

EAST MIDLANDS REGIONAL ROWING COUNCIL

# Boat Trailers & Towing

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British Rowing Hon Safety Adviser 2003 – 2010

National Rowing Safety Committee Member

# Aims of this workshop

- \* Ways in which the club can fulfill its responsibilities
- \* Considerations to make before YOU agree to tow
- \* Safe, Secure and Stable loading
- \* Keeping on the right side of the law
- \* Trailer towing tips to improve your safety

# Boat Trailer Towing Can be a Dangerous Sport !





Trailer   
Car 

4+ from top of trailer 

# Fit for the Road

- \* When was your trailer last fully serviced ?
- \* Do you keep a record of servicing and repairs ?
- \* Are the tyres legal & suitable for the maximum load ?
- \* Do all the lights work ?
- \* Do the trailer brakes work ?
- \* **DO YOU WANT TO ARRIVE AT THE EVENT ON TIME AND WITH ALL YOUR BOATS AND CREW ?**

# Trailer Chassis Failure



# Understanding the Jargon

## MAM

Maximum Authorised Mass – Maximum permitted weight of vehicle or trailer and their load

## G V W

Gross Vehicle Weight – Same as MAM

## GTW

Gross Train Weight – Maximum weight of the vehicle and trailer

## KERBSIDE WEIGHT

## UNLADEN WEIGHT

The weight of the vehicle in its complete condition (disregarding optional equipment but including a body) as it (the vehicle) was supplied by the manufacturer, and with no passengers, a full tank of fuel, an adequate supply of the necessary oils, water, fluids etc. and no load other than tools and equipment normally carried.

# Clubs have a responsibility

Club lists all its recognised trailer drivers and has details of their:

- \* Vehicle towing and roof load capacity
- \* Vehicle gross weight (MAM)
- \* Vehicle insured to tow?
- \* Vehicle's recommended load on towing hitch
- \* Type of Driving Licence

Club can then ensure the driver is towing legally and within the limitations of the towing vehicle



## Rowing Club Driver/Vehicle Audit for Boat Trailing and Car-Topping

\* It is important that drivers of towing vehicles are aware of their vehicle's limitations with regard to the load they can safely carry or legally tow. It is also important that the correct towing hitch weight is known so that the load thereon can be adjusted to suit.

\* To enable the Club to help you in these matters of safety please fill in the details below (some of which can be found in your vehicle's handbook or registration document)

\* Name .....

\* Date Driving Test passed ...../...../..... If after 01/01/97 do you have Endorsement "E" for towing a trailer over 750Kg MAM ..... YES / NO

\* Vehicle ..... Model ..... Engine Size.....

\* Registration Number .....

\* Do you have a number plate for the Trailer..... YES / NO

\* Does your Vehicle Insurance cover Towing..... YES / NO  
(The club insures the trailer, boats, oars etc.)

\* Do you have copies of a) BR Drivers Handbook and b) BR/ACPO 'Guidance for the Transportation of Oar Propelled Racing Boats'? ..... YES / NO

\* What are your vehicle's :-

\* Kerbside weight .....Kg. Gross vehicle weight .....Kg

\* Gross train weight ..... Kg. Maximum tow weight .....Kg

\* (The latter may not be shown, but can be calculated from the above)

\* Towing Hitch Load ..... Kg.

\* Maximum Roof Load ..... Kg Maximum Roof Rack load..... Kg

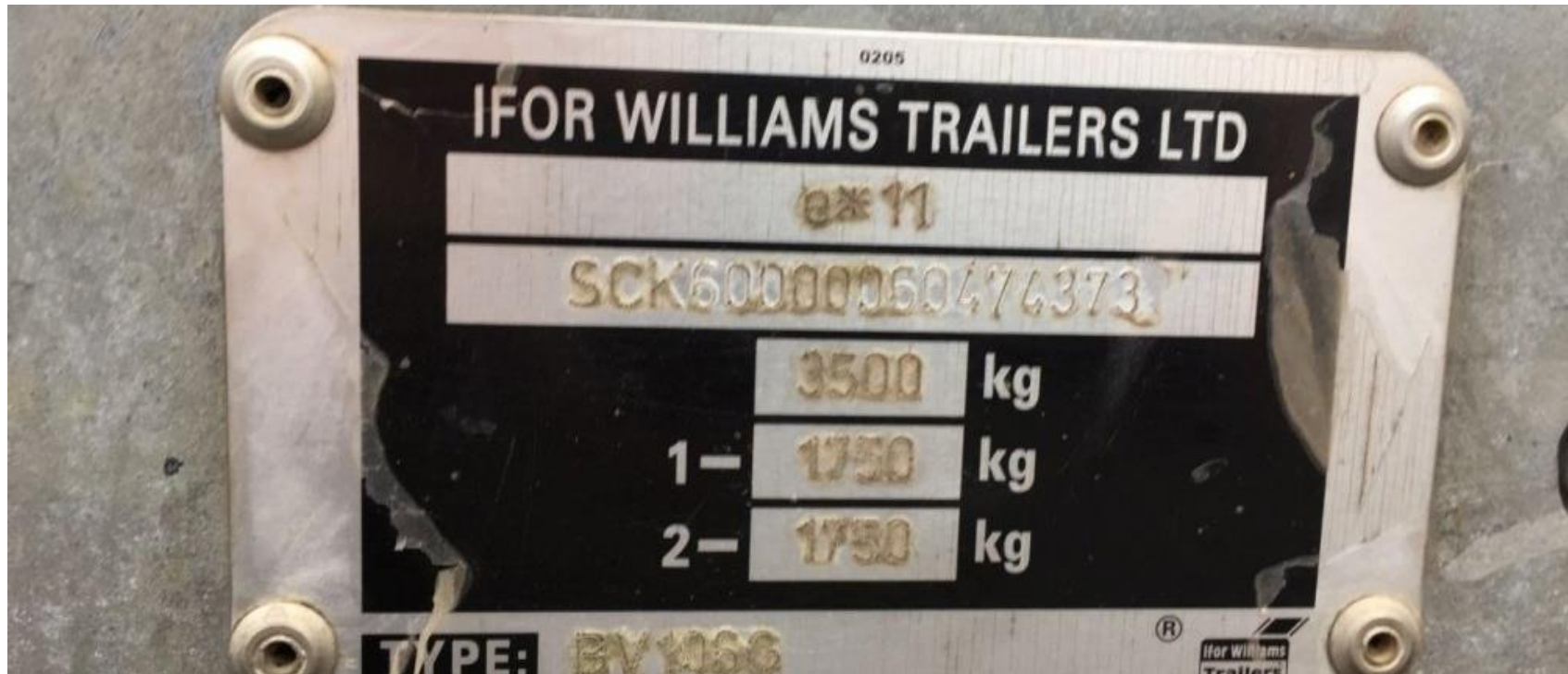
\* If you have any problems in answering any of the above questions or you need to know more on understanding the subject please see your Club's Water Safety Adviser

# Know Your Weights

- \* What is the unladen (kerbside) weight of your trailer ?
- \* What is the MAM of your trailer ? – must be plated !
- \* What are the weights of your individual boats ?
- \* What are the weights of your blades ?
- \* What is the weight of the trestles and other items carried ?

**KEEP A RECORD AND USE IT TO CALCULATE THE  
POTENTIAL LOAD**

# Trailers Must Be Plated



# Approximate Boat Weights

- \* 1x 14 to 17 Kg
- \* 2x 27 to 32 Kg
- \* 2- 27 to 32 Kg
- \* 2+ 32 to 38 Kg
- \* 4- 50 to 57 Kg
- \* 4+ 51 to 56 Kg
- \* 4x 52 to 59 Kg
- \* 8+ 96 to 105 Kg



# Driving Licence Category C1 & C1+E

## **C1**

### **Medium-sized vehicles**

- \* Vehicles weighing between 3,500kg and 7,500kg, with or without a trailer weighing no more than 750kg.

## **C1+E**

### **Medium-sized vehicles with trailers**

- \* As category C1 but with a trailer weighing more than 750kg. The total weight of the vehicle and trailer can't weigh more than 12,000kg. The weight of the trailer, when fully loaded, can't weigh more than the unladen weight of the vehicle.

## Driving Licence Category B Drivers

### DVLC information – requirements for towing trailers in Great Britain

#### **Cars**

- \* Motor vehicle with a MAM of up to 3,500kg, no more than eight passenger seats with or without a trailer – weighing no more than 750kg.
- \* As category B but with a trailer weighing more than 750kg. The total weight of the vehicle and trailer together can't weigh more than 3500kg. The weight of the trailer, when fully loaded, can't weigh more than the unladen weight of the vehicle.

**Automatic cars - As category B**

# Clarification - Category B

## Gov. UK – Towing with a car

### **Licences issued from 1 January 1997**















If you passed your car driving test on or after 1 January 1997 you can:

- \* drive a car or van up to 3,500kg maximum authorised mass (MAM) towing a trailer of up to 750kg MAM

### **From 19 January 2013**

- \* tow a trailer over 750kg MAM as long as the combined MAM of the trailer and towing vehicle is no more than 3,500kg

# Driving Licence

A1				
A2				
A		19.01.13	19.05.22	79(3),01
B1		<31.12.75	19.05.22	01
B		<31.12.75	19.05.22	01
C1				
C				
D1				
D				
BE		<31.12.75	19.05.22	01
C1E				
CE				
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DE				
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MAY22

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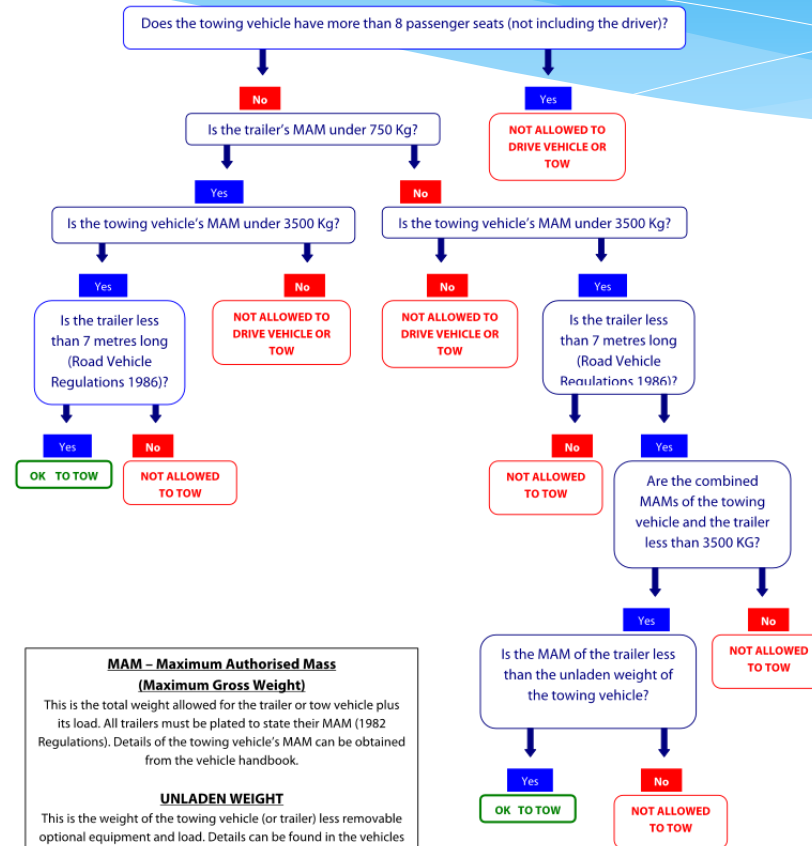
# B Licence Towing

A lighter trailer and vehicle combination of under 3.5tonnes MAM enables those with a B licences to tow boats.

- \* Ford Focus (1200kg kerb, 1600kg MAM) with a trailer up to 1200kg MAM
- \* Ford Mondeo (1400kg kerb, 1900kg MAM) with a trailer up to 1400kg MAM
- \* Ford Maverick (1550kg kerb, 2000kg MAM) with a trailer up to 1500kg MAM
- \* Land Rover 110 (2020kg kerb, 2950kg MAM) with a trailer up to 550kg MAM

# Category B Limitations – can you tow the trailer ?

## Driving and towing limitations for drivers who first obtained their driving licence on or after 1<sup>st</sup> January 1997 - Category B



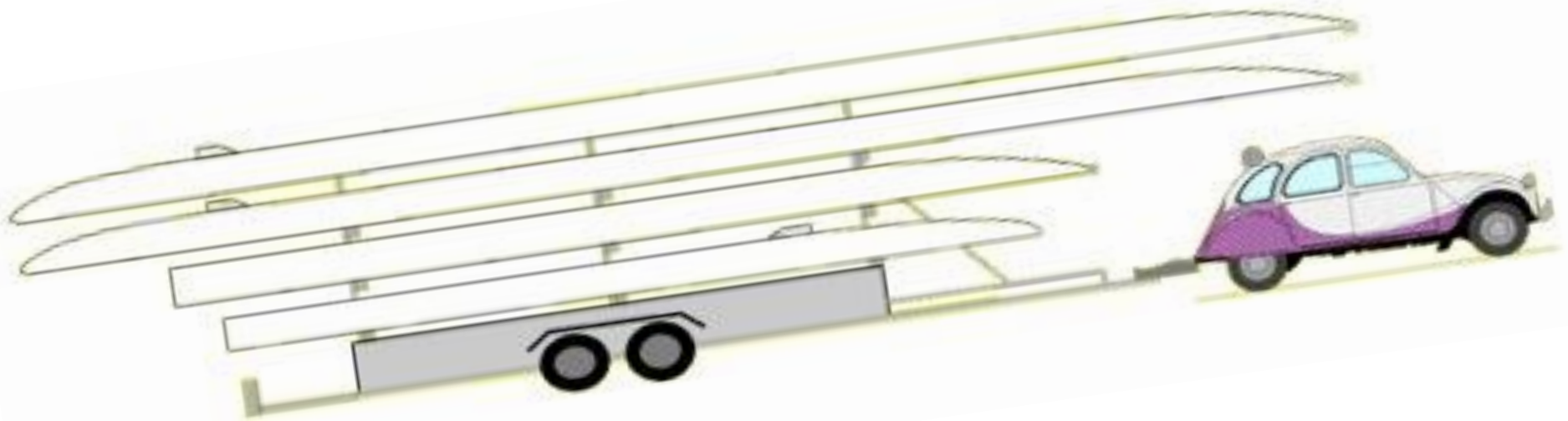
**MAM – Maximum Authorised Mass (Maximum Gross Weight)**  
 This is the total weight allowed for the trailer or tow vehicle plus its load. All trailers must be plated to state their MAM (1982 Regulations). Details of the towing vehicle's MAM can be obtained from the vehicle handbook.

**UNLADEN WEIGHT**  
 This is the weight of the towing vehicle (or trailer) less removable optional equipment and load. Details can be found in the vehicles handbook along with its towing capacity and tow hitch loading.

**TRAILER LENGTH**  
 This is a grey area but a common sense approach would be to measure from the load bearing point on the 'A' frame (including attached boxes etc) to the rear lighting unit on the extended draw bar.

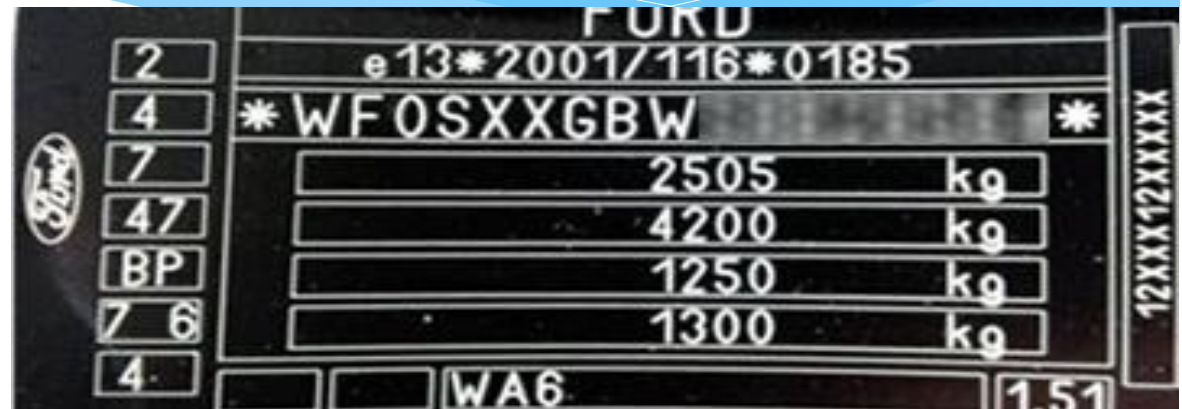
# Vehicle Towing Capacity

Don't be too ambitious - Consult your Drivers Handbook or VIN Plate to obtain the correct information.



# What is your towing capacity

Find in your handbook or look at the VIN plate



**2505kg** - Gross vehicle weight, the Maximum Allowable Mass (MAM) of the vehicle including occupants, fuel and payload.

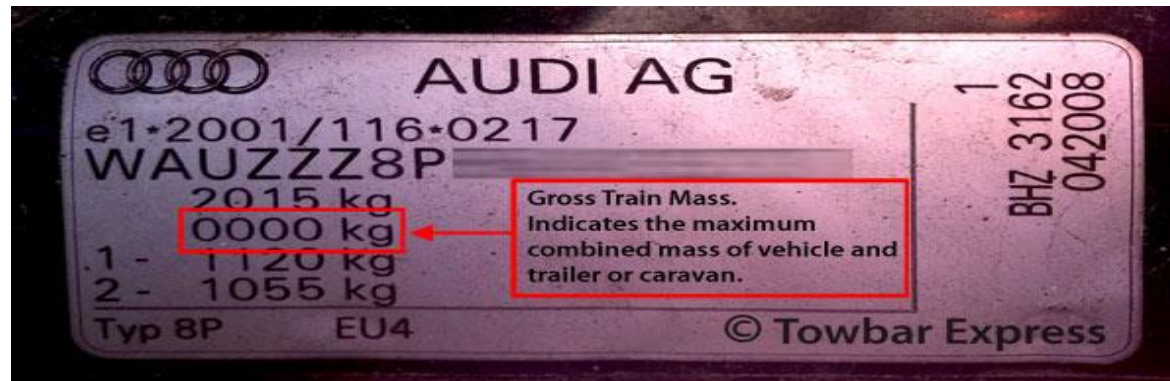
**4200kg** - Gross train weight, the combined maximum allowable mass of the vehicle and trailer.

**1250kg & 1300kg** - Maximum axle loads front and rear respectively.

The manufacturer's recommended maximum towing capacity for your vehicle is the gross vehicle weight subtracted from gross train weight. The vehicle identification plate detailed in the above picture has a towing capacity of 1695kg.

**4200kg – 2505kg = 1695kg**

# Not approved for towing



Certain performance, hybrid and city-car models or similar variants of standard models are not homologated to tow. This means that the vehicle manufacturer has deemed that the model is unsuitable for use as a tow vehicle. With this type of vehicle the towing capacity will equate to zero or a gross train weight will not be displayed.

# However !!

Fines and points on your licence can be given if:

- \* The load is unsafe – items such as seats and stretchers falling off, boat shifted and hanging off the trailer arms.
- \* The load and projections do not meet the requirements of the Road Vehicles (construction & Use) Regulations.
- \* The load is not clearly marked to attract attention from both rear and side – day and night and in poor visibility.
- \* The tyres and lights are not legal

# Stability



Alko Stabiliser



Swan Neck Stabiliser

# Tow Ball Load



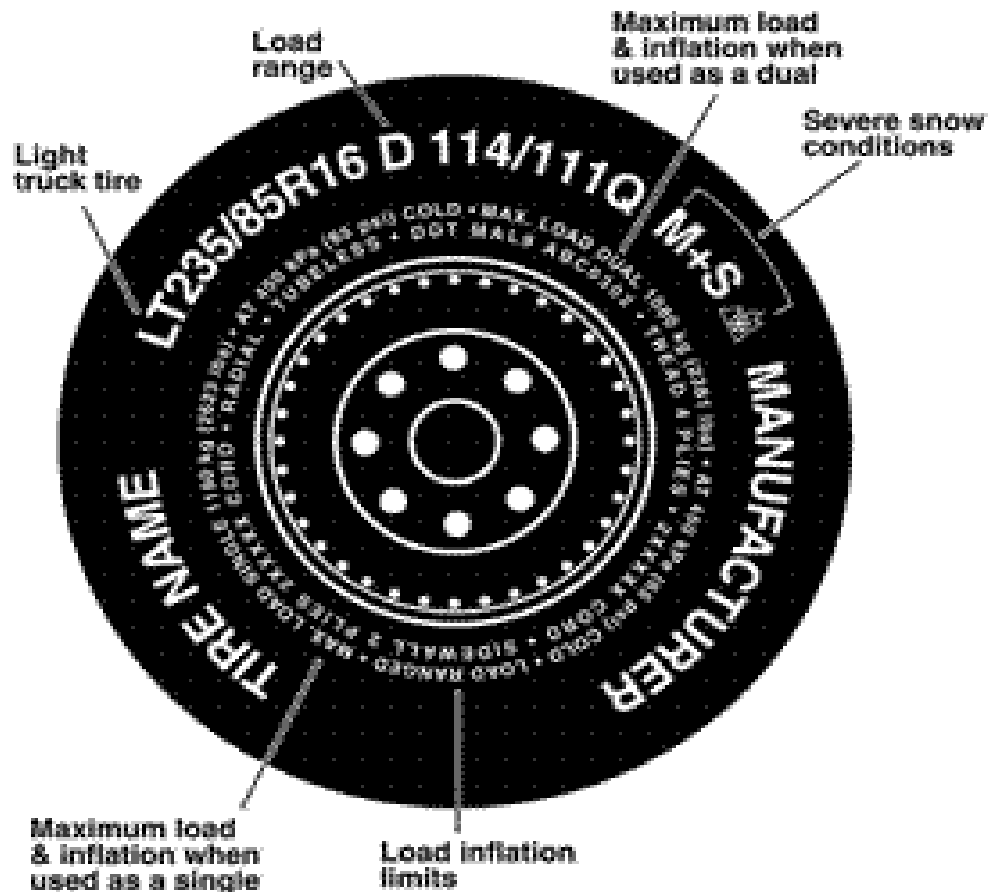
Stabilisers work to a certain extent  
BUT  
only mask the problems  
caused by:

- Incorrect loading
- The load on the tow ball
- Incorrect tyre pressure





# Tyre Pressure & Load



- Stability can be affected by unequal tyre pressures.
- Important to have the correct tyre pressure for the tyre and load.
- Important to have tyres suitable for the trailer and of the same type.
- Useful to have tyre pressure notice attached to trailer

# Principles of Loading

- \* Have the centre of gravity of the load as low as possible
- \* Balance the load on each side
- \* Position the load to achieve the required tow ball loading
- \* Use straps that are in good condition and can take the forces.
- \* Belts & Braces – to avoid the boat slipping off the arms of the trailer – Double Strapping

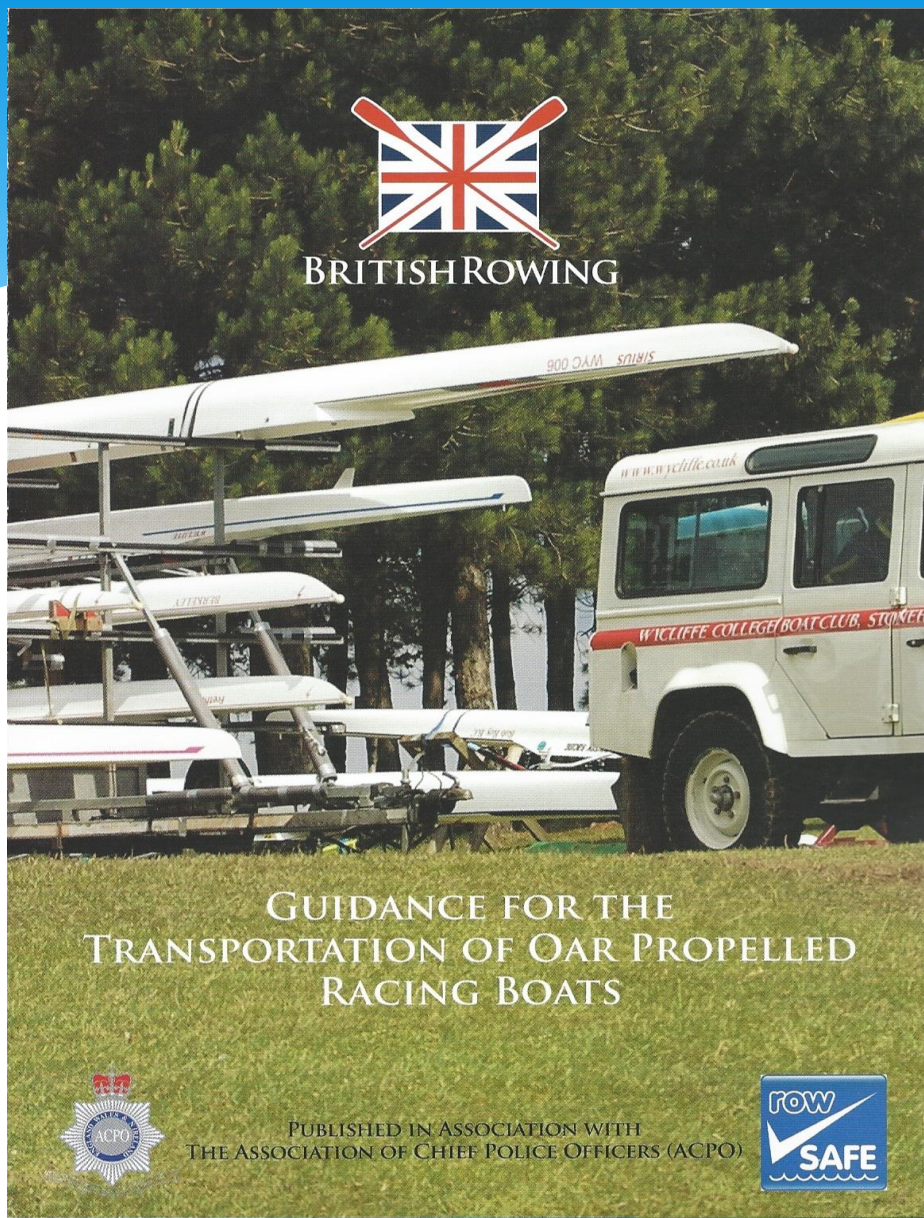
# Belts & Braces -



# Incident Report

## **Brief description of the incident:**

Rearmost end of boat tied to top rack of trailer slid laterally and fell off the trailer after the trailer passed over a large rolling bump in the road. Vehicle travelling at around 20-30 mph in 30mph zone. Falling boat caused some damage to the boat below as it fell and then struck a tree trunk by the roadside then the stern was dragged along the road for some 15 metres before the vehicle stopped. Trailer top rack was bare metal and foam block used to protect the boat from scraping on the metal was not particulate grippy. Boat ties were checked before departure and again 30 mins into journey and found to be secure. The explanation is the particularly uneven road surface was not anticipated and caused an extremely large roll of trailer. Uneven road surface caused by buses depressing the road surface immediately following a slightly raised area of the road.



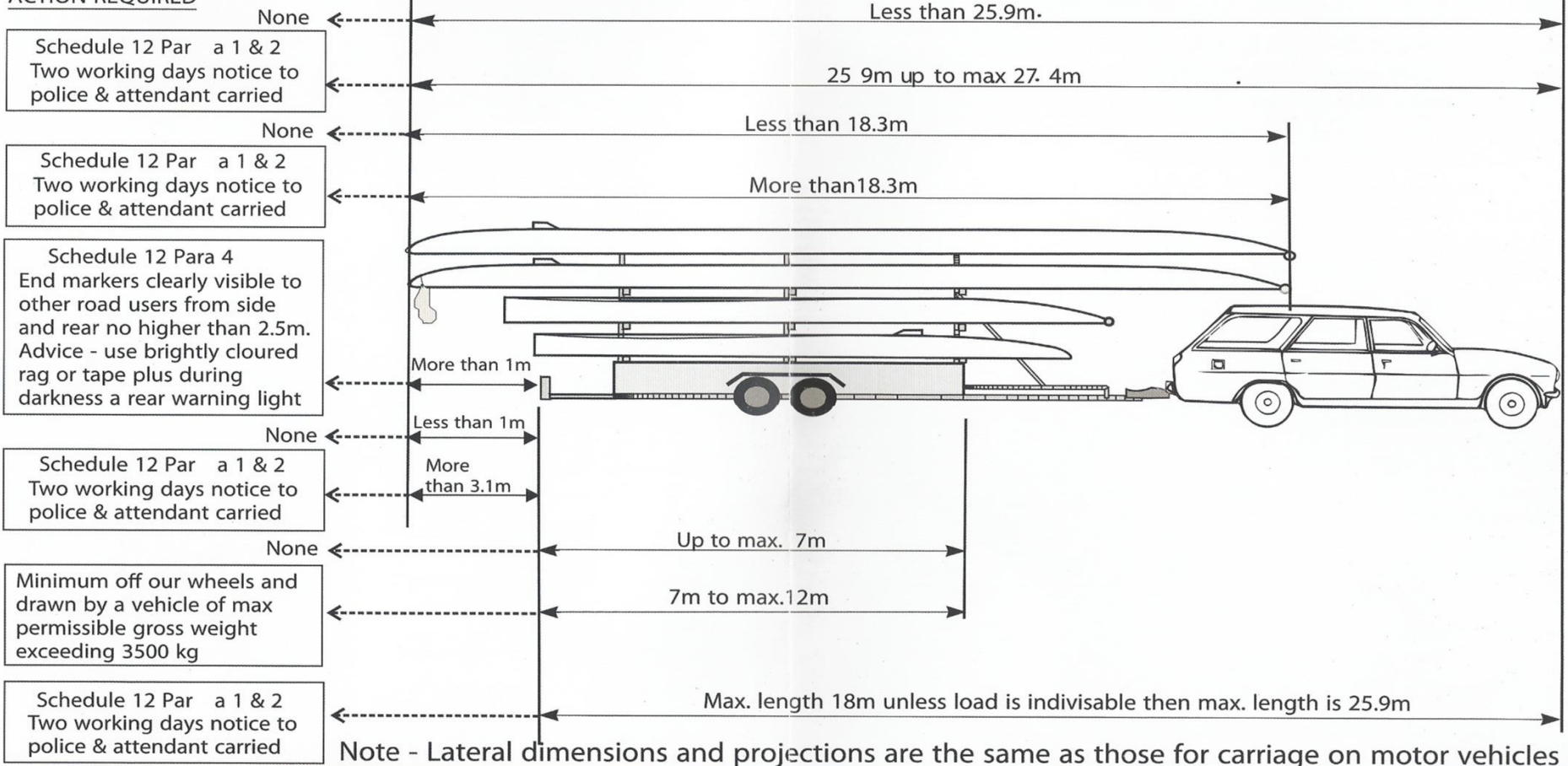
# Guidance for Clubs & Drivers

- Contains useful information regarding the regulations for both trailing and car topping boats.
- Is published in association with the Association of Chief Police Officers
- The information has been circulated to police forces throughout the country, but cannot be guaranteed to have filtered down to all officers.
- A good idea to carry a copy in the event of being stopped by the police.

# 7 Could be your Unlucky Number

## REGULATIONS RELATING TO CARRIAGE ON TRAILERS

### ACTION REQUIRED



Check the security of: tow hitch, wiring, jockey wheel and breakaway cable



# Towbars Type Test

- \* Towbars have to have a type test. This is listed on the type plate of your towbar. If the type plate is missing, you may only tow a trailer that weighs less than 750 kg, load included.



Cars registered since 1 August 1998 (ie 'S' plate) and light commercial vehicles, including vehicles based on light commercial vehicles since 29 October 2012 must fit European type-approved (EC Regulation 5) towbars. Vehicles registered before these dates are exempt.

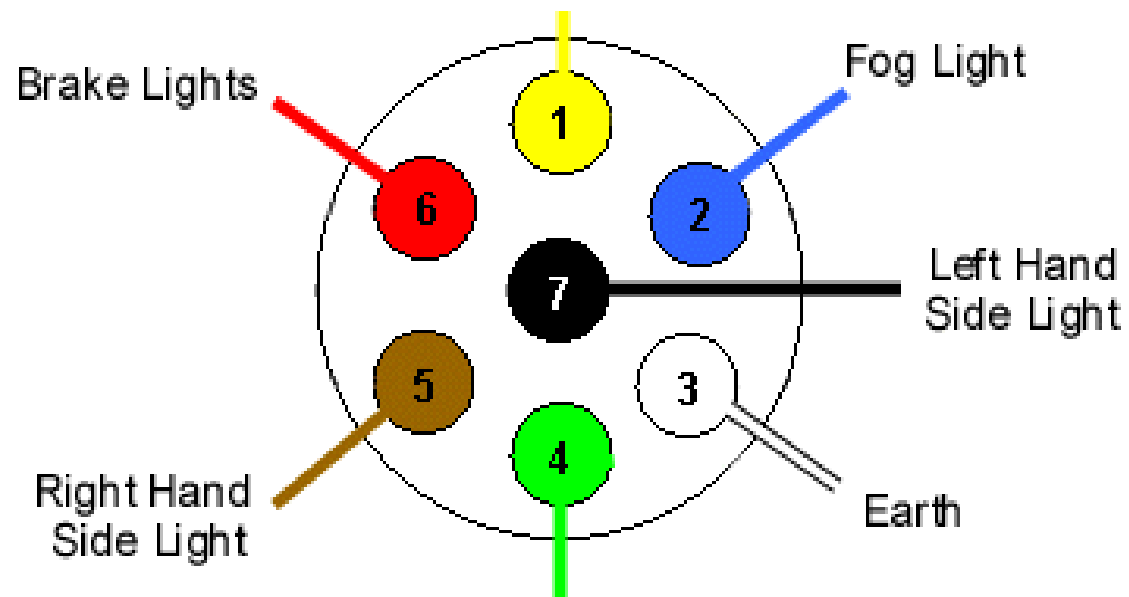


# Travelling with Spares

- \* Bulb Set
- \* Screwdriver
- \* Triangle
- \* Hi-Vis Jackets
- \* Suitable Jack
- \* Spare Wheel
- \* Wheel Brace



# Trailer Plug Wiring Diagram

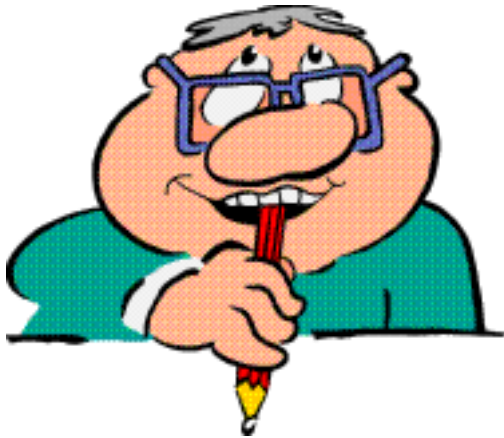


# Questions to ask before you agree to tow

- \* Is my vehicle capable of towing the trailer and load?
- \* What is the weight of the trailer and load?
- \* Does my driving licence allow me to tow?
- \* Does my vehicle insurance allow me to tow?
- \* Is the trailer insured by the club?
- \* When was the trailer last serviced?
- \* Are there sufficient ties, rear projection markers/lights in good condition?
- \* Are the lights and number plate legal?
- \* Will there be someone to accompany me?
- \* Will the club provide me with a copy of the BR “Guidance for the Transportation of Oar Propelled Boats”?
- \* Is my tow bar compatible with the trailer and up to EC/94/20 Type approval?
- \* Will I need to fit a stabiliser?
- \* Will I require an extended rear view mirror?



# The Journey



Make sure the essential checks are done before starting your journey

Don't forget to check the trailer and load at times throughout the journey.

# Help the Driver

## TRAILER DRIVER'S CHECKLIST

Check Point	Guidance	Checked?
Load weight	Is the trailer (1000KG) plus load within your vehicle's capacity?	
Load Balance	Is this placed to give lateral balance besides a low centre of gravity?	
Load security	Have all the ties been checked for good condition, tension, correct use of the buckles, position to avoid fraying and tied off as security against buckle failure?	
Nose weight	Has this been checked to be the correct requirement for the tow vehicle?	
Tyres	Are they free from defects and inflated to the correct pressure (Including spare)?	
Jack and wheel brace	Are they in the trailer and located for easy access?	
Tow hitch coupling	Test security by raising the jockey wheel until it lifts the vehicle	
Jockey wheel security	Is this fully raised and secured against vibration loosening?	
Breakaway cable	Is this secured and positioned to avoid dragging on the road?	
Number plate	Is the correct number plate fitted (both registration number and style)?	
7 Core cable and plug	Is the plug undamaged and the cable secured to avoid dragging on the road but allowing for cornering?	
Lights	Check all the lights (including fog) are working. Are you carrying the spares?	
Markers	Check the rear marker is secured and can be easily seen from both rear and side	
Rear light marker	Is this available for driving at night and poor visibility?	
Route Checked?	Is the route ok for the trailer and load?	
Weather OK?	Check the weather forecast for high winds and icy conditions which could be dangerous for trailing	
Co Driver/ Passenger	Ensure there is a person accompanying you who can help with navigation, manoeuvring assistance and if needed driving. (Think! Tiredness Kills)	

# Drive within the your and your vehicle/trailer capabilities and legal speed limits

- \* Speed limits – Single carriageway 50 mph, Dual & Motorway 60 mph
- \* Always drive at a speed that is well within your capabilities and to the road and weather conditions.
- \* If your trailer begins to snake or swerve, ease off the accelerator and reduce speed gently. This can happen if you are driving too fast or the trailer load is wrongly positioned. If you have to brake do so gently.
- \* Do not break sharply on a bend – this could cause a possible jack-knife.
- \* Gently accelerate out of a bend.
- \* Don't forget to check the trailer and load at times throughout the journey particularly if there has been any snaking.
- \* Leave plenty of time to get to your destination.

# Arrive Alive

## Avoid Driver Fatigue

- \* 20% of accidents are caused by drivers falling asleep on long journeys on trunk roads and motorways
- \* Allow for break stops in your journey time.
- \* Remember you will be tired after competing
- \* If you feel tired stop in a safe place.

# Thank You

Have safe journeys and successful competitions