



#### Clydesdale Ltd.

Instal House, 3 Sunbeam Road, Woburn Road Ind. Est., Kempston, Bedfordshire MK42 7BZ United Kingdom



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UI 760 2500 CB Rev2

**CLYDESDALE** Powering the Future

Thank you for choosing a Clydesdale product.

We want you to be satisfied with your 2500kg Cable Drum Trailer. This instruction booklet has been written to help you operate and look after it safely. We ask you to read the manual thoroughly before you start using the machine so that you are aware of the safety measures you need to take when using it.

#### GENERAL.

This equipment has been carefully designed and developed to eliminate health and safety risks

There are certain risks when working with conductors and towers or poles and to avoid these it is important that:

- Instructions are studied and observed
- Personnel are regularly trained in maintenance and safety
- The appropriate equipment and tools are available
- The owner and work supervisors take responsibility for ensuring that an effective safety programme and regulations are drawn up and followed by all personnel.

Our instructions contain important information which all users must be aware of and understand before they use the equipment. For your sake and the sake of others please take special notice of the items/sections with the following headings.

#### WARNING.

Important information that warns you of the risk of serious personal injury or threat to life if instructions are not followed.

#### CAUTION.

Important information that describes how to prevent damage to the machine and equipment or how to avoid a situation that could cause personal injury.

NOTE.

Advice regarding operation, care and maintenance of the machine and equipment.

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### SAFETY RULES.

#### GENERAL SAFETY PRECAUTIONS

#### **Personnel Safety**

- 1. Read and remember all safety warnings, precautions and directions in the operation and maintenance instructions. Read and learn the meaning of all signs that are on and around the equipment. If you are in any doubt, make sure you get answers to all your questions before starting work.
- 2. Do not work with machinery or equipment if you are under the influence of alcohol, strong medication, sedatives or other drugs that could make you less alert or affect your judgement.
- **3.** Take the necessary precautions to avoid loose hair or clothes becoming trapped in moving parts or controls.
- **4.** Whenever possible wear safety gloves to protect your hands and fingers from cuts, grazes, burns and solvents.
- 5. Always wear a safety goggles whenever there is a risk of flying particles, splinters, dust or other objects that could damage your eyes, and when safety regulations demand it. Look after your eyes!
- 6. Always wear a safety helmet and safety shoes when work requires it.
- 7. Always wear hearing protection in areas with a high noise level.

#### Safety in the work place

- 8. Keep your working area clean and uncluttered
- **9.** Keep unauthorised personnel away from the working area. Always keep a good check on who is present.
- **10.** Surfaces that you touch with your hands or feet must be kept clean, dry and free from oil or grease.
- 11. Store parts and tools in a place appointed for that purpose when they are not in use.
- **12.** Do not stand underneath or allow anyone else to stand underneath any raised or suspended equipment.
- **13.** Find out the weight limits of lines and lifting equipment and clearance they require when in use.

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#### **Equipment safety**

- **14.** Warning signs, prohibition signs and information signs must not be obscured, changed, damaged or removed.
- **15.** Before setting up mobile equipment make sure that the ground is firm and level. Check that supports and securing devices are safely in place. Follow the instructions for securing and setting up the equipment where appropriate.
- **16.** Before moving mobile equipment you must check that the brakes and road lights work satisfactorily. Make sure that supports are raised high enough above the ground to permit safe transport. Check that there are no loose parts that could fall off during transport.
- **17.** Check the components of the equipment each time before use to make sure that no parts are damaged or suspected of being damaged. Repair or replace damaged parts or parts that are suspected of being damaged. Repair or replace damaged parts before starting or operating equipment. Use only original spare parts.
- **18.** Before starting or operating the equipment make sure that no person, animal, tool or other foreign object is inside, on, under or near the equipment. Check that all protection and safety equipment is correctly installed and in satisfactory condition.
- **19.** Do not let untrained personnel start or operate any equipment without supervision by a trained operator.
- **20.** Never leave the equipment unsupervised.
- **21.** when starting and operating the equipment watch out for defective instruments, visible defects, smells or unusual noises that could be a warning of a fault. Stop the equipment immediately if you suspect a fault.
- **22.** Carry out all inspections, maintenance, lubrication and adjustments very carefully and in accordance with the manufacturers recommendations. Always stop the machine before carrying out maintenance.

#### Safety from fire and flammable substances

- **23.** Store highly flammable, flammable and hazardous substances in a safe place in the appropriate containers. These must be clearly marked according to the relevant regulations.
- **24.** Do not permit smoking or naked flame sin the vicinity of fuel and oil tanks or other flammable substances.
- **25.** Switch off all engines when topping up oil or fuel. Follow the regulations and recommendations that apply to handling these substances.
- **26.** Never start a diesel or petrol engine in a closed space unless it is properly ventilated. Harmful gases can kill.
- **27.** Never use highly flammable and/or flammable substances such as petrol, paraffin or diesel to clean parts. Always use low flammability solvents intended for cleaning.

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#### Safety with hydraulic systems

- **28.** Do not carry out maintenance on components of the hydraulic system without first depressurising the system.
- **29.** Do not carry out any checks on the oil system without first depressurising the system. Oil under pressure can be dangerous if the pressure is released incorrectly. Oil can get very hot during operation. Wait until the system has cooled down before starting work.
- **30.** Do not disconnect a hydraulic cylinder from its couplings until the system has been depressurised.
- **31.** Do not operate a pressurised system with worn or damaged hoses, valves and seals. Replace damaged components before operating the system again.
- **32.** Do not try to remove hydraulic cylinders or other hydraulic equipment unless you are trained to do such work.
- **33.** Never adjust hydraulic system pressure settings above the recommended values.
- **34.** Follow the manufacturers recommended inspection and maintenance instructions for pressurised systems to make sure that safe conditions exist during operation.

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### **TECHNICAL DATA**

#### CAPACITY

Maximum Combined Pulling Force :	2000 kg
Maximum No. of Drums :	1
Maximum Drum Diameter :	2.500 m
Maximum Drum Width :	1.400 m
Maximum DrumWeight :	2500 kg

#### TRAILER DIMENSIONS

Length :	3300 mm	
Width :	2300 mm	
Loaded Height:	2800 mm	
(max drum diam with 300mm ground clearance)		
Minimum Ground Clearance :	200 mm at minimum tow hitch height.	
Hydraulic System:	Two single-acting rams operated individually	
	via two isolating ball valves and 25cc/cycle	
	hand pump with max press. 5000psi. and	
	reservoir volume 5 litres.	
Cable Drum Shaft Diameter :	70 mm	
Cable Drum Shaft Brake :	Mechanical Disc Brake Optional	
Wheel Specs :	8.5R17.5 12PR, 5 x 6." PCD	
Brakes :	300 X 60	
Mudguards :	Galvanised steel mitred	
Coupling :	Knott KFG35	
Suspension :	Avonride J-Hub Units	
Lighting:	Purpose designed lighting pods to	
	each mudguard gives brake, indicator	
	side and front running light. Rear fog	
	light and number plate lamp also fitted.	
Hitch :	40mm DIN eye, 76mm NATO eye or 50mm	
	Ball	
Minimum Tow Hitch Height :	400mm	

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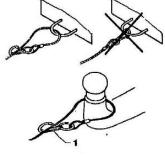
### TOWING AND HANDLING

#### HANDLING

**Hitching** – Adjust the jockey wheel so that the coupling head or eye is at the right height for connection to the hitch point of the towing vehicle. The jockey wheel is fitted with a quick adjust clamp for rpaid height changes. Reverse the towing vehicle towards the trailer or pull the trailer up to the hitch point.

- If the coupling is fitted with an eye, remove the retaining pin from the vehicle hitch point, manoeuvre the eye into the hitch point and re-insert the retaining pin ensuring it is locked in place according to the manufacturer's instructions.
- If the coupling is fitted with a ball head, open the head by pulling the lever firmly upwards. It may be necessary to release the safety catch if fitted. Place the head over the vehicle ball hitch and release the handle. Ensure that the handle returns to its original position.

Connect the lighting cable to the socket of the vehicle ensuring the cover tabs lock the plug in place. Connect the red safety cable (fig2) to the towing vehicle as shown noting that the cable should be looped over or through a suitable anchor and clipped back on to itself. This safety cable will ensure that the trailer brakes are applied should the trailer break loose from the towing vehicle.





Once the trailer is securely attached to the towing vehicle, crank the jockey wheel up to its highest position such that the locking tab locates in the serrated shaft stopping the bottom shaft rotating. Insert the R-clip and clamp securely. Raise the jockey wheel as high possible with in its quick clamp mount. Ensure that it does not obstruct the brake rod. Release the parking brake by pushing the handbrake lever to its down-most position.

CAUTION: Always check the loads on the vehicle hitch before driving. Under no circumstances should you exceed the maximum permissible loads on the vehicle hitch, trailer coupling (150kg) and trailer brake (3500kg). Avoid overloading the hitch as this will have a negative impact on braking and driving characteristics.

**Unhitching**- Crank down the jockey wheel until the trailer weight has been transferred from the towing vehicle hitch point to the jockey wheel. Ensure that the parking brake has been applied by lifting the handbrake lever.

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# CAUTION: The handbrake is spring-assisted hence care should be taken to prevent injury from powerful spring forces.

Disconnect the safety breakaway cable and lighting cable.

- If the coupling is fitted with an eye, remove the retaining pin from the vehicle hitch point. Drive the vehicle forward.
- If the coupling is fitted with a ball head, open the head by pulling the lever firmly upwards. It may be necessary to release the safety catch if fitted. Lift the coupling head off the vehicle hitch.

#### TOWING

#### CAUTION:

Extreme care must be taken when towing a loaded drum trailer on the road. The high centre of gravity due to the weight of the drum and the height at which it is carried makes the trailer easy to over-turn while cornering if excesive speed is used. It is also essential that the drum is secured using the retainer and not allowed to slide from side to side along the shaft.

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### **OPERATING INSTRUCTIONS**

WARNING: Trailer handbrake must be applied and stabiliser legs lowered for all operations ie. loading drums, dispensing cable and unloading drums. This is necessary to provide stability and a safe working condition.

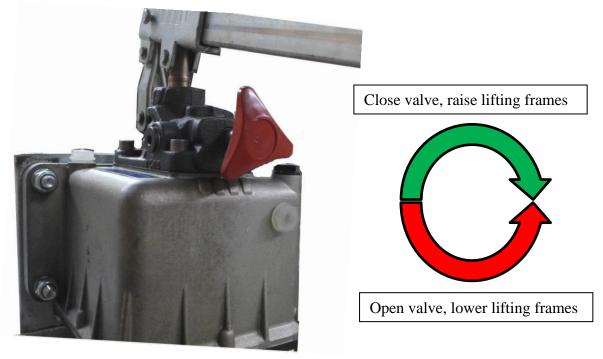
WARNING: The CLY 760 2500, Single Drum Trailer is designed for one man operation.

WARNING: All areas around the trailer should be treated as Danger Zones.

WARNING: This equipment should not be used when there is a possibility of lightning.

#### LOADING DRUMS ONTO TRAILER

- 1. Ensure the trailer and drum are on level ground.
- 2. Ensure handbrake is engaged. Turn the red triangular knob on the hand pump clockwise to its stop this is the closed position.



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- 3. Ensure both lever ball valves are open (handles inline with pipes).
- 4. Pump the handle to ensure both left and right lifting frames are raised to their maximum height.



5. Close both lever ball valves (handles at 90 degrees to pipes).



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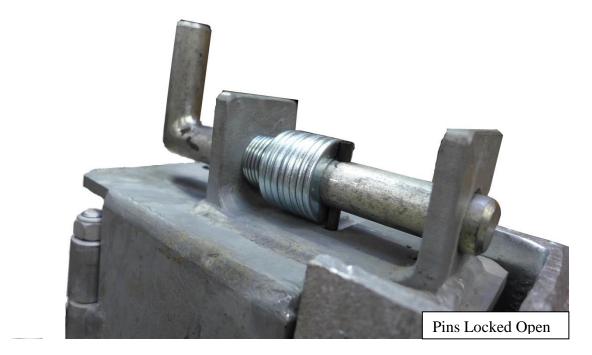


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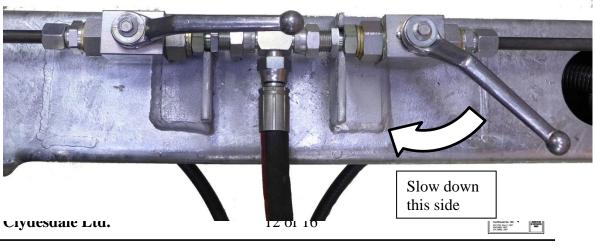


6. Turn large locking pins on top of lifting frames to "locked open" position to allow them to lower when the hydraulic pressure is released.



WARNING: Care should be taken when disengaging locking pins as inadvertent release of hydraulic pressure at this point could cause injury if heavy components are unexpectedly lowered.

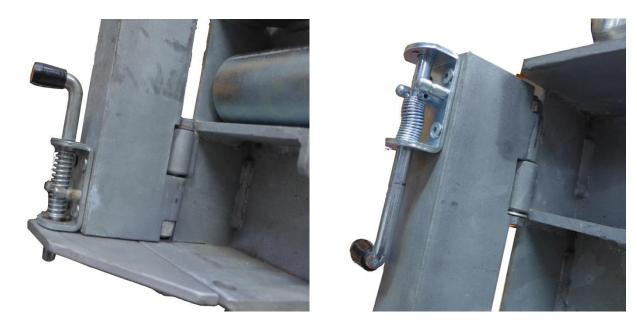
- 7. Lower drum shaft by re-opening lever ball valves then slowly releasing hand pump valve by turning red triangular knob anti-clockwise.
- 8. If load is lowering unevenly fromleft to right, close the relevant lever ball valve in stages on the fast-descending side until the load lowers evenly and all the way to the bottom of their travel.



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9. Open shaft retaining gates as shown then remove the drum shaft.



- 10. Insert the drum shaft through the cable drum's spindle hole and lock in place using the two locking collars either side.
- 11. Manouvre the drum or trailer such that the drum shaft engages in the lifting frame's ladder of cups either side.
- 12. Ensure the handbrake is engaged.
- 13. Lower the stabiliser legs at the rear of the chassis:

On models with drop & pin stabiliser legs, drop the legs to suitable height and lock into position using the retaining pins under the chassis. Extend jockey wheel to engage stabiliser legs with ground.

On models with propstands, drop and clamp the propstands at a suitable level then screw down the legs.

# CAUTION: Ensure both legs support the weight but <u>do not</u> lift road wheels clear of ground to prevent excessive bending stresses in trailer chassis.

14. Close the red pump valve (clockwise) and pump handle to raise the drum as far as it will go, balancing the lift evenly using the ball valves.

# CAUTION: DANGER OF MOVING PARTS. Do not place limbs on or near the lifting frame when it is raising or lowering a load.

15. Close the ball valves for safety and then twist and close both locking pins securely on the lifting frames.

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# WARNING: Care should be taken when engaging locking tabs as sudden release of hydraulic pressure may cause injury due to heavy components lowering.

- 16. Open the ball valves and turn the red knob on the pump slightly to open the valve (anti clockwise) lowering the lifting frames until their weight is bourne by the locking pins.
- 17. Finally, close the hand pump valve and both ball valves for added safety.

# WARNING: Failure to close all hydraulic valves in the system when travelling and operating may result in injury should a component fail or not be set correctly.

WARNING: At no time is the operator or other personnel to stand under or near a load being lifted by the trailer.

#### **DISPENSING CABLE**

In order to ensure safe operation of the trailer unit, the following points must be adhered to.

- Position trailer as level as possible.
- Trailer to remain hitched to tow vehicle or suitable anchor.
- Rear stabiliser legs used but road wheels must remain in contact with ground to provide braking.
- Trailer hand brake applied.
- Trailer positioned in line with first stringing pole, roller or chute to ensure direct feeding of conductor from drum without snagging.
- Trailer placed sufficient distance from first stringing pole, roller or chute to reduce the approach angle of the cable.

#### UNLOADING DRUMS FROM TRAILER

Unloading drum is the reverse of loading drums taking care to ensure the drum is prevented from rolling once released.

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### MAINTENANCE

It is essential that your machine receives regular attention to ensure that it remains in peak condition. All the road running gear i.e. brakes, lights, mudguards, tyres etc. are statutory requirements and as such must be maintained in good condition.

The machine must be subject to a Lifting Operations and Lifting Equipment Regulations (LOLER) examination on at least an annual basis. This should be carried out by a specialist.

Full details of the minimum servicing requirements are given on the following overall maintenance schedule.

All maintenance should be carried out by skilled and competent personnel.

Where adjustments are to be made to electrical equipment, qualified electrical personnel should be used.

#### **DAILY CHECKS - OPERATOR**

- 1. Inspect the trailer for any signs of damage. Check for any missing or loose bolts and replace or tighten as necessary. Report any problem including any damage and in extreme cases take trailer out of service.
- 2. Ensure that the tyres pressures are correct (85psi).
- 3. Check for the correct operation of the lighting mounted on mudguards.
- 4. Retaining pins should be checked for damage and that spring clips are present and in working order.
- 5. Locking collars should be checked for good order and easy operation of the screw studs and that all studs and clamping bolts are present.
- 6. Drum shaft bearing cups should be greased.
- 7. Check brake cables for wheel brakes have no obvious damage.

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#### **MONTHLY CHECKS - OPERATOR**

- 1. Lubricate the sliding areas of the lifting frames with oil.
- 2. Grease suspension slides and guides on end of suspenion swing arms
- 3. Grease plunger for over run brake mechanism on hitch (under rubber bellows) and associated linkages
- 4. Grease spring and guide holes for lifting frame locking pins
- 5. Grease suspension swing arm pivot points.

#### SIX MONTHLY CHECKS - WORKSHOP

- 1. Visually inspect all fixings for signs of looseness and rectify.
- 2. Remove tyres and examine for wear and damage. Repack wheel bearings with grease.
- 3. Ensure wheel nuts/studs are tightened to correct torque (230Nm for M16 on flat profile).
- 4. Ensure the correct operation of the trailer brakes and adjust as necessary. Check wear and condition of brake shoes and replace as necessary.
- 5. Ensure the correct operation of the trailer brakes and adjust as necessary. Check wear and condition of brake shoes and replace as necessary.
- 6. Check the condition of the wiring on the trailers lighting system. Ensure that any damaged cables are replaced.
- 7. Check hydraulic oil condition. Replace if required.
- 8. Check hydraulic components for signs of leakage or wear. Replace as necessary.

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