



## Pit Cart Chassis Kit

### Construction And Assembly

Component List:					
Qty	Description	Qty	Description	Qty	Description
1	Welded Front Cross Member Assembly	1	Steering Block	1	Handle Assembly
2	Drilled Side Rails	1	Steering Block Spacer	1	Handle Mounting Bolt 1/2"-13 x 3-1/2"
1	Rear Cross Member	1	Locking Nut For Steering Block Stud 5/8"-11	1	Locking Nut For Handle Bolt 1/2"-13
1	Welded Rear Axle Assembly	2	Tie Rod Steering Tube 3/8"	1	Handle Grip
1	LH Spindle Assembly	2	RH Steering Rod End 3/8"	1	Handle Clip
1	RH Spindle Assembly	2	RH Jam Nut 3/8"	2	Rivets For Handle Clip
4	Spindle King Pin Bushings	2	LH Steering Rod End 3/8"	4	Tire And Wheel Assemblies
2	King Pin Bolt 5/8"-11 x 4"	2	LH Jam Nut 3/8"	2	Front Wheel Spacer
8	King Pin Spacer Washer 3/8" (Use As Needed)	4	Tie Rod Bolts 3/8"-16 x 1-1/2"	4	Locking Wheel Retainer Nut 3/4"-10
2	Locking Nut For King Pin Bolt 5/8"-11	4	Locking Nut For Tie Rod Bolt 3/8"-16		

#### Chassis Construction:

1. Gather the welded front cross member assembly, side rails, rear cross member and rear axle assembly, these are the base components required to begin chassis construction. Chassis width is predetermined at 14" by width of the rear cross member to prevent front tire interference when turning. Overall length of the chassis is 60" which may be shortened as desired.
2. Prepare the work area while choosing a clean level location clear of any combustible materials.
3. Place the two side rails on a level surface and insert rear axle assembly in each pre-drilled hole.
4. Using the rear cross member as a spacer, center the two frame rails to the front cross member making sure side rails are square or 90 degrees to the front cross member. Tack the side rails into place to the front cross member as shown. The steering pivot stud should be facing down. Use caution not to weld rear cross member as this is used as a spacer only!
5. Remove rear cross member previously used as a spacer and tack weld into place between the side rails near the rear of the chassis. Use a square to verify chassis is assembled square. Once chassis has been tack welded together continue welding together alternating from side to side to prevent warping.



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#### Chassis Assembly:

1. Install king pin bushings into spindles and apply a light coat of grease to the inside, top and bottom of bushings.
2. Install spindles to frame with the 5/8"-11 x 4" bolts and locking nuts, tighten until slight drag is felt when moving the spindle back and forth. Note: Steering arms should be located towards the back and below the axle centerline, see **Figure #1**.
3. Install steering block spacer, steering block and lock nut as shown in **Figure #2**. Apply a small amount of grease to steering plate spacer and tighten locknut until slight drag is felt when moving steering block back and forth.
4. Assemble tie rod assemblies by first installing the correct thin jam nut onto each rod end and then completely install rod ends into threaded tubes, be aware there are LH and RH rod ends.
5. Install tie rod assemblies as shown using the four 3/8"-16 x 1-1/2" bolts and lock nuts. Set steering toe-in-out by adjusting threaded sleeves, once correct toe is set tighten locking nuts. Note: It may be necessary to install 3/8" washers between spindle arms and tie rod ends as spacers to clear side rails of cart, only 1/8" - 1/4" of clearance is needed when steering is moved from side to side.
6. Install handle into steering block and fasten handle in place with 1/2"-13 x 3-1/2" handle bolt and 1/2"-13 lock nut. Handle should curve out away from cart when properly installed.
7. Install grip by sliding over the open end of handle.
8. A handle retaining clip and rivets are included to secure handle to a finished box.
9. Install 3/4" I.D. x 7/8" long wheel spacers on front spindles.
10. Install wheel and tire assemblies with valve stems facing out and retain with four 3/4"-10 lock nuts.

