

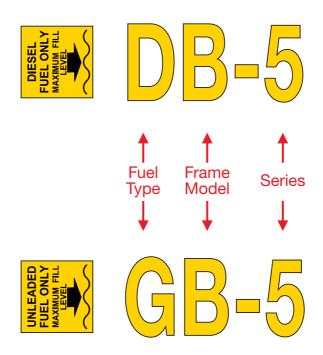
## KANGA 5, 6 & 7 B SERIES OPERATORS MANUAL



REVISION	DATE	PAGE #	CHANGES MADE	CHANGES BY
1.0	12.01.2015		Cover Image, Branch Details, Service Intervals	E.P
2	July 2016	6,14	Contact details	D.J

### Loader identification

Below is a quick reference for identifying your Kanga loader, The First letter represents the Fuel type D for Diesel and G for Gasoline, The next letter represents the model of Loader in the design and the number at the end represents the series of your kanga loader usually indicated by tyre size and attachment plate depth.



### **Proprietary Statement**

© Copyright 2009 Digga Loaders Pty Ltd. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express prior written consent of the publisher.

### Disclaimer

While all care has been taken in the development of this product, no loss of any kind is accepted by Kanga Loaders Global Pty Ltd or its agents arising from the use of this document.

Kanga Loaders Global Pty Ltd makes no representations or warranties with respect to the contents of this document, and specifically disclaims any express or implied warranties or fitness for any particular purpose. Further, Kanga Loaders Global Pty Ltd reserves the right to revise this publication and to make changes to its contents, at any time, without obligation to notify any person or entity of such revisions or changes.

### **Trademarks**

Kanga Loaders Global PTY LTD (ACN 087 977 660, ABN 14 087 977 660) 2009 ("we", "us")

™ Trade mark of Kanga Loaders Global Proprietary Limited.

- ® Australia Registered trade mark of Digga Loaders, The Kangaroo Device, Platypus, Kanga Loaders, Kanga Kid, Earth Power.
- ™Business on a Trailer, Kanga.
- © Digga Loaders Group

### 1 Copyright

- 1.1 kanga-loader.com, the material on kangaloader.com, the software, design, text and graphics comprised in kanga-loader.com and the selection and layout of kanga-loader.com are owned or licensed by us and protected by copyright under the laws of Australia and other countries.
- 1.2 You may view this website and its contents using your web browser and save an electronic copy of the website solely in the usual operation of your web browser in visiting the site.
- 1.3 You must not otherwise reproduce, transmit (including broadcast), adapt, distribute, sell, modify or publish or otherwise use any of the material on the site, including audio and video excerpts, except as permitted by statute or with Kanga Loaders prior written consent.

### 2 Trade Mark Notice

This site includes registered trade marks and trade marks which are the subject of pending applications or which are otherwise protected by law including, but not limited to the word KANGA LOADERS, the Kanga Loaders logo, the Digga Logo. You may not use these trade marks or the names "Digga Loaders Proprietary Limited", "Kanga Loaders Australia Proprietary Ltd" or "Kanga Loaders" or the name of any of our related companies.

### 3 Framing

You must not frame any of the material appearing on kanga-loader.com except in accordance with Digga Loaders Group's Linking and Framing Policy or otherwise in accordance with Digga Loaders group's prior written consent.

©Digga Loaders Proprietary. All rights reserved.

### **Patents**

Patents Pending US 6397967, 438218 & 10/096997 AU 65424/99, 2006101054 UK 2345046. AU Registered Design 138603

### DELIVERY SHEET

Ow	ner:	Date:	
Add	dress:		
City	<i>V</i> :	Post Code	•
	te/Territory:	Email Address:	<u> </u>
Ow	ners Phone No: ( )	Mobile:	
Dea	aler/Delivered By :		
Loa	ader Model and Seriel No:		
Atta	achments:		Serial No.
(	1)		
(	2)		
(;	3)		
(-	4)		
(:	5)		
Cus	stomer's name)		Salesman / Owner to initial
1.	Accept delivery of the equi been inspected and is according	pment as detailed above. All equipment has epted.	
2.	•	and safety procedures explained to me for ts and have been provided a copy of these nd use.	
3.		understand the Operators Manual and ed therein for all equipment and attachments	
4.		red to perform a risk assessment/JSEA operate this machine and/or any attachment.	
5.	Understand the warranty c	onditions and maintenance requirements for ts.	
	mments: OMPLETE SERIAL NUMBER	REGISTRATION ON PAGE 7)	
Pur	chaser's Signature:	Date	e:
			. / /

### **WARRANTY REGISTRATION CARD**

Once you have Read the Warranty section of this Manual please complete the **Warranty Registration Form** below. And check the details then return within 30 days of the delivery date to the address as indicated below the respective country of purchase on the Registration Form.

Owner:	Phone: ( )
Address:	Mobile:
Town/City:	Fax: ( )
Country:	Post Code:
Delivery Date:	KANGA SERIAL NO:
Email:	
Kanga Agent/Sales Person:	
I (The Purchaser) have read and fully underst and warran	and the Operator's Manual, Safety Instructions ty conditions.
Warranty will only be accepted if this	Certificate is completed and returned to:
AUST	RALIA:
KANGA LOADERS. PO I	Box 6332 Yatala QLD 4207
	@kangaloader.com
DEALEI	R STAMP
Purchaser's Signature:	Date:
	//

**LOADER CHECKLIST** 

MODEL:			INSPECTOR'S NAME:		
SERIAL No.:			MACHINE BUILT BY:		
ENGINE No.:			DATE:		
VISUAL CHECK	<u></u>	X	OPERATIONAL CHECK	<u> </u>	X
1. Damage.	Ī		Gauges/switches and connections/dash lights.		
2. Loose bolts/nuts.			2. Attachment Plate.		
3. Rust.			3. Throttle Lever (not too tight or loose).		
Leakage oil or water.			Levers and linkages (Aux Stop Cable adjustment).		
5. Wiring / oil cooler connection.			5. Unusual noises or vibrations.		
6. Paint work			6. Petrol/ Diesel engine <b>Idle</b> 1350-1450 / 900-1000rpm.		
7. Any untidy weld spots or runs.			7. Petrol/ Diesel engine max 3550-3650 / 3800-3850rpm.		
8. Check of fittings alignment.			8. Is Loader easy to start?		
9. Is Loader clean and tidy?			Is Hour Meter working? Test time = hrs.		
10. Are pipes and hoses clear of parts on Loaders?			10. Check that lift cylinder stops in correct position.		
11. Are Hershel plugs clear of tank & hydraulic lift tubes?			GUIDANCE	<b>✓</b>	X
SERVICE	<b>✓</b>	X	Correct stickers applied (UK C/E sticker).		
Tie down lugs fitted on body.			Correct Tyre Pressure sticker attached.		
2. Correct Attachment Plate/ operation ok with test jig.			Identification Plate -(correct number stamped).		
3. Lubricate Loader, grease all linkages.			Safety/Operating Manual/DVD.		
All pins and bushes fitted and tight.			5. Track Tool (Series 7).		
Belt tension fan/alternator.			6. Engine Manual (Honda Warranty Form).		
6. Wheel condition/wheel nuts been tensioned 100 ft-lb.			FLUID COMPARTMENT CHECK	<b>✓</b>	X
7. Is the track slot forward and tyre direction correct?			Battery condition.		
8. Is the tyre pressure to specification?			2. Engine oil level.		
9. Radiator core, hoses and fittings.			3. Hydraulic oil level.		
10. Air element and hose clearance and connections tight.			4. Fuel level.		
11. Sediment in fuel filter/tank (drain fuel tank).			5. Inspect fuel tanks for leaks.		
12. Is engine EPA compliant?			Hydraulic filter housing directions and elements tight.		
13 Is PTO direction correct?			7. Radiator water level (Diesel).		
14. Has valve tag been removed?			OTHER	<b>✓</b>	X
15. Are QRCs correctly aligned and covers fitted?			Is the "Passed By" sticker attached and signed?		
16. Spare key fitted correctly to machine.			Check machine to be shipped against order.		
17. Ensure battery is secure and boot is on alternator.			3. Is the Loader ready for despatch?		
18. Is the Splash Plate fitted?			4. Ensure diesel Loader has oil funnel.		
19. Check oil cooler connection to fan.			5. Have back protection bars been ordered and fitted?.		
20. Ensure control knobs are not split and are secured.			6. Lights/Beacon operational (Where Fitted).		
21. Is the Control Knob on Trencher Valve clear of guard?			7. Horn/ Reverse beeper operational (Where Fitted).		
			8. Rear Legs Operational (Where Fitted).		
			·		

"Received the above Loader, attachments and documentation as stated above in good condition. The correct operation of the Loader has been explained to our satisfaction. We understand that this Loader should be operated by a properly trained operator. We are aware that the use of this Loader in any manner or place for which it is not designed will render it unsafe."

DISTRIBUTOR'S NAME:	INSPECTOR'S SIGNATURE:	

### **MAIN COMPONENT SERIAL NUMBERS**

KANGA Serial No:			
Engine Type:			
Serial No:			
Wheel Motors:	FRONT RIGHT:	REAR RIGHT:	
	FRONT LEFT:		
Lift Ram:			
- Intrium			
Tilt Ram:			
Hydraulic Pump:			
Control Valve:			
Nata Burchaead:			

### WARRANTY

### **TERMS AND CONDITIONS**

### **KANGA**

- 24 months warranty Loader chassis against structural fault.
- 12 months/or 1000 hours warranty All other loader components.

### **HONDA**

- 36 months Limited engine warranty for motors released after 1/4/10.
- 12 months warranty/or 1000 hours Engine accessories (fuel, starter & charging system).

### **KUBOTA**

- 24 months/or 2000 hours Limited engine warranty.
- 12 months warranty/or 1000 hours Engine accessories (fuel, starter & charging systems).

### Purchaser's Responsibilities:

- The purchaser must ensure maintenance & minor adjustments, as detailed in the Operator's
  Manual and engine manufacturer's Manual, are carried out as per the schedule. If there is a
  discrepancy between the two, the Service Chart in the Operator's Manual will take precedence.
- The purchaser must notify Kanga Loaders or an authorized Kanga Loader service representative of the need for warranty repair.
- The purchaser must organise, and is financially responsible for the transport of the product to and from the place of warranty repair.

### **Product Registration:**

The **Purchaser** must fill out and return the warranty registration card within 30 days of purchase in order to validate the warranty.

### Repairs

Warranty repairs must be carried out by an authorized Kanga Dealer.

(For details contact Kanga Loaders on 07 5546 6399).

### **Battery Warranty- Pro rata**

- One to three months Free replacement.
- Four to twelve months Pro rata over 12 months.

### **Exclusions (No Warranty):**

- Normal maintenance, servicing, and replacement items such as spark plugs, oil, oil filters, air filter, muffler, tyres, cutting blades and edges, chains, tracks, cables, etc. are not covered by this warranty.
- Any equipment which has been altered, misused, incorrectly assembled, improperly adjusted, neglected, or damaged by accident is not covered by this warranty.
- Service completed by someone other than an authorized Kanga Loader dealer is not covered by this warranty.
- Any attachment not approved by Kanga Loader or any parts that are not genuine Kanga Loader service parts are not covered by this warranty.
- Engines and engine accessories are covered under the terms of the warranty made by the
  engine manufacturer, and are not covered by this warranty.

The standard engine manufacturers warranty is for 2 years and is subject to their terms and conditions.

**Kanga Loaders** may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating **Kanga Loaders** to incorporate such changes into previously manufactured products nor shall such changes be construed as an admission that previous designs were defective.

### LIMITATION OF REMEDY AND DAMAGES

Kanga Loaders liability under this express warranty, and under any implied warranty that may exist, is limited to repair or replacement of any defective part. In no event shall **Kanga Loaders** be liable for incidental, special, or consequential damages (including lost profits).

### DISCLAIMER OF FURTHER WARRANTY

Kanga Loaders makes no warranty other than what is expressly made in this warranty. If the law provides that an implied warranty of merchantability, or an implied warranty of fitness for a particular purpose, applies to **Kanga Loaders**, any such implied warranty is limited to the duration of this express warranty.

### SPARE PARTS WARRANTY: 6 MONTHS

### **TERMS AND CONDITIONS**

**KANGA LOADERS LTD** will warrant any part found to be defective within the conditions of normal usage. Breakage or damage to any part caused by abuse or misuse will not be considered. Hydraulic hoses will not be covered by warranty if any signs of external damage are apparent.

Consumables including tyres, tubes and S tracks are not covered by warranty.

The warranty period is for **six (6)** months from the delivery date and applies to only genuine spare parts.

This warranty does not cover any labour, freight, incidental or consequential charges.

The warranty claim will not be recognised without the return of the faulty part to Kanga Loaders Ltd and must include the Loader and attachment serial number.

A warranty claim for any engine part is covered by the engine manufactures standard warranty contained in the engine manual handbook.

It is the owner's responsibility to ensure that the correct hydraulic and engine oil levels are maintained and that maintenance is carried out as required in the manuals. Claims for damage as a result of insufficient oil levels will not be recognised.



We thank you for choosing the KANGA LOADER. This machine is the result of extensive design and development, and is acknowledged as being a superior product in its category. We congratulate you on your discerning choice and wish you many years of productive service.

Read this manual carefully before operating your machine it contains important technical information, safety precautions and operating instructions. Compliance with Safety Precautions and Risk Management standards together with the correct operation and attention to maintenance procedures are necessary to ensure a long, SAFE and trouble free working life for your KANGA LOADER.

Some illustrations in this publication show details or attachments that may be different from your machine. Guards and covers may have been removed for illustrative purposes, however, the machine in its operational state must always be operated with all guards and safety controls in place.

Continuing improvement and advancement of product design may have caused changes to your machine which are not included in this publication. We advise you to read study and understand this manual before undertaking any maintenance, and to keep it with your machine at all times as a ready reference.

### **SAFETY**

The safety section lists basic safety precautions. In addition, this section identifies the text and locations of warning labels used on the machine. Read and understand the basic precautions listed in the safety section before operating or performing lubrication, maintenance and repair on this product.

### TABLE OF CONTENTS

WELCOME	
REVISION TABLE	3
DELIVERY SHEET	5
WARRANTY REGISTRATION CARD	6
LOADER CHECKLIST	7
SERIAL NUMBER REGISTRATION	8
WARRANTY DETAILS	9
FOREWARD	11
TABLE OF CONTENTS	12
HOW TO CONTACT US	14
SAFETY	
PREPARATION FOR USE	15
SAFETY LABEL IDENTIFICATION	16
SAFE OPERATION	17
FIVE STEPS TO EFFECTIVE JSEA	20
NO GO ZONES FOR UNDERGROUND UTILITY SERVICES	21
OPERATOR SAFETY - summary	22
TASK PLANNING FOR THE KANGA LOADER	23
PRE-OPERATIONAL RISK ASSESSMENT	24
RISK ASSESSMENT	25
OPERATING INSTRUCTIONS	
OPERATING INSTRUCTIONS	29
ATTACHMENTS	
HYDRAULIC ATTACHMENT CONNECTIONS	33
4 IN 1 OPERATING INSTRUCTIONS	34
POWER HEAD OPERATING INSTRUCTIONS	35
TRENCHER OPERATING INSTRUCTIONS	36
BACK HOE OPERATING INSTRUCTIONS	37
BUCKET BROOM OPERATING INSTRUCTIONS	38
ROTARY HOE OPERATING INSTRUCTIONS	39
SAFETY - Rules for Attachments	40

### **TABLE OF CONTENTS**

MAINTENANCE	
DAILY OPERATOR MAINTENANCE	43
OPERATOR MAINTENANCE – Safety Checks	44
LOADER ARM MAINTENANCE	45
SERVICE TASKS	46
SERVICE TASKS - Engine	47
SERVICE TASKS - Hydraulics	49
SERVICE TASK - Trenching Valve	51
SERVICE TASKS - Visual	53
SERVICE TASKS - Grease Nipple	53
SERVICE TASK - Radiator (Diesel)	53
SERVICE TASKS - Battery	53
SERVICE TASKS - Pivot Pins	54
SERVICE TASKS - Tyre Pressure	55
TRACKS - 7 Series	56
DECALS	63
SERVICE CHART	67
MAINTENANCE SCHEDULE	68
SPECIFICATION	
SPECIFICATIONS - 5 series	70
DIMENSIONS - 5 series	71
SPECIFICATIONS - 6 series	72
DIMENSIONS - 6 series	73
SPECIFICATIONS - 7 series	74
DIMENSIONS - 7 series	75
TROUBLE SHOOTING	
TROUBLESHOOTING	76

### **HOW TO CONTACT US**

### **SERVICE CENTRES - SPARE PARTS, SERVICE & SUPPORT**

### **QLD SERVICE**

Phone: Aus: (07) 3441 9222

Int: +61 7 3441 9222

Fax: Aus: (07) 3441 9200

Int: +61 7 3441 9200

Email: qldservice@kangaloader.com

Address: 4 Octal Street.

Yatala, QLD 4207

### **VIC SERVICE**

**Phone:** Aus: (03) 8793 6600

Int: +61 3 8793 6600

Fax: Aus: (03) 9706 6164

Int: +61 3 9706 6164

Email: vicservice@kangaloader.com

Address: 85 Cheltenham Road

Dandenong, VIC 3175

### **NSW SERVICE**

Phone: Aus: (02) 9854 1444

Int: +61 2 9854 1444

Fax: Aus: (02) 4647 1433

Int: +61 2 4647 1433

Email: nswservice@kangaloader.com

Unit 1, 35 Sterling Road Minchinbury NSW 2770

### **SOUTHERN NSW AND ACT**

Phone: Aus: (02) 6297 9099

Int: +61 2 6297 9099

Aus: (02) 6297 9199 Int: +61 2 6297 9199

service@kangaloader.com

Address: 2/49 Yass Road

Queanbeyan, NSW 2620

### **SALES**

Address:

Phone: 1300 4 KANGA (1300 4 52642)

Fax:

Email:

### **VISIT OUR WEBSITE**

www.kangaloader.com

### **DEALER STAMP**

### SAFETY

### PREPARATION FOR USE

### INSPECTION AFTER DELIVERY

When the machine is delivered, it should be inspected for any evidence of damage caused as a result of shipment before it is declared ready for use. The preparation of the mini loader for use should only be undertaken by a responsible person who has read and understood this manual. The requirements are simple and coupled with the use of good common sense, together with general occupational health and safety knowledge and a visual inspection, should not pose any problems. The following checklist provides suggestions for detecting defective or damaged parts.

### **CHECK BEFORE USE**

1	Inspect the machine chassis for any visible damage.
2	Visually inspect all components to ensure they are attached securely.
3	Inspect all areas for evidence of hydraulic oil, engine oil or fuel leakage.
4	Inspect Arm assembly area for firm attachment and sufficient lubrication. Check hydraulic cylinders for oil leakage and visible damage.
5	Check hydraulic oil lines for correct connection and for signs of leakage.
6	Check wheel and tyre assemblies for loose or missing wheel nuts, any visible damage and proper tyre inflation.
7	Check wheel drive motor assemblies for any visible damage and oil leakage.
8	Inspect all cylinders for rust, nicks, scratches or foreign material on shafts. Check for hydraulic oil leaks at the seal and fitting areas.
9	Inspect the engine compartment for loose or missing components and any evidence of damage or leakage.
10	Check the hydraulic fluid level is within operating limits as marked on the Sight Gauge.
11	Check the engine oil level is within operating limits as marked on the Dip Stick.

### SAFETY LABEL IDENTIFICATION

The safety section lists safety precautions <u>required</u> to be taken when operating or maintaining a Kanga Loader. Read and follow <u>all</u> operating and safety instructions contained in this Manual and illustrated on the decals fitted to the Loader, and ensure that you assess the risk of any task by use of the attached Job Safety & Environmental analysis (JSEA) sheet.

If you are unable to identify hazards or do not understand the process for use of the JSEA chart, stop the job and consult a qualified Occupational Health and Safety consultant.

DANGER

THIS SYMBOL HAS BEEN USED THROUGHOUT THIS MANUAL TO HIGHLIGHT <u>CRITICAL</u> SAFETY INFORMATION TO PREVENT DEATH AND INJURY.



THIS SYMBOL HAS BEEN USED THROUGHOUT THIS MANUAL TO HIGHLIGHT IMPORTANT SAFETY INFORMATION. ENSURE YOU READ AND UNDERSTAND THE INFORMATION BEFORE EMBARKING ON ANY RELATED TASK.











THESE SYMBOLS ARE PICTOGRAMS AND REFER TO COMPULSORY PERSONAL PROTECTIVE EQUIPMENT (PPE) THAT MUST BE WORN AND/OR ACTIONS THAT MUST BE TAKEN BY THE OPERATOR TO ALLOW SAFE OPERATION OF THE MACHINE TO OCCUR.

### SAFE OPERATION

The Kanga Loader is a versatile machine, capable of performing a variety of tasks in a safe and effective manner, when used in accordance with established procedures and supported by Risk Assessment. However, to ensure the safety of operators and others, it is important to ensure that the capacity of the machine is not exceeded and that the Loader is operated appropriately, and only after all tasks associated with the work at hand have been documented and the relevant risk control measures implemented.

To ensure the safe operation and transport of your Kanga Loader, the following basic Safety Rules must be understood and complied with at all times.

### Safe Loading/Unloading and Transportation:

- When loading/unloading the Kanga from a trailer, it is important that the trailer remains attached to the towing vehicle on a firm even surface.
- Never unload a trailer positioned on a slope.
- Ensure the angle of ascent/descent is within safe operational limitations.
- · Ensure bystanders are sufficiently clear.
- All loading/unloading is to be carried out at a slow speed with due care for personal safety and damage to equipment. Practice the manoeuvres first on flat ground if necessary.
- When lifting the machine, use appropriately rated slings and shackles and attach securely to the lifting point on the top of the machine.



- Always use the tie down points on each side of the machine to secure the Loader when transporting.
- Always use witches hats, signage and traffic signals to control the unloading/loading zone, particularly when in close proximity to operational roads.

### **Before Commencing Work:**

- Ensure all safety instructions are clearly understood, that operating manuals have been read and that operators are familiar with the controls of the Kanga Loader.
- Ensure that the daily inspection routine has been successfully conducted. It is particularly
  important to ensure that all attachment Locking Pins are fully engaged and secure.
- Ensure the driving platform is free from dirt, grease or mud before use.
- Check all controls for proper response. Shut down the machine if a fault is detected, tag the
  machine out with an "Out of Service" tag, remove the key and contact the local Service Agent.
- Review the working site for hazards through the use of a Job Safety Analysis and/or Risk Assessment and implement the risk control measures to eliminate or minimise their effects, such as:
  - o Overhead power lines
  - o Underground services
  - Excavations
  - o Slopes or adverse cambers
  - o Confined spaces
  - o Other obstructions
  - o Other people or animals accessing the working area or machine

### **ALWAYS**

- Completely read and understand the Operator's Manual supplied with the machine.
- Undertake a Job Safety and Environmental Analysis (JSEA) and/or Risk Assessment before any
  use of both the Kanga Loader and the trailer upon which the Loader and/or attachments are
  carried. A blank JSEA is provided in Appendix A for use. Photocopy as required.
- Use the Job Safety and Environmental Analysis Checklist to check that the relevant safety procedures are in place before work commences.
- Position the trailer carrying the Kanga in an area free from traffic, establish a traffic control
  plan/zone, chock the wheels and ensure that people are not placed in a position where they
  can be struck by vehicles or equipment being loaded or unloaded.
- Demarcate the work area with barricades and/or witches hats before using the Kanga Loader.
- Identify, mark and delineate all underground services before any work commences.
- Have both feet planted firmly on the driving platform at all times when operating the Kanga Loader. This is especially important when carrying loads, as body weight provides additional counter-balance to the bucket load.
- Come to a complete stop before changing direction from forward to reverse and vice versa.
   Failure to do so can affect the stability of the Loader and may also damage the drive of your machine.
- Come to a complete stop before operating other hydraulic controls.
- Reverse down slopes at slow speed when carrying loads.
- Ensure the machine is fully stopped and turned off before alighting or exiting the machine.
   Never use control levers as hand holds, instead utilize the handholds, using the thumbs and forefingers to operate the control levers.
- Travel at speeds suitable for the conditions and as determined by the task JSEA or Risk Assessment.
- When traveling over undulating surfaces and/or rough terrain, it is essential that the
  operator ensures that the speed is appropriate to suit conditions and to creep over uneven
  terrain at minimum speed. The recommended normal operating speed is between 2/3 to 3/4
  throttle; at a lower speed the noise levels are reduced to both the operator and bystanders.
- Wear approved, appropriate Personal Protective Equipment (PPE), such as:
  - o Hearing protection
  - o Safety footwear
  - o Eye protection
  - o Hard hat
  - o Long, close fitting protective clothing
  - o A high visibility vest or clothing, etc.
- Keep hands, feet and clothing away from all moving parts, including hydraulic rams.
- Keep body parts within the confines of the machine.
- Keep alert, and avoid being distracted whilst operating the loader.
- Remove the key and chock the wheels whenever the Loader is to be left unattended and/or unsupervised.



### **NEVER**

- Operate this machine or the trailer without undertaking a Risk Assessment or JSEA.
- Operate this machine without Personal Protective Equipment (PPE).
- Exceed the Safe Working Load (SWL) of 250kg (551lbs) for the B Series.
- · Carry passengers on any part of the Loader or attachments.
- Place feet under the driving platform.
- Smoke (or approach the Loader with a naked flame) whilst operating or refuelling.
- Leave the engine running whilst refuelling.
- Tie or secure yourself to any part of the machine or attachment.
- · Fool around while operating the Loader or attachments.
- Carry a load with the bucket raised. Carry all loads as close to the ground as practicable.
- Traverse across slopes, especially on uneven ground.
- Jerk the control levers. Always use a steady, even action to achieve proper control.
- Touch exhaust, engine parts, hydraulic pipes and fittings, drive chains, friction parts or guards.
- Park or leave Loader unattended on a slope.
- · Remove safety decals.
- · Remove safety guarding.
- During operation use mobile telephones or portable radios.
- Operate machine for extended periods at full throttle.



BEFORE REFUELING NO SMOKING



Always exercise care when operating on slopes. The Kanga Loader has been designed to be able to access restricted areas, due to its minimal width. This, however, reduces its stability when crossing slopes.

The Kanga Loader is designed to operate on slopes to a maximum of 20°, under no circumstance is this to be exceeded. The actual safe slope angle may need to be reduced depending on a number of variables, such as site conditions, attachments, condition and configuration of machine and operator experience.

Crossing slopes should be avoided wherever possible. If it is not possible, slopes should be traversed with loads lowered as far as possible, reduced speed and extreme caution.



### FIVE STEPS TO EFFECTIVE JSEA

1	DOCUMENT THE ACTIVITY  Assemble those involved in the activity and then, using the JSEA worksheet, write down in step by step form, the tasks that make up the activity.
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.
3	DOCUMENT THE CONTROL MEASURES  For each identified hazard, assess the associated level of risk to those involved, and then list the control measures required to eliminate or minimise those risks.
4	IDENTIFY WHO IS RESPONSIBLE  Document the name of the person responsible for implementing the control measure.
5	MONITOR AND REVIEW Ensure that the activity is supervised and that the documented process is being followed. The documentation should be reviewed whenever a documented activity changes or when there is a change of personnel or after an appropriate length of time.

### NO GO ZONES FOR UNDERGROUND UTILITY SERVICES

No work is to commence on any worksite until you have checked if it contains underground services. Here is how you can find out.

- The "Dial Before You Dig" service (in Australia), dial 1100, provides free and easy access
  to the records of a large number of organizations, including telecommunications, water,
  electricity and gas.
- To see a list of organizations registered with the service or to log an enquiry electronically, visit
  the Dial Before You Dig website at <a href="www.dialbeforeyoudig.com.au">www.dialbeforeyoudig.com.au</a>, or telephone 1100 (otherwise
  consult with your local environment department).

If underground services are present, you must comply with the No Go Zones.

If the worksite contains or is suspected to contain ANY underground services, before any work commences, you must follow the relevant No Go Zone safety procedures:

- No Go Zone safety procedures are available from all gas, water, telecommunications and electricity companies.
- You must follow these safe systems of work at all times. If you cannot comply with these safety
  procedures, then NO work shall be undertaken without written permission being received from
  the utility company.
- The Kanga Loader and attachments must be kept a minimum distance of 2 meters from all underground services.

MAINTAIN A MINIMUM OF 2 METERS DISTANCE FROM ANY UNDERGROUND SERVICE.





### **OPERATOR SAFETY - SUMMARY**





FAILURE TO READ
THESE SAFETY RULES
PRIOR TO ANY MACHINE
OPERATIONS MAY LEAD
TO SERIOUS INJURY,
PROPERTY DAMAGE
OR DEATH.

### **TASK PLANNING & SAFETY CONSIDERATIONS**

### PERFORM A SITE ASSESSMENT

### Is the terrain stable or suitable to work on?

- Unload Loader from a trailer with ramps.
- Conduct a thorough site inspection before entering site with Loader.
- Consider Wet or boggy conditions.
- · Consider environmental factors.
- Consider steep slopes. Do not work side on to slopes.
- Dial before you dig (dial 1100) to check for services.
- · Amend your plans and take precautions where necessary.
- Document your plans in the JSA/SWMS.

### Personal safety

- Where other mobile plant and equipment is in use, wear high visibility garments.
- Read the Loader instruction manual familiarise yourself with Loader features.
- · Use Loader only as specified in instruction manual.
- Perform a pre-operational inspection of the Loader to identify any faults.
- Ensure all safety features are operable.
- Use bunting, flags or witches hats to demarcate or isolate work area.
- Wear additional PPE such as safety glasses, hearing protection and hard hat and steel capped boots.

### Task execution

- Discuss work plans with other workers/persons in the area.
- Coordinate Loader activities with other trades/activities on site.
- · Work in a logical sequence.
- Do not exceed weight/load and operational limitations of the Loader.
- Keep loads low to the ground when travelling.
- · Keep bucket down when not in use.

### Site Clean Up

- · Remove Loader from site.
- Wash Loader down and inspect Loader for hydraulic leaks/damage.
- · Return Loader and attachments to trailer.
- Remove bunting, flags, witches hats.
- · Restore site conditions as required.

### Perform a site assessment

### **ENGAGE YOUR MIND BEFORE USING THE LOADER**

Assess the risks

STEP BACK - Take 5 X 5

Take 5 steps back

Take 5 minutes to reflect

- Stop and think.
- Observe the work area and surroundings.
- Step through your mind what you are going to do.
- Think about what else is happening in the area or nearby.
- Identify what else could go wrong.
- Decide on control measures to prevent things going wrong.
- Make sure the hazards are controlled before starting work.

Think about the consequences to your quality of life, your income, your family, your children and everything you value. Are these things worth the risk of rushing or cutting corners? It's not just your life that could be affected – you may shatter the lives of the ones you hold dear.

### THINK SAFE! ACT SAFE! BE SAFE! GO HOME

# OHS&E Risk Assessment/SWMS - Powered Mobile Plant

Work Activity	
Principal Contractor's Name:	Project Reference #:
Contractor Name:	ABN:
Contractor Address:	Foreman and contact number:
Prepared By:	
Name 1: Signature: Position:	Name 2: Signature: Position:
Received and reviewed by:	
Name: Signature:	Position: Date:
Date work method prepared: (must be within last 12 months)	Date work to be commenced:
Actions before work commences: (e.g. signage, bunting, demarcation, isolation)	
Action during work:	
Actions after work is complete:	

Supervision:	Engineering details/certificates/ authority approval required:
Personnel qualification & experience required:	Permits e.g. excavation, hot work etc:
Training and instruction:	Warning signs and control measures:
Plant, equipment & materials to be used and the maintenance checks to be completed (details at back of SWMS also):  Loader	Personal protective equipment requirements:
Legislation, codes of practice, standards applicable:	List of attachments (e.g. material safety data sheets, diagrams etc):

# RISK SIGNIFICANCE (Level of Risk)

C = Consequence	L = Likelihood	
5 = Catastrophic	5 = Almost Certain	
Death, disablement, significant incident, unacceptable Could occur in most circumstances risk, significant financial cost.	Could occur in most circumstances	Risk control legend
4 = Major	4 = Likely	16-25 Cease activity immediately and implement risk
njuries leading	to lost time, major risk- May probably occur in most circumstances	controls before commencing work activities. Make the
_		work area safe & consult with competent/qualified
repairs/reinstatement.		personnel.
3 = Moderate	3 = Possible	10-15 Plan and implement risk control measures after
Medical treatment, medium risk-damage to plant and May occur at some time	May occur at some time	performing a Step Back 5 X 5 risk assessment. Seek
equipment, medium financial cost for		advice from the manufacturer if any doubt exists.
repairs/reinstatement.		
2 = Minor	2 = Unlikely	6-9 No immediate risk. Assess overall risk in line with
First Aid treatment, minor risk-damage to plant and Could occur at some time	Could occur at some time	resources, instruction manual, and manufacturer's
equipment, minor financial cost for		advice.
repairs/reinstatement.		
1 = Insignificant:	1 = Rare	1-4 Accept level of risk
No injuries, slight damage, low financial cost for May occur only in exceptional circumstances	May occur only in exceptional circumstances	

Likelihood (L )	Consequences (C)				
	5 Catastrophic	4 Major	3 Moderate	2 Minor	1 Insignificant
5 – Almost Certain	25	20	15	10	ம
4 – Likely	20	16	12	6	4
3 – Possible	15	12	6	9	ဧ
2 – Unlikely	10	80	°	4	2
1 – Rare	5	4	3	2	1

WHO WILL MONITOR & ENSURE THAT THIS IS DONE			
RESIDUAL RISK RANKING L C R			
HAZARD CONTROLS (What controls will be put in place to prevent an injury/illness) N.B. Control measures must not raise or create an increased risk			
RAW RISK RANKING L C R			
POTENTIAL HAZARDS (What may cause an injury/illness to occur)			
WHAT ARE THE BASIC STEPS (List steps in logical sequence & include materials, equipment etc)			
TTEM			

### **OPERATING INSTRUCTIONS**

### **BEFORE STARTING**

Check the fuel level and fill up if necessary. Ensure that the fuel is the correct type, free from impurities or water. Check that both the crankcase oil and hydraulic oil levels are within operating limits.



CAUTION: Check that all control levers below are in the neutral centre position.

**NOTE:** Ensure The Auxiliary Power Lever (3) has automatically returned to the "Engine Start" position from the "Work" position If this lever is not in neutral, the engine will attempt to start under full load. This will place strain on the starter motor potentially flattening the battery.

### **STARTING**

Refer to the engine manual for correct throttle (7) starting positions in warm and cold conditions. Turn starter key switch to start engine.



CAUTION: Do not move any of the control levers unless standing with both feet on the driving platform and holding the grip handles, ensuring non-operating personnel are clear of the Loader.



CAUTION: First time users to use slow 1/3 throttle to practice safe operation before commencing work. The recommended normal operating speed of the machine is 2/3 to 3/4 Throttle.



CAUTION: The Kanga Loader is not fitted with a "seat belt". The standing position is a safety feature which allows a quick exit from the machine in case of an emergency. Do not add a restriction system to the machine which will limit your ability to safely exit from the Kanga Loader.

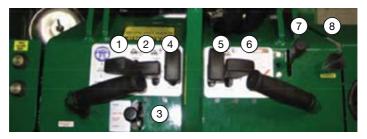


CAUTION: Always exercise care when operating on slopes. The Kanga Loader is approximately 1 meter (39") wide, which is a great benefit for providing access to confined spaces, however, the machine may become unstable if operating across a slope. If it is impossible to avoid crossing a slope keep the load close to the ground and travel at reduced speed.

The maximum safe angle of slope is  $20^\circ$ . This angle is a recommendation only. The actual safe slope angle will depend on site conditions, operator experience and activity.

### CONTROLS

On the top face of the KANGA Loader are Six spring centred levers which control the basic functions. The table below indicates the levers with their corresponding functions:



LEVER	PUSH	PULL
1	4 in 1 Open	4 in 1 Close
3	Aux Reverse	Aux Forward
2	Lower Arm	Raise Arm
4	Left Drive Forward	Left Drive Backward
5	Right Drive Forward	Right Drive Backward
6	Tilt Forwards	Tilt Backwards
7	Up Throttle Increase	Down Throttle Decrease
8	Choke Off	Choke On

### **MANOEUVERING**

The forward and reverse levers should be thought of as softly operated clutches for engaging and disengaging the wheels. Use slow even movements of the control levers for smooth operation of the Loader. Practice slow starts and gentle stops in an open, safe area.

Manoeuvring is made possible by individual controls for the hydraulic motors on each side of the machine. A turn may be achieved by varying the amount and/or direction of power supplied to each side of the machine. The machine is capable of turning in its own length by applying equal forward and reverse power to opposite sides of the machine.

While moving forward, a gentle turn to the left for instance, can be made by slightly increasing the power to the right hand side or by reducing the power to the left hand side of the machine. This mode of steering allows the type of turn to be chosen to suit the situation.



CAUTION: Always ensure that the attachment Locking Pins are fully engaged at all times.



MANOEUVRING



MANOEUVRING



3. ENSURE BOTH (2) ATTACHMENT LOCK PINS ARE FULLY ENGAGED

PARKING AND SHUTDOWN

When parking the Kanga always select level ground and lower any bucket or attachment fitted fully to the ground. To shut down, reduce the engine speed to idle and turn the key to the off position. Remove the key to prevent unauthorised use.

- When loading/unloading the Kanga from the trailer, it is important that the trailer remains attached to the towing vehicle on a firm even surface.
- Do not unload a trailer on a slope.
- Ensure bystanders are sufficiently clear.
- All loading/unloading to be carried out using a ramp must be done at a slow speed, with due
  care for personal safety and damage to equipment. Practice the manoeuvres first on flat
  ground if necessary.



- Use appropriately rated slings and shackles, and attach to the lifting point on the top of the machine when lifting the machine.
- Always use the tie down points on each side of the machine to secure the Loader when transporting.
- Always use witches hats, signage and traffic signals to control the unloading/loading zone, particularly when in close proximity to operational roads.



CAUTION: Do not park or leave the machine on steep slopes.

# ONLY KANGA DESIGNED AND APPROVED ATTACHMENTS ARE TO BE USED ON THIS MACHINE.

"No other attachment is to be used on this machine unless the design and use of the attachment has been assessed and authorised by Kanga; and has been supported by a compliant Risk Assessment, which has been verified and validated by the Risk Management Consultants."



### **HYDRAULIC ATTACHMENT CONNECTIONS**

Kanga Loaders are fitted with hydraulic quick release couplings (QRC) to connect the different attachments. The QRCs are paired as male and female to ensure correct hose connections.

### **COLOUR CODING OF QRC's FOR ATTACHMENTS**

Left Side: Controlled by the Auxiliary lever on the Control Panel.

Yellow

**B MALE QRC** - For Power Head, Under Road Borer, Mixer Bowl, Wood-Chipper, Log Splitter, Rotating Log Grab, Rock Breaker.

Black

A FEMALE QRC - For Power Head, Trenchers, Under Road Borer, Backhoe, Rotary hoe, Vibrating Plough, Mixa Bowl, Wood Chipper, Log Splitter, Rotating Log Grab, Rock Breaker, Bucket Broom, Angle Bucket Broom, Rod Hammer & Drill.

Red

**C MALE QRC TRENCHER VALVE** - For Trenchers, Backhoe, Rotary Hoe, Vibrating Plough, Bucket Broom, Angle Bucket Broom, Rod Hammer, Post Mast Rod Hammer & Drill.

Right Side: Controlled by the 4:1 Lever on the Control Panel.

Blue

**4&1 FEMALE QRC** - For 4&1 Bucket, Stump Grinder Slew, Backfill Blade, Rotating Log Grab, Kerb Clamp, Grapple Bucket, Plant Box Lifter, Angle Bucket Broom.

White

**4&1 MALE QRC** - For 4&1 Bucket, Stump Grinder Slew, Backfill Blade, Rotating Log Grab, Kerb Clamp, Grapple Bucket, Plant Box Lifter, Angle Bucket Broom.

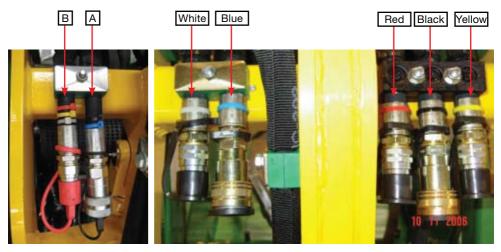
**Purple** 

Tank return line - Post Mast Rod Hammer & Drill. (If fitted).

Green

Case drain - Hydraulic Stump Grinder, Poly Pipe Layer, Wood Chipper. (If fitted).

1/2' Male QRC #L119900 1/2' Female QRC #L119910 Male Cover #L119920 Female Cover #L119930



### **4 IN 1 OPERATING INSTRUCTIONS**

### SAFE AND EFFICIENT USE OF BUCKETS

When lifting soil from a heap or pile, always have the bucket level. To achieve this, push the Loader arm downwards and use the tilt ram to bring the bucket level with the ground.

Towards the end of the run when the bucket is nearly full, gently tilt the bucket (rotate the bucket) towards the Loader. This decreases the lifting resistance when the arms are raised and promotes an efficient tear out.

When transporting material in the bucket on slopes or rough ground, always keep the bucket close to ground level. This lowers the centre of gravity of the Loader and maximises stability.

The material may then be dumped into a trailer or utility truck for removal or repositioning on the site.

When scraping, levelling and surface stripping, lower the bucket to the ground, tilt it down and so raise the front wheels slightly off the ground. Drive forward using the back wheels, the bucket will bite into the soil as you move forward.





BUCKET DOWN AND LEVEL



CAUTION: Do not step off the operator platform with the load raised or the machine moving.



**CAUTION:** Always ensure that the attachment Locking Pins are fully engaged at all times.





PRIOR TO USE



UNDER STANDING PLATFORM



13, NO PERSONNEL IN **BUCKET OR ATTACHMENTS** 







### **POWER HEAD OPERATING INSTRUCTIONS**

### FITTING OF POWER HEAD:

Drive the Loader to the attachment and couple the attachment plate onto the attachment. Raise the Power Head slightly and engage the locking pins fully. Turn the engine off and push the AUX Control Lever forwards and backwards to release any hydraulic line pressure. Clean the hydraulic fittings (QRCs) and then connect them to connections A & B. (see "Hydraulics General Description" section).

Removal procedure is the reverse order of the above. Remember to always reconnect the attachment hoses into one another to stop dirt entering the hydraulic system, or fit the dust caps supplied.

### FITTING THE AUGER

Once fitted to the Loader, raise the Power Head high enough to allow the auger to be positioned into the Power Head's square drive shaft. Drive the Power Head forward positioning the drive into the auger, aligning the locking pin holes.



CAUTION: Large auger fitting is a 2 person operation.

### **PRE - OPERATION CHECK**

Insert the locking pins and lock in place.

Ensure that the Power Head is securely attached to the Kanga Loader Check that the couplings are engaged and check for leaks. Tighten/repair as required.



**CAUTION:** Prior to commencing work, read the **Safety Rules** of this Kanga Loader Manual.

### OPERATING INSTRUCTIONS:

Inspect the cutting tips and teeth. Ensure that they are in good condition and firmly attached.

Note: Teeth should display slight movement. Check that bolts securing the pilot are tight.

Start the auger turning in a clockwise direction by activating the "AUX" lever downwards. Lower the auger by pushing the "ARM" lever forward. If the ground is hard the front wheels of the Kanga Loader will lift off the ground. As the auger cuts into the ground the arc of the arm travel will move it out of vertical. To keep the auger vertical, move the Kanga Loader backward or forward slightly to compensate. Continually clear the hole during digging by raising the auger up (pull back on the "ARM" lever).

Drill a "trial" hole in a clear area to practice all operations and to become familiar with the procedure.



**CAUTION:** Prior to commencing any digging operations, check with the Local Authorities and the land owner that there are no buried services (Power, phone, water, gas, sewage etc) in the vicinity. **Australia ONLY:** Phone 1100 "DIAL BEFORE YOU DIG"

Read the Safety instructions in this Manual.

Keep clear of the auger at all times (4m minimum).

### TRENCHER OPERATING INSTRUCTIONS

### **FITTING A TRENCHER**

Drive the Loader to the attachment and couple the Attachment Plate onto the attachment. Raise the Trencher slightly and engage the locking pins fully. Turn the engine off and push the AUX Control Lever forwards and backwards to release any hydraulic line pressure. Clean the hydraulic fittings (QRCs) and then connect them to connections A & B (see "Hydraulic Attachment Connection" section).

Removal procedure is the reverse order of the above. Remember to always reconnect the attachment hoses into one another to stop dirt entering the hydraulic system, or fit the dust caps supplied.

### PRE-OPERATION CHECK

Ensure that the Trencher is securely attached to the Kanga Loader. Check that the couplings are engaged and check all joints for leaks. Tighten/repair as required. Inspect the cutting teeth, ensuring that they are in good condition and firmly attached.

### **Chain Tensioning:**

The Trencher chain requires 35-45mm of "lift" to have the correct tension and should be adjust as required. This is achieved by loosening the 16mm bolt, adjusting the adjustment wedge, and retightening the bolt.



**CAUTION:** Read all safety rules before operating. See safety chapter in this manual.

### **OPERATING INSTRUCTION**



### SETTING THE TRENCHING VALVE



Position the Trencher, and activate the AUX lever so that the chain runs along the top of the boom and returns back towards you on the underside. Engage the TILT lever so that the boom and chain arcs down to dig a trench. When the desired depth is achieved, slowly drive the Kanga Loader backwards along the trench line.

(LH side of the Loader). This is a load-sensing valve, which can be set to automatically regulate the speed of travel when trenching. Use the black knob to shut off the valve (turn clockwise). With the trencher cutting to the required depth start moving backwards using the drive levers, open the valve (½ a turn) and this will regulate the travel speed. Further adjustment of this valve will vary the cutting speed to suit the conditions and the operator's experience.

NOTE: Minor adjustments are required to maintain a straight line as the Loader will tend to "drift" to the left.



**CAUTION:** Prior to commencing any digging operations, check with the Local Authorities and the land owner that there are no buried services (Power, phone, water, gas, sewage etc) in the vicinity.

Australia ONLY: Phone 1100 "DIAL BEFORE YOU DIG"

Read the Safety instructions in this Manual.

Keep clear of the Trencher at all times (4m minimum).

### **BACK HOE OPERATING INSTRUCTIONS**

### FITTING THE ROTARY HOE

- Refer to Backhoe Manual for complete installation instructions.
- Turn the engine off, move the Aux Lever 3 back and forth to release hydraulic pressure. Connect the hoses of the Back Hoe to A & B QRC's on the right hand side of the loader when looking from the front of the machine.
- Ensure the Loaders Main Arm is lowered with the 4 in 1
  Bucket flat on the ground, for best results the backhoe works
  better if the bucket is full of dirt making the machine slightly
  more stable.



**CAUTION:** Prior to commencing work, read the Safety Rules of this Kanga Loader Manual

### PLEASE NOTE: ALWAYS FIT THE DUST CAPS PROVIDED FOR THE QRC'S TO YOUR ATTACHMENT AND MACHINE WHEN NOT IN USE TO PREVENT DIRT ENTERING THE SYSTEM

### **PRE - OPERATION CHECK**

- Ensure the Back Hoe is securely attached to the Kanga Loader. Check the couplings are engaged and check all joints for leaks.
- 2. Tighten and Repair as required.
- 3. Inspect the Backhoe bucket teeth and hydraulic hoses and cylinders are in good condition.
- 4. Ensure the Backhoe wheels are in the locked position.

### OPERATING INSTRUCTIONS:

- 1. Ensure Lever 3 is in the neutral Position.
- 2. Start the Diesel Engine.
- 3. Adjust engine rpm using Lever 7 which can be adjusted to suit the operation and hydraulic requirements.
- 4. Drive the loader into position then lower the loader main arms to position the bucket onto the ground.
- While standing on the rear step of the loader pull Lever 3 of the mini loader towards you, this allows hydraulic power to go to the Backhoe Valve.
- 6. Turn around and operate the backhoe as per control details in the Back Hoe Operators Manual.



**CAUTION:** Once the "AUX" lever is engaged, the KANGA Back Hoe attachment is "Alive". Any movement of the KANGA Back Hoe control levers will cause the Back Hoe to move. Ensure that you are ready to operate the machine and have observed all safety regulations before moving the control levers.



**CAUTION:** Prior to commencing any digging operations, check with the Local Authorities and the land owner that there are no buried services (Power, phone, water, gas, sewage etc) in the vicinity.

Australia ONLY: Phone 1100 "DIAL BEFORE YOU DIG"

Read the Safety instructions in this Manual.

Keep clear of the auger at all times (4m minimum).

### **BUCKET BROOM OPERATING INSTRUCTIONS**

### FITTING THE ROTARY HOE

- Connect the attachment plate of the loader to the Bucket Broom frame ensure the quick hitch / attachment locking pins are engaged.
- Turn the engine off, move the Aux Lever 3 back and forth to release hydraulic pressure. Ensure the QRC's are clean then connect the hoses of the Bucket Broom to A & B QRC's on the right hand side of the loader when looking from the front of the machine.
- 3. Connect the hose bracket to the machine and secure the R Clip.
- Install the chain onto the broom chain clamp (Supplied with the Broom) around the top of the lift arm cylinder and tighten onto the machine.
- Place the bucket broom flat on the ground and adjust the chain to have about 4 links slack so when you lift the bucket up and tilt it forward it will open the bucket lid and empty out the debris.
- 6. To Remove the Bucket Broom please reverse the instructions above.



**CAUTION:** Prior to commencing work, read the Safety Rules of this Kanga Loader Manual.

PLEASE NOTE: ALWAYS FIT THE DUST CAPS PROVIDED FOR THE QRC'S TO YOUR ATTACHMENT AND MACHINE WHEN NOT IN USE TO PREVENT DIRT ENTERING THE SYSTEM.

### **OPERATING INSTRUCTIONS:**

- Ensure Lever 3 is in neutral.
- 2. Start the Engine and adjust the Engine RPM Lever 7 to suit the operation power you require.
- Position the Bucket flat on the ground engage Lever 3 and pull towards the operator. This will start the Broom rotating and sweeping into the bucket base.
- The Bucket can either be pulled or pushed with the mini loader drive system however the does work more efficiently when pulled.
- 5. Using levers 4 & 5 Drive the machine, Travel Speed is controlled by levers 4 & 5 by gently engaging both levers forward, The further forward they are the faster the machine will travel and slowing down is the exact reverse allowing the levers to gently return to centre will slow the machine down.
- 6. To empty debris from the bucket disengage Lever 3 tilt back slightly and drive to the location you would like to dump the debris, Raise the lift arm with Lever 2 and tilt the bucket forward to dump the debris out using Lever 6.

### **ROTARY HOE OPERATING INSTRUCTIONS**

### FITTING THE ROTARY HOE

- Connect the attachment plate of the loader to the Rotary Hoe ensure the quick hitch/attachment locking pins are engaged.
- Turn the engine off, move the Aux Lever 3 back and forth to release hydraulic pressure. Ensure the QRC's are clean then connect the hoses of the Rotary Hoe to A & B QRC's on the right hand side of the loader when looking from the front of the machine.
- 3. Connect the hose bracket to the machine and secure the R Clip.
- 4. To Remove the Rotary Hoe please reverse the instructions above.



**CAUTION:** Prior to commencing work, read the **Safety Rules** of this Kanga Loader Manual.

### PLEASE NOTE: ALWAYS FIT THE DUST CAPS PROVIDED FOR THE QRC'S TO YOUR ATTACHMENT AND MACHINE WHEN NOT IN USE TO PREVENT DIRT ENTERING THE SYSTEM

### **PRE - OPERATION CHECK**

- Ensure the Rotary Hoe is securely attached to the Kanga Loader.
- Check that the couplings are engaged and check all joins for leaks.
- 3. Tighten and repair and required.
- Check the rotary hoe and cutting blades are in good condition.

### **OPERATING INSTRUCTIONS:**

- 1. Ensure Lever 3 is in neutral.
- 2. Start the Engine and adjust the Engine RPM Lever 7 to suit the operation power you require.
- Position the Rotary Hoe flat on the ground and engage Leverand pull towards the operator to start the blades rotating.
- 4. The Rotary Hoe should only be pulled with the mini loader drive system. Using Levers 4 & 5 to drive the machine. Travel Speed is controlled by levers 4 & 5 by gently engaging both levers Rearward. The further Rearward they are the faster the machine will travel and slowing down is the exact reverse allowing the levers to gently return to centre will slow the machine down.
- The travel speed of the loader will adjust the condition of the soil, slower travel speed will turn the soil over more making it softer. Fast speed will turn the soil over less allowing for a Chunkier texture.

### **SAFETY - RULES FOR ATTACHMENTS**

The following safety requirements should be read in conjunction with the Safety Rules provided for the base model, i.e., Kanga Loader, Kanga Kid, and the corresponding Operating Instructions accordingly. All tasks and risks associated with the activity are identified using the Job Safety and Environmental Analysis (JSEA) or Risk Assessment (RA) and <u>ALL</u> risk controls are to be identified and implemented before the work commences.

### FORK LIFT TYNES SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Keep the general working area clear of bystanders and other workers. Loader operations typically rely on rapid movement and direction changes. It is important, therefore, that the whole operation area is kept clear of other personnel and operators maintain vigilance about their immediate surroundings.



FORK LIFT TYNES

### Never...

- Place any article or body part under the tynes at any time.
- Carry passengers, either on the machine or on the tynes of the forklift.
- · Overload the machine or tynes.
- Travel with the tynes raised, especially when carrying loads.

### ANGLED BACK-FILL BLADE SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Keep the general working area clear of bystanders and other workers. Loader operations typically rely on rapid movement and direction changes. It is important, therefore, that the whole operational area is kept clear of other personnel and operators maintain vigilance about their immediate surroundings.



BACK FILL BLADE

### Never...

 Place any article or body part under or near the angled back-fill blade at any time.

### 4 IN 1 BUCKET SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Keep the general working area clear of bystanders and other workers. Loader operations typically rely on rapid movement and direction changes. It is important, therefore, that the whole operation area is kept clear of other personnel and operators maintain vigilance about their immediate surroundings.
- Check with Local Authorities and land owners about the presence of underground services within the prospective working area prior to commencement of work. (Dial <u>1100</u> to establish any existing underground services before work commences.)
- Ensure excavations are located a minimum of 2 meters away from any underground service.



FOUR IN ONE BUCKET

### Never...

 Place any article or body part between the jaws of an open bucket, or under the bucket at any time.

### TRENCHER SAFETY RULES

### Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Check with Local Authorities and land owners about the presence of underground services within the prospective working area prior to commencement of work. (Dial <u>1100</u> to establish any existing underground services before work commences.)
- Ensure trenches are located a minimum of 2 meters away from any underground service.



### Never...

• Place any article or body part under the trencher at any time

### POST HOLE AUGER & TREE PLANTER AUGER SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Check with Local Authorities and land owners about the presence of underground services within the prospective working area prior to commencement of work. (Dial <u>1100</u> to establish any existing underground services before work commences).
- Ensure excavations are located a minimum of 2 meters away from any underground service.



POST HOLE AUGER

### Never...

• Place any article or body part under the auger at any time

### ROTARY HOE (TILLER) SAFETY RULES Always...

 Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.

### Never...

- Place any article or body part near or under the Rotary Hoe at any time.
- Carry out maintenance of any type whilst the Rotary Hoe is attached to the Loader or any other power source.



ROTOR TILLER

### BUCKET BROOM SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Keep the general working area clear of bystanders and other workers. Loader operations typically rely on rapid movement and direction changes. It is important, therefore, that the whole operation area is kept clear of other personnel and operators maintain vigilance about their immediate surroundings.



### Never...

• Place any body part under the bucket broom at any time.



BUCKET BROOM

### LOG SPLITTER SAFETY RULES Always...

- Establish and maintain a minimum 4 meter (12 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the machine's engine is running.
- Use leather gloves to protect hands from wood splinters.
- Clear split logs away from the base of the machine, to ensure they
  do not interfere with the operation of the log splitter. When clearing
  away the split logs, ensure that the machine is shut down and the
  pressure released from the hydraulic controls.
- Wear eye protection.

### Never...

- Place any article or body part under the log splitter at any time.
- Place any attachment, article or body part in the zone of travel of the log splitter.

### TERMINATOR STUMP GRINDER SAFETY RULES Always...

- Establish and maintain a minimum 12 meter (40 foot) exclusion zone around the local working area and ensure no person other than the operator, enters this zone whilst the Loader engine and/or Stump Grinder is/are running.
- Keep the general working area clear of bystanders and other workers. Loader operations typically rely on rapid movement and direction changes. It is important, therefore, that the whole operation area is kept clear of other personnel and operators maintain vigilance about their immediate surroundings.
- Check with Local Authorities and land owners about the presence of underground services within the prospective working area prior to commencement of work. (Dial 1100 to establish any existing underground services before work commences.)
- Install effective perimeter hoarding/barricades 6ft high around the exclusion zone.
- · Wear respiratory and eye protection.

### Never...

- Place any article or body part under, or in close proximity to, the Stump Grinder at any time.
- Touch the exhaust, engine parts, hydraulic pipes and fittings, guards or Stump Grinder Wheel soon after use.





STUMPGRINDER

### **MAINTENANCE**

### **DAILY OPERATOR MAINTENANCE**

### INSPECTION AND CHECKS

Before each day's operation of the KANGA Loader, the **operator MUST** perform the inspection and checks as outlined below.

The purpose of the operator's inspection is to keep the equipment in a safe working condition and to detect any signs of malfunctioning during normal operations between scheduled maintenance checks.

While it may not be the operator's responsibility to perform mechanical maintenance, they should be thoroughly familiar with the unit, as this involves their own safety.

Many costly maintenance jobs can be prevented through observance of the following operator maintenance inspections and checks by KANGA Loader operators.

For expert advice and quality service, consult an expert repairer, we recommend an authorised kanga repairer.

The owner should retain evidence that proper maintenance has been performed as prescribed.

A claim against a warranty will not qualify if it results from lack of maintenance and not from defective material or authorised workmanship.





CAUTION: DO NOT operate a Kanga Loader that is known to be damaged or malfunctioning. Remove the key from the ignition and Tag Out the machine using an Out of Service tag and contact your Service Agent.

Defective components and/or equipment malfunctions can jeopardise the safety of the operator and other personnel and can cause extensive damage to the unit. Remember, a poorly maintained unit could become a great operational hazard.

	DAILY CHEC	CKS		
Element		Yes	No	Comment
	LOADER			
	Good condition/ adequate tread.			
Tyres & Whee	Adequate pressure.			
	Wheel nuts secure.			
	Good condition.			
Guarding	Secure.			
	Good condition of hoses (check for leaks).			
Hydraulics	Good condition of casings (check for leaks).			
	Good condition of rams (check for leaks).			
	Adequate hydraulic oil level.			
Controls	Correct operation.			
	Responsiveness.			
	Adequate weld condition.			
Structure	Free of cracks/damage.			
	Linkage Pins greased.			
	Check pivot pins for wear/damage.			
Bolts and Fasteners	Tight.			
Doits and rastellers	None missing or damaged.			
	Terminals tight.			
Battery	Free of corrosion.			
Dattery	Good condition (check indicator).			
Safety Decals	Legible.			
Guicty Decais	All in place.			
Engine	Adequate crankcase oil level.			
_	Check Air cleaner / Filter.			
	No Leakage.			
Fuel	Adquate Fuel Level.			
	Drain water tap if fitted (Optional Extra).			
Water (Diesel Loader)	Radiator Hoses/water level.			
Operating Manual	Present with machine.			
	ATTACHMENT			
Guarding	Good condition.			
	Secure.			
	Good condition of hoses (Check for leaks).			
Hydraulics	Good condition of casings (Check for leaks).			
	Good condition of rams (Check for leaks).			
Controls	Correct operation.			
	Responsiveness.			
Structure	Adequate weld condition.			
	Free of cracks/damage.			
	Tight.			
Bolts andFasteners	None Missing.			
	Attachment locking pins in place.			
Decals	Legible.			
	All in place.			
Operating Supplement	Present with machine/attahcment .			

### **LOADER ARM MAINTENANCE**

### **INSPECTION AND CHECKS**

### Always...

- Secure the Arm using the supplied Locking Pins when carrying out maintenance activities, particularly when working with the Arm in the raised position.
- Keep a fire extinguisher on hand during maintenance operations.
- Ensure the working area is kept clean and free of oil, grease and debris.
- Designate the effective maintenance work area using witches hats.

### Never...

- Rely solely on the machine hydraulics to keep the Arm elevated whilst carrying out maintenance. Locking Pins should always be used to physically hold the boom in the raised position.
- Raise or lower the boom with the Locking Pins in place.



**BOOM MAINTENANCE** 



LOCKING PINS ARE KEPT TO THE LEFT SIDE OF THE CONTROLS.

Arm Safety Pin Replacement # 0K10750 Rubber Safety Pin Grommet # L122240



LOCKING PINS IN POSITION

### **SERVICE TASKS**

The following service work should only be carried out by a qualified Service Technician at intervals indicated on the Service Chart.

The operating hours are displayed by the Hour Meter on the Instrument Panel. The display will flash for 2 hours when a service is due. The flashing will cease after a two hour operating period has passed. Also displayed on the Instrument Panel on all Loaders are a Fuel Gauge, a Charge Warning Light and an Oil Warning Light. A Water Temperature Warning Light and Glow Plug Light are also included on the Instrument Panel for the Diesel Loaders only.

### PETROL INSTRUMENT PANEL



Honda Replacement Key # KS-000080 key

Hour Clock # DL-000817 Spare Bulb # EC-100088

### **DIESEL INSTRUMENT PANEL**



Kubota Replacement Key # L115965-4 set

### **ENGINE OIL**

Change the engine oil after the first 20 hours of operation and thereafter, after every 100 hours. Generally engine oil type SAE 10W-30 is recommended. See Engine Manual for details.

Ambient Temperature	Oil Type
Above 25°C (77°F)	SAE 30 or SAE10W-30/SAE10W-40
0°C to 25°C (32°F to 77°F)	SAE 20 or SAE10W-30/SAE10W-40
Below 0°C (32°F)	SAE 10 or SAE10W-30/SAE10W-40

### **ENGINE OIL FILTER (PETROL ENGINE) - Part Number # KS-000053**

Replace the oil filter after every 100 hours of operation. See Engine Manual for details.

### ENGINE OIL FILTER (DIESEL ENGINE) - Part Number # L120500

Replace the oil filter after every 100 hours of operation. See Engine Manual for details.

### AIR FILTER (PETROL/DIESEL)

### HONDA AIR FILTRATION - Part Number # KS-000034 (Element Only)

The pre cleaner foam should be washed out and re oiled when machine is working in dusty conditions every 8 hours of operation. Replace the air filter element after every 100 hours of operation, or sooner if operating in a dusty environment.



HONDA

### DONALDSON

### DONALDSON AIR FILTRATION - Part Number # L120682 (Element Only)

The pre cleaner bowl should be emptied out and when machine is working in dusty conditions every 8 hours of operation. Replace the air filter element after every 100 hours of operation, or sooner if operating in a dusty environment.

### RADIATOR (DIESEL ENGINE) - Replacement Radiator Cap # KS-000081

The radiator fluid bottle should be checked every day and topped up where necessary and the system contains a pre mix of water and coolant to a 50/50 ratio, Water capacity is 3.1 litres. The radiator cap should be periodically checked for proper performance and replaced as required.

### FAN BELT (DIESEL ENGINE) - Part Number # L115958

The Fan Belt should be checked regularly for signs of wear and changed in accordance with the Manufacturers recommendation (see engine manual).

### FUEL FILTER FOR E 10 ETHANOL FUELS - Part Number # DL-001253

The Racor fuel filter if maintained daily and correctly will minimize the ingress of water and hard partials entering into the carburettor and causing corrosion and the engine to run rough.

The 10 micron filter must be drained daily or at prior intervals if it becomes saturated with water so the operator must keep an eye on the filter saturation level, when water is visible in the see through bowl or engine performance is noticeably reduced service is required.

The aqua block filter can be cleaned and re used several times and replaced every 100 hours as per service chart however if it becomes dirty and completely blocked with hard partials it should be replaced sooner.

### SERVICE INSTRUCTIONS

- 1. Make sure the engine is turned off and cool to touch.
- 2. Use a small catch container under the filter housing spin the see through bowl off the mounting head by turning in a counter clockwise motion.
- Remove the aqua block filter and clean in a bath of Methylated spirits and thoroughly dry (do not use compressed air or you could damage the filter) re install or replace element if required with part number DL-001253.
- 4. Lubricate the filter bowl o-ring with motor oil and tighten by hand only don't use tools
- 5. Start engine and check for leaks correct any if necessary with the engine switched off.

**NOTE:** For Ethanol fuels that are stored for longer than 2 weeks and up to a Month a Fuel stabilizer additive is available P/N CONS-000732 and recommended to reduce phase separation of the Ethanol fuels.

### FUEL FILTER FOR DIESEL FUELS - Part Number # L120400A

Replace the fuel filter after every 100 hours of operation, or sooner if operating in a dusty environment.

### **IDLE SPEED**

Check engine idle speed after every 200 hours of operation, and adjust if out of specification. See Engine Manual for details.

### SPARK PLUGS (PETROL ENGINE) - Part Number # KS-000027

Replace after every 100 hours.

### GLOW PLUGS (DIESEL ENGINE) - Part Number # L115950-3

See Engine Manual for details.

### **VALVE CLEARANCES (PETROL ENGINE)**

Check and adjust engine valve clearances after every 200 hours of operation. See Engine Manual for details.

### **VALVE CLEARANCES (DIESEL ENGINE)**

Check and adjust engine valve clearances after every 800 hours of operation. See Engine Manual for details.

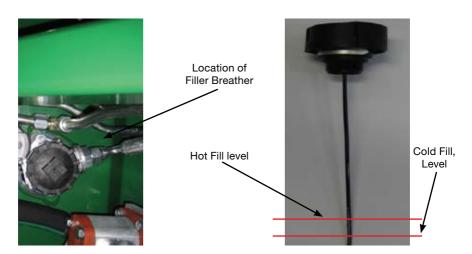
### **SERVICE TASKS - HYDRAULICS**

### **HYDRAULICS**

Perform the following work after every 100 operating hours:

Check hydraulic fluid level (with arms down and oil cold) top up with Hydraulic Oil ISO 68

**NOTE:** A significant drop in fluid levels will indicate leakage. The appropriate cold fluid level is indicated on the site gauge.



Inspect all hydraulic hoses, tubes, fittings, valves and rams for leaks and damage. Tighten loose fittings and replace damaged components. Check all three pressure settings every 200 hours (see procedure on following page) and adjust if necessary.)

### **HYDRAULIC FILTERS**

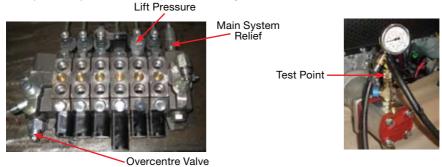
Return line filter Replace the cartridge after every 200 operating hours.

**PRESSURE FILTER** Service and clean (Remove O-Rings & wash out with Prepsol wax & grease remover or similar solvent) the pressure line filter cartridge after every 200 operating hours, this is a re usable filter but should be replaced at 1000 operating hours or if it becomes completely blocked or damaged.



### **HYDRAULIC PRESSURE SETTINGS**

The hydraulic system has three pressure settings which have to be set as follows:



Before any testing is carried out run the engine and hydraulic system to warm the hydraulic oil. The oil cooler fan will engage at between 60 and 65°C (145°F).

All pressure settings are performed with the oil cooler fan on and engine running at full speed (3,600 rpm).

### **OVER CENTRE VALVE**

Connect an accurate pressure gauge with a range 0-300 bar (0-4,300 PSI) to the Test Point. The pressure should be set at: 31-34 bar (450-500 PSI) for the 11.3cc Pump

**NOTE:** If adjustment is required slacken off the lock nut and using a 5mm hex key wind in the screw in to increase the pressure or out to reduce the pressure. Retighten the lock nut when adjustments are complete.

### MAIN SYSTEM RELIEF PRESSURE

Connect an accurate pressure gauge with a range 0-300 bar (0-4,300 PSI) to the Test Point.

Check the pressure while pulling the **tilt control lever** at the end of the ram's stroke.

The pressure should be set at: 207 bar (3,000 PSI) for the Petrol models and 220 bar (3,200 PSI) for Diesel Models.

**NOTE:** If adjustment is necessary slacken off the lock nut on the main pressure relief valve and wind in the screw to increase the pressure or back off the screw to reduce the pressure. Retighten the lock nut when adjustments are complete.

### LIFT PRESSURE

Connect an accurate pressure gauge with a range **0-300 bar (0-4,300 PSI)** to the Test Point. Check the pressure while pulling the arm control lever at the end of the ram's stroke (boom fully raised).

The pressure should be set at: 165 bar (2,400 PSI) for all B Series Loaders.

**NOTE:** If adjustment is necessary unscrew the cap lock nut on the lift pressure relief cartridge and wind in the screw using an allen key to increase the pressure or back off the screw to reduce the pressure. Refit and tighten the lock nut when adjustments are complete.

### **HYDRUALIC FLUID**

Replace the hydraulic oil after every 1,000 operating hours. (Hydraulic Oil ISO 68)

### HYDRAULIC OIL DRAIN PLUG

Situated between the wheel motors on the left hand side of Loader

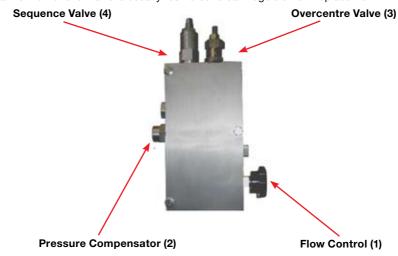


### TRENCHING VALVE

### DESCRIPTION

The trenching valve is specially designed to convert the Kanga Loader together with the trencher attachment into a high performance trenching machine. The valve provides load sensing to ensure the trencher travel speed stays balanced to the trencher cutting speed regardless of the ground conditions.

The trencher valve assembly comprises a group of cartridges forming a complex circuit. Servicing and repair to the trencher valve is usually restricted to cartridge element replacement.



### **CIRCUIT DESCRIPTION**

When starting the trenching chain (Aux. Lever down) oil is flowing to VLV A port of the trencher valve. Priority oil flows through the flow control valve (1) and pressure compensator (2) to VLV B port and back to the main control valve for use by the drive motors. Trenching travel speed is adjusted by the flow control valve (1) with speed being constant regardless of trenching and travel loads. Once the priority flow requirements are satisfied excess flow is permitted to flow through the pressure compensator (2) to the A port and to the trencher motor.

**NOTE:** If the flow control valve (1) is fully closed all flow is directed to the trencher motor and no oil can flow to the drive motors; no regulating occurs.

Return oil from the trencher motor flows through the C port and the over centre valve (3) to the Tank (T) port.

In the event of excessively hard trenching with the drive motor driving against the trenching chain the drive circuit pressure will rise above the setting of the sequence valve (4) and it oil will get diverted to the tank. In this condition a constant load is held against the trenching chain by the drive motors. When reversing the trencher chain (Aux. Lever up) eg. to clear the chain from rocks or wood, oil flow is directed to port VLV B. System pressure will rise to the setting of the sequence valve (4) and then flow will get diverted to port C and therefore reversing the trencher motor.

**NOTE:** If the flow control valve (1) is fully closed all flow is directed to the trencher motor and no oil can flow to the drive motors; no regulating occurs.

Return oil from the trencher motor flows through the C port and the over centre valve (3) to the Tank (T) port.

### PRESSURE SETTINGS

Before adjusting anything on the trencher valve check all main pressure settings as outlined in chapter "Service Tasks - Hydraulics" from the Operators Manual.

With the same setup as outlined there: hydraulic oil warmed up, pressure gauge (0-300 bar / 0-3400 PSI) plugged into test point, engine running at full speed (3600 rpm) do the following:

### Over Centre Valve (3) Setting

Flow Control Valve (1) fully closed (turned clockwise).

Aux. Lever (3) on main control valve **down** (trencher chain running forward).

The pressure should be set at: 69 - 76 bar (1000-1100 PSI) on all models.

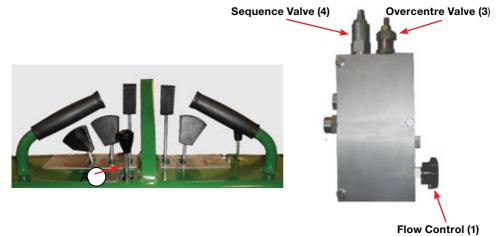
### Sequence Valve (4) Setting

Flow Control Valve (1) fully closed (turned clockwise).

Aux. Lever (3) on main control valve up (trencher chain running backwards).

The pressure should be set at: 186 bar (2700 PSI) on B Series Petrol Models

203 bar (2950 PSI) on B Series Diesel Models



### **Checking Trenching Valve Function**

- With trencher above ground and chain running forward (Aux Lever (A) down) pull both drive levers backwards (to reverse Loader) and then start opening Flow Control valve (1) slowly.
- The loader should start moving backwards.
- The more the valve is opened the faster the loader should move.

### **SERVICE TASKS - VISUAL**

### **VISUAL CHECK**

Check all over machine for loose bolts, cracks and dents after every 100 operating hours. Tighten loose bolts, and replace if worn or damaged.

### **SERVICE TASKS - RADIATOR (DIESEL)**

### RADIATOR

Radiator Hoses and connections should be checked on a regular basis for cracks and wear and the radiator checked for leaks, the radiator fluid should be changed every two years with a coolant to water ratio of 50/50, check the fan belt for wear and replace as required.

### **SERVICE TASKS - BATTERY**

### **BATTERY- Part Number # L114392**

The battery provided with the Loader is maintenance free. An indicator at the top of the battery displays its condition according to a displayed colour. Ensure that the terminals are tight and that covers and battery leads are not damaged.

### **SERVICE TASKS - GREASE NIPPLE**

### **GREASE**

Grease\* and inspect for wear, all eleven (11) **linkage pins** after every 100 operating hours. (Grease type Castrol APX T or equivalent).

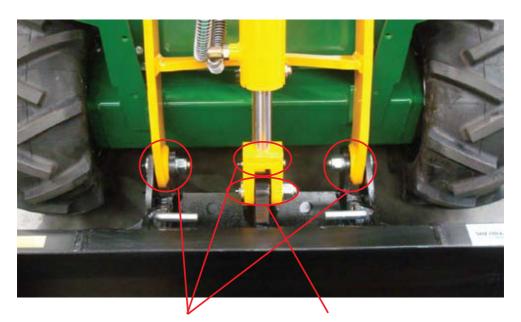
\* The frequency for regreasing depends on the workload and the severity of the working conditions. Regreasing during the day of operation may be necessary (see Daily Checks).



### **SERVICE TASKS - PIVOT PINS**

### **BOTTOM PIVOT PINS**

Before every use, visually inspect all pivot pins for any signs of wear and damage or possible failure. Thoroughly inspect all pivot pins and bushes for wear and damage at an interval of 200 operating hours.



Part No. 0K10800

Part No. 0K10903

0K10700	PIN A (44MM) KIT	x 2
0K10800	PIN B (51MM) KIT	x 3
0K10810	PIN D (55MM) KIT	x 2
0K10900	PIN C (60MM) KIT	x 2
0K10903	PIN G (65MM) KIT	x2 Piston End
L111210	BUSH IRB 1610	x 2
L111410	TOP BUSH IRB 1616	x 5

### **SERVICE TASKS - TYRES & PRESSURE**

### **5B SERIES**

**TUBE LUG & TURF TYRE 19"** Part Number-DL-000800 **TYRE LUG 19 X 800 X 10 K359 KENDA** Part Number-DL-000767 TYRE LUG 19 X 800 X 10 INC TUBE Part Number-L114110 **TYRE COM TURF LUG-SUIT SSIES** Part Number-L114131 TYRE TURF 205-65 X 10 K399 8 PLY Part Number-L114177 **RIM 6X10 YELLOW GA 5 SERIES** Part Number-DL-000764 **NUTS WHEEL 7/16 UNF** Part Number-FA-000530 STUD WHL 7-16 KNOCK-IN Part Number-DL-000458

### **6B SERIES**

TYRE 23 X 850 X 12 LUG

TYRE 23 TURF KENDA 23 X 10-5 X 12

TUBELESS VAL 10-12 RIM

7 X 12 RIM COMPLETE

NUTS WHEEL 7/16 UNF

STUD WHL 7-16 KNOCK-IN

Part Number-L114105

Part Number-L114106

Part Number-DL-000995

Part Number-FA-000530

Part Number-DL-000458

### **7B SERIES**

URO TRACK ASSY ROLLER CHN S7
TYRE TRACK DRIVE 145 X 10 DEST
RIM TRACK YELLOW 10 X 3
TUBELESS VAL SHORT 10 RIM
CHN ROLLER FOR 160 PITCHES S7
STUD WHL 7-16 KNOCK-IN
Part Number-DL-000968
Part Number-DL-0001017
Part Number-DL-000458
Part Number-DL-000458
Part Number-FA-000530

Visually check tyres on a daily basis and check tyre pressure every 50 operating hours, and check for wear and damage to tyres and tracks.

### Tyre pressures:

k	ANGA LOADER TYRI	E PRESSUF	RES GROS	S
Tyre	Size	Recomr Pres		Gross weight Kgs
		KPA	PSI	(Water Filled)
Lug 19"	19 X 8 X 10	260	32	25
Turf 19"	205/65 X 10	206	32	25
Sand 20"	20 X 8 X 10	150	22	25
Sand 20" Wide	20 X 10 X 10	150	22	25
Lug 23"	23 X 8.5 X 12	260	38	40
Turf 23"	23 X 8.5 X 12	150	22	40
7 Series Track	145 X 10	380-520	55-75*	N/A

Note: That the tracks in this section are Yellow for illustration purposes only.



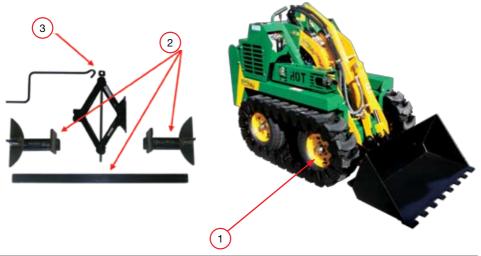
**CAUTION:** Observe all Safety Rules as outlined in the Operator's Manual.



CAUTION: The series 7 Track Loader is capable of negotiating very steep inclines outside the safe operating limit of the machine. It is possible to tip the Loader backwards when climbing or descending a steep bank and with little load in the bucket.

Do not use this machine on slopes without assessing the risks and fully identifying the required risk control measures by use of a Job Safety and Environment Analysis (JSEA) or Risk Assessment (RA).

Do  $\underline{\text{NOT}}$  operate on slopes without undertaking a risk assessment and complying with the requirements outlined in the Safe Operation section of the manual.

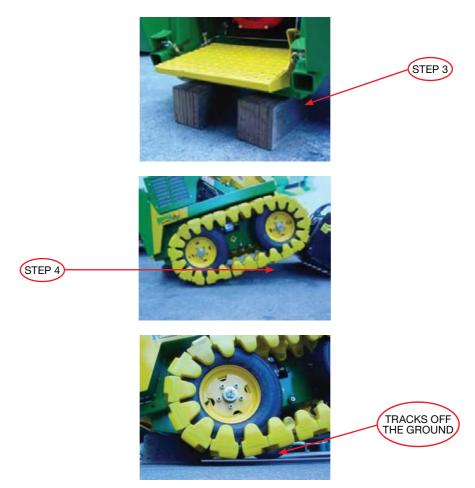


NO	DESCRIPTION	PART NO
1	HUB	0K12714
2	TRACK TOOL 7 & 8 SERIES, SCISSOR TYPE	0K14315
3	SCISSOR JACK 1 TONNE	L150209-1

### TRACK INSTALLATION

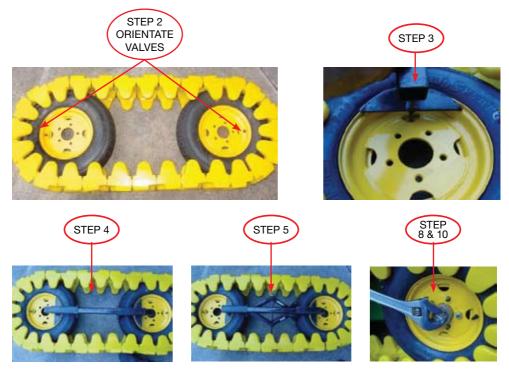
### **DISASSEMBLY**

- 1. Attach a bucket to the Loader, ensuring the attachment Locking Pins are fully engaged.
- 2. Position the Loader on level, solid ground for a stable working base.
- Place suitable wooden blocks or stands under the flat section of the Loader base at the rear of the Loader.
- 4. Place the bucket flat on the ground.
- Tilt the bucket forward (as if dumping) and the Loader will lift clear of the ground, supported by the block and the bucket.
- When tracks are clear of ground at both ends, place another wooden block or a stand under the base at the front of the Loader.
- 7. Deflate tyres to 25psi.
- 8. Remove the wheel nuts and use a suitable lever to remove the front wheel from the hub. Repeat for the rear wheel.



### INSTALLATION OF TRACKS

- 1. Set tyre pressure at 25psi.
- 2. Position the wheels with the valves in the same orientation to assist with aligning the wheels to the studs, ensuring the wheels and tracks are laying flat on the floor.
- 3. Attach the left and right end segments of the tool to the wheels as illustrated.
- 4. Slide the guide through both segments.
- 5. Install the scissor jack, with handle end pointing through the top of the track.
- 6. Tension the jack to extend the track assembly and stand the track upright.
- 7. Use two people to lift the tracks onto hub spigot; you may have to adjust the jack to suit.
- 8. Use an adjustable wrench to rotate the rear hub so the studs will line up with the wheel while depressing forward/ reverse control lever. Do not start the engine.
- 9. Locate the rear wheel on the hub and studs and install one wheel nut to hold the wheel to the hub.
- 10. Rotate the front hub with an adjustable wrench to line up the studs to the wheel while depressing forward/ reverse control lever. Do not start engine. To do this, the jack may have to be extended or retracted. If the tracks cannot be extended far enough using the scissor jack, reduce the tyre pressure and extend the scissor iack further.
- 11. Install all wheel nuts and tighten to 135Nm (100 ft-lb).
- 12. Adjust tyre pressure to between 55psi and 75psi. Refer to the Tyre Pressure Section for further tyre pressure information.



### TRACK ORIENTATION OPTION

### **URO TRACK GRIP OPTION**

There are 2 different configurations that you can have the tracks set to for grip. All Loaders will come set up with option 1.

However if customers would like to change the tracks around to try a different set up they can. We feel that the way that they are supplied is the best all round set up.

Option 2 is best suited for muddy or sandy conditions.

**URO Track Roller Train 7 Series Part Number (Per Side): 0K14313** 



Follow these instructions to change the option, start by removing the tracks from the machine; use the **Track Removal Instructions** to perform this operation.

 Once the track is removed, lay the track on its side and use a flat blade screw driver or suitable lever to move the chain through the track to the joining link. If you have trouble doing this you can purchase a spare joiner for repair or adjustment (Part number L117900).



 Once you have found the joining link, place 2 x 6mm bolts or suitable pins to hold the chain while you remove the joiner link.



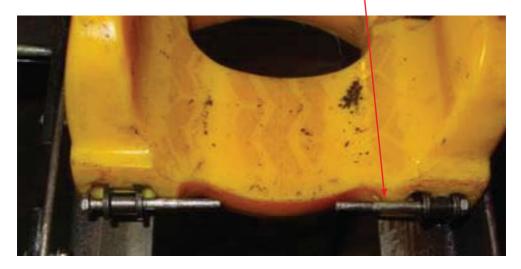
3. Pull the locking bolts out and remove the chain simply by pulling it through the track segments. Then turn the track onto it's other side and repeat steps 1, 2 and 3.



4. Lay segments out on the floor in the required pattern, and then feed the chain in from one end through to the other. It will assist if the chain is washed clean and soaked in diesel. If you have trouble, you can thread a piece of 3 mm wire in from the other end and connect it to the chain to help pull the chain through.



5. Once the chain is fed all the way through, install the 6mm locking pin in one end of the chain and push all the segments up tight, inserting the 6mm locking pin through the other end. Repeat this procedure with the chain on the opposite side.



- Once both chains are pulled through and secured with pins, lay the track it on it's side. Place the securing pins through the link in such a manner so as to expose the holes through which you will fit the joining link.
- 7. With the track on its side, install the joining link from the inside to the outside so that the spring clip is on the outside. Flip the track over and repeat to the other side, remove the locking pins/bolts and the track is now ready to install. Refer to Track Installation Instructions (Page 46).



### TRACK CHAIN LINK REMOVAL

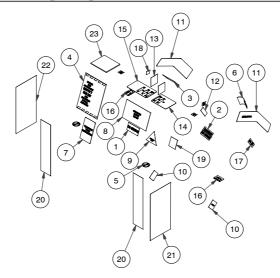
If traction between the drive wheel and track is lost, increase tyre pressure in 5psi stages to compensate for wear. If traction is lost when the tyre pressure is set at 75psi, track chain links will need to be removed to tighten tracks.

- 1. Use the Track Removal Instructions to undertake this operation.
- 2. Once track is removed, lay track on its side.
- 3. You will have to pick a spot and pry the L/H segment apart to allow you to insert a 6mm locking bolt through the chain link. Then pry the R/H segment back as far as you can with a screwdriver to expose 2 full side plates (4 x pins).
- 4. Use chain splitter or angle grinder to grind off 2 pins that are on the outside of the 4 pins. Grind off these 2 pins to remove 1 x link. Use a pin punch to drive the pins out to release the chain section.



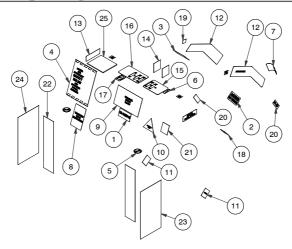
- 5. Turn the track over and perform the same on the other side to release the track so it is no longer joined.
- 6. Use Joiner Link (Part number L117900) to rejoin the chain, this has now shortened the chain by one link. Turn track over and perform this to the other side.
- 7. Remove the 6m locking bolts on both sides, and then reinstall the tracks.
- 8. Once links are removed tyre pressure must be decreased.

### **DECALS - PETROL LOADER**



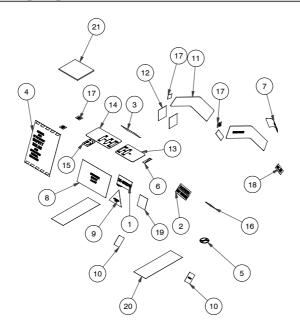
ITEM	QTY	PART NUMBER	DESCRIPTION	KMN
1	1	DE-000046	DECAL (DIAL 1100) - SMALL - 90MM x 35MM	L118594
2	1	DE-000176	DECAL - LOADER - DANGER HOT EXHAUST	L118571
3	1	DE-000177	DECAL - LOADER - WARNING SHUT OFF ENGINE	L118675
4	1	DE-000178	DECAL - LOADER - MANUAL HOLDER	L118572
5	2	DE-000183	DECAL - LOADER - NO SMOKING	L118596
6	1	DE-000185	DECAL - LOADER - CRUSH TRIANGLE	L118561
7	1	DE-000188	DECAL - LOADER - TRENCHER VALVE INSTRUCTIONS	L118599
8	1	DE-000190	DECAL - LOADER - OPERATOR SAFTY 2-5-6-7	L118550
9	1	DE-000191	DECAL - LOADER - AUSTRALIAN MADE	L118565
10	2	DE-000192	DECAL - LOADER - TIE DOWN	L118563
11	2	DE-000193	DECAL - LOADER - KANGA POWER	L118658
12	2	DE-000239	DECAL - LOADER - SWL 250-550	L118579
13	2	DE-000226	DECAL - LOADER - 5-6-7 SERIES LIFTING LUG	
14	1	DE-000234	DECAL - LOADER - NAME PLATE R/H DRIVE LIFT	L118431
15	1	DE-000235	DECAL - LOADER - NAME PLATE L/H DRIVE LIFT	L118451
16	1	DE-000236	DECAL - LOADER - NAME PLATE AUXILLARY	L118460
17	1	DE-000237	DECAL - LOADER - NAME PLATE HYDRAULIC OIL	L118480
18	4	DE-000238	DECAL - LOADER - ARM SAFETY PIN	L118632
19	1	DE-000250	DECAL - SERVICE AND SPARES - 1 300 2 DIGGA	
20	2	DE-000269	DECAL LOADER GB522	
20	2	DE-000270	DECAL LOADER GB622	
20	2	DE-000271	DECAL LOADER GB722	
21	1	DE-000310	DECAL - RIGHT SIDE ROO & FLAG	
22	1	DE-000311	DECAL - LEFT SIDE ROO & FLAG	
23	1	DL-000993	COMMON LOADER PART - SAFETY INSTRUCTIONS DVD	L118580

### **DECALS - DIESEL LOADER**



ITEM	QTY	PART NUMBER	DESCRIPTION	KMN
1	1	DE-000046	DECAL (DIAL 1100) - SMALL - 90MM x 35MM	L118594
2	1	DE-000176	DECAL - LOADER - DANGER HOT EXHAUST	L118571
3	1	DE-000177	DECAL - LOADER - WARNING SHUT OFF ENGINE	L118675
4	1	DE-000178	DECAL - LOADER - MANUAL HOLDER	L118572
5	2	DE-000183	DECAL - LOADER - NO SMOKING	L118596
6	1	DE-000184	DECAL -LOADER- THROTTLE STICKER	L118577
7	1	DE-000185	DECAL - LOADER - CRUSH TRIANGLE	L118561
8	1	DE-000188	DECAL - LOADER - TRENCHER VALVE INSTRUCTIONS	L118599
9	1	DE-000190	DECAL - LOADER - OPERATOR SAFTY 2-5-6-7	L118550
10	1	DE-000191	DECAL - LOADER - AUSTRALIAN MADE	L118565
11	2	DE-000192	DECAL - LOADER - TIE DOWN	L118563
12	2	DE-000193	DECAL - LOADER - KANGA POWER	L118658
13	2	DE-000221	DECAL - POWERED BY KUBOTA	L118646
14	2	DE-000226	DECAL - LOADER - 5-6-7 SERIES LIFTING LUG	
15	1	DE-000234	DECAL - LOADER - NAME PLATE R/H DRIVE TILT	L118431
16	1	DE-000235	DECAL - LOADER - NAME PLATE L/H DRIVE LIFT	L118451
17	1	DE-000236	DECAL - LOADER - NAME PLATE AUXILLARY	L118460
18	1	DE-000237	DECAL - LOADER - NAME PLATE HYDRAULIC OIL	L118480
19	4	DE-000238	DECAL - LOADER - ARM SAFETY PIN	L118632
20	2	DE-000239	DECAL - LOADER - SWL 250 - 550	L118579
21	1	DE-000250	DECAL - SERVICE AND SPARES - 1 300 2 DIGGA	
22	2	DE-000272	DECAL LOADER DB525	
22	2	DE-000273	DECAL LOADER DB525	
22	2	DE-000274	DECAL LOADER DB525	
23	1	DE-000310	DECAL - RIGHT SIDE ROO & FLAG	
24	1	DE-000311	DECAL - LEFT SIDE ROO & FLAG	
25	1	DL-000993	COMMON LOADER PART - SAFETY INSTRUCTIONS DVD	L118580

### **DECALS - LPG LOADER**



ITEM	QTY	PART NUMBER	DESCRIPTION	KMN
1	1	DE-000046	DECAL (DIAL 1100) - SMALL - 90MM x 35MM	L118594
2	1	DE-000176	DECAL - LOADER - DANGER HOT EXHAUST	L118571
3	1	DE-000177	DECAL - LOADER - WARNING SHUT OFF ENGINE	L118675
4	1	DE-000178	DECAL - LOADER - MANUAL HOLDER	L118572
5	2	DE-000183	DECAL - LOADER - NO SMOKING	L118596
6	1	DE-000184	DECAL -LOADER- THROTTLE STICKER	L118577
7	1	DE-000185	DECAL - LOADER - CRUSH TRIANGLE	L118561
8	1	DE-000190	DECAL - LOADER - OPERATOR SAFTY 2-5-6-7	L118550
9	1	DE-000191	DECAL - LOADER - AUSTRALIAN MADE	L118565
10	2	DE-000192	DECAL - LOADER - TIE DOWN	L118563
11	2	DE-000193	DECAL - LOADER - KANGA POWER	L118658
12	2	DE-000226	DECAL - LOADER - 5-6-7 SERIES LIFTING LUG	
13	1	DE-000234	DECAL - LOADER - NAME PLATE R/H DRIVE TILT	L118431
14	1	DE-000235	DECAL - LOADER - NAME PLATE L/H DRIVE LIFT	L118451
15	1	DE-000236	DECAL - LOADER - NAME PLATE AUXILLARY	L118460
16	1	DE-000237	DECAL - LOADER - NAME PLATE HYDRAULIC OIL	L118480
17	4	DE-000238	DECAL - LOADER - ARM SAFETY PIN	L118632
18	2	DE-000239	DECAL - LOADER - SWL 250 - 550	L118579
19	1	DE-000250	DECAL - SERVICE AND SPARES - 1 300 2 DIGGA	
20	2	DE-000276	DECAL LOADER LPGAS LPB22	
21	1	DL-000993	COMMON LOADER PART - SAFETY INSTRUCTIONS DVD	L118580

### THIS PAGE IS INTENTIONALLY BLANK

### SERVICE CHART

					<u>Ş</u>	NUMBER OF HOURS	된	JRS									
MAINTENANCE INTERVAL	TYPE		MIN	INT	MIN	INT	MAJ	IN	N	INT	NIM	MAJ	NIM	INT	MIM	INT	MAJ
	HOURS		100	200	300	400	200	009	002	800	006	1000	1100	1200	1300	1400	1500
ENGINE OIL (PETROL)			œ	ж	æ	œ	æ	œ	æ	æ	æ	ш	æ	ж	ш	æ	ж
ENGINE OIL (DIESEL)			В	В	В	В	В	н	В	В	В	В	В	В	В	В	В
ENGINE OIL FILTER (PETROL)			В	н	В	В	В	н	В	В	В	В	В	В	В	В	н
ENGINE OIL FILTER (DIESEL)			В	н	В	ш	н	ш	æ	В	н	ж	В	ж	В	ш	ж
AIR FILTER ELEMENT *			В	н	В	В	В	ш	æ	В	В	В	В	В	В	В	В
FUEL FILTER *			ж	ш	æ	æ	æ	œ	æ	ж	æ	æ	ш	ж	æ	æ	ж
								ı		l	l						
SPARK PLUGS (PETROL)			œ	œ	œ	œ	æ	œ	œ	œ	æ	æ	œ	æ	æ	ш	ж
IDLE SPEED (PETROL)				۷		٧		٧		٧		۷		٧		٧	
IDLE SPEED (DIESEL)				4		۷		۷		٧							
VALVE CLEARENCE (PETROL)				۷		Α		A		Α		٧		A		A	
VALVE CLEARENCE (DIESEL)										٧							
FAN BELT (DIESEL)			-	-	-	_	æ	-	-	-	-	ш	-	-	_	-	æ
HYDRAULIC HOSE/ TUBE			1	-	ı	-		-	-	ı	1	-	ı	ı	-	-	-
HYDRAULIC FLUID (ISO68)			-	-	ı	-	-	-	-	-	-	В	ı	1	-	-	-
HYDRAULIC RETURN FILTER				В		В		В		В		В		В		В	
HYDRAULIC PRESSURE FILTER				C		၁		၁		၁		н		O		၁	
TYRE PRESSURES			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allyd						H	Ę	1	200	TEME TO BE CHECKED ON A PARK	2	900					
						Ě	2		CNED			202					
	HOURS	<del></del>	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
PRE-CLEANER FOAM *		С	С	ပ	С	ပ	ပ	ပ	၀	С	С	ပ	С	O	С	ပ	C
VISUAL CHECK (CRACKS, WEAR)		-	_	_	-	_	-	-	-	-	-	-	-	-	-	_	-
RADIATOR WATER LEVEL (DIESEL)		-	1	-	-	_	-	-	-	-	-	-	1	ı	-	-	-
GREASE NIPPLES/ PINS		٦	L	L	٦	٦	٦	٦	٦	L	L	L	L	_	L	٦	L
				_	Re Re	Replace											
* Denotes - May need Serviced at more regular.	t more regi	ular		J	٥	Clean as required	anired			∢	Adjus	Adjust as Necessary	essary				
Intervals If working	in dusty co	ndit	ions.				}			_	Inspe	ct, Fill Up	p, Tighter	Inspect, Fill Up, Tighten or Replace as Necessary	ce as Nec	essary	

Lubricate as Necessary

## MAINTENANCE SCHEDULE B SERIES

			*		
MAJOR SERVICE	500Hr	DATE SHALL CHILD	MAJOR SERVICE **	1000Hr	DATE SHIPLINGS
INTERMEDIATE SERVICE	400Hr	DATE.	MINOR SERVICE	900Hr	DATE. SHALLON
MINOR SERVICE	300Hr	DATE	INTERMEDIATE SERVICE	800Hr	DATE.
INTERMEDIATE SERVICE	200Hr	DATE	MINOR SERVICE	700Hr	DATE
MINOR SERVICE	100Hr	DATE	INTERMEDIATE SERVICE	600Hr	DATE
	MODEL	B Series		MODEL	B Series

# **MAINTENANCE SCHEDULE B SERIES - Continued**

MINOR SERVICE INTERMED	MODEL 1100Hr 15	B Series CATE	INTERMEDIATE SERVICE MINOR	MODEL 1600Hr 1.	B Series
INTERMEDIATE SERVICE	1200Hr	SHALLOGE	MINOR SERVICE	1700Hr	SHAUCH
MINOR SERVICE	1300Hr	DATE STITULISM STITULISM	INTERMEDIATE SERVICE	1800Hr	DATE
INTERMEDIATE SERVICE	1400Hr	DATE.	MINOR SERVICE	1900Hr	DATE
MAJOR SERVICE	1500Hr	DATE.	MAJOR SERVICE **	11000Hr	DATE STIPULOH STIPULOH

NOTE.

The warranty on the equipment is subject to the periodic maintenance being carried out at the intervals specified. If a service provided other than Kanga Loaders is used, maintenance records from the trade qualified provider may be required to support any claim.

Only genuine Kanga spare parts should be used during servicing.

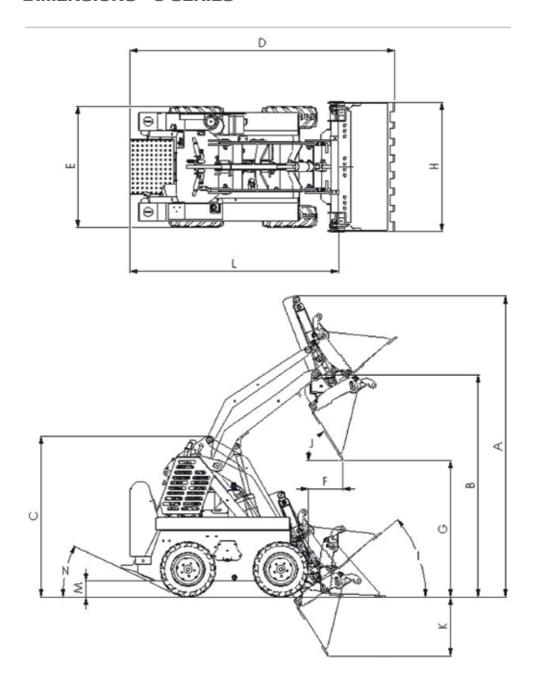
<sup>\*\*</sup> Denotes Hydraulic oil and Pressure filter require Changing for 1000Hr Services

### **SPECIFICATIONS - 5 SERIES**

PERFORMANCE	GBS	522	DB525		
Max. Lift Capacity	250 kg	551 lbs	250 kg 551 lbs		
Travel Speed	6.5 km/h	3.8 mph	7 km/h	4.3 mph	
Operating Weight (Machine Only with water filled tyres)	860 kg	1892 lbs	930 kg	2046 lbs	
Fuel Capacity	54 L	14.2 gal	54 L	14.2 US gal	
ENGINE					
Manufacturer	Honda	GX690	Kubo	ta 902	
Power	16.5 KW	22.1 HP	17.5 KW	23.4 hp	
DRIVE SYSTEM					
Drive Control	Soft Touch F	land Levers	Soft Tou	ch Levers	
Throttle Control	Hand	Lever	Hand	Lever	
Wheels	Direct Drive Hy	drualic Motor		t Drive ic Motors	
HYDRAULICS					
Gear Pump Displacement	11.3 cc/rev	0.69 cu.in/rev	12.5 cc/rev	0.76 cu.in/rev	
Pump Output	41 L/min	10.75 US gal/min	45 L/min	11.9 US gal/min	
System Pressure	em Pressure 207 bar		220 bar	3200 psi	
Hyd. Reservoir Capacity	66 L	17.4 US gal	66 L	17.4 US gal	
BUCKETS					
Standard Bucket Capacity	0.1 m³	3.5 cu.ft	0.1m³	3.5 cu.ft	
4 in 1 Bucket Capacity	0.1 m³	3.5 cu.ft	0.1m³	3.5 cu.ft	
DIMENSIONS					
A Max Operating Height	2460mm	96.9"	2460mm	96.9"	
B Height to Hinge Pin	1815mm	71.5"	1815mm	71.5"	
C Overall Height	1300mm	51.2"	1300mm	51.2"	
<b>D</b> Overall Length With Bucket	2200mm	86.6"	2200mm	86.6"	
E Overall Wheel Width	1010mm	39.8"	1010mm	39.8"	
F Bucket Reach at 40°	455mm	17.9"	455mm	17.9"	
Bucket Max Reach (Level)	1060mm	41.7"	1060mm	41.7"	
G Dump Height Std. Bucket	1090mm	42.7"	1090mm	42.9"	
Dump Height 4 in 1 Bucket	1815mm	41.7"	1815mm	41.7"	
H Bucket Width	1050mm	41.3"	1050mm	41.3"	
I Bucket Max Roll Back	40	)°	4	0°	
J Bucket Max Dump Angle	60	)°	6	0°	
K Ground Penetration	470mm	18.5"	470mm	18.5"	
L Overall Length Less Bucket	1660mm	65.4"	1660mm	65.4"	
M Ground Clearance	140mm	5.5"	140mm	5.5"	
N Angle of Departure	35	5°	3	5°	
Approach Angle	90	)°	9	0°	

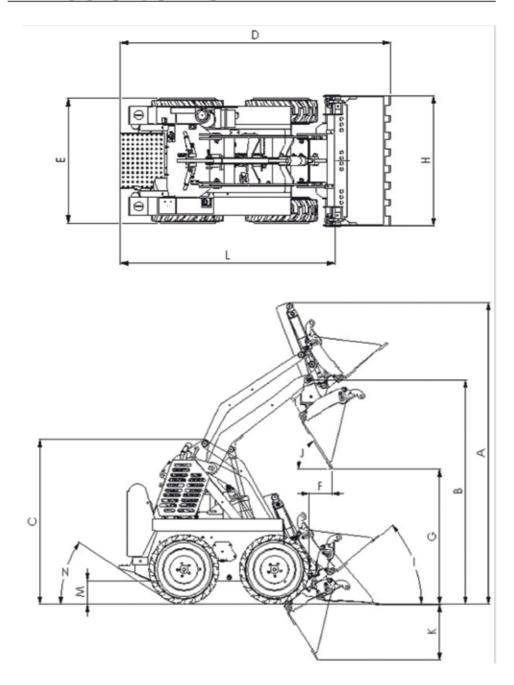
<sup>\*</sup> Net power the Power rating of the engine indicated in this document is the net power of the production engine only and is measured in accordance with SAE J 1349 at 3600 Rpm, Mass production engines may vary from this value, Actual power output for the engine installed in the final machine May vary depending on numerous factors, including operation speed of the engine in application, environmental conditions and other variables.

### **DIMENSIONS - 5 SERIES**



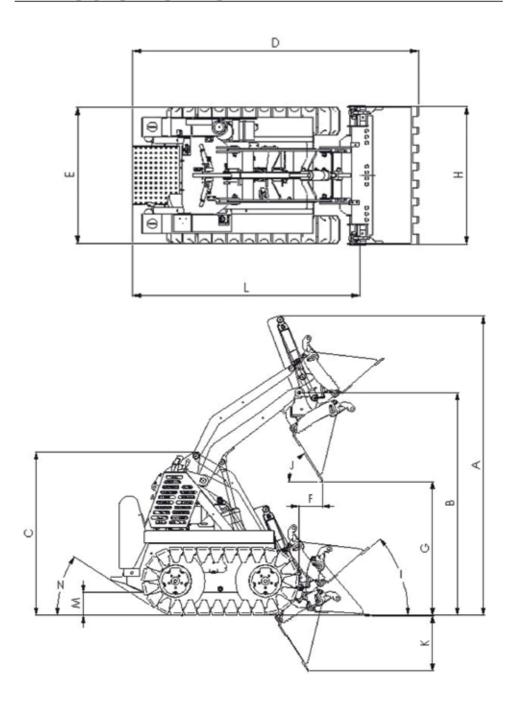
### **SPECIFICATIONS - 6 SERIES**

PERFORMANCE	GB622		DB625	
Max. Lift Capacity	250 kg	551 lbs	250 kg	551 lbs
Travel Speed	7 km/h	4.3 mph	7.5 km/h	4.7
Operating Weight (Machine Only with water filled tyres)	866 kg	1909 lbs	975 kg	2150 lbs
Fuel Capacity	54 L	12.94 US gal	54 L	14.2 hp
ENGINE				
Manufacturer	Hond	la GX690	Kub	ota D902
Power	16.5 KW	22.1 hp	17.5 KW	23.4 hp
DRIVE SYSTEM				
Drive Control	Soft Touch	n Hand Levers	Soft Touch Hand Levers	
Throttle Control	Hane	d Levers	Hand Lever	
Wheels	Direct Drive Hydrualics Motors		Direct Drive Hydraulic Motors	
HYDRAULICS				
Gear Pump Displacement	11.3 cc/rev	0.69 cu.in/rev	12.5 cc/rev	0.76 cu.in/rev
Pump Output	41 L/min	10.75 US gal/ min	45 L/min	11.9 US gal/min
System Pressure	207 bar	3000psi	220 bar	3200 psi
Hyd. Reservoir Capacity	66 L	17.4 US gal	66 L	17.4 US gal
BUCKETS				
Standard Bucket Capacity	0.1 m³	3.5 cu.ft	0.1m³	3.5 cu.ft
4 in 1 Bucket Capacity	0.1 m³	3.5 cu.ft	0.1m³	3.5 cu.ft
DIMENSIONS				
A Max Operating Height	2500mm	98.4"	2500mm	98.4"
<b>B</b> Height to Hinge Pin	1855mm	73"	1855mm	73"
C Overall Height	1340mm	52.8"	1340mm	52.8"
<b>D</b> Overall Length With Bucket	2200mm	86.6"	2200mm	86.6"
E Overall Wheel Width	1030mm	40.6"	1030mm	40.6"
<b>F</b> Bucket Reach at 40°	410mm	16.1"	410mm	16.1"
Bucket Max Reach (Level)	1020mm	40.1"	1020mm	40.1"
G Dump Height Std. Bucket	1130mm	44.5"	1130mm	44.5"
Dump Height 4 in 1 Bucket	1855mm	43.3"	1855mm	43.3"
<b>H</b> Bucket Width	1050mm	41.3"	1050mm	41.3"
I Bucket Max Roll Back		40°		40°
J Bucket Max Dump Angle		60°		60°
<b>K</b> Ground Penetration	430mm	16.9"	430mm	16.9"
L Overall Length Less Bucket	1660mm	65.4"	1660mm	65.4"
M Ground Clearance	185mm	7.3"	185mm	7.3"
N Angle of Departure	40°		40°	
Approach Angle		90°		90°



### **SPECIFICATIONS - 7 SERIES**

PERFORMANCE	GE	3722	DE	3725
Max. Lift Capacity	250 kg	551 lbs	250 kg	551 lbs
Travel Speed	7 km/h	4.3 mph	7.7 km/h	4.7 mph
Operating Weight (Machine Only with water filled tyres)	940 kg	2072 lbs	1025 kg	2260 lbs
Fuel Capacity	54 L	14.2 US gal	54 L	14.2 US gal
ENGINE				
Manufacturer	Honda	GX690	Kubo	ta D902
Power	16.5 KW	22.1 hp	17.5 KW	23.4 hp
DRIVE SYSTEM				
Drive Control	Soft Touch	Hand Levers	Soft Touch Hand Levers	
Throttle Control	Hand	Levers	Hand Lever	
Wheels	Direct Drive Hydrualics Motors		Direct Drive Hydrualic Motors	
HYDRAULICS				
Gear Pump Displacement	11.3 cc/rev	0.69 cu.in/rev	12.5 cc/rev	0.76 cu.in/rev
Pump Output	41 L/min	10.75 US gal/min	45 L/min	11.9 US gal/min
System Pressure	207 bar	3000psi	220 bar	3200 psi
Hyd. Reservoir Capacity	66 L	17.4 US gal	66 L	17.4 US gal
BUCKETS				
Standard Bucket Capacity	0.1 m <sup>3</sup>	3.5 cu.ft	0.1m³	3.5 cu.ft
4 in 1 Bucket Capacity	0.1 m <sup>3</sup>	3.5 cu.ft	0.1m³	3.5 cu.ft
DIMENSIONS				
A Max Operating Height	2510mm	98.8"	2510mm	98.8"
<b>B</b> Height to Hinge Pin	1865mm	73.4"	1865mm	73.4"
C Overall Height	1350mm	53.1"	1350mm	53.1"
D Overall Length With Bucket	2200mm	86.6"	2200mm	86.6"
E Overall Wheel Width	1040mm	41"	1040mm	41"
<b>F</b> Bucket Reach at 40°	400mm	15.7"	400mm	15.7"
Bucket Max Reach (Level)	1010mm	39.8"	1010mm	39.8"
G Dump Height Std. Bucket	1140mm	44.9"	1140mm	44.9"
Dump Height 4 in 1 Bucket	1865mm	43.7"	1865mm	73.4"
H Bucket Width	1050mm	41.3"	1050mm	41.3"
I Bucket Max Roll Back	4	0°	4	10°
J Bucket Max Dump Angle	6	0°	6	0°
K Ground Penetration	420mm	16.5"	420mm	16.5"
L Overall Length Less Bucket	1660mm	65.4"	1660mm	65.4"
M Ground Clearance	195mm	7.7"	195mm	7.7"
N Angle of Departure	41°		41°	
Approach Angle	9	0°	9	90°



### **TROUBLE SHOOTING**

This section contains trouble-shooting information to be used for locating and correcting problems which may develop with your KANGA Loader. Troubleshooting and maintenance information relating to the engine are contained in the Engine Manual.

### **ARMS**

TROUBLE	PROBABLE CAUSE	REMEDY
Arm will not rise.	Load capacity exceeded.	Reduce load. Load should not exceed the specified SWL displayed on the machine.
	Hydraulic system oil level low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked hydraulic line.	Remove line and remove any obstructions or replace line as necessary.
	Malfunctioning hydraulic pump.	Replace Hydraulic Pump as necessary.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Contact Service Agent.
	Lift Control Valve relief set too low, allowing oil to return to reservoir.	Adjust relief valve to proper setting. Contact service Agent.
	Excessive oil leak past lift cylinder piston seal.	Repair or replace cylinder as necessary.
Arm will not lower.	Hydraulic oil system low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked hydraulic line.	Remove line and remove any obstructions or replace line as necessary.
	Malfunctioning pump.	Replace Hydraulic Pump as necessary.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Contact Service Agent.
	Control rod or lever broken or disconnected.	Repair or replace control rod or lever.
Arm Lowers with control lever in neutral.	Worn Control Valve spool.	Repair or replace valve as required.
	Lift ram piston seal leaking.	Replace seals.
Arm will not rise, or rises slowly.	Lift Control Valve relief set too low allowing oil to return to reservoir.	Adjust relief valve to proper setting. Contact Service Agent.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Contact Service Agent.
	Excessive oil leak past lift cylinder piston seal.	Repair or replace cylinder as necessary.

	Control rod or lever broken or disconnected.	Repair or replace control rod or lever.
	Hydraulic lines incorrectly connected at Control Valve.	Correctly connect line at Control Valve.
Arm rises and lowers erratically.	Lift Control Valve relief set too low, allowing oil to return to reservoir.	Adjust relief valve to proper setting.
	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked line.	Remove line and remove any obstructions or replace line as necessary.
	Malfunctioning pump.	Repair or replace hydraulic pump as necessary.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Repair or replace valve as required.
	Excessive oil leak past lift cylinder piston seal.	Repair or replace cylinder as necessary.
	Arm pivot pin seized or otherwise damaged.	Replace pivot pin and bushing as necessary. Grease thoroughly.

### **HYDRAULIC PUMP**

TROUBLE	PROBABLE CAUSE	REMEDY
Flow from hydraulic pump erratic or non existent.	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked line.	Remove line and remove any obstructions or replace line as necessary.
	Worn or chipped pump gears.	Replace pump gears as necessary.
	Worn or broken drive shaft or coupling.	Inspect drive shaft or coupling. Repair or replace as necessary.
Hydraulic pump noisy.	Air in hydraulic system.	Check suction side or hydraulic system for defects and repair as necessary. Ensure no leaks exist in the suction line.
	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Worn or broken drive shaft or coupling.	Inspect drive shaft or coupling. Repair or replace as necessary.
	Worn or chipped pump gears.	Replace pump gears as necessary.

### **DRIVE SYSTEM**

TROUBLE	PROBABLE CAUSE	REMEDY
Machine will not drive forwards or backwards.	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Repair or replace valve as required.
	Damaged or blocked line.	Remove line and remove any obstructions or replace line as necessary.
	Control rod or lever broken or disconnected.	Repair or replace control rod or lever.
	Hydraulic lines incorrectly connected at Control Valve.	Correctly connect line at Control Valve.
	Malfunctioning pump.	Repair or replace pump.
Machine drive speed is erratic.	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked line.	Remove line and remove any obstructions or replace line as necessary.
	Binding drive motor(s).	Repair or replace motor(s) as necessary.
	Relief valve setting.	Adjust relief valve.

### AUXILIARY HYDRAULIC

TROUBLE	PROBABLE CAUSE	REMEDY
Attachment is slow or will not function.	Hydraulic system oil low.	Check oil and replenish as necessary. Oil level should not change. Leaks may be present.
	Damaged or blocked line.	Remove line and remove any obstructions or replace line as necessary.
	Malfunctioning pump.	Replace Hydraulic Pump as necessary.
	Worn Control Valve spool.	Check pressure delivery from Control Valve. Repair or replace valve as required.
	Attachment plate pivot pin seized or otherwise damaged.	Replace pivot pin and bushing as necessary. Grease thoroughly.
	Excessive oil leak past cylinder piston seal or motor rotating group.	Repair or replace cylinder motor as necessary.
	Control rod or lever broken or disconnected.	Repair or replace control rod or lever.

### **ENGINE**

TROUBLE	PROBABLE CAUSE	REMEDY
Engine will not crank over.	Low battery output.	Recharge or replace battery.
	Loose, disconnected or broken battery cables.	Inspect cable(s) and tighten all connections. Repair or replace cables as necessary.
	Faulty Starter.	Repair or replace starter.
	Faulty circuit wiring.	Check wiring continuity.
	Engine flooded (petrol).	Remove spark plug and crank.
Engine cranks but not fires.	No fuel in tank.	Refill fuel tank.
	Spark plug fouled (petrol engines).	Check spark plug gap and clean or replace spark plug.
	Dirty fuel filter.	Clean filter.
	Carburettor flood (petrol engines).	Clear carburettor.
	Fuel valve closed.	Open valve.
Engine runs but stalls.	Spark plug fouled (petrol engines).	Check spark plug gap & clean or replace.
	Fuel valve closed.	Open valve.
	Low battery output.	Recharge or replace battery.
	Power take-off engaged	Shift power take-off lever into neutral.