# Operators Manual

# TA0.8EH
# TA1EH
# TA1.2EH

## Hydrostatic Drive Dumpers

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Original Instructions

Dealer Stamp

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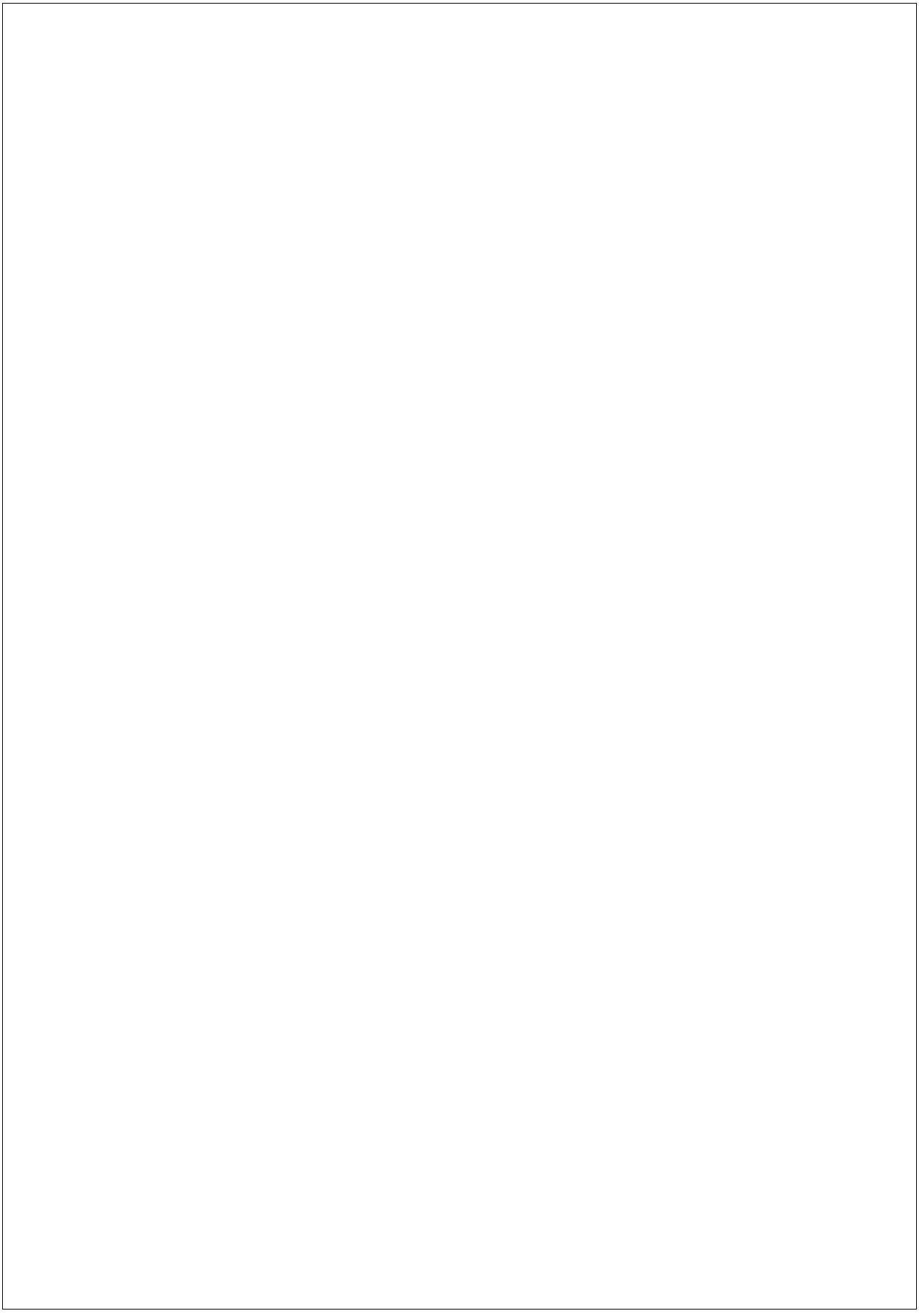

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**The operator must read and understand all the instructions in this manual Before operating the machine**

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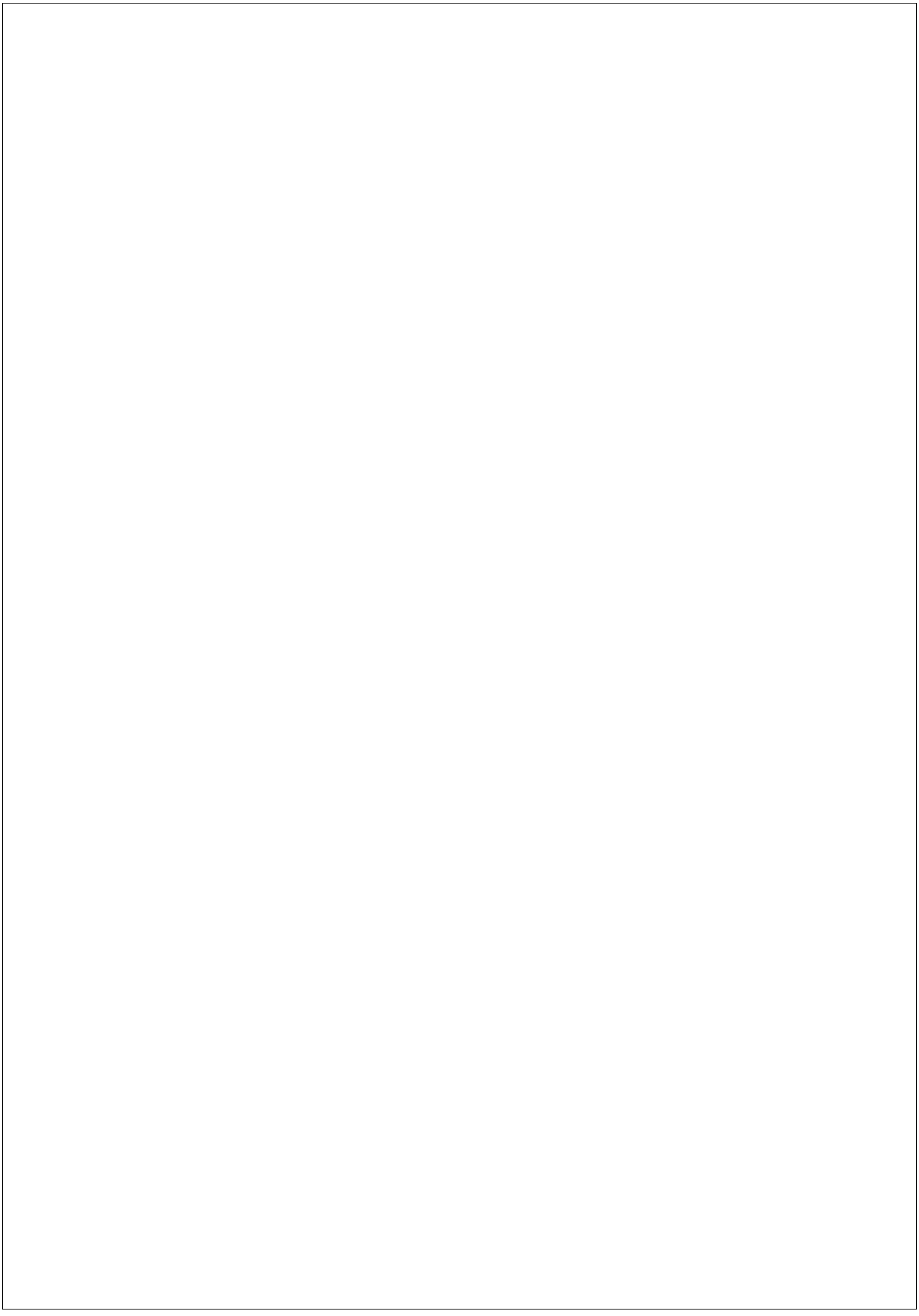
# 1 - Introduction

# TA 0.8EH, TA 1EH, TA 1.2EH

**Four Wheel Drive Dumper**



## Introduction

TEREX appreciates your choice of our product for your application. Our number one priority is user safety which is best achieved by our joint efforts. We feel you can make a major contribution to safety if, you as the machines user:

- **Comply** with all the relevant National Laws and Local Regulations.
- **Read, Understand and Follow** the instructions in this and any other manuals supplied with this machine.
- **Use Good, Safe Work Practices** in a common sense way.
- **Only Use Trained Operators** to operate the machine who are directed by informed and knowledgeable supervision.

If there is anything in this manual which is not clear or there is information which you think should be added, contact the Manufacturers Service Department who will deal with your problem or request.

We reserve the right to make improvements to these machines without incurring any need to change these operating instructions.

Any modification to this machine which has not been approved by the Manufacturer in writing immediately invalidates the Manufacturers warranty.

### Safety Alert System

**.The Safety Alert System identifies important safety messages in this manual.**
**When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators**

### Intended Use

The machine has been designed and tested to carry out the function of transporting various free flowing materials. If used correctly, it will provide an effective means of transportation and meet the appropriate performance standards and regulations.

Use of this product in any other way is prohibited and contrary to its intended use.

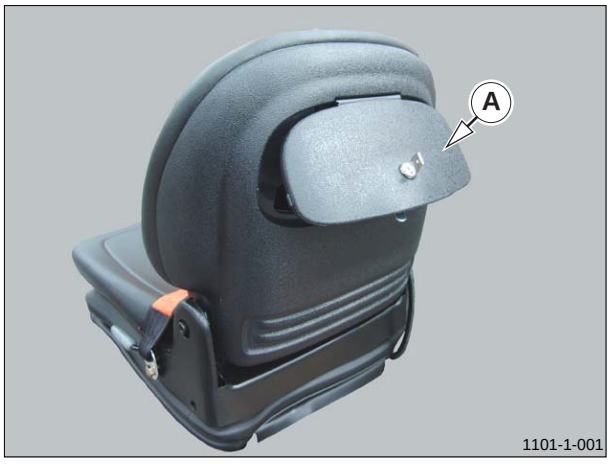
**Machine LEFT and RIGHT HAND**

**All references in this manual to LEFT and RIGHT are as viewed from the Operating Position (Operators Seat) with Operator facing the skip.**

## Instruction Manual

This manual is designed as a guide to the Machines Controls, Operation and Maintenance.

Read this instruction manual carefully before operating the machine. Ensure this instruction manual is kept with the machine at all times and is in good condition - replace the manual immediately if it becomes dirty, damaged or has been lost. The manual holder is located in the back of the seat (A) and is lockable



## Service or Spares Enquiries

Please state the machine type and the Vehicle Identification Number (VIN) when making enquiries or orders and in all written correspondence.

The Vehicle Identification Number is recorded on a plate (A) located on the right hand of the rear frame behind the access step.


## Warranty and Maintenance

The warranty period for the machine, under normal circumstances, covers **the first 12 months** of use. This period begins the day the machine is handed over or put into operation.

The machine must be used correctly and serviced to the manufacturers recommendations.

The correct grades of fuels, lubricants and coolants must be used at all times and must be new and clean when added to the machine. Failure to follow these rules may lead to failure of the machine.

Servicing and repairs must be carried out by the dealers staff who will be trained and experienced in the necessary skills for successful maintenance of the machine.

Only genuine TEREX spare parts must be used when the machine is serviced or repaired.

All claims during the warranty period will only be accepted if the recommended maintenance and service work has been carried out at the specified intervals.

It is important regular maintenance and service work is carried out after the warranty period has expired to ensure the machine is in good working condition and does not cause unnecessary downtime and expense.

Modifications to this machine and/or changes to the specification which have not been approved by the factory, will invalidate the machines warranty and possibly your own insurance cover.

## Official documents (European Community only)

### CE mark

The Machinery Safety directive is intended to harmonise all the machinery safety regulations throughout the community so that there will be no technical barriers to trade.

Compliance with the essential safety requirements of the EEC directives 2006/42/EC (machinery), 2000/14/EC (Noise) and 2004/108/EC, permits companies to CE mark their products.

The directive affects almost every equipment supplier and user in the community and in particular, applies to this type of machine.

The regulations require that potential hazards from machinery are properly addressed and guarded against.

The EC declaration of conformity is a requirement of CE marking. The declaration for this machine follows.

## EC Declaration of Conformity

TEREX

### Contents of the EC Declaration of Conformity

**2006/42/EC Machinery Directive**

Manufacturer: Terex United Kingdom Limited
Central Boulevard
Prologis Park
Keresley End
Coventry
CV6 4BX
United Kingdom

Name of Person to Compile Technical File: David Maslin

Address of Person to Compile Technical File: Terex United Kingdom Ltd

| | |
|---|---|
| Generic Denomination: | Compact Dumper |
| Machine Function: | Earth-Moving Machinery |
| Model / Type : | TA0.8EH<br>TA1EH<br>TA1.2EH |
| Serial/VIN number | |
| Commercial Name: | Same as Model /Type |

Terex United Kingdom Limited hereby declares that the above piece of machinery is in conformity with the relevant provisions of the Machinery Directive 2006/42/ EC

Terex United Kingdom Limited hereby declares that the above piece of machinery is in conformity with the provisions of the following other EC-directives: Noise - Equipment Used Outdoors (2000/14/EC), Emissions - Non-Road Engines (97/68/EC) and Electromagnetic Compatibility (2004/108/EC).

Terex United Kingdom Limited hereby declares that the following European harmonised standards have been used:

EN474-1 & EN474-6

Place of Issue: Coventry, United Kingdom

Date of Issue:

Empowered signatory

Wayne Berry

Sales Administration Manager

## California Proposition 65

California (USA) state law stipulates that the manufacturers of machines operated within its borders must provide a clear warning to customers regarding exposure to substances commonly associated with the machine that are recognized by the state as harmful. Terex complies with this requirement by providing the following information.

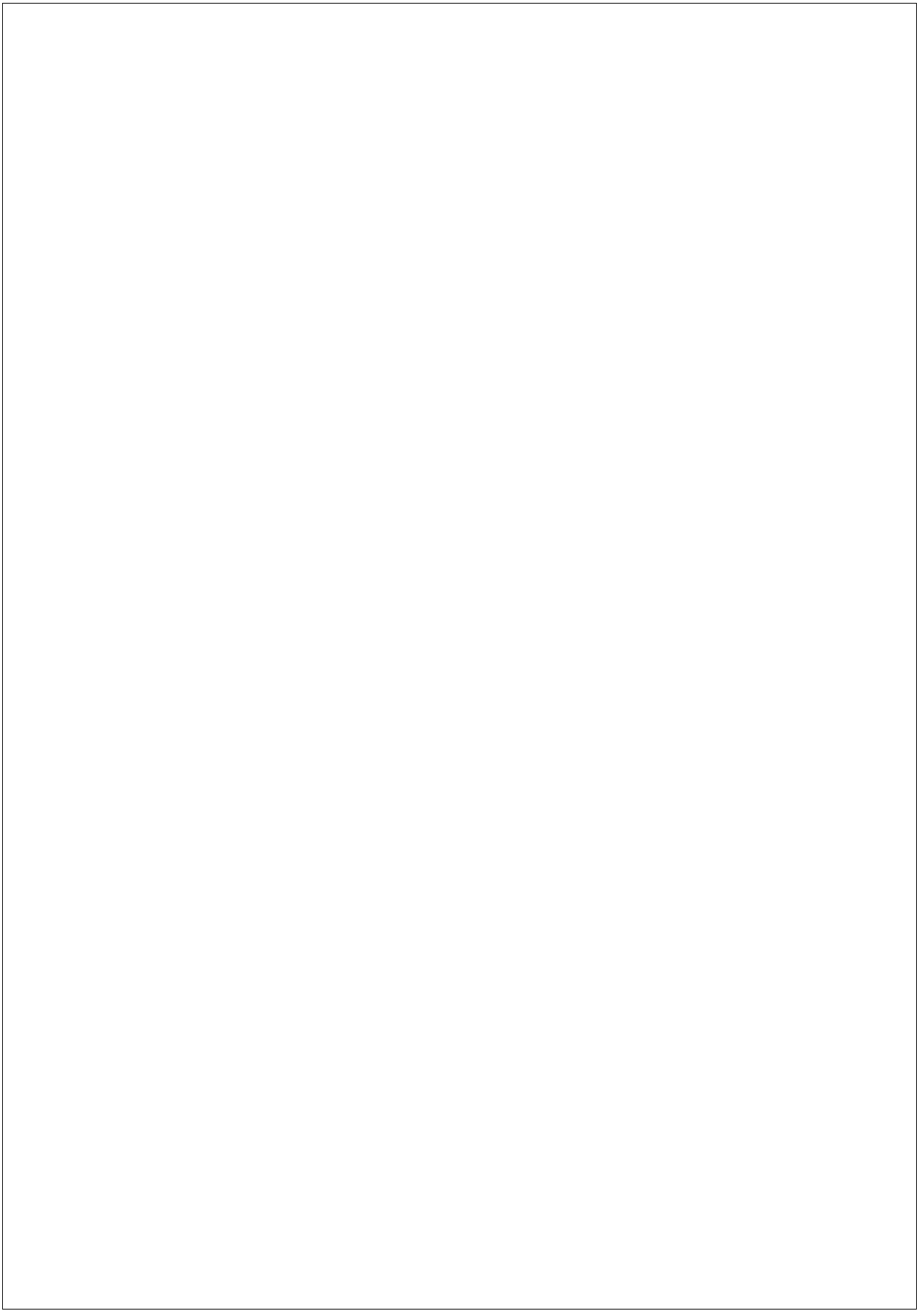
| **California**<br>Proposition 65 |
| --- |
| **Warning:** This product contains lead and lead compounds, diesel engine exhaust, and used engine oil, chemicals known to the state of California to cause cancer |

| **California**<br>Proposition 65 |
| --- |
| **Warning:** This product contains lead a chemical known to the state of California to cause birth defects or other reproductive harm |

# 2 - Safety

# TA 0.8EH, TA 1EH, TA 1.2EH

## Four Wheel Drive Dumper



## General Safety

This manual is designed as a guide to the Machines Controls, Operation and Maintenance.

**It Is NOT A Training Manual**

## Safety Alert Symbol

The Safety Alert Symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

**Safety Alert Symbol**

## Hazard Classification

### (Only applicable to ANSI Safety Signs)

ANSI safety signs are only fitted to machines used in the US, Canada, Australia and New Zealand .

A multi-tier hazard classification system is used to communicate potential personal injury hazards.

The following signal words used with the safety alert symbol indicate a specific level of severity of the potential hazard.

All are used as attention getting devices on safety signs fixed to the machinery to assist in potential hazard recognition and prevention..


DANGER - (Always used with a safety alert symbol and white letters on a red background) Indicates a hazardous situation which, if not avoided, will result in death or serious injury.


WARNING - (Always used with a safety alert symbol and black letters on an orange background) Indicates a hazardous situation which, if not avoided, could result in death or serious injury.


CAUTION - (Always used with a safety alert symbol and black letters on a yellow background) Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## Property Damage

The following signal word indicates a property damage hazard.


NOTICE - (Used without a safety alert symbol and white italic letters on a blue background) Is used to address practices not related to personal injury.

## General Safety Notes

Consult manufacturers or dealers for details of training courses.

All the time you are working on or with the machine you must consider what hazards there may be and how to avoid them.

**This manual is designed as a guide to the Machines Controls, Operation and Maintenance**

**IT IS NOT A TRAINING MANUAL**

**This manual must not be removed from the machine and must be kept in the place provided in a useable condition. If the manual becomes unusable new copies may be ordered from the manufacturer by quoting the Publication Number**

**Only authorised persons must be allowed to operate this machine.**
**Unauthorised use of this machine may invalidate your insurance.**

**ALL Operators of the machine must be authorised, mentally and physically capable of operating this machine and fully trained in its operation.**
**The Operator must have read and understood this manual before operating this machine.**

**If you are unsure of anything concerning the machine or job - ASK**

## Personal Protective Equipment (PPE)

The following symbols indicate the personal protective equipment that must be used at all times when operating this equipment. Operators must not wear rings, scarves, open jackets and must make sure that all loose clothing is tightly secured. Long hair must be restrained.

| | | | | | |
|---|---|---|---|---|---|
|  | **Protective Helmet** | A protective helmet must be worn at all times to prevent injury from falling objects |  | **Safety Boots** | Safety boots must be worn at all times when operating this equipment |
|  | **Ear Defenders** | Ear protection must be worn at all times when operating or near this equipment |  | **Safety Glasses** | Safety glasses must be worn at all times to prevent eye injury from flying objects |
|  | **High Visibility Clothing** | High visibility clothing must be worn at all times when operating this equipment. |  | **Seat Belt** | The seat belt must be worn at all times when operating this equipment |

The following symbols indicate the personal protective equipment that must be worn when site conditions dictate.

| | | | | | |
|---|---|---|---|---|---|
|  | **Protective Gloves** | Wear protective gloves when necessary to prevent injury from sharp objects. |  | **Face Shield** | A face shield must be worn when conditions dictate to prevent eye or facial injury from flying objects |
|  | **Dust Mask** | A dust mask must be worn when site conditions dictate |  | **Respirator** | A respirator must be worn when site conditions dictate |
|  | **Protective Clothing** | Protective clothing must be worn when site conditions dictate | | | |

## Personal Protective Equipment (PPE)

The following symbols indicate the personal protective equipment that must be used when performing maintenance on the machine.

| | | | | | |
|---|---|---|---|---|---|
|  | **Safety Glasses** | Safety glasses must be worn at all times to prevent eye injury from flying objects. |  | **Safety Boots** | Safety boots must be worn at all times to prevent injury. |

The following symbols indicate the personal protective equipment that must be used when site conditions dictate when performing maintenance on the machine.

| | | | | | |
|---|---|---|---|---|---|
|  | **Protective Clothing** | Protective clothing must be worn when conditions dictate. |  | **Protective Gloves** | Wear protective gloves when conditions dictate |
|  | **Dust Mask** | A dust mask must be worn when conditions dictate |  | **Face Shield** | A face shield must be worn when conditions dictate to prevent eye or facial injury from flying objects |

## Seat Belt

A seat belt is provided for operator safety, it must be worn at all times the machine is in use. It is important that the seat belt is inspected and checked regularly *See Maintenance Section*.

**Failure to properly inspect and maintain a seat belt can result in death or serious injury.**

**The seat belt MUST be worn at all times when operating this equipment.**

## ROPS

A ROPS (Roll Over Protective Structure) is provided for operator safety.

Although ROPS seem to be relatively maintenance-free, regular periodic inspections to make sure ROPS are damage free and thus capable of functioning in a roll over cannot be over emphasized.

Through periodic inspections, cracks, loose bolts, damage, and other normal wear and tear related problems can be eliminated before they become serious.

Proper inspection and maintenance procedures can make sure that ROPS will perform the life saving function they are designed for and expected to do.

Details on the inspection and maintenance of the ROPS will be found in the *Maintenance Section*.

**Do NOT modify or attach items to the ROPS without the manufacturers approval.**
**Do NOT use the ROPS as an attachment point for towing or pulling equipment.**

## General Safety Information

Operators and maintenance staff must always comply with the following precautions. These precautions are given here for your protection. Review them carefully before operating the machine and before performing general maintenance or repairs. Supervising staff must develop additional precautions relating to the specific work area and local safety regulations.

- Before operating the machine make sure you have had proper training and are fully conversant with the machine and its operation - If in Doubt ASK!
- Make sure you, and anyone else who uses the machine, have been trained to operate it correctly and are physically and mentally fit.
- Read this instruction manual carefully before operating the machine. make sure this instruction manual is kept with the machine at all times and is in good condition - replace the manual immediately if it becomes dirty, damaged or lost.
- Read and understand all safety signs before operating the machine or performing maintenance.
- Safety signs are fitted to machine for safety purposes. All safety signs must be legible and MUST be replaced immediately if they are unreadable or lost. If the machine is repaired and parts have been replaced on which signs were fixed make sure new signs are fitted before the machine is put into service.
- Always make sure there is adequate ventilation around the machine. Never run the engine in an enclosed area without good ventilation or next to combustible materials.
- Stop the engine before refuelling, if there is a spillage mop it up and do not start the engine until it has been done.
- The exhaust gets extremely hot. Do not place anything on top of it and keep all combustible materials clear. Do not attempt any maintenance on a hot engine.
- Check your local laws and regulations, the engine may require a spark arrester etc.
- Before performing any maintenance on the machine, place a warning tag on the machine to prevent accidental start-up and remove the start key. Put the locking bar into position to prevent the front and rear chassis moving and creating a crushing zone.
- Do not inspect or clean the machine with the engine running.
- Make sure all guards or shields are in place before using the machine.
- Before carrying out maintenance on the hydraulic system make sure the hydraulic fluid is cool and there is no residual pressure in the hydraulic circuit - hydraulic fluid leaking under pressure can penetrate the skin.
- Personal Protective Equipment must be used as specified on *pages 2 - 2 and 2 - 3.*
- Establish a training programme for all operators to make sure they are fully familiar with its operation.
- Do not operate the machine if it is damaged, improperly adjusted or not completely and correctly assembled.
- Be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.
- Always use driveways approved by site management when driving around the site.
- Do not carry passengers.
- Do not operate the machine if you are unfit to do so because of alcohol or drugs etc.
- Only fill skip with free flowing loads.
- The operator must get off machine when loading the dumper skip.
- When manoeuvring or driving the machine with the skip raised take extreme care as forward visibility will be restricted.
- Do not drive around the work site with the skip raised.
- Do not drive the machine on the public highway with the skip in the fully tipped position.
- Before taking the machine on public roads make sure the machine complies with all road traffic regulations and obey all driving laws.
- Make sure the ROPS is not damaged and has no unauthorised modifications.
- Keep footplates and steps free from dirt, oil, snow, ice etc.
- Check seat belts daily. **ALWAYS WEAR A SEAT BELT WHEN OPERATING THE MACHINE.**
- Always park machine correctly on firm, level ground where it will not cause an obstruction or danger - chock the wheels if necessary. DO NOT LEAVE THE ENGINE RUNNING or the start key in the start switch.
- Do not work under a raised skip unless a prop or ram lock is fitted and locked in position.
- Do not remove the radiator cap when the engine is hot. Do not add coolant to a hot engine.
- Tyre changes and repairs to punctured tyres MUST only be carried out by fully trained operatives using the correct equipment. The manufacturer of this machine recommends a competent firm is employed to carry out these tasks.
- Should the machine roll over, the Operator must grip the steering wheel firmly allowing the seat belt to restrain him/her in the seat until the machine comes to rest. DO NOT ATTEMPT TO JUMP CLEAR. The ROPS is designed to provide protection.
- All bystanders must be made aware of all potential safety hazards caused by the operation of this machine and the precautions to be taken to avoid injury..
- In the event of an electrical/lightening storm park the machine in a safe place, dismount and seek shelter.

**If any site personnel has any concerns with any safety aspect of the machine, the machine must not be used until the safety concerns have been rectified or an authorised person has checked and satisfied the site personnel the machine is safe to use.**

## Lockout and Tag Out

To prevent unauthorised starting of the machine, before any maintenance:-

- Remove start key.
- Place warning notice in a prominent position warning others not to attempt to start or drive the machine.

## Hydraulic Fluid

Fine jets of hydraulic fluid under pressure can penetrate the skin.

Do not use your fingers to check for small leaks or expose uncovered areas of your body to leaks.

Check for leaks using a piece of cardboard.

Fluid injected into the skin must be surgically removed within a few hours by a doctor familiar with this type of injury or gangrene will result.

**Check for leaks using a piece of cardboard. Do not use your hands.**
**Escaping hydraulic fluid under pressure can penetrate the skin. If skin is penetrated with Hydraulic Fluid, get immediate medical help, it must be surgically removed within a few hours by a suitably qualified doctor familiar with this type of injury or gangrene will result.**

## Fluid Levels

Make sure the machine is on firm, level stable ground. It must not be in a dangerous position or causing an obstruction.

Place drive lever is in neutral and the make sure engine is stopped before checking ALL fluid levels.

## Frozen Battery Electrolyte

- Batteries with frozen electrolyte may explode if used or charged.
- Never 'jump start' a machine with a frozen battery.
- To help prevent freezing, keep the battery fully charged.

**Do Not Use or Attempt to Start a Machine with Frozen Battery Electrolyte**

## Fires

Using water to extinguish an oil fire could spread the fire or give you a shock from an electrical fire.

Use a carbon dioxide, dry chemical or foam extinguisher whilst waiting for the fire brigade.

Keep fire extinguisher seviceable and have it checked regularly.

**Do Not Use Water to Extinguish a Machine Fire**

## Water Cooled Engines

Water cooled systems operate under pressure to increase the boiling point of the coolant. Therefore, the coolant temperature may be greater than boiling water at standard atmospheric pressure (100ºC).

**Never Maintain Cooling System when the Engine is HOT!**

## Lubricants

It is essential that anyone concerned with lubricants read and understand the following text.

## Hygiene

Lubricants should be handled in accordance to the lubrication manufacturers recommended practices.

Avoid contact with lubricants. Wear oil resistant gloves when performing maintenance.

Whenever handling oil products, maintain good standards of care plus personal and plant hygiene.

For details of these precautions we advise you to read the relevant publications issued by your local health authority.

## Storage

ALWAYS keep lubricants out of reach of children.

NEVER store lubricants in open or unlabelled containers.

## Handling Oil

See also First Aid - Oil.

**New Oil**

There are no special precautions needed for the handling or use of new oil other than the normal care and hygiene practices.

**Old Oil**

**Used engine crankcase lubricants contain harmful contaminants. In laboratory tests it was shown used engine oils can cause skin cancer and reproductive harm. Avoid inhalation of vapours, ingestion and prolonged skin contact with used engine oils. Dispose of used oil in accordance with local environmental regulations.**

Observe the following precautions.

- Avoid prolonged, excessive or repeated skin contact with used engine oil.
- Apply a barrier cream to the skin before handling used engine oil.
- Note the following when removing engine oil from the skin.
  - Wash skin thoroughly with soap and water. Using a nail brush will help.
  - Use special hand cleansers to help clean dirty hands.
  - Never use petrol, diesel fuel or kerosene.
- Avoid skin contact with oil soaked clothing.
- Do not keep oily rags in pockets.
- Wash dirty clothing before reuse.
- Throw away oil soaked shoes.

## First Aid - Oil

**Swallowing Oil**

If oil is swallowed, do not induce vomiting.

Get Medical Advice.

**Skin Contact**

In the case of excessive skin contact, wash with soap and water.

**Eye Contact**

In the case of eye contact, flush with water for 15 minutes. If the irritation persists, get medical attention.

## Oil or Fuel Spillage

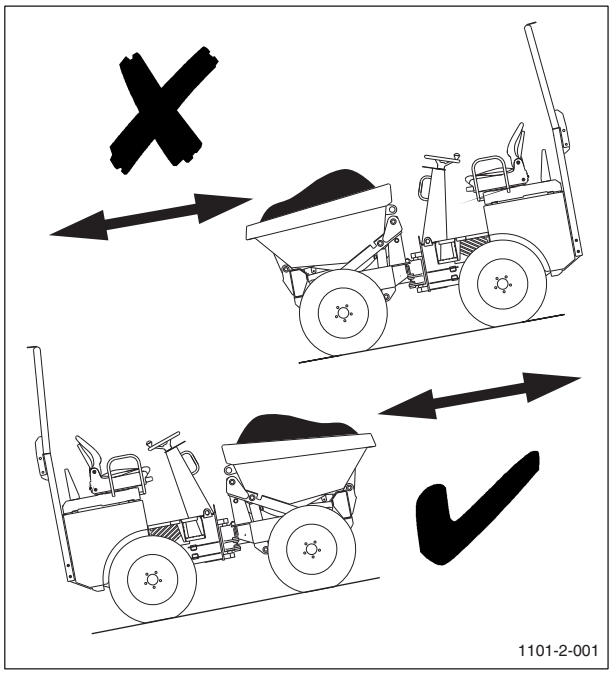
Absorb with sand or a locally approved brand of absorbent granules. Scrape up and dispose of in a chemical disposal area.

## Gradients

### Ascending and Descending

When ascending and descending a gradient the skip MUST face the top of the incline. Always drive up and reverse down inclines. Do not attempt to drive down inclines there is a serious risk of overturning.

**ALWAYS Drive Up and Reverse Down Inclines. Risk of overturning.**



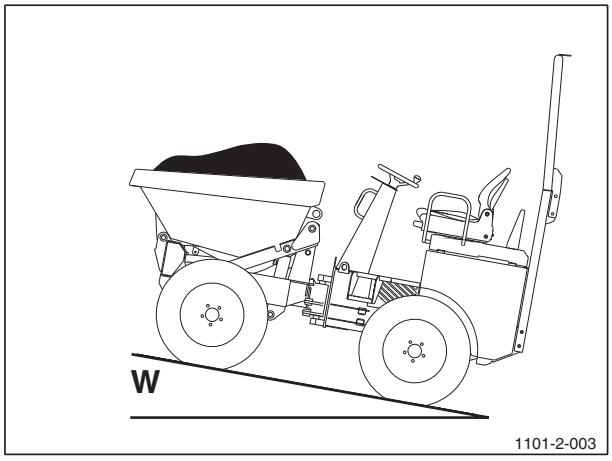

### Maximum Gradient

The maximum permitted gradient (W) for this machine is:-

19.5% (1 in 5)

Do not attempt to drive up or down gradients exceeding this figure there is a serious risk of overturning.

The maximum gradient capability of the machine will be reduced in wet, icy or muddy conditions.




### Driving Across Gradients

Muddy, slippery ground conditions will adversely affect the ascending and descending capabilities of the dumper.

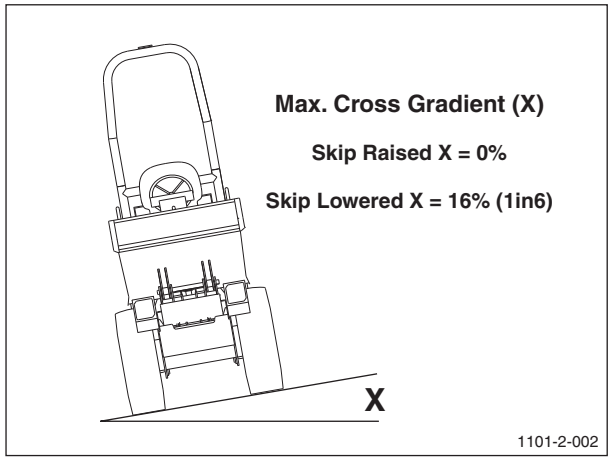
However these conditions can be even more hazardous when driving across a gradient. Extreme care must be taken when crossing a gradient to prevent a machine from sliding sideways out of the operators control.

Never drive across a gradient with the skip raised.

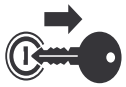
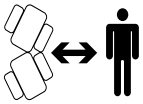
The maximum permitted gradient (X) this machine may cross with the skip lowered is:-

16% (1 in 6)

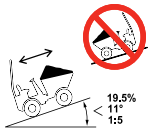
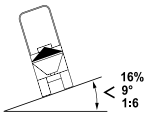
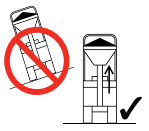
**DO NOT drive across gradients with the skip raised.**



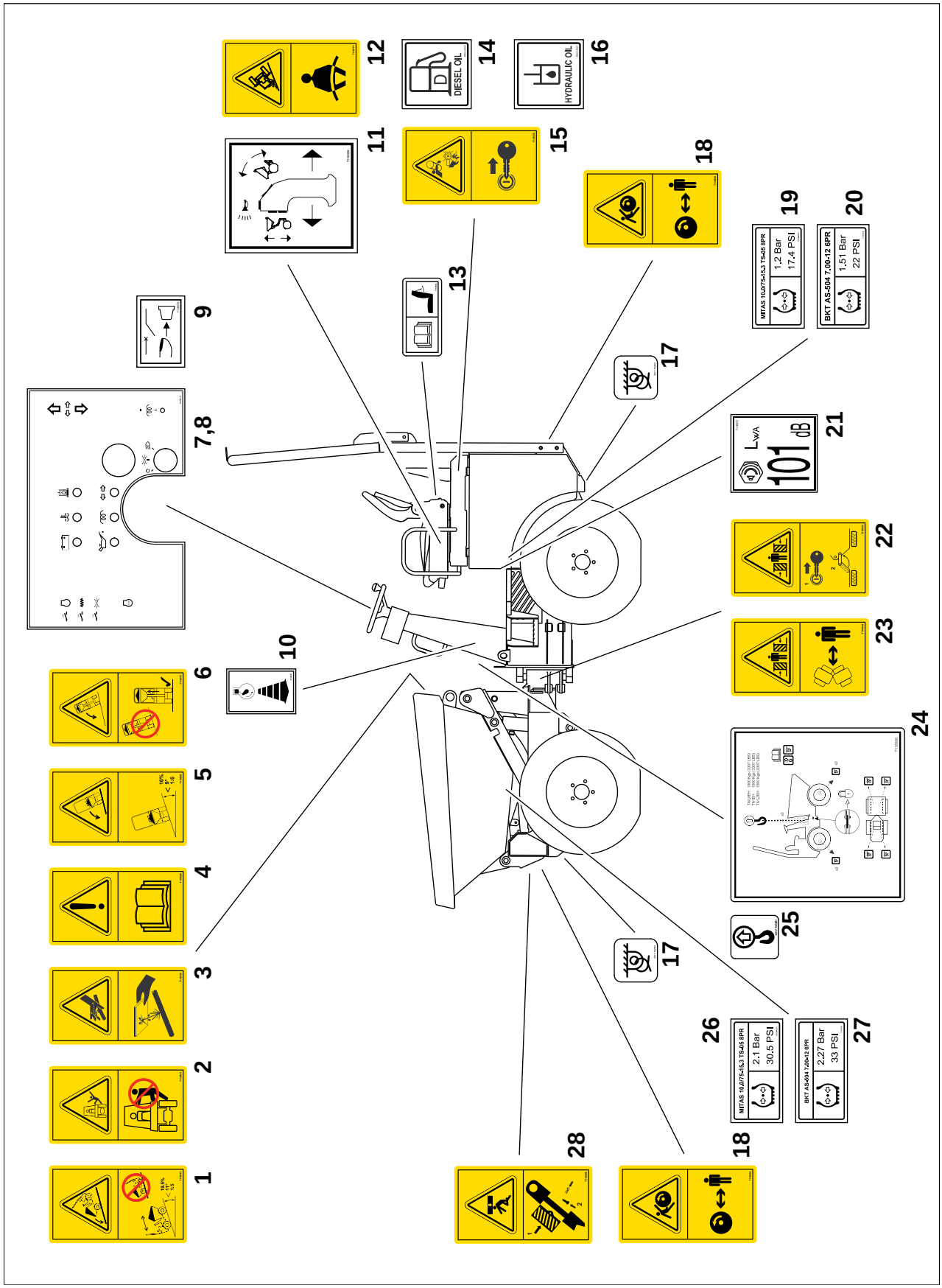
## Symbols and Pictorials Used on Safety Signs

| HAZARD | AVOIDANCE | DESCRIPTION |
|---|---|---|
|  |  | **Hazard : Entanglement**<br>**Avoidance: Keep away from fan and belt.Turn off engine and remove key before servicing.** |
|  |  | **Hazard : Crushing**<br>**Avoidance: Stay clear of machine** |
|  |  | **Hazard : Skin Injection from High Pressure Fluid**<br>**Avoidance: Use cardboard or wood to check for leaks.** |
|  |  | **Hazard : Crush during Roll over**<br>**Avoidance: Always wear a seat belt when operating the machine** |
|  |  | **Hazard : Crush Zone When Turning**<br>**Avoidance: Stay clear of machine** |
|  |  | **Hazard : Crush Zone**<br>**Avoidance: Stop engine and remove the key.**<br>**Fit articulation lock** |
|  |  | **Hazard : Crushing**<br>**Avoidance: Fit Skip Ram Lock When Working Under Raised Skip** |

## Symbols and Pictorials Used on Safety Signs

| HAZARD | AVOIDANCE | DESCRIPTION |
|---|---|---|
|  |  | **Hazard : Attention, safety involved**<br>**Avoidance: Read and understand operator's manual before using the equipment** |
|  |  | **Hazard : Tip Hazard**<br>**Avoidance: Only Drive Up and Reverse Down Slopes** |
|  |  | **Hazard : Fall/Crush**<br>**Avoidance: Do not carry passengers or allow people to ride on the machine** |
|  |  | **Hazard : Roll Over When Crossing Slopes**<br>**Avoidance: Do Not Cross Slopes Exceeding 18%** |
|  |  | **Hazard : Roll Over Hazard**<br>**Avoidance: Do Not Elevate Skip On a Slope** |

## Safety Signs



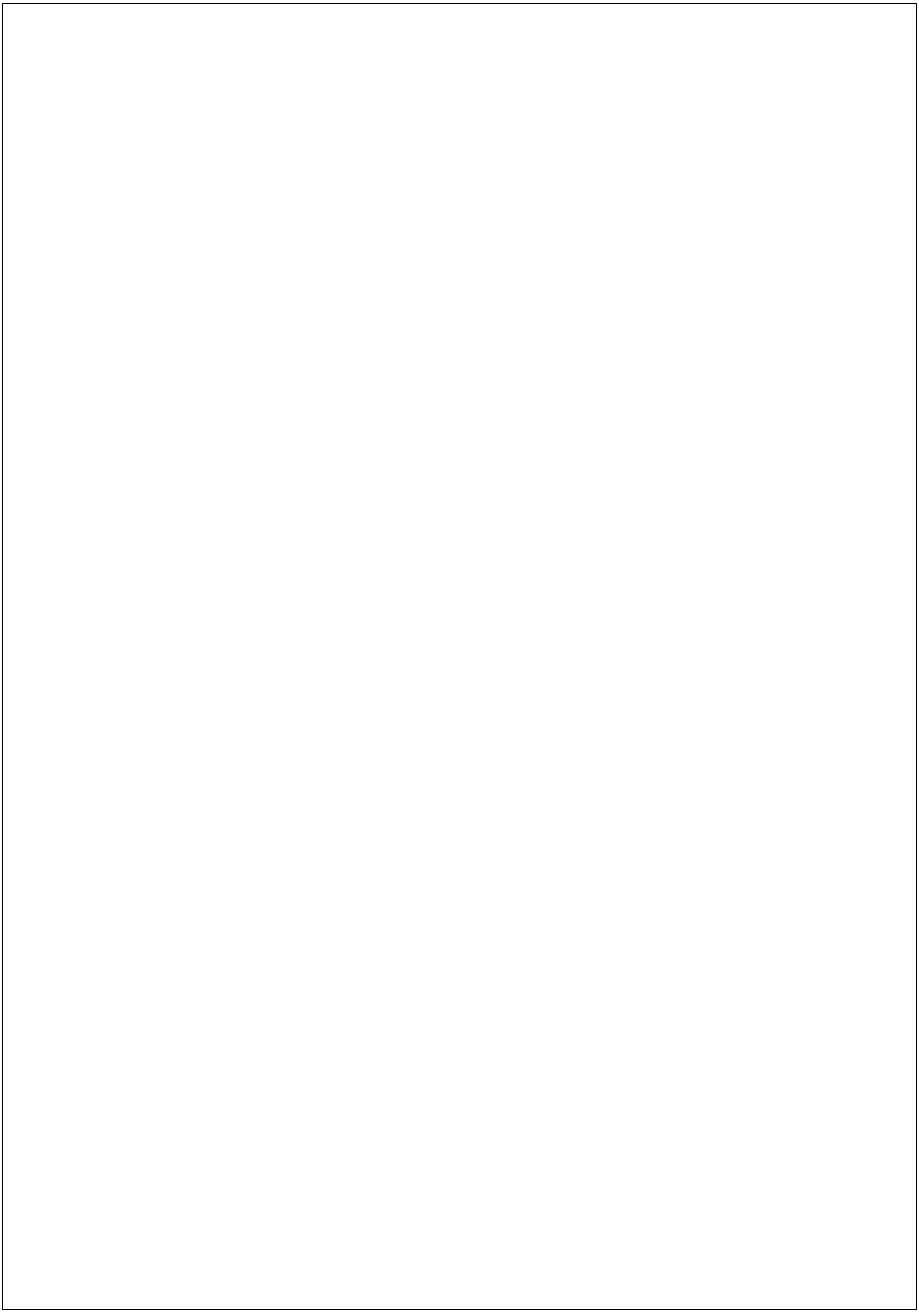
## Safety Signs

| Item | Description | Notes |
|---|---|---|
| 1 | Warning - Operating on Gradients/Maximum Gradients | On Back Face of Skip |
| 2 | Warning - Do Not Carry Passengers/Danger of Falling | On Back Face of Skip |
| 3 | Warning - Hydraulic Oil Under Pressure | On Back Face of Skip |
| 4 | Warning - Read Operators Manual Before Using Machine | On Back Face of Skip |
| 5 | Warning - Crossing Slopes | On Back Face of Skip |
| 6 | Warning - Do Not Raise Skip On Slopes | On Back Face of Skip |
| 7 | Instruction - Dash Decal - No Lights | On Dashboard |
| 8 | Instruction - Dash Decal - Public Highway Lights | On Dashboard |
| 9 | Instruction - Circuit Breaker Reset | On Dashboard |
| 10 | Instruction - Throttle Control | On Steering Column |
| 11 | Instruction - Control Lever Operation and Functions | By Lever |
| 12 | Warning - Seat Belt must Be Worn. | - |
| 13 | Instruction - Operators Manual Location | Back of Seat |
| 14 | Instruction - Diesel Filler Point | - |
| 15 | Warning - Rotating Fan/Drive Belts - Stop Engine and Remove Key | - |
| 16 | Instruction - Hydraulic Tank Filler Point | - |
| 17 | Instruction - Tie Down Point Location | - |
| 18 | Warning - Crush Hazard - Keep Clear | - |
| 19 | Instruction - Tyre Pressure - Rear | Above Wheel |
| 20 | Instruction - Tyre Pressure - Rear - Narrow Tyre Option TA0.8 & TA1 Only | Above Wheel |
| 21 | Vehicle Sound Level | - |
| 22 | Warning - Crush Zone - Fit Articulation Lock | - |
| 23 | Warning - Crush Hazard -Keep Clear When Machine Is Turning | - |
| 24 | Instruction - Lifting/Tie Down Information | - |
| 25 | Instruction - Lift Point | - |
| 26 | Tyre Pressure - Front | Above Wheel |
| 27 | Tyre Pressure - Front - Narrow Tyre Option TA0.8 & TA1 Only | Above Wheel |
| 28 | Warning - Crush Hazard - Fit Skip Ram Lock | - |
| | **IMPORTANT**<br>**ALL safety signs listed must be fitted to the machine and must be legible. Use mild soap and water to clean safety signs - DO NOT use solvent based cleaners because they may damage safety sign material.**<br>**Safety signs are fitted to the machine to warn of possible dangers and MUST be replaced immediately if they become unreadable or lost.**<br>**If the machine is repaired and parts have been replaced on which safety signs were fixed, make sure new safety signs are fitted before the machine is put into service.** | |

# 3 - Installation

# TA 0.8EH, TA 1EH, TA 1.2EH

**Four Wheel Drive Dumper**



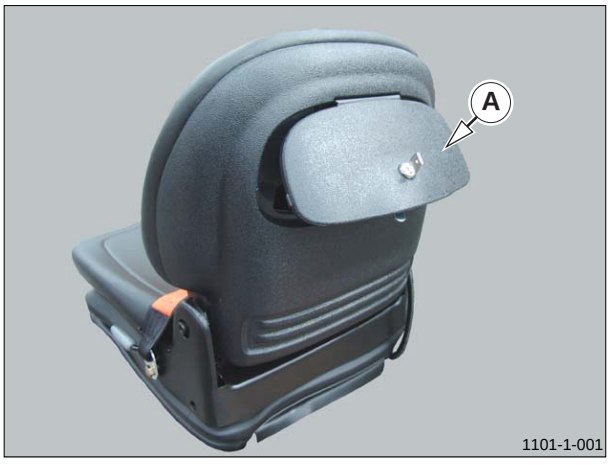
## Delivery Checks

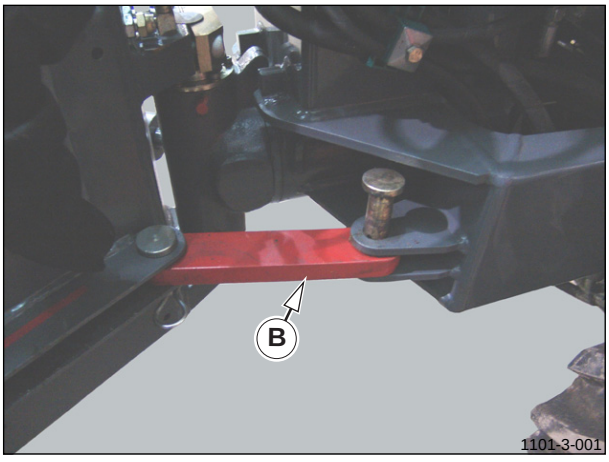
Immediately on taking delivery of your new dumper and before putting it into service:

- Read this handbook completely -- it could save a great deal of unnecessary expense. Put this Instruction Manual in its holder (A).
- Check general condition of the machine, - has it been damaged during delivery?
- Raise ROPS and install all pins and locking rings.
- Fit flashing beacon to ROPS.
- Check fluid levels - see *Pre Start Checks* on page 4-2.

## Articulation Lock

If the machine has been delivered by lorry or trailer the articulation lock (B) may have been fitted. This must be released before the machine is used. Failure to release the articulation lock will make the steering inoperative and cause serious damage to the machine.



## Pre-Start Checks

Before putting the machine into service:

- Check the following fluid levels:
  - Oil level in engine.
  - Hydraulic oil level
  - Fuel level.
  - Coolant level in radiator.

Recommended lubricants are detailed in the Maintenance section of this manual.

- Check tyres are inflated to correct pressure.
- Check all instruments alarm buzzers and warning lights function correctly.
- Check all lights and road traffic direction indicators (if fitted) function correctly.

Note: When filling fuel tank make sure the tank is filled when the engine is cold and the machine is in a well ventilated area, with the engine stopped using clean fuel and container. It is advisable to fill the tank at the end of a working session to prevent condensation forming in the tank during long periods of inactivity, e.g. overnight.

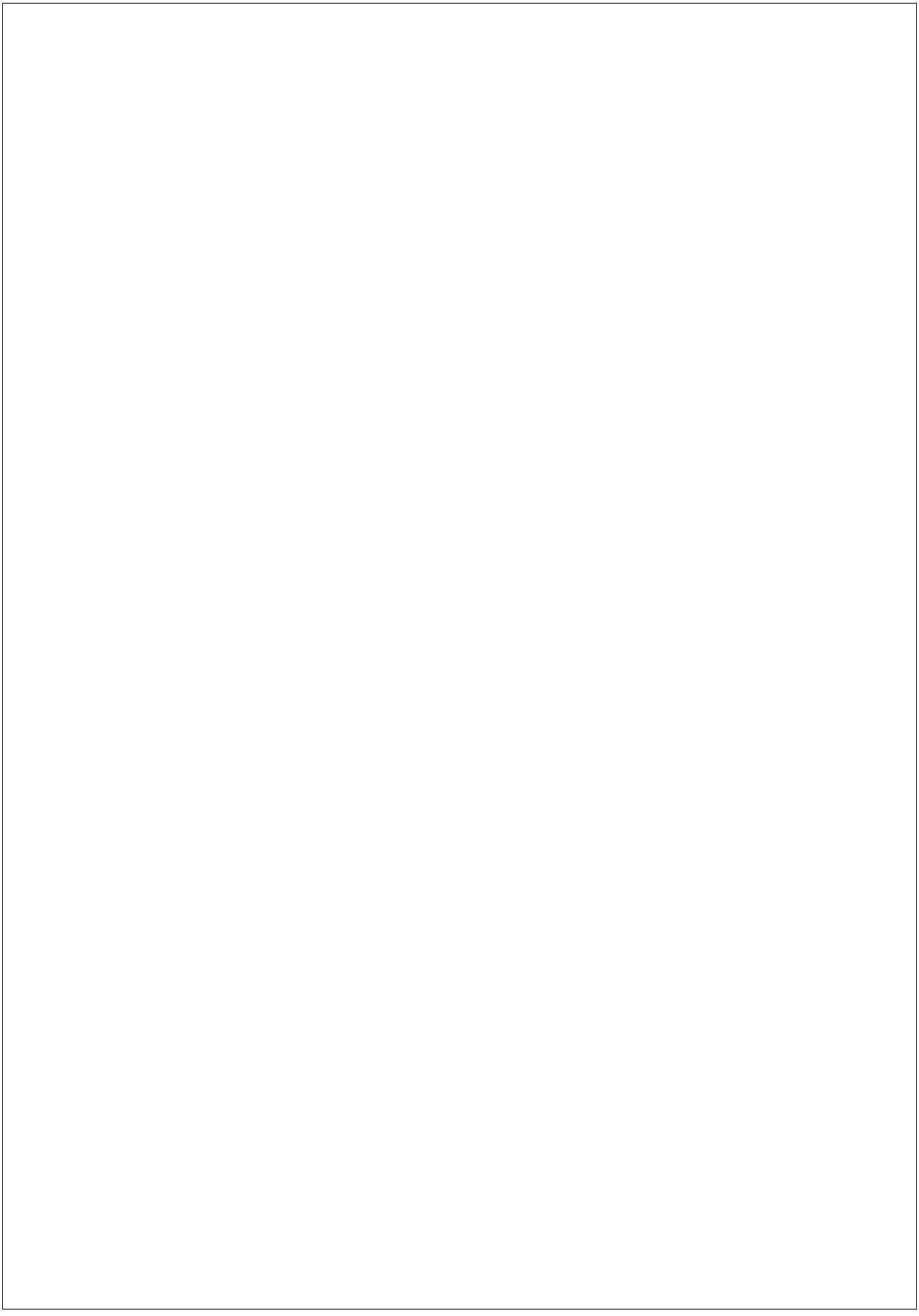
**When Refuelling Beware of Naked Flames, Grinding Sparks etc.**

Check for adequate ventilation if the machine is to be started or run in a building etc.

# 4 - Description

# TA 0.8EH, TA 1EH, TA 1.2EH

**Four Wheel Drive Dumper**



## TA1EH Dumper


## General Description

This range of 4 wheel drive site dumpers have the load carrying skip located over the front wheels ahead of the driver. This section of the manual describes the major features of the machine and the layout and operation of all controls and instruments.

There are 3 models in the range:

| TA0.8EH | TA1EH | TA1.2EH |
|---|---|---|
| 850kg Payload | 1000kg Payload | 1200kg Payload |

This section of the manual should be read in conjunction with the *Safety* section located at the beginning of the manual.

### Engine

Power is provided by a Kubota D905, 0.898litre 3 cylinder water cooled diesel engine developing 14.9 kW at 3,000 r.p.m.The engine has electric starting.

A separate key operated starter switch is provided and located close to the steering wheel.

### Transmission

A hydrostatic transmission system is fitted. A hydraulic pump is mounted to, and driven by the engine. The pump supplies hydraulic oil to power hydraulic motors driving each wheel.

Speed and direction is controlled by a “joystick” type lever positioned close to the operator. Moving the lever forward towards the front of the machine will cause the dumper to travel forwards; while moving the lever towards the back of the machine will cause the dumper to travel in the reverse direction.

### Cooling System

A dual core radiator is fitted; one section permits cooling of the engine coolant and the other, the hydraulic oil.

The system is pressurised to increase the boiling point of the coolant.

### Electrical System

The machine has a 12v Negative Earth electrical system supplied by an engine driven alternator. Road lighting compliant with current traffic regulations is available as an option.

### Brakes

Totally enclosed oil immersed brakes are fitted in each rear wheel motor. The brakes are applied progressively as the joystick is moved towards its central (neutral) position. When the joystick is in neutral the brakes are fully applied.

### Chassis

The front and rear chassis are connected by a central pivot that permits articulation in both vertical and horizontal axis.

**The articulating chassis can cause a crush hazard when the machine is put on full lock in either direction.**

### Steering

Steering of the dumper is by an ‘Orbitrol’ hydrostatic steering unit controlling a single hydraulic cylinder connecting the front and rear chassis units. The steering unit is operated by a conventional steering wheel.

The steering wheel is fitted with a “spinner” knob to aid manoeuvring on the work site. This must not be used or should be removed when the machine is used on the public highway

**Do Not use the steering wheel knob when on the public highway. Use of a steering wheel knob to control the machine when on the public highway is illegal and strictly prohibited.**

In the event of hydraulic failure the steering still operates but under these circumstances steering wheel loads are high and the dumper must only be driven at slow speeds.

### Skip

A forward tipping skip is fitted. If necessary the skip can be raised by 1m before tipping. This feature is particularly useful when tipping loads into builders skips, lorries etc.

The tipping and raising of the skip is controlled by buttons on the joystick lever.

The skip is raised and lowered by hydraulic cylinders; a small (24.5 litre) engine mounted pump providing hydraulic power.

**The skip must only be used to carry free flowing loads. Only tip or raise the skip when the dumper is on firm level ground**

## ROPS

Machines are fitted with a ROPS ( Roll Over Protective Structure) to protect the operator should the machine overturn. To reduce the transport height of the machine the ROPS can be folded down. Do not use the machine with the ROPS lowered.

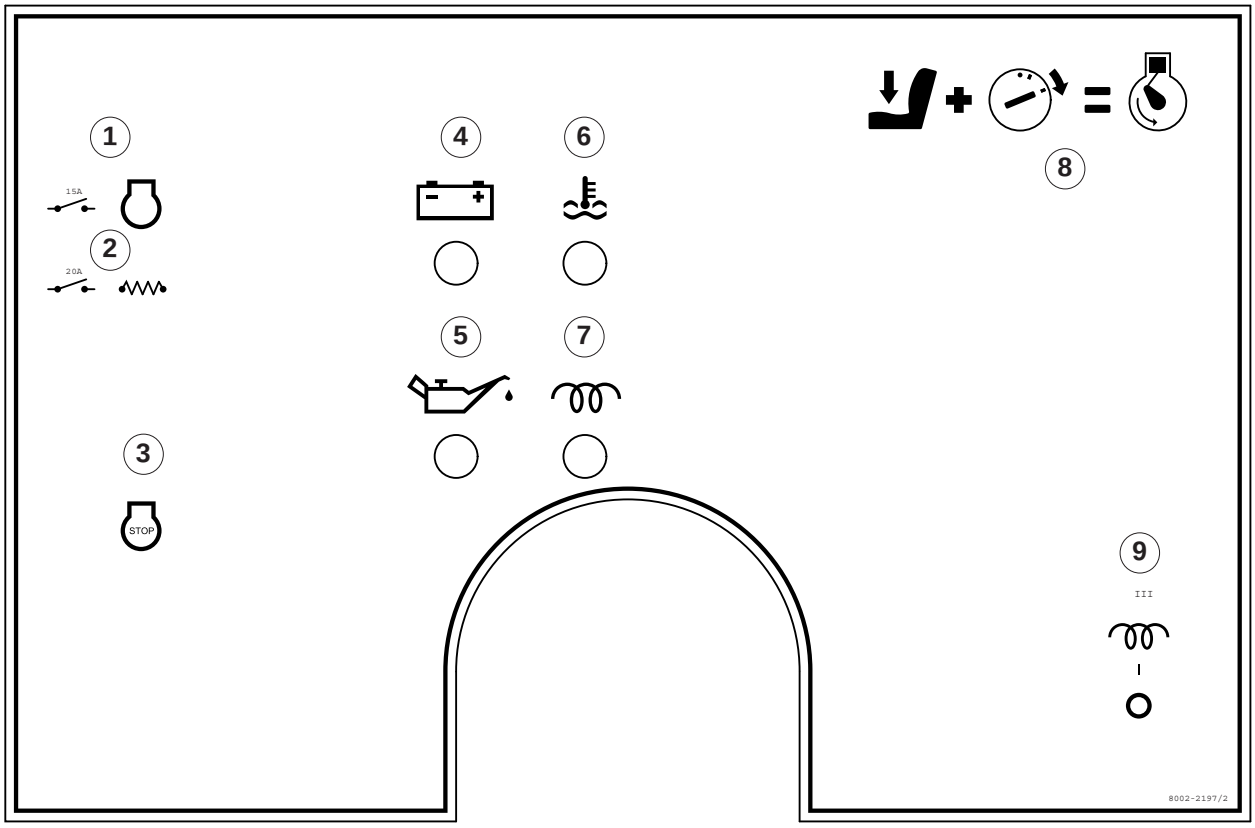
**Under NO Circumstances Must the Machine Be Used with the ROPS Lowered.**

## Dashboard, Controls and Instruments

The layout of the dashboard is dependant on equipment and options fitted. Various examples are illustrated on the following pages.

## Dashboard

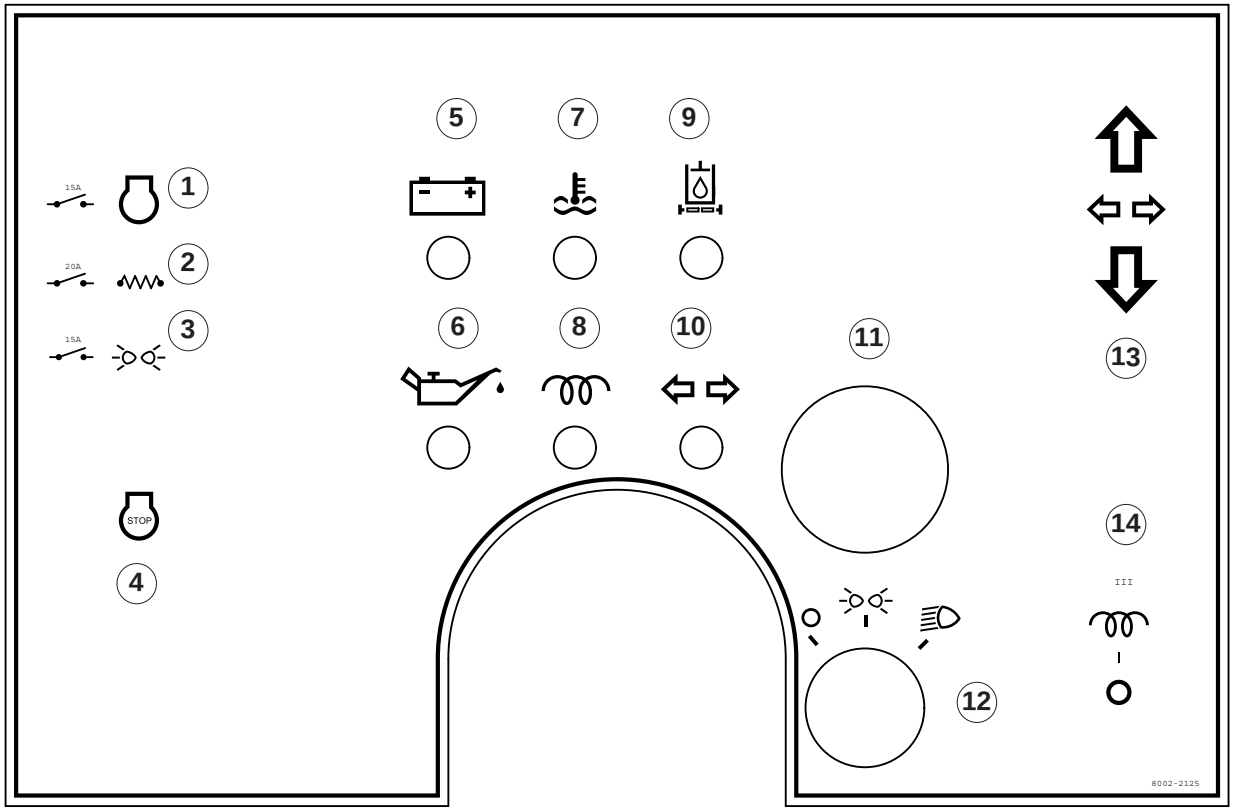
**Dashboard - No Lights**




| | |
|---|---|
| 1 - Circuit Breaker - Engine | 6 - Warning Light - Engine Water Temperature |
| 2 - Circuit Breaker - Joystick Control | 7 - Warning Light - Engine Cold Start |
| 3 - Emergency Stop | 8 - Instruction - Start Inhibitor |
| 4 - Warning Light - Battery | 9 - Instruction - Switch Cold Start Position |
| 5 - Warning Light - Engine Oil Pressure | |

## Dashboard

**Dashboard - Highway Lighting**




| | |
|---|---|
| 1 - Circuit Breaker - Engine | 8 - Warning Light - Engine Cold Start |
| 2 - Circuit Breaker - Joystick Control | 9 - Warning Light - Blocked Filter |
| 3 - Circuit breaker - Lighting | 10 - Warning Light - Direction Indicators |
| 4 - Emergency Stop | 11 - Switch - Hazard Flashers |
| 5 - Warning Light - Battery | 12 - Switch - Lighting |
| 6 - Warning Light - Engine Oil Pressure | 13 - Switch - Indicators & Main Beam |
| 7 - Warning Light - Engine Water Temperature | 14 - Instruction - Switch Cold Start Position |

## Dash Panel

**Warning Light - Battery Charge**

This light (A) will come on when the start switch is in the ON position and the engine is NOT running. It should go out when the engine starts. If the light fails to go off when the engine starts or it comes on when the engine is running the engine must be stopped immediately and the fault investigated.

**Warning Light - Engine Coolant Temperature**

This light (B) together with the audible alarm informs the operator when the coolant temperature exceeds a predetermined level. The light will come on when the coolant temperature exceeds this level. The engine must be stopped immediately and the fault investigated.

**Warning Light - Charge Pump Hydraulic Filter Blocked**

This light (C) will come on when the hydraulic filter becomes blocked. If the light comes on the filter and hydraulic oil must be changed immediately.

**Warning Light - Engine Oil Pressure**

This light (D) will come on when the start switch is in the ON position and the engine is NOT running. It should go out when the engine starts. If the light comes on when the engine is running the engine must be stopped immediately and the fault investigated.

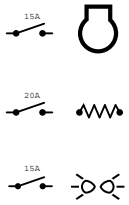
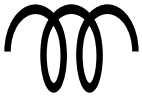
**Warning Light - Cold Start**

This light (E) comes on when the start key is turned to the Heater position. The operator must wait until the light goes out before turning the key to the start position and attempting to start the engine.

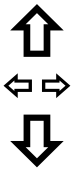
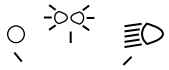
**Warning Light - Direction Indicators - When Fitted**

This light (F) will flash when the right or left direction indicators are selected.

## Dash Panel Symbol Description

| | | |
|---|---|---|
| **A - Circuit breaker - Electric Circuit** |  | A - 15A Engine Starter System<br>B - 20A Joystick Controller<br>C - 30A Highway Lighting (if fitted)<br>Circuit breakers protect the machines electrical system. |
| **B - Emergency Stop Button** |  | Indicates location of Emergency Stop. By pressing this button the machine will stop immediately. |
| **C - Warning Light - Engine Oil Pressure** |  | This warning light will illuminate when the start switch is turned to the RUN position.<br>When the engine starts, the light should extinguish. If the light fails to extinguish or illuminates when the engine is running -<br>**STOP THE ENGINE IMMEDIATELY**<br>Do not use the machine until the fault has been rectified. |
| **D - Warning Light - Battery Charge** |  | The battery charge warning light should only be illuminated when the start switch is ON and the engine is not running. When the engine starts and full RPM is selected the charge warning light extinguishes. The warning light should stay off while the engine is running.<br>If the light fails to go out when the engine is running -<br>**STOP THE ENGINE IMMEDIATELY**<br>Check the fan belt, alternator, wiring etc.<br>Do not use the machine until the fault has been rectified. |
| **E - Warning Light - Engine Coolant Temperature** |  | The water temperature warning light should only be illuminated when the start switch is in the RUN position and should go out when the engine is cranked.<br>If the warning light illuminates when the engine is running the water temperature is too high, a warning buzzer will also sound.<br>If engine temperature warning light is Illuminated when engine is running -<br>**STOP THE ENGINE IMMEDIATELY**<br>Do not use the machine until the fault has been rectified |
| **F - Warning Light - Engine Cold Start** |  | When the start key is turned to the heater position the warning light is illuminated. Wait for the light to go out before turning the key to the start position |

## Dash Panel Symbol Description

| | | |
|---|---|---|
| **G - Warning Light - Blocked Filter (If fitted)** |  | This light will illuminate when the hydraulic filter is blocked. |
| **H - Warning Light - Direction Indicators (When Fitted)** |  | This light will flash when the direction indicators are operating |
| **J - Instruction - Start Inhibitor** |  | This instruction informs the operator that they must be sitting on the seat before the engine will start.<br>A start inhibitor is fitted which prevents the engine being started unless the operator is sitting on the seat. |
| **K - Switch Instruction - Direction Indicator (When fitted)** |  | If fitted, this instruction informs the Operator which way to move the switch in order to operate the LEFT and RIGHT direction indicators |
| **L - Switch Instruction - Highway Lighting- (if fitted)** |  | This switch will turn the headlights and front and rear side lights on and off. |
| **M - Instruction - Engine Start Key Switch** |  | This instruction shows the start key position to use when the engine cold start aid is required. |

## Controls and Instruments

### Emergency Stop

The RED emergency stop switch (A); when pressed, will immediately stop the engine and all electrical/hydraulic systems will stop functioning.

To release, turn the switch knob in the direction of the arrow embossed on the knob (Clockwise). Make sure all controls are in Neutral before restarting the machine.

### Circuit Breakers

Re-setable circuit breakers (B) are fitted; one for the engine circuits and one for the machines other electrical systems.

A third circuit breaker is fitted when machines are supplied with highway lighting.

In the event of a fault the breaker will trip out, this being indicated by the button protruding out beyond its normal position.

Should this occur the cause of the fault should be investigated and faulty components be replaced or repaired.

The breaker is then reset by pressing the button until it locks in position restoring the electrical supply.

### Audible Warning

If the temperature of the engine coolant rises above a predetermined level an audible warning (C) will sound.

When this happens the engine must be stopped immediately and, once the engine has cooled and the cause investigated.

### Hourmeter

The hourmeter (D) records the total amount of time the engine is running in hour and one tenth of an hour units.

The start key must not be left in the RUN position without the engine running as the meter will continue recording.

### Start/Stop Switch

The start switch (E) is operated by a removable key. The switch has 4 positions:-

Off - 1

Run - 2

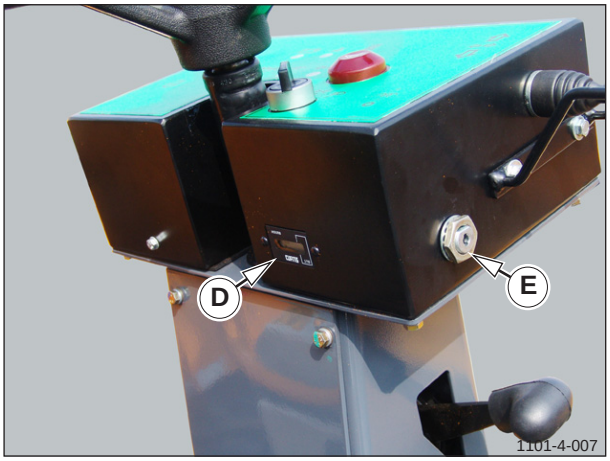
Heater - 3

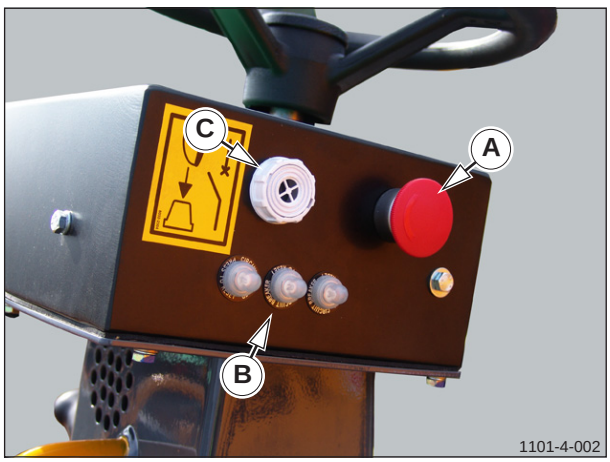
Start - 4

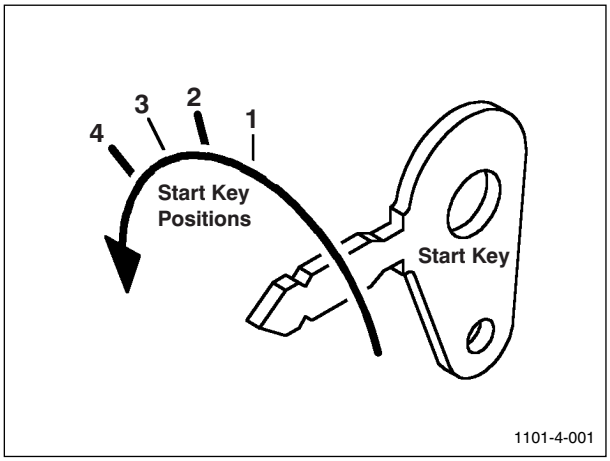
To start the engine turn the key to the “Start” position. As soon as the engine starts release the key and it will automatically return to the “Run” position.

When turned to the “Heater” position the switch will activate the engines cold start facility and light up a warning light on the dash. As soon as this light goes out the key can be moved to the “Start” position and the engine will start.

When the engine is running by turning the key to the “Off” position the engine will stop.



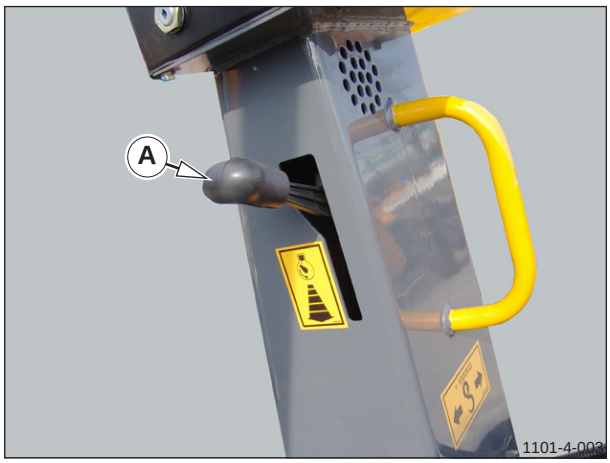



## Controls and Instruments

### Throttle Control Lever

The throttle control lever (A) is located on the side of the steering column support. When fully raised (closest to the steering wheel) the engine is set to idle speed. When the lever is pushed fully down the engine will run at a pre set maximum r.p.m.



## Controls and Instruments

### Multi Function Control Lever

The joystick (A) controls forward and backward movement of the machine and incorporates buttons and switches to control the raising and lowering and tipping of the skip and also a button to sound the machines horn.

The buttons operate as follows:-

1 - Raise the high discharge mechanism

2 - Lower the high discharge mechanism

3 - Operate the horn

To tip the skip press the top of the rocker switch - 4.

To lower the skip press the bottom of the rocker switch - 5.

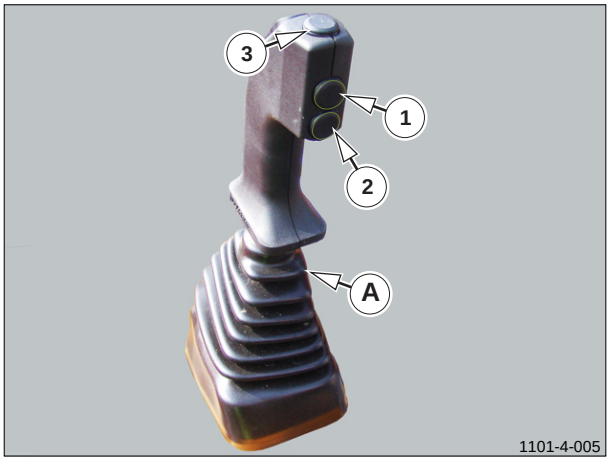
**The Horn Must Only Be Used To Warn Of Possible Danger.**

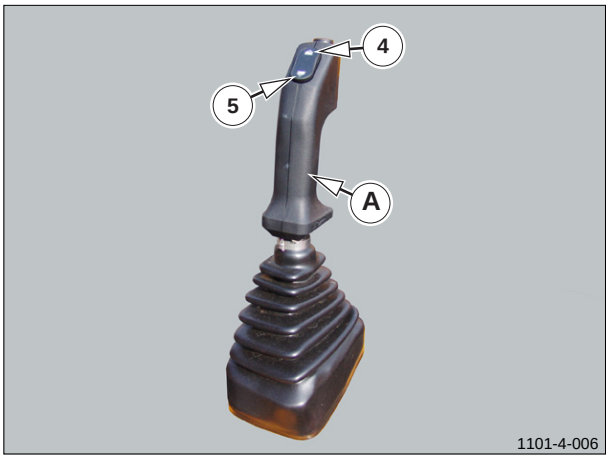
The speed and direction of travel is controlled by moving the joystick forwards or backwards. A neutral gate prevents accidental movement of the joystick.

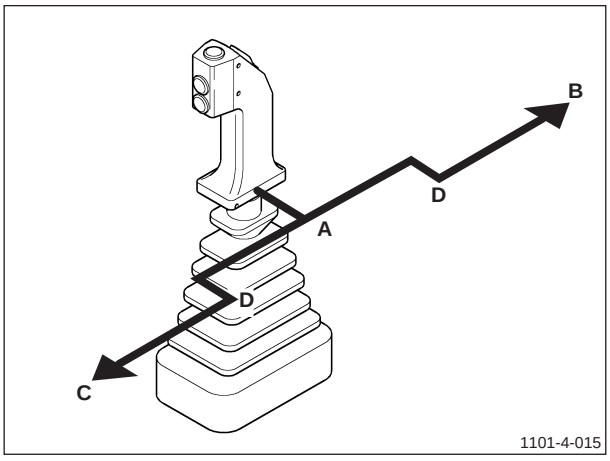
By moving the lever towards the operator the neutral gate-A is cleared and the lever may be moved backwards-B or forwards - C up to a second high speed gate-D. The speed of the machine is proportional to the distance the lever is moved from the gate. As the lever is moved back towards the neutral gate the speed of the machine decreases.

When the second gate-D is encountered the lever is pulled further towards the operator and the high speed range is selected.

When reverse is selected an audible warning is activated alerting bystanders that the machine is reversing.



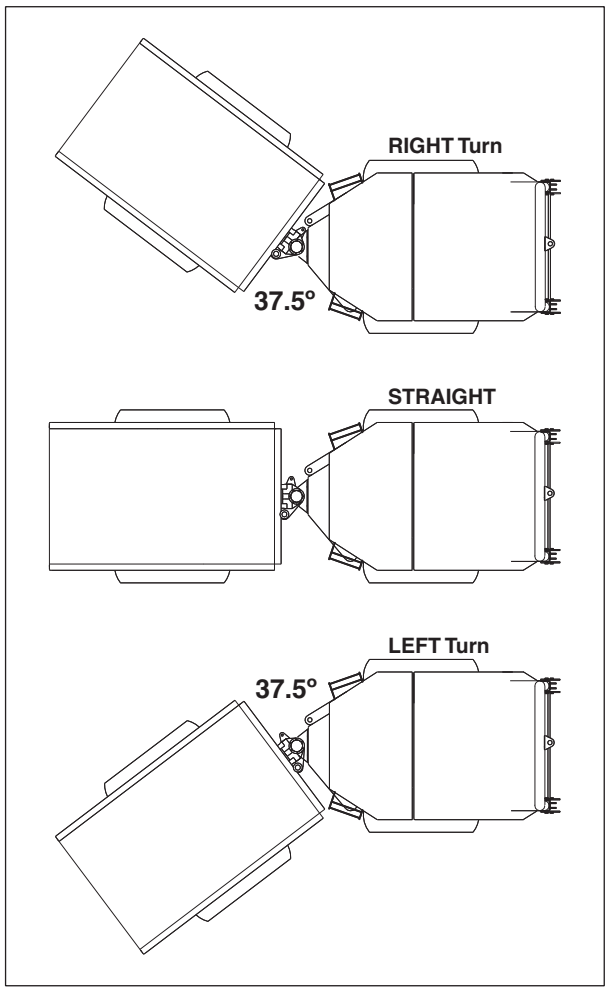
## Chassis and Steering

The front and rear chassis frames are connected by a centre pivot assembly that allows movement in both horizontal and lateral planes. The articulation of the frames permits wheel contact with the ground at all times and maintains maximum wheel adhesion.

A double acting hydraulic ram connected to the frames provides steering. A “Orbitrol” hydrostatic steering unit; controlled by the steering wheel, meters oil to either side of the hydraulic cylinder to extend or retract the piston rod and steer the machine.

In the event of hydraulic failure the machine can still be driven at slow speeds but under these circumstances steering loads are high and extreme caution must be taken.

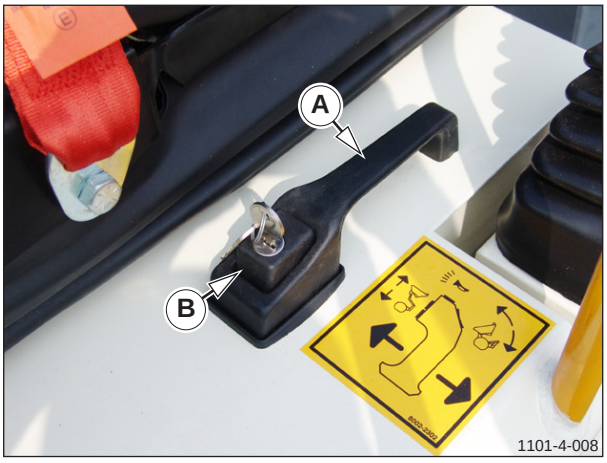
**A crush hazard is created when the machine is put on full lock in either direction. All bystanders must be kept well clear of the machine when it is manoeuvring.**




## Seat Support/Engine Cover.

The hinged seat support/engine cover can be lifted to gain access to the engine, battery, fuel tank, hydraulic tank, radiator etc.

The cover has a handle (A) with a push button (B) and lock with a removable key. A gas strut assists opening.



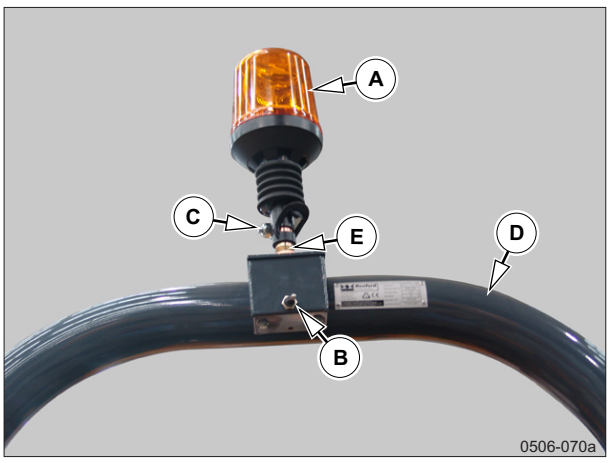
## Flashing Beacon

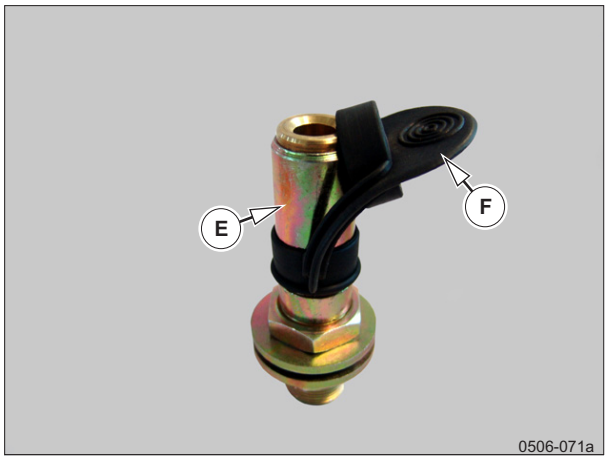
The beacon is provided to warn people of the dumpers presence.

The flashing beacon (A) is fitted to the machine's ROPS and controlled by a switch (B).

The beacon is easily removed to prevent theft or vandalism by slackening nut (C) and lifting the beacon off its mounting stem.

When the beacon has been removed the stem is protected by pulling the rubber cap (F) over the stem (E).

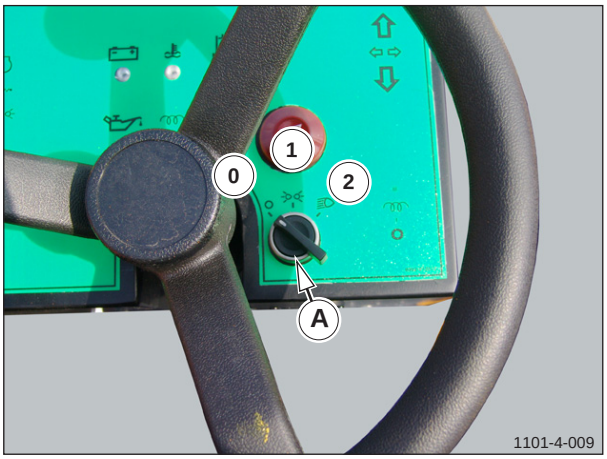


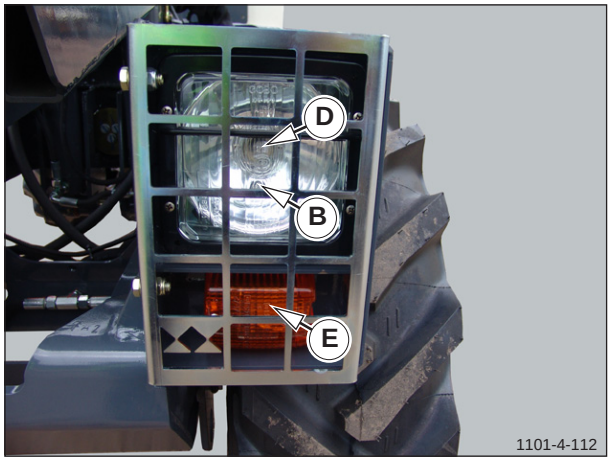



## Highway Lighting (When Fitted)

A 3 position switch (A) switches the side and head lights on and off.

| Switch Position | Lamp | Description |
|---|---|---|
| **0** | - | OFF |
| **1** | B | Side/Tail Light |
| **1** | C | Registration Plate Light |
| **2** | D | Head Light |
| **Indicator Switch** | E | Indicator Light |
| **Brake Switch** | F | Brake Light |
| **-** | G | Reflector |



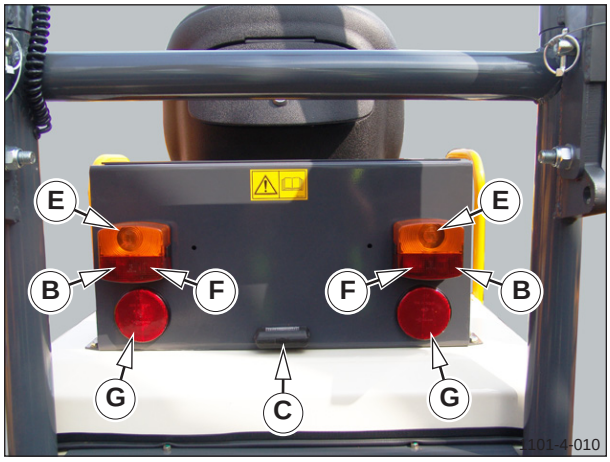

### Brake Lights

The brake light switch is activated and the lights (F) come on when the drive control lever enters the Neutral gate.

When the lever is moved from the Neutral gate into either forward or reverse the lights will go off.

### Registration Plate Light

A light (C) is provided to illuminate the rear registration plate. This light comes on when the side/tail lights are switched on.



### Direction Indicator Switch

This switch (A) is used to turn on the Left OR Right front and rear direction indicator lights to inform others of the operators intention to turn the machine to the left or right.

Moving the switch lever forwards (1) will turn on the left hand indicator lights. Moving the switch lever backwards (2) will turn on the right hand indicator lights.

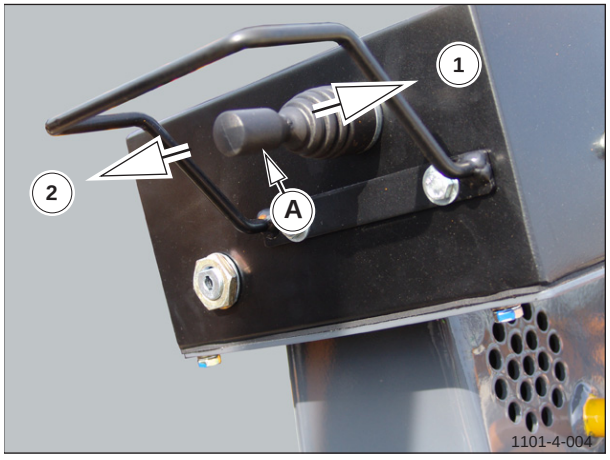
A warning light on the dashboard will flash when the indicators are operating.

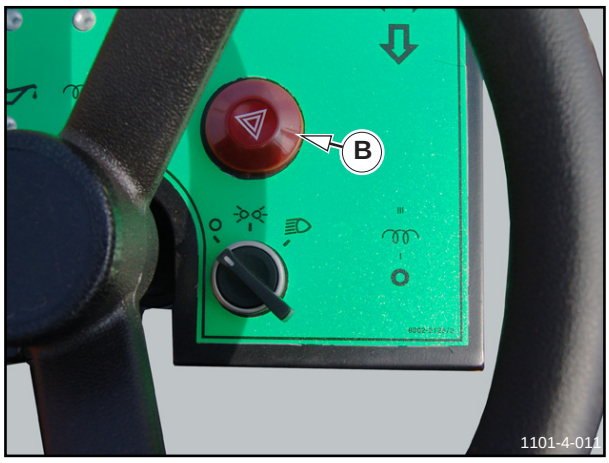
Returning the switch to the central position will turn the lights off.

These instructions are shown graphically on the dashboard decal.

### Hazard Flasher Switch

Pressing the switch (B) will cause all four direction indicator lights to begin flashing warning that the machine may be causing a hazard or obstruction. The bulb in the switch will also flash at the same time. The lights will continue flashing until the switch is pressed a second time.

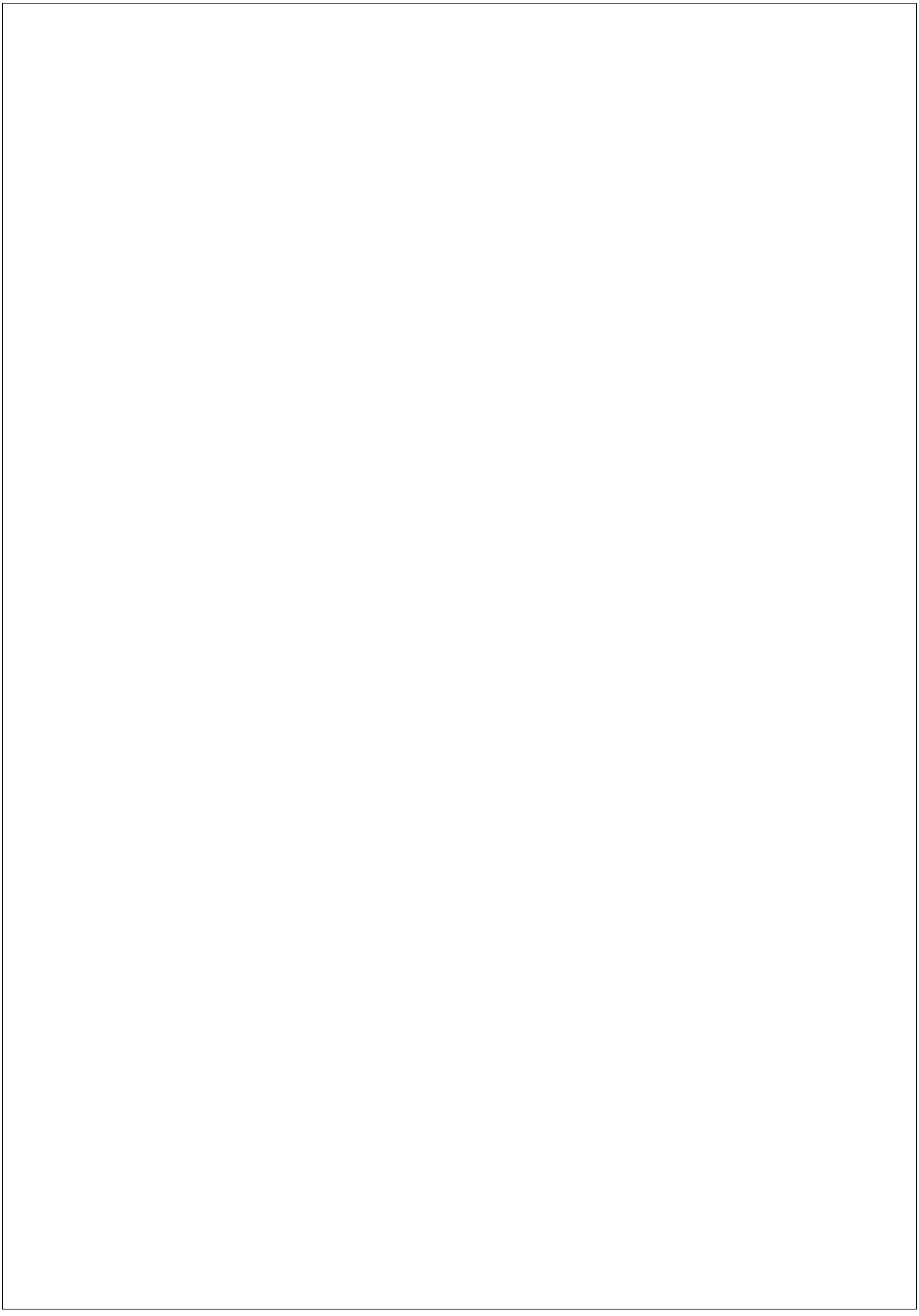


# 5 - Inspection

# TA 0.8EH, TA 1EH, TA 1.2EH

**Four Wheel Drive Dumper**



## General Inspection

Before each days operation of the dumper the operator must perform the General Inspection as outlined in the Check List on the following page.

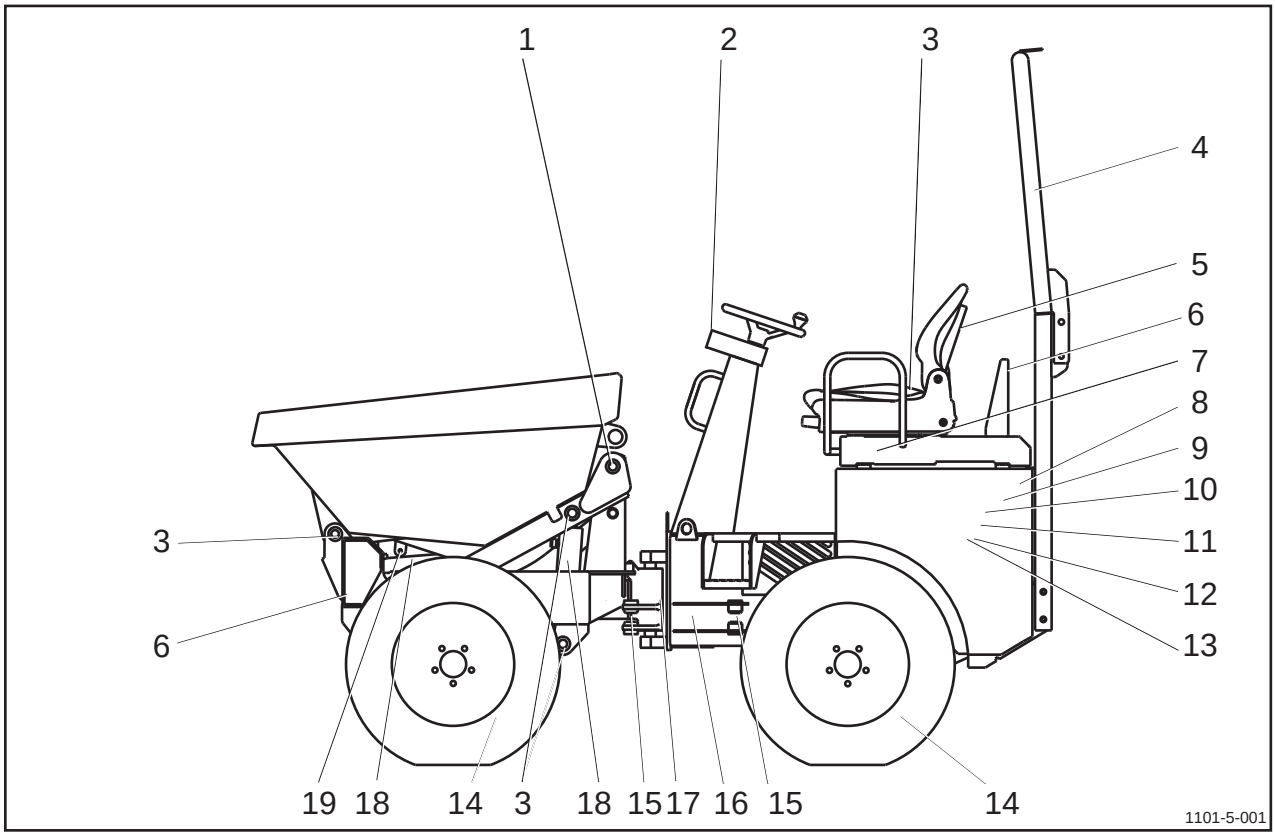
The purpose of the Operators Inspection is to keep the machine in proper working condition and to detect any signs of malfunction during normal operation between scheduled maintenance intervals.

Read the Safety Section of this manual before performing the inspection.

While it may not be the operators responsibility to perform mechanical maintenance the operator must be thoroughly familiar with the machine and its proper care since their own safety is involved.

**Before Carrying Out Checks Read Safety Section Of This Manual**

## Operator Checks

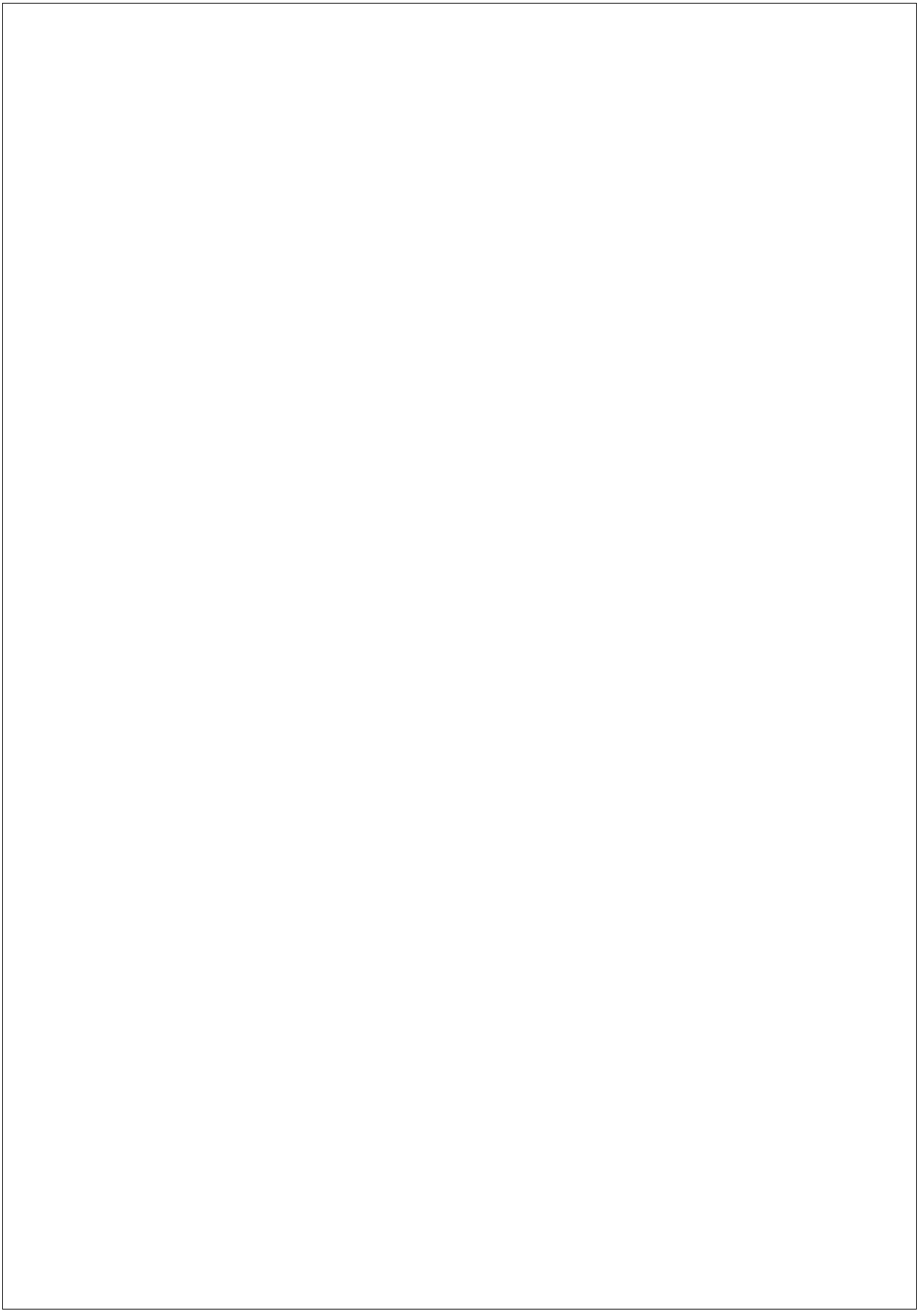



| | | |
|---|---|---|
| 1 | Lift Frame, Skip Pivot and Ram Pins | Check for wear and retention |
| 2 | Controls and Warning Lights | Working Correctly |
| 3 | Seat Belt | Working and Undamaged |
| 4 | ROP's Frame | Check for Damage. If damaged Do Not use machine |
| 5 | Instruction Manual | Present and Legible |
| 6 | Lighting (if fitted) | Check Operation |
| 7 | Air Cleaner | Check Blockage Indicator and clean filter if necessary |
| 8 | Alternator Belt | Check Adjustment |
| 9 | Engine Coolant | Check Level (ONLY with engine cold) |
| 10 | Engine Oil | Check Level |
| 11 | Fuel Tank | Check Level |
| 12 | Hydraulic Oil Tank | Check Level |
| 13 | Hydraulic System | Check for leaks |
| 14 | Wheels and Tyres | Inspect for Damage.Check Pressures |
| 15 | Steering Ram Pins | Check for wear and retention |
| 16 | Steering Ram and Hoses | Check for leaks |
| 17 | Articulation Lock | Present and Undamaged |
| 18 | Lift and Skip Rams and Hoses | Check for leaks |
| 19 | Skip Prop | Present and Undamaged |
| - | Safety Signs | Present and Legible |

# 6 - Operating Instructions

# TA 0.8EH, TA 1EH, TA 1.2EH

**Four Wheel Drive Dumper**



## Operating Instructions

Before using this equipment the operator must read and fully understand this Instruction Manual and pay particular attention to Section 2 - Safety and Section 4 - Description which describes the major components of the machine and the layout and function of all the controls.

**ALL Operators of this machine must be authorised, mentally and physically capable of operating this machine and fully trained in its operation.**

## Pre-Start Checks

- Make sure the machine has been cleaned to enable leaks etc. to be noticed easily during the pre-start check and during normal operation.
- Make sure the *Daily Operator Checks* as described on page *5 - 2* have been performed.
- Check general condition of machine - missing parts, loose fasteners, fuel lines for damage, hydraulic hose end fittings for leakage, hose outer covers for ballooning, etc.
- It is advisable to fill the fuel tank at the end of a working session to prevent condensation forming in the tank during long periods of inactivity, e.g. overnight.

**When Refuelling Beware of Naked Flames, Grinding Sparks etc.**

- Check for adequate ventilation if the machine is to be started or run in a building etc.
- If necessary place the ROPS in the “work” position and make sure all pins and retaining clips are fitted.

## Operators Seat - Milsco

The seat is adjustable for Operator comfort. The adjustments allow the seat to be moved forwards and backwards, the back of the seat may be tipped forwards and backwards and the seat suspension may be adjusted to the weight of the Operator.


### Seat Controls

A - Fore and aft movement.

B - Weight adjustment.

C - Back rest angle adjustment.

D - Seat belt.

### Fore and Aft Movement

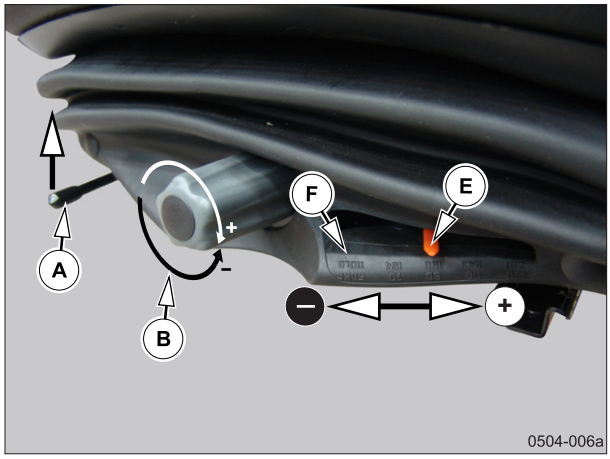
Lifting lever (A) allows the seat to be move forwards or backwards to suit the leg length of the Operator.

When the lever (A) is released the seat is locked in the selected position.

### Weight Adjustment

**NOTICE**

**The machine is fitted with a start inhibitor in the seat. Failure to adjust the seat for the drivers weight will prevent the engine from starting.**

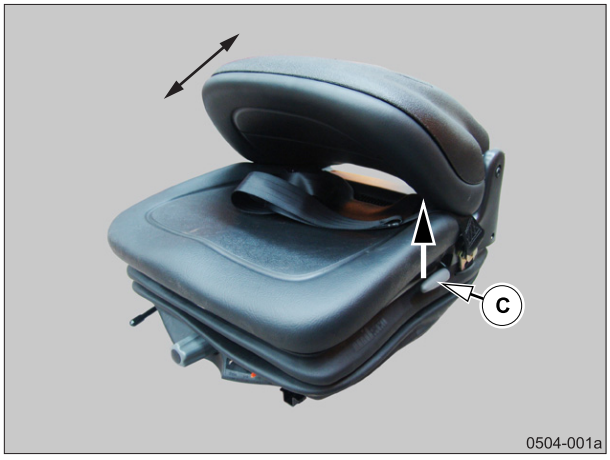



This control is used to adjust the seat characteristics to the weight of the Operator.

Turning knob (B) clockwise adjusts the seat for the larger person and anticlockwise for the smaller person.

When the knob (B) is turned, the pointer (E) moves to allow the Operator to select the correct weight from the scale (F).

**If the suspension seat weight adjustment is not set correctly the Operator may experience discomfort or personal injury**




### Back Rest Angle Adjustment

Lifting lever (C) allows the back of the seat to be pushed forwards or backwards to suit the preference of the Operator.

When the lever (C) is released the seat is locked in the selected position.

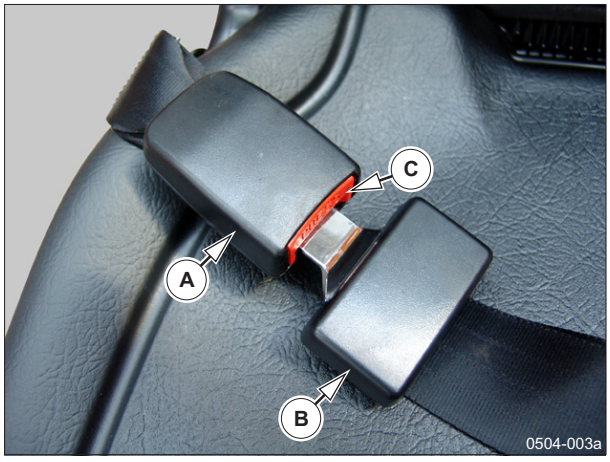
## Operators Seat - Milsco

### Seat Belt

- Sit on the seat, place the seat belt across the hips and insert the inner buckle (B) into the outer buckle (A) until it locks into position.

**Seat Belt must be locked in position across the Operators hips BEFORE operating the machine**

- Adjust by pulling the belt through buckle (B) until it is a firm, comfortable fit across the hips.
- To remove the seat belt, press the button (C) and pull inner buckle (B) away from outer buckle (A).



## ROP's

The folding ROPS comprises of two sections (A) and (B) and is pivoted at seat level to allow the ROPS to be tipped backwards to reduce the transport height of the machine.

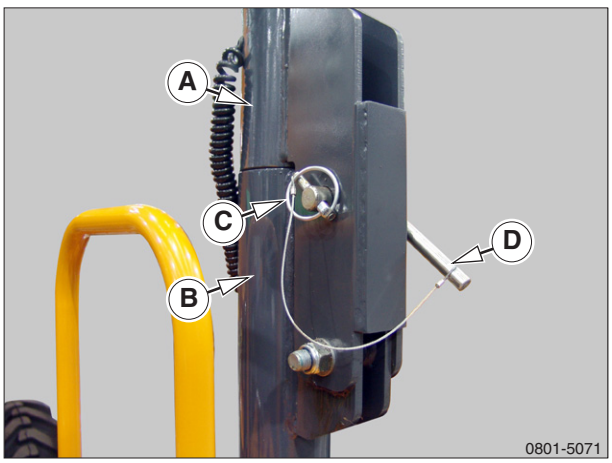
**The ROPS must only be lowered to reduce the transport height of the machine. Under NO circumstances must the machine be used with the ROPS lowered.**

**To Place the ROPS in the Transport Position**

- Remove the flashing beacon.
- Remove grip clips (A) from locking pins (B).
- Support the top half of the ROPS and remove the locking pins (B).
- Carefully tip the ROPS backwards and insert the locking pins (B) through the storage holes (D) and insert grip clips (A) to retain locking pins (B) in position.

**To Place the ROPS in the Work Position**

- Remove grip clips (A) from locking pins (B).
- Remove the locking pins (B) from the storage holes (D).
- Pivot the ROPS upwards to the working position.
- Fit the locking pins (B) and secure with grip clips (B).
- Fit flashing beacon.



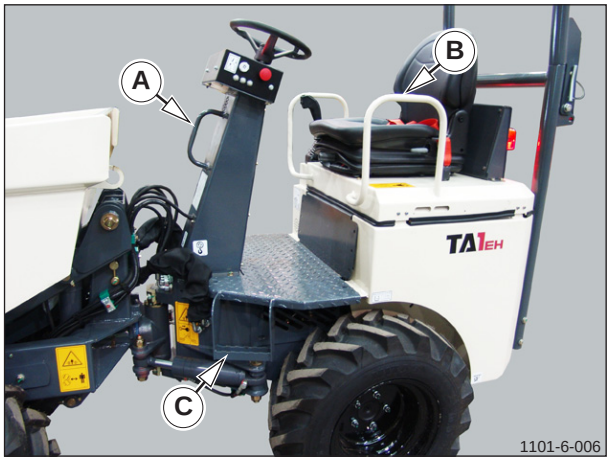
## Access / Egress

The Operator must use handles (A & B) and footsteps (C) when mounting or dismounting the machine to avoid personal injury or damage to the machine.

When mounting or dismounting, the Operator must always face the machine and use three points of contact (two feet and one hand or two hands and one foot) at all times.

**Do not use steering wheel, joystick etc. when mounting or dismounting. Use footsteps and handles provided.**

The handles (A & B) and footsteps (C) are situated on either side of the machine.




**Make sure the steps, handles and operators floorplate are kept clean from mud, oil, ice etc.**

Before dismounting, make sure the machine is parked correctly on firm, level ground, The joystick is in NEUTRAL and the engine has been stopped.

**Do not jump from the machine. Always face the machine and use handles and steps provided.**

## To Start the Engine

Before attempting to start the engine the operator must be sat on the seat. The inhibitor prevents the engine from starting unless the operator is seated.

**To start the Engine:-**

- Make sure the control lever is in Neutral.
- Turn the key to the “START” (4) position.
- When the engine starts release the key immediately and it will automatically return to the “RUN” (2) position.

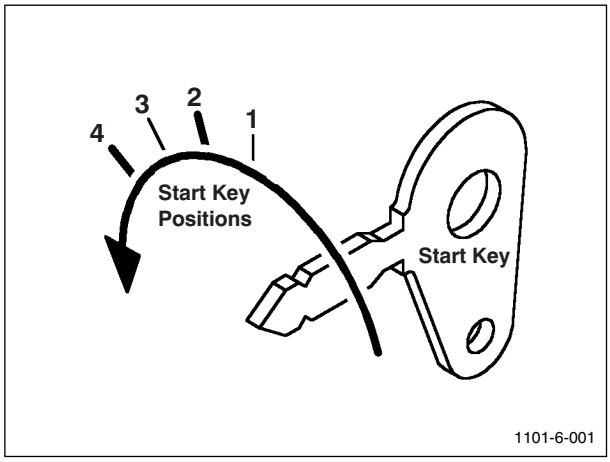
**NOTICE**

**If the key fails to return to the RUN position when released stop the engine immediately and do not use until the fault is rectified.**

- Do not crank the engine for more than 10 seconds.

**NOTICE**

**Do NOT engage the starter motor with the engine already running.**




**Cold Start**

The machine has a cold start facility to aid starting in low ambient temperatures.

- Turn the start key to the “HEATER” (3) position. The heater light on the control panel will come on.
- When the heater light goes out turn the start key to the “START” (4) position.
- When the engine starts release the key and make sure it returns to the “RUN” (2) position.
- Do not crank the engine for more than 10 seconds.

**NOTICE**

**Do NOT use starting sprays to assist engine starting.**

**To Stop the Engine**

- Place the machine on firm level ground.
- Move the control lever to the Neutral position - the brakes are automatically applied.
- Reduce engine speed and allow to idle for a few seconds.
- Turn start switch to “OFF” (1) position and the engine will stop.
- Remove the key to prevent accidental starting or unauthorised use.

⚠

**In an emergency press the Emergency Stop Button.**

## To Move the Machine

**To Move the Machine:-**

- Start the engine.
- Move the hand throttle downwards to the preset engine speed.
- Move the drive control lever towards the operator out of the Neutral gate.
- Push the drive control lever forwards towards the high speed gate. The further the lever is pushed more the speed will increase.
- To increase speed further move the drive control lever further towards the operator and through the high speed gate..

**To Reduce Speed:-**

- Move the drive control lever back towards the Neutral gate.

**To Stop the Machine:-**

- Move the drive control lever into the Neutral gate. This will slow and then stop the machine automatically. The parking brake will also be applied.
- Move the hand throttle to the Idle position.

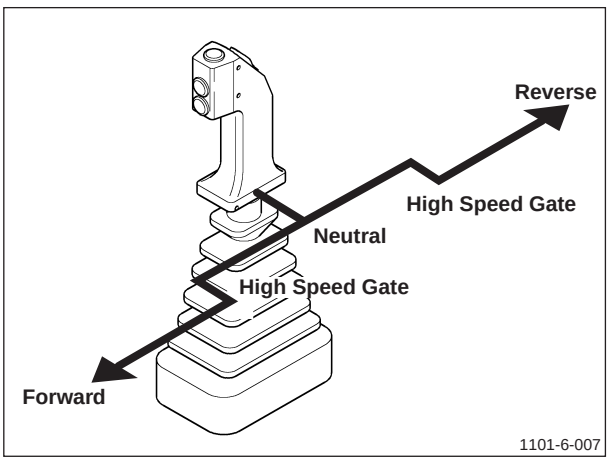
**To Reverse the Machine:-**

- Move the drive control lever from the Neutral gate towards the reverse direction.

**NOTICE**

**Do not go straight from forward to reverse direction. The machine must come to a stop before changing direction. Failure to do so may cause serious damage to the transmission system.**

**Only reverse at slow speeds. Look out for bystanders.**



## Loading the Skip

**Only fill the skip with free flowing materials. Danger of overturning.**

Before loading the skip the driver must:-

- Park the machine in a safe position on stable ground.
- Place the joystick in the “Neutral” position.
- Stop the engine.
- Dismount the machine and stand well clear.

**The skip must be loaded in such a way that the drivers view is NOT obstructed when the machine is travelling.**

## To Raise and Lower the Skip

This feature is useful when tipping into builders skips, lorries etc.

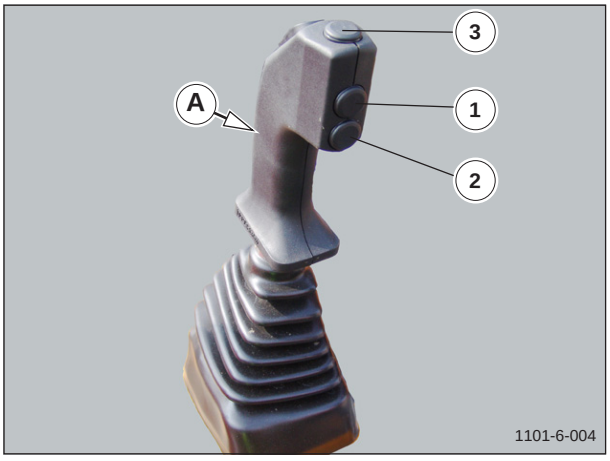
### To Raise the Skip

- Place the machine in the required position.
- Make sure the area is clear of bystanders.
- Press the upper button (1) on the joystick (A).
- Raise the skip to the required height and release the button.

**Only raise the skip with the machine on firm level ground. Do Not drive the machine with the skip raised.**

### To Lower the Skip

- Press the lower button (2) on the joystick (A).
- The skip will lower.



## To Tip or Lower the Skip

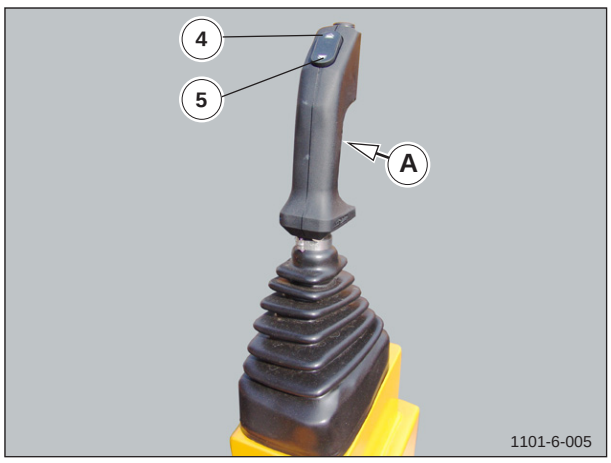
### To Tip the Skip

- Place the machine in the required position.
- Make sure the area is clear of bystanders.
- Press the top of the rocker switch (4) on the joystick.
- The skip will tip and discharge the load.

### To Lower the Skip

- Press the bottom of the rocker switch (5) on the joystick.
- The skip will lower.

**Only tip the skip with the machine on firm level ground. Do Not drive the machine with the skip tipped as your forward view will be obstructed.**



## Recovery of the Machine

Should it be necessary to tow the machine in the event of a breakdown it will be necessary to release the brakes first.

### To Release the Brakes

- Make sure the machine is on a flat level surface and chock the wheels to prevent the machine moving when the brakes are released.
- Undo the bolts and remove the brake release plates from their storage positions.
- Remove the plastic caps (B) from the end of the wheel motors.
- Place the plate over the end of the motor. Screw the release plate bolts into the motors through the centre hole. Tightening the bolts will release the brakes. Do not use bolts exceeding 30mm (1.18 inches) in length otherwise the motor will be damaged.

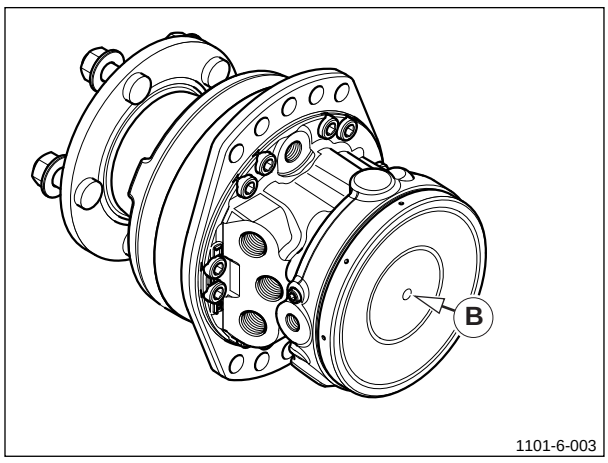
**NOTICE**

**Do Not tow at speeds in excess of 1MPH.**
**Do Not tow for more than 50 meters.**

### After Repair

When the fault has been rectified it will be necessary to re-apply the brakes.

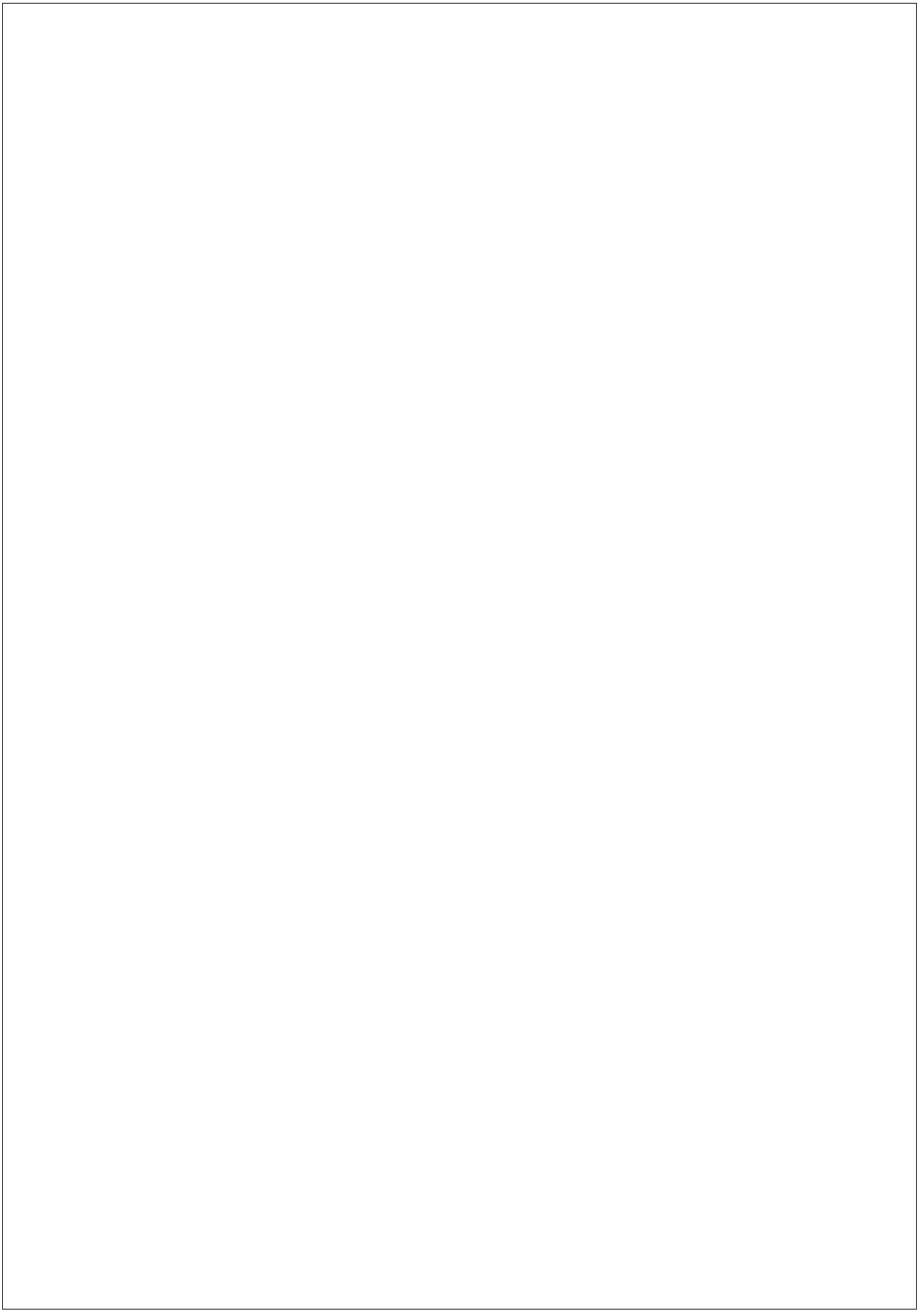
- Make sure the machine wheels are chocked to prevent movement.
- Remove the bolts and brake release plates and refit to their storage positions.
- Refit the plastic caps to the wheel motors.
- Start the engine; the brakes will be re-applied.
- Test the machine and make sure the brakes are working correctly before returning it to work.



# 7 - Transport

# TA 0.8EH, TA 1EH, TA 1.2EH

## Four Wheel Drive Dumper



## Transportation

### Loading onto Lorry / Trailer

When loading dumper onto a trailer or lorry, strong loading ramps must be used. See *Specification* section for machine weights.

Make sure the trailer or lorry will not move during loading by applying their brakes and also chocking their wheels if necessary.

The angle of the ramps must not exceed the gradeability of the machine and in wet or muddy conditions may need to be less.

**Ramp Gradeability Will Be Reduced In Slippy Conditions.**

**To prevent both chassis halves swinging relative to each other the articulation lock must be fitted when the machine is on a lorry/trailer. See *Articulation Lock* section.**

**Keep all bystanders well clear while loading or unloading the machine.**

**The skip must be empty when transporting the machine.**

Fit articulation lock - see *Articulation Lock* Page 7 - 2.

Secure the dumper to the lorry chassis using chains, straps or ropes of sufficient strength.

See *Securing Dumper* on Page 7 - 2.

### Unloading

When unloading from a lorry/trailer, strong loading ramps; capable of taking the weight of the dumper, must be used.

Make sure the trailer or lorry will not move during loading by applying their brakes and also chocking their wheels if necessary.

When the machine has been lowered to the ground release the articulation lock before attempting to move the machine..

**Keep all bystanders well clear while loading or unloading the machine.**

### Loading or Unloading using a Crane

A lifting point (A) is provided each side of the steering column box for lifting the complete machine Another lift point (B) is provided in front of th steering column.. The position of these points together with a two legged chain will permit a safe stable lift of the machine in working condition.

Note:- Other Methods of Lifting Are Not Recommended

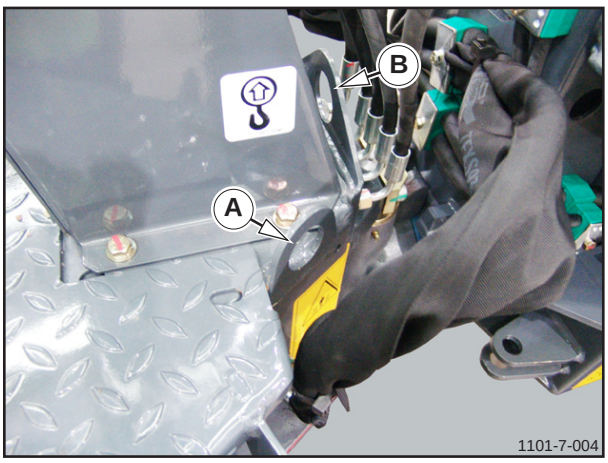
When using a crane or similar lifting device the rope, chain, strap etc. must be of sufficient strength to support the machine safely and be free from damage. See *Specifications* section for machine weights.

Before lifting the machine make sure it is positioned in the straight ahead position, i.e. front and rear chassis are in line.

Fit the articulation lock - see *Articulation Lock Page 7 - 2.*

**To prevent both chassis halves swinging relative to each other the articulation lock must be fitted when the machine is being lifted. See *Articulation Lock* section.**

Remember to release the lock bar after unloading the machine otherwise the steering will be inoperative.



## Articulation Lock

- When the machine has been positioned on the lorry or trailer to prevent both chassis halves swinging relative to each other the articulation lock bar (A) must be fitted.
- To fit the lock remove grip clip and pin from the lock. bar.
- Pivot the lock bar around until the holes in the bar are in line with the holes in front chassis locking bracket (B).
- Refit the pin (C) through the holes and secure with the grip clip.

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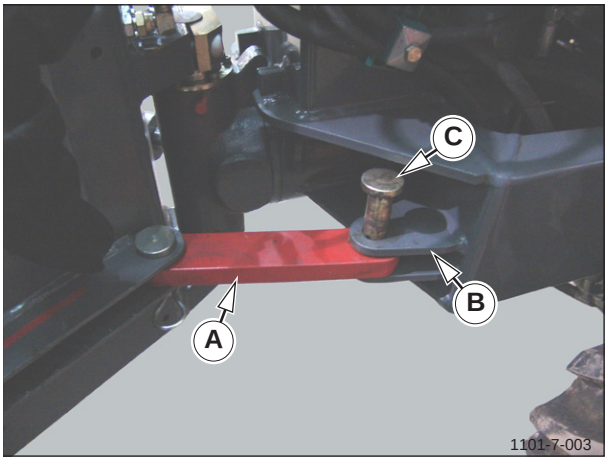
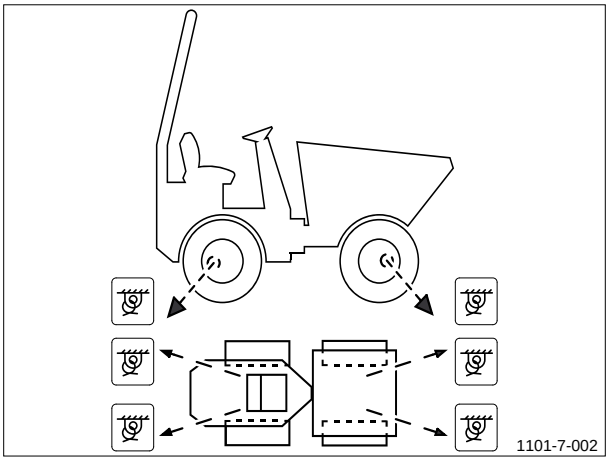
## Tie Down Points

Recommended tie down points are the front and rear wheel motors as indicated below. These points must be used when securing the machine to a lorry or trailer for transport.



## Securing the Dumper to a Lorry or Trailer Bed

When the machine has been placed in an acceptable position on the lorry or trailer, the drive control lever should be placed in neutral and the skip fully lowered. The articulation lock should be fitted.

The ROPS should be lowered to reduce the transport height of the machine. *See folding ROPS section*.

Once the machine has been positioned on the Lorry / Trailer bed, chocks should be securely fastened in the positions shown in the diagram below.

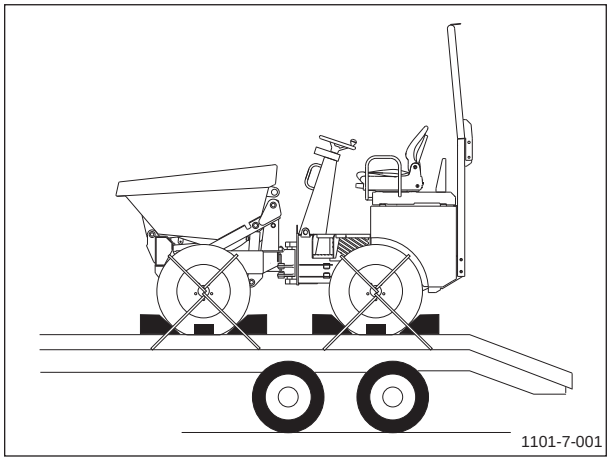
**Chocks MUST be placed on all four wheels.**
**Secure the dumper to the lorry/trailer chassis using chains, straps or ropes of sufficient strength.**

The chains, straps, ropes etc. should be attached to the machines tie down points - *see Tie Down Points - Page 7 - 2.*

Ropes may also be placed over the wheels as shown in diagram below.

The loose ends of the chains, straps, ropes etc. must then be securely attached to the lorry / trailer bed.

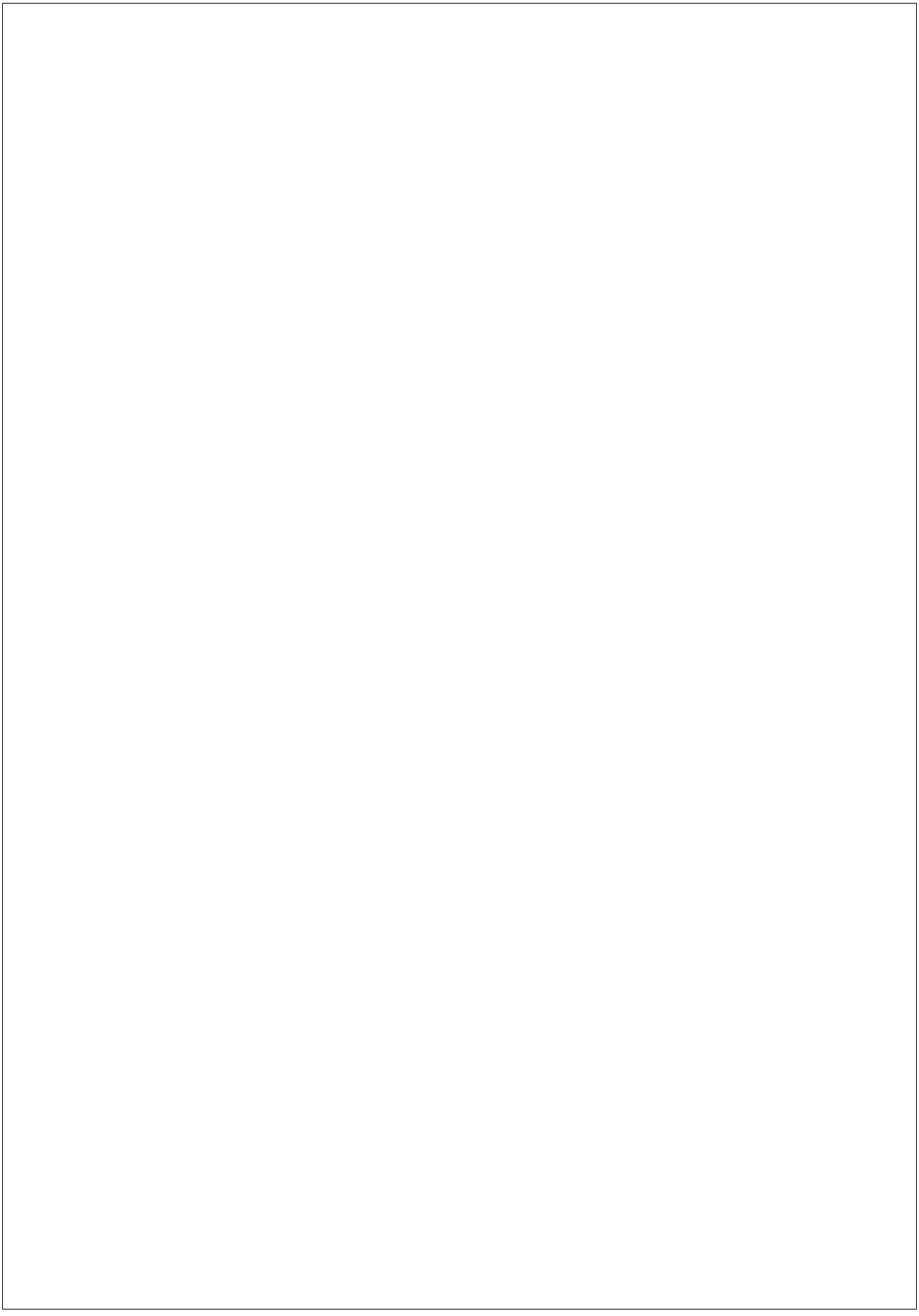
**All tie down methods must be secure**



# 8 - Maintenance

# TA 0.8EH, TA 1EH, TA 1.2EH

## Four Wheel Drive Dumper



## Maintenance and Lubrication

Before carrying out any service or maintenance work make sure that the following precautions have been taken.

- Park the machine on firm level ground.
- Stop engine and chock the wheels.
- Remove Start key to prevent accidental start up.
- Place a warning tag on the machine to warn others not to attempt to start the machine.*(Lock out and tag out page 2 - 6)*.
- Only jack or raise the dumper using the correct equipment.

**Always use suitable stands or other acceptable rigid support of ample capacity to support the dumper when raised clear of the floor.**

- Fit the articulation lock when working in the area of the centre pivot. *See page 7 - 2.*
- Refer to the *Lubricating and Service Schedules.*
- When checking fluid levels park the machine on a firm, level surface, in a well ventilated position away from naked flames, grinding sparks etc.
- Make sure strict cleanliness is observed especially when dealing with hydraulic systems.
- Isolate electrical system by disconnecting the battery.
- Make sure all guards and covers removed during maintenance are replaced before the machine is put back into work.

**Refer to the SAFETY Section of this manual before performing any maintenance tasks on this machine.**

**Never work under a raised skip unless the skip prop/ram stop is LOCKED in position.**

**OIL - Refer to Safety Section BEFORE handling oil and other lubricants and observe and adhere to all the warnings and precautions listed.**
**Avoid skin contact with used oils and lubricants if possible.**

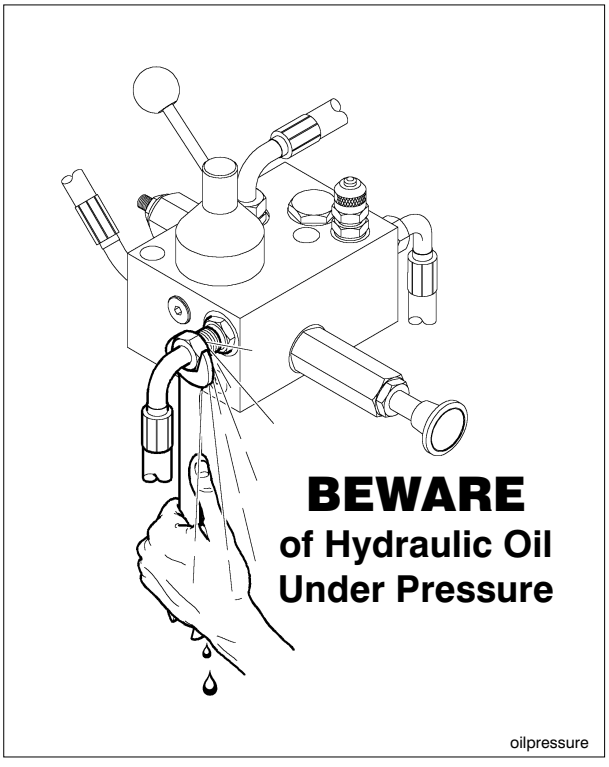
### Safety Signs

All safety signs fitted to the machine must be legible.Use mild soap and water to clean safety signs -DO NOT use solvent based cleaners because they may damage the safety sign material. All safety signs MUST be replaced immediately they become damaged or unreadable.

### Hydraulic Oil Under Pressure

- Release any pressure in the hydraulic circuit before carrying out repairs to the hydraulic system or components.
- Fine jets of hydraulic fluid under pressure can penetrate the skin.
- Do not use your fingers to check for small leaks or expose uncovered areas of your body to leaks.
- Check for leaks using a piece of cardboard.

**If skin is penetrated with Hydraulic Fluid, Get Immediate Medical Help**



## Cleaning

- Clean the dumper thoroughly, this will make it easier to find oil leaks and loose fittings etc.
- Take care to clean the oil and fuel tank filler necks.
- Drain plugs must also be cleaned.

**NOTICE**

**Avoid Spraying Electrical Equipment with Pressure Washers**

- Using water or a pressure washer to wash down the exterior of the dumper with or without detergent is generally all that is required.
- When cleaning the dumper it is preferable to use a biodegradable cleaner. Do not use solvents or like products which can damage rubber and plastics.

**Contaminated Water / Fluids / Oils Must Be Disposed of Legally**

## Component Access

Most servicing can be carried out by lifting the engine cover/ seat support. However for some maintenance operations it is necessary to remove the floor plate.

### To Remove the Floor Plate

- Remove the 3 bolts (E) from either side of the floor plate (6 in total).
- Lift the floor plate clear of the machine.
- To refit the floor plate reverse the above procedure.


## Vehicle/Machine Battery - End of Life Disposal

When the battery reaches the end of its useful life it must be removed from the machine and recycled in an approved way in accordance with local environmental regulations.

This service is usually offered by battery vendors.

Machine users that cannot find a suitable battery recycling facility should contact Terex for assistance.

## Working Under A Raised Skip

### Skip Props

A skip prop (A) is provided to support the skip in the raised position when maintenance is being carried out It is stored on the underside of the skip when not in use and secured by a pin (B) and secured by an R clip (C)..

**NEVER work under, or in front of, a raised skip unless skip props have been fitted.**

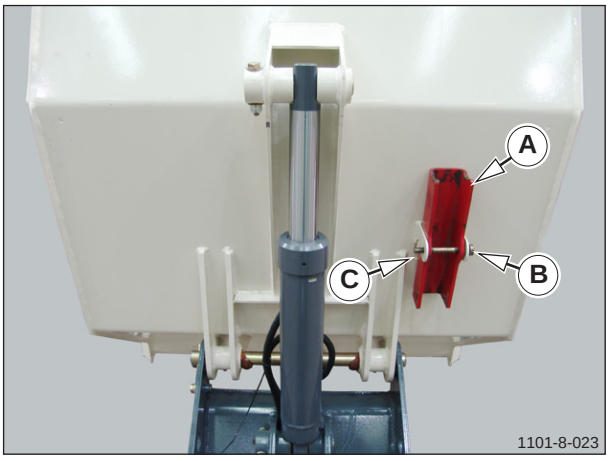
### To Fit the Skip Prop

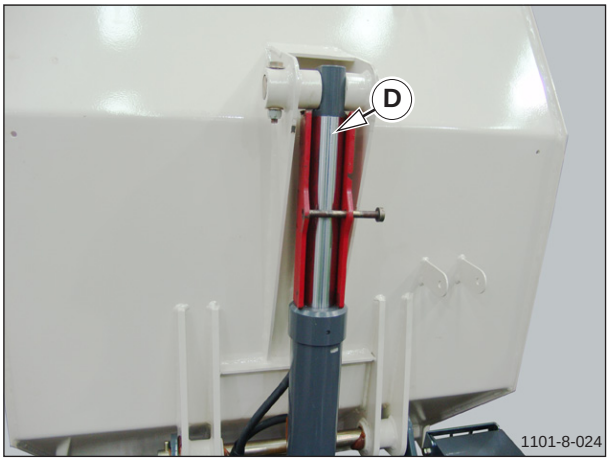
- Tip the skip fully.
- Remove the R clip (C) from the pin (B).
- Support the prop (A) and pull the pin out and remove the prop from its storage bracket.
- Fit the prop over the ram rod (D), fit the pin.
- Secure the pin with the R clip.
- Carefully lower the skip until it rests on the prop.

**Before working under a raised skip the prop must be fitted and secured in position.**

### To Remove the Prop

- If necessary start the engine and lift the skip slightly to take the weight of the skip off the prop.
- Remove the R clip (C) from the pin (B).
- Support the prop (A) and pull the pin out.
- Remove the prop from the ram rod
- Fit the prop in its storage bracket.
- Fit the pin and secure with the R clip.



## Battery

It is recommended that the battery is disconnected before any maintenance is carried out on the machine

**Before Attempting Any Maintenance Disconnect Battery**

**Battery Acid**
**Contact with battery acid can cause serious burns, blindness or even death. Protective clothing, gloves and a face shield must be worn at all times when handling or working on a battery**

### Battery Maintenance

Always keep the battery fully charged.

Keep battery terminals clean and free of corrosion. When reconnecting cables smear terminals with grease or petroleum jelly for protection.

DO NOT attempt to charge a frozen battery.

**Do Not charge a frozen battery. Risk of explosion**

When charging a battery hydrogen gas is produced. Make sure the area is well ventilated to avoid risk of explosion from a build up of hydrogen.

Do not smoke, weld or grind in an area where a battery is being charged.

If skin is exposed to battery electrolyte wash immediately with running water.

If eyes are exposed to battery electrolyte wash with running water and get immediate medical attention.

### Battery Access

The battery (A) is located in the engine compartment. To gain access:-

- Unlock engine cover/seat support.
- Press the button and open the engine cover/seat support by lifting with the handle.

### Battery Removal

Read the battery maintenance section before removing the battery.

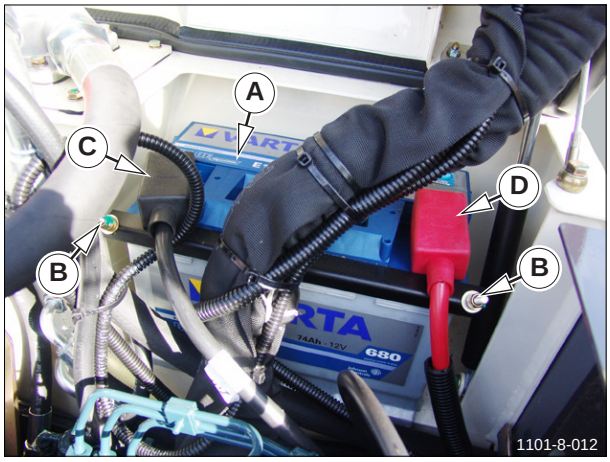
Lift off plastic covers from terminals.

- First disconnect the NEGATIVE ( - ) battery cable (C).
- Disconnect the POSITIVE (+ ) cable (D).
- Remove the two nuts and washers (B) securing the battery strap.
- Remove the battery strap and lift the battery clear.

NEVER allow metal objects to touch both battery terminals at the same time or to touch the POSITIVE ( + ) terminal and the frame.

### Re-fitting the Battery

- Position the battery in its tray.
- Fit the battery strap and secure with the nuts and washers.
- Tighten the nuts to hold the battery firmly.
- Reconnect the POSITIVE ( + ) cable.
- Reconnect the NEGATIVE ( - ) cable.
- Make sure connections are tight.
- Refit plastic covers over terminals.



## Air Cleaner

The air cleaner is accessed by opening the engine cover/seat support.

Maximum engine protection from dust is only possible if the air cleaner is serviced at regular intervals. No hard and fast rules apply to service intervals because operating conditions vary so much.

The only way to determine if the cleaner requires cleaning or replacing is to physically check it.

### Daily

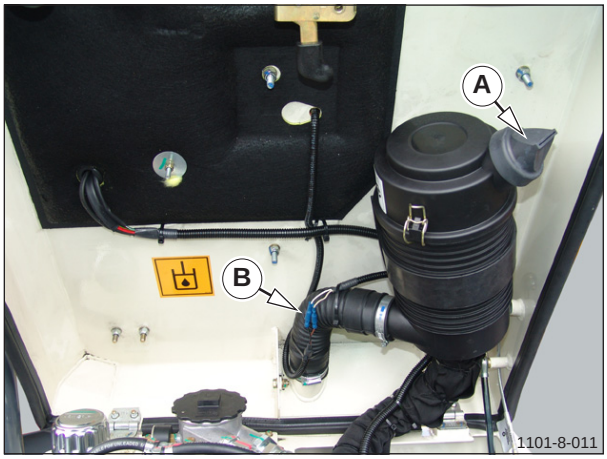
- Check the blockage indicator (C). If the indicator is showing RED, the air cleaner requires servicing.
- Squeeze the dust ejector vent nozzle (A) to remove dust build up in the air cleaner case.
- Check the inlet pipe (B) is not damaged.

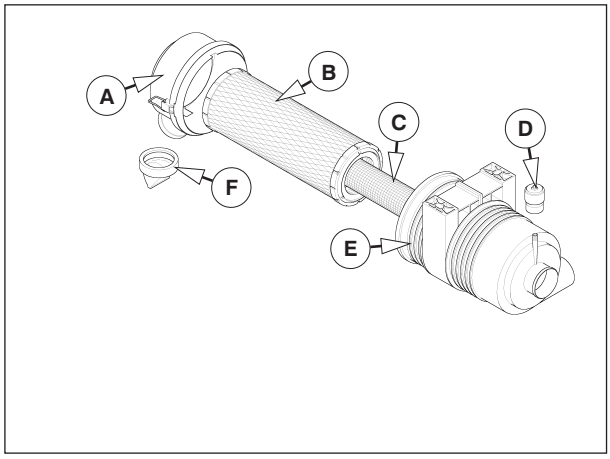
### Servicing

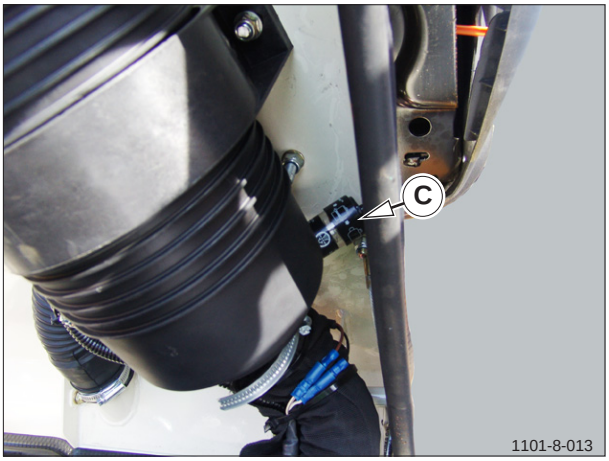
- Clean the area around the air cleaner.
- Release the clamps holding the end cap (A) to the filter body (E).
- Pull the primary (B) and secondary (C) filter elements from the body.
- The primary filter can be cleaned by blowing gently from the inside with a low pressure airline or by taping gently against a firm object.
- The secondary element should not be cleaned but replaced if blocked.
- Reassemble by reversing the above procedure.

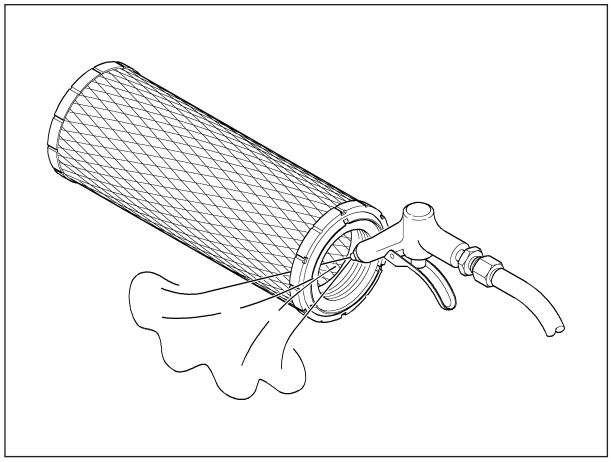
### Cleaning the Elements

The air cleaner elements should be cleaned by blowing gently, from the inside out with an airline or, alternatively by tapping the element gently against a firm object.



## Engine Oil

Always use the *Engine Manufacturers Handbook* for instructions when checking or servicing the engine, e.g. oil level, filters, fan belt etc.

If this is not available the following procedures should be followed for checking and changing the engine oil.

The oil should be changed after the first 50 hours and then every 200 hours thereafter.

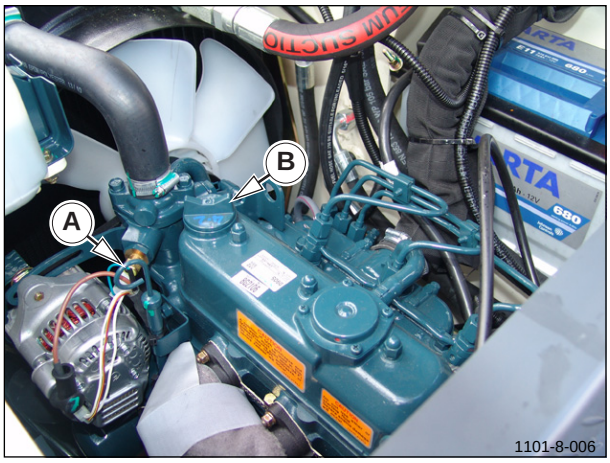
**The Dumper MUST be On Firm Level Ground when Checking or Changing the Oil**

### Checking Engine Oil Level

- Park the machine on firm level ground.
- Stop the engine and allow time for oil to drain into the sump.
- Open the seat support/engine cover.
- Remove the dip stick (A) and wipe clean with paper, replace the dipstick and remove again and check the level of the oil on the dipstick.
- If the oil is below the MIN. level remove the filler cap (B) and add clean fresh oil of the correct grade to the engine.
- Do not fill above the MAX. mark.
- Replace filler cap.

**NOTICE**

**Do Not Overfill. Too much engine oil may cause damage to the engine**




### Changing Engine Oil

- Make sure engine oil is warm - **Not Hot**.
- Park the machine on firm level ground.
- Stop engine and set drive lever in neutral gate to apply brakes.
- Remove start key and place warning tag on dash.
- Place a suitable container under the drain plug in the sump.
- Remove the sump plug and allow the oil to drain.
- When oil has finished draining clean and refit the sump plug.
- Re-fill engine with fresh clean oil through filler cap (B). Refer to page 20 for correct grade and quantity.
- Start engine and check for leaks.

**NOTICE**

**The oil filter should be replaced when changing the engine oil**

**Contaminated Water / Fluids / Oils Must Be Disposed of Legally**

## Engine Coolant.

The cooling system is pressurised to increase the boiling point of the coolant, therefore extreme caution should be taken when carrying out maintenance on the system to prevent scalding. Never remove the radiator cap (A) when the engine is hot.

**NEVER Remove Radiator Cap when Engine is running or hot. Risk of scalding**

The radiator incorporates an oil cooler for the hydraulic system. The coolant used in the cooling system should be a pre mixed solution of antifreeze and water in the correct ratio for the temperature range the machine is operating in. Refer to page 8 -23 for the correct antifreeze/water specification

If the pressure in the cooling system rises above a preset pressure the radiator cap allows excess pressure to escape through the overflow pipe.

**NOTICE**

**DO NOT use anti leak additives in the cooling system. Never start the engine without coolant in the system.**

### Checking Coolant Level

**The Cooling System MUST Be Cold Before Checking The Coolant Level. Never Remove The Radiator Cap When The Engine Is Hot. Risk Of Scalding**

To check the level:-

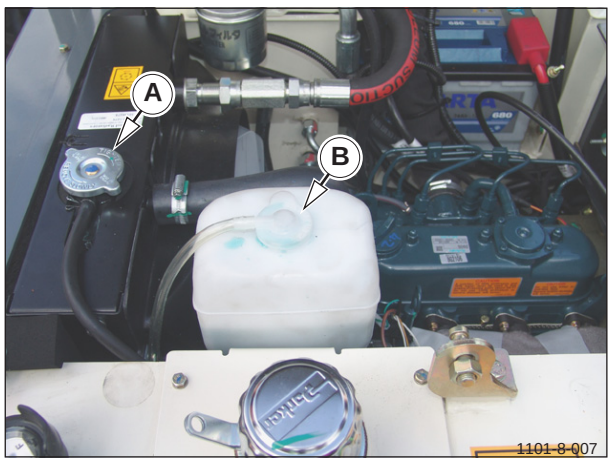
- Make sure the system is cold.
- Check the level on the plastic expansion tank
- The coolant level should be just below the maximum mark (C) on the tank
- If the level is below the minimum mark (D) add fresh coolant through the expansion tank filler (B) until the level is correct.

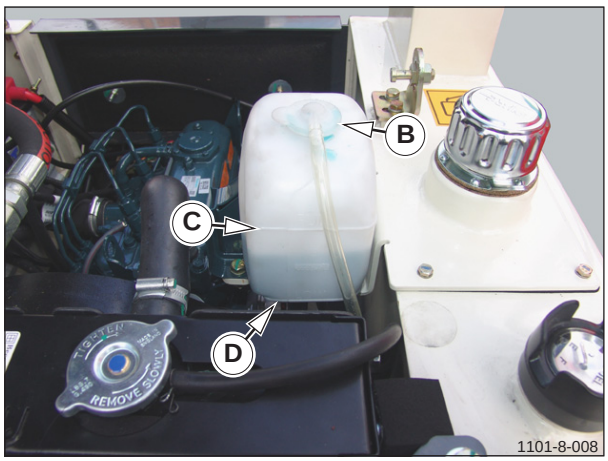
### To Drain the Cooling System

- Make sure the system is cold.
- Open the engine cover.
- Loosen the bottom hose clip.
- Remove bottom hose and allow coolant to drain into a suitable container.
- Refit bottom hose and re tighten the hose clip.

### Refilling the Cooling System

- Add fresh coolant of the correct antifreeze strength through the filler cap (A).
- Add coolant until the level is just below the maximum mark (C) on the expansion tank. Allow time for the coolant to settle adding more coolant as required.
- Refit filler cap (A) , start engine, check for leaks and allow engine to reach operating temperature.
- Stop engine, allow to cool and re check level. Add coolant through the expansion tank filler (B) if required not the radiator cap (A).



## Fuel System

### Fuel Level

**When Refuelling Stop the Engine and Beware of Naked Flames, Grinding Sparks etc.Risk of Explosion or Fire**

Before filling make sure the engine is cool, the machine is in a well ventilated area and on level ground. Always use clean fuel from a clean container.

- Check the diesel fuel level reaches the indicated FULL level on the tank top mounted level gauge (A). The gauge markings indicate when the tank is Empty, half full or Full.
- To refill, remove the large filler cap (B) and pour the recommended grade of fuel through the fuel strainer inside the filler neck. NEVER overfill the fuel tank.
- When refuelling never leave the engine running.
- Clean up any spilt fuel before using the machine.

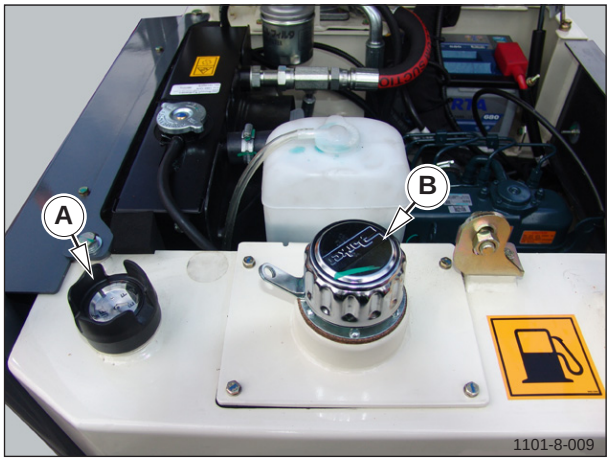
### Fuel Filter

Servicing is limited to changing the filter canister.

- Unscrew the filter canister (C) and dispose of in an environmentally way.
- Smear the rubber ring on the new canister with grease.
- Screw the new canister onto the filter and hand tighten only - do not use grips etc. to tighten the canister
- Run the engine for a short period, stop engine and check for leaks.

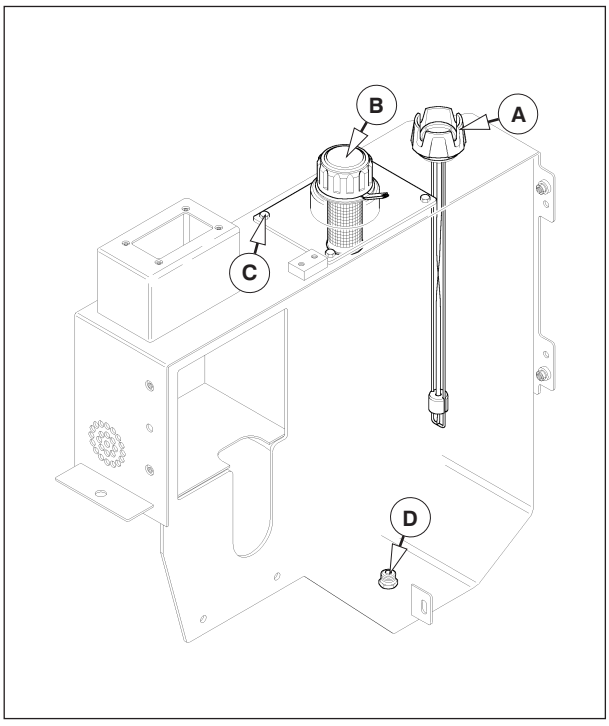
**NOTICE**

**Fuel Filters are not serviceable items, they must be replaced**




**Cleaning The Fuel Tank**

- Clean the outside of the tank and the drain plug.
- Place a suitable receptacle under the drain plug (D).
- Remove the drain plug and drain off any remaining fuel.
- Remove the four cover bolts (C) and lift the inspection cover away from the tank.
- Clean all traces of gasket from the face of the inspection cover and the tank top. Make sure that no bits of gasket or other dirt enter the tank.
- Place a suitable container beneath the drain plug hole and wash the tank out thoroughly with clean diesel.
- Dry the inside of the tank with lint free cloth or paper.
- Refit the drain plug.
- Clean the strainer under the filler cap (B) and refit the inspection cover using a new gasket.
- Tighten the inspection cover bolts.
- Refill the tank with clean fresh diesel.
- Check for leaks.



## Hydraulic System

Before any maintenance care should be taken to prevent contamination from entering the hydraulic system. By observing strict hydraulic cleanliness the machine will benefit from fewer hydraulic failures through contamination. For example:

**Always**

- Thoroughly clean machine before any maintenance. Use paper roll, not rag, to wipe parts.
- Use fresh, clean hydraulic oil from a sealed container.
- Make sure old gasket particles and excess sealing compound etc. do not enter the system. If they do clean them out.
- Make sure new parts and fittings are kept in sealed bags etc. and they are stored away from any contamination.
- Remove flaking paint from around the area being maintained. Inspect the inside of new tanks for debris, contamination etc.

**Never**

- Fit new hoses if both ends have not been protected with plastic caps.
- Fit new valves, pumps, motors, filters etc. if all the ports are not plugged.
- Use dirty containers for oil storage.
- Use dirty containers or funnels for filling hydraulic system.
- Store hydraulic components on the floor, in areas where welding or grinding is done, in a dirty environment etc.

**NOTICE**

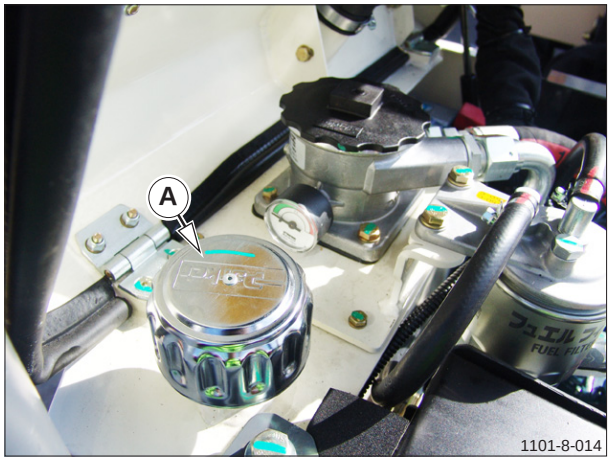
**Make sure that no dirt enters the hydraulic system**

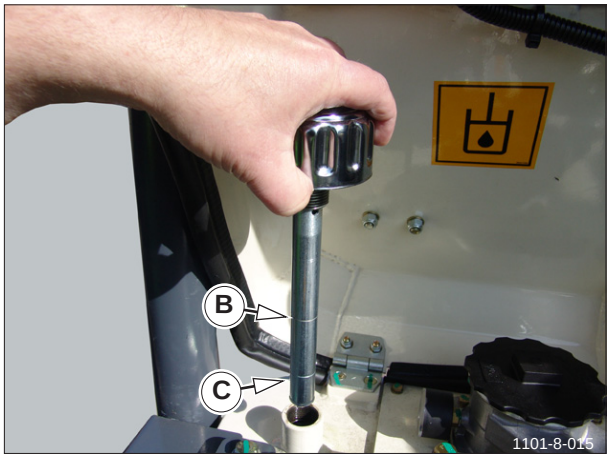
### Checking Hydraulic Oil Level

The filler/breather cap (A) is fitted with a tube that acts as a dip stick.

The tube has two marks indicating the Minimum (C) and Maximum (B) oil levels.

Hydraulic oil should be added until the level is just below the Maximum (B) mark on the dipstick.



## Hydraulic System

### Changing Hydraulic Oil

- Thoroughly clean the area around the top of the hydraulic tank and the drain plug to prevent dirt entering the system.
- Run the machine until the oil is warm - not hot. This will aid draining.
- Place the machine in a clean dust free area.
- Remove the drain plug from the hydraulic tank and allow oil to drain into a suitable receptacle.
- Clean drain plug and sealing washer. Replace the washer if necessary.
- Refit the drain plug.

**Contaminated Water / Fluids / Oils Must Be Disposed of Legally**

### Refilling

Refill the tank with the correct grade and quantity of hydraulic oil using a clean container and funnel. Refer to the Lubrication Section on Page 8 -20 for correct grade of oil.

Check the dipstick regularly while filling and stop when the level is just below the full mark.

Replace the filler cap and clean up any spilt oil.

Run the machine and check for leaks.

Re-check the level.

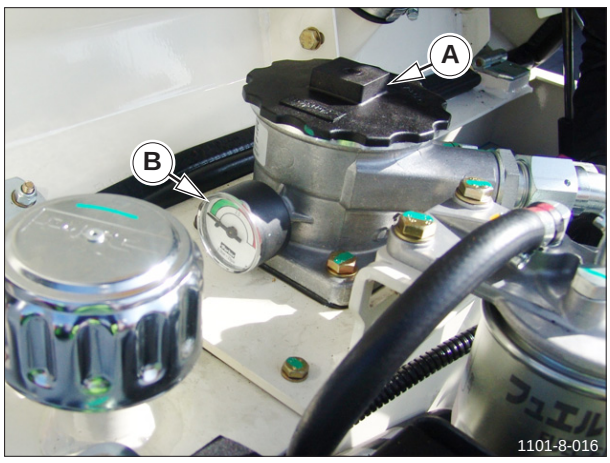
### Filters

With the exception of the filters the hydraulic system is normally maintenance free.

When renewing filters the area around the filter should be thoroughly cleaned before removing the old filter to prevent the ingress of dirt etc.

### Return Filter

The return filter (A) is fitted with a dial type blockage indicator (B). When the needle is in the green section the filter is functioning normally. When the needle enters the red section a blockage is indicated and the machine should be stopped immediately and the filter replaced before the machine is used again.

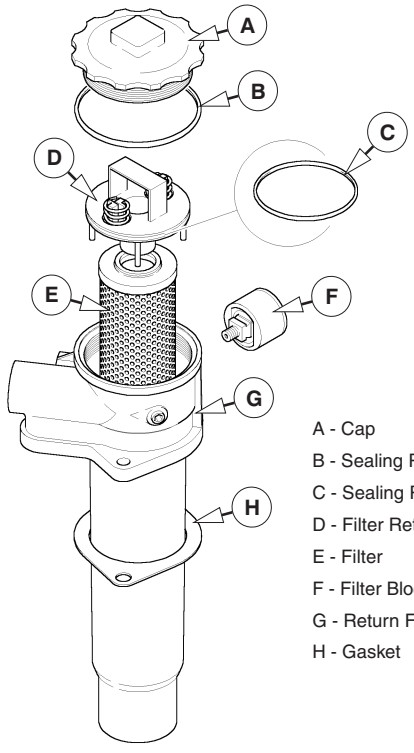


## Hydraulic System

**Replacing Return Filter Element**

- Drain the hydraulic tank - see *Page 8-12*.
- Unscrew filter cap assembly (A) using the square on the cap.
- Lift the filter retaining plate (D) and filter element (E) out of the body (G).
- Dispose of the old element.
- Clean all components and replace plate seal (C) and cap seal (B) if necessary.
- Fit new element (E) to retainer plate (D).
- Fit plate seal (C) to retainer plate and fit plate to body.
- Fit cap seal (B) to cap (A) and refit cap.
- Tighten cap using square but do not over tighten.
- Refill tank to correct level.
- Start machine and check for leaks.
- Check that the needle of the blockage indicator (F) is in the green section.

**Dispose of Waste Oil and Used Filter Element In An Environmentally Friendly and Legal Way.**

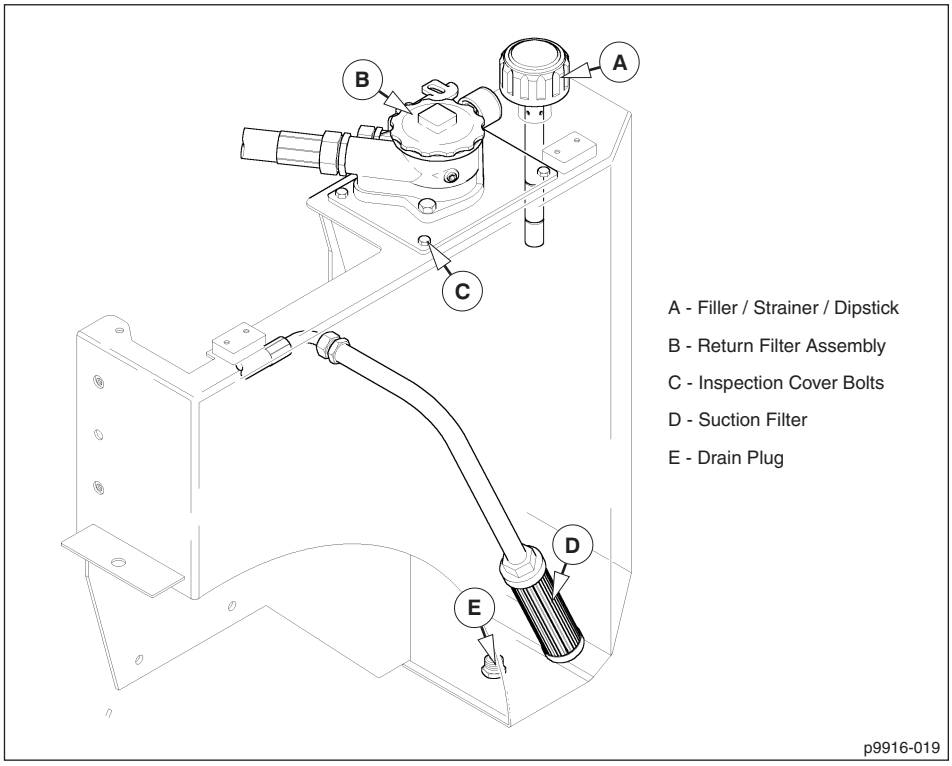


## Hydraulic System

### Replacing Suction Strainer

Note:- It is recommended that the return filter element is replaced at the same time.

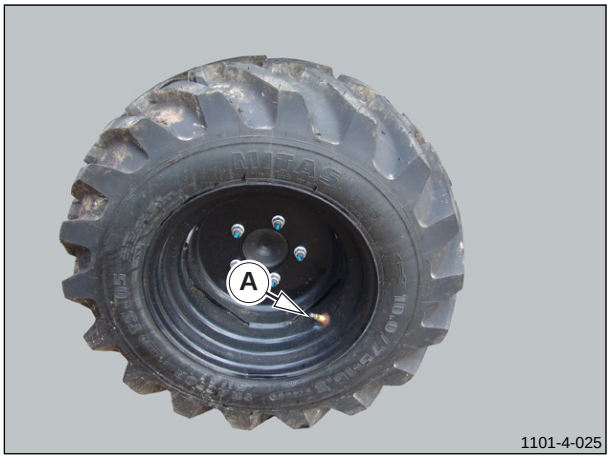
- Thoroughly clean the hydraulic oil tank externally.
- Remove the drain plug (E) from the hydraulic tank and allow oil to drain into a suitable receptacle.
- Remove the four bolts (C) and remove the return filter mounting plate.
- Clean all traces of gasket from the face of the mounting plate and the tank top. Make sure that no particles of gasket or other debris enter the hydraulic tank.
- Undo the suction strainer (D) from the union.
- Check the strainer and clean or replace as necessary.
- Place a suitable container beneath the drain plug hole and wash the tank out thoroughly with clean diesel.
- Dry the inside of the tank with lint free cloth or paper.
- Replace the drain plug.
- Re fit the suction strainer.
- Fit a new gasket to the return filter mounting plate and securely bolt the plate onto the tank.
- Refill the tank with clean fresh oil.
- Replace filler cap (A).
- Start engine and check for leaks.
- After a short period stop the engine and check the oil level in the tank and top up as necessary.



## Wheels and Tyres

Check the tyres regularly for damage by cuts and embedded particles, i.e. nails, steel, glass etc. and check/adjust the pressures weekly using valve (A).

See *Specifications* section for tyre pressures.



## Lubrication

The Articulation Lock and Skip Prop must be fitted before lubricating the machine.

**Fit Articulation Lock and Skip Prop BEFORE Lubrication**

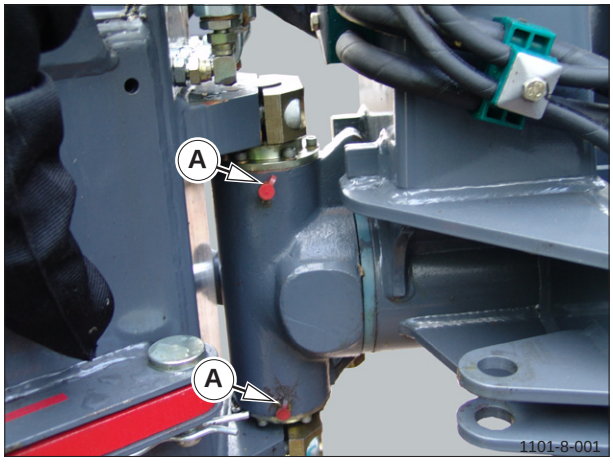
Refer to lubrication diagram on *Page 8 - 20.*

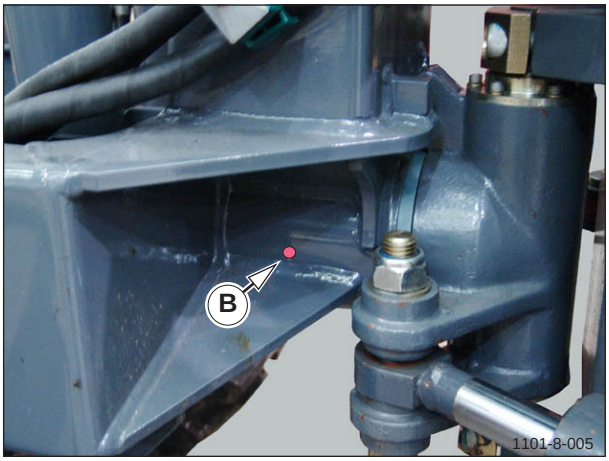
### Centre Pivot

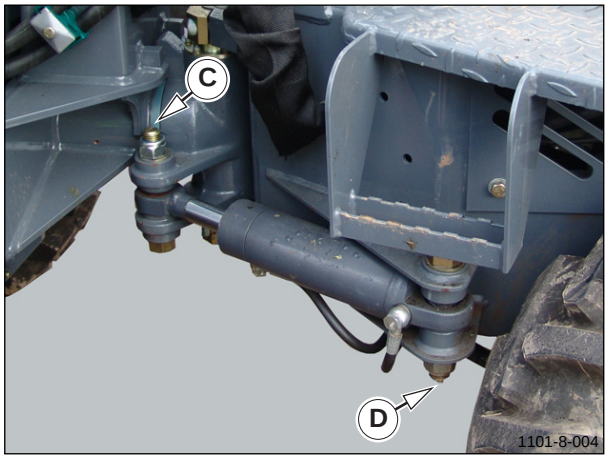
Lubrication of the centre pivot bearings (A) and (B) is very important and must be carried out every 50 hours.

### Steering Ram

The steering ram pins are fitted with grease points (C) and (D). Grease every 50 hours.



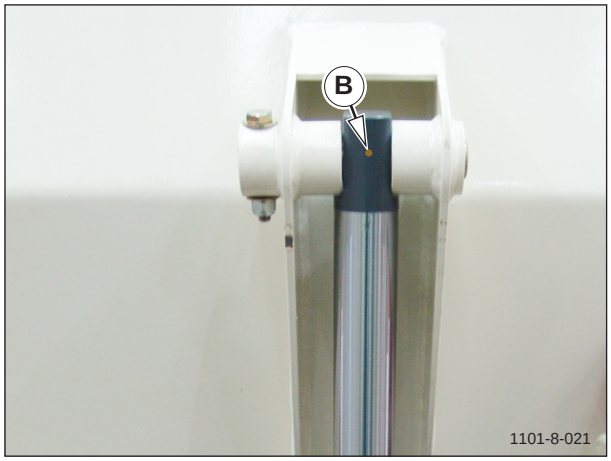
## Lubrication

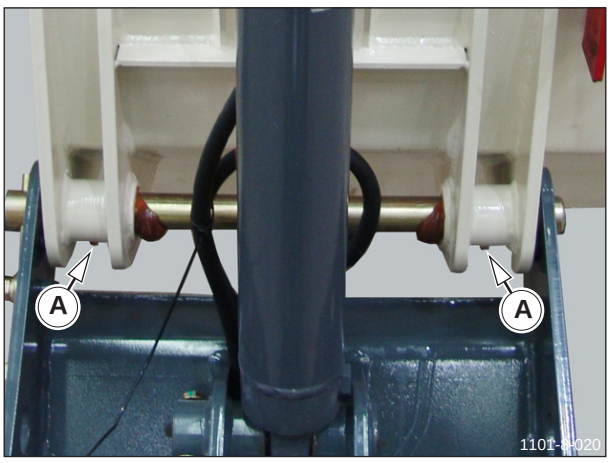
### Skip Pivot

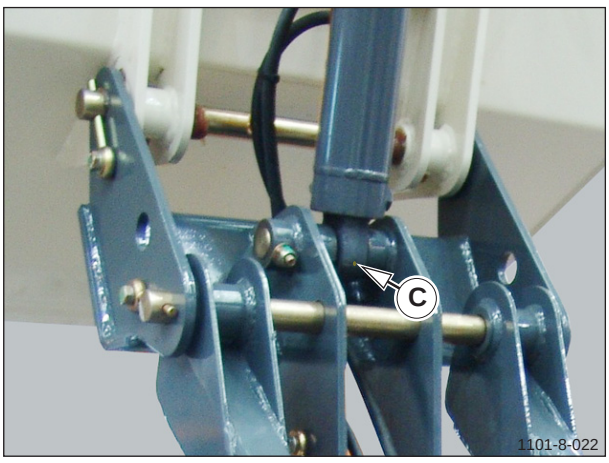
The skip pivot must be greased every 50 hours through the nipples provided (A).

### Skip Ram

The skip ram has greasing points at the rod end (B) and the base (C). Grease every 50 hours.



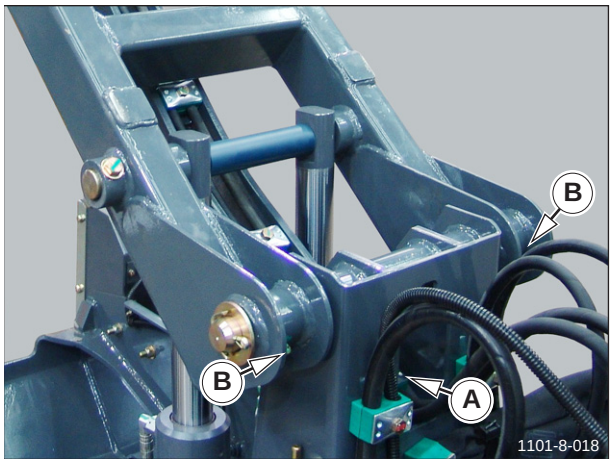
## Lubrication

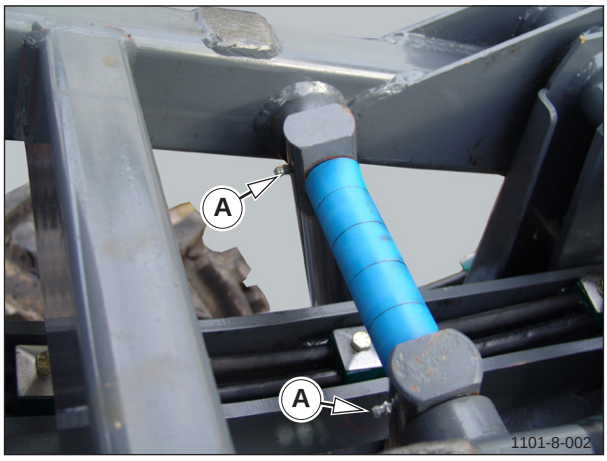
### Lift Arms

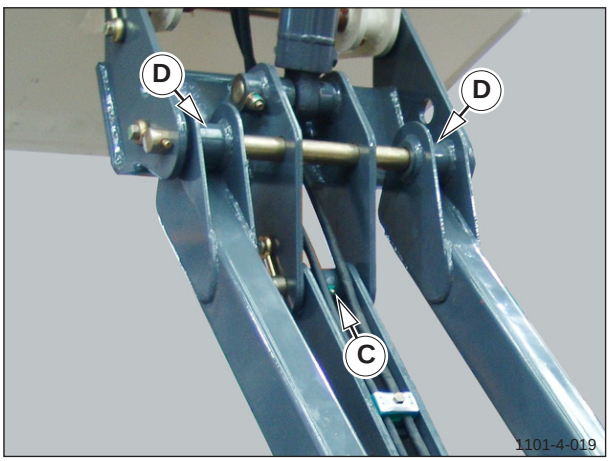
The lift arms and link have grease points at (A), (B), (C) and (D). Apply grease every 50 hours.

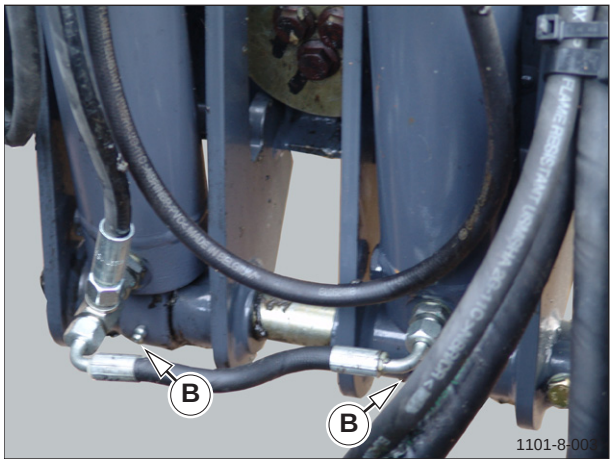
### Lift Arm Rams

The lift arm rams have grease points at the rod end (A) and base (B). Apply grease every 50 hours.



## ROPS

### Introduction

There are in-service factors which tend to degrade a ROPS/FOPS systems energy absorbing or load carrying capability.

A few of these factors are:

- Structural damage from vibrations and/or loadings during some operations.
- A corrosive environment.
- Continued use of the machine after rollover or accident involving structural damage.
- Unauthorized modification.
- Worn or deteriorated isolation mounts.
- Bolt replacement with less than the correct grade or neglect in maintaining proper bolt torque.
- Improper installation.

Any of these factors may cause a dangerous condition to exist as well as exposing all concerned parties to liability damages. The following guidelines will be helpful if followed.

#### Attachments and/or Modifications

Generally ROPS/FOPS structures are not intended as external load carrying members and must not be used to mount attachments such as pull hooks, winches, side booms, etc. without the manufacturers approval.

Non external load transmitting attachments such as mirrors, fans, heaters, lights, etc. should be installed following the manufactures guidelines. Typically these attachments are located in non critical areas such as roof sheets, enclosure sheet metal, or the middle portion of the ROPS legs.

Modifications to basic design such as increasing canopy height, or relocating ROPS legs is not permitted.

### Maintenance

Inspection - A scheduled, frequent visual check of mounting hardware by operation or service personnel is recommended. As most ROPS are different and function in different service environments, no specific inspection interval can be recommended. Inspection in conjunction with regular service intervals is suggested. The inspection should check for:

Worn, damaged or missing resilient mounts. Excessive motion or rattling during operation are indications of a problem. The mounts should be disassembled and repaired if required.

Missing or damaged mounting hardware (bolts, nuts, washers, etc.) should be replaced. Bolts should be checked for correct torque settings.

Cracks in ROPS/FOPS structure and mounting system. The machine should be cleaned and disassembled as necessary to allow inspection for cracks in the structure and mounting system. Cracks are usually associated with weld details and usually show as a line of rust before it will be clear as a crack. Rust lines should be taken as indications of cracks and verified by inspection following the manufacturers procedures. Only some cracks will badly affect the ROPS/FOPS function. Cracks in enclosure sheet metal generally are not structurally important. The manufacturer can identify the appropriate measures. If in doubt, consult the manufacturer.

**Water drainage paths**. The check should verify clear water drainage paths so that entrapped water will not freeze and crack or deform the structure.

**Corrosion**. Extensive paint peeling and rusting should be noted and corrective action taken.

**Other Inspection**. The structure must be inspected following a rollover, collision or fire.

#### Repair

Replace all missing or damaged hardware with the manufactures specified hardware. Re-torque all threaded fasteners to the manufacturers specifications.

Replace worn or damaged resilient mounts to prevent further damage and vibration problems.

Determine the repair ability of cracks in ROPS/FOPS structures on the basis of the crack details and effect on the particular design. The manufacturer must be consulted at this step. Some general guidelines which may be helpful are:

Enclosure sheet metal cracks are repairable.

Small cracks may be repairable. Consult the manufacturer.

If damaged by a rollover, collision or fire consult the manufacturer.

In all cases, when doubt exists, consult manufacturer.

## Seat Belts

**Important Facts about Seat Belts**

The potential exposure of this seat belt to severe environmental conditions make it crucial to inspect the seat belt system regularly.

It is recommended that the seat belt system is inspected at least once a year or more often if the vehicle is exposed to severe environmental or vocational conditions,

Any seat belt system that shows cuts, fraying, extreme or unusual wear, significant discoloration due to UV exposure, dusty-dirty conditions, abrasion to the seat belt webbing, or damage to the buckle, latch plate, retractor, hardware or any other obvious problem should be replaced immediately.

Once replacement of the seat belt has been determined, be certain that it is only replaced with the original equipment manufacturer recommended replacement seat belt. See your authorized spares and service centre for replacement. Your restraint system has been developed and tested specifically for your machine.

If the inspection indicates that any part of the seat belt requires replacement, the entire belt must be replaced. It is vitally important that all components be mounted back in the same position as the original components which were removed. This will maintain the design integrity of the mounting points for the seat belt assembly.

⚠

Failure to properly inspect and maintain a seat belt can cause serious injury or loss of life in the event of an accident.

It is critical that any time the machine is involved in an accident, the entire seat belt system must be replaced.

The seat belt should be considered to have a finite life and must be replaced as required throughout the life of the machine.

The seat belt must be inspected daily for required maintenance.

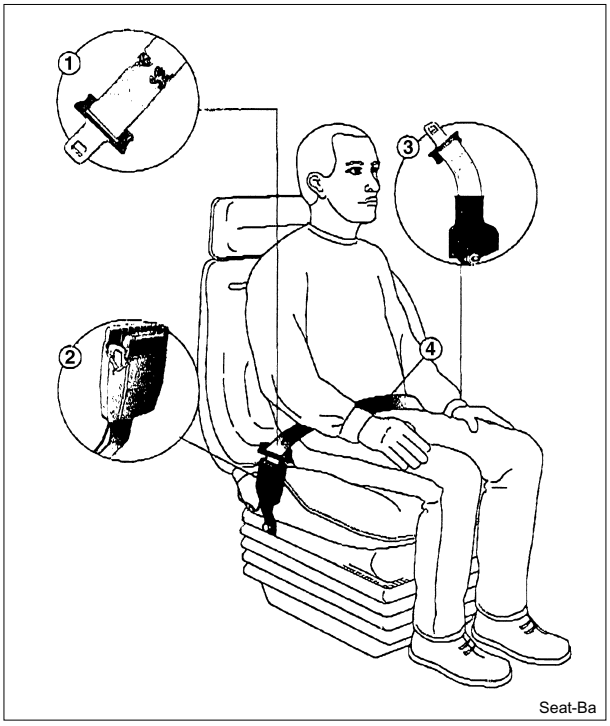
If replacement of any part of the seat belt is indicated in the maintenance guidelines, the entire belt must be replaced, both retractor and buckle sides.

## Seat Belt Maintenance Guidelines

Follow Maintenance Guidelines 1-4 to properly inspect seat belt and tethers to determine if replacement is necessary.

The following maintenance guidelines detail how to Inspect seat belt for “cuts, fraying, extreme or unusual wear of the webbing, etc., and damage to the buckle, retractor, hardware or other factors” which indicate that seat belt replacement is necessary.

1. Check the webbing. Pull the webbing completely out of the belt retractor and inspect the full length of the webbing for cuts, wear, fraying, dirt and stiffness. If a belt shows any cuts, fraying, extreme or unusual wear, the system should be replaced.
2. Check the buckle and latch for proper operation and to determine if latch plate is excessively worn, deformed or buckle is damaged or casing broken.
3. Check retractor web storage device operation by extending webbing to determine it locks properly and that it spools out and retracts webbing properly - fitted.
4. Check web in areas exposed to ultraviolet rays from the sun or extreme dust or dirt. If the original colour of the web in these areas is extremely faded and/or the web is packed with dirt, the physical strength of this web may have deteriorated. If this condition exists replace the system.



## Service Schedule

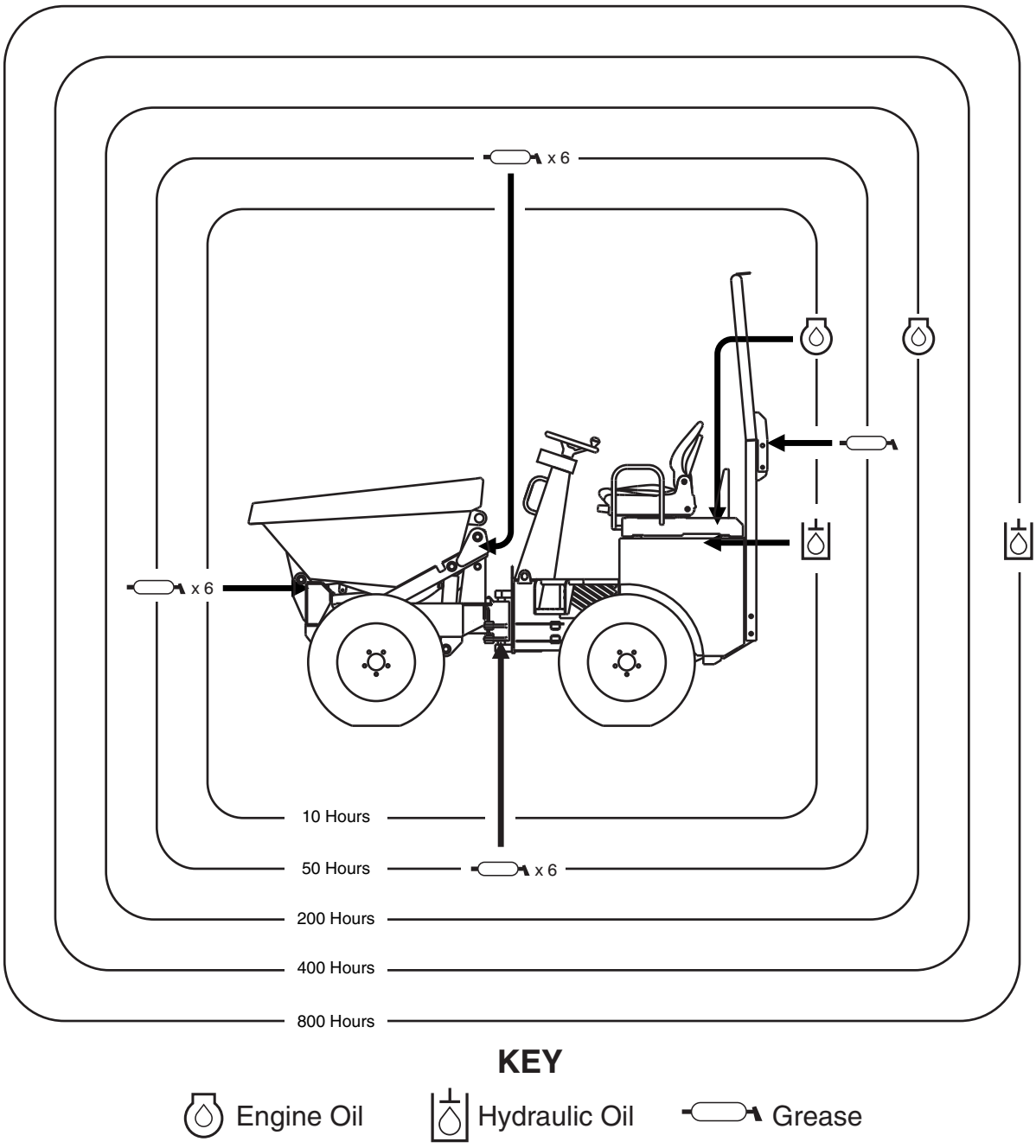
**The following service schedules are for guidance only. Under extreme operating conditions the service schedules should be adjusted accordingly to allow for the local working environment.**
**Before carrying out any service or maintenance work make sure ALL safety precautions have been taken.**
**Always follow the instructions given in the engine manufacturers handbook when servicing, adjusting and especially when starting and stopping the engine.**

**ALL Faults MUST be Reported Immediately and Corrected BEFORE the Machine is Used**

| | |
|---|---|
| **10 Hours** | Check tyre condition and pressures.<br>Check ROPS for damage, loose bolts etc. Report ALL faults immediately.<br>Check seat belt and lock work correctly.<br>Check the air cleaner blockage indicator.<br>Squeeze the air cleaner dust ejector.<br>Remove air filter and clean in dusty environments.<br>Check fuel tank level - NEVER allow the fuel tank to empty. Fill at the end of each shift.<br>Check engine oil level and top up as necessary.<br>Check hydraulic oil level.<br>Check all warning lights and gauges are working correctly.<br>Check alternator belt.<br>Check engine coolant level.<br>Check operator platform and steps are clean and free from damage and obstructions.<br>Check start inhibitor functioning correctly.<br>Check skip props are present and serviceable.<br>Visually check machine for fluid leaks, damage, missing parts, missing or unreadable safety signs etc. |
| **50 Hours** | **As for 10 hours and including:-**<br>Lubricate the centre pivot.<br>Lubricate all other grease nipples - see lubrication chart.<br>Oil all control pivots, e.g. throttle, control levers etc.<br>Check wheel nut torque.<br>Check, clean and protect battery connections.<br>Check for air leaks on the air inlet/filter system. Remove end cap on cyclone type air cleaner and inspect, clean or replace as necessary.<br>Check all safety signs are present and legible. |
| **200 Hours** | **As for 50 hours and including:-**<br>Drain engine and refill with fresh, clean oil.<br>Replace engine oil filter.<br>Drain and clean fuel tank.<br>Check tightness of centre pivot lock screws.<br>Check hose lines for chaffing, adjust as necessary.<br>Check articulation lock bar is fitted and works. |
| **400 Hours** | **As for 200 hours and including:-**<br>Replace fuel filter elements.<br>Change hydraulic filter(s).<br>Drain hydraulic tank and clean hydraulic suction strainer. Renew return line filter. Refill hydraulic system with clean, fresh oil.<br>Check engine coolant antifreeze / water ratio - especially in sub zero conditions. |
| **800 Hours** | **As for 400 hours and including:-**<br>Drain and replace engine coolant.<br>Check wheel motor location bolts.<br>Check centre pivot pin nut torque settings. |

**Only Perform the Applicable Service Checks Above**
**Thoroughly Clean the Machine BEFORE Performing ANY Service or Maintenance Tasks**

## Lubrication Diagram




## Recommended Lubricants

| | Quantity | Lubricant |
|---|---|---|
| **Engine Oil** | **5.1 Litres** | **Shell Rimula R3 X 15/W40** |
| **Engine Coolant** | **4.25 Litres** | **50/50 Water/ Shell Glycoshell Antifreeze** |
| **Fuel System** | **42 Litres** | **Diesel - DERV to EN590** |
| **Hydraulic System** | **25.3 Litres** | **Shell Tellus T46 Hydraulic Oil** |
| **Grease Points** | **As Required** | **EP2 Grease** |

## Long Term Storage

If the machine is to be stored for a long period of time then the following procedures must be applied:-

- Thoroughly wash down the exterior of the machine and remove any build up of dirt etc.
- Repair all damaged paint work to prevent further corrosion.
- Grease all greasing points.
- Start and warm up the engine. Drain the engine oil and refill with clean fresh oil. Refer to engine manufacturers handbook for further information on prolonged engine storage with regards to anti-corrosion oils and fluids.

**Contaminated Water / Fluids / Oils Must Be Disposed of Legally**

- Check hydraulic oil level and top up as required.
- Fill the diesel tank to prevent corrosion of the tank walls.
- Drain, and refill cooling system with water/antifreeze mixture (*see Specifications section*).
- Store the machine on solid level ground which is not liable to flooding, standing water or airborne contamination.
- Chock the wheels securely to prevent the dumper moving.
- Smear exposed metal parts with grease.
- Seal off the air intake opening on the air cleaner and the exhaust pipe opening.
- Remove the battery and keep fully charged.

## Re-commissioning After Storage

Before putting the machine back into use the following operations must be carried out:-

- Clean grease or other protective film from piston rods and other exposed metal parts.
- Remove the seals or covers from the air filter inlet and exhaust pipe.
- Check the condition of the air filter elements and replace if necessary.
- Thoroughly clean the machine.
- Make sure the battery has remained full charged and re-connect to the machine.
- Carry out all measures for putting the engine back into use described in the engine manufacturers manual.
- Check all other fluid levels.
- Lubricate machine in accordance with lubrication diagram.
- Examine tyres and inflate to correct pressure.

**If stored for more than 6 months :-**

- Replace all hydraulic filters.
- Examine hydraulic oil for degradation and replace if necessary.

## Scrapping the Machine

**At the end of its life the machine must be disassembled by a competent person using safe working practices, wearing the appropriate Personal Protective Equipment and working in accordance with local regulations.**

The appropriate lifting equipment, chocks and stands must be used to maintain a stable machine as components are removed and the machines centre of mass changes.

Care must be taken when dealing with flammable liquids and the machine parts that contained those liquids. Any process that could ignite flammable materials must not be used on components that have contained flammable liquids in them or have residual flammable liquids on them.

Fire extinguishers must be readily available if cutting/welding equipment is to be used.

Fluids must be drained off into suitable containers and if possible recycled or otherwise disposed of in an environmentally friendly way in accordance with local regulations.

Where possible recyclable materials must be separated out and processed in accordance with local regulations using an authorised agent.

## Antifreeze

The following table gives the freezing and boiling temperatures for the recommended antifreeze/water mixture of 50%.

If the machine is to be used in temperatures outside this range, consult the engine manufacturers or their handbook.

It is advisable to change the antifreeze/water mixture annually, before winter. if it is not changed, the concentration should be checked and additional antifreeze added as necessary to maintain the correct concentration.

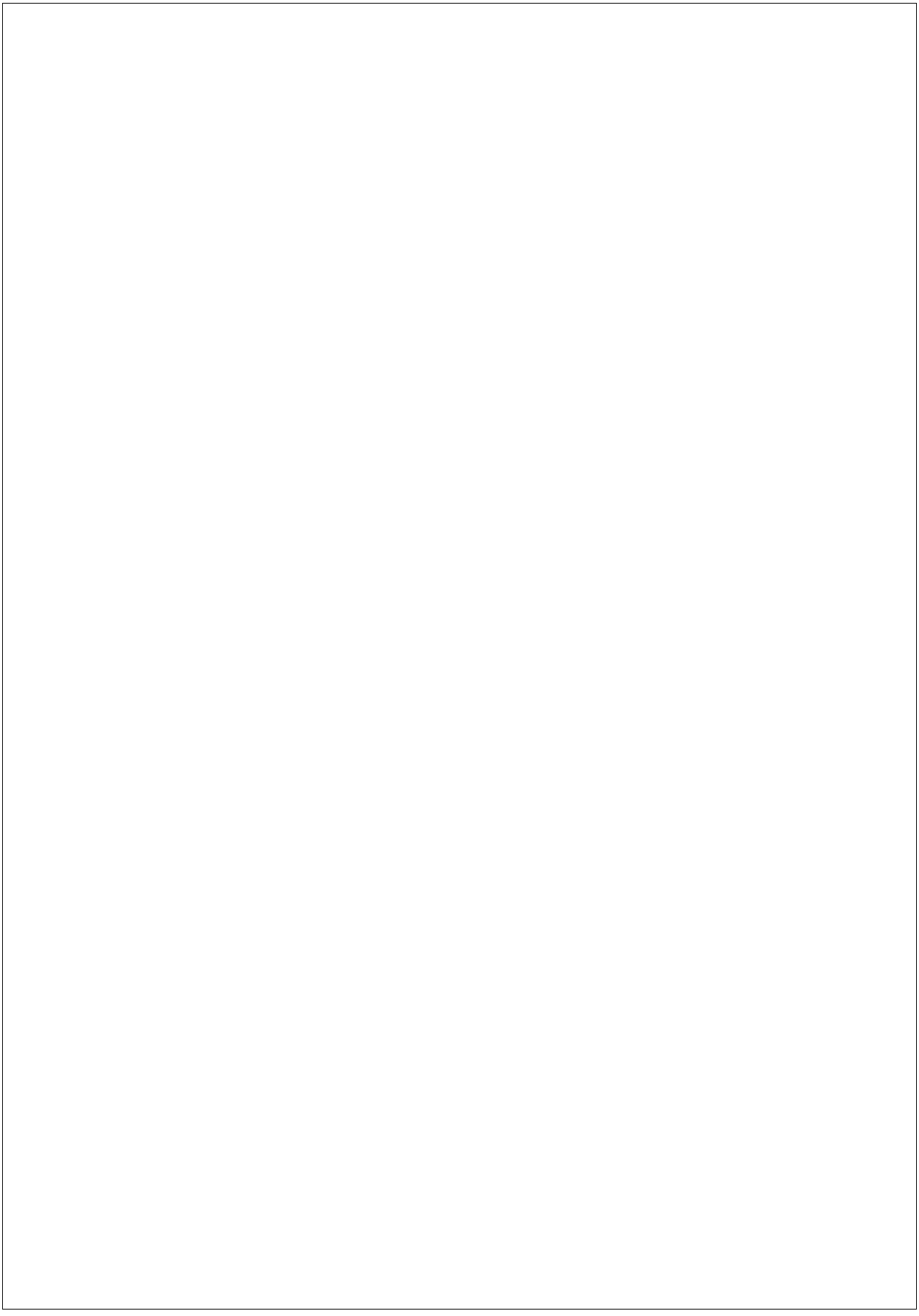
| **Antifreeze** (Ethylene Glycol) | | |
|---|---|---|
| **Concentration** | **Freeze Protection** | **Boil Protection** |
| 50% | -36ºC (-33ºF) | 106ºC (223ºF) |

**Antifreeze is TOXIC. If accidentally swallowed, medical advice must be sought Immediately**
**Antifreeze is corrosive to the skin. If accidentally spilled on to skin, it must be washed off immediately. Protective clothing and eye protection should be worn when handling antifreeze.**

# 9 - Specifications

# TA 0.8EH, TA 1EH, TA 1.2EH

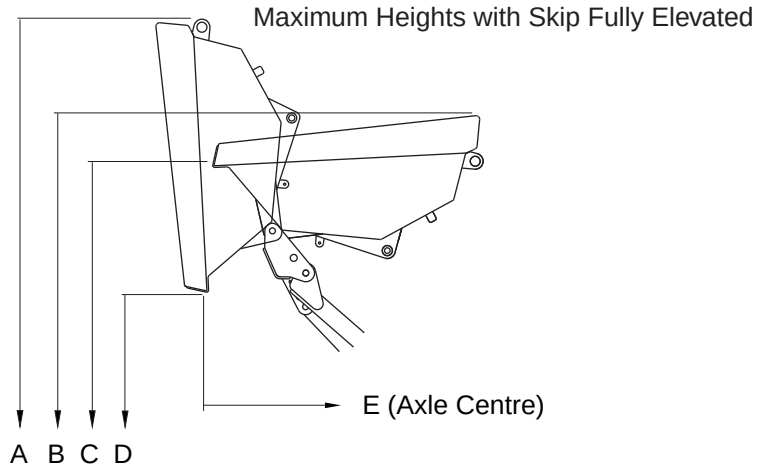
## Four Wheel Drive Dumper

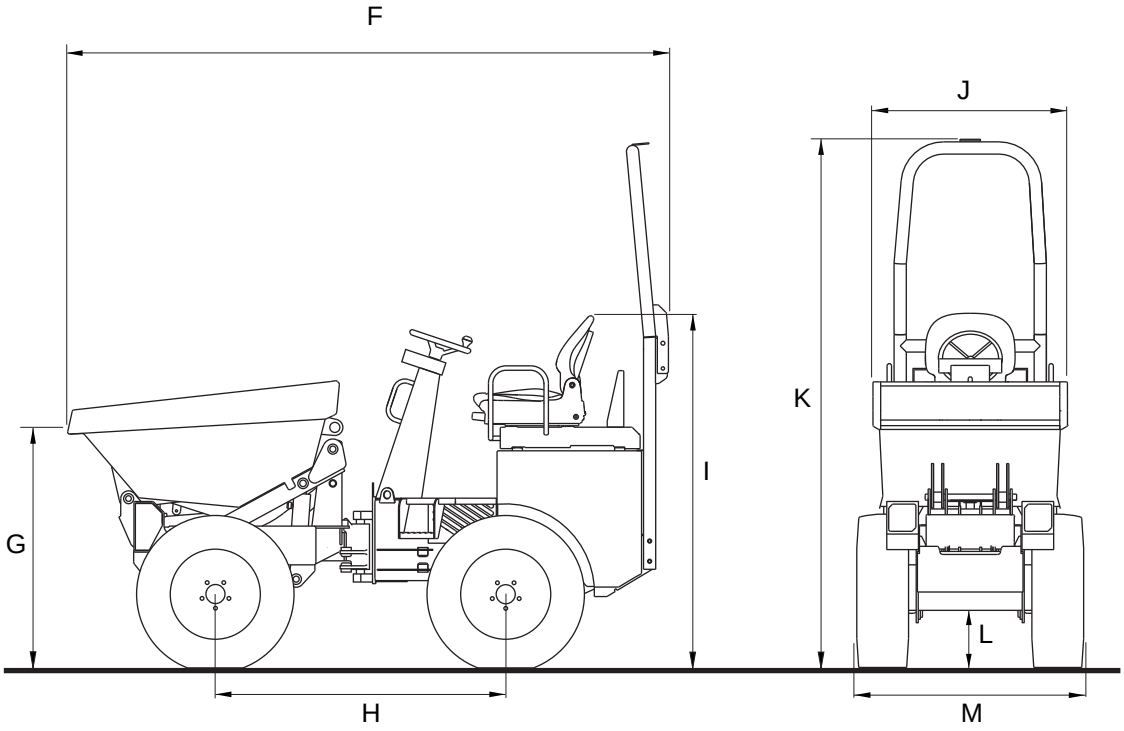


## Introduction

All dimensions are in metric (mm), weights in kilograms and capacities in litres unless otherwise stated. This section also contains details of electric circuits and torque data for fasteners.

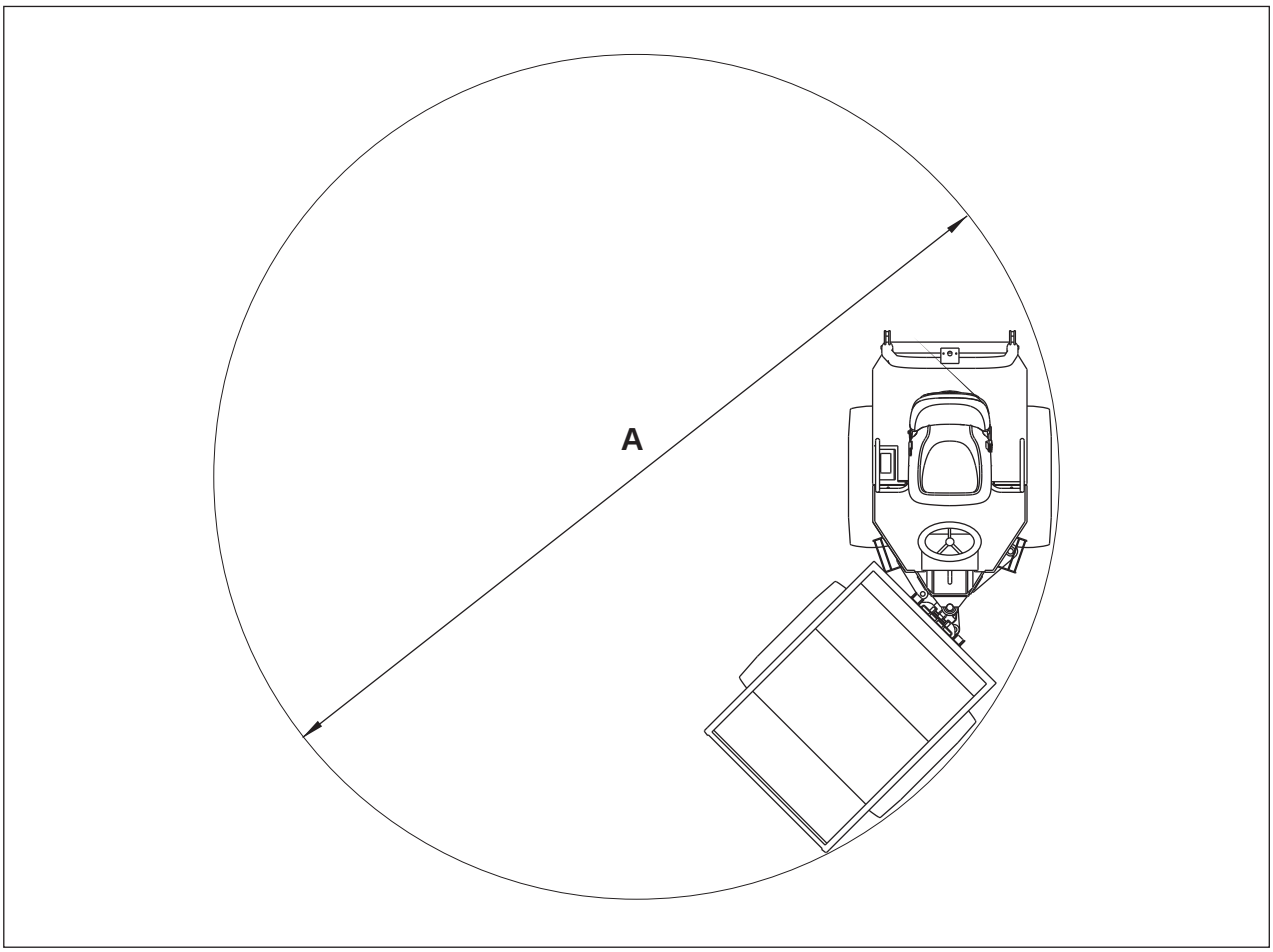
## Dimensions




| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TA0.8** | 2915 | 2458 | 2258 | 1558 | 671 | 2900 | 1170 | 1440 | 1687 | 842 | 2586 | 204 | 998 |
| **TA1** | 2952 | 2495 | 2295 | 1595 | 671 | 2900 | 1207 | 1440 | 1724 | 952 | 2586 | 241 | 1120 |
| **TA1.2** | 2952 | 2495 | 2295 | 1595 | 671 | 2900 | 1207 | 1440 | 1724 | 1152 | 2586 | 241 | 1310 |

## Machine Turning Circle




| | TA0.8EH | TA1EH | TA1.2EH |
|---|---|---|---|
| Turning Circle - A | 4560 | 4660 | 4850 |

## Technical Data

| Engine | TA0.8EH | TA1EH | TA1.2EH |
|---|---|---|---|
| Manufacturer/Model | Kubota D905 | | |
| Power | 16kW (21.45hp) @3,000rpm | | |
| Oil Capacity | 5.1 litres (1.1 Gal) | | |
| **Cooling System** | | | |
| Coolant | 50/50 Water and Antifreeze | | |
| Capacity | 4.25 litres (0.93 Gal) | | |
| **Fuel Tank** | | | |
| Capacity | 42 litres (9.23 Gal) - Diesel | | |
| **Hydraulic Tank** | | | |
| Capacity | 25.3 (5.56 Gal) litres | | |
| **Transmission** | | | |
| Type | Hydrostatic | | |
| **Speed** | | | |
| Forward/Reverse | 11 kph (6.8 mph) | | |
| **Braking System** | | | |
| Hydrostatic | within rear wheel motors | | |
| **Tyres and Wheels** | | | |
| Size | 10.0-75/15.3 - 8PR | 10.0-75/15.3 - 8PR | 10.0-75/15.3 - 8PR |
| Pressure - Front | 2.1 bar (30.5psi) | 2.1 bar (30.5psi) | 2.1 bar (30.5psi) |
| Pressure - Rear | 1.2 bar (17.4psi) | 1.2 bar (17.4psi) | 1.2 bar (17.4psi) |
| Narrow Tyre Option | | | |
| Size | 7.00-12 - 6PR | 7.00-12 - 6PR | N/A |
| Pressure - Front | 2.27 bar (33psi) | 2.27 bar (33psi) | N/A |
| Pressure - Rear | 1.51 bar (22psi) | 1.51 bar (22psi) | N/A |
| Wheel Nut Torque | 120Nm | | |
| **Electrical System** | | | |
| Voltage | 12v | | |
| Battery | 74amp/hr | | |
| **Skip Capacity** | | | |
| Maximum Safe Payload | 850kg (1874lb) | 1000kg (2204lb) | 1200kg (2645lb) |
| Heaped Capacity | 0.47cu M (0.61cu yds) | 0.54cu M (0.70cu yds) | 0.68cu M (0.88cu yds) |
| Water Capacity | 0.28cu M (0.36cu yds) | 0.32cu M (0.41cu yds) | 0.39cu M (0.51cu yds) |
| Struck Capacity | 0.40cu M (0.52cu yds) | 0.45cu M (0.58cu yds) | 0.56cu M (0.73cu yds) |
| **Unladen Weight** | | | |
| | 1290kg (2843lb) | 1310kg (2888lb) | 1375kg (3031lb) |

## Noise Emissions

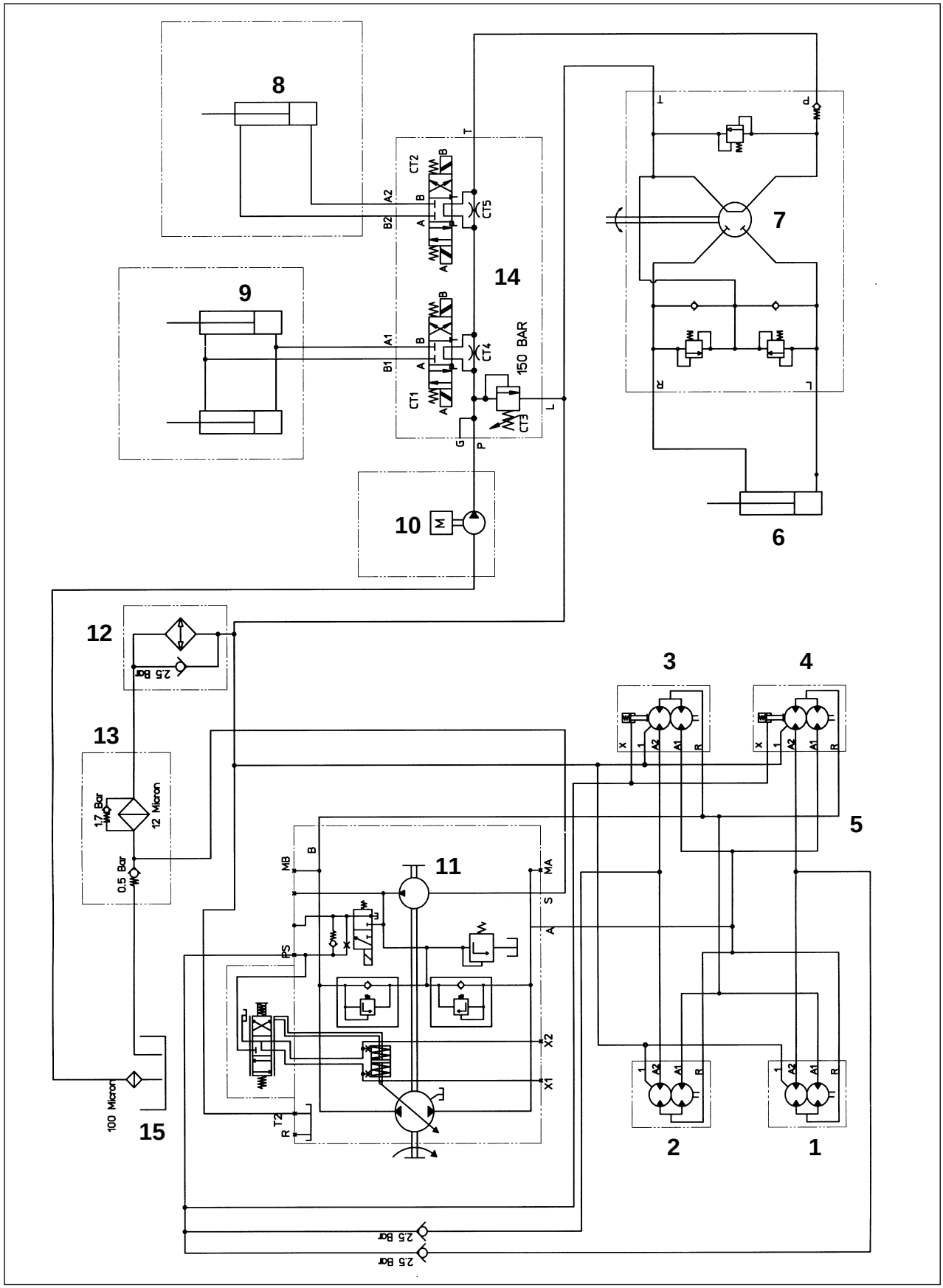
| Model | Declared Single-Number Noise Emission Values to ISO 4871 | |
|---|---|---|
| | A - rated sound pressure level at operator station | A - rated sound power of machine |
| | $L_{pAd}$ | $L_{WAd}$ |
| TA0.8EH | 80.2dB | 101dB |
| TA1EH | 80.2dB | 101dB |
| TA1.2EH | 80.2dB | 101dB |

## Vibration

| | Operation | Value | Uncertainty |
|---|---|---|---|
| Hand Arm Vibration as defined in EN474-1 | All Operations | <2.5m/s$^2$ | N/A |
| Whole Body Vibration Values as defined in ISO/TR 25398 | Work Cycle | 0.529 rms | 0.264m/s$^2$ |

Note: these values are for guidance only. Actual work site, operation and operator characteristics will have a large influence on actual values for specific circumstances.

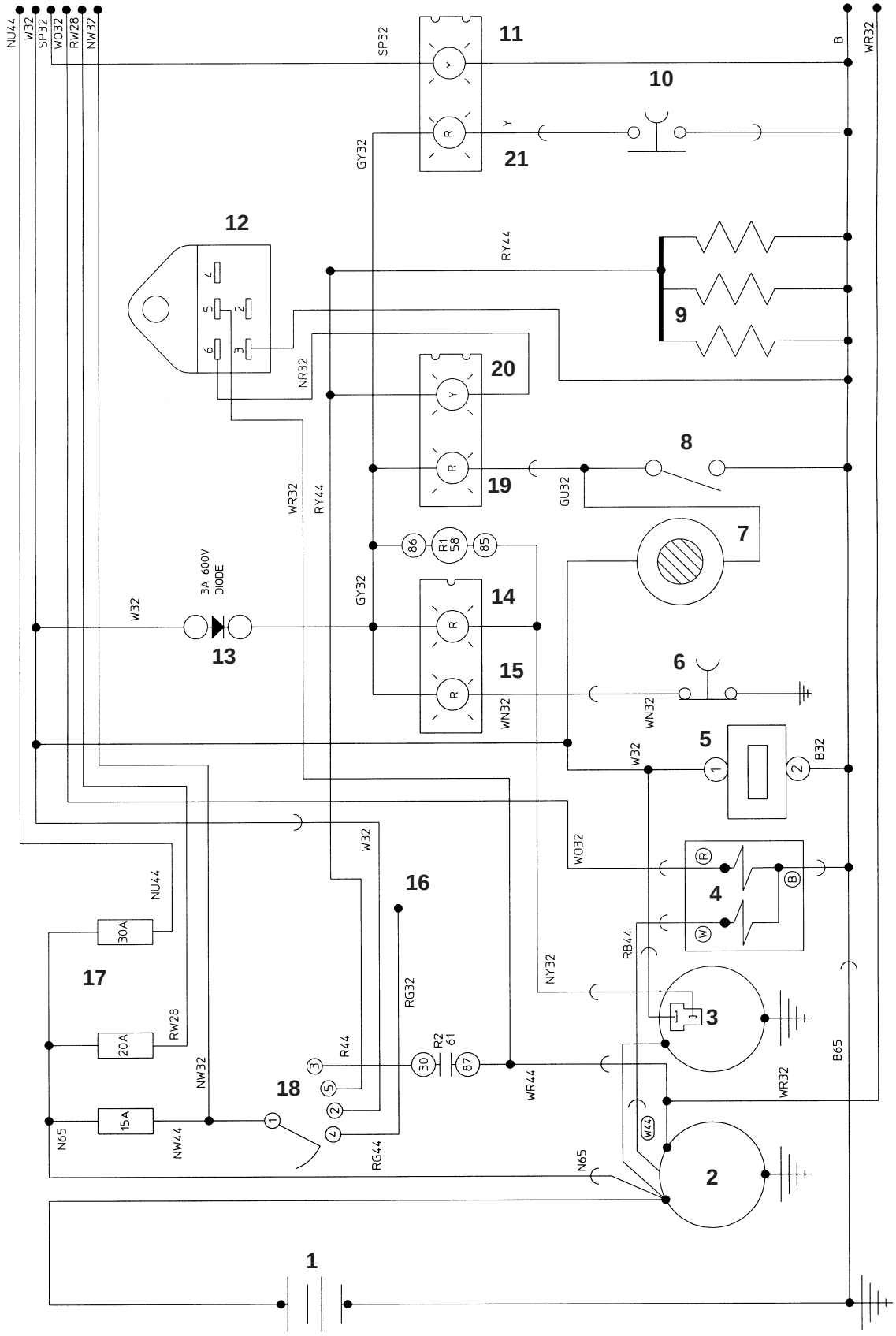
## Hydraulic Circuit



## Hydraulic Ccircuit

| | |
|---|---|
| 1 | Hydraulic Motor - Front Left |
| 2 | Hydraulic Motor - Front right |
| 3 | Hydraulic Motor - Rear Right |
| 4 | Hydraulic Motor - Rear Left |
| 5 | Twinlocks |
| 6 | Steering Ram |
| 7 | Steering Unit |
| 8 | Tip/Lower Cylinder |
| 9 | Raise/Lower Cylinders |
| 10 | Auxiliary Pump |
| 11 | Main Transmission Pump |
| 12 | Oil Cooler |
| 13 | Filter |
| 14 | Control Valve - Lift/Tip |
| 15 | Hydraulic Oil Tank |

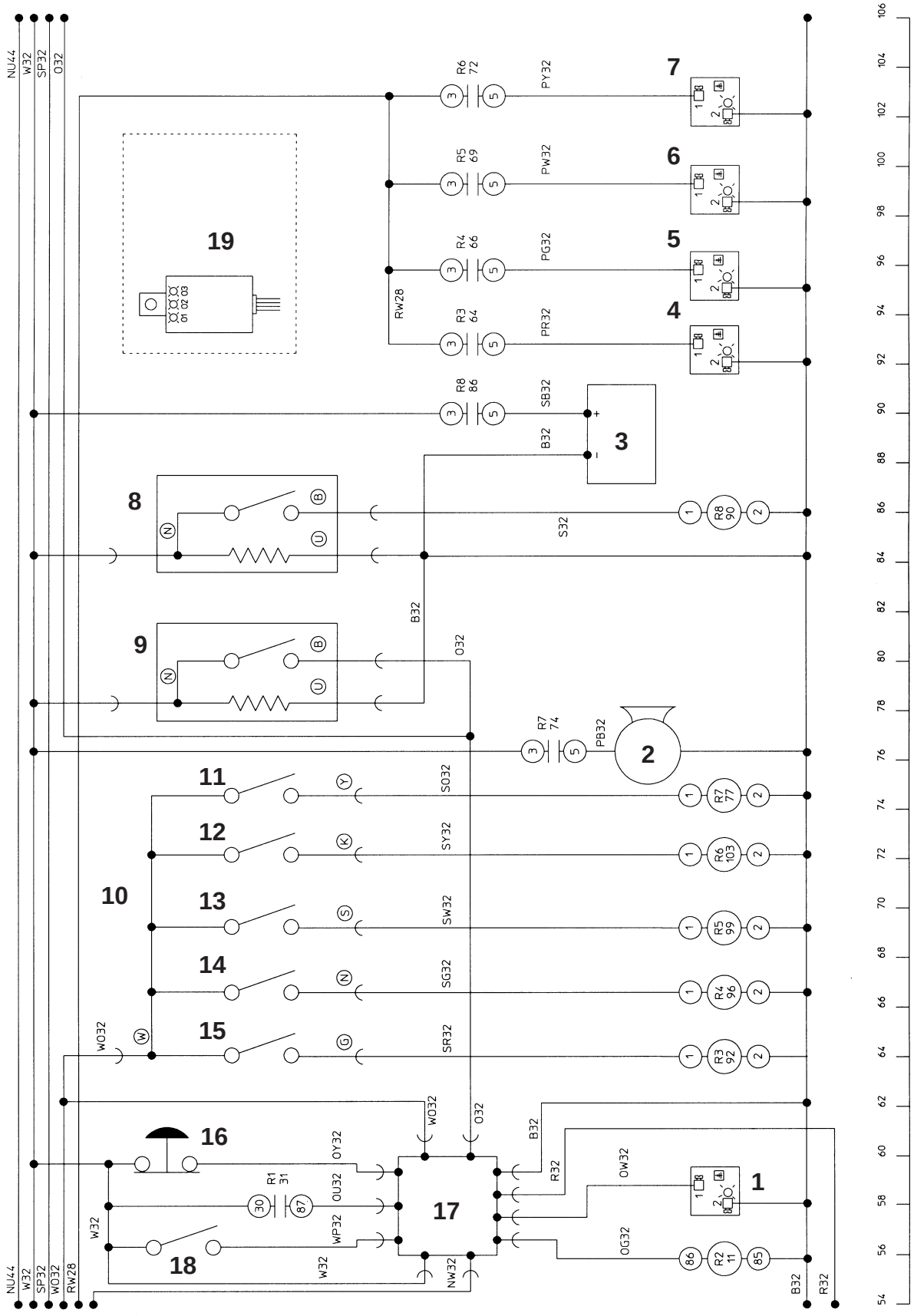
## Electrical Circuit



## Electrical Circuit

| Item | Description | Cable Colour Codes | |
|---|---|---|---|
| 1 | Battery - 12V | B | Black |
| 2 | Starter Motor | G | Green |
| 3 | Alternator | K | Pink |
| 4 | Solenoid - Run/Stop | LG | Light Green |
| 5 | Hourmeter | N | Brown |
| 6 | Switch - Engine Oil Pressure | O | Orange |
| 7 | Audible Warning - High Coolant Temperature | P | Purple |
| 8 | Switch - Engine Coolant Temperature | R | Red |
| 9 | Heaters - Engine Cold Start | S | Slate |
| 10 | Switch - Blocked Hydraulic Filter - If Fitted | U | Blue |
| 11 | Direction Indicators - If Fitted | T | Turquoise |
| 12 | Timer - Cold Start Warning Light | W | White |
| 13 | Diode - 3A 600V | Y | Yellow |
| 14 | Warning Light - Battery Charge | | |
| 15 | Warning Light - Oil Pressure | | |
| 16 | Power Supply - Beacon | | |
| 17 | Circuit Breaker - Highway Lighting - When Fitted | | |
| 18 | Circuit breaker - Machine Electrics | | |
| 19 | Circuit Breaker - Engine | | |
| 20 | Switch - Key - Engine Start | | |
| 21 | Warning Light - Engine Coolant Temperature | | |
| 22 | Warning Light - Engine Cold Start | | |
| 23 | Warning Light - Blocked Hydraulic Filter - If Fitted | | |
| | | | |

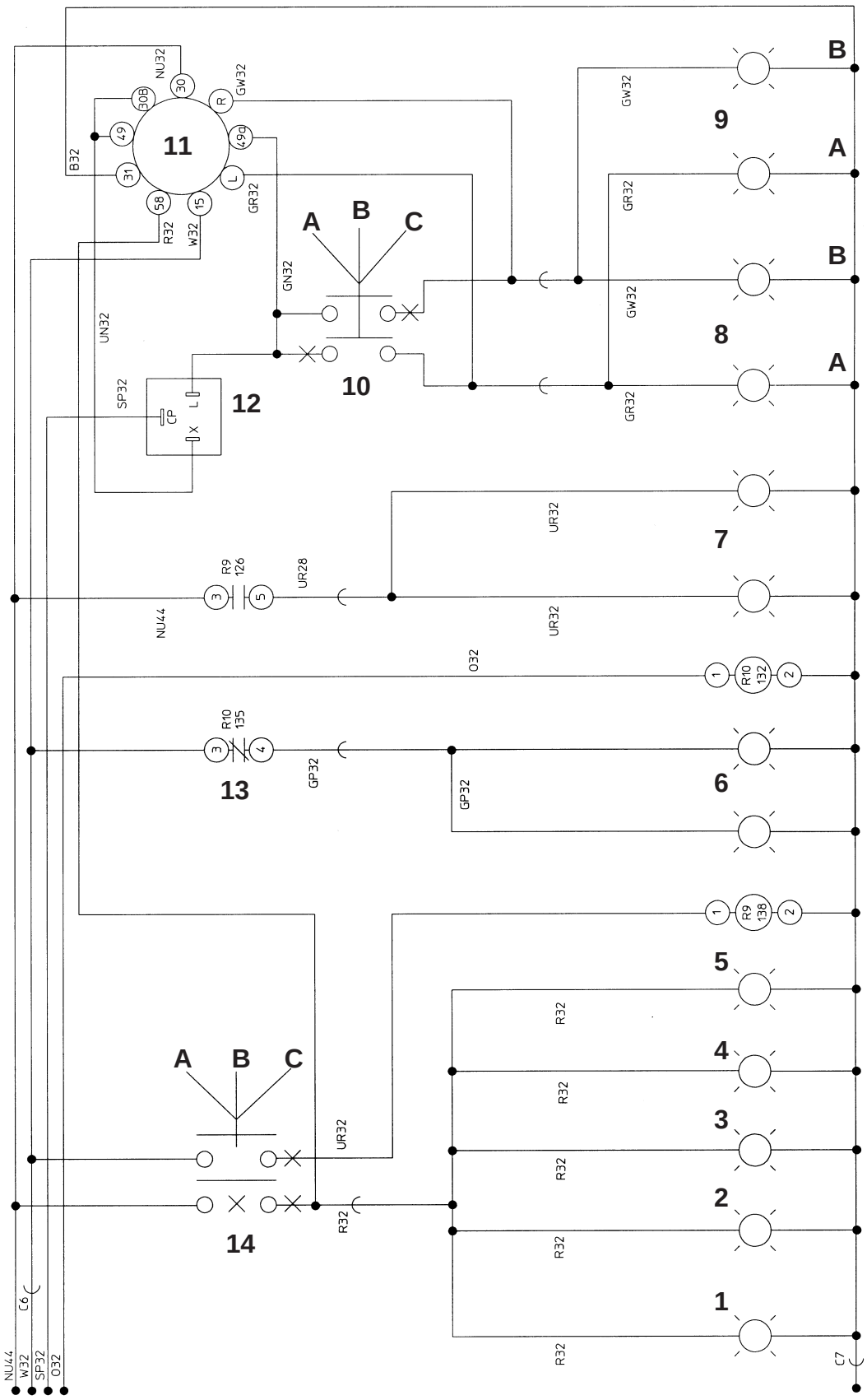
## Electrical Circuit



## Electric Circuit

| Item | Description | Cable Colour Codes | |
|---|---|---|---|
| 1 | Solenoid - Transmission Dump | B | Black |
| 2 | Horn | G | Green |
| 3 | Alarm - Reversing | K | Pink |
| 4 | Solenoid - Lift Arms - Raise | LG | Light Green |
| 5 | Solenoid - Lift Arms - Lower | N | Brown |
| 6 | Solenoid - Skip Tip | O | Orange |
| 7 | Solenoid - Skip Lower | P | Purple |
| 8 | Controller Reverse Switch | R | Red |
| 9 | Controller Neutral Switch | S | Slate |
| 10 | Controller Forward/Reverse Switches | U | Blue |
| 11 | Horn Button | T | Turquoise |
| 12 | Skip Lower | W | White |
| 13 | Skip Tip | Y | Yellow |
| 14 | Lift Arms Lower | | |
| 15 | Lift Arms Raise | | |
| 16 | Emergency Stop | | |
| 17 | Anti Start Module | | |
| 18 | Switch - Inhibitor - Seat | | |
| 19 | LED's Output - Anti Start Module:- | | |
| | 01 - Run Stop Solenoid | | |
| | 02 - Starter | | |
| | 03 - Transmission Dump Solenoid | | |
| | | | |

## Electric Circuit



## Electric Circuit

| Item | Description | Cable Colour Codes | |
|---|---|---|---|
| **1** | Marker Light - Front Left | **B** | **Black** |
| **2** | Marker Light - Front Right | **G** | **Green** |
| **3** | Marker Light - Rear Left | **K** | **Pink** |
| **4** | Marker Light - Rear Right | **LG** | **Light Green** |
| **5** | Light - Registration Plate | **N** | **Brown** |
| **6** | Brake Light | **O** | **Orange** |
| **7** | Head Lights | **P** | **Purple** |
| **8** | Indicator Lights - Front - A-Left - B-Right | **R** | **Red** |
| **9** | Indicator Lights - Rear- A-Left - B-Right | **S** | **Slate** |
| **10** | Switch - Indicator - A-Left -B-Off - C-Right | **U** | **Blue** |
| **11** | Switch - Hazard Warning | **T** | **Turquoise** |
| **12** | Switch - Brake | **W** | **White** |
| **13** | Switch - Lights - A-Off - B-Side Lights - C-Head Lights | **Y** | **Yellow** |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |