THE WOLSELEY WORD

CAR CLUB

JUNE/JULY 1980 **NEWSLETTER** VOL. 4. NO. 6.

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NEWSLETTER

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OFFICIAL NEWSLETTER OF THE " WOLSELEY CAR CLUB" CHRISTCHURCH N.Z.
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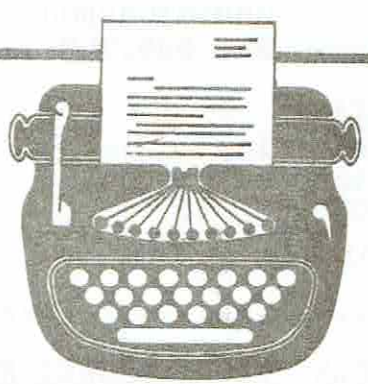
"Then every now and then it makes a noise like a shoulder strap breaking."



EDITORIAL

It does not seem that another year has passed by, but it has, and one may reflect, and wonder, what has the "Club" achieved during the year? This could be answered several ways, depending, from which angle, one has been viewing events.

Due to a change of pace, caused by the economy of this country, our country is experiencing a period of consolidation, where car owners have had to face the situation of choosing, between a new car, or merely replacing with a used one, or reconditioning the old family faithful for another year. With the increase in everyday commodities, - groceries - clothing - home heating and maintenance - taxation - fuel for the car etc., it is inevitable that a club such as ours is effected, particularly when postage, printing materials, hall rentals, and other associated expenditure, are also increasing.

To keep pace with this, the Committee has to increase the subscription to $15 for 1980-81 financial year, but reduciable to $10 if paid by August, 31st. 1980.

The first increase, I must add, since the formation of the 'Club', four years ago. Many members had to be reminded, more than once, to pay their subs last year, so the penalty clause has been added, to enable club volunteers, working on your behalf, to achieve efficient running of your Club's activities.

This completes my second year on the Christchurch Committee, during this time, I have thoroughly enjoyed working on your behalf. Much has been accomplished, but a lot, has yet to be done, such as the formation of another branch in Fielding, combined activities with sister car Clubs, how best to realise our heritage, by seeking out early N.Z. models of the marque (veteran and vintage), by joining the Wolseley Register - England, proper storage facilities for Christchurch Clubrooms, a drive to induce advertising in the newsletter, to balance future production costs, to mention just a few.

So it was with mixed feelings, that I decided not to stand for re-election, one of the reasons being, that to prevent staleness, some new blood might be needed. If a young club such as ours, is to be successful, and progressive, then each committee member, when, accepting a post, must be prepared to carry their rightful share of the work load, and accept the responsibility of such a post, for the good of the Club, and not for any personal gain.

I would also like to thank the many people who have made my tasks easier over this period. In particular the Staff of various Christchurch and Wellington libraries, the New Zealand Fire Service, P.O. Association, and many others during my incessant search for Newsletter material and/or answers to members car problems. Also John Parker and all the members of the last two Committees, who I have leaned on for help, support, and when bending their ears, when sounding out an idea. In particular, Jack Milne, who in the latter stages of last year assumed the formidable role of Sec retary/Treasurer, continuing his impeccable record this year, both as acting National Treasurer, and Christchurch Branch Treasurer, which has been a far from easy task.

Last, but not least, Margaret, my wife, who has provided her continual support throughout, both as writing critic, and with my material preparation, a support, which I could not have functioned without.

BILL WILLIAMSON.

LETTERS TO THE EDITOR.

18 Bryant Street
Palmerston North

Dear Sir,

A small note about my car, which is a 1962 6/99.

I have owned the car for three years, and have slowly been doing it up. The car has had four owners, and covered to date, 120,000 miles.

The first thing I had to repair, was the motor and the gearbox. Motor was bored out, to 20 thou oversize, gearbox was changed to three speed on the floor (old one was colomn change), also took out, and replaced the dash, a Mk II one went in, Also replaced were floor mats, seats, head lining, also other Mk II items were fitted into the car.

I have done approx 20,000 miles since fitted, with no problems. The overdrive kickdown was taken out, and a switch put on the gearstick. I think that covers most items.

Thanks for your time to read this letter.

John Downer
Vice President
Palmerston Nth. Branch.

LETTERS TO THE EDITOR

C/- A.& T. Burt Limited,
P.O. Box 909,
AUCKLAND.

The Editor,

Dear Bill,

Thanks for all the Newsletters, the one on the 6/80 was, of course, of much interest.

Your note got to me at Palmerston North, and just in time as we are uping camp, and on the move again. As from June 30th, I will be able to be contacted, at the above postal address in Auckland.

I read with surprise, of the Manawatu Branch, I did see an advert in a local paper, for a possible meeting, to set up a Club of 6cyl English owners, but unfortunately was unable to attend, and had since lost the notice. I have not seen a lot of early Wolseley cars around, but there are one or two, one I have noticed, appears to be an early 6/80, could be pre 1947, as it bears some resemblance to the 48 - 52 6/80.

I have seen, during my frequent business trips to New Plymouth, an immaculate 6/80 with Foreign plates, so if I get a chance on my next trip I will try, and contact him, and see if he is a member, or is interested.

There is one thing the Club may be able to help me with, and that is; I have lost one flying W hubcap, and small spoked wheel trim, If you could put a note in the next newsletter for me, it would be most appreciated. Please send me a note, to tell me what I owe for subs, and for the advert, or if the spare parts Dept., has one, the price.

Well best go, as I have to prepare the 6/80, for the trip to Auckland. Should get a few strange looks, burning down Queen Street in the old girl, but with a bit of luck, I may finally get some time, to do some restoring.

Thanks for dropping me a line, and keep up the good work with the Club etc., it seems to be going good, sorry cannot be with you all, to share some of the functions, but anyway have one for me.

Regards,

IVAN SISSON.

We have a suitable hubcap for Ivan, but would appreciate some one supplying the required wheel trim - Ed.

THE PRESIDENT SAYS:-

I had the pleasure recently, of meeting, in our home, the Secretary of our Mananatu Branch, Mrs. Elaine Lockhart.

Mrs. Lockhart was in Christchurch on other business, but expressed the desire to discuss matters relating to the Club, Bill and Margaret Williamson came over to meet her, and we explained together, various points concerning the Manawatu people, and the formation of their Branch.

Before Mrs. Lockhart left, she gave us the application forms, for membership, from her branch, and a list of their Committee, which is as follows:-

CHAIRMAN: A.C. Sutton, 12 Ranfurly Road, Fielding.

Secretary:- Elaine Lockhart 39 Cambridge St., Palmerston North.

VICE CHAIRMAN: J. Downer 18b Bryant Street, Palmerston North.

Treasurer:- Tina Sutton, 12 Ranfurly Road, Fielding.

CLUB CAPTAIN: C. MacKay, 29 Carter Crescent, Palmerston North.

COMMITTEE:- Tony Joyce, R.D.4., Palmerston North

Tom Miles, 14 Shelton Place, Fielding.

Bernie Suendsen, 17 Derby Street, Fielding.

Congratulations to you all, and I wish you well in the future.

ANNUAL SUBSCRIPTION:-

Last newsletter I mentioned the increase in the Annual Subscription, but didn't expound on the following:-

$10 joining Fee: To be used for spares and accessories.
$5 New Members: Local Social/Competitive Club activity.
$5 Members Fee: Local Social/Competitive Club activity.
$5 Members Fee: Used for Newsletter i.e. Postage, paper, printing costs, letters, forms, and other matters, pertaining to the Club nationally.

I hope that the foregoing, explained the financial setup, a little better for you.

Our Patron Max Higgins, and his wife Faye, will be sadly missed by many of us, when they leave for a promotional transfer to Wellington shortly, Max, along with sons Colin, and Gavin, were the first to conceive the idea, of forming our Club, over 4 years ago, around their dinner table.

I'm sure you will all join me in wishing both Max and Faye well in their new venture.

Finally fellow members, I hope you will continue to drive safely, and I hope to see you soon.

JOHN PARKER.

COMBINED CAR CLUB RUN.

If anyone wished to point the finger, and say we were tempting fate, by expecting good weather, just seven days after the shortest day, and to have a Club outing as well, then 29th June, would surely have been it. Once having set the wheels in motion, for a combined outing of the Riley and Wolseley Clubs, the two respective Club Captains, then twiddled the knobs of the weather maching, and sat back with fingers crossed, until the day arrived. Lo and behold, the weather, though cool, turned out, fine, and after lunch actually turned sunny for the rest of the afternoon.

11.20a.m., saw the final late arrival appear at the start, before the mixed convoy of 14 cars move off, bound for our first sighting, of a local 14 h.p. Wolseley-Siddeley 1909, owned by Ron Duckworth. This particular car had been on a round journey from Christchurch to the International Vintage and Veterans Rally at Rotorua, early in the year. Ron had thoughtfully placed the car out on display in his driveway, for all to see. He then gave a commentary on its history, including a series of beforehand, and after photos, during the restoration period.

After a suitable period of inspection, and questions, we were off again, this time to look at its sister car, being restored by Alan Roberts, who I must add, had a film of perspiration, and a hunted look on his face, just fading away, due to his engine not starting, after a damp evening, of course by this time it was ticking over beautifully.

Restoration on this car, has reached the stage, where the running gear, motor, gearbox, diffy, wheels etc., are all assembled and working, in other words the vehicle is completely mobile. The bodywork has yet to be painted, with upholstery, and hood to be completed, including a hundred and one minor details required to complete this superbly presented unit. Alan, also took interested members on a conducted tour of the property, to show them the many parts aquired, by a car enthusiast such as himself accumulates, during his continuous quest for early car parts, over the years.

Everyone by now, were feeling it was time for lunch, so Loburn Domain was where everyone made their own way to. Bill Thomas was waiting for us all there, as he was unable to see us prior to lunch.

We had not envied the occupants of the sporty looking Maroon, Wolseley 'Hornet Special', travelling with us with the hood down, but they were wrapped up for the outing, hope to see this car in the Club, as it is a worthy example of its model, having been fully restored.

The ground at the Domain although dry for the season, was soft on the surface, which Rex Fielding demonstrated to us, with his frontwheel drive 18/85, as the car just sat on the grass and turned the wheels with very little headway. In contrast, were some of the early model cars with larger diameter wheels, who just idled their way across the field.

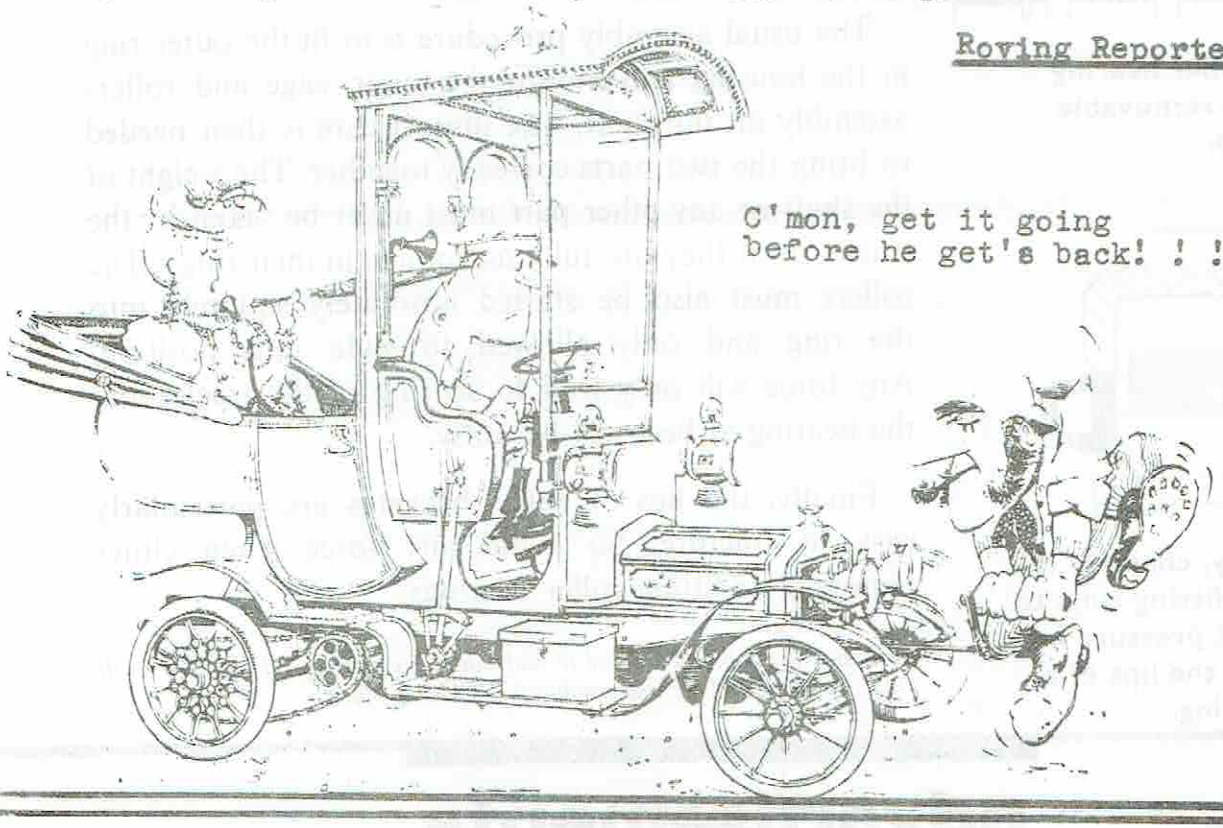
When in Loburn, do as the 'Roamin's do', which most of us did, judging by the bags of apples etc., that disappeard into the various cars' boots, before arriving at Jack Newells front gate.

The Newell family had also placed their collection on the driveway for perusal. Here we were able to drool over an early Indian motorcycle, a Vauxhall coupe, a 1911 - 16/20 'Wolseley-Siddeley', and last, but not least, the partly restored 1908- 20 h.p. Vauxhall (The celebrated "Old Blue). Jack gladly have us the background, and history of each vehicle, and it must be pointed out, he placed a Vauxhall, and motorcyle between the Wolseley, and the gate, a wise move, with so many Wolseley enthusiasts in attendance. This car, also had been up to the Rally at Rotorua, and received a placing in the Rally as well. Incidently, another 1911 16/20 Wolseley-Siddeley, from Invercargill, plus Ron's and Jack's Wolseleys accumulated, between 6000 and 7000 miles total, for the round trip to Rotorua, and their respective homes. No major breakdowns were reported, from these elderly models, during their Rally either.

Our last call, was to see a partly restored twin cylinder Riley at Kaiapoi, rounded off an interesting outing, for all members, who then made their farewells, and their respective ways, homeward.

Our gratefull thanks to all those people who toiled to have their precious possessions, laid out for our enjoyment, in particular, those folk, who attended the Vintage and Veteran shindig the night before, thereby missing their 'lie in', on Sunday morning.

Roving Reporter.



TIMARU ANNUAL GENERAL MEETING.

The first Annual meeting of the South Canterbury Wolseley Car Club was held on the 5th June, in the home of Mrs. Sprosen. Five members were present. The minutes of the first Official meeting and run were read out.

The Chairmans report and the Treasurers report were read and accepted. The balance in the Account stands at $27 - 20cents.

Mrs. Sprosen and Mr. Hill tendered their resignations. Mrs. McArthur has accepted the post of Timaru Branch Secretary.

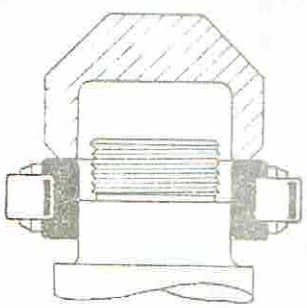
Lorraine Sprosen.

WOLSELEY SERVICE

NO. 6 OF 6 | FITTING PARALLEL ROLLER BEARINGS

Parallel roller bearing types with removable inner rings.

Parallel roller bearing types with removable outer rings.



If necessary, chamfer the end of the fitting tube to ensure that pressure is not put on the lips of a roller bearing.

The usual fitting precautions for ball journals still apply to roller bearings. However, most parallel roller bearings can easily be separated as the outer or inner ring will slide off the rest of the assembly. These parts are not interchangeable between bearings and you must take care to keep the parts of one bearing together. If they do become mixed up then it is possible to re-match inner and outer rings by pairings up those with the same etched serial number. For example, those marked K31 will go together.

The usual assembly procedure is to fit the outer ring in the housing and mount the inner, cage and rollers assembly on the shaft. The utmost care is then needed to bring the two parts correctly together. The weight of the shaft or any other part must never be taken by the rollers until they are fully assembled in their rings. The rollers must also be started absolutely squarely into the ring and only allowed to slide into position. Any force will only lead to scoring of the tracks and the bearing at best will be noisy.

Finally, the lips of roller bearings are particularly easy to fracture. So avoid any force when either removing or fitting roller bearings.

Most bearing failures are due to bad working conditions. These notes will help you to enjoy long and trouble-free bearing life.

advertisements

STOP PRESS!!! STOP PRESS!!! STOP PRESS!!!

FOR SALE:- 1963 6/110 Mk I Automatic. Grey, Red interior, original condition, £1500, o.n.o. Contact: NEIL THOMPSON, 10 Crighton Terrace, CHRISTCHURCH.2. or Ph. 327-221.

STOP PRESS!!! STOP PRESS!!! STOP PRESS!!!

WANTED URGENTLY:- Overdrive unit to fit 6/90 Mk III
Contact MIKE DAVIES, 215 Harewood Road CHRISTCHURCH.5.
phone. CHRISTCHURCH. 598-589.

WOLSELEY SERVICE

FLEXIBLE DRIVES

For Speedometers and Revolution Indicators

THE condition of the flexible drive to a great extent controls the performance of the speedometer or revolution indicator, and poor installation or subsequent damage to the flexible drive will be shown up as an apparent instrument fault. It is, therefore, important that the flexible drive be correctly fitted and properly maintained.

Our illustrations give general information for fitting and maintaing flexible drives and some further points are brought out in the section dealing with speedometers and revolution indicators.

Speedometers and Revolution Indicators

Faults, which quite naturally can only be made apparent at the instrument, in very many instances are found to be caused by a complete or partial failure of the flexible drive.

Before returning a speedometer or revolution indicator for service under the Smiths guaranteed exchange scheme, make quite sure that there are no faults in the flexible drive by checking the points illustrated in Figs. 1 to 13.

Figs. 14 to 20 illustrate types of failure which may be experienced and, in each case, causes are explained. Only after the flexible drive has been found to be in good condition should the instrument be treated as defective and returned for servicing.

Speedometer Inaccuracy

Reasons for this (see also Fig. 16) may be that the rear axle ratio is non-standard or the drive in the vehicle gearbox non-standard. A rapid, simple but approximate check is obtained by entering in the formula shown below the figures revealed in the gearing test (see Fig. 17).

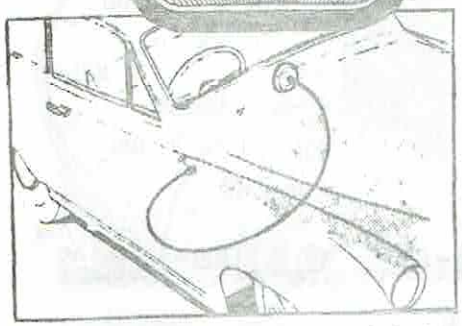


Fig. 1.—SMOOTH RUN. The run of flexible drive must be smooth, the minimum bend radius being 6 in. No bend within 2 in. of connections is permissible.

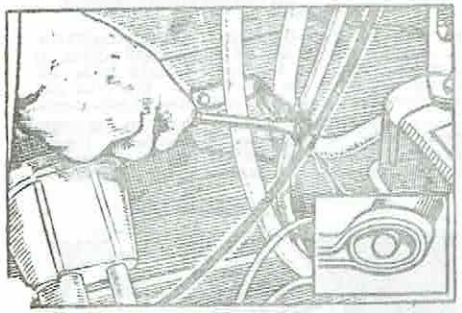


Fig. 2. SECURING. Avoid crushing the flexible drive by over-tightening the clip. The flex can be crushed between two moving components.

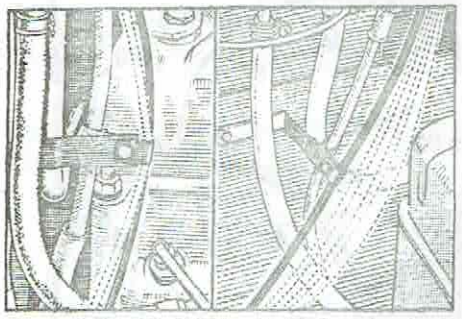


Fig. 3. FITTING CLIPS. Avoid sharp bends at clips. If necessary, alter position of clips. Excessive free movement of the flexible drive should be avoided. Fit extra clips if necessary.

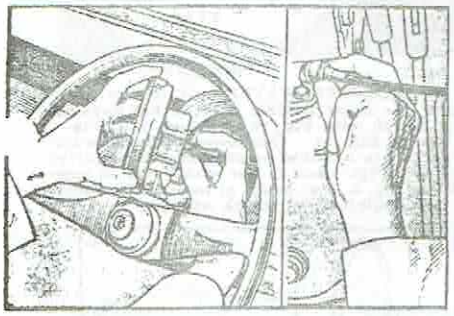


Fig. 4.—CONNECTION. Ensure that threaded end connections are secure with no looseness of the outer casing and collars. Connecting nuts should be tightened by hand. A spanner or pliers should not be used. It is important that the drive to which the flexible drive connects is free from dirt and grit.

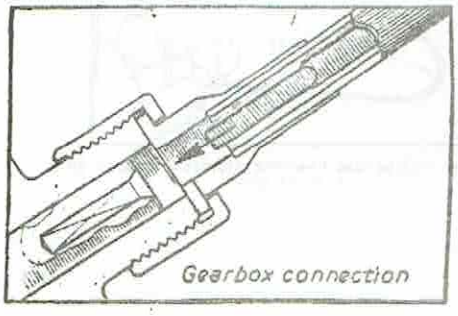


Fig. 5.—(Left) CONNECTION OF INNER FLEXIBLE SHAFT. Where possible slightly withdraw inner shaft and connect outer first to point of drive. Then slide inner shaft into engagement from the other end. It may be necessary to rotate the shaft.

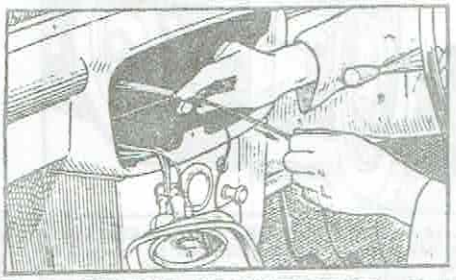


Fig. 6.—REMOVAL OF INNER SHAFT. Most inner shafts can be removed by disconnecting instrument end and pulling out shaft. Some must be removed from point of drive end after first taking off C washer at instrument end. Broken inner shaft will have to be withdrawn from both ends.

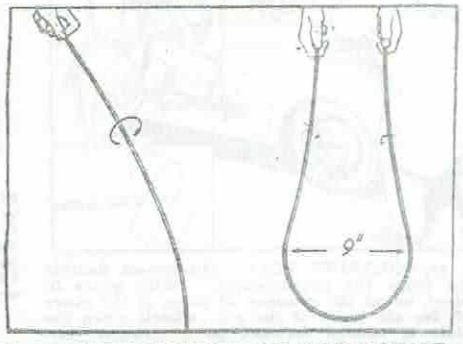


Fig. 7.—CHECK FOR INNER FLEXIBLE SHAFT. Lay out shaft straight on flat clean table and roll. Any "kinks" or obvious signs of damage will be seen. Then take an end in each hand, allowing the shaft to hang in a loop of approximately 9in. diameter. Rotate it slowly with the fingers.

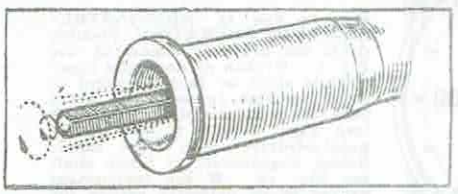


Fig. 8.—CONCENTRIC ROTATION. Check that inner shaft rotates concentrically when fitted in outer casing, and not eccentrically, as shown by the dotted lines.

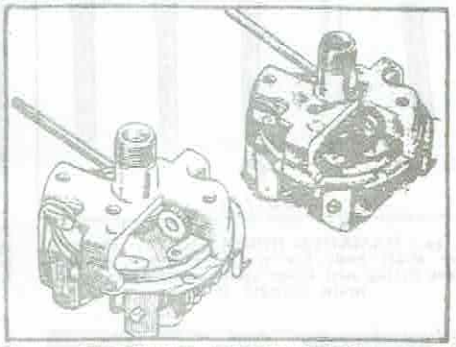


Fig. 9.—EXCESSIVE LUBRICATION. Avoid excessive lubrication. If oil appears in the flexible drive, suspect faulty oil-seal at point of drive. This illustration shows oiled-up speedometer movement.

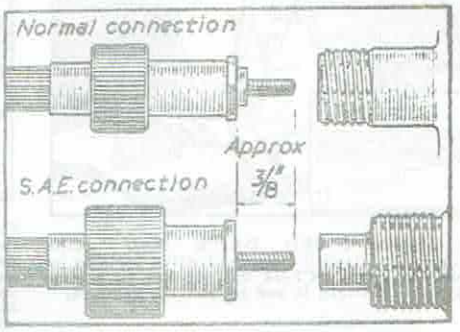


Fig. 10.—INNER SHAFT PROJECTION. Check that there is approximately ⅜in. projection of inner shaft beyond outer casing at instrument end. This ensures correct engagement in instrument and point of drive.

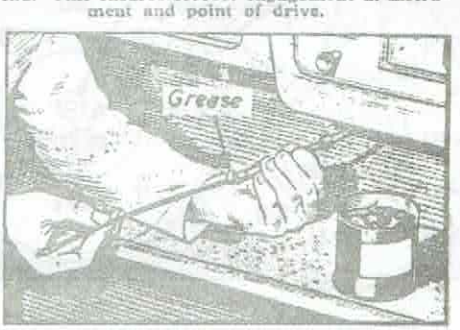


Fig. 11.—LUBRICATION. Examine every 10,000 miles. Withdraw the inner shaft and apply grease sparingly. Feed shaft back into its casing. Then withdraw approximately 8in. and wipe off surplus grease. Use Castrol L.M. or Esso T.S.D. 119 grease or equivalent. Do not use oil.

Installation & Adjustment

FORMULA

$$\frac{1680N}{R} = T.P.M.\ No.$$

Where **N** = number of turns made by the inner shaft for 6 turns of rear wheel and **R** = Radius of rear wheel in inches measured from centre of hub to ground.

EXAMPLE

Cardboard pointer on inner shaft (see Fig. 17) rotates 9½ times as vehicle is pushed forward 6 turns of rear wheel. Rear wheel radius 12¼in.

Flex turns per mile . .

$$= \frac{1680 \times 9\frac{1}{2}}{12\frac{1}{4}}$$

$$= \frac{15330}{12\frac{1}{4}} \quad (\text{approx.}) = 1251$$

= T.P.M.

Tapping

If this becomes evident, check with Figs. 2, 3 and 4. If the flexible drive is damaged, check with Figs. 7 and 12 (see also Fig. 6). Check that the lubrication is adequate (Fig. 11), and check Figs. 8, 10 and 13.

General High Level of Noise

If troubled with a high level of noise, withdraw the inner shaft (see Fig. 6), and reconnect the outer casing only. If the noise continues at a lower level, then the source of the noise is in the vehicle point of drive. Fitting P.V.C.-covered flexible drive with a nylon bush on the inner shaft may assist in overcoming this trouble, but if it does not it will be necessary to refer to the vehicle manufacturer.

Periodic Tick Increasing with Speed

If an excessive regular ticking in time with the speedometer decimal distance counter occurs, the instrument should be returned for replacement, as it should be if "screech" occurs, this being more prevalent in cold weather.

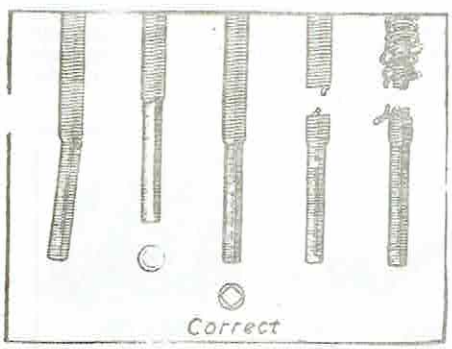


Fig. 12.—DAMAGED INNER SHAFT. Examine inner shaft ends for wear or other damage. Before fitting new inner shaft ensure instrument main spindle is free.

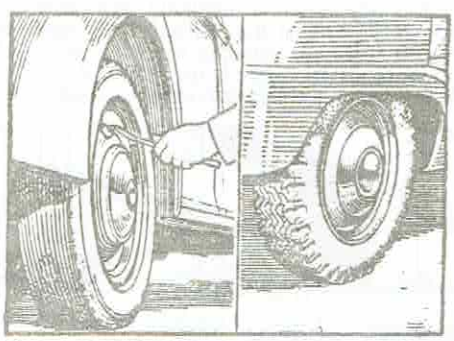


Fig. 16.—SPEEDOMETER INACCURATE. Check tyre pressures. Inaccuracy can be caused by badly-worn tyres. If non-standard tyres are fitted, apply to Smiths for specially calibrated instruments.

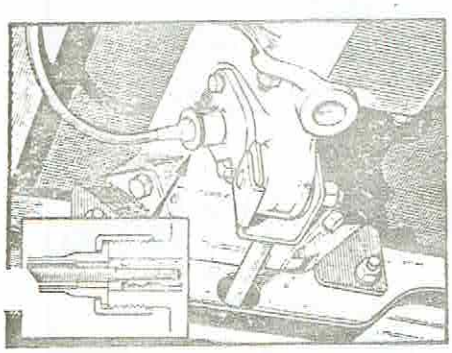


Fig. 13.—DAMAGED DRIVE END CONNECTIONS. Examine point of drive for dirt or possible damage. Check driving key to ensure tightness between it and its gear in gearbox.

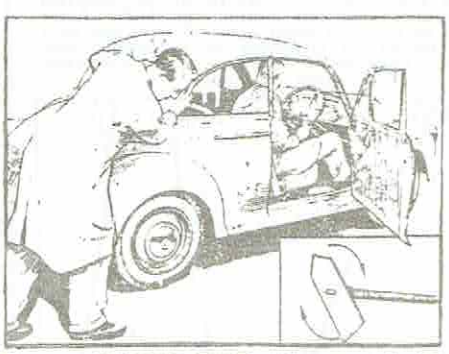


Fig. 17.—GEARING TEST. Disconnect flexible drive from the speedometer. With gears in neutral, count the number of turns of the inner shaft for six turns of the rear wheels when the vehicle is moved forward in a straight line. Measure the rolling radius of the rear wheels with the tyres at correct pressures—centre of hub to ground. (Refer here to figures in the formulae given.)

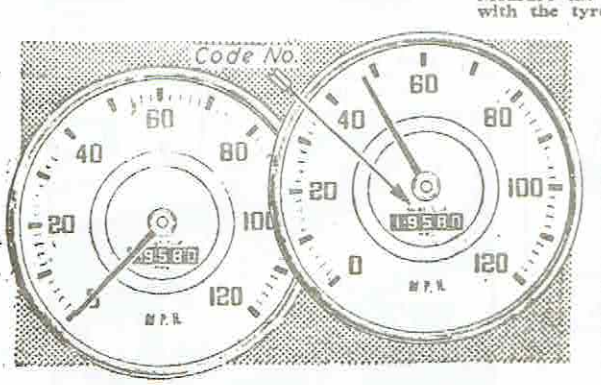
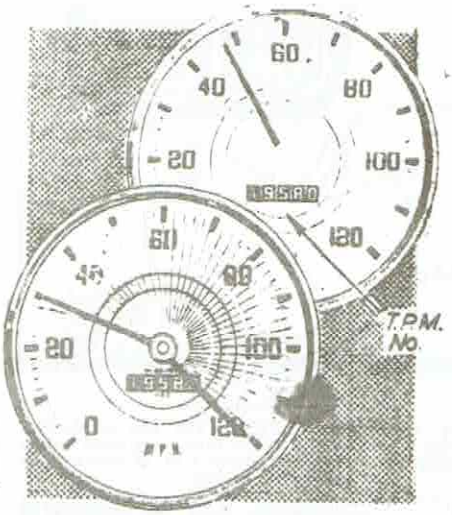


Fig. 14 and 15 (left).—INSTRUMENT NOT OPERATING. Flexible drive not properly connected (see Fig. 5). Broken or damaged inner flexible shaft or fault at point of drive (see Figs. 12 and 13), in which case remove and replace inner shaft (see Figs. 6 and 8), or rectify point-of-drive fault. For insufficient engagement of inner shaft see Fig. 10. If the instrument proves to be defective return for service. INSTRUMENT INACCURATE. Incorrect speedometer or revolution indicator fitted. Check code number and refer to maker, stating make, year and model of vehicle.



Figs. 18 & 19.—(Top) CORRECT SPEEDOMETER. The number shown should correspond within 32 either way with the number obtained from the formula and from the gearing test. If it does not, apply for the specially calibrated instruments.
(Below) POINTER SWINGS OR SLUGGISH OPERATION. Oiled-up instrument (check with Fig. 9). Replace the oil seal if necessary; clean and lubricate the flexible drive (see Fig. 11).

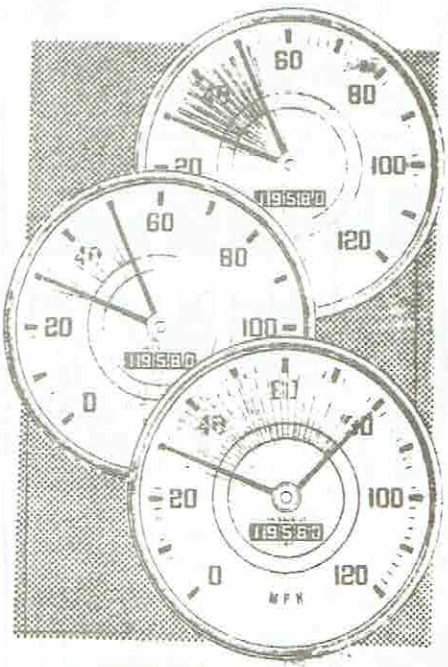


Fig. 20.—POINTER WAVER. If this is intermittent, the inner flexible shaft is not engaging fully. Check with Fig. 10 and then with Fig. 4, and finally Fig. 12. Continuous pointer waver may be due to a kinked or crushed flexible drive. Check with Figs. 7 and 3. For withdrawal of inner shaft, see Fig. 6. For bends of too small a radius in flexible drive, check with Fig. 1.

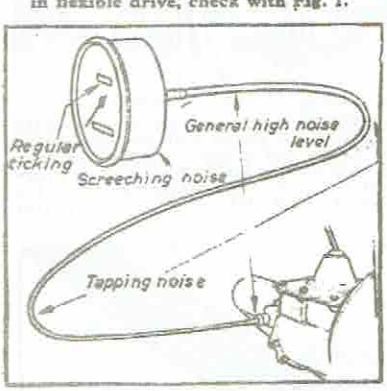


Fig. 21.—Diagram showing apparent source and type of noise.

1908 ROAD IMPRESSIONS OF SIX WOLSELEY-SIDDELEYS

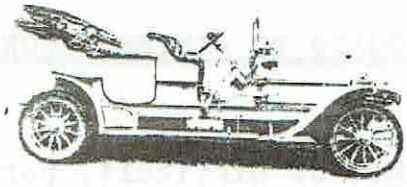
Among the most successful firms of the day must certainly be numbered the Wolseley Tool and Motor Car Co. There is no doubt that the success of the Siddeleys cars is largely due to two facts. First and foremost they are thoroughly well designed and soundly constructed. Secondly, there is such a wide range of models, each one of them thoroughly good in its way. We start with the little two-cylinder 10-12 h.p. and run right up to the 45 h.p. six cylinder car. With the exception of the 10-12 h.p., which has two cylinders, and the 45 h.p., which, we have said, has six, all the other models are four-cylinder cars. Some idea of the comprehensiveness of the range may be given by mentioning the various types. They are the 10-12 h.p. two-cylinder (this engine is half the 18 h.p.), the 14-20 h.p. four cylinder, the 18-25 h.p. four-cylinder standard and de luxe types, the latter having four speeds, two ignitions, etc., the 30-34 h.p. four cylinder, the 40 h.p. four cylinder in two patterns (one chain and the other gear driven, the chain driven having a ¼in. more on the cylinder bore), and the six cylinder chain driven 45-51 h.p., this engine having three pairs of 30 h.p. cylinders. In each case where two p owers are quoted the first is the nominal and the second the horse-power by R.A.C. formula. In the case of the gear driven 40 h.p. it will be noted that the nominal and the R.A.C. powers are the same, the slightly larger engine of the chain model being rated at 44 h.p.

Not long since we had the opportunity of trying every one of these models except the 10-12 h.p., the excellent running of which has been referred to on a previous occasion. In the main they may be said to possess the same characteristics. From the 14 h.p. up to the 45 h.p. eac h model is remarkable for its silent running when the car is standing still and the engine working, and for the excellent way in which the engines pull at slow speeds. By this it is not suggested that they do not pull well at high speeds; quite otherwise, but what should be made clear is the very wide range of power. In fact, the engines seem to have no critical speed. Silence is certainly the keynote of the 1908 Siddeleys, as it is not only the engines which are quiet, but the transmission throughout. Another point, too, remarked during our severe and excepti onally comprehensive trial was the fact that there was an absence of rattle on each model. The steady, even running of the engines is undoubtedly due to careful balancing and accurate manufacture, and also to real ly good carburation, and it is largely on acco unt of this that the engines pull so well at low and medium speeds, as well as higher rates of revolution. As to the brakes, they are exceptionally powerful and smooth acting, and from actual observation we have satisfied ourselves that they will run for ve ry long periods without adjustment, though when they require it it is a very simple matter to take them up. The steering, too, is light; but positive, and singularly free from backlash. Other virtues which are common to all the models are excellent springing. In proportion to its size we were particularly struck with the easy riding of the back seats of the 14 h.p. Of course, it suffers from road inequalities at a good speed than the larger models, but for its weight and wheelbase it was remarkably free from severe shocks from the road. The gear ratios on the direct drives, too, are evidently correct and properly proportioned to the power of the engine and weight of the car, because each model has a particularly good dwell upon the direct speed when climbing hills of a gradient which almost calls for a drop. The engine pulls well up to the last without any shock or snatch at the propeller-shaft joints - another proof, by the way, of correct carburation, which in nine cases out o f ten is the chief cause of poor pulling at low engine speeds.

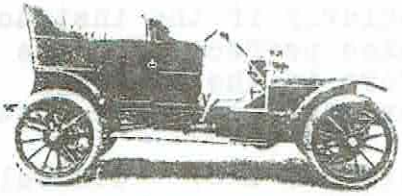
Having used every one of the models for a good distance, it is difficult to particularise, but we can hardly do better than start with the smallest four-cylinder model. The 14-20 h.p. is a delightful little car. It possesses all the characteristics of its larger brethren except that it has three speeds instead of four, with direct drive on the top, while drip feed is employed instead of mechanical lubrication. The clutch is a leather lined cone in lieu of the metal cone variety. There is really no need for a metal to metal clutch on an engine of this power, provided the leather lined type i s of correct design, and that it is so is evident from its smooth and easy action. The speed attained by the little car is remarkable, and, however fast the engine is running, it is free from vibration, nothing more than a pleasant s teady boom proceeding from the bonnet. No pump is used on the 14 h.p. and it does not appear to be required, as the water even fails to boil on steep hills of over three miles in length. The only improvement which we can suggest to the specification of the chassis would be a fourth speed, not with the idea od a higher top speed, but simply so that the gap between the top and the next lower speed should be reduced.

There are certain parts of England, such as Devonshire or North Somerset, in which it is a question whether the 14 h.p. is not the best of the Siddeley fleet, simply because it is the smallest four-cylinder car, and therefore most suitable for use in the narrow twisting roads, the majority of which are twisty lanes rather than roads, and which obtain so largely in those two delightful counties. As to the 18-25 h.p. it may be roughly described as an enlargement of the 14 h.p. plus an indirect fourth speed, mechanical lubrication, and a metal to metal clutch. Apart from the larger engine, the wheelbase and main dimensions are larger than the 14 h.p., and the car is capable of a higher top speed. On the direct third it will negotiate all ordinary hills without a change of gear, and at the same time will run very slowly and smoothly in traffic without changing down. It climbs faster than the 14 h.p., and on occasion, over an open stretch, when running down slight slopes, the indirect fourth may be used with advantage. Mr. Siddeley has alway been a believer in the indirect fourth, and was, we imagine, the first manufacturer to advocate its use, at a time when certain other makes maintained that it as impossible to have a direct third and indirect fourth.

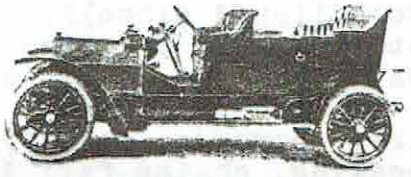
Having dealt with the 14 h.p. and the 18 h.p., we come to the 30 h.p. which its again an enlarged edition of its nearest predecessor. In fact, except for dimensions, the 18-24 h.p. and the 30 h.p. are identical. The result is a slightly higher capacity for speed both up hill and on the flat, with that increase in steadiness and that indifference to rough roads which is one of the main characteristics of a large car. Speaking broadly, it may be said that, as the size and weight of a car go up, so does its freedom from road shock improve. With the 30 h.p. we enter what we may call the closed throttle models. With the 30 h.p. 40 h.p., and the 45 h.p. the throttle is opened with less and less frequency. During the greater part of the running these big engines are doing very little work, and the throttle is nearly closed. It is only at starting or hill-climbing that anything like full aperture is required. The control, by the way, is very easy, both hand and foot throttles being nicely graduated, and the foot throttle so set, and sprung, that road shocks do not greatly affect the steadiness, of the foot pressure. The 40 h.p., is just what it might be expected to be, after a trial of the 30 h.p., but really, for ordinary work the 30 h.p. is quite big enough.



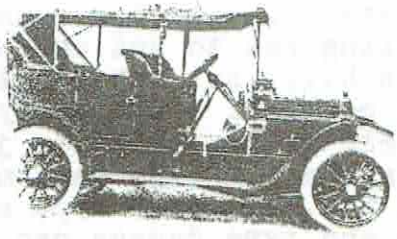
The 45 h.p. Siddeley



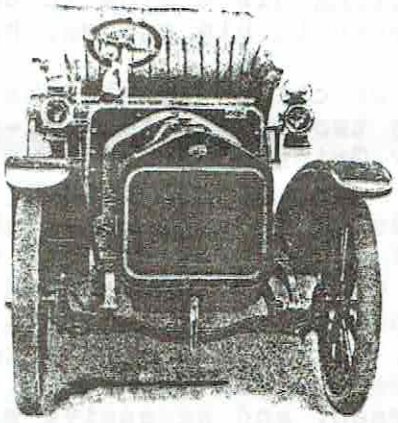
The 14-20 h.p. Siddeley



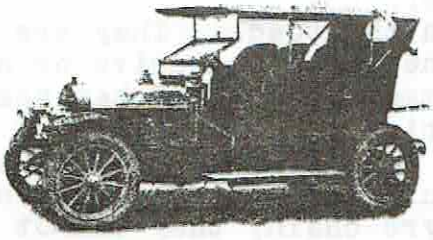
The 18 h.p. Siddeley



The 30 h.p. Siddeley.



Front view of the Siddeley 14, 18, and 30 h.p. cars.



The 40 h.p. Siddeley.

The extra power of the 40 h.p., is only required, when very heavy bodies, or big loads are habitually carried, or when the owner is keen on high speed climbing. The speed model par excellence of the Siddeley fleet, is the 45 h.p. six-cylinder. This simply spurns hills, while the engine turns over like a dynamo. It is a delight to drive, owing to the immense reserve of power, which is scarely ever used. With it one experiences the joy, of controlling something which always has a reserve in hand, and which cannot, may must not, be called for except when climbing very steep hills. This car is interesting, too, inasmuch as, instead of being gear driven like the other models, the last drive is by means of Reynold's silent chains. Although these chains were naked they were almost noiseless. Had they been in cases they would probably have been quite inaudible. Having said so much we may be asked which, in our opinion, is the best model of the Siddeley fleet, and to this question we should be very much inclined to make the non-committal reply that it depends entirely upon the requirements of the purchaser and the depth of his purse. For people of moderate incomes the choice must be made between the 14 h.p. and the 18 h.p., and good as the 14 h.p. is, we should strongly recommend those who can afford it, to have the large model.

Those who want still faster climbing and do not mind paving for it mainly intyres, but slightly in petrol, will find the 30 h.p. hard to beat, and above this power, the matter is so much one of hard cash, that we can safely leave the choice to the would be owner, though we must say for ourselves if we were going above 30 h.p. we should certainly take six-cylinders, because of the sub-division of the impulses in this design and the nearer approximation to the ideal of a constant; torque, which goes to eliminate all engine vibration.

JOIN THE CHAIN GANG WHEN GOING TO WINTER RESORTS.

Fitting tyre chains need not be difficult, particularly if the instructions are followed closely. Nevertheless, practice makes perfect, and the wise motorist will practise fitting his chains in comfort in the fine dry weather in the drive, or even in his garage, before the roads are snowbound.

First, however, what type of chains should the motorist use? Generally speaking, chains fall into two types- the all-round type, or the strap-on chains, known as Emergency Grips. As the name implies, emergency grips were designed for emergency use only and should never be used for running on the road. They are useful as a means of enabling you to get out of the snowbound drive or out of a field or even up a hill, but once that immediate hazard has been overcome they should be removed. Emergency grips should be used at speeds consistent with their design purpose, just a few miles an hour - say, at the most, 10 miles an hour. The reason for this is that, being anchored to the wheel, unlike the all-round type of tyre chain, they cannot creep, and excessive wear and tyre damage can very easily occur if they are misused. For regular motoring the all-round chain must be used.

It is worth considering here a few words of warning. First, do not deflate tyres and fit the chains and then blow the tyres up again. This practice causes the links to become embedded in the cover, with the result that the chain is unable to creep and the tyres may become chafed and damaged and the life of the chains shortened. It is also necessary to ensure that the reinforcing bars on the cross-chains are not fitted so that they are in contact with the tyre. These reinforcing bars should be in contact with the road.

Before commencing your fitting make sure that the tyres are at their normal pressure. Each chain should then be laid out on the ground behind the rear wheels of the car. The chain couplings should be at the ends farthest from the wheels and the points of the cross-chain hooks facing upwards. When the chains are laid out ensure that neither side-chain is twisted in any way. Should the chains be twisted, the length of the assembly will incorrect Furthermore, a twisted chain can cause cover wear. With some tyre chains a set of zip-on appliers are supplied, and these should be fitted to the forward end of each chain. The points of the appliers are inserted through the last free links of the chain and then pushed onto the rear of each tyre respectively, carrying the chains with them. Fitting is simplified if the appliers are clamped at the same height on both wheels. the rear of each applier should then be pressed down against the tyre so that the 'U' piece does not protrude or foul the wing.

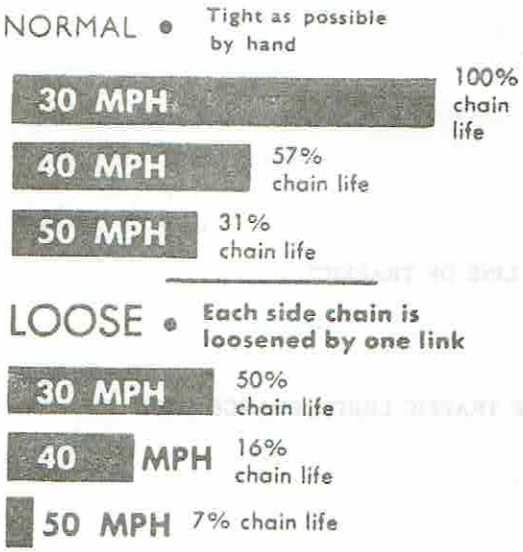
At this stage each chain clamped to its tyre hangs down and stretches out behind to its full extent on the ground. Next,gather the cross-chains in as close to the tyres as possible so that when the car is driven forward the links will not jerk up and foul the valances. Now, the car should be driven forward slowly in a straight line until the appliers have taken the chains right round the rear tyres. After the car has been halted the appliers are removed and the ends of the chains coupled together. The links on the inside of the wheel must be joined up first, leaving about two links hanging free. It is unlikely that any further adjustment will then be necessary to the inside connector.

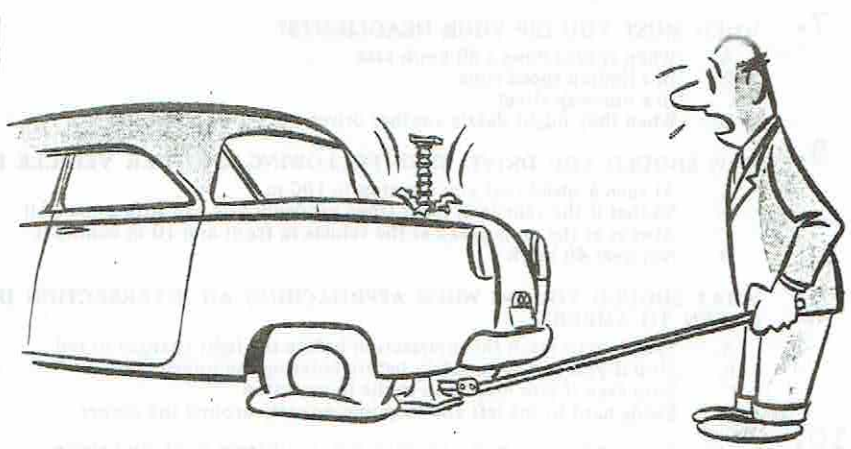
Next, the outside links are coupled up as tightly as possible by hand.

The chains are now in position, but the job is not quite finished. The car should be driven for about a hundred yards, after which it will probably be possible to take up the slack in each chain on the outside of the wheels, again as tightly as possible by hand. Any free chain left hanging, either on the inside or outside side-chains, can be back with string or wire. The retightening of tyre chains after the first hundred yards or so, and also at any other time when it is possible to take up an extra link by hand, is important, as will be seen from the figures given later about chain life. Also available are extra special spring tensioners which fit on the outside of the wheel and to a large extent take up any slack that may occur, but they still allow the chain in use to creep gradually round the tyre.

To remove the chains, loosen the outside coupling first, followed by the inside coupling, and after removal from the wheel lay out straight on the ground, ensuring that the side and cross-chains are not twisted. Join end to end before returning to the bag.

It is obvious that high speeds shorten the life of chains considerably. Already mentioned is the necessity for fitting the chains as tightly as possible by hand, and the chart shows the effect of speed and loose chains on chain life. The normal speed of driving with tyre chains should be about





CONCLUSION

One final thought for to-day, if you own a front wheel driven car, don't be like someone we heard of recently, who owned one also, but still fitted the chains to the rear wheels!!!!

JIM COLLINS.

WOLSELEY OWNER/DRIVER QUESTIONAIRE

1. YOU WISH TO TURN RIGHT FROM A TWO WAY ROAD WITH A CENTRE LINE. WHERE SHOULD YOU POSITION YOUR VEHICLE BEFORE TURNING?
   A. Just to the left of the centre line, or, when it is safer, as far to the left of the road as practicable
   B. To the far left of the road under all circumstances
   C. Straddling the centre line
   D. As far to the right of the centre line as practicable

2. WHAT DOES THIS SIGN MEAN?

   A. You may stop if there are no buses in sight
   B. You may stop between 6 p.m. and 8 a.m. except on Fridays and Saturdays
   C. You may stop provided someone remains in the car
   D. You may not stop at any time

3. WHEN WOULD YOU APPLY THE RULE "GIVE WAY TO YOUR RIGHT"?
   A. At an intersection when you are the only vehicle controlled by a "GIVE WAY" sign
   B. At an intersection when you are the only vehicle controlled by a "STOP" sign
   C. At an uncontrolled intersection
   D. When approaching a green traffic signal

4. CAN A DRIVER BE PROSECUTED FOR ALLOWING SOMEBODY TO RIDE ON HIS VEHICLE IN A POSITION WHICH MIGHT RESULT IN INJURY?
   A. Yes
   B. Only if the person is under 12 years old
   C. Only if the driver is over 21 years old
   D. No

5. WHAT IS THE TOTAL STOPPING DISTANCE SHOWN IN THE ROAD CODE FROM 80 KM/H WITH GOOD BRAKES ON A WET SURFACE?
   A. 149 metres
   B. 101 metres
   C. 66 metres
   D. 41 metres

6. GOOD CAR CONTROL INCLUDES DRIVING –
   A. To the limit of the posted speed restriction
   B. As close as possible to the centre line except where there is oncoming traffic
   C. At the correct speed and in the correct gear and place on the road
   D. With a tight grip on the steering wheel

7. WHEN MUST YOU DIP YOUR HEADLIGHTS?
   A. When approaching a 50 km/h area
   B. In a limited speed zone
   C. In a one-way street
   D. When they might dazzle another driver

8. HOW SHOULD YOU DRIVE WHEN FOLLOWING ANOTHER VEHICLE IN A LINE OF TRAFFIC?
   A. At such a speed that you can stop in 100 m
   B. So that if the vehicle in front stops suddenly you can stop short of it
   C. Always at the same speed as the vehicle in front and 10 m behind it
   D. Not over 40 km/h

9. WHAT SHOULD YOU DO WHEN APPROACHING AN INTERSECTION IF THE TRAFFIC LIGHTS CHANGE FROM GREEN TO AMBER?
   A. Speed up to reach the intersection before the light changes to red
   B. Stop if you can do so safely before entering the intersection
   C. Stop even if you must stop in the intersection
   D. Swing hard to the left and stop immediately around the corner

10. MAY YOU PARK A CAR IN FRONT OF A VEHICLE ENTRANCE?
   A. Yes – provided someone who can move it remains with the vehicle
   B. Yes – for no longer than 10 minutes
   C. Yes – but only to pick up or let down passengers
   D. No – not under any circumstances

11. WHAT IS THE BEST WAY TO STOP WHEN DRIVING ON AN ICY OR SLIPPERY ROAD?
   A. Disengage the clutch and brake fairly heavily
   B. Turn off the motor and then apply the brake
   C. Apply the brake very heavily
   D. Pump the brake gently up and down

12. IS THERE A LAW THAT SAYS YOU MUST NOT TRAVEL SO SLOWLY THAT YOU HOLD UP OTHER VEHICLES?
   A. Yes
   B. No – but you should follow this advice
   C. Yes – but only during heavy weekend traffic
   D. No – but you must travel at over 50 km/h on the open road

13. IF YOU ARE DRIVING AT A MODERATE SPEED AND SUDDENLY YOU GET A BLOWOUT IN ONE OF THE TYRES, WHAT SHOULD YOU DO?
   A. Take your foot off the accelerator and try to keep your vehicle on course
   B. Swing your car in the direction it sways towards
   C. Take your foot off the accelerator and brake hard in a straight line
   D. Keep your foot on the accelerator

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4/50 Scientific Magazine Workshop Manual
1500 Polyslager Handbook
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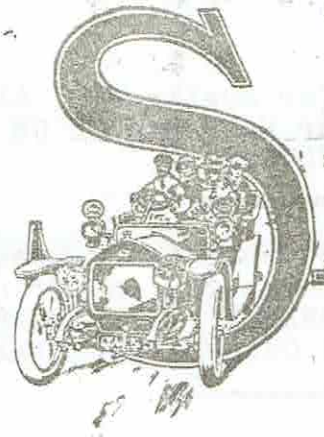
Answers to page 16:- 1/a, 2/d, 3/c, 4/a, 5/b, 6/c, 7/d, 8/b, 9/b, 10/d, 11/d, 12/a, 13/a.....

SIDDELEY AUTOCARS



Consistent Running and Reliability are the Keynotes which indicate the good material and high-class workmanship used in the construction of "SIDDELEY" AUTOCARS.

Year in, year out, a SIDDELEY does its work, and does it well. It is as good a car at the end of a year's hard work as it is on the day it leaves our Works.

H. M. McAllister, Esq., of Nether Worton House, Steeple Aston, Oxon., has proved this to his own great satisfaction. He purchased a SIDDELEY "18-25" in July, 1907, and in twelve months he ran it 12,000 miles. On July 21st, 1908, he writes:

12,000 Miles for 24s. for New Parts.

"You will, I think, be pleased to hear of the consistent running of my Siddeley "18-25." I took delivery of this car last July and ran it the same month in the Oxford & District A.C. Hill Climb—it did the climb up a hill with a 1 in 7 gradient in 1 min. 21 secs. On Saturday last, after running over 12,000 miles, it again did the same hill within decimal 001 of its time last year, taking the third prize.

"I have taken down and cleaned the engines twice since I got the car, though no new parts have been fitted except a complete set of piston rings. The car is running as well to-day as when I first got it, and has never hung me up on the road. For consistent running and reliability, this performance is, I think, hard to beat."

THINK WHAT THIS MEANS! A Total Cost of 24/- for replacing mechanical parts; or an expenditure of 2/- only for each thousand miles.

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THE WOLSELEY YEARS

CHAPTER 1X

WOLSELEYS IN NEW ZEALAND

COMMENTARY

With the advent of the first motor vehicle more than 90 years ago, it is not surprising that there are enough cars in the Western World to transport every man, woman and child at a moments notice. The record of this phenoninal growth, clearly shows periods of growth rate, the amount of use, inter-related with its influences on the community. These phases varied minutely, from country to country, but only by a few short years. Because the universal interest in the car has been so keen, any development in one part of the world, has been quickly studied, and experimented on by other countries. A case in point, weapons of war, and the transport of same, can be a matter of life, or death, when "keeping up with the Jones's".

New Zealand's motoring development has been no different to this general pattern, with the same development phases, following closely behind U.K., U.S.A., Europe, and Australia.

When England abolished the "man walking in front" by an act of Parliament in 1896. It was only two years later in 1898, that the McLean light Locomotive Bill came before the New Zealand Parliament. It was a private bill asking for permission to allow McLean to import, and drive motor vehicles, also to store such inflammable fuels to be used for their propulsion. He had imported two such vehicles, then found that legally, he could not run them.

With traction engines already running on the roads, it is most likely the McLean vehicles would have been driven, when experimenting with so novel a conveyance. However unrealistic, the laws of the time may have been, it would not have been wise to ignore them, when demonstrating to potential buyers, particularly as certain authorities had already refused to grant permits to run, such "light locomotives".

Eventually it became a Public Bill and was passed in the final session in 1898, as the McLean Motor Car Act.finally included with the provisions:-

a. After sunset, a light to be glowing in the direction travelled, able be suitably to warn people of the vehicle's approach.

b. A maximum speed limit of 12 m.p.h.

c. Every car had to have an identification work pointed on it, this being registered with the local authority. Originally, New Zealand roads were built to cater for horse drawn traffic only, in 1900 demands for roading to be better made, stating the volume of traffic was "tremendous", no doubt goods drays were delaying private horse drawn carriages, on some roads.

Very few cars had been exported to New Zealand at the turn of the Century, due at the time, to the motor industry being underdeveloped enough, to cope for home demand, therefore the export of cars to had yet to become established. Also the car was still a novelty, yet to be recognised,as another means of transport.

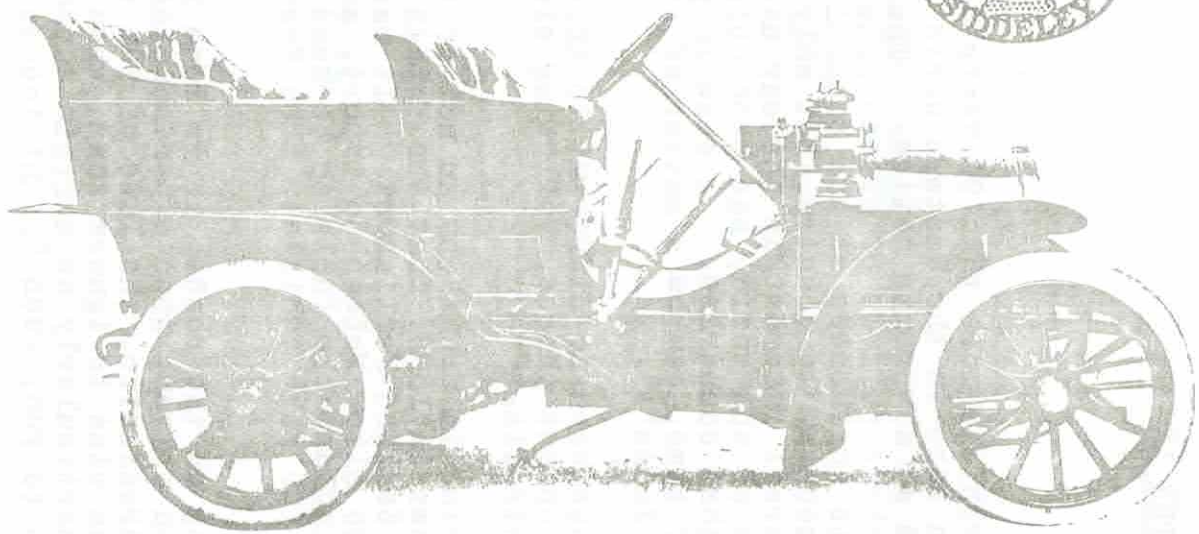
Siddeley AUTOCARS

The Mark of WOLSELEY V.S.&M. Ltd. SIDDELEY Reliability.

The 12 h.p. "Siddeley" Car.

5,000 Miles Automobile Club Trial, January, 1903.

DESCRIPTION.—Motor—Two cylinders, 4¼in. × 4½in., running normally at 850 revolutions per minute, and accelerating to 1,400 revolutions per minute. Control by variable lift of mechanically operated inlet valve actuated by lever on steering wheel. Transmission—By cone clutch from motor through a universal joint shaft to gear box, thence by straight tooth gear wheels to the bevel wheels which convey the motor drive through the differential shaft to the driving chain wheels. Frame—Pressed steel, with three cross members only. Speeds—Four speeds forward and one reverse. Cooling—Radiator of gilled tubes, inside an aluminium frame forming water tank. Pump is gear driven. Half Compression Cam—Fitted to ease compression when starting motor. Lubrication—Gravity feed. Separate sights to each drip. Wheelbase—Standard 7ft. 4in. Track 4ft. 3in. to centres of tyres. For side entrance bodies. 8ft. 6in. Wheels Wood, artillery pattern, 32in. high. Tyres—Michelin pneumatic, or to order, 810 m.m. × 90 m.m. Painting—To suit customer. Upholstery—Leather, with spring cushions, or to order. Weight—Standard chassis, 15 cwt. Weight of car without water and petrol, approximately 16½ cwt. Dimensions—Length over all, standard, 11ft. 8in.; long wheel base, 12ft. 10in. Height over all, 5ft. Height, with canopy, 7ft. 3in. Width over all, 5ft. 3in. Fittings—The fittings supplied include two side lamps, tail lamp, horn, aluminium screw jack, two sets of accumulators, oilcans, tun-dish, and complete set of tools in leather case.



The 12 h.p. "SIDDELEY" Tonneau or Side-entrance Body—Net Cash Price £450 - 0 - 0.

THREE METHODS OF PURCHASE THROUGH FRANK PEACH & COMPANY, LIMITED.

No. 1. One Quarter of the Net Cash Price payable down and the Balance when the Car is ready for Delivery.

No. 2. £112 - 10 - 0 Cash down and Twelve Monthly Payments of £30 - 7 - 6, commencing One Month after Delivery.

No. 3. £112 - 10 - 0 Cash down and Four Quarterly Payments of £91 - 2 - 6, commencing Three Months after Delivery.

THE CAR BECOMES THE ABSOLUTE PROPERTY OF THE PURCHASER IMMEDIATELY ON DELIVERY.

Price to above Description, with Standard Tonneau or Short Side Entrance Body, £450. Chassis, £400.

" " Long Side Entrance Body, £475. Extended, £410.

" Landaulette Body, £550. Long, £420.

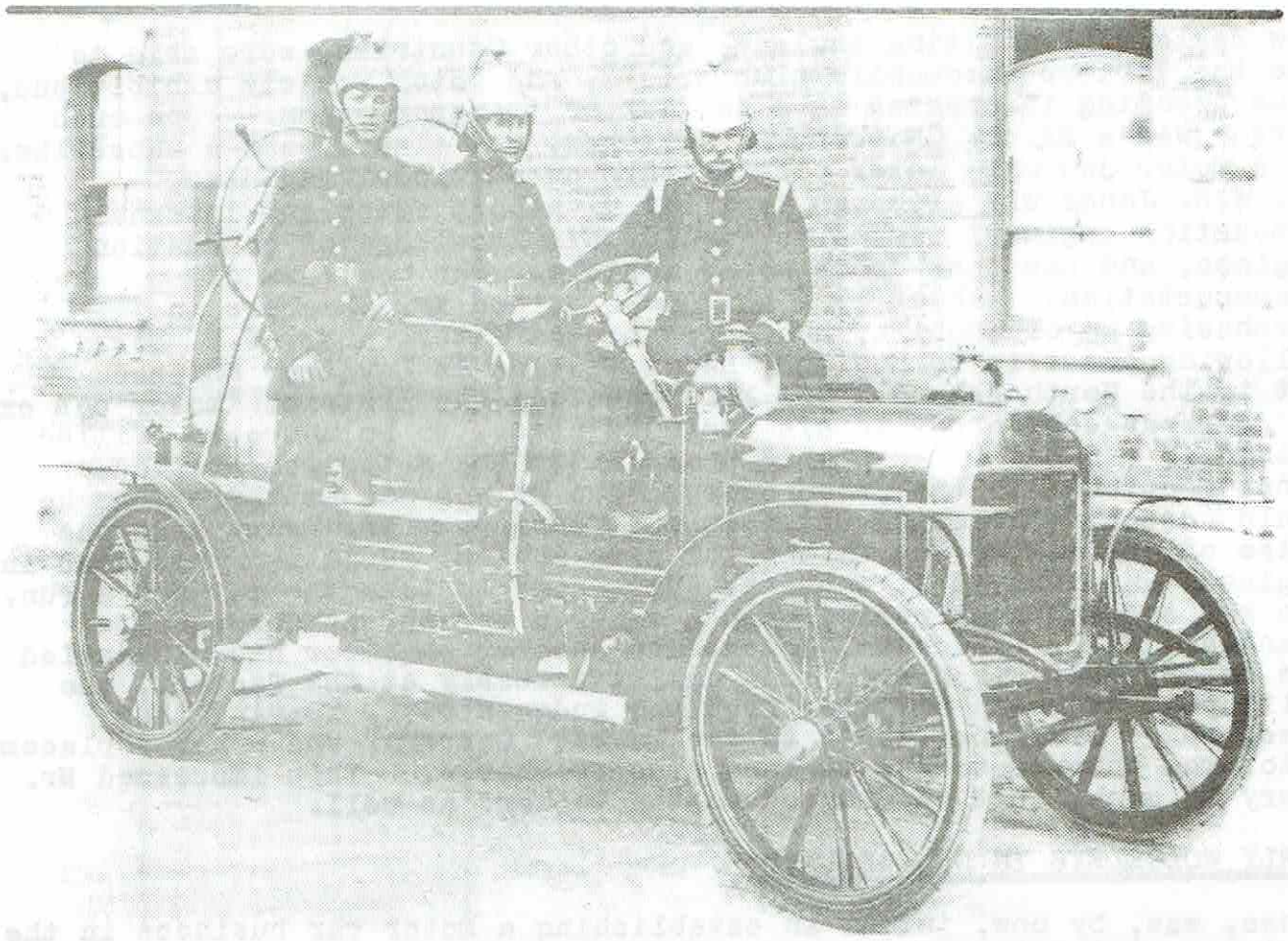
THE "SIDDELEY."

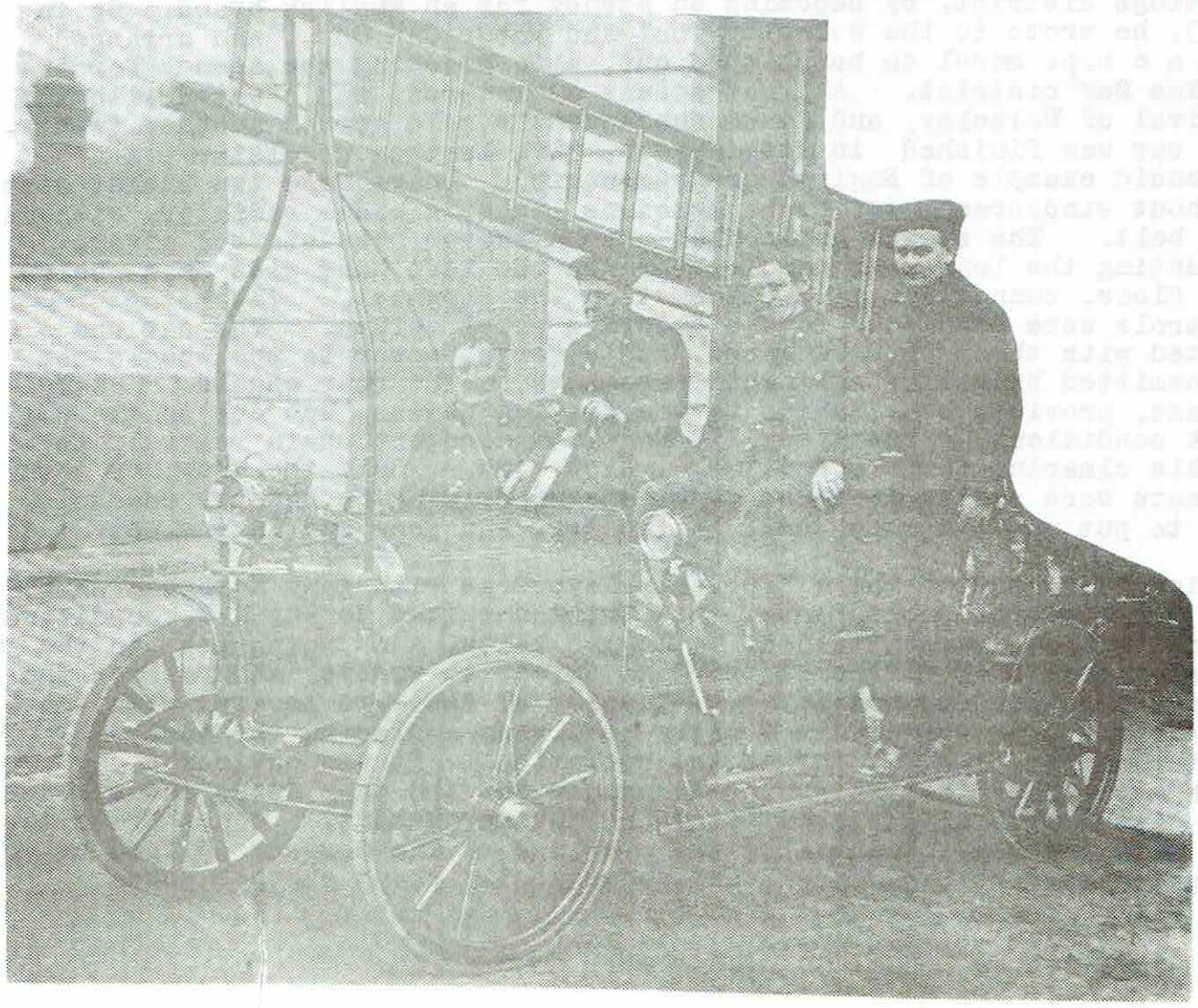
MANUFACTURED BY

THE WOLSELEY TOOL AND MOTOR CAR CO., Ltd, LONDON. Sales Department: YORK STREET, WESTMINSTER, S.W.

Telephone 1671 Victoria. Telegrams: "SIDLETH, LONDON."

Works: ADDERLEY PARK, BIRMINGHAM, & CRAYFORD.





New Zealanders visiting England, and other Countries, were able to see the various automobile club trials, and motor vehicle exhibitions, thus becoming interested in a new way of transportation. One such person was a Mr. B. Chambers of Hastings, who also became a subscriber to a motor journal, later passing them onto a local engineer, Mr. W.B. Jones who although familiar with both steam and internal combustion engines, wished to further his knowledge of combustion engines, and how they drove motor vehicles, the new form of transportation. About 1902 Mr. Jones helped Mr. Chambers in purchasing an oldsmobile, and a few months later, a Mr. T.H. Lowry, following his trip to England, had a Panhard et Levassor shipped out to the North Island. As Mr. Jones was the district "motor car expert" the car was delivered, to his business place, to be uncrated, filled withfuel, and the tyres pumped up. After the motor was started, Jones mentioned to the proud owner, that he was not satisfied, as he could detect a knocking while it was running. Mr. Lowry said the noise of the engine was making the same sounds, as it had when used in England, and thought it would be quite safe to take the car for a run. The run ended disastrously, when a con-rod was thrust through the crankcase wall. When Mr. Jones, and another engineer had dismantled the motor, they discovered that during assembly at the factory, the split pins had been ommitted from the gudgeon pins, leaving them insecure. Mr. Jones wrote to the Packard Company, and a new replacement motor was shipped to New Zealand free of charge. This impressed Mr. Lowry so much, that he ordered anothe Packard as well.

EARLY WOLSELEYS IN NEW ZEALAND.

Jones, was, by now, intent in establishing a motor car business in the Hastings district, by becoming an agency for an English brand. So in 1903, he wrote to the Wolseley Tool and Motor Car Coy., and arranged for a 6 h.p. model to be shipped out, also becoming the agency for the Hawkes Bay district. A great amount of interest was created with the arrival of Wolseley, and Jones subsequently sold approx another twenty. The car was finished in deep Maroon, with leather upholstery, a splendid example of English craftsmenship. There were two bucket seats, without windscreen, two brass kerosene lamps, a brass radiator, without fan belt. The single horizontal piston engine, was started after, thrusting the long crankhandle, through the left hand side seat, below the floor, connecting with a socket on the flywheel. The motor controls were connected to the steering wheel column. The car was fitted with three forward gears, and reverse, power to the wheels was transmitted by roller chains to sprockets on the rear wheels. Heavy grease, provided lubrication to the driving chains, but due to extreme dust conditions of the times, it required constant chain removal, to enable clearing to be effective, a dirty joh. Only the city, or town streets were sealed in those days, anyone driving on country roads had to put up with deep dust, in the dry, and deep mud in the wet.

A big handicap with the 6 h.p. Wolseleys, (as with many European cars) was the low ground clearance, this being unsuited to the N.Z. conditions. Also the tyres were attached, by lugged bolts, and wingnuts to the rims, making them difficult, for the driver to remove, and replace the inner tubes to mend punctures. Inspite of the tyre levers, with the repair kit,, it was always a risky job, when replacing the tube, trying not to pinch it during the operation. It was obvious a car with more power, better ground clearance for the many fords and streams and fitted with solid tyres, would be an improvement. Jones wrote to the Wolseley Coy., explaining the problems. The Company obliged by dispatching a 10 h.p. model, and subsequently about another dozen

were sold to local farmers, some being previous 6 h.p. owners. Also about this time, a 12 h.p. Wolseley, was imported to the hawkes Bay district, fully assembled, in addition to bucket seats front and rear the car had dicky seats fitted too. The local roads of the time were not able to allow this powerfull car, to attain its top road speed, in fourth gear of 50 m.p.h.

It is worth mentioning at this poi nt that the first Wolseley Sidd eley reached the Jones agency during 1905-1906.

CHRISTCHURCH FIRE BRIGADE WOLSELEY SIDDELEY.

It is recorded that the Wanganui Fire Brigade was the first to become motorised in Australasia , on 6th July, 1903. But not many people are aware that the first Fire Engine in Christchurch was a Wolseley Siddeley, circa 1904-5,

Prior to this, it had been owned by the Chief Fire Officer of that period, who had a car, while the brigade was still equipped with horsedrawn Fire Engines. Near his retirement, this 12 h.p. Wolseley Siddeley, chain driven car was purchased by the Christchurch Fire Brigade to be converted to a fire engine, and was commissioned, costing £617 as such in January, 1908, at the Central Fire Station, corner Lichfield and Madras Streets, after being fitted with a soda acid cylinder, complete with hose reel. Notice the wire spoked racing type wheels, fitted with solid tyres.

April, 1909, it was transferred to the St. Albans Fire Station, Office Road. It had been altered to carry a ladder and other equipment, notice also, that the lights had been changed. During 1919, the unit was again transferred back to the newer Central Fire Station at 178 Lichfield Street, as No 6 motor, in 1922, it was to be reallocated, as No 8 motor. February, 1923, it was removed from turnout, as a fire engine, to be converted, as the Brigades runabout truck,, finally on 17th June, 1924, it was decommissioned, and was disposed of, by selling it to a Dairy Coy., for £25.

WOLSELEY MOTOR SLEIGH

Another first for Wolseley, in our part of the World, was Captain Scott's, 1910 Antartic expedition, when the Terra Nova called at Lyttelton, it had three of the Wolseley Tool and Motor Company's motorised tractor sleighs aboard.

These had undergone trialson the Norwegian ice-fields, with most satisfactory results. Instead of the usual car-wheels on the power-driven rear axle, there are fitted sprocket or chain wheels driving an endless chain, carrying patterns and spuds, which grip into the snow, ensuring a forward motion by the travel of the chain. The chain had also a bearing, on a runner, and passing between this runner and the ground, supports the whole tractor, while propelling it, as the sprocket-wheels, driving the chain, are revolved by the motor. The frame was of woodwork, and a shield was fitted to the underside, extending from end to end, to enclose the mechanism, presenting a smooth surface to the snow.

MOTOR-SLEIGH FOR THE ANTARCTIC EXPEDITION.

CONSTRUCTED BY THE WOLSELEY TOOL AND MOTOR-CAR COMPANY, LIMITED, ADDERLEY PARK, BIRMINGHAM.

Fig.1.

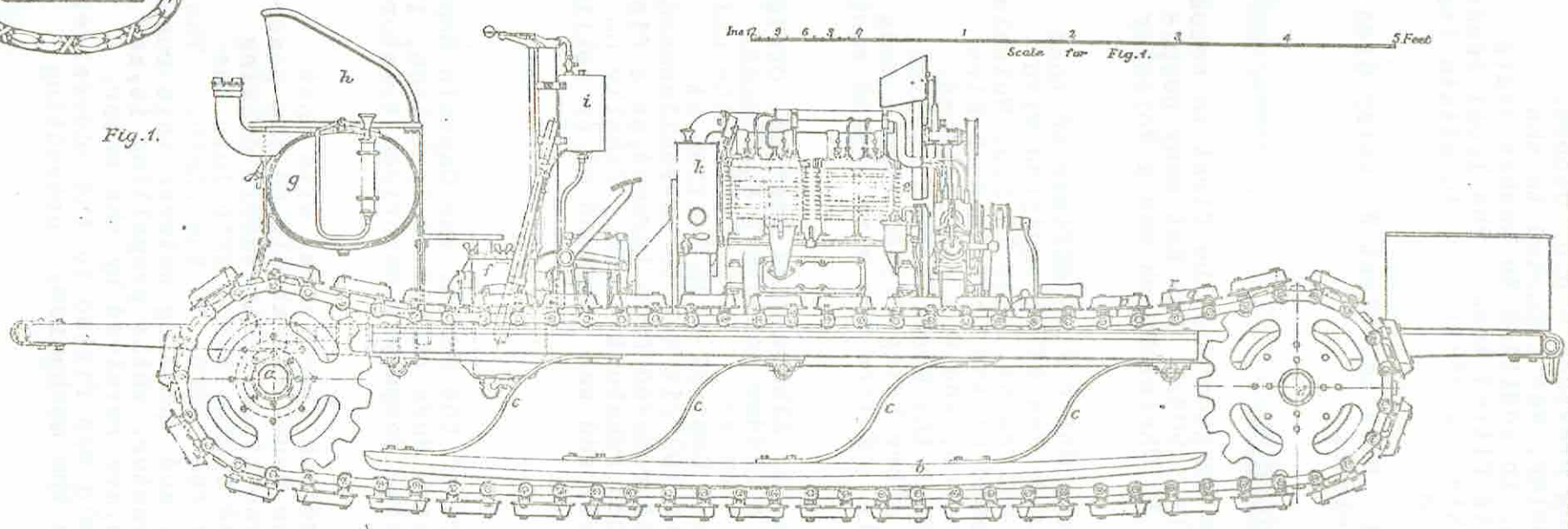


Fig.2.

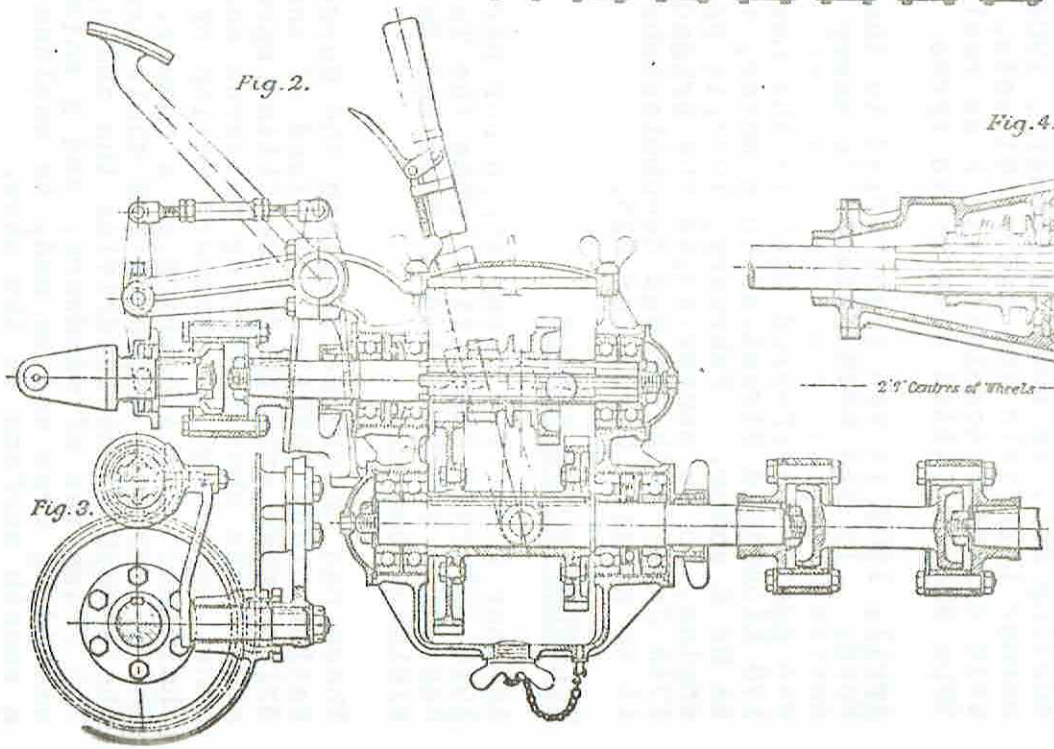


Fig.3.

Fig.4.

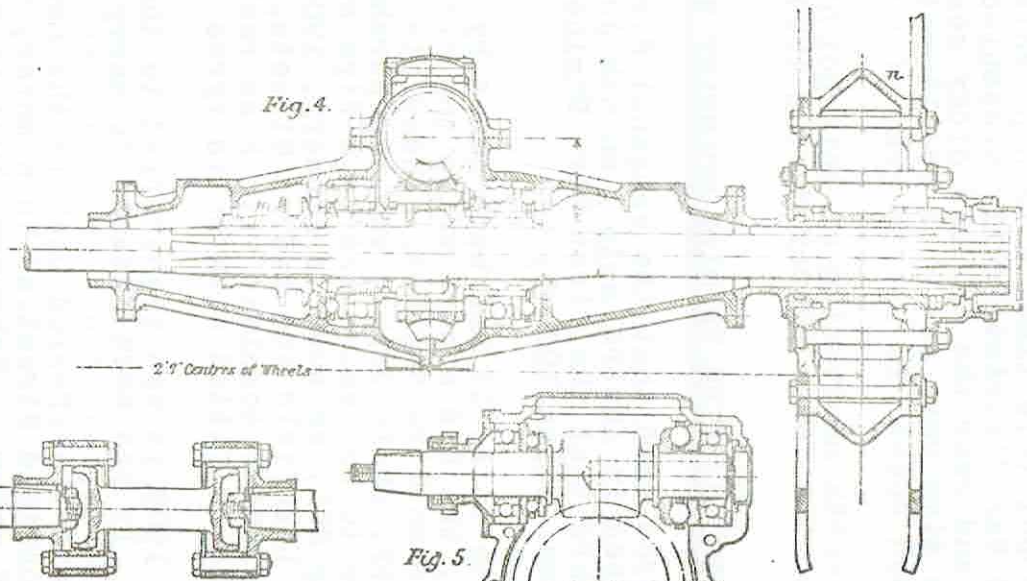


Fig.5.

DETAILS OF MOTOR-SLEIGH FOR THE ANTARCTIC EXPEDITION.

CONSTRUCTED BY THE WOLSELEY TOOL AND MOTOR-CAR COMPANY, LIMITED, ADDERLEY PARK, BIRMINGHAM.

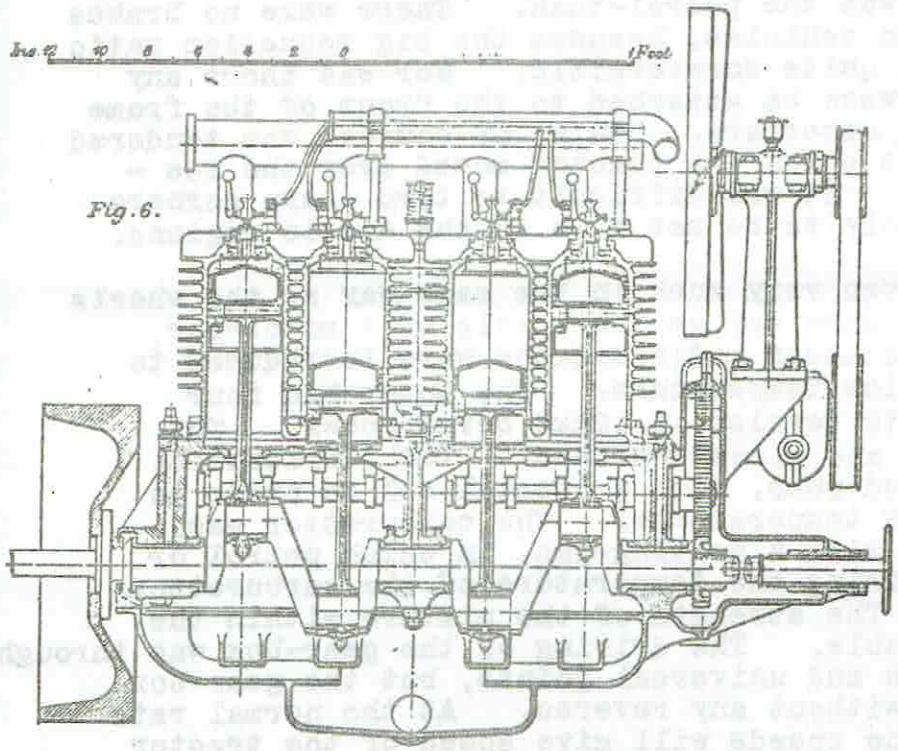


Fig. 6.

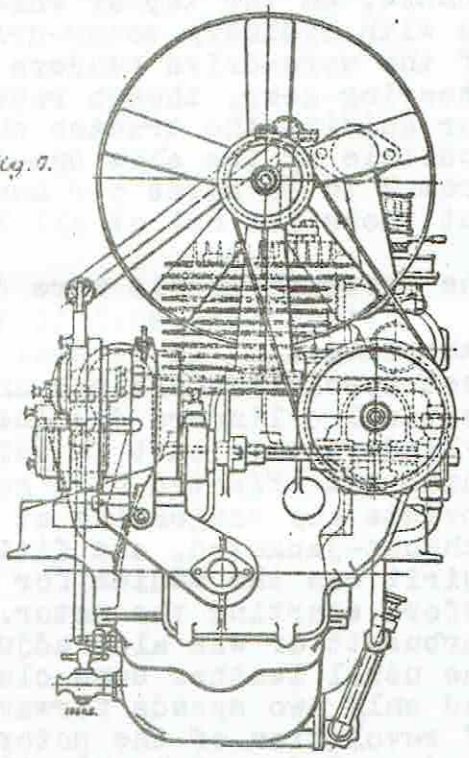


Fig. 7.

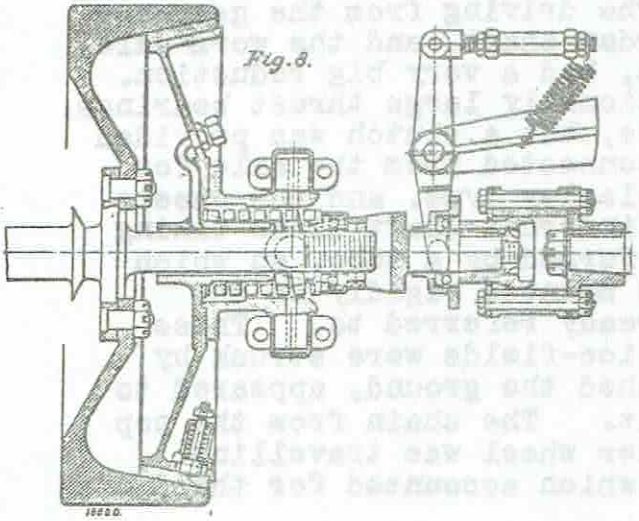
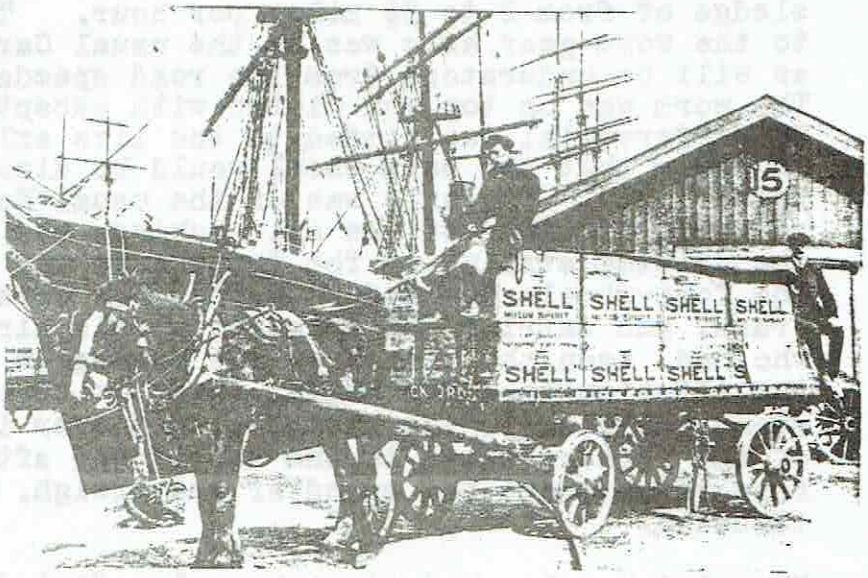
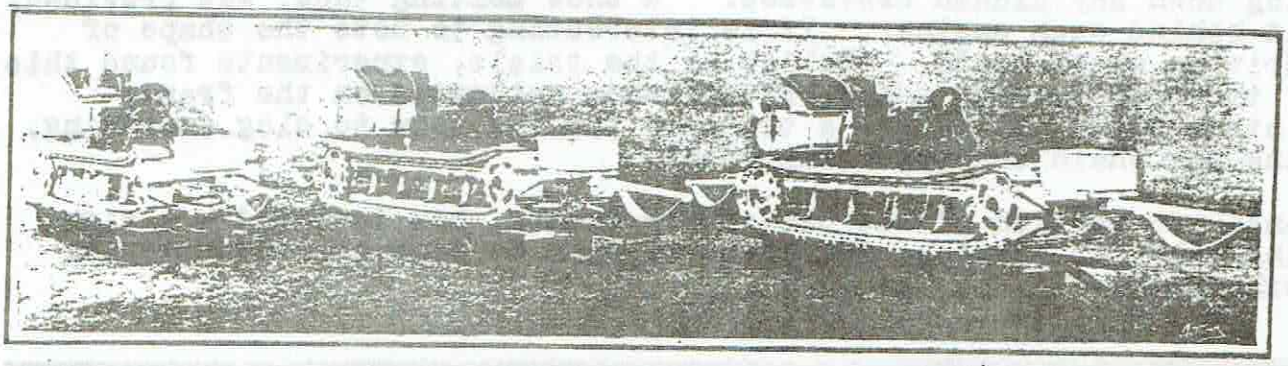


Fig. 8.



A waggon load of Shell petrol for use in Captain Scott's motor sleigh. The "Terra Nova" may be seen in the background.



Three Wolseley motor sledges have now been completed and despatched to Port Lyttleton for shipment aboard the "Terra Nova." The detail design has been altered somewhat as a result of the experience gained during the trial of the machines in Norway. The stretcher poles at back and front are intended to increase the length of the vehicles and render them less likely to fall down hidden crevasses. The poles also fit into vertical sockets to form tent poles. A snow melting tank has been provided behind each engine.

Above there is a driver's seat located behind the engine, with the usual levers for operating the motor. The engine was enclosed in a bonnet, on the top of which was the petrol-tank. There were no brakes as with ordinary motor-driven vehicles, because the big reduction ratio of the worn-drive renders it quite unreversible. Nor was there any steering-gear, though ropes were be attached to the front of the frame for guiding the tractor when necessary. This, of course, was tendered possible by the slow speed at which the tractor moved over the ice - from 2 to 3½ miles per hour. It was difficult to turn sharp corners but these are not at all likely to be met with in the Arctic regions.

The sprocket-wheels were driven very much in the same way as the wheels were driven very much in the same way as the wheels of a motor-car, excepting that in several instances modifications were introduced to meet special conditions and low temperature. The motor had four vertical cylinders designed to develop 12 brake horse-power. The cylinders were cast in pairs and alsoair-cooled. The lubrication, which was effected by a geared pump, with a special oil in order to obviate any congealing at low temperatures. The carburettor was exhaust-jacketed, and fitted with a heating-pan, in which petrol or spirit was the medium for raising the temperature of the carburettor before starting the motor. The strength of the mixture within the carburett or was also adjustable. The driving of the gear-box was through the usual leather cone clutch and universal joints, but the gear-box had only two speeds forward without any reverse. At the normal rate of revolution of the motor the speeds will give speed of the tractor sledge of from 2 to 3½ miles per hour. The driving from the gear-box to the worm-gear axle was by the usual Cardan shaft, and the worm-axle, as will be understood from the road speeds, had a very big reduction. The worm was on top,and fitted with exceptionally large thrust bearings. No differential was fitted to the live axle, but a clutch was provided in order that the worm-wheel would be disconnected from the axle for "coasting". The axle was of the usual Wolseley type, and the wheels ran on extensions of the axle-tubing, the internal shaft alone taking the driving strains. The front axle was formed by a tube, on which the fore-wheels rotated. Both axles were mounted rigidly on the frame, and carried the sprocket wheels already referred to. Those who had seen the sleigh on the Norwegian ice-fields were struck by the illusion that the chain, where it touched the ground, appeared to stand still while the sleigh glided over it. The chain from the top of the forward wheel to the top of the after wheel was travelling forward at twice the speed of the sleigh, which accounted for the illusion.

The sleighs also had stretcherpoles fitted to both front and rear, to increase the overall length of each machine, to lessen the risk of falling down any hidden crevasses. A snow melting tank, was provided, to fit behind each engine. It is interesting to note the shape of the driving wheel teeth. Following the trials, experiments found this form, the best type to throw off any snow collected on the frame. With other forms, there was a tendency for the snow to clog everthing, causing the chain to eventually break.

The Antartic section of the Canterbury museum, has included a sleigh driving axle, on display, for those wishing to look at, when viewing the exhibition.

ROAD TEST DATA & SPECIFICATIONS

Manufacturer: ..... British Leyland Motor Corporation, Cowley, UK
Make/Model: 18/22
Body type: ..... 4-door sedan
Test car supplied by: ..... BLMC, Lougbridge, UK

ENGINE

Cylinders: ..... Four in-line (Six in-line)
Bore x stroke: ..... 80.26mm x 89mm (76.2 x 81.2)
Capacity: 1798cc (2227cc)
Compression: ..... 9 to 1 (9 to 1)
Aspiration: ..... Single SU HS6 carburettor (Twin SU HIF6)
Fuel pump: ..... SU mechanical
Fuel recommended: ..... Maximum octane (90-plus)
Valve gear: ..... OHV (SOHC)
Max. power (gross): ..... 61.2kW @ 5200 (82.1 @ 5250)
Max. torque: ..... 138.3Nm @ 2750 (155.9 @ 3500)

TRANSMISSION

Type/locations: ..... C series four-speed all syncro manual (BW 35 three-speed auto)
Clutch type: ..... SDP

Gear	Manual Direct Ratio	Auto Direct Ratio
1st	3.29	2.38
2nd	2.06	1.45
3rd	1.38	1.00
4th	1.00	

Final drive: ..... 3.72 to 1 (3.83 to 1)

BODY AND SUSPENSION

Type: ..... Integral
Kerb weight: 1160kg (1197kg)
Front suspension: ..... Unequal length, transverse links. Upper arm operates interconnected Hydragas spring unit
Rear suspension: ..... Independent by trailing arms and Hydragas spring units
Wheels: ..... 4.5J x 14
Tyres: 185/70 SR14

STEERING

Type: ..... Rack and pinion (power assistance optional)
Ratio: ..... 23.8 to 1 (17 to 1)
Turns lock to lock: ..... 4.37 (3.26 with servo)
Wheel diameter: 40cm
Turning circle: 11.5M

BRAKES

Type: ..... Disc front/drum rear, servo-assisted
Dimensions: ..... 27cm front/22.8cm rear

DIMENSIONS

Wheelbase: 269cm
Track, front: 147.3cm
rear: 145.8cm
Overall length: 445.39cm
width: 172.33cm
height: 141.1cm
Ground clearance: 16.4cm

EQUIPMENT

Battery: ..... 55 A/H
Alternator: 45A
Headlamps: ..... Single 60W/55W, Dual 87W/60W

CAPACITIES

Fuel tank: ..... 50 litres (58 litres)
Engine sump, Final drive, Gearbox: ..... 6.4 litres (7.4 litres)
Water system: ..... 7.1 litres (8.25 litres)

PERFORMANCE

FUEL CONSUMPTION:

	litres/100km	(MPG)
Best recorded	7.43 (8.07)	38 (35)
City conditions	8.83 (10.86)	32 (26)
Country conditions	7.43 (9.42)	38 (30

ACCELERATION:

	1500 manual	1500 auto	2200 manual	2200 auto
0-50km/h	5.0s	6.0s	4.0s	5.0s
0-65km/h	7.5s	8.5s	6.5s	7.5s
0-80km/h	10.5s	12.0s	9.0s	10.5s
0-100km/h	15.5s	17.0s	13.0s	14.5s

SPEEDS IN GEARS: (auto only)

	Max. km/h
1st	53.3 (58.0)
2nd	85.2 (92.7)
3rd	126.8 (138.0)

OVERTAKING TIMES (in top gear):

mph	Manual	Auto
20-40	11.0s	9.5s
30-50	11.0s	9.5s
40-60	12.0s	10.0s

TOP SPEED: 157.7km/h (170.6km/h)

CALCULATED DATA:

Power to weight: ..... 18.9 (14.5) kW/kg
Piston speed at max. rpm: ..... 925 (852) M/min
Specific power output: ..... 29.3 (27.1) kW/litre

hushout most road noise. For the most part the ADO-71 is exceptionally quiet with little windrush and little noise coming from either the engine bay (a thermostatically controlled electric cooling fan is mounted in front of the big radiator) or from the tyres.

Only one section of specially ridged and untarmaced concrete Motorway managed to spoil the otherwise quiet effect of the Denovo-shod 1800 I drove first. Other than that the radials were unobtrusive, producing no more than the now familiar dull thump over the catseyes.

The boot is capacious. With the big spare in position there is 3.55 cubic metres - 11 percent more usable space than in the Landcrab. I had no trouble stacking in six large suitcases leaving plenty of room for a holdall or two and camera bags. Without the spare, luggage space, particularly width, goes up appreciably - with spare its 101.60cm wide, without it goes up to 134 70cm which should make getting those golf clubs and trolley in easy.

Boot depth is 105.40cm and height is 51.50cm. One minor criticism is that the hydraulically supported boot-lid doesn't hinge back high enough and one has to crouch to lift luggage aboard. The tail-light clusters also restrict the opening - pity safety requirements forbid

pivot are contained directly within the ends of the cross-tube.

The lower suspension arm is arranged to ensure suspension loads are fed back into the bulkhead and floor/toeboard junction. This means there are no suspension loads in the front end structure which has been designed for greater impact crushability.

The rear suspension is based on the simple Allegro design with trailing arms and levered Hydragas units, mounted on rubber torsion bushes to a cross tube which is itself rubber-mounted to the body shell. The torsion bushes are "pre-loaded" on assembly to give a "built-in" load equivalent to one passenger's weight and which minimises attitude change under full load conditions.

For those owners and rally drivers who criss-crossed Australia and the world in them, the 1800 landcrab had one of the best suspensions ever. I can tell them, Hydragas, as applied to the ADO-71, seems to work even better. The roll is much more controlled than that of the current "car of the year" in Europe and effected without the complications of that unit.

Like all front-wheel-drive there is an understeering characteristic which increases in the wet, particularly on the tight corner or roundabout. Both test cars I tried were set up with the recommended tyre pressures (Dunlop SP radials and the Dunlop Denovos have the same recommended pressures). Pressures are always a compromise between handling and comfort. I've little doubt the cornering ability in wet or dry conditions could be bettered, for the type who likes to press on, after a little jiggling with pressures. For most owners the pressures are just right, the cornering ability excellent. On the safe side you can lift off when going through a corner fast and unlike most front-wheel-drive cars, it remains neutral. I tried all ways to get back to break away and produce oversteer, even on muddy surfaces but without success.

The Adwest power assistance to the rack and pinion steering is the same as used in the Jaguar XJ series and is set to allow a reasonable amount of 'feel' back through the column. With the exception of the cheapest 1800 four cylinder the Adwest comes as standard. I'd reckon it's a necessity. One of the bad features about the old 1800 was the heaviness of the steering at low running and parking speeds. The Adwest has been set with, I'd say, the right amount of weight, and both versions I drove seem to have lost that dead centre section which affected the previous east-west installed six cylinder versions. For safety the column itself has two universal joints and is supported on brackets to minimise steering wheel displacement in a frontal impact.

Dual line 27cm disc brakes each with four pistons, twin feed calipers are used at the front with 23cm drums at the rear. Total swept area is an impressive 2055.8sq cm. A servo is standard. They worked efficiently and always pulled up straight - despite the mud and slush of any army tank course.

The all-steel welded monocoque body is well padded - both inside and out! Apart from a corrosion protection package comprising an electrophoretic primer, wax injection of box sections and lots of underseal, the front wheel arches are protected by moulted plastic liners. These not only guard against corrosion but also help to