



OPERATORS MANUAL



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



JADEN-KANGA GROUP Ph 61 7 5593 4567 Fax 61 7 5593 4398
Email kanga@jaden.com
PO Box 54, Burleigh Heads QLD 4220 Australia



DELIVERY SHEET

Owner:	Date:
Address:	
City:	Post Code:
State/Territory:	Email Address:
Owners Phone No:	Mobile:
Dealer / Delivered By:	
Loader Type (KL, KK, TK) and Serial No:	
Attachments:	Serial No.
(1)	
(2)	
(3)	
(4)	
(5)	

I (<i>Customers name</i>)	Salesman / Owner to initial
1. Accept delivery of the equipment as detailed above. All equipment has been inspected and is accepted.	<input style="width: 50px; height: 20px;" type="text"/>
2. Have had the operational and safety procedures explained to me for the loader and attachments and have been provided a copy of these procedures for reference and use.	<input style="width: 50px; height: 20px;" type="text"/>
3. Have received a copy and understand the Operators Manual and safety information contained therein for all equipment and attachments supplied.	<input style="width: 50px; height: 20px;" type="text"/>
4. Understand that I am required to perform a risk assessment/JSEA covering all tasks before I operate this machine and/or any attachment.	<input style="width: 50px; height: 20px;" type="text"/>
5. Understand the warranty conditions and maintenance requirements for the Loader and attachments.	<input style="width: 50px; height: 20px;" type="text"/>
Comments:	
(COMPLETE SERIAL NUMBER REGISTRATION ON PAGE 30)	Date:
Purchaser's Signature: / /
.....	

Warranty will only be accepted if this Certificate and the registration form are returned to -
KANGA LOADERS, PO BOX 54, BURLEIGH HEADS, QUEENSLAND 4220, AUSTRALIA or if
 purchased in the USA - **KANGA LOADERS USA, 3326 HIGHWAY 51, FORT MILL, SC 29715, USA**
 within 30 days of the delivery date.



WARRANTY SHEET

Read the Warranty section towards the rear of this manual before completing the Warranty Registration Form below. Once read, complete and return within 30 days of the delivery date to –

KANGA LOADERS, PO BOX 54, BURLEIGH HEADS, QUEENSLAND 4220, AUSTRALIA

or if purchased in the USA –

KANGA LOADERS USA, 3326 HIGHWAY 51, FORT MILL, SC 29715, USA.

KANGA LOADERS: WARRANTY REGISTRATION FORM

Owner	Phone	()
Address:	Mobile	
Town/City	Fax	()
Country:	Post Code	
Delivery Date:	KANGA Serial No	
Email:		
Dealer:		
<p>I (The Purchaser) have read and fully understand the operator's manual, safety instructions and warranty conditions.</p> <p>Warranty will only be accepted if this Certificate is completed and returned to KANGA LOADERS Pty. Ltd, PO Box 54, Burleigh Heads, Queensland, 4220 Within 30 days of the delivery date.</p>		
Purchaser's Signature:		Date:
..... / /

Model: _____
 Serial No.: _____
 Engine No.: _____
 Hour Meter: _____

Inspectors Name: _____
 Machine built by: _____
 Date: _____

Visual Check	√	x	Operation	√	x
1. Damage			1. Gauges/Switches and connections/dash lights		
2. Loose Bolts/Nuts			2. Attachment (s) plate		
3. Rust			3. Throttle Lever (not too tight or loose)		
4. Leakage Oil or Water			4. Levers and Linkages (aux stop cable adjustment)		
5. Wiring / oil cooler connection			5. Unusual Noises or vibrations (drive chains to slack)		
6. Paint Work			6. Petrol Engine Idle RPM 1350-1450 rpm = rpm		
7. Any untidy weld spots or runs			7. Petrol Engine max RPM 3550-3650 rpm = rpm		
8. Check of fittings alignment			8. Is Machine Easy to start		
9. Is loader clean and tidy			9. Is hour meter / tacho working test time = hrs		
10. Are pipes and hoses clear of parts on loaders			10. Check that lift cylinder stops in correct positions		
11. Are Hershel plugs clear of tank and hydraulic lift tubes					
Service	√	x	Guidance	√	x
1. Tie Down Lugs Fitted On Body			1. Correct Stickers Applied UK C/E sticker		
2. Correct Attachment Plate/ operation ok with test jig			2. Correct Tyre Pressure sticker attached		
3. Lubricate Loader grease all linkages			3. Identification Plate (correct number stamped)		
4. All Pins and Bushes Fitted and Tight			4. Safety/Operating Manual		
5. Belt Tension Fan/Alternator			5. Safety/Operating Video		
6. Wheel Condition/Wheel Nuts been tensioned 100 ftlb			6. Engine Manual (Honda Warranty Form)		
7. is the track slot forward and Tyre Direction correct					
8. is the Tyre Pressure to specification			Fluid Compartment Check	√	x
9. Radiator Core, Hoses and Fittings			1. Battery Electrolyte Level		
10. Air Element and hose clearance and Connections tight			2. Engine Oil Level		
11. Sediment in Fuel filter/tank (drain fuel tank)			3. Hydraulic Oil Level		
12. Drive chain tension (second hand loaders only)			4. Fuel Level		
13. Is Engine EPA Compliant			5. Inspect Fuel tanks for leaks		
14. Is PTO Direction Correct			6. Radiator water Level		
15. Has valve tag been removed			7. Hydraulic filter housing directions and elements tight		
16. Are QRC's correctly aligned and covers fitted					
17. Spare key fitted correctly to machine			Other	√	x
18. Ensure battery is secure and boot is on alternator			1. Is Pass Sticker Attached and Signed		
19. 8 Series U Beaut bracket stop bolt fitted			2. Check machine to be shipped against order		
20. Is the Splash Plate Fitted			3. Is the loader ready for despatch		
21. Check oil cooler connection to fan			4. Is the track tool attached to the machine		
22. Ensure control knobs are not split and are secured			5. Ensure Diesel has oil Funnel		
23. Is the control knob on trencher valve clear of guard			6. have back protection bars been ordered and fitted		

CUSTOMERS COMMENTS

INSPECTORS COMMENTS

"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 which it is not designed will render it unsafe."

DISTRIBUTOR'S NAME:

INSPECTOR'S SIGNATURE:

FOREWORD



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

Read this manual carefully before operating or repairing your machine as 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 under taking any maintenance.



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SAFETY

The safety section lists safety precautions **required** to be taken when operating or maintaining a Kanga Loader. Read and follow **all** operating and safety instructions contained or 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.



This Symbol has been used throughout this manual to highlight **critical** 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.



SAFETY VEST
MUST BE WORN



FOOT PROTECTION
MUST BE WORN



HEARING AND
EYE PROTECTION
MUST BE WORN



HAND PROTECTION
MUST BE WORN



WHEELS MUST
BE CHOCKED

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

HOW TO CONTACT US

Head Office

Phone: Aus: (07) 5593 4567
Int: +61 7 5593 4567

Fax: Aus: (07) 5593 4398
Int: +61 7 5593 4398

Email: australia@kanga-loader.com

Postal: Jaden-Kanga Group Pty Ltd
PO Box 54
Burleigh Heads, Queensland 4220, Australia

Address: Jaden-Kanga Group Pty Ltd
43 Alex Fisher Drive
Burleigh Gardens Industrial Park
Gold Coast, Queensland 4220, Australia

Spares & Mechanical Support

Phone: Aus: 1300 4 KANGA (1300 4 52642)
Int: +61 7 5593 4567

Fax: Aus: (07) 5546 7922
Int: +61 7 5546 7922

Email: australia@kanga-loader.com

Operating Tips & Support:

Phone Aus: 1300 4 KANGA (1300 4 52642)
Int: +61 7 5546 7922

Visit our website

www.kanga-loader.com

Safety & Risk Management Support:

Safety & Forensic Engineering Pty Limited
Phone: +61 2 4933 9942
Email: safegroup@safegroup.com.au

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, damaged or improperly installed parts.

CHECK BEFORE USE

1	Inspect the machine chassis for any visible damage.
2	Visually inspect all components to assure their security of attachment.
3	Inspect all areas for evidence of hydraulic oil, engine oil or fuel leakage.
4	Inspect boom arm assembly area for security of components 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 dip stick
12	Check the engine oil level is within operating limits as marked on the dip stick.

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:

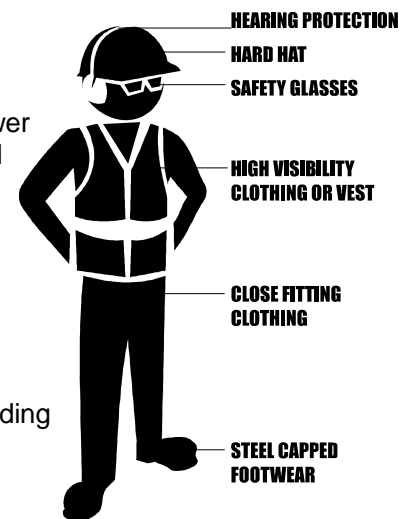
- When loading/unloading the Kanga from the trailer, it is important that the trailer remains attached to the towing vehicle.
- Due to the incline and sharp change of angle experienced when using a ramp for loading and unloading onto a trailer, it is recommended that when traversing the ramp, the operator operate the loader from behind, rather than from the driving platform. This removes the counterbalance effect of the operators' bodyweight, and improves stability ***for this operation only.***
- Loading/unloading should be conducted at very slow speed (essentially creeping).
- Use appropriately rated slings, 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.

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 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:
 - Overhead power lines
 - Underground services
 - Excavations
 - Slopes or adverse cambers
 - Confined spaces
 - Other obstructions
 - 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 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 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.
- Demarcate the work area with barricades and/or wickets 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 to operate the control levers.
- Travel at speeds suitable for the conditions and as determined by the task **JSEA** or Risk Assessment.
- When travelling over undulating surfaces and / or rough terrain, it is essential that the operator ensures that the speed is appropriate to the conditions and to creep over the rough terrain at minimum speed. The recommended normal operating speed of the machine is 2/3 to ¾ throttle.
- Wear approved, appropriate Personal Protective Equipment (PPE), such as:
 - hearing protection,
 - The machine is designed to operate at 2/3 throttle, at a lower speed the noise levels are reduced to both the operator and bystanders.
 - safety footwear,
 - eye protection,
 - hard hat,
 - long, close fitting protective clothing, and
 - high visibility vest or clothing, etc.
- Keep hands, feet and clothing away from all moving parts, including hydraulic rams,
- Keep arms within the confines of the machine.
- Keep alert, and avoid being distracted whilst operating 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 250 KG (550 lbs).
- 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.
- Never traverse across slopes, especially on uneven ground.
- Jerk the control levers. Always use a steady, even action to achieve proper control.
- Touch exhaust, hydraulic pipes and fittings, drive chains or guards.
- Park or leave Loader unattended on a slope.
- Remove safety decals.
- Remove safety guarding.
- Use mobile telephones or portable radios.
- Operate machine for extended periods at full throttle



CAUTION

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°. The actual safe slope angle will depend 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.

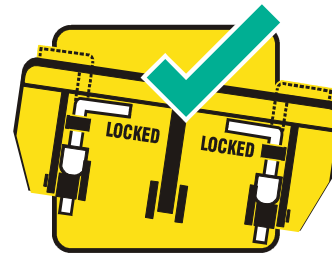
SAFETY—Summary



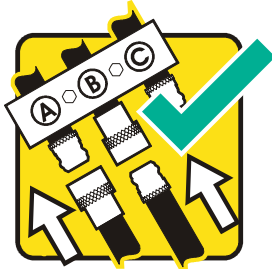
1. READ OPERATORS MANUAL
PRIOR TO USE



2. DAILY INSPECTION



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



4. ENSURE HYDRAULIC HOSES
ARE CLEAN AND ATTACHED



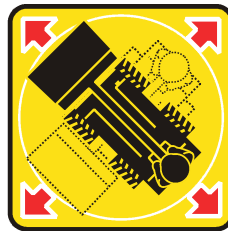
5. TRANSPORT MATERIAL WITH
BUCKET DOWN AND LEVEL



6. ALWAYS REVERSE DOWN SLOPES
WITH LOAD



7. WEAR APPROPRIATE
PROTECTION



8. NO PERSONNEL WITHIN A
4M (12 ft.) DIAMETER



9. NO SMOKING
WHILE FILLING



10. DO NOT PLACE FEET
UNDER STANDING PLATFORM



11. DO NOT TRAVEL
WITH ARMS RAISED



12. AVOID TRAVELLING
ACROSS SLOPES



13. NO PERSONNEL IN
BUCKET OR ATTACHMENTS



14. PAY ATTENTION



15. OPTIMUM OPERATION OF
THIS MACHINE IS ACHIEVED
AT 2/3 TO 3/4 THROTTLE

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), **call 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 www.dialbeforeyoudig.com.au, 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 metres from all underground services.



Minimum of 2 metre distance from ANY Underground Service

SAFE - JOB SAFETY CHECK SHEET

To ensure you work safely with Kanga Machines - carry out these checks and questions **BEFORE** you start. Use a blank copy of the JSEA in Appendix A to assist you keep T.R.A.C.K. of the process.

Think through the Task

- Think about each step in the task/s
- Permits and authorizations needed to work
- Equipment and tools that are to be used
- The area in which you are to operate the machine and attachments

Recognise the Hazards

- Check your environment is safe
- Undertake your Daily Operator Maintenance Safety Checks
- Check equipment and tools are safe and fit for purpose
- Identify any hazards using the Job Safety and Environmental Analysis Worksheet (JSEA)
- Identify and isolate damaging energies
- Check above and below for potential hazards
- Determine exclusion zone and delineate with witches hats

Assess the Risks

- Could a serious injury or accident be avoided
- What equipment/systems could be damaged
- What is the likelihood and consequence
- What needs to happen to reduce the risk

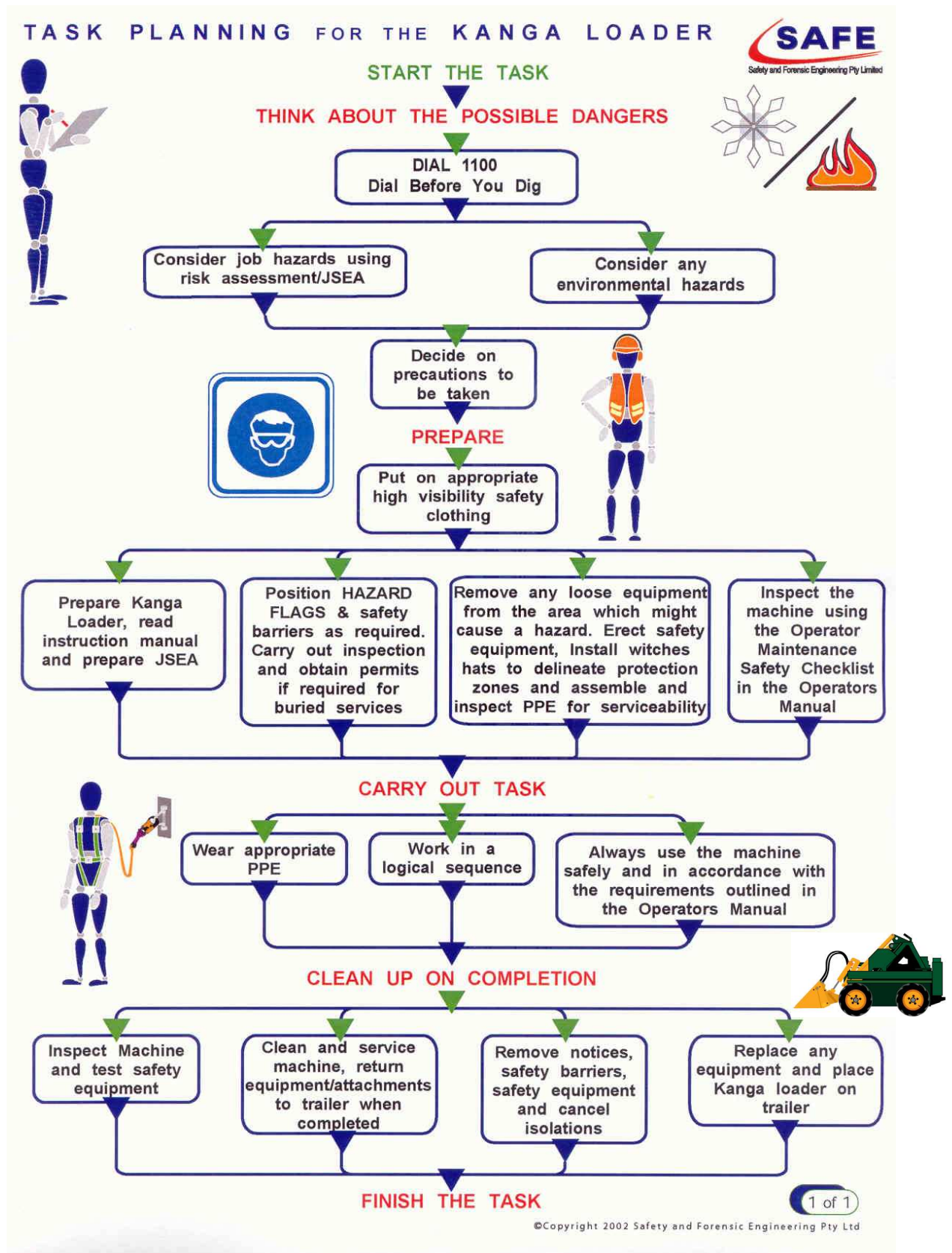
Control the Hazards

- Eliminate (remove the hazard)
- Substitute (use tracked machine with low center of gravity)
- Engineering (guards, covers, handrails)
- Administrative (SOP's, permits, signage)
- Correct PPE (hearing protection, glasses, gloves)

Keep Safety First in all Tasks

- Check for changes in work conditions (slope)
- Monitor safety controls for effectiveness
- If the Task changes, reassess Safety/Risks
- Look after yourself and your mates

TASK PLANNING FOR THE KANGA LOADER




RISK RANKING CHART

How Do I Risk Assess A Hazard?

Using the Kanga Risk Assessment tools:

1. Determine the **likelihood** of the hazard occurring e.g. in this example we have determined - **Remote**
2. Determine the **severity** of the consequence e.g. in this example we have determined - **Significant**
3. The resultant score (**X**) is (**5**) which is a “**Low**” risk - we now need to refer to the **Risk Ranking Matrix** for what **action** is required

Note: The higher the score the higher the risk

 RISK RANKING CHART		LIKELIHOOD TO OCCUR				
		P R O B A B L E	O C C A S I O N A L	P O S S I B L E	R E M O T E	V E R Y U N L I K E L Y
CONSEQUENCES						
Severity	Personal injury					
Extreme	Fatality	25	24	22	19	15
Severe	Permanent injury or health issue (e.g. loss of limb)	23	21	18	14	10
Serious	Lose time from work or major treatment by doctor/hospital	20	17	13	9	6
Significant	Minor treatment injury by doctor.	16	12	8	5	3
Minor	Near miss of minor potential consequence or first aid injury	11	7	4	2	1

Risk Ranking Matrix	Action Required
High Risk (20—25)	Implement immediate risk control action measures e.g. cease activity, make job/area safe, seek advice and guidance from qualified persons
Medium Risk (7-19)	Plan and implement risk control action measures - seek advice from Kanga if in doubt about any aspect of the hazard / risk
Low Risk (1-6)	No immediate action, assess overall risk in line with available resources - contact Kanga if in doubt about any aspect of the hazard / risk

JOB SAFETY CHECK



ASSESS THE RISKS

To keep Safety on **T R A C K**,
before every job **STOP** and:

- T**hink though the Task
- R**ecognise the Hazards
- A**ssess the Risks
- C**ontrol the Hazards
- K**eeP Safety First in all Tasks

OUR TARGET IS ZERO INJURIES



www.safegroup.com.au

SAFETY - Rules for Attachments

Only Jaden-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 attachments has been assessed and authorised by Jaden-Kanga and has been supported by a compliant Risk Assessment, which has been verified and validated by Safety and Forensic Engineering Pty Limited.

The following safety requirements should be read in conjunction with the safety rules provided for the base model, ie, Kanga Loader, Kanga Kid and the operating instructions. All tasks and risks associated with the task are identified using the Job Safety and Environmental Analysis (JSEA) or Risk Assessment (RA) and ALL risk controls are to be identified and implemented before the work commencing.

LOG SPLITTER SAFETY RULES



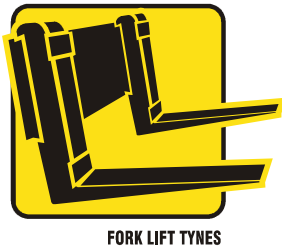
Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the local working area and ensure no person enters this zone, other than the operator, 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.

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.

FORK LIFT TYNES SAFETY RULES



Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the local working area and ensure no person enters this zone, other than the operator, 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 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 metre (12 foot) exclusion zone around the local working area and ensure no person enters the zone, other than the operator, whilst the loader 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 article or body part under the angled back-fill blade at any time.

LOADER BOOM MAINTENANCE



Always...

- Secure the boom by mechanical means when carrying out maintenance activities, particularly when working with the boom 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.
- Delineate the effective maintenance work area using witches hats.

Never...

- Rely solely on the machine hydraulics to keep the boom elevated whilst carrying out maintenance. A mechanical scotch should always be used to physically hold the boom in the raised position.

4 IN 1 BUCKET SAFETY RULES



Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the local working area and ensure no person enters the zone, other than the operator, whilst the loader 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 and dial **1100** to establish underground services before work commences.

Never...

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

TERMINATOR STUMP GRINDER SAFETY RULES



Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the local working area and ensure no person enters the zone, other than the operator, whilst the loader engine and/or stump grinder 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.
- Install effective perimeter hoarding/barricades.

Never...

- Place any article or body part under, or in close proximity to, the grinder at any time.

TRENCHER SAFETY RULES



Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the working area and ensure no person enters the zone, other than the operator, whilst the loader 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 and dial **1100** to establish underground services before work commences.
- Ensure trenches are located a minimum of 2 metres 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 metre (12 foot) exclusion zone around the working area and ensure no person enters the zone, other than the operator, whilst the loader 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 and dial **1100** to establish underground services before work commences.

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 metre (12 foot) exclusion zone around the local working area and ensure no person enters the zone, other than the operator, 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.

BUCKET BROOM SAFETY RULES



Always...

- Establish and maintain a minimum 4 metre (12 foot) exclusion zone around the local working area and ensure no person enters the zone, other than the operator, whilst the loader 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.
- Wear respiratory and eye protection whilst using the Bucket Broom.

Never...

- Place any article or body part under the bucket broom at any time.

operating instructions

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 (see below) are in the neutral centre position.

NOTE: The auxiliary power lever doesn't automatically return to the neutral position from the down position (1). If this lever is not in neutral the engine will attempt to start under full load. This will stall the starter motor potentially flattening the battery.

STARTING

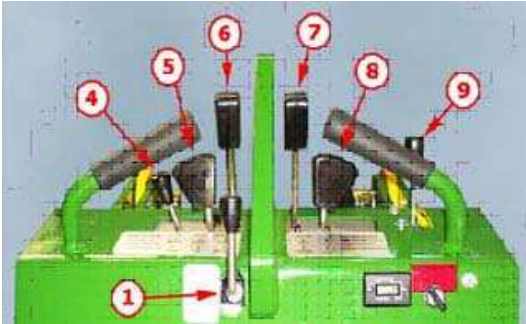
Check that the fuel valve (where fitted) is open, Refer to the engine manual for correct throttle (9) starting positions in warm and cold conditions. Turn starter key switch (3) to start engine.



CAUTION: Do not move any of the control levers unless standing with both feet on the driving platform and holding the grip handles.

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 correspondent functions:



Lever	Push	Pull
4	4in1 Open	4in1 Close
5	Lower Arm	Raise Arm
6	Left Drive Forward	Left Drive Backward
7	Right Drive Forward	Right Drive Backward
8	Tilt Forwards	Tilt Backwards
9	Throttle Increase	Throttle Decrease
	Up	Down
1	Aux Reverse	Aux Forward

PARKING AND SHUTDOWN

When parking the Kanga Kid always select level ground, lower the 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 unauthorized use.

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

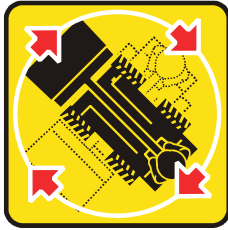
UNLOADING AND LOADING ON A RAMP

Due to the incline and sharp change of angle experienced when loading / unloading, it is recommended to **walk behind the loader** rather than operate it from the usual driving platform. This removes the counter weight effect (weight of the driver) experienced and greatly improves stability and safety on a steep ramp where sudden angle changes occur.

All loading / unloading 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



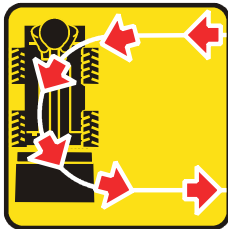
CAUTION: First time users to use **slow** 1/3 throttle to practice safe operation before commencing work, the recommended normal operating speed of the machine is between 2/3 and ¾ throttle



MANOEUVRING

MANOEUVRING

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 a open, safe area.



MANOEUVRING

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.



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



CAUTION: Always ensure that the attachment locking pins are fully engaged at all times.



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 restrict exiting from the Kanga Loader.**



CAUTION: Always exercise care when operating on slopes. The Kanga Loader is 1 metre (39") wide. This is a great benefit 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°. This angle is a recommendation only. The actual safe slope angle will depend on site conditions, operator experience and activity.

Always exercise care when working on slopes.



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.

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.



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

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



SERIAL NUMBER REGISTRATION

MAIN COMPONENT SERIAL NUMBERS

KANGA Serial No.: _____

Engine Type: _____

Serial No.: _____

Wheel Motors: _____

Lift Ram: _____

Tilt Ram: _____

Hydraulic Pump: _____

Control Valve: _____

Date Purchased: _____

maintenance

DAILY OPERATOR MAINTENANCE



2. DAILY INSPECTION

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 since their own safety is involved.

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



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 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.

OPERATOR MAINTENANCE - SAFETY CHECKS

DAILY CHECKS				
	Loader Element	Yes	No	Comments
Tyres & Wheels	Good condition			
	Adequate pressure			
	Adequate tread			
	Wheel Nuts secure			
Guarding	Adequate condition			
	Secure			
Hydraulics	Good condition of hoses (inc. leaks)			
	Good condition of casings (inc. leaks)			
	Good condition of rams (inc. leaks)			
	Adequate hydraulic oil level			
Controls	Correct operation			
	Responsiveness			
Structure	Adequate weld condition			
	Free of cracks/damage			
	Linkage Pins greased			
Bolts and Fasteners	Tight			
Battery	None missing			
	Terminals tight			
Decals	Free of corrosion			
	Adequate battery fluid level			
	Legible			
Engine	All in place			
	Adequate crankcase oil level			
Fuel	No Leakage			
	Adequate fuel level			
Operating Manual	Present with machine			
ATTACHMENTS	ATTACHMENTS			
Guarding	Adequate condition			
	Secure			
Hydraulics	Good condition of hoses (inc. leaks)			
	Good condition of casings (inc. leaks)			
	Good condition of rams (inc. leaks)			
Controls	Correct operation			
	Responsiveness			
Structure	Adequate weld condition			
	Free of cracks/damage			
Bolts and Fasteners	Tight			
Decals	None missing			
	Attachment locking pins in place			
	Safety Boom locking pin/restraint in place			
Operating supplement	Legible			
	All in place			
Safety devices	Present with machine/attachment			
Safety devices	Dead Mans Pedal Operational			
	Safety Bar working (Stump Grinder)			

SERVICE CHART

ACTIVITY	SERVICE REQUIREMENTS TIME INTERVALS (HOURS) – X = SERVICE, R = REPLACE														
	20	120	220	320	420	520	620	720	820	920	1020	1120	1220	1320	1420
ENGINE OIL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ENGINE OIL FILTER			R		R		R		R		R		R		R
AIR FILTER	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FUEL FILTER	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
IDLE SPEED			X		X		X		X		X		X		X
SPARK PLUGS (PETROL)		X	R	X	R	X	R	X	R	X	R	X	R	X	R
VALVE CLEARANCE (PETROL)		X			X		X		X		X		X		X
VALVE CLEARANCE (DIESEL)								X							
HYDRAULICS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HYDRAULIC FILTER			R		R		R		R		R		R		R
HYDRAULIC FLUID									R						
GREASE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TYRES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
VISUAL CHECK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BATTERY		X	X	X	X	X	X	X	X	X	X	X	X	X	X
CHAIN TENSIONER			X		R		X		R		X		R		X
PIVOT PINS			X		X		X		X		X		X		X
SERVICE STAMP															
DATE SERVICED															

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

Only genuine spare parts must be used during the service.

SERVICE TASKS

The following service work should only be carried out by a qualified Service Technician at intervals shown on opposite page.

The operating hours are displayed by the hour meter. The display will flash for 2 hours when a service is due. The display will stop flashing after the 2 hour operating period has passed.

Engine Oil

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

Engine Oil Filter

Replace the oil filter every 200 hours of operation. See Engine Manual for details.

Air Filter

Service the air filter every 8 hours of operation. Replace the filter element every 100 hours. See Engine Manual for details.

Fuel Filter

Replace the fuel filter every Service or 100 hours. See Engine Manual for details.

Idle Speed

Check engine idle speed every 200 hours of operation. Adjust if out of specification. See Engine Manual for details.

Spark Plug (Petrol Engine)

Service the spark plug every 100 hours of operation. Replace it every 200 hours. See Engine Manual for details.

Valve Clearance (Petrol Engine)

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

Valve Clearance (Diesel Engine)

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

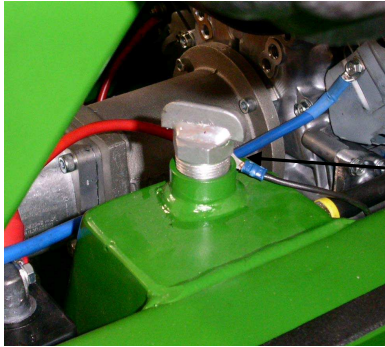
SERVICE TASKS - Hydraulics

Hydraulics

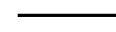
Perform the following work every 100 operating hours:

Check hydraulic fluid level (**when oil is cold**) top up with Hydraulic Oil ISO 68

NOTE: A drop in fluid levels will indicate leakage.



FILL LEVEL WHEN COLD



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 (see procedure on opposite page).
Adjust if necessary.

Hydraulic Filters

Replace the pressure filter every 500 operating hours and the return line filter cartridge every 200 operating hours.

(Pressure Filter Element Part No: 16420; Return Filter Element Part No: 16442).

PRESSURE FILTER

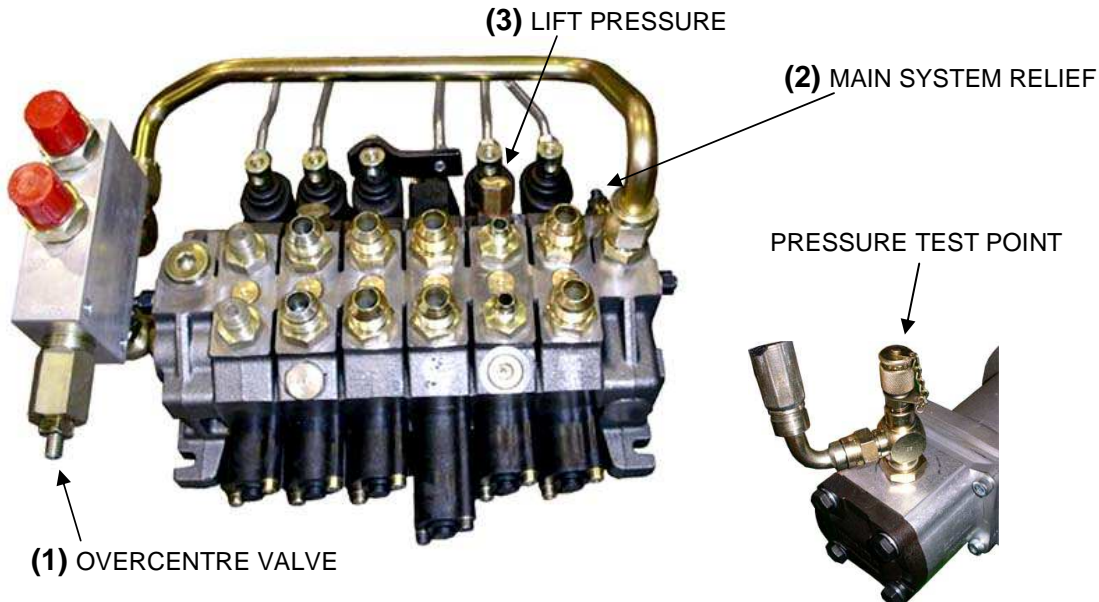


RETURN LINE FILTER



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 to **80°C (176°F)**.

All pressure setting are performed with the **engine running at full speed (3600 rpm)**.

OVER CENTRE VALVE

Connect an accurate pressure gauge with a range **0-300 bar (0-4300 PSI)** to the test point.

**The pressure should be set at: 32 bar (460 PSI) for Series 5 machine
41 bar (600 PSI) for Series 6 machine**

NOTE: *If adjustment is required slacken off the lock nut and using a 5mm hex key 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.*

(2) MAIN SYSTEM RELIEF PRESSURE

Connect an accurate pressure gauge with a range **0-300 bar (0-4300 PSI)** to the test point.

Check the pressure while pulling the **tilt control lever** at the end of the rams stroke.

The pressure should be set at 203 bar (2950 PSI) .

NOTE: *If adjustment is necessary slacken off the lock nut 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 (0-4300 PSI)** to the test point.

Check the pressure while pulling the **boom control lever** at the end of the rams stroke (boom fully risen).

The pressure should be set at 165 bar (2400 PSI).

NOTE: *If adjustment is necessary unscrew and remove the cap lock nut and wind in the screw using a screw driver to increase the pressure or back off the screw to reduce the pressure. Refit and tighten the lock nut when adjustments are complete.*

Hydraulic Fluid

Replace the hydraulic oil every 1000 operating hours.

(Hydraulic Oil ISO 68)



Series 5



Series 6-7

OIL DRAIN

SERVICE TASKS - Grease Nipple

Grease

Grease daily* and inspect for wear all **linkage pins** 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').



○ Grease Nipples

SERVICE TASKS - Tyre Pressure

Tyres

Check tyre pressure every 50 operating hours.
Visually check for wear and damage to tyres and tracks (if fitted).

Tyre pressures:

KANGA Loader Tyre Pressures			
Tyre	Size	Recommended Pressure	
		kPa	PSI
Lug 18"	18 x 8.5 x 8	150	22
Turf 18"	18 x 8.5 x 8	150	22
Lug 19"	19 x 8 x 10	260	38
Turf 20"	20 x 8 x 10	150	22
Turf 20" wide	20 x 10 x 10	150	22
Lug 23"	23 x 8.5 x 12	260	38
Turf 23"	23 x 8.5 x 12	150	22
Track drive	14.5 x 10 x 7.6	450	65

SERVICE TASKS - Battery

Visual Check

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

Battery

Wear safety glasses when checking battery electrolyte
Check battery electrolyte and connections every 100 operating hours.
Top up with distilled water if necessary, tighten loose cable connections.

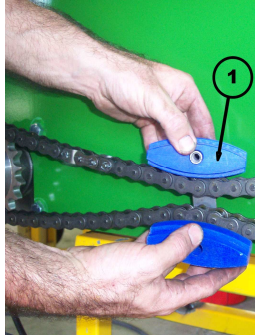
SERVICE TASKS - Drive Chain

Chain Tensioners (Series 5 only)

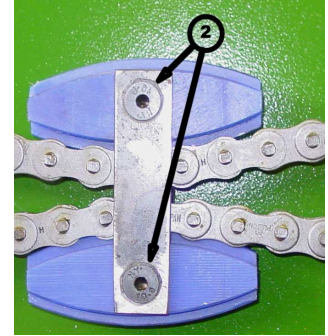
Check the tension of drive chain every 200 hours. The slack can be adjusted by turning one or both chain tensioning blocks (1) by 180°. If no adjustment is possible anymore, replace the chain tensioning blocks.

NOTE: Secure bolts (2) with Loctite. Lubricate chain with grease.

(To get to the drive chain, the loader has to be isolated, chocked, jacked up on one side supported, two wheels and the chain guard have to be removed first)



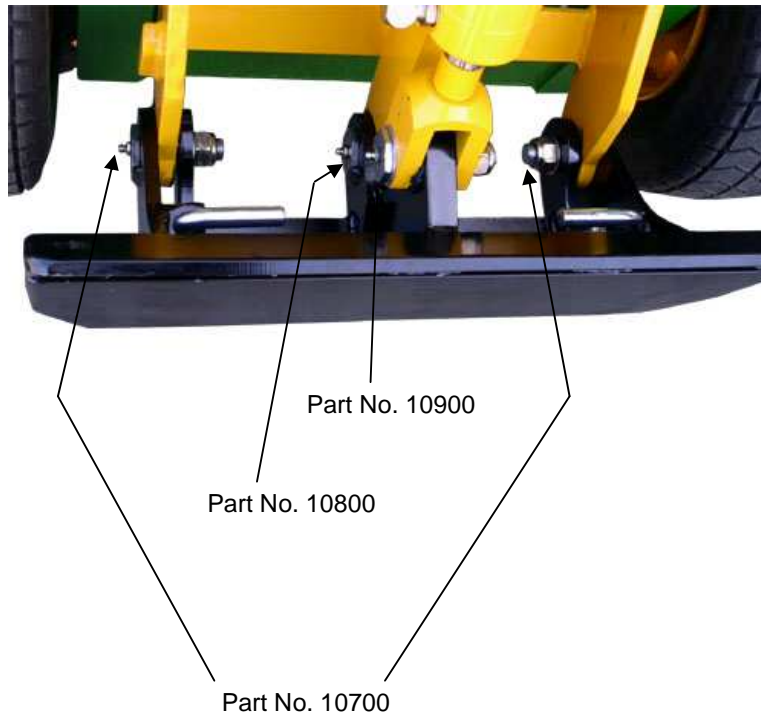
Ensure to use washers



SERVICE TASKS - Pivot Pins

Bottom Pivot Pins

Replace the four pivot pins on the attachment plate every 1000 operating hours.



TROUBLESHOOTING

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.

Boom

TROUBLE	PROBABLE CAUSE	REMEDY
Boom will not raise.	Load capacity exceeded	Reduce load. Load should not exceed 250 kg (550 lbs)
	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	Repair or 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.
Boom 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	Repair or replace hydraulic pump as necessary.
	Worn control valve spool	Check pressure delivery from control valve. Repair or replace valve as required.
	Control rod or lever broken or disconnected.	Repair or replace control rod or lever

Boom - (continued)

TROUBLE	PROBABLE CAUSE	REMEDY
Boom arm will not raise or raises 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.
Boom raises 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.
	Boom pivot pin seized or otherwise damaged.	Replace pivot pin and bushing as necessary, Grease
Boom Lowers with control lever in neutral	Worn control valve spool	Repair or replace valve as required.
	Lift ram piston seal leaking	Replace seals.

Drive System

TROUBLE	PROBABLE CAUSE	REMEDY
Machine will not drive forward 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.
	Worn or broken drive chain(s)	Repair or replace drive chains as necessary
	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
	Loose drive chain(s)	Check chain tensioner, adjust or repair as necessary
	Relief valve setting.	Adjust relief valve.

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	Repair or replace pump gears as necessary.
Hydraulic pump noisy	Worn or broken drive shaft or coupling.	Inspect drive shaft or coupling. Repair or replace as necessary.
	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	Repair or replace pump gears as necessary.

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	Repair or 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
	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.
	Carburetor flood (petrol engines)	Clear carburetor
	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

tracks

TRACKS (Series 7 only) - Safety/Parts

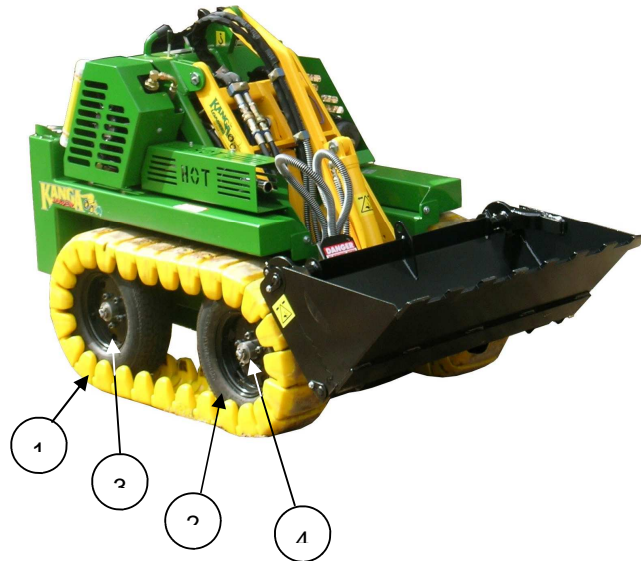


CAUTION: Observe all Safety Rules as outlined in the Operator's Manual

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 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 **NOT** operate on slopes without undertaking a risk assessment and complying with the requirements outlined in the Safe Operation section of the manual.



Parts		
No	DESCRIPTION	PART No
1	TRACKS (2 OFF)	14307
2	TRACK DRIVE TYRE (4 OFF)	14301
3	TRACK DRIVE RIM (4 OFF)	14305
4	HUB	12704
5	TRACK FITTING TOOL	50206

TRACKS INSTALLATION

NOTE: Rear tyres are water filled for extra rigidity.

DISASSEMBLY

6. Place machine on level of hard surface
7. Chock track on opposite side to be worked on
8. Turn off machine, remove key and affix Danger Tag to key
9. Jack up one side of the Kanga Loader with a hydraulic car jack
10. Deflate tyres to approx. 70 kPa (10 PSI)
11. Unscrew all wheel nuts except one on the rear wheel
12. Remove front wheel together with the tracks first and then the back wheel
13. Remove wheels from tracks

INSTALLATION OF TRACKS

1. Jack up one side of the Kanga Loader with a hydraulic car jack, rated at a minimum of 1,500 kilograms
2. Place packing beneath machine to support machine in the event of jack failure
3. Stand up tracks with both wheels inside it next to loader (Fig. 1)
Note: Fit tracks with correct rotation as shown in Fig. 1, do not reverse rotation
4. Use Track Fitting tool to spread the two wheels apart until the distance between wheel centres matches the axle distance of the machine Rotate wheel hubs to align stud pattern of wheels
5. Lift complete unit onto wheel hubs (Fig. 2) making sure that the front wheel is held on.
6. Remove Track Fitting Tool and push front wheel on fully.
7. Fit and tighten the wheel nuts
8. Inflate tyres to 450 kPa (65 PSI)
9. Repeat steps 1 - 8 on other side

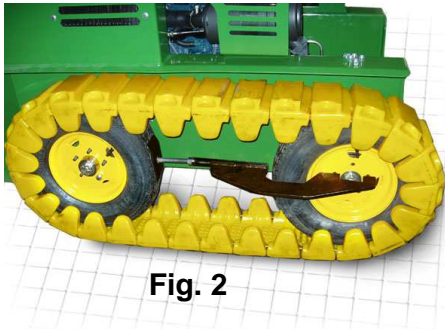


Fig. 2



Fig. 1

Ensure filler nozzles are on the outside



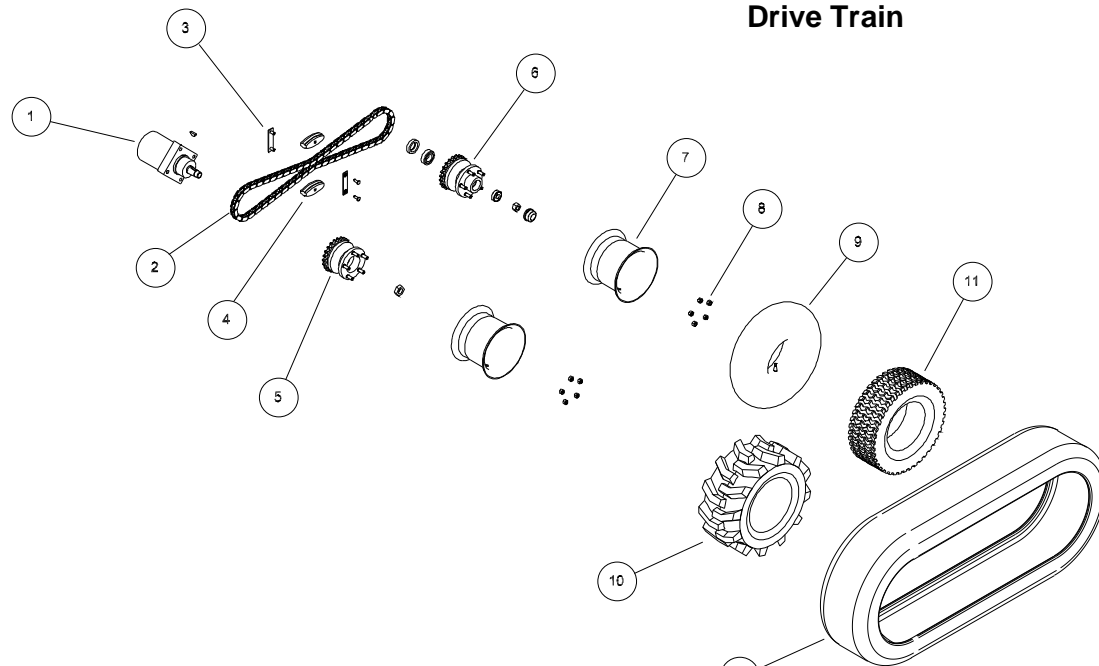
Track fitting
tool
pressure
plate on
rear tyre



Track fitting
tool pins
into holes in
the front
wheel hub

spare parts

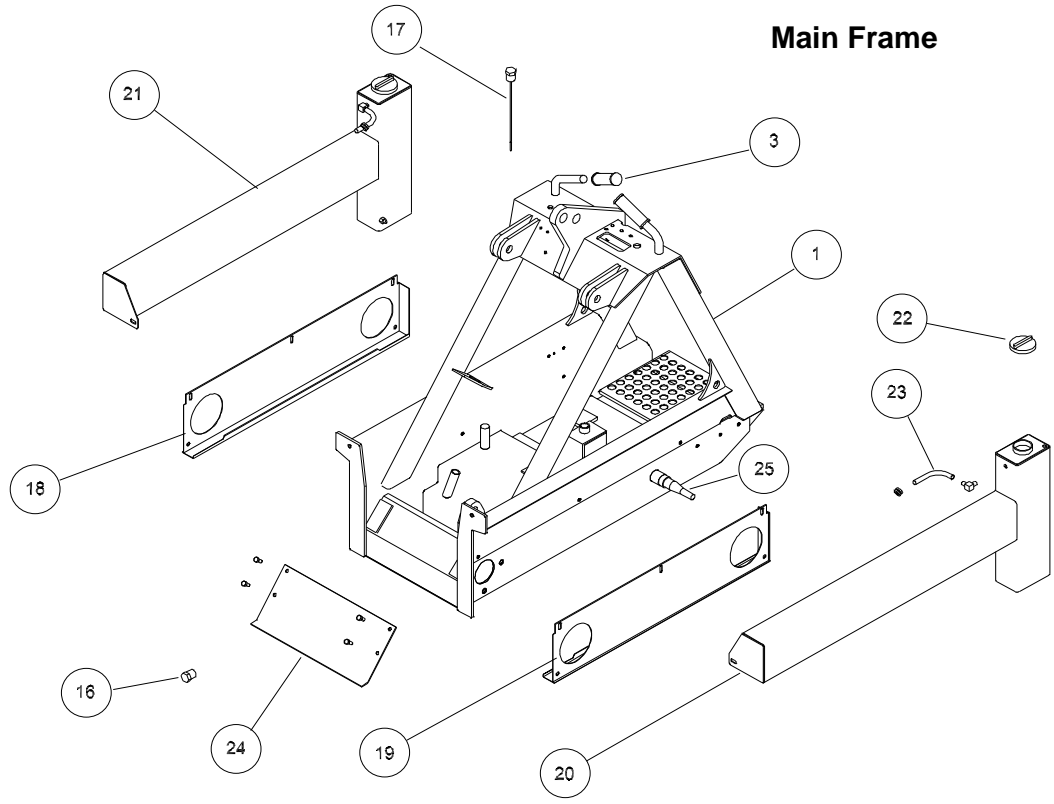
DRIVE TRAIN - ASSEMBLY DRAWING



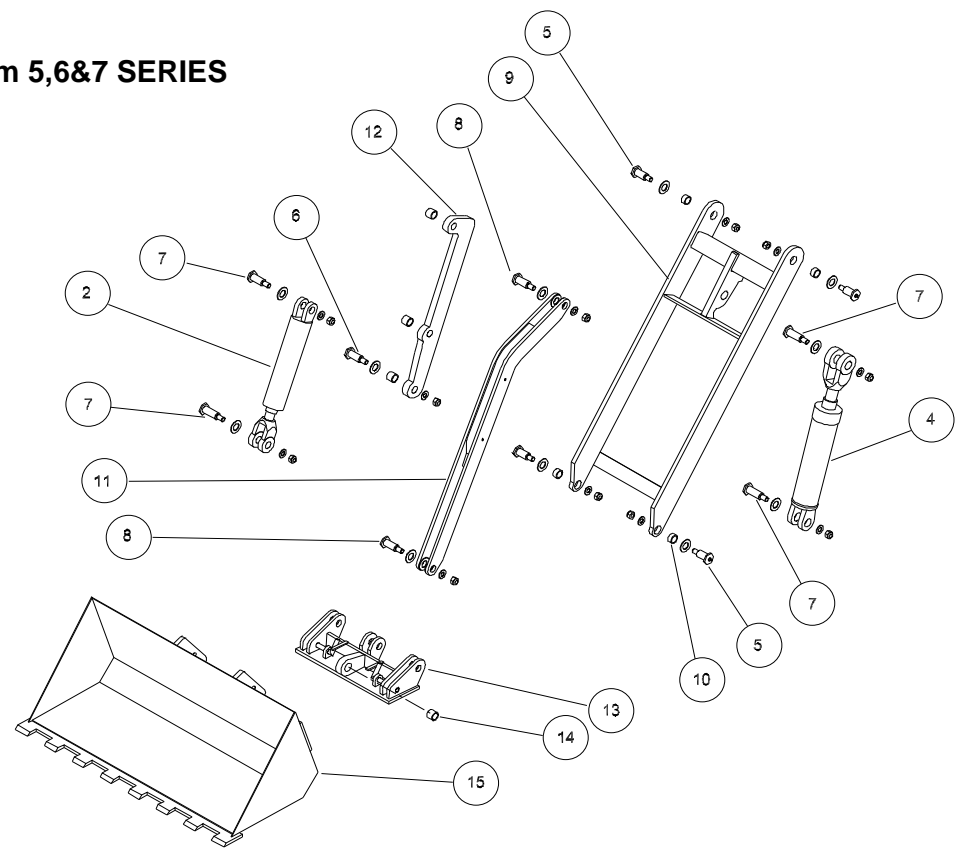
No	Description	Part No
1	Wheel Motor Series 5 (2x)	12320
	Wheel Motor Series 6 (4x)	12324
	Wheel Motor Series 7 (4x)	12282
2	Chain Series 5	17600
	Chain Join Link	17700
	Chain Half Link	17800
3	Chain Tensioner Frame	12610
4	Chain Tensioner Block	12620
5	Drive Hub Series 5	12701
	Drive Hub Series 6 & 7 (4x)	12704
6	Idler Hub Series 5	12801
	Wheel Bearing Inner	13200
	Wheel Bearing Outer	13210
	Seal	13310
	Dust Cap	13300

No	Description	Part No
7	Rim 6 x 10	14210
	Rim 7 x 12	14206
	Rim suit Track Tyre Series 7	14305
8	Wheel Nuts	14300
9	Tube (Lug Tyre)	14010
	Tube (20" Turf)	14230
10	Lug Tyre 19"	14110
	Lug Tyre 23"	14206
11	Turf Tyre 20"	14220
	Turf Tyre 20" wide	14171
	Turf Tyre 23"	14106
	Track Tyre Series 7	14301
12	Tracks Series 7	

MAIN FRAME & ARM 5, 6 & 7 SERIES - ASSEMBLY DRAWINGS



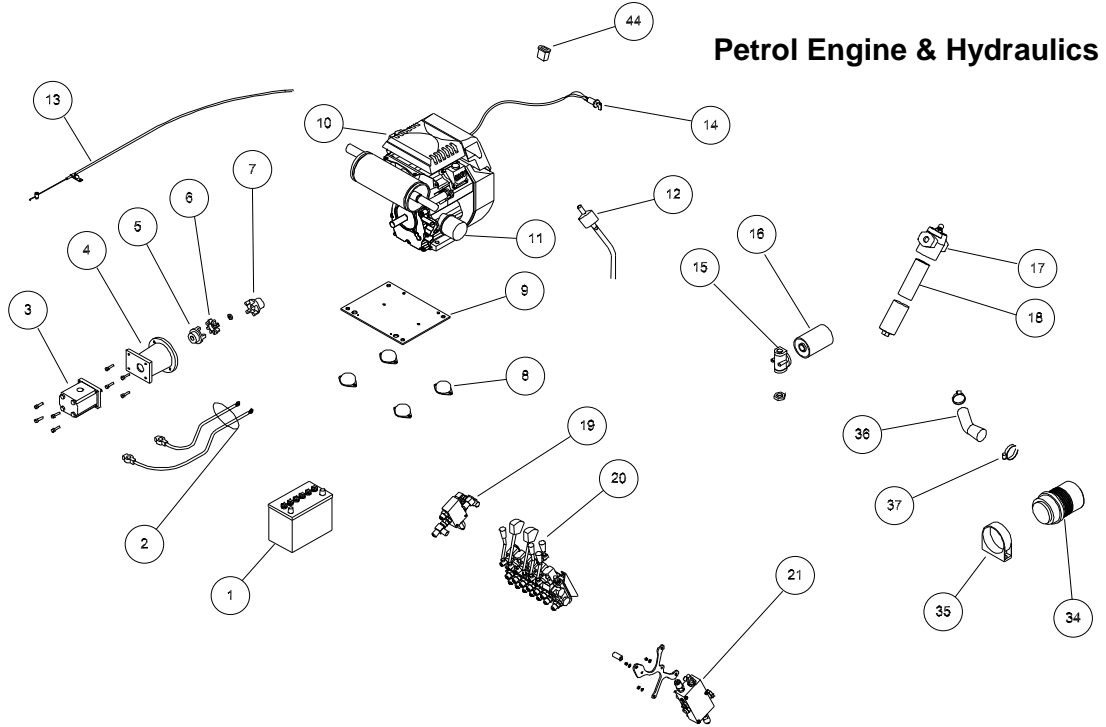
Arm 5,6&7 SERIES



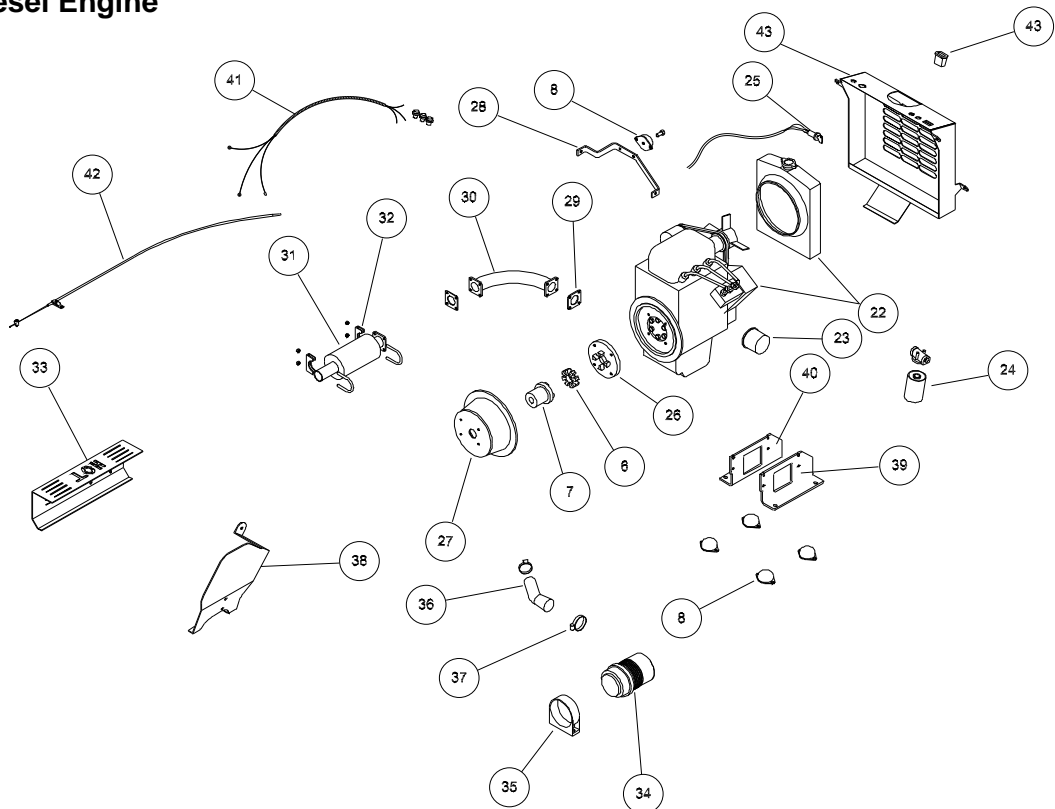
MAIN FRAME - PARTS LIST

No	Description	Part No	No	Description	Part No
	Loader Std. Hyd. Tube Kit	10040	13	Attachment Plate standard	11500
	Loader Std. Hyd. Hose Kit	10010		Attachment Plate universal	11502
	Loader Std. Hyd. Adaptor Kit	10020	14	Bush	11410
	Loader Std. Bolt Kit	10030	15	Bucket standard	11600
1	Chassis	10100		Bucket 4in1	60001
2	Tilt Cylinder	10190	16	Drain Plug	13500
	Tilt Cylinder Seal Kit	10231	17	Dip Stick	13600
3	Handle Grips	10300	18	Chain Guard R/H	13700
4	Lift Cylinder	10390	19	Chain Guard L/H	13710
	Lift Cylinder Seal Kit	10470	20	Fuel Tank L/H	20113
5	Pin "A" (inc. nipple, washer & nut)	10700	21	Fuel Tank R/H	20114
6	Pin "B" (inc. nipple, washer & nut)	10800		Fuel Line Guard pair	20117
7	Pin "C" (inc. nipple, washer & nut)	10900	22	Fuel Cap	22230
8	Pin "D" (inc. nipple, washer & nut)	10810	23	Fuel Line	22210
9	Arm Assembly	11200	24	Splash Plate	10150
10	Bush	11210	25	Axle Series 5	11700
11	Leveller Arm	11300			
12	Tilt Arm	11400			

ENGINE & HYDRAULICS 5 SERIES - ASSEMBLY DRAWINGS



Diesel Engine

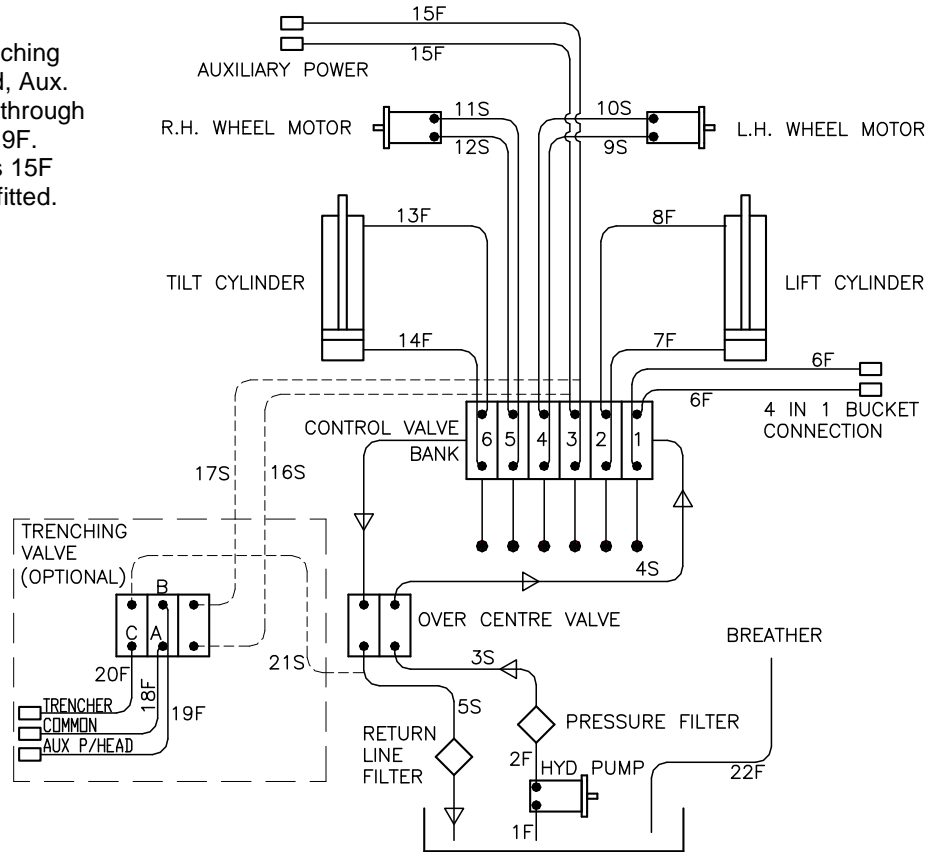


ENGINE & HYDRAULICS - PARTS LIST

No	Description	Part No	No	Description	Part No
1	Battery	14390	22	Kubota Engine incl. Radiator	15950
	Battery Cover	14410	23	Oil Filter	20500
2	Battery Lead Set	14500	24	Fuel Filter Element Diesel	20400
3	Pump G-520	14620	25	Key Switch	15980
	Pump G-524, DL520, Series 6 & 7	14680	26	Engine Coupling	15540
4	Bell Housing	15300		Engine Coupling Spacer	15542
5	Pump Coupling	15520	27	Bell Housing	15210
6	Spider	15530	28	Engine Strap	15600
7	Engine Coupling	15510	29	Exhaust Gasket	15790
	Engine Coupling Spacer (20hp)	15511	30	Exhaust Flex. Hose	18910
	Engine Coupling Spacer (24hp)	15561	31	Muffler	15960
8	Engine Mount	15700	32	Exhaust Clamps	18920
9	Engine Mount Plate	15800	33	Exhaust Guard	20130
10	Honda Engine 20hp	15900	34	Air Cleaner	20663
	Honda Engine 24hp	16050		Air Cleaner Element	20680
11	Oil Filter 20hp & 24hp	15910	35	Air Cleaner Bracket	20665
12	Fuel Filter	15942	36	Air Cleaner Hose Petrol	20320
13	Throttle Cable	19030		Air Cleaner Hose Diesel	20290
	Throttle Assembly	19029	37	Hose Clamp	20350
14	Key Switch	15743	38	Guard Air Cleaner	20140
15	Hydraulic Return Filter Head	16300	39	Engine Mount L/H Series 5	15810
16	Hydraulic Return Filter Element	16400		Engine Mount L/H Series 6 & 7	15820
17	Hydraulic Pressure Filter	16410	40	Engine Mount R/H Series 5	15811
18	Hydraulic Pressure Filter Element	16420		Engine Mount R/H Series 6 & 7	15821
19	Over Centre Valve Series 5	16600	41	Electric Loom incl. Warning Lights	15850
	Over Centre Valve Series 6 & 7	16600-1	42	Throttle Cable	19040
20	Control Valve Bank	17400		Throttle Assembly	19029
	Valve Bank Spacer	17420	43	Engine Cowlings	15830
	Valve Bank Knobs	17270	44	Engine Hour Meter	21500
21	Trenching Valve	41300			
	Trenching Valve Mounting Bracket	41320			

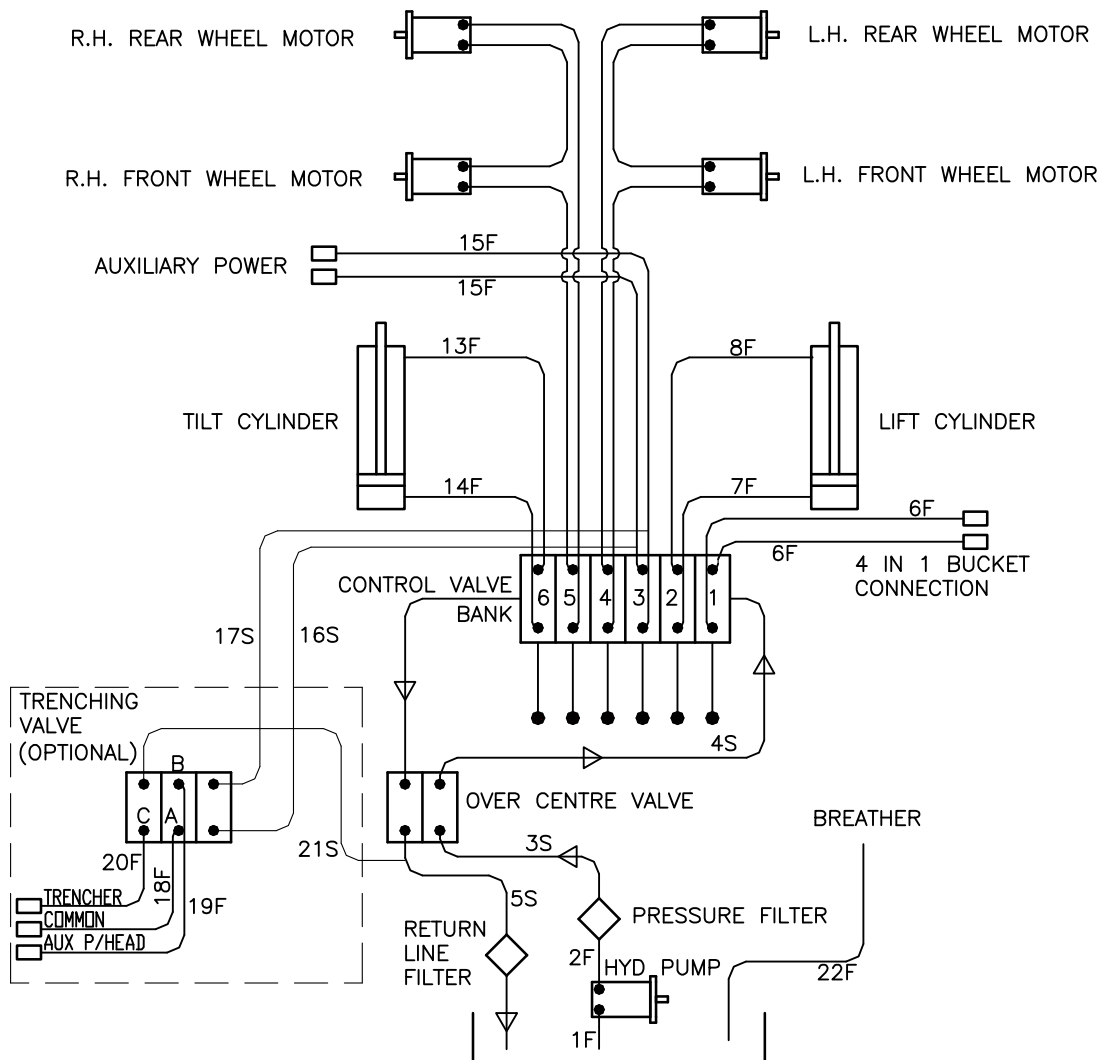
HYDRAULIC CONNECTIONS - Series 5

When a Trenching Valve is fitted, Aux. Power is fed through lines 18F & 19F. The two lines 15F are then not fitted.

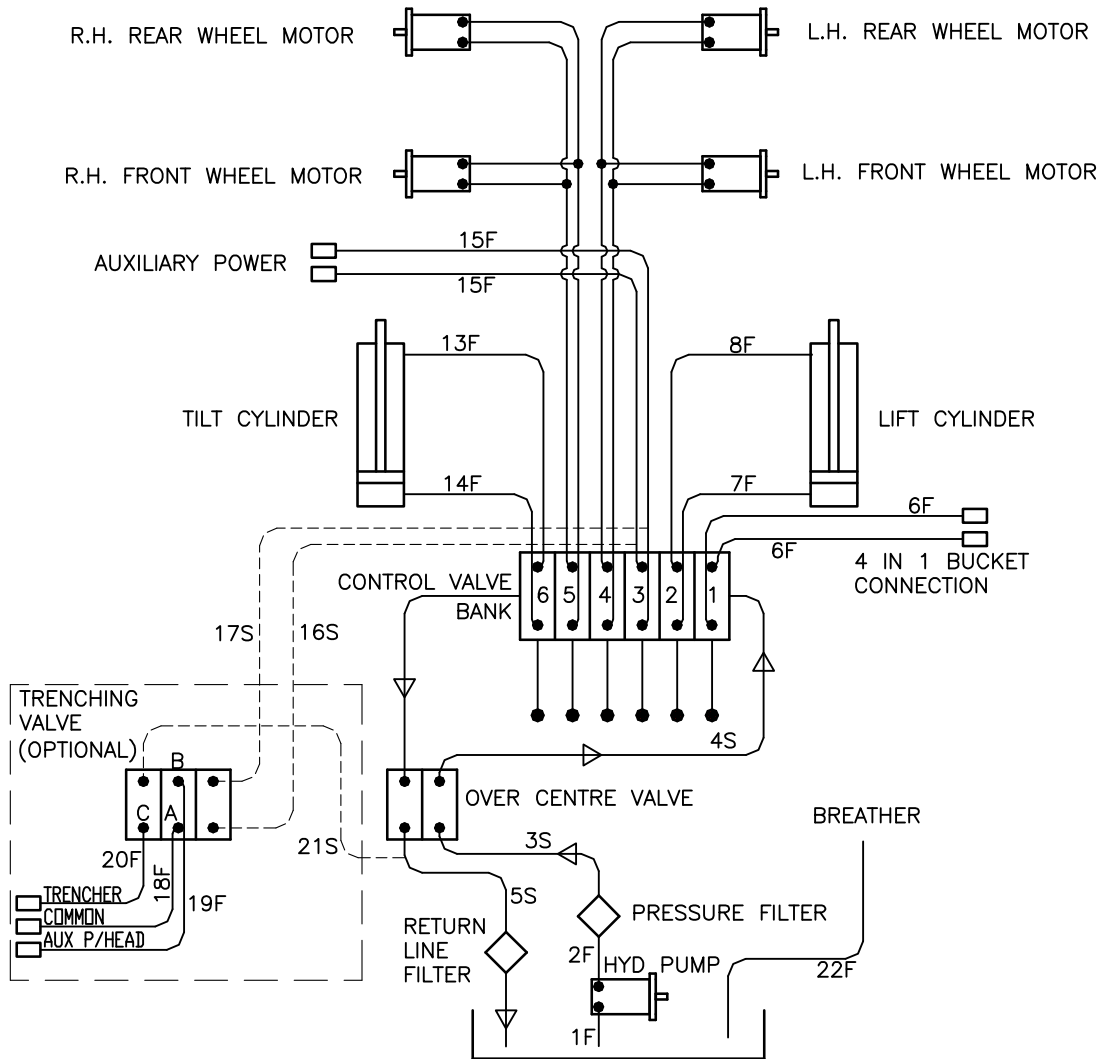


10010-2F	Pump to Pressure Filter	1/2"	310	12	3/4" JIC Fem 90° Sw iv	3/4" JIC Fem Straight Sw iv
10040-3S	Pressure Filter to Over Centre Valve	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-4S	Over Centre Valve to Control Valve Inlet	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-5S	Over Centre Valve to Return Line Filter	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10010-6F	Valve Bank Section 1 to 4in1 Bucket Connection (2x)	1/2"	680	27	7/8" JIC Fem Straight Sw iv	1/2" BSPP Male
10010-7F	Valve Bank Section 2 to Lift Cylinder (rear end)	3/8"	795	31	9/16" JIC Fem Straight Sw iv	9/16" JIC Fem Straight Sw iv
10010-8F	Valve Bank Section 2 to Lift Cylinder (rod end)	3/8"	455	18	9/16" JIC Fem Straight Sw iv	9/16" JIC Fem Straight Sw iv
10040-9S	Valve Bank Section 4 to L.H Wheel Motor	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-10S	Valve Bank Section 4 to L.H Wheel Motor	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-11S	Valve Bank Section 5 to R.H Wheel Motor	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-12S	Valve Bank Section 5 to R.H Wheel Motor	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10010-13F	Valve Bank Section 6 to Tilt Cylinder (rod end)	3/8"	2180	86	9/16" JIC Fem Straight Sw iv	9/16" JIC Fem Straight Sw iv
10010-14F	Valve Bank Section 6 to Tilt Cylinder (rear end)	3/8"	1910	75	9/16" JIC Fem Straight Sw iv	9/16" JIC Fem Straight Sw iv
10010-15F	Valve Bank Section 3 to Aux Power Connection (2x)	1/2"	625	25	7/8" JIC Fem Straight Sw iv	1/2" BSPP Male
10040-16S	Valve Bank Section 3 to Trenching Valve (optional)	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10040-17S	Valve Bank Section 3 to Trenching Valve (optional)	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
41340-18F	Common Return to Trenching Valve (optional)	1/2"	530	21	3/4" JIC Fem 45° Sw iv	1/2" BSPP Male
41340-19F	Trenching Valve to Aux. P/Head (optional)	1/2"	490	19	3/4" JIC Fem 45° Sw iv	1/2" BSPP Male
41340-20F	Trenching Valve to Trencher (optional)	1/2"	530	21	3/4" JIC Fem 45° Sw iv	1/2" BSPP Male
10040-21S	Trenching Valve to Over Centre Valve (optional)	5/8" tube			3/4" JIC Nut	3/4" JIC Nut
10010-22F	Reservoir Breather	1/4"	650	26	M14 Male	7/16" JIC Fem Straight Sw iv

HYDRAULIC CONNECTIONS - Series 6



HYDRAULIC CONNECTIONS - Series 7



DECALS

	Part No.		Part No.
	18547		18560
	18548		18480
	18549		18594
	18410		18563
	18430		18562
	18450		18579
	18460		18572
	18550		18549-1
	18569		18549-1
	18571		18541
	18500		18546
	18490		18568

	Part No.		Part No.
	18594		18565
	18557		18567
	18558		18541
	18559		18557
	18564		

HOW TO ORDER SPARE PARTS

WEB SITE ADDRESS: www.kanga-loader.com

1. ENTER SPARE PARTS SECTION
2. SELECT REQUIRED PARTS GROUP FROM **KANGA LOADER** MENU
3. HOLD CURSOR OVER PART NUMBER TO DISPLAY DETAILS
4. SELECT REQUIRED PART FROM PART LIST
5. FOLLOW INSTRUCTIONS TO COMPLETE ORDER

FACSIMILE NUMBER: **+61 7 5593 8556**

6. IDENTIFY THE PART(S) REQUIRED
7. REFER TO PARTS LISTS
8. INCLUDE THE FOLLOWING ON YOUR FACSIMILE:
Loader Model, Serial Number, Engine Type
Part Number required, Description

(INCLUDE METHOD OF PAYMENT , CONTACT NUMBER, DELIVERY ADDRESS)

TELEPHONE (AUSTRALIA): **+61 7 5593 4567**

POSTAL ADDRESS:

*JADEN-KANGA GROUP
PO BOX 54
BURLEIGH HEADS QLD 4220 AUSTRALIA*

INCLUDE THE FOLLOWING INFORMATION:
*Loader Model and Serial Number, Engine Type
Part Number required, Description*

(INCLUDE METHOD OF PAYMENT, CONTACT NUMBER, DELIVERY ADDRESS)

WALK IN ADDRESS:

*JADEN-KANGA GROUP
UNIT 2/127 LAHRS RD
ORMEAU, QLD 4208 AUSTRALIA*

attachments

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 the hoses cannot be connected incorrectly.

COMMON HOSE LAYOUTS AS VIEWED FROM THE FRONT OF THE LOADER



STANDARD LOADER SET UP:

Right Side:

This connection is used for all kinds of different attachments and it is controlled by the AUX lever on the control panel.

Left Side:

This connection is used for the **4 in 1 bucket** and the **Angle Blade**. It is controlled by the **4 in 1** lever on the control panel.



LOADER WITH TRENCH VALVE:

This machine has an additional hose connection to connect a trencher.

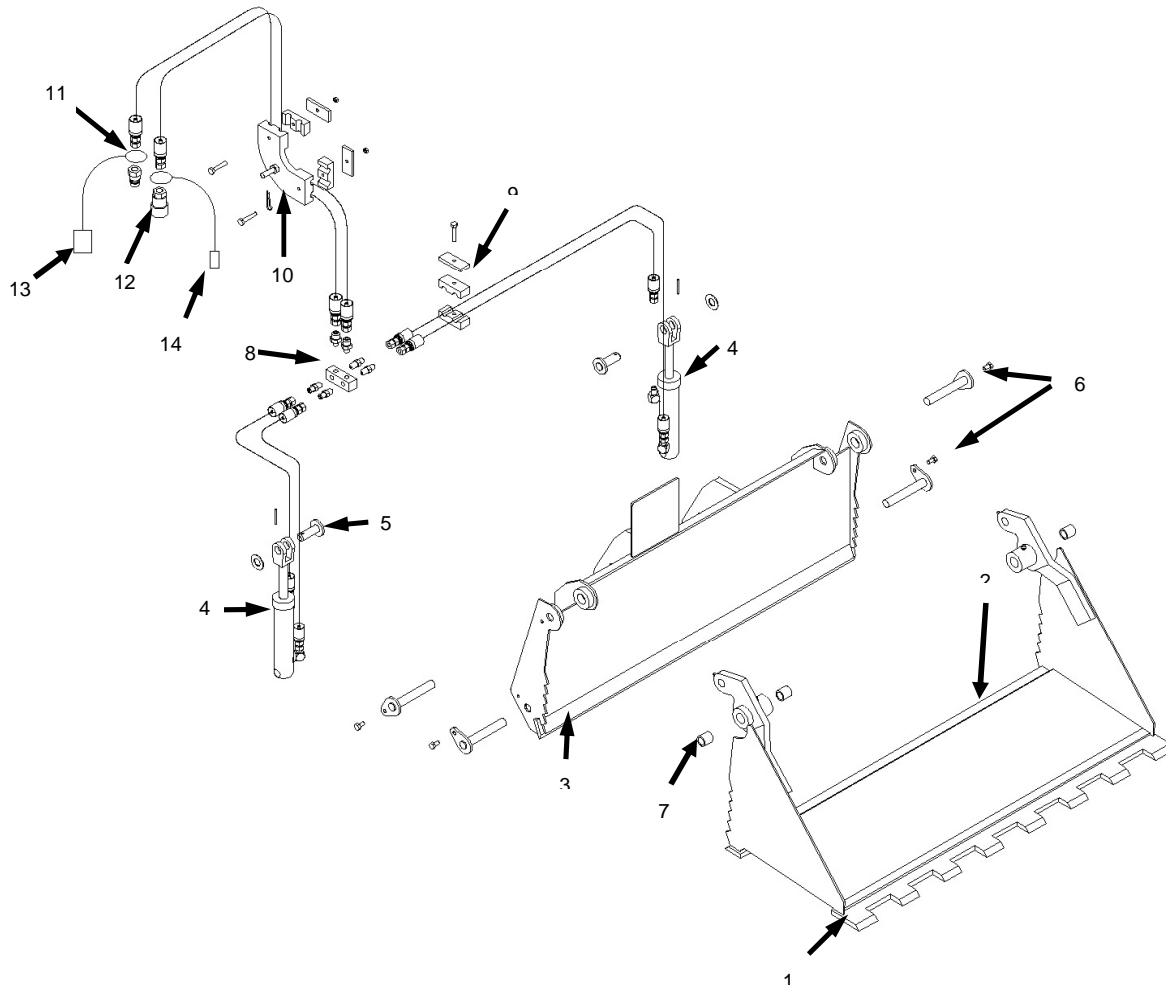
The **trencher** is connected to **A** and **C**.

Other attachments are connected to A and B

Note: Additional hoses can be fitted on either side to connect specialised attachments such as stump grinders and back hoes.

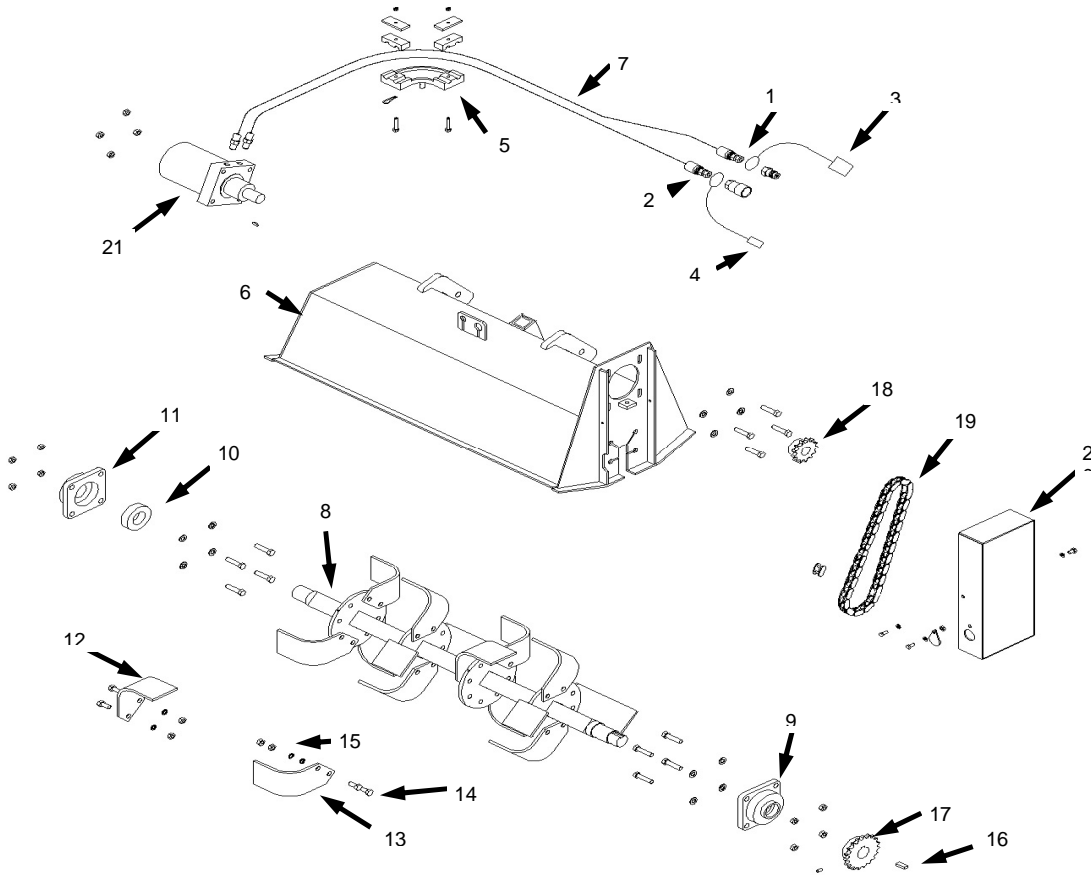
Please consult the relevant manuals before connecting these.

4 IN A BUCKET



ITEM No	PART No.	DESCRIPTION	ITEM No	PART No.	DESCRIPTION
	60001	4in1 Bucket compl. STD att.	6	60301	Swivel Pin
	60004	4in1 Bucket compl. UNI att.	7	60601	Bush
	60021	Hydr. Adapter Kit	8	60500	Tee block
	61003	Hydr. Hose Kit	9	17510	Hose clamp retaining plate
	61011	Bolt Kit	10	22000	U-Bute bracket
1	19601	Bucket Strip, toothed	11	19900	Quick Release Coupling male
2	19611	Bucket Strip, straight	12	19910	Quick Release Coupling female
3	19612	Bucket Strip, rear	13	19920	Dust Cover male
4	62205	Hydr. Cylinder	14	19930	Dust Cover female
5	60401	Pin, ram top			

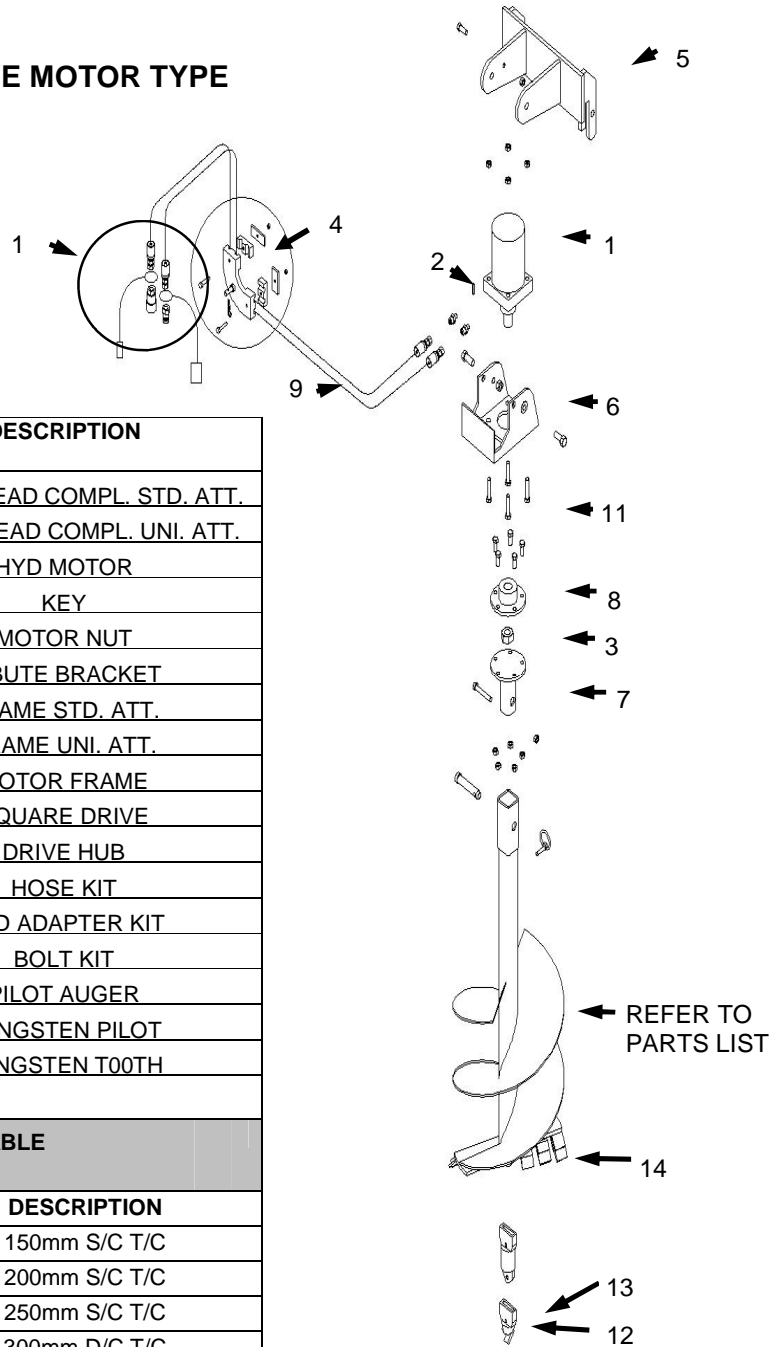
ROTARY HOE (TILLER)



ITEM No	PART NoNo.	DESCRIPTION	ITEM	PART NNNNoNoNo.	DESCRIPTION
1	19900	QUICK RELEASE COUPLING - MALE	13	80400	LEFT HAND BLADE
2	19910	QUICK RELEASE COUPLING- FEMALE	14	80500	1/2" x 1 1/2" UNF BOLT & NUT
3	19920	FEMALE DUST COVER	15	80600	1/2" SPRING WASHER
4	19930	MALE DUST COVER	16	80700	12 X 8 KEY STEEL
5	22000	U-BEAUT BRACKET	17	80800	19 TOOTH SPROCKET
6	80000	BODY	18	80900	13 TOOTH SPROCKET
7	80010	HYDRAULIC HOSE KIT	19	81000	DRIVE CHAIN
8	80100	SHAFT	20	81100	CHAIN COVER
9	80200	BEARING ASSEMBLY	21	81700	HYDRAULIC MOTOR
10	80210	BEARING		30410	HYDRAULIC ADAPTOR KIT
11	80220	BEARING HOUSING		80030	NUT & BOLT KIT
12	80300	RIGHT HAND BLADE			

STANDARD AUGER POWER HEAD

DIRECT DRIVE MOTOR TYPE



ITEM	PART No	DESCRIPTION
	30000	POWER HEAD COMPL. STD. ATT.
	30001	POWER HEAD COMPL. UNI. ATT.
1	12320	HYD MOTOR
2	12900	KEY
3	13000	MOTOR NUT
4	22000	U BUTE BRACKET
5	30010	FRAME STD. ATT.
	30011	FRAME UNI. ATT.
6	30020	MOTOR FRAME
7	30200	SQUARE DRIVE
8	30100	DRIVE HUB
9	30400	HOSE KIT
10	30410*	HYD ADAPTER KIT
11	30110	BOLT KIT
12	32100	PILOT AUGER
13	32130	TUNGSTEN PILOT
14	32010	TUNGSTEN T00TH

AUGER TYPES AVAILABLE

PART No	DESCRIPTION
31020	150mm S/C T/C
31120	200mm S/C T/C
31320	250mm S/C T/C
31430	300mm D/C T/C
31530	350mm D/C T/C
31570	450mm D/C T/C
31590	600mm D/C T/C
31600	750mm D/C T/C

AUGERS:

T/C - TUNGSTEN CARBIDE
 S/C - SINGLE CUT (TEETH ONE SIDE ONLY)
 D/C - DOUBLE CUT (TEETH BOTH SIDES)

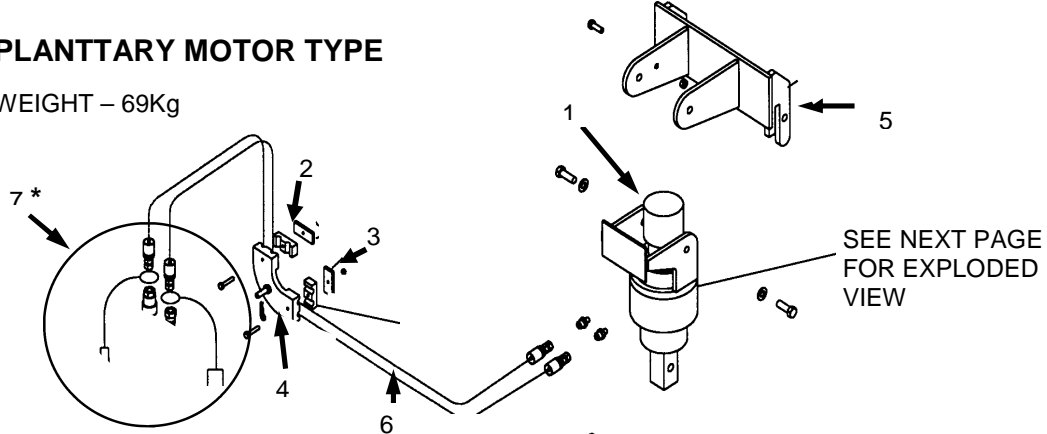
AUGERS HAVE 3" TUNGSTEN PILOT (P/N 32130)

* HYDRAULIC ADAPTER KIT (P/N 30410) HAS MALE & FEMALE QUICK RELEASE COUPLINGS (QRC) & 2 x RUBBER BOOTS.

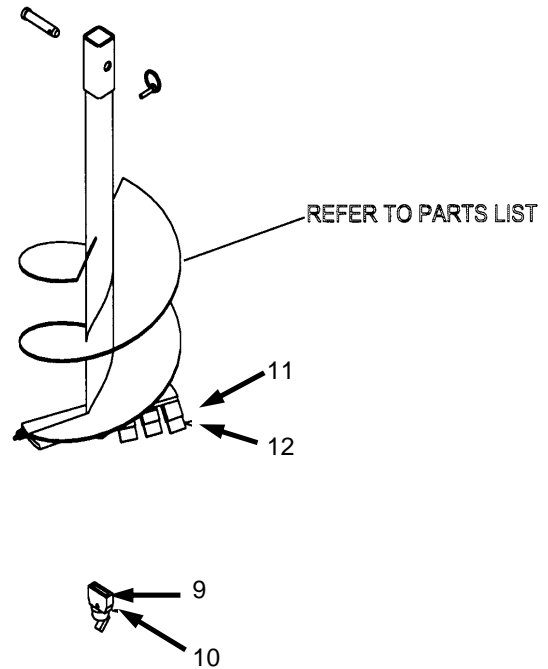
HIGH TORQUE AUGER POWER HEAD

PLANETARY MOTOR TYPE

WEIGHT – 69Kg



ITEM	PART No.	DESCRIPTION
	30310	POWER HEAD COMPL. STD ATT.
	30311	POWER HEAD COMPL. UNI ATT
1	30300	MOTOR PLANETARY DRIVE
2	17500	HOSE CLAMP
3	17510	COVER PLATE
4	22000	U-BUTE BRACKET
5	30010	FRAME STD ATTACH.
	30011	FRAME UNI ATTACH.
6	30400	HOSE KIT
7 *	30410	ADAPTOR KIT
8	30120	BOLT KIT (NOT SHOWN)
9	32100	PILOT AUGER
10	32130	3" TUNGSTEN PILOT
11	32000	CUTTING TOOTH
12	32010	TUNGSTEN DIRT TEETH



AUGER TYPES AVAILABLE:

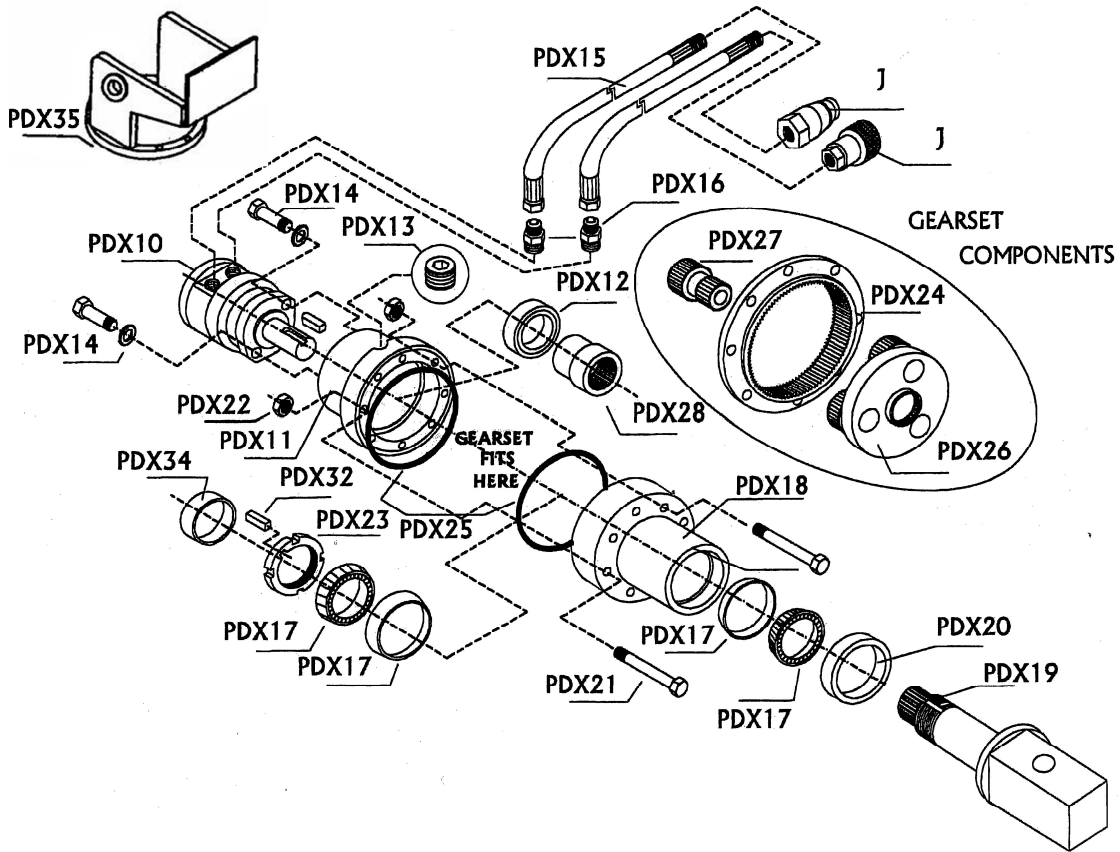
PART No.	DESCRIPTION
31020	150 mm S/C T/C
31120	200 mm S/C T/C
31320	250 mm S/C T/C
31430	300 mm D/C T/C
31530	350 mm D/C T/C
31570	450 mm D/C T/C
31590	600 mm D/C T/C PILOT EXT
31600	750 mm D/C T/C PILOT EXT

AUGERS:

T/C - TUNGSTEN CARBIDE
 S/C - SINGLE CUT (TEETH ONE SIDE ONLY)
 D/C - DOUBLE CUT (TEETH BOTH SIDES)

AUGERS HAVE 3" TUNGSTEN PILOT (P/N 32130)

* HYDRAULIC ADAPTER KIT (P/N 30410) HAS MALE & FEMALE QUICK RELEASE COUPLINGS (QRC) & 2 x RUBBER BOOTS.




Part No.	Description	Qty.	Part No.	Description	Qty
PDX 10	Hydraulic Motor	1	PDX 22	Nyloc Nut (Suit Gearbox Bolt)	8
PDX 11	Input Housing	1	PDX 23	Locking Nut	1
PDX 12	Input Bearing	1	PDX 24	Ring Gear	1
PDX 13	Filler Plugs	1	PDX 25	'O' Rings	2
PDX 14	1/2" x 1 1/3" UNC ht Bolt & Spring washer	2	PDX 26	Carrier	1
PDX 15	Hose 2.2m (87") Long	1 Pair	PDX 27	Input Pinion	1
PDX 16	7/8" UNO x 3/4" JIC Male-Male Nipple	2	PDX 28	Input Adaptor	1
PDX 17	Tapered Thrust Bearing	2	PDX 32	Locking Key	1
PDX 18	Output Housing	1	PDX 33	Gear Oil	450 ml
PDX 19	Output Shaft (51mm SQ)	1	PDX 34	Spacer Ring	1
PDX 20	Oil Seal	1	PDX 35	Mounting Ring	1
PDX 21	Gearbox Bolt	8			

POWER HEAD OPERATING INSTRUCTIONS

FITTING OF POWER HEAD: Stand the auger up so it is possible to engage the mounting plate on the power head with the mounting plate on the loader. Raise the power head slightly and engage the locking pins. Turn the engine off, move the AUX control lever to release the hydraulic line pressure. Clean the hydraulic fittings (QRC's) and then connect them to connections A & B (see page).


Removal procedure is a reverse order of the above. Remember to always reconnect the hoses into a loop 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 underneath onto the power heads square drive shaft with the locking pin holes aligned

 **CAUTION:** Large auger fitting is a 2 person operation

Insert the locking pins and lock in place.

PREOPERATION CHECK: Ensure that the auger 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 **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 all bolts 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.

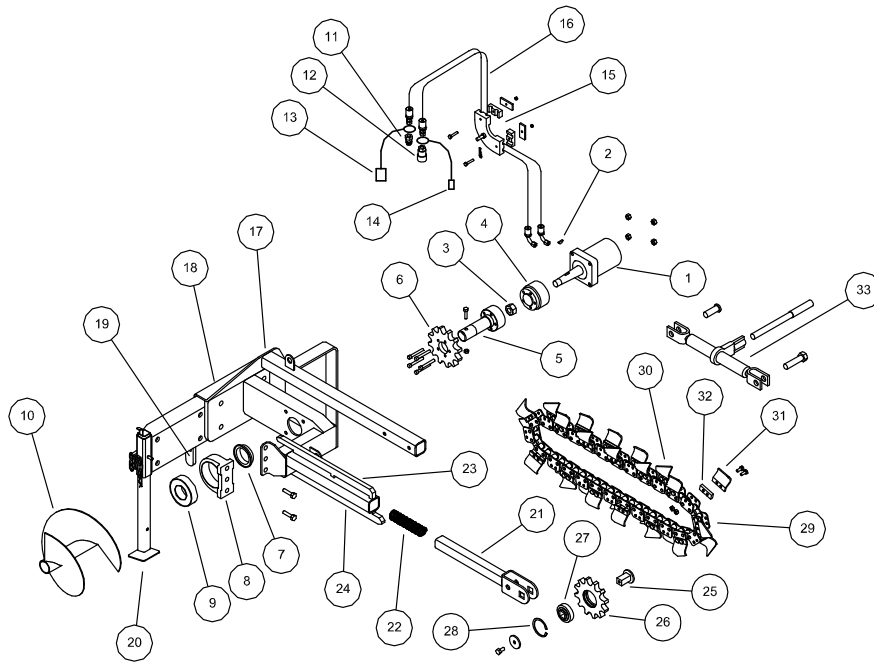
 **CAUTION:** Prior to commencing any digging operations check with the local Authorities and the land Owner that there are no buried services (Power, phone, water, gas, sewage) in the vicinity.

Australia ONLY phone 1100 "DIAL BEFORE YOU DIG"

Read the Safety instructions in this manual

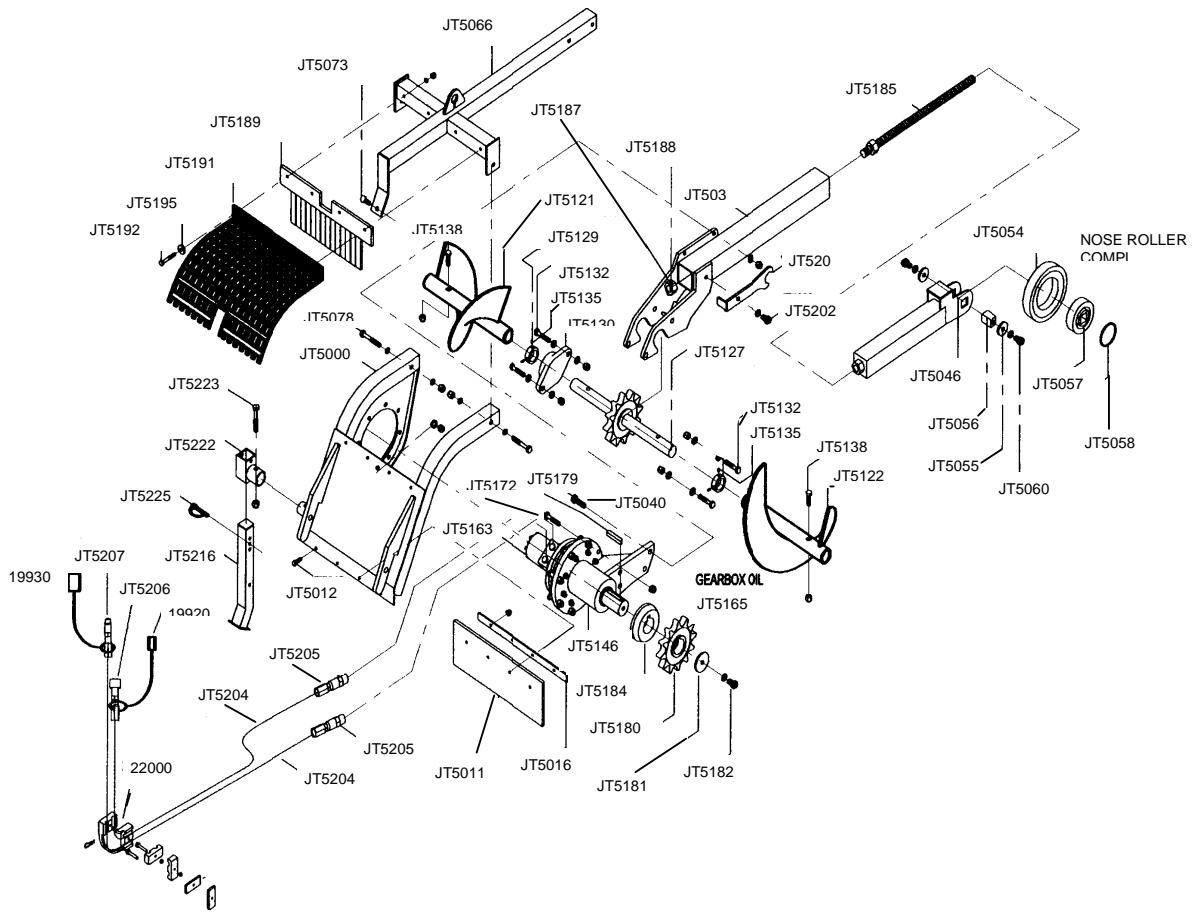
Keep clear of the auger at all times (4m minimum)

STANDARD TRENCHER



No	Description	Part No	No	Description	Part No
	TRENCHER COMPL UNI ATTACH	41228	17	TRENCHER FRAME COMPL	41227
	TRENCHER COMPL STD ATTACH	41229	18	MOUNTING PLATE STD	41224
	BOLT KIT	40821		MOUNTING PLATE UNI	41225
1	HYDR MOTOR	12284	19	LUG STD ATTACH.	40231
2	KEY	12900	20	RIGHT HAND LEG (STD ATT. ONLY)	40700
3	MOTOR LOCK NUT	13000		LEFT HAND LEG (STD ATT. ONLY)	40710
4	DRIVE HUB -5 BOLT	40400	21	INSIDE BOOM	40201
5	TRENCHER SHAFT	40421	22	SPRING	40500
6	DRIVE SPROCKET - 5 BOLT	40400	23	BISALLOY WEAR STRIP TOP	40211
7	LABYRINTH SEAL	41215	24	BISALLOY WEAR STRIP BOTTOM	40222
8	BEARING HOUSING	41201	25	IDLER AXLE	40340
9	BEARING	41211	26	IDLER SPROCKET	40330
10	FLIGHT AUGER	40601	27	BEARING	40310
	FLIGHT AUGER EXTENSION	40602	28	CIRCLIP	40320
11	QUICK RELEASE COUPLER MALE	19900	29	TRENCHER CHAIN COMPL.	42551
12	QUICK RELEASE COUPLER FEMALE	19910	30	TEETH POINTED L/H	40780
13	DUST COVER MALE	19920		TEETH POINTED CENTRE	40781
14	DUST COVER FEMALE	19930		TEETH POINTED R/H	40790
15	U-BEAUT BRACKET	22000	31	TEETH L/H	40810
16	AUXILLARY HOSE KIT	30400		TEETH R/H	40800

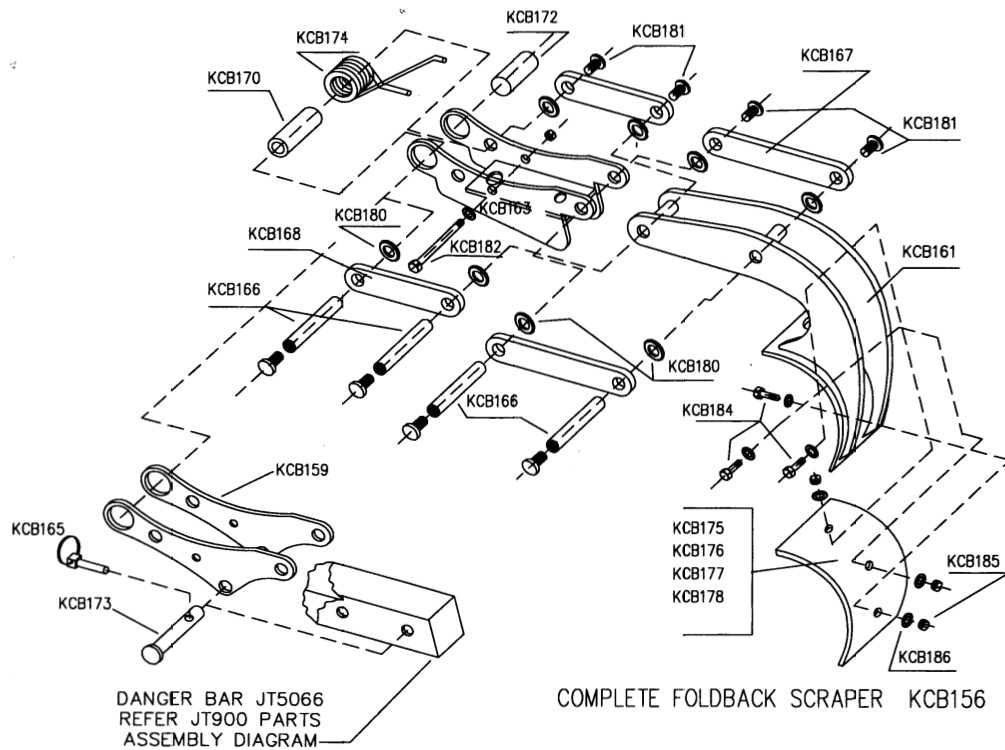
HEAVY DUTY KC TRENCHER



PART No.	DESCRIPTION	QTY.
JT 5000	BACKING PLATE / SIDE PLATE COMPLETE	1
JT 5011	RUBBER FLAP (BOTTOM)	1
JT 5012	RUBBER FLAP (BOT) RETAINING PL. FASTENERS - ZC BOLT & NUT	4
JT 5016	RUBBER FLAP (BOT) RETAINING PLATE	1
JT 5035	OUTER BOOM COMPLETE	1
JT 5040	OUTER BOOM TO PLANETARY HOUSING ZC BOLT, NUT & WASHER	4
JT 5054	LARGE NOSE ROLLER	1
JT 5055	NOSE ROLLER PIN WASHERS	2
JT 5056	NOSE ROLLER SQ. PIN	1
JT 5057	NOSE ROLLER BEARING	1
JT 5058	NOSE ROLLER CIRCLIP	1
JT 5060	NOSE ROLLER WASHER TO SQ	2
JT 5062	LARGE NOSE ROLLER COMPLETE	1
JT 5066	DANGER BAR COMPLETE	1
JT 5073	DANGER BAR REAR MOUNTING PLATE TO BACKING PLATE	1
JT 5121	LEFT HAND AUGER COMPLETE	1

PART No.	DESCRIPTION	QTY.
JT 5122	RIGHT HAND AUGER COMPLETE	1
JT 5127	IDLER SPROCKET SHAFT COMPLET	1
JT 5129	IDLER SPROCKET SHAFT BEARING INNER	2
JT 5130	BACKING PLATE / SIDE PLATE COMPLETE	1
JT 5132	IDLER SHAFT BEARING TO OUTER BOOM ZC BOLT, NUT & FLAT WASHER	4
JT 5135	IDLER SHAFT BEARING TO IDLER SHAFT (LOCKS BEARING TO SHAFT GRUB SCREW AND LOCK NUT	4
JT 5138	L & R AUGER COMPLETE TO SPROCKET IDLER SHAFT ZC BOLT & NUT	2
JT 5146	PLANETARY GEARBOX COMPLETE GF 20.5 / BOX STAMPED 21	1
JT 5163	HYDRAULIC MOTOR 5.9 S/PLUS	1
JT 5165	GEAR OIL 600 ml.	
JT 5172	PLANETARY TO SIDE PLATE ZC BOLT, SPRING WASHER & NUT	7
JT 5179	DRIVE SPROCKET & KEY	1
JT 5180	DRIVE SPROCKET 50mm (2") BORE	1
JT 5181	SPROCKET RETAINING WASHER	1
JT 5182	SPROCKET RETAINING WASHER TO SHAFT ZC BOLT & WASHER	1
JT 5184	SEAL PROTECTOR	1
JT 5185	ADJUSTING SCREW COMPLETE (BOOM)	1
JT 5187	NUT TO ADJUSTING SCREW	2
JT 5188	NUT TO ADJUSTING SCREW	1
JT 5189	RUBBER FLAP (TOP)	1
JT 5191	GUARD	1
JT 192	REAR OF GUARD TO SIDE SHIFT PLATE BOLT, FLAT WASHER & NUT	4
JT 195	REAR OF GUARD TO SIDE SHIFT PLATE RUBBER WASHER	4
JT 5200	SPANNER	1
JT 5202	SPANNER TO OUTER BOOM ZC BOLT & SPRING WASHER	1
JT 5204	HYDRAULIC HOSES 12 mm (1/2")	2
JT 5205	HYDRAULIC HOSE ADAPTORS	2
JT 5206	QUICK RELEASE COUPLING (FEMALE)	1
JT 5207	QUICK RELEASE COUPLING (MALE)	1
JT 5212	"NO STEP" STICKER (RED) TO DANGER BAR (not shown)	2
JT 5213	"CAUTION-KEEP CLEAR" STICKER (not shown)	2
JT 5215	ADJUSTABLE SUPPORT LEG COMPLETE (not shown)	1
JT 5216	LEG	1
JT 5222	LEG MOUNT / ADJUST CONSTRUCTION COMPLETE	1
JT 5223	LEG ADJUSTER TO LEG MOUNT BOLT & NUT	1
JT 5225	LEG TO LEG ADJUSTER D-CLIP M10 X 70	1
19920	FEMALE DUST COVER	1
19930	MALE DUST COVER	1
22000	U-BEAUT BRACKET	1

KC TRENCHER CRUMBER BAR



PART No.	DESCRIPTION	QTY.	
KCB 156	FOLD BACK SCRAPER COMPLETE	1	
KCB 159	FOLD BACK SCRAPER PIVOT HEAD ASSEMBLY	1	
KCB 161	FOLD BACK SCRAPER ARM ASSEMBLY COMPLETE	1	
KCB 163	FOLD BACK SCRAPER HEAD ASSEMBLY COMPLETE	1	
KCB 165	FOLD BACK SCRAPER RETAINING PIN CLIP	LYNCH PIN (CAD)	2
KCB 166	FOLD BACK SCRAPER PIVOT ARMS PIN		4
KCB 168	FOLD BACK SCRAPER ARM (REAR SHORT)		2
KCB 167	FOLD BACK SCRAPER ARM (FRONT LONG)		2
KCB 170	FOLD BACK SCRAPER SPRING BUSH		1
KCB 171	FOLD BACK SCRAPER RETAINING PIN (LONG)		1
KCB 172	FOLD BACK SCRAPER REAR PIN		1
KCB 173	FOLD BACK SCRAPER RETAINING PIN (SHORT)		1
KCB 174	FOLD BACK SCRAPER SPRING		1
KCB 175	FOLD BACK SCRAPER SHOE 140 mm		1
KCB 176	FOLD BACK SCRAPER SHOE 190 mm		1
KCB 177	FOLD BACK SCRAPER SHOE 240 mm		1
KCB 178	FOLD BACK SCRAPER SHOE 290 mm		1
KCB 180	FOLD BACK SCRAPER PIN SPACER WASHER	FLAT WASHER ZC	8
KCB 181	FOLD BACK SCRAPER PIVOT ARM TO SCROPER PIN	BUTTON HEAD SCREW	8
KCB 182	SPRING TO SCRAPER PIVOT HEAD	ZC BOLT, WASHER AND NUT	1
KCB 184	SCRAPER SHOE TO SCRAPER SKELETON PLATE	ZC BOLT, WASHER & NUT	3
KCB 185	SCRAPER SHOE TO SCRAPER SKELETON PLATE	ZC NUT	3
KCB 186	SCRAPER SHOE TO SCRAPER SKELETON PLATE	ZC WASHER	3

TRENCHER OPERATING INSTRUCTIONS

BEFORE YOU START

The Trencher will have a Tension Spring Compressor tool attached to the trencher arm. This tool is required to compress the arm tensioning spring to allow the chain to be removed. This **must** be removed prior to trenching.

FITTING A TRENCHER

Position the trencher so it is possible to engage its mounting plate with the loaders mounting plate raise it slightly to allow the locking pins to be engaged. Turn the engine off, move the AUX control lever to release the hydraulic line pressure. Clean the hydraulic fittings (QRC's) and then connect them to connections A & C (see "Hydraulics General Description" section).

Removal procedure is a reverse order of the above. Remember to always reconnect the hoses into a loop 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, Ensure 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 wedge, and retightening the bolt.

OPERATING INSTRUCTIONS



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

Position the trencher, activate the AUX lever so that the chain runs along the top of the boom and returns back towards you on the underside. Pressurise the TILT ram 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.

SETTING THE TRENCHING VALVE



TRENCHER VALVE
SPEED
REGULATING
VALVE (BLACK
KNOB)

(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 (Fig A) 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.

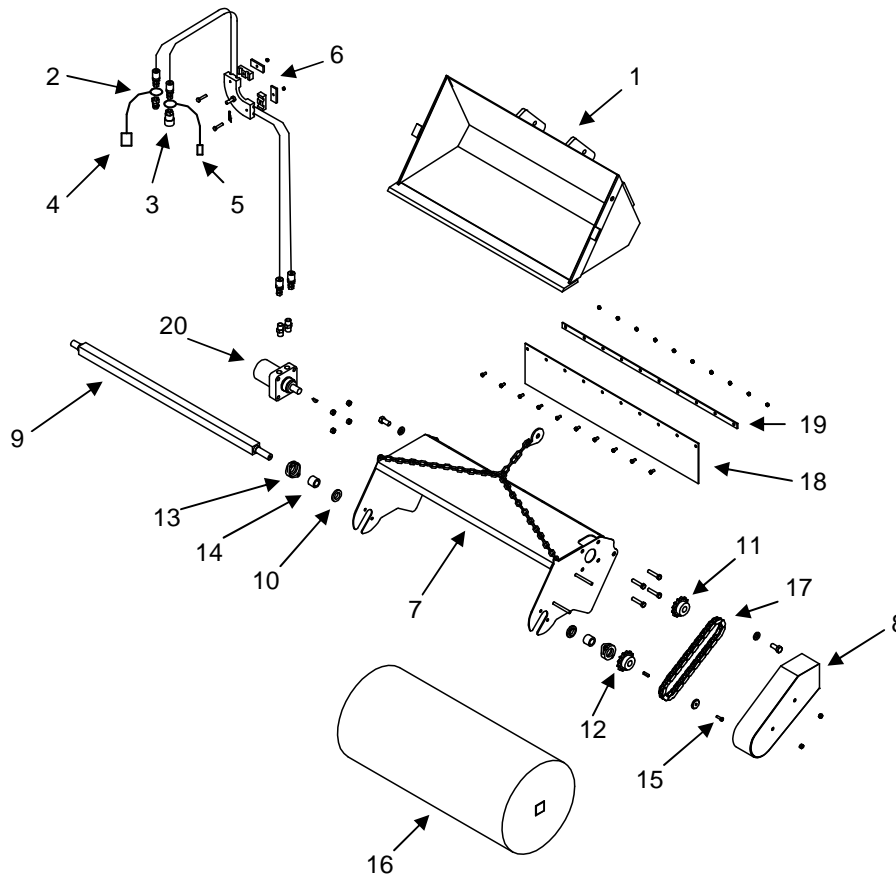
NOTE: Minor adjustments are required to maintain a straight line as the loader will tend to "drift" to the left.



CAUTION: Prior to commencing any digging check with the local authorities and the land owner that there are no buried services (eg. power, phone, water, gas, sewage) in the area.

Australia ONLY: Phone 1100 "DIAL BEFORE YOU DIG"

BUCKET BROOM



Item No	Part No.	Description	Item No	Part No.	Description
	50301	BUCKET BROOM COMPL.	13	50900	BEARING HOUSING
1	50309	BUCKET	14	51000	BEARING (x 2 OFF)
2	19900	QUICK RELEASE COUPLING MALE	15	51400	KEY
3	19910	QUICK RELEASE COUPLING FEMALE	16	51700	BROOM BRUSH
4	19920	FEMALE DUST COVER	17	52400	DRIVE CHAIN
5	19930	MALE DUST COVER	18	53300	INSERTION RUBBER
6	22000	U-BEAUT BRACKET	19	53400	BACKING STRIP
7		FRAME	20	52600	MOTOR (MF14)
8	50200	CHAIN GUARD COVER	21	54100	HOOK & CHAIN
9	50300	SHAFT		30410	HYDRAULIC ADAPTOR KIT
10	50101	SHAFT SPACER		80010	HYDRAULIC HOSE KIT
11	50700	SPROCKET-HYDRAULIC MOTOR		51100	BOLT KIT
12	50700	SPROCKET—BRUSH SHAFT			

warranty

WARRANTY: 1 YEAR OR 1000 HOURS

1 Year or 1000 Hour Warranty:

Kanga Loaders hereby warrants to the original purchaser that all Kanga products will be free from defects in materials and workmanship for a period of **one (1) year from the date of purchase or 1000 hours**, whichever comes first.

Kanga Loaders will repair or replace any part found upon examination by **Kanga Loaders** to be defective. Such repair or replacement will be free of charge to the purchaser (labour and parts), except as noted below.

This warranty is subject to the following exceptions, conditions, and limitations:

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.
- The purchaser must notify **Kanga Loaders** or an authorized **Kanga Loader** service representative of the need for warranty service.
- 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 to validate the warranty within 30 days of purchase.

Service

Warranty service must be carried out by an authorized **Kanga Dealer**.
(For contact 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, tires, 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 only by 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.

Tyres, tubes and 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.

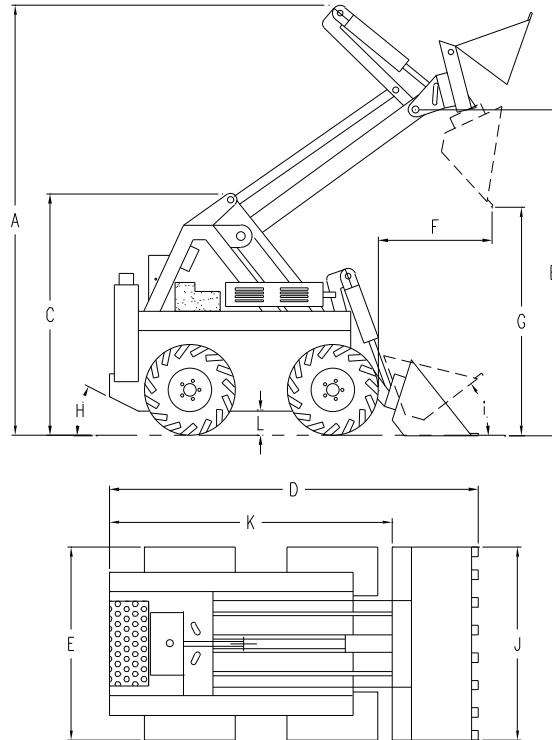
It is the owner's responsibility to ensure that the correct hydraulic and engine oil levels are maintained and that maintenance is carried out as required in the manuals. Claims for damage as a result of insufficient oil levels will not be recognised.

specifications

SPECIFICATIONS - 5 Series

	G-520	G-524	DL520
PERFORMANCE			
Max. lift capacity		250 kg	551 lbs
Travel speed		6 km/h	3.7 mph
Operating weight (incl. bucket)	688 kg	700 kg	1543 lbs
Fuel capacity	1517 lbs	42 l	11.1 gUS
			764 kg
			1684 lbs
ENGINES			
Make	Honda GX620	Honda GX670	Kubota D722
Power	14.9 kW	17.7 kW	14.6 kW
Wheels	20 hp	24 hp	20 hp
		Direct Drive Hydraulic Motors	
DRIVE SYSTEM			
Drive Control Soft Touch		Hand levers	
Throttle Control		Hand lever	
HYDRAULICS			
Gear pump displacement	10.6 cc/rev	11.3 cc/rev	0.690 cu.in/rev
Pump output	38 l/min	40 l/min	10.6 gUS/min
System pressure	10.0 gUS/min	203 bar	2950 psi
Hyd. reservoir capacity		55 l	14.5 gUS/min
BUCKETS			
Standard bucket capacity		0.1 m3	3.5 cu.ft
4 in 1 bucket capacity		0.1 m3	3.5 cu.ft
	STANDARD EQUIPMENT		
	Auxiliary safety shut down		Enclosed drive chains
	Self levelling bucket		Greasable linkage pins
	Auxiliary hydraulics		Non slip rear step
	Universal attachment plate		Lifting lug
	Smooth soft touch controls		Tie down lugs
	Engine hour clock		Electric start
	Service warning indicator		

DIMENSIONS - 6 Series

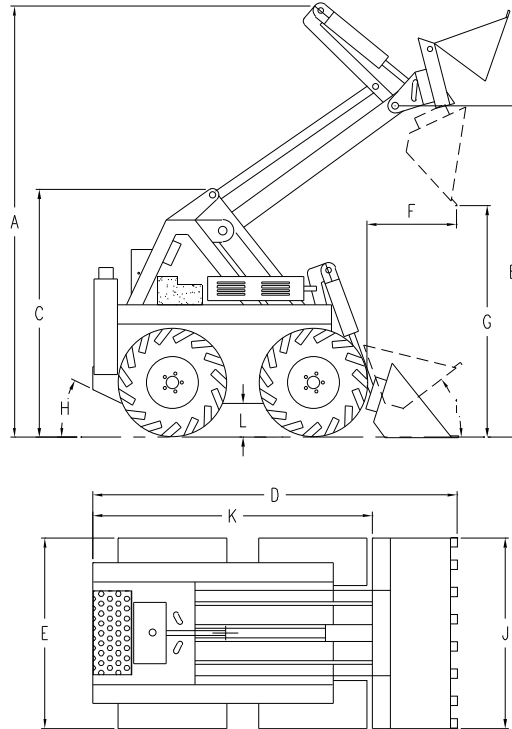


	DIMENSIONS	mm	inch
A	Max. operating height	2335	92
B	Height to hinge pin	1730	68
C	Overall height	1260	50
D	Overall length	2070	81
E	Overall wheel width	980	39
B	Dump height 4 in 1 bucket	1730	68
F	Bucket max. reach at 45°	560	22
G	Dump height std bucket 45°	1075	42
H	Angle of departure	27°	
I	Max. roll back	47°	
J	Bucket width	1050	41
K	Overall length less bucket	1620	64
L	Ground clearance	125	5

SPECIFICATIONS - 6 Series

	G-624	G-627	DL 620
PERFORMANCE			
Max. lift capacity		250 kg	551 lbs
Travel speed		7 km/h	4.3 mph
Operating weight (incl. bucket)	813 kg	813 kg	1792 lbs
Fuel capacity	1792 lbs	42 l	11.1 gUS
			877 kg
			1933 lbs
ENGINES			
Make	Honda GX670	Kohler Command Pro	Kubota D722
Power	17.7 kW	20.1 kW	14.6 kW
	24 hp	27 hp	20 hp
DRIVE SYSTEM			
Drive Control		Hand levers	
Soft Touch		Hand lever	
Throttle Control		4 Hydraulic Motors	
Wheels			
HYDRAULICS			
Gear pump displacement		11.3 cc/rev	0.690 cu.in/rev
Pump output		40 l/min	10.6 gUS/min
System pressure		203 bar	2950 psi
Hyd. reservoir capacity		55 l	14.5 gUS/min
BUCKETS			
Standard bucket capacity		0.1 m3	3.5 cu.ft
4 in 1 bucket capacity		0.1 m3	3.5 cu.ft
	STANDARD EQUIPMENT		
	Auxiliary safety shut down		
	Self levelling bucket		Enclosed drive chains
	Auxiliary hydraulics		Greasable linkage pins
	Universal attachment plate		Non slip rear step
	Smooth soft touch controls		Lifting lug
	Engine hour clock		Tie down lugs
	Service warning indicator		Electric start

DIMENSIONS - 6 Series

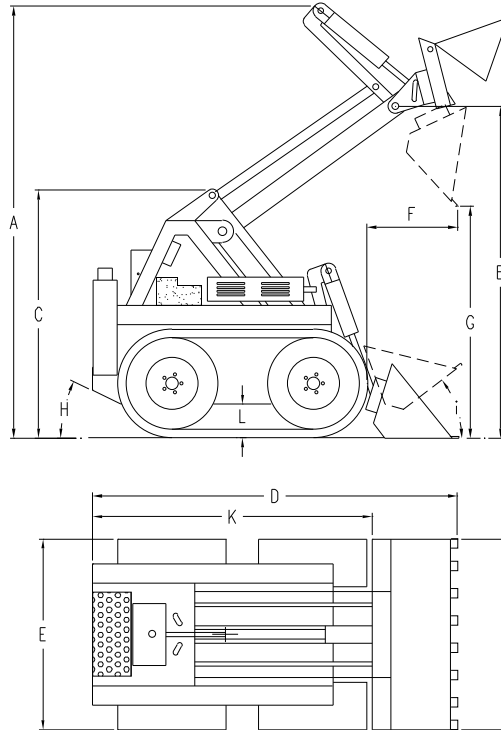


DIMENSIONS	mm	inch
A Max. operating height	2385	94
B Height to hinge pin	1780	70
C Overall height	1310	52
D Overall length	2070	81
E Overall wheel width	1015	40
B Dump height 4 in 1 bucket	1780	70
F Bucket max. reach at 45°	560	22
G Dump height std bucket 45°	1125	44
H Angle of departure		37°
I Max. roll back		47°
J Bucket width	1050	41
K Overall length less bucket	1620	64
L Ground clearance	170	6.75

SPECIFICATIONS - 7 Series

	G-724	G-727	DL720
PERFORMANCE			
Max. lift capacity		250 kg 551 lbs	
Travel speed		7 km/h 4.3 mph	
Operating weight (incl. bucket)	857 kg 1889 lbs	857 kg 1889 lbs	921 kg 2030 lbs
Fuel capacity		42 l 11.1 gUS	
ENGINES			
Make	Honda GX670	Kohler Command Pro	Kubota D722
Power	17.7 kW 24 hp	20.1 kW 27 hp	14.6 kW 20 hp
Tracks		4 Hydraulic Motors	
DRIVE SYSTEM			
Drive Control Soft Touch		Hand levers	
Throttle Control		Hand lever	
HYDRAULICS			
Gear pump displacement		11.3 cc/rev	0.690 cu.in./rev
Pump output		40 l/min	10.6 gUS/min
System pressure		203 bar	2950 psi
Hyd. reservoir capacity		55 l	14.5 gUS/min
BUCKETS			
Standard bucket capacity		0.1 m3	3.5 cu.ft
4 in 1 bucket capacity		0.1 m3	3.5 cu.ft
	STANDARD EQUIPMENT		
	Tracks		Service warning indicator
	Auxiliary safety shut down		Enclosed drive chains
	Self levelling bucket		Greasable linkage pins
	Auxiliary hydraulics		Non slip rear step
	Universal attachment plate		Lifting lug
	Smooth soft touch controls		Tie down lugs
	Engine hour clock		Electric start

DIMENSIONS - 7 Series



DIMENSIONS	mm	inch
A Max. operating height	2400	94
B Height to hinge pin	1795	71
C Overall height	1325	52
D Overall length	2070	81
E Overall wheel width	1040	41
B Dump height 4 in 1 bucket	1795	71
F Bucket max. reach at 45°	560	22
G Dump height std bucket 45°	1140	45
H Angle of departure		38°
I Max. roll back		47°
J Bucket width	1050	41
K Overall length less bucket	1620	64
L Ground clearance	188	7.5

appendices

JOB SAFETY AND ENVIRONMENTAL ANALYSIS (JSEA) WORKSHEET

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**
Make sure the activity is supervised to ensure 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.



JOB SAFETY AND ENVIRONMENTAL ANALYSIS (JSEA) WORKSHEET

PROJECT/AREA:		SITE NAME:		JSEA No:		
Workplace/Area:		This JSEA Covers:		Date:		
JSEA Team (Attach separate sheet if required):		Reviewed By:		Date:		
Isolation Plan Ref:		Authorised By:		Date:		
Type of Permit / License / Plan Required						
	YES	NO	YES	NO	YES	NO
None			Gas		Gas Test Required	Solid/Liquid Waste
Hot Work			Isolation		Explosives	Lifting Analysis
Cold Work			Electric Isolation		Air/Water Emissions	Traffic Control Permit
Engineering			High Voltage		High Pressure Water	Complex Isolations (plan required)
PPE Requirements (Additional to standard site PPE requirements)						
	YES	NO	YES	NO	YES	NO
Chemical Goggles			Respirator (P1/P2 mask)		Barricading/Signs/ Warnings Hats	Emergency Response Plans
Face Shield			Safety Helmet		Fire Blankets/Spark Containment	Plant & Equipment Condition
Respirator (full face/ half face)			Gloves		Extinguishers/ Charged Fire Hoses	Task Specific Training / Induction
Other:						
<i>Ensure prior to the commencement of operations this area is reviewed by all personnel for any inclusions to be required PPE for the job</i>						
Potential Environmental Hazards (This item requires continual review to include the specific area or activity requirements)			Hazardous Materials / Substances (List any hazardous materials/substances to be used or that may affect operations – reference Chemwatch I.D.'s)		Fire / Emergency Equipment Requirements (Consider fire extinguishers, rescue equipment etc.)	
	YES	NO	YES	NO		
Air Pollution (dust, fumes)			Spills to ground			
Noise (plant & equipment)			Soil Erosion			
Spills to Drains/Waterways			Hazard to Flora or Fauna			
Details of special precautions to be taken:						



RISK RANKING CHART		LIKELIHOOD TO OCCUR					Action Required
		Probable	Occasional	Possible	Remote	Very Unlikely	
CONSEQUENCES							
Severity	Personal Injury						
Extreme	Fatalities						High Risk (20-25) Implement immediate risk control action measures e.g. cease activity, make job/area safe, seek advice and guidance from qualified persons
Severe	Permanent injury or health issue (eg, loss of limb)						
Serious	Loss of time from work or major Doctor or Hospital treatment						
Significant	Minor treatment injury by Doctor						Medium Risk (7-19) Plan and implement risk control action measures - seek advice from Kanga if in doubt about any aspect of the hazard /risk
Minor	Near miss with minor potential consequence or first aid injury						
							Low Risk (1-6) No immediate action, assess overall risk in line with available resources - contact Kanga if in doubt about any aspect of the hazard /risk

STEP NO.	JOB STEP List steps required to perform the task in the sequence they are carried out (Take photographs of steps & append to the document)	POTENTIAL HAZARD Against each step list the potential/risk hazards that could cause injury/damage when the task step is performed	Probability	Consequence	Risk Rank H M L	REQUIRED HAZARD CONTROL List the control measures required to eliminate or minimise the risk of injury for each hazard identified	RESPONSIBILITY Nominate the person required to action the control measures