Wheels & Tires

Safety Is Your Business

Why? Because **SAFETY**, based on knowledge, technical skill, and years of experience has been carefully built into your Wagner. Time, money and effort have been invested in making your machine a safe product. The dividend from this investment is **YOUR PERSONAL SAFETY.**

However, it must be realized that no power-driven equipment can be any safer than the person behind the controls. If you don't operate and maintain your equipment safely, our efforts will have been in vain.

The safety instructions and warnings, as documented in this manual and shipped with the machine, provide the most reliable procedures for the safe operation and maintenance of your Wagner. It's your responsibility to see that they are carried out.

The following terms define the various precautions and notices in this manual:

NOTE: Whenever information exists that requires additional emphasis beyond the standard text, the term "**NOTE**" is used.

IMPORTANT: Whenever information exists that requires special attention to procedures or to ensure proper operation of the equipment or to prevent its possible failure, the term "**IMPORTANT**" is used.

⚠ CAUTION

CAUTION: Whenever potential damage to equipment exists, requiring correct procedures for prevention, the term "CAUTION" is used.

Whenever potential personal injury or death situations exist, requiring correct procedures or practices for prevention, the "WARNING" symbol is used.

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.

NOTE: All possible safety hazards cannot be foreseen so as to be included in this manual. Therefore, the operator must always be alert to possible hazards that could endanger personnel or damage the equipment.

Safety Warning

As experienced distributors in after-market rim and wheel sales, we have heard and read many warnings about the potential energy contained in an inflated tire and rim/wheel assembly. You should not hesitate to pass these warnings along.

It bears repeating that the o-ring seal on a tubeless assembly is ***inside*** the lock ring groove in the gutter. Thus an assembly with a gutter crack shows no warning air leak. One of our largest tires, the 36.00-51 has 1,200,000 foot-pounds of energy stored in it. **ONE MILLION TWO HUNDRED THOUSAND FOOT POUNDS.** What happens when this energy is released instantaneously is obvious.

With a little thought, it is obvious that a tubed assembly presents the same problems, plus the fact that tubed assemblies will not lose air regardless of where a crack might be.

⚠ WARNING

Size is no criteria in setting safe procedures. A broken 10.00-20 assembly can kill just as quickly as a 24.00-49. It is a small consolation to know that you probably won't be blown as far.

Do talk about safety. Rims are expensive, but not costly enough to justify unsafe procedures. It is hard to imagine an operator that would knowingly condone unsafe procedures on rims and rim parts. Besides, keeping rim and wheel equipment up to snuff helps tires too.

Safety Tips

The safety tips listed here were compiled by the Goodyear Metal Products Division and apply to single and dual mounting tire/rim assemblies.

1. Never attempt to weld on an inflated tire/rim assembly.
2. Always exhaust all air from a single tire and from both tires of a dual assembly prior to removing any rim components, or any wheel components, such as nuts and rim clamps. Make sure to remove the valve core and exhaust all air from the tire. Check the valve stem by running a piece of wire through the stem to make sure it is not plugged. Remove valve cores from both tires of a dual assembly.
3. Check the rim components periodically for fatigue cracks. Replace all cracked, badly worn, damaged and severally rusted components.
4. Clean the rims and paint to stop detrimental effects of corrosion. Be very careful to clean all dirt and rust from the lock ring gutter. This is important to secure the lock ring in its proper position. A filter on the air inflation equipment to remove the moisture from the air line helps to prevent a lot of corrosion. The filter should be checked periodically to see that it is working properly.
5. Make sure correct parts are being assembled. Check your distributor or manufacturer if you have any doubts.
6. Double check to make sure all components are properly seated prior to inflation.
7. Mixing parts of one manufacture's rims with those of another is potentially dangerous. Always check manufacturer for approval.
8. Don't overload or over inflate rims. Check your rim manufacturer if special operating conditions are required.
9. Don't reinflate a tire that has been run flat without first inspecting the tire, rim and wheel assembly. Double check the lock ring for damage; make sure that it is secure in the gutter before inflation.
10. Never run a vehicle on one tire of a dual assembly. The carrying capacity of a single tire and rim is dangerously exceeded, and operating a vehicle in this manner can result in damage to the rim.
11. Don't be careless or take chances. If you are not sure about the proper mating of rim and wheel parts, consult a wheel and rim expert. This may be the tire man that is servicing your fleet, the Rim and Wheel Distributor in your area, or Tire Products Sales Engineer.
12. Don't use undersized rims. Use the right rims for the job.
13. Don't seat rims by hammering while the tier is inflated. Don't hammer on an inflated or partially inflated tire/rim assembly.
14. Don't inflate the tire before all side and lock rings are in place. Check components for proper assembly again after inflating to approximately (5) psi.
15. Don't let anyone mount or demount tires without proper training.
16. Never sit on or stand in front of a tire and rim assembly that is being inflated. Use a clip-on chuck and make sure inflation hose is long enough to permit the person inflating the tire to stand to the side of the tire, not in front or in back of the tire assembly.
17. **Do Not**, under any circumstances, attempt to rework, weld, heat or braze any components that are cracked, broken or damaged. Replace with new parts or parts that are not cracked, broken or damaged, which are the same size, type and make.
18. Inflate in a safety cage or use safety chains during inflation.
19. Regardless of how hard or firm the ground appears, put hardwood blocks under the jack.
20. Block the tire and wheel on the other side of the vehicle before you place the jack in position; always crib up with blocks just in case the jack may slip.
21. Remove the bead seat band slowly to prevent it from dropping off and crushing your toes. Support the band on your thigh and roll it slowly to the ground. This will protect your back and toes.

⚠ WARNING

22. Bead breakers and rams apply pressure to bead flanges. Keep your fingers clear. Slant bead breaker about (10°) to keep it firmly in place. **If it slips off, it can fly with enough force to kill.** Always stand to one side when you apply hydraulic pressure.
23. When using a cable or chain sling, stand clear; it might snap and lash out.
24. Do not stand at the side of tires when machine is in operation.

Maintenance

Wheel Installation Tips

When installing a new wheel on a used hub, a used wheel on a new hub or a new wheel on a new hub, it is mandatory that the O.D. of the pilot hub and the I.D. of the wheel bounce ring be measured for matched fit. The maximum clearance is .020" overall, or .010" on each side. If the bounce ring I.D. is too large, it must be built up with 70,000 minimum weld rod. 7018, 7024 or 70,000 wire is also satisfactory. It can then be machined to a maximum of .020" tolerance. That clearance is necessary to carry the machine weight properly, thus eliminating excessive stress on wheel mounting studs and nuts.

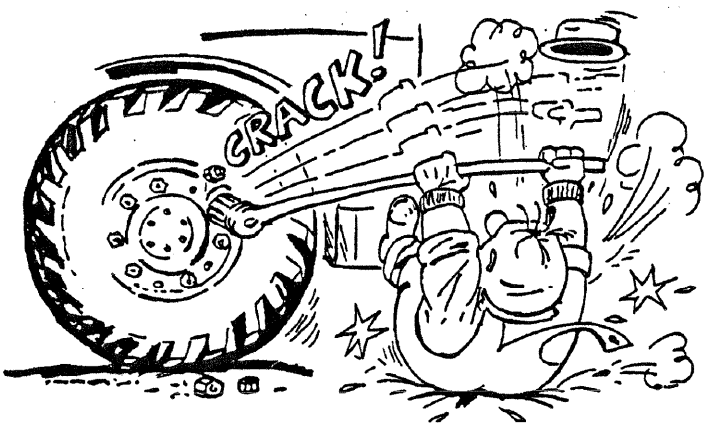
In the event you remove a wheel, center punch a reference mark on it and the hub so you can remount it in the original position. Be sure both mounting flanges on the hub and wheel are clean so a positive fit can be obtained when remounting.

Torque Specifications

Mounted wheels must be torqued to specification. Torque values for studs or nuts are as follows:

5/8" 200 Ft/Lbs	7/8" X 7/8" 500 Ft/Lbs (Outside Stud Nut) 300 Ft/Lbs (Inside Stud Nut)
3/4" 300 Ft/Lbs	1 1/8" X 3/4" 300 Ft/Lbs (Both Sides)

To eliminate over-torque, always use a torque wrench. The torque wrench will prevent the process of one man checking the nut until it moves, the next man tightening until it moves a little more, and finally the last man ending up with a broken stud and wondering why.



Remember, every time you tighten the nut down, it pulls the stud a little tighter and stretches it a little farther. A stud only has so much give before it breaks, and a torque wrench is the only tool that will let you know when the proper torque has been reached.

When you receive a new unit or install a new wheel on your present unit, it is most important to torque the lug nuts daily or every (8) hours of operation for the first four or five days of service. Check the studs and nuts for proper torque every 100 hours or weekly thereafter.

Tire Inflation

The tires on Wagner heavy lift machines are designed to operate with a certain sidewall deflection, or bulge. Proper inflation is very important to tire life. An under inflated tire flexes excessively every time you turn the wheel, which generates high internal heat and causes premature failure. Over inflation causes excessive center tread wear. A correctly inflated tire permits all the tread to contact the ground and insures proper operation and maximum life. All your recommended tire pressures are cold readings. Hot pressures taken while a tire is in use will not give you proper readings. Maintenance pressure checks should be taken only when the machine has been idle long enough for the tires to cool down to the surrounding temperature.

⚠ WARNING

MOUNTING: Never inflate tires to more than 10 psi until they are securely mounted on the vehicle axle with all components properly in place. Use clip-on chuck and an in-line valve with gauge or a pre-set pressure regulator. STAND CLEAR OF ANY POTENTIAL BLAST AND TRAJECTORY OF THE RIM COMPONENTS DURING TIRE INFLATION.

DEMOUNTING: Always exhaust all pressure from both tires of dual assemblies before loosening or removing any rim components or attaching hardware such as rim nuts and rim clamps. Remove the valve cores and use a piece of wire to make sure that the valve stems are not plugged.

Tire Pressures

Model	Location	Tire Size	Ply	PSI		kPa	
				Min	Max	Min	Max
L70	Driver	29.5 X 29	40	85	90	586	621
	Tail	23.5 X 25	20	60	65	414	448
	Tail	16.00 X 25	16	60	65	414	448
L470	Chassis	29.5 X 29	40	85	90	586	621
	Bogie	29.5 X 29	22	60	65	414	448
L80S	Driver	33.5 X 33	44	90	95	620	655
	Tail	23.5 X 25	20	60	65	414	448
L480S	Chassis	33.5 X 33	44	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L90S	Driver	33.5 X 33	44	90	95	620	655
	Tail	23.5 X 25	20	60	65	414	448
L490S	Chassis	33.5 X 33	44	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L100	Chassis	24.00 X 35 (Dual)	36	90	95	620	655
	Chassis	37.5 X 39	52	90	95	620	655
	Tail	26.5 X 25	24	60	65	414	448
L4100	Chassis	24.00 X 35 (Dual)	36	90	95	620	655
	Chassis	37.5 X 39	52	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L4115C	Chassis	24.00 X 35 (Dual)	42PR	90	95	620	655
	Bogie	29.5 X 29	22PR	60	65	414	448
L120S	Driver	37.5 X 39	60	90	95	620	655
	Tail	23.5 X 25	20	60	65	414	448
L4120S	Chassis	37.5 X 39	60	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L120D	Driver	24.00 X 35 (Dual)	42	90	95	620	655
	Tail	26.5 X 25	24	60	65	414	448
L4120D	Chassis	24.00 X 35 (Dual)	42	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L130B	Driver	27.00 X 49 (Dual)	42	90	95	620	655
	Tail	26.5 X 25	24	60	65	414	448
L4130	Chassis	27.00 X 49 (Dual)	42	90	95	620	655
	Bogie	29.5 X 29	22	60	65	414	448
L4160	Chassis	27.00 X 49 (Dual)	42PR	90	95	620	655
	Bogie	29.5 X 29	22PR	60	65	414	448

NOTE: SLICK TREAD TIRES CARRY THE SAME AIR PRESSURE AS STANDARD.
ALL RECOMMENDED TIRE PRESSURES ARE COLD READINGS.

Tire Pressures

Model	Location	Tire Size	Ply	PSI		kPa	
				Min	Max	Min	Max
CHD17	Chassis Bogie	26.5 X 25 26.5 X 25	Radial Radial	55 65	55 65	379 448	379 448
CHD17S	Chassis Bogie	29.5 X 25 29.5 X 25	Radial Radial	55 65	55 65	379 448	379 448
CHD24S	Chassis Bogie	29.5 X 29 29.5 X 29	Radial Radial	55 65	55 65	379 448	379 448
CD100	Chassis Bogie	29.5 X 29 29.5 X 29	Radial Radial	55 65	55 65	379 448	379 448
CD500	Chassis Bogie	26.5 X 25 29.5 X 25	Radial Radial	60 60	65 65	414 414	448 448
CD650	Chassis Bogie	29.5 X 25 29.5 X 25	Radial Radial	60 60	65 65	414 414	448 448
CD1000	Chassis Bogie	29.5 X 29 29.5 X 29	Radial Radial	60 60	65 65	414 414	448 448
CHE70	Driver Tail	33.25 X 35 23.5 X 25	32 20	80 55	85 60	552 382	586 414
MHE80	Driver Tail	33.25 X 35 23.5 X 25	32 20	80 60	85 65	552 414	586 448
PC90	Driver Tail	33.5 X 33 23.5 X 25	44 20	90 60	95 65	620 414	655 448
PC9082	Driver Tail	33.5 X 33 23.5 X 25	44 20	90 60	95 65	620 414	655 448
MJ9090	Driver Tail	33.5 X 33 23.5 X 25	44PR Radial	90 60	95 65	620 414	655 448
MJM90R	Driver Tail	21.00 X 35 (Dual) 23.5 X 25	32PR 20PR	85 60	90 65	586 414	621 448
SW600	Driver Tail	29.5 X 29 23.5 X 25	28 20	65 60	70 65	448 414	483 448
SW800	Driver Tail	33.5 X 33 26.5 X 25	44 24	90 60	95 65	620 414	655 448

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