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Hon. Secretary:
Miss G.M.Harris
Paternoster Farm
Yarnton, Oxon
Tel: KIDLINGTON 2166

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G.W.Wrapson, Esq.
29 Kirk Close
Tel: OXFORD 57729

START OF THE SEASON

BULLETIN no. 19
February 1963

We are inaugurating what we hope will be an annual event, in the shape of a Dinner, to be held on Friday April 5th at the Oxford University Air Squadron Mess. We have been fortunate enough to get Mr C.W.Morton, of the Rolls-Royce Apprentice School, Derby, one of the greatest experts on the early cars, and R-R early history, to come and talk to us on this occasion. He will also show some interesting slides of early cars taken in his lifetime's association with the Company. He hopes to drive down his 1906 3-cylinder car, which will be on show in the daylight of summertime, before the dinner. The Mess is in Manor Road, off Longwall Street, near the site of the new St Catherines College, Oxford. Here we have the facilities of a very pleasant bar, where members may meet from 6 pm. We are very grateful to Wing Commander "Whittam, the Commanding Officer, for making over the premises to us for this evening. The turkey dinner will be half a guinea a head. It is essential that application be made by those wishing to attend the dinner so that catering can be arranged; will members please send their names to the Hon. Secretary not later than Friday March 29th. The original date published in the Bulletin for this dinner has now been changed, to fit in with Mr Morton's plans; the proposed rally to Waddesdon Manor the following Saturday has also been postponed, because: The 20-Ghost Club have invited us to participate in their run to Alwalton, Lincolnshire, birth-place of Sir Henry Royce, on Saturday March 30th. for the Centenary of his birth. Write to the Secretary if you wish to attend.

Sunday April 28th, 1pm. A visit to Stanley Sears' Motor Museum at Bolney, Sussex. We rendezvous at 1 pm at the Queen's Head Inn on the main London/Brighton Road, A23, at Bolney. The entrance is by a small private road adjacent to the inn, where sandwiches can be had by prior arrangement. Tea afterwards at the Tudor House, one mile north. We are issuing tickets for this meeting, which should be obtained from our Hon. Secretary not later than April 20th. Please say if you require sandwiches from the Inn. Museum tour starts at 2. 30.

Tune 9th. We have been approached by Oxfam to provide cars for their Cavalcade of Cars Through the Ages in Blenheim Park on Sunday June 9th. Some 500 cars of all makes are expected. Those wishing to attend please notify our Secretary.

June 16th. We are invited to join the 20-Ghost Club, who are meeting at Stanford Park, together with other R-R clubs, and the BDC, at noon.

June 30th. Our Annual Concours d'Elegance will be held at Blenheim Palace.

September. Blind Speedometer country tour, with Rally at Stately Home

October. AGM and Film Meeting

NATIONAL REGISTER

We enclose a form for members to complete if they wish, to help the Veteran and Vintage Magazine to compile a register of the older cars.

ACE DISCS FOR PRE-1940 R-R WHEELS

Cornercroft Ltd, makers of wheel discs and fittings, inform us that they can no longer supply their products for wheels larger than 17", so the only source of replacement is from cars that are being broken. It is important to see that the threads on the aluminium nave plate and the plated brass securing rings are thoroughly cleaned out with a fine pointed instrument, and then smeared with oil before assembly. Failure to do this results in the aluminium and brass growing together, and attempts to remove the ring at this stage result in the battered chrome retaining rings.

The last cold spell has produced the usual crop of cracked cylinder heads, in most cases due to inadequate concentration of anti-freeze in the coolant, or putting cold water into over-heated heads.

Repair of heads. The Service Depot at Hythe Road will undertake the repair of heads in suitable cases at an approximate cost of £20 to £30. If the crack runs into any hole in the casting it cannot satisfactorily be restored by welding, and the only suitable process is by electro deposition of copper, originally patented as the Electrobond process. This is carried out by depositing copper into the pores of the cast iron at a fraction of a volt, over a period of some weeks, so you are without your cylinder head for about a month. Planing of the cylinder head is necessary in all cases after repairs have been carried out, otherwise further leaking and cracking will occur.

Mr Drake, who invented the process, went out of business last year. After much research we have found that the Rootes Group have bought the process up, and have kindly agreed to accept suitable iron cylinder heads for repair, provided the combustion chamber is not involved. Repairs should be sent to Mr H. A. Poole, Singer Motors Ltd, Victoria Works, Maidstone.

Aluminium heads can be welded and built up, provided they are not corroded thin, by competent gas welders.

LEATHER UPHOLSTERY

We have obtained a number of Connolly's hide leather upholstery sets arising from an altered styling of car trim. We have found them eminently suitable for re-upholstering our cars, and can supply these in beige, dark red, and blue at £18 a set.

TIME, GENTLEMEN, PLEASE

One of the bothers entailed in overhauling the crankshaft vibration damper is the possible loss of the valve timing, which can be, to say the least, irritating.

On all 20 HP, 20/25 HP, and 25/30 HP engines, valve and ignition timing marks referring to nos. 1 and 6 cylinders appear on the flywheel; also appearing is the valve clearance for timing purposes. Strictly speaking, on 25/30 HP the marks are on the clutch unit, but the principle is the same. As standard, there are no marks on the timing gears.

Before extracting the damper, align the flywheel TDC mark with the pointer, and mark the mating teeth of all the gears except the crankshaft pinion; a dab of paint or Prussian blue, or even a pencil mark will suffice. As the damper withdraws, a progression of two teeth will occur between the pinion and the camwheel. If this characteristic of helical gears is overlooked, a good deal of frustration may ensue.

On completion of the work to the damper, check that the TDC mark is in register and the marks on the gears are aligned. Then offer up the damper and line it up with the crankshaft keys, but before meshing up the pinion turn it and the crankshaft two teeth clockwise. Once the damper has been urged fully home it will be observed that a retrogression of two teeth has occurred, and once again all the marks will be in alignment.

To check the valve timing, set no. 1 inlet rocker to the timing clearance, and then bring the flywheel 10 (inlet opens) mark into line with the pointer. At this the push rod should just be nipped. An error of up to 1/2" at the flywheel rim is permissible, provided the timing is late within this limit.

Remember that the flywheel marks refer equally to nos. 1 and 6 cylinders, and do not make the error of timing the valves and ignitions on the same stroke. Such a setting gives a remarkable complete absence of performance.

R.H.

ENGINE OVERHAUL PERIODS

There is a popular misconception about the R-R engine, which can best be put in terms of the man at the pump: "They go on forever, don't they Guv." While this is true to the general public, as a result of the efforts of all Rolls-Royce enthusiasts, we have to face the fact that they do wear out. The big difference between the Royce and other engines is that it wears out very gradually and quietly, giving you 40,000 (approx.) miles warning. When the owner eventually imagines that re-ringing, or some other inexpensive treatment is all that is required to restore "as new" performance, he is staggered to find that the whole engine is thoroughly worn, and reconditioning is a very expensive game.

ENGINE OVERHAUL PERIODS (continued)

The policy governing overhauls, laid down by the Company, is that the level of oil consumption should be used as a guide to the general condition of the engine, an excessive oil consumption indicating the need for a complete engine overhaul. The complete overhaul should at least include stripping the engine, cleaning every part, re-boring, replacing little end bearings, gudgeon pins, pistons and rings, and overhauling the slipper drive. It may well include replacing big end and main bearings, timing gear bearings, valves, guides and valve springs. In the case of PII and PIII, the camshaft and valve gear will demand attention. All this adds up to a bill for up to £1500 (OUCH!)

The man who demands absolute perfection, and who has a pocket several miles deep, will be prepared to undertake such an overhaul if he finds a car with bodywork that puts it in the top class. The rest of us, who are prepared to revise our ideas of perfection in the light of a limited bank balance, look for a less expensive way out of trouble. The following dodges have been used with success, but I cannot say how many miles they are good for.

1. Providing the existing pistons are not showing signs of fatigue, it is possible to re-use them by lining the cylinders, and boring them to fit. The pistons are re-conditioned by reaming them for oversize gudgeon pins, and turning out the ring grooves to take wider rings.

2. Re-ringing alone can cure oil consumption if the bores are not worn in excess of about 5 thou. Duaflex oil control rings are now supplied by R-R for all replacement sets on 20/25 and PII, and have met with considerable success.

3. The existing main bearing and big end shells can be re-metalled and bored to fit the crankshaft. This technique is liable to give trouble if extreme care is not exercised in cleaning up the shells after the white metal has been deposited, as otherwise the "nip" of the shells in their housings will be destroyed, causing fretting and loss of oil pressure.

4. The top end knock often heard on worn engines is not piston slap but little end knock. The little ends should always be replaced when re-ringing, if silence is required.

Since the overhaul of these engines is difficult and expensive, I would advise members to leave their engines alone if they are running reasonably well. To chase after perfection in a nearly perfect engine ends up nearly as expensive as overhauling a thoroughly worn one. If you must look inside your engine, either put it back together without doing anything but clean it, or overhaul the whole lot to the best of your ability.

There is no harm in decarbonising an engine, as this merely involves lifting the head, but beware of going any further without being prepared for the worst.

OVER-RICH IDLING ON 25/30

There are two types of gasket available for the float chamber cover on the Stromberg carburettor fitted to the 25/30. It is essential that the correct gasket is used, or there is a possibility of blocking off the idling air bleed, resulting in complaints of over-rich idling. Thus, in case of this complaint, see that the gasket has as many holes as the top surface of the float chamber.

THANK YOU

The Technical Secretary would like to thank all members for the prompt and safe return of service sheets. This has made the job of getting the required information to members very much easier than had been anticipated.

N.H.

FOR SALE

Set (5) of 19" wheel discs (from a 1930 chassis GDP) complete with all components including retaining rings, valve extensions and a special spanner. £5. Apply Col. P. G. Parker, Bieby House, Winchcombe, Glos.

1934 20/25 3-light saloon by Windover. Used every day and in really good condition. With mascot, tools and two spare wheels. May be seen 141 Warren Road, Farnborough, Orpington, Kent (S5909) or at Westminster Hospital, SW1. Apply C. Wastell. £300 ono.

1929 PII limousine, £65

1937 25/30 Park Ward sun saloon, completely rebuilt, £390

FOR SALE (continued)

1937 PIII Windover sedanca, total mileage under 55, 000, black/maroon, immaculate condition throughout, £700

1929 PI saloon by Windover, re-cellulosed blue/grey, engine overhauled, £100

1932 PII MS series, top hat Mulliner coachwork

1933 20/25 James Young cabriolet, converts to full open tourer Apply Hon. Secretary

1937 PIII Hooper landaulette, recently fitted new pistons and rings. In excellent condition throughout. Apply E.Harris, Paternoster Farm, Yarnton, Oxon.

1935 20/25 saloon, chassis GOH 63, eng: L6N, price £300. Write S.Karpeles, 28 Victoria Street, SW 1, tel: ABBey 3029

1923 '20' in process of restoration, all donkey work done. Apply E. J.Poulter, 20 Lower Icknield Way, Chinnor, Oxon.

1935 20/25 H. J. Mulliner 4-light sports saloon with boot, new upholstery and tyres, front and rear bumpers. Apply Col. R. E.S. Beirne, Heath Cottage, Clifton Heath, Nuneham Courtney, Oxon.

TYRES

Two 600/650:20 covers (not remoulds) 2-3000 miles, only £8 each. Apply G.E.Baugban, 27 Colstan Avenue, Carshalton, Surrey. Vigilant 8306

G.W.Wrapson, 29 Kirk Close, Oxford, has two 32x4 1/2 tyres for sale.

Vintage Tyre Supplies, 35 Cricklewood, Broadway, NW2, tell us they have a quantity of 33 x 5 covers (6-ply, Gehrig tyres and tubes) recently imported from America. We believe the price will be circa £20-£25.

F.R. Galloway, 2 Wellfield Road, March, Huddersfield, has the following for sale:

Two new Dunlops size 33 x 5, one almost new Goodyear remould 33 x 5, one part worn but good Dunlop beaded edge 895 x 150. He WANTS three new 600 x 20s and one R-R wire wheel of this size.

WANTED

D.W. Miles, 38 High Street, Leamington Spa, is looking for four wheel discs (21" wheels) outers only complete with centre fixing rings, and a carburettor in good condition, for 1925 '20' GPK 50.

SILVER GHOST TOOLS

Mr J.G.Hutt, Appley Cottage, Ashmore Green, Newbury, who is owner of a 1914 SG, has "a fair selection of Ghost tools" which he has kindly offered to lend to those in need.

OLD BULLETINS

There is an interest among many of our new members in the early editions of the Bulletin. If any of you do not wish to keep these issues, perhaps you would be good enough to return them to the Hon. Secretary, to help her make up sets for those who are collecting them. We do, in any case, propose in the future to publish a digest of some of our technical articles, which will serve as a supplement to the Handbooks.

DON'T LOSE YOUR PRECIOUS MASCOT

We keep hearing from members whose mascots have been stolen, and these have become very difficult to replace. It is recommended that the cap and mascot are unscrewed whenever the car is left unattended. We now have a supply of new plain undrilled caps, price 38/-, in chrome, which we recommend for use when the car is left, Apply Hon.Secretary.

NEW BADGES

The initial supply of Club badges is now exhausted. A further batch is on order, and should be available in six weeks.

TRUEXpress 53 Holywell OXFORD 43292

LIST OF MEMBERS December 1962

* denotes Committee member

- D. B.E. Adams, Eastfield, Exeter Road, Okehampton, Devon 1924 '20'
 D.J. Attenborough, 41 Rpyston Park Road, Hatch End, Mdx 1933 PII, 1932 '25'
 P. C.G. Abbott, Lindens, Holtye Road, East Grinstead, Sussex 1930 PII
 Dr Roger Andrews, 23 High Street, Highworth, Wilts 1927 '20'
 Bjorn Almberg, Brunngatan, 9, Sundbyberg, Sweden 1926 PI
 Roy G. Adams, 49 Cliddesden Road, Basingstoke, Hants 1934 20/25 also 1930 PII
 P. Burton, 3 Kentfields, Kingston, Lewes, Sussex 1938 25/30
 Cdr H. G.K. Bramah, RN Rtd, Redminster House, Thurlston, near Penistone, Yorks
 1937 PIII
 Colin Bradbury, 35 Woodland Court, Dyke Road, Avenue, Hove 1924 '20'
 R.C. Blaker, 6 Creswell Gardens, SW 5 1935 20/25
 J.K. Booty, 20 Martin Rise, Bexleyheath, Kent 1927 '20'
 Dr A.S. Beer, 78 Lower High Street, Thame, Oxon 1935 saloon
 *Lt Col E.R. Barrass, OBE, TD, 5 Holland Road, Leckhampton, Cheltenham
 20/25's, 1932 and 1935
 R.J. Barton, 20 Queens Gardens, W2 1929 20/25, 1933 20/25
 Tom Brahmaer, 23, Rue des Torrents, Vevey, Vaud, Switzerland 1921 Silver Ghost
 S/Ldr E.A. Bali, Gll Sloane Avenue Mansions, Sloane Avenue, SW 3 1934 & 35 20/25's
 H.C. Brooks, 8 Oxford Street, Woodstock, Oxon Assoc.
 B. Brooks, Hensington Farm, Woodstock, Oxon Assoc.
 E.J. and R. Brooks, Long Close, Woodstock, Oxon 1926 PI
 C. P. Brooks, Hillside, Shelleys Lane, Knockholt, Sevenoaks, Kent 1930 20/25
 H.D. Coysh Busby, Lindfield, West Wembury, Plymouth, Devon 1937 25/30
 A. C. Burton, 113 Glenroy Street, Ruath Park, Cardiff Assoc.
 J.A.G. Burchall, Manor Hurst, Meadow Way, Chigwell, Essex 1912 & 13 SGs 1929 '20'
 Mrs J.I. Barbosa, Motts Hill Cottage, Withyham Hartfield, Sussex 1930 20/25
 Lt Col R.E.S. Beirne, RM Rtd, Heath Cottage, Clifton Heath, Nuneham Courtney, Oxon
 1933 20/25
 G. L. Brown, Prego, Haver Avenue, West Kingsdown, Kent 1936 20/25
 S/Ldr F.J. Bennett, 3 Grantham Road, Robertson Close, Waddington, Lines Assoc.
 E.H. Brown, 62 St Georges Terrace, East Boldon, Co. Durham 1933 saloon
 J. L. Brown, 15 St Georges Loo Mansions, St Loo Avenue, Chelsea, SW 3 1938 25/30
 J.G. Bissett, Hillcrest, Crosshill-by-Maybole, Ayr 1932 20/25
 M.F. Butler, 5 Terrace House, 128 Richmond Hill, Richmond, Surrey 1935 20/25
 G. Bird, Thatched Cottage by the Forge, Finchampstead, Wokingham, Berks 1938 25/30
 C.S. Butterworth, 367 Washway Road, Sale, Cheshire Assoc.
 M.J. Beale, 91 Chalkwell Avenue, Westcliffe-on-Sea, Essex 1935 20/25
 G.E. Baughan, 27 Colstan Avenue, Carshalton, Surrey 1929 '20'
 R. A. Brown, 28 Borneo Street, Putney Common, SW 15 1933 20/25
 A.L. Braybrook, 13 High Beeches, Chelsfield, Kent 1930 20/25
 C.C. Bown, The Bungalow, Millbatch, Ottery, near Bridgewater, Som. 1930 PII
 R.M.H. Ball, Lower Farm, Longborough, Moreton-in-Marsh, Glos 1938 Ch:GLP 40
 D.J. Carpenter, 39 Highmead, Plumstead, SE 18 1932 20/25
 Wing Cdr A. R.T. Coke, Garstons, Heytesbury, Warminster, Wilts 1938 25/30
 R.S. Cooper, Sunny Mount, Tabernacle Road, Hanham, Bristol 1930 PII
 C. Cooke, 99 Church Street, Chesham, Bucks 1921 Silver Ghost
 Flt Lt C.J. Calvert, DFC, Officers Mess, RAF, Eastleigh, Nairobi, Kenya, BFPO 10
 1934 PII
 Revd P.M. Caporn, The Rectory, Eastwood, Notts 1932 PII
 Dr A. J. Carman, Wentways, East Studdall, near Dover, Kent Assoc.
 L.M. Crees, Jennies, Brackley Road, Beckenham, Kent 1937 25/30
 A. J. Castle, 5 Blackgate Road, Shoeburyness, Southend-on-Sea, Essex Assoc.
 D.J. Clare, 18 Sheep Street, Wellingborough 1935 20/25
 P. J. Constable, Medhurst, 20 Johnson Street, Southall, Mdx 1929 20/25

Lt Cdr J.Dymock Maunsell, RN Rtd, Endway Cottage, Fir Grange Avenue, Weybridge,
Surrey 1926 PI, 1934 PII

*C. Daff, 472 Banbury Road, Oxford 1929 25 hp

A.F. Deveson, Westleigh, Third Acre Rise, Cumnor, Oxford 1938 25/30

S. Davis, 44 Philbeach Gardens, SW5 1937 PI

Surrey 1929 '20'

W.G.Davis, Quakers Yard Garage, Quakers Yard, Treharris, Glam 1935 20/25

W.Davidson, 27 Low Wood Road, Denton, Manchester Assoc,

John Dobie, 2 Thatchbury House, Roehampton, SW 15 1933 20/25

Mr and Mrs Elliott Smith, The Grange, Old Headington, Oxford 1934 20/25

M-J.Erroll, Flat 4, 54 The Avenue, Beckenham, Kent 1936 Park Ward

Revd J.W Evans, Old Milverton Vicarage, Leamington Spa, Warks 192' 20/25

R.E.Derrington-Fenning, Royal Hotel, Ashby-de-la-Zouche, Leics 1926 20

Dr A. J. Fairrie, Lampits Hill, Corringham, Essex 1935 20/25

S. Fortune, 20 Linden Road, Leatherhead, Surrey 1938 25/30

C.R.Fuller, 23 Dorset Close, Chelmsford, Essex 1933 20/25

Nicholas Franco, Jr, Princesa 23, Madrid 8, Spain 1921 Silver Ghost

W.T. Field, Sweed Meadow Lodge, Waterhouse Lane, Gedling, Notts Assoc.

J. Gale, St Keverne, 5 Shanklin Avenue, Billericay, Essex 1926 '20'

W. Glover, 49 Campden Square, NW 1 1935 20/25

C.E. Green, 21 Brechin Place, SW 7 1936 40/50

H.F.Gresham, Ghyllwood, Parish Ghyll Drive, Ilkley, Yorks 1937 25/30,
1936 25/30, 1935 PII

Mrs Greenwood, The Elms, Tedstone Wafre, near Bromyard, Hereford 1926 '20'

I.E. Griffiths, Segrwyd Farm, Trevine, Haverford West, S.Wales 1935 20/25

F.R. Galloway, 2 Wellfield Road, Marsh, Huddersfield, Yorks 1923 '20'

J.A. Goodwin, Woodcote, Gills Hill Lane, Radlett, Herts 1937 25/30

Cdr J. Garland, Rosslyn, Green Lane, Yelverton, Devon 1937 25/30

N.J. Ganley, Ferndean, 27 Maypole Road, Ayr Assoc

Capt. P.C.Gibson, 13 Grenville Place, SW 7 Assoc.

J.G-Hutt, Appley Cottage, Ashmore Green, Newbury, Berks 1914 Silver Ghost

*N.H.Hughes, Cam Brea, Gold Street, Riseley, Beds 1930 20/25

I.B. Wiboe-Hansen, Fugelvarvsvej 58, Lyngby, Copenhagen, Denmark 1929 PI

E.Hope, FRCS, Higham, Marlton Hill, Paignton, Devon 1927 '20'

Colin Hughes, Spinney House, 15 The Drive, Haresfield Place, Uxbridge, Mdx Assoc.

*E.Harris, Paternoster Farm, Yarnton, Oxon 1937 PIII, 1924 Silver Ghost

Major A. J.Hewitt, 18 Broomfield Road, Surbiton, Surrey 1935 20/25

J. Hamilton Fish, Flat 5, 21 Hyde Park Square, W2 1928 '20'

A.G. Hazlewood, 81 Ashlands Road, Cheltenham, Glos 1934 20/25

Revd F.R Hodges, St Breoke Rectory, Wadebridge, Cornwall 20/25

J. Hurdidge, 31 Sidewood Road, New Eltham, SE 9

M.L. Hall, Pippens, Angel Road, Thames Ditton, Surrey 1937 25/30

Dr L. Henderson, 114 Burges Road, Thorpe Bay, Essex 1936 20/25

J.D.Horsfield, Warley Springs Garage, Burnley Road, Halifax 1930 20/25

C.H. Harris, Glenlyon, Freshfield Road, Formby, Lanes 1935 PII

W.J. Head, 28 Ock Street, Abingdon, Berks Assoc.

S.L. Houston, Ravenswood, 36 Glasgow Road, Blanefield, by Glasgow 1935 Park
Ward saloon

P.M. Hitchin, Pine Needles, 278 Vale Road, Ash Vale, Aldershot, Hants 1928 PI

R. Haworth, 13 St Leonards Road W, St Annes-on-Sea, Lanes 1935 20/25

R. Howells-Jones, 10 Glanryd, Rhiwbina, Cardiff 1934 20/25

Dr. W. Jackson, Regency House, Queens Hill, Ascot, Berks 1934 20/25

F.W. Jones, 17 Oxford Road, Mosely, Birmingham 13 1931 PII

P.G. Jackson, The Corner Stores, Sutton Benger, Chippenham, Wilts 1935 20/25

S.R. Johnson, ASS Rects. RAF, Lyneham, Wilts Assoc.

W.N. Jowes, West Ridge, School Hill, Heswall, Cheshire 1938 20/25

M.J. Jewkes, Dolphins, 5 Laburnam Avenue, Kenilworth, Leamington 1929 '20'
 H. Armstrong James, Yew Tree House, Albion Lane, Ferne Kent 1931 Ch:GPS 28
 Wing Cdr M M. Kane, MBE, Brimpton Cottage, Milton, Oxon 1928 '20'
 H. Kemp, 372 Charminster Road, Bournemouth, Hants 1929 '20'
 Cdr H.W. Keller, 63 Hendon Wood Lane, Mill Hill, NW 7 1929 '20'
 R.S. Klapprott, Waveny, Green Lane, Ashstead, Surrey 1931 20/25
 P. Kent, 31 Holmhurst Road, Belvedere, Kent 1928 PI
 S. Karpeles, 19 Vincent Square, SW 1 1934 20/25
 P.H. Kift, Lodge House, Hanham Green, near Bristol 1934 20/25

 A.S. Lewis, 92 Rosslyn Crescent, Harrow, Middlesex 1936 ch: GTL 16
 J.M. Leavens, 14 Rowan Road, Summit, New Jersey, USA
 D.N. Lester, 6 Glebe Street, St Clements, Oxford 1937 25/30
 Major Charles Lewis, 706 Crestview, Wilmington, Ohio, USA 1929 '20'
 Rolf Arnold-Lagne, Handelsvagen 30, Enskede, Sweden 1921 Silver Ghost
 A.E. Lumley, 10 Minster Road, Ramsgate, Kent Assoc.
 E. A. Lister, Langdale, Highlands Lane, Chalfont St Peter, Bucks Assoc.

 E.S. Mallett, Westend Farmhouse, Sandford Road, Aldershot, Hants 1937 25/30
 J.E. Montgomery-Baird, 3 Thorny Lane South, Richings Park, Iver, Bucks. 1930 20/25
 Ian Monro, Calverts Cross, Jordans, Bucks 1936 25/30
 Ian Monro, 4 Lloyd Square, WC 1 1927 '20'
 A.D.S. Miller, Tonn, Llandovery, S.Wales 1925 '20'
 D.W. Miles, 33 Melton Road, Leamington Spa, Warks 1925 '20'
 N. Middleton, Ilgars, Runwell, Wickford 1935 25 hp
 C. Manners, 108 Beacon Street, Lichfield, Staffs 1927 '20'¹
 A.C. Malin, Worlingham Hall, Beccles, Suffolk Assoc.
 A. McKechnie, Fairfields, Redmarley, Gos. 1923 '20'
 A.R. McKellar, 43 Foxborough Road, Radley, Abingdon, Berks 1936 20/25
 Dr J. McKenzie, la Rawlinson Road, Oxford 1937 25/30
 R.Mundin, 3 Great Lane, Bierton, near Aylesbury, Bucks 1936 25/30
 T.Machell, Dormy Cottage, Rope Walk, Littlehampton, Sussex 1930 PII
 J.R. Melrose, 41a Deacon Road, Willesden, NW2 1935 20/25
 C.W. Maude, 26 Ancaster Road, Far Headingley, Leeds 16 Assoc.
 I.S. Morgan, 100 Kingshill Road, Dursley, Gos. 1925 '20'
 W.T. Mellor, 17 Spiers Way, Horley, Surrey 1936 25/30
 Dr Granville-Mathers, 87a Harrow View, Harrow, Middlesex Assoc.

 E.R. Nicholson, 57 Argyll Road, N.Harrow, Middlesex 1936 25/30
 Dr P.T. Nowell, 38 Rosemount Road, Liverpool 17 1933 20/25

 D. Organ, 250 Banbury Road, Oxford Assoc.
 C.R. Olsen, 133 Northland Road, Northland, Wellington W2, New Zealand
 M.H. O'Connor, Flat 3, 7 The Avenue, Beckenham, Kent 1934 20/25

 W. Pollard, 4 Portarlington Road, Bournemouth, Hants 1935 20/25
 M.J. Palmer, 8 Derwent Close, Claygate, Esher, Surrey 1937 25/30
 A. Pyle, 31a Greenmarket, Newcastle-on-Tyne
 O.H. Perks, Silverdale, The Avenue, Clevedon, Som. 1922 Silver Ghost
 A.H.B. Procter, Royal Beacon Hotel, Exmouth, Devon 1952 Wraith
 A.G.B. Parker, Bleby House, Abbey Terrace, Winchcombe, Gos 1929 20/25
 P. G. Pigeon, 17 Annandale Road, Sidcup, Kent 1933 Hooper
 G. Phillips, 12 Walton Street, Oxford 1933 20/25
 B.M. Poag, 45 Overhill Way, Park Langley, Beckenham, Kent 1929 '20'
 H.C. Pepperell, Barclays Bank House, Biggleswade, Beds 1923 SG
 G.W.Procter, The Firs, Temple Lane, Copmanthorpe, Yorks 1930 PII
 E.P. Peet, Tain-y-Mynydd, Bronygarth, Weston Rhyn, Oswestry 1936 PIII
 F. Parker, 6 Old North Road, Royston, Herts 1929 20/25
 P.M.G. Perrow, Toad Hall, Watlington, Kings Lynn, Norfolk 1934 20/25
 E. A. J. Perry, Winfields, Hortspring Lane, Aldenham, Herts 1935 Park Ward limousine

J.C. Richards, 72 Sidney Road, Raynes Park, SW 20 1935 20/25
 C.H.P. Richards, Abergwynant, near Dolgelly, Merioneth 1934 20/25 1939 Wraith
 F.D. Robinson, 1 Church Road, Alsager, Stoke-on-Trent, Staffs 1931 20/25
 J.P.R. Rogers, Clyne Mayals, 201 Mayals Road, Blackpill, Swansea 1924 '20'
 M.H. Rosewarne, The Corner Cottage, Keswick Road, Orpington, Kent 1936 20/25
 The Revd D.E. Roberts, St Peter's Vicarage, Hixon, Staffs 1930 PII
 A.P. Rollett, Upton Hellions, Crediton, Devon 1932 20/25
 G. Ross-Watt, Belhaven, Myrtle Avenue, Lenzie, Glasgow 1933 20/25
 S.J. Rea, 15 Bedford Street, Gloucester Assoc.
 G.G.M. Roberts, 117E Broadway West, Leigh on Sea, Essex 1937/8 25/30
 Lt G.W.S. Rottiwel.RN, HMS Hermes, c/o GPO London 1934 20/25
 ++ W.A. MacRae, 1 Rosalyn Grove, Timperley, Altrincham, Chesh. 1935 20/25
 D. Macmilian, 14 Silverdale Road, Bushey, Watford, Herts 1928 '20'

* denotes Committee member

P.W.J. Stomm, 49 Howard Road, Westbury Park, Bristom 6 1936 20/25
 Capt.M .Seddon, Datchet Cottage, Datchet, Bucks 1934 PII
 D.G. Standish Hayes, West Warren, Warren Road, Woodley, near Reading 1937 PIII
 E. Silcock, The Close, Great Road, Winchcombe, Glos 1932 25/30
 George Scott, The Bungalow, Langbar Road, Middleton, Ilkley, Yorks 1927 coupe
 E.A.N. Spicer, Alderbrook, Fulmer, Bucks 1938 PIII
 Lt. Col. J. Stevens, Short & Harland, Montgomery Road, Belfast, N.Ireland Assoc.
 Miss C.M. Scott Clark, Gil Sloane Avenue Mansions, Sloane Avenue, SW3
 P. Shurmur, College Farm, Yarnton, Oxon Assoc.
 H. Savage, Riplingham, The Circle, Southsea, Hants 1933 20/25
 J. Savage, 67 St Andrews Road, Southsea, Hants 1930 PII
 D.H. Surgeoner, 53 Woodside Avenue, Beaconsfield, Bucks 1937 sports saloon, 1933 '25'
 Julian Shindle, 330 Maiden Way, New Maiden, Surrey 1934 20/25
 Fritz Spiegl, 4 Windermere Terrace, Liverpool 8 1924 '20'
 W. Scholes, AMHCI, Rookwood Christian Hotel, Edgar Road, Cliftonville, Margate, Kent
 R. Symmons, 78 Banbury Road, Oxford 1937 25/30 , 1939 Wraith
 Capt. D. G. Sargant, RAMC, Gordon House, Royal Hospital, Chelsea, SW3 1935 20/25
 Cdr. J.W. Stead, RN, c/o Hagues, 62 Constable Road, Ipswich, Suffolk 1933 20/25
 Miss S.M. Sainter Ashbrook, 78 Arkwright Mansions, Hampstead, NWS 1935?
 H. A. Smith, 43 Fairfield Road, Hoddesdon, Herts 1930 20/25
 P.McL.Swift, 12 Pentley Close, Welwyn Garden City, Herts 1933 20/25
 J.W.G. Sharp, 38 Station Road, Walmer, near Deal, Kent 193120/25
 Dr John D. Scott, 2 Ash Haugh, Portsmouth Road, Esher, Surrey 1926 21.6 hp
 E.M. Syddique, 42 St Martins Drive, Eynsford, Dartford, Kent 1934 20/25
 C. F. Scriven, BEM, 34 Langdon Road, Cheltenham, Glos Assoc.
 J. Simpson, Fiarfield, Woodbury, near Exeter 1937 saloon
 H. Monro Smith, c/o Jardine Matheson Ltd, Hong Kong 1930 20/25
 T. Sorrell, 7 Broad Oak Way, Stevenage, Herts Assoc.
 J.C. Smerdon, 20 Pakenham Road, Edgbaston, Birmingham 15 1934 saloon
 R.W. Stott, 2 Southfield, Horton Crescent, Rugby 1934 20/25
 A.L. Tipton, Queens Hotel, Ashby-de-la-Zouch, Leics 1938 PIII
 J.B. Thornton, 13 The Butts, Warwick 1934 sports saloon
 J. Taylor, 73 Waltham Avenue, Leicester 1934 20/25
 W. Tolley, 19 Ainsworth Road, Park South, Swindon, Wilts 1933 20/25
 N.de B.H. Tuppen, Highlands, Horam, East Sussex 1929 New Phantom
 H. Taylor, 2 Estate House, Pinewood Road, Iver Heath, Bucks 1932 20/25
 T.Sgt.W.L. Tew, 3920th HQ Sq., Box 1049, RAF,Brize Norton, Oxon Assoc.
 R. Tookey, British Bank of Middle East, PO Box 57, Bahrain, Persian Gulf PII, '20'Ghost
 A.E. Tomlinson, 20 Craven Street, Burton on Trent, Staffs 1930 20/25
 A.L. Taylor, 8 Heythrop Drive, Acklam, Middlesborough, Yorks Assoc.
 A.M. Vince, Leckhampstead Farm, Newbury, Berks 1928 PI
 K. J.S. Vasey, Terrace House, 128 Richmond Hill, Richmond, Surrey 1927 '20'

W.J.F. Ward, 6 Pump Court, Temple, EC4 1933 20/25
*G.W. Wrapson, 29 Kirk Close, Oxford 1939 Wraith
A.W. Walker, 85 Bagley Wood Road, Kennington, Oxon 1924 '20'
R.S.G. Williams, Holly Lodge, Croes-y-Ceiliog, near Newport, Mons 1936 PII
A. J. Wright, 537 Green Lane, Birmingham 1938 25/30
J. Whymant, The Paddock, Horton, Northampton 1932 20/25
Wesley Woolhouse, 30 Guildersfield Road, SW 16 1937 25/30
D.L. West, 38 Staunton Road, Headington, Oxford 1960 Silver Cloud

LIST OF MEMBERS to be continued

CHANGES OF ADDRESS

Flt.Lt.C.J. Calvert.DFC, Officers'Mess, RAF, Abingdon, Berks 1934 PII
Cdr. J.W. Stead, RN, after March 4th HMS Fisgard, Torpoint, Cornwall, near Plymouth

APOLOGIES

To W.N. Jones, Heswall, Cheshire, printed as 'Jowes', and to Mr and Mrs Ellinghouse, 111a St Mary's Lane, Upminster, Essex, Assoc., inadvertently left out of last list.
Also to E.J. Brooks, who is a *Committee member.

TECHNICAL ARTICLES FROM THE R. R. E. C. BULLETIN

Since the RREC Bulletin was introduced over two years ago, it has contained a large number of technical articles which extend the information available in the Company's literature.

Since the supply of back numbers is very limited and there is a constant demand from members for technical information, it has been decided to reproduce the articles in this form.

The articles have been arranged in a reasonably logical order regardless of the original publication date, and cover general topics, choice of petrol and oil, carburation, ignition, valve gear, braking, general overhaul, etc.

This is not intended as a replacement for instruction books or service sheets, but as a supplement.

May 1963

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PASSING THE TEN-PLUS TEST

1

On 12th September I arrived at the Ministry of Transport Vehicle Testing Station, Hendon, and was one of the first to submit a car for test under the voluntary scheme. I am pleased to report that my Twenty passed with no defect, and although I do not expect members to have any difficulty in getting their cars through the test, I will point out a few things they should remember.

When I had my test, I was asked whether I wanted it to be restricted to lights, steering, and brakes, or to cover all defects likely to affect the roadworthiness of the car. In the interest of science, I told the examiners to go to town on the car and sort out as many faults as they could find.

The examiners at Hendon knew all about Rolls-Royce brakes, and realised that the servo operation of the front brakes would make it impossible for them to test the car on their rollers. Therefore an examiner put an accelerometer on the floor-boards, and we drove up and down on the tarmac outside to test the efficiency of foot and hand brakes directly. In my opinion, a crash stop from, say, 12m.p.h., does not give the best efficiency reading from R-R foot brakes, as almost inevitably this leads to locking of the rear wheels, and puts the servo out of action. Remember the servo only applies the front-wheel brakes as long as the rear wheels are turning. Sir Henry Royce designed the system this way to eliminate the possibility of locked front wheels, resulting in an uncontrolled front-wheel skid. My advice is to take the car on the road, and brake from about 30 m.p.h., adjusting pedal pressure for maximum braking without locking the rear wheels. On l.w.b. cars, the braking effort is proportioned to give more effect on the rear wheels than the front. Weight transference during braking reduces the load on the rear wheels and thus reduces braking efficiency. Therefore put your best tyres on the back wheels and arrange to have a passenger in the back seat: the latter made a difference of 10 per cent in efficiency in my case, and could mean the difference between a pass or a fail for two-wheel brake cars.

As to lights, go out one evening and check on the road that your headlamps are set so as not to dazzle oncoming traffic, even in the undipped position. This is a common fail point, even for new cars. Make sure that all your lights are working, and give side and tail lights a smart rap to make sure they do not flicker when vibrated. For those who have made up "period" lighting schemes, the "Rubbolite" diver's helmet lamps were accepted without query at Hendon, but make sure you have at least 6-watt bulbs in them. If you want to increase the efficiency of these lamps, you can paint the black interior silver.

Check whether there is play in the steering connections. Most of these are spring-loaded, and this had the testers fooled until it was pointed out; they thought there was half an inch of play on the side steering tube. A small amount of rock on my king-pins, caused by wear on the roller-bearing, was dismissed as quite insignificant.

Finally, we advise members to have their cars tested, so that if some unsuspected wear is found on a component, they can look for spares before a test certificate becomes a legal requirement.

The Rolls-Royce Service Station, Hythe Road, London, will shortly be able to test R-R cars for the MOT certificate.

N. H. H,

WHICH PETROL?

For the last year I have made two 25-mile runs per week on the M1. This has enabled me to detect quite small differences in smoothness of running, which would go unnoticed in normal driving. Accordingly I have run an extensive check on the cheaper grades of petrol, to determine which is best for my car. The results should be applicable to Ghost, PI (cast iron head), 20 and 20/25. Other models with the higher com-

pression turbulent head designs may not behave in the same way.

The petrols tested were Esso, Shellmex, Power, BP, and Cleveland. Jet is not available in my motoring country. There is nothing to choose between them as regards economy or ease of starting, but Cleveland definitely gave the best performance in terms of smoothness.

If the hand ignition control is operated when the car is running on a smooth level surface at a steady speed of about 40 m.p.h. in top gear, it will be found that retarding the ignition or advancing it from the correct running position will increase engine vibration. Generally the optimum position for the control is further retarded at 30 m.p.h. in top than at 50. The automatic advance mechanism was designed to give sufficient advance for low octane petrols, and with modern petrols I find that I run out of advance at about 45 m.p.h., at which speed the hand control has to go to the top of the quadrant for smooth performance.

With all the petrols except Cleveland I have found it necessary to make continuous adjustments to the ignition timing, to allow for changing road speed. With Cleveland, however, it is possible to set up the timing at about 35 m.p.h., and leave it alone. This implies to me that Cleveland has the lowest octane rating of the available petrols, and is the nearest to the fuel the cars were designed for. I have no shares in the company, but I was getting rather tired of wearing out my ignition linkage and feel other members may benefit from this information.

Incidentally, if any petrol company could be persuaded to sell an even lower octane petrol, at a lower price of course, I am sure our cars would stand it. Has anyone ever heard of a pre-war R-R pinking on modern petrol?

N.H.H.

WHICH OIL?

This article does not attempt to make a fair comparison between brands of oil, as it is quite out of the question for an amateur to make accurate tests of the properties of oils. There are, however, several guiding principles in the use of oil in R-R engines and I will try to state these.

Frequently I get letters in which the writer says that he has just had the rocker box and tappet covers off, and he has seen a nasty-looking build-up of sludge. This statement is usually followed by the question, "Will the use of a flushing oil cleanup my engine?"

The engines in the cars we buy have often done about 100,000 miles since they were last overhauled, and unless the car has been used for a large proportion of runs on which the engine got really warm, and the oil has been changed every 2000 miles or oftener, then the presence of sludge just has to be faced. Besides covering the visible surfaces of the engine, sludge builds up in the crankshaft oilways, as the crankshaft acts as a massive centrifuge, and precipitates the sludge, packing it into a hard dense mass.

If you want a clean engine, to ensure that every part is being lubricated as it should, then the only solution is to strip down every part and clean every speck of dirt out in a degreasing plant. You can go a long way, cleaning by hand, but there is always the chance of leaving dirt in some corner.

If you put a detergent oil into a dirty engine, it will gradually soften the sludge, which will move about until trapped somewhere, causing serious oil starvation. The short-term use of a flushing oil will do no good whatever.

If you have a dirty engine, which is still sound enough to run well, simply change the oil frequently (every 1000 miles) and use a non-detergent or mildly detergent oil. On no account use a multigrade oil in a dirty engine.

We believe Castrol XL and BP Energol 30 to be non-detergent or mildly detergent.

N.H.H.

Although the adjustment of 20 HP and early 20/25 HP carburettors is covered by the various Handbooks, these instruments are often not completely understood. Hence the comments, 'She bangs in the exhaust on overrun', or 'The carb. dribbles when she is standing still'

Before adjusting the jets, ensure the fuel level is 1 1/4" down from the top face of the float chamber. If the float chamber has no side window, tee in a sight-glass for checking purposes. With the level correct fuel will not leak over the jet heads; if it does the float valve is leaking.

The jets and needles seldom require renewal, but the low speed stand pipe should not be bell-mouthed; the conical section of the l. s. needle should enter about two thirds of its length into the jet. The h. s. needle, on the other hand, enters fully into the jet, and it is therefore rather difficult to check these parts for wear. See to it that the h. s. needle return spring is working properly; water and silt being heavier than petrol, this little cap nut assembly can rust up with resultant loss of control of the h. s. jet.

Check the condition of the air valve by unscrewing the complete assembly from the carburettor, and then push the valve up to the top of its stroke. On release the valve should return fully in 1 - 1 1/2 seconds for 20 HP or 1 3/4- 2 1/4 seconds for 20/25 HP. The .015" holes in the air valve piston are for calibration purposes, and may be broached out or filled in as required. The correct setting for the air valve return spring is just short of lifting the top cap when the retaining ring is unscrewed.

The diaphragm washer should be set so that its top face is .025" above the bottoms of the venturi tube cutaways; this point may be checked by means of a depth gauge and the washer adjusted as necessary.

Having restored law and order in the foregoing particulars, and made sure the carburettor and manifold joints are sound, the jet adjustments should be looked to. Bear in mind that the air flow over the h. s. jet is entirely controlled by the air valve, and that irregularities at very small throttle openings call for adjustment of the l.s. jet.

R.H.

OVER-RICH IDLING ON 25/30

There are two types of gasket available for the float chamber cover on the Stromberg carburettor fitted to the 25/30. It is essential that the correct gasket is used, or there is a possibility of blocking off the idling air bleed, resulting in complaints of over-rich idling. Thus, in case of this complaint, see that the gasket has as many holes as the top surface of the float chamber.

N.H.H.

OVER-RICH IDLING ON PII

The car was a late Phantom II, with semi expanding carburettor. Neither adjustment of the throttle edge bleed position nor adjustment of the idle jet venturi had any effect on the richness, which was such as to cause very rough idling, and clouds of black smoke.

The whole carburettor was very heavily coated on the inside with carbon, which may have been the result of adjustments designed to get 20 m.p.g. out of the car, giving severe spitting back. The carb. was cleaned according to the R-R service sheet but to no avail.

The answer lay with a part that is not mentioned in the sheet, and would not normally need cleaning. The air intake to the idle jet assembly is in the form of an inverted U tube, so that the jet can be submerged in petrol for starting, without flooding the carb. Removal of the steel plate covering the top of this tube showed it to be carboned solid, blocking off all the air supply. After removing the carbon and returning the mixture adjustments to the original setting the engine idled perfectly.

N.H.H.

The action of the R-R switchbox feels so delightful that one imagines that this is one part of the car which really does not wear out. I was very surprised the other week to find that my generator charge was intermittent, and that slight movement of the charging switch was sufficient to turn the generator on and off. The situation very rapidly deteriorated to the point where I had no charge. The trouble was badly burnt contacts in the switchbox, and these had to be replaced with spares from an old box. The cause of the trouble was that the previous owner of the car had set the generator charge to about half as much again as it should have been, and this had led to severe sparking when the generator had been turned off. Other contacts in the box were in perfect

To avoid occurrence of this fault, which is very tricky to repair, I recommend that the generator be selected on or off only when the engine is idling and the generator is cut out. After all, the cut out contacts are easy to get at and clean if need be, but the inside of the switchbox is anything but accessible.

N.H.H..

IGNITION INFORMATION

With the original Rolls-Royce ignition coil with detachable bakelite cover the engine will run with the coil connected either way. We have come across a number of cars with the coils incorrectly wired up.

The result of this is that some 45 per cent of the ignition power is lost at the higher speed range. The correct connection is as follows: The wire from the ballast resistor should be connected to the terminal nearest the external high tension terminal, and the contact breaker wire to the low tension wire most distant from the high tension connection.

It has also been brought to our notice that a proportion of the other makes of coil which are used as replacements for the original Rolls type are wrongly connected when made, so do not rely on the makers' markings for contact breakers and LT supply, as the same loss of ignition power will occur at the higher engine speeds. The certain way of ensuring that connections are right is to have the coil tested at a garage where apparatus for this purpose is available.

Although original R-R- coils can no longer be procured from the company, a firm called Magneto Repairs, Lighting and Ignition Co, 324a Cricklewood Lane, London NW2, SPEedwell 0144, will supply a new winding if the Rolls casing is sent back to them, at an approximate charge of 75/-. This firm do most of the electrical repairs for the RR London Depot. Their charge for complete overhaul of dynamos and starters is approximately £24 for each, whether large or small.

Ignition rotors: The metal blades on the mushroom shaped ignition rotor are often eroded after many years of use so that the normal gap of 3/1000" between this arm and the six contacts are widened considerably. These blades can be easily renewed by loosening the single set screw which holds them and replacing with a new one, care being taken to adjust the gap to 3/1000". The part number of this blade for all pre-war cars other than P III is YS 65520 and is obtainable from Crewe.

R.S.

VALVE GEAR OVERHAUL

If your engine has a noisy valve gear, there can be the following causes:

Incorrect tappet adjustment, wear on bottom tappet rollers or cam followers, and wear on rockers. While we recommend a valve clearance of 5 thou. where the book says 3 thou., to allow for old age, the valves can be dead silent with up to 6 thou. if the valve gear is in good condition, and properly lubricated. Wear on the rockers can be easily corrected with a carborundum stone, but be careful to remove no more metal than is needed to eliminate any depression. Worn bottom tappets are expensive to replace, but noise can be reduced by getting the lubrication right.

The small clearance between the rockers and shaft, and rockers and pushrods, act as a very effective oil filter, with the result that the rocker shaft gradually fills up with all

kinds of rubbish. In my case, the drilling in the centre of the shaft was sludged down to one third of its original diameter, and many of the holes leading from the shaft to the drillings in the rockers were completely blacked. The oilways in the rockers themselves were half full of dirt. The rockers and spacers are simply slid off one end of the shaft, and although numbered, should be laid out in order. Cleaning the rockers is easy but the shaft is more difficult. Prodding with thin wire will free the sludge, which can be flushed out with an oil can full of paraffin. Don't forget the oil drillings in the cylinder head, and the oil pipes. The banjo unions get quite full of dirt.

On my car, before cleaning, the oil flow to the top end was just enough to keep the rockers wet, but actual circulation could not be detected. Now, above about 1000 r. p. m. the oil flow is sufficient to maintain a stream 1/32" thick down the pushrods, and of course the valve gear is silent. Oil consumption has not suffered, as nearly all the improved circulation comes down the pushrods, and little goes over the valves. Time for the job: 5 man-hours, including stoning the rockers, and wire brushing all parts to a dull shine.
N.H.H.

VALVE CLEARANCES

Valve clearances while cold are small on all R-R engines, and particular care must be taken to ensure that they do not become zero under any circumstances. This is particularly important when the head gasket is settling down after decarbonisation or overhaul. The settling down process may take several hundred miles, and it is advisable to leave the valve clearances a few thou. wider than recommended during this period. The clearances should be checked after every outing of more than a few miles. This may seem an awful bore, but is much less tedious than removing the head to re-seat the valves.

When finally adjusting the tappets, make sure that the rocker shaft is properly tightened down. One loose rocker standard can play havoc with clearances. Try to adjust each valve with the neighbouring valves nearly closed. If these valves are open, the extra spring pressure can force the rocker shaft upwards slightly, giving a false indication of clearance. You will find that the valve timing prevents you from having neighbouring valves completely closed, without danger of the valve under adjustment being on the verge of opening again.

If you are not sure that your cams and camshaft bearings are perfect, you should play safe and add a thou. to the gap to allow for cam ridges.

N. H. H,

ROTOR ARM TROUBLE

Take the greatest care when turning the engine over with the distributor cap removed. It is possible for one of the clips to foul the end of the rotor arm, and the first thing you will hear is the crack as the rotor arm breaks. We see too many of these with the plastic broken where the end of the wiper has been twisted round.

While on the subject of distributors, check that the ball race at the top of the rotor shaft is not unduly worn. This bearing is lubricated from the hand oiling point on the side of the unit, and is all too often neglected. Wear produces side play in the shaft and can give rise to rough running due to the erratic ignition timing.

N.H.H.

POSTSCRIPT ON COILS

The R-R ignition coil is made in such a way that it can be dismantled quite extensively. I recently took one apart to look for signs of obvious breakdown and discovered that the interior can be fitted into the case in two positions 180 degrees apart. Actually my coil was assembled so that the primary connections were wrong when made as recommended in the last Bulletin, and this gave rise to rough idling and poor high-speed performance. It is important to get the connections right, and it seems that trial and error is the only sure way.

N.H.H.

I have been asked how one replaces the magneto HT wire on the Twenty and 20/25 cars, This is usually oil soaked and swollen to the point where it can not be pulled out of the fibre tube it lives in. The answer is to remove the complete harness, which may involve removal of the water pump, and drill the wire out with a 1/4" drill. This sounds drastic but is quite easy to do without harming the fibre tube. It will be found that if about two inches of cable are drilled out of each end of the longest tube, a piece of well preserved cable can be slipped out of the centre of the tube. An extension drill is not usually needed. The above dodge is by courtesy of member A. W. Walker.

TAPPET ADJUSTMENT ON P III

Tappet adjustment on these engines can be a tricky business, and the following technique is advised by Hythe Road;

Adjust all clearances of 'A' Bank before attending to 'B' Bank- The firing order for each individual Bank is 142635, which is the order of adjustment.

Turn the engine until No. 6 exhaust valve is seen to close, and then adjust No. 1 inlet and exhaust valves. On moving the crankshaft one third of a turn No. 3 exhaust valve will be seen to close, when No. 4 inlet and exhaust may be adjusted. At a further third of a turn No. 5 exhaust valve will close, and No. 2 inlet and exhaust are ready for adjustment. Repeat this procedure for cylinders 6, 3 and 5, which valves are set after closing Nos. 1,4 and 2 exhaust valves respectively.

Having carried out the adjustment of the 'A' Bank cylinders, repeat the sequence on 'B' Bank.

R.S.

Running clearances : Hydraulic tappets .015” Solid tappets .010”

Firing order :

A1 B6 A4 B3 A2 B5 A6 B1 A3 B4 A5 B2

Both valves closed	Exhaust valve lusted closed	Both valves closed	Exhaust valve lusted closed
A1	A6	A6	A1
B6	B1	B1	B6
A4	A3	A3	A4
B3	B4	B4	B3
A2	A5	A5	A2
B5	B2	B2	B5

TIME, GENTLEMEN, PLEASE

One of the bothers entailed in overhauling the crankshaft vibration damper is the possible loss of the valve timing, which can be, to say the least, irritating.

On all 20 HP, 20/25 HP, and 25/30 HP engines, valve and ignition timing marks referring to nos. 1 and 6 cylinders appear on the flywheel; also appearing is the valve clearance for timing purposes. Strictly speaking, on 25/30 HP the marks are on the clutch unit, but the principle is the same. As standard, there are no marks on the timing gears.

Before extracting the damper, align the flywheel TDC mark with the pointer, and mark the mating teeth of all the gears except the crankshaft pinion; a dab of paint or Prussian blue, or even a pencil mark will suffice. As the damper withdraws, a progression of two teeth will occur between the pinion and the camwheel. If this characteristic of helical gears is overlooked, a good deal of frustration may ensue.

On completion of the work to the damper, check that the TDC mark is in register and the marks on the gears are aligned. Then offer up the damper and line it up with the crankshaft keys, but before meshing up the pinion turn it and the crankshaft two teeth clockwise. Once the damper has been urged fully home it will be observed that a retrogression of two teeth has occurred, and once again all the marks will be in alignment.

To check the valve timing, set no. 1 inlet rocker to the timing clearance, and then bring the flywheel 10 (inlet opens) mark into line with the pointer. At this the push rod should just be nipped. An error of up to 1/2 " at the flywheel rim is permissible, provided the timing is late within this limit.

Remember that the flywheel marks refer equally to nos. 1 and 6 cylinders, and do not make the error of timing the valves and ignitions on the same stroke. Such a setting gives a remarkable complete absence of performance.

R. H.

Four-wheel braking, assisted by the servo, was fitted to all R-R chassis after 1925. This servo is, for many, surrounded by an aura of mystery which it does not deserve.

Servos either work or they do not. If yours is in good condition, moderate pedal pressure should produce hard braking, and it should be possible to lock the back wheels without too much effort. A servo which is working may emit slight squeaks, and should have a dry dusty appearance. Any sign of oiliness on either the driving or driven portion must be regarded with suspicion. It is fatal to wash down the gearbox with paraffin or other solvent, as inevitably this leads to contamination of the servo linings and results in failure. If you have a good servo and want to keep it that way, then wipe over the gearbox with a dry rag to remove accumulated oil, and similarly clean up the servo linkage and levers. If you must wash down the box, then tie a polythene bag over the servo to keep the wet off. Incidentally, water is death to the servo just as it is to drum brakes, and a properly fitted gearbox undertray can go a long way towards keeping the unit dry in wet weather.

If your servo is ineffective, as indicated by a braking system requiring excessive pedal pressure for anything but the lightest braking, then oil on the linings is almost certainly the trouble. In any event, clean off the gearbox as above, and try to locate the source of the excess oil. Overlubrication either by hand or from the 'one shot'¹ system can be responsible, as can oil loss from the gearbox via leaking cover plate gaskets. Having cured the cause of the over oiling, you now have to get the unit working, and here you have a choice. Relining is the textbook cure, and is relatively straightforward; however, should you wish to try the alternative, you may 'toast' the servo. If you do the relining job, clean all parts scrupulously in petrol, and be very careful not to pull the driving member away from the gearbox, or you will hear a distance piece fall off inside the gearbox, with a resounding clonk, and you will have several hours work putting it back.

The principle behind toasting is to run the servo for an extended period so that it gets hot and dries out any oil on the linings. This is done by jacking up the rear wheels of the car, and locking the brake linkage so that pressing the brake pedal only engages the servo, and does not apply the rear brakes. These are held off by bracing the outer servo engaging lever so that it cannot move forward. Precise methods of doing this vary with the type of chassis, but generally the lever can be held back by means of hooks, chain, wire and what have you, attached to a chassis crossmember.

You can now start the car, and run the transmission at about 30 m. p. h. in top gear, which can conveniently be set up on the hand throttle. The brake pedal is now operated with moderate pressure, the pressure being released occasionally. This is continued until the servo is too hot to touch. Allow the unit to cool before making a road test, not forgetting to restore the linkage to normal, and to check the servo clearance. This should be not less than 1/32nd", measured between the engaging levers with the servo engaged lightly. If the servo is really wet with oil, a wash down with carbon tetrachloride prior to toasting may prove beneficial. Do not work without good ventilation.

Now take the car for that test run, and try a few light brake applications. If there is no improvement, either your servo was all right before, or the linings may be glazed, in which case re-lining is required.

N.H.H.

TWO CASES OF BRAKE DRAG

Case 1. Symptoms: The near-side rear brakes were remaining lightly on after pedal pressure was released, reducing free pedal travel, and causing the offending drum to emit a low moan of agony.

The trouble was caused by failure of the one shot lubrication to the levers carrying the brake ropes on the near side of the rear axle. The pivots had become so stiff that the pull off springs were totally ineffective, and also the two levers had become seized together so that the footbrake operated the handbrake and vice-versa. The only cure was complete disassembly and thorough cleaning, as oil was incapable of penetrating the fine

clearances of the bushes, which were corroded up. Moral: Don't kid yourself the one-shot system is working until you have checked the whole thing.

Case two was cunningly different. Inspection showed that the dragging brakes could be released by turning a rear drum backwards, but that continued turning applied the brakes again. This is characteristic of a dragging servo.

Slackening off the servo adjuster did not cure the trouble, and careful inspection showed that the inner servo shaft had seized solid in the outer, so that the rebound spring was unable to release the servo, once it had been engaged. Failure here was caused by inadequate lubrication of a hand lubricated servo on a late car, possibly coupled with over adjustment of the servo, resulting in over heating.

Usually servo performance is ruined by over oiling, either from the chassis system, or by gearbox leakage. Once again, complete stripping was the only answer.

N.H.H.

ONE SHOT LUBRICATION

From 1929 onwards Rolls-Royce chassis have been fitted with a one shot chassis lubrication system comprising an oil pump connected to points requiring oil by means of a maze of narrow bore brass pipes. Early cars had separate subsystems on front and rear axles which had to be charged by means of an oil gun.

At each point requiring lubrication is fitted a metering orifice known as a drip plug. The drip plugs contain a small felt filter and a brass insert drilled to pass the correct quantity of oil at each operation of the oil pump. Assuming that the filters in the oil pump itself are clean, and that the oil pipes are not fractured, failure of the system to lubricate a particular component is almost always due to a fault in the relevant drip plug, possibly combined with dirt in the pipelines. The official procedure is to replace any suspect drip plug, but it is as well to check that the pipe to the banjo union on the plug in question is free of dirt. This is quite simply done by pressing and releasing the oil pump with the union disconnected, when any dirt will be expelled. Drip plugs can have their output severely cut down by an accumulation of dirt on the small felt filter inside the plug. This is particularly serious in the case of the rear spring shackles, where the plugs are right at the end of the line and tend to accumulate a large share of the loosened scale from within the pipes. In the last case I treated, there was enough dirt to fill the whole of the inside of the union.

If you have an oil gun, it is very useful to make up a drip plug tester. You need a drip plug union, some pipe, and a screw type oil gun fitting. With this device, you can apply oil pressure to a suspect drip plug, and determine if it passes oil at a reasonable rate. I have put a side branch in the pipe of my tester, permanently connected to a plug of known value, so that I can compare the flow through a suspect plug with that through a good one. If you fit a blank plug with its innards drilled out to the end of this device you can use the oil gun to push oil through to a component which may have become dry due to a failure.

Never trust your one shot system until you have checked it over. It is amazing how many times one finds that a piece of pipe is broken, cutting off the oil supply completely from a large part of the system, and seriously reducing the supply to the rest. Just operate the pedal and have a careful look round underneath the car. If you can see oil steadily dripping or running out anywhere, check for a broken pipe. With the aid of the drip plug map in the instruction book, check that each part is receiving oil. If any part appears dry, check the drip plug. In all cases of work on the oil system, be really fastidious about getting the work area clean. If your hands are dirty you may get enough dirt into the system to make your efforts worthless. When replacing the caps on the drip plug unions, have the oil actually flowing. This may be a bit messy, but it helps to keep dirt out and avoid air locks.

N.H.H.

The pre-war R-R chassis up to, but not including 25/30 and PIII, used a worm and nut steering box of R-R manufacture. These boxes usually perform very well, and show very little wear, apparently being designed to last several centuries before achieving ten-year-test standards of backlash. However, sometimes the oil bath type of box fitted to the late 20 HP, 20/25 and PII, and also 3 1/2 Bentley, gives rise to trouble.

The first snag is a tendency to leak oil. Generally the leaks appear round the flange at the front of the box through which the control tubes pass. The flange may be removed by sliding the control levers off their tubes, slackening the nut on the outer tube, removing the flange retaining nuts and the tab washer under the inboard one, and giving the outer tube nut a smart bang towards the steering wheel by means of a soft drift. This last operation frees the outer tube from its taper in the flange, and enables the flange to be drawn off. You can then try to make an oil tight joint between the flange and the box (not easy). The Hythe Road treatment with persistent oil leakers is to fill them with a 50-50 mixture of hub grease and the recommended oil. Warm the mixture and pour it in.

The second snag is a tendency for the steering to become tight when under load, once the box has become warm. It is not uncommon to find that the steering fails to castor return after a corner. The reason for this behaviour is a matter of opinion. There is no obvious reason why the large white metallised steel nut should seize on the steel worm when the whole lot is oil immersed. One suggestion is that when the box has worn slightly, the nut begins to rock slightly on the worm, reducing the area of contact and causing breakdown of the oil film when the oil is warm. This is reasonable, as the effect can be almost completely eliminated by emptying the box of all the old oil, and refilling with an extreme pressure lubricant such as Castrol Hi-Press or Shell Spirax, SAE 140. The box may be emptied of the old oil by removing the top cover plate and sucking it out with a syringe. I would recommend the use of one of the EP oils regardless. It is absolutely disastrous to dismantle the box and attempt lapping the nut on its worm with metal polish or any abrasive. The white metal will soak up the abrasive like a sponge, and the future rate of wear in the box will be rapid.

N.H.H.

ENGINE OVERHAUL PERIODS

There is a popular misconception about the R-R engine, which can best be put in terms of the man at the pump: "They go on forever, don't they Guv". While this is true to the general public, as a result of the efforts of all Rolls-Royce enthusiasts, we have to face the fact that they do wear out. The big difference between the Royce and other engines is that it wears out very gradually and quietly, giving you 40,000 (approx.) miles warning. When the owner eventually imagines that re-ringing, or some other inexpensive treatment is all that is required to restore "as new" performance, he is staggered to find that the whole engine is thoroughly worn, and reconditioning is a very expensive game,

The policy governing overhauls, laid down by the Company, is that the level of oil consumption should be used as a guide to the general condition of the engine, an excessive oil consumption indicating the need for a complete engine overhaul. The complete overhaul should at least include stripping the engine, cleaning every part, re-boring, replacing little end bearings, gudgeon pins, pistons and rings, and overhauling the slipper drive. It may well include replacing big end and main bearings, timing gear bearings, valves, guides and valve springs. In the case of PII and PIII, the camshaft and valve gear will demand attention. All this adds up to a bill for £1500 (OUCH!)

The man who demands absolute perfection, and who has a pocket several miles deep, will be prepared to undertake such an overhaul if he finds a car with bodywork that puts it in the top class. The rest of us, who are prepared to revise our ideas of perfection in the light of a limited bank balance, look for a less expensive way out of trouble. The following dodges have been used with success, but I cannot say how many miles they are good for.

1. Providing the existing pistons are not showing signs of fatigue, it is possible to re-use them by lining the cylinders, and boring them to fit. The pistons are re-conditioned by reaming them for oversize gudgeon pins, and turning out the ring grooves to take wider rings.

2. Re-ringing alone can cure oil consumption if the bores are not worn in excess of about 5 thou. Duaflex oil control rings are now supplied by R-R for all replacement sets on 20/25 and PII. and have met with considerable success.

3. The existing main bearing and big end shells can be re-metalled and bored to fit the crankshaft. This technique is liable to give trouble if extreme care is not exercised in cleaning up the shells after the white metal has been deposited, as otherwise the "nip" of the shells in their housings will be destroyed, causing fretting and loss of oil pressure.

4. The top end knock often heard on worn engines is not piston slap but little end knock. The little ends should always be replaced when re-ringing, if silence is required.

Since the overhaul of these engines is difficult and expensive, I would advise members to leave their engines alone if they are running reasonably well. To chase after perfection in a nearly perfect engine ends up nearly as expensive as overhauling a thoroughly worn one. If you must look inside your engine, either put it back together without doing anything but cleaning it, or overhaul the whole lot to the best of your ability

There is no harm in decarbonising an engine, as this merely involves lifting the head, but beware of going any further without being prepared for the worst.

N.H.H.

SLUDGE PROBLEMS

Most R-R engines have seen a very great deal of service since their last major overhaul, with the result that there is a heavy accumulation of sludge in the oilways. One indication of this is the refusal of the idling oil pressure to drop to the manufacturer's figure when warm. In my case, the sludging was so bad that it covered up for worn big end bearings. Some authorities have stated that they think the sludge can be shifted by using a highly detergent oil in the sump. This is true as far as it goes in that the sludge will be dissolved and the oil will come out of the engine as black as your hat, but the danger is that some of the loosened material will be trapped at the fine clearances of the bearings, leading to acute oil starvation and bearing failure.

A further point is that the crankshaft acts just like a centrifuge, and particles of dirt and sludge will have separated out in the crankshaft oilways, over the years. It is quite possible for 80 per cent of the big end bearing oil passages to be blanked off in an old engine, as I found when I cleaned my crankshaft. Fortunately the oil drillings in the crankshaft are covered at their ends by removable caps, which makes the cleaning job possible without removing the crankshaft.

The important points to remember are as follows: Detergent oil is death (by thrombosis) to old engines, you should be sure that your high oil pressure does not mean worn bearings and a blocked crankshaft before going on the MI, and you really ought to take off the sump and clean it out before starting an engine which has been standing for several years.

N.H.H.

OVERHAULING 25/30HP ENGINE

The standard modification on this engine was to blank off the water ports at the forward end of the cylinder head or block to effect a greater water circulation at the after end of the engine. Do not attempt to remove this blanking when you have the cylinder head off. There are only three rings per piston and it is as well to renew these as one often finds one broken or the groove worn. In this case the grooves should be turned out and fitted with wider piston rings. At the same time the split skirt pistons can be expanded by the pressure and shot blasting process. All this assumes the bore wear to

be less than ten thou. In this overhaul it was found that after 100,000 miles it was possible to use the original pistons with this treatment. Hall's metal big ends were found in excellent condition, as was the crank shaft.

Gudgeon pins were renewed and fitted with new bushes. As these were standard Well Worthy pins, designed for circlip retention (not provided in Rolls pistons), brass end caps were turned to provide retention. The oil used in this engine was straight Energol 30.

R.S.

CRACKED CYLINDER HEADS

The last cold spell has produced the usual crop of cracked cylinder heads, in most cases due to inadequate concentration of anti-freeze in the coolant, or putting cold water into over-heated heads.

Repair of heads. The Service Depot at Hythe Road will undertake the repair of heads in suitable cases at an approximate cost of £20 to £30. If the crack runs into any hole in the casting it cannot satisfactorily be restored by welding, and the only suitable process is by electro deposition of copper, originally patented as the Electrobond process. This is carried out by depositing copper into the pores of the cast iron at a fraction of a volt, over a period of some weeks, so you are without your cylinder head for about a month. Planing of the cylinder head is necessary in all cases after repairs have been carried out, otherwise further leaking and cracking will occur.

Mr Drake, who invented the process, went out of business last year. After much research we have found that the Rootes Group have bought the process up, and have kindly agreed to accept suitable iron cylinder heads for repair, provided the combustion chamber is not involved. Repairs should be sent to Mr H. A. Poole, Singer Motors Ltd, Victoria Works, Maidstone.

Aluminium heads can be welded and built up, provided they are not corroded thin, by competent gas welders.

R S

ENGINE VIBRATION

A member reports that engine vibration on his 20-25 was caused by lack of lubrication to the front engine mounting. The lubricator, which takes the R-R oil gun, is hidden away beneath the radiator and is all too easily neglected by the owner who believes the one shot lubrication system looks after everything.

A further item very frequently neglected by owners is the large number of points on the brake and servo linkages requiring attention from the oil can by hand. These are usually utterly dry and well worn where the rest of the chassis is lubricated by the one shot system, whereas on hand lubricated chassis the wear is more evenly distributed throughout.

N . H . H.

INSTRUMENT LIGHTING

On early models with manual control of the radiator shutters, it is essential to be able to check the temperature gauge from time to time at night, and thus the instrument lighting must be used. Although the lamps are generally hooded, the white light is sufficiently bright to destroy night vision and is a distraction, whether left on or merely flashed on from time to time. Also, the headlamps on the early cars may not be too effective, and any aid to night vision is an advantage. The solution is to paint the instrument lamp bulbs red, or to place a piece of red gelatine in the lamp casing. The eye's dark adaptation is not affected by red light, and hence you can leave your instrument lamps on, and still adapt your eyes to the prevailing road conditions,

Unfortunately, there is no cure for the modern type with sixteen headlamps, and so much spare horsepower that he can run a kilowatt alternator, except to leave him to fight it out on the main roads, and learn the byways for night driving. N.H.H

If you have one of the early Cambridge thermometers on your car, and it needs repair, send it to Mr G.Huxley, Service Technical Department, S .Smith and Sons, 50 Oxgate Lane, London NW10. They will be pleased to examine any vintage instrument and offer service if at all possible. They can definitely overhaul all instruments of Smiths' manufacture.

R.S.

POLISHING EBONITE PARTS

Does your steering wheel look green? Do you have a lack-lustre ignition harness ? Does your fuse box look as if it had been submerged for centuries? You can cure all these maladies by polishing these parts with Brasso or some similar mild abrasive, Use Vim if the parts are really hairy, and follow up the polishing with a coat of silicone wax. This works so well that we have been asked whether the parts were all new.

N.H.H.

LOST YOUR MAGIC CARPET?

Does your car ride like a steam roller? Do your teeth fall out every time you go over a manhole? These minor irritations can be cured by thorough cleaning of the road springs. Even on cars fitted with one-shot lubrication, if the springs have ever got dry, then all will not be well under those mud encrusted gaiters. The conditions of marginal lubrication, fretting, stress, and differential aeration, which exist in leaf springs, lead to quite nasty corrosion, and the only answer is to remove the springs from the car (one at a time) and dismantle them completely. Do not forget to clamp the centre of the spring before undoing the centre bolt, or the leaves will fly apart, and may do serious damage. Clean each leaf separately, noting which way round the leaves were assembled relative to one another. Steel wool and paraffin are good for shifting greasy muck, and these can be followed by an emery disc to remove rust and roughness. If possible, polish the mating surfaces of each leaf. Grind out the dents in the bottom of each leaf, where the next one has been rubbing, spreading the grinding on either side of the depression to eliminate any sudden change in section, which would be a point of stress concentration, and might lead to breakage. Smear molybdenum disulphide grease on the working surfaces of the leaves before final assembly.

N.H.H.

ARE YOU LAZY?

If not, then you need not bother to read this. The majority of cars are fitted with wheel discs, which undoubtedly save a great deal of cleaning time, but very few owners ever look inside the discs to see what is happening to the wheel underneath. The result is that the wheel corrodes to the point where it begins to creak on its spokes, and the only answer is a complete re-spoke, which costs about £3 per wheel.

This unseen corrosion can be kept at bay by soaking a small piece of sponge, about a one-inch cube, in oil, and putting this inside the discs. It moves around the wheel as the car travels, and spreads a protective film all over the wheel.

It is very important to avoid corrosion of the wheel rim by rain water which finds its way between the rim and tyre bead, and this can be overcome by running tyre paint into the bead-rim joint when the wheel is thoroughly dry. It is a good plan to de-rust the wheel rim every time a tyre is changed, protecting the rim with tyre paint against further attack. Putting a new tyre onto a rusty rim is a sure way to ruin the tyre beads. Some members advocate having the complete wheel shot-blasted and stove-enamelled every time a tyre is changed.

In the metal spraying process, any metal or alloy which can be obtained in wire form can be fed into a flame, where it is broken into fine molten droplets, and sprayed onto a cold surface. The droplets adhere to the surface by a mechanical bond, and build up a slightly porous metal layer.

Metal spraying can be used to apply a protective coating, or to build up worn parts. While sprayed metal will build up a worn part to its original dimensions, it has no strength in itself, and it is essential that the wear on the part is not so severe as to weaken it seriously.

The most attractive use of sprayed metal is a protection. The parts to be treated are first grit blasted to remove all traces of corrosion, and then sprayed with a layer of the chosen metal. Sprayed aluminium is a good finish for exhaust systems, and protect them from external corrosion, and sprayed zinc is as good as galvanising in protecting steel parts. If you are having wire wheels stove enamelled, you will have to have them grit blasted anyway to remove all the rust, so why not have them zinc sprayed before painting to hold future decay at bay? The approximate break down of cost per wheel would be: grit blasting 15/-, zinc spraying 5/-, stove enamelling £1. Incidentally, the sprayed metal forms an excellent key for the paint.

You would do well to make friends with your local metal sprayer, as he will probably have a large grit blasting bay, and this is a most effective way of getting rid of rust in awkward places like luggage racks, wing stays, spare wheel mountings and so forth.

Metal Sprayers Ltd of Carlisle Road, The Hyde, London NW9, have given us a satisfactory service in metal spraying.

N.H.H.

LOCKS AND KEYS FOR IGNITION, BONNETS AND DOORS ON ROLLS-ROYCE CARS

Our correspondence with the Company and various coachbuilders in the matter of replacement keys or locks for pre-war cars have signified the records no longer exist, and keys and locks are not available. Enquiries among firms specialising in locks have been equally unfruitful, but we have now discovered a master locksmith who will repair existing locks and cut keys for them if lost, and of course copy any existing key sent to him for duplication. Furthermore he has produced a Yale lock barrel, the thread and length of which exactly screws into the existing door mortice locks on pre-war cars, which were nearly all made by the now extinct Vaun firm.

To remove one of these barrels for repair or replacement, the small set screw on the face of the mortice lock is removed, and a piece of stout wire, the diameter of the two holes in the barrel, is bent to a U and inserted in these two holes, found either side of the keyhole. The barrel may then be screwed out. Should the wire not be strong enough to turn the barrel (RH thread), a pair of thin pipe grips can be placed on the periphery to start it. It is important to see that the barrel is in the unlocked position when doing this, otherwise the rotating cam at the back of the barrel will be broken off.

The name and address of the locksmith is: E. Smith & Company, 179 Kingston Road, Oxford (57454), and he can give quick service. The price of a single barrel, with two keys, as supplied by him, is 15/6 plus postage.

R.S.

RECOMMENDED REPAIRERS

The following R-R repairers have been recommended by our members. We hope to publish more of these, and would be glad to receive further details from members who have had satisfactory experiences,

Messrs Woodall Nicholsons of Halifax - Body and chassis work
Mr J.L. Brown, 3 Clarendon Rise, Lewisham, LEE 4474 - Upholstery
Wrangaton Motors, South Brent, Devon, on the Exeter-Plymouth road

on most Rolls Royce overhaul operations are available from the Technical Secretary, Nigel Hughes Esq, Cam Brae, Gold Street, Risley, Beds.

SPARES

A large and comprehensive range of second-hand spares and tyres (including new remoulds) is now available to members for most models from 1930 onwards. Complete new sets of Conolly's hide upholstery in various colours are also available. Suitable for fixed or loose covers. Apply The Chairman, 78 Banbury Road, Oxford.

STORAGE FACILITIES

These can be offered to members wishing to lay cars up. Apply the Hon. Secretary.

A recognition feature of early 20/25 HP radiators is the small filler, this being 2" diameter in common with all 20 HP chassis. Just before the introduction of thermo-static shutter control on 20/25 HP, the larger filler (2 1/4" diameter) was adopted.

Integral with the larger cap is an antisplash valve which seats on the annulus within the filler neck. Embodied in the valve is a domed-shaped depression release valve which seats on the underside of the main valve plate. In each case the valve is seated by a spiral spring; one to load the main plate downwards against the filler annulus, and the other to load the dome upwards against the main plate.

The main valve is quite straightforward, but the depression valve can readily be assembled incorrectly by transposing the dome and the spring. When correctly put together the dome will spring upwards if pulled down with the fingers.

On the small filler cap water sealing is by means of a rubber washer, which can easily be renewed. The larger caps were supplied with a spun-in copper washer which is not replaceable.

R. H.

BUTYL TUBES

The Chairman had the misfortune to spend three hours stranded on a busy main road last Easter Bank Holiday. The first sign of trouble was the steering beginning to pull. A very rapid stop enabled me to find a flat rear tyre before the casing was ruined. The solitary spare wheel was duly fitted and 30 miles later the steering began to pull again. A quick stop again showed the other rear tyre to be nearly flat. By this time it was dark and I was far from home. An examination of both tyres revealed no foreign bodies which could cause a puncture, so I immediately suspected that my new covers had been fitted with Butyl tubes, which are not a proposition to repair. I therefore had to get a car sent out to me with another spare wheel complete. I had given specific instructions to the tyre firm that Dunlop rubber reinforced tubes were to be fitted with these new covers, but my instructions had not been carried out, and once the tube is fitted one's instructions cannot be checked until it is too late.

The moral of this unfortunate experience is to realise that tyre dealers do not know that reinforced rubber tubes 600/19 are being made as a result of persistent Butyl failures when used on heavy Rolls Royce cars. It took me seven days to get Dunlop's total stock, to wit 6 tubes, delivered from their main London depot to Oxford, and I suggest that members should order one of these reinforced rubber tubes and carry it in the car, and if they order tyre firms to fit them, to inspect the tubes before fitting in order to ensure that they are not being fobbed off with Butyl Air Seal tubes. The price is the same in both cases. The fact that the Dunlop rubber tubes carry the no. 284 should avoid any confusion between the two.

R. S.

WELDING OF CYLINDER HEADS

Mr W. Turner of Angelina Street, Birmingham, telephone Calthorpe 2083, has been recommended to us as a person who can undertake welding of Rolls Royce cylinder heads. We should be glad to hear reports from any members who have sampled his work.

BRAKE AND CLUTCH LININGS

Shoes and clutch plates will be stripped and promptly relined by B.D. Bridgwood, 3 & 5 Sun Street, Hanley, Stoke on Trent, telephone Stoke 25215, with the correct Ferodo at a fraction of R-R charges, if you state that you are a member of our Club.

DEVELOPMENT OF 20/25 CHASSIS

17

Year	Chassis number	
	GXO (11-111)	20/25 hp 3 1/4" bore engine
1930	GGP (1-81)	Cast dash. Narrow hubs. 6:00 x 19"
	GDP (1-81)	tyres. Single level petrol tank.
	GWP (1-41)	Larger diameter crankshaft.
	GLR (1-25)	3" longer chassis. New type coil.
	GLR (26-81)	5.25-1 compression. New exhaust
	GSR (1-81)	manifold. Flexible engine
	GTR (1-41)	suspension.
1931	GNS (1-81)	Grooved road springs.
	COS (1-81)	Servo damper, GOS22
	GPS (1^1)	
	GFT (1-81)	Rubber fan belt. Res.petrol supply. Anti-splash rad. cap.
	GBT (1-21)	2. 5" prop. Front axle modified, GFT 32
1932	GBT (22-81)	Diamond engine mounting. Radiator 4" deeper. Thermostatic
	GKT (1-21)	shutters. Copper matrix tubes. Split piston shocks. Flip-flap bonnet shutters. Front apron. One-shot lubn. Hinged filler cap. Remote control petrol reserve. 2-rate charging scheme.
	GKT (22-41)	Synchromesh gearbox. 5. 75-1 compression. High lift cams. Heavy exh. valves. Low inertia spring drive. Balanced crank- shaft. Stronger clutch springs with higher pedal leverage. New exhaust system. 3" propeller shaft. Pivoted front brake shoes. N2 Road wheels. Overhanging bonnet.
	GAU (1-81)	RAD 11 clutch liners. Bronze bearing servo cams. 18-gallon
	GMU (1-21)	petrol tank (formerly 14 galls). Electric petrol gauge. Modified 3rd motion shaft, GAU76. Provision for dynamo brake,GAU76.
	GMU (22-81)	
	GZU (1-41)	
	GHW (1-81)	
1933	GRW (1-81)	Dynamo drive brake.
	GAW (1-41)	RAD 13 servo liners GRW 22.
	GEX (1-81)	Relay starter switch. Cast iron rear brake drums, GEX1.
	GWX (1-81)	3-rate charge scheme. Resonant type silencer, GWX22.
	GDX (1-41)	
	GSY (1-101)	Improved clutch ring, GSY 33
	GLZ (1-81)	Rear brake bronze bearing. Luvax-Bijur lubn. Air silencer,
	GTZ (1-81)	GLZ 28. Silent 2nd gear. Front axle control. New type dampers.
	GYZ (1-41)	Cast iron front brake drums, GLZ 52.
	GBA (1-81)	
	GGA (1-81)	Hand lubn. to servo, GGA 1. Marston type
	GHA (1-41)	radiator, GGA 22.
1934	GXB (1-81)	Spring drive in clutch.
	GUB (1-81)	Stiffer crankshaft, GXB27.
	GLB (1-41)	Cam balancer, GXB62.

Year Chassis

number

	GNC (1-81)	DWS hydraulic jacks.
	GRC (1-81)	Needle bearing universal joints, GKC22.
	GKC (1-41)	
	GED (1-81)	Felt oil ring to crankshaft. Provision for damper control.
	GMD (1-81)	Larger oil filler. New type carb. , starting carb. dropped.
	GYD (1-41)	Controllable shock dampers, GYD25.
1934	GAE (1-81)	
cont.	GWE (1-81)	
	GFE (1-41)	
	GAF (1-81)	Easy brake adj. Modified cam balancer. Voltage controlled
	GSF (1-81)	dynamo. Flexible engine and exhaust mounting, GAF 52.
1935	GRF (1-41)	Modified synchromesh sleeve, GSF 2.
	GLG (1-81)	TCC condenser. Concealed front x-member. Clutch spring
	GPG (1-81)	drive deleted. Propeller shaft damper.
	GHG (1-41)	Carburettor balance pipe. External clutch adj.
	GYH (1-81)	
	GOH (1-81)	Pivoted rear brake shoes. 35° servo cams, GOH22.
	GEH (1-41)	
	GBJ (1-81)	
	GLJ (1-81)	Torque reaction dampers.
	GCJ (1-41)	
	GXX (1-81)	
1936	GBK (1-81)	Fully floating servo. Isolated gear lever, GBK22.
	GTK (1-41)	
	GTK (42-53)	Additional 20/25 HP chassis with Borg and Beck clutch. Maries steering, hypoid axle.

Supplementary list of 20/25 chassis changes

GLR55	RW-1 magneto.
GBT 22	Staybrite radiator shell and shutters
GKT 22	Crankshaft vibration damper changed to low inertia spring drive from slipper drive. Crankpin diameter increased to 1.999".
GLZ 28	Nitralloy crankshaft instead of nickel chromium steel.
GXB27	Crankshaft journal diameter increased to 2.2495".
GAF 1	Drilled connecting rod instead of external oil pipe.

DEVELOPMENT OF PII CHASSIS

<u>Year</u>	<u>Chassis numbers</u>	<u>Series</u>	<u>Modifications</u>
1929	1-WJ to 101-WJ	J2A	
1929	102-WJ to 133-WJ	J2B	
1929)			
1930)	1-XJ to 71-XJ	J2B	
1930	72-XJ to 172-XJ	K2A	
1930	173-XJ to 204-XJ	K2B	Low inertia type crankshaft vibration damper, 173 XJ change gear bracket with internal oil baffle, 174-XJ (approx)
	1-GN to 68-GN	K2B	92° thermometers (warning light), instead of 97°, 19-GN to 50-GY {approx), modified inner clutch bearings, 64-GN.
1930	69-GN to 168-GN	L2A	New type coil, 69-GN; nickel plated copper cylinder head tubes in place of aluminium tubes, 111-GN; exhaust heated throttle body instead of water heated, 120-GN; modified rear axle bearing, 120-GN.
1930	169-GN to 202-GN	L2B	7. 00"-20" tyres in place of 7. 00"-21", 169-GN.
1930	1-GY to 68-GY	L2B	As above
1930	69-GY to 169-GY	M2A	Improved Hardy fabric engine coupling 110-GY; rubber fan belt, 150-GY.
1931	170-GY to 205-GY	M2B	Fuel tank with 3 gallons imperial (3. 6 US gallons) reserve, 178-GY.
1931	1-GX to 68-GX	M2B	Strengthened battery box suspension, 1-GX.
1931	1-JS to 61-JS	N2	"Staybrite" (stainless) radiator shell and shutters.
1932	(RH steering)		Pressure radiator cap.
1931	201-AJS to 276-AJS	N2	Thermostatically controlled radiator shutters; single point radiator suspension; extra cylinder wall lubrication controlled by a tap (operated by driver) for use when engine is cold; front apron between dumb-irons; 60" rear track; one-shot lubn. system extended to front and rear axle systems in place of lubrication by oil gun; pivoted section on front brake shoes; wider foot brake shoes; 3/8" thick brake liners; hinged petrol filler cap; two-rate dynamo charge scheme; servo damper; remote control petrol reserve; 50 percent thicker rear brake drums; modified front axle.
		N2	201-AJS to 276-AJS left-hand steering, central gear shift,- and position of engine components reversed to correspond with changed position of steering.
1932	62-JS to 84-JS	N2	Diamond engine mounting; pivoted section on rear brake shoes.
1932	2-MS to 44-MS (RH steering)	N2	Auto-Kleen oil filter; carburettor air silencer; split piston shock dampers; flip-flap bonnet shutters. RAD clutchliners in place of Ferodo.
1932	277-AJS to 303-AJS	N2	277-AJS to 303-AJS and 201-AMS to 224-AMS left-
1932	201-AMS to 224-AMS (LH steering)	N2	hand steering; central gear shift and position of engine components reversed to correspond with changed position of steering.

PII CHASSIS (continued)

<u>Year</u>	<u>Chassis numbers</u>	<u>Series</u>	<u>Modifications</u>
1932 1933	46-MS to 170-MS (RH steering)	N2	Synchromesh (gearbox) on 3rd and 4th speeds; 2.75" propeller shaft in place of 2.25"; stronger clutch springs; overhanging bonnet; keyed servo motor rocking shaft, 122-MS; anti-shimmy shackle, 140-MS (approx).
1933	2-MY to 100 MY	O2	DWS jacking system; adjustable clutch and brake pedal positions; heavy exhaust valves; increased front braking; 7.00"-19" tyres in place of 7.00"-20" tyres; ribbed cast-iron brake drums, ball bearing servo cams; Ferodo RAD 11 clutch liners, 44-MY. Filter in main petrol tank deleted, 32-MY.
1933 1933	102-MY to 190-MY 3-MW to 107-MW	O2	5.25:1 compression ratio; high lift cams; semi-expanding carburettor; large horizontal air silencer; modified reverse mechanism, 102-MY. Modified shock dampers; silent 2nd speed gear, 65-MW.
1933 1934	2-PY to 206-PY	P2	Smiths instruments, radiator warning light deleted, 2-PY; provision for shock damper control; larger engine coupling; 28 gallon instead of 20 gallon (imperial) petrol tank; electric petrol gauge; Luvax-Bijur chassis lubrication; resonant type silencer; nitralloy crankshaft, main journal diameter increased from 2.6425" to 2.7995"; crankpin diameter increased from 2.135" to 2.3735", 14-PY; Autovac filter deleted, 32-PY; controlled shock dampers (controlled on steering column with front dampers outside of frame, 162-PY).
1934	3-RY to 211-RY	R2	Ignition warning light fitted; voltage controlled dynamo, 3-RY; large oil filler, 157-RY; hand lubrication to servo in place of one-shot system, 157-RY.
1934	2-SK to 196-SK	S2	4½ gallon (imperial) petrol tank reserve, 2-SK; strengthened shock damper cylinders; grooved shock damper pistons; push-down gear lever knob; dropped front crossmember, 58-SK; needle bearing propeller shaft, 96-SK; 12x41 ratio rear axle gears, 136-SK.
1934	1-TA to 99-TA	T2	Fully floating servo; wing nut brake adjustment; modified hot-spot pipe; connecting rod with 5 clips; external clutch adjustment.
1935	101-TA to 201-TA	T2	Large choke carburettor; low lift cam-shaft; flexible engine mounting; synchromesh 2nd gear.
1935	2-UK to 84 UK	U2	TCC condenser.

No. 13 is omitted from all chassis numbers.

There are four different cylinder heads for PII:

- 1st head - 4 ³/₄ : 1 Part no. E78854
- 2nd head - 5 : 1 Part no. E82168
- 3rd head - 5 : 1 Part no. E 83537
- 4th head - 5 ³/₄: 1 Part no. E83538