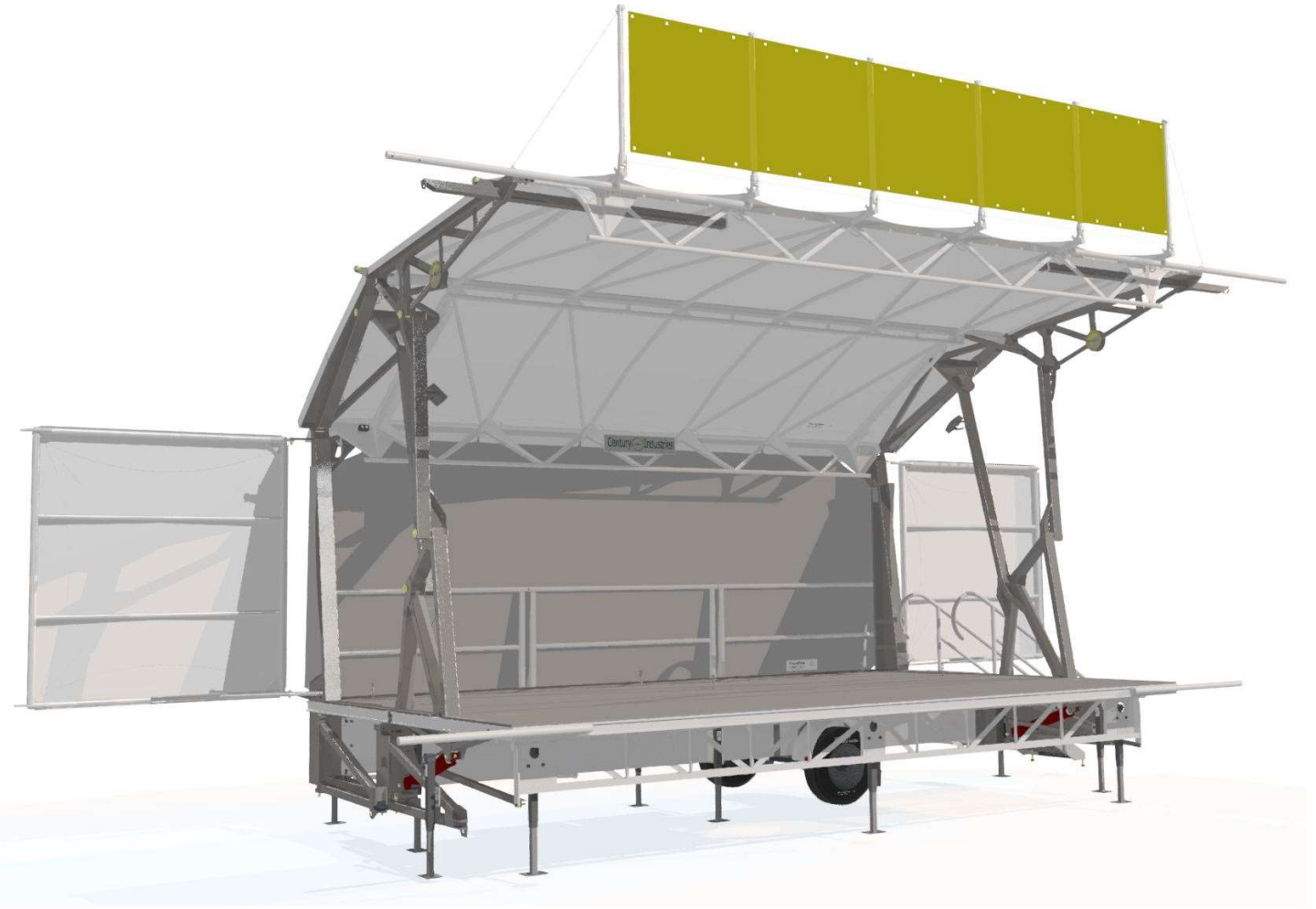
Century Industries Models:
FR4320, FR4324, and FR4332
Mobile Bandstand Stages
User Manual



Revision 2, April, 2019, clarified wording on combined loading p6, added occupancy load section p7, new 120V schematics p42-43, corrected reservoir check notation p44, added details to lubrication p45, revised battery charger info p48, added inspection info & log p53.

Revision 3, Aug 1, 2019, corrected hydraulic jack option diagram p36.

Revision 4, Sept 10, 2019, Changed “Lower Roof” wind speed from 50 to 40mph p8 & 9. Revised schematic p34 & 39. Added schematic p37.

Section 1, General Information

Overview

Century's FR4332, FR4324, and FR4320 mobile stages provide a covered 32ft, 24ft, or 20 ft long x 15.5 ft deep main stage deck. A powered, canopy, rising to 13.8 ft above the stage deck covers the main stage area.

The FR4300 is designed for fast, efficient set up, minimizing the time and labor required. A self-contained hydraulic power system provides stage operation. Base stage setup requires approximately 5 minutes by two technicians.

The FR4300 stage is equipped with a leaf spring axle suspension and 2-5/16" Ball (or pintle) hitch and meets DOT requirements for highway transport. When folded, it forms an enclosed trailer 34.5ft, 26.5ft, or 22.5ft (40ft, 32ft, or 28ft including hitch) x 8.4 ft wide x 13.2 ft high.

Incorporated into the canopy are mounting provisions for lighting and sound equipment.

Features

- 32ft, 24ft, or 20ft long x 15.5 ft deep fully covered stage deck
- Canopy height – 13.8 ft (above stage deck)
- No corner support posts for increased sight lines.
- Canopy/Roof can be quickly and easily lowered during rain or high wind conditions
- Endwalls/Media Panels at each stage end – folds for transport
- Speaker mounts at each end of stage
- Folding 2-5/16" Ball or Pintle Hitch.
- Aluminum rear guardrails
- Weather resistant aluminum and galvanized steel structure
- Stage deck support/leveling truss speeds setup

Construction

Century's FR4300 mobile stage is designed and built to perform as an all-weather, outdoor stage. It is fabricated from weather resistant materials and designed to reduce maintenance requirements in an outdoor environment.

Support Structure

Support columns, canopy support linkage, end deck supports, and suspension attach points are fabricated from galvanized steel.

Mainframe, roof canopy, and deck support structure are welded aluminum construction for weather resistance and reduced weight.

Stage Deck

Stage deck is fabricated from ¾" exterior MDO plywood fastened to aluminum deck support structure.

Stage deck has flat gray painted top surface. Other colors optional.

Stage Canopy

Canopy covering is a weather resistant 18 oz PVC coated polyester (NFPA 701) tensioned to the canopy support structure with seamless roof hinges.

Canopy support is provided by a welded, all-aluminum structure with support members spaced 48” O.C.

Three (3) full-length aluminum trusses with 2” O.D. pipe, aluminum pipe for hanging light fixtures.

Media Panels/Endwalls

Media panels are provided at each end of the stage and are multi-functional. 1. They can be positioned at multiple angles for backdrop. 2. They also can be folded to the back side of the stage or folded on the top of the roof canopy if you have a lack of space. 3. They enclose the stage ends for transport.

Actuation System

A self-contained 12VDC powered hydraulic system operates the stage components during setup and teardown. In one motion, hydraulic cylinders simultaneously tilts the roof, opens the canopy panel, and lowers the stage deck.

The hydraulic pump and reservoir are contained in a main-frame mounted, locking mechanical compartment for security and easy service access.

Leveling/Support System

Mounted on the main frame are four (4) crank-style primary leveling/support jacks. Jacks are bolted to main columns. Jacks are positioned so that they do not protrude above the stage deck.

Two (2) frame-mounted support jacks provide additional support and load distribution.

Folding stage deck is equipped with a support truss that automatically extends as the deck lowers, remaining perpendicular to the ground. In addition to providing deck support, the truss maintains a flat stage deck, and significantly simplifies and speeds deck setup and leveling.

Support truss is equipped with three (3) support/leveling jacks.

Electrical

12VDC – deep cycle battery provides self-contained power for operation of the hydraulic actuation system and optional 12VDC compartment and area lighting.

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.

120VAC – basic electrical power is provided through a 125 amp capacity breaker panel mounted on side of main stage frame. A 50ft 10/3 power cord supplies electric power to the stage whenever plugged into a power source.

120V LED service flood lights mounted on canopy support structure illuminates the stage interior.

Stairs

Base stage is equipped with a 36” wide aluminum stair with handrails. Stairs feature welded aluminum construction, diamond-plate treads, fully enclosed risers (ADA), and adjustable leveling legs.

Stairs attach to stage deck perimeter rail.

Storage

Base stage has one (1) storage compartment with lockable door 14” high x 36” wide x 14” deep bolted to mainframe.

Additional storage compartments are available.

Interior Cargo – when fully collapsed, the remaining clear center space is 8.5’ high x 6.5’ wide x 29.8’, 21.8’, or 17’8’ long.

Under-Frame Cargo – Optional compartment is available below stage deck (inside frame tail end) for storage of up to four 4’x8’ portable stage sections. Clear space is 1.8’ high x 4.2’ wide x 8.5’ long.

Safety

Canopy/Roof/Deck Support Locks – when extended, the stage deck is supported by safety lock bars with pins and hydraulic cylinders with check valves. The stage is designed such that locking the stage deck locks the entire stage…deck, roof, and canopy.

Finish

Corrosion protection for all steel components will be provided by either paint or hot-dipped galvanizing.

Suspension

Axles – 8,000 lb rated capacity axle leaf-spring suspension, and four-wheel electric brakes. (Single axle for FR4320 & FR4324…Tandem slipper spring axles for FR4332)

Tires – 235/75R17.5 – Load Range “H” or “J”, 6005 lbs each at 128 or 127psi

(2 total for FR4320 & FR4324…4 total for FR4332)

Towing Hitch

Stage is equipped with 2-5/16” ball coupler (optional 3” pintle ring) coupler. Hitch assembly unpins and folds flat against the stage. Audience-side hitch swings toward the audience to provide support while opening the stage.

Options

Optional features and equipment add utility and capability to stage.

Extension Sections

4 x 8 stage extension sections expand main stage deck area.

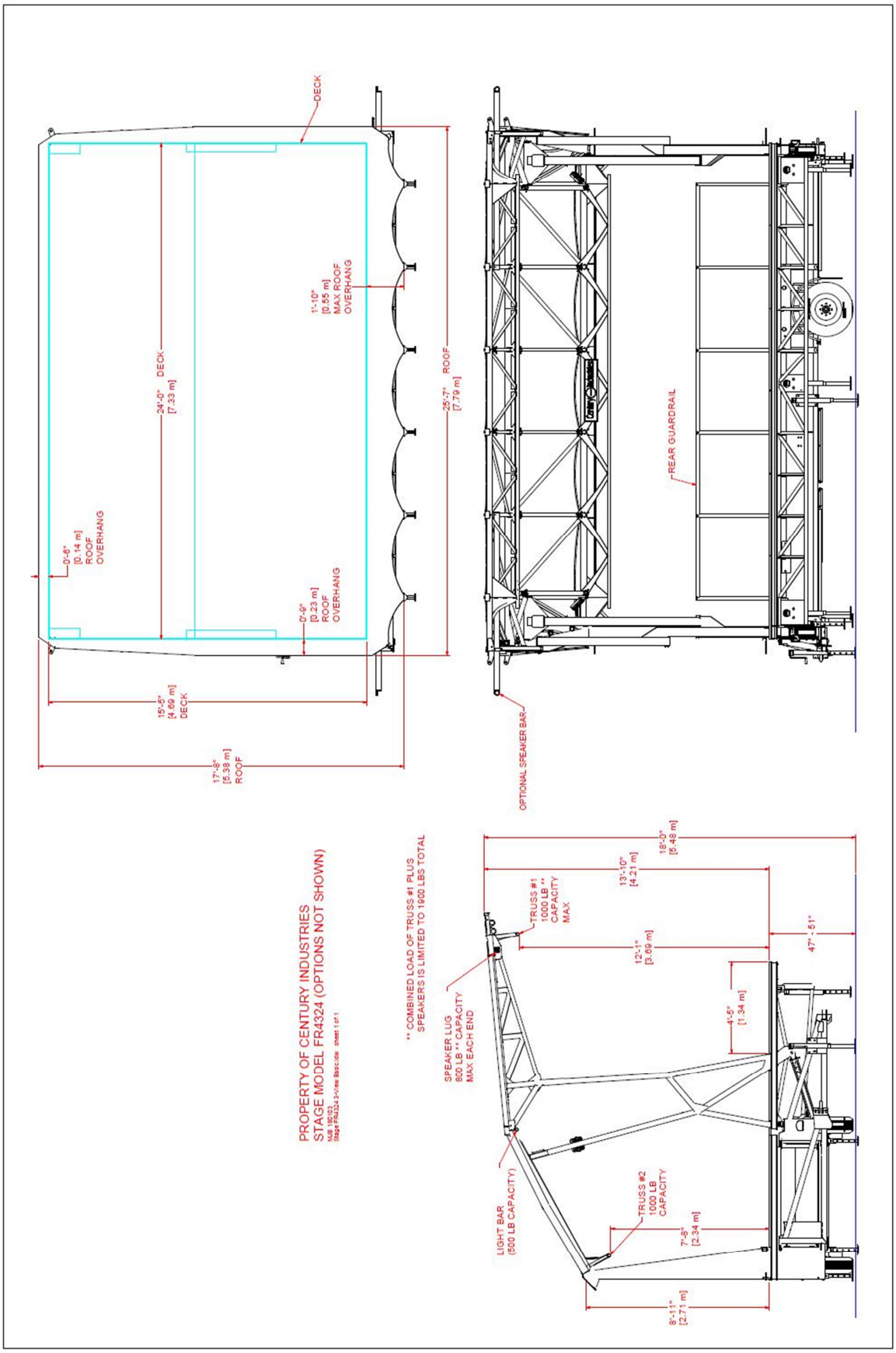
¾“ MDO plywood deck surface is attached to welded aluminum support structure.

4” high aluminum perimeter rail with integral lock channel allows attachment to stage sections, main stage deck.

Telescoping support legs install in section corners. Thread adjustable feet allow precise leveling.

Each section includes interlocking components and clamps.

Three-View Drawing of FR4324 (FR4320 is 4' shorter…FR4332 is 8' longer)



FR4300
Dimensions and Weights

Stage Dimensions	Specification	Ft -In	M
	Stage Deck – Width (FR4320)	20’ 0”	6.10
	Stage Deck – Width (FR4324)	24’ 0”	7.33
	Stage Deck – Width (FR4332)	32’ 0”	9.76
	Stage Deck – Depth	15’ 5”	4.69
	Stage Deck to Canopy Roof Max	13’-10”	4.21
	Stage Deck to Canopy Roof Min	8’-11”	2.71
	Stage Deck to Bottom of Rear Truss	7’ 8”	2.34
	Stage Deck to Ground – Max	4’ 3”	1.29
	Stage Deck to Ground – Min	3’ 11”	1.19
	Canopy Width (FR4320)	21’ 7”	6.58
	Canopy Width (FR4324)	25’ 7”	7.79
	Canopy Width (FR4332)	33’ 7”	10.24
	Canopy Depth	17’ 8”	5.38
	Front Canopy Overhang	1’ 10”	0.55
	Rear Canopy Overhang	0’ 6”	0.14
	Side Canopy Overhang (each end)	0’ 9”	0.23

Stage Load Ratings	Specification	Lbs	Kg
	Stage Deck Live Load	100 lbs/ft^2	488 kg/m^2
	Canopy Live Load	7 lbs/ft^2	34 kg/m^2
	Front/Downstage Truss	** 1,000	453
	Rear/Upstage Truss	1,000	453
	Middle Light Bar – (at canopy hinge line)	500	226
	Speaker Mount – two (2) @	** 800 ea	362 ea
	**** Total Load of Front Truss plus speakers ***shall not*** exceed 1980 lbs.**		

Trailer Dimensions	Specification	Ft –In	M
	Body Length (FR4320)	22’ 5”	
	Body Length (FR4324)	26’ 5”	8.06
	Body Length (FR4332)	34’ 5”	
	Overall Length (including hitch FR4320)	27’-10”	
	Overall Length (including hitch FR4324)	31’-10”	9.69
	Overall Length (including hitch FR4332)	39’-10”	
	Overall Width	8’ 4”	2.54
	Overall Height	13’ 2”	3.99
	Coupler Height	1’ 7”	0.48

Trailer Load Ratings	Specification	Lbs	Kg
	FR4320		
	GVWR	9876	4479
	GAWR	8000	3628
	Hitch GWR	1540	699
	Empty Weight – Base Stage	6920	3138
	Useful Load	2956	1340
	FR4324		
	GVWR	9876	4479
	GAWR	8000	3628
	Hitch GWR	1540	699
	Empty Weight – Base Stage	7320	3320
	Useful Load	2556	1159
	FR4332		
	GVWR	18000	8164
	GAWR	8000	3628
	Hitch GWR	1540	699
	Empty Weight	8320	3773
	Useful Load	6520	2957

See Limitations section for Equipment Loading capacities and windy conditions recommendations.

Occupancy Load

2018 IBC, Table 1004.5 states that the maximum floor area allowances per occupant for Stages and Platforms is 15 square feet.
FR4320 : 20 people maximum
FR4324 : 24 people maximum
FR4332 : 32 people maximum
4’ x 8’ portable Stage Section : 2 people maximum each stage section
2018 IBC, Table 1006.2.1 states that the maximum occupancy load for one exit is 49 people. If occupancy is over 49, two exits are required.

Section 2, Limitations

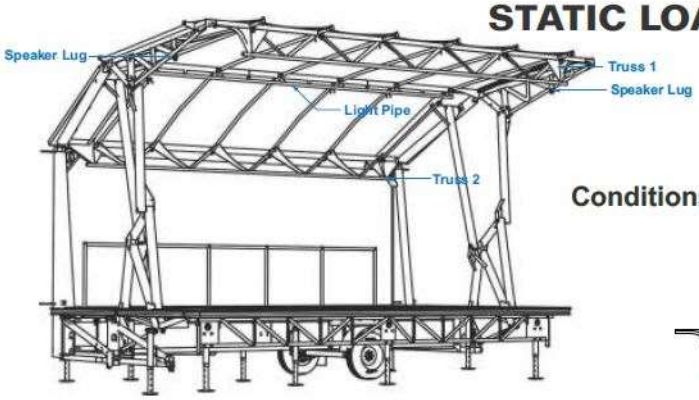
The stage must be set-up, maintained and operated by trained technicians, in a safe manner. The stage user must monitor weather conditions and adhere to set-up and take-down procedures enumerated in the user manual. Caution should be exercised with respect to soil bearing conditions at the set-up location,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

Canopy Equipment Loading

FR4300 Series Roof Canopy Loading - Quick Guide

Reference Stage Operation Guide for Comprehensive Stage Operation

STATIC LOADING LIMITATIONS

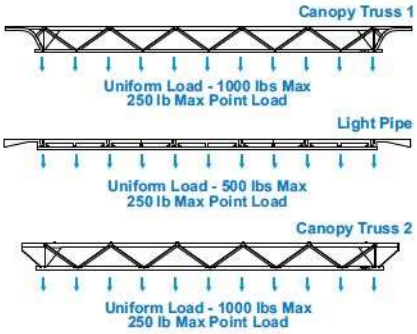


Conditions
1) Deck lowered and leveled
2) All jacks set
3) Canopy fully raised

Truss 1 *	1000 lbs (450 kg)
Truss 2	1000 lbs (450 kg)
Light Pipe	500 lbs (227 kg)
L Speaker Lug	800 lbs (363 kg)
R Speaker Lug	800 lbs (363 kg)
Total	3480 lbs (1578 kg)

*ALTERNATE FRONT CANOPY LOADING

Truss 1 + TBars	1980 lbs (898 kg)

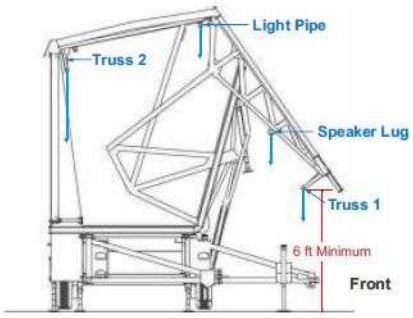


LIFTING LOAD LIMITATIONS

Conditions
1) Hitch pivoted toward audience and pinned
2) Deck lowered and leveled
3) All jacks set
3) Truss 1 - Min. 6ft (1.83m) above ground

MAX LOAD CAPACITY

Truss 1 L Speaker Lug R Speaker Lug	1000 lbs (450 kg)
Light Pipe	500 lbs (227 kg)
Truss 2	1000 lbs (450 kg)
Total	2500 lbs (1133 kg)



WIND LIMITATIONS

MAX STRUCTURAL WIND SPEED

Base Stage	90 mph (145 kph)
Base Stage w/ backwalls	60 mph (96 kph)

OVERTURNING WIND SPEED

Base Stage	66 mph (106 kph)
Base Stage w/ backwalls	51 mph (82 kph)

Safety Wind Speeds

	MAXIMUM WIND SPEED
Setup Stage	40 mph (64 kph)
Release backwalls, equipment & banners	30 mph (48 kph)
Lower roof canopy	40 mph (64 kph)

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Note – If the equipment that you wish to install exceeds the limitations for dynamic loading, consider raising and locking the roof with a partial equipment load, and then winching the remaining equipment into position. Also note that when lowering a roof that has been loaded in this manner, it will be necessary to lower the winched equipment prior to unpinning and lowering the roof.

Operational Wind Limitations

While the stage's chart lists the maximum structural design loads for the stage, there is a functional difference between what the stage can handle structurally and what you should attempt.

Possible versus Prudent – Think of the work accomplished by a sailboat's sail in a moderate wind. Note that the stage's roof covering and windwall/backdrop are considerably larger than the sails found on smaller boats. Just because the limitations table shows that the stage's structure is capable of withstanding a given wind speed, it does not mean that it is smart for one or two people to attempt to install or otherwise wrestle a backdrop into or out of position under certain wind conditions.

Structural versus Safety – The following wind speed guide is provided as suggested maximum safe wind speeds for stage operation. While the stage structure is capable of accommodating these suggested speeds, it may not be safe or even possible for you and your crew.

Safety Wind Speeds

Maximum Wind Speed to Open Stage – Base Stage	40 mph (64 kph)
Wind Speed by which banners, windwall/backdrop should be released	30 mph (48 kph)
Wind Speed by which roof should be lowered	40 mph (64 kph)

Design Structural Wind Speeds

FR4320, FR4324, FR4332

Maximum Wind Speed – Base Stage	90 mph (145 kph)
Maximum Wind Speed – Stage with windwall/backdrop and rigging	60 mph (96 kph)

FR4320

Overturning Wind Speed – Base Stage	67 mph (107 kph)
Overturning Wind Speed – Base Stage with windwall/backdrop	52 mph (83 kph)

FR4324

Overturning Wind Speed – Base Stage	66 mph (106 kph)
Overturning Wind Speed – Base Stage with windwall/backdrop	51 mph (82 kph)

FR4332

Overturning Wind Speed – Base Stage	56 mph (90 kph)
Overturning Wind Speed – Base Stage with windwall/backdrop	48 mph (77 kph)

Section 3

Stage Set Up Procedure

CAUTION	**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 FR4300 series mobile stage features an unique hydraulically actuated dynamic operating system that allow quick, easy set up with a minimum of labor. A key feature is an interconnect that simultaneously lowers the stage deck as the roof canopy opens.

Prior to opening the stage or lowering the canopy, determine that wind speeds are within the acceptable range.

1 -Initial Positioning

Position the stage in the desired event location

CAUTION

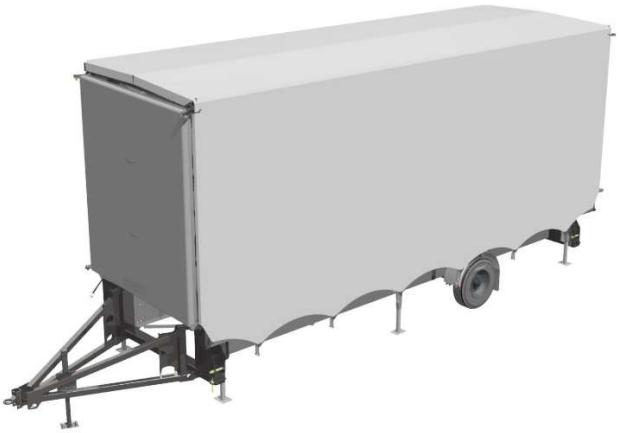
Note – the left side (driver side) of the trailer opens to form the audience side of the stage.

1. Chock trailer tires
2. Lower tongue jack
3. Release coupler
4. Disconnect 12VDC and emergency break-away cables
5. Raise tongue until coupler clears hitch
6. Remove tow vehicle

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

2 - Leveling

1. Using the tongue jack, lower tongue until stage is level lengthwise.
2. Lower four corner jacks' drop legs and re-pin.
3. Crank four corner jacks to the ground using a ½" square drive extension and ratchet. Do NOT use an impact drill. (use remote for Hydraulic jack option)
4. Raise stage enough to relieve the suspension slightly.
5. Using bubble levels, determine highest corner and leave that jack alone.
6. Raise other three corners until stage is level.



Wireless Remote Operation

Stage is equipped with a wireless remote control for the hydraulic system allowing the operator to freely move around the stage for optimum view all of the hydraulic stage components. This permits unrestricted operator movement for optimum viewing positions while operating the stage.

Note – To prevent battery from being discharged while not in use, the wireless receiver mounted in the stage has an electric circuit controlled by a timer switch. Timer must be set **ON** before stage 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 stage cannot be accidentally operated while in the **OFF** mode.

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

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

Wireless Remote (Standard)

To Open stage, hold “START” while pressing “UP”.

START + UP

To Close stage, hold “START” while pressing “DOWN”

START + DOWN

Optional Wireless Remote – For stages equipped with the optional Hydraulic Leveling Jack package

To activate the remote control Operation System

Rotate the timer/switch, located at the stage corner, clockwise to the **ON** position.

Remove the Wireless Controller from the stage compartment

To activate the wireless controller:

1. Place the switch at the end of the controller in the **ON** position
2. Rotate the large red button clockwise
3. Push the panel button in the lower left column

Upon successful completion of these steps you will be rewarded by a beep.

Hint – Orient the wireless controller so that the antenna end is pointed in the same direction as the trailer hitch.

Whenever the remote is not in use, return it to the **OFF** position to prevent unintended stage movement.

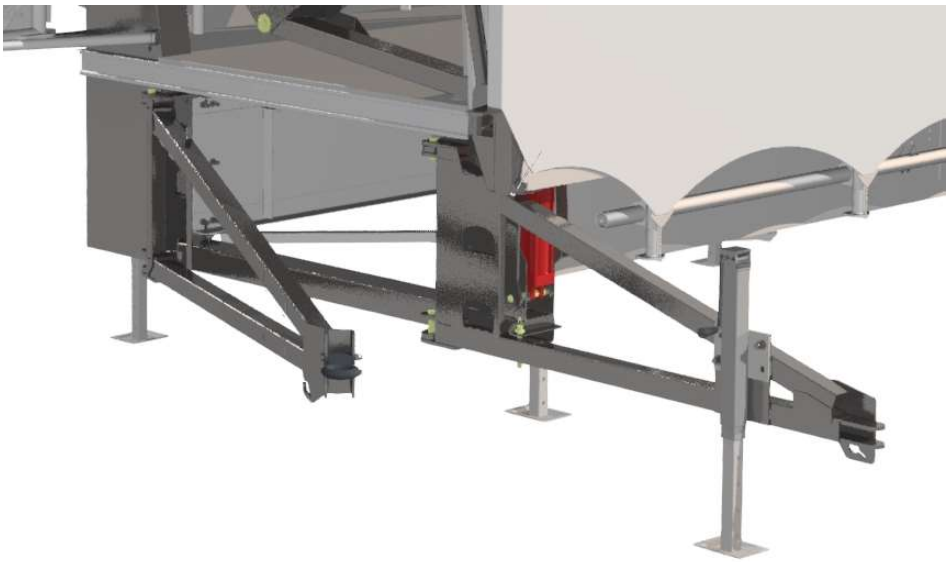
Hint – Should the wireless system ever fail to operate, there is a manual over-ride located in the mechanical compartment. See the Troubleshooting section for more details.

1. Remove end-door pins (top & bottom).
2. Release lock bar pin on inside/bottom of door.
3. Open door to desired position.
4. Swing lock bar and secure pin.

Do not permit end-doors to swing freely. Always maintain a firm hold on the end-door until support brace is in place and secured. Otherwise wind may cause damage and/or injury.

4 – Set Remaining Jacks

1. Lower Mid-Frame Jacks.
   Lower two (one each side) mid-frame jacks' drop legs and re-pin.
   Crank jacks to the ground using a ½" square drive extension and ratchet.
2. Secure Hitch/Outrigger
   Remove pin connecting two hitch sides.
   Swing driver-side hitch (with jack) toward audience.
   Pin jack in-place. *(This will engage the limit switch to allow hydraulics to work.)*
   Lower hitch jack to the ground securely.
   Swing other passenger-side hitch toward audience.



5 – Partially Open the Stage

Unlock and open hydraulic box.

Turn timer knob to about 10 minutes.

Remove remote.

Make sure area is free and clear.

NOTE: Limit Switch (at front hitch) must be engaged before hydraulics will work.

With remote, hold “START” while pressing “DOWN” or “CLOSE” to equalize hydraulic system.

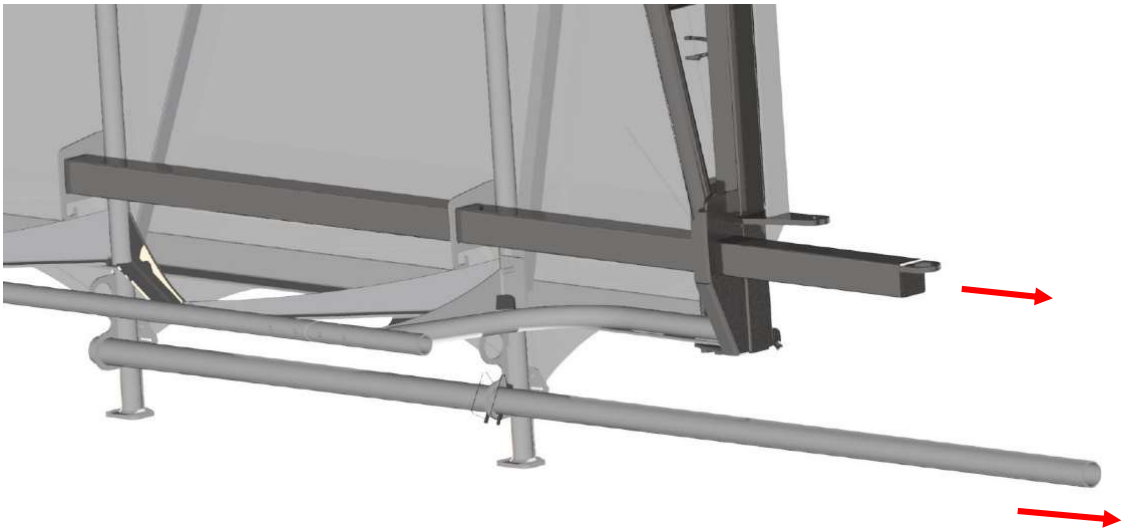
Hold “START” while pressing “UP” or “OPEN” and open stage about two (2) feet.

Pull out Speaker Bar Tube about two (2) feet until it stops (each end).

Do NOT Hang speakers yet.

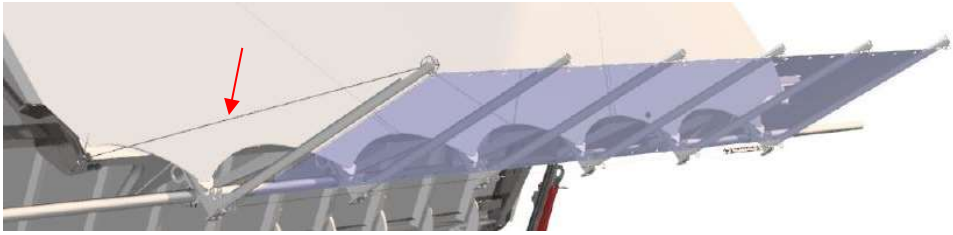
Pull out Optional Vertical Hanging Banner Pipes (each end)

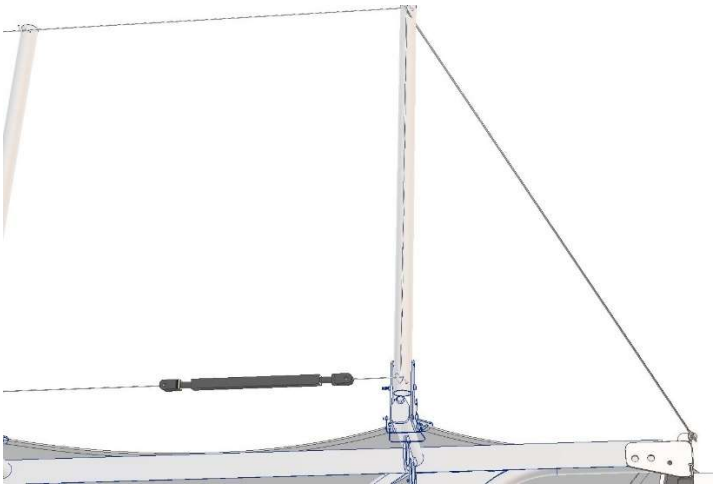
- Unpin pipes at each end.
- Slide pipes out into position.
- Re-pin pipes.
- Do NOT hang banners yet.



6 – Install Optional Marquee Banner

a. Install Each Banner Post and secure with two pins.
b. Secure hitch & tail end posts with 5 ft long diagonal wire rope from the top of the post to the corner of the stage.
c. Route long wire rope through “pigtails” to make a large rectangular loop and connect ends to the turnbuckle.
d. Tighten long wire rope by twisting turnbuckle.
e. Using wire ties, secure marquee banner (through grommets) to perimeter cable.





7 – Install Speakers, Banners & Lights

Open stage until lower truss pipe is six (6) feet or more from the ground.

Secure speakers to speaker lugs as needed (each end).

Secure vertical banners to banner pipes.

Secure lights as needed to truss pipes.

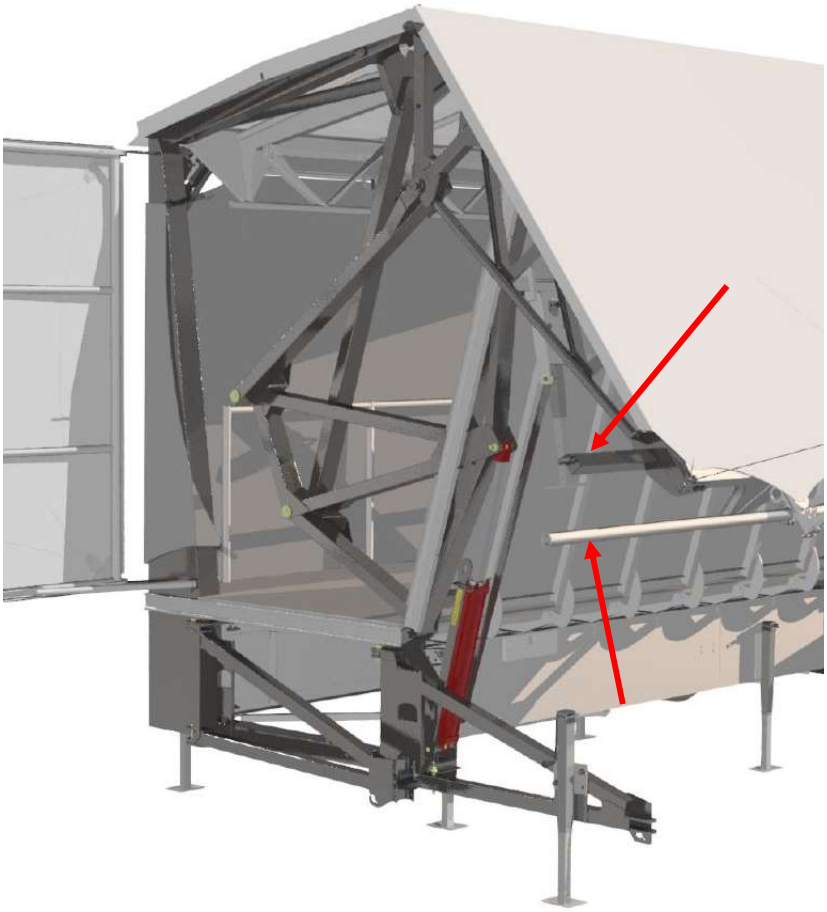
Lighting and sound equipment may be either canopy lifted or winched into position. Consult the Limitations section to determine loading capacities and limitations.

If it should be necessary to lower the canopy, the winched-in-place equipment must first be lowered before initiating the canopy lowering procedure.

If equipment is to be canopy-lifted, it is important that the canopy truss be **at least 6 feet (1.83m)** from the ground during equipment installation or removal.

Read and understand the section covering lifting and lifted load capacities prior to installation of equipment loads.

Read and understand the section covering wind speed limitations.



8 – Open the Stage

Turn timer again if needed.

Make sure area is free and clear.

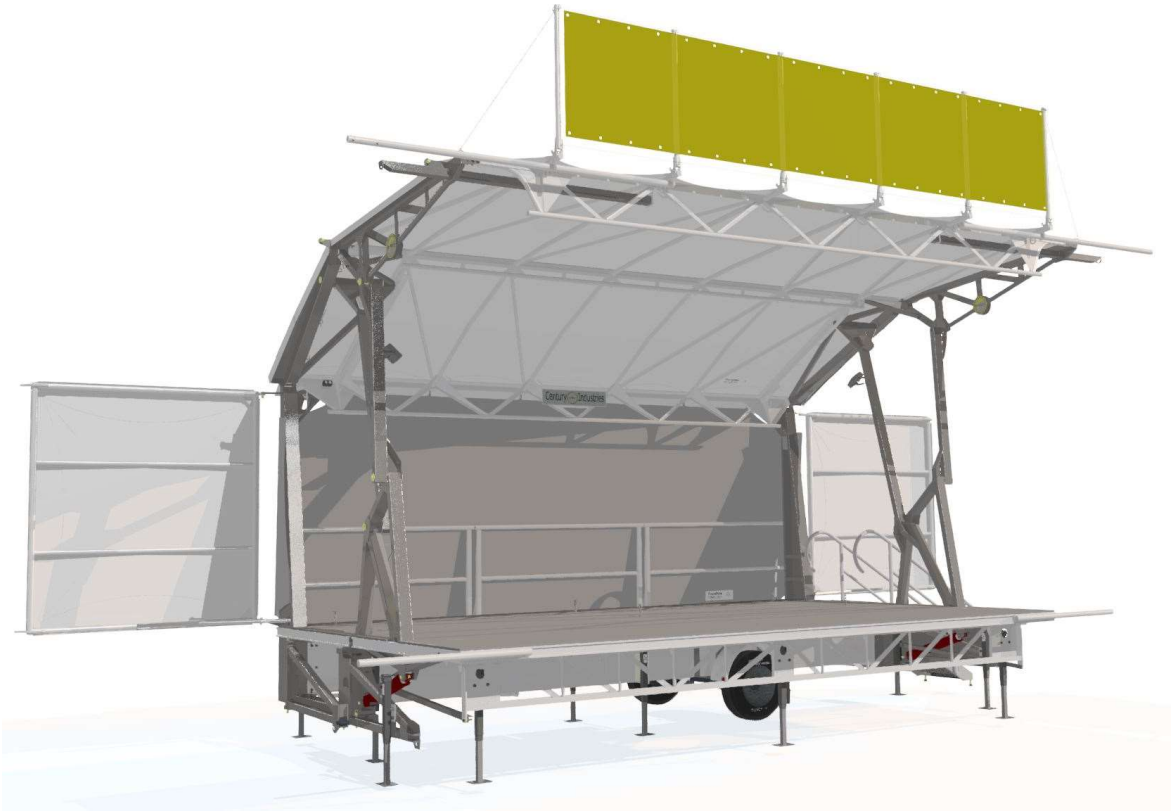
NOTE: Limit Switch (at front hitch) must be engaged before hydraulics will work.

Hold “START” while pressing “UP” or “OPEN” until canopy is open and deck is down.

NOTE: If any leg truss jacks hit the ground before the fold-out deck is level, STOP opening the stage and raise the jacks.

Open stage until fold-out deck is level.

Make Sure all stage Jack Legs are firm to the ground. Adjust if needed.



Accessories

Stairs

Stage deck access is provided by welded aluminum stairs with enclosed risers and handrails. Stairs can be located around the stage deck perimeter and to optional stage sections.

To install stair on stage, place top lip of stair on stage deck. From the deck underside, install clamps in two (2) places to secure stair.

Do not walk on stair until retaining clamps are installed

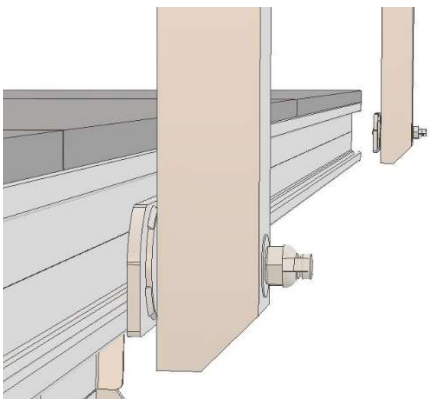
Insert left and right handrail vertical supports into pockets located on either side of stairs. Once in place, tighten retaining knobs (below right).

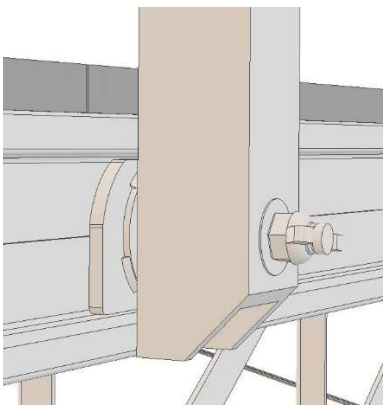
Adjust leveling/support legs at bottom of stairs as required to achieve correct stair angle.

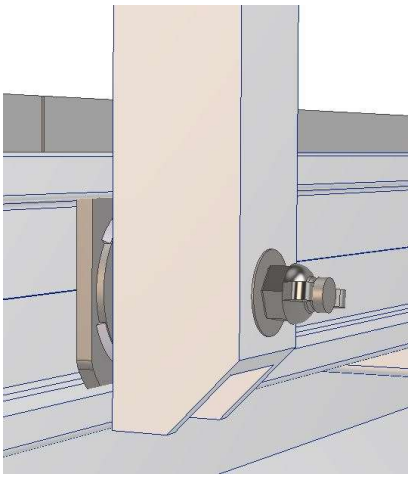
Guardrails

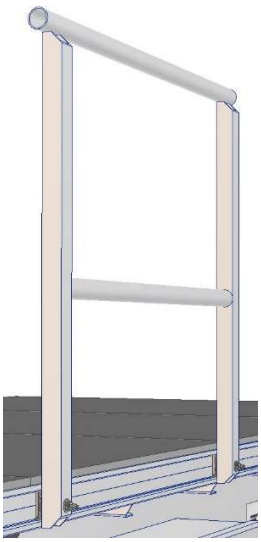
Guardrail sections can be installed around perimeter of stage deck or stage extension sections. Stages come standard with guards for the rear deck (as shown below).

To install Guardrails, insert lower cams (horizontally) into stage rail groove. Turn Cams vertically into groove. Tighten with wing nuts until all is secure.









Extension Sections

Extension sections may be placed around the stage deck perimeter or other extension sections to expand the stage deck area as needed.

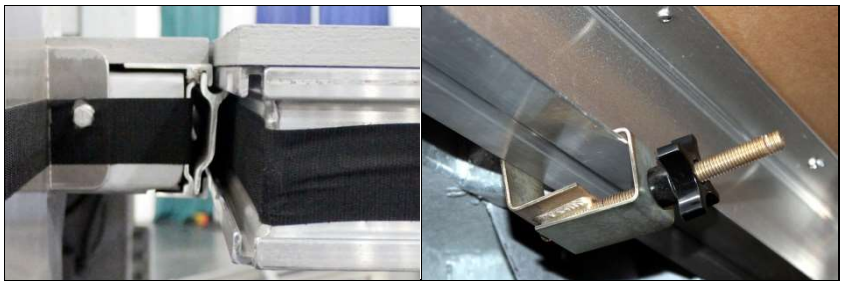
Insert support legs into extension section corners, tighten retaining knob. Hint – On level ground, leg lengths may be preset.

Insert deck support splines into stage deck perimeter extrusion with the “U” pointed up.

Place edge of extension section onto support spline.

From under stage, attach and secure clamps.

Adjust extension section support legs as required to level deck.



Adjust legs as required to level extension section.

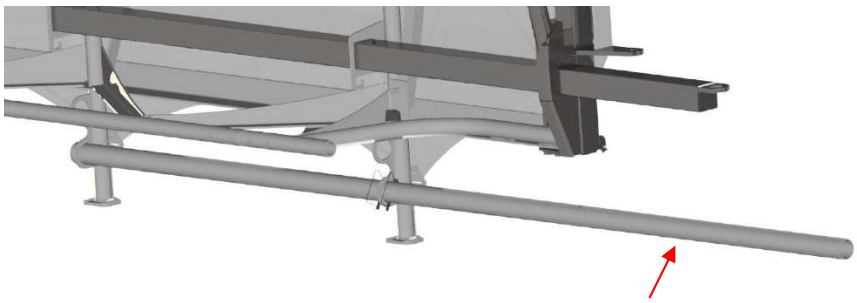
Perimeter Skirt

For a more finished and attractive appearance, an optional perimeter skirt can be installed.

Simply attach the velcro at the top of the skirt to the velcro around the stage deck or extension section perimeter.

Hanging Banners

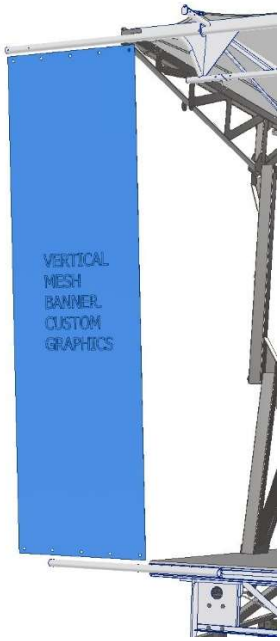
Banners can be hung from the bar on each end of the canopy.



1) With the canopy lowered, attach the banner to the banner bar with plastic wire ties or similar.

2) To secure the bottom of the banner, slide the spline on the banner support pole into the top and bottom grooves in the stage deck perimeter rail.

3) Loosely attach the bottom edge of the banner to the pole with plastic wire ties or similar. Only tighten wire ties may once canopy is raised to full height.



Rear Windwall/Backdrop

The Backdrop is made of fabric, hangs vertically (either by pins or curtain track), and secures at the bottom and each end with straps, hooks, and buckles.

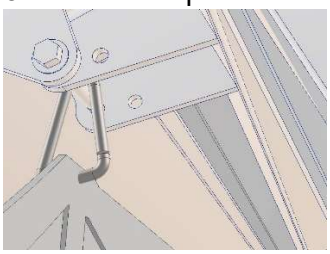
For Standard Pin Attachment:

To Remove the Backdrop:

1. Loosen buckles and release all the hooks from the ends and bottom of backdrop.
2. From Stage Deck (step ladder might be needed), remove clasps at each connection.

To Install the Backdrop:

1. From Stage Deck (step ladder might be needed), lift backdrop and attach clasps at each connection.
2. At each end of stage, at top, install strap hooks and secure tightly.
3. Install strap hooks and secure tightly at bottom and each end of backdrop.



For Curtain Track Option:

To Remove the Backdrop:

1. Loosen buckles and release all the hooks from the ends and bottom of backdrop.
2. Remove retainer pin at one end of curtain track.
3. Roll the backdrop off the curtain track until backdrop is removed.
4. Re-insert retainer pin at end of curtain track.

To Quickly Relieve Stage During High Winds:

1. Loosen buckles and release strap hooks from the bottom and one end of the backdrop.
2. Roll the backdrop to one end of the stage.
3. Bunch up the backdrop and secure it to the column.

To Install the Backdrop:

1. Remove pin at one end of curtain track. Feed the Backdrop rollers into the curtain track one at a time.
2. Insert retainer pin at end of curtain track.
3. Roll Backdrop into position.
4. Install strap hooks and secure tightly at bottom and each end of backdrop.

Section 4

Stage Tear-Down Procedure

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

Tear Down

Clear area of non-essential people/personnel and deck or perimeter equipment. Note – equipment to be transported inside the stage can be loaded in the fixed/upstage section of the stage deck.

Caution – For personnel safety, 40 mph maximum wind speed during tear down.

1 - Remove Accessories

a) Lower all winched into place equipment – lights, speakers, video displays, etc.

b) If installed, remove perimeter stage skirt.

c) Remove supplemental stage extension sections.

d) Remove stage deck perimeter guardrails.

e) Remove stairs if attached to stage deck.

f) Load cargo on main stage deck and secure with tie-downs.

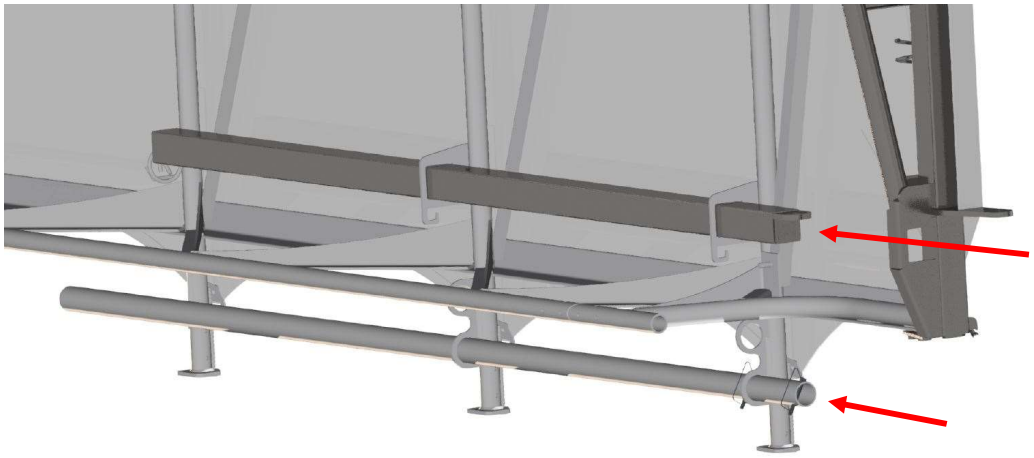
2 – Partially Close the Stage

a) Wireless Remote System – Turn timer knob to about 10 minutes and retrieve the wireless control.

b) Partially Close Stage – Check that area is clear. Using the wireless control, power roof canopy "DOWN" or "CLOSED" until front canopy truss is about **6 feet** above the ground.

c) Remove Speakers, Lights, and Vertical Banners – and store.

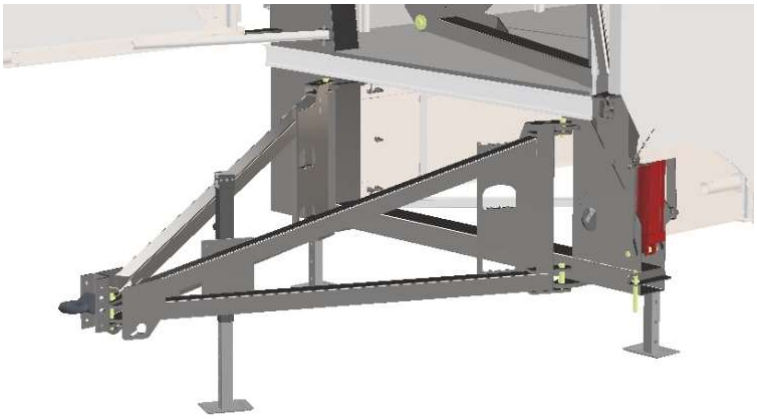
d) Push Speaker Bars and Banner Pipes into Stage – and secure with pins (each end of stage).



f) Remove Optional Marquee Banner – and store.

3 - Close Stage

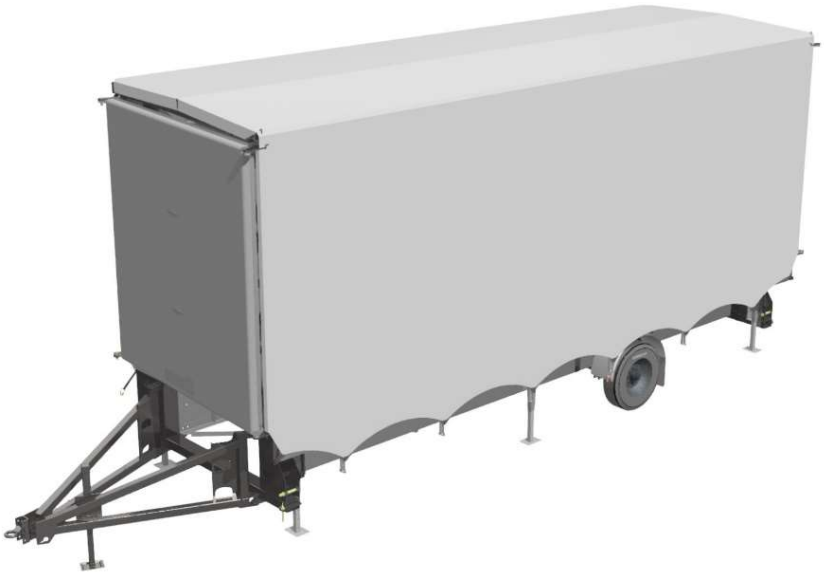
a) **Close Stage** –Using the wireless control, power roof canopy “DOWN” or “CLOSED” until fully closed.
b) **Unlock Audience-Side Hitch** –slightly raise jack foot off the ground, remove lock pin.
c) **Connect Hitch Sides** –swing both hitch sides together, pin together, and lower jack foot to the ground.



d) **Retract Intermediate/Support Jacks** – Fully retract frame mounted leveling jacks.
e) **Retract Corner Leveling/Support Jacks** – Fully retract corner leveling jacks.
f) **Close Media Panels/End Doors –** Unpin support brace, swing door closed, install upper and lower corner pins, and re-pin support brace on inside.

Caution – maintain a firm grasp on end door until closed and latched to prevent wind damage or personal injury.

g) Secure any interior cargo with tie-down straps.
h) **Wireless System** – return wireless controller to storage compartment.
i) **Jacks –** confirm that all frame jacks are fully retracted.
j) **Compartment Doors –** confirm that all compartment doors are closed and secured.



4 - Connect Tow Vehicle

Connect Tow Vehicle

- Fully raise (retract) tongue jack leg
- Secure Coupler
- Connect 12VDC connector
- Attach emergency break-away cable

Prior to Towing

- Verify correct operation of signal lights.
- Inspect tire condition
- Remove wheel chocks
- Test trailer brakes for correct operation

Section 5
Towing Safety

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 (CO2) 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 CO2 extinguishers should be recharged periodically even if they are not used. The dry powder used in CO2 extinguishers tends to compact with road vibration. Before using it, rap the CO2 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 alert 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.

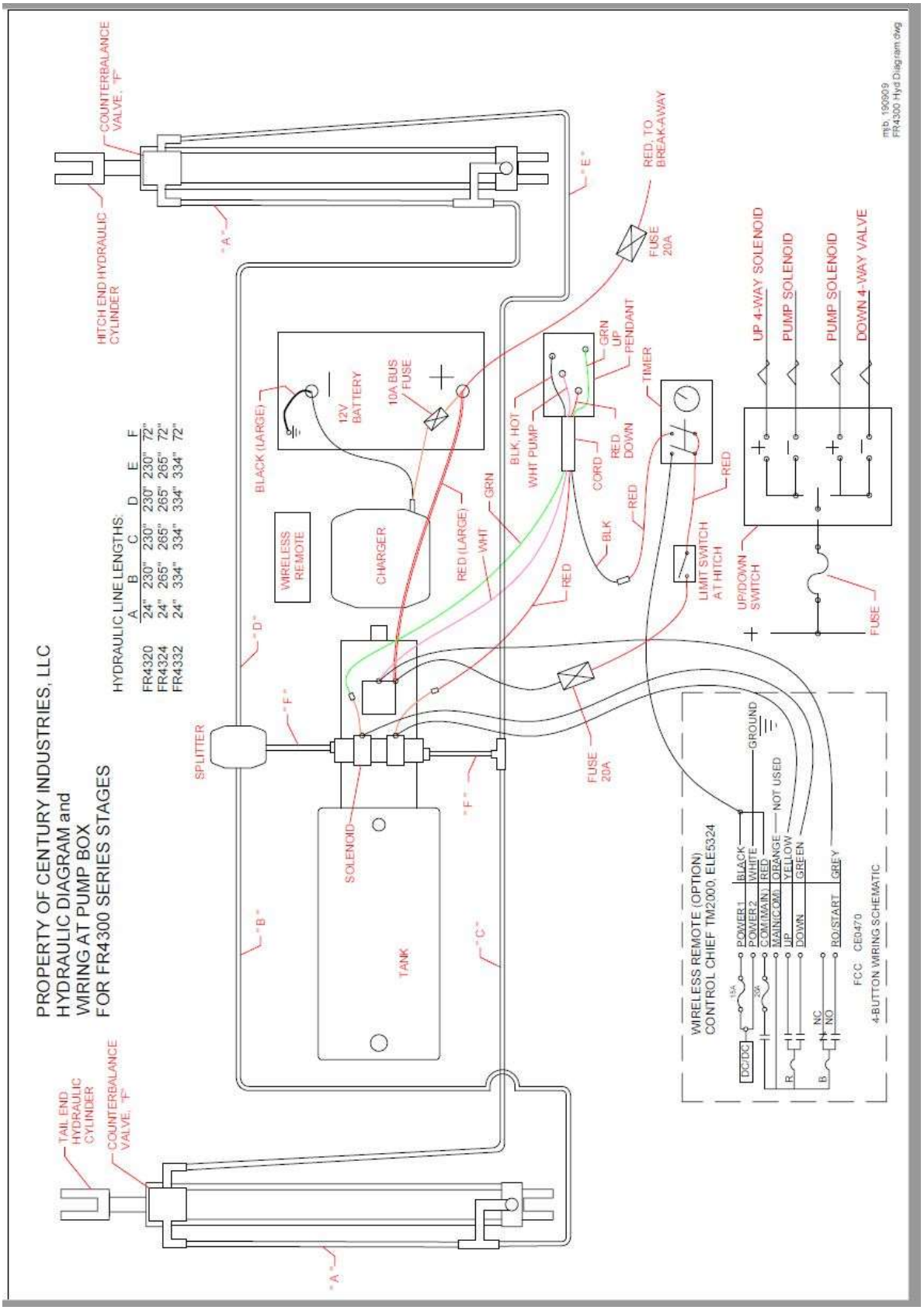
Remember: Night driving can be especially hazardous since the body naturally wants to sleep at night. Most drivers are less alert at night, especially after midnight. If you are sleepy, the only safe cure is to get off the road and get some sleep. If you don't, you risk your life and the lives of others.

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.

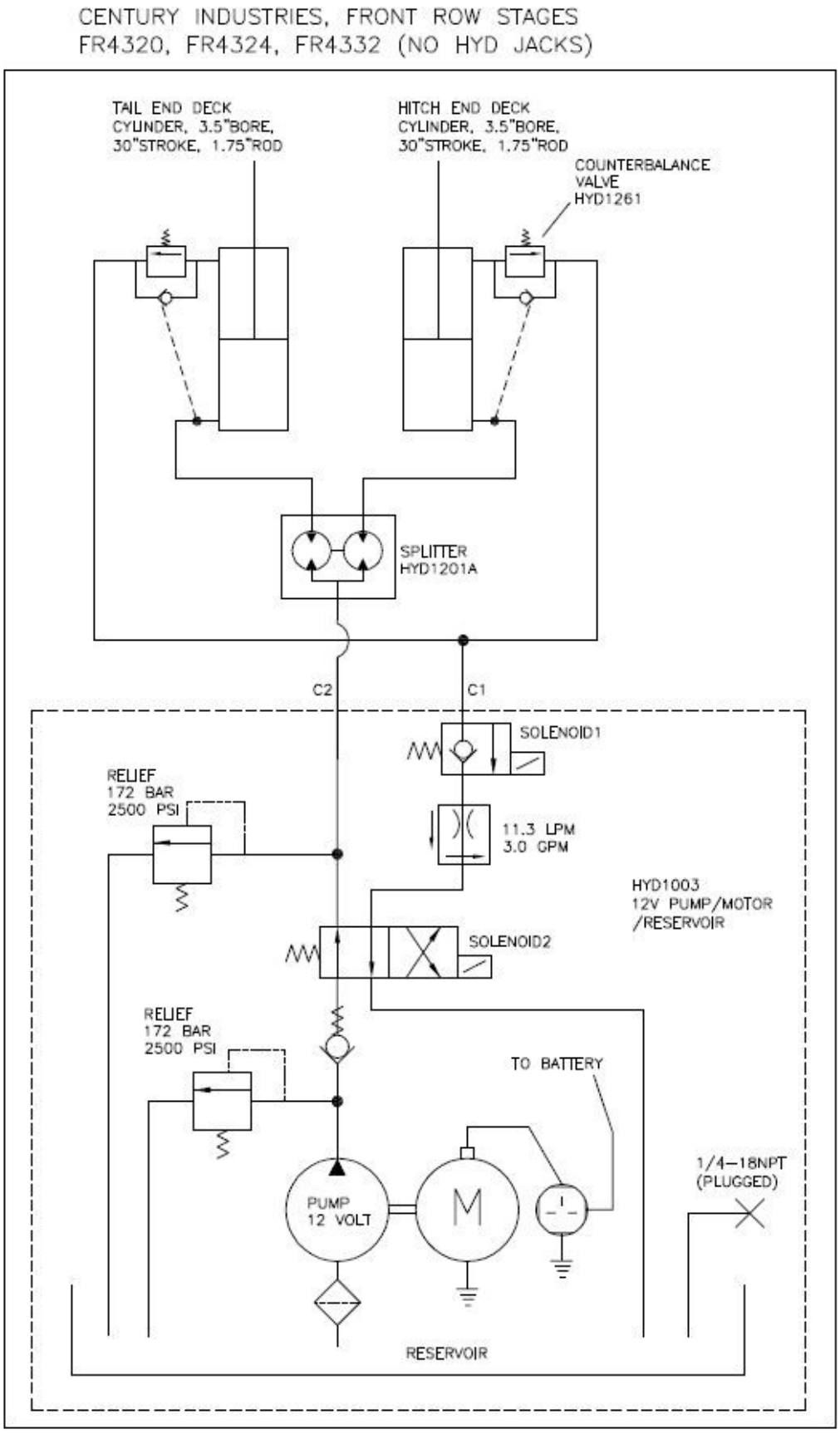
Section 6

Stage Systems

Hydraulic System Diagram (Base Model, No Hydraulic Jacks)

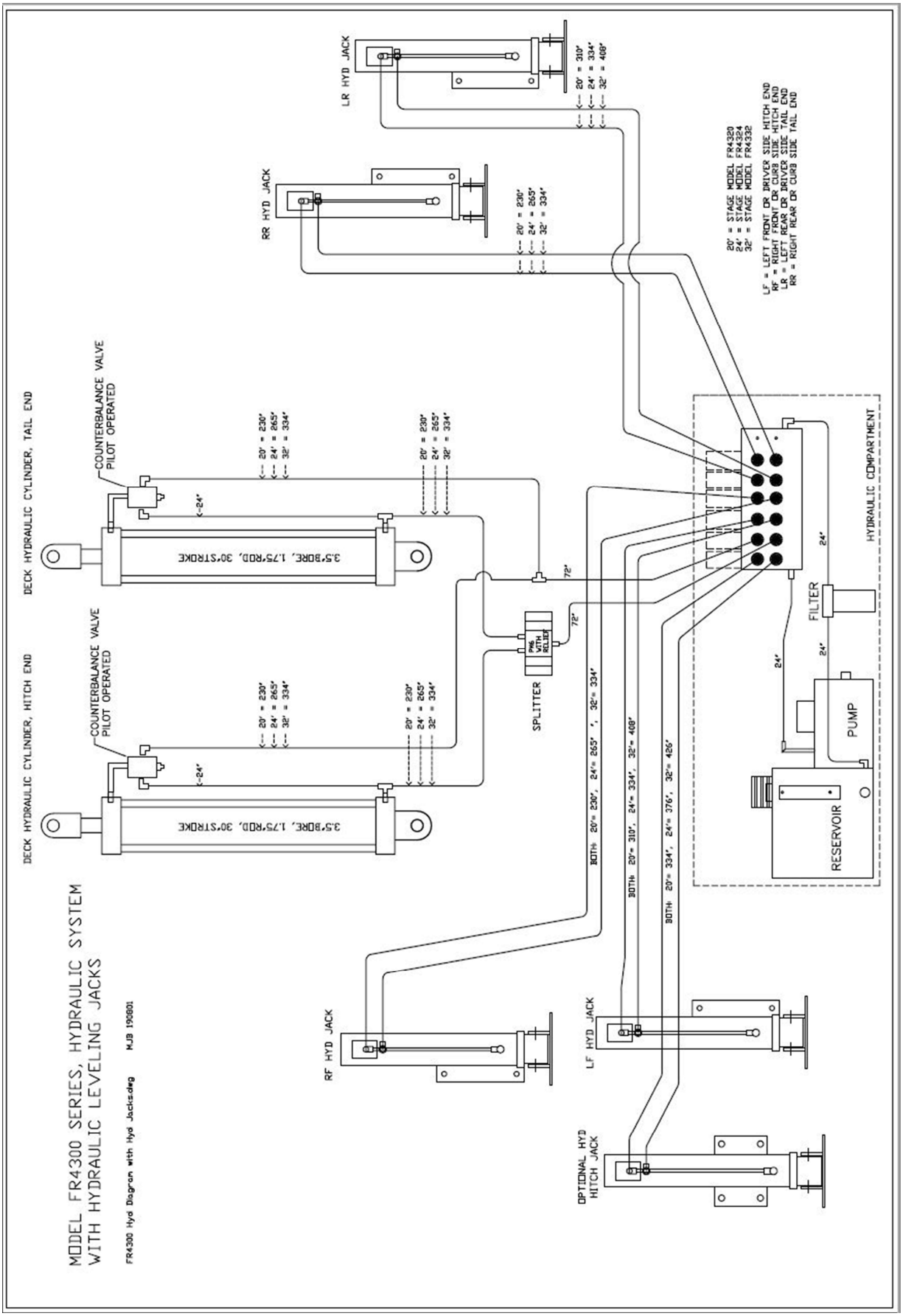


Hydraulic System Schematic (Base Model, No Hydraulic Jacks)



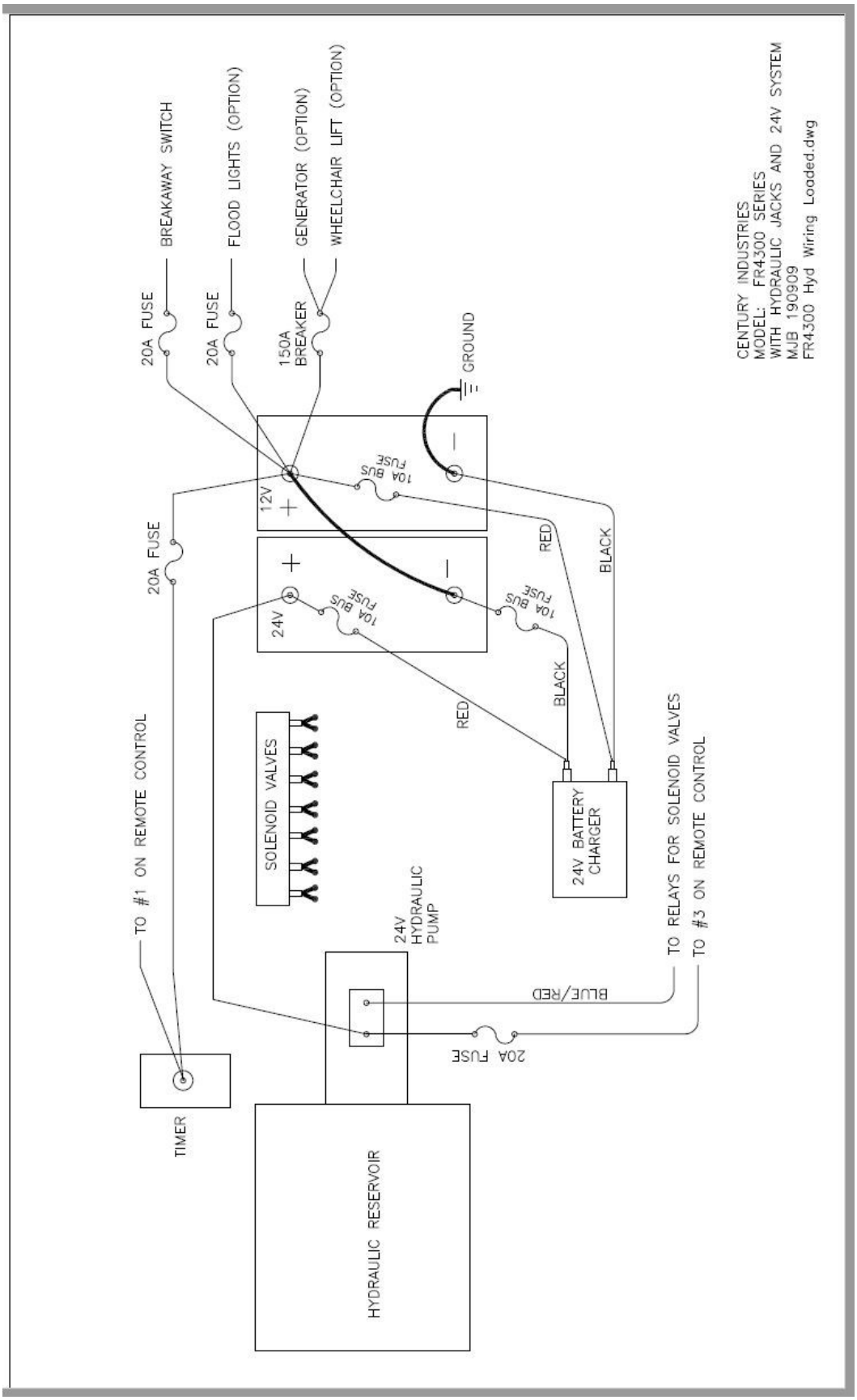
Section 6

Hydraulic System Diagram (Hydraulic Jacks Option)

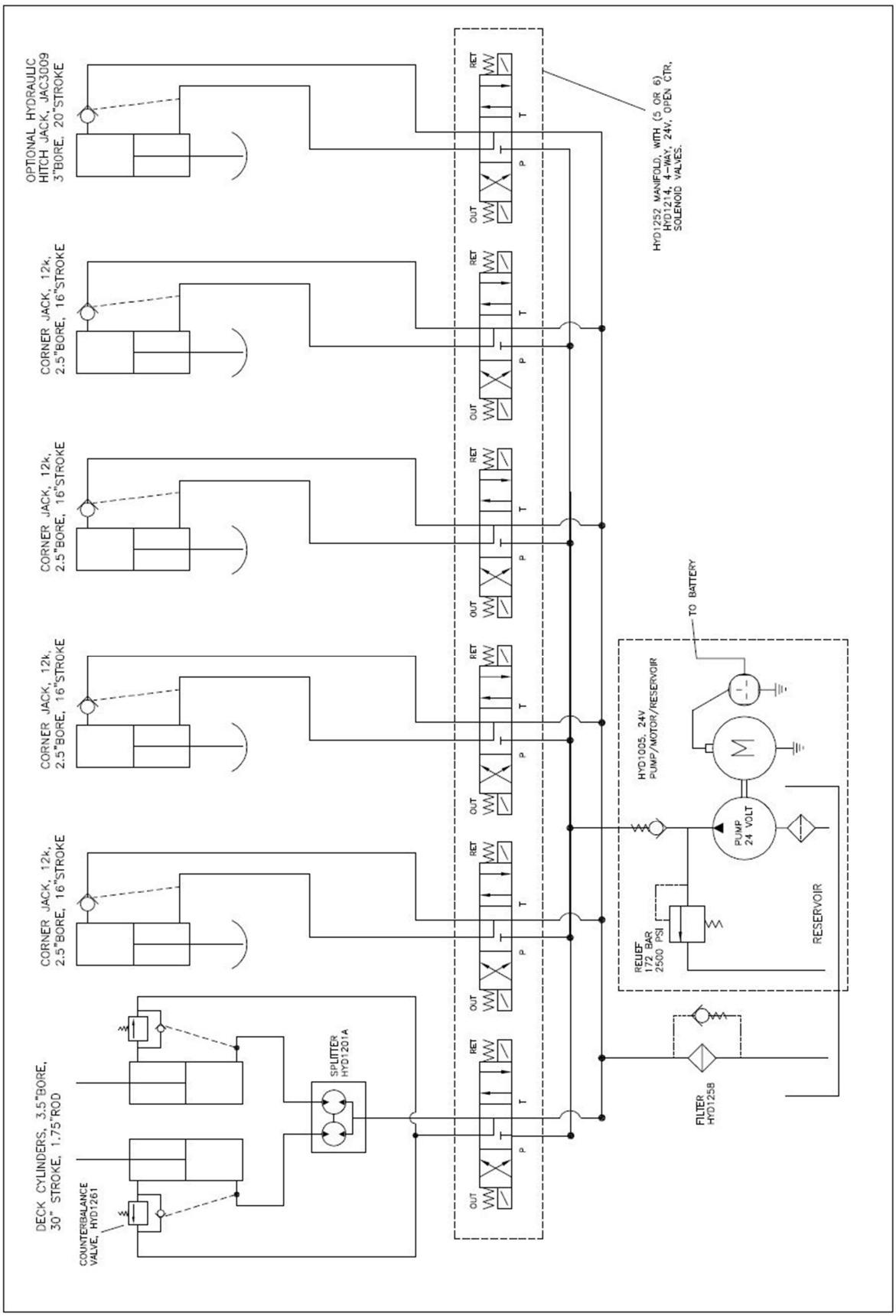


Section 6

Hydraulic System Wiring Schematic (Hydraulic Jacks Option)

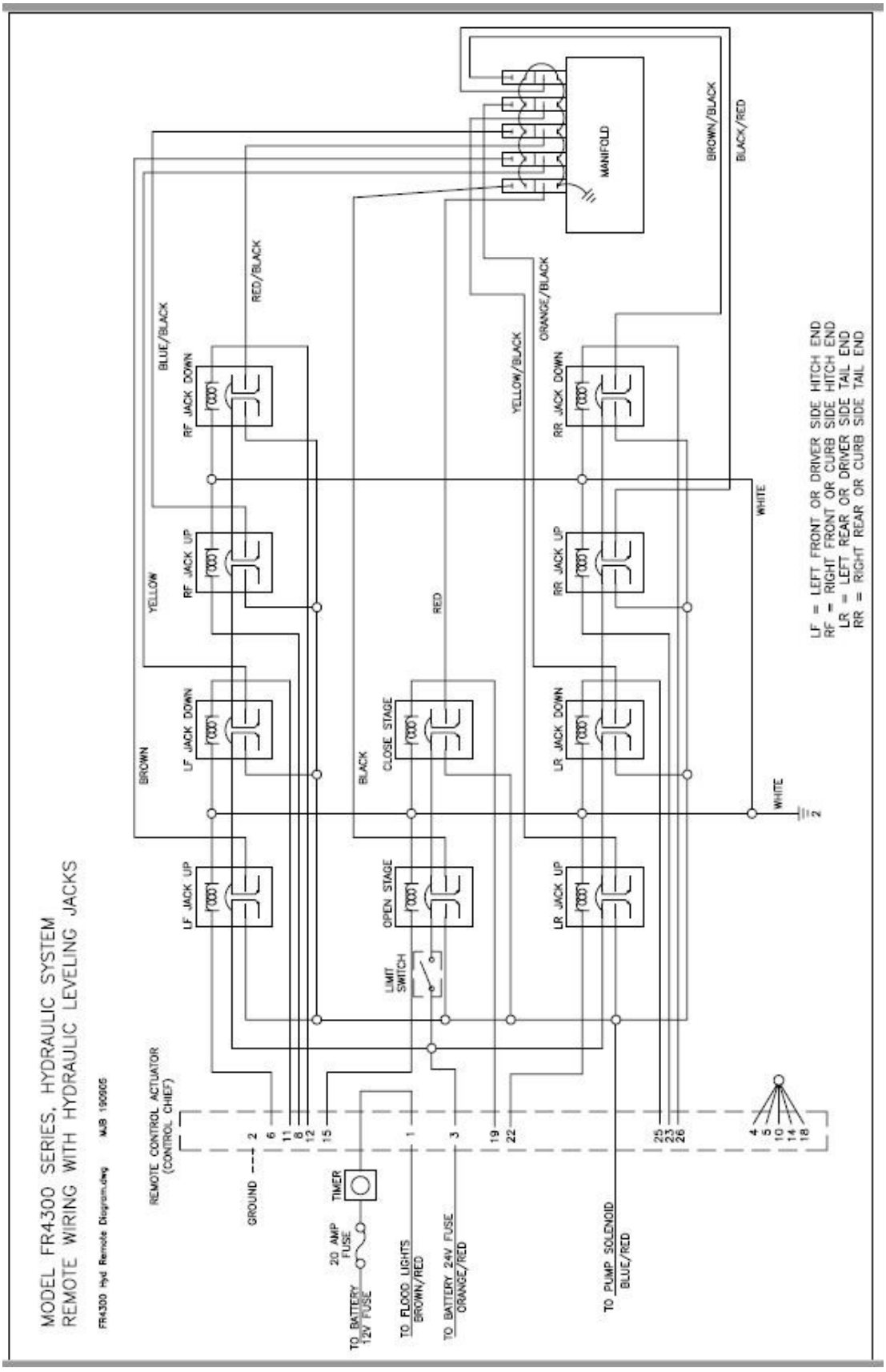


Hydraulic System Schematic (Hydraulic Jacks Option)

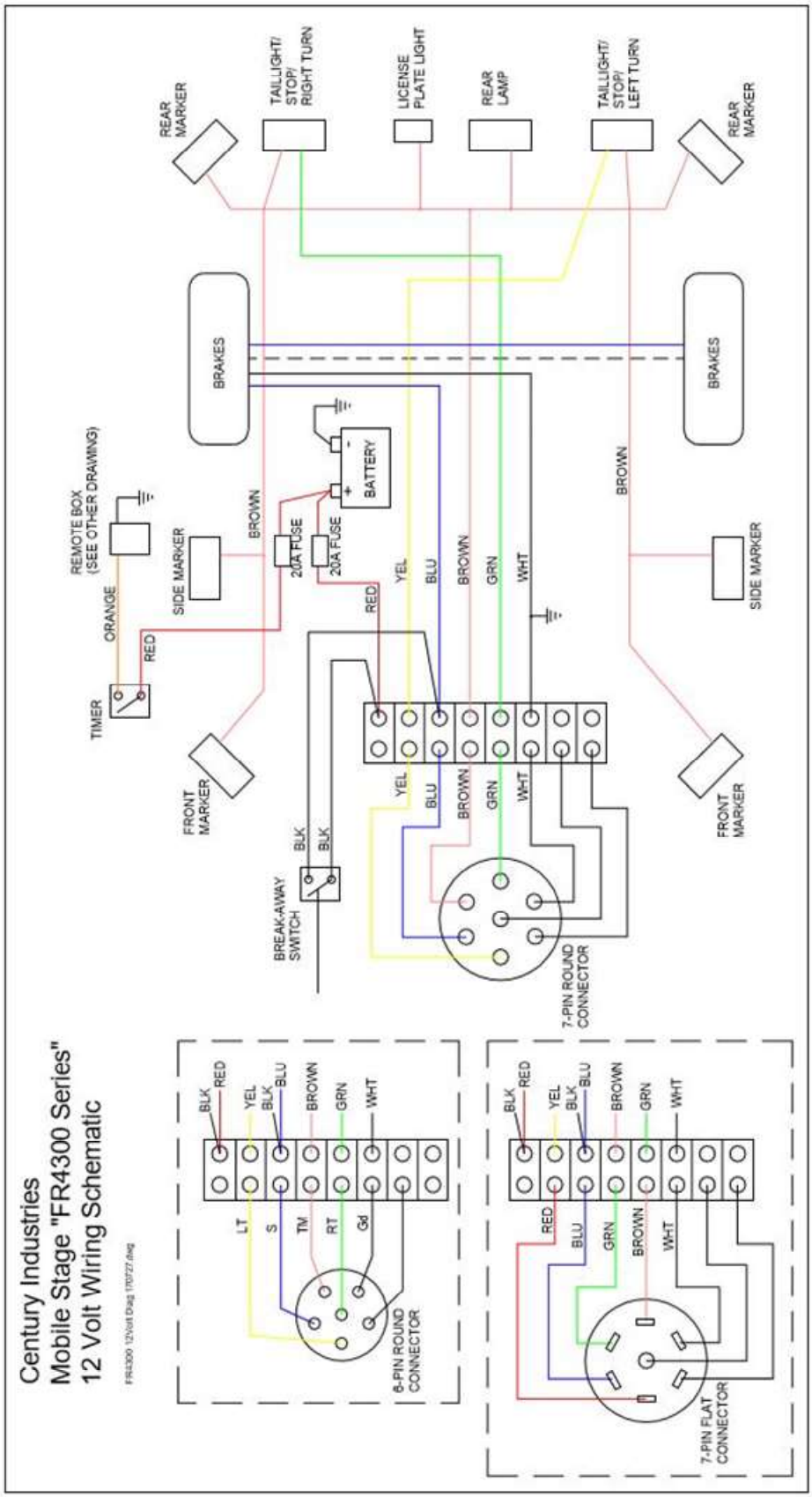


Section 6

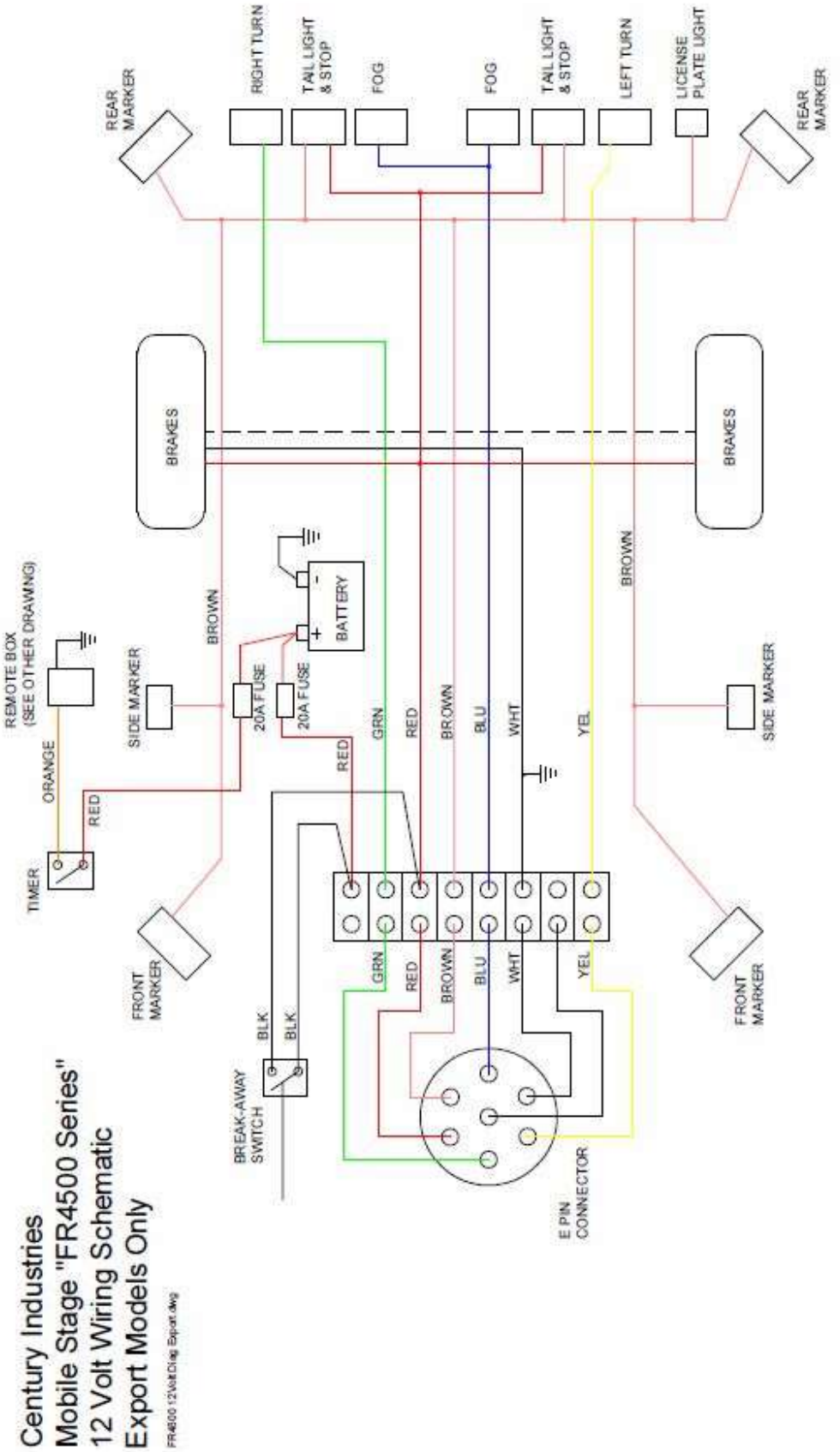
12VDC Wireless Control Schematic (Hydraulic Jacks Option)



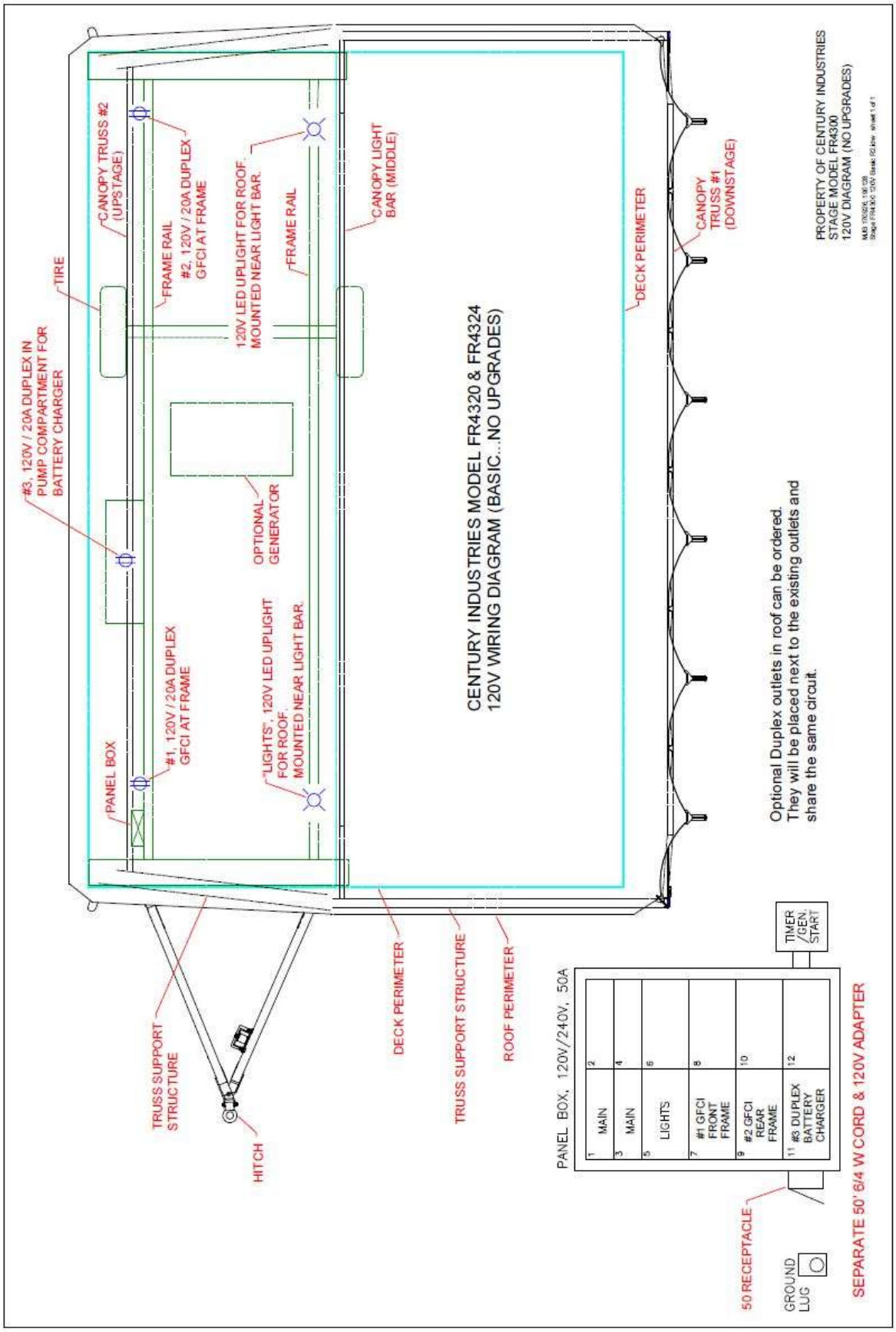
12VDC Trailer Light & Brake Schematic



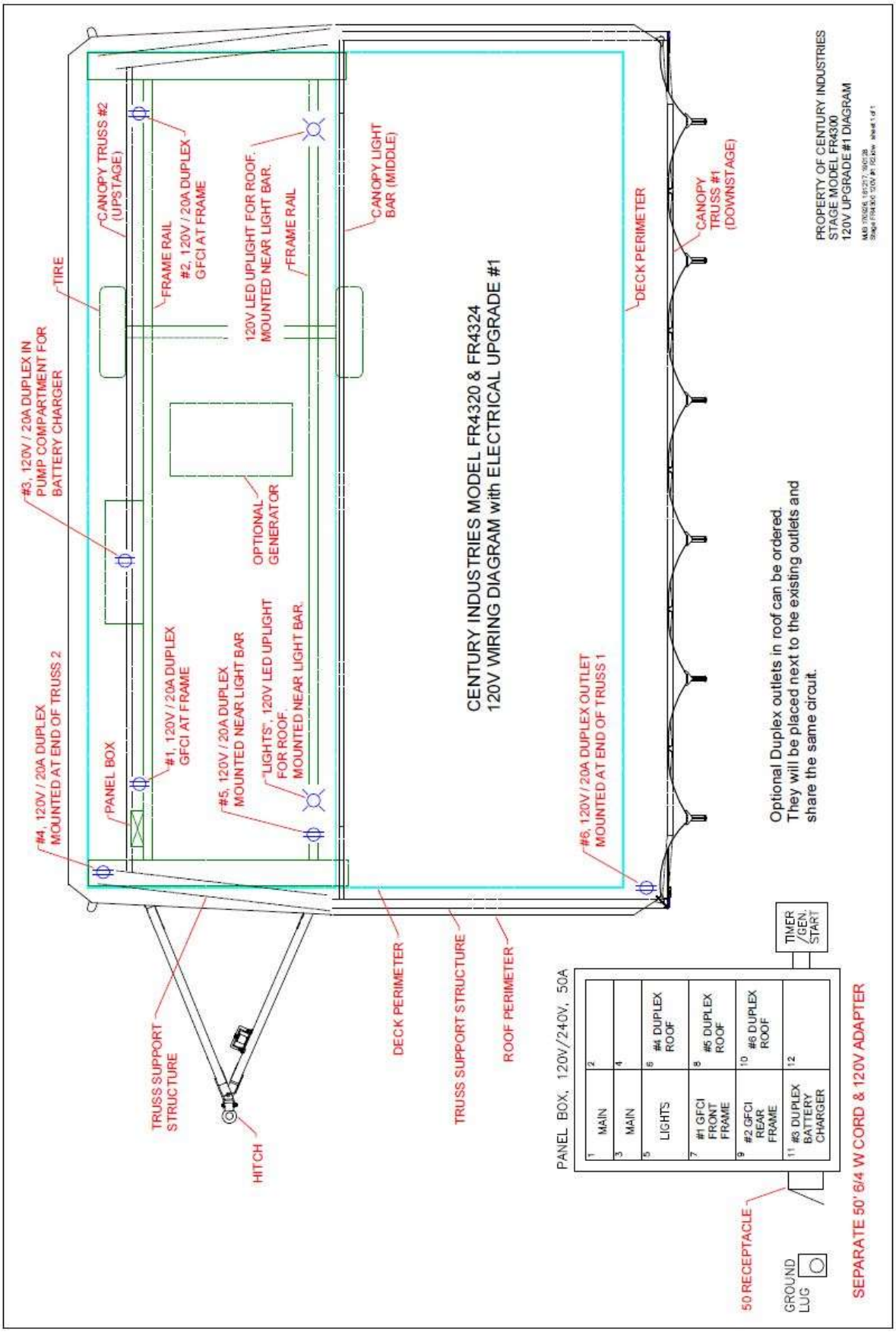
12VDC Trailer Light & Brake Schematic (Export Models)



120V Electrical Schematic (Basic, No Upgrade)



120V Electrical Schematic (Upgrade #1)



Section 7
Maintenance & Service

Maintenance

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

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 stage. Periodically check to see that the hydraulic fluid reservoir is full with approximately an inch gap from the top when stage is **Open**.

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.

Changing/flushing hydraulic fluid is not necessary unless fluid looks discolored or dirty. If stage is being used multiple times daily, consider changing/flushing hydraulic fluid every five years.

CAUTION: DO NOT ATTEMPT TO OPERATE STAGE 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 stage is fully **open**. 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 is 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.

If stage makes ticking noises while opening or closing, hinges/pivots likely need lubricated.

Recommended Lubrication for hinges/pivots is Dry Moly Lube (any reputable manufacturer). If Dry Moly Lube is not available, our second choice is White Lithium Grease (also any reputable manufacturer).

Inspect wheel bearings annually; repack if necessary.

Suspension System

Mobile Stage 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 stage, inspect and verify that the tires are in good condition, each tire is correctly inflated, the trailer is riding level, and that the stage is not overloaded.

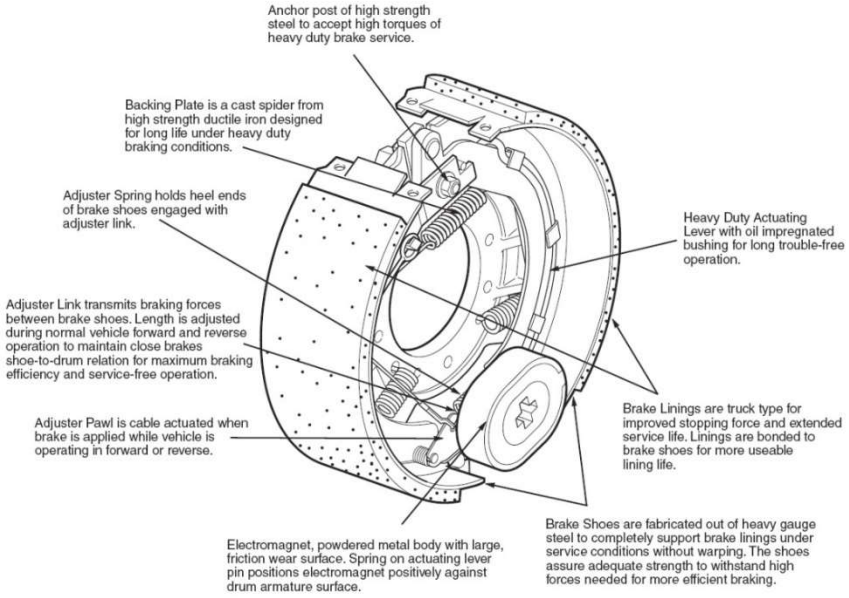
Suspension

Models FR4320 & FR4324 - Single Axle

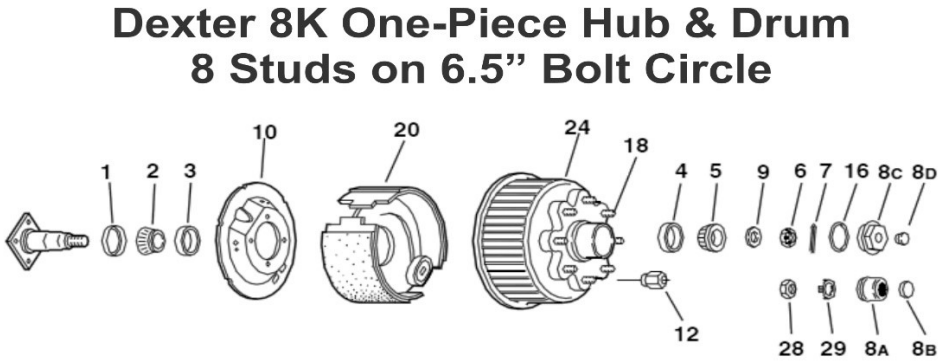
Model FR4332 - Tandem Axle

Component	P/N – Model	Type	Size	Description
Axle			82.00 Hubface 63.00 Spring Center	8000lb each axle
Brakes	K23-434 LH K23-435 RH	Electric	12.25 x 3.375	8000 lb forward Self-adjust
Hubs		8 on 6.5		5/8” Studs - Grease
Wheels	17.5 x 6.75HC	8 on 6.5		¼” Outset
Tires	235/75R17.5	LR – H or J	6005 lbs/each @ 128 or 127 psi	

Brakes



Hub Assembly



Key No.	Description	No. Required Per Wheel	Dexter Number
1	Grease Seal	1	010-054-00
	Oil Seal	1	010-063-00
2	Inner Bearing Cone	1	031-030-02
3	Inner Bearing Cup	1	031-030-01
4	Outer Bearing Cup	1	031-028-01
5	Outer Bearing Cone	1	031-028-02
6	Axle Nut	1	006-176-00
7	Spindle Washer	1	019-002-00
8	Grease Cap	1	021-039-00
8A	E-Z Lube Grease Cap	1	021-043-01
8B	Plug for E-Z Lube Grease Cap	1	085-001-00
8C	Screw-On Oil Cap	1	K71038 021-035-00
8D	Plug for oil Cap	1	046-032-00
9	Spindle Washer	1	005-057-00
10	Dust Shield	1	036-115-20
12	5/8"-18 90° Cone Nut	8	006-109-00
16	O-Ring for Oil Cap	1	010-045-00
18	5/8"-18 Wheel Stud	8	007-232-00
20	LH Electric Brake Assy	1	K23-434-00
	RH Electric Brake Assy	1	K23-435-00
24	Hub/Drum Assembly	1	008-285-08
28	Axle Nut for E-Z Lube	1	006-191-00
29	Retainer for E-Z Lube Axle Nut	1	006-190-00

Sharp Maneuvering

Tight pivoting of the trailer is very hard on all of the suspension components. When you hook onto the towing coupler and pull it sideways, the bottoms of the tires turn under until either the rubber or the ground gives way, and extreme side loads are imposed on the hubs, bearing, springs, and axles. It is like someone turning you around by your shoulder, but not allowing you to move your feet.

Tire Changing

To change a tire, first chock wheels to prevent stage 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.

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

Never jack against the underside of the stage frame. Improper lifting of the stage 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.

Battery Charging & Care

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

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

The Stage is also equipped with battery charger that Analyzes battery, Charges battery, Conditions battery, Maintains Battery, and Storage Reconditions battery. Whenever the A.C. power line is connected to an external power source. Charger works automatically when plugged into the A.C. receptacle and the circuit breaker is ON.

It is recommended that the charger be plugged-in 12 hours prior to using the stage.

Multi-Stage Charging Overview

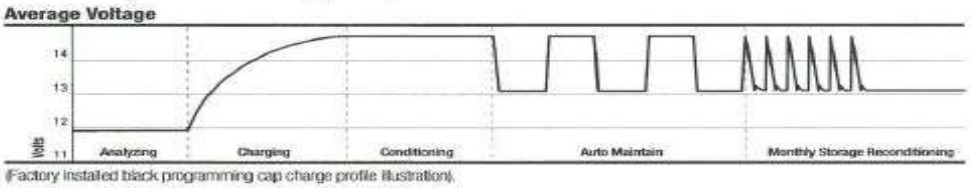
Stage 1 - System Check OK and Battery Analyzing: During this stage the ProSport red "Charge" LED will flash indicating ProSport is analyzing all battery connections in addition to checking each battery is capable of being charged. Upon completion the "System Check OK" indicator will illuminate green followed by Stage 2 Charging.

Stage 2 - Charging: During this mode the "Charging" indicator will be red. The ProSport Series will use all of its available charging amps (as controlled by temperature) until the battery voltage is raised to 14.6VDC (Flooded lead-acid factory setting).

Stage 3 - Conditioning: During this mode the "Conditioning" status indicator will be amber. Batteries will hold at 14.6 VDC (factory set for Flooded lead-acid batteries) to complete charging while conditioning each battery connected. Upon completion the ProSport will go into its Energy Saver Mode.

Stage 4 - Auto Maintain (Energy Saver Mode): During this mode the blue "Power" and green "Auto Maintain" LED's will be on indicating Stage 2 charging and Stage 3 conditioning are completed. At this time ProSport will initiate its Auto Maintain (Energy Saver Mode) which will monitor and Auto Maintain batteries only when needed to maintain a full state of charge.

Stage 5 - Storage Recondition Mode: During this mode the ProSport "Storage Recondition Mode" green indicator will illuminate with a slow fade in and out pulse. This indicates that while your batteries/boat are in storage the ProSport will automatically recondition all batteries for up to 3 hours once a month extending battery life and maximizing on the water battery power performance.



(Factory installed black programming cap charge profile illustration).

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 stage.

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 stage. 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

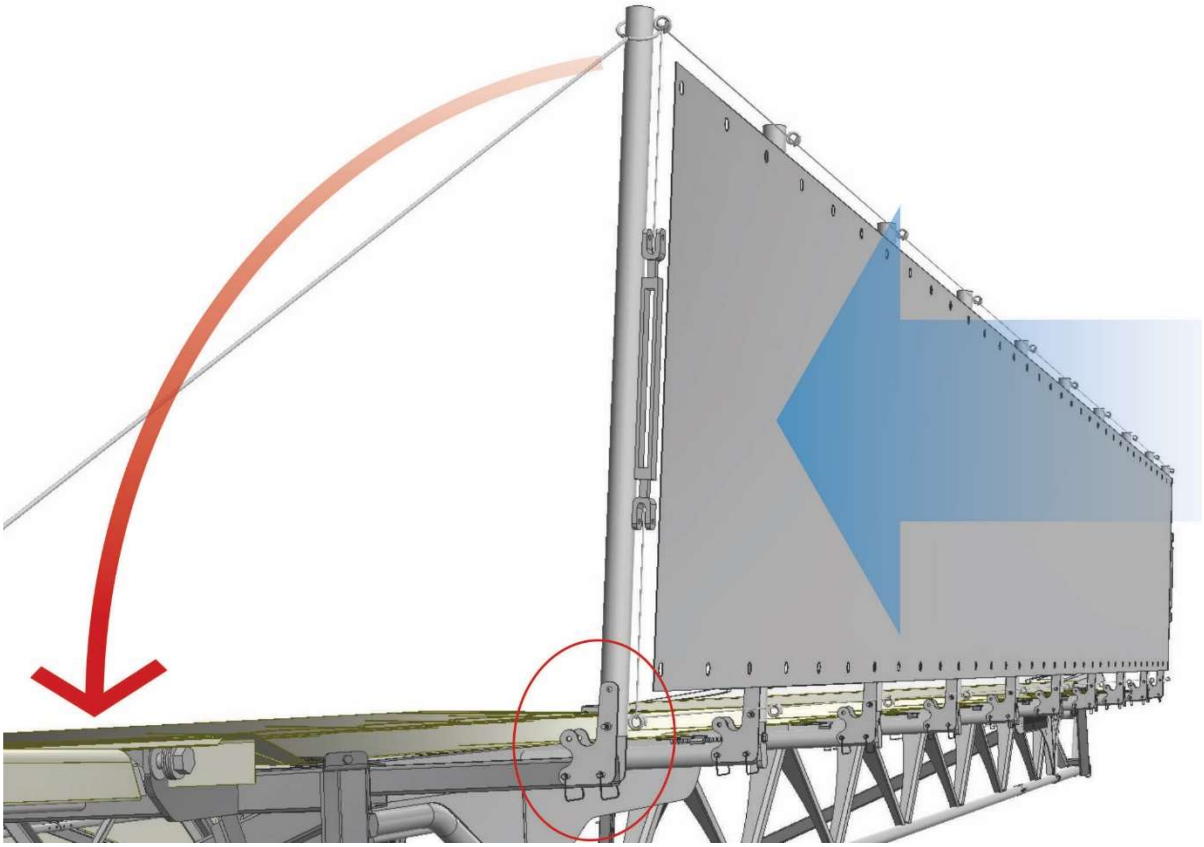
All trailer body lights, which include marker lights, turn signals, and brake lights, should be inspected frequently for proper operation.

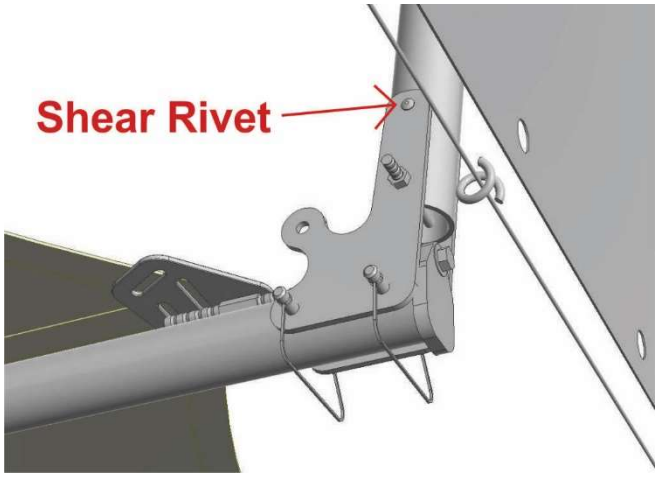
Always connect 12V trailer connector to towing vehicle before towing. Check and verify correct light operation.

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

Marquee Structure





On stages equipped with the front banner marquee - to prevent damage to the stage canopy structure, shear rivets are used to attach the vertical banner supports. These rivets are engineered to fail at a wind speed of approximately 30 mph, allowing the banner to pivot and relieve the wind loads imposed on the canopy structure. The failure wind speed varies depending on wind direction and the banner porosity.

Note – when replacing the rivets use only 3/16" dia. x 5/16" grip aluminum blind-pull hollow rivets.

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 Century Industries LLC.
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.

STAGE INSPECTION

This equipment must have been inspected within the last 24 months by a competent authority. If critical defects were found on the structure during the inspection, repairs and procedures must have been approved by a structural engineer and completed in accordance with professional standards. Inspection, engineering approval (if applicable) and repair documents must remain available for presentation upon request.

STAGE INSPECTON LOG Model FR43___ VIN # _____

Date of Inspection	***Name of Inspector***	***Notes from Inspection:***
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Section 8
Supplements

Canopy Fabric
Fire Certifications

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 pages offer 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.

The following pages are a sample form to be completed, handed out, and reviewed with all members of your event team. The form should outline appropriate event monitoring and responses, and offers quick access to officials and emergency services in the event of an incident. Add to or modify the form to fit your event(s).

Keep all appropriate individuals and groups in the loop. Through planning, training, monitoring, and implementation, incidents can be prevented or contained.

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