

THE WORD

N.Z. INCORPORATED

JANUARY 1979

NEWSLETTER

VOL. 3 NO. 3

COMMITTEE

PRESIDENT

John Parker,
3 Otaki Place,
CHRISTCHURCH, 7.
Ph. 883.034

CLUB CAPTAIN

Ernie Dalton,
131 Birdwood Avenue,
CHRISTCHURCH, 2.
Ph. 325.005

SECRETARY/TREASURER

Isobelle Hawthorn-Smith,
32 Cecil Street,
CHRISTCHURCH, 2.
Ph. 791.974

EDITOR

Colin Hey,
38 Te Rama Place,
CHRISTCHURCH, 6.
Ph. 894.533

Jack Milne,
51a Birdwood Avenue,
CHRISTCHURCH, 2.
Ph. 33.699

SPARE PARTS

Peter MacDiarmid,
79 Tennyson Street,
CHRISTCHURCH, 2.
Ph. 39.103

Bill Williamson,
80 Mathers Road,
CHRISTCHURCH, 2.
Ph. 382.516

CLUB PATRON

Max Higgins,
32a Field Terrace,
CHRISTCHURCH, 4.
Ph. 488.613

ASHBURTON ACTING AREA SECRETARY

Denis Carruthers,
167 Harrison Street,
ASHBURTON.
Ph. 83678 ASH.

CORRESPONDENCE

All correspondence should be addressed to:

The Secretary,
32 Cecil Street,
CHRISTCHURCH, 2.

NEWSLETTER

All newsletter material should be addressed to:

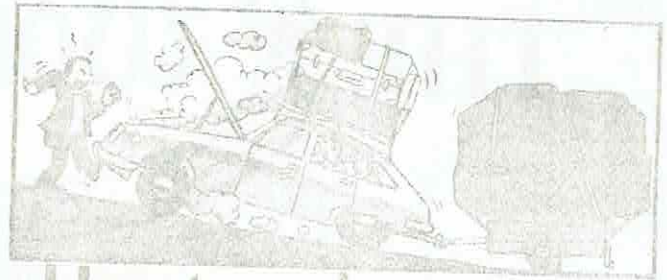
The Editor,
38 Te Rama Place,
CHRISTCHURCH, 6.

OFFICIAL NEWSLETTER OF THE "WOLSELEY CAR CLUB" CHRISTCHURCH, N.Z.

Registered at POH, Wellington as a Publication

ORDER OF ARTICLES

1. Editorial
2. President Says
3. Coming Activities
4. Run to Chertsey Domain
5. Car Care
6. Road Test
7. Caravan Towing
8. Buy, Sell and Exchange
9. Supplement "The Wolseley Years"



**How to make your car
tow better.**

If you're taking your caravan with you this summer, spare a thought for the poor old car.

1. Editorial - From My Point Of View

It was great to hear so many favourable comments about the last newsletter, and I only hope you all enjoy this one and future ones as much. I am extremely grateful for the provision of material for them, but would still welcome any that some of you may have at hand. This will enable me to start planning newsletters two or three issues ahead instead of the couple of weeks prior to printing as I have been doing in the past.

Please feel free to air your views and questions through the Newsletter and make full use of its services.

With Christmas upon us, many of you will no doubt be heading off for your holidays, and knowing how keen you all are on driving your Wolseleys, they will be going along with you.

If you are heading away in your car please don't forget to give it a good check over before you go, particularly if you are towing a caravan or travelling very long distances. Important things to check are as follows:-

- | | |
|-----------------|---|
| Engine: | Oil age and level, spark plugs, points etc. |
| Cooling System: | Water level, condition of <u>all</u> hoses, clamps etc. and fan belt tightness and condition. |
| Electrical: | Operation of all lights, wipers etc. |
| Brakes: | Condition of linings, pads etc. Brake and clutch fluid reservoir levels check for adjustment, uneven operation etc. Particularly important if towing. |
| Transmission: | Oil levels. |
| Wheels: | Security of wheel nuts and condition of tyres. |

It is also worthwhile throwing in a spare fan belt if you can't remember back to when the present one was replaced and maybe a

couple of other bits you know your own car has an appetite for.

If you are not already a member of the Automobile Association you may find it worthwhile to join and make use of their touring information and other amenities. Their breakdown service is also invaluable should you require it.

My own 1500 is now looking rather good after a little cosmetic surgery and I'm looking forward to the next run so I can park it proudly with some of the other very nice cars which have been present at previous runs. I'll write an article on what I have done to it, along with a few tips I've learnt the hard way over the years I've had mine, for the next Newsletter, which will be due out in February.

Until the next Newsletter, may I personally wish you all the best for the coming season, and I hope you enjoy the break which it offers.

COLIN HEY

2. The President Says

Dear Member,

Christmas is all but gone, but, I would like to extend to you and your families a very Merry Christmas and Happy New Year from the Committee.

Our Editor Colin Hey was away last weekend and couldn't attend the Children's Christmas Party, so the following is a brief account of the event:-

The second annual Christmas Party was held at Jack Milnes, 51A Birdwood Avenue on Sunday 10 December at 2.30pm and 28 children plus parents attended. Jack and his good wife Ailsa had everything at the ready, including a roped off fish pond to ward off gold fish catching toddlers etc. We started the proceedings by having a few running races with a bar of chocolate as first prize. Goodies were handed out to each child at, I might say, an exhausting rate by Jack Milne and I on the chips and drinks and Ernie Dalton on the sweets.

After a hasty cuppa and cakes for the adults supplied by Ailsa and all the wives and mothers, the children gathered for their Christmas gifts. Father Christmas was not able to be with us on the day because of other commitments but we were fortunate to have Mr & Mrs Wolseley themselves, Max and Fay Higgins, to hand the gifts to the children. Then the surprise came, Fay asked me to accept, on behalf of the Club, a beautiful cup to be used as an annual trophy award. The cup will be known as the Higgins Cup and will be presented at the Annual General Meeting each year. It has yet to be decided as to what it will be awarded for and your Committee will discuss this at its next meeting. I was very overcome by this wonderful presentation by Max and Fay as I am sure you are also. By the way, they are now the proud owners of a 16/60 Auto, a nice tidy car.

In conclusion, may I express many thanks to my wife Pauline for selecting the gifts and party eats etc, Margaret Williamson for helping to wrap them all, Jack and Ailsa Milne for their hospitality and hard work. all the ladies for the lovely afternoon tea they prepared, most of them brought two plates instead of one, and all the other members who assisted in making the day the success that it was.

Drive Safely.

JOHN PARKER

3. Coming Activities

28 January 1979

- Car Rally to Selwyn Hutts commencing 1pm from Haywrights Car Park, Sydenham. Barbecue tea. Presentation of the Dalton Rally Trophy. Plus, Display of NEW Club Radiator Badges and, Wall Placques.
- Committee Meeting at 79 Tennyson Street.

6 February 1979

- 7.30pm General Meeting. Details to follow.

19 February 1979

4. Run to Chertsey Domain

Again, as for the previous run, we managed to strike a perfect day for our run to Chertsey on 19 November. The weather was fine and warm with only a slight nor-wester blowing.

The assembly point was Hornby Mall car park which was somehow changed to Woolworths, Hornby car park by the first couple of cars to arrive (whose owners will remain anonymous). However, this proved a better spot to meet and leave from anyway.

Eleven cars were present at our departure at approximately 10.50am, our numbers being boosted to 17 cars once we had arrived at Chertsey, which was a creditable turnout considering the distance.

Two cars developed faults on the way down, one loosing oil pressure momentarily and mysteriously, and the other, a 6/99, loosing power from a faulty carburettor. However, all arrived safe and ready to enjoy the day.

You may recall that this run was to have included a gymkhana, but alas, this was not to be. Upon arrival we discovered that the Chertsey Domain is in the middle of a horse racing track which unfortunately was holding a meeting the same day. Consequently, our space and activities were somewhat limited and it was decided to cancel the gymkhana. This also made it hard for those coming out just for the afternoon difficult to get to us because it was necessary to get through a gate, cross the race track and then remove a barrier, and replace it once you were through. The reverse procedure applied when the time came for us to leave.

However, the day definitely turned out to suit the children better, who amused themselves 'exploring' and enjoying generous supplies of lollies from the lolly scramble.

Two raffles were held to raise money for the Spare Parts fund. The first raffle was won by John Parker, who took away a very large frozen turkey, and the second raffle was won by Colin Hey, the prize being a dutchess set made and donated by Elsa Milne. It is significant to note that John Parker and Colin Hey were selling the raffle tickets, and both made hasty retreats amongst cries of foul play. However, I think I can assure other ticket holders this was pure coincidence.

It was good to see Gale and Denis Carruthers from Ashburton present, and we thank them for directing us into the domain from the main road. It was also good to see Ken Godfrey who had arrived in his Hillman Hunter with the cylinder head off his 6/110 in the boot. Ken was seeking a little advice, and to my knowledge, Chris Bowden was able to provide it to him. There were also a couple of members on their first run, but, unfortunately, I cannot recall their names.

Most people began heading home between 3.45 and 4.15 and I'm sure most enjoyed the day in the sun and the good natter, along with the close up view of the Chertsey trotting meeting.

5. Car Care

1. Contact Points

The points in your distributor have a profound effect on the overall efficiency of your engine.

Why are they there? They act as a switch to turn the primary current on and off through a condenser which charges then discharges to earth. This induces a high voltage current out of the secondary coil winding to the plugs.

A precise manufacturers gap is stated for all cars, this is important as it governs the time for the coil to build up a hot spark for the plugs. The points when closed - coil saturation period - is known as the dwell angle of the distributor cam and is read on the 'Cam Angle Meter' in degrees, i.e. part of 90 deg. on a four cylinder and 60 deg. on a six cylinder. Tuning specialists do not depend on feeler gauges for point gap accuracy.

It is very important that having set the gap, ignition timing is also reset. Advance or retard, by unlocking the distributor clamp stud and with the motor hot and the timing light wired in series with No. 1 spark plug, move the distributor to get the timing marks to line up, as prescribed by the manufacturer.

Next test the car on the road. Should roughness and pinking occur at lower speeds, use the vernier nut on the distributor for minor adjustments.

Points should be checked every 5,000 miles.

2. Spark Plugs

Alongside other developments which make the modern engine the powerful efficient unit that it is today - the manufacturers have come up with a multi-heat range plug.

These differ from the standard plug in that the centre electrode is much longer and the insulator core is projected down approximately $3/16$ inch.

The plugs run hotter at low engine revs because their electrodes are further away from the water circulating around the plug aperture.

This has the advantage of burning off fouling deposits which are formed in the cylinder at low engine speeds, or when the throttle is shut on to high vacuum at a bend on the open road.

However, on fierce acceleration or at high speeds with open throttle running, the new plug runs cooler than normal as the long electrodes sit out in the turbulence of the cold incoming charge.

Most types retail at \$1.35 and are readily obtainable at motor supply stores.

Any inquiries on car maintenance will be answered for members who care to phone Riccarton Motor Spares Ltd.

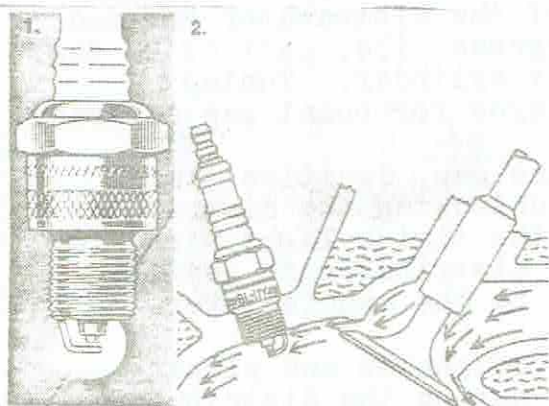
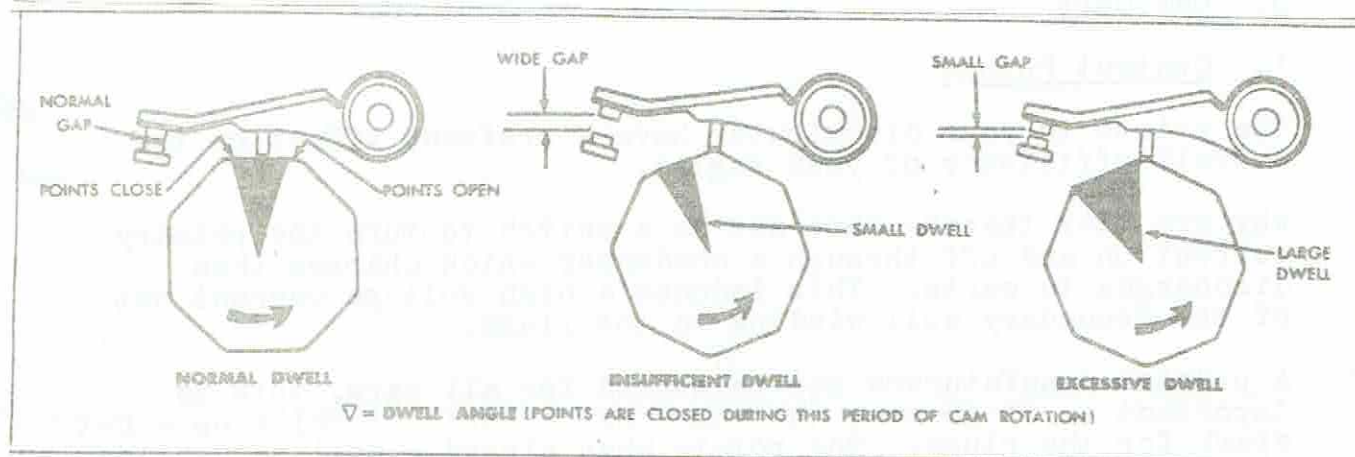


Fig. 1. A plug positions the insulator nose and electrodes deeper in the combustion chamber.
Fig. 2. At high speeds, the incoming mixture cools the projected electrodes. At low speed the projected electrodes operate at a higher temperature to prevent fouling.

ABOVE: Diagrams show effect of contact gap on cam (dwell) angle.

Happy Motoring.

TOMMY THOMPSON.

- 7 -

or walls 12.2 (40ft) apart (the old crab turned between walls 11.5m apart).

Frankly, I don't mind the extra front overhang. For one thing it makes the ADO-71 a far prettier and better-looking wedge than that blunt-nosed, ungainly crab. For another the wedge, with a wind co-efficient of only 0.404 helps the ADO-71 literally slice through the air barrier and makes it one of the quietest production cars (designer Harris Mann, who was also responsible for the sleek TR-7 wedge, aimed at 0.350 co-efficient and first models actually gave him that).

In addition the lack of frontal area brings down fuel consumption, and helps provide an extremely big engine bay to provide ease of maintenance. The 2200 82KW six hardly touches the area and the 1800 61KW four is practically lost in it! On top of that it leaves plenty of room for air-conditioning pumps, compressor and other gubbins.

The trunking and heater unit is much the same as that installed in the TR7 - designed by BLMC and produced by Smiths. Though it is possible to "bolt-on" air after the car is produced it can still be complicated, though much more attractive and efficient than the normal hang-on units.

The big bay also raises two of my one-hand criticisms - I think it should be equipped with a splash tray and it needs a sump guard - but more about that later.

The power units themselves are the now well-tried 1800 pushed OHV of 1798cc with single SU HS6 carbs and 9:1 compression ratio production 61KW (DIN) at 5200rpm, 138Nm at 2750 rpm and the 2227cc chain-driven SOHC six producing 82KW (DIN) at 5250rpm, 168Nm at 3500rpm.

The latter is the same E-series power plant of the ill-fated Kimberley and P76.

The transmission, with its four-speed all-synchro box is much the same but linkage has been further improved and the clutch (on the six) has been increased in size. A three-speed Borg Wagner Type 35 Automatic is available. Final drive ratio of the manual box is 3.72:1, of the automatic 3.83:1 giving the former 30km/h and the latter 29km/h per 1000rpm on the road in top gear.

Suspension is a new version of the Hydragas interconnected, all independent type introduced on the Allegro but with greatly revised damping and spring rates to suit the new application. Hydragas did not get off to a good start in the Allegro mainly because of settings. I frankly didn't like it at all, though it is better now than when first introduced in January 1973 - but in the ADO-71 it works like a charm.

The front suspension units are mounted horizontally in a cross-tube, which as on the previous hydrolastic 1800, is an integral part of the body shell bulkhead assembly. This arrangement tends to contain the suspension loads in the very rigid bulkhead by setting the two spring reaction forces against each other. The tube itself also helps give high torsional rigidity to the bodyshell.

The Hydragas spring units incorporate nitrogen springs and have their own integral damping units. The unequal length, transverse links pivot on rubber torsion bushes with an upper arm operating the Hydragas spring through a knuckle joint. Mountings for this upper



PROJECT ADO-71 (AUSTIN DRAWING OFFICE -71)

Started in late 1970, is British Leyland's strongest ever bid for increased domestic and export market penetration. Alongside TR-7, the Jaguar XJ27 and Rover SD1, the ADO-71 represents a concerted effort to re-establish the shaky Leyland group as one of the world's major car producers. From London in 1975 this comprehensive road test report on BLMC's new look model was compiled.

ADO 71

Leyland's new ADO-71 series, 1800/2200 front wheel drive, four and six cylinder replacements, are the nicest, quietest, internally biggest road-hugging best-lookers ever to come out of the BLMC factories. Properly marketed, backed by efficient service, and produced in sufficient quantities they should be outright winners.

They are probably the most complete four/five-seater medium size cars built in the UK. And that goes for cars of this and any other year!

They are cars for our time. Economical, safe and probably with just the right power plants.

This isn't be nice to Leyland year - though I admit to doing a bit of a rave over the new TR-7, introduced two months back and now this series. I have yet to sample the TR-7 over any distance but I have driven two versions of the ADO-71 over almost 1600 km on everything from tarmac to a tank course. Nothing I have driven for years has surprised me more - or given me so much pleasure. I can list on one hand some very easily corrected criticisms.

In hindsight one can't help wondering why Leyland Australia bothered to mess about with the P76-Force Seven series that was to eventually kill them down-under. Peter North was not to know the oil crisis was almost on us but I am sure ADO-71 or another development (enginewise) of it could have been a winner - in Australasia. It still might.

The world, and that includes New Zealand and Australia, now doesn't really want, doesn't need, big, thirsty, fuel-gobbling V8s. It does need reliable, torquey, smooth and economical sixes and fours. The ADO-71 could do with perhaps a little more verve lower down by some, though not all of our standards (and that should be easy enough to obtain). But in every other department the new car stands out well against the opposition.

ADO-71 is the ideal size - not too small, not too big and extremely manoeuvrable. The figures in brackets are of the old 1800 Landcrab: Overall length is (4.22m), overall width 1.72m (1.70), and height 1.41m (1.43m). It has a ground clearance of 16/4cm (15.9cm), it weighs between 1160/1197kgs (115/1187kgs) depending on model and finish.

Wheelbase is 2.76m (2.69m). All models, except the basic 1800 version (and then its available as an option), are fitted with excellent ad-West power steering. With 3.26 turns lock-to-lock (4.37 on the manual) of the 40cm diameter (15.75 in steering wheel this allows the ADO-71 to be turned between 11/53 (37.83ft) kerbs,

is superb.

Once a driving position has been selected from the 200-odd possibilities the driver can relax and thoroughly enjoy himself. His passengers can stretch their legs and lounge in great comfort. I don't go much for the vinyl seating, but the velour plush seat coverings as used in the top-of-the-range Wolseley would suit me. This new type "brushed nylon" as it is generally known has the tops of the stitches cut off, preventing short animal hairs from becoming entwined. The material, which would be cool in summer, not chilly in winter, can be brushed and washed easily.

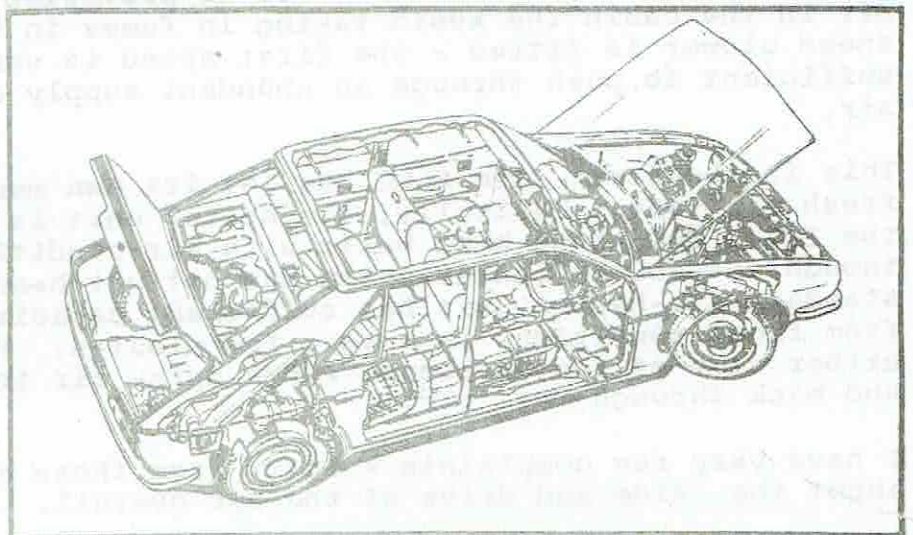
Carpets in the Wolseley got a bit mucky after tramping in and out of them from a tank testing course in Southern England, but they brushed up reasonably well. I took one "outback" section of mud, slush and ruts at speed with four aboard - there were no complaints. And there was no "locking up" of suspension as there had been in the Hydrogas Allegro. The suspension requires little or not maintenance and should offer a lifetime of service. It takes a lot of beating.

Niggles are few. Sure, I'd like a bit more power when caught in the "tramlines" of the outback track. Bottoming is cushioned, but a sump guard would be necessary if you intend taking it off the tarmac. Same goes for a splash-guard for the engine bay - it would help to keep it clean if you are going to take it over unmade road.

I liked the slick gearbox and can't argue much about the ratios. Both motors are tourquey up to around the 2500rpm mark, but then the curve gets very flat. I'd like it to go on a bit more.

It's one of the better cars to go through the automatic car wash - but I think the body deserves another sealing ring around the doors. Mud crept up under the door onto the sill during the tank course and was apt to mark trouser legs - an extra seal could prevent this.

Top speed of the 1800 is 158km/h while the 2200 reaches 170km/h (automatic versions are slightly slower). You can cruise both around the legal limit of 80km/h in quietness and great comfort and economy.



Above: Top-of-the-line Wolseley uses the 2.2 litre six cylinder engine, has vinyl roof and more luxurious interior.

Velour seats, thick carpets and wood-finish fascia of Wolseley model. Right: Cutaway shows 1800 basis of new car. Suspension is "Hydrogas" as used in the Allegro models.

them being set in the boot lid. At long last Leyland has rectified a pet hate I've had going back years. To have that jack just loose in the back was more than annoying. It slid and rattled from side to side. The ADO-71 has an excellent covered recess built into the boot floor that not only holds the big jack but leaves plenty of room for a tool roll. I would like to see it lined with some of that bitumastic material but the fact that it's there at all is the main thing.

So much for the outer appearance.

The four doors of the ADO-71 open wide (with strong two-position stays) and allow very easy entry. The interior is as big as the Landcrab though much more refined. The seats really do offer limousine-like comfort. All models have slide mounted full reclining front seats with full width side release bars.

The driver's seat has to be used to be believed. The cushion alone adjusts to 240 positions - you can tilt the seat forward or back, raise or lower it and combine all this with an adjustable squab and I would almost defy anyone not to be comfortable.

The old Issignois bus-type wheel position has been thankfully dropped. Fascia layout is basically the same for all models - three round dials containing a speedo with tripmeter in one, a combined fuel level/coolant/battery-condition gauge in another, and the third a big clock. Frankly I still would like to have a tach.

This leads us to another minor niggle. The glass used to cover the left, though this is countered somewhat by the twin, door-mounted side rear vision mirrors.

Rationalisation comes out well in the new models. The stalk cluster is the same used in all BLMC newer models with the left hand stalk controlling a flick/pulse-timed screenwash with two speed wipers and the horn, head lamp dip and flash and direction indicator for the right stalk.

I'd like perhaps bigger symbols on the switches which would provide quicker recognition both day and night. At night the illumination is by fibre-optics, which was faulty in the original Wolseley I tried but in a photo session on two other models they worked splendidly - apart from the size of the symbol. The heater controls are fairly simple and straight forward and there is plenty of fresh air ventilation available - from two rectangular slotted and directional vents in the centre of the dashboard and two others (with independent controls either side) which feed the ambient air into the cockpit at foot level. There is provision for recirculation of air in the cabin to avoid taking in fumes in traffic. A three-speed blower is fitted - the first speed is very slow and quiet but sufficient to push through an abundant supply of heated, or cool-air.

This is the first time BLMC has let its own men design the heater/fresh air vent. Basically, the heater unit is the same as that in the TR7. Both have been built with air-conditioning in mind - though the ADO-71 installation has not yet been approved. The standard air-heater unit has sufficient capacity to clear the screen from frost conditions in a very few minutes. Permanent side vents either side of the dashboard ridge spray air towards side windows and back through the car.

I have very few complaints - apart from those already mentioned - about the ride and drive of the car overall. The driving position

LAWS OF THE ROAD AND CARAVAN SAFETY

(Prepared by the Ministry of Transport)



CARAVANNING SAFETY

One of the most common ways of enjoying a holiday is to tow a caravan. There is no need to worry about booking accommodation and therefore no urgent necessity to stick to a planned schedule. And you can rely on the standard of your accommodation wherever you go.

Towing a caravan does however, place greater responsibilities on the driver of the towing vehicle. A caravan is classified as a motor vehicle and has to meet warrant of fitness requirements that ensure the caravan is safe to tow. The towing vehicle should also be able to stand up to the added stress of hauling a caravan.

YOUR CAR

A caravan can go nowhere unless it has a vehicle to tow it. If your car is unreliable and unsafe, your trip with a caravan will be doomed to fail, no matter how good the caravan may be.

Have your car fully serviced before going on a caravanning holiday. Make sure particular attention is given to the steering, lights, tyres and brakes. In addition, the rear tyre pressures should be increased to cope with the extra load of the caravan and the headlights will need adjusting so they don't dazzle on-coming motorists.

The towbar is the all-important link between your car and the caravan. A well-fitted towbar should be mounted solidly and never where rust has affected the cars bodywork. The height of the ball-hitch should be set so the drawbar is level.

It is also important that the number plate is not obscured by the ball-hitch when the caravan is not being towed.

The law requires that the coupling be fitted with a safety chain or cable of sufficient strength to hold the caravan in the event of the coupling coming free of the ball-hitch. The chain or cable should hold the caravan under all conditions of road use.

If your normal outside rear-view mirrors are not adequate to offer you an unobscured view of the road behind your caravan, extended outside mirrors are required.

YOUR CARAVAN

The modern caravan is the result of many years of experience and appreciation of the hazards likely to be encountered on the road. It is built for maximum safety with correct balance and weight distribution. However modern or well-built, your caravan should always be checked before making a trip.

If your caravan was first registered after 1 February 1977 two tail lights are required. If first registered before that date only one

tail light is required. Whenever your caravan was registered, the tail light or lights should be visible from 200 metres to the rear of the caravan at night.

A rear number plate light must illuminate the letters of the number plate so they are clearly visible from a distance of 20 metres at night. Direct beams from the light should not be visible from the rear.

If your caravan is more than two metres wide, forward facing side lights are required to give a reasonable indication of the width of the caravan. It's likely the stop lamps on your car will be obscured to following vehicles by your caravan so you need at least one stop lamp on the caravan if it was first registered before 1 February 1977. If it was registered on or after that date, two stop lamps are required.

Your arm signals or indicator lamps on your car are also likely to be obscured. If they are, your caravan should be fitted with flashing indicator signals. Two approved red reflectors must also be fitted.

Most caravans have a laden weight of over 1,000kg so there must be at least 1.5mm of tread depth across three-quarters of the tread of the tyres and around the entire circumference. The tyres must not have cut or damaged cords.

If your caravan weighs over 2,000kg fully laden it must be fitted with service brakes under the direct control of the driver. It must also be provided with an effective handbrake and be fitted with brakes which will automatically apply if the caravan becomes disconnected from the towing vehicle.

If you have a particularly large caravan weighing over 2,500kg fully laden, it is a heavy trailer for the purposes of the Motor Regulations and you will need a drivers licence of class "L".

Your caravans tyres should be inflated to the correct pressure and all tyres inflated evenly. Uneven pressure or underinflation will cause the caravan to weave.



LOADING

Your car must be capable of towing your caravan safely. A small car towing a large caravan is a dangerous mixture that can swing the whole unit out of control.

For comfortable and safe travel the load weight (including about 200 kg for your bedding and other equipment) or your caravan should not be more than three-quarters of the weight of your towing vehicle.

Distribute the load in the caravan on the basis of 60 percent to the front of the axle and 40 percent behind.

ON THE ROAD

With the added weight of the caravan, your car will handle differently and be more sensitive to road and weather conditions.

You must not travel faster than 70 km/h on the open road when towing a caravan. At that speed you are required by law to travel no

closer than 28 metres from the vehicle in front of you. Leave more room when towing. Remember to take corners a little wider than usual and keep well to the left of the centreline. If traffic builds up behind you, you must pull over to allow it to pass.

Change down early for hills and ease strain on your brakes by engaging a low gear when going down hills. Acceleration will be reduced so allow extra length for the caravan when you pull back into line.

Driving tips that stand whether towing or not include: refraining from drinking before driving; keeping speed down; keeping a reasonable distance from the vehicle in front; taking rest stops every hour or so to fight fatigue; and taking extra care in wet weather and on poor roads.

Safety should not be forgotten when you reach your destination. Manoeuvring your caravan takes practice and should always be done with the assistance of a helper standing on the near side rear of the caravan. Always check around the caravan before making any manoeuvre just to see there are no children or dangerous obstacles in the way. A check of the caravan for roadworthiness before moving is always advisable.

The extra care taken to check your car and caravan before travelling to observe the road rules and to be alert and considerate to others on the road will pay off in the knowledge that you are travelling in safety. Then you can be sure of enjoying your caravanning.

FIRST AID AT THE SCENE OF AN ACCIDENT

First Priority

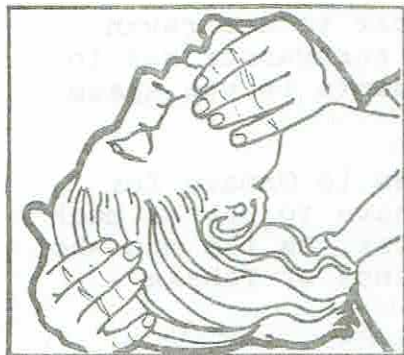
Make sure no further accident occurs. Protect yourself and the site of the accident by —

1. Parking your car in a safe spot. Using your hazard flasher or turning indicator
2. Post another person or safety triangle at least 200 metres from the site of the accident, in both directions.
3. Turn off the ignition in accident car.

Second Priority

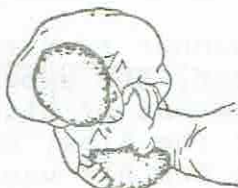
Determine if injury has occurred. If a victim is unconscious check —

- A. **The Airway** Clear the mouth of dentures, mucus or vomit with your finger



- B. **Breathing** Is the victim breathing?

Check that the chest or abdomen is moving, that the skin colour is normal. A dark blue complexion indicates lack of oxygen. If no breathing, commence mouth to mouth resuscitation.



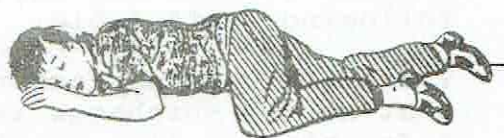
- C. **Circulation** Bleeding is controlled by pressure to the bleeding point.

Third Priority

Do not move casualties out of the vehicle unless this is necessary because of other dangers or unconsciousness.

Unconsciousness

Handle the unconscious victim gently and if possible place in the recovery position if breathing normally.



Fourth Priority

Send for aid, dial 111, give site of accident, number of casualties and degree of injury.





WILL YOUR CAR PULL ITS WEIGHT THIS SUMMER?

What caravans will my car tow comfortably? Is it a good towing car anyway? How can I get the best performance out of my outfit? How should I tackle steep hills?

These are just a few of the questions to which both novice and experienced caravanners want to find the answers. And it is important that they should, because not only will it make towing a much greater pleasure but it will prevent that particular outfit being a nuisance to other vehicles on the road.

There is nothing more terrifying than to see a caravan that is snaking and wandering all over the road, almost controlling the car. This type of handling behaviour is completely unnecessary. It shows that the van and car have not been matched correctly, and that no attention has been paid to the elementary principles of loading up the van.

If you take your caravan out for the first time and have trouble with sway or pitching, do not immediately blame the caravan; this is not fair because in a great many cases it has been found that these troubles can be caused by maladjustment in the towing vehicle. This can take the form of uneven tyre pressures, wheel misalignment or unequally adjusted brakes or it can be far more serious, with chassis misalignment, weak springs or weak shock absorbers.

A great many towing troubles have eventually been tracked down to poorly made flimsy and badly fitted towbars. The best types undoubtedly are made out of heavy gauge tubing with a tongue of heavy gauge materials welded on, and perhaps a gusset in the form of a triangular piece of fairly heavy material at the end of the tongue, giving support and preventing up and down movement.

New caravanners have been known to arrive to pick up a new caravan in a car fitted with a towbar bolted only to the overriders. If your vehicle is already fitted with a towbar have a good look, making sure it is good and strong and well-fitted to the vehicle.

To enable the would-be caravanner to base his choice of van on the towing capabilities of his car, the experienced caravanner to get the best possible performance out of his outfit whether he is touring the Canterbury Plains or the Alps; and the man who is changing his car to pick the best one for his van, we have appended the following facts table.

There are so many factors involved in matching a car to a caravan that no two purchases are exactly alike. So each caravanner has to judge his own case purely on his personal requirements in van space and the capabilities of his car.

The caravanner who wants to trundle his tourer down to Oamaru for the annual holiday every year will naturally not have to pay as much attention to the size and weight of his van, and car, as the man who makes fast trips to the Westcoast, Marlborough Sounds or Takaka - where there are stiffish passes to negotiate.

Over-simplifying the matter, the heavier the car, and the bigger the engine, the better towing vehicle it is. Cars with a wheel in each corner are better than those with a long tail overhang, and front-engined vehicles with most weight at the front are better than those

with the engine at the rear because, to start with, they handle better.

Now the table. The kerb weight of the car is an essential factor in working out the towing capacity. "The heavier the better" is the rule of thumb to follow here.

The maximum brake horsepower is fairly academic, but it does give some indication to the expert of the acceleration of the car and its maximum speed.

Maximum torque is of much importance to the caravanner, because this figure shows in what sector of the engine speed range the maximum pulling power in lbs/ft is available from the engine. The lower down the rev scale this is produced the better the car will be at slogging up hills. But, the amount of torque has to be read in conjunction with engine speed.

For cars equipped with a tachometer - unfortunately they are few in numbers - this information is invaluable, because the car can be driven at its maximum torque spot in every gear while hill climbing purely by using the tachometer. For cars not so equipped we have converted the maximum torque figures to road speed figures in top gear (for maximum pulling power and economy) and in first (for the most advantageous speed for tackling hills).

Generally a four-cylinder car with a three-speed gearbox is not a particularly satisfactory vehicle for towing, but some of the modern four-cylinder cars with four speeds and particularly with a synchromesh low gear can be a pleasure to tow with, in many cases. A three-speed gearbox in a four-cylinder car has much wider ratios between the gears and often quite a high first gear that makes starting on a hill a problem.

An oddity sometimes encountered is that a combination of one specific model caravan and one certain model car may not be a good towing proposition without a great deal of special work being done.

To overcome this problem our suggestion is, that before you buy a caravan, particularly a used one, you should tow it. Any of the specialist caravan centres will have no objection to this and quite a number prefer it, then there can be no difficulty after you have made your purchase.

This is absolutely essential if you are considering the purchase of a homebuilt van, often an amateur builder does not have a great deal of knowledge about weights, towing characteristics and, where the weight is best placed in the caravan, and he builds a caravan which will not tow and from experience with a homemade caravan, I can tell you nothing spoils a caravan holiday quite as much as one which is unpleasant on the road.

Another important factor is that first gear should have synchromesh, a "crash-type" first can be an embarrassment in an emergency on a hill. The ideal tow car has a reasonable sized motor, is heavy for its size and develops a high torque at low revs. Overdrive is a very useful extra on any car used for towing, and some manufacturers when they fit overdrive, install a lower rear axle ratio; thereby (from a towing point of view) greatly increasing its value.

If the alternative higher ratio (lower gear) is used in conjunction with an overdrive - as it is on some 6/110 cars for example - so much better. Not only does it mean that every gear is more suited

to towing, but there is also overdrive to reduce petrol and engine revs for driving on unrestricted main roads.

Another feature is the clutch size. Frequently, where two cars with very similar characteristics, if one has a larger clutch than the other it will tow better and be less likely to cause maintenance problems.

Automatic transmission is ideal for towing. With most designs there is no clutch to burn out on starting up on a steep slope. In fact, if the car has a torque converter, full torque is delivered moving off; the engine cannot slog away in too high a gear; and it can be locked in an intermediate gear for engine braking on long descents or for fast overtaking.

Most automatic boxes use a converter which transmits engine torque to the rear wheels. Unlike a manual gearbox/clutch set-up the automatic allows maximum engine torque to be fed to the driving wheels when the vehicle is still stationary.

With a normal clutch only part of the engine's turning effort actually reaches the rear wheels as the friction surfaces gradually engage. So with an automatic transmission delivering the right sort of effort at the right time, hill restarts become a much less painful operation.

The great majority of automatics feature three-speed ranges which, because of the flexibility provided by the torque converter, in practice provide a better coverage of ratios than a four-speed manual.

The transmission manufacturers don't raise eyebrows at trailer towing but there is one very important condition that must be remembered by the owner if he is to guard against the possibility of expensive repairs. Automatic transmissions have a maximum safe operating temperature - up to about 130degC - and if the trailer is too heavy for the car on certain gradients or ambient temperatures rise dramatically the gearbox will overheat. To counter this condition a number of auto transmissions are fitted with oil coolers as standard or optional equipment. In some cases the car manufacturers will not entertain warranty claims that may have come about as a result of towing - unless the transmission has been fitted with a cooler.

There should be no problem obtaining the correct cooler for your car; these units are normally available as stock parts from the car manufacturer. However, should you have an obsolete model for which no suitable cooler is available from your dealer there is a company which sells oil coolers. In order to keep a close check on the gearbox temperature you need a gauge and in fact one car maker insists that a cooler and a gauge must be fitted to meet warranty requirements when towing.

Though the fitting of an oil cooler is a local precaution to take, if your car is out of warranty, if your trailer is well within the car's capability and if you're not planning to climb the Alps, don't bother with the extra expense. One manufacturer thinks it better merely to fit a temperature gauge and let the car cool if the needle goes into the red, but this is not always possible, especially on a long mountain pass.

To summarise, there is no inherent reason why you should not plump for an automatic towcar, providing you take reasonable precautions to protect your investment. Just try selling an American a manual

The type of rear suspension and the tail overhang in inches should be taken together. A car with a large overhang is unlikely to tow as well as one with wheels in all four corners, but there are so many suspension aids - including export springs - on the market to suit practically every type of suspension and car that any tendency to pitching or snaking can almost invariably be eliminated.

Overload springs will boost the rear end so that the car sets level, but rear tyres still carry more weight, and front less weight. This "heavy on" condition promotes unstable handling characteristics, excessive tyre and axle bearing wear. And the front end light condition could cause loss of steering control.

If this increased loading causes an unstable feeling in the car, a loss of steering control, or excessive bottoming, a load equaliser should be fitted.

Before the introduction of the equaliser, rear end sway on some towing vehicles was so bad it was impossible to travel at a speed in excess of 30 mph without the caravan pitching and snaking dangerously. This "light on" condition of the front end of the tow car reduced the steering and braking efficiency by as much as 50% making it extremely difficult to control the outfit. Towing under these conditions was a nightmare to the driver, and the outfit was a menace to fellow travellers.

A load equaliser overcomes and controls these difficulties by distributing the tongue weight of the caravan evenly to all wheels on the tow car and caravan, keeping the outfit at proper level and maintaining correct steering and braking. Head lights are not affected, pitch and sway is controlled and snaking eliminated.

Most load equalisers operate on pretty much the same principal. Usually spring bars or leaf springs are used as levers. The hitch ball acts like a fulcrum, and the spring bars exert the lightening force. By raising the bars more pressure is brought to bear, and more weight is moved forward, and away from the hitch ball. By lowering the bars more weight is allowed to rest on the ball.

It does, however, add to the cost of converting the car, which will also need a towing bracket, seven-pin electrical connection plug and socket, and extending mirrors.

All car manufacturers lay down a maximum all-up weight that their cars will tow. Some British manufacturers - and most foreign manufacturers - are extremely conservative with their figures. However it must be borne in mind that in the event of a guarantee claim the fact that the car firm's figure has been exceeded might invalidate the warranty on a new car.

Now we come to an easily applied formula or yardstick to follow when you are considering the purchase of a vehicle.

A safe general rule of thumb is that the all-up weight of the caravan ready to roll away on holiday, should not exceed the all-up weight of the car excluding passengers - and a little less is desirable. The National Caravan Council of Great Britain recommends formula which may be used to calculate what your car can tow, but like all formulae it should be used with caution.

The formula: the gross laden weight of the caravan should not exceed $1\frac{1}{2}$ cwt for each 100 cc of the car engine or should not, as mentioned above, exceed 1 cwt for each 1 cwt of the car, whichever is the lower. When considering the formula, it is important to bear in mind that we have considered private passenger cars only, goods carrying and special purpose vehicles having been excluded.

We now come to the chart. These recommendations are for New Zealand conditions and may differ in part from some of the overseas recommendations but the figures are based on experience of the vehicle mentioned over the last 17 years. In some instances these weight recommendations vary from the car manufacturers, but they are based on experience that certain vehicles are better suited to towing than others.

The basis of this is that the ex works weight of the caravan should not exceed 75 per cent of the kerbside weight of the car (given in the handbook). It assumes that the gas bottles, equipment, food, baggage, full water tank in the caravan will not exceed the following:-

- $2\frac{1}{2}$ cwt in vans up to 10 cwt ex-works weight.
- 3 cwt in vans 10-20 cwt ex-works weight.
- 4 cwt in vans 20-30 cwt ex-works weight.
- 5 cwt in vans above 30 cwt ex-works weight.

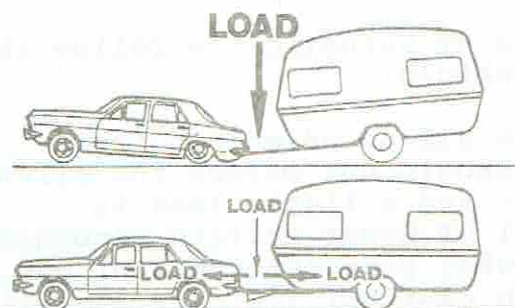
As not all manufacturers take the same weight as the ex-works weight, it does pay to put the van on a public weigh bridge so that the unladen weights can be checked.

This table of figures will help you narrow down your choice of cars or vans - which whenever you are buying or hiring - to a short list. Then, of course, personal leanings, interior layouts and - not least - price, help to narrow the choice down even further.

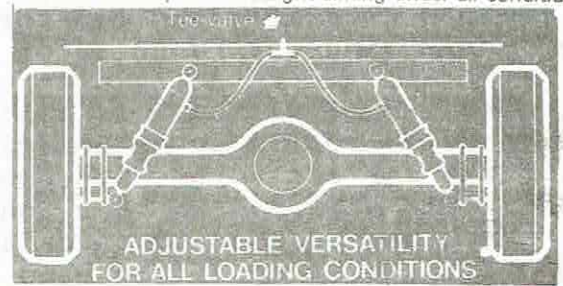
But before you put down any cash, have your car fitted with a seven-pin plug, towing bracket and extending wing mirrors and take all the vans on your final list for a test tow. You might very well find that a van you like, but which does not come out best according to the figures, will actually tow more happily than a caravan which rates high on the figures.


Bear in mind that these figures are a good guide and no more. It is up to you to use them to pick the best caravan for your car.

Stabiliser
gives extra security when
towing by equalising ball
loads and resists snaking
movements.



RIDE LEVELER Air Adjustable Shock Absorbers are fitted in place of the normal rear shock absorbers and have been designed to easily adjust your vehicle's ride height, to compensate for varying heavy loads and so maintain stability and headlight aiming under all conditions.



	ENGINE CAPACITY CC	VEHICLE WEIGHT	MAX TORQUE a RPM	SPEED a MAX TORQUE IN 1ST G	SPEED a MAX TORQUE IN TOP G	MANUFACTURERS RECOMMENDED TOW WEIGHT	TAIL OVERHANG (IN.)	NZ CONDITIONS RECOMMENDED TOW WEIGHT
WOLSELEY HORNET	998	13	52 a 2700	12	40	-	27"	10
" 1100	1098	16½	61 a 2750	11	41	15	28"	13½
" 1300	1275	17	77 a 3000	15½	51	15	28"	14
" 16/60	1622	22	90 a 2100	9½	35	20	44"	18
" 1500	1489	18½	77 a 2000	--	-	13	36"	15
" 18/85	1798	23½	100 a 2100	11	37	20	31"	19
" 6/110	2912	31½	163 a 2750	20	52	25	46"	28



8. Buy, Sell and Exchange

Sell: Wolseley 15/60, 16/60 radiator, brand new. still in box. Genuine BLMC part. Worth \$180 retail, sell for \$50. Contact Colin Hey, Ph. 894 533.

STOP PRESS STOP PRESS

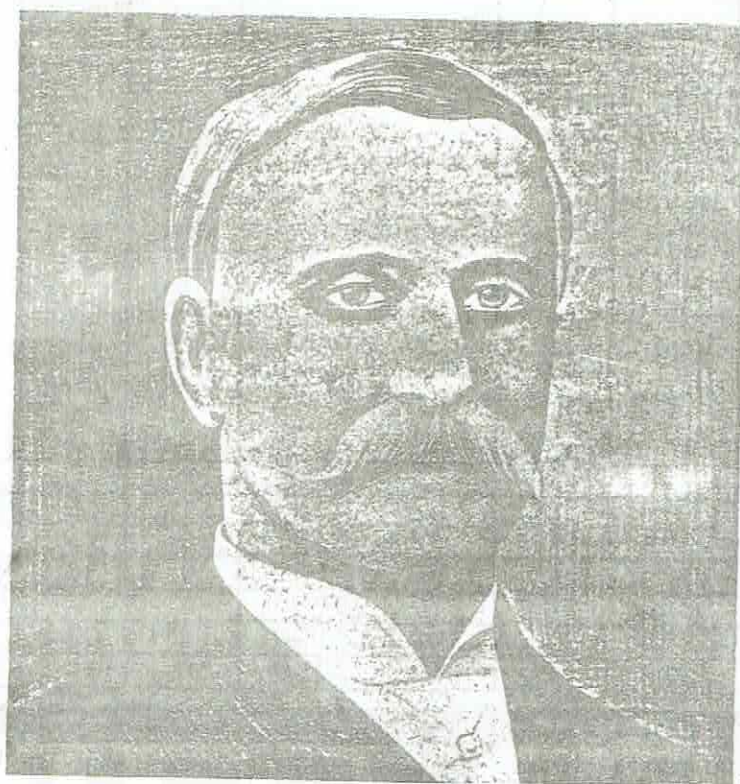
ADULT XMAS DINNER PARTY

On December 1st., following a Club happy hour of Christmas cheer, twenty three members sat down to an enjoyable and, relaxing evening of entertainment by wining, din ing, tall stories and, other light table talk, inclu ding dancing and pleasant listening to a mixture of tunes for all ages, without blowing our eardrums.

Although more members had indicated they were coming, I feel sure those that had to drop out at the last minute were just as disappointed, as we were, because it was an excellent night out for the club to herald in the festive season.

Well it MUST have been, judging by this reporter, who later observed Margaret Williamson singing, (without musical accompaniment) to Bill and Barbara Smiths' flower plants and shrubs about 1.30 AM.

BY ONE WHO WAS THERE.



F. Y. Wolseley

DEFENSIVE DRIVING COURSE SCHEDULE 1ST QUARTER 1979 CANTERBURY AREA.

LOCATION	COURSE	TELEPHONE	SESSIONS			
			1&2	3&4	5&6	7&8
KAIKOURA	1260	124 Kaik.	27th March	2nd Apr.	10th	17th
CHEVIOT	1296	516 Chev.	26th Feb.	5th Mar.	12th	19th
KAIAPOI	1500	792-577	13th March	20th	27th	3rd Apr.
RANGIORA	1501	6136 Rang.	8th March	15th	22nd	29th
LYTELTON	1502	792-577	14th March	21st	28th	4th Apr.
LINCOLN	1503	792-577	22nd Feb.	1st Mar.	8th	15th
ASHBURNTON	1357 1360	4039 Ash. "	7th Feb. 12th Mar.	14th 19th	21st 26th	28th 2nd Apr.
TIMAPU	1415 1489	5502 Tim. "	5th Feb. 14th Mar.	12th 21st	19th 28th	26th 4th Apr.
WAIMATE	1504	8810 Wai.	14th Feb.	21st	28th	7th Mar.
TWIZEL	1450	636 Twizel	27th Feb.	6th Mar.	13th	20th
CHRISTCHURCH	1505	792-577	24th Jan.	31st	7th Feb.	14th
	1506	"	29th Jan.	5th Feb.	12th	19th
	1507	"	8th Feb.	15th	22nd	1st Mar.
	1508	"	13th Feb.	20th	27th	6th Mar.
	1509	"	21st Feb.	28th	7th Mar.	14th
	1510	"	26th Feb.	5th Mar.	12th	19th
	1511	"	8th Mar.	15th	22nd	29th
	1512	"	13th Mar.	20th	27th	3rd Apr.
	1513	"	21st Mar.	28th	4th Apr.	11th
	1514	"	26th Mar.	2nd Apr.	9th	16th
	1515	"	7th Feb.	14th	21st	28th
	1516	"	7th Mar.	14th	21st	28th
CENTRAL CITY DAY COURSES 9.30-11.30am.	1517	"	4th Apr.	11th	18th	25th

P.O. BOX
13-362 CHCH
PH. 792-577

P.O. BOX
13-362 CHCH
PH. 792-57