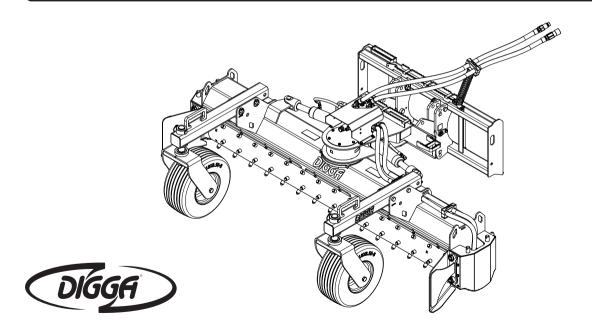
POWER RAKE / SOIL CONDITIONER OPERATOR'S MANUAL



PM-000280

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 Power Rake / Soil Conditioner.

This product was carefully designed and manufactured to give you years of dependable service. To keep it running efficiently, please read the instructions in the manual to keep it 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.

No responsibility will be taken by Digga for any omissions or errors in this manual as all data is correct at time of print, however Digga reserve the right to revise this manual without further notice.

Service

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



CAUTION

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.

Product Identification

| MODELS COVERED IN THIS MANUAL | | |
|--|--|--|
| POWER RAKE / SOIL CONDITIONER | | |
| PR-720003 - SOIL CONDITIONER 72" SLEW PRO (HYDRAULIC PIVOT) | PR-900003 - SOIL CONDITIONER 90" SLEW PRO (HYDRAULIC PIVOT) | |
| PR-720004 - SOIL CONDITIONER 72" (MANUAL PIVOT) | PR-900004 - SOIL CONDITIONER 90" (MANUAL PIVOT) | |
| PR-720006 - SOIL CONDITIONER 72" SLEW STANDARD (HYDRAULIC PIVOT) | PR-900006 - SOIL CONDITIONER 90" SLEW STANDARD (HYDRAULIC PIVOT) | |

Your Digga Power Rake / Soil Conditioner model provides important information about the product. Compare the model engraved on the serial plate to the list above.

NOTE

This attachment is known as Power Rake in Australia/New Zealand and Soil Conditioner in North America.

Product Identification

Your Digga Power Rake / Soil Conditioner is a user non-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.

| O DIGGH | 4 Octal St, Yatala QLD 4207 Australia | O DIGGA | Sygn Routh Antiental Sygn Routh Farkway SW Oyersville, Iowa 52040, USA |
|----------------------|--|----------------------|--|
| Model | MIA WILL | Model | |
| Name | AUSTRALIA | Name | |
| Serial No. | | Serial No. | |
| Flow (max) | MADE | Flow (max) | |
| Pressure (max) | RPM (max) | Pressure (max) | |
| Power(max) | | Power(max) | RPM (max) |
| Approx. Oil Capacity | Yr. Manuf. Weight | Approx. Oil Capacity | Yr. Manuf. Weight |
| DE-000632 - AUS & NZ | | DE-0006 | 29 - North America |
| Mod | el: | | |
| | | | |
| Seria | al Number: | | |
| | | | |
| | | | |
| Purc | hase Date: | | |

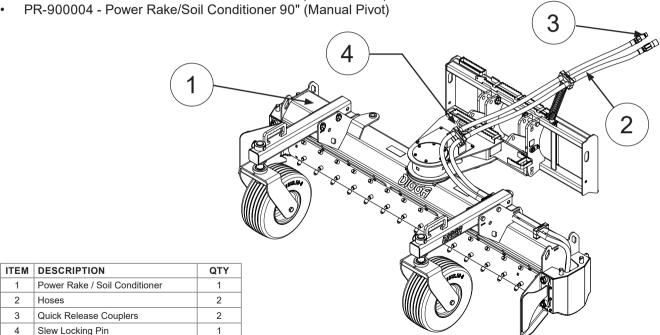
NOTE

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

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 Power Rake / Soil Conditioner is to be fitted to.

This page covers:

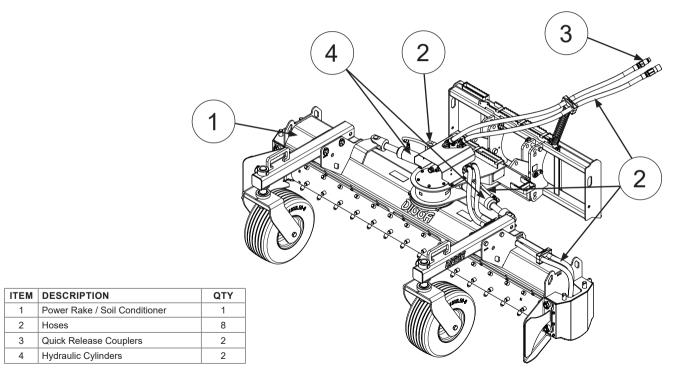




V1.0

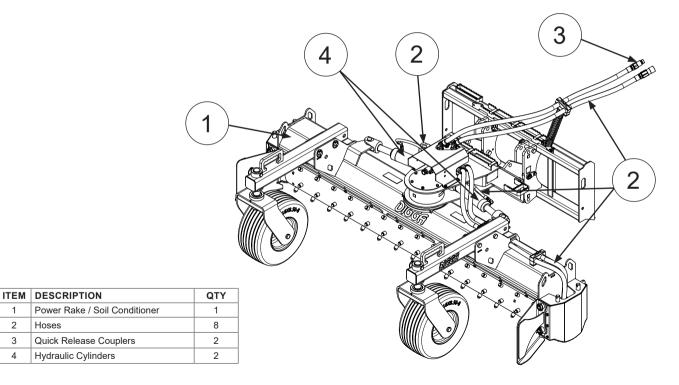
This page covers:

- PR-720006 Power Rake/Soil Conditioner 72" (Hydraulic Slew Standard)
- PR-900006 Power Rake/Soil Conditioner 90" (Hydraulic Slew Standard)

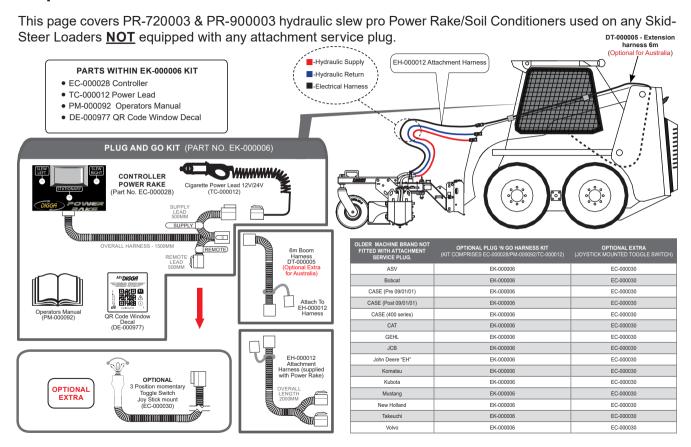


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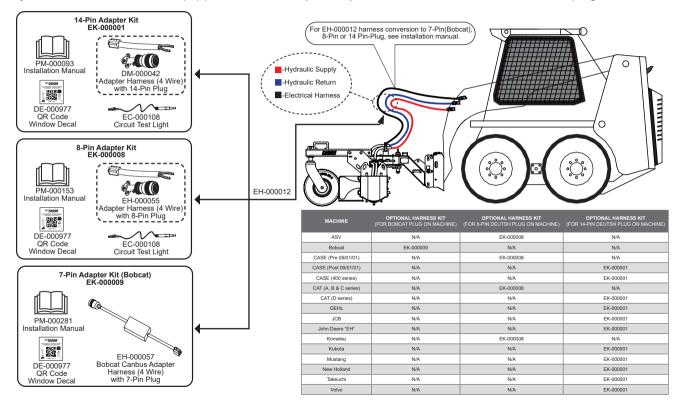
- PR-720003 Power Rake/Soil Conditioner 72" (Hydraulic Slew Pro)
- PR-900003 Power Rake/Soil Conditioner 90" (Hydraulic Slew Pro)



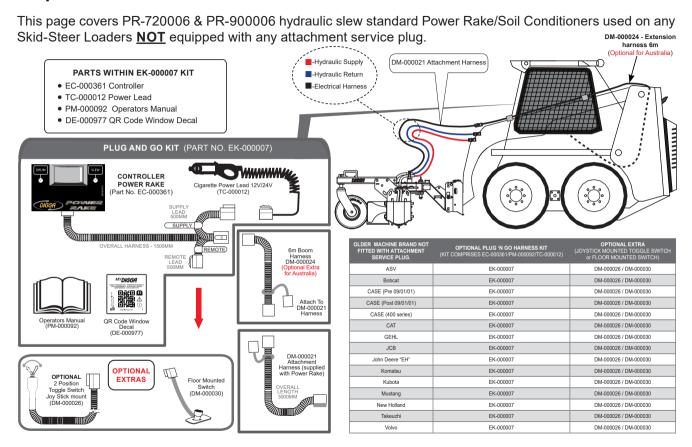
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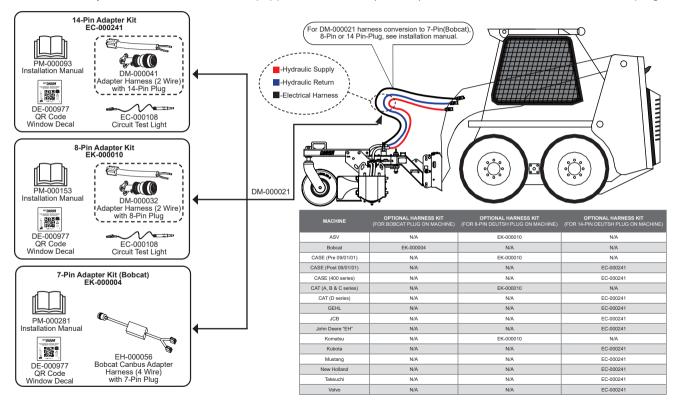
This page covers PR-720003 & PR-900003 hydraulic slew pro Power Rake/Soil Conditioners when connected to any host Skid-Steer Loader equipped with a 7-Pin (Bobcat); 8-Pin or 14-Pin attachment serivce plug.



V1.0



This page covers PR-720006 & PR-900006 hydraulic slew standard Power Rake/Soil Conditioners when connected to any host Skid-Steer Loader equipped with a 7-Pin (Bobcat); 8-Pin or 14-Pin attachment serivce plug.



V1.0

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

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



WARNING

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



CAUTION

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 and immediately seek the help of a qualified safety consultant.

Know where utilities are

- Observe overhead electrical and other utility lines. Be sure the equipment will clear them.
- Before starting any digging project, lodge an enquiry with BYDA (Before you Dig Australia) or your local
 utilities location service for the identification of 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.
- Only commence works after having received and studied the underground plans and information thoroughly. Never begin work until the work area has been fully marked for underground utilities.
- For more information about digging best practices access www.byda.com.au. Many countries offer a similar service which advises the location of underground services in your area. If available use this service prior to digging, drilling, trenching or any form of excavating and earth-moving.



CAUTION

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.

V1.0

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.
- Remove paint before welding or heating. 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 the area. Allow
 fumes to disperse at least 15 minutes before welding or heating.

End of Life Disposal

• At the completion of the useful life of the attachment drain all fluids and dismantle it, 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 Power Rake / Soil Conditioner

- 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.
- Keep all stepping surfaces, pedals, and controls free from dirt, grease and oil. Keep equipment clean to help avoid injury from slipping or a fall when getting on or off equipment.
- Do not exceed rated operating capacity (ROC) of the host machine, as machine may become unstable resulting in loss of control. Overloading or 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 Power Rake / Soil Conditioner from the parent machine before transporting to and from the
 job site.

- 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). Establish and maintain a minimum 15 meters (50 feet) 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 Power Rake / Soil Conditioner in a safe transport position to prevent the uncontrolled movement.
- Drive slowly over rough ground and on slopes.
- 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.
- Turn off engine before performing maintenance. All maintenance can be performed with the machine arms lowered. 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.
- 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, jewellery and equipment which might become entangled in moving equipment are prohibited while working near the Power Rake / Soil Conditioner.

- 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.
- The Power Rake / Soil Conditioner shall be cleaned only when the mechanism is in neutral and stopped.
- The Power Rake / Soil Conditioner shall be used only for its designed intent and shall not be loaded beyond its rated capacity. Overloading or exceeding the manufacturers specifications will void all warranty.
- Do not smoke when refueling the prime mover. Allow room in the fuel tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.
- The Soil Conditioner must be stopped before making adjustments to the attachment.



CAUTION

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



DANGER

During Power Rake / Soil Conditioner 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 50 feet (15 meters) away from the working area of the Power Rake / Soil Conditioner.

V1.0

Storing your Power Rake / Soil Conditioner

- Seal hydraulic couplers from contaminants. Use dust covers on the quick couplers, or connect the couplers together.
- 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 motor and hoses are full of clean oil and apply grease to all grease nipple points.
- Coat liberally with grease all connecting pins to prevent rust and reduce wear.
- 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.

Maintaining the Power Rake / Soil Conditioner

- 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.

Transporting the Power Rake / Soil Conditioner

- 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.
- 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.

Tie-Down Points

- Tie-down points are identified by tie-down decals where required. Securing to trailer at other points is unsafe and can damage the attachment.
- Do not attach tie down accessories around the cylinders or in any way that may damage hoses or hydraulic components.
- Attach tie-down accessories to unit as recommended.
- 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. Failure to do so could result in serious personal injury or death.

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Safety - Working with the Attachment

Complete a Risk Assessment

Your Digga Power Rake / Soil Conditioner 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 | DOCUMENT THE ACTIVITY Assemble those involved in the activity. Write down the tasks required for the activity in step-by-step form. |
|---|---|
| 2 | IDENTIFY THE HAZARDS 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 | DOCUMENT THE CONTROL MEASURES 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 | IDENTIFY THE RESPONSIBLE PERSON Document the name of the person responsible for implementation of the mitigation measure. |
| 5 | MONITOR AND REVIEW 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 Power Rake / Soil Conditioner drum is rotating in the desired direction.
 - □ 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.

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Safety - Working with the Attachment

NOTE

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

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 enabler 'Dead Man' controls are installed it is illegal to disengage, tamper with, or remove them.



WARNING

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 Power Rake / Soil Conditioner.
- When making repairs use only competent 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.

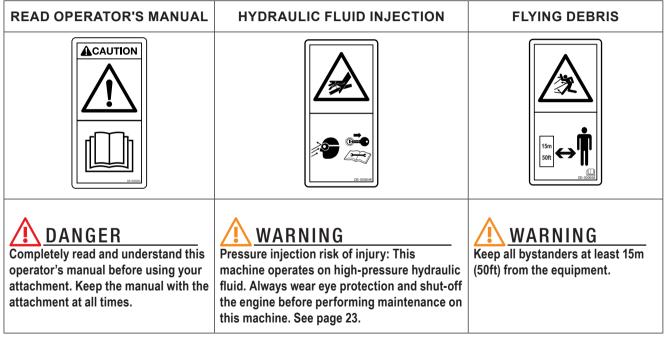


CAUTION

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 Power Rake / Soil Conditioner. 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.



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Safety - Decal Labels

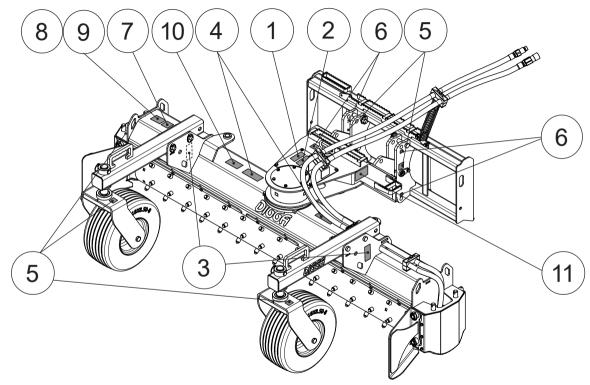
| PINCH POINT | PROPOSITION 65 | PRESSURE TESTED | MY.DIGGA.COM | |
|--|--|--|--|--|
| ACAUTION CONTRACTOR OF THE PARTY OF THE PART | CALIFORNIA PROPOSITION 65 WARNING This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov | PRESSURE TESTED | MODICONCOM MODICO | |
| CAUTION Keep your hands away from the moving parts. | WARNING This product contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For information go to: www.p65warnings.ca.gov | NOTE The label indicates that the hydraulic cylinders are pressure tested. | NOTE Scan the QR-code to access: my.digga.com Find manuals, safety information, guides and more. | |

Safety - Decal Labels

| GREASE POINT BELOW | LOCK PINS | DIAL 811 | DIAL BEFORE YOU DIG |
|---|--|--|--|
| DE-000659 | DE-000965 | SAFETY IS IN YOUR HANDS. EVERY DIG. EVERY TIME. DE-SOLDET | Www.byda.com.au |
| NOTE The label indicates the position of the grease nipples. Refer to "Lubrication" on page 48. | NOTE The label indicates where to place the lock pins. | CAUTION Dial 811 before you dig. Hidden services must be located. Please contact your local government serive providers before you start working. (USA ONLY) | CAUTION Dial before you dig. Hidden services must be located. Please contact your local government serive providers before you start working. (Australia Only) |

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Power Rake / Soil Conditioner with MANUAL SLEW PIVOT:



<u>NOTE</u>

Refer to page 29 for Decal description, part numbers and quantity. Only one decal will be shown, either Item 8 or Item 9, depending on the location. Item 8 is for Australia only and item 9 is for North America only.

ACAUTION

Item 1





Item 3

Item 4



Item 5



Item 6



Item 7



Item 8



Item 9



Item 10







| O DIGGA www.diggausa.com | Digga North America 2325 Industrial Parkway SW Dyersville, Iowa 52040. USA |
|--------------------------|--|
| Model | n a series |
| Name | TH N |
| Serial No. | MADE IN THE |
| Flow (max) | × |
| Pressure (max) | RPM (max) |
| Power(max) | RPM (max) |
| Approx. Oil Capacity | Yr Manuf. Weight |
| 0 | |

DF-000632 - AUS & NZ

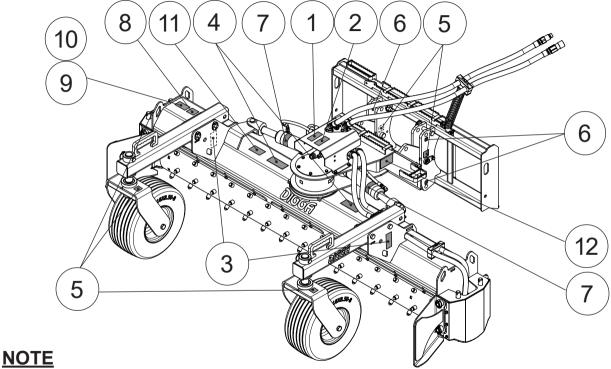
DF-000629 - North America



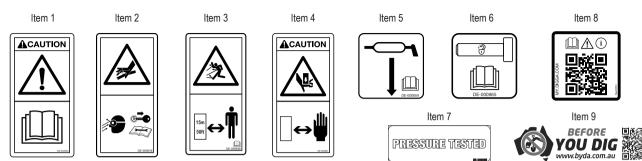
NOTE

Item 8, 9, 10 & 11 varies depending on the location.

Power Rake / Soil Conditioner with HYDRAULIC SLEW PIVOT:



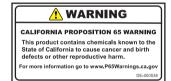
Refer to page 31 for Decal description, part numbers and quantity. Only one decal will be shown, either Item 9 or Item 10, depending on the location. Item 9 is for Australia only and item 10 is for North America only.



Item 10



Item 11



Item 12



DE-000632 - AUS & NZ

DE-000629 - North America

| ITEM | CODE | DESCRIPTION | QTY |
|------|-----------------|-------------------------------------|-----|
| 1 | DE-002064 | READ MANUAL | 1 |
| 2 | DE-000648 | HYDRAULIC PRESSURE | 1 |
| 3 | DE-000658 | SAFE DISTANCE | 2 |
| 4 | DE-000957 | PINCH POINT HAZARD | 2 |
| 5 | DE-000659 | GREASE POINT BELOW | 5 |
| 6 | DE-000965 | LOCK PINS | 5 |
| 7 | DE-000055 | PRESSURE TESTED | 2 |
| 8 | DE-000850 | MY.DIGGA.COM | 1 |
| 9 | DE-000046 | DIAL BEFORE YOU DIG (AUS ONLY) | 1 |
| 10 | DE-002267 | DIAL 811 (NORTH AMERICA ONLY) | 1 |
| 11 | DE-000538 | PROPOSITION 65 (NORTH AMERICA ONLY) | 1 |
| 12 | DE-000632 OR | SERIAL TAG : AUSTRALIA OR NORTH | 1 |

NOTE

ODDED

DE-000629

Item 9, 10, 11 & 12 varies depending on the location.

AMERICA

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Before Use

The key feature of your Digga Power Rake / Soil Conditioner is low maintenance. 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

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

Before First Use

Inspect the Power Rake / Soil Conditioner 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.
- 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 25).
- Check for wear and tear on pins, pivots, wheel bearings, drum teeth, etc.., and replace any damaged parts and excessively worn parts.
- Use only manufacturer recommended replacement parts. Other parts may be substandard in fit and quality.
- Always wear safety goggles or glasses when inspecting equipment.
- Make sure all shielding is in place.

EVERY WEEK

Lubricate all pivot points.

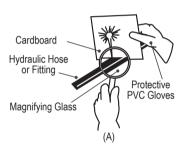
EVERY 40 HOURS OF USE

· Grease all fittings



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.

V1.0

Commissioning Procedure

The Digga Power Rake / Soil Conditioner 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 host machine operator's manual for information regarding machine operation before attempting to use the Power Rake / Soil Conditioner.

When a Power Rake / Soil Conditioner 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 Power Rake / Soil Conditioner to other machines you must first contact your DIGGA dealer and receive written confirmation to ensure you do not incorrectly fit the attachment to a machine with higher pressure, or lower rated load capacities than what the product was designed for.

Warranty will be void if the Power Rake / Soil Conditioner 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 Power Rake / Soil Conditioner 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 15). Review the job at hand and determine the Power Rake / Soil Conditioner is appropriate for the intended conditions. For example: Do not use it as a lifting device.

Operating Parameters - HP (kW) Power Ratings

The hydraulic motor of your Power Rake / Soil Conditioner has a maximum power rating. Maximum pressure and flow cannot be achieved at the same time. Ensure you know and understand the maximum flow, pressure and power ratings of your Power Rake / Soil Conditioner and parent machine. Never exceed the maximum ratings listed on the serial tag attached to the side of the Power Rake frame (see page 28 & 30).

Commissioning Procedure

Installation instructions

- 1. Remove the shipping banding from around the Power Rake / Soil Conditioner.
- 2. Remove any attachments from the front of the machine.
- 3. Ensure you have read the serial tag on the Power Rake / Soil Conditioner to obtain the maximum flow, pressure and load ratings. Ensure your machine's flow, pressure and load settings align with the requirements of the Power Rake / Soil Conditioner.

NOTE

Never exceed the maximum flow and pressure ratings as the warranty will be void.

4. Following all standard safety practices and the instructions for installing an attachment in your machine operator's manual, install the Power Rake / Soil Conditioner 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.

- 5. Lower the unit to the ground and remove the key from the parent machine.
- 6. Relieve any pressure from the auxiliary hydraulic system. After ensuring that there is no foreign matter on the hydraulic couplers, connect the power and return couplers to the auxiliary hydraulic system of your machine.
- 7. Route the hoses in such a fashion as to avoid pinching or chafing.
- 8. For hydraulic slew attachments, ensure that the electric harness is cable tied to the hydraulic supply and return hoses to aviod pinching of chafing.

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Operating Instructions

Hydraulic Connection Instructions

- 1. Disconnect the hydraulic hose quick release couplers or disconnects (purchase locally, if not supplied) from one another and attach the quick release couplers or disconnects to your power unit as per the instructions on your power unit's operator's manual.
- 2. Carefully raise the loader arm and cycle the tilt cylinders to check clearance and to check for any interference.
- 3. If the Power Rake / Soil conditioner is fitted with hydraulic slew, Cycle the hydraulic cylinders on this product several times from fully retracted to fully extended until all air has been completely removed from the cylinders. (Depending on the model of the Power Rake / Soil Conditioner, the drum should be spinning in clockwise direction (viewed on the LHS of the attachement), for the cylinders to slew the attachement).

NOTE

When shipped, the hydraulic cylinders on this product contained air or an air-fluid mixture. Failure to remove all the air from the hydraulic cylinders can cause uneven jerky cylinder movement when hydraulic controls are being operated and unwanted cylinder movement when those controls are not being operated. Slew the attachment left and right through several cycles to dispel all entrapped air.



WARNING

Do not lock the auxiliary hydraulics of your power unit into the ON position. Failure to obey this warning could result in death or serious injury.

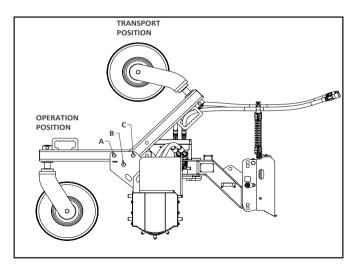
SETUP PROCEDURE

Castor(Caster) Wheels:

The Power Rake / Soil Conditioner is equipped with 2 heavy duty solid rubber caster/castor wheels. These wheels are minimal maintenance, with solid rubber tires/tyres (not air inflated) and sealed bearings.

The Power Rake / Soil Conditioner is recommended to be transported with the caster/castor wheels in the "Transport Position". When operating the Power Rake / Soil Conditioner, the wheels should be in the "Operation Position".

- To lower the wheels from the "Transport Position" into the "Operation Position", remove the retaining pin and the main pin located in position "B" on the diagram below, lower the wheel assembly arm into the
 - "Operation Position" holding onto the handles provided and then installing the pin into location "A" and secure it with the retaining pin. (Do not remove the pin in location "C" unless removing the wheels completely from the attachment). Assistance may be necessary as the wheels are heavy and care must be taken so as not to cause any injury.
- To raise the wheels from the "Operation Position" to the "Transport Position", remove the retaining pin and the main pin located in position "A" on the diagram, lift the wheel assembly arm into the "Transport Position" by holding onto the handle provided and then installing the pin into location "B" and secure it with the retaining pin.



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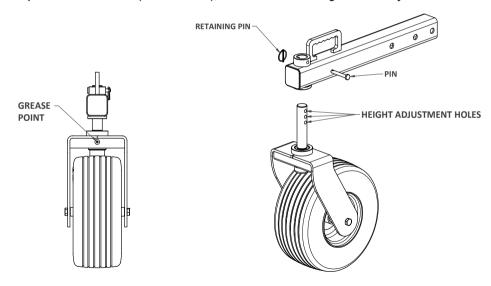
The Power Rake / Soil Conditioner caster/castor wheel heights are easily adjustable.

There are 3 heights to be able to set the wheels at depending on host machine and working depth.

To adjust the height, remove the retaining pin, then remove the main pin, slide the pivot shaft up or down until the holes line up at the desired height.

NOTE

There is one grease point for each wheel (shown below), recommended to be greased every 100 hours.



Drum:

The drum and Power Rake / Soil Conditioner (front to back) should be positioned level with the ground. To adjust, raise or lower the caster/castor wheels and/or use the power units tilt cylinder.

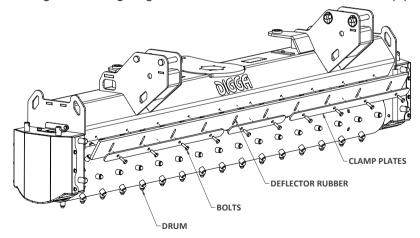
To allow the drum to penetrate the ground deeper, raise the gauge wheels. During operation, depth control can be adjusted further by tilting the attachment back up to raise the gauge wheels, allowing more drum penetration.

Deflectors:

Under average conditions, the normal gap between the drum and deflector should be about 1.5" to 2".

This gap can be adjusted by loosening the bolts that hold the deflector and clamp plate, and adjusting it up or down. A wider opening will allow more dirt and rock to pass through.

DO NOT let the drum hit the rubber deflector. The gap should be consistent across the deflector and this can be verified by either measuring or matching height of the rubber above or below the clamp plates.

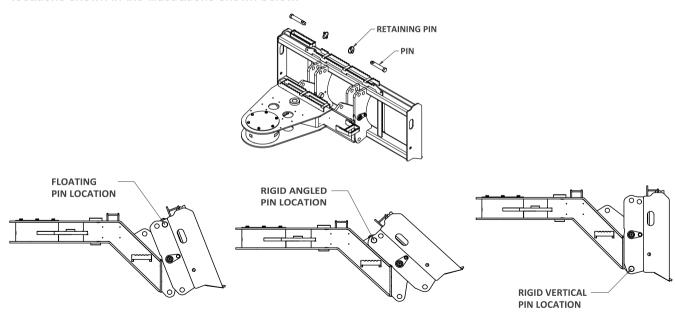


Floating/Rigid Mount:

The Digga Power Rake / Soil Conditioner is equipped with a universal skid steer mount that can be pinned into either a rigid or floating position depending on the type of work that is being carried out.

There are 3 positions: Floating, Angled Rigid, and Vertical Rigid.

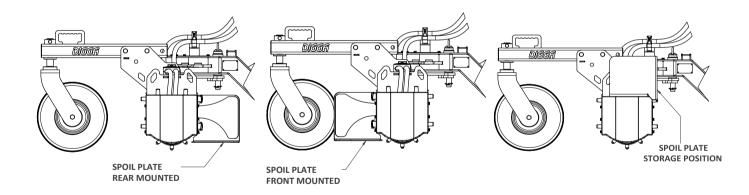
In order to switch from one to the other, remove both retaining pins, and main pins shown below, tilt the skid steer mount forwards or backwards until the holes line up with the desired position, and reinstall the pins in the locations shown in the illustrations shown below.



Spoil Plates:

The spoil plates contain the material in front of the drum while clean material passes between the drum and deflector. With the spoil plates mounted in the working position and the Power Rake / Soil Conditioner parallel with the power unit's tires/tyres, material can be moved along, filling in low spots. Spoil plates can be mounted to the front or back of the attachment, depending on raking direction. When moving the spoil plates from front to back, move the left one to the right side and the right one to the left side. Pin both the top and bottom bushing to secure the spoil plates.

The spoil plates can be stored by connecting them to the top storage pins on the main frame.



ANGLE

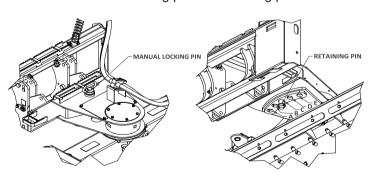
Set the Power Rake / Soil Conditioner straight for conditioning and collecting debris. Angle the attachment for windrowing debris or fill. Angling is also used to change grade.

Manual angle operation:

Manual angle operation is achieved with a pin located in the middle of the slew frame.

To change the angle of the soil conditioner:

- 1. Raise the soil conditioner off the ground (keeping the attachment as level as possible).
- 2. Ensure the drum is not rotating and the machine is shut off when changing the angle of the attachment manually.
- 3. Remove the retaining pin on the underside of the of the attachment (shown below).
- 4. Lift the locking pin by using the handle of the pin until the pin is no longer engaged.
- 5. Swing the head of the soil conditioner to the left or right until you reach the desired angle aligning the locking pin holes (location A, B, C, D or E).
- 6. Reinstall the locking pin and retaining pin.



| MANUAL ANGLE POSITIONS | | | | |
|------------------------|----------------------------------|--|--|--|
| POSITION (A) | ANGLE 25° LEFT SIDE DISCHARGE | | | |
| POSITION (B) | ANGLE 12.5° LEFT SIDE DISCHARGE | | | |
| POSITION (C) | STRAIGHT DISCHARGE | | | |
| POSITION (D) | ANGLE 12.5° RIGHT SIDE DISCHARGE | | | |
| POSITION (E) | ANGLE 25° RIGHT SIDE DISCHARGE | | | |

Hydraulic angle operation:

If the Power Rake / Soil Conditioner has hydraulic angling, this can be operated as follows:

For Slew Pro:

By utilizing the host machine service plug and the optional connectors (7 pin, 8 pin or 14 pin connectors depending on host machine). This allows the Power Rake / Soil Conditioner angling function to be able to be controlled by a momentary button in the operator station.

If the host machine does not have an electrical service package and you have purchased the optional "plug and go" kit which can run off the machines 12V accessory plug, you can angle/slew the attachment from left to right by pressing on the momentary rocker switch on the controller. Alternatively an optional momentary toggle switch is available to fasten to the joystick of the host machine.

With both above options for angling/slewing the attachment, the Power Rake / Soil Conditioner slew pro must be running, with the drum rotating in a clockwise direction when viewed from the motor side of the attachment (left side from the operator position).

For Slew Standard:

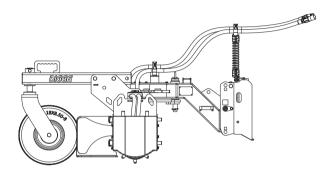
By utilizing the host machine service plug and the optional connectors (7 pin, 8 pin or 14 pin connectors depending on host machine). This allows the attachment angling function to be controlled by a remote toggle switch or foot operated switch.

If the host machine does not have an electrical service package and you have purchased the optional "Plug n Go" kit which can run off the machine's 12V accessory plug, you can slew the attachement left to right by using the rocker switch on the controller. Alternatively an optional 2-position toggle switch is available to fasten to the joystick of the host machine or a foot operated switch placed on the floor of the .

With both options of angling/slewing the attachment, the Power Rake/Soil Conditioner slew standard can only run with the drum rotating or the attachment slewing. Both features cannot operate simultaneously.

NOTE

The hydraulic angling function will not work if the drum is running in a reverse direction.



| ROLLER ROTATION | TRAVEL DIRECTION |
|-----------------|------------------|
| | |
| 3 | |

SETUP PROCEDURE



WARNING

Failure to obey the following procedures could result in death or serious injury. Never lift this product above the operator's eye level or to a height where visibility is obstructed.

Standard operation:

1. Never raise the Power Rake / Soil Conditioner more than a few inches off the ground when travelling from job site to job site.

- 2. For the drum to operate efficiently, it must rotate in the opposite direction of the power unit wheels (see illustration on page 44). Drum direction is controlled by power unit hydraulic controls.
- 3. Normal operating ground speed is between 3-5mph. In heavy rock, reduce speed to 1-3mph.
- 4. Normal operating rotations per minute of the drum is approximately 170. If operating in heavy rock, reduce speed as appropriate.
- 5. Operating depth will determine how much dirt is carried ahead of the roller. Ideal depth will vary from skimming the surface to approximately 3" deep.
- 6. When making the first windrow, the level of dirt may be halfway up the deflector. After moving the windrow 2 or 3 times, the level of dirt may be to the top of the deflector. Try to prevent material from flowing over the top of the deflector. Volume and density of material will dictate how many times a windrow can be moved.
- 7. The following are common operating applications:

| APPLICATION | DRUM POSITION | ENDPLATE POSITION | MOUNT FLOAT POSITION |
|-------------------------------|--------------------|--------------------|----------------------|
| Pulverising Topsoil | Angled or Straight | Stored | Rigid |
| Debris Removal | Angled or Straight | Windrow or Collect | Float |
| Finish Grading | Straight | Collect | Float |
| Spreading Fill and Topsoil | Angled | Windrow | Rigid |
| Changing grade | Angled | Windrow | Float |
| Thatching existing grass area | Straight | Stored | Rigid |

8. When adjusting the gap between the drum and deflector; a wider opening will allow more dirt and rock to pass through. For finer raking, reduce the gap.

Removal and Storage

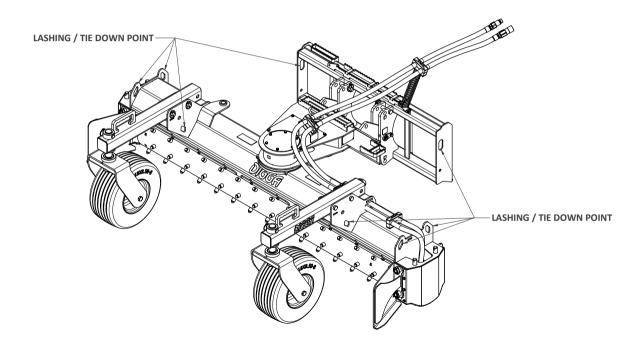
- 1. Set the attachment on the ground and follow the standard shut-down procedure in your loader operator's manual.
- 2. With the loader OFF, release hydraulic pressure from the auxiliary hydraulic system, and disconnect the hydraulic quick disconnects.
- 3. If the Power Rake / soil conditioner is fitted with hydraulic slew which requires an electrical connection to the host machine, disconnect this at the auxiliary connection on the host machine arm or disconnect the optional in-cab "Plug & Go" on the boom extension harness at the Deutsh Plug located next to the hydraulic hose connectors.
- 4. Start the machine's engine and make sure that the lift arm is lowered and in contact with the loader frame.
- 5. Disengage the locking pins on the quick attach (Depending if the host machine has manual or hydraulic locking pins, this process may vary, refer to prime movers operating manual).
- 6. Roll the attachment mechanism forward and slowly back up until the attachment is free from the machine.
- 7. Store the attachment in a dry and protected place. Leaving the attachment outside will materially shorten its life.

When attachments are not on parent machine

It is a requirement of the Occupational Safety & Health Administration body (OSHA), that safe systems of work are employed when handling any attachment. Complete compliance with OSHA issues is compulsory and all due care and attention must be observed at all times in any method of moving, transporting or storing any such device when not attached to a parent machine. We recommend attachments are well secured when being moved or in transit and furthermore prior to moving, storing, loading/unloading, or parking it is suggested that the attachment is strapped/secured to a pallet or enclosed in a suitable container to minimize any movement or loss of the load during such activity. NO responsibility for loss or damage to persons or property in any regard can be attributed to Digga.

Transporting the attachment

- Follow all federal, state and local regulations when transporting the unit on public roads.
- The Digga Power Rake / Soil Conditioner is designed with multiple lashing / tie down points to be able to secure the attachment. (See below diagram)

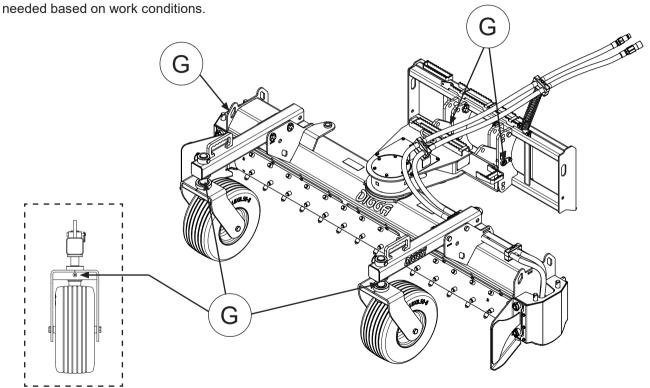


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Maintenance

Greasing

Lubricate all greasing points (G) with multi-purpose grease before use and every 40 hours, or more frequently as



Maintenance

Removing Wire, Twine, Weeds, ETC. that are wrapped around the drum

- 1. Park your loader on a level surface with this product properly attached.
- 2. Place your loader's transmission in park and engage the parking brake.
- 3. Lower the product onto the prepared blocking that will support the motor guards of this product so that the teeth are not in contact with the ground.



WARNING

Do not use blocking made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Do not use wood or steel blocking that is wrapped, twisted or tapered. Failure to obey this warning could result in death or serious injury.

- 4. Shut off your loader's engine and remove the key, wait for all moving parts to come to a stop, and relieve all the pressure in the hydraulic lines.
- 5. Disconnect the hydraulic lines from your loader and connect the two ends to each other. This should permit the drum to rotate.
- 6. Pull the material from the drum while allowing it to rotate.

Maintenance

Alternate method for Skid Steer Loaders

If your loader is equipped with safety stops for the lift arms of the loader that can be activated from the operator's position or if the safety stops must be activated from outside the operator's position and a second person is present, then the method above may be replaced with these steps:

- 1. Park your loader on a level surface with this product properly attached.
- 2. Place your loader's transmission in "Park" and engage the parking brake.
- 3. Disconnect the hydraulic lines from your loader and connect the two ends to each other. This should permit the roller to rotate freely.
- 4. Fully raise the lift arms and fully extend the tilt cylinders to the fully dumped position.
- 5. Shut off your loader's engine, remove the starter key, wait for all moving parts to come to a stop, and relieve all hydraulic line pressure.
- 6. Pull the material from the drum while allowing it to rotate.



WARNING

The second person removing the entanglement from the roller drum must <u>NOT</u> perform any work from under the raised arms of the loader. Work must be performed from front of the supported attachment.

Replacing Deflector strips

- 1. Perform the same steps 1 to 5 mentioned above.
- 2. Remove worn strip by removing bolts and nuts that secure the strip.
- 3. Replace the strip, making sure the steel clamp plate is re-installed.

Technical Specifications

| DESCRIPTION | POWER RAKE / SOIL CONDITIONER | | | | | |
|---------------------------------|-------------------------------|--|---|------------------------------|--|---|
| MODEL | PR-720004 72" Manual Slew | PR-720006 72" Hydraulic Slew | PR-720003 72" Hydraulic Slew Pro | PR-900004 90" Manual Slew | PR-900006 90" Hydraulic Slew | PR-900003 90" Hydraulic Slew Pro |
| OVERALL LENGTH (WHEELS DOWN) | 69.5" | 69.5" | 69.5" | 69.5" | 69.5" | 69.5" |
| OVERALL LENGTH (WHEELS UP) | 49" | 49" | 49" | 49" | 49" | 49" |
| OVERALL WIDTH | 84" | 84" | 84" | 102" | 102" | 102" |
| DRUM WIDTH | 72" | 72" | 72" | 90" | 90" | 90" |
| WEIGHT (LBS) | | | | 1270 | 1350 | 1350 |
| PRESSURE RELIEF SETTING | Not Included | Not Included | 3500PSI | Not Included | Not Included | 3500PSI |
| RECOMMENDED FLOW (GPM) | 17-30 | 17-24 | 17-30 | 17-30 | 17-24 | 17-30 |
| MOTOR TYPE | EATON | EATON | EATON | EATON | EATON | EATON |
| MAX PRESSURE - DO NOT EXCEED | 3500PSI @ 33GPM | 3500PSI @ 24GPM | 3500PSI @ 33GPM | 3500PSI @ 33GPM | 3500PSI @ 24GPM | 3500PSI @ 33GPM |
| MAX FLOW - DO NOT EXCEED | 40GPM @ 2900PSI | 24GPM @ 3500PSI | 40GPM @ 2900PSI | 40GPM @ 2900PSI | 24GPM @ 3500PSI | 40GPM @ 2900PSI |
| MAX HORSE POWER – DO NOT EXCEED | 67 | 67 | 67 | 67 | 67 | 67 |
| SLEW FUNCTION NOTES | N/A | Must Stop drum to slew – Can not slew and rotate drum at same time | Drum must be rotating for slew function to work, can not slew without drum rotation | N/A | Must Stop drum to slew – Can not slew and rotate drum at same time | Drum must be rotating for slew function to work, can not slew without drum rotation |

Troubleshooting

Power Rake / Soil Conditioner

| TROUBLE | POSSIBLE CAUSE | REMEDY | |
|---|--|--|--|
| DIDDING TEETH FROM DRUM | Hitting rocks | Repair | |
| RIPPING TEETH FROM DRUM | Abuse | Repair | |
| DRUM SPINNING IN OPPOSITE TO PRE- FERRED DIRECTION | Incorrect hosing | Switch hose quick disconnects around | |
| LEAKING HOSES | Loose fittings | Tighten fittings | |
| | Drum rotating counter clockwise when viewed from Left Hand Side | Ensure drum rotates Clock wise when viewed from Left Hand Side | |
| ATTACHMENT WILL NOT SLEW | 12v power not connected to cigarette lighter plug (Plug'n Go slew kit only) | Check 10A fuse inside cigarette lighter plug. Check that 12v power is reaching the switch. Check that 12V power is reaching the solenoid coil on the diverter valve. If either of the above are not occurring, contact Digga. | |

Notes

Spare Parts

For spare parts of your Power Rake/Soil Conditioner, obtain the serial number from the aluminium serial tag located on the side of the Power Rake/Soil Conditioner. 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 all 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

DIGGA NEW SOUTH WALES

19 Mckay Close, Wetherill Park, NSW 2164 Phone: 1300 2 DIGGA Email: nsw@digga.com

DIGGA VICTORIA

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

Web: www.digga.com

NORTH AMERICA

DIGGA NORTH AMERICA

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

Web: 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

Web: www.diggaeurope.com

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 warrants its equipment for a period of twelve (12) months dating from delivery to the original user.

In the event of failure (excluding cable, ground engaging parts such as sprockets, digging chain, bearings, teeth, tamping and demolition heads, blade cutting edges, pilot bits, auger teeth, auger heads), 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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