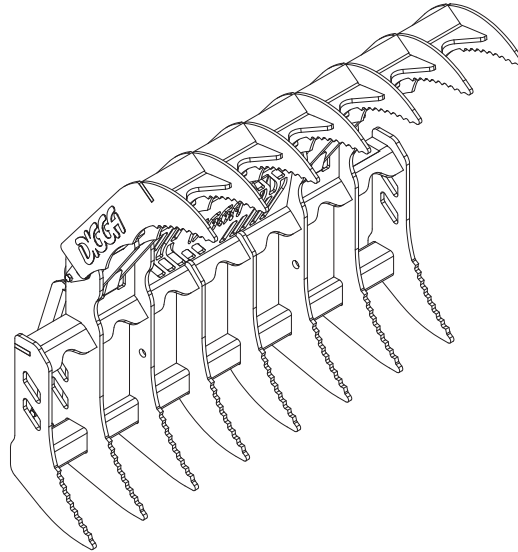


# GRAPPLE RAKE OPERATOR'S MANUAL



V3.0

PM-000271

MY.DIGGA.COM



DECAL IS APPLIED TO THE  
ATTACHMENT

MY.DIGGA.COM



DECAL TO BE APPLIED TO  
WINDOW OF MACHINE

**ACCESS OPERATOR MANUALS RISK ASSESSMENTS AND MORE**

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# To the Purchaser

Thank you and congratulations on the purchase of your new Digga Grapple Rake.

This product was carefully designed and manufactured to give you years of dependable service. It is mandatory to read these instructions to keep the equipment running in top working condition.

## Before Operation

Inspect the attachment for shipping damage and if any damage does exist, do not operate until the damaged parts have been replaced or repaired. The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understood this manual. If there is any portion of this manual or function you do not understand, contact your local authorized Digga dealer or the manufacturer to obtain further assistance. Keep this manual available for reference. Provide the manual to any new owners and/or operators.

## About This Manual

This manual has been designed to help you do a better and safer job. **Read this manual carefully and become familiar with its contents before connecting and operating this unit.**

## Service

Use only manufacturer replacement parts. Substitute parts may not meet the required standards.



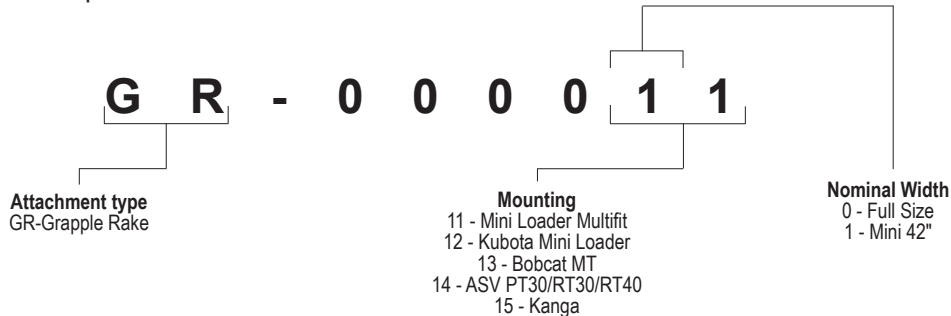
## CAUTION

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Never allow anyone to operate this attachment without reading the “Safety precautions” and “Operating instructions” sections of this manual. Always choose hard and level ground to park the vehicle on and set the brake, so the unit cannot roll.

MODELS COVERED IN THIS MANUAL	
MINI GRAPPLE RAKE 42"	
GR-000011	MINI GRAPPLE RAKE 42" - MINI LOADER MULTIFIT
GR-000012	MINI GRAPPLE RAKE 42" - KUBOTA MINI LOADER
GR-000013	MINI GRAPPLE RAKE 42" - BOBCAT MT
GR-000014	MINI GRAPPLE RAKE 42" - ASV PT30/RT30/RT40
GR-000015	MINI GRAPPLE RAKE 42" - KANGA

This manual, unless explicitly stated otherwise, encompasses the entire range of Digga Grapple Rakes. Essential information about the product can be obtained by referencing the model engraved on the serial plate. Below is a key breakdown for comparison:



## NOTE

The list and key breakdown provided above are not exhaustive. Digga reserves the right to update and introduce new products without prior notice.

# Product Identification

**Your Digga Grapple Rake is a user serviceable part.** When servicing or assembling your product, use only genuine Digga replacement parts. Substitute parts may not meet the standards required for safe and dependable operation. Use of non genuine Digga parts will void warranty and Digga accept no liability what so ever for consequential or special damages. All service must be performed by qualified professionals. Contact your local Digga dealer for details. To facilitate warranty or service, record the model and serial number of your unit in the space provided on this page. This information may be obtained from the identification plate located on the product.

<b>DIGGA</b> www.diggausa.com		Digga North America 2325 Industrial Parkway SW Olympia, WA 98501, USA	
Model	<input type="text"/>		
Name	<input type="text"/>		
Serial No.	<input type="text"/>		
Flow (max)	<input type="text"/>		
Pressure (max)	<input type="text"/>		
Power (max)	<input type="text"/>	RPM (max)	<input type="text"/>
Approx. Oil Capacity	<input type="text"/>	Hy. Mand.	<input type="text"/>
	<input type="text"/>	Weight	<input type="text"/>

DE-000642 MADE IN THE USA

DE-000642

**Model:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Purchase Date:** \_\_\_\_\_

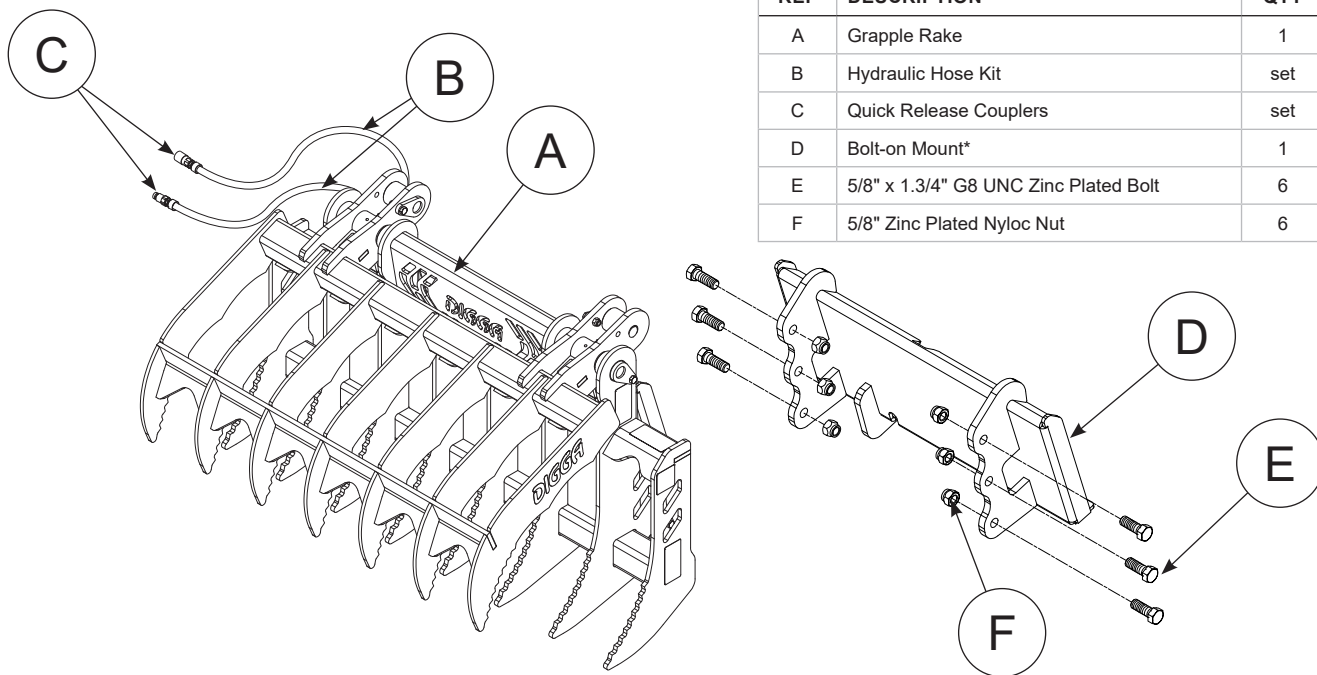
## **NOTE**

The parts department needs this information to ensure accurate parts can be sent to the authorized service agent.

## Preparation for use

To avoid any inconvenience before operation, please check that you have received the following items which you may have ordered. Items may differ depending on type of machine the Grapple Rake is to be fitted to\*.

REF	DESCRIPTION	QTY
A	Grapple Rake	1
B	Hydraulic Hose Kit	set
C	Quick Release Couplers	set
D	Bolt-on Mount*	1
E	5/8" x 1.3/4" G8 UNC Zinc Plated Bolt	6
F	5/8" Zinc Plated Nyloc Nut	6



\*Additional bolt-on mounts can be requested to suit different machines. Consult your Digga Dealer.

## Safety Precautions - General Information

You must understand all safety statements shown on your attachment and in this manual. Especially note the information called out by the designations shown below. Follow these safety precautions, when operating or maintaining the attachment.

### **DANGER**

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The **DANGER** designation indicates an imminently hazardous situation that, if not avoided, will result in death.

### **WARNING**

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The **WARNING** designation indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

### **CAUTION**

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The **CAUTION** designation indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury or property damage.

### **NOTE**

You will also see information called out with the **NOTE** designation. This additional safety or general information is important to the maintenance and operation of your loader.

During day-to-day operation of your attachment, you will encounter a variety of situations beyond those listed in this manual. We encourage you to assess the risk present at any job site and in every work task before beginning work. Apply appropriate risk mitigation strategies to make safety a first priority at all times, and if these are not sufficient, stop the job immediately and seek the help of a qualified safety consultant.



# Safety Precautions - General Information

## Know where utilities are

Never begin work at a new location until the work area has been fully marked for underground utilities. Buried electrical, telephone, cable wires, gas, water and sewer lines are likely to be present. Unintentionally disrupting these hidden hazards while working with your loader can result in dangerous situations and property damage. Many countries offer a service which advises the location of underground services in your area. If available also use this service prior to digging, drilling, trenching or any form of excavating and earthmoving. Call 811 (call811.com) is the service for the United States and Before you Dig ([www.byda.com.au](http://www.byda.com.au)) is the service for Australia.



## CAUTION

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**You must ensure that underground utilities have been officially marked before working in the area. Markings must be valid according to state law or practice.**

## Exposure to Respirable Crystalline Silica Dust Along with Other Hazardous Dusts

- It is recommended to use dust suppression, dust collection, and if necessary personal protective equipment during the operation of this or any other machine attachment that may cause high levels of dust.

## Remove Paint Before Welding or Heating

- Hazardous fumes/dust can be generated when paint is heated by welding, soldering, or using a torch.
- Do all work outside or in a well ventilated area and dispose of paint and solvent properly.
- When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding.
- Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

# Safety Precautions - General Information

## End of Life Disposal

- At the completion of the useful life of the Grapple Rake, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

## Operating the Grapple Rake

- The primary responsibility for safety with this equipment falls to the operator. Make sure that the equipment is operated only by trained individuals, who have read and understood this manual.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate the equipment.
- Don't hurry the learning process or take the unit for granted. It is the skill, care, common sense, and good judgment of the operator that will determine how efficiently and safely the job is performed.
- Visually inspect your equipment, ensure correct assembly and installation is done and never operate the equipment that is not in proper working order.
- Know the capabilities of your equipment and practice its operation to become familiar with the controls, emergency shut down procedures, and the way it handles on your machine.
- Follow all safety decals and keep them clean. Replace them, if they become worn, damaged or illegible.
- Do not paint over, remove or deface any safety signs or warning decals on your equipment.
- Operate only from the operator's station and operate only in daylight or with sufficient artificial light.
- Always carry loads close to the ground and do not exit the machine with the loader arms raised.
- Do not exceed rated operating capacity (ROC) of the host machine, as machine may become unstable resulting in loss of control. Exceeding the manufacturers specifications will also void all warranty.
- Always lower the loader arms or the machine boom to the ground, shut off the engine and remove the key before getting off the unit.
- Remove the Grapple Rake from the parent machine before transporting to and from the job site.

## Safety Precautions - General Information

- Never use the attachment on a machine that is not equipped with a cab rollover protective structure (ROPS) and/or falling object protective structure (FOPS), and operator restraints (seat belts or equivalent devices). Although, this is not applicable when using this attachment on a stand-on mini loader.
- Establish and maintain a minimum 20 feet (6 meters) exclusion zone around the working area. No person other than the operator should enter the work zone, while the parent machine's engine is running.
- Do not allow site workers to climb on the attachment at any time, including while stationary, in operation or being moved.
- Avoid steep hillside operation which could cause the machine to overturn. Consult your machine operator's and safety manual for maximum allowable incline.
- Reduce speed when driving over rough terrain, on a slope or turning to avoid overturning the machine.
- Travel only with the Grapple Rake in a safe transport position to prevent the uncontrolled movement.
- Drive slowly over rough ground and on slopes.
- Tether any accessory connected to the Grapple Rake with a chain if necessary, to prevent uncontrolled swinging of the attachments.
- Do not drive close to ditches and excavations, etc., as cave in could result.
- Flow and pressure gauges, fittings, and hoses must have a continuous operating pressure rating of at least 25% higher than the highest pressure of the system.
- All operations must be stopped in the event of local thunderstorm or lightning activity. During operation, weather conditions shall be monitored, operations shall cease during electrical storms or when electrical storms are imminent. Ground personnel and bystanders.
- Be alert to others in the work area. Be sure others know when and where you will be working.
- Loose fitting clothing, long hair, jewelery and equipment which might become entangled in moving equipment are prohibited while working near the Grapple Rake .
- Operators, helpers, and other personnel working near the attachment must wear steel-toe safety shoes, safety glasses, and hard hats as a minimum. Hearing protection, respirators, and personal protective clothing will be specified in the site-specific Health and Safety Plan.

## Safety Precautions - General Information

- The Grapple Rake shall be cleaned only when the mechanism is in neutral and stopped; long-handled shovels shall be used to move debris from the Grapple Rake. Materials heavier than 22 lbs (10 kg) must be moved mechanically or by using at least two people.
- The Grapple Rake shall be used only for their designed intent and shall not be loaded beyond their rated capacity. Overloading or exceeding the manufacturers specifications will void all warranty.



### CAUTION

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Wait for the mechanism to completely stop before making any adjustments or cleaning.



### DANGER

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During Grapple Rake operation, maintain a minimum “no-work zone” buffer of 10 feet (3 meters) from any overhead electrical service and 6 feet (2 meters) from any underground service . All bystanders should be kept at a minimum of 20 feet (6 meters) away from the working area of the Grapple Rake.

### Storing your Grapple Rake

- Seal hydraulic couplers from contaminants and secure all hoses off the ground to help prevent damage.
- Clean the unit thoroughly by removing all mud, dirt, grease, etc.
- Inspect for visible signs of wear, breakage, or damage. If required, order any damaged parts and perform the necessary repairs to avoid delays upon removal from storage.
- Check that hydraulic cylinders and hoses are full of clean oil and apply grease to all grease nipple points.
- Lubricate all pivot point pins to prevent rust and reduce wear. Refer to page 33.
- Tighten loose nuts, cap screws, and hydraulic connections.
- Replace safety decals that are damaged or in an unreadable condition.
- Store unit in a dry and protected place, as leaving the unit outside will materially shorten its life.

# Safety Precautions - General Information

## Maintaining the Grapple Rake

- All maintenance should be performed with the engine turned off, parking brakes applied, machine arms lowered, and hydraulic pressure relieved.
- Lock out and tag out the equipment before repairs or maintenance is performed.
- Only properly trained and qualified individuals are permitted to perform repairs and maintenance.
- If lift arms must be left raised for any reason, use a positive lift arm lock to secure the arms in place. Serious damage or personal injury could result from lift arms accidentally lowering.
- Never adjust a relief valve for pressure higher than recommended by the machine's manufacturer.

# Safety Precautions - General Information

## Transporting the Grapple Rake

- When transporting your attachment, follow all local government regulations that may apply along with any equipment safety precautions provided in this manual.
- It is the responsibility of the operator that safe systems of work are employed while handling this attachment and to ensure that the attachment is firmly fastened without causing any damage to it.
- Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components.
- Attachment should be well secured, when being moved or in transit and furthermore prior to moving, storing, loading/unloading, or parking.
- Verify that all tie down accessories (chains, slings, ropes, shackles, etc.) are capable of maintaining attachment stability during transporting and are attached in such a way to prevent unintended engagement or shifting of the unit.
- Use extra care when loading or unloading the attachment on to a trailer or truck and disconnect hydraulic couplers during the transportation. No responsibility for loss or damage to persons or property in any regard can be attributed to Digga.

# Safety - Working with the Attachment

## Complete a Risk Assessment

Your Digga Grapple Rake is a versatile machinery attachment, capable of performing its tasks in a safe and effective manner. To ensure the safety of operators and others, it is important to document the work at hand for hazard and risk. Before beginning work, complete a risk assessment. The following steps provide a framework for this activity:

1	<b>DOCUMENT THE ACTIVITY</b> Assemble those involved in the activity. Write down the tasks required for the activity in step-by-step form.
2	<b>IDENTIFY THE HAZARDS</b> Next to each task, identify what part of the task may cause injury to those engaged in the task or others in the vicinity. Rate the consequences and likelihood of the hazard using the risk assessment matrix.
3	<b>DOCUMENT THE CONTROL MEASURES</b> Using the results from the risk assessment matrix, determine which hazards require attention. List all mitigation measures that are required to eliminate or minimize those hazards.
4	<b>IDENTIFY THE RESPONSIBLE PERSON</b> Document the name of the person responsible for implementation of the mitigation measure.
5	<b>MONITOR AND REVIEW</b> Ensure that the activity is supervised and that the documented process is being followed.

## NOTE

Remember, Personal Protection Equipment (PPE) provides a level of protection during work, but PPE is the last level of hazard control and prevention. Always refer to the hierarchy of hazard control, when planning a safety process.

# Safety - Working with the Attachment

**Take Extreme Care When Dealing with Hydraulics - Whilst Assembling, Operating, Maintaining or Performing any work on or near this product.**

- Hydraulic fluid under pressure can penetrate the skin and may develop gangrene or other permanent disabilities. **Hydraulic leaks under pressure may not be visible!**
- If any fluid penetrates the skin, **get immediate medical attention!**
- Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks. **Do not use your hands!**
- Before connecting or disconnecting hydraulic hoses, read your machine or power unit's operator manual for detailed instructions on connecting and disconnecting hydraulic attachments.
- Ensure that all parts meet the specifications for this product when installing or replacing hydraulic hoses or fittings.
- After connecting hydraulic lines:
  - Slowly and carefully raise the loader's arm(s) and cycle the rollback/dump cylinders to check hose clearances and to check for any interference.
  - Operate the hydraulics on this product to ascertain forward and reverse.
  - Ensure that the hoses cannot interfere with or actuate the quick-attach mechanism.
  - Ensure that hoses will not be pinched, or get tangled, in any equipment.
- Do not lock the auxiliary hydraulics in the "ON" position.
- Refer to host machine operator's manual and this manual for procedures and service intervals, then inspect and maintain the entire hydraulic system to ensure that the fluid remains clean, that all devices function properly, and that there are no fluid leaks.

## **NOTE**

**For any additional safety information please see "Risk Management Booklet". To obtain a copy of this document please contact Digga Head Office.**



# Safety - Working with the Attachment

## When Mounting this Product to Your Machine

- Refer to the operator's manual of your host machine for any special or detailed mounting instructions regarding quick-attach mechanism.
- This product should fit onto the quick-attach frame or hitch (machine mount). If this product does not fit properly, contact your Digga dealer before operating.
- Where safety controls are installed it is illegal to disengage, tamper with, or remove them.



## **WARNING**

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Never place any part of your body into the mounting plate, frame, hitch or loader holes. A slight movement of the power unit and this product could cause serious injury.

## When Adjusting Servicing or Repairing this Product

- Do not make any modifications to your Digga Grapple Rake.
- When making repairs use only authorized Digga service agents and use only genuine Digga parts. For fasteners, hydraulic hoses, or hydraulic fittings, use only properly rated parts.
- Replacement parts must also have safety signs attached.



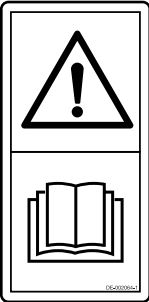

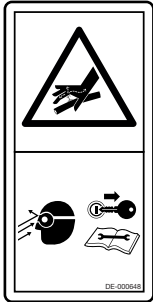



## **CAUTION**

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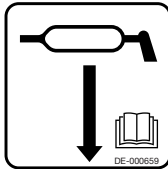

Wait for all moving parts to stop completely before making any adjustments or cleaning.

# Safety - Decal Labels

This section provides a glossary of safety labels found on your Digga Grapple Rake. These labels are important! Become familiar with both their meaning and location prior to operating the attachment. Ensure that each label is clean, visible, and legible at all times. To clean the decal, use a soft cloth, water, and soap. Avoid the use of solvents, gasoline, or other harsh chemicals, as these may damage the decal. If a label has been damaged or removed, it must be replaced.

ITEM 1	READ OPERATOR'S MANUAL	ITEM 2	PINCH POINT HAZARD	ITEM 3	HIGH PRESSURE FLUID
					
	<p><b> DANGER</b></p> <p>Completely read and understand this operator's manual before using your attachment. Keep the manual with the attachment at all times.</p>		<p><b> WARNING</b></p> <p>Keep hands and body parts a safe distance from actuating parts.</p>		<p><b> WARNING</b></p> <p>Pressure injection risk of injury: This machine operates on high-pressure hydraulic fluid. Always wear eye protection and shut-off the engine before performing maintenance on this machine. Refer to page 16.</p>

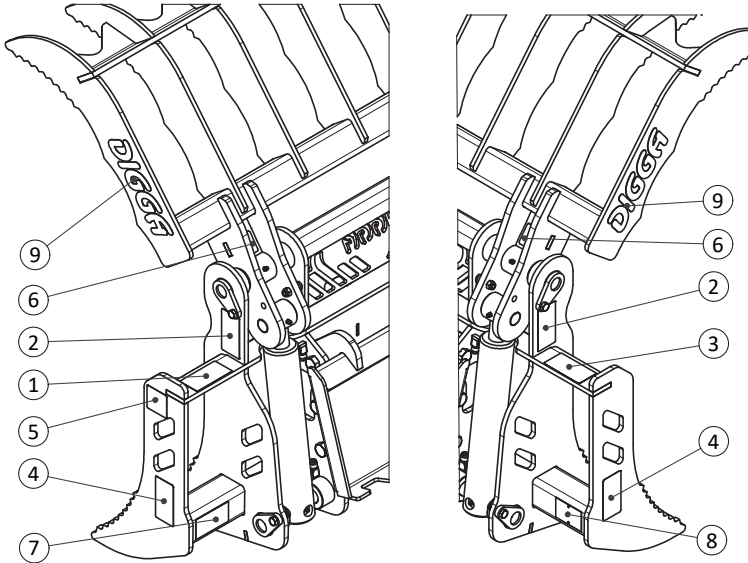
# Safety - Decal Labels

ITEM 4	CRUSH HAZARD/ KEEP DISTANCE	ITEM 5	MY.DIGGA.COM	ITEM 6	GREASE POINTS
					
	<p> <b>DANGER</b></p> <hr/> <p>Keep bystanders 20ft (6m) from the equipment.</p>		<p><b>NOTE</b> Scan the QR-code to access: <a href="http://my.digga.com">my.digga.com</a> Find manuals, safety information, guides and more.</p>		<p><b>NOTE</b> This decal indicates the position of grease nipples. There might be more than one grease nipple in same direction indicated by the arrow. See "Greasing" on page 33.</p>

# Safety - Decal Labels

ITEM 7	CALIFORNIA PROPOSITION 65	ITEM 8	SERIAL TAG
<div data-bbox="263 277 589 449" data-label="Image"> <p><b>WARNING</b></p> <p><b>CALIFORNIA PROPOSITION 65 WARNING</b></p> <p>This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.</p> <p>For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a></p> <p>DE-000538</p> </div>		<div data-bbox="934 263 1230 462" data-label="Image"> <p><b>DIGGA</b> www.diggausa.com</p> <p>Digga North America 2325 Industrial Parkway SW Dyersville, Iowa 52046, USA</p> <p>Model <input type="text"/></p> <p>Name <input type="text"/></p> <p>Serial No. <input type="text"/></p> <p>Flow (max) <input type="text"/></p> <p>Pressure (max) <input type="text"/></p> <p>Power (max) <input type="text"/> RPM (max) <input type="text"/></p> <p>Approx. Oil Capacity <input type="text"/> Yr. Manuf. <input type="text"/> Weight <input type="text"/></p> <p>DE-000442 MADE IN THE USA</p> </div>	
<div data-bbox="108 594 719 795" data-label="Text"> <p><b>! WARNING</b></p> <p>This product contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to: <a href="http://www.p65warnings.ca.gov">www.p65warnings.ca.gov</a></p> </div>		<div data-bbox="762 584 1354 685" data-label="Text"> <p><b>NOTE</b></p> <p>The serial tag contains important information about the product. Refer to "Product Identification" on page 5.</p> </div>	

# Safety - Decal Locations



## **NOTE**

The following figure and table show typical safety decal labels location. The actual position and quantity of the labels on your product may differ.

DKIT2140			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	DE-002064-1-SM	READ MANUAL - 45mmW x 90mmH
2	2	DE-000646-3	PINCH POINT HAZARD - 45mmW x 90mmH
3	1	DE-000648-1	HIGH PRESURE FLUID - 45mmW x 90mmH
4	2	DE-000649-1	CRUSH/KEEP DISTANCE - 45mmW x 90mmH
5	1	DE-000850	MY DIGGA (QR CODE)-50mmW x 50mmH
6	2	DE-000659	GREASE POINT BELOW - 40mm x 40mm
7	1	DE-000538	CALIFORNIA PROPOSITION 65 82mmW x 43mmH
8	1	DE-000642	SERIAL TAG-USA
9	2	DE-000453	DIGGA LOGO 212mmW x 60mmH

# Before Use

The key feature of your Digga Grapple Rake is low maintenance. It contains user serviceable parts. When servicing your product remember to use only genuine Digga replacement parts. Use of non-genuine Digga parts will void warranty and Digga will accept no liability what so ever for consequential damages as a result thereof.



## **DANGER**

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**Safety first!! Read and understand the safety instructions before beginning any maintenance.**

### **Before First Use**

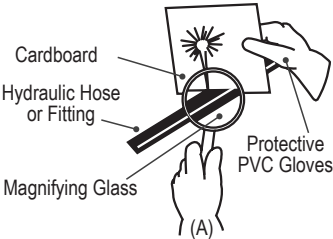
Inspect the Grapple Rake for shipping damage. If damage does exist, do not operate until the damaged parts have been replaced or repaired.

### **Before Each Use**

- Make sure that all nuts and bolts are in place and properly tightened.
- Make sure that all other fasteners are in place and are performing their specified function.
- Check mount bolts and nuts. Refer to "Changing the bolt-on mount" on page 26.
- Make sure that all hydraulic fittings are tightened and that there are no leaks in any fittings or hoses.
- Make sure that all safety signs are in place, are clean, and are legible (refer to "Safety - Decal Labels" on page 18).
- Lubricate all greasing points. Regrease all greasing point every 10 hours of use. See "Greasing" on page 33.
- Check for wear and tear on pins, linkages, cutting edges and replace any damaged parts and excessively worn parts.
- Use only manufacturer recommended replacement parts. Other parts may be substandard in fit and quality.
- Ensure any damage or excessively worn parts are replaced.
- Always wear safety goggles or glasses when inspecting equipment.

**!** WARNING

Escaping fluid under pressure as low as 100 PSI can have sufficient force to penetrate the skin up to 4" (100mm) away causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks (A). Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak and use heavy duty PVC protective gloves. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.



**!** WARNING

Always wear the correct PPE, when operating or performing maintenance on this attachment. If a hydraulic fluid injection injury occurs, seek emergency medical attention immediately. Explain to medical staff that the injury is the result of pressurized fluid injection. Remember that even if the point of entry appears as a minor pin hole, this potentially could be a major injury, especially if not treated in time.

# Commissioning Procedure

The Digga Grapple Rake attaches to the tool bar/quick-attach mechanism of your Machine. Due to this arrangement, thorough knowledge of the machinery controls is necessary for machine operation. Read and understand your machine operator's manual for information regarding machine operation before attempting to use the Grapple Rake.

When a Grapple Rake is purchased from Digga or a Digga Dealer/Distributor, the frame/attachment is matched for suitability and compatibility to the flow, pressures and load ratings of the original machine it was purchased for. For fitment of the Grapple Rake to other machines you must first contact your Digga dealer and receive written confirmation about mount compatibility and to ensure you do not incorrectly fit the attachment to a machine with lower rated load capacities than what the product was designed for.

Warranty will be void if the Grapple Rake is fitted to an alternative machine without first receiving written confirmation from your Digga dealer. Exceeding the recommended maximum flow, pressure, or rated load capacity of the Grapple Rake as stated on the serial tag will void all warranty.

Check the work site and identify the extent of the work to be carried out and note any possible hazards or constraints. Overhead cables, underground utilities, services, etc. Check with relevant service providers on the location of these before commencement of any work (see "Know where utilities are" on page 9). Review the job at hand and determine the Grapple Rake is appropriate for the intended conditions. For example: Do not use it to extract or crush posts, rocks or other material from the ground.

## Rated Operating Capacity

When working with the Grapple Rake, consider the machine's rated operating capacity (ROC), the mass (weight) of the Grapple Rake (refer to "Technical Specifications" on page 34) and the mass (weight) of the material which you will be working with.

The sum of the weight of the material loaded plus the weight of the Grapple Rake shall never exceed the machine rated operating capacity.

The weight of the Grapple Rake can be obtained from the serial tag, which is attached at the back of the attachment (refer to page 21 for the serial tag location).



## Installation instructions

1. Remove the shipping banding from around the Grapple Rake and Frame.
2. Ensure that the bolt-on mounting is compatible to your machine. Refer to
3. Remove any attachments from the front of the Machine.
4. Ensure you have read the serial tag on the Grapple Rake to obtain its weight. Ensure your machine ROC is adequate to handle the job intended. See "Rated Operating Capacity" on page 24.



## **DANGER**

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**Do not exceed the machine Rated Operating Capacity when working with your bucket.**

5. Following all standard safety practices and the instructions for installing an attachment in your machine operator's manual, install the Grapple Rake onto your Machine.

## **NOTE**

**It is important to make sure the locking mechanism on your quick attach is engaged, therefore locking the attachment onto the machine.**

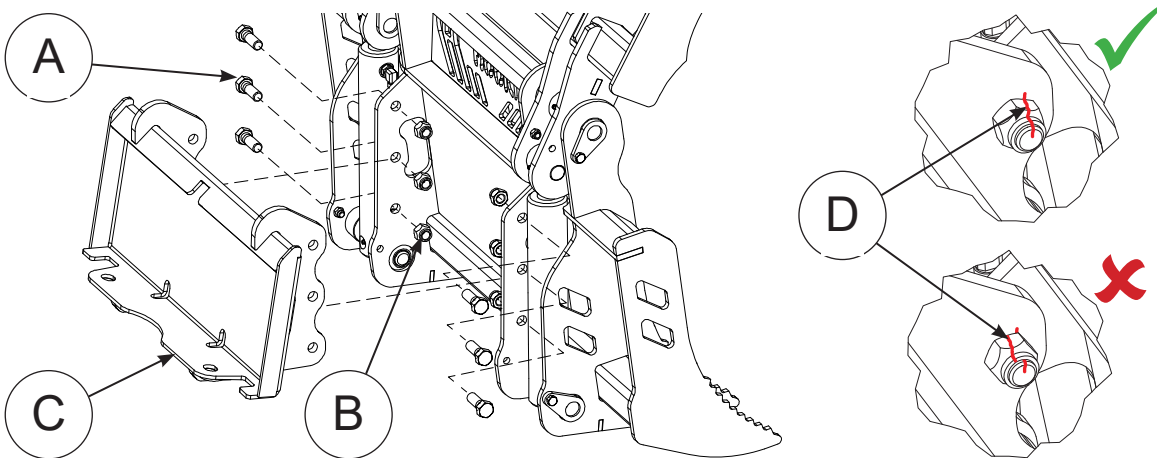
6. Lower the unit to the ground and remove the key from the parent machine.
7. Relieve any pressure from the auxiliary hydraulic system and after making sure that there is not any foreign matter on the hydraulic couplers, connect the power and return couplers to the auxiliary hydraulic system of your machine.
8. Route the hoses in such a fashion as to avoid pinching or chafing.
9. Carefully raise the loader arms and cycle the tilt cylinders to check clearances and to verify that all mounting procedures have been successfully completed.
10. Cycle the upper jaw cylinders through their full range to verify the correct installation.
11. The machine is now ready for use.

# Commissioning Procedure

## Changing the bolt-on mount

The Digga Grapple Rake allows changing its pickup mount to suit different machines. Consult a Digga Dealer for compatibility and follow these steps to change:

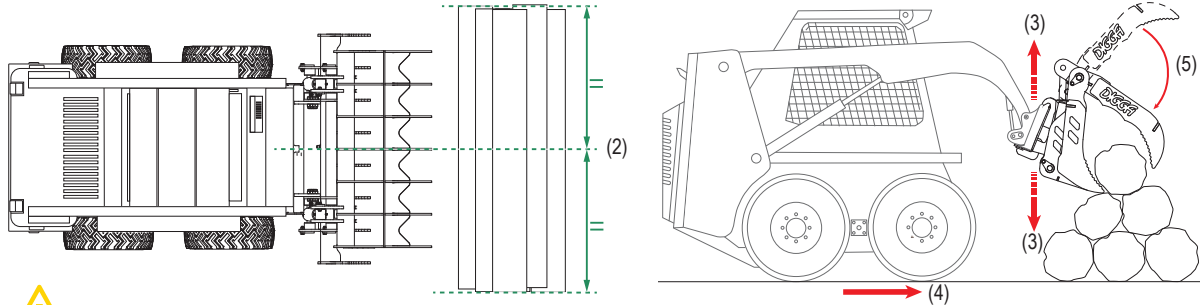
1. Position the attachment on flat and stable ground, then remove it from the machine.
2. Insert support blocks under the mount to bear its weight. Chock or lash the attachment to prevent rolling.
3. Remove the 6 bolts (A) and nyloc nuts (B) that secure the mount in place.
4. Take out the existing mount (C) and replace it with a compatible one for the intended machine. Consult your Digga Dealer for compatibility guidance.
5. Use 6x 5/8" 1.3/4" G8 UNC zinc-plated bolts and nyloc nuts to affix the new mount securely. Do not substitute with bolts of different specifications. Lightly lubricate the fasteners and torque them to 184 ft-lbs (249 Nm).
6. It is recommended to mark the nuts with inspection paste (D) to simplify daily checks.



## Loading

Do not exceed the hosting machine's ROC. Refer to "Rated Operating Capacity" on page 24. Keep all personnel and bystanders 20ft (6m) away from the equipment, as objects can shift suddenly during the operation of the Grapple Rake.

1. Adhere to all Safety Precautions and Operational Procedures. Refer to "Safety Precautions - General Information" on page 8 and "Safety - Working with the Attachment" on page 16.
2. Position the grapple centrally over the material to be lifted.
3. Come to a complete stop in front of the material and adjust the grapple to the appropriate height for entry into the pile.
4. Fully open the upper jaw and slowly advance into the pile.
5. Secure the load by gently closing the upper jaw.



**CAUTION**

Avoid forcefully ramming the attachment into a pile to prevent equipment damage and potential harm to the operator.

# Operating Instructions

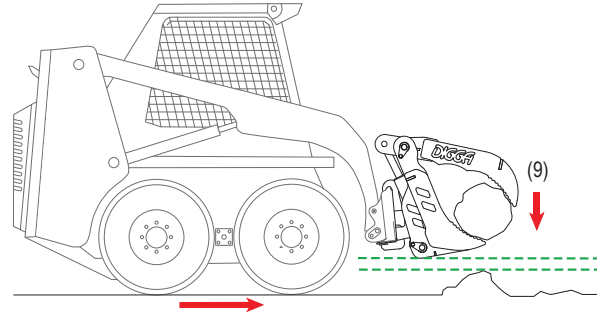
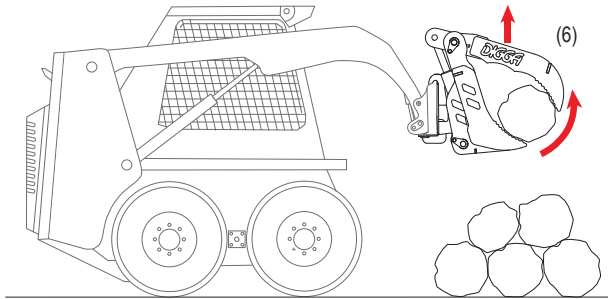
## CAUTION

Exercise caution when entering the load to prevent any objects from protruding into the operator's station.

## CAUTION

Exercise care when closing the upper jaw with fragile materials to avoid damage or crushing.

6. Elevate and tilt the load slightly for stability.
7. Maintain control over the load; if uncertain, release and re-clamp it in a safer position.
8. Carefully remove the load from the pile, ensuring clearance from all obstacles.
9. Lower the load to a safe traveling height for transport to the unloading site.



## **NOTE**

Occasionally, the load may not be securely held in the grapple after removal from the pile. Lower it to the ground, release, and re-clamp it safely before proceeding.

### **Transporting Loads**

- Follow all safety precautions and operational procedures. See "Safety Precautions - General Information" on page 8 and "Safety - Working with the Attachment" on page 16. Continuously scan all sides for pedestrians, traffic, and obstacles.
- Keep the load slightly tilted back. Maintain clear visibility by traveling with the Grapple Rake and load at the lowest position possible, avoiding obstacles.
- Drive at a safe speed, especially when turning corners. Avoid sudden braking.
- When traveling over ramps or inclines, position the load on the uphill side of the machine. Prefer straight travel on grades, ramps, and inclines, avoiding turns whenever feasible.
- Only adjust the load height when stopped, never while moving.

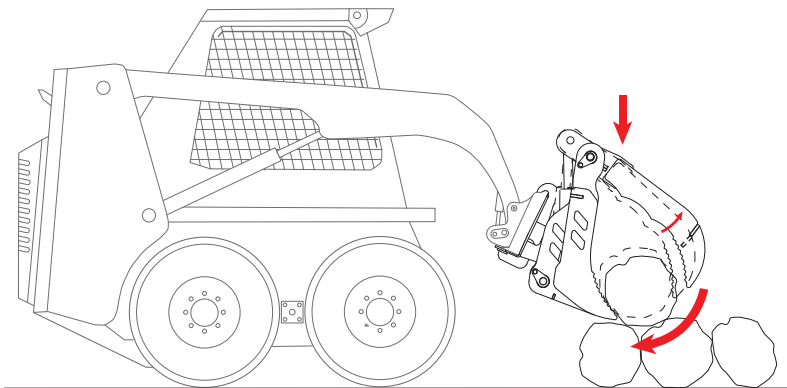
# Operating Instructions

## DANGER

Do not transport on public roadways with a load attached. It can create hazards such as obstruction of vision, wide load issues, or falling objects.

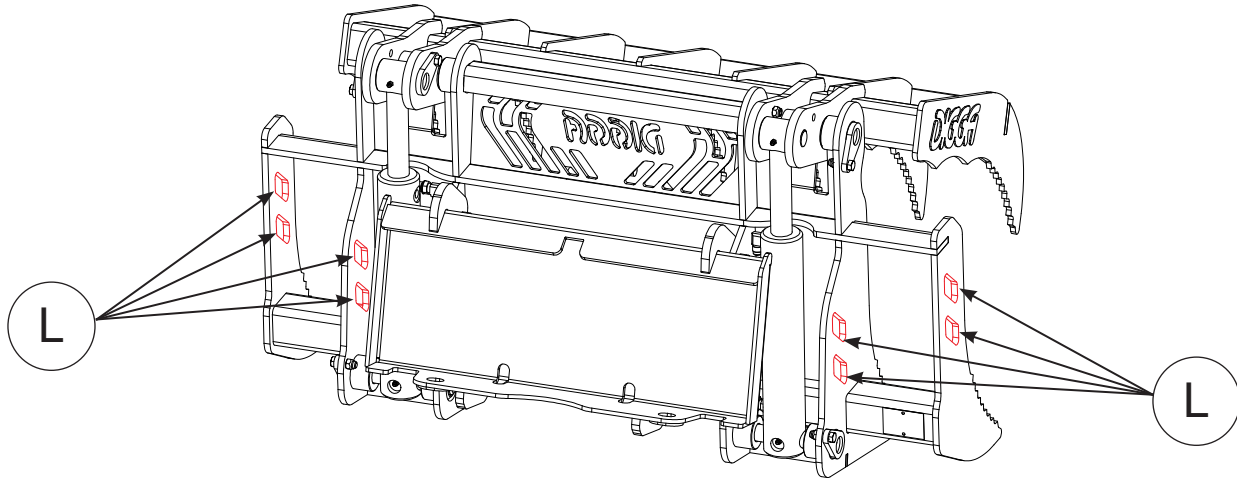
### Unloading

1. Follow all Safety Precautions and Operational Procedures. See "Safety Precautions - General Information" on page 8 and "Safety - Working with the Attachment" on page 16.
2. Stop at the desired location.
3. Slowly raise the load just above the drop-off point.
4. Carefully move forward, ensuring clearance for the Grapple Rake and the load.
5. Halt forward movement when the load is positioned over the release point.
6. To release the load, tilt the front of the grapple down, raise the upper jaw, and lift the loader arms. The sequence may vary based on the material type, but maintain control throughout.
7. After the load settles onto the pile, slowly reverse, ensuring clearance for the Grapple Rake.
8. Lower the Grapple Rake to its lowest position, avoiding obstacles.



## Transporting the attachment

1. Follow all federal, state and local regulations when transporting the unit on public roads.
2. Refer to "Transporting the Grapple Rake" on page 14 for safety information.
3. Use extra care when loading or unloading the machine onto a trailer or truck. Disconnect hydraulic couplers during transportation.
4. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components.
5. The slots (L) provided in the structure (marked in red in the figure below) are suitable for lashing or lifting the attachment.

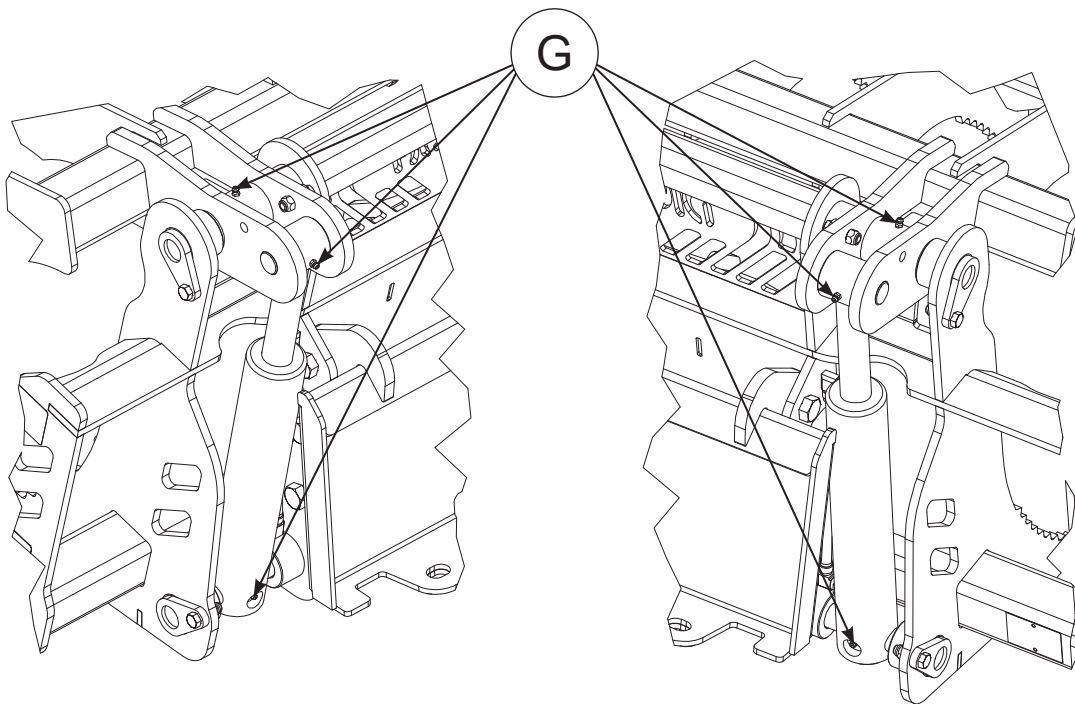


# Notes




## Greasing

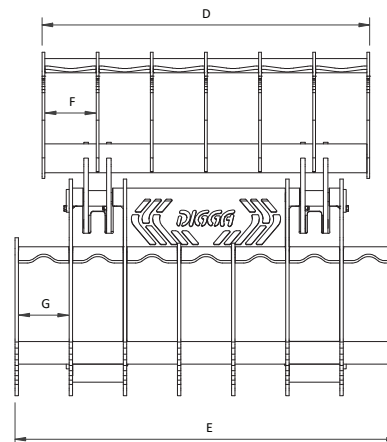
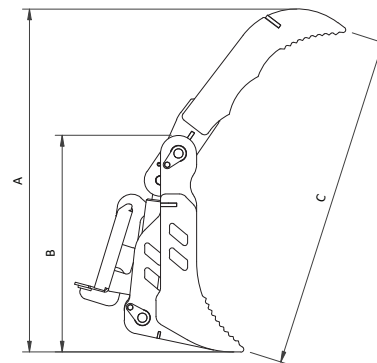
Lubricate all 6 greasing points (G) before use and every 10 hours of use with multipurpose grease.



# Technical Specifications

SPECIFICATION	42" MINI GRAPPLE RAKE
Open height (A)	38.03" (966mm)
Closed height (B)	24.02" (610mm)
Jaw opening (C)	37.13" (943mm)
Upper jaw width (D)	36.3" (922mm)
Bottom jaw/Overall width (E)	42.36" (1076mm)
Upper jaw tine spacing (F)	5.68" (144mm)
Bottom jaw tine spacing (G)	5.62" (143mm)
Weight*	337.31 lbs (153kg)

\*Weight of GR-000011 42" Mini Loader Multifit. Weight might differ for other models. Consult your Digga dealer.



For spare parts of your Grapple Rake, obtain the serial number from the aluminum serial tag located on the rear of the Grapple Rake. The serial number allows Digga to trace all production and service records. Ensure all service and maintenance is performed by a competent service agent and all service records are kept. For spare parts contact your nearest Digga dealer or Digga Head Office.

For further information on spare parts, please contact one of the Digga sales offices shown below, or contact your local authorised Digga dealer.

## DIGGA INTERNATIONAL SALES OFFICES

### ASIA PACIFIC

#### DIGGA HEAD OFFICE - BRISBANE

4 Octal St, Yatala QLD 4207  
Phone: +61 7 3807 3330  
Email: [info@digga.com](mailto:info@digga.com)

#### DIGGA NEW SOUTH WALES

19 Mckay Close,  
Wetherill Park, NSW 2164  
Phone: 1300 2 DIGGA  
Email: [nsw@digga.com](mailto:nsw@digga.com)

#### DIGGA VICTORIA

17-21 Babbage Dr,  
Dandenong, VIC 3175  
Phone: 1300 2 DIGGA  
Email: [vic@digga.com](mailto:vic@digga.com)

Web: [www.digga.com](http://www.digga.com)

### NORTH AMERICA

#### DIGGA NORTH AMERICA

2325 Industrial Parkway SW  
Dyersville IA 52040  
Phone: + 1 563 875 7915  
Email: [infous@digga.com](mailto:infous@digga.com)

Web: [www.diggausa.com](http://www.diggausa.com)

### EUROPE

#### DIGGA EUROPE

Unit 1, Nexus Park  
Plenty Close  
Newbury, RG14 5RL  
England, United Kingdom  
Phone: +44 (0) 1488 688 550  
Email: [infouk@digga.com](mailto:infouk@digga.com)

Web: [www.diggaeurope.com](http://www.diggaeurope.com)

# Troubleshooting

## Grapple Rake

TROUBLE	POSSIBLE CAUSE	REMEDY
Damage to hydraulic cylinder rod.	Spoil build up between cylinder and grapple.	Repair or replace cylinder.
Oil leak.	Loose fittings or hoses.	Inspect and repair or replace.
	Damage to fittings or hoses.	Inspect and repair or replace.
	Damage to cylinder.	Inspect and repair or replace.
	Damaged cylinder seal.	Inspect and repair or replace.
Load is shifting	Moving or turning at excessive speeds.	Reduce velocity to a safe, consistent rate to prevent bouncing.
	Carrying the load too high	Lower the load to a more stable position.
	Inadequate grip due to loose clamping of the claws against the load.	Release and re-clamp the load in a safer position.
	Load not properly centered within the grapple.	Align the load centrally within the grapple to maintain balance.
	Traveling with the front teeth of the grapple tilted downwards.	Tilt the load slightly backward to secure its weight against the bottom jaw.
	Traversing sideways on an incline.	Travel straight up and down inclines for better stability.
Damage to hoses or fittings	Objects are transpassing the grapple	Replace damaged components. Be cautious with objects that can transpass the grapple when entering the pile.
Damage to the grapple	Abuse	Contact your local Digga dealer.
	Bucket not fitting to parent machine correctly.	Contact your local Digga dealer.
Damage to grapple teeth	The load center of gravity is not aligned with the center of the grapple	Reposition load
	Ramming grapple against the ground or pile	Do not ram with the grapple


# Warranty Statement

All new Digga products are warranted to be free from defects in materials or workmanship, for a period of twelve (12) months from date of original purchase, which may cause failure under normal usage and service when used for the purpose intended. Digga Australia Pty Ltd and all its subsidiaries, including Digga North America LLC and Digga Limited, warrants its equipment for a period of twelve (12) months dating from delivery to the original user.

In the event of failure (excluding cables and ground engaging parts), if after examination, Digga determines failure was due to defective material and/or workmanship, parts only will be repaired or replaced. Digga may request defective product or products be returned prepaid to them for inspection at their place of business or to a location specified by Digga. The warranty will be considered void if the product or any part of the product is modified or repaired in any way not expressly authorized by Digga, or if closed components are disassembled prior to return. Closed components include, but are not limited to: gearboxes, hydraulic pumps, motors, cylinders and actuators. Any goods returned to Digga by the customer under warranty or repair must have all freight charges prepaid for on the customers account.

Any claims under this warranty must be made within fifteen (15) days after the Buyer learns of the facts upon which such claim is based. All claims not made in writing and received by Digga outside the time period specified above shall be deemed waived.

## **Damage or failure through operator abuse or negligence voids warranty.**

This warranty is in lieu of all other warranties expressed or implied and there are no warranties of merchantability or of fitness for a particular purpose. In no event shall Digga be liable for consequential or special damage. Digga's liability for any and all losses and damages to buyer, resulting from any cause whatsoever, including Digga's negligence, irrespective of whether such defects are discoverable or latent, shall in no event exceed the purchase price of the particular products with respect to which losses or damages are claimed, or, at the election of Digga, the repair or replacement of defective or damaged products.

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