

# Vintage *Scene*



ISSUE 165  
AUGUST 2018  
ISSN 1177-925X

NEW ZEALAND'S  
VINTAGE MACHINERY MAGAZINE  
[www.vintagescene.co.nz](http://www.vintagescene.co.nz)

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**Vintage Scene**  
39 Northumberland Street  
TAPANUI, West Otago 9522  
NEW ZEALAND

# Vintage Scene

**New Zealand's independent vintage  
machinery magazine**

Published quarterly  
(February, May, August, November)  
**www.vintagescene.co.nz**

**VINTAGE SCENE 2018**

## **PRINT, PRODUCTION & DESIGN**

Idealprint 2018  
Tapanui, West Otago

Vintage Scene is registered with the  
National Library: ISSN 1177-925X  
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New Zealand ..... \$35.00  
Australia..... \$40.00  
Rest of World..... \$50.00

All subscriptions are stated in  
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payable in advance.

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Personal cheques or bank notes to the  
equivalent of the New Zealand dollar rate  
will be accepted, also bank drafts. Visa  
and Mastercard are also accepted.

## **POSTAL DETAILS**

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Tapanui, West Otago 9522  
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**20 OCTOBER 2018**

**Hi everyone**

Some important and exciting information for you all to start the issue with. As of 1st June my husband and I are now owners of Idealprint, the business that sets up and prints your Vintage Scene magazine. We are very excited about our new venture, and look forward to working with you all to give you the magazine you love to read. (please see Page 4 for all the necessary information you need in regard to renewing your subscription)

Included with this issue you will also find a short survey form we would love for you to fill out and return to us if you wish. (*you can also email or phone us with your answers, if that is easier for you*) We really want to be able to print the type of stories you want to read, so we need to know what it is you like, and dislike. (we won't be offended) ***Those of you who send us your thoughts will go in the draw to win your next subscription for free - available to 3 lucky subscribers***

We have also joined the Facebook world. I actually don't know why it has taken so long!! This will be another great way for us to see what you guys all around the country are doing, and with your permission, perhaps even share some of your stories.

In this issue we start with a story about a new display at our local Museum - West Otago Vintage Club. On pages 8 and 10 we have a couple of stories from a regular, Dave Hunger. These stories look into converting 2WD tractors to 4WD, and the development of the Ford 5000. Lance Mullin has sent in a story about his restoration of a Ferguson Half Track. It would be great if a few more of you were to send in your stories of a restoration project you are currently working on, or have already completed.

Something I would also like to start doing, is in each issue featuring a Museum or Club (from the list on the inside back cover). So please get writing about the great things you available for anyone interested. An array of photos would also be much appreciated.

***Take care everyone, till next time.***  
***Vicky***

## **COVER PHOTO**



On Page 11 we bring you the story of a special delivery of a Garrett Steam Engine about to happen at the Thornbury Rural Heritage Centre.



# Club Activities and Highlights

*A selection of excerpts taken from Club Newsletters sent to us*

**South Canterbury Traction Engine & Transport Museum** - hosting a Horse Power Rally, Phar Lap Race Way in Timaru. 20th and 21st October. Sounds like this will be a great day with already over 300 exhibits interested.

**Ashburton Railway and Preservation Society** - holding a 2 day event over Labour Weekend, with 2 steam engines running, rural history, stationary engines, a sawmill and other displays.

**Franklin Vintage Machinery Club** - set up a display at the Franklin A&P Show in February. The theme of their display was to acknowledge 100 years of Pukekohe Vegetable Growers Assoc. The display included tractors and implements from local growers and club members. The oldest implement displayed was a 1896 potato digger!!

**Wellington Vintage Machinery Club** - hosted a visit from a large group of keen people in early April. Sounds like they enjoyed looking at all of the displays, machines and equipment, and especially the great morning tea!!!

**Ayrshire Vintage Tractor & Machinery Club (Scotland)** - held their 35th annual Vintage Rally celebrating 175 years of Case International Harvester and 100 years of John Deere Tractor production. According to their report they could not have asked for a better day. The weather for the weekend was great, and for the first time ever, the car park was full!!! Great work guys.

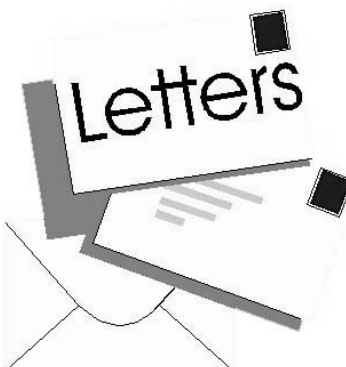
**Horowhenua Vintage Machinery Club** - plans are underway for their next Harvest Weekend, to be held 2nd and 3rd February 2019.

**Ferguson Heritage Club** - I have read a report where members of from throughout New Zealand, gathered in the Taranaki area over Queens Birthday weekend. The days were full with trips to many interesting destinations including the Honnor Family Museum, Lance Mullin's collection, and also to see Kelvin and Juan Whittington. It sounds like a very well organised trip.

**Tauranga Vintage Machinery Club** - recently held their monthly meeting at COG's Gear Cutters in Tauranga. The owner of the business showed the members some of the machinery in action. Everyone was so fascinated by what they saw, it was 10pm before the last left for home. Sounds like a great place to visit.

**The Steam Traction Society** - are hosting the Great Manawatu Steam Fair in March 2019. On offer for the day will be: steam engine driven machinery displays, traction engine trailer rides, model steam engines, stationary engines, and you can even have a go at steering a steam engine!!

**Waikato Vintage Machinery Club** - having a Club visit this month with one of the stops being to the Gold Mine and Museum in Thames. Sounds like an interesting trip, hopefully there will be a report for our next issue.



No letter this month, but I must print an apology to Alister Clark re. his story in our last issue about his amazing rhubarb patch - I mistakenly said that the price per sack of fowl manure was 3 pound and six pence. This should have said 3 **pence** and six pence.



## HERE IS ALL THE IMPORTANT INFORMATION YOU NEED WHEN IT IS TIME TO RENEW YOUR SUBSCRIPTION

**PAYING BY CHEQUE:** It is very important for those of you paying by cheque that you no longer make your cheque payable to Cole Industries or Vintage Scene, as these will no longer be accepted by the bank.

**PLEASE MAKE YOUR CHEQUE PAYABLE TO: IDEALPRINT 2018**

**INTERNET BANKING:** For those of you who like to pay by Internet Banking, you will need to update your records to the new bank account number: 03-0915-0022953-000. It would be appreciated if you use your membership number as a reference when making your direct deposit payment.

**CREDIT CARD PAYMENT:** We are more than happy to continue with credit card payments. However we are now using a different system to previously. This means one important change to the information you need to provide us. We now need from you the 3 digit authorisation code on the back of your credit card.

I apologise in advance for any problems these changes may bring you, but obviously with new owners these are important details.

# LIFE

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# Seems to be a recurring theme here .....

## YESTERDAY

By Charles A McLennan (Grandy)

Old tractor dismembered and shrouded in dust  
Her body disfigured by horrible rust  
Her day is long over, her ploughing all done,  
No more will she flash in the sun.

The spark plugs are gone; there's no fire inside,  
Her pistons long idle, her spirit has died;  
She rusts in dishonor, not even a grave  
In reward for the service she gave.

In a field back of nowhere, abandoned alone;  
Been robbed of the seat that was used as a throne.  
No one to sing to the song of the gears;  
Everything's gone with the years .....

In her prime she could plough fifteen acres a day,  
The binder in fall was considered as play  
With full tanks she'd boldly strike out, at the dawn,  
Be there until last light had gone.

One way or harrows she didn't much care;  
The belt pull of harvest when fall's in the air  
Her real work revealing what lay below the ground  
Each new year when spring rolled around.

In a field back of nowhere abandoned alone;  
Been robbed of the seat that was used as a throne,  
No one to sing the song of the gears;  
Everything's gone with the years ....

Yesterday's gone, must keep up with the times,  
Not much call today for a pitch fork with tines,  
Computerised cows let themselves out to graze ..  
Tomorrow there'll be a new craze

## 10 THINGS I WANT IN LIFE

1. *Tractors*
2. *A spouse that loves tractors*
3. *More tractors*
4. *Friends that love tractors*
5. *A big shed for my tractors*
6. *More tractors*
7. *Money for more tractors*
8. *A trailer for my tractors*
9. *Unlimited parts for my tractors*
10. *Tractors*

from Taranaki Vintage Club



# From Farm, to Display



The idea to save and restore old farm bikes occurred during the dairy craze, when farms were being brought up and all the old machines were getting given to the scrap man, or buried in the dead hole. While watching this and trying to save some old bikes I thought that we should look after these machines and collect and restore them. Then at clearing sales I would buy some, so the collection grew.

Then I went to the West Otago Vintage Museum meeting asking if it would be possible to get some space to display the old bikes, trikes and four wheelers. Peter Byars was present and told the committee my idea. They were more than helpful and gave me an area 20 metres by 2 metres. Then we went about making a stand to put the display on, and I was overwhelmed with support from the Dongwha Fibreboard Plant and Stuart Timber. We duly had the stand made.

Then we went about getting the machines to a standard to suit my idea, which is off the farm but tidy, with all the bits and pieces the farmers would put on there like crash bars, bikes with side cars and tow bars, leather bags to carry lambs, and all sorts of things that farmers create.

Basically the West Otago Vintage Museum is building a display starting with a BSA Bantam (John Hughes); a Mountain Goat (Baxter family); Iowa 125 (George Morrison); Suzuki Farm Byke, yes spelt with a "y" (Neil Baird); a Iowa 175 (Philip Edge), Gnat (Neil Kirk) and Honda CT90 (Bill Horton) etc.

The display is in the very early stages with only 18 bikes tidied and ready on the stand, but we hope to do one a month if possible, to get the display finished. But as I say it is in the early stages.

So don't make a visit to expecting to see 50 bikes. But we are getting there. Hopefully by the end of the year we will have a display to a good standard.

We have been collecting sometimes three bikes just to make one good bike. The desire is to retain the farmy look.

When you talk to friends about vintage clubs, they automatically think of dust and rust and grumpy old men. Although we do have some of that in our club, but mostly there is a keen interest in restoring and preserving old machinery for the future, and there is a great pleasure in getting something going again.

**DP Devereux**





# Garrett Steam Engine coming to Thornbury

Sitting quietly in a lonely shed at Waianiwa, sits Garrett Steam Engine works number 28933. For many years the Garrett steam engine has lay hidden. A gem of Southland's industrial past.

But not for long! This engine will soon be on the move to its new home at Thornbury's Rural Heritage Centre.

The history of this engine dates back to 1911. Built in Suffolk England this East Anglian engine was brought into New Zealand new by the firm McAlister's of Invercargill who were the agents for Garrett engines at the time.

The first owners were Wright-Stevenson's, a farming mercantile firm who used it to run all their seed dressing plant. In 1928 it was then sold to the Edendale Dairy Co who never actually used it but leased it to the Waimumu Lignite and Coal Co. Harold Richardson, Bill Richardson's father, brought the engine off Edendale in 1938. Transporting it from Waimumu to Progress Valley, he used it to drive a sawmill for his Niagara Sawmilling Co. After steam power was replaced by diesel, the Garrett lay derelict until 1976 when it was rescued by Keith Simpson, a steam engineer and enthusiast from Invercargill. Keith transported the engine firstly to Invercargill and then onto his property at Waianiwa where he restored the engine and had it running several times.

Keith was looking for a new home for his engine. Some members of the Thornbury Vintage Tractor Club were approached and a plan was put into place. Although several members of the club own Traction Engines, steam was one aspect of our farming history that our Rural Heritage Centre in Thornbury did not exhibit. So it was with great excitement that Thornbury chose



to take on the challenge to house this unique piece of machinery. This engine is unique in the fact that it is the only one of its kind in New Zealand. And we have been told only one of three left in the world. We also understand it is the only one capable of steam.

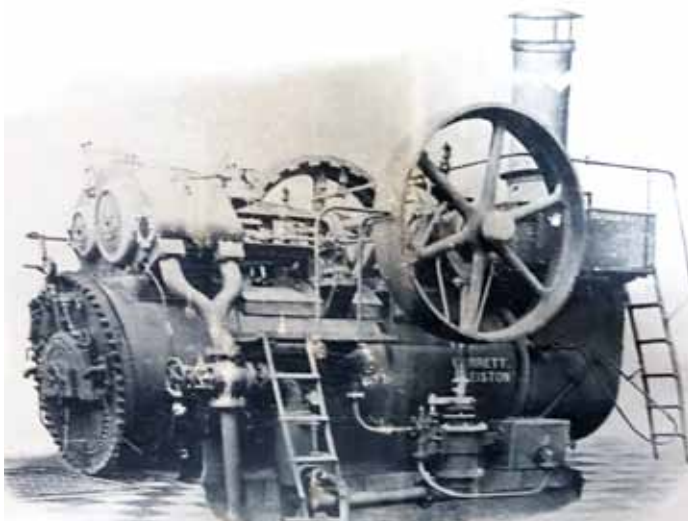
Rated at 100nhp and weighing about 16 tonne this is one serious engine. The Thornbury Vintage Machinery Club is under no illusion as to the enormity of the task ahead. An initial fundraiser in which the club sold advertising to the Southland Farm Location Map book, the project got off to a good start. But it wasn't until the club was successful in receiving a grant from the Lotteries Environment and Heritage Committee that our dreams were realised.

Presently we are working on site preparations in order to lay the foundations. The plan at this time is to relocate the

Garrett steam engine and it's shed to Thornbury by Christmas. Next year a lean-to viewing area will be added to the shed and the engine will be surveyed for steaming later in the year.

There is lots happening at our Rural Heritage Centre in Thornbury. Please be on the lookout for further reports of our progress with the Garrett Steam Engine.

Our Rural Heritage Centre is open Sundays 1.30pm – 4.30pm, but you will find a dedicated team of workers are there most Saturdays. Otherwise phone 012 038 5196 and I will be able to arrange a visit.



**Four Wheel Drive Adaptions using Chain-drive**  
*Converting standard 2WD tractors to 4WD has always vexed farmers and engineers.*  
*Utilising chain drives has been an easy solution...*

*by Dave Hunger*

Countys' first foray into 4 wheel drive was the County Four Drive. The front wheels were driven by chains from the rear brake shafts. The chains ran in an oil bath. This was a skid steer design using side brakes to slew the machine around. Originally sold to the Indian sugar cane market, Four Drives were also popular in forestry.



Colin Davidson of Dipton (South Island, NZ) used a triplex chain drive off the rear PTO to convert around 120 MF tractors with ground speed to 4WD. The front axles were surplus WWII stock sold off cheap in the late '50s. The long drive shaft to the front axle ran under the left foot plate.

An MF65 with a Davidson 4WD conversion.



A Taranaki tractor enthusiast has recently fitted a TEA with 4WD. The front diff is a Dana 44 with free-wheeling hubs. This is a relatively common diff used on jeeps and light vans. The Dana is attached to the cut-down front axle meaning that the axle pivot-point remains unchanged.

The drive shaft to the Dana is powered by a chain-drive taken off the shaft that connects the tractor gearbox to the rear diff. A 21 tooth sprocket on this shaft aligns with an 18 tooth sprocket mounted on a Fordson Major PTO shaft bolted to the gearbox flange where the right foot-plate sits. This shaft in turn connects with the Dana pinion input shaft. The chain is brought out through the side of the rear hydraulic housing. The oil level in the gearbox/ rear housing had to be dramatically lowered to achieve this. Safety guards (not shown in photo for clarity) have since been fitted. The free-wheeling hubs are ideal for road use.





# Preserving the Past

The long pendulum master clock, pictured, was manufactured by Gent and Co in Liecester from the 1950's through to the 1970's.

The master clock and its associated slave clocks were common in places such as schools, railway stations, factories and various other work sites.

Inside the master clock is a toothed wheel that advances one tooth every pendulum swing – time for a pendulum swing two seconds.

After every 30 seconds the contacts inside would make thus sending an electrical impulse to every slave clock and also giving the pendulum a nudge to keep it swinging for the next 30 seconds.

All clock hands, including the one on the mater clock would advance by a half minute for each electrical pulse.

Keeping the master clock at the correct time would ensure all the slave clocks were at the correct time as well.



This was good providing no wire was broken as all clocks would stop. Finding the break could be time consuming.

The 230 volt mains clock and battery clock have in general superceded the master/slave system.

Some museums still have a master and slave clocks in operating condition.

***photo and words from Trevor Creagh***

***Trevor tells me this particular clock is at the Taranaki Aviation and Transport Museum in New Plymouth.***

***Please send us your own stories of something from your past that you may have restored, or just have in your collection - Editor***



We haven't been away for a while, as we are in the process of selling our house. We will then live in our motorhome for probably a year, before we build our small project house.

Our last big trip away was 2 years ago, when we spent a week travelling parts of the South Island. When we travel north to Christchurch we often head towards Timaru / Ashburton from Fairlie, but this time I thought it would be nice to take the much more scenic route. We travelled through a lot of towns I had heard of, but had never been to - Staverley, Rakaia Gorge, Windwhistle, Darfield.

I really did enjoy seeing the different sights to what I am used to, and of course being up high in our motorhome you also get to see things you wouldn't normally see if travelling by car.

On our trip back home we had a couple of days in Christchurch. We hadn't been there since the 2011 earthquakes, and so really wanted to head into the city to see for ourselves the damage that had been done. While it was great to see the progress that is being made, it was truly heartbreaking as well. For me, the most emotional visit we made was to Cashel Street, where the display of 185 white seats stood in remembrance of those who were killed.



# FERGUSON HALF TRACK

*story and photos from Lance Mullin*



A few years ago I bought a Ferguson half track off Bruce Alexander, in Taranaki. I am slowly restoring it, fitting it in around kids and cows.

When I picked it up I noticed it came with a second set of tyre tracks, and I got the idea of collecting up the rest of the bits and maybe making another half track one day, though I wasn't holding my breath.

As luck would have it, Dave Hunger text me just a few weeks later to tell me of a set of swing arms for a half track on Trademe. I was the only bidder, and after a drive to



Gordonton in Waikato, and back between milkings they were mine.

I was still missing some important bits though. I needed the tensioner springs, idler wheels, and the brackets that bolt to the top of the axle and take the other end of the springs. Carac Couplings in Eltham made me the brackets at a

good price by copying one from the other tractor, and my mate, Neil tipped me off to a pair of original 15" idler wheels in excellent condition on Trademe, a bargain at only \$40. My wife's uncle even picked them up in Auckland and delivered them while they were visiting.

I managed to pick up a tensioner spring with some spare parts from Hawkes Bay, and Rob Lintern from Lintern Engineering in Hawera, did a fantastic job rebuilding the remains of another one.

George Jupp from Tikorangi, kindly gave me a handful of cleats for the tracks as I was missing a few. Carl Hinton from Fieldtorque Taranaki, the local MF dealer, sourced me some baler belt for the tracks, and Rob's wife ordered me the 360 odd bolts needed to bolt all the cleats on. I was slowly getting there.

During this time a mate, John Hughes took me to look at a Fergie his brother

Bernie was selling. I wasn't really looking at buying another tractor, but it was super original, and it was cheap. It had a seized engine, and needed one new back tyre, but was otherwise good. I unseized it, and eventually found time to rebuild the engine with new rings and a new head gasket. Neil helped me split it to free a stuck clutch, but apart from a few other small jobs, it was in good nick.

I slowly fitted the tyre tracks to the tractor, when I had time. It wasn't an overly difficult job, but was very time consuming, especially making the tracks which included cutting the rubber with an angle grinder, drilling the 360 odd holes, and finally bolting on the cleats, and fitting them to the tractor. I was very happy with my impact driver, it made the job much quicker.

It's fair to say I was happy to see the end of it, but I really love it, and it's great fun to drive.

I'm especially happy that it's in original, unrestored condition as







I can play with it without worrying about scratching the paint or getting it dirty.

It's certainly a well travelled machine. The tractor came from Manaia, the tracks from Wanganui, the swing arms from Gordonton, the wheels from Auckland, the brackets were made in Eltham, one spring came from Hawkes Bay, one was made in Hawera, and the whole thing was put together at Te Kiri.

***Many thanks for your story and photos Lance.***

***Do you have a project you are working on, or have completed? Please send us your story, and we will happily share it with our readers - Editor***





# Development of the Ford 5000

*by Dave Hunger*

During the early 60's Ford were working on a new line of tractors that would be known as the 'Worldwide' or '1000' series. Code named the Ford 6X range.

In an effort to capitalise on the solid reputation of the preceding line-up, Ford did a curious thing. They gave all their tractors two names. Both the old and new tractors shared these common names. For instance, the Dexta became the Dexta/2000 and the new 2000 was also called a Dexta/2000. This created obvious problems when Mum was sent to town to get parts!

As a part of this confusing carry-on, in 1964, the Super Major was replaced by the Performance Super Major, which boasted an improved hydraulic pump, different gear ratios and a revised cylinder head with superior flow. This is the tractor that was exported to the U.S. as the 'Ford 5000 Diesel/ Super Major'. So the first 5000's were really just Super Majors. The 5000 Diesel was imported into the United States to provide a large diesel tractor to Ford dealers. The

tractor had no relation, other than name, to the later Ford 5000 that followed it.

In addition to different badges, the U.S. version sported a gray hood in place of the blue hood used on the tractors sold elsewhere in the world.

The first 'real' Ford 5000s appeared in 1965. They featured a 3.8 litre diesel motor rated at 69hp. (gross) They have been described as a 'nightmare'. It was one of the worst engines Ford ever made and lost them a lot of business in Europe. The engines were built in the new factory at Basildon. They remained in use until the release of the Ford Force upgrades in 1968. When the engine was changed in 1968 to the superior 4.2 litre unit (75hp) at least one dealer shouted their staff a bonus in recognition of all the trials they had endured over the previous 4 years!

Early 3.8 engines can be identified by the screw in frost plugs. 4.2 engines have the press in type. The 3.8 was square-107mmx107mm. The 4.2, over-square at 112mm x

107mm. Gasoline versions of both engines were available. An agent from the period states, "The best engine to come out of the changes in 1964/1965 was the 4000. It was also an 'over square' unit. Apart from the bad starting, compared to the Super Major, it would out-perform the early 5000. We had to 'handicap' it when demonstrating both of them together".

Ford 5000s were available with 6 or 8 speed manual transmissions, Select-O-speed, and, from the early 70's, Dual power options. County and Roadless both supplied 4WD converted 5000s.

Despite its' unfortunate start, the 5000 was a great tractor. Its' power, brakes, independent PTO and driver access were vastly superior to the old Super Major. Over 400,000 of these iconic tractors had left the factory when production ceased in 1976 and its' successor, the Ford 6600, was released.



The fluted bonnet, canister type oil filter and old style grill identify this as an early Ford 5000.





# Maindonald

F.J. Maindonald was the son of a farmer and although attempts were made to persuade him to take that occupation he chose to be an engineer. He studied a correspondence course from America, imported some engine parts and set up business in Waimate, South Canterbury. Whether the parts were finished or rough castings is not known nor how much of the engine was made in New Zealand.

During 1905 until late September F.H. Maindonald, Engineer, High Street, Waimate was advertising oil or gas engines for sale. On Tuesday September 26 1905 the following advertisement appeared:

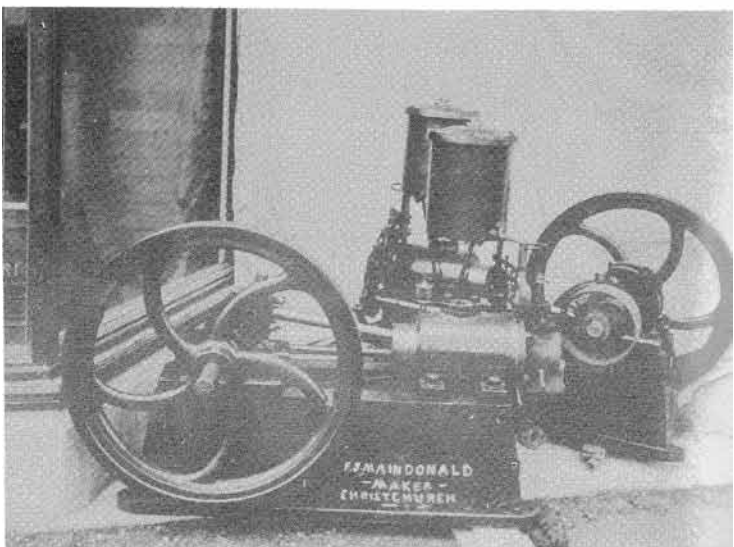
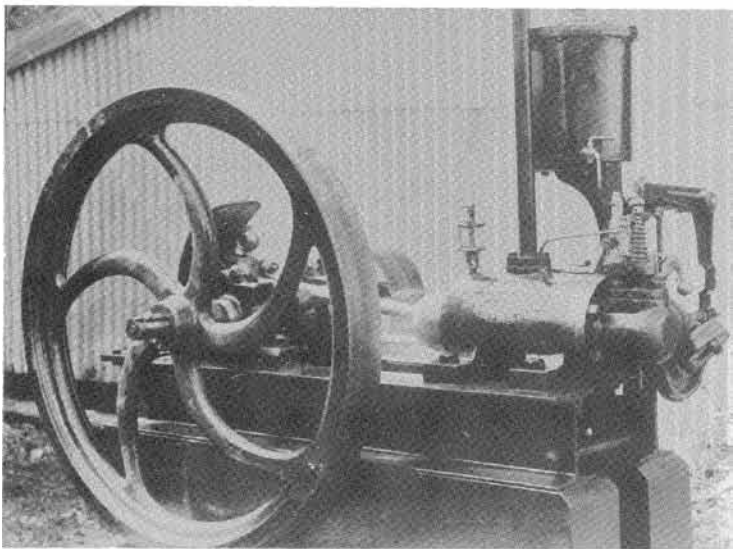
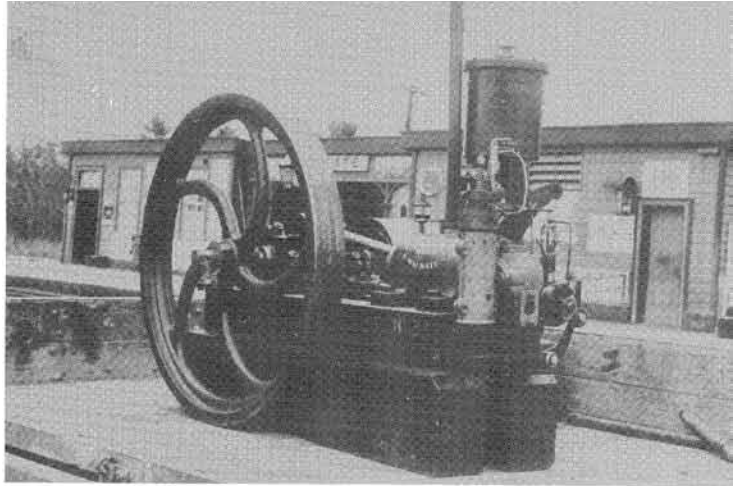
## **F.J. Maindonald**

begs to intimate to his South Canterbury and North Otago friends that he has removed to Christchurch, where, in conjunction with the Crown Iron Works Co. he will carry on the manufacture of Oil and Gas Engines. A number of these engines are now at work in South Canterbury and North Otago, giving satisfaction, and are already earning a reputation for their simplicity and ease of management. With our increased facilities we will be prepared to supply to order any size engine, either stationary or portable.

The shift was short lived. The Waimate Times, December 30 1905 announced:

We note with pleasure that Mr Maindonald is returning to this town to take the position of machinery salesman and expert for Messrs Guinness & Le Cren Ltd.

No engine is known to have survived and no further details are available.



***The top two photos show similar engines presumably made in Waimate, while the bottom photo shows two smaller engines made in Christchurch***

**story and photos reprinted from "Stationary Engines made in New Zealand", by Richard Robinson. I will be putting more of these stories in future issues, for those of you who love stationary engines - Editor**

# Patina Not Paint!!

*I have copied this article from a 2007 issue of "Old Tractor", a British magazine*



**an award winning 1927 Wallis 20-30**

The cardinal rule is to collect what you like and what interests you as an enthusiast; don't be drawn into collecting what is making the most money at auctions or what everyone else seems to be buying. Sometimes the cheapest tractors have so much potential, but many people just don't see it and walk on by.

Some collectors like to specialise in a certain make; creating a collection following a timeline or a specific time period. This soon becomes very serious collecting and it can be very interesting trying to find the particularly rare models. Eventually, a very focused collection will develop.

Others prefer to collect a variety of makes; showing the different manufacturers' designs of the period. This makes for a much broader collection with a variety of colour in the line-up in your 'collection. The result will probably hold greater appeal for the 'less dedicated' enthusiasts when they view your collection.

Whichever direction the collector takes, it's important to focus on your long-term aims and ambitions. With careful thought and planning, you will end up with a very nice collection that will be admired by other people. The collection should continue to evolve and give you lots of satisfaction for the many hours spent in putting it together.

the focus in the preservation movement has been placed on restoring tractors to 'concours' condition. This has resulted in some very historically important tractors being restored to a condition way beyond how they would have looked when they left the factory new. When you find a tractor that has been sitting in a barn for years, it's too easy to destroy the patina that has built-up over the many years of its working life - a patina that often reveals evidence of careful operators and conscientious ownership. Of course, if your project has been sitting outside open to the elements under a hedgerow for many years, then a full mechanical and cosmetic restoration is the only answer.

## **EVALUATING THE PURCHASE**

Very often, tractors with a great amount of potential for originality appear unexpectedly at collective auctions, having been hidden away in a barn for years, covered in layers of oil, grease, dust and old sacks.

Such machines do not make great 'glossy advertising' for auctioneers and often appear out of the blue on the viewing day of the auction. They are frequently passed by many collectors as they dash to the front row to see what is making the most money on sale day. Consequently, the 'barn fresh' find can sometimes be purchased very cheaply.

Occasionally, throughout the country, there are the local 'farm retirement' machinery auctions. Often, a family may have farmed the holding for several generations and tucked away in the corner of the shed is their father's 'first tractor', which may not have seen the light of day for years. Such auctions, usually conducted by a local auctioneer, can attract quite high prices for a one-off original tractor with both collectors from the area and the family being interested in buying the tractor to keep it local.

Also, of course, there is the occasional chance of a rare find appearing in the classified adverts of Old Tractor. This is usually when a collector wants to sell something that has been sitting in his shed for years; he has not got around to restoring it and wants the cash to buy something different for his collection.

Once you have found a tractor to your liking, study it in depth using your basic knowledge of that particular make: is it complete? Has it got all the correct parts? Does it turn over with compression? What is broken or damaged and has it received any modifications? After you have considered the basics, then delve deeper: is there original paint underneath all the oil and grease? Are the wheels correct for the era and do the tyres match?

Most importantly, what is the condition of the tinwork? Will any dents in the bonnet and mudguards straighten out and is there any rot, particularly on the bottom edges? Because if the tinwork has to be replaced with new, then the originality will be immediately lost.

Spending a lot of time on evaluation is very important and " will help you decide on what should be the maximum price to bid or offer for the tractor. It will also help you make you mind up whether it will be a worthy addition to your collection and should leave you with an idea of how much it will cost in terms of time and money to bring the machine back to life again.



## RESEARCH

Once you have got your latest purchase home, don't be tempted to rush in with the steam cleaner to remove all the dirt and dust to reveal the original paintwork; patience wins the day! Firstly, just spray the whole tractor over with a light penetrating oil, or you can use diesel. This will help to soak and soften up the years of grime; keep doing this while you begin the important task of learning more about your particular tractor.

Start your research by sourcing an original sales brochure and studying it in depth. Look for the finer detail of how the tractor would have been when it left the factory. Many people tend to ignore the original parts books; they have no colour pictures but they do have lots of information and drawings, which will be invaluable for your mechanical restoration. They will reveal the differing parts fitted during certain serial number runs and can often help you start to date your tractor more accurately.

Parts books will also provide details such as what bolt sizes were used; what were the correct fuel caps, taps, pipes and fittings; the magneto options available and the type of spark plugs etc. Very quickly, you will build up an archive of information as to how the tractor should look when displayed. Also, talk with other owners who will have a wealth of knowledge; today, with the internet at our fingertips, there is much more information available to help us expand our hobby.

## CARRYING OUT THE WORK

With all the research completed, you are now ready to start work on your tractor. Dismantle it carefully as you begin the mechanical restoration of the engine, clutch and gearbox. Cleaning all the parts with paraffin or in a parts-washer will remove all the external grime that has been softened by the spraying and any thick dried oil or grease; DO NOT use a scraper because this will also remove the paint underneath as well, just keep re-soaking and be patient.

Rebuild all the steering with new pins and bushes as required; replace the bearings and adjust the steering box. Gradually assemble the tractor by fitting the renovated components, such as the water pump, manifold,

carburettor and air-cleaner. If the radiator core requires replacement, there are specialists offering that service, but ensure you get the correct period type of core for your tractor.

During the rebuild, remember all you have learnt from your research; it's essential to find and use the correct nuts and bolts, fuel pipes and flared nuts, which will reflect in the end result. Magnetos can be overhauled by specialists, but pay particular attention to fitting them to the tractor with the correct period spark-plug wires and fittings. Period spark plugs can be found at autojumbles or shows and look much better than modern replacements.

Once all the mechanical restoration is complete, then turn your attention to the tinwork; knock out any dents in the mudguards and re-fit using the correct fittings and bolts. Fuel tanks can be hard to find in good original condition and often the bottom of the tank will require replacement followed by an internal coating of tank sealant. The bonnet is usually the last part of the jigsaw to straighten and piece together and you will often have to fabricate or find the original fasteners that have been lost or broken.

With all the lubricating oils replaced, water in the radiator and fuel in the tank, you are ready for your first 'crank-up'; this can be very rewarding when the tractor bursts into life for the first time in many years. However, there

will be many adjustments and teething problems to sort out before you are happy with the way it runs and drives.

Once you are completely satisfied with the now very clean and nicely running tractor, you will need to consider conserving its originality. Hopefully, a careful restoration will have revealed and retained a large amount of original paintwork. To preserve this, again spray the whole tractor with a very light oil; this will bring out the richness of any faded colour and will protect the machine from further deterioration due to rust. Polish any exposed brass fuel pipes, caps and fittings; clean and refurbish the serial number plate. DO NOT polish any pipes or fittings that would have been painted and still have their original finish.

## ENJOY YOUR TRACTOR!!

An 'original' restoration will be enhanced by a period implement, conserved in the same manner, to go behind your tractor. This will add interest on the rally field and, even better, gives your tractor something to work with at one of the many popular working events throughout the country.

Both you and the public will get more pleasure from seeing a nice original tractor working in the field, doing the job for which it was intended. Don't be frightened to use your tractor or there's no point in owning it. If you get it dirty, then just wash it down, let it dry and re-spray it with light oil.



***this David Brown 25D has been carefully conserved by its owner with a coat of light oil to protect its original finish***



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# DIESEL ENGINE HISTORY

*story reprinted from our November 2008 issue*



**Rudolf Diesel, 18 March 1858 - 29 Sept 1913**

The laws of thermodynamics fascinated Rudolf Diesel. He saw in them a way to change society, to protect small craftsmen and artisans from the tide of big business.

Diesel had been born in Paris, son of a leather merchant, but he studied at Munich Polytechnic where he was a sort of renaissance man. Arts, linguistics and social theories then in development all held him in a spell. He saw how large factories, which had the capital to invest in large steam engines to power their equipment, were ruining small businesses.

How could the little enterprises withstand this pressure? Only by having at their disposal an easily adaptable source of energy. Steam engines then had a mechanical efficiency of 10 percent, so Diesel set out to apply the three laws of thermodynamics to the creation of an engine that would not waste so much energy. One day Diesel saw something strange: A pneumatic cigarette lighter. Small pieces of tinder are in a little glass tube. With a piston, air is compressed in the tube and the tinder starts to glow. This vision set him afire.

He set up a laboratory in Paris in 1885, and took out his first patent in 1892. In August 1893 he went to Augsburg, Germany, where he showed the forerunner of MAN AG (Maschinenfabrik Augsburg-Nuerenberg) a three-meter-long iron cylinder with a piston driving a flywheel. It was an economic thermodynamic engine to replace the steam engine. Diesel called it an atmospheric gas engine, but the name didn't stick. He worked on. On New Year's Eve 1896 he proudly displayed an engine that had a theoretical efficiency of 75.6 percent. Of course, this theoretical efficiency could not be attained, but there was nothing to equal it - and there is nothing to equal it to this day - in thermodynamic engines.

The self-igniting engine was a sensation of the outgoing century, though Rudolf Diesel's dream of enabling the small craftsmen to withstand the power of big industry did not ripen. Instead, big industry quickly took up his idea, and Diesel became very rich with his royalties. From all over the world money flowed to him as his engines became the standard to power ships, electric plants, pumps and oil drills.

In 1908 Diesel and the Swiss mechanical firm of Saurer created a faster-running engine that turned at 800 rpm, but the automotive industry was slower to adopt Diesel's engine.

MAN was the first, and in 1924, a MAN truck became the first vehicle to use a direct-injection diesel engine. At the same time Benz & Cie in Germany also presented a diesel truck, but Benz used the mixing chamber that Daimler-Benz kept into the 1990s. The first diesel Mercedes-Benz hit the road in 1936. But Rudolph Diesel didn't get to see his inventions' victorious march through the automotive world. He drowned in 1913 in the English Channel.



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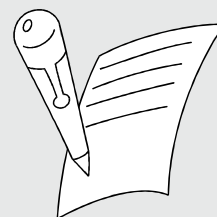
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salt

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## Club Register New Zealand's vintage machinery clubs

### Please help keep this register up to date

*It is used by a lot of people wanting to contact clubs, but can only be useful if it is accurate. If you already send us your newsletter, we will update your details from it each time they change. Otherwise, please send your mailing address each time you change secretary.*

**Ashburton Railway & Preservation Society**, P.O. Box 5051, Tinwald.

**Auckland Steam Engine Society**, 47 Oriel Ave, West Harbour, Auckland 0618. [gray.quayle@xtra.co.nz](mailto:gray.quayle@xtra.co.nz)

**Awarua Communications Museum**, PO Box 722, Invercargill 9840. Ph 0274 237 465. [www.awaruauseum.co.nz](http://www.awaruauseum.co.nz)

**Buller Classic and Vintage Machinery Club**, c/- 24 Torea Street, Granity 7650.

**Canterbury Steam Preservation Society**, c/- Andrew Gillanders, P.O. Box 6172, Christchurch.

**Case & Vintage Farm Machinery Club of NZ Inc**, c/- Keith Howden, 35 Dynes Road, RD8, Christchurch, 7678, (03) 347-9467.

**Central Southland Vintage Machinery Club**, 10 Winton-Wreys Bush Highway, RD 3, Winton Ph (03) 236-8847.

**Cheviot Vintage Machinery Club**, c/- Bev Cameron, 701 Sisters Road, RD 4, Cheviot.

**Christchurch Historic Machinery Club**, c/- Alan Mattingly, 60 Teesdale Street, Russley, Christchurch 8053.

**David Brown Club of New Zealand**, c/- Alan Mitchell, 28 Roache Rd, RD 4, Morrinsville 3374

**East Otago Vintage Machinery Club**, c/- Noel J. Sheat, 1RD, Palmerston, Otago.

**East Coast Museum of Technology**, P.O. Box 971, Gisborne.

**Eaves Steam Sawmill Nightcaps Trust**, 15 Benson Rd, Nightcaps, Southland, (03) 225-7739.

**Edendale Vintage Machinery Club**, P.O. Box 19, Edendale.

**Ellesmere and Districts Vintage Club**, c/- The Secretary, PO Box 80, Leeston 7656

**Fairlie Heritage Museum**, 49 Mt Cook Rd, Fairlie 7925. Contacts: Anne Thomson, c/- Resource Centre, 64 Main Street, Fairlie or Helen Beastie, (03) 685-4824.

**Fiordland Vintage Machinery Museum**, Bob Anderson, P.O. Box 188, Te Anau.

**Franklin Vintage Machinery Club**, c/- Ian Robb, 90 Beach Road, Papakura 2113.

**Geraldine Vintage Car & Machinery Club**, The Secretary, 178 Talbot St, Geraldine.

**Hauraki Vintage Machinery Club**, c/- Peter Williams, 1482 Kaihere Road, RD 1 Ngatea 3597.

**Hawke's Bay Vintage Machinery Club**, c/- Jenny McCormick, 231 Onehunga Road, Bay View, RD2, Napier. Phone 06 836 5144

**Hokonui Pioneer Village & Museum Inc**, Waimea Street, Gore. C/- John Graham, 14 Maitland St, Gore. (03) 208 9790. [www.hokonui pioneervillage.co.nz](http://www.hokonui pioneervillage.co.nz)

**Horowhenua Vintage Machinery Club**, C/- Grahame Cottle (06) 367 0786. PO Box 1157, Levin 5540. [www.horowhenua vintageclub.co.nz](http://www.horowhenua vintageclub.co.nz)

**Hurunui Vintage Machinery Club**, c/- R.H. Miller, P.O. Box 74, Harwarden.

**Kaikohe & District Historical & Mechanical Society**, P.O. Box 55, Kaikohe.

**Kaipara Vintage Machinery Club**, Chairman, Bill Fitness, Ph (09) 439-7108 or 021 106 3635.

**Manawatu Vintage Machinery Club**, P.O. Box 4236, Palmerston North.

**Marlborough Vintage Farm Machinery Society**, C/- John Neal, PO Box 527, Blenheim.

**Methven Vintage Club**, C/- PO Box 70, Methven.

**Mid Canterbury Vintage Machinery Club**, c/- David Breathing, P.O. Box 390, Ashburton.

**Middlemarch Vintage Club**, c/- Peter Murdoch, P.O. Box 35, Middlemarch.

**Museum of Transport and Technology**, P.O. Box 44 114, Point Chevalier, Auckland.

**National Agricultural Heritage & Clydesdale Museum**, Private Bag 3015, Hamilton.

**Nelson Vintage Engine & Machinery Club**, c/- A.F. Palmer, 116 Aniseed Valley Road, RD1, Richmond, Nelson.

**New Zealand Vintage Machinery Club (Canterbury)**, c/- Mr IE Jonasen, PO Box 20082, Bishopdale, Christchurch 8543

**Northland Regional Museum**, P.O. Box 1359, Whangarei.

**Northland Vintage Machinery Club (Whangarei) Inc.**

**North Otago Vintage Machinery Club**, C/- Neil Roberts, 15 Leven Street, Oamaru

**North West Nelson Vintage Machinery Society Inc**, c/- Frank Drake, PO Box 295, Takaka 7142.

**Nuffield Leyland Tractor Club**, c/- Ron Totman, Nickle Road, RD3, Cambridge.

**Okains Bay Maori & Colonial Museum**, Okains Bay, Banks Peninsula.

**Otago Vintage Machinery Club**, c/- Tom Rietveld, (03) 489-6369.

**Otorohanga Vintage Machinery Club Inc**, PO Box 174, Otorohanga 3970.

[vintagemachinery.otorohanga@gmail.com](mailto:vintagemachinery.otorohanga@gmail.com)

[www.vintagemachinery.otorohanga.net](http://www.vintagemachinery.otorohanga.net)

**Pleasant Point Railway & Historical Society**, Railway Station, Pleasant Point.

**Pigeon Valley Steam Museum Inc**, c/- A.F. Palmer, 116 Aniseed Valley Road, RD1, Richmond, Nelson.

**Rockville Machinery Museum**, c/- W. McLellan, Collingwood Postal Centre, Collingwood, 7171.

**Rotorua Tractor & Machinery Club**, c/- David Chatterton Ph 07 333 8777 [thegranger@xtra.co.nz](mailto:thegranger@xtra.co.nz)

PO Box 124 Ngongotaha 3041.

**Society Of Rural History Ferrymead**, c/- A.J. Ebert, 46 Bay View Road, Redcliffs, Christchurch, 8.

**South Canterbury Traction Engine & Vintage Steam Club**, c/- Ian Urquhart, 33 Brosnan Road, RD4, Timaru 7974. Ph 03 688 4280.

**South Otago Vintage Machinery Club**, c/- F. Bunting, Cossens Street, Balclutha.

**Southbrook Traction Engine Club**, c/- 158 White Street, Rangiora.

**Southland Stationary Engine Club**, c/- Adrian Irving, Waimatua, RD11, Invercargill.

**Southland Steam Engine Club**, c/- Callum McLeod, 748 Pioneer Highway, Brydone (03) 206-6333.

**Taranaki Vintage Farm Machinery Club**, c/- Dave Hunger, Ph 06 765 8641.

**Taranaki Aviation Transport & Technology Museum Inc**. Kent Road, 8km South New Plymouth, State Highway 3 opposite Lake Mangamahoe. (06) 752-2845 [tatatm@xtra.co.nz](mailto:tatatm@xtra.co.nz)

#### Tauranga Vintage Machinery Club

c/- Russell Williams, 326 Te Puna Station Road, RD 6 Tauranga 3176.

**Te Amorangi Trust Museum Inc**, c/- P.O. Box 658, Rotorua 3040.

**Aotea Utanganui - Museum of South Taranaki**, 127 Egmont Street, Patea. Marie McKay Secretary.

**The Steam Traction Society**, P.O. Box 410, Feilding.

**Thornbury Vintage Tractor & Implement Club**, Foster Road, Thornbury. PO Box 5059 Waikiki 9843

**Tokomaru Steam Engine Museum**, c/- C. Stevenson, P.O. Box 46, Tokomaru, Manawatu.

**Top of the South Tractor Group**, c/- B.A. McKenna, 16 Meihana Street, Takaka.

**Tua Marina Vintage Traction & Machinery Club**, PO Box 51, Seddon, Marlborough 7247.

**Tuaapeka Vintage Club**, c/- Bruce Young, 22 Harrington Street, Lawrence.

**Vintage Engine Restorers Auckland (VERA)**, c/- Harry Maidment, 3 Gigi Place, Conifer Grove, Papakura 2112. (09) 298-8695, [harry.denise@xtra.co.nz](mailto:harry.denise@xtra.co.nz)

**Waikato Vintage Tractor & Machinery Club**, c/- Kevin Beck, PO Box 3, Morrinsville. (07) 889-6292. [www.vintagetractors.co.nz](http://www.vintagetractors.co.nz)

**Waimate Vintage Car Club**, 4 Harris Street, Waimate.

**Waimea Plains Vintage Tractor & Machinery Club**, c/- PO Box, 1, Riversdale.

**Wairarapa Vintage Machinery Club**, c/- John Arnold, 105 Jervois Road, Dalefield, RD 1 Carterton.

**Wellington Vintage Machinery Inc**, c/- P.O. Box 40214, Upper Hutt.

**West Otago Vintage Club**, c/- Neil Kirk, 19 Forest Street, Tapanui.

**Westland Industrial Heritage Park**, c/- Ian Gilbertson, PO Box 79, Hokitika 7810.

**Waterwheel Historic Trust**, c/- 5 Powdrell Rd, R.D. 4, Whakatane.

**Whangarei Stationary Engine Club**, c/- R John Eynon, 34 High Street Raumunga, Whangarei

#### PRIVATE MUSEUMS:

**Matthews Vintage Collection**, Winston & Lyn Matthews, 5km north of Taiapa on SH 10, Northland, (09) 406-0203. E-mail [winn-lynk@xtra.co.nz](mailto:winn-lynk@xtra.co.nz)

**Heron's Steam Museum**, 183 Merton Rd, Fernside, Rangiora.

**Packard & Pioneer Museum (Anawhata Museum Trust)**, Maungatapere. Fenton Craw, Tarai Station Rd, RD2, Whangarei, (09) 433-1536. Cars, Motorbikes, Machinery etc (Groups by appointment)

**Beechfield Vintage Museum & Gardens**, Neville & Janice Davison, 612 Otewa Road, RD 5, Otorohanga, (07) 873 8531

**Andersonia Engine Museum**, John (JT) Thorby, 120 Omoto Valley Rd, Kaiata, Greymouth 7805. (visits by prior arrangement only.) Closed June & July.

**Tractorworld Museum**, 12 Moutere Hwy, Upper Moutere, RD2, c/- Murray Boyes (03) 528-0903.

**"The Sheds"**, Sharman Collection, Waiuku, Ph (09) 235-0917. (Traction Engines, Cars, Junk etc).

**Ruapuna Park & Museum**, Ngaire Hancock, Rangiwahia, RD54, Kimbolton, 4774 Ph (06) 328-2855.

**Coach House Museum**, 121 South Street, Fielding, Manawatu (06) 323 6401. Piki Lowe. Open 7 days 10am-4pm. Group bookings welcome. [manager@coachhousemuseum.org](mailto:manager@coachhousemuseum.org)

**Vintage Shearing Handpiece and Sheep Memorabilia Museum**, Richie Gould, 43 Hammond Rd, Pleasant Point (03) 614 7466

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