPTER 5

Maintenance

In This Chapter

Proper, regularly scheduled maintenance is essential in keeping your crane, refuse container, and vehicle at peak operating efficiency. Detailed maintenance requirements for the crane are included in the Material Handling Crane Operation & Safety Manual (IMT # 99904591). Maintenance logs can be easily documented in the IMT Crane Log manual (IMT # 99900686). Both of these manuals were included with your vehicle.

Equipment cleanliness can make it easier to see potential problems and maintain the vehicle. Although general washing is approved for the IMT Refuse Container with Crane, targeted high-pressure powerwashing around the electrical panel and RCL areas of the vehicle is prohibited.

Refuse Container with Loader Maintenance Tasks

Inspections

Complete daily, weekly, monthly, and periodic inspections as noted in the General Reference section of the Material Handling Crane Operation & Safety manual, IMT # 99904591.

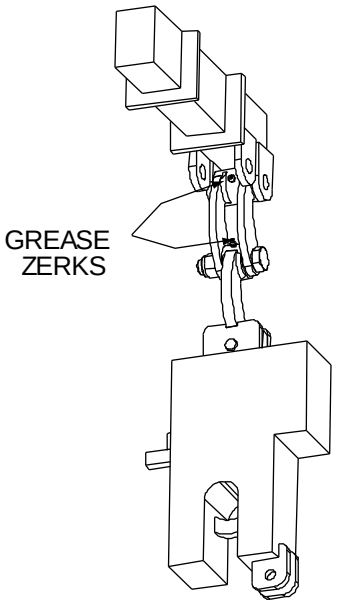
High-Pressure Filter

The filter should be changed annually or more frequently if needed. Replacement parts for the high-pressure filter include:

- Filter element - 49402
- Seal kit - 49417

Boom Tip Grease Zerks

Most of the grease and lubrication requirements for the Refuse Container with Loader are listed in the maintenance section of the crane manual, Material Handling Crane Operation & Safety , IMT # 99904591. The Refuse Container with Loader has two additional grease zerks which are not part of the crane, located near the rig release hook as shown. Grease, using Shell Alvania 2EP, Shell Retinax "A", Mobilith AW2 or equivalent, every six months.



Installation Instructions - Stabilizer Spool Stroke Limiters

The auto-rotate function on the refuse container with loader stabilizers can move very quickly. The operating instructions consistently required *SLOW* operation of the auto-rotate function. The loader on the refuse container has stroke limiters installed on the stabilizer spools to force slow stabilizer rotation. The top two spools on the stabilizer valvebank are for the power down / up cylinders, and the bottom two spools are for the power out/in cylinders.

Stabilizer Spool Stroke Limiter Installation

1 Remove the 4 allen head screws (using a 5 mm hex wrench) on the top two spool spring bonnets.

2 Discard the bonnets.

3 Replace the discarded bonnets with bonnets supplied in kit. Do not adjust the screw or nut on the new bonnets.

4 Reinstall the four allen head screws. Torque to 35-50 in-lb.

5 Deploy the stabilizer arms fully.

6 When extending the power out cylinder, note the speed at which the leg auto-rotates downward. It should rotate slowly, without any sudden moves or jerks. The cylinder should auto-rotate slowly and steadily, and a full rotation should require 8 to 10 seconds.

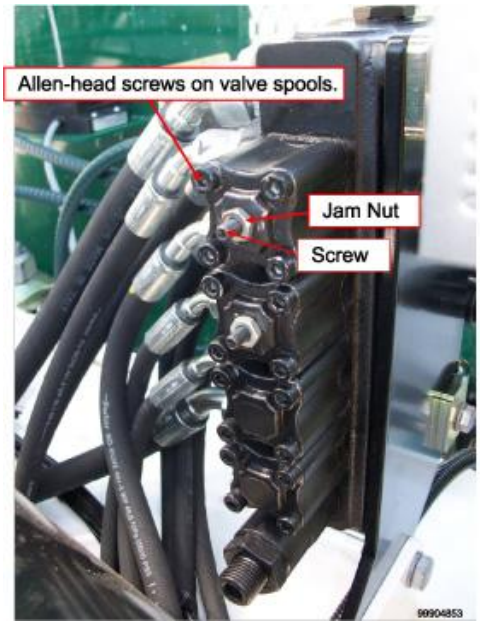
Stabilizer Spool Stroke Limiter Adjustment

If you find that the leg rotates and extends in less than 8 seconds, it is rotating too quickly and should be slowed down. To slow the rotation speed,

1 Loosen the jam nut

2 Turn the screw clockwise in 2 to 3 degree increments.

CAUTION! Small adjustments yield big changes in the auto-rotate speed. Tighten the jam nut without turning the screw.



Replacement Parts

A single replacement spool stop is IMT # 71413883.

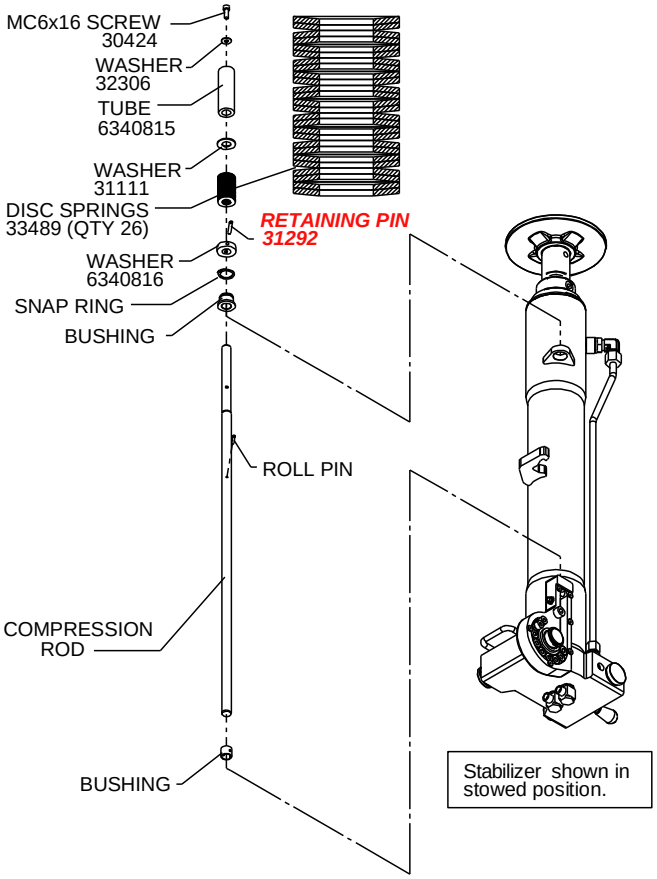
A kit, which includes a stroke limiter for both power up/down cylinders, is IMT # 91722887.

Replacement Instructions - Crane Stabilizer Retaining Pin

INTRODUCTION

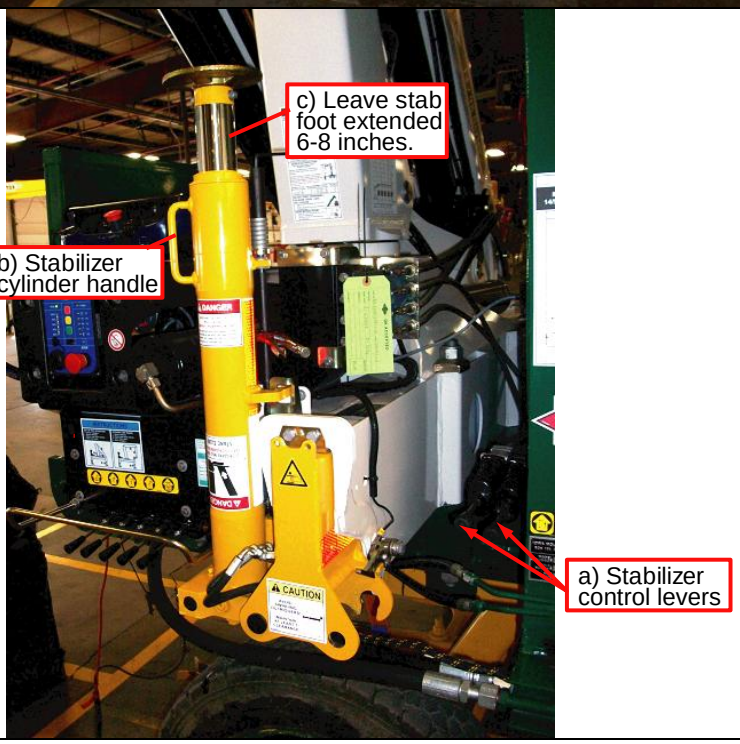
On IMT refuse containers with material-handling cranes, the retaining pin on the auto-rotating stabilizers can be replaced in case of breakage. Although the only part that has to be replaced is the pin itself, shown in red on the drawing below (retaining pin # 31292), part numbers for all parts which must be removed during the replacement process are shown in the graphic.

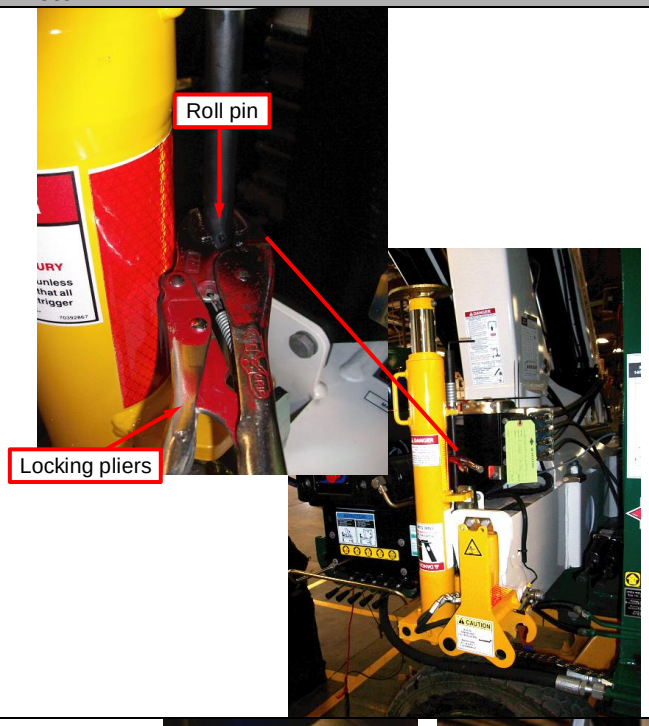
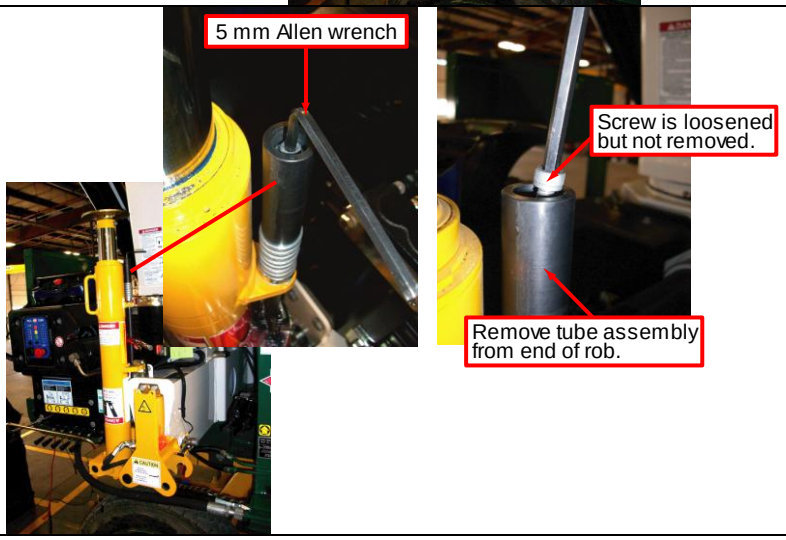
For more information, see the complete assembly drawing, drawing # 53302245, in the 14/98SL Parts Manual, IMT # 99904605.

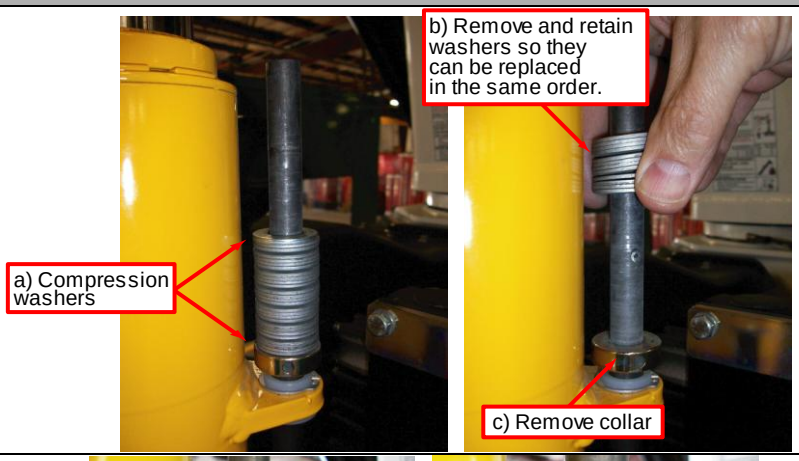
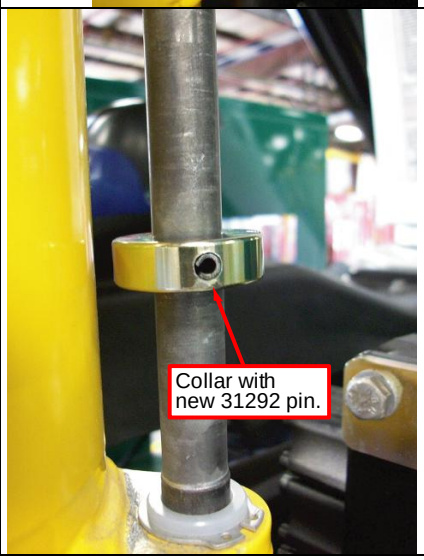


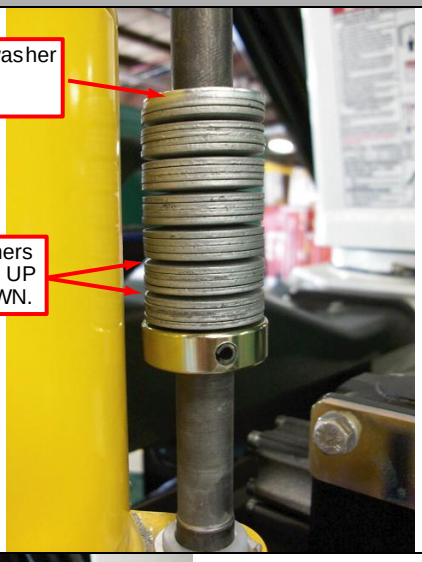
EXPLODED DRAWING - STABILIZER CYLINDER INCLUDING SWING-UP MECHANISM (REFERENCE DRAWING # 53302245)

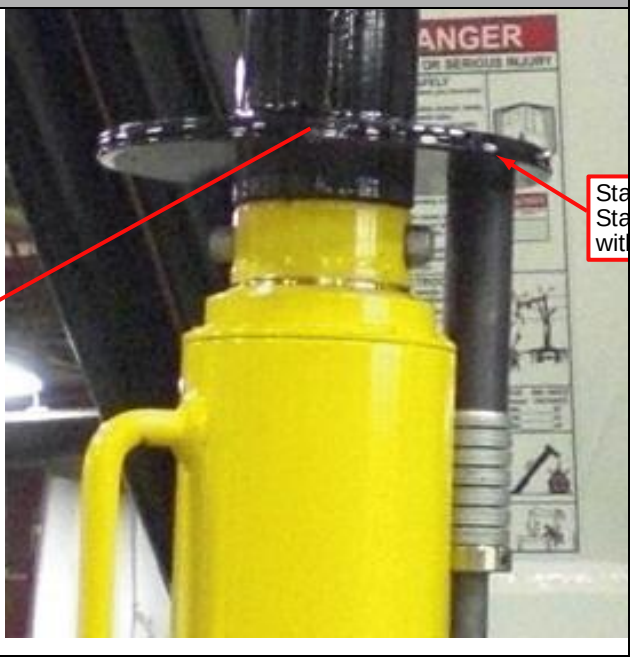
Stabilizer Retaining Pin Replacement Instructions:

Step #	Instructions	Photo
1	If the stabilizer auto-rotation pin has been sheared, the stabilizer cylinder will not fully retract. The cylinder will only raise the stabilizer to a position just above horizontal.	
2	To stow the stabilizer, a) Use the control lever to retract the stabilizer arm as far as possible without hitting the tarper arm on the chassis. (Power IN function) b) Rotate the cylinder up by hand the rest of the way, using the cylinder handle. While still holding the cylinder handle, retract the arm the rest of the way. (Power IN function.) c) Extend the stabilizer leg slightly until 6 to 8 inches are extended. (Power DOWN function.)	

Step #	Instructions	Photo
3	Use locking pliers to hold the compression rod in place near the small roll pin.	
4	Using a 5 mm allen-wrench, loosen the socket head cap screw that retains the tube on the end of the compression rod. Loosen the screw until it is free from the compression rod, but do not remove the screw from the tube. Remove tube assembly and screw from end of compression rod.	

Step #	Instructions	Photo
5	a) Note placement of compression washers, and that the top washer may be a flat washer. b) CAREFULLY lift off all compression washers. Store them so they can be reinstalled in the exact same order in which they were removed. c) Remove collar.	
6	You should be able to see the broken retaining pin in the compression rod. Use a 5/32” drift punch to remove the broken pin from the compression rod. Remove pin pieces from the collar, if applicable. DO NOT drill out the hole!	
7	Reinstall collar with new retaining pin, IMT # 31292 (4.5 mm diameter x 30 mm length).	

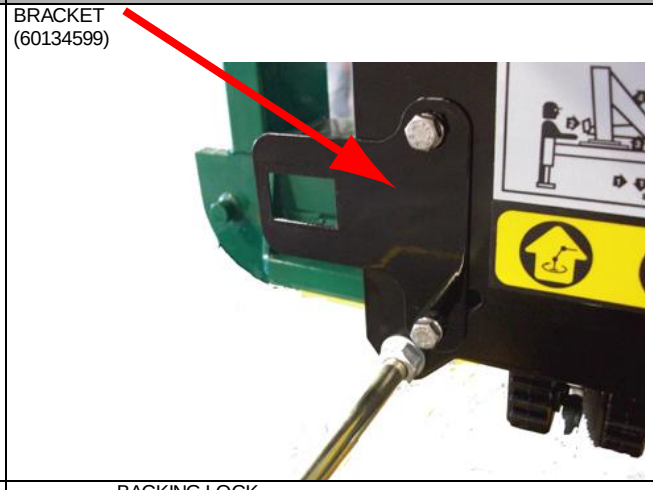
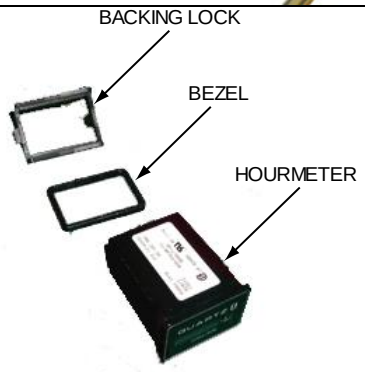
Step #	Instructions	Photo
8	Reinstall compression washers exactly as shown. Note that the washers are concave in shape. Starting from the collar, each stack of four washers has two washers facing up, and two washers facing down. The top two washers face up, and a 14 mm flat washer is installed on top of them.	
9	Slide the tube over the compression rod until it butts up against the washers. Secure using the MC6 x 16 cap screw. (5 mm allen-wrench). Torque cap screw to 10-14 ft-lb.	

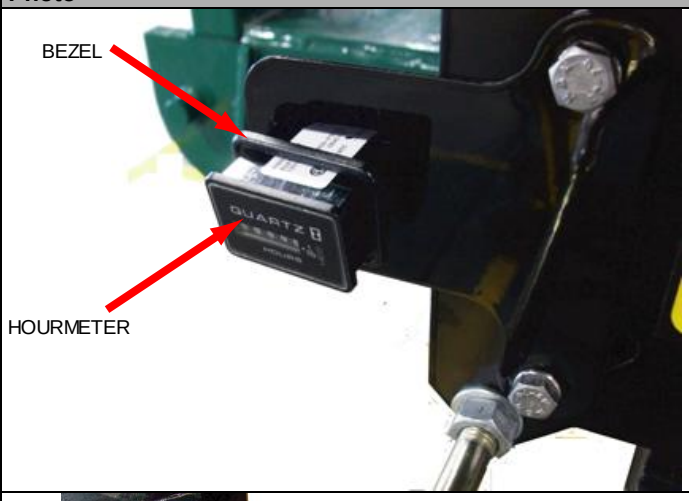
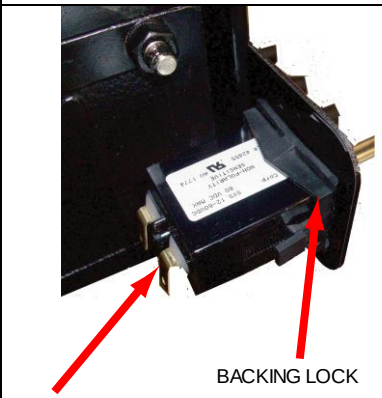
Step #	Instructions	Photo
10	When all components are reinstalled, retract the stabilizer cylinder completely using the UP lever. The stabilizer leg will contact the tube assembly.	 

Installation Instructions - Hourmeter

Hourmeter Installation Kit:

Part #	Description	Quantity
51722914	RETROFIT KIT-HOUR METER	
77441418	HARNESS-HOUR METER JUMPER	1
60135499	BRACKET-HOUR METER 14 TM	1
70733496	HOUR METER-PUSH LOCK W/FLANGE	1

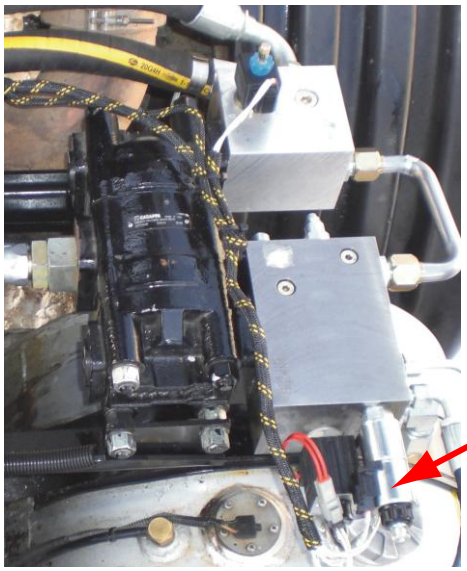
Step #	Instructions	Photo
1	Use a 13 mm wrench to install hourmeter bracket (60135499) to existing bolts and lock washers in the area near the driver's side controls below the RCL5300. Discard flat washer.	
2	The hourmeter includes a bezel and a backing lock.	

Step #	Instructions	Photo
3	Slide the bezel onto the hourmeter. Slide the hourmeter into the bracket installed in step 1.	
4	Install the wiring harness. Some units will require a jumper harness between the main harness and the hourmeter. The jumper harness is # 77441418.	
5	Installation is complete. Use the hourmeter to measure the hours of operation for the crane.	

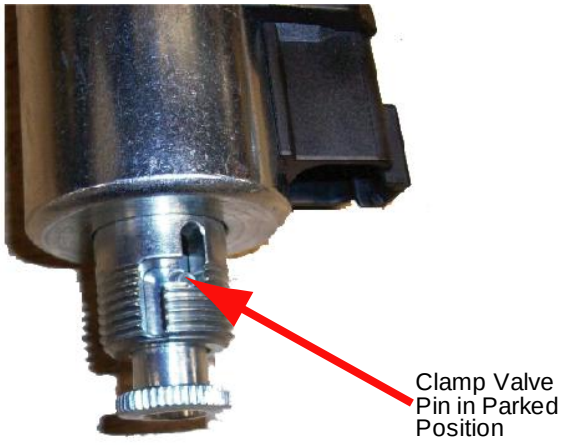
Resetting Clamp Manual Override Valve

If you have moved the *Clamp Override Valve*, located on the passenger side of the vehicle, from the parked position to manually operate the clamp arms, you must reset this valve in the locked position.

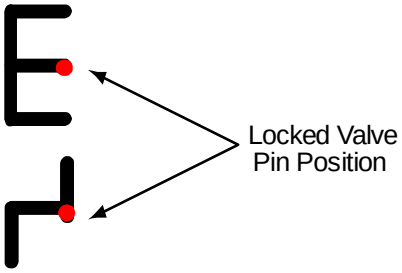
1 Locate valve on the passenger side of the vehicle.



2 Push knurled knob on the Clamp override valve in and rotate clockwise 90 degrees so that the valve is parked in this position (note pin position shown below). (Note-black cap removed for clarity.) Replace cap and tighten by hand.



3 The clamp valves may have an "E" or a "Z" shaped gate. Park the valve pin as shown for each type.

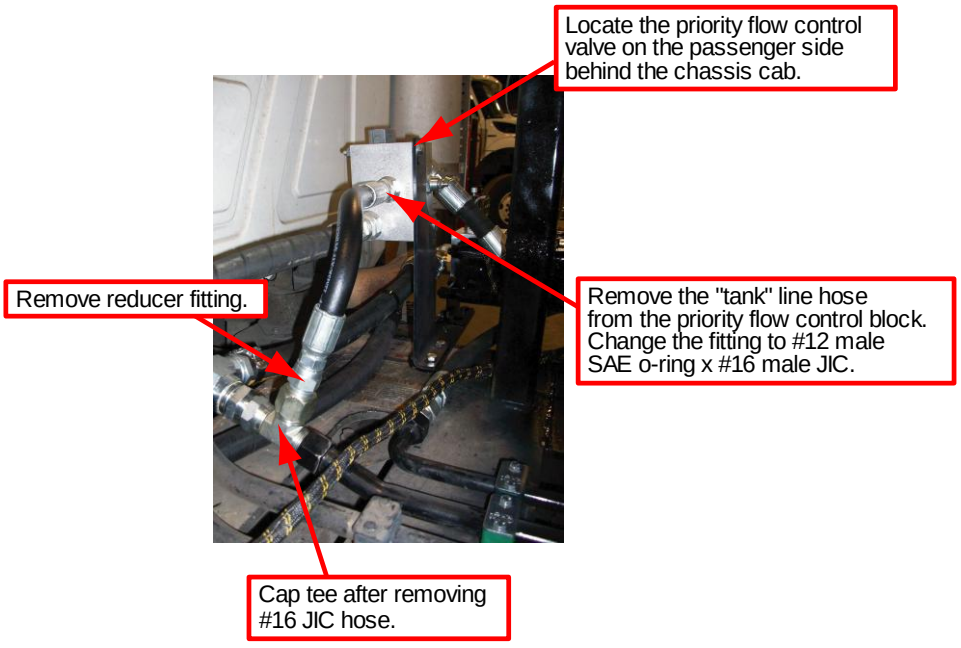


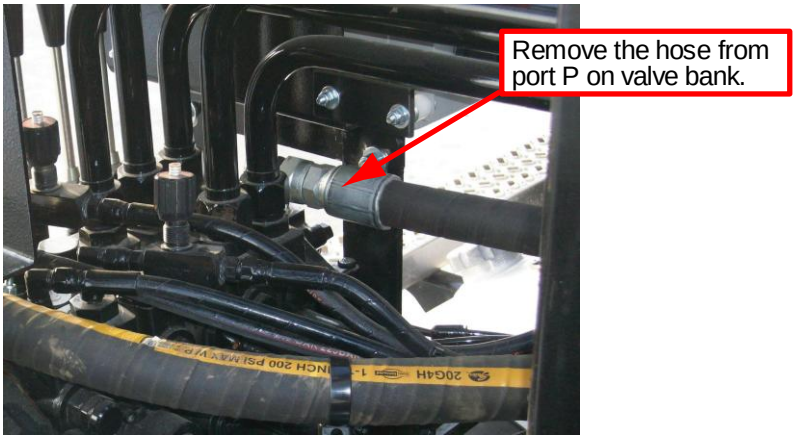
Improving Roll-Off Hoist Speeds After Priority Flow Control Valve Installation

On IMT refuse containers with material-handling cranes, the priority flow control valve regulates the oil flow to the flow divider regardless of the pump output. When the priority flow control valve is installed, the maximum oil flow to the flow divider is 42 gpm. However, some rolloff units require a higher flow for normal speeds. If your roll-off hoist is running slower than prior to the addition of the flow regulator addition, modify the plumbing per the following instructions. This change will still provide a limited flow to the refuse crane but will combine all flows when feeding the roll-off hoist valve, thus providing the same flow and speeds as prior to the flow divider installation.

Required parts:

DESCRIPTION	QUANTITY
#16 JIC CAP	1
#12 SAE M O-RING X #16 MJIC STRAIGHT ADAPTER	1
HOSE, 1" X 3000 PSI WITH #16 FEMALE JIC STRAIGHT AND #16 90° JIC ENDS	LENGTH TO BE DETERMINED AT ASSEMBLY
TEE, RUN #16 JIC	1





1 Remove hose from port "P" (inlet) on the valvebank.

2 Install a #16 JIC run tee on to the valvebank fitting, with the "T" port pointing up.

3 Install the removed hose from step 1 onto the end of the #16 tee.

4 Make a new hose, 1" diameter and 3000 psi, to fit between the tee on the "P" port of the valvebank to the "tank" port on the priority flow control valve. The hose will need a #16 90° fitting at the valvebank tee, and a #16 straight fitting at the priority flow control block.