



**Ifor Williams
Trailers®**

ANHÄNGER / TRAILER
MODULBOX
MODULBOX MAX



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Serial No:

USER'S HANDBOOK

These instructions are provided to help you to get the best possible service from your trailer. To ensure that the trailer is used safely, we strongly recommend that the instructions are read by all users and all the recommendations followed.

Misuse may invalidate warranty

IMPORTANT

If you sell your trailer, please pass this book on to the new owner.

THE FOLLOWING POINTS ARE MOST IMPORTANT TO ENSURE SAFE TOWING OF ANY TRAILER

- Use an approved towing bracket and coupling ball/jaw on the towing vehicle.
 - Always follow any recommendations for maximum trailer weights given in your towing vehicle's handbook.
 - Never exceed the maximum gross weight shown on the trailer plate.
 - Never exceed the recommended towing speeds.
 - Check tyre pressures before every journey. Correct pressures are shown on a label on the side of the trailer.
 - Check wheel bolts after first 25 miles of service and subsequently before every journey. (See page 10 for wheel bolt tightening details)
 - Check lighting equipment before every journey.
 - Always make use of the breakaway cable.
 - Always leave the handbrake on or chock the wheels when the trailer is parked. When parking the trailer for extended periods, it is advisable to chock the wheels and release the handbrake to avoid the possibility of the brake shoes adhering to the brake drum surface.
 - With the trailer coupled to the towing vehicle, the bed of the trailer should be level. It is recommended, therefore, that provision be made on the towing bracket for adjustments to be carried out to the towing ball height to allow for various conditions of loading.
 - Never exceed the maximum nose weight shown on the coupling. It is advisable to distribute the load to achieve a nose weight of between 50% and 75% of the maximum. The load should be distributed as evenly as possible across the trailer floor. Compact, heavy items should be positioned centrally, directly above or slightly forward of the axle (single axle trailers)/central line between the axles (twin axle trailers).
- Coupling maximum nose weights – KF13, KF27, KFG27 & KRV20 - 100kg
KFG35 - 150kg
- Except in emergencies, **never unhitch a loaded trailer**. If unavoidable, take great care to ensure that the jockey wheel is securely clamped and the handbrake is fully applied. If the trailer is on a slope, chock the wheels as an added precaution.
 - Always tie down securely or restrain effectively all loads and carry out regular checks on the condition of the load during the journey.

Used correctly and sensibly and maintained to this handbook, your trailer should give many years of safe and reliable service. If you are in doubt about any of the instructions, please contact your distributor or our Customer Care Department.

If additional equipment is to be fitted to the trailer which involves any welding, drilling or any structural modifications to the trailer, approval should be obtained from our Customer Care Department before commencing work.

SAFETY INSTRUCTIONS

TRANSPORTING LIVESTOCK

When transporting livestock, full use should be made of partitions to ensure that the animals are not thrown about by the motion of the vehicle. This is one of the provisions of the Transit of Animals (Road & Rail) Order 1975 (S.I. No. 1024) for the protection of animals during transit, but also it is most important for the safe towing of the trailer.

Cross divisions are available for all livestock trailers. They are not provided with the trailer as standard as customers' requirements vary considerably depending on the type of stock to be carried. However, the trailers are provided with receivers as standard to accept the cross divisions at intervals along the trailer.

Maximum pen lengths permitted by the order

Sheep, pigs, goats	3.1m	10'2"
Calves	2.5m	8'2"
Cattle	3.7m	12'1 1/2"

If a part load is carried, pens may need to be smaller.

Non-slip floors are standard on all livestock trailers. However, the Order states that new straw bedding (or similar) must be used if calves or pigs are carried.

Horses

Straw or similar bedding should also be used in horsebox trailers to improve comfort and footing when the floor is wet.

NOTE: The above references to the Transit of Animals Order are not intended to be definitive legal interpretations. If you are in any doubt about the requirements of the Order, advice can be obtained from your local Animal Health Inspector (County Council Trading Standards Department).

TOWING SPEEDS

All trailers are fitted with wheels, tyres and braking systems that comply with the UK Construction and Use Regulations. The maximum speed limit under the regulations is 60mph. However, we strongly recommend that speeds are reduced when transporting livestock or any unevenly distributed load.

NOTE: The 60mph limit is allowed on motorways and unrestricted dual carriageways only. On other unrestricted roads the limit is 50mph.

Transporting livestock in the DP120G trailer

It is recommended that when transporting livestock in the DP120G, speed should not exceed 25mph.

BREAKAWAY CABLE

The breakaway cable is designed to operate the handbrake if the trailer becomes detached from the towing vehicle. It will then detach itself by the spring ring opening out. After use, the cable and spring ring should be replaced to ensure correct future operation.

COUPLING INSTRUCTIONS

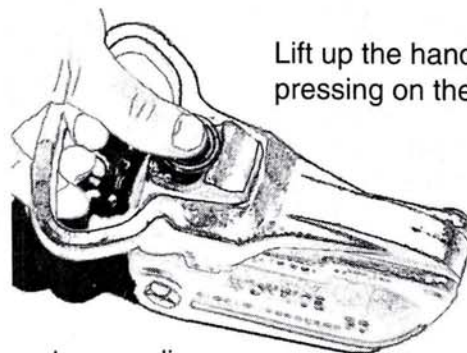
Whenever possible, both trailer and towing vehicle should be on level ground.

50mm Ball Couplings

- 1 Check the condition of the breakaway cable. If frayed or kinked, replace before using trailer.
- 2 Check that the ball is clean, and the coupling head cup is well greased.
- 3 Ensure that the trailer handbrake is fully applied.
- 4 Ensure that the jockey wheel clamp handle is tight and, by turning the jockey wheel jack handle, raise the coupling to a height greater than that of the coupling ball.
- 5 Reverse the towing vehicle up to the trailer so that the coupling head is directly over the towing ball. Fully apply the towing vehicle handbrake.
- 6 Attach the breakaway cable to the towing vehicle.

The practice of wrapping the cable around the stem of the coupling ball is not recommended. It is better to fit a suitable eye bracket to the towing bracket for the purpose.

- 7 Press the release button on the coupling head and lift the handle. Lower the coupling head by means of the jockey wheel jack handle until the coupling head is in place over the towing vehicle ball, and release the handle.



Lift up the handle whilst pressing on the release button

Coupling and uncoupling

- 8 Test that the ball is engaged by attempting to lift the coupling off the ball with the jockey wheel.
- 9 Retract the jockey wheel, taking care that the wheel is wound up fully and positioned well clear of the brake linkage as follows:
Before releasing the clamp, wind up the wheel until the forks are tight against the stem. Release the clamp, lift the stem and tighten the clamp with the wheel facing forward and in contact with the inside of the drawbar channel.
- 10 Attach the electrical plug and check that all the lights are operating correctly.
- 11 Release the trailer handbrake.

Eye Coupling

- 1 Check the condition of the breakaway cable. If frayed or kinked, replace before using trailer.
- 2 Release the jockey wheel clamp and drop the wheel to the ground.
- 3 Clean the towing eye and jaw and apply grease to the pin and eye.
- 4 Ensure that the trailer handbrake is fully applied.
- 5 Tighten the jockey wheel clamp handle and, by turning the jockey wheel jack handle, raise the coupling eye to the height of the towing jaw opening.
- 6 Remove the safety clip or release the safety catch on the towing jaw and remove the pin.*
- 7 Reverse the towing vehicle up to the trailer so that the coupling eye is in position between the towing jaw. Apply the towing vehicle handbrake.
- 8 Replace the pin and safety clip.*
- 9 Attach the breakaway cable to the towing vehicle.
- 10 The practice of wrapping the cable around the towing pin is not recommended. It is better to fit a suitable eye bracket to the towing bracket for the purpose.

Retract the jockey wheel, taking care that the wheel is wound up fully and positioned well clear of the brake linkage as follows:

Before releasing the clamp, wind up the wheel until the forks are tight against the stem. Release the clamp, lift the stem and tighten the clamp with the wheel facing forward and in contact with the inside of the drawbar channel.
- 11 Attach the lighting plug and check that all lights are operating correctly.
- 12 Release the trailer handbrake.

***NOTE:** Safety devices on towing jaws vary depending upon the manufacturer. The manufacturer's instructions should be followed to ensure correct operation.

REVERSING

All trailers are fitted with auto-reverse braking systems. Manual reverse catches are available as optional extras for use in particularly adverse conditions, eg. reversing up a slippery incline, where the slight drag present in the auto-reverse brakes may otherwise cause the wheels to lock.

PARKING

Trailer on level ground or facing downhill:

- 1 Fully apply the towing vehicle and trailer handbrakes.
- 2 Remove the lighting plug and stow in a safe position.
- 3 Release jockey wheel clamp and lower the jockey wheel to the ground.
- 4 Firmly re-tighten clamp by hand.
- 5 Uncouple the trailer using the jockey wheel to raise the coupling free of the coupling ball. (For eye couplings, remove the pin from the towing jaw following the towing jaw manufacturer's instructions.)
- 6 Detach the breakaway cable.

Trailer facing uphill:

- 1 Apply the towing vehicle and trailer handbrakes.
- 2 Return to the towing vehicle and release the handbrake. The trailer should roll back a few inches as the handbrake applies the brakes, overriding the auto-reverse system.
- 3 Re-apply the towing vehicle handbrake.
- 4 Check the trailer handbrake is fully applied.
- 5 Remove the lighting plug.
- 6 Lower the jockey wheel and clamp securely.
- 7 Uncouple the trailer using the jockey wheel to raise the coupling free of the ball. (For eye couplings, remove the pin from the towing jaw following the towing jaw manufacturer's instructions.)
- 8 Detach the breakaway cable.

IMPORTANT – Never detach the breakaway cable before uncoupling the trailer.

Note: When parking the trailer for extended periods, it is advisable to chock the wheels and release the handbrake to avoid the possibility of the brake shoes adhering to the brake drum surface.

SERVICE & MAINTENANCE

BRAKE ADJUSTMENT

Note: Failure to adjust brakes regularly will lead to premature failure of the damper in the overrun unit.

Brake adjustment should be checked after the first 100 miles and subsequently every 1000 miles or 2 months (whichever is the sooner) as follows:—

- 1 Jack up the trailer and support the axles on suitable stands so that all wheels are clear of the ground.
- 2 Release the handbrake fully ensuring that the coupling head is fully extended and that the brake rod is not applying tension to the brake cables by slackening the nut at the rear of the brake rod.
- 3 Adjust each wheel brake as follows:—

Note: During brake adjustment, the drum must only be turned in the direction of forward rotation.

Do not use excessive force during adjustment.

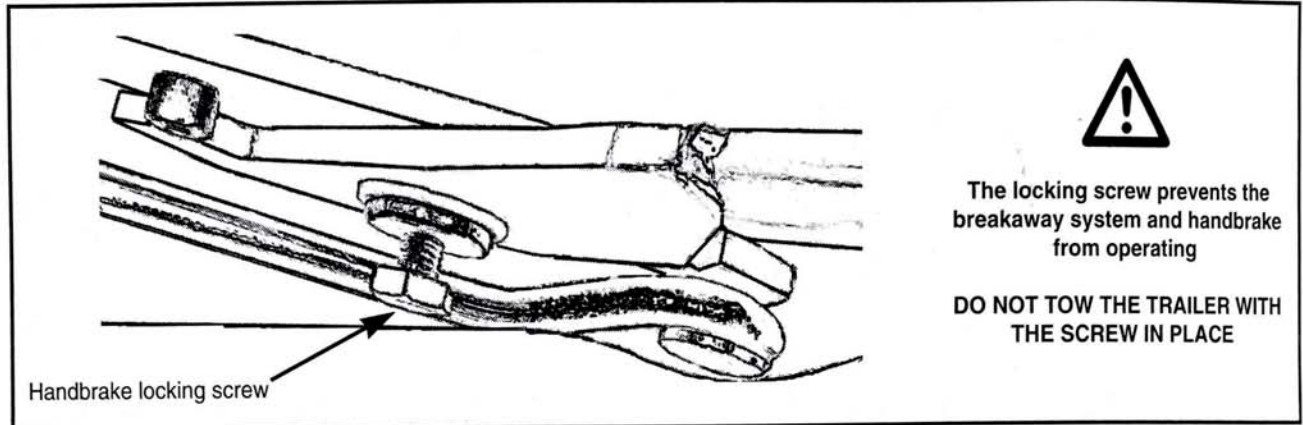
- i Using a spanner/socket (17mm A/F for the 200x50 brake, 19mm A/F for the 250x40 brake), turn the hexagonal adjuster bolt on the rear of the brake in a clockwise direction until the brake is firmly applied.
 - ii Slacken the adjuster until the wheel turns freely in the forward direction.
 - iii Apply the handbrake two or three times to ensure that the brake shoes are centralized on the drum.
- 4 Adjust the brake linkage as follows:—
 - i Adjust the nuts on the bowden cables so that the compensator is parallel with the axle.
 - ii Adjust the brake rod at the rear nut so that there is no clearance between the overrun lever and the drawshaft (at the rear of the overrun/coupling unit).

Do not overtighten or the brakes will be applied.
 - iii Apply the handbrake.
 - iv Turn each wheel in the reverse direction until it locks to test adjustment. All brakes should lock firmly as the handbrake overrides the auto-reverse mechanism. If they do not lock, adjustment is too slack.
 - v Release the handbrake and tighten the locknuts.
 - vi Couple the trailer to towing vehicle and reverse the trailer. If the brakes lock, the brake rod has been overtightened. Re-adjust the brake rod.

BRAKE MAINTENANCE

Important Note: On KF27, KFG27 & KFG35 couplings the handbrake mechanism comprises an over-centre lever and a powerful compression spring. **To prevent the unrestrained handbrake from springing up, the lever must be disabled in the off position before any part of the braking system is dismantled.** This can be achieved by lashing the lever down or using the locking screw provided.

The screw is inserted into the handbrake base as shown in the illustration. Ensure that it is removed after the linkage is re-assembled, otherwise neither the handbrake nor the breakaway cable will operate. The KF13 coupling does not have this facility as the handbrake rises at slow rate. However, it is recommended that the handbrake is lashed down before the linkage is dismantled.



Brake lining conditions should be checked every 3000 miles or 6 months. This can be carried out as follows without removing the brake drum:

Remove the two plastic bungs from the rear of each brake and visually check the thickness of the lining, replacing the bungs after checking. If the thickness is less than 1.5mm the linings should be replaced.

REMOVAL OF BRAKE DRUM AND REPLACEMENT OF BRAKE SHOES

This work must not be carried out unless a suitable torque wrench is available. (The torque required for re-fitting the axle end nut is 350Nm/260lb/ft.)

- 1 Jack up the trailer and remove the wheel.
- 2 Release handbrake and tie down the lever or use the handbrake locking screw.
- 3 Remove the hub cap.
- 4 Remove the axle end stake nut.
- 5 Slide the hub/drum off the end of the axle. A suitable hub puller may be required.
- 6 Check the condition of the braking area of the drum. If any deep score marks are visible on the drum surface, the drum should be replaced.

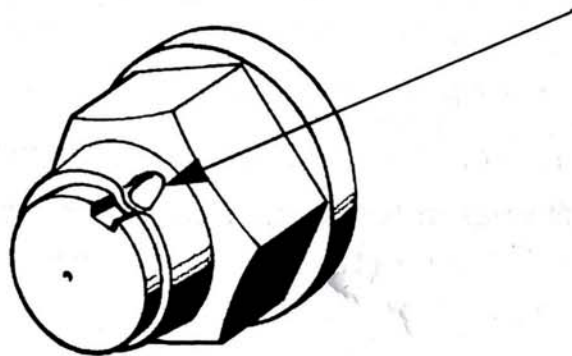
Clean the inside of the drum with a damp cloth. **DO NOT CLEAN WITH AN AIR LINE, AS INHALATION OF DUST COULD BE HARMFUL.** (Though brake linings are now asbestos-free, irritation may still result.)

- 7 Replace the brake shoes as follows:—
 - a. Unscrew the brake adjuster until the shoe ends are resting on the housing.
 - b. Detach the brake cable by pulling the outer cable clear of the cable shroud "shell" on the rear of the brake unit, removing the loose half of the shell and unhooking the cable.
 - c. Remove the brake shoe retainer spring from the centre of the top brake shoe by compressing the spring to release it from the slot in the backplate. (There is no retainer spring on the lower brake shoe.)

- d. Using a suitable lever or screwdriver, lift the forward end of the top brake shoe away from the adjuster and slide the shoe in a rearward direction until it is free. Remove the two brake shoes together with the expander assembly and springs. The lower wedge will drop out of the adjuster assembly. Retain this safely for re-fitting.
- e. Remove the two springs from the top shoe and fit them to the new shoe to ensure that they are correctly re-fitted.
- f. Attach the rear spring to the lower shoe, place the expander assembly in position between the shoes, bring the forward ends of the shoes together and fit the forward spring.

Note: On the 250x40 brake, the lower hook on the rear spring must pass completely through the carrier.

- g. Place the brake shoes together with the expander assembly into position on the backplate, replace the lower wedge and position the forward end of the lower shoe in the adjuster.
 - h. Lever the top shoe into position using a large screwdriver.
 - i. Fit the retainer spring to the top shoe.
 - j. Attach the brake cable.
- 8 Apply a light smear of grease to the thread and bearing face of the axle end nut.
 - 9 Slide the brake drum onto the axle.
 - 10 Fit the axle end nut and tighten to a torque of 350Nm/260lb/ft.
 - 11 Stake the nut collar into one side of the stub axle groove as shown:



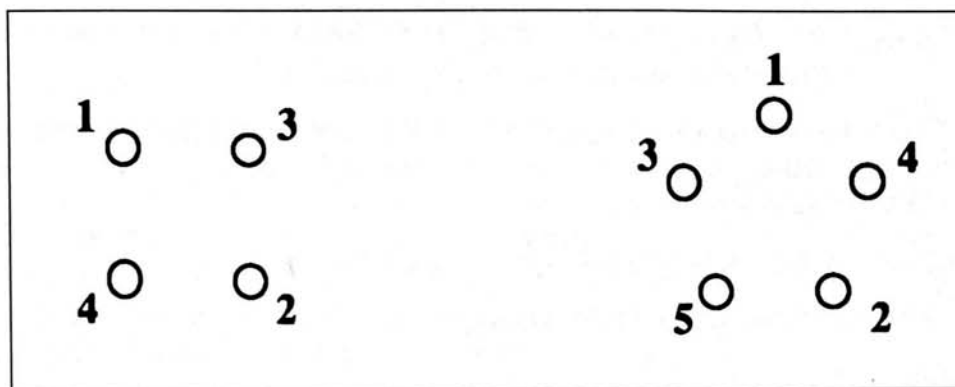
At the next removal, the opposite groove should be used and following that, a new nut will be required.

- 12 Replace the hub cap.
- 13 Replace the wheel.
- 14 Adjust the brakes.

FITTING WHEELS

- Ensure wheel bolt threads and wheel seating surfaces are clean and dry.
- Place wheel over locating rim on the hub.
- Tighten each bolt slightly and then tighten to the torque figure given below, following the sequence shown in the diagrams.

				Socket size
4xM12	65 lb ft	88 Nm	9 kgm	19mm A/F
5xM14	81 lb ft	110 Nm	11 kgm	19mm A/F



Wheel bolts should be checked after first 25 miles of service and subsequently before every journey.

BRAKE CABLES

To ensure smooth operation of the brakes and to reduce the possibility of premature brake wear, it is recommended that the brake cables are replaced every 6000 miles or 12 months (whichever is the sooner) at the same time as the brakes are checked.

The cables can be replaced without removing the hubs. See above under "Replacement of Brake Shoes" (paragraph 7).

LUBRICATION AND GENERAL MAINTENANCE

Wheel hubs – No lubrication necessary. The bearings are sealed for life.

Do not attempt to disassemble unitized bearings.

Damaged or missing hub caps should be replaced as soon as possible.

Leaf springs/spring hangers – No lubrication is necessary.

Check the tightness of the self-locking nuts on the U-bolts every 1000 miles or 2 months.*

Brake linkage – All moving parts should be greased or oiled monthly.

Wheel bearing adjustment

The unitized wheel bearings do not require adjustment. However, if the hubs are removed for any reason, a new axle end nut must be fitted every alternate time, tightened to a torque of 350Nm/260ft lb and locked as shown above.

Overrun Coupling Unit and Jockey Wheel

The general condition of the overrun coupling unit and jockey wheel should be checked monthly. Any damaged or worn parts should be replaced immediately.

Lubricate the wheel spindle and screw thread every 6 months.

To minimize wear on your towing ball and coupling head, clean out the cup in the coupling head monthly and apply new grease.

Service as follows every 3000 miles or 6 months, whichever is the sooner:—

Thoroughly examine all moving parts for wear and correct functioning.

Grease the drawtube bearings by means of the grease nipples.

Clean and grease bearing parts and pivot pins.

Ensure correct functioning of all pivot pins and levers and oil monthly.

Drawtube Reaction Test

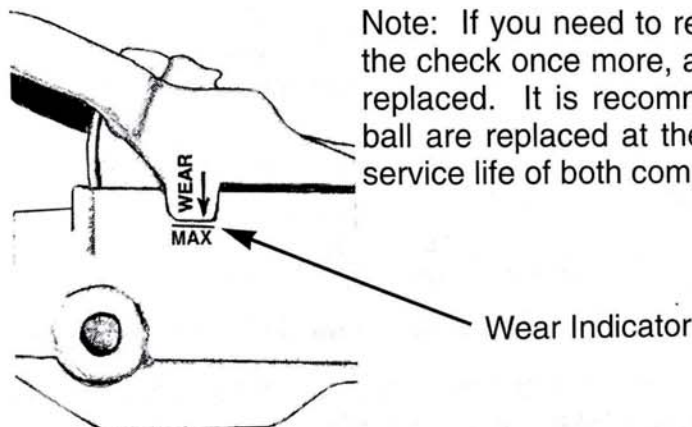
Fully apply the handbrake lever. Push the coupling head as far back into the housing as possible. (It will move slowly under steady pressure.) On release, the coupling head should slide gradually forward under the pressure of the gas-filled shock absorber. If it either fails to return to the forward position or returns immediately, contact your authorized distributor for advice.

Checking the coupling head for excessive wear

With the coupling disconnected from the tow ball, observe the position of the wear indicator lug relative to the "MAX" line. Then, with the coupling attached to the tow ball, re-check the position of the lug (see diagram). The gap between the base of the lug and the "MAX" line should be greater. If it is unchanged, excessive wear has taken place on the coupling head, the coupling ball, or both.

If this is the case, make a further check using a new 50mm ball.

If the gap is still unchanged the coupling head is excessively worn and should be replaced. However, if the gap is greater, your original 50mm ball should be replaced.



Note: If you need to replace your coupling head, carry out the check once more, as your tow ball may also need to be replaced. It is recommended that the coupling head and ball are replaced at the same time, as this will extend the service life of both components.

General Lubrication

Spring bolts and sliding bolts on sheep deck drop leaf, cross divisions, centre partitions and general duty trailer tailboards should be greased monthly.

HB505R, HB510R & HB401R

Floors

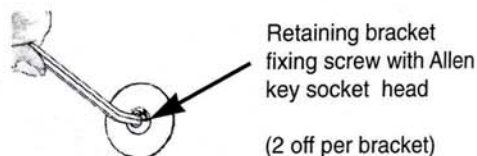
The rubber mats should be removed and an inspection made for kicking damage over the rear floor area at regular intervals. As a guide, we recommend a monthly check where the trailer is in use daily.

Interior Lamps

Do not obstruct the interior lamp with hay racks, clothing, etc. (The lamp will overheat and may become a fire risk.)

Quick Release Breast Bars / Breaching Bars

The breast bars and breaching bars can be removed from outside the trailer by removing the retaining bracket fixing screws using the Allen key provided. This allows a distressed horse to be unloaded without the need to remove the retaining hooks inside the trailer.



Galvanized Finish

As part of the normal ageing process, galvanized surfaces form an outer layer of oxide. This protects the reactive zinc and underlying steel from further corrosion. The appearance of the surface ranges from bright silver to dull grey. Exposure to road salt can change the appearance of newly galvanized surfaces to grey or black with white or grey deposits. This does not affect the protective properties of the finish.

Loading Skids

- Extreme care should be exercised when using loading skids.
- Carry out loading and unloading on level, firm ground.
- Always use the prop stands provided.
- Have an assistant on hand to guide you.
- Ensure that the skids are positioned correctly, with the lower ends on firm, level ground, parallel with the trailer and in line with the centre of the tyres of the vehicle to be loaded/unloaded and that the skid top angles are in contact with the trailer rear cross member over their full width.
- Your assistant should keep well clear during loading/unloading.
- Take your time and constantly check that the vehicle is correctly positioned.
- For loading vehicles under their own power, the ladder type skids are more suitable, whereas winching will normally be easier with the flat type.

Tyres

Tyre pressure stickers will be found on the side of the trailer.

Tyres must be maintained at the pressures indicated on the sticker. Under-inflation will adversely affect handling and fuel consumption and will lead to premature wear. If seriously under-inflated, a tyre will overheat and fail very rapidly.

When renewing tyres, always ensure that you purchase a tyre of the same size and load/speed index rating. This will be found on the sidewall of the tyre. E.g. 6.70-13C 95/93L. Different makes or models of tyres of the same size can have widely differing load/speed index ratings and inflation pressures. Use of a tyre with a lower rating can be dangerous. If in doubt, ask a tyre distributor or our Customer Care department.

The tyres fitted to the following trailer models do not currently have suitable equivalents.

DO NOT REPLACE WITH LOWER RATED TYRES

LT-series Low Loading Trailers and GP74GTA "Mini-Plant"

Avon 145R10C 8 P.R. "Europé Van" Load/speed index 82/80M

TT105G and GP106GM "Maxi-Plant"

Michelin 155/70R12 XCX Load/speed index 104/102J

Avon 155/70R12C "Trailer 12-70" Load/speed index 104/102J

DP120G, LM-series, CT166G

Avon 195/50R13C "Trailer 13-50" Load/speed index 104/101J

The maximum gross weight figure given on the trailer plate is always equal to or less than the approved maximum load for the tyres multiplied by the number of tyres on the trailer. In some cases this includes a bonus load which is allowed for trailer use up to 60 mph. Other maximum load figures are marked on some tyres. These do not apply to the UK or Europe and should be disregarded.

Tyre Repairs

Punctures should be inspected and repaired by a specialist tyre distributor. Do not fit tubes to tubeless tyres as this can lead to a "blow out" in the event of a further puncture. If the tyre is too severely damaged for a repair to be carried out the tyre should be replaced.

Security

Your trailer is security marked, but as an added means of assisting the police in making a positive identification we recommend that you mark the trailer with your postcode or another unique mark. Horsebox trailers are also fitted with Datatag electronic tags for use with Police scanner systems.

If you wish to protect your trailer with a coupling lock or other security device your distributor will be pleased to advise you of the various devices which are available.

Guarantee Registration Card

It is important that the registration card is completed and returned without delay, not only to ensure that the guarantee is validated, but also so that we can assist the police in returning your trailer to you should it be stolen. Also, it allows us to contact you without delay in the event of a recall.

We reserve the right to change and improve specifications without prior notice.

Whilst every effort has been made to ensure the accuracy of these instructions, they are intended only as a guide to the user.

January 2000