

CHAPMAN

INNOVATION. DESIGNED.

DT100 Hydraulic Dump Trailer



Original Instructions

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THIS MANUAL MUST BE HANDED TO THE OPERATOR BEFORE USE. THE OPERATOR MUST UNDERSTAND FULLY THE CONTENT OF THIS HANDBOOK BEFORE USING THE MACHINE FOR THE FIRST TIME. OF THE IMPLEMENT IS RESOLD, THIS MANUAL MUST ACCOMPANY THE MACHINE.

NOTE:

The information contained in this manual is correct at the time of going to press. However, in the course of development, changes in specification are inevitable. Should you find the information given differs from your machine, please contact Chapman Machinery Ltd direct for advice. **Use only Chapman Genuine Service Parts on Chapman Machinery and Machines.**

HSE Information

Safe use of all-terrain vehicles (ATVs) in agriculture and forestry – AIS Sheet 33

Introduction

This information sheet gives advice on the safe use of ATVs. It covers the two main types used in off-road working in agriculture and forestry, which are:

- sit-astride ATV / sit-in machines
- side-by-side mini-utility vehicles,

The Full HSE information sheet can be found here or using the QR Code at the bottom of the article: <https://www.hse.gov.uk/pubns/ais33.pdf> and must be read prior to any ATV/UTV use. Below are related extracts to trailed machinery.

REMEMBER - GET PROPERLY TRAINED AND ALWAYS WEAR HEAD PROTECTION

Training

Under the Provision and Use of Work Equipment Regulations 1998 (PUWER), there is a legal requirement for employers to provide adequate training, and to ensure that only employees who have received appropriate training in their safe use, including the use of any towed equipment or attachments, are permitted to ride ATVs. The same requirements apply to the self-employed. HSE regards training provided by recognised training providers as being adequate for the purposes of PUWER.

Protective clothing

More than half of all ATV riders have been thrown off at some time. As these machines are not fitted with either a cab or roll bar, your only protection is what you wear.

- **Head protection is vital.** The majority of ATV fatalities in the UK in the last ten years have been caused by head injuries. Nobody who died from head injuries was wearing a helmet. Helmets would certainly have prevented most, if not all, the deaths. **You should always wear a helmet when riding an ATV.** All helmets should have a chinstrap and be capable of being used with suitable eye protection. The type of helmet chosen should be based on an assessment of the circumstances in which the ATV will be used, eg the types of surface travelled over and anticipated speeds. The harder the surface and higher the speed the greater the degree of protection needed. **NB: Forestry helmets and industrial hard hats are not acceptable for any ATV operations.**
- Wear clothing that is strong and covers your arms and legs. Gloves are useful for protection and to keep hands warm in cold weather for good control of the ATV. Wear sturdy, ankle-covering footwear, eg boots or wellingtons that are strong, supportive and have good wet grip.
- Protect your eyes from insects and branches with either a visor or goggles.

Trailed equipment and loads

Ensure all riders know the manufacturers recommended towing capacity and drawbar loading limit. Always operate within these requirements.

Remember that your ability to control the ATV by your body movements will be considerably reduced when carrying a load or towing a trailer.

- When selecting trailed equipment look for:
 - over-run brakes;
 - a swivel hitch drawbar;
 - bead lock rims on wheels;
 - a low centre of gravity and a wide wheel track;
 - a long drawbar; and
 - attachment points for securing a load.
- Check the weight ratio between your ATV and its trailed load. This needs to be assessed for each operation. As a general guide, on level ground, braked trailed equipment can be a maximum of four times the unladen weight of the ATV. For unbraked trailed equipment the maximum should be twice the unladen weight. These loads should be reduced when working on slopes, uneven ground or poor surface conditions. Follow the manufacturers advice for your particular machine.
- Weight transfer is also important. Stability and resistance to jack-knifing is improved if some load is transferred onto the ATV's drawbar. Approximately 10% of the gross weight of the loaded trailer is recommended, but this should not exceed the manufacturers drawbar loading limit. Remember that weight transfer can change dramatically when you start going up or down hill.
- When selecting mounted equipment, make sure it is within the manufacturers approved weight limit, with a low centre of gravity, and controls which are easy to operate but do not create a hazard. Where equipment is added to one end of the machine, add ballast at the other end to maintain stability.
- Loads carried on racks must be well secured, e.g. with ratchet straps, and be evenly balanced between the front and rear, except where they are deliberately altered to aid stability when going up or down a slope.
- Only tow a load from the hitch point. Loads towed from other points such as the rear rack have caused sudden rear overturning even on slight slopes or with slight acceleration. Ropes or chains should not be used to drag a load where they can become caught on a wheel. This may lead to entanglement with the brake cable, causing unexpected braking.

Further information

For information about health and safety go to <https://www.hse.gov.uk/>

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Important Safety Information

Always read this manual before fitting or operating the machine – whenever any doubt exists contact your dealer or the Chapman Machinery Service Department for advice and assistance.

DEFINITIONS

The following definitions apply throughout this manual:

WARNING - An operating procedure, technique etc., which can result in personal injury or loss of life if not observed carefully.

CAUTION - An operating procedure, technique etc., which can result in damage to either machine or equipment if not observed carefully.

NOTE - An operating procedure, technique etc, which is considered essential to emphasis.

LEFT & RIGHT HAND - This term is applicable to the machine when attached to the towing vehicle and is viewed from the rear – this also applies to tractor references.

Safety Information

- Do not operate this equipment unless you have studied this manual in full
- Only use this machine for its designated task - improper use is both highly dangerous and damaging to machine components
- Both operators & maintenance fitters should be familiar with the machine and fully aware of dangers surrounding improper use or incorrect repairs
- Before starting, carry out a visual check on both machine & towing vehicle as regards functionality, road safety & accident prevention rules
- Even when using the machine correctly, accidents can occur. It is imperative that nobody stand within the danger area. If working near roads, buildings or animals, special attention must be taken to ensure safety.
- Never wear loose clothing which could get caught in rotating equipment
- Never carry passengers on the towing vehicle
- Do not stand near the machine when operating
- Damaged or missing safety decals must be replaced immediately

Transportation Safety

- When transporting, especially over rough ground, reduce speed to prevent damage to machine.
- This machine is not road legal in its standard form. DO NOT tow on public highways.

Operating Safety

- Pay special attention when working not to harm livestock if crowding around the machine occurs.
- If anything should become entangled in the mechanism, stop the machine and disconnect the power before attempting to clear the blockage.

Description

The DT100 Dump Trailer is designed for equestrian, agricultural, contractors and other customers as an all round heavy duty, reliable hydraulic tipping trailer. It's 1 ton payload capacity is perfect for moving soil, dung, stone plus much more with ease and paired with a twin pivoting axle including flotation tyres allows for easy towing off-road.

The DT100 is a trailed attachment, attaching to the towing vehicle with a 50mm ball hitch connection with integral overturn safety swivel hitch. A unique automatic latch/unlatch system is installed in the rear tailgate alongside a large 50° tipping angle for hassle free emptying. The DT100 is installed with an electric operated hydraulic system, complete with wired hand remote that attaches to the back of your ATV, UTV or 4x4 and on-board battery for the ultimate convenience.

These machines should however only be used to perform tasks for which they were designed - use of the machine for any other function may be both dangerous to persons, and potentially damaging to components. Use of the machine beyond the stated usage may invalidate any applicable warranty, as well as being potential in breach of applicable safety regulations.

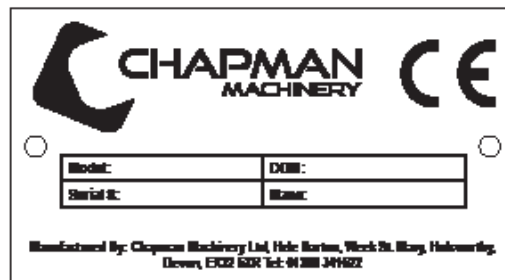
Note: This machine is for off-road use only and is not designed or approved for highway travel

Identification

Each machine is fitted with a serial plate (shown below) which details the following:

1. Model
2. Date of Manufacture (DOM)
3. Serial Number
4. Mass

When enquiring regarding spares or additional equipment, ensure you have this information to hand.

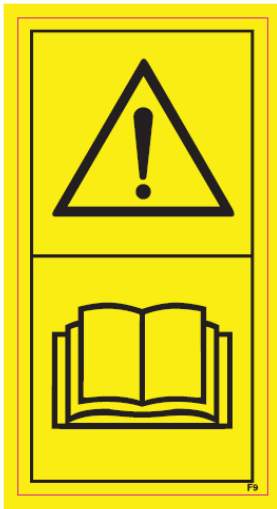


Implement Decals

If your implement does not contain all of the decals shown below, please contact Chapman Machinery for replacement decals before use. **Note:** All decals must be present and visible. It is imperative that these are replaced if damaged to prevent potential harm to users.

1. **Carefully read operators manual before handling this machine. Observe instructions and safety rules when operating.**
2. **WARNING - Attach support before getting into hazardous area.**
3. **WARNING - Never reach into the crushing danger area as long as parts may move.**
4. **WARNING - Avoid fluid escaping under pressure. Consult technical manual for service procedures.**

1



2



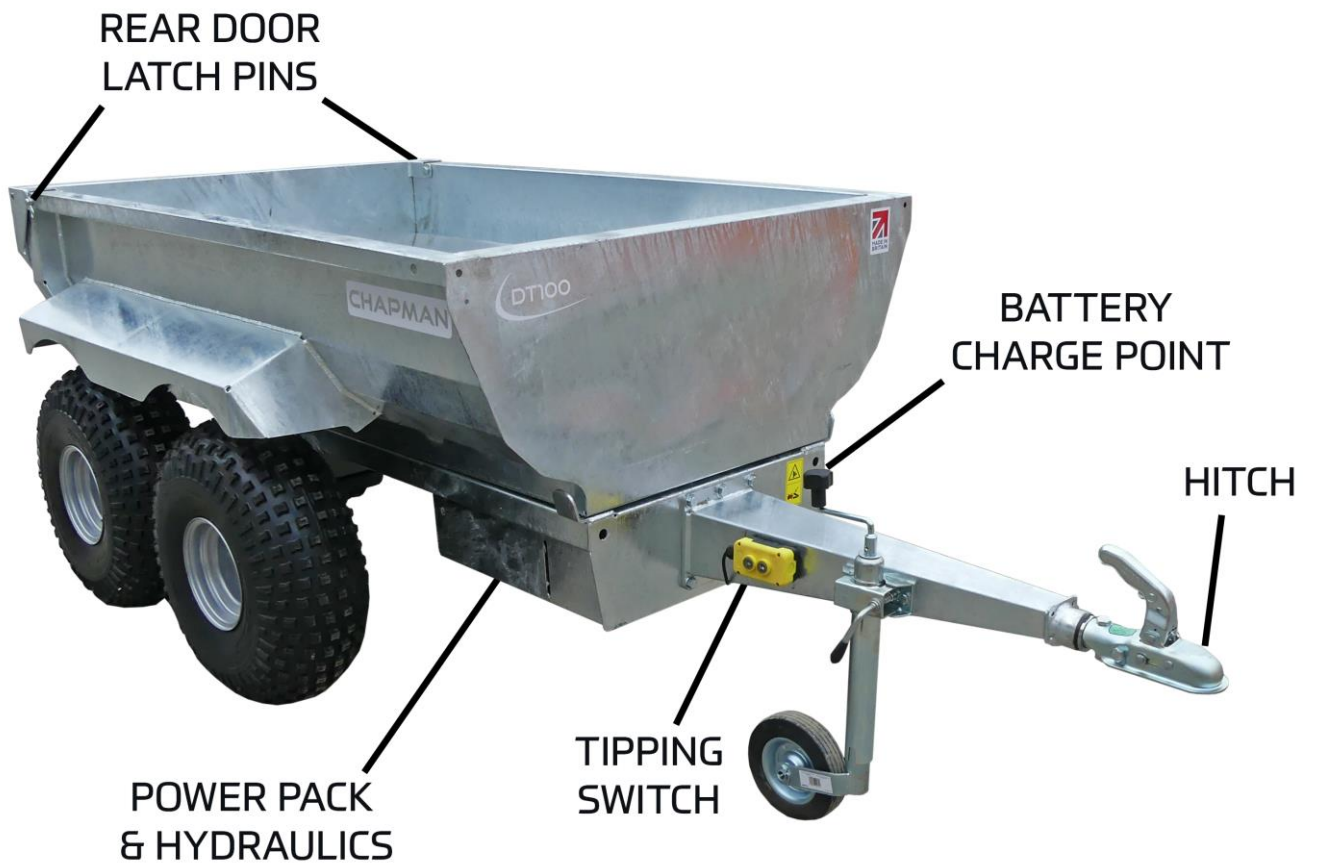
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4



Component Identification



Assembly

Some minor pre-assembly will be required prior to use. The DT100 is shipped flat on a pallet with the assembly parts within the Trailer Body. Please see instructions below on assembling the DT100 from dispatch:

Tools needed: 19 Spanners / Socket

1. Remove packaging from around the pallet and the Drawbar & Wheels from the trailer bed.



2. Once Drawbar is removed, thread through the hand controller through the end plate



3. Use a 19mm spanner to remove the 6 x M12 bolts at the front of the machine where the drawbar mounts then proceed to attach the drawbar making sure all bolts are tightened to **100Nm**.
NOTE: THESE BOLTS SHOULD BE CHECKED FOR TIGHTNESS AFTER APPROX 1 HOUR OF USE.



4. Raise the rear of the trailer with a Hydraulic Jack or similar (using axle stands where necessary) and attach the wheels. Tighten wheel nuts to **50Nm**.



5. Proceed to do the same on the following side, making sure all wheels on both sides are fully tightened. Remove the DT100 from the pallet and proceed with the next steps of Attachment & Set up.



Attachment

Before Attaching the Machine

Before attachment, ALWAYS ensure the following:

- All safety guards & decals are in good working order and correctly fitted
- Lubrication points have been lubricated as per scheduled maintenance period
- The tyres are free of damage and inflated to the correct pressure
- Electrical connections are free of dirt and moisture
- The hydraulic oil level is correct & topped up if required
- Battery has been fully charged

Attaching the Machine

NOTE: This machine is designed to attach to the towing vehicle through a 50mm diameter ball hitch.

1. Reverse the towing vehicle up to the machine.
2. Attach the machine onto the towing vehicle's coupling.
3. Wind & release Jockey Wheel and re-secure

WARNING: ENSURE CONTROL EQUIPMENT IS SECURELY ATTACHED TO THE TOWING VEHICLE BEFORE USE

Initial Set-up

Initial Test Operation

In order to familiarise the operator(s) with the machine, first test the mechanism and controls on a flat surface, with the trailer empty. Once happy with the principles of operation then test using a suitable materials before proceeding to use as normal.

Operating Limits

WARNING: DO NOT OPERATE BEYOND OPERATING LIMITS, DAMAGE TO MACHINERY OR INJURY TO OPERATOR MAY OCCUR.

Minimum / Maximum Temperature: -5°C / +40°C –
Max load 1,000kg

Operation

Ensure that the operator is suitably qualified to use a machine of this nature and that they have fully read and understood this manual - they should be aware of all safety aspects relating to the safe use of the machine.

It is advisable that all 'first time' operators practice using the machine in a clear safe area prior to work in order to familiarise themselves with its operation.



After approximately one hour of work with a new machine, all nuts, bolts and hydraulic hoses should be checked for tightness, breaks and adjusted as necessary!

Machine Operation

Loading

NB: THE DT100 IS DESIGNED TO TAKE A MAXIMUM 1000KG – OVERLOADING WILL LEAD TO PREMATURE MACHINE FAILURE OR IN-OPERABLE USE

1. Make sure the rear tailgate is securely latched prior to loading. If un-latched, raise the body, remove any obstructions blocking the mechanism (eg. stones or mud) and lower body for auto-latch mechanism to operate.
2. Load in a safe manner and do not overfill trailer based on operating limits of towing vehicle and DT100
3. Loads must be spread evenly across the trailer. Never exceed the permitted load weight
4. Secure the hand control to the towing vehicle prior to moving. Ensure trailing cables cannot snag as this may result in damage to the hand control.

Unloading

1. Make sure the unloading area is safe and clear prior to unloading
2. Operate the electric hydraulic lift on the hand remote to lift the DT100 bed – the tailgate will auto-unlatch to release the load as it lifts.
3. Prior to lowering the body, make sure the chassis and rear tailgate are free from debris to enable safe re-engagement. **Note that on new machines the bed may be slow to lower until the cylinder beds in and all air is expelled from the hydraulic circuit. As this takes around 50 cylinder operations under load, if used for light loads this may take several months to occur.**
4. Never drive with the trailer body raised as this increases the risk of overturning significantly.



TAKE CARE WHEN LOWERING THE DT100 – STAND CLEAR AND MAKE SURE NOTHING IS IN BETWEEN THE CHASSIS AND BODY

Maintenance

All maintenance, cleaning and repair operations must be performed with the machine suitably supported and in a safe environment.

Daily Checks

Before use each day the following checks should be undertaken;

- **Bearings & Grease Points** - Ensure bearings are in good order and greased as per the maintenance schedule.
- **Hydraulic Fluid** – Check to see if the fluid is at the correct level and if necessary top up.
- **Battery** - Ensure battery is fully charged ready for use.
- **Hitch** - Check condition of swivel hitch and ensure this is attached securely to towing vehicle.
- **Tyres** - Ensure tyres are free from damage and inflated to the correct working pressure for the conditions at hand

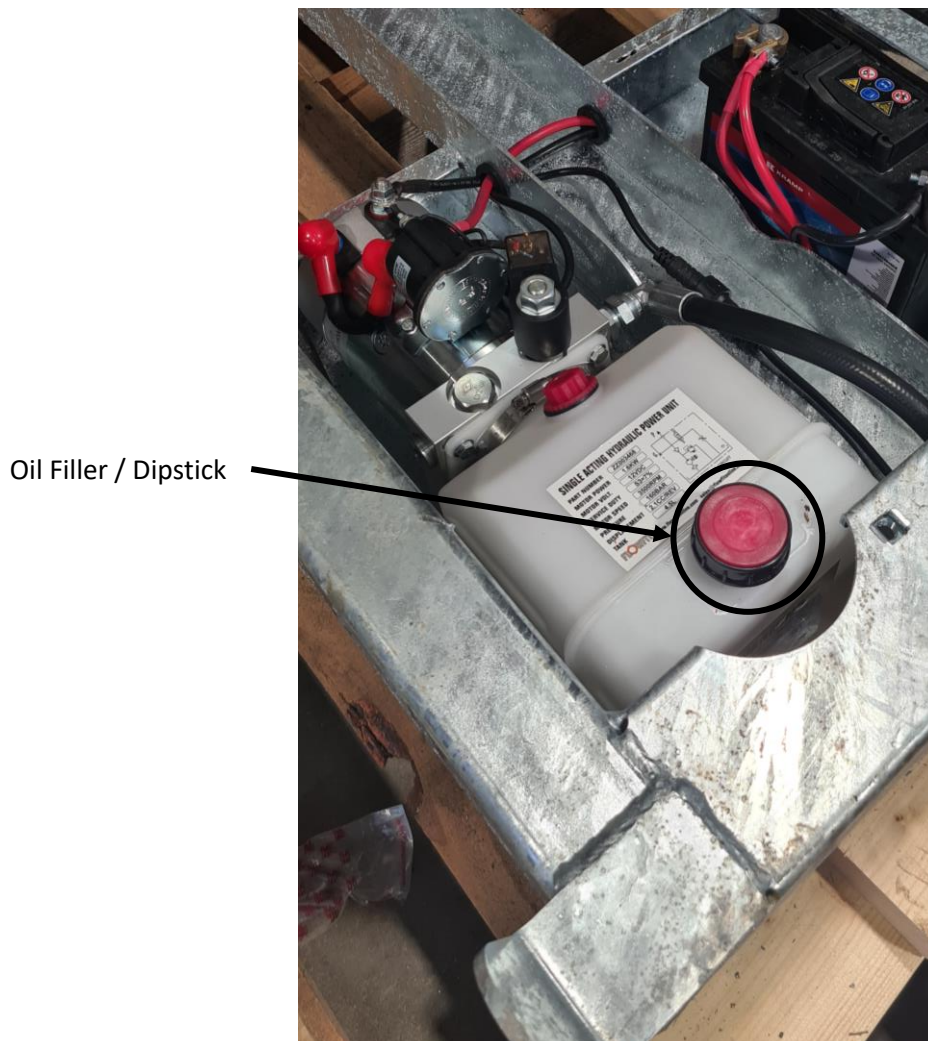
Battery Charging

The DT100 comes complete with a quick link 12v battery charging port and connector for ease of use. The connecting cable is supplied with the machine and the charging port on the outside of the machine underneath the body of the DT100 as shown in the below image. Battery life and re-charge frequency depends on the load being tipped and number of tipping operations. Batteries should be charged or maintained with a suitable smart charger at 4A maximum.



Hydraulic Fluid

The DT100 uses **mineral ISO46 HLP hydraulic oil** in the hydraulic circuit. Although the machine is supplied fully filled and ready for use the level should be checked before first use and as part of the daily checks routine. The oil level is checked by using the dipstick on the oil filler cap, shown below (cover removed for clarity).



Oil Level Check Procedure

The hydraulic oil level is checked on the DT100 with the body **fully** raised as follows;

1. Ensure the DT100 is securely attached to a towing vehicle and raise the bed fully.
2. Use a prop or block to ensure you are safe when checking the oil level. **NEVER WORK UNDER AN UNPROPPED BODY!**
3. With the bed fully raised (ie. hydraulic cylinder at full extension) the oil should be at the minimum level marker of the dipstick. Add or remove oil as required to ensure the correct level.

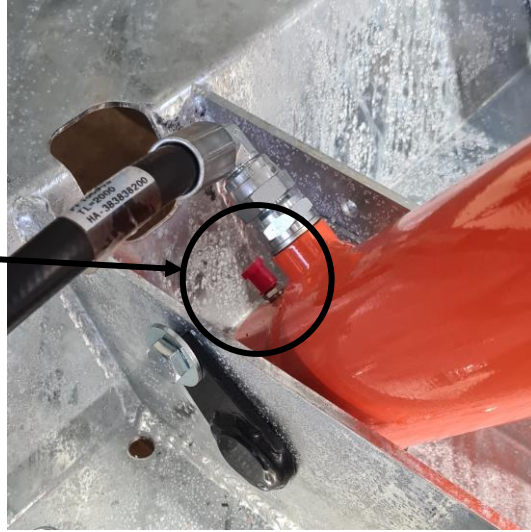


ALWAYS MAKE SURE THE BODY IS SUITABLY PROPPED WHEN WORKING UNDER THE MACHINE

Grease Points

Lubricate the following points using Multi-purpose lithium-based grease with NLGI 2 viscosity grease as per the maintenance schedule:

1 - Hydraulic Ram (lower end)



2 - Hydraulic Ram (higher end)



3 - Pivot Axle Bearing (Both Left & Right)



Troubleshooting

Problem	Possible Causes	Remedies
Body not tipping / Partially Tipping	Lack of Hydraulic Oil	Check for leaks/re-fill where necessary
	Battery not charged	Charge Battery with supplied connector
	Damage to Controller/Wiring	Inspect cabling for damage and replace where necessary
	Motor Fault	Contact distributor
	Trailer Overloaded	Remove load to within safe operating guidelines
Rear Door Not Latching	Blockage within Mechanism	Remove Blockage (eg. stones or mud)
	Latch mis-aligned	Adjustment required – contact Distributor
	Latch Sticking	Lubricate moving parts
Body is slow to lower or jerky movement when lowering	Air in hydraulic circuit	Check hydraulic oil level, top up as necessary
	Cylinder seals tight	<p>This can be the case on new machines before the cylinder and seals have had chance to bed in.</p> <p>After approximately 50 operations the cylinder will bed in (with light intermittent loading this may take longer and with heavy loading this initial bed-in period will be reduced.)</p>

Warranty

The Chapman Warranty

Chapman Machinery Ltd (herein 'Chapman' or 'Chapman Machinery') warrants that the machine referred to in the Warranty Registration Form will be free from manufacturing defects for a period of 24 months from the date of sale. This warranty does not affect your statutory rights, but merely adds to them. Should you have a problem within 24 months from the date of sale please contact your original dealer, or Chapman Machinery's Service Department.

Any part found to be defective during this period will be replaced or repaired, at our discretion, by the dealer or a authorised Service Engineer.

Warranty Conditions

1. The Warranty Registration Form must be completed and returned to Chapman Machinery Ltd within 30 days of the date of sale
2. This warranty does not cover defects arising from fair wear and tear, wilful damage, negligence, misuse, abnormal working conditions, use in competition, failure to follow Chapman Machinery's instructions (oral or written, including all instructions and recommendation made in the Operator's Manual) or alteration or repair of the machinery without prior approval.
3. The machinery must have been serviced in accordance with the Operator's Manual and the Service Log must have been kept up to date and made available to the dealer should service, repair or warranty work be undertaken.
4. This warranty does not cover claims in respect of wearing parts such as blades, flails, paintwork, tyres, belts, hydraulic hoses, bearings, bushes, linkage pins, top links, ball ends unless there is a manufacturing or material defect or the cost of normal servicing items such as oils and lubricants.
5. This warranty does not cover any expenses or losses incurred whilst the machinery is out of use for warranty repairs or parts replacement.
6. This warranty does not extend to parts, materials or equipment not manufactured by Chapman Machinery, for which the Buyer shall only be entitled to the benefit of any such warranty or guarantee given by the manufacturer to Chapman Machinery. Only genuine replacement parts will be allowable for warranty claims.
7. All parts replaced by Chapman Machinery under warranty become the property of Chapman Machinery and must be returned to Chapman Machinery if so requested. Such parts may only be disposed of after a warranty claim has been accepted and processed by Chapman Machinery.
8. Chapman Machinery is not liable under this warranty for any repairs carried out without Chapman Machinery's written consent or without Chapman Machinery being afforded a reasonable opportunity to inspect the machinery the subject of the warranty claim. Chapman Machinery's written consent must, therefore, be obtained before any repairs are carried out or parts replaced. Use of non-Chapman Machinery parts automatically invalidates the Chapman Warranty. Failed components must not be dismantled except as specifically authorised by Chapman Machinery and dismantling of any components without authorisation from Chapman Machinery will invalidate this warranty.
9. All warranty claims must be submitted to Chapman Machinery on Chapman Machinery Warranty Claim Forms within 30 days of completion of warranty work.
Using the machine implies the knowledge and acceptance of these instructions and the limitations contained in this Manual.

Transfer of Warranty

The Chapman warranty be transferred to a subsequent owner of the machinery (for use within the UK only) for the balance of the warranty period subject to all of the stated warranty conditions and provided that the Change of Owner form is completed and sent to Chapman Machinery within 14 days of change of owner- ship.

Chapman Machinery Ltd retain the right to refuse transfer of warranty.

Chapman Machinery reserves the right to make alterations and improvements to any machinery without notification and without obligation to do so.



EC DECLARATION OF CONFORMITY
Machinery Directive 2006/42/EC

Chapman Machinery Ltd

Hele Barton
Week St.Mary
Holsworthy
Devon
EX22 6XR

The Products Covered by this Declaration

Product: DT100 Dump Trailer
Standards and Regulations used: Machinery Directive 2006/42/EC
Place of Issue: United Kingdom
Name of Representative: James Chapman
Position of representative: Director

The Basis on which Conformity is being Declared

I declare that as the authorised representative, the above information in relation to the supply / manufacture of this product, is in conformity with the stated standards and other related documents following the provisions of Machinery Directive 2006/42/EC directives

The products described above comply with the essential requirements of the directives specified.

Signed: 

Date:30/08/21.....