

Oberon Tarana Heritage Railway Inc.

Restoration of the OTHR Wickham 'Section Car' - PAGE 1

OTHR own a Wickham Section car which is being restored for use by maintenance crews on the line. This section of the website will follow the restoration of the section car by OTHR volunteers. Details of the car numbers provided below.

The "boys" could do with some help in locating spare parts for the car so if you have any advice could you please contact the Secretary on 02 6336 1211

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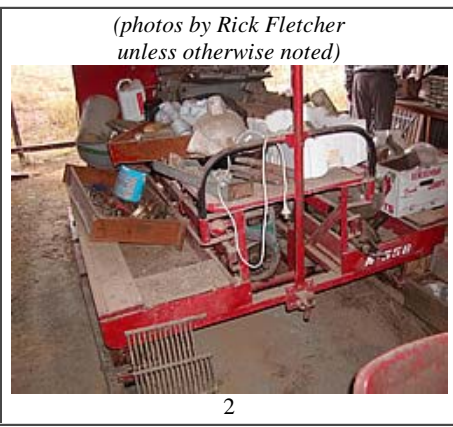
CLICK IMAGE TO VIEW FULL SIZE

Details:

Wickham Type No. 4 (open pattern) Car No. 7199
 Imported for the NSWGR from UK in 1955, presumably complete as the frame is constructed from square type Enlish. Importation likely to be in Nov 1955. Originally fitted with a J.A.P. 600cc (UCZ.R) engine but probably one of the batch refitted with the current Wisconsin engine, in or after 1977.
 Wisconsin Engine - model S12D2, ser. no. 146678. Spec No. X964 (12.5HP)
 (acknowledgements to Greg Lee, Alan Robinson & Errol Hall with extracts from Keith Gunner's list Of Wickham Cars in Australia).
 The photo at the right shows typical wear in the suspension bushes - these will be remanufactured unless anybody has other brilliant suggestions?



(photos by Rick Fletcher unless otherwise noted)

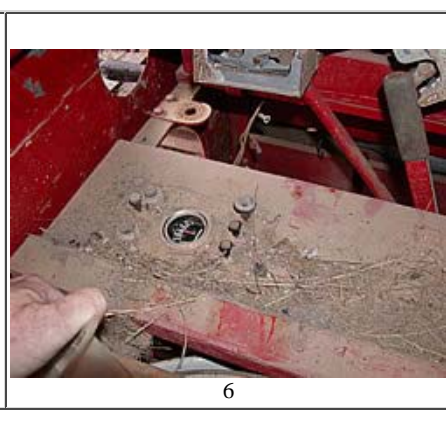


1

2

3

The section car as found.



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5

6

Ready for restoration.

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8

9

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Restoration of the OTHR Wickham 'Section Car' - PAGE 2

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(photos by Harry Shannon unless otherwise noted)

 <p style="text-align: center;">1</p>	 <p style="text-align: center;">2</p>	 <p style="text-align: center;">3</p>
The inverted chassis receives some cold galvanising.	Colin Bembrick attacks some rust patches.	The chassis is back upright with work commencing from the top.
 <p style="text-align: center;">4</p>	 <p style="text-align: center;">5</p>	 <p style="text-align: center;">6</p>
Arthur sanding some of the metal parts.	Ross uses a needle gun to remove some difficult rust patches.	Tony and Harry carrying out some welding repairs.
 <p style="text-align: center;">7</p>	 <p style="text-align: center;">8</p>	 <p style="text-align: center;">9</p>
<p>Ready ... (Tony, Ross & Charles)</p>	<p>set... (Tony, Ross & Arthur)</p>	<p>... GO! The Wisconsin purrs back into life. (Arthur & Tony - Ross left & Colin at the back)</p>

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Photos 7 to 11 by Alison Allen.



10

Chassis progress as at 2nd April 2008



11

Seat cover undergoing restoration by Harry.



12



13

Arthur does some careful cleaning of the original engine paint.



14



15

Ross is preparing the surface for re-coating.

CLICK IMAGE TO VIEW FULL SIZE



16

Finishing touches on the engine paint work .



17



18

Timber parts have received a first finishing coat to match the existing paintwork





19



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21

<p>Col is giving the timber parts a second coat of paint.</p>	<p>Details of the suspension parts during painting.</p>		
 <p style="text-align: center;">22</p>	 <p style="text-align: center;">23</p>		
<p>Gearbox and transmission system.</p>	<p>Thrust bearings after metal filling and re-machining.</p>		
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Dismantling commences (*Harry Shannon photos*)



10



11



12

Dismantling continues (*Harry Shannon photos*)

With the chassis exposed, restoration commences.



13



14



15

The volunteers have been methodical in cataloging parts and grouping them for refurbishment.



16



17



18

The rear axle undergoing stripping.

The Wisconsin 12.5HP engine about to be test run.

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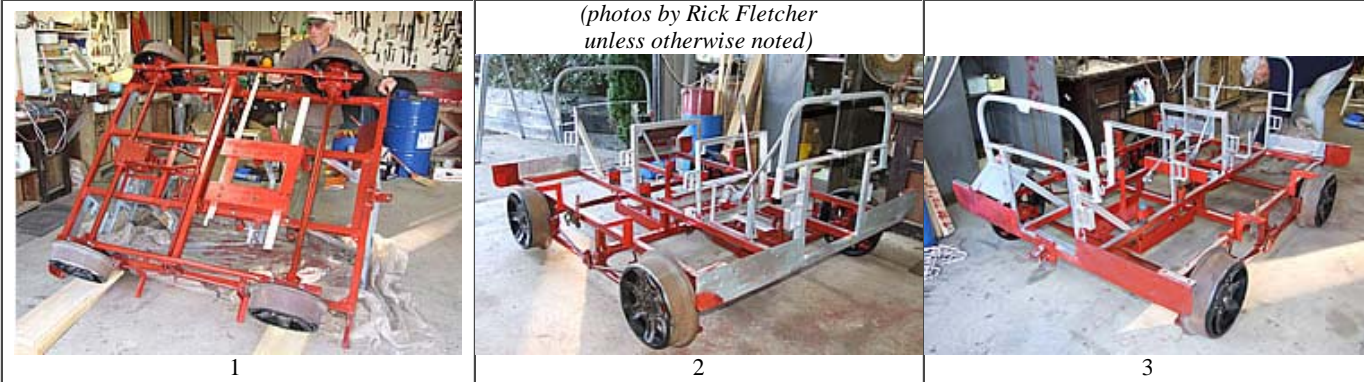
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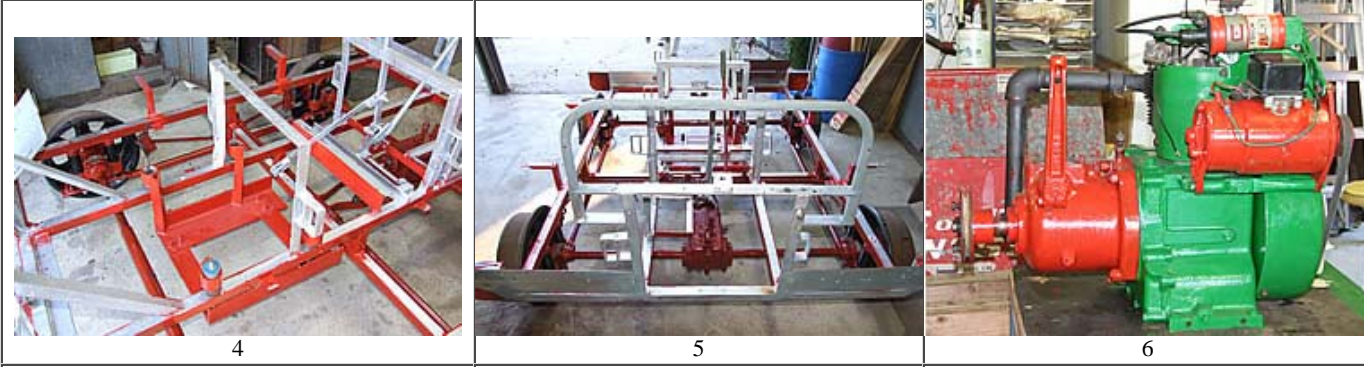
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Early May 2008 and the chassis is ready to be set back on its wheels.

Looking more like it!



Engine reassembled.



Touch-up painting continues.

Ross Allen who generously made his workshop available for the restoration.

Timber work ready for installation and being inspected by Richard Webb.

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*Photos 10 to 14 by Harry Shannon.
THESE PHOTOS WERE TAKEN LATER IN MAY 2008*



10

Track Manager Peter Resto looks at progress on the section car, Charles in the background.



11

Ross, Tony and Arthur continue with the reassembly. Methodical part storage has made this task easier.



12



13

Looking much more like a section car now.



14

Suspension detail, awaiting final painting.



15

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Photos 16 to 21 by Harry Shannon.

These photos show the final stages of the restoration of the Wickham section car.



19

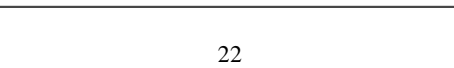


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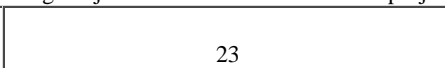


21

What a great job the crew have done on this project.



22



23



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The Wickham Rail Car Report 4 June 2008

Wickham Rail Car (c. 1953) - See earlier report below.

The last report was dated 2 April 2008.

Since then a further 187 man hours of work have been completed. The total to date, since work commenced on 27 December 2007, is now 418 hours.

The members putting in the effort are Harry Shannon, Charles Hazelwood, Tony Thackray, Colin Bembrick, Arthur Robinson and myself. Two visitors, John Snapp and Colin Shepherd, have contributed 20 hours to this total.

The work done over the last two months comprised painting preparation and painting, and work on the engine, transmission and suspension and brakes. Also, during this reporting period, we discovered that the machine had experienced a fairly hefty rear end bump at some stage in its life. This entailed some cutting, straightening and welding of the frame and straightening of all suspension bolts. Re-assembly of the component parts of the railcar really got under way during May. Rewiring of all the electrics is almost completed, and this has involved some modifications including relays, safety fuses and up-grading of switches and lights.

The railcar has been stripped down to the bare skeletal frame and then all the metal work cleaned and areas of rust treated. It was painted with Galmet 90 followed by two coats of enamel paint. All woodwork was stripped and undercoated and then painted with two coats of enamel oil paint.

Signwriting has been professionally done and is now completed. Our thanks must go to Mark's Signage for the generous contribution of Mark's time and skill.

Lastly we hope to have the Section Car ready for operating trials within the next couple of weeks. Unfortunately we won't be able to put it into permanent operation until we meet the requirements of ARTC and ITSRR, and this entails completing their paperwork requirements and operational instruction.

Ross Allen 4 June 2008

The Wickham Rail Car Report 2 April 2008

Wickham Rail Car (c. 1953)

The car was donated to OTHR by Shane Moorhead and Rick Fletcher.

I offered to provide space in my workshop for work to be carried out on it to bring it to a serviceable standard.

What was the Brief that I was given? The Brief was to get it working. It was verbal, as concise as that, and certainly not a written instruction.

I got together a small team and we set to work. It has been a project that all of us have approached with thought, care and enthusiasm.

To get access to the working parts, it was necessary to remove the timberwork.

What was revealed was as follows:

- Small sections of timber were showing rot.
- ¼” cuphead bolts securing the timber were, in many cases, rusted almost through, nuts frozen, and cupheads turning in the timber.
- Rust was starting to pockmark the metal frame in some places.
- Brakes were in an unsafe condition due to poor design, shearing the bolts holding the brake assembly to the frame. This was unseen until they were stripped down. (This has been found to be an endemic design fault by others who have renovated Wickhams).
- Suspension bolts were both bent and distorted as a result of the brake rod failure.
- Suspension rubber bushes were perished.
- Wheel bearing side thrust plates were (in 3 cases out of 4) badly worn down, which could result in speed wobble and possible derailment.
- All four roller bearings were in good condition.
- Suspension bushes in the bearing housings were badly worn (from ¼” down to paper thin in some cases) and were jamming on the bent suspension rods.
- The engine had battery and coil missing and defective wiring, the exhaust valve stem was frozen solid in the valve guide, there were 3 pinholes in the carburettor float and the float was partly filled with residual petrol, there was a wasp-free wasps' nest in the cooling fins of the engine block, the petrol tank lid was missing. Otherwise all seems good.
- The clutch, transmission and end drive (sort of gear-box and differential combined) were in good order with the exception of some excessive wear in the control lever for forward-reverse-neutral.

What we have done is:

- stripped back all paintwork and applied rust and rot controls. We have begun the re-painting of the frame, woodwork and engine parts.
- welded and re-surfaced the side thrust plates.
- re-bushed the suspension.
- bushed the direction control lever.
- repaired the engine exhaust valve and the carburettor, and supplied a battery and coil and renovated the electrics and test run the engine.
- drained the water and old oil out of the final drive and washed it with kerosene ready to be re-filled with oil.
- cleaned up all the wheel bearings and housings ready for re-greasing.
- made and supplied new mounting bushes for the engine mounting and suspension system.
- replaced the fuel line and filters.

Progress is pretty slow but we feel it is keeping pace with the paperwork requirements.

We think that the outcome will be that OTHR will have a rail car that is serviceable and reliable. It will be in condition for hard-working AND will look good in the eyes of both members and the public. As such it will be a good advertisement for OTHR whenever it is on display, or just working. And importantly, it will be a safe vehicle to put on the track and should pass inspection by ITSRR.

Ross Allen 2.4.2008

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