



the perfect partner

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Ritchie Clamp Trailer
Model 3669g-A2000

**Instruction Manual
& Operating Guide**



EC Declaration of Conformity

in accordance with BS EN ISO/IEC 17050-1: 2004



David Ritchie (Implements) Ltd.,
Carseview Road, Forfar, Scotland, DD8 3BT

declare that:

Equipment: **Ritchie Clamp Trailer** Model No: **3369g-A2000**

Serial No:

in accordance with the following directives:

2006/42/EC Conforms with the essential requirements of the
Machinery Directive and its amending directives

2007/46/EC EC Vehicle Type-Approval (No. e11*2007/46*3502*01)

has been designed and manufactured to the following specifications:

BS EN ISO 12100-1: 2003 Safety of Machinery – Basic concepts, general principles for
design – Basic terminology, methodology.

BS EN 12100-2: 2003 Safety of Machinery – Basic concepts, general principles for de-
sign – technical principles and specifications.

BS EN 982: 1996 Safety of machinery. Safety requirements for fluid power systems and
their components – Hydraulics

BS EN ISO 4254-1: 2009 Agricultural machinery – Safety – Part 1 : General require-
ments

BS EN ISO 13857: 2008 Safety of machinery – Safety distances to prevent hazard zones
being reached by upper and lower limbs

BS EN ISO 14121-1: 2007 Safety of machinery – Risk assessment – Part 1 : Principles

Signed:-

Agricultural Sales Director

at:- David Ritchie (Implements) Ltd. Forfar, UK

on:- 20th June 2016

Notes

RevC



Optional Equipment

3306AL - Aluminium Sheep Hurdle

Up to 15 Hurdles can be transported using the Ritchie Clamp Trailer



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Foreword / Intended Use

This instruction manual and operating guide covers the trailer unit only. Please refer to the appropriate literature for the Ritchie Clamp (Model 4669g) and associated attachments.

The Ritchie Clamp Trailer has been designed for, and is intended to be used by, the agricultural industry purely for the mobilisation of the Ritchie Clamp and associated handling system. The trailer has been designed to reduce the time taken to move from one work site to another.

David Ritchie Implements shall not be liable for damage resulting from misappropriate use of the unit, i.e. for purposes other than those indicated in this manual.

Intended use also comprises adherence to the operating, maintenance and servicing instructions contained in this manual.

The unit must only be used in perfect working condition. Any functional disorders, especially those which affect the health and safety of personnel must be rectified before further use.

The unit should only be used by a competent operator who has read the operator's instruction manual. If the unit is being towed on a public road, the driver should hold a suitable driving licence for the vehicle and trailer combination. The vehicle should be capable of towing the unit legally (please refer to vehicle specifica-

Deviations from the intended use should not take place without the notice and approval of David Ritchie (Implements) Ltd.

tions).

Following the assembly, operation and maintenance instructions within this manual should allow the operator to correctly assemble the unit (if necessary), and efficiently transform the sheep handling system between operation and transport modes.

Operators should read carefully all safety notes contained within the manual prior to using the unit in order to help avoid dangerous situations, expensive repairs and prolonged downtime. In addition, the operator should read any relevant legislation regarding health and safety and accident prevention applicable to the country in which the unit is to be used.

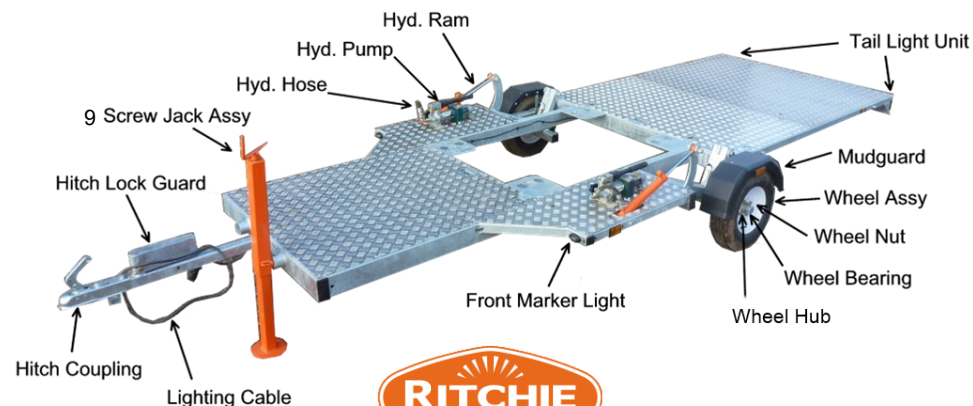
The right to alter specifications, equipment and maintenance instructions at any time, without notice is reserved as part of our policy of continuous development and improvement.

No liability can be accepted for inaccuracies or omissions in this manual, although every possible care has been taken to make it as complete and accurate as possible.

Owners who encounter a problem not covered in this manual should contact David Ritchie (Implements) Ltd at the address given on the rear cover of this manual, or consult their local Ritchie dealership.

Spare Parts

Part Description	Part No.	Qty/Unit
Screw Jack	3669g-A2010	1
Hyd. Ram	3669g-2076	2
Hyd. Pump	3669G-2080	2
Hyd. Hose	3669g-2077	2
Wheel Assy	WHPN5x10x4x101.6	2
Wheel Nut	INDESP. WR020	8
Wheel Bearing kit	INDESP. ISHU001	2
Wheel Hub c/w bearings	INDESP. HU004	2
Mudguard	MUDGUARD 10"	2
Lighting cable	PLUG7PINEXTCABLE	1
Tail light unit	LIGHTREAR3669G	2
Fog Light Unit	FOGLIGHTREAR01	1
Front marker light	LIGHTFRONTMARKER1499	2
Hitch Coupling	TOWHITCH01	1
Hitch Lock Guard	3669g-A2012	1
Secondary Coupling	ISCP200	1
Goal Post Assy	3669g-A2009	2
H-frame Assy	3669g-A1007	1
Securing Plate	323g/01	2
Ramp Filler Plate	669g/A803	2
Safety Rail	3669g-2030	1
Axle Lever Bar	3669g-A2013	1
Tie Down Assy	3669g-A2016	2



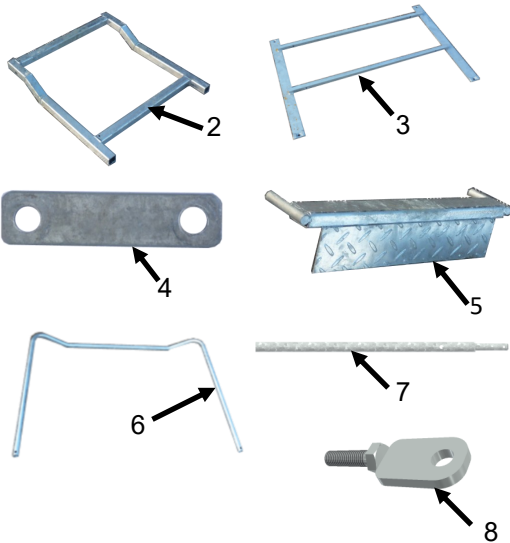
Maintenance

- Daily when in use:-
1. Check tyre pressures
 2. Check hydraulic system for leaks or damage
- Weekly when in use:-
- 1, Grease ram pivots and rods for protection.
 2. Check wheel nuts torques
- Once per season:-
1. Pack hubs with fresh grease
- Every 5 years:- Hydraulic hoses must be replaced even if signs of wear or damage are not apparent. Always use suitable replacements (available from Ritchie dealerships) according to the rating in the Specifications (page 8).

The above Maintenance Instructions are in addition to the Transportation and Storage Instructions (page 7).

Kit List

Item	Description	Qty
1	Trailer assy	1
2	Goal post assy	2
3	H-frame assy	1
4	Securing plate	2
5	Ramp filler plate	1
6	Safety rail	1
7	Axle lever bar	1
8	Tie Down Assy	2
9	Screw Jack Assy	1
•	M8x45 bolt	2
•	M8x50 bolt	4
•	M10x35 setscrew	8
•	M10 hookbolt	1
•	M10x120 bolt	2
•	M8 locking nut	8
•	M10 locking nut	7
•	M8 large flange washer	2
•	M10 large flange washer	9



Warranty

The Ritchie Clamp Trailer should be checked over at time of delivery for transport damage. Check also that the specification is complete and that the data plate contains the serial number of the machine. All claims must be delivered to the manufacturer in written form within 48 hours.

David Ritchie (Implements) Ltd guarantee subject to certain conditions that the good supplied will be free of defects both in material and workmanship.

The following conditions apply:-

- The equipment should only be used for the purposes in this manual.
- Service and warranty work is carried out only by authorised Ritchie dealers.
- The original specification of the equipment has not been subject to unauthorised modification.

Correct operation of the unit and regular maintenance will help prevent breakdowns. If however operating trouble is experienced during the warranty period the following actions should be adopted:-

Notify the dealer immediately, from whom the machine was purchased, quoting the model and serial number.

Do not operate the unit. Damage resulting from failure to report a fault may not be covered by warranty.

The manufacturer cannot accept liability for damage to equipment or third party through operational negligence.

Safety Information

Please read these instructions carefully. Ignoring these instructions could result in personal injury or damage to the equipment.

These instructions apply to all personnel involved with the operation, maintenance and servicing of the equipment.

General

The Ritchie Clamp Trailer must only be used by an experienced, competent operator who has been trained in the use of the unit.

The operator should consult the towing vehicle handbook for additional information and instruction on safety issues relating particularly to maximum hitch loads, maximum towing weight, road transportation and road lighting connections.

Never allow personnel to ride on the trailer either on the road or in the field.

Do not modify any part of the trailer unless modifications or additions are approved by the manufacturer. This also applies to welding work.

Do not use the trailer if a malfunction occurs as this could lead to damage to the equipment.

Warning: Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury or blindness. Fluid leaks, under pressure, may not be visible. Use



a piece of cardboard or wood to find leaks. DO NOT use your bare hand. Wear safety goggles for eye protection. If any fluid is injected into the skin, it MUST be surgically removed within a few hours by a doctor familiar with this type of injury.

Warning: During assembly and operation the raising and lowering of heavy components is required. This should be carried out in a safe manner using suitable lifting equipment if required. Wear safety footwear for protection.

Warning: Parts of the Ritchie Clamp Trailer are galvanised. Although every care has been taken to remove zinc spikes it is recommended that safety gloves be worn when handling galvanised parts.

Before and During Assembly (if applicable)

Select a suitable flat level site for assembly. Ensure there is sufficient space, free of obstacles, for the assembly of the Ritchie Clamp on to the trailer unit allowing room for any necessary lifting equipment.

Ensure the trailer cannot move when detached from towing vehicle.

Manual handling regulations should be followed when assembling the Ritchie Clamp and associated ramps on to the trailer unit. The use of lifting equipment should be solely by trained operators who have read the safety and operation instructions for the specific equipment.

The use of power drills / screwdrivers should be solely by trained operators who have read the safety and operation instructions for the specific tool.

Before and During Operation

Select a suitable flat level site for operation. Ensure there is sufficient space for necessary gathering pens and for the operator to work safely and efficiently.

Ensure the trailer cannot move when detached from towing vehicle by chocking wheels.

Minimise trip hazards by stowing road lighting cable safely.

Ensure all guards and safety rails are fitted before use to help avoid injury.

Service and Maintenance

Only use suitably qualified engineers, working to the relevant standards and codes of practice, when repair work to the hydraulic system is to be undertaken.

Ensure the unit cannot move when undertaking maintenance or servicing work. Select a firm level site.

After cleaning the machine check the hydraulic hoses for leaks or operational damage. Damaged hoses should be replaced immediately.

Adhere to replacement intervals noted in the manual even if signs of wear to component parts is not evident.

Lower the rear of the trailer one side at a time as follows:

Ensure hydraulic pump valve is fully closed. Operate the pump handle approx. two times to take the load allowing the locking mechanism to be unlocked. Unlock by pulling spring loaded pins against the springs (see fig 8a). One can be held in the open position by turning 90° and the other must be held by hand whilst releasing the mechanism. Release by levering with the provided bar. Once released, the spring loaded pin can be let go and the lever bar removed. Fold the mechanism back onto the trailer floor.

Keeping feet clear turn pump valve open slowly (anti-clockwise) and lower side to the ground (see fig 8b).

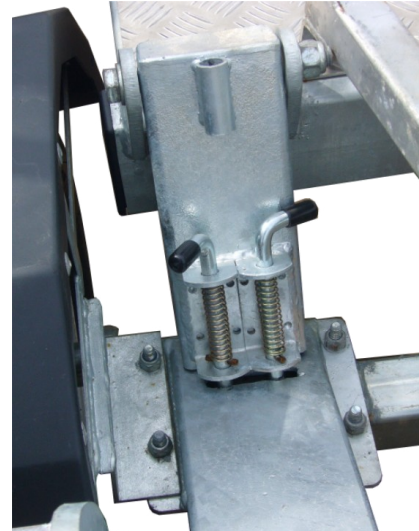


Fig 8a - Locking pins

Figure 8b - One side lowered

Repeat on other side. The handling system gates/hurdles may now be attached.

Raising Unit for Transport

Detach any additional handling system and secure all loose items on the Ritchie Clamp Trailer.

Raise one side as follows: Close pump valve by turning clockwise; pump handle until locking mechanism can be folded and locked into transport position ensuring both locks engage. Once the locks are in position release the pressure from the pump by turning the valve screw anti-clockwise. Position pump handle down and re-tighten pump valve to prevent it from vibrating out.

Repeat on the other side.

Raising front and attaching to vehicle is the reverse of detaching and lowering.



Fig 9 - Hydraulic Pump



Lowering Unit for Operation

PPE – It is recommended that safety footwear is worn during the operation of the Ritchie Clamp Trailer. High pressure hydraulic fluid is used in the system. Hydraulic fluid under pressure can penetrate the skin or eyes and cause serious injury or blindness. Fluid leaks, under pressure, may not be visible. Use a piece of cardboard or wood to find leaks. **DO NOT** use your bare hand. Wear safety goggles for eye protection. If any fluid is injected into the skin, it **MUST** be surgically removed within a few hours by a doctor familiar with this type of injury.

Select a suitable flat level site for operation. Ensure there is sufficient space for necessary gathering pens and for the operator(s) to work safely and efficiently.

Ensure the trailer cannot move when detached from towing vehicle.

Using the jack – detach the Ritchie Clamp Trailer from the towing vehicle. Disconnect the road lighting plug and safety cable. Detach the road lighting cable. Move the towing vehicle away.

Lower coupling lock handle by pulling lock mechanism on underside forward (see fig. 7b), pulling trigger and lowering handle. Fit coupling guard by removing safety pin and turning guard 180° to cover handle (see fig 7c). Refit safety pin.

Lower front of trailer to the ground by turning the jack handle clockwise. Remove jack.



Fig 7a - Unhitching



Fig 7b - Coupling underside

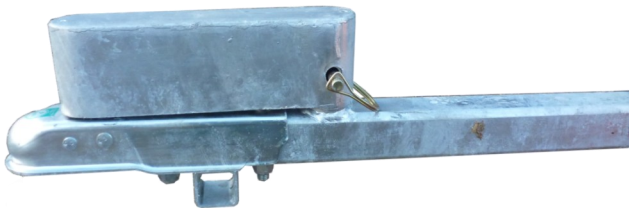


Fig 7c - Coupling guard fitted

After servicing is complete check all nuts and bolts have been tightened satisfactorily.

Dispose of used oils with due care to the environment.

Transportation and Storage

Before travelling on public roads ensure the trailer's load is secure and free from loose material and equipment. Check that the couplings, trailer structure, suspension components and wheels are free from damage or excessive wear and are in a road-worthy condition.

Attach the trailer to the towing vehicle's ball hitch ensuring that the coupling locks properly and the safety cable is attached securely. Connect the road lighting cable to the towing vehicle's socket.

Refer to vehicle and tyre specifications and regional road regulations for maximum road speed.

When turning or at bends take the width, length and tail swing of the trailer into consideration.

Take extra care when reversing.

When stopped, always apply the towing vehicle parking brake.

When storing the trailer – clean thoroughly. Position on firm level ground where it presents no hazard to people or animals. If stored outside the trailer must be lowered to the ground with lift rams fully retracted to protect the rods or protect the rods liberally with grease.

Road light System

Check road light clusters regularly, especially before travelling on the public roads. Replace bulbs as necessary. Clean lens covers and reflector periodically.



Important: Never use the Ritchie Clamp Trailer for the transport of livestock!



Features and Specification

- Combines with a Ritchie Clamp and associated gates to make an easily transportable sheep handling system.
- Ritchie Clamp can be fitted for left or right-handed operation.
- Ritchie Clamp can be fitted with or without load bars.
- Secure storage for sheep hurdles.
- Self contained hydraulic system.
- Aluminium 5-bar tread-plate floor.
- Fully road legal.

Specifications

Length (incl. Drawbar)	5431 mm
Width	2060 mm
Height (without Ritchie Clamp or safety rail fitted)	1000 mm
Height (with Ritchie Clamp fitted)	1760 mm
Maximum Gross Weight	750 kg
Unladen Weight	335 kg
Maximum Drawbar Weight	75 kg
Wheels	5.00 x 10 wheel
Tyre Pressure	3.45 Bar (50 psi)
Wheel Nut Torque Setting	57 Nm
Hydraulic Oil	SAE 30 (or equivalent)
Oil Capacity	350cc
Hydraulic Hose Rating	400 Bar (5800 psi)
Vehicle Coupling	50mm ball hitch
Optimum Ball Hitch Height	35 - 50 cm from ground
Maximum Towing Vehicle Mass	22 Tonnes
EC Vehicle Type-Approval No.	- Located front right of chassis
VIN	- Located front right of chassis

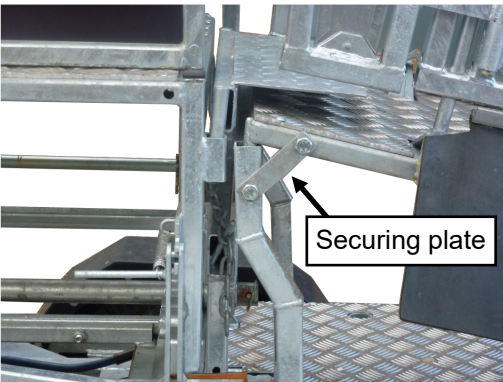


Fig 5b - Securing plate and ramp filler plate fitted

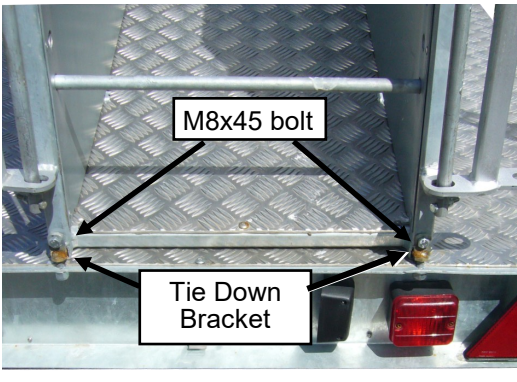
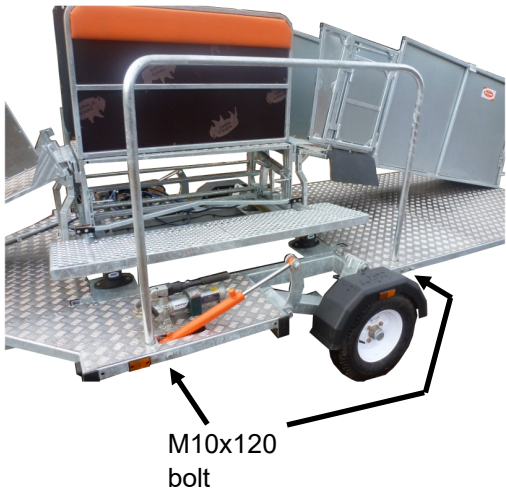


Fig 5c - Entry ramp secured

6. Safety Rail

Fit Safety Rail in sockets as shown in fig. 6 or on opposite side if Ritchie Clamp is orientated the other way. Secure using (2) M10x120 bolts and (2) M10 lock nuts.

Fig 6 - Safety rail fitted



For further information on set up and operation of the Ritchie Clamp please refer to the Ritchie Clamp Instruction Manual & Operating Guide.



4. 3-Way Shedding Gate (optional)

Fit Goal Post Assy to trailer in sockets aligned with Ritchie Clamp (see fig. 4a). Position 3-way shedding gate into top of goal post assy. Fit securing plate to one side (see fig. 4b) and secure with (2) M8x50 bolts and (2) M8 lock nuts. Secure lower end of ramp by drilling through the ramp into the trailer floor sheet (see fig. 4c). Fasten down with (1) M10 hook-bolt, (1) M10 large flange washer and (1) M10 lock nut. Fit Ramp Filler Plate (see fig. 4b).

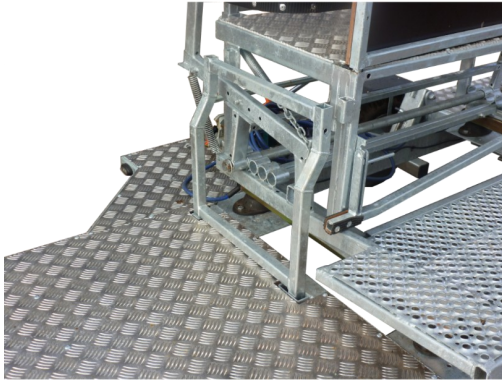
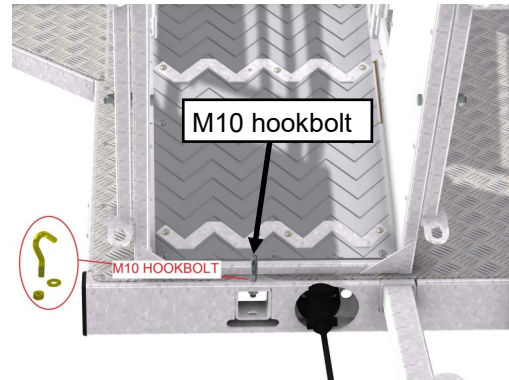
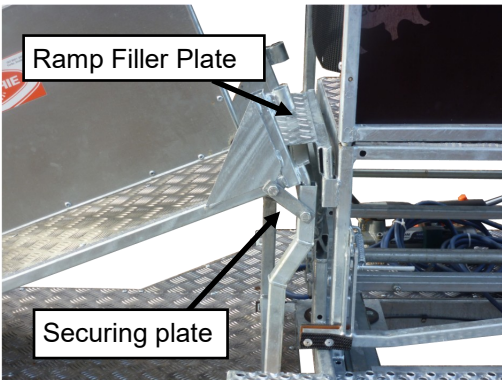


Fig 4a (left) - Goal post assy for exit ramp

Fig 4b (below left) - 3-way shedding gate, securing plate and ramp filler plate fitted.

Fig 4c (below) - Ramp bolted down



5. Entry Ramp

Fit Goal Post Assy to trailer in sockets aligned with Ritchie Clamp (see fig. 5a).

Position entry ramp into top of goal post assy. Mark positions for holes for Tie Down brackets (see fig 5c). Remove entry ramp and drill (2) 9mm holes for Tie Down brackets. Re-position entry ramp.

Fit securing plate to one side. Secure with (2) M8x50 bolts and (2) M8 lock nuts (see fig 5b).

Fit tie down brackets and secure using (2) M8x45 bolts and (4) M8 lock nuts.

Fit Entry Ramp Filler Plate (fig. 5b).

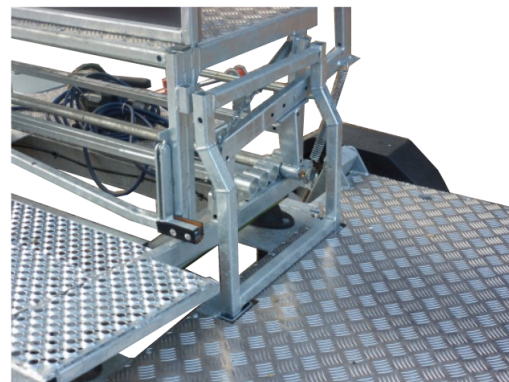


Fig 5a (bottom) - Goal post assy for entry ramp

Transport Weights for Various Configurations

Configuration	Product Part No.	Gross Weight (kg)	Nose Weight (kg)	Axle Weight (kg)
Trailer - no product attached	A3669g-A2000	335	30	305
Trailer Ritchie Clamp Aux Frame Loadbars	A3669g-A2000 669g 669g-600 MP800 Loadbars	585.5	23.5	562
Trailer Ritchie Clamp Aux Frame Loadbars 3-way shedding gate	A3669g-A2000 669g 669g-600 MP800 Loadbars 669g-300	645.5	59.5	586
Trailer Ritchie Clamp Aux Frame Loadbars 3-way shedding gate 10 x Alum. Hurdles	A3669g-A2000 669g 669g-600 MP800 Loadbars 669g-300 3306AL (x10)	719.5	23.5	696
Trailer Ritchie Clamp Aux Frame Loadbars 3-way shedding gate 15 x Alum. Hurdles	A3669g-A2000 669g 669g-600 MP800 Loadbars 669g-300 3306AL (x15)	750	-	-
Trailer Ritchie Clamp Aux Frame Loadbars 10 x Alum. Hurdles	A3669g-A2000 669g 669g-600 MP800 Loadbars 3306AL (x10)	659.5	-	-



Note: Positioning of hurdles should be such that there is not a negative nose weight particularly when 3-way shedding gate is not fitted.



Assembly of Ritchie Clamp on to Trailer

PPE – It is recommended that thick gloves are worn whilst handling galvanised components. Eye protection should be used when using power tools.

The Ritchie Clamp can be assembled on the Ritchie Clamp Trailer either with the operator position on the right or the left of the trailer. The position chosen should take into account operator preference for ease of the most common operations to be carried out. For example, if the Ritchie Clamp is frequently used for dosing via a mouth gun – a right handed operator would prefer to be positioned to the right of the animal facing forward. Changing the operator position can be done at any time but requires repositioning of the Ritchie Clamp, the H-Frame, the load bars and the entry and exit ramps. Switching between the two positions does not alter the direction of travel of the animals. The entry ramp is always at the rear of the trailer and the exit at the front. Figures 1A & 1B show the two configurations.

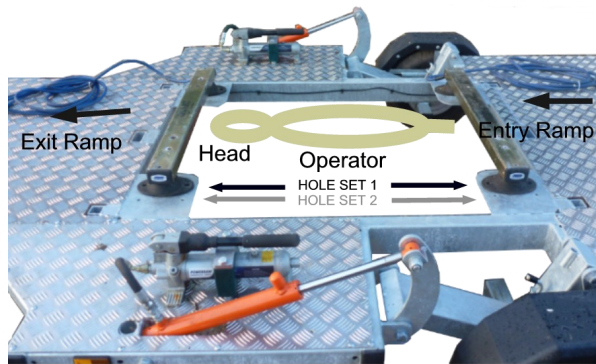


Fig 1A—Configuration for operator on left side of animal. Animals enter from right of operator and exit to left of operator.

1. Fit Load Bars

Choose the desired orientation for the Ritchie Clamp and position load bars according to either figure 1A or 1B. Take care to have the cables to the opposite side from the operator and to use the correct hole set.

Secure each load bar loosely using (4) M10x30 set screws and (4) M10 lock nuts.

Note: If not fitting load bars - then a dummy frame is fitted in place of the load bars.

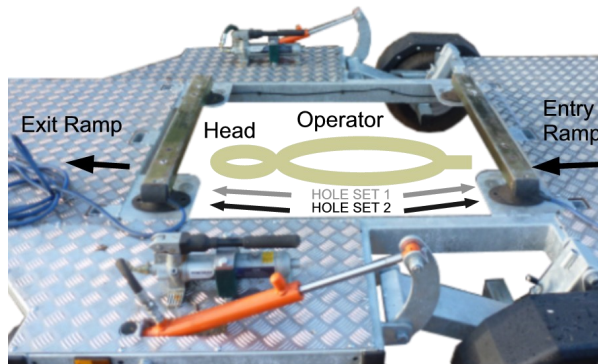


Fig 1B—Configuration for operator on right side of animal. Animals enter from left of operator and exit to right of operator.



2. H-Frame (3669g-A1007)

(optional for 669g & 3669g)

Not required for 4669g

Position H-Frame on top of load bars as per fig. 2 for operation on left of animal. Swap orientation if assembling for operation on right of animal.

Secure using (4) M10x25 counter-sunk set screws and tighten. Tighten locknuts securing load bars to trailer.

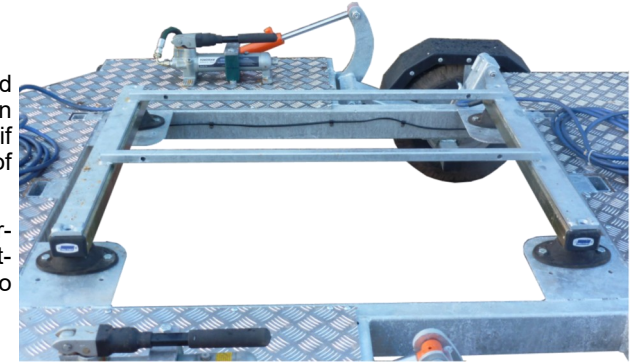


Fig 2 (above) - H-frame positioned for operator on left of animal



Fig 3a (left) - Ritchie Clamp positioned over H-frame

Fig 3b (below) - Hole drilling on pre-July 2015 Ritchie Clamps

3. Ritchie Clamp

Position Ritchie Clamp over H-Frame as per fig. 3a.

If the Ritchie Clamp is pre-July 2015 then a drill will be required to drill (4) dia 11mm holes for securing to the H-Frame (see fig. 3b).

Secure using (4) M10x70 bolts, (4) M10 washers and (4) M10 lock nuts.

