TranSport©
MOBILE GRANDSTANDS

TSP15

Operation Guide

Mobile TSP15 Grandstand Operator must be knowledgeable and understand operation of this Century Industries TranSport mobile grandstand along with all installed options before operating.

Grandstand Operator agrees to be responsible for good practice, inspection and maintenance, event safety that pertains to the bleacher, and any required certifications.

TranSport TSP15

Mobile Grandstand
Operation Guide

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Section 1
General

Overview

Century's TSP15 mobile grandstand provides 15 row, outdoor, all-weather spectator seating that is ideal for special events requiring high-capacity seating.

The TSP15 grandstands are designed for fast, efficient set up, minimizing the time and labor required. A self-contained hydraulic power system provides bleacher operation. Base bleacher setup requires approximately 20 minutes by two technicians.

The TSP15 grandstand is equipped with a tandem axle suspension and pintle hitch, and meets DOT requirements for highway transport. When folded, it forms an enclosed trailer 47'- 9" (52'- 7" including hitch) x 8.5 ft wide x 13 ft high.

Features

- 15 row high outdoor mobile spectator seating
- Hydraulic powered grandstand opening and setup
- Aluminum seat and footboards
- Attached side and rear aluminum guardrails
- Standard aisleway with handrails
- Multiple frame-mounted crank-adjustable support jacks
- Removable towing hitch.
- Tandem axle suspension with electric brakes.
- Hydraulic cylinders retracted during transport and folded storage.

Construction

Century's TSP15 mobile grandstand is designed and built to perform as an all-weather, outdoor grandstand. It is fabricated from weather resistant materials and designed to reduce maintenance requirements in an outdoor environment.

Support Structure

TranSport Bleacher's main frame is built extra tough to withstand towing over rough roads, up and down curbs, and over open fields.

Main frame components are fabricated from 12" rolled steel channel for extra strength and long life.

For maximum corrosion protection, support members are either aluminum or steel. Steel components are galvanized after fabrication.

Seat & Footboards

Seat and footboards are extruded aluminum for maximum durability. Boards are bolted to the grandstand support structure with plated hardware. Planks have aluminum end caps.

Seat planks are anodized. Footboards are extra width.

Side & Back Guardrails

Transport Bleachers are enclosed with a sturdy aluminum guardrail system along the back and on two sides. Guards feature rounded pipe with welded vertical balustrades for comfort and safety.

Guardrails are permanently attached to the grandstand structure, folding and unfolding as the grandstand is opened and closed.

Guardrails travel in place on the grandstand.

Aisleway

Grandstand is outfitted with an easy access aisleway equipped with removable aluminum handrails for safety.

Frame Mounted Leveling/Support Jacks

TranSport grandstands are equipped with time and labor-saving crank- jacks. These are high-capacity, precision jacks, capable of lifting as well as stabilizing your bleachers on uneven ground surfaces. Crank adjustment allows the grandstands to be quickly and precisely aligned to the terrain.

Multiple frame-mounted jacks are provided to evenly distribute the loads over a larger surface area. This allows the grandstand to be used on softer ground surfaces.

Electrical

12VDC – deep cycle battery provides self-contained power for operation of the hydraulic actuation system.

A built-in battery charger restores and maintains battery charge when an AC power source is available.

12VDC – DOT signal and marker lighting and brake system are connected to the tow vehicle through a 12VDC power cable and connector.

Suspension

Axles – 7,000 lb rated capacity axles (14,000 lb total) with tandem suspension, and electric brakes.

Tires – ST235/75R17.5 – LR J tires

Towing Hitch

Grandstand is equipped with a choice of a 3” pintle ring or 2 $^{5}/_{16}$” ball coupler. Hitch is removable allowing end to end placement of grandstands.

Options

Optional features and equipment add utility and capability to grandstand.

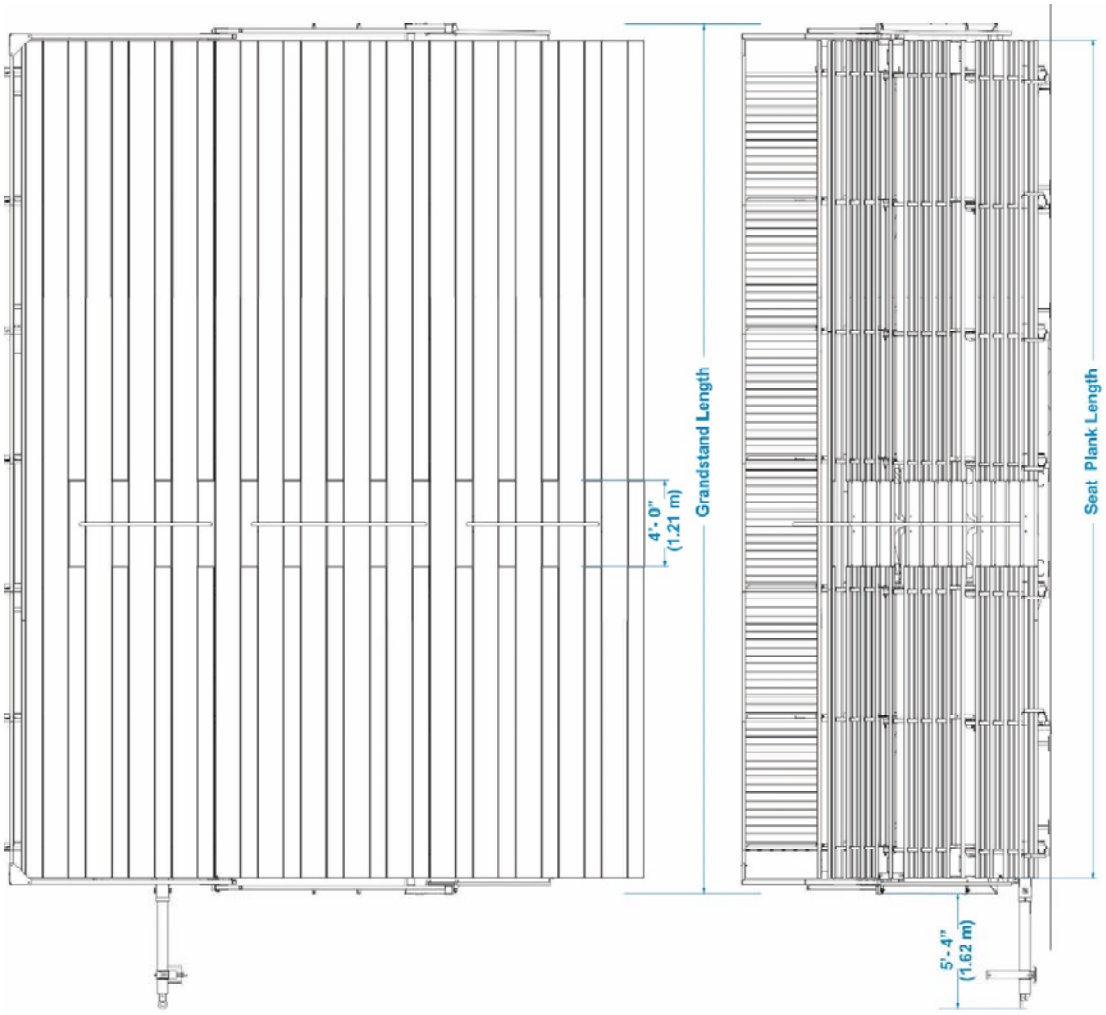
TSP15
Dimensions and Weights

Grandstand Dimensions	Specification	-390	-450
	Overall Length	40’- 5” (12.32m)	46’- 4” (14.12m)
	Seat Plank Length	39’- 0” (11.89m)	45’- 0” (13.72m)
	Depth	29’- 10” (9.09m)	29’- 10” (9.09m)
	Height	14’- 5” (4.39m)	14’- 5” (4.39m)
	Top Seat Plank Height	10’- 10” (3.31m)	10’- 10” (3.31m)
	Aisleway Width	4’- 0” (1.21m)	4’- 0” (1.21m)
	Seating Capacity with Aisleway	352	412
	Seating Capacity without Aisleway	390	450

Towing Dimensions	Specification	-390	-450
	Overall Length – Including Hitch	46’- 3” (14.10m)	52’- 3” (15.93m)
	Towing Width	8’- 5” (2.57m)	8’- 5” (2.57m)
	Towing Height	13’- 3” (4.04m)	13’- 3” (4.04m)

Towing Weight	Specification	-390	-450
	Base Trailer Weight	12,100 lbs (5,488 kg)	13,200 lbs (5,987 kg)

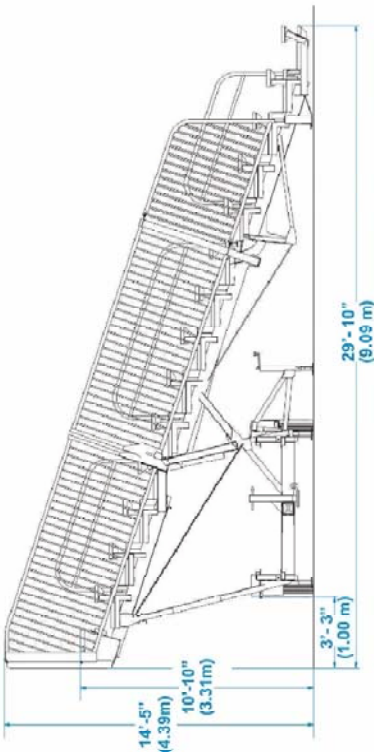
Dimensions - Open



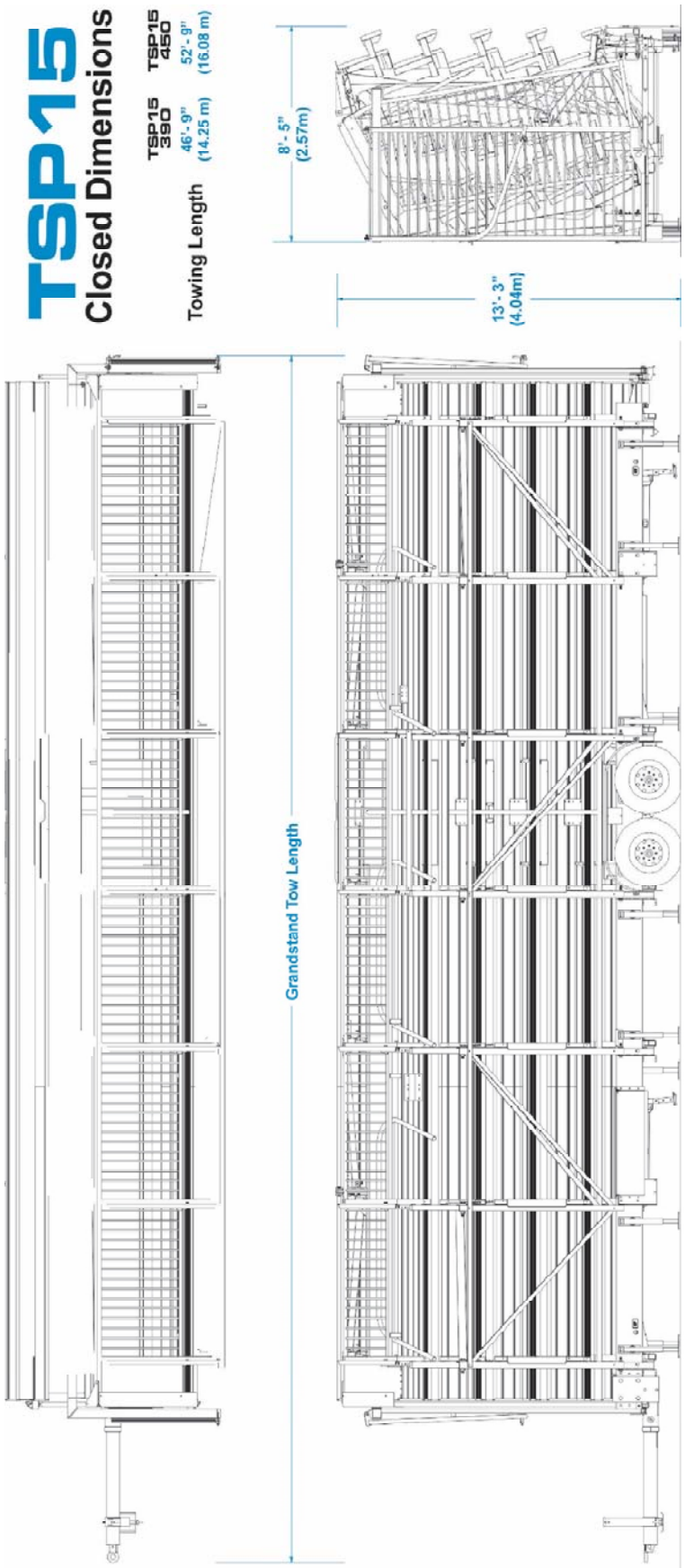
TSP15

Open Dimensions

	TSP15 390	TSP15 450
Grandstand Length	40'-5" (12.32 m)	46'-4" (14.12 m)
Seat Plank Length	39'-0" (11.89 m)	45'-0" (13.72 m)



Dimensions – Towing & Storage



Section 2
Limitations

Section Contents

General Limitations

Trailer Capacity

	TSP15-390	TSP15-450
GVWR	16,000 lbs (7257 kg)	17,000 lbs (7711 kg)
Empty Weight	12,100 lbs (5488 kg)	13,200 lbs (5987 kg)
Useful Load	3,900 lbs (1769 kg)	3,800 lbs (1724 kg)

Grandstand Component Ratings

	Wind Load (structure)	68 mph

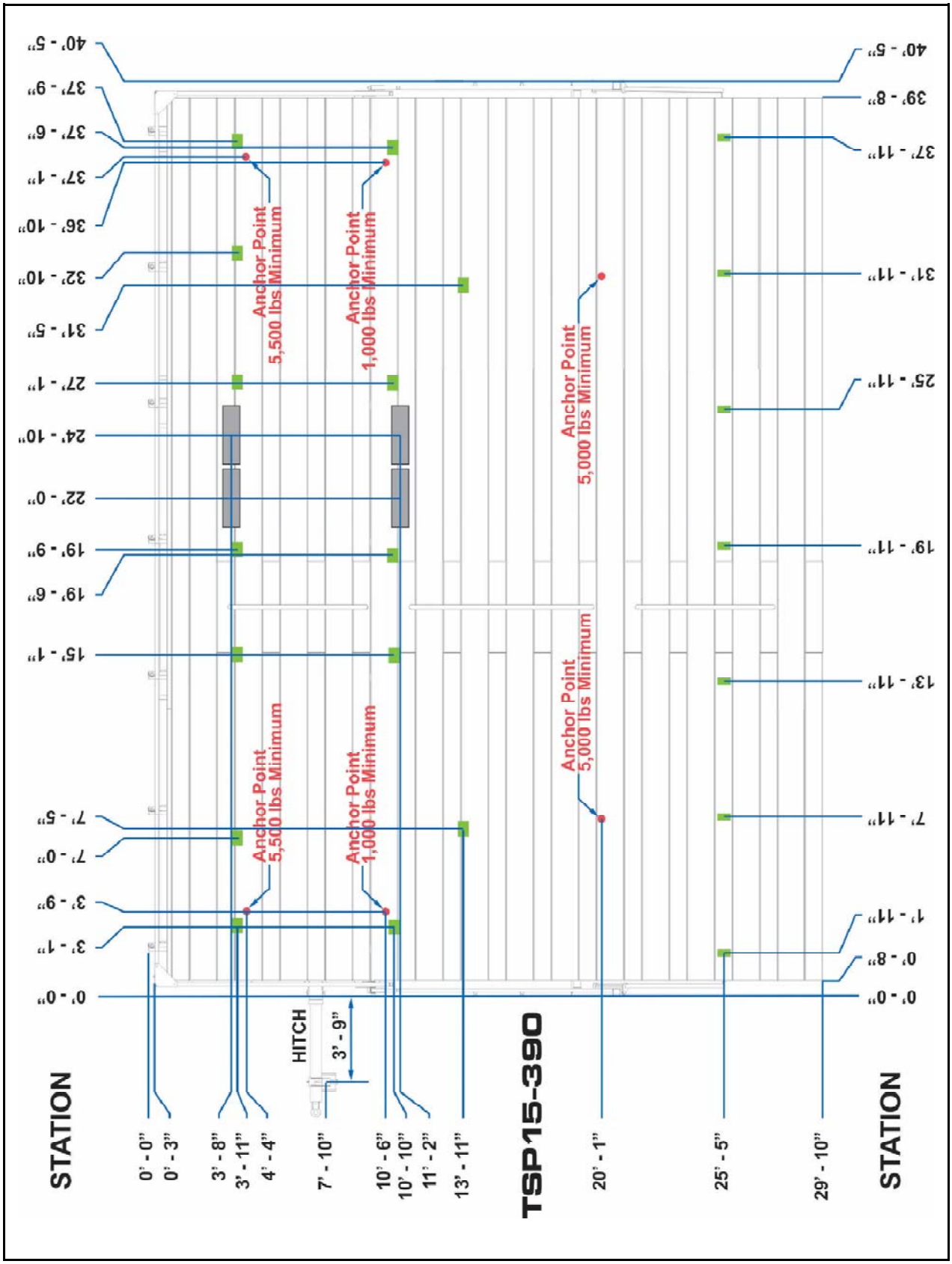
Towing Components

GAWR	7,000 lbs. (3175 kg)	7,000 lbs. (3175 kg)
Hitch GWR	2,500 lbs. (1134 kg)	3,600 lbs. (1633 kg)
Standard Tongue Weight	1,900 lbs (862 kg)	2,700 lbs (1225 kg)

Note: Total suspension capacity is determined by the lowest component rating.

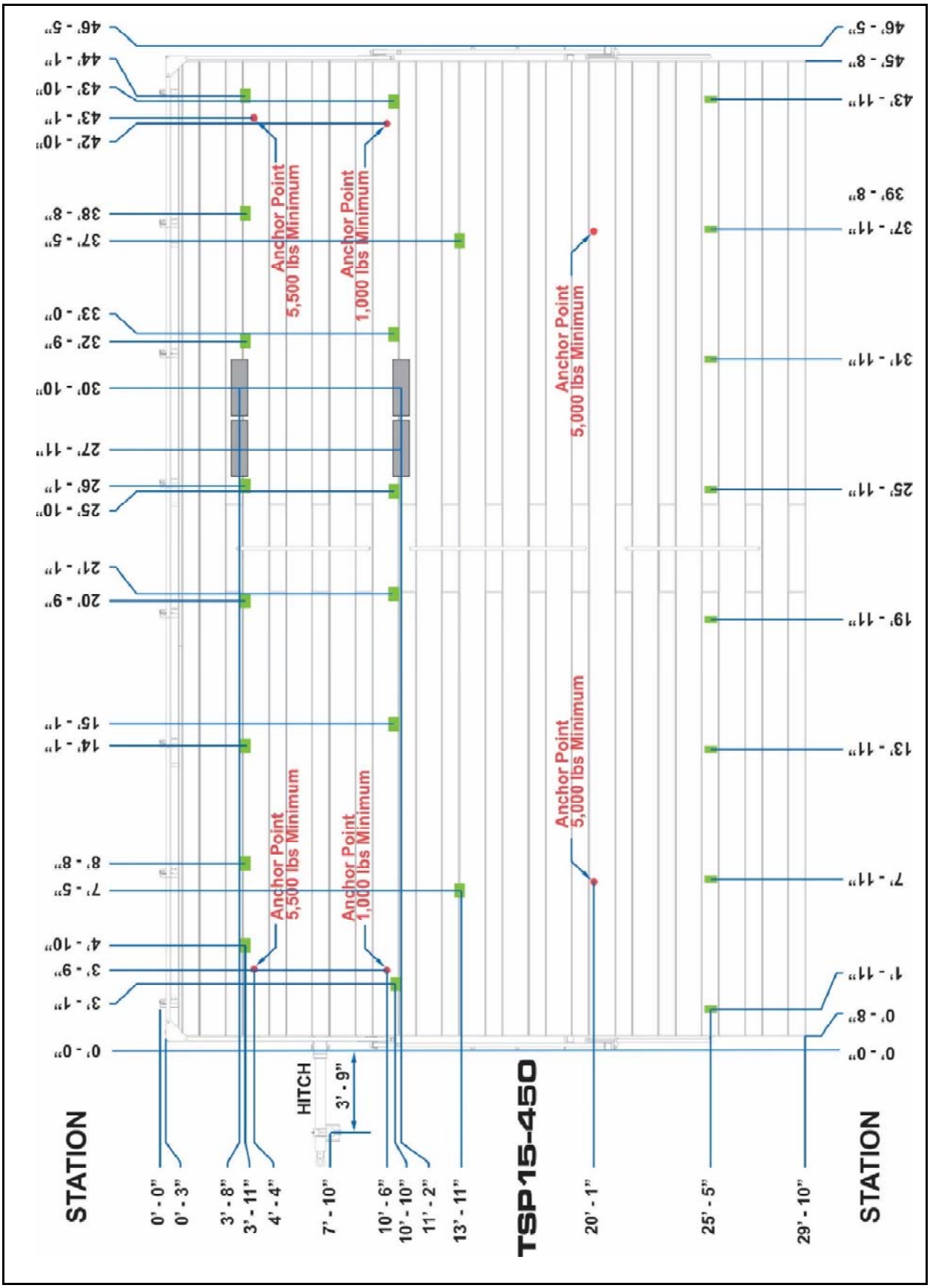
The grandstand must be set-up, maintained and operated by trained technicians, in a safe manner. The grandstand user must monitor weather conditions and adhere to set-up and take-down procedures enumerated in the user manual. Caution should be exercised with respect to soil bearing conditions at the set-up location, grandstand configuration and equipment loading, environmental hazards, wind conditions, and safety of the grandstand occupants and passersby.

Ground Contact Points – TSP15-390



Maximum 7,000bls each point.

Ground Contact Points – TSP15-450



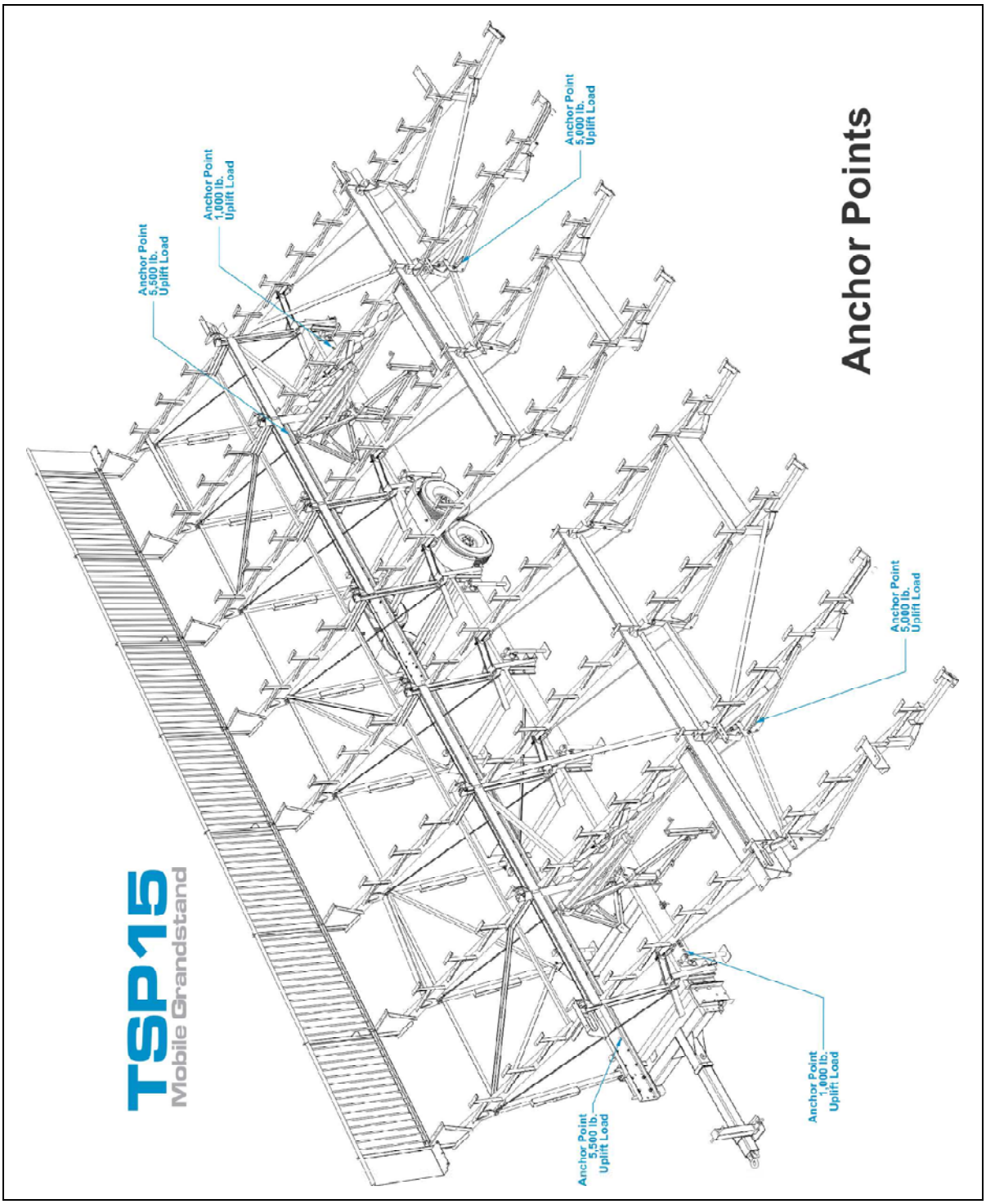
Maximum 7,000bls each point.

Tie-Down Anchors

For increased stability in windy conditions, the grandstand is equipped with a frame mounted anchor point located near the each of the four corner jacks and two on the diagonal structure.

Ground anchors may be driven into the ground and attached to the grandstand's tie-down/anchor points. Ground anchors must be appropriate for local soil conditions.

(Ground anchors not included)



NOTE - The grandstand must be set-up, operated and maintained in a safe, professional manner by trained technicians. The grandstand operator/owner must monitor weather conditions and adhere to set-up and take-down procedures enumerated in the user manual. Caution should be exercised with respect to soil bearing conditions at the set-up location, grandstand configuration, equipment loading, environmental hazards, wind conditions, and safety of the grandstand occupants and passersby.

Grandstand Operator must be knowledgeable and understand operation of this mobile grandstand and all installed options before operating grandstand.

Grandstand Operator agrees to be responsible for grandstand rigging knowledge and good practice, grandstand inspection and maintenance, event safety that pertains to the grandstand, and any required certifications.

Vehicle operator agrees to be responsible for commercial vehicle towing knowledge and practice, maintenance, inspections, and safe appropriate driving.

Section 3
Grandstand Set Up Procedure

Section Contents

Note – Caution is advised at all steps of set-up and tear-down. Improper operation, procedures or inattention may result in serious injury or death.

Set Up

Century's TSP15 mobile grandstands feature a hydraulically actuated operating system that allows quick, easy set up with a minimum of labor. Once positioned, with the support jacks set, the opening or closing of the grandstand is a one-person push-button procedure.

1 -Initial Positioning

Position the grandstand in the desired site location

Note – the left side (driver side) of the grandstand opens to the viewing side.

1. Chock trailer tires
2. Extend tongue jack to surface contact
3. Release coupler
4. Disconnect safety chains, 12V and emergency break-away cables. **Note** – do not remove breakaway pin from switchbox
5. Raise tongue until coupler clears hitch
6. Remove tow vehicle

Note – once set-up has begun, do not attempt to reposition the grandstand. If repositioning is required, completely close grandstand to trailer configuration.

Use caution and be aware of overhead obstacles such as wires and tree limbs.

Also note that when open, the top seat rows extend beyond the rear support frame and tires. This feature allows the grandstand to be positioned near fences or other low obstacles, as the upper seats will overhang these obstacles. Additional walking area in front of the grandstand can be provided using this feature.

2 - Initial Leveling

Using the tongue jack, adjust tongue height until grandstand is aligned to the ground surface lengthwise.

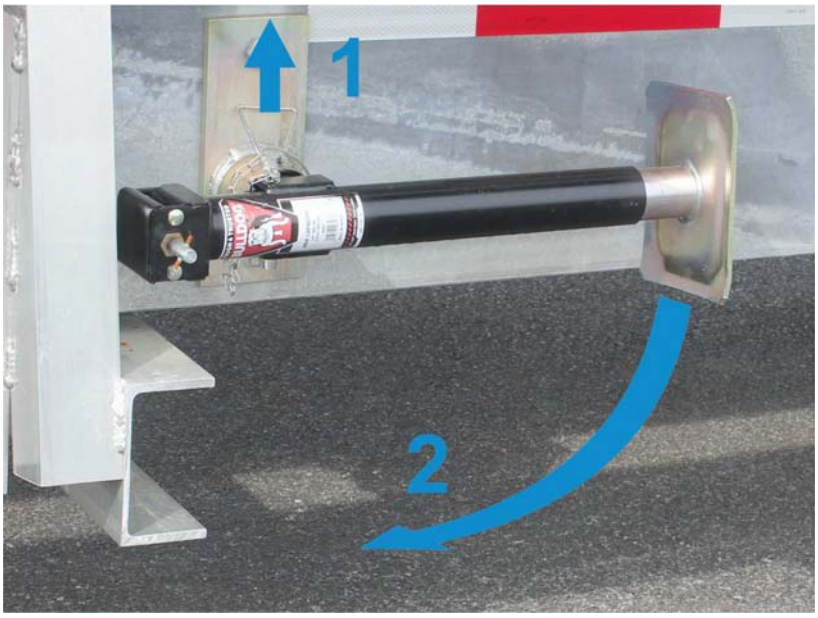
Note - Grandstand is designed to conform to uneven terrain, therefore, leveling bleacher is not important or recommended.

To adjust bleacher alignment, it is easiest to first set the front and rear corner jacks to establish the terrain alignment, and then set the intermediate supports and outrigger supports as required.

2 – Support Jacks

Rotate front two corner jacks to vertical position.

- Remove jack retaining pin.
- Rotate jack to vertical.
- Reinstall retaining pin



Using the jack crank, extend jack legs until jack foot pads are in firm contact with the ground surface.

As previously noted, repeat this process with the rear two corner jacks, aligning grandstand with the terrain.

Repeat process with remainder of intermediate support jacks.

2 – Outrigger Supports

1 Unpin outrigger

2 Rotate outrigger support until perpendicular to grandstand frame.

3 Pin outrigger to secure.

4 Unpin jack drop-leg. Lower to closest hole.

Repin.

5 Crank jack until jack foot is in firm contact with ground surface.

6 Repeat process on other outrigger support.

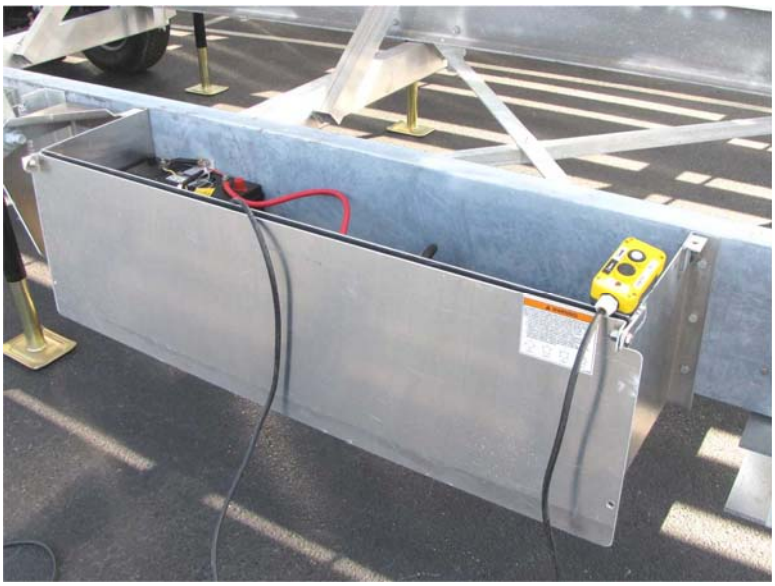
All frame support jacks and outrigger support jacks should be extended and in firm contact with ground surface.

Adjust jacks as necessary to align grandstand with surface.

Compartment

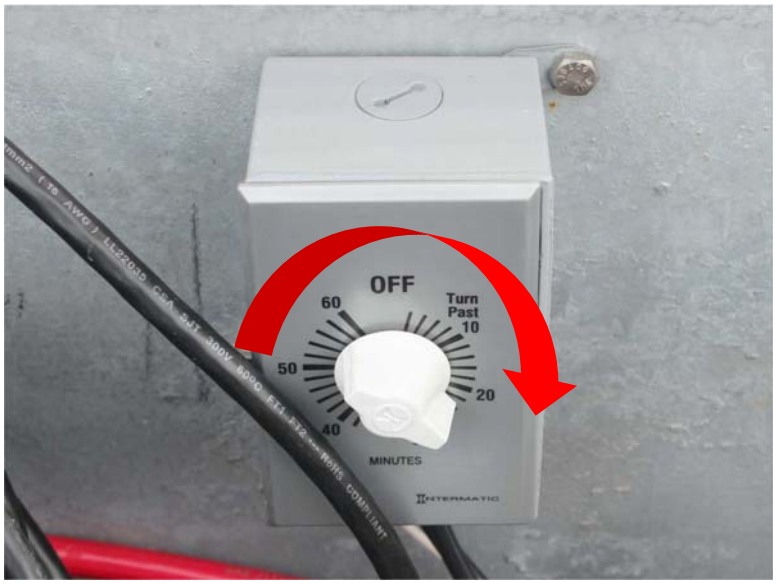
Located on the backside of the grandstand is the compartment containing the hydraulic actuating system.

Go to the compartment and open the lid.



Rotate the timer switch clockwise to activate the system.

Remove the control pendant, and extend the cable.



Move to a location where you have a clear view of grandstand extension progress.

First push the **CLOSE** button to fully close the grandstand.

Then push and hold the **OPEN** button. Watch for people, objects, or other hazards. Note – releasing the **OPEN** button will immediately halt the opening procedure.

Continue opening until the grandstand is fully extended.

Lock Chains

On backside of grandstand, at each vertical support is located a lock chain that must be connected before grandstand can be used.

To install, remove each chain from its storage box.

Insert end of chain through key hole slot in bracket and lock in position.

Repeat process at each vertical support for all chains.

Caution – Chains must be locked in place prior to grandstand use.

Lower End Guardrails

Remove pin that secures the lower end guardrail during transport.

Rotate end guardrail to enclose lower seat tiers.

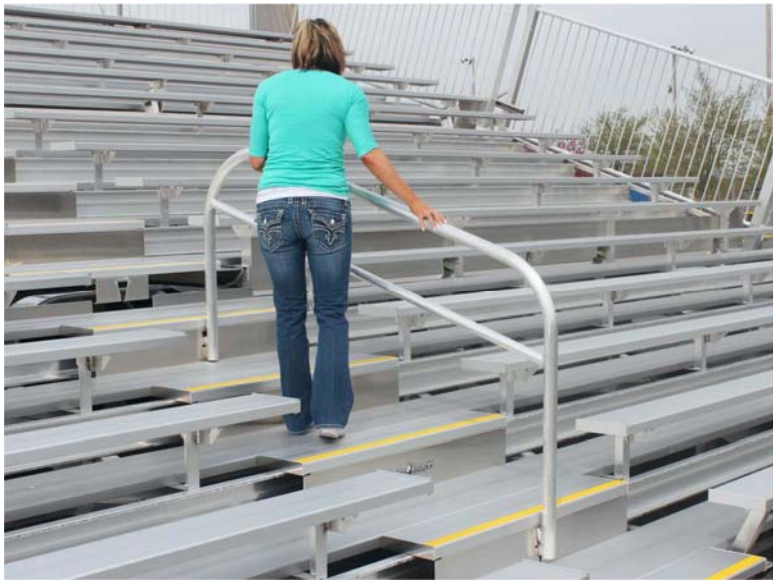
Insert guardrail pin into vertical seat support, and install keeper.

Repeat process at other end of grandstand.

Install Aisle Handrails

Remove aisleway handrail from storage location at top, rear of grandstand.

Insert handrail into aisleway sockets.



Repeat process for all three handrails.

Secure Grandstand

Return control pendant to hydraulic compartment

Turn timer switch counter clockwise to OFF position

Close compartment lid.

Check that all support jacks are in firm contact with ground surface. Adjust as necessary.

Removable Hitch Tongue

If desired, the towing tongue can be removed once grandstand set up is completed. This can be done for a number of reasons including:

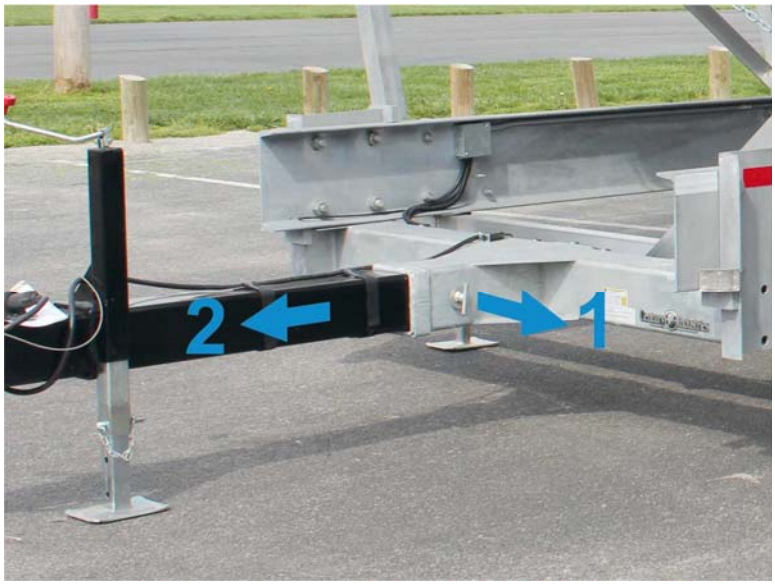
- Eliminate a walk-around obstruction
- Allow multiple grandstands to be closely positioned end to end
- Prevent unauthorized removal of grandstand

Towing Tongue Removal

Release the Velcro straps holding the 12V electric connector cable and the emergency breakaway cable to the towing tongue. **Note** – do not pull the emergency breakaway cable from the switch box as this will drain the on-board battery.

To remove the towing tongue

1. Remove the retaining hitch pin
2. Slide out towing tongue

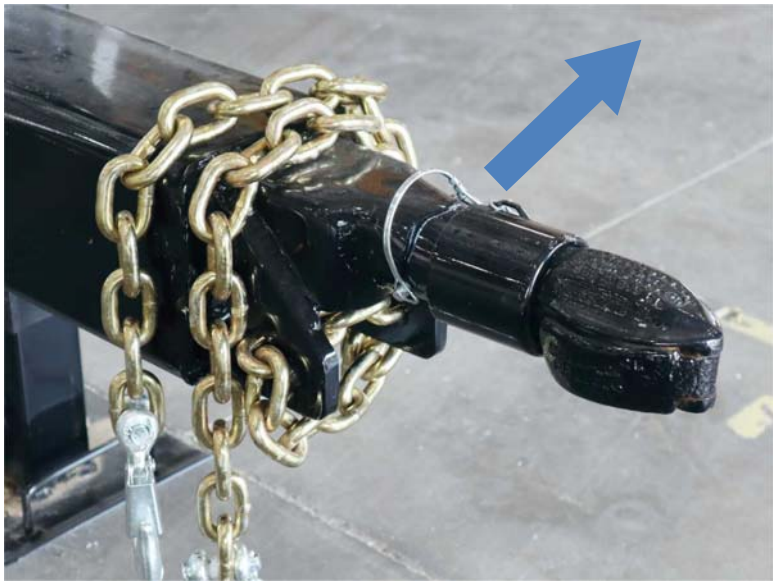


Ball Coupler

The following outlines the coupler operation of ball coupler equipped grandstands:

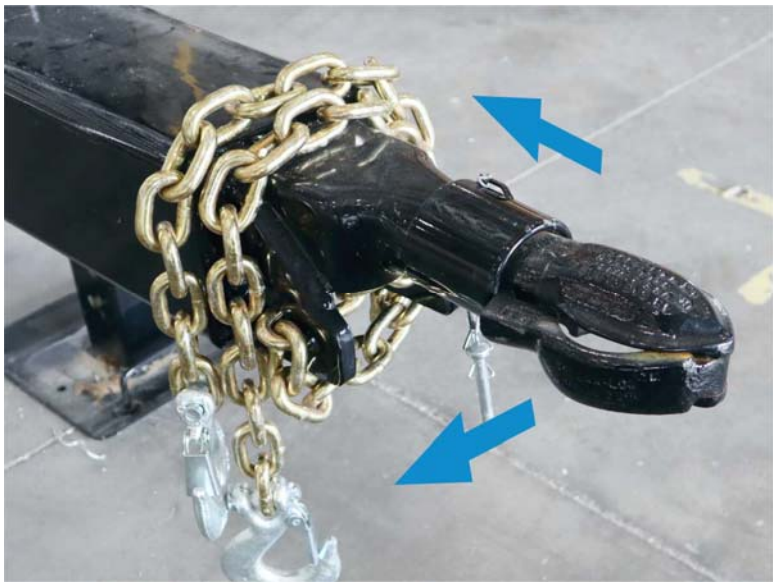
To open coupler:

1 Remove retaining pin behind the lock collar



2 Slide lock collar rearward away from coupler.

3 Spring-loaded coupler cap will open outward, opening the coupler ball pocket.

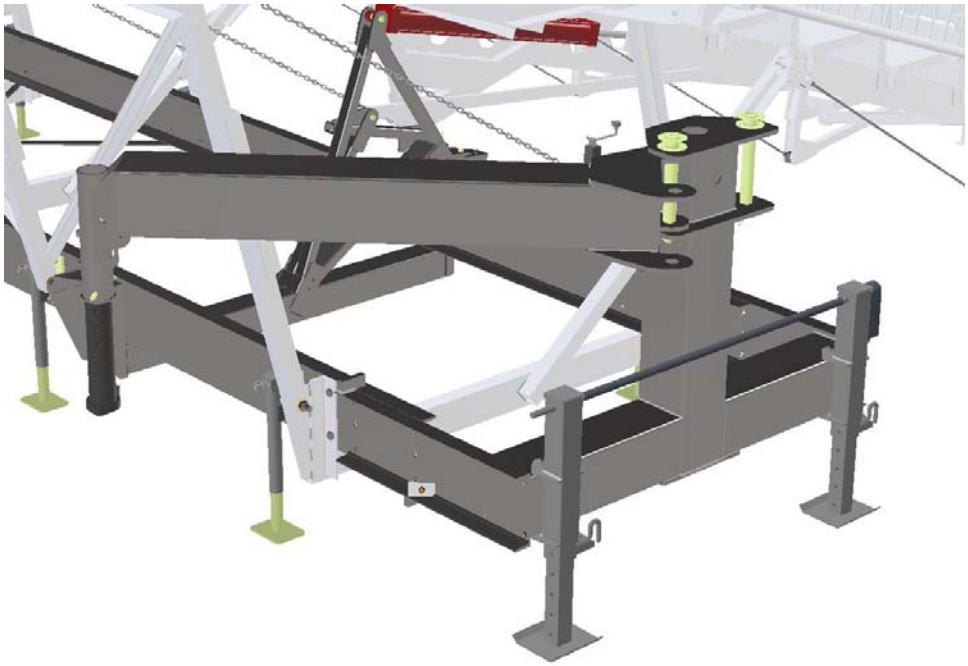


Gooseneck Hitch (optional)

Gooseneck Hitch can be folded to reduce overall grandstand length when set up.

To fold hitch, simply remove one pin, rotate hitch, re-install pin in open hole.

Hitch may be folded either forward toward Row1 or toward the rear of bleacher as desired.



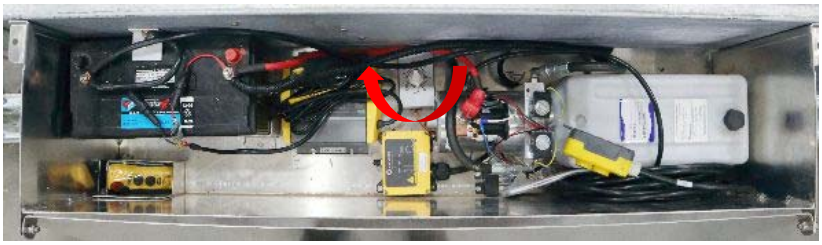
Wireless Control

(optional)

Optional wireless remote control for the hydraulic system allows the operator to freely move around the grandstand for optimum view of all of the hydraulic grandstand components. This permits unrestricted operator movement for optimum viewing positions while operating the grandstand.

Wireless Remote Operation

Note – To prevent battery from being discharged while not in use, the wireless receiver mounted in the grandstand has an electric circuit controlled by a timer switch. Timer must be set **ON** before grandstand will operate. When time expires, receiver will go to **OFF** mode, and will need to be reset to **ON** position before it will operate. This also provides a safety mode as grandstand cannot be accidentally operated while in the **OFF** mode.



Wireless Remote (Standard)

Activate the remote:

1. Press the red **STOP** button down until it clicks down.
2. Rotate the red **STOP** button until it pops up.
3. Check for **Green** indicator light.
4. Press the two (2) black button simultaneously.

To open bleacher – press and hold the **OPEN** button.

To close bleacher – press and hold the **CLOSE** button.

CAUTION

Visually determine that no people, wires, or obstacles block the opening path of the grandstand prior to commencing the opening sequence.

Visually determine that all movable grandstand components are unlatched or unpinned and are free to move prior to energizing hydraulic system.

Section 4
Grandstand Tear - Down Procedure

Section Contents

Note – Caution is advised at all steps of tear-down. Improper operation, procedures or inattention may result in serious injury or death.

Close Grandstand

Closing the TSP15 mobile grandstand is the reverse of setup. Care must be taken to follow the tear down sequence, and that the aisle handrails and end guardrails are properly stowed prior to closing the grandstand. It is also important to keep people clear of the moving grandstand components while closing.

Prior to closing the grandstand, determine that wind speeds are within the acceptable range for safety.

1 - Remove Aisle Handrails

Remove aisleway handrails.

Return handrails to their transport/storage locations and secure.

2 - Fold Lower End Guardrails

Remove retaining pin securing end guardrail to seat support.

Rotate guardrail to transport/storage position.

Insert pin and keeper to secure guardrail.

Repeat at opposite end.

3 - Stow Lock Chains

Release lock chains from keyhole brackets along back side of grandstand.

Store all chains in associated boxes.

4 - Compartment

Open the lid on the hydraulic compartment.

Rotate the timer switch to the **ON** position.

Remove the control from the compartment, and stand where you have a clear view of the grandstand area.

Visually check area for people and obstacles.

5 - Fold Grandstand

Press and hold the **CLOSE** button. Continue holding until the grandstand is fully retracted.

6 - Retract Jacks

Extend the tongue jack to the ground surface.

Retract outrigger jack leg. Rotate outrigger to closed position against grandstand frame. Secure outrigger in transport position with retainer pin and keeper. Repeat at other outrigger.

Retract frame-mounted support jacks. Rotate jacks to travel position (horizontal or vertical) and pin to secure.

7 – Connect Tow Vehicle

Connect tow vehicle to mobile grandstand.

- Open coupler
- Raise tongue as required until coupler clears hitch
- Open coupler
- Lower coupler onto vehicle hitch, close and secure
- Attach safety chains
- Connect 12V connector
- Attach emergency breakaway cable
- Retract tongue jack

8 – Safety Checks

Before towing complete the following:

- Inspect and verify coupler security.
- Verify correct signal and marker light operation.
- Verify emergency breakaway cable and safety chain connection.
- Make final visual inspection of grandstand configuration and condition.
- Remove trailer wheel chocks.
- At slow speed, test trailer brake operation.

Section 5
Towing Safety

Section Contents

Pre-Towing Safety Checklist

- Tow vehicle sized and equipped for trailer size and weight
- Tow vehicle components and systems in good working condition
- Check for proper coupler/pin sizing
- Lubricate coupler and latch as required
- Coupler is locked and secured
- Inspect brake wiring and harness
- Inspect and/or clean 12VDC plug and receptacle
- Inspect all hitch components for cracking or broken welds
- Test breakaway switch
- Check tire pressures, inspect each tire for damage and wear
- Check wheel condition and lug nut torque
- Check marker lighting, brake lights and turn signals
- Trailer level
- Cargo strapped down and secured
- Landing gear jacks fully retracted and pivoted as required
- Wheel chocks removed and stowed
- Test electronic brake controller

Towing considerations

- Increased stopping distance
- Reduced maneuverability
- Turns & Rear end swing
- Overall Height and Clearance
- Width
- Reduced visibility
- Backing

Braking Systems

Before entering public roads, while rolling forward at a slow speed, check the trailer's electric brakes by manually applying the brakes using the electronic brake controller. This action should slow and stop the combined tow vehicle and trailer. If not, determine and fix problem before proceeding.

Wiring Systems

Make sure connector-plug prongs and receptacles, light bulb sockets, wire splices, and ground connections are clean and shielded from moisture. Lightly coat all electrical terminal connections with non-conducting (dielectric), light waterproof grease. Dielectric grease helps to prevent shorting due to rain and washing. It also helps to prevent formation of corrosion.

Clean the prongs with very fine sandpaper, being careful not to damage the contact area.

Clean the surface deposits in the connector holes. (Make sure the lights are off to prevent blowing a fuse.) Try to clean off only the deposits and lubricate lightly with dielectric, light waterproof grease.

Tire Safety

All your trailer tires should be the same type, size, and construction—do not mix bias-belted and radial tires. In selecting tires for your trailer, buy the size, type, and load range listed on the trailer's certification label or in this manual. Tires have a load rating that indicates the amount of weight they can safely carry, and a corresponding tire pressure.

With both your tow vehicle and trailer, always maintain proper tire pressure and replace worn or damaged tires. Check your tow vehicle's manual for towing tire pressures. Tow vehicle tires may require a higher tire pressure when towing loads.

Handling Emergencies

All drivers are placed in emergency situations at some point in their driving careers. Although you can't avoid emergency situations, you can give some thought to them so you can be mentally prepared. If you think about a certain emergency situation and decide how you would handle that emergency, you will be better prepared to react properly if it really happens.

Accidents

Good defensive driving techniques will help you from becoming involved in accidents. One important technique is to keep a three-second or more following distance from the vehicle ahead of you. Keeping your distance gives you time to react and avoid an accident.

Plan Your Escape

To avoid successfully an accident situation, you need to plan your escape. As a defensive driver you have already prepared for this by maintaining a space cushion around your vehicle which you will need to avoid an emergency. Glance at the shoulder of the road. Does it look firm enough and wide enough to support your vehicle? Is your vehicle well maintained so that you don't have to worry about unexpected mechanical problems? Remember to make gentle steering movements.

Signal Your Intentions

Always use your vehicle's mechanical signals when you move through or out of traffic. In an emergency, and once you are on the side of the road, use emergency flashers, flares, or some other emergency signaling device to warn oncoming traffic. Emergency signaling devices are even more important if you are unable to pull completely away from the flow of traffic or you are on the top of a hill or around a curve in the road and other drivers cannot see you.

If you have a flat tire, make sure the person who changes the tire is not in the way of oncoming traffic. If a narrow shoulder does not permit the vehicle to be parked far enough away from traffic flow, proper use of emergency signaling devices and a person flagging traffic away from the scene are important safety precautions. Be sure the jack is adequate to lift the vehicle and that wheels are blocked.

Fires

Vehicles should carry at least one dry chemical or carbon dioxide (CO_2) type extinguisher in working condition with a rating of at least 4-B. The most effective fire extinguishers use halon gas and are good investments for safety. It can keep a small, manageable fire from becoming a major, uncontrollable fire.

The best fire protection includes:

- proper maintenance and inspection of fuel systems and electrical equipment,
- the use of a smoke detector, and
- an LP gas detector.

Make sure the fire extinguisher is suitable for the type of fire and it is large enough to put out the fire. If you have a fuel or electrical fire, first try to shut off the source of the fuel. Turn off the fuel valves and unplug the electrical circuits. If you aren't sure, shut off everything.

The most common extinguisher is a 2 1/2 lb. ABC which is suitable for all types of fires, including fuel fires and electrical fires. There is no substitute for the correct type of fire extinguisher. The letter designates the type of fire suitability:

- A—ordinary materials like wood and paper
- B—petroleum products such as gasoline, propane kerosene
- C—electrical

Be sure to recharge the extinguisher after it is used, even if it is not totally empty. Conventional CO_2 extinguishers should be recharged periodically even if they are not used. The dry powder used in CO_2 extinguishers tends to compact with road vibration. Before using it, rap the CO_2 extinguisher sharply on its side and bottom to shake the powder loose.

Put the extinguishers where fires are more likely to occur and where they can be easily reached. For example, with a tow vehicle and travel trailer, you should have one in the tow vehicle and another near the kitchen in the trailer.

Driving Safely

Trailer Height

Trailer height requires that the driver be allert for road clearances, service station canopies, bridge heights, and to watch for low hanging obstacles such as tree branches.

Maneuvering

The additional weight and size (length) of the combination tow vehicle and trailer makes it less maneuverable than the tow vehicle alone. A safe maneuver in your tow vehicle may be dangerous in the combination. Since it is heavier, the combination vehicle will not stop as quickly and you will need more following distance. Defensive driving requires making changes slowly, braking gradually, and being familiar with its handling characteristics.

Braking

A combination tow/trailer vehicle is heavier, and requires greater braking distances. You must allow more time for the vehicle to slow or stop. During heavy braking, you must also worry about brake fade. Brake fade can happen when the brakes are overheated from prolonged use, or the brakes are out of alignment. To help avoid brake fade on downgrades, use the lower gears to allow the engine to help slow the vehicle.

Speed

Combination tow/trailer vehicles are naturally slower. It takes longer to climb a hill with a combination vehicle because it's heavier. Practice good manners, and observe the law by using turnouts when there are five or more vehicles behind you that wish to pass. The drivers behind you will be able to see ahead more easily if you try not to drive next to the center of the lane. If you are traveling with other vehicles in a caravan, be sure to leave enough space between your vehicle and the vehicle in front of you for other drivers to enter when they want to pass.

Safety Belts

Always wear your safety belt when driving.

Weather Conditions

Bad weather conditions such as winds, fog, snow, and ice, are hazards to all drivers. A combination vehicle has an advantage over many other vehicles because of the added weight over the drive wheels. This gives the vehicle better traction in bad weather. However, its added weight can also make it more difficult to move if it gets stuck. Plan your trips to avoid bad weather conditions as much as possible.

Remember, if hazardous weather conditions require the use of windshield wipers you must also turn on your headlights.

Defensive Driving Techniques

Defensive driving requires all drivers to think ahead. This is even more important when pulling a trailer. The driver must be continually aware of the traffic around the vehicle because directional changes are slower and the vehicle combination needs more space in traffic. Try to avoid roads during rush hour traffic. If you are driving in unfamiliar areas, ask someone (possibly one of your passengers) to help you with directions and always have a map of the area. If you are driving by yourself, always pull off the road at a safe place and stop the vehicle before looking at a map.

Be Prepared - Listen to the local radio stations where you are traveling. Be aware of traffic slow downs, accidents, or road construction, etc. If you are prepared and have a map, you will be able to take alternative routes.

Starting and Shifting - Always try to start and shift (for manual transmissions) smoothly to prevent wear and tear on the hitch and transmission systems.

Turning Patterns - Longer wheel bases make it necessary to change your turning patterns. You must turn wider at intersections or the trailer's wheels may roll over the curb. Go further into the intersection before starting the turn and adjust your lane position to increase the turning radius.

Curves in the highway can also be tricky. Stay more to the center of the lane for right turns so the rear wheels will not move off the pavement. For a left turn or curve, stay more to the right of the lane to prevent the back of the trailer from tracking into the oncoming lane of traffic.

Trailers have a higher center of gravity, so turning corners and taking curves must be done at slower speeds to prevent swaying. Slowdown before you enter the curve.

Winds - If you are driving in areas with strong winds, take special care. Crosswinds are the greatest threat because they can push a trailer combination into another lane if you are not prepared. In most cases, going slower is the best defense against strong winds. If you are towing a trailer, you should gradually apply the trailer brakes to help control a swaying trailer. Headwinds require a heavier throttle to maintain usual speeds. You may be able to control a trailer in very strong winds, but the safest thing to do would be to pull over and wait it out. If you anticipate driving in very windy areas, call and obtain local weather and road conditions. Good sources of weather information are local airports, highway patrols, state police, or ranger stations. Often, you will see signs along the highway which show radio frequencies for weather information.

Snow - Always carry drive wheel and trailer wheel chains when you travel in snow country. Know how to put them on. Chains are needed for both the tow vehicle and for one axle of a trailer.

Ice - If you are towing a trailer on icy roads, go slowly, especially downhill. Use the lower gears. You may be able to gain additional traction for the tow vehicle by moderately releasing the tension of the load equalizing hitch. Always readjust the hitch after the icy road condition has passed or vehicle stability may be affected during normal driving conditions.

Mountain Roads - Will your vehicle make it up the grade? Almost all grades, regardless of severity, will cause you to slow down. Any grade steeper than six percent is considered extreme and requires special attention. The steeper the grade or the longer the grade and/or the heavier the load, the more you will have to use lower gears to climb hills or mountains.

When going down steep hills, gravity will tend to speed you up. You must select an appropriate safe speed, then use a low gear and enough braking power to hold you back without letting the brakes get too hot. Use the braking effect of the engine (lower gears) as the principal way of controlling your speed. Save your brakes so you will be able to slow or stop as required by road and traffic conditions. Slow the vehicle and shift the transmission to a low gear before starting down a grade.

Remember: The use of brakes on a long and/or steep downgrade is only a supplement to the braking effect of the engine. Once the vehicle is in the proper low gear, the following is a proper braking technique:

1. Apply the brakes just hard enough to feel a definite slowdown.
2. When your speed has been reduced to approximately five mph below your "safe" speed, release the brakes. (This brake application should last for about three seconds.)
3. When your speed has increased to your "safe" speed, repeat steps 1 and 2.

Do not drive in the fast lanes on a multiple-lane grade. Stay in the far right lane while climbing a steep grade if your trailer will not maintain the legal speed limit. It would be better to drop to a lower gear and slow down rather than pass slow trucks and tie up the faster lanes because you don't have enough power.

Narrow Roads - Special "turnout" areas are sometimes marked on two-lane roads. You may pull into these areas and allow vehicles behind you to pass. Other two-lane roads sometimes have a passing lane. When you drive a slow-moving vehicle on a two-lane highway or road where passing is unsafe, and five or more vehicles are following you, pull to the side of the road wherever you can safely do so to let the vehicles pass.

Try to stay to the right of the lane so the vehicles behind you can see ahead. Remember to pull off the road when it is safe and allow the faster vehicles to pass.

Escape Ramps - Escape ramps have been built on many steep mountain grades, and are used to stop runaway vehicles safely without injuring drivers and passengers. Escape ramps use a long bed of loose, soft material (pea gravel or sand) to slow a runaway vehicle, sometimes in combination with an upgrade.

Know where escape ramps are located on your route. Signs show drivers where ramps are located.

Road Signs - Pay attention to road signs that warn against travel by vehicles towing trailers. If you missed the sign that warned of a "Dead end" ahead, would you be able to turn your vehicle around? What was the weight limit for the bridge ahead? Did you notice the height clearance for the overpass?

Freeway Driving - You will have slower acceleration when you enter a freeway, so you will need more space. Remember that freeway traffic has the right-of-way, so you must look for gaps large enough to accommodate your vehicle(s). You also need more space when passing other vehicles. Judging how much space you will need takes practice. If you don't allow enough space and time to complete the pass, you may need to swerve quickly into another lane. This could result in a skid, over-steering, sway, or a fishtailing trailer.

Following distances must also be increased because you cannot slow down and stop your vehicle quickly. When you want to exit a freeway, slowdown sooner than you would for a smaller vehicle. Be aware that many off ramps have reducing radius curves (the curve continually tightens). You will need to stay to the outside of the curve so the rear wheels will not rub the curb or drop off the pavement.

By law, vehicles towing trailers must stay in the right hand traffic lane or as close as possible to the right edge or curb. If you drive on a divided highway with four or more traffic lanes in the same direction or where a specific lane or lanes have not been designated, you can drive in the lane just to the left of the right hand traffic lane. When overtaking or passing another vehicle going in the same direction, you must use either: (1) the designated lane, (2) the lane just to the left of the right-hand lane, or (3) the right-hand traffic lane when use of that lane is permitted.

Dirt or Unpaved Roads - There may be a hazard such as rocks, low trees, or washed-out sections of the road ahead that only a four-wheel drive vehicle can handle safely. If unfamiliar with the road, walk or drive the road first to check for hazards before proceeding with the trailer.

Fatigue - Driving is not as easy as it appears. Break up your driving time by taking a 15- to 30-minute stretch every two to three hours. Get out of your vehicle and walk around. This will help to loosen tired muscles and rest tired eyes. Use this time to inspect your vehicle. It will also improve your alertness.

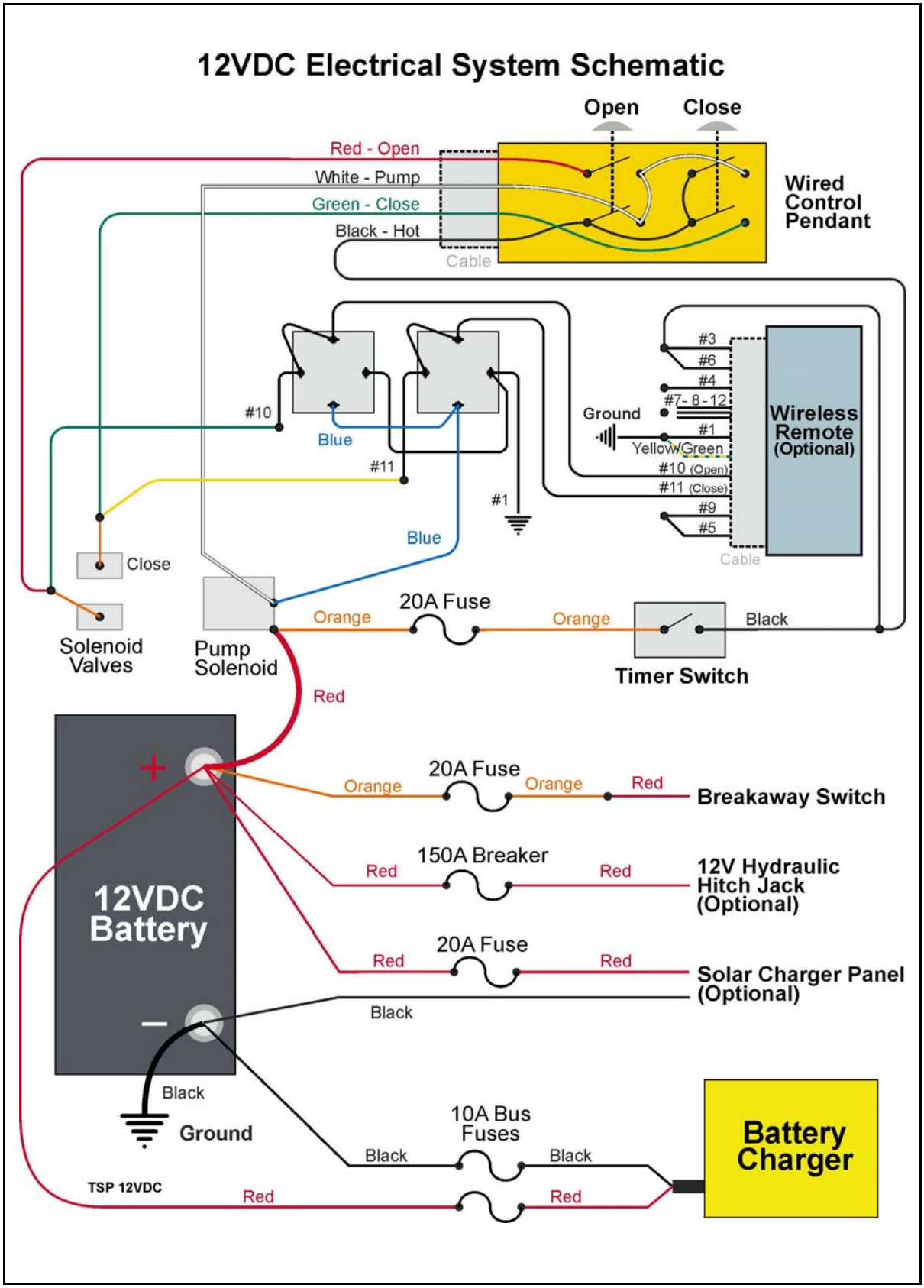
Remember: Night driving can be especially hazardous since the body naturally wants to sleep at night. Most drivers are less alert at night, especially after midnight. If you are sleepy, the only safe cure is to get off the road and get some sleep. If you don't, you risk your life and the lives of others.

To Report Safety Problems and Obtain More Information - If you have a safety problem with your vehicle, or if information is missing from your trailer certification label, call the DOT Auto Safety Hotline at (888) 327-4236/TDD (800) 424-9153. To request additional information, visit the NHTSA website at www.nhtsa.gov, or call the hotline.

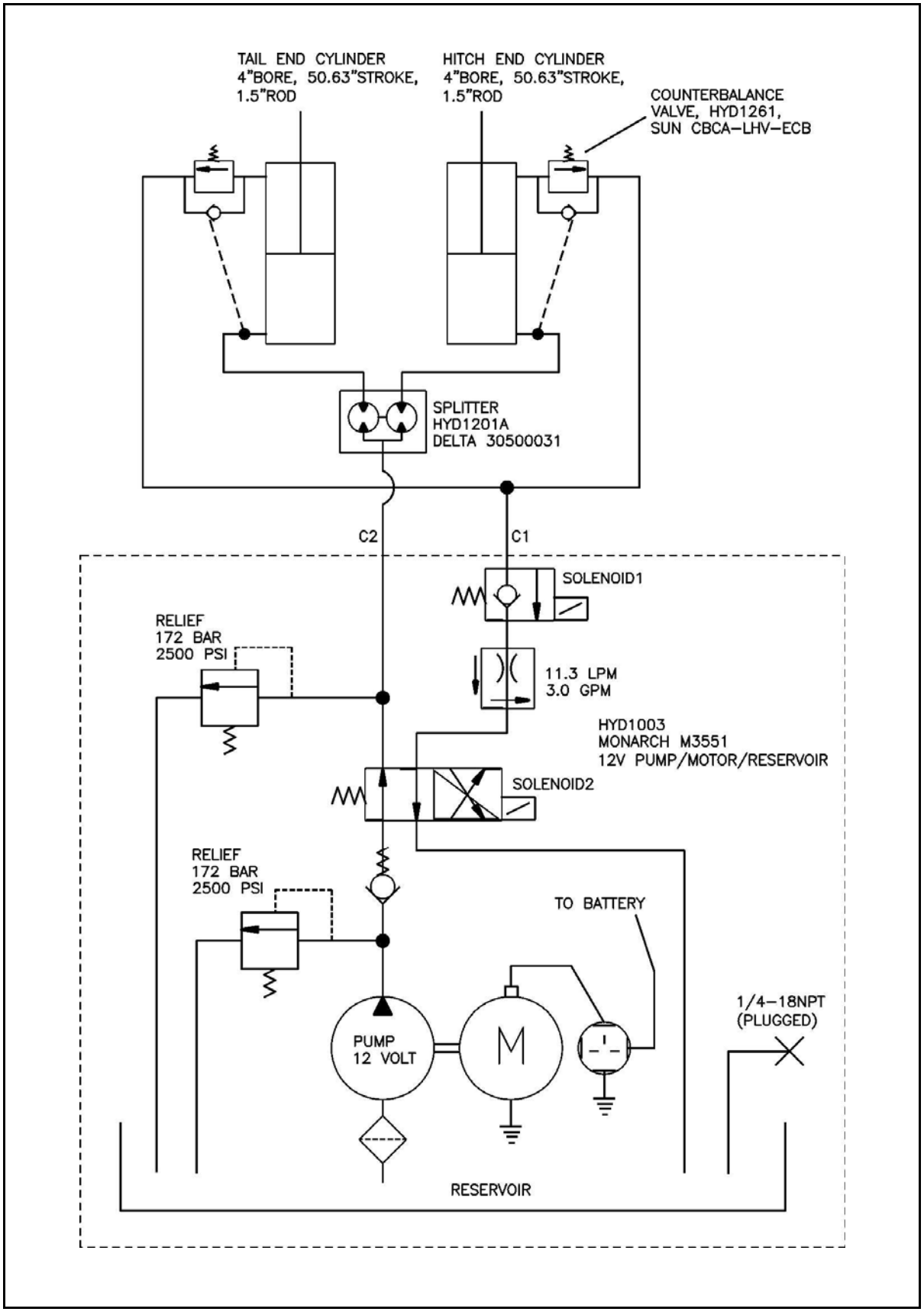
Section 6
Grandstand Systems

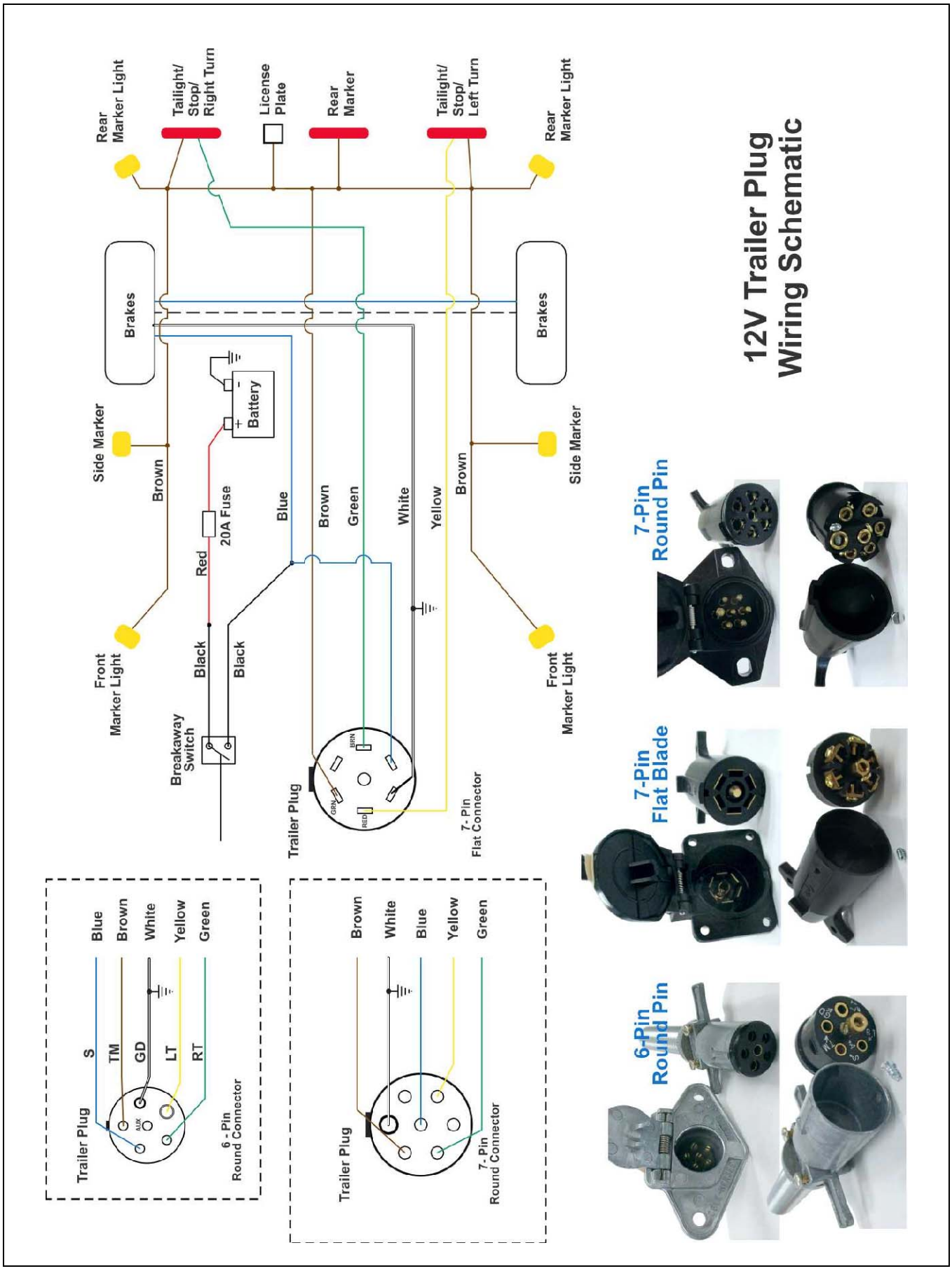
Section Contents

12VDC System Schematic



Hydraulic System Schematic - Standard




12V Trailer Plug
Wiring Schematic
Rear Marker Light
Taillight/ Stop/ Right Turn
License Plate
Rear Marker
Taillight/ Stop/ Left Turn
Rear Marker Light
Brakes
Brakes
Side Marker
Side Marker
Front Marker Light
Front Marker Light
Battery
20A Fuse
Breakaway Switch
Trailer Plug
7- Pin Flat Connector
Brown
Red
Black
Black
Blue
Brown
Green
White
Yellow
Brown
7-Pin Round Pin
7-Pin Flat Blade
6-Pin Round Pin
Trailer Plug
S
TM
GD
LT
RT
6 - Pin Round Connector
Blue
Brown
White
Yellow
Green
Trailer Plug
7- Pin Round Connector
Brown
White
Blue
Yellow
Green

Section 7
Maintenance & Service

Section Contents

Maintenance

The following maintenance section is provided to help you maintain maximum dependability and maximum life from your Century Grandstand.

Consumable and high wear components such as tires, brakes, bearing, light bulbs, hydraulic fluid, batteries, electric system components, and hydraulic system components, are selected to be locally available through most automotive or industrial supply houses. Needed parts can therefore be quickly obtained.

For additional part or service information, please call Century Customer Service at 800/248-3371, or 812/246-3371.

Hydraulic System

For ease of inspection and service, the hydraulic pump, hydraulic fluid reservoir, (battery, and battery charger on powered units only) have been grouped in a locking compartment located inside the frame of the grandstand. Periodically check to see that the hydraulic fluid reservoir is full with approximately an inch gap from the top when grandstand is closed. Reservoir is mounted in the mechanical compartment. Should additional fluid be needed, add only good quality, heavy-duty hydraulic fluid.

When the hydraulic cylinders are under load for long periods of time, a small amount of fluid leakage from the cylinder should be considered normal.

CAUTION: DO NOT ATTEMPT TO OPERATE GRANDSTAND WITHOUT HYDRAULIC OIL UNDER ANY CONDITION.

Hydraulic Pump Service Starting Procedure

Fill the reservoir with Multi Guard Hydraulic **AW32** to an inch from the top when the grandstand is fully closed. It is essential that the oil be kept very clean. Any dirt or lint introduced into the reservoir will eventually cause trouble.

Motor rotation must be as indicated by arrow decal on top of motor. In the event that the decal has been removed, motor rotation is counter-clockwise viewing from motor end. The wiring diagram is provided on the motor tag. When starting the motor for the first time, apply short durations of power to check rotation and flow from the pump. If flow does not start immediately, it may be due to wrong motor rotation.

Be sure to bleed all air from the system components since this will cause erratic operation.

- **Recommended Hydraulic Fluid -** Multi Guard Hydraulic **AW32** with anti-wear, rust and oxidation inhibitors.

Filter

This unit is equipped with a 100 x 90 mesh screen filter. The area of the filter is quite adequate and the unit should run for a long period of time using clean oil before the filter is clogged to the point where it would affect the operation of the unit. Periodic inspection, and if

necessary, cleaning of the filter are recommended. To gain access to the derby shaped filter, remove the screws which attach the reservoir cover to the reservoir. The filter is screwed onto the pipe nipple which leads to the pump. Wash in suitable solvent and blow out with air from inside out. When reassembling filter to pipe, screw on until filter is snug, leaving approximately 4" from end of pipe to inside of filter.

Pump & Motor

Neither the pump nor motor require any attention under normal operating conditions. The motor bearings are life lubricated. The pump bearings are lubricated by the fluid being pumped.

Trouble Shooting

Little or no oil being pumped

The following are items to check for proper performance of pump unit only. It must be remembered that any apparent failures in pump performance may be caused by other components in the hydraulic system.

1) Check to see that motor is running and in proper direction.
2) Check reservoir oil level.
3) Check system components for possible leakage.
4) Check filter for clogging.

CAUTION: WHEN SERVICING HYDRAULIC SYSTEM DO NOT USE TEFLON TAPE TO SEAL NPT THREADS.

Lubrication

Periodically lubricate all hinges and jacks.

Inspect wheel bearings annually; repack if necessary.

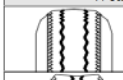
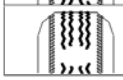
Mobile Grandstand is equipped with highway rated tubeless tires. Tires should be checked periodically for punctures, cuts, cracks or other abnormal conditions. Air pressure should be checked and maintained at the tire manufacturer's recommended pressure (shown on tire). Wheel lug-bolts should be checked regularly for tightness.

If you should experience tire failure, you should try to determine and correct the cause.

Possible factors that would cause the initial tire failure are as follows:

1) Defective tire.
2) Tire puncture caused by road debris.
3) Improper tire inflation (too low) causing tire breakdown and eventual failure.
4) Towing trailer in an unlevel altitude (either nose high or nose low) putting extra weight on either front or rear axle.
5) Trailer overloaded with equipment, or improperly loaded so that weight is not evenly distributed.

Tire Wear Diagnostic Chart

Wear Pattern		Cause	Action
	Center Wear	Overinflated tire	Adjust tire pressure to specific load rating per tire catalog.
	Edge Wear	Underinflated tire	Adjust tire pressure to specific load rating per tire catalog.
	Side Wear	Loss of camber or overloading	Make sure load does not exceed axle rating. Realign axle at alignment shop.
	Toe Wear	Incorrect toe-in	Align at alignment shop.
	Cupping	Out-of-balance	Check bearing adjustment and balance tires.
	Flat Spots	Wheel lockup and tire skidding	Avoid sudden stops when possible and adjust brakes.

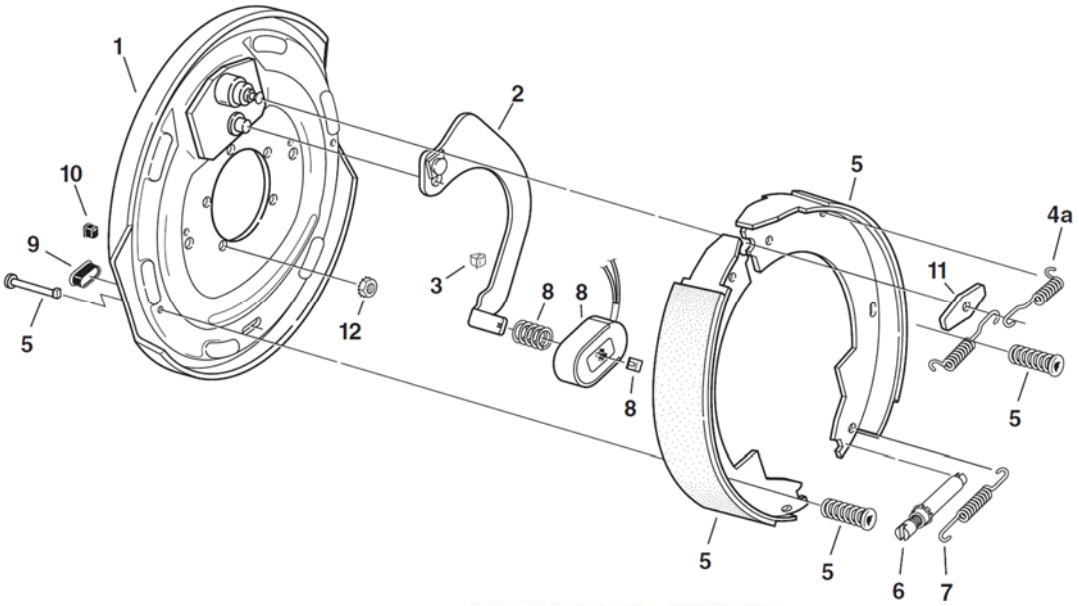
Before towing the grandstand, inspect and verify that the tires are in good condition, each tire is correctly inflated, the trailer is riding level, and that the grandstand is not overloaded.

Suspension

Tandem 7,000 lb. capacity Torflex

Axle Maintenance – Except for periodic inspection of the fasteners used to attach the axle to the frame, no other suspension maintenance is required. Axles are subject to the maintenance and inspection procedures regarding brakes, hubs, bearing, seals, wheels, and tires as outlined in Dexter's Operation Maintenance Service Manual (www.dexteraxle.com)

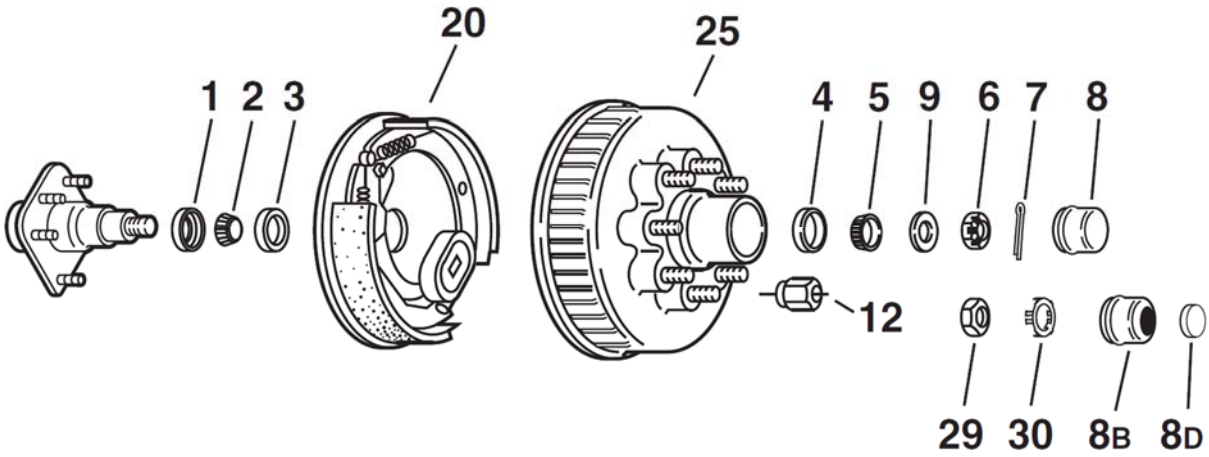
12” x 2” 7,000lb Electric Brakes



Electric Brake 7000 lbs.

Item	Part No.	Qty/Brk	Description
0	K23-180-00	1	LH Complete Brake Assembly
0	K23-181-00	1	RH Complete Brake Assembly (shown)
1	036-089-10	1	Backing Plate Assembly (after 3/18)
2	047-107-05	1	LH Actuating Lever Arm Assembly
2	047-108-05	1	RH Actuating Lever Arm Assembly
3	027-005-00	2	Wire Clip
4a	046-009-00	2	Retractor Spring (before 3/18 and after 11/19)
4b	046-005-00	1	Retractor Spring (Between 3/18 - 11/19)
5	K71-127-00	1	Shoe & Lining Kit Contains: 1 040-215-00 Primary Shoe & Lining 1 040-216-00 Secondary Shoe & Lining 2 049-002-00 Shoe Hold Down Pin 2 046-077-00 Shoe Hold Down Spring & Cup
6	043-004-00	1	Adjuster Assembly
7	046-018-00	1	Adjusting Screw Spring
8	K71-125-00	1	Magnet Kit Contains: 1 042-143-00 Magnet (black wire) 1 027-009-00 Magnet Clip 1 046-080-00 Magnet Spring (before 7/16) 1 046-175-00 Magnet Spring (after 7/16)
9	046-007-00	2	Adjuster Slot Plug
10	046-016-00	1	Wire Grommet
11	005-067-00	1	Anchor Post Washer
*12	006-193-00	5	Nut Washer Assembly

Hub Assembly



Grease Lube Parts

Item	Part No.	Description
1	010-036-00	E-Z Lube® Seal 2.25"
2	031-030-02	25580 Inner Bearing Cone
3	031-030-01	25520 Inner Bearing Cup
4	031-017-01	14276 Outer Bearing Cup - 865 Hub
4A	031-029-01	15245 Outer Bearing Cup - Demountable
5	031-017-02	14125A Outer Bearing Cone - 865 Hub
5A	031-029-02	15123 Outer Bearing Cone - Demountable
6	006-176-00	Spindle Nut
7	019-002-00	Cotter Pin (not used with E-Z Lube®)
8	021-039-00	Grease Cap - 865 Hub
8A	021-001-00	Grease Cap - Demountable
8B	021-043-01	Grease Cap for E-Z Lube® - 865 Hub
8B	021-043-02	Grease Cap E-Z Lube® Chrome Option - 865 Hub
8C	021-042-01	Grease Cap for E-Z Lube® - Demountable
8C	021-042-02	Grease Cap for E-Z Lube® Chrome Option - Dem.
8D	085-001-00	E-Z Lube® Rubber Plug
9	005-057-00	Spindle Washer
16	006-005-00	9/16-18 Nut for Rim Clamp
23	015-002-00	Rim Clamp
29	006-191-00	Special Jam Nut for E-Z Lube® (after 2002)
30	006-190-00	Spindle Nut Retainer for E-Z Lube® (after 2002)

Hubs

Item	Part No.	Description	Bolt Circle
Hubs/Drums			
25	008-219-13	Grease 9/16" Stud	8 on 6.50
25	008-219-18	Grease 5/8" Stud	8 on 6.50

Tires – 235/75 17.5, 18 ply

Wheels – 30.50” dia x 8.80 w, (8) 5/8 studs on 6.5” dia.

Tire Changing

To change a tire, first chock wheels to prevent movement. Place jack under axle, next to wheel to be changed. Jack axle until tire just clears the ground. Change wheel, and remove jack.

After a wheel has been replaced, check the tightness of the wheel lugs every 50 miles for the first 200 miles.

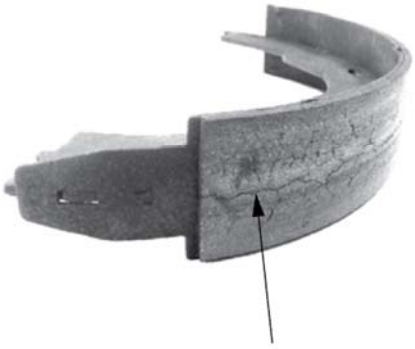
Grandstand "Jacking" - when jacking the grandstand, use the four main frame corner jacks and/or place a jack under the axle.

Never jack against the underside of the grandstand frame. Improper lifting of the grandstand frame can cause permanent structural damage.

Brakes

Brake pads should be inspected once a year for wear. The electric brake system should be checked regularly for proper operation.

A simple visual inspection of your brake linings will tell if they are usable. Replacement is necessary if the lining is worn to 1/16" or less. Shoes contaminated with grease or oil, or abnormally scored or gouged should also be replaced. Hairline heat cracks are normal in bonded linings and should not be cause for concern. When replacement is necessary, it is important to replace both shoes on each brake and both brakes of the same axle. This will help retain the “balance” of your brakes.



Acceptable
Hairline Cracks

The Grandstand is equipped with a 12V D.C. wet cell battery to supply electric power to the pump motor for grandstand operation.

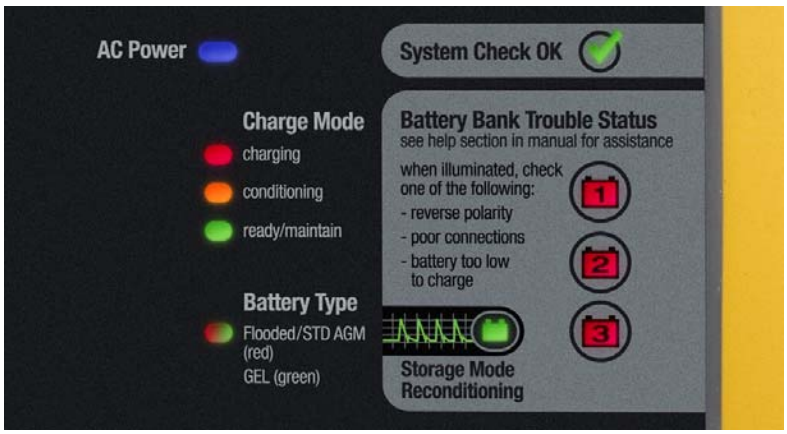
The battery is mounted in the hydraulic compartment inside the frame. This is a locking compartment for security.

The Grandstand is also equipped with battery charger allowing a full charge to be restored to the battery whenever the A.C. power line is connected to an external power source. Charging is accomplished by plugging the cord on the charger onto the A.C. receptacle and turning the circuit breaker to ON.

The charging period should only be long enough to provide a full charge. The charger should not be left on for extended periods of time, as overcharging will result in damage to the battery.

Battery Charger

ProSport LED Status Center - Operation and Display



1. The blue AC power LED Illuminates when AC power is applied

2. The battery type LED Will illuminate red for standard Flooded (lead-acid)/AGM and green for GEL. Note: The ProSport 20 Dual bank model includes an amber battery type LED for AGM HP (High Performance) battery type. Please read the battery manufacturer literature carefully and select the correct charge profile. Failure to do so may cause early battery failure.

3. The system check OK LED After applying AC power the ProSport will self test and analyze all battery connections and batteries. If all checks are OK the green LED will illuminate. This can take up to 2 minutes.

4. The charge mode LEDs

Charging: Red LED will flash during the self test and battery test mode (approximately 1-2 minutes) and will be solid red during charging.

Conditioning: Amber LED illuminates during conditioning mode.

Auto Maintain: Green LED illuminates when batteries are fully charged and being automatically maintained until you are ready operate.

Storage Recondition: Green LED fades in and out when performing a once a month storage recondition mode.

5. Battery bank trouble status LEDs Red LEDs will illuminate indicating a wiring problem or fault at one of the batteries connected to the ProSport charger.

Battery Service

CAUTION: EXTREME CARE SHOULD BE USED WHEN SERVICING ANY LEAD-ACID BATTERY. Lead-acid batteries may emit highly explosive hydrogen gas. Battery acid can cause severe burns and eye damage. When servicing batteries:

- **Always wear face shield and safety glasses.**
- **Do not smoke around batteries.**
- **Turn off all electrical equipment before disconnecting battery cables.**
- **Never expose battery to sparks or open flame.**

Before towing, check to see that the battery has a full charge. If the bleacher is connected to an AC power source at the site, the battery can be charged before closing the bleachers at the end of the event.

If you are ever caught in the field with a dead battery, you have several alternative methods of powering the grandstand.

1) Removed the battery and take to the shop for charging.

2) A fresh battery can be brought to the site and connected to the 12VDC power system (watch polarity).

3) If the towing vehicle has a 12VDC electrical system, you can use jumper cables to provide electric power from the tow vehicle to the grandstand. Should you elect to use this approach, use extreme caution. Use a good set of jumper cables. Be sure to wear a face shield. Do not smoke around the batteries. Be very careful to not reverse polarity. Keep your hands out of the engine compartment of a running engine.

Battery Connections Monthly	Clean and tighten all battery connections. Clean all battery terminals with a wire brush where required.
Battery Electrolyte Monthly	Monitor and maintain proper water levels in each battery cell. Only use distilled water.
Charger Wiring Monthly	Visually inspect AC power cord and output cables for condition. Replace as required

DOT Trailer Lighting

All trailer body lights, which include marker lights, turn signals, and brake lights, should be inspected frequently for proper operation.

Always connect 12V trailer connector to towing vehicle before towing. Check and verify correct light operation.

ProSportHD

On-Board Marine Battery Charger

Important Safety Instructions

SAVE THESE INSTRUCTIONS

This manual contains important safety and operating instructions for the ProSportHD On-Board Marine Battery Charger.

⚠ CAUTION - To reduce the risk of injury, charge only 12 Volt Flooded (Lead-Acid), AGM and Gel batteries. Other types of batteries may burst, causing personal injury.

EXTERNAL CONNECTIONS TO CHARGER SHALL COMPLY WITH THE UNITED STATES COAST GUARD ELECTRICAL REGULATIONS (33CFR183, SUB PART 1).

Before connecting your batteries or applying AC power, read all instructions and cautionary markings on the battery charger, cables, and batteries.

⚠ WARNING

To reduce the risk of injury to user or property; the user must read and understand the instruction manual and all warnings on the charger and batteries before use.

⚠ WARNING

1. WARNING - RISK OF EXPLOSIVE GASES.
   a. WORKING IN THE VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS. BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOU FOLLOW THE INSTRUCTIONS EACH TIME YOU USE THE CHARGER.
   b. To reduce risk of battery explosion, follow these instructions and those marked on the battery.
2. Use charger for charging a LEAD-ACID battery only. It is not intended to supply power to an extra-low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may burst and cause injury to persons and property.
3. Use of an attachment not recommended or sold by ProMariner may result in a risk of fire, electric shock, or injury to persons.
4. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.

1 -Introduction

Four Color Multi-Stage Mode LED Status Bar

LED Fuel Gauge Completion Status
Red indicator for low battery and transitions to green during charging process.

System Check OK and Dual Mode Battery Status
Red Fault indication during Analyze mode for user wiring or battery attention.
Green indication as each battery becomes fully charged and is monitored off line.

3 Selectable Charge Profiles
Performance charge profiles for Flooded (lead acid), AGM and GEL batteries.
HP AGM profile on ProSportHD 20 Dual only.

2 -Safety Instructions

Important Safety Instructions

5. Extension cords:
   a. Check the pins on the plug of the extension cord are to be the same number, size and shape as those on the plug of the charger.
   b. Use only a properly wired extension cord in good electrical condition.
   c. Use an industrial grade / heavy duty UL or CSA approved and grounded extension cord. Check extension cord before use for damage, bent prongs, and cuts. Replace if damaged. Always make your extension cord connection on the charger side first. **After connecting the extension cord to the charger proceed to plug the extension cord into a nearby GFCI protected (Ground Fault Circuit Interrupt) outlet.**
   Below are manufacturer recommendations for the right size UL or CSA Approved grounded extension cord.
      i. Up to 50 feet in length use a 3 conductor 18 AWG extension cord.
      ii. 50 to 100 feet in length use a 3 conductor 16 AWG extension cord.
      iii. 100 to 150 feet in length use a 3 conductor 14 AWG extension cord.
6. Do not operate charger if any protective AC and DC cable insulation, DC fuse holders, or ring terminals have been damaged or compromised. Contact ProMariner immediately to return the charger for service and repair.
7. Do not operate the charger if it has received a sharp blow, direct hit of force, been dropped or otherwise damaged in any way. Contact ProMariner immediately to return the charger for service and repair.
8. Do not disassemble charger. Incorrect reassembly may result in a risk of electric shock or fire. If service or repair is required please call ProMariner customer service at 800-824-0524 between 8:30am-5pm (EST) Monday through Friday, or via www.promariner.com. Unauthorized attempts to service, repair or modify may result in a risk of electrical shock, fire or explosion and will void warranty.
9. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.
10. Do not expose AC power cord connection to rain or snow.

12. PERSONAL PRECAUTIONS

⚠ CAUTION

a. Consider having someone close enough or within the range of your voice to come to your aid when you work near a lead-acid battery.

b. Have plenty of soap, water and baking soda nearby in case battery acid comes in contact with skin, clothes or eyes.

c. Wear complete eye protection, hand and clothing protection. Avoid touching eyes while working near a battery.

d. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 15 minutes and get medical attention immediately.

If electrolyte is taken internally, drink large quantities of water or milk. DO NOT induce vomiting. Get prompt medical attention.

e. NEVER smoke, strike a match or cause a spark or flame in vicinity of battery or engine.

f. Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short-circuit a battery or other electrical hardware which may cause an explosion or fire.

g. Remove all personal metal items such as rings, bracelets, necklaces, watches, and jewelry when working near a battery. A battery can produce a short circuit current high enough to weld a ring or any other metal, causing serious burns.

h. Use charger for charging a LEAD-ACID battery only. It is not intended to supply power to a low voltage electrical system other than in a start-motor application. Do not use battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.

i. NEVER charge a frozen, damaged or leaking battery.

j. Keep other persons, children and pets away from batteries and your charger during operation to avoid serious injury, death, fire or explosion.

⚠ DANGER: RISK OF ELECTRIC SHOCK

Do not touch uninsulated portion of output connector or uninsulated battery terminal if 3 or more batteries are connected in series.

13. PREPARING TO CHARGE A BATTERY

⚠ CAUTION

a. If necessary to remove a battery from a boat to charge, **always remove the grounded negative terminal from the battery first.** Make sure all accessories in the boat are off, as to not cause an arc.

b. Be sure the area around the charger and batteries is well ventilated while the battery is being charged.

c. Neutralize with baking soda any electrolyte that spills on a vehicle or in the work area. After neutralizing, rinse contaminated area clean with water.

d. Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.

e. For flooded batteries with removable caps, ONLY ADD DISTILLED WATER in each cell until electrolyte reaches levels specified by the battery manufacturer. Do not over fill. For a maintenance free battery without removable caps, such as valve regulated lead acid batteries, carefully follow manufacturer's recharging instructions.

f. Study all battery manufacturers' specific precautions; warnings and instructions while charging and recommended rates of charge. Never charge a battery with missing safety vent caps.

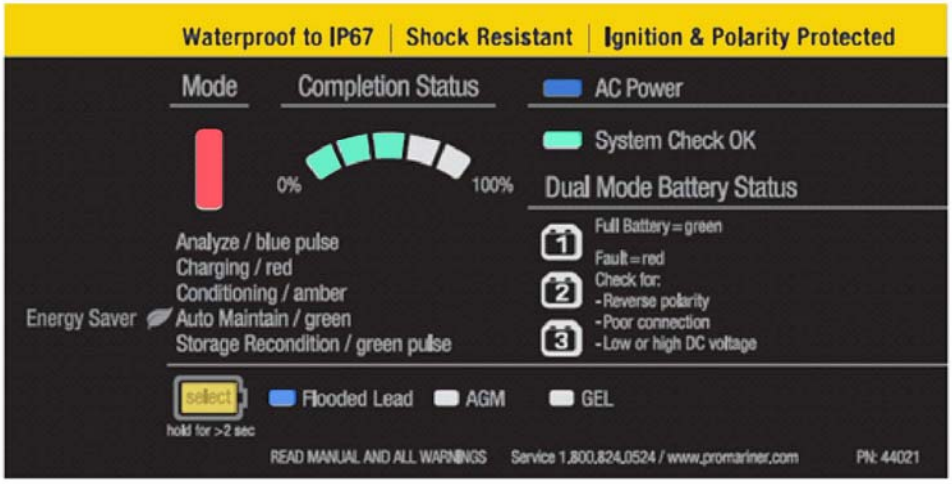
g. Do not overcharge batteries or try to charge non 12 Volt Flooded (Lead-Acid), AGM or Gel batteries

The ProSportHD will automatically fully charge and condition your batteries while it extends the life of your batteries. When you're not at home, always leave your charger plugged in to reduce sulfate build-up, allowing your batteries to be fully charged and automatically maintained for your next fishing trip.

The ProSportHD design incorporates a Storage Recondition mode that stimulates and reconditions your on-board batteries for 3 hours once a month and when completed will resume its normal energy saver auto maintain mode. During this mode the LED mode bar will illuminate green but with a fade-in fade-out pulse, indicating Storage Recondition mode is active with the green Auto Maintain LED still illuminated indicating your batteries remain fully charged during this process.

ProSportHD Charge Mode LEDs

The LED mode bar will change as each mode is completed.



Analyze (Pulsing Blue Mode LED):

After installing the ProSportHD according to this instruction manual, followed by applying AC power to the charger, the ProSportHD's blue Mode LED will be pulsing indicating, the charger is in the process of analyzing: connections, polarity and that the battery(s) connected are over 2.5 VDC and are able to accept a charge.

This takes approximately one minute.

Charging (Red Mode LED):

Mode LED will be solid red during charging.

Conditioning (Amber Mode LED):

Mode LED illuminates solid amber during conditioning mode.

Auto Maintain - Energy Save Mode (Green Mode LED):

Mode LED illuminates solid green when batteries are being monitored to automatically maintain your fully charged battery(s) during short or long term storage periods.

Storage Recondition (Pulsing Green Mode LED):

Mode LED pulses when performing a once a month Storage Recondition mode to your battery(s).

ProSportHD LED Display and Charge Monitor

The ProSportHD Charger includes 6 LEDs for operation status, up to 3 battery bank trouble LEDs depending on model and a battery gauge Charge Monitor.

Blue AC Power LED

Power Indicator Illuminates when AC power is present.

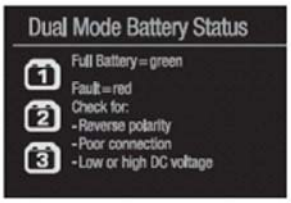
System Check OK (Green LED):

If all tests pass, the System Check OK indicator will illuminate green, providing positive confirmation your charger is installed properly and your batteries are capable of being charged followed by the charging process.

Completion Status Monitor

The Charge Monitor has 4 green LEDs and 1 dual color green/red LED. When the batteries are low, the first LED bar illuminates. During the Charge process the first Completion Status LED will transition to green. As the charging process progresses, the other Completion Status LEDs will turn on until all 5 LEDs are on and the batteries are fully charged.

This feature provides at-a-glance charge status so you can see the charge level of the lowest battery.



Dual Mode Battery Status

Depending on the model, up to 3 LEDs can illuminate red indicating a wiring problem or fault with any of the individual battery(s) connected to the charger, including batteries that are under 2.5 VDC that should be tested by your local battery dealer before trying to charge them. See page 27 for further details.

As each bank completes its charge cycle, the dual mode status indicator will illuminate green to let you know the corresponding bank has completed its charge cycle.

Note: These will be off during charge and conditioning

Fully Automatic Charge Profile

The ProSportHD is designed for all 12 Volt Flooded (Lead-Acid), AGM and Gel batteries.

After completing the installation of your new ProSportHD Charger and with no wiring or connection errors, the battery(s) connected are greater than 2.5VDC and can accept a charge, the ProSportHD will sequentially perform the following 5-Stage Digital Performance Charging Process. If your battery(s) are full, the charger will start maintaining your batteries immediately after it finishes analyze mode.

5 Stage Performance Charging Overview

Stage 1 - Analyze & System Check OK: During this stage the ProSportHD Mode LED will pulse blue indicating it is analyzing all battery connections and ensuring each battery is capable of being charged. When completed successfully, the System Check OK indicator will illuminate green. This takes approximately 1 minute.

Stage 2 - Charge: During this stage the ProSportHD Mode LED will be solid red and the ProSportHD will use all of its available charging amps (as controlled by temperature) until the battery voltage is raised to the selected Battery Types absorption voltage (see page 14).

Stage 3 - Condition: During this stage the ProSportHD Mode LED will be solid amber and the ProSportHD will hold all batteries at the selected absorption voltage to complete charging while conditioning each battery connected for up to 3 hours as needed.

Stage 4 - Auto Maintain (Energy Saver Mode): During this stage the ProSportHD's Mode indicator will be solid green, indicating it is monitoring and auto maintaining your batteries when needed to maintain a full state of charge. At this time, the blue Power LED, green System OK and green Mode LEDs will remain on letting you know your batteries are ready when you are.

Stage 5 - Storage Recondition: During this stage the ProSportHD will enter into its once a month Storage Recondition mode. The green Mode LED will pulse indicating, while your batteries / boat are in storage, the ProSportHD is reconditioning all batteries for up to 3 hours once a month to extend battery life and provide maximum reserve power performance on the water.

Understanding Battery Types & Charger Settings

There are three primary types of batteries in the marketplace today; standard Flooded (Lead-Acid), AGM (Absorbed Glass Mat)/ high performance AGM, and Gel cell (Gelled Electrolyte Lead-Acid). Traditionally, the most common type of batteries used are Flooded (Lead-Acid) batteries. Almost all Gel cell batteries will state that they are Gel cell on the battery case or labels. Shown below are typical battery voltages at absorption and float levels.

LED	Battery Type	Charging Profile
Blue	Standard Flooded	14.6VDC Absorption 13.4VDC Float
Green	AGM (HP AGM*)	14.7VDC Absorption 13.6VDC Float
Yellow	GEL	14.1VDC Absorption 13.8VDC Float

*Only on ProSportHD20 and ProSportHD20 Global

NOTE: AGM (Absorbed Glass Mat) batteries are not Gel (Gelled Electrolyte Lead-acid) batteries. Gel batteries require a completely different charge profile that must be selected versus the out of the box factory setting. AGM batteries can accept the same charging profile as Flooded (Lead-acid) batteries.

Selecting a Charging Profile & Understanding Battery Types

Your battery charger is equipped with a user programmable battery type selector that is factory set for standard Flooded (Lead-Acid) batteries.

To select a different battery profile, use the following steps:

1. Power on the charger.
2. Press and hold the select button for more than 2 seconds to enter battery type select.
   Note: You can only enter battery type selection in analyze mode (Pulsing blue status LED)
3. Press and release the select button to cycle through battery types.
4. Press and hold the select button for more than 2 seconds to set the battery type.

Charging Your Batteries

The ProSportHD is designed to charge, condition, and auto maintain your batteries during short or long term periods of storage or non use. Please follow these steps each time you use your ProSportHD Charger:

1. Read manual and all warnings.
2. Review "Preparing to Charge a Battery" on page 6.
3. Ensure charger is installed as per the installation instructions.
4. Connect a heavy duty UL approved extension cord to the ProSportHD Charger first. After connecting the extension cord to the charger, proceed to plug the extension cord to a nearby GFCI protected outlet. Anytime power is applied to the ProSportHD the blue LED will illuminate.
5. The Mode LED will pulse blue indicating the charger is in Analyze mode. While the charger is analyzing your batteries, check that your have the correct battery profile selected. **This mode takes approximately 1 minute for the ProSportHD to do a self test, check all wiring connections, and make sure the batteries are greater than 2.5 Volts DC and are able to take a charge.**

   Assuming there are no battery faults, the green System Check OK LED will illuminate and the following charger operation sequences will proceed:

   Note: If there is a bad connection, reverse polarity, or a battery that is below 2.5 VDC that can not accept a charge, then a RED Battery Trouble status LED will illuminate for the battery that requires attention. See page 27 for further troubleshooting details.
6. The mode LED will transition to red indicating the charger has entered the Charging stage as outlined in the Multi-Stage Charging Overview section of this manual.

⚠ **CAUTION: HOT SURFACE.** Avoid contact during charging operation as unit will be hot to the touch but operating safely and properly.

7. The mode LED will transition to amber indicating that the ProSportHD will hold all batteries at the selected absorption voltage to complete charging by conditioning each battery for up to 3 hours as needed.
8. When the charge process is complete (or if your batteries are fully charged when you apply AC power) the mode LED will transition to green indicating your batteries are fully charged and the charger is in auto maintain mode.

Owner's Periodic Maintenance Guide

Item:	**Battery Connections**
Process:	Clean and tighten all battery connections. Follow battery manufacturer's instructions for cleaning a battery. Clean all battery terminals with a wire brush where required and tighten all battery connections.
When:	Monthly

Item:	**Battery Electrolyte**
Process:	Per battery manufacturer's instructions, monitor, and maintain proper levels of distilled water in each battery.
When:	Monthly / Before and after each trip or extensive use of batteries.

Item:	**DC Output Wiring**
Process:	Visually inspect all wiring for cuts and abrasions. Contact ProMariner if your ProSportHD On-Board Marine Battery Charger needs to be serviced.
When:	Monthly

Item:	**AC Power Cord**
Process:	Visually inspect the AC power cord. Confirm ground blade is present and all plug blades are in good condition and not bent out of place.
When:	Monthly

Item:	**Mounting Hardware Inspection**
Process:	Check all mounting hardware to ensure there is no loose hardware. Tighten where required.
When:	Monthly

Troubleshooting

No LEDs turn on when plugged in.

1. Check for AC power
    a. Check AC power quality by using a lamp or similar appliance to verify:
        i. The GFCI has not tripped.
        ii. The extension cord is of good quality with good connections.
2. If AC power quality is verified with a lamp or similar appliance and LEDs do not illuminate, contact ProMariner.

Red Fault LED is ON

1. Identify the bank LED that is on.
2. Check for the following on the corresponding bank for:
    a. Clean and tight connections.
    b. Blown fuses.
        i. Visually inspect fuses or test with multimeter.
    c. Reverse Polarity.
        i. Verify that your red lead is connected to the positive terminal and the black lead is connected to the negative terminal.
    d. Leads are across more than one 12 volt battery.
        i. Verify leads are connected to only one 12V battery.
    e. Low battery voltage
        i. Verify the battery voltage is above 2.5 volts DC.
3. If none of the above situations are found and the Red Fault LED is still on, contact ProMariner.

Charge Mode bar is green & Red Fault LED is ON

Your battery did not complete charging during a normal charge cycle.

1. Power off your charger
2. Allow batteries to rest for 1 hour
3. Power on your charger.
4. If the fault occurs again, have your battery tested.
5. If your battery is good, the charger may be undersized for your battery, contact ProMariner.

Contact ProMariner at 1-800-824-0524 from 8:30am to 5pm Eastern, by email at support@promariner.com, or visit us on the web at www.promariner.com

Regular Inspections

Each Trip	Trailer Marker and Signal Lights Electric Brake Operation Tire, Wheel and Suspension Conditions Loading Hydraulic Hose Condition Coupler/Hitch Condition Hitch Pins and Retainers Trailer Connection
Monthly	Hydraulic Fluid Level Battery Condition Spring Hanger and Suspension Bolts
Yearly	Hinge Lubrication Wheel Bearings Brake Condition Jack Gear Lubrication Coupler Lubrication

Cable Adjustment

When the grandstand is open, the cables at each bay must be tight before allowing use. Cables are factory-set to tighten when bleacher is fully open.

If adjustment needs is required for one or more cables do the following:

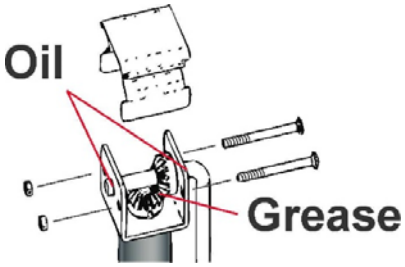
1. Loosen nut shown on outside with a wrench
2. Loosen inside nut (not visible) and turn to desired position.
3. Re-tighten outside nut to secure.
4. Check grandstand when set-up. All cables must be tight when each lower support pad is firmly resting on the ground.

Crank Jacks

Regular crank jack maintenance.

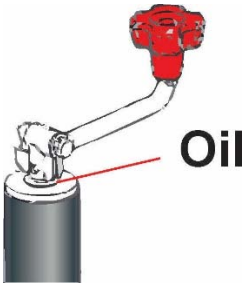
The following procedures should be performed at least annually.

For side-wind jacks, the internal gearing and bushings of the jack must be kept lubricated. Apply a small amount fo automotive grease to the internal gearing by first removing the jack cover. Rotate the jack drive to evenly distribute the grease.



Apply a lightweight oil to the drive shaft at both sides of the tube.

For top-wind jacks, apply a lightweight oil to the screw stem.



NOTIFICATION OF SAFETY DEFECTS

If you believe that your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying COMPANY NAME.
If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or COMPANY NAME. To contact NHTSA, you may either call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153), go to http://www.safercar.gov; or write to:
Administrator
NHTSA
1200 New Jersey Avenue S.E.
Washington, DC 20590

You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

TranSport Mobile Bleacher
Annual Inspection Checklist

Bleacher VIN: _____

Completed by _____ **Date** _____

	Safe Condition ☑	Serviced/Repaired 🔧

SUPPORT STRUCTURE

Inspect support members for damage and corrosion ***	☐	☐
Inspect welds for damage, cracks, and corrosion ***	☐	☐
Inspect bolted and pinned connections for security, play, wear, and damage **	☐	☐
Lubricate pivot and hinge points *	☐	☐
Inspect jacks – lubricate jack mechanism ⁂	☐	☐
Inspect seat & footboards – loose or damaged planks, missing end caps	☐	☐

Note – make inspections with bleachers in both open and closed positions

TIRES & SUSPENSION

Remove tires and inspect for tread depth, wear, cracks/cuts, overall condition	☐	☐
Remove wheel hubs - inspect brake components, check condition and operation	☐	☐
Inspect brake linings for wear and thickness	☐	☐
Clean, inspect, and lubricate wheel bearings – axle grease	☐	☐
Check axle and suspension bolt condition, connections, and security	☐	☐
Reinstall hub and check rotation	☐	☐
Reinstall tires – torque lug bolts to specified value	☐	☐
Check tire pressures	☐	☐

HITCH & TONGUE

Inspect and lubricate coupler ⁂	☐	☐
Inspect condition of safety chains	☐	☐
Inspect condition of emergency break-away cable	☐	☐
Inspect condition of 12VDC connector and cable	☐	☐
Inspect and lubricate tongue jack as required ⁂	☐	☐

HYDRAULIC SYSTEM

Hydraulic fluid filter service – See manual Section 7 for procedure	☐	☐
Check hydraulic fluid – change fluid if discolored or dirty	☐	☐
Check hydraulic fluid level – check when all hydraulic cylinders are fully retracted	☐	☐
Inspect hydraulic hoses and connections for damage, deterioration, and corrosion	☐	☐
Inspect hydraulic cylinders and pistons for corrosion, damage, condition, and leaks	☐	☐
Inspect battery condition – case and posts for cracks or corrosion	☐	☐

	☑	
Check battery charger – condition and correct operation	☐	☐
Inspect compartment overall condition – moisture, wires, dirt, corrosion	☐	☐

GENERAL CONDITION AND OPERATION

Evaluate unit for overall all squareness and alignment	☐	☐
Evaluate smoothness of operation while opening and closing	☐	☐
Monitor for noisy hinges or pivot points – lubricate as needed *	☐	☐
Verify operation of emergency break-away system	☐	☐
Connect to tow vehicle – check security and operation of coupler, chains, 12VDC plug	☐	☐
Verify correct operation of trailer marker and signal lights	☐	☐
Verify operation of trailer brakes	☐	☐

INSPECTION NOTES

The International Code Council, the organization setting industry design standards, requires **annual** vehicle inspection. (ANSI E1.21-2006)

Inspection - Equipment must have been inspected within the last **12 months** by a competent authority. If critical structural defects are found during the inspection; structural engineer approved repairs and procedures must have been completed in accordance with professional standards. Inspection, engineering approval (if applicable) and repair documents must remain available for presentation upon request. No part should be replaced unless it is Century Industries approved or supplied.

Service Notes

* **Recommended lubrication** for hinges/pivots is Dry Moly Lube (any reputable manufacturer). If Dry Moly Lube is not available, use white lithium grease.
** **Fasteners** - Replace all damaged (deformed, worn, or corroded) fasteners (pins, bolts, nuts, rivets, etc).
*** **Rust Damage** - Components that are rusted through or structurally damaged - replace or repair.
*** **Surface Rust** (no damage) - remove rust, wipe clean, and spray with cold galvanizing.
⁂ **Lubricate** – use axle grease

Section 8
Supplements

Section Contents

Outdoor Event
Emergency Response Planning

Recent high-profile incidents at outdoor public events have altered the regulatory focus and scrutiny of such events, increasing the necessity for pro-active planning to deal with potential emergency situations which might arise.

Risk Assessment - look at the whole picture:

- Consider all who could be affected by a hazard — exhibitors, entertainers, vendors, attendees, and staff
- Institute controlling efforts to diminish identified risks
- Establish the response measures to be executed in case of an emergency
- Identify first- and second-wave emergency services to be contacted

Plan &Train - Typical Potential Risks

- Severe Weather
- Fire
- Accident on Grounds
- Personal Injury/First Aid (illness, injury, heat related, attack)

Compliance with newly revised standards for outdoor public events consists of two parts.

Part 1 – Code compliant, properly maintained facilities (staging, seating, etc) properly erected by trained crews, operated by knowledgeable, trained staff.

Part 2 – An established, written emergency plan, training for all members of your staff, and follow your plan with progressive monitoring and appropriate implementation.

Check with your insurer to determine that you have adequate coverage for the type and size event that you are planning, and that you have addressed any concerns that they may have.

Make sure that all outside contractors and vendors offering event services have insurance coverage.

Preliminary Planning

Staff/Security Meeting – Plan:

Entrances/Exits
Shelter Locations & Access
Emergency Vehicle Access
Emergency Equipment
Communications – Staff Radios/Phones
Communications - Public
Weather Monitoring
Public Address Equipment
Public Relations – Designate Media Spokes-Person

Day(s) of Event

Staff/Security Meeting – brief:

Copy of Emergency Plan for Each Member
Identify Entrances/Exits
Identify Emergency Shelter
Identify Emergency Equipment Location(s)

Defibrillator
Fire Extinguisher
Cold Water/Ice

Verify weather monitoring system
Emergency Services Contacts
Provide Copy of Emergency Plan to Each Vendor

Safety is First Priority

The following page offers a sample template for establishing staff procedures for your event. Adjust the procedures and actions to meet the specific environment and activities of your event(s) and local public-safety agency requirements. This information and provided outline are intended to serve only as a guide, and are not offered as all inclusive. Consult your local requirements when preparing your plan.

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Event
Emergency Response

Event Date(s)	Start/End Times

Weather

- Monitor Weather
- Notify committee/vendors/ attendees of conditions
- Detail severity & timeline of storm and related actions
- Identify exits

Wind Speed MPH	ACTION
_____	Move Crowd Away From Stage
_____	Remove Banners
_____	Remove Speakers
_____	Lower Stage Canopy
_____	Direct Attendees to Exits

- Direct Attendees to Take Cover
- Direct Attendees to Exits
- Staff Go To Shelter

Accident

- Contact Appropriate Emergency Service(s)
- Inform Staff & Security of Situation
- Go to incident area
- Clear crowd from area
- Clear path for emergency equipment
- Do not alarm attendees
- Answer all questions honestly with limited detail – direct questions to designated PR member

Fire

- Contact Fire and Police
- Go to incident area
- Clear crowd from area
- Clear path for emergency equipment
- Notify staff/vendors/attendees of condition

Monitor Situation

- Do not alarm attendees
- Update staff and security
- Answer all questions honestly with limited detail – direct questions to designated PR member

Personal Injury

- Contact Appropriate Emergency Service(s)
- Inform staff and security
- Go to incident area
- Clear crowd from area
- Clear path for emergency equipment if appropriate
- Do not alarm attendees
- Update staff and security
- Answer all questions honestly with limited detail – direct questions to designated PR member

Emergency Contact Phone Numbers

AGENCY	NUMBER
Police	
Fire	
EMS	
Event Coordinator	
Media Relations	

Insert Event Grounds Map

September 21, 2021

schaefer CONNECT

Century Industries, LLC
P.O. Box U
Sellersburg, IN 47172

Re: TranSport Mobile Bleacher/Grandstand Models TSP15-450, TSP15-390, TSP12E-45, and TSP12E-39 manufactured after June 2021, starting with unit #3530
Schaefer Project Number: 21-1345

Schaefer has analyzed and reviewed the structural design of the Century Industries TranSport Mobile Bleacher:

Models: TSP15-450 and TSP15-390 (15 rows of bench seating with center aisle)

Models: TSP12E-45 and TSP12E-39 (12 rows of bench seating with center aisle and elevated walkway, front guardrail, and stairs at each end)

TSP15 and TSP12E series have been designed in accordance with the requirements of the Standard for Bleachers, Folding and Telescoping Seating, and Grandstands (ICC 300-2017), the ASCE Standard 7-16, and the 2018 International Building Code for the following design loads:

Vertical Load on Seats and Footboards = 120 lb/ft (179 Kg/m)

Minimum Vertical Load = 100 psf (488 Kg/m_2)

Lateral Load on Seats and Footboards:

Parallel to seats and footboards = 24 lb/ft (36 Kg/m)

Perpendicular to seats and footboards = 10 lb/ft (15 Kg/m)

Wind Load – Basic Wind Speed (Exposure C) = 115 mph* (51 m/s)

Horizontal Load at Top of Handrails and Guardrails = 50 lb/ft OR 200 lb (worst case) (74 Kg/m) OR (91 Kg)

*See following section for allowable wind loads

The analyses of the TSP15 and TSP12E Series are based on the final fabrication drawings and 3-dimensional models provided to Schaefer by Century Industries on May 6, 2021. If any modifications are made to the structure, a review shall be conducted by a professional engineer and Schaefer shall be notified.

schaefer-inc.com
537 East Pete Rose Way, Suite 400
Cincinnati, Ohio 45202
800.542.3302

schæfer

Models TSP15-450, TSP15-390, TSP12E-45, and TSP12E-39 can each safely withstand service level wind speeds (3- second gusts) indicated below.

	Max Wind Speed with anchorage	Max Wind Speed without anchorage
For Stress Limitations:	67.5 mph (30 m/s)	40 mph (20.5 m/s)
To Maintain a Factor of Safety of 1.5 against Overturning:	67.5 mph (30 m/s)	40 mph (20.5 m/s)

Tie-downs are located on the (6) places on the frame: (4) on the base trailer frame and (2) in the lower bleacher section. Please see the attached drawings which provide the location of these points. Additional anchorage at each of these points shall be designed to resist the loads indicated on the attached drawings. Tie downs must be used to achieve the reported max wind speed with anchorage values listed above.

Bleacher High Wind Action Plan (HWAP):
Evacuate people from bleacher before wind approaches 25 mph.
All people must take shelter at least 100 feet away from bleacher.

Secure Bleacher before wind reaches 30 mph:
If bleacher is properly anchored, leave it in place (whether bleacher is open or closed).
If bleacher is NOT properly anchored:

- Close the bleacher.
- Couple the bleacher to a heavy truck.
- Park truck and bleacher in a safe shelter from the wind.
- If no shelter is available, point truck & bleacher heading toward the wind.
- All people must seek shelter at least 100 feet away from truck and bleacher.

The grandstand must be set-up, maintained, and operated by trained technicians in a safe manner. The grandstand user must monitor the weather conditions and adhere to set-up and take-down procedures enumerated in the User Manual. Caution should be exercised with respect to soil bearing conditions at set-up location, grandstand configuration and equipment loading, environmental hazards, wind conditions, and safety of the grandstand occupants and passerby.

This equipment must have been inspected for structural condition in the last 12 months by a competent authority. Each grandstand should be reviewed before and after every event for damage or critical defects. Damage must be repaired, approved, and documented by a qualified professional. Records should be kept of annual inspections as well as any discovered and repaired damage.

This letter shall not be considered a permit document for specific site events. Site conditions, along with bearing conditions of the bleacher, shall be reviewed by a professional engineer on a case by case basis.

schæfer

Sincerely,

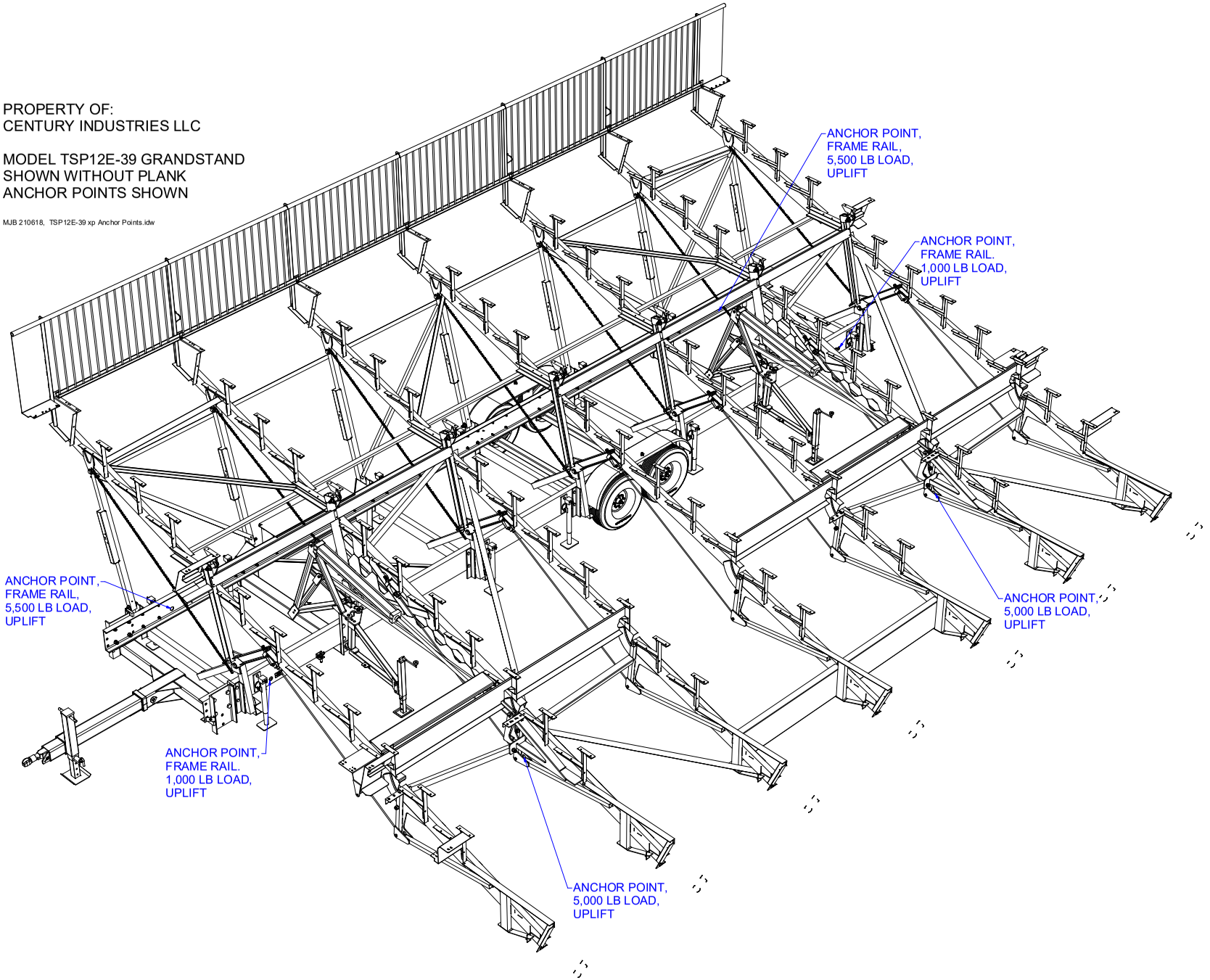
Laura Goodman, PE
Project Manager

Nathan R. Walsman, PE (IN)
Principal

PROPERTY OF:
CENTURY INDUSTRIES LLC

MODEL TSP12E-39 GRANDSTAND
SHOWN WITHOUT PLANK
ANCHOR POINTS SHOWN

MJB 210618, TSP12E-39 xp Anchor Points.idw



TSP15
MOBILE GRANDSTAND

Quick Guide

Setup

- Extend tongue jack ❶ and disconnect tow vehicle.
- Stow safety chains, 12V connector, emergency breakaway cable. Caution - Do not remove breakaway pin from switchbox.
- Level grandstand lengthwise using tongue jack (adjust to ground slope)
- Rotate leveling/support jacks ❷ to vertical, re-pin, extend jack legs to ground.
- Unpin outrigger jacks ❸ (2) places, swing out, insert pins, extend jack legs to ground.
- Open lid on mechanical compartment.❹ Rotate timer switch to **"ON"** position. Remove control from compartment.
- Visually check that area is clear.
- Push **"CLOSE"** button to fully close bleacher, then push **"OPEN"** button until grandstand is fully extended.
- Secure lock chains ❺ along rear of grandstand.
- Set lower guardrails at each end, ❻ remove pin, swing lower guardrail into place, pin in place and install keeper.
- Unpin and remove aisle handrails ❼ from stored position and insert into aisleway.
- Check leveling/support jacks ❷ and reset as required.
- Rotate timer switch to **"OFF"** position.
- Stow control pendant, close compartment lid and secure. ❹

Close

- Remove aisle handrails,❼ return to storage position, secure with pin.
- Fold lower guardrails at each end,❻ remove pin, swing lower guardrail rearward, pin in place and install keeper.
- Release and store all rear lock chains.❺
- Open lid on mechanical compartment.❹ Rotate timer switch to **"ON"** position. Remove control from the compartment.
- Visually check that area is clear.
- Press and hold **"CLOSE"** button until grandstand is fully closed.
- Rotate timer switch to "OFF" position. Store control pendant.❹ Close compartment lid.
- Extend tongue jack leg to ground contact.
- Retract outrigger jack legs, unpin, swing to travel position, repin ❸ (2) places.
- Retract, rotate to horizontal, and repin all frame support jacks.❷
- Connect tow vehicle - coupler, safety chains, 12V connector, emergency breakaway cable.
- Check coupler, signal lights and brake operation prior to towing.

Read and understand operation guide prior to towing and operation.

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