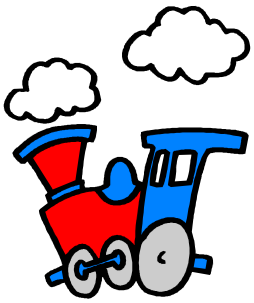
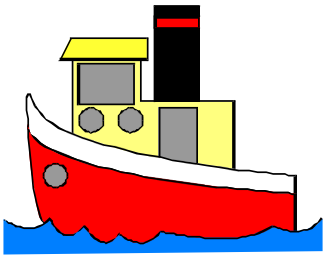


Wheels and Floats



Newsletter December 2016

TAURANGA MODEL MARINE AND ENGINEERING CLUB INC.

The Secretary
PO Box 15589
Tauranga 3112

Palmerville Station Phone 578 7293

Miniature Railway Memorial Park
Open to Public, weather permitting
Sundays in Summer: 10am to 4pm approximately
Winter. 10am to 3pm approximately
Website: www.tmmec.org.nz

MEETINGS
General Members Meeting every first Tuesday 7pm.
Committee Meeting every second Thursday at 7pm.
Maintenance Tuesday mornings from 9am.
Engineering discussions Tuesday evenings 7.30pm.

COMMITTEE

President:	Peter Jones	543 2528
Vice President:	Bruce Harvey	548 0804
Club Captain	Bruce McKerras	5770134
Secretary:	Murray de Lues	027 3020930
Treasurer:	Owen Bennett	544 9807
Committee:	Warren Belk, Shane Marshall, John Stent, Russell Prout, Clive Goodley.	
Boiler Committee:	Peter Jones, Bruce McKerras, John Heald, Paul Newton.	
Safety Committee:	Warren Karlsson, Bruce Harvey, Peter Jones, Malcolm George, Marty Rickard.	
EDITOR:	Roy Robinson 07 5491182 royrobkk@gmail.com NOTE new email address	

CONVENERS

Workshop:	John Nicol
Track :	Bruce Harvey, John Stent, Russell Prout
Marine:	Warren Belk
Librarian:	John Nicol
Rolling Stock:	Clive Goodley
Website:	Murray de Lues
Driver Training:	Clive Goodley
Club Captain:	Bruce McKerras

OPERATORS 2016

4 December	P Jones
18 December	P Lindsay
25 Dec & 1st Jan 2017 Closed	
8th January	B McKerras
15 January	R Salisbury
22 January	G Barnes
29January	N Bush
5 February	M Duncan
12 February	B Fitzpatrick
19 February	B Harvey
26 February	P Jones

PRESIDENT'S POINTS

Greetings members.

Members were advised of the special meeting to be held at Palmerville on club night the 6th of December to vote on the notice of motion that Malcolm George be given the honor of becoming a life member of our club. This meeting was well attended and the motion was supported unanimously, thank you for the work you have done over the years Malcolm , especially those years as treasurer of our club.

Our open weekend went smoothly as usual. Thanks to those that visited our club from Manukau, Whakatane, Hamilton, New Plymouth, Napier and Cambridge, and especially to our members ladies, Bev Jones, Sheila Goodly, Robyn Shirley, Colleen Shand, and Caroline Jones made sure our visitors and members were looked after, and also a special thanks to our visitors Donna Alex-

ander and Yvonne Moffitt who got involved to help us during the weekend.
Our club was audited for ADR on the Saturday by MEANZ Auditor Mark Stack from Napier, thank you Mark for carrying out this service to our club. This is part of our MEANZ association support carried out by volunteers who check out what we do fits within the Worksafe requirements for the ADR. David Giles has supported us as Lead Auditor, so just procedure now to get the paperwork sorted and presented to Worksafe. Our ADR, (Amusement Device Registration) is a requirement every two years, this allows us to operate our railway. Representation by MEANZ helps us through this process, those involved in the auditing know what we doing and why we are doing it. Warren Karlsson as Safety Chairman along with Bruce Harvey did a lot of preparation work getting things sorted for the audit , thank you for your hard work.

As previously reported, our club was awarded the Trustpower Supreme Award for 2016, which leads into a National Competition in March 2017. Our committee wants to represent our club during this event in a professional way so we have enlisted the services of a professional, Lara Marshall movie director to help with our presentation. We need to make public aware of what we do and how that extends from our own interests in our model engineering hobby into the public arena, supporting the community in a number of ways. One of those areas is our railway safety crossing and it is our intention to give support to the Australasian rail safety week by demonstrating how we can teach our youngsters about the hazards of railways and especially at crossings. Shane Marshall and Mike Treloar set this up along with the help of a play centre group lead by Alison Marshall,with help from Dawn Marshall and Kaye Treloar, instructing the little NZ'ers about the hazards of rail crossings. This has been filmed and directed just as has our rail operation over the open weekend and also our involvement in the Christmas parade, giving us material that we as a club can use for various promotions in the future.

Yes we have been busy, and an opportunity to relax and enjoy our years efforts was denied us when our planned Christmas get together at Bruce Harvey's was cancelled due to inclement weather, so once again Christmas has been postponed until next year. It was a sensible call, but that does not give comfort to Trevor Chapman who flew from Greymouth to Tauranga for the occasion. Sorry Trev, I guess AIR NZ will not give you a "rain check", it was great to catch up with you Sunday.

Just a couple of more sleeps and we will be into a new year, all the very best to you your families and loved ones, have a great Christmas Celebration, while sparing a thought for those in North Canterbury who have endured further hardship recently. Looking forward to a great year in 2017.

Peter Jones

p.s.

Christmas parade is over, a well supported event by the community. We had two traction engines this year, Shane and Phillips, with the same "Santa's Workshop" theme as last year. Thank you members who travelled out to Russell's and helped set up the float and to those who came down on Saturday morning to finish off and be part of the occasion. It is good fun and congratulations to our team on winning 3rd prize in the Sport and Recreation category.

Best wishes

Peter Jones.

Editor’s efforts.

There is a move afoot to build a small loco to encourage younger (potential) members of/to the Club. To this end plans of a 3 1/2” loco are required. Something like a Titch of Rob Roy. If you are able to assist please contact Bruce McKerras, Lloyd Breckon or the Editor.

For those who may be contemplating attending the Convention in Nelson 2018 I have been corresponding with the Convention Secretary Tracy Gibbs. The Tahuna Motor Camp which is adjacent to and the obvious possible accommodation is not available because of prior bookings. Just a quick search revelled the following:

Motueka Top 10, Mitai Valley Motor camp, Nelson City Holiday Park, Able Tasman Marahau Beach Camp.

No doubt there are others. These would be no greater than 1/2 hour form the venue. Just remember there is a possibility of a trip to the Cobb Power Station if I can get all the ducks in a line.

I’m keen to have a Buy, Sell, Exchange section in this mag. To date I haven’t received much to trade, sooooo if you are having a clean out as your New Years resolution give me a list and I will put it in the mag.

I have a flyer from the Whangarei Model Engineering Club advising of their Anniversary Weekend Open Day Event 28th & 29th January 2017. If you are planning to go they request RSVP with numbers to Bruno Peterson (Sec) <brunopeterson@xtra.co.nz> ASAP. More info available from the Editor.

Whilst you have your feet up over the holidays take some time to scribe an article for YOUR mag. Remember it belongs to YOU, not me, I only put the articles into some semblance of order.

This is the last mag for 2016, the next issue will be out in February 2017.

We (my advisers, assistants and I) wish you all a Merry Xmas and a relaxed New Year and hope you get lots of time in your man cave.

Roy Robinson (please note new email address)

Big Yellow (No4) back on the track again.

How to build an Ofeldt Steam Boiler

The wish to build a steam propelled boat had long been a dream of mine ,so in May of 2014 I purchased a suitable set of plans for a strip plank launch from Selway Fisher. Some of you will have seen the project so far, at the last Club BBQ. At that time the hull was complete, steam engine located and some of the internal fit out well on its way. had hoped to "pick up " a boiler somewhere or other. It was suggested that the way to go was a "flash" boiler. Not knowing what this involved I conducted some serious internet searches. The term flash refers to the design of the tube stack. It is effectively a large container with a burner below to boil the water contained therin . The steam is led through a separation chamber, to reduce carry over, and thence to the engine inlet globe valve. The amount of steam produced is dependent on the surface area being heated. This is the reason for the multiple coil design. Being unable to find somebody to make this monstrosity for me I decided that the only way forward was to "jump of a cliff". This quote from the club Captain is most appropriate because although I have a degree of theoretical and practical engineering knowledge, my only experience of copper tube assembly was home plumbing and those joints often leaked! The design of the boiler is as follows. I have a central copper tube 100mm in diameter of 2mm thickness. The tube is 800mm long and is sealed at bottom and top with a hand beaten copper disc. Around the core are 12 copper tube coils each silver soldered to the tube at the top and bottom . The coils are approximately 100mm in diameter,600 mm in length they were wound by hand using a simple pipe bender. The tube is 14.7 mm annealed copper which is purchased in 15 m coils. I have used four coils so my tube stack is 55 metres overall ! The reason for the number of coils is to provide the maximum surface area exposed to the burner flame. I am using a two ring burner capable of producing 20MJ of power per hour from a 4Kg cylinder of LPG. The steam/water separator is a cylinder of 80mm copper tube continuing an upward facing pipe which is soldered through the tube wall and is the steam supply to the engine. Assembly involved drilling the core pipe and soldering in each coil at the top and bottom, one joint at a time. The tube was set up horizontally on a pair wooden V blocks so that I could have each joint in the horizontal plane to aid solder flow. After each joint the area around the next one had to be cleaned thoroughly. The amount of heat required to effect an easy flow was LARGE hence why the surrounding area was heavily sooted after each joint. The copper tube was a most effective radiator and conductor to dissipate heat so I employed a burner ring below the tube and a "flame thrower" borrowed from the club to heat each joint. The fixing of the disc at the top and bottom used an immense amount of heat. So far I have consumed at least 12Kg of LPG. Prior to carrying out any soldering I had to re-locate my store of paint tins and other flammable materials to the opposite end of the garage as a bonfire would have been disapproved of! Even so working with garage door open was necessary in spite of the temperature outside being in single figures.

The boiler is now complete and has been pressure tested. There was only one small pinhole leak on the fitting which I had soldered in to accept the connection from the pressure testing unit ! All of the other 26 joints were good. I shall have to retest when I have fitted the two connections for the gauge glass but I was keen to check out my work so far. The first picture shows the steam separator, the small tube is the steam supply line, this is before the end cap was soldered on.

The second picture shows the tube stack being tested by weight of water, hence the filling funnel in the test connection, the level did not go down at all, in spite of being left in situ overnight. A satisfactory initial test.

The next stage was to install the tube stack in a stainless steel jacket as a shield and combustion chamber.

The tube stack needs to be suspended above the burner flame and this was achieved by brazing four, equally spaced, one inch copper tubes at the top and drilling corresponding holes in the jacket. The tubes protrude through the inner jacket but are covered by the outer stainless steel cylinder, which also allows a layer of ceramic insulation to be fitted.

The completed boiler is shown here undergoing final successful pressure test. The boiler was then lagged with ceramic insulation 30 mm thick and the outer skin attached. Stainless steel pop rivets 0.49 mm in diameter are used to secure the casings and intervening brackets of the boiler. The lagging is temporarily secured with "non plastic" string before putting the outer jacket on, the securing brackets can also be seen. The final task shows the boiler with the top cone attached in the boat.

The boiler is now installed and pipe work connections for feed water and steam supply are to be made. I shall also include a safety valve, whistle and pressure gauge. I have received lots of encouragement and advice from numerous club members for which I thank you all.

David Flockhart

For Sale

Model Engineering mags Model Maker 1996—2007

Model Engineer 1952—1991

Stricktly Internal Combustion 1996—2007

Relm Shaper 10’ stroke

Contact Bill Janes 07 5787583 with reasonable offers


DEWALT

Australia Trip 2016 (continuing story)

South Australia has major problems. The State wide power outage we encountered was predictable. The Green faction had been successful in closing the Port Augusta Power Station one of the two major State power stations on the basis that it was using "dirty" brown coal. This resulted in the death of one town Leigh Creek where the coal mine was situated and a severe shock for Port Augusta. It was then promoted that South Australia was the leading Australian State with renewable energy mainly wind farms, 43% of the power is produced by renewable energy if I remember correctly. That's all good, but when the storm broke just prior to our arrival in SA it transpired that the wind mills are unable to operate in high, fluxulating wind so the wind farm was closed down. The next thing that happened was because the storm was so violent some 20 pylons which carried the power from Victoria blew down…… No power, a perfect storm!!!!!!!

The next problem for SA is that it very likely One Steel will close its steel mill at Whyalla. (That is where both the Union Rotoiti and Union Rotorua jet turbine powered RORO vessels were built in the 60's) If this closure takes place (because of cheep Chinese steel) 4 towns will die i.e. Whyalla and 3 mine towns.

A mate of mine son works or did work for Santos an exploration company, the week we were there they put off 800 employees, they put off 600 last year.

The only bright light is that $1.2b is being spent on upgrading the lead / zinc processing plant at Port Pirie.

However that's nothing to do with Model Engineering. We left Adelaide and headed East. One of our lunch stops was at Kingston at the bottom end of the Coorong NP. It was a quick lunch as a cold westerly wind proved to be too cold to spend time viewing the scenery. Just as we were leaving Kingston I spotted a sign "Tractor Museum, 200 running tractors" I guess the guy didn't say when they were last running but to be fair there was at least 200! The shed must have been at least 20,000 sq ft and was floodlit with 4 x 60 watt bulbs! It was a struggle to get pics but it is a "must visit" if you are in the area.

We stayed with friends at Waracknabeal. They crop 20,000 acres of wheat, barley and lentils. I won't bore you with details bar 2 points which will give you an idea of the size of the operation. Roundup is purchased in 1000l pods!!!!!!!!! Two header harvesters had been replaced @ $750,000 each (bare machines no fronts)!!!!!!!

To Horsham for the Model Traction Engine Convention. We arrived latish Thursday and made contact with Colin the Secretary of the Horsham Model Engineering Club. I accepted an offer to attend their monthly meeting that evening and was made very welcome. There were 9 members attending and I gathered that was about the full membership. If I remember correctly there track runs 600 m and was 5 & 7 ¼ gauge. For the size of the Club it was a good facility and whilst beside the river park was somewhat of the beaten track and they feel $200 income is a good public run day.

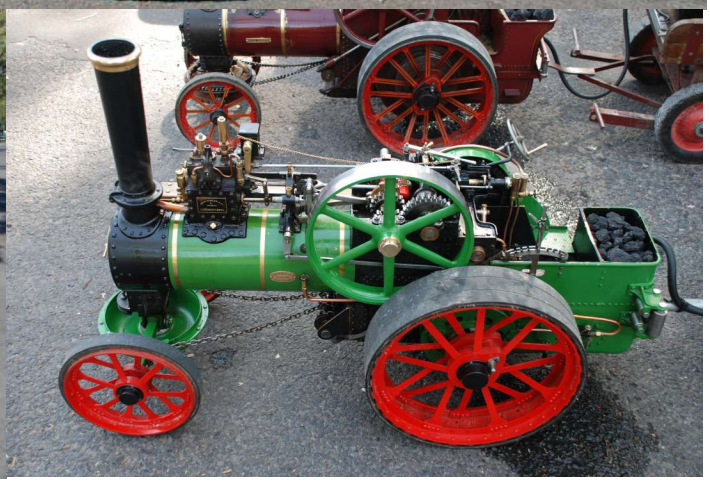
Friday was slow with a trip 60k to another Museum at Rupanyup with an excellent display on tractors, stationary engines, farm equipment etc. It also had "rooms" featuring a grocery store, doctor's surgery, hairdresser plus many others. Once again a "must visit" if you are in the area.

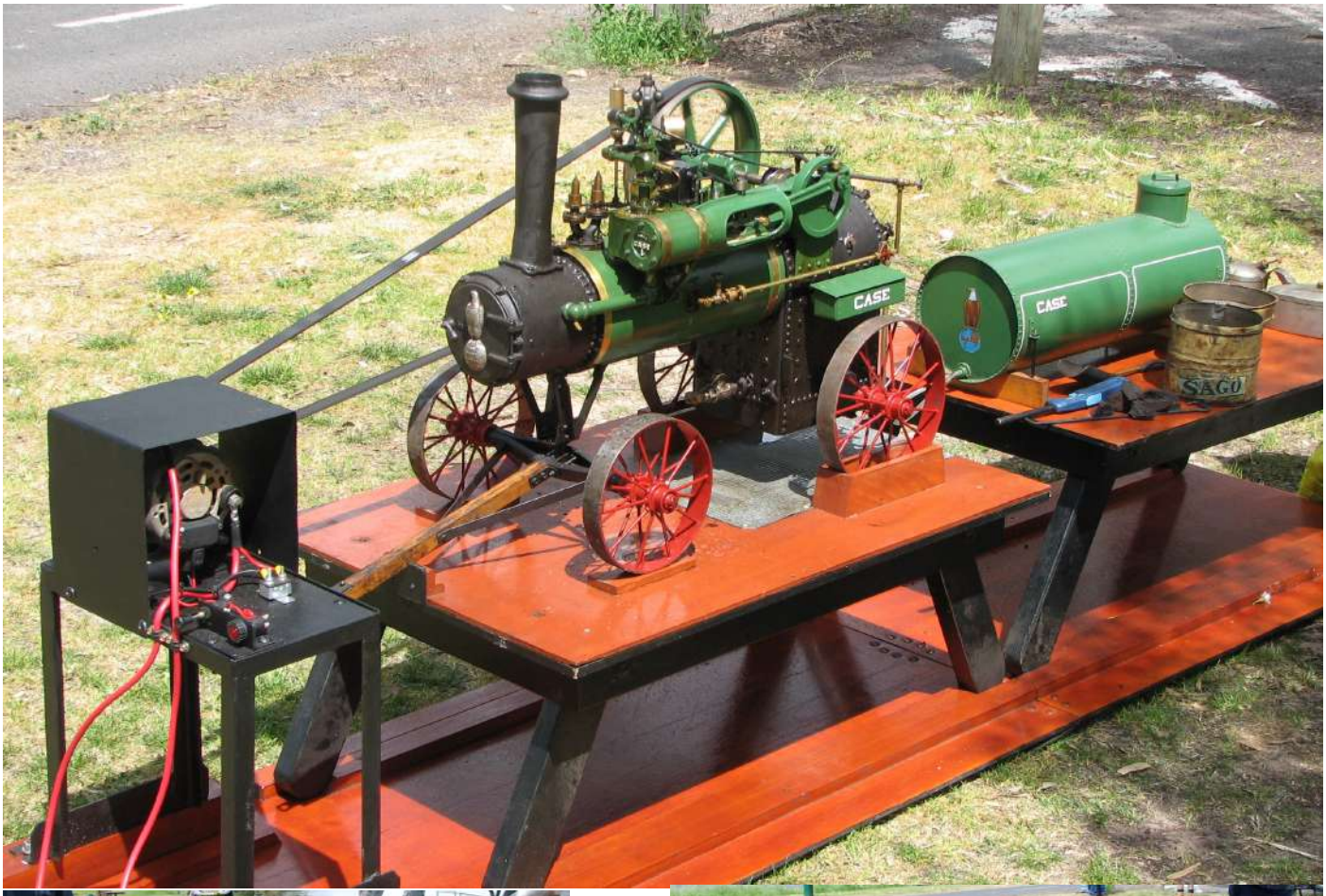
Saturday was "The Day" and by 10 o'clock some 15 odd traction engines were being fired up mostly with coal from Bunnings!! There a large group based in South Australia centred around 3" Alchin. They have all the plans and I believed could provide most parts for that size and model together with a very active build support team. Barb & I found all participants helpful and happy to talk. The only subject I found not to promote was duplex boilers and I quickly changed the subject. It was very clear the people were left and right and most are left. Several engines towed interesting trailers, one having the living van and the Furfey water cart behind that all to scale of course. Another had a 4 axle low loader float behind with a steam truck on the float. One odd stationary steam engine was an American Case. This fitted onto a base which had a car alternator mounted on it. This was connected to a battery and an old lounge 3 head standard lamp fitted with suitable bulbs. The Case was at full noise to keep the lights bright and it did look good. The was a vertical saw cutting "logs" driven of course by a traction engine. However this guy went a little further and the logs were dragged out of the "bush" onto skids, winched onto a trailer and towed to the saw mill to be cut into planks not without real life problems. Another trailer had a full load of wool bales once again all to scale.

Unfortunately we had to say goodbye and leave for Melbourne by 2.00pm some 4 hours away as we were going to the Model Engineering Exhibition the next day. However that is next month's story. A great experience, really enjoyed it with lots of "new" engines.

Roy Robinson


PICKERING
M HAULAGE COMPANY
Charlotte

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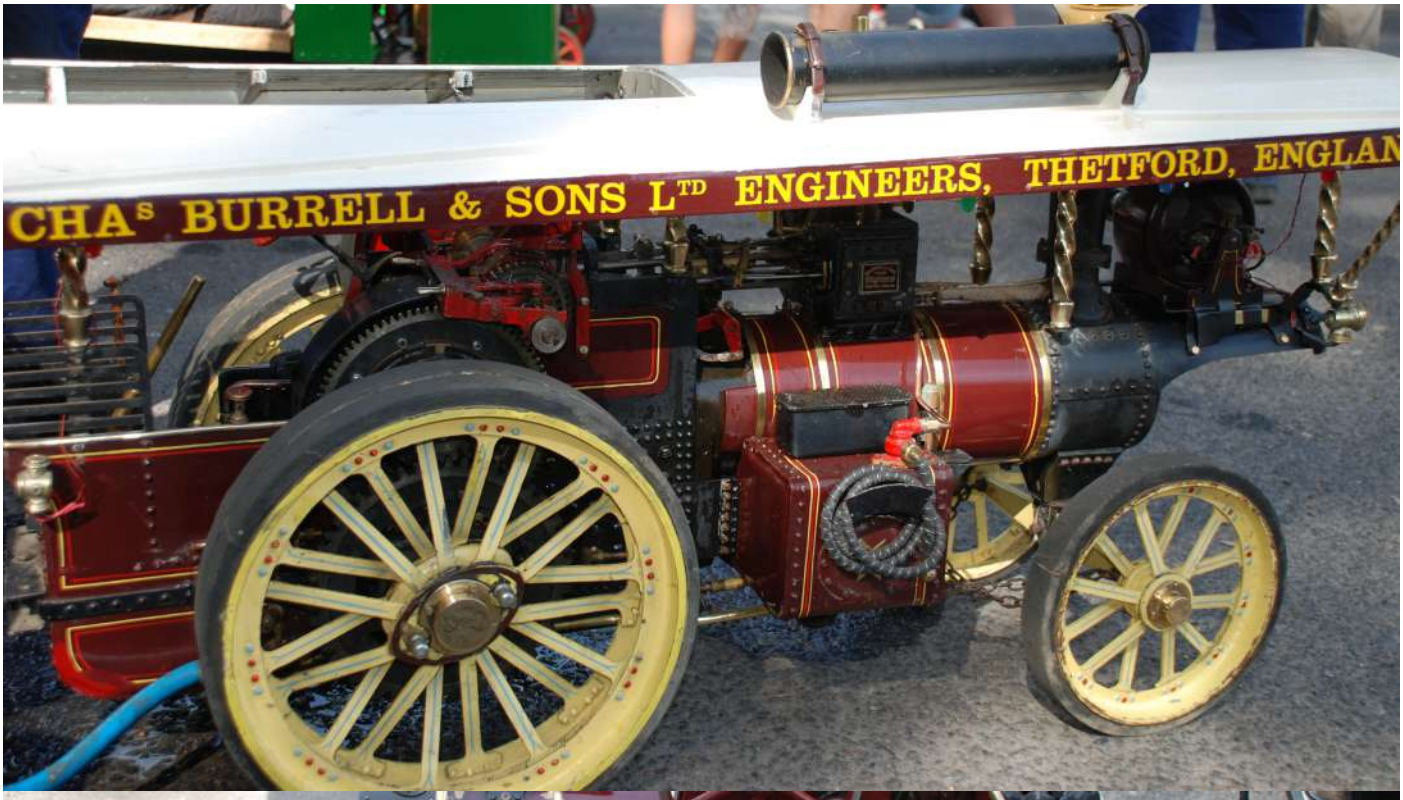

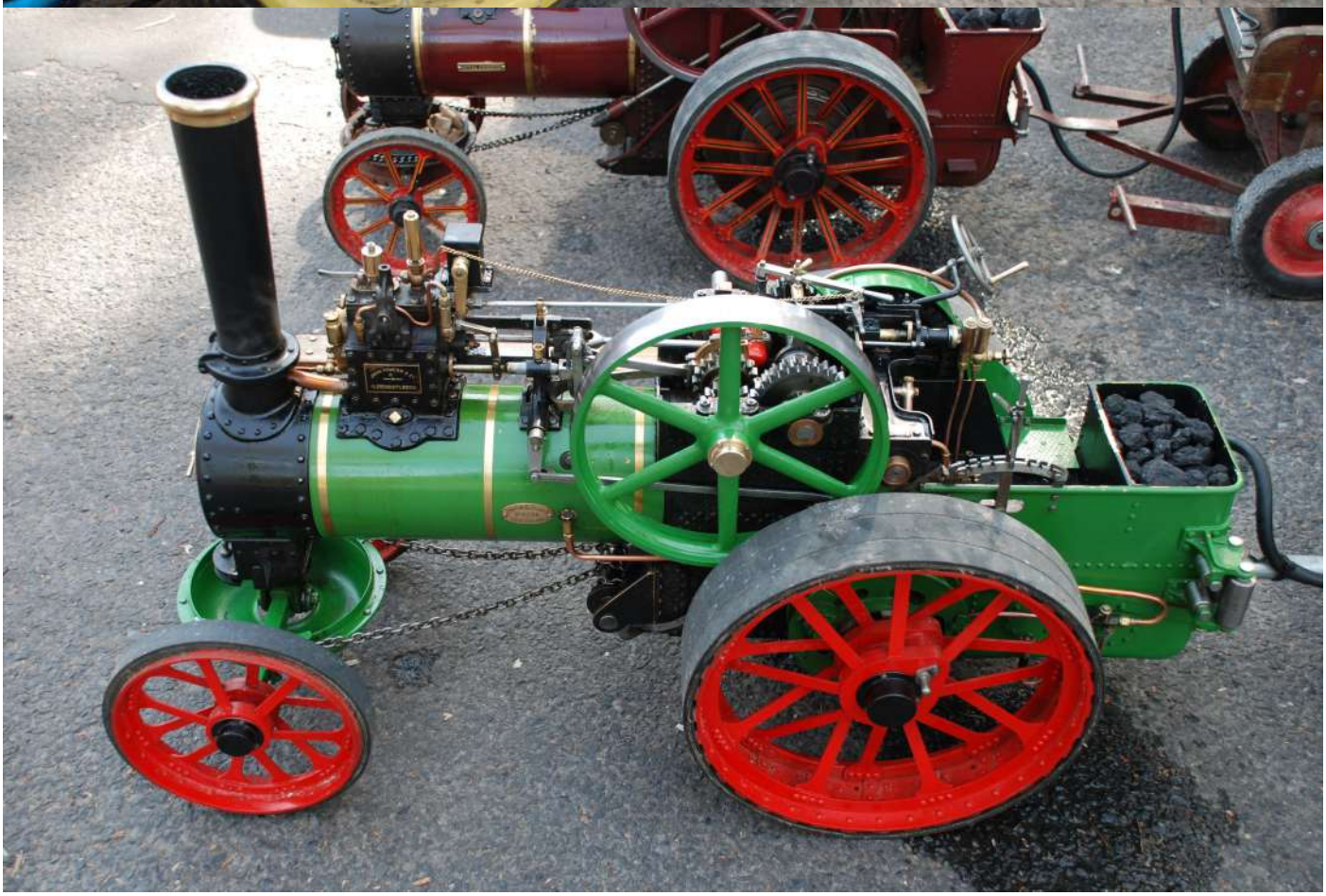

The preceding pics are just a few of the many entrants in the Traction Engine Convention at Horsham Australia. The one which took my fancy was the Foden (on the left of the 2 engines facing each other). This engine is a replica of a full sized machine owned by the driver. They were approached by an engineer who came, measured and photographed the full sized Foden then proceeded to freelance this model. He steamed it once then offered it to the owners of the full sized one. Of course they couldn't refuse the offer and Dad purchased the model. It is evidentially scale correct even to the colour of the paint!!

From the 2016 Tauranga Xmas Parade

Phil “the tosser” on the left (his engine tossed 2 rear tyres by day end) and Shane with his FORD (fix or repair daily) traction engine .

Understanding Engineers 1

Two engineering students were biking across a university campus when one said, "Where did you get such a great bike?"

The second engineer replied, "Well, I was walking along yesterday, minding my own business, when a beautiful woman rode up on this bike, threw it to the ground, took off all her clothes and said, "Take what you want."

The first engineer nodded approvingly and said, "Good choice: The clothes probably wouldn't have fit you anyway."

Understanding Engineers 2

To the optimist, the glass is half-full. To the pessimist, the glass is half-empty. To the engineer, the glass is twice as big as it needs to be.

Understanding Engineers 3

A priest, a doctor, and an engineer were waiting one morning for a particularly slow group of golfers. The engineer fumed, "What's with those guys? We must have been waiting for fifteen minutes!" The doctor chimed in, "I don't know, but I've never seen such inept golf!" The priest said, "Here comes the greens-keeper. Let's have a word with him." He said, "Hello George, What's wrong with that group ahead of us? They're rather slow, aren't they?" The greens-keeper replied, "Oh, yes. That's a group of blind firemen. They lost their sight saving our clubhouse from a fire last year, so we always let them play for free any-time!" The group fell silent for a moment. The priest said, "That's so sad. I think I will say a special prayer for them tonight." The doctor said, "Good idea. I'm going to contact my ophthalmologist colleague and see if here's anything she can do for them." The engineer said, "Why can't they play at night?"

Understanding Engineers 4

What is the difference between mechanical engineers and civil engineers? Mechanical engineers build weapons. Civil engineers build targets.

Understanding Engineers 5

The graduate with a science degree asks, "Why does it work?" The graduate with an engineering degree asks, "How does it work?" The graduate with an accounting degree asks, "How much will it cost?" The graduate with an arts degree asks, "Do you want fries with that?

Understanding Engineers 6

Three engineering students were gathered together discussing who must have designed the human body. One said, "It was a mechanical engineer. Just look at all the joints." Another said, "No, it was an electrical engineer. The nervous system has many thousands of electrical connections." The last one said, "No, actually it had to have been a civil engineer. Who else would run a toxic waste pipeline through a recreational area?"

Understanding Engineers 7

Normal people believe that if it ain't broke, don't fix it. Engineers believe that if it ain't broke, it doesn't have enough features yet.