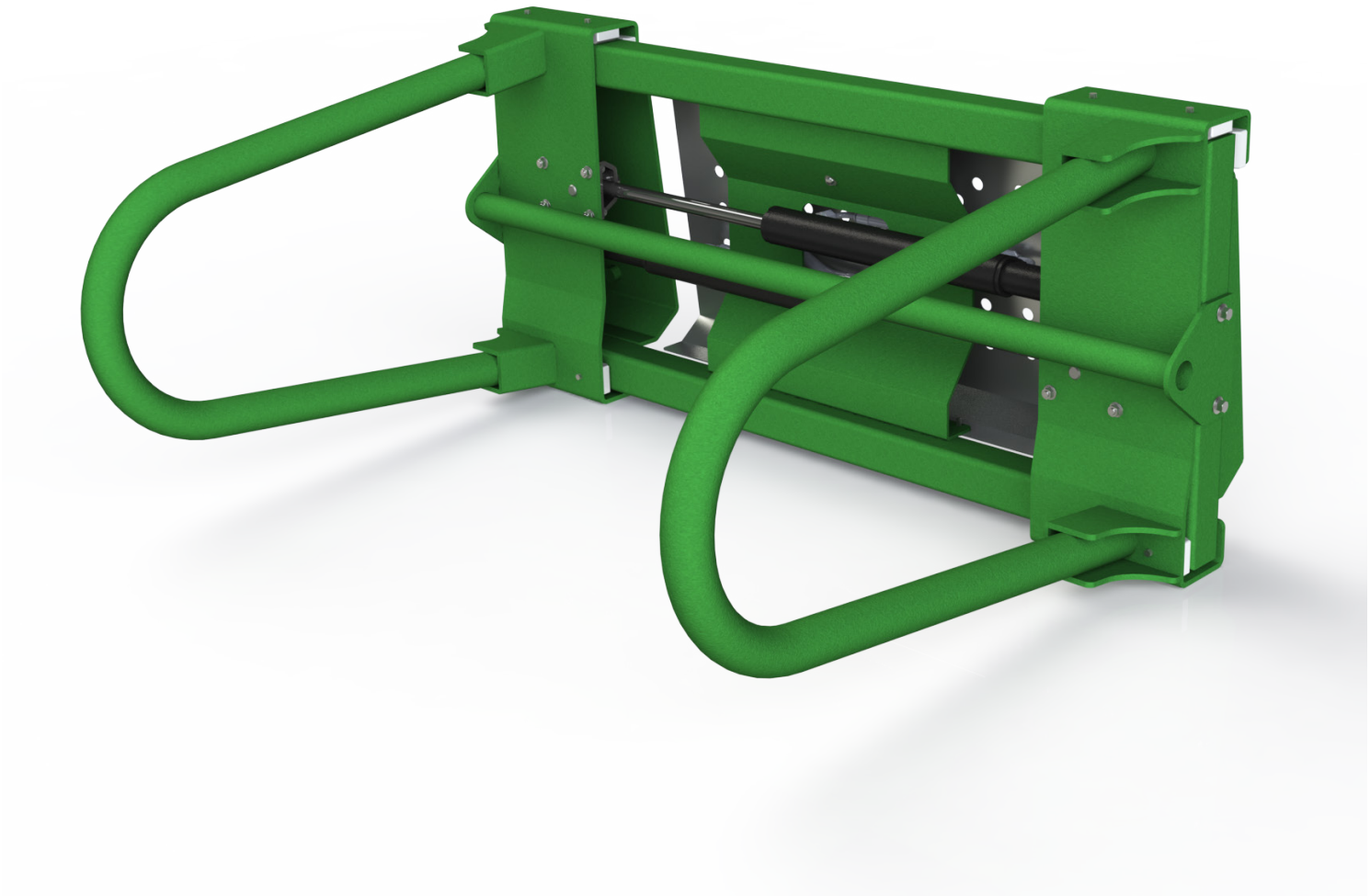
HOWARD MARSHALL ENGINEERING LTD.

OPERATOR'S MANUAL

HM-W0064



BALE GRAB
P000908

for use on the following John Deere Front Loader models:

H120, H130, H160, H165, H180, 200CX, 300CX, 400CX, 410, 420, 430, 460, 120R NSL, 120R MSL, 220R NSL, 220R MSL, 300E NSL, 300E MSL, 300R, 320R, 400E, 400R NSL, 440R MSL.

Howard Marshall Engineering Ltd.

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Origional Language

CONTENTS

APPENDIX

NOTICE

Please read through and understand the entire contents of the operator's manual prior to using the implement.

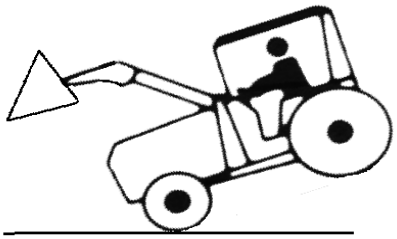
The information in this manual was correct at the date of print. Howard Marshall Engineering Ltd (HME) reserve the right to change the specification of products as required without prior notice. Please contact HME if there are any aspects of the manual that you do not understand.

One operator's manual is supplied with each attachment to inform the user how it should be operated and maintained. It is therefore advised that every operator must read and study the text in this manual thoroughly before using the implement.

SAFETY

WARNING

Refer to the serial number plate on the attachment for the weight of your model as it will effect the maximum load capacity. During use be aware of increased weights due to shock loading. Shock loading is the result of magnified load weight from bouncing caused by driving at speed on uneven surfaces for example. This can cause dangerous overload.



WARNING

Do not stand between the front loader and power unit. Risk of crushing and jamming. Always lower the loader/attachment to the ground prior to working on it.

WARNING

Do not allow persons to sit or ride on the attachment at any time, or perform adjustments unless the machine is stopped, switched off, and the implement is on the ground.

SAFETY CONTINUED

WARNING

Always ensure the working area is clear of persons or live-stock, take extra care when operating in farmyards or tight spaces.

Only use the attachment with the correct loader/attachment it was designed for. HME do not accept any damages to bracket as a result of incorrect fitting or from the use of adapters or any home-made conversions.

Do not use the implement for any other purpose than for which it was designed for. Please see operating instructions, limitations of equipment.

Ensure that the attachment is used within the lift capacity of the loader.

Ensure that the attachment works correctly once it is attached to the loader.

As an operator it is your responsibility to familiarise yourself with the functions to ensure your competence.

Use the appropriate guards / tine and fork covers when driving on public roads.

Remember that driving characteristics of the power unit can be influenced by the attachment.

Never use the attachment if it has been damaged or is not working properly.

OVERVIEW

For weight of unit, parts list and dimensions, please see appendix A General Assembly.

Intended use:

The Bale Grab is designed for the collection and moving of individual bales, note that the bales are agricultural crop bales, not recycled material bales. The Bale Grab consists of a main body and two independent grab arms. Thes arms each have a hydraulic cylinder.

The attachment has been designed to be used on the stated loader and should only be connected to that unit. The unit can be moved for transport or storage using the designated lifting points.

The commecial use of the attachment should be incorperated into a task specific Risk Assessment and Method Statement, to mitigate possible injury, damage or death.

The Maximum Working Load for this product is 900kg **or** the Maximum Working Load of the loader, **whichever is less.**

SAFETY DECALS

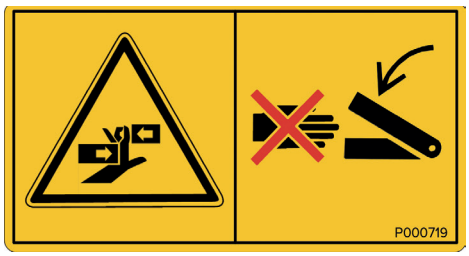
Warning decals are fitted in different locations on the attachment. For decal locations, see general assembly.

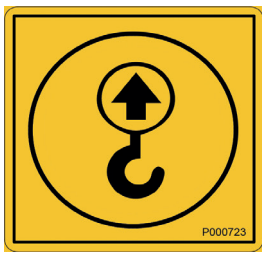
Do not cover or remove any of the decals.

If a decal is missing or illegible replace it with a new decal.

New warning decals are available from HME.

Decals used on this unit are shown below.





OPERATING INSTRUCTIONS

Mounting of attachment

Mounting of the equipment shall only be carried out a single operator.

1. Lower the loader frame to align mounting bars with the receivers;
2. Drive forward until the mounting bars are in the receivers;
3. Raise the loader so the locking pins go through the mounting holes. Continue to raise the loader until the faces touch but do not lift up the attachment;
4. Turn off the engine, apply the brakes and remove the key;
5. Secure the clevis pins into the locking pins on both sides of the attachment. see figure 2;
6. Ensure the hydraulic connections are clean then connect the hydraulic hoses to the auxiliary hydraulic hookup on the loader;

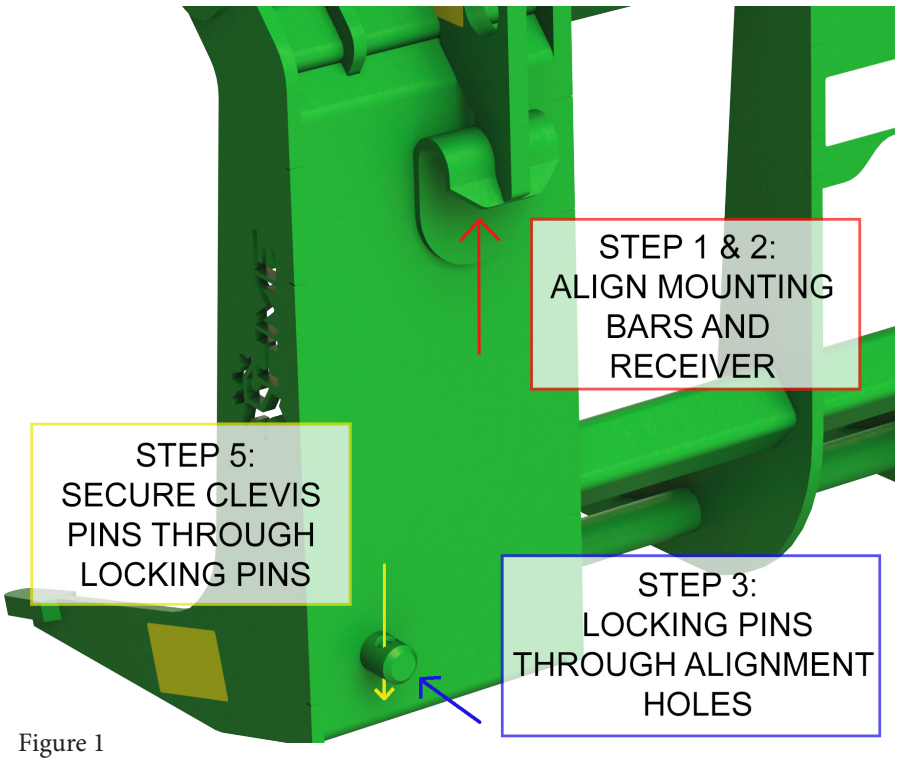


Figure 1

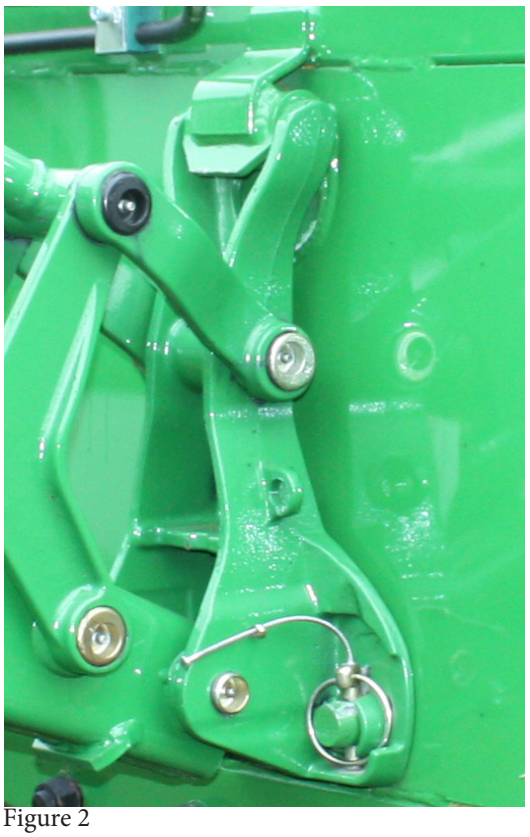


Figure 2

Detaching of attachment

Detaching of the equipment shall only be carried out by a single operator.

1. Position the attachment as per storage instructions;
2. Turn off the engine , apply the brakes and remove the key;
3. Disconnect the hydraulic hoses from the auxiliary hydraulic hookup on the loader;
4. Remove the clevis pins from the locking pins on both sides of the attachment;
5. Start the engine and lower the loader to retract the locking pins from the mounting holes;
6. Reverse the power unit until the mounting bars are clear of the receivers.

Pre operation checklist

Before each use, carry out the following checks:

- Check the power unit and loader are in good working order;
- Check hydraulic hose connection;
- Check mounting connection is secure (ensure clevis pins are in place);
- Ensure no one is immediately around the equipment or in the direction of travel. Do not allow riders;
- Check all safety decals are present and legible;
- Ensure an appropriate counter balance is connected to power unit for the intended task;
- Check all hinges are suitably greased and top up as required. Hinges should be greased after every 10 hours of use or after a wash.

Handling of materials

1. Please refer to the loader and power unit user manuals on the operation of equipment controlling the attachment and to identify suitable Personal Protective Equipment (PPE);
2. Before commencing handling, ensure the load will fall centre of the attachment and overhang on both sides is minimised, where possible. Ensure that the load does not weigh more than the maximum working limit of the attachment or the loader;
3. Approach the load with the grab open. Once contact is made with the load, close the arms and tilt the attachment back so the load is resting on the lower tines;
4. Before moving the power unit, lower the attachment as low as safely possible to lower the centre of gravity;
5. When moving larger loads that overhang, consider having a competent banksman to oversee the moving of the load to prevent collisions.

Limitations of equipment

The Bale Grab is not designed for the following, as such should not be undertaken or risk damage to equipment, injury or death:

- Excavation work;
- The breaking up of rubble or frozen material;
- The moving of building materials (such as concrete or steel);
- Demolition work;
- The moving of personnel or live-stock;
- Deforestation work, including stump pulling;
- The arms should not be used as a lever to lift or push anything.

STORAGE

Position

The attachment should be stored in the position shown in figure 3, with the hydraulic cylinders in their fully closed position.

Location

The attachment should be placed on a hard and level surface to prevent it sinking or tipping over time. The attachment should be kept in a cool and dry environment to prolong service life. If it cannot be kept under a shelter, the unit should be covered to prevent exposure to the elements. Ensure that the attachment is not accessable to live-stock or anyone who is not suitably qualified to use it.

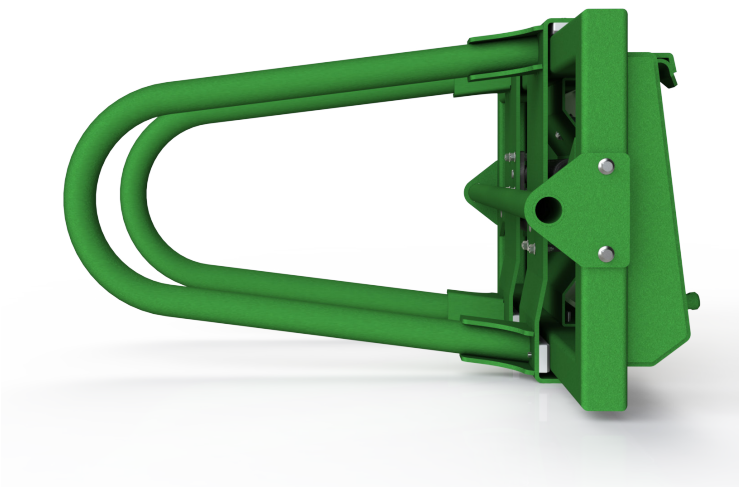


Figure 3

MAINTENANCE

Maintenance must be carried out by a suitably qualified person after 200 hours of use or after prolonged storage. Before any maintenance is carried out ensure the attachment is lowered to ground level so no works are carried out overhead. Ensure the engine is off, the breaks are engaged and the key is removed.

RECOMMENDED PPE FOR MAINTENANCE WORK



Hydraulics

Please refer to Hydraulic oil safety data sheet and the power units operating manual before commencing any maintenance.

Inspect the integrity of the hydraulic hoses by searching for any holes, damaged connections or degradation of the hose. This should be carried out wearing protective eye wear and gloves. Use a piece of wood or cardboard to find holes instead of using a hand to prevent possible injury.

Spare parts are available for purchase from HME, please see appendix A for parts list.

Hinges

Please refere to grease safety data sheet before commencing any maintenance.

The hinges should be periodically greased as required. This should be carried out wearing protective eyewear and gloves. Ensure that the grease nipples and the hinges are clear of dirt, sand or dust as these will increase the wear on the part and reduce service life.

Spare parts are available for purchase from HME, please see appendix A for parts list.

Paintwork

The paintwork should be monitored to identify any large scratches or scrapes which have left large areas of the bare steel exposed. Dependent on size and location, it may be suitable to protect the steel with a steel zinc oxide primer as this will extend the service life of the equipment.

If the paintwork has become degraded over years of use, HME offer a refurbishment service to repaint older products.

Framework

Carry out a visual inspect to identify if there are any cracks, large deflections, tears or broken parts on the body. If these are identified the unit should not be used until suitably repaired.

Spare parts are available for purchase from HME, please see appendix A for parts list.

Safety decals

Ensure all safety decals are present and legable. Replace as required. Please contact HME to source safety decals.

TROUBLE SHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	POSSIBLE RESOLUTION
Load falls from attachment during operation	1. Arms incorrectly position; 2. Load not sufficiently clamped by hydraulic cylinders; 3. Hydraulic system has a leak.	1. Reposition arms or load to ensure good contact and arms are closed fully; 2. Ensure hydraulics are suitably extended to clamp load; 3. See guidance on hydraulic maintenance;
Rear tires slipping or lifting	1. Insufficient traction; 2. Insufficient counter balance;	1. Use a heavier power unit or reduce the weight of load handled; 2. Attach appropriate counter balance or reduce the weight of load handled;
Attachment hydraulic cylinders will not move	1. No or insufficient oil flow; 2. Cylinder or moving component's path is blocked with something; 3. One of the hydraulic hoses is disconnected.	1. a. Hydraulic connections not compatible; b. Hydraulic system provides insufficient pressure; c. Hydraulic system supplying lower than expected pressure. System may require repair or service; d. Hydraulic valve on power unit not engaged. 2. Ensure path of movement is clear or material that may snag or block the movement; 3. Connect all hoses.
Damaged components	Improper operation.	Spare parts are available for purchas from HME, please see appendix A for parts list.
Attachment won't tilt back	1. Load carried is too heavy; 2. Hydraulic system has insufficient pressure.	1. Reduce the weight of the load; 2. Check pressure and adjust as required. See power unit user manual and guidance on hydraulic maintenance.
Hydraulic hose failure	1. Hose is worn or damaged; 2. Hose is being pinched or compressed by either the attachment, the carried load, the power unit or the loader.	1. See guidance on hydraulic maintenance; 2. Reroute the hose and fasten.
Hydraulic oil over heating	1. Hydraulic oil level in power unit is too low; 2. Hydraulic oil is contaminated; 3. Hydraulic oil filter is blocked; 4. Hydraulic oil reservoir of power unit is too small; 5. Oil cooler blocked.	1. Check and top up oil, as per power units manufacturer's instructions; 2. Change oil, as per power units manufacturer's instructions; 3. Change oil filter as per power units manufacturer's instructions; 4. Use a larger power unit or allow oil to cool; 5. Clean oil cooler screen.

WARRANTY

HME offer a 12 (twelve) month warranty on all products effective from the date of despatch from HME which covers against faulty materials and workmanship. The warranty is exclusively to the supplying agent. The warranty is on condition that the fault is reported immediately to the agent, and that the faulty component/ part is made available to the HME via the agent. Replaced parts carry a 90 day warranty. HME's warranty does not cover faults caused by inadequate maintenance, improper use, modification or incorrect installation. HME warranty does not cover wear and tear.

Within the warranty period, testing or fault diagnosis at the request of the agent will be carried out without charge to the agent if the defects are established to be manufactures fault, otherwise the purchaser is liable for all costs.

Warranty does not cover malicious or accidental damage.

EC DECLERATION OF CONFORMITY

In accordance with BS EN ISO/IEC 17050-1:2010

Howard Marshall Engineering Ltd.
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Nottingham, NG15 8FG
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Tel + 44 (0) 115 963 0011

In accordance with the following directive(s):

1. of May 17, "relating to machinery" 2006/42/EC

Hereby certifies that;

Equipment: Bale Grab
Part Number: P000908
Serial Numbers: P000908-1-1 to P000908-1-100

is in conformity with the applicable requirements of the following documents:

1. BS EN 12525:2000 +AS:2010, Agricultural machinery-Front Loaders-Safety;
2. BS EN ISO 12100:2010, safety of Machinery. Basic concepts, general principles for design.
3. BS EN ISO 4413:2010, Hydraulic fluid power. General rules and safety requirements for systems and their components;
4. BS EN 474-1:2006+A6:2019; Earth-moving machinery. Safety. General requirements

I hereby declare that the equipment named above has been designed to comply with the relevant sections of the above referenced specifications and is in accordance with the requirements of the Directive(s).

Howard Marshall
Director
(authorised representative for Howard Marshall Engineering Ltd and responsible for technical documentation)

Date of Issue: 28.12.2020
Location of completion: Barracks Farm, Papplewick

The technical documentation for the equipment is available from the manufacturer at the above address.

document Number: HM-W0065

UKCA DECLERATION OF CONFORMITY

In accordance with BS EN ISO/IEC 17050-1:2010

Howard Marshall Engineering Ltd.
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Tel + 44 (0) 115 963 0011

In accordance with the following directive(s):

1. Supply of Machinery (Safety) Regulations 2008;
2. Section 6 of the Health and Safety at Work Act 1974
3. Consumer Protection act 1987-Schedule 3, Paragraph 1

Hereby certifies that;

Equipment: Bale Grab
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document Number: HM-W0066

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