

# **WBM Installation Manual**

## **KAT Master Hitch**

### **General Information**

This section provides general information and recommendations required prior to installing, operating or maintaining your KAT Master Hitch.

All safety messages and decals contained in this WBM Parts and Installation Manual, and in the Hydraulic Installation Kit must be read and understood by all personnel installing, maintaining or operating the KAT Master Hitch.

#### **Safety Message Classification**

Safety messages in this manual are as follows:

**Danger:** Indicates an imminently hazardous situation. If not avoided, this hazard will result in serious injury or death.

**Warning:** Indicates a potentially hazardous situation. If not avoided, this hazard could result in serious injury or death.

**Caution:** Indicates a potentially hazardous situation. If not avoided, this hazard may result in minor or moderate injury and/or damage to the coupler or machine.

All personnel who will operate the KAT Master Hitch must read and familiarize themselves with the Installation, How it Works, Maintenance and Safe Working Procedures sections of this manual prior to operating or maintaining the KAT Master Hitch.

The owner or operator of any equipment using a KAT Master Hitch shall review all additional materials, including hazard assessments and operating manuals supplied by the manufacturer of the machine to ensure safe use and operation.

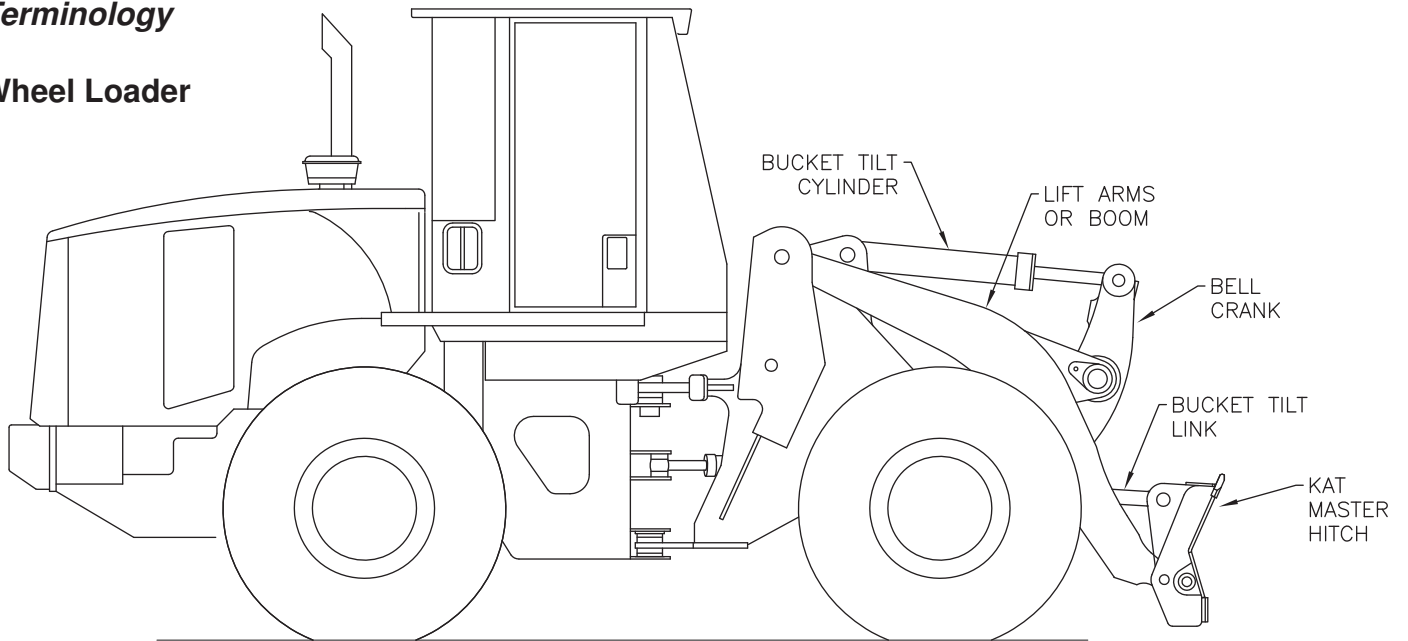
#### **DANGER**

Failure to comply with information contained in the Weldco-Beales Parts and Installation Manual may result in injury, death, damage to property and/or damage to the KAT Master Hitch.

All personnel shall read and understand the information contained in the Manual before attempting to install, maintain or operate the Weldco-Beales KAT Master Hitch.

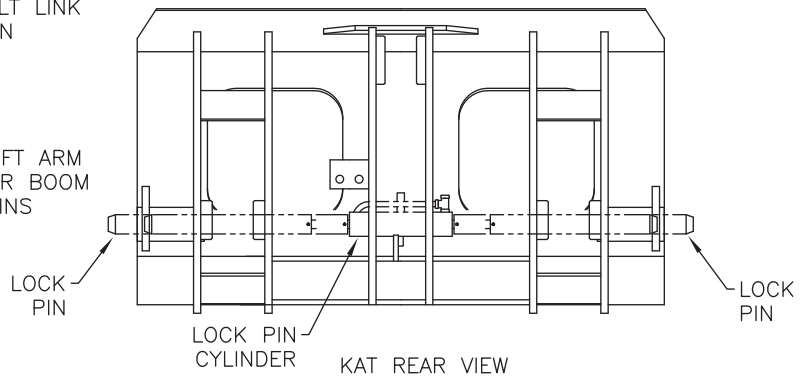
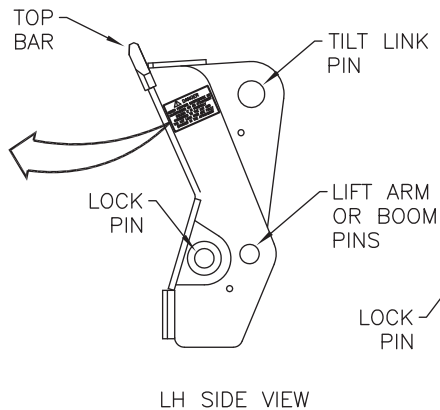
# Terminology

## Wheel Loader

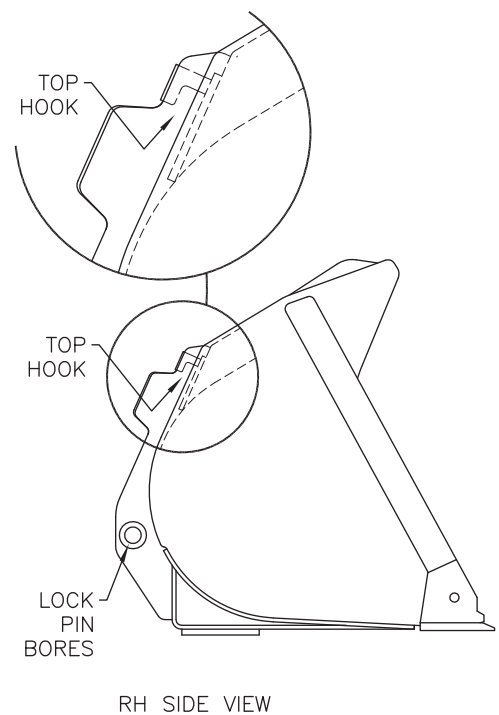
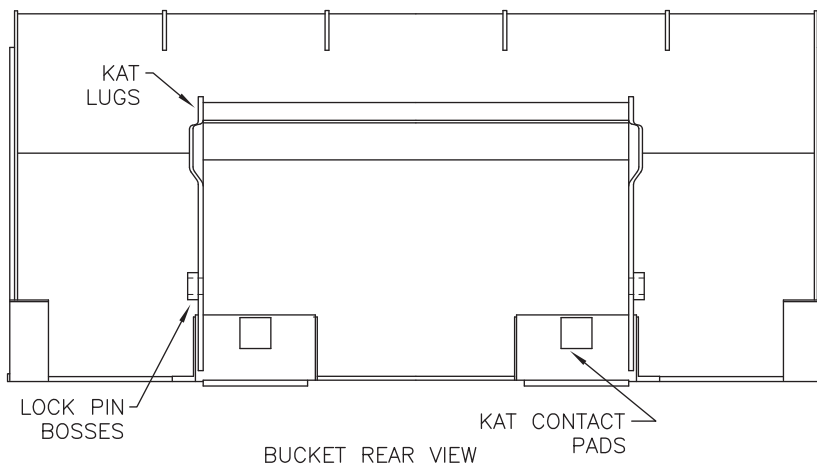


### KAT Master Hitch

**⚠ DANGER**  
 NEVER PERFORM MAINTENANCE OR ADJUSTMENTS ON AN ATTACHMENT UNLESS IT IS PROPERLY CONNECTED TO THE KAT AND THE KAT LOCK PINS ARE FULLY ENGAGED IN THE ATTACHMENT



### Wheel Loader KAT Bucket



# **WBM Installation Manual**

## **KAT Master Hitch**

### **Maintenance and Operation**

 **DANGER**

Improper operation and maintenance of the KAT Master Hitch could result in serious injury or death. Read and understand this manual prior to operating and/or maintaining this equipment.

 **DANGER**

Always use the lock pins during operation. Failure to follow all safety precautions could result in serious injury or death. Read and understand this manual prior to operating and/or maintaining this equipment.

#### **Maintenance:**

##### **General Information:**

Only qualified personnel should perform maintenance and inspection operations.

Prior to any maintenance or inspection operations ensure that the attachment is resting on the ground and/or properly supported.

Always wear proper protective equipment when performing maintenance operations.

 **DANGER**

The attachment end of the wheel loader lift arms or boom, the linkage and attachments contain several pinch points. Stay clear when the machine is in operation. Properly support all attachments and linkages before performing maintenance or inspections. Failure to do so may result in serious injury or death.

##### **Daily Inspections:**

###### **Static**

Without the KAT Master Hitch being engaged to an attachment, with the machine's parking brake engaged, and if equipped, the machine's hydraulic safety lever in the off position, perform visual daily inspections on/for all of the following items:

- 1) Structural integrity of the KAT Master Hitch and its' accompanying components. Inspect all welds and components for cracks or damage. Contact WBM with any questions before repairing any welds for recommended welding procedures.
- 2) Excessive wear on components that would impede or impair proper operating procedures; KAT Master Hitch components that show signs of wear by more than 1/32" will require rebuilding or replacement.

** DANGER**

Any cracks or component damage must be repaired prior to any operation of the KAT Master Hitch. Failure to repair damaged or worn components may result in serious injury or death.

- 3) Hydraulic components (hoses, hose ends, fittings, valves, cylinders) and connections for leakage or damage.

** WARNING**

When inspecting the hydraulic components for damage, ensure the proper Protective Equipment is being used and the machine's hydraulic engage function has been disengaged.

** DANGER**

All hydraulic leaks or damage must be repaired prior to any and all operation of the KAT Master Hitch. Failure to repair damaged or worn components may result in serious injury or death.

- 4) Bolts for tightness and installation.
- 5) Lock Pins for structural integrity, cracks and damage.

***Dynamic***

Perform visual daily inspections on/for all of the following items, without the KAT Master Hitch being engaged to an attachment, the machine's park brake engaged, machine engine rpm at low idle and, if equipped, the machine's hydraulic safety lever in the on position:

** DANGER**

When performing inspections with equipment in a fully operable condition ensure all personnel and objects are at the O.E.M (Original Equipment Manufacturer) recommended safe working distance from the operating area of the machine. Conduct all inspections on flat, dry ground where the equipment and all attachments are properly supported. Failure to comply may result in property damage or serious injury or death.

- 1) Manipulate the lift arms/boom and bucket hydraulics to allow for a clear, visual inspection of the KAT Master Hitch in operation.
- 2) Fully extend and retract the lock pin cylinder, to ensure they move freely.
- 3) Repeat this procedure twice prior to engaging any attachment to ensure that the KAT Master Hitch is functioning properly.

** DANGER**

If the KAT Master Hitch is not functioning properly have it checked and repaired by a qualified service technician before attempting to use the quick coupler or any related attachments. Failure to comply may result in property damage or serious injury or death.

## **Attachments**

Check the fit of the KAT Master Hitch into all corresponding attachments; inspect the top bar to top hook fit and lock pin to lock pin bore.

There should be no movement between a correctly connected KAT Master Hitch and the attachment KAT lugs.

If movement exists check the KAT Master Hitch and the attachment KAT lugs for possible wear.

Any attachment KAT lugs that are cracked or worn more than 1/32" on any critical surface will require repair or replacement.

 <b><i>DANGER</i></b>
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Any cracking or component damage must be repaired; all worn components or missing parts must be replaced prior to any and all operation of the KAT Master Hitch. Failure to repair or replace damaged or worn components may result in equipment malfunction, serious injury or death.
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## **Installation**

 <b><i>DANGER</i></b>
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Installation of the KAT Master Hitch shall be done by a qualified service technician. The technician must read and understand the manual before attempting installation. Failure to comply may result in property damage or serious injury or death.
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## **Component Installation**

 <b><i>DANGER</i></b>
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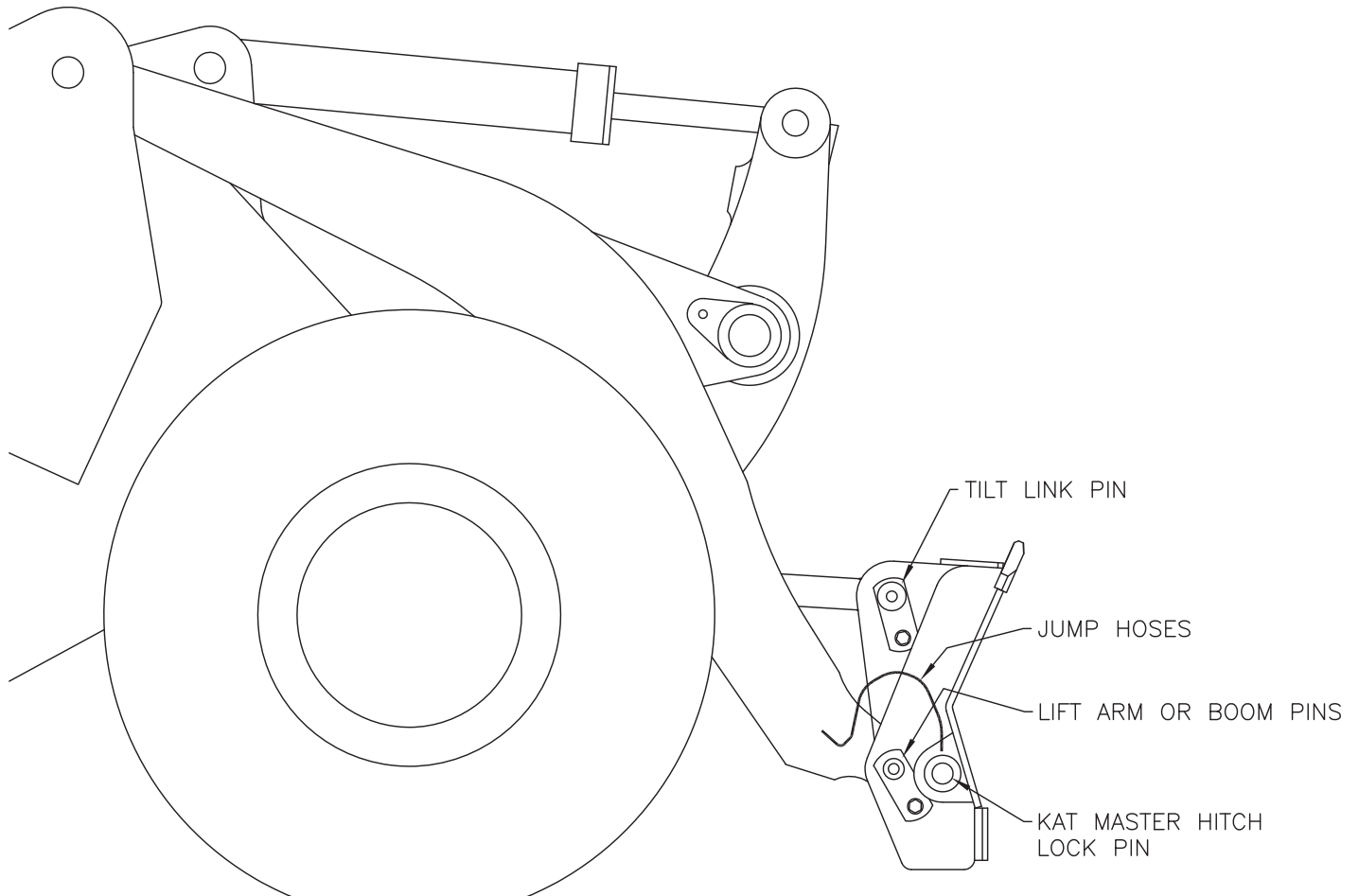
Always follow the procedures in this manual for the installation of the KAT Master Hitch. Failure to do so may result in injury, death, or damage to property or the Master Hitch.
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- 1) Position the machine on stable, level terrain in an area where there is clear and unobstructed access to all areas of the wheel loader.
- 2) If the wheel loader is equipped with an existing pin-on style attachment, remove the factory pins and remove the attachment from the work area. The factory pins are needed to install the KAT Master Hitch on the wheel loader.
- 3) Align the KAT Master Hitch lower pin bores with the wheel loader lift arm/boom pin bores and install the factory pins.
- 4) Align the bucket tilt cylinder link(s). Install and secure the correct proper pin(s).

## Hydraulic Installation

The KAT Master Hitch lock pin cylinder can utilize pressure from the machine's "3<sup>rd</sup> valve", or an auxiliary hydraulic pump to activate the lock pin cylinder.

- 1) Connect the lock pin cylinder to the machine hydraulic system with jump hoses.
- 2) Contact the Wheel Loader manufacturer/dealer for machine hydraulic information.



## **Operating Instructions** **KAT Master Hitch**

### **WARNING**

Failure to comply with information contained in the Weldco-Beales Parts and Service Manual may result in injury, death, damage to property, and/or damage to the KAT Master Hitch. Ensure that all personnel have read and understand the Parts and Installation manual before operating or maintaining this equipment.

Engage/disengage attachments away from all personnel.

A visual inspection must be performed to ensure a proper connection each and every time an attachment is engaged. Failure to properly engage an attachment can result in injury or death. The attachment may drop without warning if the KAT Master Hitch is not properly engaged with the attachment

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### **Safety Notes:**

1. Before operating the KAT Master Hitch read the Safe Working Procedures, and General Operating and Maintenance Guidelines.
2. Always utilize the Parts and Installation manual to ensure the recommended procedures have been used to ensure a successful and correct installation.
3. Always ensure when coupling or uncoupling the attachment that the machine is at low engine idle.
4. Never operate or move the machine with the lock pins disengaged from the attachment and the KAT Master Hitch still inserted in the attachment.
5. Always ensure that all surrounding personnel and/or objects are at the recommended O.E.M (Original Equipment Manufacturer) safe working distance from the operating area of machine.
6. Always ensure that the attachment will be uncoupled in a safe, stable position to prevent unexpected or sudden movement that could cause damage, injury or death.
7. Always conduct a workplace hazard assessment **prior** to work commencing to address any dangers or potential dangers arising out of the use of the equipment and/or KAT Master Hitch and attachments.
8. If the KAT Master Hitch is observed to be **not properly engaged** in the attachment the operator should immediately discontinue use. The KAT Master Hitch and attachment should be immediately secured and not placed into operation until there has been a full assessment of any malfunction and all problems are remedied by qualified personnel.
9. Do not use any attachment which is not in the correct tonnage class.

## Hydraulic Uncoupling of the Attachment

- 1) Position the attachment on level ground, ensuring that the attachment will remain stable after uncoupling.

**⚠ DANGER**

Engage or disengage attachments away from all personnel as the attachment may drop without warning. Failure to do so may result in injury, death or damage to property or the KAT Master Hitch.

**⚠ DANGER**

Use only WBM style lugged wheel loader attachments on the WBM style KAT Master Hitch. Failure to do so may result in injury, death or damage to property or the Master Hitch.

- 2) With the attachment positioned on level ground, hydraulically disengage the lock pins from the attachment. If required, slowly manipulate the KAT Master Hitch by operating the tilt circuit to allow easier disengagement of the lock pins. (Photo 1)



Photo 1



- 3) After the lock pins have been fully disengaged, slowly tilt the KAT Master Hitch forward. Slowly back the machine away to disengage the bottom of the attachment. (Photo 2)



Photo 2

- 4) After the bottom end of the KAT Master Hitch is disengaged, lower the machine's lift arm/boom to free the top end of the hitch. (Photo 3)



Photo 3

- 5) Once the KAT Master Hitch has cleared the attachment, position the machine to engage another attachment.

## ***Hydraulic Coupling of the Attachment***

- 1) Prior to engaging an attachment, ensure it is in a safe position to be coupled.

***⚠ DANGER***

Engage or disengage attachments away from all personnel as the attachment may drop without warning. Failure to do so may result in injury, death or damage to property or the KAT Master Hitch.

***⚠ DANGER***

Use only WBM style lugged wheel loader attachments on the WBM style KAT Master Hitch. Failure to do so may result in injury, death or damage to property or the Master Hitch.

- 2) With the machine's lift-arm/boom lowered and the KAT Master Hitch tilted forward, align the Master Hitch with the attachment lugs. Using the wheel loader hydraulic controls fully insert the top bar of the Master Hitch in the top hook of the attachment (Photo 4).



Photo 4

- 3) When the top bar of the KAT Master Hitch is fully inserted in the top hook of the attachment slowly tilt the Master Hitch back to rotate the bottom of the Master Hitch into the lower portion of the attachment lugs.
- 4) After the KAT Master Hitch is fully seated, extend the lock pins, engaging the attachment. (Photo 5)
- 5) Manipulate the tilt circuit hydraulics to perform a visual inspection from the operators cab to ensure that the attachment is seated properly on the KAT Master Hitch and that both lock pins are fully engaged.



Photo 5

7) Test the attachment for secure engagement with the KAT Master Hitch by:

- Raising the attachment off the ground about 2 feet.
- Applying down pressure by tilting the KAT Master Hitch and the attachment forward allowing the attachment to contact the ground to ensure that the lock pins are engaged. (Photo 6)



Photo 6



- Cycle the KAT Master Hitch on the attachment working the tilt cylinder in and out trying to force the attachment from the Master Hitch.

 ***DANGER***

When performing inspections or tests with equipment in a fully operable condition ensure all personnel and objects are at the O.E.M (Original Equipment Manufacturer) recommended safe working distance from the operating area of the machine. Failure to comply may result in property damage or serious injury or death.

- 8) After the visual inspection and secure engagement test has been successfully completed, and proper attachment to the KAT Master Hitch has been confirmed, operate the machine as required.

 ***DANGER***

A visual inspection and secure engagement test must be completed after every attachment change to ensure proper engagement of the KAT Master Hitch has occurred. Failure to comply may result in property damage or serious injury or death.

 ***DANGER***

Never perform maintenance or adjustments on an attachment unless the KAT lock pins are fully engaged. Failure to comply may result in property damage or serious injury or death.