

## THE WAIRARAPA RAILCARS

By T. A. McGavin

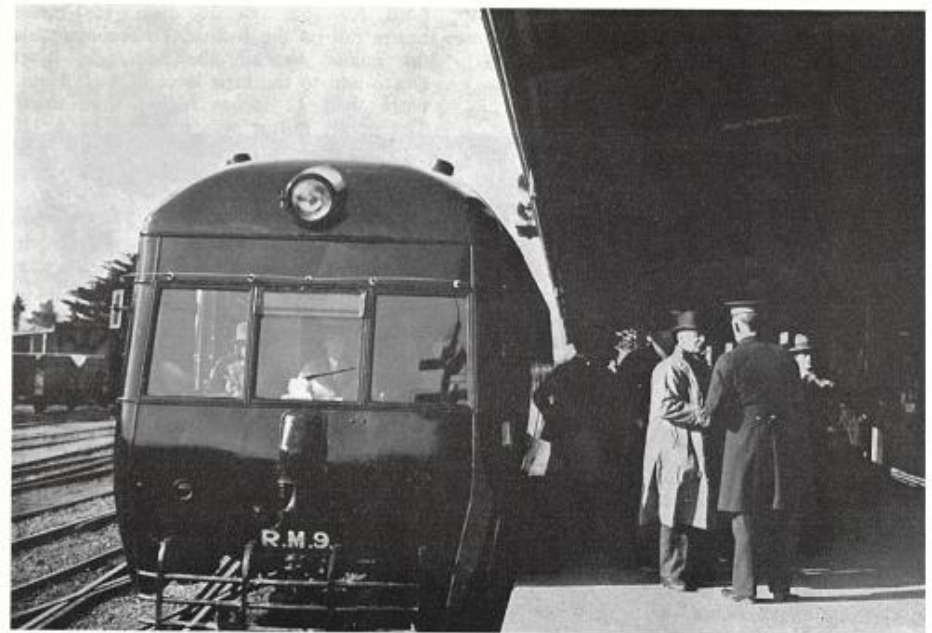
IT WAS not for nothing that they came to be known as the "Tin Hares".

To a generation of railwaymen and passengers who had grown up with solid timber-bodied carriages hauled sedately at speeds generally between 35 and 45 m.p.h., these new lightweight fabrications of metal construction that came scampering, nay bolting, from station to station on the steel trail between Palmerston North, Woodville, Masterton, and Wellington at speeds approaching a mile a minute, the sensation was completely new. They were the Wairarapa railcars, 130 h.p. 49-seat vehicles specially designed for working over the 1 in 15 Rimutaka Incline, yet capable of top speeds of 60 m.p.h. on level track. They entered regular service on 7 September 1936.

BEFORE the introduction of the Wairarapa railcars, the passenger train service between Masterton and Wellington was confined to two in each direction daily except Sunday leaving Masterton at 7.40 and 2.06 p.m. and Wellington at 7.50 a.m. and 4.15 p.m. Because of the complications involved in working trains up and down the Rimutaka Incline, which lifted southbound trains 869 feet in the three miles from Cross Creek to Summit, these trains were allowed an average of 3 hr 40 min. each to cover the 65.5 miles between Masterton and Wellington. Introduction of the railcars cut this time to an average of 2 hr 25 min. (minimum 2 hr 15 min.) and provided two morning

services to Wellington, returning in the afternoon and evening. The "mail" train from Wellington at 7.50 a.m. to Woodville, and its opposite number (Masterton depart 2.06 p.m.), continued to run until 1948, latterly on only three days a week, when they too were replaced by railcars.

It was my fortune to travel about once every two weeks from Wellington to Masterton and back during the period from late 1936 to the end of 1943, the up journeys being divided about equally between a Friday evening railcar and a Saturday morning steam train. The return journeys were mostly on a Sunday evening railcar, but sometimes (at holiday weekends) on a special steam train. Perusal



Photograph: N.Z. Railways Publicity.

A Wairarapa railcar "Rm" 9 at Woodville (or maybe Dannevirke?) in 1937 during a special run. The then General Manager of Railways, Mr G. H. Mackley, is being greeted by the Stationmaster.

of my notebooks shows that, from a track performance point of view, the railcars could only be regarded as successful. Out of 36 timed runs on the 6.04 p.m. Wellington-Masterton service (train 742) between June 1937 and September 1939, only eleven were behind time on arrival and of these only four were more than 10 minutes late. Furthermore, on not one of these runs could any delay be attributed to the railcar itself.

The record of the down runs on Sunday evenings, however, was not quite so happy. Out of 50 runs on the 6.25 p.m. service from Masterton between June 1937 and the end of 1939, only three reached Wellington on time, though 39 were less than ten minutes late. The problem in this instance was that, although it was usual to reach Kaitoke within schedule time, delay almost invariably occurred here awaiting the arrival of a Sunday evening service from Wellington, and there was

precious little recovery margin in the timetable thereafter as will be seen from the runs tabulated later.

It was in the down or southbound direction of course that the railcars faced the testing ascent of the 1 in 15 Rimutaka Incline, and it was here perhaps that they did not come fully up to expectations. When the decision to introduce these railcars was announced in August 1935 it was stated that they would "negotiate the Rimutaka Incline fully loaded at a speed of 15 to 17 miles per hour". Elsewhere, on an official diagram dated 1938, their designed maximum speed was quoted as 60 m.p.h. on level track and 15 m.p.h. on a 1 in 13 gradient. In the event, however, they proved rather sensitive to loadings on such a steep grade, and at one stage a practice was adopted of providing a Fell steam locomotive as a "pusher" from Cross Creek to Summit when the number of passengers exceeded

a seated load (they were permitted to carry up to 60 adult passengers altogether, including standees).

On one occasion in my experience, before the use of Fell locomotive assistance was adopted, we slipped to a standstill soon after leaving Cross Creek. Eventually we returned to the station where the women and children were disembarked to wait by the fire in the station building while "Rm" 7 took the male passengers to Summit to find what shelter they could around the signal box. This first successful ascent occupied 21 minutes, and "Rm" 7 then took 44 minutes to back down to Cross Creek (feet first, so to speak) and bring up the rest of our passengers. From the time we arrived at Cross Creek until we eventually bade farewell to Summit, just three miles away, an hour and 39 minutes had elapsed. On this occasion we reached Wellington at 10.09 instead of 8.40 p.m. I can find no instance in my notes, however, when I became involved in a complete failure of one of these railcars, although such did occasionally occur and a light steam train would be put on as a replacement, or perhaps passengers would complete their journey by bus.

The general dimensions and characteristics of the six passenger railcars of the Wairarapa type can be seen from the accompanying diagram. Numbered from "Rm" 4 to "Rm" 9 inclusive, they were named after famous Maori canoes of ancient times: *Maahunui*, *Mahuhu*, *Mamari*, *Matahourua*, *Mataatua*, and *Arai-te-Uru* respectively. A seventh car of generally similar outward dimensions, named *Arava* ("Rm" 10), had a small 20-seat passenger compartment and a large compartment for parcels and small lots of goods. This one was provided for a local service between Cross Creek and Masterton and it was only occasionally used elsewhere.

As built, at the Hutt Workshops, each of the six passenger cars was fitted with a Leyland 10-litre petrol engine with a rated output of 130 b.h.p. Transmission was through a Lysholm-Smith fluid torque converter to a final drive unit mounted on the single rear driving axle. This single axle, with wheels 3ft. 2½in. in diameter, was a distinctive feature of these railcars, the large wheels being necessitated by the

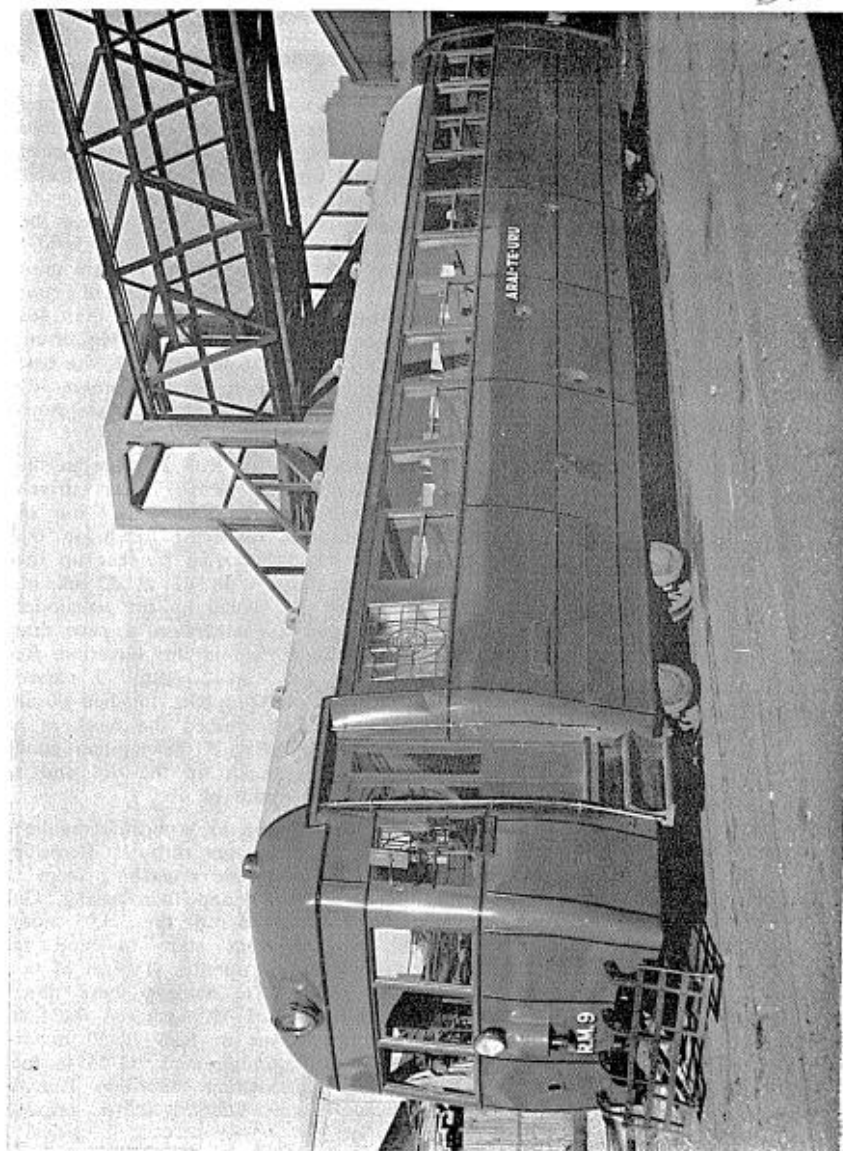
need for the axle to clear the raised centre rail on the Incline. To accommodate the engine beneath the floor, the latter was raised to the high level of 4 ft. 4½ in., more than 12 inches higher than usual. The goods railcar was powered by a 120 h.p. Leyland diesel engine, and the passenger cars received similar engines after a few years.

Ready for service, including 35 gallons of petrol in the fuel tank and 40 gallons of water to serve the toilet, each passenger railcar weighed 13.35 tons, of which 7.1 tons rested on the driving wheels, according to a 1938 diagram. An underfloor compartment at the rear, and another inside the car opposite the toilet, were provided for the accommodation of luggage up to a maximum of one ton.

Westinghouse air brakes were provided to operate on brake drums at the ends of each axle, and Fell centre-rail grip brakes, hydraulically worked, were available for use on the 1 in 15 Rimutaka Incline. A driving cab with seats for driver and guard was provided at one end only, next to the passenger entrance, so the cars had to be turned at the end of each journey for normal running. A reverse gear was provided however for manoeuvring purposes. Emergency passenger exit doors were provided at the rear of the car, as in bus practice. Fully laden, including eleven standing passengers, the all-up weight would have been about 18 tons.

To illustrate the capabilities and normal performance of these railcars during their earlier years, I have set out in Table 1 details of eight runs from Upper Hutt to Masterton on train 742, the 6.04 p.m. from Wellington, between 1941 and 1943, and in Table 2 similar summaries of eight runs from Masterton to Kaitoke during 1940 and 1941. The continuations of the latter runs from Kaitoke as far as Lower Hutt, where I usually alighted after 1939, are set out in Table 3.

The 6.04 p.m. service from Wellington was allowed more time than usual for the 19.5 miles to Upper Hutt because it was scheduled to take the loop at Melling and again at Silverstream to cross down suburban trains. Indeed, for much of the period during the war years, it often had to await a third train as well, a down troop special at Haywards.



Photograph: N.Z. Railways Publicity.  
A 120 h.p. Wairarapa type diesel railcar "Rm" 9 (Arai-te-Uru) at the original Wellington railcar depot in 1950.

Consequently it was almost always a few minutes late by the time it reached Upper Hutt, and on the runs tabulated departure from Upper Hutt was never less than four minutes behind time.

Immediately on starting here, trains were faced with  $1\frac{1}{2}$  miles of 1 in 35 gradient and 5-chain radius curves up to Cruickshanks Tunnel. Then came two miles of easier but rising grades across the Mangaroa "flat", followed by three miles up at between 1 in 40 and 1 in 50 to Kaitoke, again with much sharp curvature. This "tortuosity" continued right through to Summit, effectively restraining running speeds to between 20 and 30 m.p.h., but grades were easy for some five miles beyond Kaitoke until the final bank of just over two miles was encountered, mainly between 1 in 39 and 1 in 42, beginning at the distinctive locality known as Ladle Bend.

The allowance of 16 minutes for the climb from Upper Hutt to Kaitoke was clearly too optimistic, the best performances in this selection being  $17\frac{1}{2}$  minutes on three occasions. My notes show that, on Run 5, "Rm" 6 accelerated rapidly to 30 m.p.h. at the end of the Upper Hutt station yard and then settled down to a steady 20 m.p.h. on the grade, recovering to 34 in the short distance between the tunnel and Mangaroa station. A rate of 41 m.p.h. was attained in the first rising mile out of Mangaroa, eased to 36 round the curve at the foot of the bank proper, and 21 to 25 m.p.h. was maintained on the bank itself. Generally, with a fully loaded car, speed appeared to settle at about 18-20 m.p.h. on 1 in 35 grades and at about 21-23 m.p.h. on 1 in 40. I have a note of one run at this period when "Rm" 8, on the 6.13 p.m. Friday evening relief service, climbed the Mangaroa bank at 21 m.p.h., passed Mangaroa in 5 min. 39 sec., attained 42 m.p.h. on the straight, and then soared up the Kaitoke bank without falling below 24 m.p.h., the 7.1 miles being completed in  $15\frac{1}{2}$  minutes, no doubt with something less than a full load.

Time was generally maintained from Kaitoke to Summit, and the allowance of 17 minutes thence down the Incline was surprisingly liberal, especially as only 15 minutes were allowed for the ascent. As will be seen, it was usual to slither down

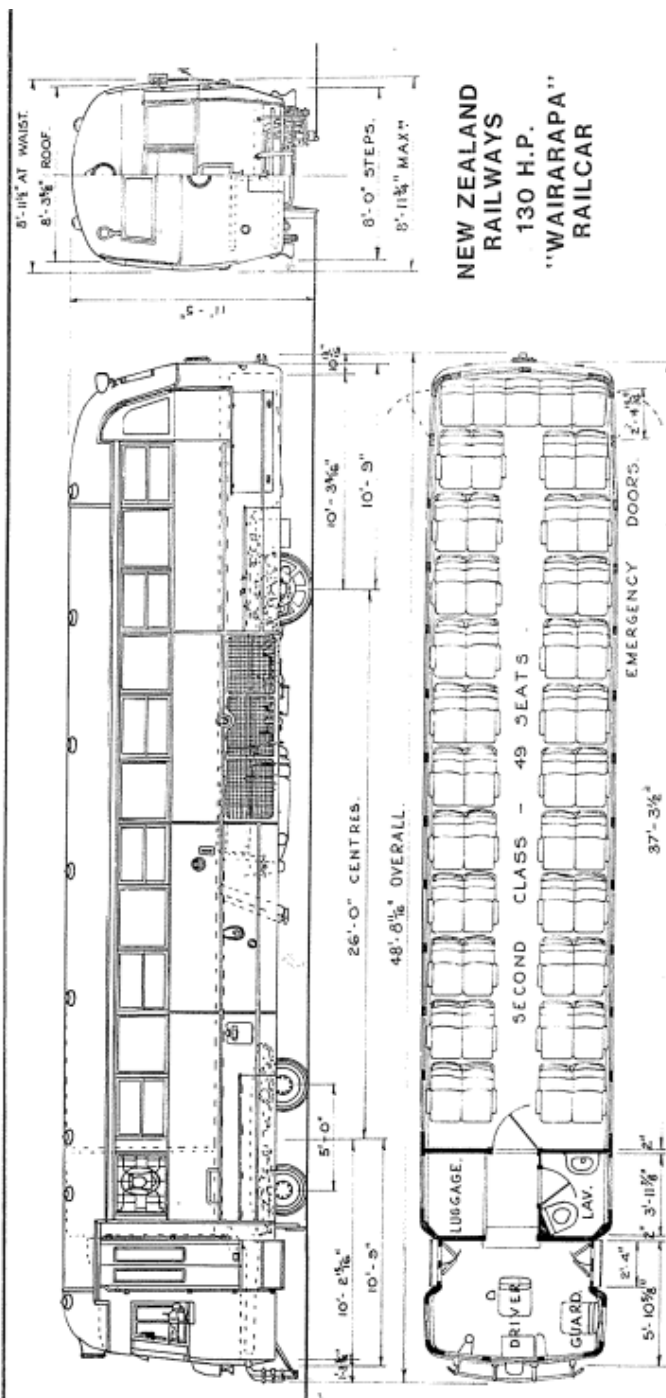
to Cross Creek in less than 14 minutes with speed held between 12 and 15 m.p.h.

From Cross Creek to Masterton the 28.3 miles were allowed 53 minutes including three regular and up to eight conditional stops. It was rare, however, for more than three or four of the latter to be required, with the result that drivers trying to recover lost time were able to demonstrate how these cars could scamper. The virtual absence of restrictive curves was further encouragement, and the severe speed restrictions imposed on ordinary trains over the old bridges across the Tauherenikau River just north of Fernside and the Waiohine River north of Woodside did not apply to the lightweight railcars until many years later. The tabulated runs accordingly show no time longer than 46½ minutes from Cross Creek to Masterton, inclusive of seven stops (Run 7), the best time in this selection being a smart 42½ minutes, and even this included six stops (Run 2).

The excitement in Run 1 came in the early stages when "Rm" 7 was driven down the half mile of 1 in 49 out of Pigeon Bush to reach 61 m.p.h. in the dip. This impetus carried the car up the subsequent short 1 in 61 at 55 m.p.h., and 56 was maintained up the remainder of the climb to Featherston, a pace that was rarely held here in this direction. By comparison, on Run 2, "Rm" 7 passed Pigeon Bush at 52 m.p.h., touched 60 in the dip, and surmounted the bank at a minimum of 53. Run 5 was another good effort with 54 m.p.h. in the dip and a subsequent minimum of 49.

From Featherston to Woodside the line includes  $2\frac{1}{2}$  miles up through Fernside beginning with a mile steepening from 1 in 91 to 1 in 81 and then easing. On six of the tabulated runs these 4.95 miles were covered from start to stop in between 6½ and 7 minutes. Typical of the running required to achieve these times were the speeds of 45 m.p.h. on the first part of the climb in Run 1, 50 m.p.h. at the summit, and a peak of 55 in the gentle dip approaching Woodside. Run 5 produced 46, 50, and 52 m.p.h. respectively.

Woodside to Carterton, 7.2 miles, included a favourite race track, as it still does. After  $1\frac{1}{2}$  miles almost level, the line descends for two miles through Mata-



DMC. 1/64.

Weight, ready for service ..... 13.35 tons.  
 Weight distribution: 6.25 tons on the leading bogie and 7.1 tons on the driving wheels.  
 Engine: Leyland 10-litre petrol E47/1 with 6 cylinders 4½ inches bore x 6 inches stroke, giving rated output of 130 b.h.p.  
 Fuel tank capacity ..... 35 gallons.

rawa, varying between 1 in 109 and 1 in 149, levels out through Dalefield, and rises again into Carterton. For nearly five miles it is dead straight. On three of the tabulated runs we covered the distance at an average speed of more than 50 m.p.h. from start to stop. The maximum speeds attained were 57 m.p.h. on Run 3 and 58 on Run 8, both of which produced an average of 56.5 m.p.h. from Matarawa to Dalefield. On Run 4 speed reached 62 m.p.h. at the foot of the bank but was then allowed to drift down to 54 at Dalefield, the average from Matarawa having been 58.8 m.p.h.

North of Carterton the line continues to rise as far as Waingawa, reaching an inclination of 1 in 125 north of Clareville and then, beyond the river, descends gently into Masterton. The only curves here are slight changes of direction to the right approaching Waingawa and after crossing the river. By far the best run on this section was No. 2 when "Rm" 7 with Driver Herbert at the throttle, cleared Clareville, 1.7 miles, in 2 min. 37 sec. from the standing start and proceeded to average 53.7 m.p.h. on the climb to Waingawa, passed at 56. A maximum of 58 m.p.h. was attained before stopping at Solway in an excellent 8½ minutes for the 7.14 miles. Run 7, with "Rm" 6 and Driver Schroder, was also good with 9 min. 15 sec. start to stop. Speeds were 50 m.p.h. at Clareville and 48 beyond, working up to a peak of 53 approaching Waingawa.

Table 2 shows that southbound cars had no trouble whatever in maintaining their 47-min. schedule from Masterton to Cross Creek. There was always an incentive to have time in hand at Featherston, where more than the scheduled minute was usually needed for checking passengers on to the car. On Runs 1 and 3 the 7.14 miles from Solway to Carterton were covered in 8½ minutes from start to stop with a top speed of 60 m.p.h. in each instance. The average from Waingawa to Clareville on Run 1 was 58.1 m.p.h. On Run 8 a peak of 61 m.p.h. was attained, but the finish was slower and the time from Solway was 8 min. 50 sec.

Some interesting runs resulted when stops at Dalefield and Matarawa were not required, and Runs 1, 4, 5, and 8 all show

start-to-stop times of 9½ minutes or less from Carterton to Woodside. On Run 4 a rate of 55 m.p.h. was checked to 44 through Dalefield, but the Matarawa bank was attacked at 54 m.p.h. and cleared at 46, with a final recovery to 50 approaching the Waiohine River bridge. Run 5 produced a more vigorous start with 53 m.p.h. through Dalefield, 58 at the foot of the bank and 45 at the top, and a final 52 m.p.h. before a relatively slow stop.

The 4.95 miles from Woodside down to Featherston usually occupied about 6½ or 6½ minutes, but on Run 6 Driver Schroder with "Rm" 7, after having run very quietly with nothing better than 50 m.p.h., suddenly proceeded to make amends. He worked speed up rapidly to 58 m.p.h., eased to 55 through Fernside, and touched 62 m.p.h. down the straight approaching Featherston. This short 6-minute sprint produced an average of 49.5 m.p.h. from start to stop. Identical maxima were attained on Run 2, with "Rm" 7 and Driver Herbert, but this time the reduction at Fernside was to 50 m.p.h. and the time was a few seconds longer.

The run from Featherston to Cross Creek began with a long straight descent for more than three miles into the dip preceding half a mile of 1 in 49 up to Pigeon Bush. A short, sharp descent followed and at milepeg 39½, 5½ miles from Featherston, the stiff climb to Cross Creek began around a 20-chain radius curve to the right and back to the left on to the side of the hill. It was almost all at 1 in 40 to 1 in 46, broken only by a short easing after the first half mile. Including a conditional stop at Pigeon Bush, the 7.3 miles were allowed 12 minutes, but this stop was rarely required and a start-to-stop time of about 10½ minutes was achieved with remarkable uniformity. By far the best time, however, was attained on Run 6, when Driver Schroder, having overcome whatever mechanical problem it was that was troubling him before Woodside, drove with "exceeding great joy" to reach a rousing 66 m.p.h., the highest speed I ever personally recorded on these railcars. The momentum from this pace carried us through Pigeon Bush at 46 m.p.h., 4.14 miles in 4 min. 51 sec. from the start. We began the 1 in 40 climb at 50 m.p.h., cleared the first half mile

TABLE 1 — NZR UPPER HUTT - MASTERTON  
Wairarapa Railcars Working Train 742, 6.04 p.m. ex Wellington

| Railcar Number | Date  | Minutes late leaving Upper Hutt | Sched. | Stations | Distance | 1            | 2            | 3            | 4            | 5            | 6            | 7             | 8            |
|----------------|-------|---------------------------------|--------|----------|----------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|
| km.            | miles | UPPER HUTT                      | min.   |          |          | m. s.        | m. s.        | m. s.        | m. s.        | m. s.        | m. s.        | m. s.         | m. s.        |
| 3.89           | 2.42  | Mangaroa                        | x      |          |          | 0 00<br>6 30 | 0 00<br>6 30 | 0 00<br>6 30 | 0 00<br>7 05 | 0 00<br>6 15 | 0 00<br>6 30 | 0 00<br>6 45  | 0 00<br>6 35 |
| 11.49          | 7.14  | Kaitake                         | 16     |          |          | 7 00         | 7 00         | 7 00         | 7 20<br>X    | 6 30         | 6 45         | 7 15<br>20 40 | 7 35         |
| 23.27          | 14.46 | Summit                          | 21     |          |          | 17 30        | 17 30        | 18 00        | 19 15        | 17 45        | 17 30        | 20 40         | 19 20        |
| 28.19          | 17.52 | Cross Creek                     | 38     |          |          | 23 00        | 23 30        | 23 15        | 26 00<br>X   | 25 00        | 23 15<br>X   | 25 20<br>X    | 26 25        |
| 33.26          | 20.67 | Pigeon Bush                     | 57     |          |          | 40 15        | 40 30        | 40 00        | 45 20        | 41 25        | 42 05        | 43 30         | 43 38        |
| 39.93          | 24.81 | Featherston                     | 56     |          |          | 41 15        | 41 30        | 41 00        | 47 05        | 42 35        | 43 10        | 44 15         | 44 55        |
| 43.76          | 27.19 | Fernside                        | 57     |          |          | 53 15        | 54 15        | 53 30        | 60 30        | 55 15        | 57 00        | 57 50         | 58 17        |
| 47.89          | 29.76 | Woodside Junc.                  | 59     |          |          | 55 00        | 56 15        | 62 45        | 62 10        | 58 10        | 58 50        | 59 20         | 63 15        |
| 52.40          | 32.56 | Matarawa                        | 69     |          |          | 59 15        | 60 33        | 66 35        | 67 00        | 62 40        | 63 35        | 64 40         | 69 30        |
| 59.93          | 37.81 | Featherston                     | 69     |          |          | 64 45        | 66 00        | 72 30        | 73 10        | 68 20        | 69 50        | 71 15         | 76 24        |
| 63.76          | 39.65 | Fernside                        | 70     |          |          | 68 13        | 69 13        | 76 30        | 78 47        | 70 15        | 71 20        | 73 20         | 77 32        |
| 67.89          | 42.31 | Woodside Junc.                  | 78     |          |          | 72 15        | 74 00        | 83 00        | 82 10        | 76 50        | 78 00        | 80 20         | 84 31        |
| 72.40          | 45.06 | Matarawa                        | 79     |          |          | 72 45        | 74 45        | 83 45        | 82 50        | 77 15        | 79 00        | 80 40         | 85 25        |
| 76.26          | 47.41 | Dalefield                       | x      |          |          | 76 26        | 78 10        | 87 20        | 86 29        | 80 57        | 82 43        | 84 40         | 89 02        |
| 80.26          | 50.04 | Carterton                       | x      |          |          |              | 81 00        | 89 53        | 88 56        | 83 55        | 85 27        | 84 55         | 91 35        |
| 84.22          | 52.46 | Clareville                      | 93     |          |          |              | 81 15        | 92 15        | 91 20        | 84 05        | 88 05        | 90 40         | 94 01        |
| 88.22          | 54.94 | Waingawa                        | x      |          |          | 82 30        | 84 15        | 93 15        | 92 55        | 87 20        | 89 05        | 91 35         | 94 32        |
| 92.22          | 57.46 | Solway                          | x      |          |          | 87 10        | 88 52        | 96 14        | 95 54        | 91 20        | 89 00        | 91 35         | 94 32        |
| 96.22          | 59.94 | Renall Street                   | x      |          |          | 88 30        | 90 15        | 100 46       | 100 08       | 95 52        | 96 48        | 98 40         | 101 53       |
| 100.22         | 62.46 | MASTERTON                       | 110    |          |          | 91 30        | 93 00        | 103 00       | 102 25       | 98 15        | 99 25        | 100 50        | 103 08       |
| 104.22         | 64.94 |                                 |        |          |          | 94 15        | 95 00        | 105 00       | 104 20       | 100 15       | 100 45       | 101 00        | 103 19       |
| 108.22         | 67.46 |                                 |        |          |          | 95 45        | 97 00        | 107 00       | 106 40       | 100 55       | 101 30       | 103 35        | 106 50       |
| 112.22         | 70.46 |                                 |        |          |          | 98 00        | 99 45        | 109 00       | 108 40       | 102 45       | 103 35       | 105 35        | 108 41       |

**TABLE 2 — NZR MASTERTON - KAITOKE**  
Wairarapa Railcars Working Train 885, Sunday 6.25 p.m. to Wellington

[illegible]

**TABLE 3 — NZR KAITOKE - LOWER HUTT**  
Wairarapa Railcars Working Train 885, Sunday 6.25 p.m. Masterton to Wellington

[illegible]

x Stops if required to pick up or set down passengers.

b Stops only to set down passengers.



The railcar "Rm" 7 (Matahourua) at Cross Creek one day in October 1955, just before beginning the ascent of the Rimutaka Incline.

Photograph: Mrs. J. M. S. Galbraith.

at 36, recovered to 40, and completed the climb without falling below 28 m.p.h. Typical of the speeds involved in making a 10½-minute run were those on Run 4, with 58 m.p.h. down the straight, 46 at Pigeon Bush, 54 in the next dip, 34 after the first 1 in 40 with a recovery to 36, and a final minimum of 23 m.p.h.

The famous Incline, with its 2½ miles on an average gradient of 1 in 15, was always a trial for any train. The Wairarapa railcars, however, generally managed to maintain between 8 and 12 m.p.h. and only occasionally would they take much more than 20 minutes to complete the climb. On the other hand it was rare indeed for them to succeed in observing the scheduled 15 minutes — in my experience anyway. On only two of the tabulated runs did the time come below 16 minutes, which would have required a steady 11 or 12 m.p.h. On just one occasion, in 1946, when the climb

took 17 min. 17 sec., I noted times at some of the quarter-mile pegs. These showed a steady 100 seconds per quarter mile, or 9 m.p.h.

An allowance of 18 minutes from Summit to Kaitoke was of course no problem, this section being predominantly downhill. Here the times recorded simply reflected the speeds the driver was prepared to allow round the constant succession of sharp curves, and the extent to which he took advantage of short stretches of easier curves.

Very similar considerations applied to the continuation of the runs beyond Kaitoke, tabulated in Table 3. It was from these last stages of the run home that I retain the most vivid recollections of the lively riding of the Wairarapa railcars. The final 1 in 35 descent to Upper Hutt began right at the Mangaroa portal of Cruickshanks Tunnel and a 5-chain radius curve to the left began at the



Photograph: N.Z. Railways Publicity.

Interior of a Wairarapa type railcar, which could seat 49 passengers in 22 fixed double seats (11 on each side of the centre aisle) and in a row of five across the back of the car. Curtains instead of blinds were a new feature in 1936.

Upper Hutt portal. From the Mangaroa stop we would still be accelerating normally when we struck the solid wall of air in the tunnel mouth. At the same instant it would feel as if the track fell away beneath us, and gravity quickly took over. Only then, about halfway through the tunnel, would the brakes be applied, and speed would still be coming down as we entered the curve.

From Upper Hutt the single line was then dead straight for more than three miles, and beyond Silverstream it turned sharply to the right on a curve of 6 chains radius with a speed restriction of 25 m.p.h. Here we would come bounding down the straight at better than 50 m.p.h., steadily accelerating from the Trentham stop. In the darkness the little Silverstream station building would flash by, the curve only seconds away. But always, at the last moment, brakes would be applied to reduce speed rapidly by more than half.

After negotiating the curvaceous stretch between Silverstream and the old Hutt River bridge, power would be applied again as we came around the last curve and away we would gallop, down through Haywards. At that time much of the track was still laid with 36-foot rails, and indeed a stretch just south of Haywards had even shorter 30-foot lengths. Suffice to say then that acceleration here would produce a rousing tattoo. The most appropriate musical accompaniment conjured up in my mind here was always the finale to Rossini's William Tell Overture. Try counting 25 or more in 10 seconds, and you'll get some idea of the rhythm.

It was thus that the Wairarapa railcars brought the weekenders home to the Hutt Valley and Wellington. In more prosaic terms, typical of the running required to cover the 9.9 miles from Trentham to Lower Hutt in 14½ minutes were the speeds noted on Run 7, namely 54 m.p.h.

TABLE 4 — NZR MASTERTON - WOBURN

|                      |         |         |
|----------------------|---------|---------|
| Train Number         | 811     | H-3     |
| Date                 | 12/1955 | 10/1974 |
| Railcar Number       | 7       | 2       |
| Gross Weight in tons | 17      | 112     |
| Horsepower           | 120     | 1,010   |

| Distances* |       | Stations                   | Sched.  | 1                     | 2              |
|------------|-------|----------------------------|---------|-----------------------|----------------|
| km.        | miles |                            | min.    | m.s.                  | m.s.           |
| 1.56       | 0.95  | MASTERTON<br>Renall Street | 0<br>x  | 0 00<br>2 29          | 0 00           |
| 2.87       | 1.76  | Solway                     | x       | 2 40<br>4 33          | —              |
| 5.85       | 3.62  | Waingawa                   | x       | 5/R<br>7 34           | 4 55           |
| 14.36      | 8.90  | Clareville<br>Carterton    | x<br>16 | 12 07<br>14 48        | 11 25          |
| 17.59      | 10.90 | Dalefield                  | 17      | 16 07                 | —              |
| 21.35      | 13.30 | Matawau                    | x       | 19 26<br>22 10        | 14 08          |
| 25.84      | 16.10 | Woodside                   | x       | 5/R<br>26 36          | 19 38          |
| 29.98      | 18.67 | Fernside                   | x       | 26 55<br>S/R<br>31 18 | 22 05          |
| 33.81      | 21.05 | FEATHERSTON                | 36      | 34 46                 | 25 58          |
| 42.55      | 26.47 | Rimutaka Loop              | 37      | 36 04                 | 26 40          |
| "          | "     | Tunnel entrance            | —       | 44 30                 | —              |
| "          | "     | Tunnel exit                | —       | 45 02                 | 34 08          |
| 52.21      | 32.47 | Maymorn                    | 52      | 54 35<br>55 27        | 40 45<br>41 05 |
| 58.56      | 36.44 | UPPER HUTT                 | 54<br>b | 57 08<br>65 35        | 5/R<br>47 58   |
| 59.66      | 37.11 | Wallaceville               | 61      | 66 58                 | 48 30          |
| 61.56      | 38.29 | Trentham                   | b       | 68 35                 | 50 05          |
| 62.72      | 39.01 | Heretaunga                 | —       | 70 29                 | 51 30          |
| 64.13      | 39.90 | Silverstream               | —       | 71 56                 | 52 49          |
| 67.26      | 41.83 | Manor Park                 | —       | 73 07                 | 53 50          |
| 68.98      | 42.90 | Pomare                     | —       | 75 31                 | 56 03          |
| 70.41      | 43.19 | Taita                      | b       | 76 50<br>78 38        | 57 22<br>58 21 |
| 71.47      | 44.46 | Wingate                    | 73      | 78 42                 | —              |
| 72.71      | 45.24 | Naenae                     | —       | 80 12<br>81 12        | 59 09<br>60 24 |
| 74.42      | 46.29 | Epuni                      | —       | 82 32                 | 60 49          |
| 75.46      | 46.94 | Waterloo                   | b       | 83 44                 | 62 52          |
| 76.59      | —     | WOBURN                     | —       | —                     | 63 37<br>64 48 |

x Stops if required to pick up or set down passengers.

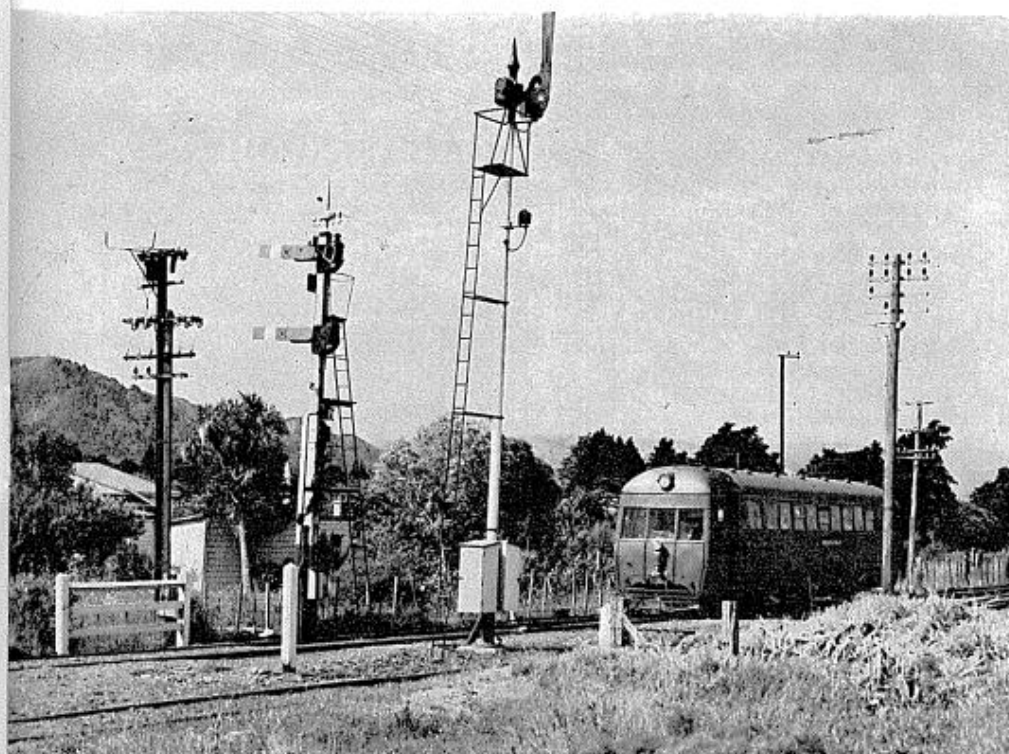
b Stops only to set down passengers.

\* Kilometres are from the 1974 timetable and miles from the 1955 list. They do not necessarily correspond.

at Silverstream, 25 minimum round the curves, 54 again beyond Haywards eased to 44 for more curves on the west bank of the Hutt River, 50 again at Belmont. 39 round yet more curves, and a final 48 m.p.h. between Melling and Lower Hutt. This was about the best the track alignment would allow. There was clearly no recovery margin in the timetable here, and indeed on the only run when we

were able to omit both the Trentham and the Silverstream stops (Table 3, No. 4) we gained only one minute on the schedule from Upper Hutt to Lower Hutt, the 11.63 miles occupying just 17 minutes.

After the completion of the Rimutaka Tunnel on 3 November 1955 and the earlier diversion of the railway between Silverstream and Petone to a completely new alignment, I recorded only one more



Photograph: N.Z. Railways Publicity.

A Wairarapa railcar ("Rm" 7) on the Masterton-Wellington run accelerates out of Upper Hutt in 1950 at the beginning of the 3-mile straight through Trentham to Silverstream.

run on a Wairarapa railcar before they were completely displaced by the much larger, heavier, and more powerful 88-seat articulated cars. This run was on 30 December 1955 when "Rm" 7 was provided for an early evening run from Masterton to Wellington. A summary of the times is given in Table 4 with, for the sake of interest, the times recorded on the Silver Fern railcar "Rm" 2 when it was returning from its first-ever visit to Napier on 27 October 1974. In column 1, "Rm" 7 can be seen to have maintained traditional running from Masterton to Featherston, though by this time speed restrictions were in force on the Waingawa, Waiohine and Tauherenikau bridges and an extra two minutes were allowed

in the timetable in deference to this fact.

South of Featherston, on the new line, "Rm" 7 maintained an excellent 47 m.p.h. up the 1 in 70 approach gradient towards the tunnel, but speed then had to be restrained to about 35 m.p.h. from Rimutaka Loop through the tunnel and down to Upper Hutt pending final consolidation of the track. In spite of this, Upper Hutt was reached in less than 30 minutes from Featherston, compared with the 65-70 minutes commonly spent negotiating the old line between the two towns.

Onwards from Upper Hutt the scamper down to Silverstream was now interrupted by a slowing at Trentham through the turnout on to the new double line, but a respectable pace could now be main-

tained all the way down through Taita and Waterloo, and "Rm" 7 showed this by averaging 56 m.p.h. from Manor Park to Pomare and then 47 from Wingate to Epuni. Now in its 20th and last year of service, "Rm" 7 had not been pushed over hard, but it was still able to maintain schedule without trouble.

The new Silver Fern diesel-electric railcar "Rm" 2, whose run is shown in column 2, similarly was not pushed to unusual feats of speed having regard to its designed top speed of 120 km/hr (74.6 m.p.h.) and the normal line maximum of 100 km/hr (62.1 m.p.h.); but the time of 64 min. 48 sec. for the 76.6 km (47.65 miles) from Masterton to Woburn, inclusive of three stops and a speed restriction, was almost four minutes inside its schedule. The absence of stops between Masterton and Featherston gave me the best actual time I had yet recorded over that section, but not the highest speeds, and the average speed from start to stop was still a little below 80 km/hr.

The original Wairarapa railcars also of course worked north of Masterton to Woodville and Palmerston North, but my journeys rarely took me in that direction and I can find only one timed railcar run over that section in my notebooks.

Since 1955 the articulated railcars — and indeed certain other trains — have given me quicker times and higher speeds than the best attained by the "Tin Hares", and with much more comfortable rides into the bargain, but that is another story. Meanwhile let us salute their memory and be pleased to know that at least one is being restored as a working museum piece for the education of generations to come.

**Our Society's next Annual General Meeting will be at New Plymouth on Saturday, 25 October 1975. Watch for further announcements.**

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