

## Guidance notes for authorised Teleporter drivers

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### 1. Introduction.

With ever increasing awareness of the need to prevent accidents, the potential for action against Clubs or club members and the increasing interest being taken by the relevant authorities in the prevention of accidents, it is incumbent on sailing clubs and their members to examine their working practices and so far as is practicable minimise or eliminate potential hazards.

Members, in any event, would wish to maintain high safety standards within Marconi Sailing Club and it is for this reason the following guidance notes are issued. They should not be considered to be all embracing, but rather to form the basis for good practice. It is up to each member to ensure that the operations in which they are engaged are safely carried out.

These instructions do not apply to or consider the ‘ At Work Situation’ where any individual is carrying out the activity for hire or reward.

The instructions address two principal areas:

1. The use of safe working practices in order to ensure the safety of persons in the immediate area of activity including where appropriate the adjacent waters.
2. The correct use of equipment to ensure it remains in good working order and which may directly or indirectly contribute towards safety.

**The Sanderson Teleporter and its attachments may only be driven by those specifically trained and authorised.**

### 2. Safety.

In all operations involving the use of the Teleporter the following will apply:

- a) The Teleporter must be suitable for the intended task.
- b) The Teleporter driver must assess the intended task and has the right to refuse to use it where the safety of doing so is in doubt.

## 2. Safety (Cont)

- c) When an Officer of the Day is on duty at the time of Teleporter activity that person must be informed that Teleporter operations are in progress.
- d) The seat belt MUST be worn at all times during operation and is in good condition and functions correctly.
- e) Prior to use the following safety checks should be carried out-
- The attachment to be used is correct (see list under “Attachments” heading) for the task.
  - The tyres (and in particular the front tyres) are inflated to the correct pressure. If the front tyres are to be checked it is important to ensure that Schrader valve is at the top of the rim before checking as the tyres are ballasted. (80% filled with water)
  - The hydraulic fluid level is correct.
- f) The Teleporter driver must always ensure that the intended load does not exceed the “Safe Working Load” as detailed on the plate inside the driver’s door. The “Safe Working Load” is the maximum weight that can be transported at each lift depending on the following variable circumstances:
- The Maximum Load Capacity – is shown in the Appendix 2 and on Load Plate inside the cab door. This will vary with Reach and Lift heights as shown on the graph
  - Attachments – are added to the Carriage and thereby become part of the load. This weight must be taken from the load weight when calculating the safe working load. The weight of each attachment is stamped on the Attachment plate (together with the load capacity of that particular attachment). If the Attachment load capacity is less than the calculated safe working load for the Teleporter then, the Attachment load capacity becomes the actual safe working load.
  - Terrain – being the surface on which the load will be carried – affects the safe working load by its conditions in relation to maintaining stability.
  - Gradient – is the angle or incline of the terrain, which by its severity could affect the safe working load in relation to maintaining stability.

## 2. Safety (Cont)

### Note:

To prevent any potential overload a “Safe Load Indicator” is fitted to the Teleporter and an alarm will sound when the load exceeds the maximum. However, a competent operator should always be able to estimate when the load is safe and should not wait to hear the alarm.

If the “Safe Load Indicator” is not functioning correctly refer to the Plant Co-ordinator and enter the detail in the Teleporter Logbook. (stored in the cab)

The detailed functionality of the “Safe Load Indicator” is shown in Appendix 3

- h) Whilst not every use of the Teleporter will require a banksman the Teleporter operator should always consider nominating a responsible person to act as Banksman and establish a clear line of communication with him (see hand signals defined in Appendix 1). This is particularly important when in close proximity to persons and in confined spaces.
- i) The Teleporter must only be used to tow a boat or equipment if it is absolutely necessary in an emergency.
- j) Slings – The “Forks Jib” attachment is the safest way to lift using either a load tested sling or chain. Never attach a chain or sling to the Forks themselves or any part of an attachment. When using the Forks Jib do not allow the load to swing freely when on the move – secure it – and restrict the speed to below 5 m.p.h. (8kph).
- k) When steering any changes of direction must be made slowly with due regard for the road surface, the type of load and the rear end swing of the Teleporter. The brake pedals must always be locked together, and only unlocked if they are needed as an aid to turning in tight places
- l) Avoid braking sharply especially in a forward direction – the vehicle will stop but the load may not. Apply the Parking Brake before leaving the vehicle and, if on a slope, also chock the wheels.
- m) Gradients must be treated with respect. The Teleporter has a relatively narrow track and if heavily laden may become unstable when driven across a slope. Drive up and reverse down slopes when laden. Drive down and reverse up slopes when unladen. Do not attempt to turn on a slope but proceed to the top or the bottom and turn safely on the level. Always use rear wheel drive on sloping surfaces.
- n) The lifting fork blades must be equally spaced from the centre and set at the maximum width apart that the load or pallet will allow. Additionally, the forks MUST always be tilted back except when entering or discharging a pallet.
- o) When moving the boom, forks must be maintained in the transport position while the vehicle is moving. The transport position being the lowest height that provides adequate ground clearance and allows the operator a clear view of the rear right side through the mirror. When at a standstill or parked the boom and forks should be

lowered to the ground. When raising the boom the vehicle should be stationary or only very slowly moving into position for charging or discharging the load.

- p) Always watch the boom height especially when entering buildings or when in the vicinity of overhead cables.
- q) Teleporter drivers must ensure any defects to either the Teleporter or any attachments are recorded in the Teleporter Operations Log Book and also reported to the Plant Co-ordinator for action. A 'Do Not Use' label must be securely attached to the Teleporter steering wheel and if relevant to the attachment as well. Endorsement of the logbook in the appropriate space will enable drivers to confirm the defect has been rectified. Labels can be found on the shelf in the hydraulics pump house.

***This list is not exhaustive. To view all safety reminders, refer to the Operators Handbook stored in the barn container.***

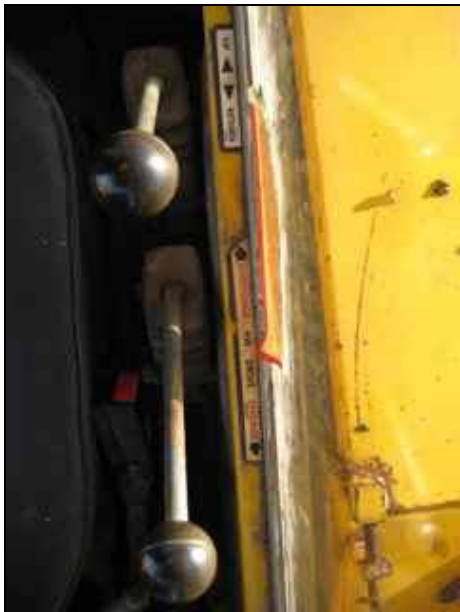
### **3. Teleporter Use and Attachments - a guide to their use.**

**On each occasion the Teleporter is used the following checks must be carried out.**

- a) The oil level in the crankcase is correct.
- b) There is adequate cooling water in the radiator or header tank - to be checked when the engine is cold.
- c) There is adequate fuel in the Teleporter.
- d) The hydraulic oil level is correct.

#### **Sanderson Teleporter Base Unit – General Information**

- e) Gear selection will be easier if the engine is at minimum revs. Move the forward/reverse lever into neutral before changing gear. NEVER change gear while on the move.
- f) Use two wheel drive whenever possible.
- g) Four-wheel drive should be used when operating in slippery or muddy conditions to improve traction. It should be disengaged as soon as possible when conditions deem it is not necessary. Always leave the four wheel drive disengaged when leaving the Teleporter and check it is has been disengaged before starting. The lever is the rear of the two levers to the right side of the drivers seat.



FRONT

- h) The Teleporter may be used with the cab door secured in the open position after ensuring it is locked open correctly and seat belt is worn.
- i) Wheelspin can be reduced by engaging the Differential Lock. This is achieved by pressing down the bar situated on the cab floor under the front seat cushion with your heel. It is essential that the differential lock is only engaged when travelling in a straight line and not engaged above 5 m.p.h. or with one wheel spinning much faster than the other. If necessary stop forward travel, engage the diff lock then proceed forward again. No attempt should be made to turn with the diff-lock engaged. Release before reaching the turning point.



REAR

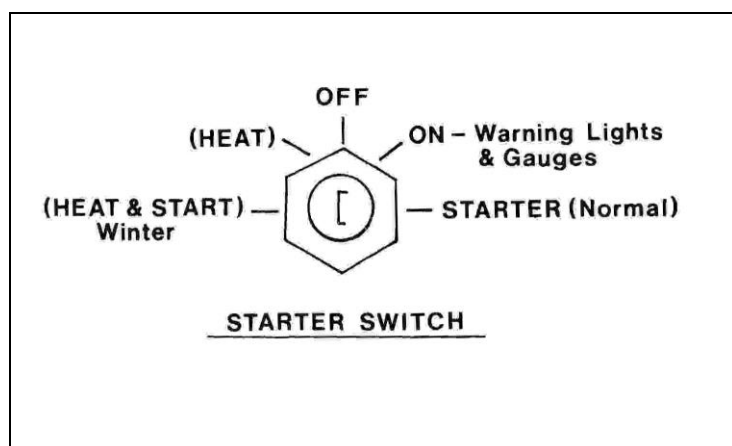
## Operating Hints

### **Starting the engine.**

- a) Check the hydraulic tank oil level under the rear cover. Do not overfill.
- b) Check the engine oil level by accessing the dipstick underneath the right hand side of the Teleporter between the wheels. If oil is to be replenished use the correct grade and type of oil

and ensure the correct filler port is used . There are three filler ports under the hood on the Right side of the Teleporter. The engine oil filler is the one that is rearmost, next to the engine exhaust manifold and is appropriately marked as such.

- c) Ensure that the gear lever is in neutral position and that the direction control lever is in neutral position.
- d) Ensure that the “STOP” knob is fully pushed in.
- e) Open throttle halfway
- f) In warm weather or when engine is hot, start the engine by turning the key clockwise into first “ON” position then into second position “STARTER” position to engage the starter motor and release when engine runs back to position “ON”. Operate the starter motor for a maximum of 10 seconds or until the engine starts.
- g) During periods of cold weather turn key one notch anti clockwise and hold for 30 secs to operate the heater, then turn it a second notch anti clock to start. When engine runs turn key clockwise to ignition “ON” position.
- h) Check that all warning lights extinguish and gauges are reading normal before continuing. If not stop the engine and assess the problem.



- i) Raise the boom sufficiently to gain access to the radiator and stop engine (as described below)
- j) Open the side shield and top shield and check the radiator coolant level. Replace the shield, ensuring that the “anti battery short” rubber mat is in place across the battery terminals to prevent the possibility of shorting. Start the engine and lower the boom.



**Stopping the engine.**

- k) Apply parking brake firmly and set direction control lever and gear lever in neutral.
- l) Allow to tick over for a couple of minutes to cool down.
- m) Pull red "STOP" knob on right side of dash panel until engine stops. Push it back in again once engine has stopped.

- n) Turn key to “OFF” position AFTER engine has stopped. (turning key off too soon may damage the alternator)
- o) Check to ensure that all LIGHTS ARE OFF, as it is possible to leave them on. Make sure all windows are closed SHUT before leaving the tractor.
- p) At the end of a days work always replenish the fuel tank and ensure that the boom is fully retracted and the boom is lowered to the ground.
- q) Once the engine has stopped release the hydraulic pressure in the cylinders by operating all the levers
- r) Lastly, lock the cab door.

### Moving Off and Stopping

- a) Release the handbrake and apply the footbrakes.
- b) With the engine running at low idle, firstly select the gear on the manual gear lever. (second from the left) Use the lowest gear you think you will need for the task. Normally on the MSC club site you will not need to use the 3<sup>rd</sup> or 4<sup>th</sup> gear. Usually 1<sup>st</sup> and 2<sup>nd</sup> will suffice for working around boats, buildings and equipment.
- c) With the engine at low idle push/pull the forward/reverse lever (first from left) in the direction you want to travel. Release the footbrake and increase the engine revs to move forward or reverse. Increasing the engine speed will increase ground speed. A torque converter is fitted to the Teleporter and therefore there is no clutch pedal as on a car or tractor. To stop direction of travel decrease engine speed and apply footbrake and/or return the forward/reverse lever to neutral position.
- d) When changing direction of travel always slow down the engine speed to idle, stop, then operate the forward/reverse lever to change direction of travel.
- e) In an emergency apply footbrake at the same time as pulling the forward/reverse lever into the neutral position.



### Boom Control

- a) Always use your experience to assess each lift to ensure that the task is within the capability of the skill of the driver and the capability of the machine. If in doubt, ask the Plant Coordinator's advice or do not carry out the task if it is considered to be possibly dangerous.
- b) Always lift from as close in as possible with a short a reach as possible. Never extend the reach of the boom when the prime mover can be driven closer to the load as this will reduce stability.

Reducing the reach will reduce the load on the hydraulics and will increase the weight transfer onto the rear wheels.

- c) Never lift higher than is necessary and always check that there are not any obstructions such as power cables.
- d) Always lower the boom before moving off to improve lateral stability. Never drive the Teleporter with a load lifted up higher than is necessary to effect the job.
- e) Always ensure that when the boom is being moved that the direction control lever is in neutral and ground travel is stopped, unless you are manoeuvring slowly to pick up or drop off a load.  
Note: that the speed of the boom cylinders is related to the engine speed. If the engine is running slowly the cylinder being operated will move slowly. The higher the engine speed means the boom cylinders will move faster.
- f) Always ensure that the levers are operated smoothly and progressively. Erratic movement of the levers can affect the stability of the Teleporter.
- g) There are three principal spring-loaded centralising levers for operating the boom. These are situated to the right side of the driver's steering wheel. The boom "RAISE" and "LOWER" lever, (push to lift and pull back to lower). The boom "EXTEND" and "RETRACT" lever, positioned to the right of the raise/lower lever, (push to extend, pull back to retract). Finally the boom carriage control lever, positioned to the rear of the raise/lower lever is the "TILT FORWARD" and "TILT BACK" lever, (push to tilt forward and pull back to tilt back)

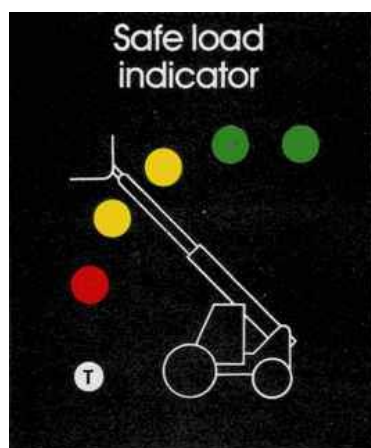


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- h) Always release the hydraulic control levers once the cylinder has reached its desired position. Never allow the relief valves to blow unnecessarily as this will heat the oil and may damage the pump.



- i) "Safe Load Indicator" – This electronic safety device is fitted as an aid to operation and loading of the unit. It is located to the left of the drivers' side. It consists of two green, two yellow and one red lights and an audible alarm. Green indicates a safe load, yellow indicates an optimum load and red with the alarm sounding indicates an overload. When starting the engine the "Safe Load Indicator" panel will go through a self-check procedure and the alarm will sound briefly if functioning correctly. It should not be used to achieve the maximum loading possible. A load should never be moved if the red light and alarm sounds. If the alarm does sound, ALWAYS retract the boom before lowering a load, as this will decrease the effective weight being lifted. (The Teleporter balance point is the centre of the front axle, so by retracting the boom the distance from the load to the pivot point will be reduced) If the boom is raised to maximum height to collect a high load and the alarm sounds, retract the boom if possible or replace the load in its original position. NEVER try to lower the load from maximum height if the alarm has sounded as this will increase the effective load and will render the machine unstable. (as the boom is lowered from maximum height the distance from the load to the front axle centre will increase, due to the geometry of the jib) NEVER ignore the overload warning as the unit has become unstable and means that the Teleporter is overloaded. Use the "Safe Load Indicator" as an indicator to aid operation and safe working practices. Working examples are shown in Appendix 3.



SAFE LOAD INDICATOR

### Attachments.

#### GENERAL.

- The carriage is permanently attached to the end of the boom and consists of a face-plate with notched upper beam.
- At the bottom of the carriage on each side is a pair of attachment locking pins controlled by a single lever on the right side.
- Additionally there are two additional hydraulic connectors for attaching additional equipment where necessary.



**FORKS**

- a) It is necessary to have two persons to remove and replace the forks as they are heavy and awkward to handle manually.
- b) The forks are slid onto the upper carriage beam and are held in place by means of spring-loaded pins that locate into the notches of the beam.
- c) They must always be equally spaced from the centre line of the carriage to ensure equal loading of the forks and must be as far apart as the load or pallet will allow.
- d) The forks MUST always be tilted back except when entering or discharging the load.
- e) The boom must always be as close as possible to the ground when the Teleporter is moving. Also this enables the driver to use the mirror on the right side to view the rear right side of the Teleporter.
- f) Changes of direction must be made slowly with due consideration to the load being carried and the proximity of the rear right hand side to any vehicle or obstruction.
- g) Drive slowly at all times – never rush at the job.



### MAN UP CAGE

- a) This attachment fits onto the forks. Space Forks centrally on carriage & to the correct width of channels on man up cage remove locating pin & lock pins & drive into cage locating both channels fully. Place locating pins in into rear of channels behind fork heels & FIT Lock pins DO NOT use cage if any part is not fitted correctly or missing.
- b) The cage must be secure for operatives, ensure that the chain securing the opening is fitted.
- c) The cage floor must be clear & undamaged.
- d) The Safe Working Load (SWL) is 500kgs. This is a maximum load that applies to the cage, carriage and forks.
- e) The cage is designed for TWO MEN only. NO LIFTING load is allowed when used as a Man Up cage
- f) When cage is fitted operatives are must not travel in cage when the Teleporter is moving. The operatives may only enter cage once the Teleporter is at the required site.
- g) **The cage must only be allowed for maintenance jobs only.** (this is a Legal Requirement for use of man up cage)
- h) Any person using the man up cage shall do so wearing the tested, safety harness provided by the club and be attached to the man up cage at all times.



### BUCKET

- a) The bucket is fitted to the Carriage. Firstly the forks may need to be removed. There is a slot in the centre of the lower rail of the carriage that allows the lower lip of the fork to be pulled forwards to release it from the rail. The first fork must be slid over to be adjacent to this slot and the bottom pulled upwards to release. The carriage will then need to be tilted to release the top lip of the fork from the carriage rail. It is necessary to have two persons to remove and replace the forks as they are heavy and awkward to handle manually. Remove the second fork in the same way. Drive into the centre of bucket and lift the boom so top lip of carriage hooks under top rail of bucket. When it is hooked in tilt back the carriage until side rails cover the bucket rails. Then lift lever to locate lock the pins into bucket holes to secure the bucket to the carriage.
- b) The safe working load with bucket fitted is 2500kgs. The bucket must be calculated as part of the load. NEVER OVERLOAD. A full bucket of sand or shingle will most likely overload the

Teleporter. Take care when raising the load. If overloaded the “Safe Load Indicator” will alarm. If this occurs empty some of the load immediately. Never extend boom with full load.



**FORK JIB**

- a) The fork jib can be used for lifting any object that is not a pallet or flat based load.
- b) The fork jib must be slid onto the forks and secured so that its centre line is a maximum of 500 mm to the front of the carriage.
- c) Ensure that if a shackle is used to attach either chains or slings to the Fork Jib then it must be also tested to match the maximum load of 500 kg. These are located in the metal box on the side of the Teleporter.
- d) Never use chains or slings directly onto the forks to lift any load
- e) When moving a load ensure that the load is restrained from swinging freely or damage may result to the Teleporter or bystander.



**CRANE JIB**

This attachment fits onto the forks and is especially useful, with its extra reach, to lift boat engines in and out of hulls. Maximum SWL is 500kg.

Place forks centrally on carriage & to the correct width of channels on crane jib. Drive into crane jib locating both channels fully. Place locating pins in into rear of channels behind fork heels & fit lock pins

Most applications will require the crane job to be fitted with a block and tackle when lifting engines. In this way the lifting/lowering is far more controlled.



**REMEMBER THAT THE TELEPORTER AND ITS ATTACHMENTS, IF MISUSED, CAN BE DANGEROUS AND A HAZARD TO OPERATOR AND BYSTANDERS. IF IN DOUBT STOP AND REVIEW THE OPERATION.**

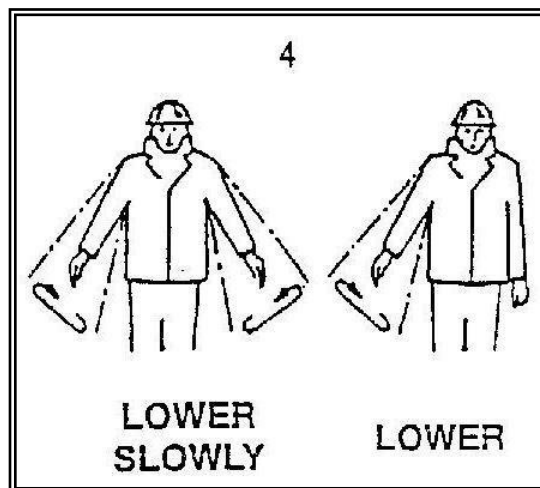
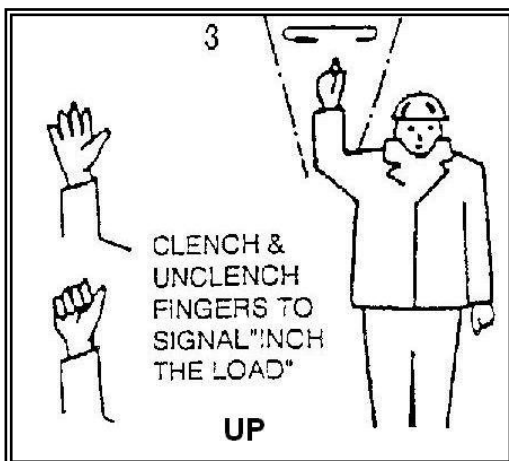
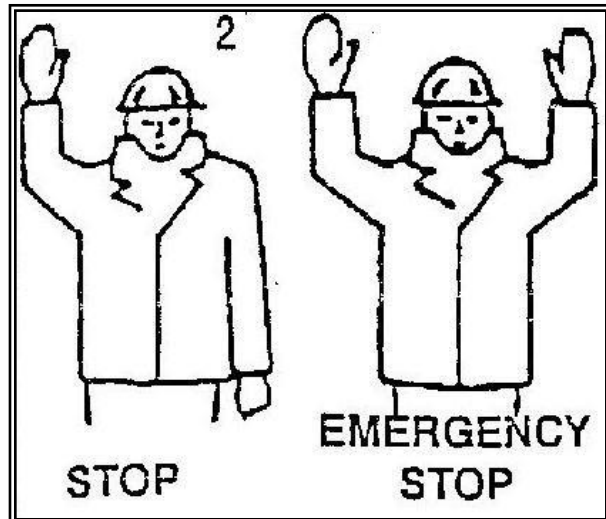
Appendices 1 to 3 follow on Pages 14 to 16

Reviewed on 12<sup>th</sup> April 2024 by the Health & Safety Sub-committee

To be reviewed after 4 years. Next review due April 2028

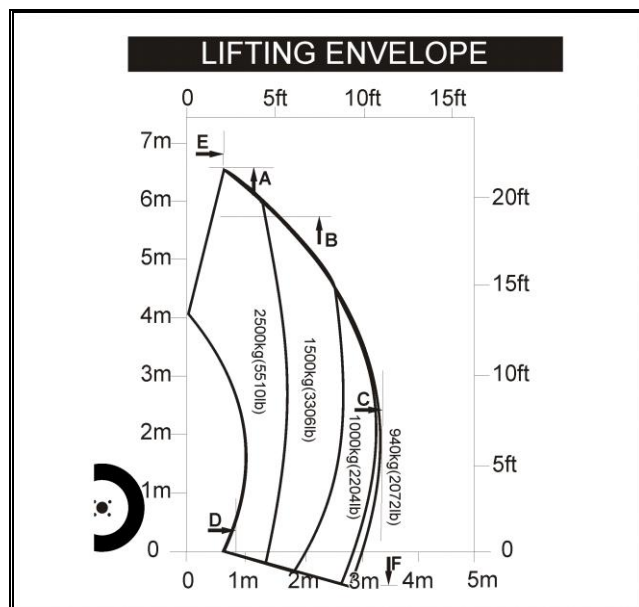
Appendix 1

APPROVED HAND SIGNALS.



## Appendix 2

### MAXIMUM LOAD CAPACITY



Appendix 3

ELECTRONIC SAFE LOAD INDICATOR

