



STACK TALK

OCTOBER 2015

The Official News Letter of the Adobe Mountain Railroad
Phoenix Arizona, Operated by the Maricopa Live Steamers
Railroad Heritage Preservation Society,

UP-COMING MEETS

2015 FALL MEET OCT.29, 30, 31 NOV 1

2016 OPS MEET JAN. 14, 15, 16, 17

2016 SPRING MEET MARCH 17, 18, 19, 20

We are just a skip and a jump from the fall meet, there is a lot to be done before it hits. One of the first things that we need to work on is the club house. There is lot of stuff that should not be there and this is fair warning: after the next meeting, there will be a clean up, so if there is anything that you don't want pitched, please see that is removed. The club house is our home, it is the first thing our guest see when they come into the park.



I have been told that there was a great deal of track problems on Sunday, a lot of complaints. Question, whose Railroad is it? I believe that very member has a stake in it. If you want it to be better, then it is time for you to come out and help fix it. If you do not know what to do, ask and I am sure that there will be a number of members to help you learn. We need to face facts, there are about 18 miles of track, and about 4 to 6 members that try to keep up with it. **THEY NEED HELP!!!!!!**

There are also about 6 or 8 members that work very hard to try and keep the park itself up and running. They could use some help as well, just ask.

Repair crew is very hard at work trying to keep up with me maintenance of the equipment. Believe me that is a full time job.

Let us not forget the signal dept, the 4 or 5 members that work on that and have a large amount of work hours invested on it, you guessed it they could use help.

There are a large group of members that come out on Sunday to pull the public. That is a pretty large group. Of course they could use help.

I do want to give credit to the members that come out and never say a word, they just get it done.

Face it, it is your railroad and there is a lot of work to be done, be proud, you belong to one of the largest club railroads in the world.

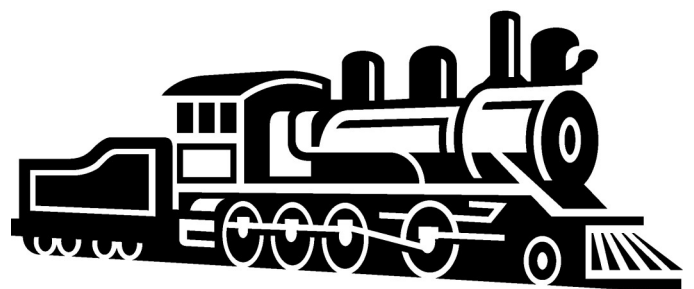
The club thanks all the ones who do work so hard to keep it going. Pat yourself on the back for a job well done.

It has come to my attention that some members come out and use the club locomotives and do not put gas in them, be fair, it is not up to the club to pay for your gas. If you take the trains out for any kind of joy ride you should help with gas. Everyone knows that when they come on Sunday to run the public, the locomotives are out of gas and the cans are empty. I know that gas will evaporate but not that fast.

Remember that after the fall meet it will be time for Christmas lights to be installed. This is one of our biggest money makers of the year please come out and help.

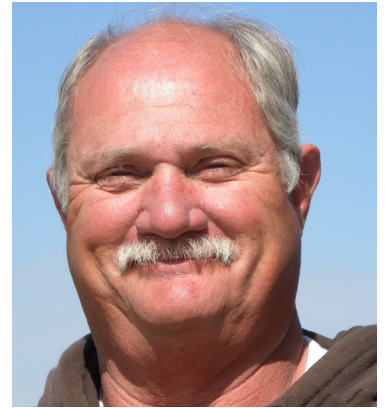
As everyone can see I am begging for help.

Every member should come to the meetings and put in their ideas as how to best to move club forward. You cannot complain if you are not there, we want to hear from you.



Well October is on us and fall meet just around the corner, please register if you haven't, also make sure sign to help during the meet we can't do it without you.

Work continues as you read this. so far arcthoo is almost complete, Bill is busy making more switches, we want to Terry for rebuilding all of the track panels for Pardee point yard I know there are thanks to give to others for their hard work. holes were drilled for light poles and trenches cut for conduit and installed. tubes are almost ready for concrete, but we still need to purchase the light fixtures for the poles please help by any donation you can give to help with purchasing these lights.



Friendship Park continues to get better more rocks have added, and again we need your help spreading the rock out. so come out give us a hand.

Engine repair shop is getting a new roof and up grade, this is long over due.

Remember after the fall meet we need to start putting up lights for the Christmas runs we expect a lot more riders this year. We may want to start putting lights up before the meet???? We are in the process of installing a project board out side of the club house so you can see where you can help out.

We are also looking for donations for new front sign, this will help with people knowing where we are at and when we have runs days.

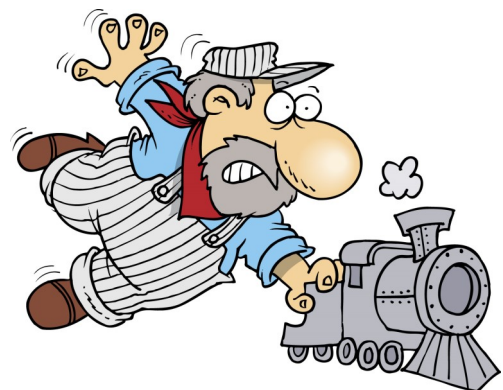
One more thing we are in the process of cleaning out the club house and organizing it if you have anything in there, please remove by the next general meeting or who knows where it will end up.

okay I am not done WE NEED ITEMS FOR RAFFLE. Please we need anything train related and you would like to part with please bring it in.

Well that's about all. see you at the park, work and play safely.

We have some members that are not in good health that need your prays, please keep them in mind.

Pete



Slow Orders Ahead!

By John Lovely under inspiration from Bruce Petrarca

Two indisputable Facts: we are not getting younger and we are accumulating more stuff. No choice on the former, but we can do something about the latter by thinking through some things now to make the disposal of our stuff easier for those that follow.

Several scenarios come to mind: fire, flood, burglary, illness, and finally death. Some steps of preparation now can make the recovery from any of these incidents easier, if not simple.

The first step is to inventory your stuff, specifically trains and tools. Give them an honest market value. When did you buy/acquire it? Yes, I know some of us have been hiding how much we have spent from our spouses and maybe even ourselves. But, the adjusters, whomever they may be, will want to know all the facts.

Second is proof of possession. Where was it at time of loss? How was it protected? One simple way to do this is to take your video camera and walk around your house, shop, storage shed, and record everything, commenting as you walk through about each item. Have the date and time feature turned on. Then store this digital record in a safe place. Remember to update the recording anytime you acquire something more.

How about insurance? Your home owner's (renters) policy probable doesn't cover your collections. Yes, they are collections of little worth except to another hobbyist. You will need insurance policies designed just to cover these potential losses. NMRA and other organizations have listings of some insurers that have just such policies. Without such a policy you are self-insured. Did/do you put a dollar in savings for each dollar spent?

The third step is to consider what you will do after the loss. Are you going to replace/rebuild your current layout or train inventory? Or will it be an opportunity to start fresh in another aspect of our wonderful hobby?

The fourth step then is the final act – death. Have you prepared specific instructions in your will or Living Trust about the disposal of your precious stuff? In the smaller scales too many of us have seen the proverbial brass engine given to the grandkids for play in the sandbox. At our Flagstaff Model Railroad Club we often find boxes of trains on our door step. Or someone will come with a box of junk that (out of ignorance) the person thinks must be worth a fortune.

Then there are the 401K's and other retirement savings accounts. When we reach age 70, we must take Required Minimum Distributions annually. Did you know that you can make those distributions to your favorite 501(c)3 organization directly from your account? For the past several years those contributions have been tax exempt. I am hoping congress will make that exemption permanent, it is in the finance bill the Senate passed earlier, but the house balked on. Talk to your financial advisor about this process.

I hope this will get the thought processes going. Happy rails and be prepared for those restrictive signals and the final red.

FRIENDS NIGHT SAT. OCT 3RD

Friends Night: Saturday [October 3rd](#) is our first fiends night of the season. What, you have never attended a friends night at MLS? Now's the time. Bring some dinner and your friends and family to meet at Ford Station at 5pm. After dinner and chat we hit the rail by 6pm for just some fun running around the railroad until you get tired. It may still be warm so bring a cooler of soft drinks for the trip.

Hank

Hi Everyone

Fred and Mike and the crews have worked over the summer to have our equipment ready for the fall runs. Sorry to report loco UP 2001 will be down for a month or two. On our first run day we had an axle wear out. On further inspection it was found all the bearings need replacement as well as some axles. Loco's 4402, 4403, 6005 and 7282 are ready for service. Please remember to bring your own gas if you are running for fun and check oil levels and general condition of the equipment. If any issues are found please email mlsmaint@yahoo.com with any issues. Also red tag the equipment and mark the chalk board.



Thanks

hank

STEAM LOCOMOTIVES

PISTON RINGS

Hello again. Last time we discussed pistons, leaving the piston rings to be addressed this time, so here we go.

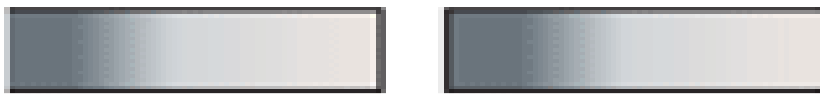
In the very early years pistons were “packed” with materials such as hemp and oakum (used to caulk seams in wooden ships). Using pressures at the time of 50+/_ psi, this was a relatively satisfactory method of making the piston steam tight within the bore, understanding that the bores left a great deal to be desired for surface finish and concentricity.



However, it was not very long before the pressures began to rise and a better method was required resulting in the use of brass and plain or Babbitt clad cast iron. This method lasted up into the 1890's.

From this time, on the cast iron snap ring and sectional rings began to appear. The drawing below shows some of the more common methods of making the ring joints. You might notice that the ring has a gap, which typically has specified dimensions needed to address expansion and provide some degree of flexibility to conform to the bore.

One of the best references regarding piston rings for steam locomotives is the “Engineers Handbook”, published by the American Hammered Piston Ring Co., 1935. From this work we find the basic geometry of the ring joints, shown in this drawing.



BUTT / STRAIGHT CUT



ANGLE CUT – RIGHT OR LEFT HAND

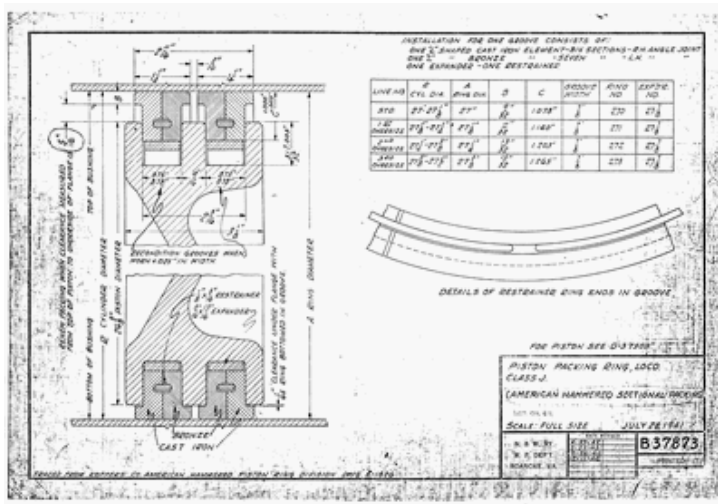


LAP JOINT

The term hammered ring comes from the fact that the internal diameter of the ring is literally hammered which produces a permanent tension on the cylinder wall.



Here is a new set of piston and valve rings, notice the end angle cuts.



Here is a more modern type of ring. As you can see it is made in sections and has an L profile, then installed back to back, being referred to as segmental rings. This method employs a strip metal spring behind the segments to provide tension on the cylinder wall.

Piston and valve rings have dimensional tolerances that are fairly critical to satisfactory performance. For locomotive work (steam) the side clearance is 0.003" to 0.006" depending on cylinder size. End clearance is recommended to be 0.006" per inch of cylinder diameter. These dimensions reflect the era of 1935 and were considered very good tolerances, however, it should be recognized that ring technology has significantly advanced which will probably provide much better service and reliability.

Finally, the piston fit in the cylinder bore typically has a clearance of 0.001" to 0.0015" per inch of diameter. Included below is the wear limits for cylinders from the Pennsylvania Railroad, things can get pretty sloppy (!) before re-boring.

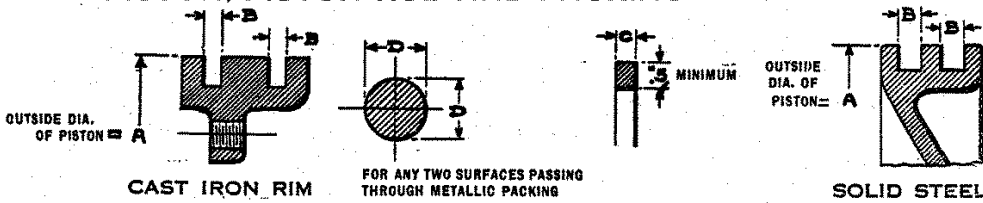
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Locomotive Maintenance Instructions No. L-6-D
(SUPERSEDING LOCOMOTIVE MAINTENANCE INSTRUCTIONS NO. L-6-C, DATED MARCH 18, 1918.)

ISSUED ALTOONA, PA.
FEBRUARY 11, 1920.

PISTON, PISTON ROD AND PACKING RING LIMITS



SUBJECT		New Locomotives and New Parts for Repaired Locomotives. Limits.	Repaired Parts. Limits.	Renewals or Repairs Must Be Made When Parts Are Worn to the Following Limits:		
				When Piston is Removed from Locomotive.	When Locomotive is in Shop for Classified Repairs	Under Running Repairs.
PISTON HEAD.	Rim, Cast Iron, Diameter For Pistons Without Tail Rods. A	Tracing Size or Cylinder Bore Minus .030". Limits, Plus or Minus .005". See Note 1.	Cylinder Bore Minus .030". Limits, Plus or Minus .005". See Note 1.	If Diameter is Less Than Cylinder Bore by .250". See Note 4.	If Diameter is Less Than Cylinder Bore by .125". See Note 4.	If Diameter is Less Than Cylinder Bore by .250". See Note 4.
	Solid Steel, Diameter For Pistons With Tail Rods. A	Tracing Size or Cylinder Bore Minus .187". Limits, Plus or Minus .005". See Note 1.	Cylinder Bore Minus .187". Limits, Plus or Minus .005". See Note 1.	If Diameter is Less Than Cylinder Bore by .280".	If Diameter is Less Than Cylinder Bore by .250".	If Diameter is Less Than Cylinder Bore by .280".
	Grooves for Packing Rings. Width. B	Tracing Size. Limit, Plus .004"	Sides Parallel Within .003". See Note 2.	When Ring is Renewed, Groove is to be Faced if out of Parallel More Than .030". See Notes 2 and 4.	When Out of Parallel More Than .015". See Notes 2 and 4.	See Note 4.
PISTON PACKING RINGS.	Width. C	Tracing Size. Minus .002" to Minus .004". See Note 5.	Groove Width Minus .002" to Minus .005". See Note 5.	See Note 4.	See Note 4.	See Note 4.
	Side Play in Groove.	Maximum, .008". Minimum, .003".	Maximum, .008". Minimum, .003".	Renew Rings When Exceeding .030".	Renew Rings When Exceeding .015".	
PISTON RODS.	Diameter of Part Passing Through Packing. D	Tracing Size. Limit, Minus .004".	Variation in Any Two Diameters Not to Exceed .004". See Note 3.	If Variation in Any Two Diameters Exceeds .015". See Note 3.	If Variation in Any Two Diameters Exceeds .008". See Note 3.	If Variation in Any Two Diameters Exceeds .030". See Note 3.

(OVER)

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No. L-6-D.

Well that's it for this time, take care, Dave