

EJECTOR TRAILER

EJECTOR TRAILER

CHASSIS No: N120417

**OPERATING AND SAFETY
INSTRUCTIONS**

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GENERAL DESCRIPTION

The Trailers is a high quality bulk carrying vehicle with uses for waste disposal, animal feeds or any application where control of discharge is critical. The ejector principal overcomes the hazards of tipping trailers and allows the operator to select the discharge point accurately.

Ejectors are available in a wide variety of body sizes, with a choice of running gear and ancillary equipment. The six-stage ejector ram is powered from a hydraulic pump that is driven either from an engine PTO or a donkey engine installation.

The frame and running gear for an ejector trailer follow standard approved practices but weight is minimised and hence load capacity is maximised by the use of monocoque chassis construction. Floor supports are integrated with the trailer frame giving enhanced rigidity to the body.

Ejector bodies are fabricated from high-grade steel and, with carefully designed reinforcing, maintain their shape extremely well under all conditions of normal operation. The ejector blade has an exclusive design of edge wiping system, which ensures a completely clean discharge over many cycles of ejection.

This manual covers the four main aspects of ejector trailer – technical specification, operating safety and maintenance. To get the maximum use from the trailer it should be studied in detail before the trailer is put into service.

The company operate a policy of continual product improvement and the details of any new trailer will be included in the specific manual for that trailer.

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SPECIFICATIONS

a) **BODY**

TYPE	110 Cu Yard Tri-Axle Taper Ejector Trailer.	
DIMENSIONS	Length	13.6M
	Depth	2.70M
CONSTRUCTION	2.2mm Tenform High Tensile Steel Sides and 4mm Tenform Steel Floor	
	3mm Ejector Blade reinforced with 100 x 50mm RHS	
	Hydraulic Tailgate with 25mm diam. Locking jaw at bottom.	
PAINT FINISH	Painted in High Build Primer – Chassis & Body finished in Mason Green W6774	
STANDARD FITTINGS	Integral Mudwings with flaps, rope hooks, ladder	

b) **TRAILER**

CONSTRUCTION	Fabricated '1' beams in monocoque construction with cross bearers and bolsters in pressed steel channel.		
Plated Weights	Gross Combination Weight	44,000Kg	
		Legal	Design
	Gross	38,000Kg	41,000Kg
	Axle	8,000Kg	9,000Kg
	King Pin	14,000Kg	14,000Kg
SUSPENSION & AXLES	SAF Drum or Disc braked axles with SAF air suspension.		
BRAKING SYSTEM	Wabco EBS system including brake valves and park Shunt Valve. Wabco Roll Stability Program.		
ELECTRICAL SYSTEM	Aspock electrical lights-wired to ISO 1185 & 3731 – A designed 7638 ABS socket is fitted as designated.		

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c) AXLES

MANUFACTURER	SAF
TYPE	Disc or Drum Brakes
No of Axles	Three
ABS Sensor	Middle Axle

d) SUSPENSION

MAKE	SAF
TYPE OPERATION	Trailing arm design with air bag rubber bushes
DAMPERS	Integral heavy duty dampers

e) BRAKING SYSTEM

MAKE	Wabco
TYPE	EBS System
OPERATION	Air operated anti-locking system
DESCRIPTION	

The Wabco anti-locking brake system incorporates two sensor/exciter assemblies and one modulating valve with combined relay/emergency function. The exciter turns with the wheel and its teeth brake the magnetic field of the sensor 100 times per revolution.

This generates a wheel speed signal which is sent to the electronic module via the sensor cable. The module detects locking of the wheels and control the air brakes MCER valve. System Power is via **ISO 1185/3731** plus designated 7638 plug. A green lamp is fitted in the instrument panel to indicate the system is working correctly .

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f) HYDRAULIC & EJECTOR SYSTEM

EJECTOR RAM Edbro RK222 Double acting

PUMP

PUMP DRIVE Sun 2105 Donkey Engine (5gall Tank)

SYSTEM OPERATION

Operation of the Ejector Ram and hydraulic tailgate (if fitted) is controlled by the selector valve at the front of the trailer. The flow to the Ejector Ram is through an adjustable Flow Control Valve, protected by a safety Dump Valve, which is set to control the speed of operation of the ram. A relief valve is fitted in the retract line to the ram, preventing over-pressure to the ram in the event of system blockage.

When the hydraulic pump is fitted to the main engine PTO a pneumatically operated accelerator disconnect is required to avoid damaging the pump through persistent running of load or over revving the engine.

g) SHEETING SYSTEM

Nevis 2 two piece sheeting system

OPERATING INSTRUCTIONS

1. TRAILER

a) SUSPENSION

The only operation required for the suspension is the lift axle (if fitted) which is operated by the selector on the near side of the chassis. Ensure that the axle is lowered before the trailer is loaded.

b) BRAKING SYSTEM

The Wabco ABS system is a standard 2 line air operated system with Anchorlok spring brakes and park/shunt valves.

c) ELECTRICAL SYSTEM

The system is wired in accordance with ISO 3731 and 1185. On power up of the system, the warning lamp must illuminate in the correct sequence to show a fault free system.

On for 2.5 seconds = Bulk OK and system self- checking.

Off for 1 second = System self-checking and preparing to sample sensors.

On until moving = System waiting for vehicle to move above 10Km per hour in order to check that sensors are working.

Off = Once the vehicle is moving above 10Km per hour and the lamp (s) goes out, the electronic system is fully checked.

During the self-checking procedure the system operates each modulator valve separately once. This operation will be audible as an exhaust of air from the valve. If more than one modulator is fitted the exhaust noise from each valve will be separated by approximately one second.

Once these two checks are made with correct results no further action is required. If the results are not satisfactory the TODD or the DDU should be used to diagnose the problem.

d) HYDRAULIC EJECTOR

Check the level of hydraulic fluid in the tank and replenish with hydraulic oil if the level is below gauge. Ensure that all filling is done through the inlet filter.

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All valves in the system must not be adjusted or tampered with. Check with our Technical Department.

Hydraulic filters need changing on a regular basis (approx. every 2 months – frequency is dependant upon number of trips per day and types of application).

Oil to be cleaned annually.

e) OPERATION

- a) Open the selector valve to open tailgate fully. Allow valve to return to spring centre.
- b) Check visually that the tailgate is fully open. Operate the selector valve to start the ejector ram. The valve is detent loaded. Pull lever up to eject. After ejecting follow procedures in reverse. (c, b, a.)

2 COUPLING TRACTOR UNIT TO TRAILER

- a) Ensure that the trailer mechanical parking brake is applied.
- b) Check that the fifth wheel jaws are open and the rear end is tilted downwards. Ensure that the support legs are adjusted to the correct coupling height. If necessary, adjust using the lower gear.
- c) Align the tractor and trailer and slowly reverse the tractor into coupled position. Check the security of the coupling by attempting to move forward with the trailer brakes applied. Visually check that the tractor and trailer are correctly coupled and securely locked.
- d) Connect the electrical couplings and air lines to their respective couplings.
- e) Raise the support legs to their fullest extent and secure in the running position.
- f) Check that the trailer brakes have released and release the parking brake.

3. UNCOUPLING THE TRACTOR UNIT FROM THE TRAILER.

- a) Apply the trailer parking brake.
- b) Lower the front support legs to take the weight of the trailer. If on soft ground plank under the legs to prevent them sinking.
- c) Disconnect the electrical coupling and air lines and attach them to the dummy coupling to avoid contamination.
- d) Unlock and release the fifth wheel coupling and slowly drive the tractor clear of the trailer.

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1. HYDRAULIC OPERATION

a) OPERATION OF LEVERS



UP TO EJECT

UP TO OPEN

EJECTOR RAM

TAILGATE

DOWN TO RETRACT

DOWN TO CLOSE

VERY IMPORTANT

- 1. Ensure sheeting system is fully open before opening tailgate.**
- 2. Tailgate must be fully open before ejecting load.**
- 3. Fully retract ram before closing tailgate.**
- 4. Fully close tailgate before closing.**

IMPORTANT:-

Under no circumstances, compact against the rear doors (Tailgate). This will result in severe damage to doors.

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SAFETY INSTRUCTIONS

The information in this chapter is issued in compliance with the Health and Safety Act 1992. Purchasers of DEE Warley trailers are advised to ensure that all of their staff concerned with the operation of the Ejector Trailer are fully conversant with the operation systems and have been instructed on the safety aspects of the operation.

The company ensure, as far as is reasonably practicable, that their products are safe to use when properly operated. No liability can be accepted for defects or accidents caused by operating the trailer outside its design limits. The following points should be brought to the operator's attention.

- 1. COUPLING TRACTOR UNIT TO TRAILER** - Ensure that the trailer brakes are applied, that the fifth wheel jaws are open and the rear end is tilted downwards. Adjust the trailer support legs to the correct coupling height. Check for secure coupling by engaging forward gear with the trailer parking brakes still applied.
- 2. PAY LOAD** - The trailers are designed and constructed to carry the rated payload distributed evenly along the length of the trailer. Concentrated loads will reduce the capacity of the trailer and may impair safe handling. Operators must ensure that axle load regulations are not infringed by incorrect loading or positioning of such loads.

Operators Must Ensure That The Axle Loading Limits And Neck Ratings For The Vehicle Are Not Exceeded. These Limits Are To Be Found On The Plates Attached To The Mail Rail. Unless Otherwise Arranged The Trailers Are Designed for Highway Use Only.

- 3. TAILGATE AND RAM OPERATION** – Before operating the tailgate ensure that the vehicles correctly positions to discharge the load and that there is sufficient clearance for the tailgate to lift. Warn any person in the vicinity of the vehicle to stay clear of the rear end as the tailgate opens.

Before operating the ejector ram check that the Tailgate/Barn Doors are fully open and that the load will discharge in the correct place. Check that the load is fully discharged and retract the ejector ram fully before lowering the tailgate.

Do not attempt to speed up the operation of the ejector ram by increasing main or donkey engine revs beyond prescribed limits.

- 4. HSE PUBLICATIONS AND INFORMATION** - The Road Haulage Association supplies a full list of publications. The following particular publications may be of interest to ejector trailer users:

Reversing Vehicles
Managing Vehicle Safety at the Workplace
Danger – Vehicles at work

ING (G) 148 (L)
IND (G) 199 (L)
HSE Video

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MAINTENANCE

1. Post Delivery Checks
 - a) Torque load wheel nuts to the figure shown in the Pre-Delivery Inspection Report.
2. Daily for the first 1000 Km
 - a) Torque load wheel nuts.
2. Weekly for the first 6000Km
 - a) Torque load the Sheet Nuts
 - b) Torque load the suspension and 'U' bolts
 - c) Adjust the brakes
 - d) Torque load Kingpin bolts
 - e) Check the level of hydraulic fluid in the tank

PAINT WORK

Customers should note that the standard gloss paint used in polyurethane enamel which requires a 14 day period to fully cure.

It is imperative that during this period no attempt is made to clean the trailer using high pressure or steam cleaning equipment.

OUT OF SERVICE

If the trailer is out of service for a long time the 'Resumption of Service @ checks should be carried out.

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RESUMPTION OF SERVICE CHECKS

To ensure safe and reliable operation of the trailer the following checks should be carried out when a trailer resumes service having been out of operation for between 8 and 12 weeks.

1. Connect the electrical plugs and check the operation of the lights.
2. Connect the air supply and charge the tank.
3. Visually check the operation of the brakes.
4. Ensure that the trailer inflates to ride height.
5. Check the level of hydraulic tailgate and ejector ram.
6. Check the operation of the hydraulic tailgate and ejector ram.
7. Check the tyre pressure.
8. Check the operation of the landing legs.
9. Carry out a road test before returning to full duties.

If the trailer is carried out of operation for more than 12 weeks the following additional checks must be made:-

1. Strip and service the brakes.
2. Re-adjust the hub bearings.
3. Re-adjust the brakes.
4. Check oil filters – change.
5. Check air filters – change.

WARRANTY & CLAIMS PROCEDURE

Every care and attention is taken in the production of your trailer/ chassis, however, should you feel that a claim on warranty should be made please contact the company without delay quoting the serial number stamped on the manufacturers plate.

We cannot act on your claim without this number.

BASIC GUIDELINES TO MAKING A CLAIM

The company must be informed immediately a defect occurs which may warrant a claim. The company cannot guarantee full or part payment of invoice for labour or materials which incurred for repairs without prior arrangement with the Warranty Department.

Please note that a customer making a claim on an assumed defective component may be liable for the full cost of testing the components (including carriage) if on inspection it is found to be functioning correctly.

All invoices submitted in connection with a claim must have an official order number which will be issued by the Warranty Department on agreement of the claim.

For more details of the company's warranty terms refer to the 'business terms' which form part of the purchase contract.

WARRANTY SPECIFIC NOTES

1. Braking Pre-Dominance

The braking system fitted to the trailer conforms to the current legislation and is based on braking calculations which are designed to produce the braking performance currently required by EE directive.

However, due to the numerous variations in tractor unit braking system designs and their effects on the braking performance of the vehicle combination as a whole, DEE Warley cannot guarantee or be held responsible for any incompatibility between the two vehicles.

Any customer experiencing "Overbraking" or "Underbraking" on the trailer should include a pre-dominance check in their inspection of the system.

2. Axle Alignment

At the time of manufacture the axle alignment is carried out in accordance with the procedures laid down by the suspension manufacturers. It must therefore be noted that before releasing the trailer we have set the axle alignment correctly and any subsequent adjustment is not covered under our warranty policy.

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TRAILER ACCEPTANCE FORM

I confirm that the “operating and safety instructions manual” is fully understood and that ALL operatives of the trailer have been instructed on the operating requirements and health and safety aspects of the trailer before it went into operation.

Name (Signature):

Position:

Name (Print):

Company:

Tel No:

Date trailer went into service:

Note:

Please return one form within 7 days of receipt of trailer otherwise warranty may become invalid.