

## BENTLEY, 3-LITRE, RED LABEL, ENGINE NO.542S

### General:

Open 4 seater, with long bonnet and fairly short tonneau –From engine No., built 1924.

### Driving position:

Comfortable for person 5'10" tall or more, steering wheel well into the lap without being too close, gear lever being reached by dropping right hand straight down from wheel without any stretching. Handbrake is within easy reach outside the body.

Driving position is high, giving good view of both wings, although divided windscreen is a disadvantage.

### Performance:

Most comfortable cruising speed from point of view of lack of driving fatigue , 45-50 m.p.h.

On first class road surfaces, car is very smooth between 60 and 70 mn.p.h.

Engine vibration period between 52-55 m.p.h. makes cruising in this vicinity undesirable.

Top speed approximately 80 m.p.h., but needs time to wind up.

### Acceleration:

Sluggish at low speed revs, but improves rapidly as speeds rise. No definite figures available.

### Petrol Consumption:

At 45-50 m.p.h. cruising, petrol consumption approx. 22 m.p.g. on open road. In city traffic, only 17-18 m.p.g. may be expected.

## Condition of car.

### Bodywork:

Bodywork:- fairly sound and free from rattles except in rear door and windscreen. Panelling split below rear door, but heavy gauge aluminium will stand welding. Rubber and fabric packing between glass and metal frame of windscreen perished and hard, allowing glass freedom of movement.

Paintwork:- Generally dull and worn off in patches. Needs renewing.

Upholstery:- Fair condition, but torn and split in places. Front seat and squab in genuine leather . rear seat and squab in leather cloth.

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Mudguards:- Front suffer from general looseness. Some bolts require renewal. Rear guards sound.

Off side running board, toolbox panels loose and require rebuilding. Metal beading is broken at edge of running board and on edge of toolbox lid. Lock broken.

Near side running board split adjacent to battery. Requires reinforcing. Beading is broken.

Spare wheel mountings:- Loose

Hood:- Fabric completely useless. Framework fairly sound but joints show some wear, resulting in rattles.

Side curtains:- New

Rear compartment windscreen:- Missing

Body under-shield:- Missing

Chassis Frame:- Sound condition generally. Tie rod ends between front dumb irons cannot be kept tight owing to partially stripped thread on near side. Repairing this should stiffen frame to some extent, but general construction of frame allows a degree of flexibility which is uncomfortable on bad road surfaces.

Road Springs and Shackles:- Spring leaves all sound but bushes show some wear, as do shackle pins. Gaps of approx. 1/16<sup>th</sup> inch exist between spring bush ends and inner faces of shackles. Fitting of washers would improve roadholding.

Shock Absorbers:- Generally sound, but some bushes are worn.

Wheels:- Rolled rims are rusted inside. Spokes generally tight and sound, but 2 wheels have one or two spokes broken. All wheels reasonably true. Nut and security washer are missing from one balance weight in one case. Splines are worn but still have good safety factor. Locking rings sound. Wheel bearings sound. Hub caps missing from rear wheels. Nearside front hub cap works loose if not kept extremely tight.

Brakes:- Car has run less than 15,000 miles since linings removed and rear drums ground, but efficiency not high. Rear brakes have recently developed a shudder under application at low speed. This is apparently due to grease or dirt on the linings. All brakes should be inspected for actual condition. Brake linkages seem to be in good condition.

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Steering:- Ball joints slightly worn. Oil way to rear ball joint on drag link is apparently blocked. Slight wear is apparent in steering gear box, (1/2" to 1" on the periphery of the steering wheel). Grease leaks at junction of box and steering column.

King Pins:- Show no wear.

**Engine:-**

Crankshaft:- Reground and all bearings renewed Jan. 1942. Big ends may now require taking up. (Motor rattles on easing throttle back at speeds above 45 m.p.h. could be caused by looseness in big ends, gudgeon pins and/or pistons).

Pistons:- slightly loose in cylinders and could profitably be expanded (split skirt type)

Gudgeon Pins:- show about .002" wear. Suggest grinding parallel and hard chroming to 3 to 4 thou thick, and reaming piston bosses and bushes to fit.

Piston Rings:- may need renewing, but compression is good, and blow by and oil consumption not excessive.

Valves and guides and seats:- all in reasonably good condition.

Camshaft:- Faces of cams pitted and appreciable wear apparent, (Up to .005" by estimate).

Camshaft bearings:- almost perfect.

Camshaft upper gears:- worn on driving faces of teeth.

Vertical shaft splines:- almost perfect as far as I can remember.

Magnetos and water pump gears:- sound

Bearings in all auxiliary drives:- sound

Water pump:- Not the original, but replaced from 4 1/2 litre car. Good condition when last inspected.

Cylinders:- In the opinion of K.A. Johnson, Castle Service Station, Nagill Road, Nagill, S.A., who has carried out all repair work on the car over the last 10 years or so, the cylinders are worn, but do not warrant reboring at present.

Clutch:- Cone reground and lining renewed Jan. 1942. Car has run less than 15000 miles since. Clutch screams on engagement, but application of graphite should cure. Withdrawal races are worn but not excessively so.

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- Gearbox:- All teeth pitted and rough on driving faces.
- Splines:- almost perfect. I use SAE 90 gear oil. (Mobiloil for preference).
- Tailshaft:- Never examined internally, but no trace of vibration, so presume in good condition.
- Differential:- Crown wheel and pinion teeth roughened on driving faces, but still in reasonably good condition. Slow oil leak in joint between rear cover plate and housing. Gear hum appreciable at 40 m.p.h. Not noticeable at other speeds. (Use SAE 90 oil)

**Electrical System:-**

- Battery new 12 volt (Clyde?) March 1946
- Generator sound; front armature bearing has no lubricator; (should be examined).
- Lights good
- Switches Sound, except for intermittent contact on tail light in conjunction with head lights.
- General charge switch requires careful manipulation for contact
- Wiring Worn out and should be renewed in the near future
- Horn and windscreen wiper both sound

**Ignition:-**

- Magnetos R & L both in good condition
- Switches only fair. Port switch requires careful manipulation for contact.
- Wiring H.T. & L.T. wiring is still in working condition, but could profitably be renewed.
- Plugs Port bank are new K.L.G. corundite, type M50. Starboard bank are worn K.L.G. plat. Pt. Type PK1

**Cooling System:-**

- Radiator Cools efficiently except when climbing heavy grades at low speeds. Some leaks. Needs overhaul.
- Outlet manifold Leak in ??? near front end.

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Cyl.Block water outlet studs ????? and care should be taken when removing the manifold.

Thermostat and bypass valve and pipe - have been removed

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**Tyres:-**

Rear – 21\* 6.00 Dunlop Silent 90, heavy duty 6 ply slightly more than half worn.

Front – 21 \* 5.25 Olympic Balloon 6 ply  
21 \* 5.25 Olympic Spartan, worn smooth at centre

Spares - 21 \* 5.25 Barnett Glass retreaded, worn whole tread width (probably 1000 miles to breaker strip.)

**Fuel System;-** In good order.

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PRG Note 25<sup>th</sup> June, 2011

The above was obviously copied from a hand written memo which I assume would have been written by Mr Robertson. The typed copy together with the original hand written version was given to me by Malcolm when I bought the car. I assume it was typed by Malcolm.

Malcolm obviously added the following

Car was reconditioned by Bentley Motors in 1935.

Bought out to Australia by a Mr Robertson of Adelaide about 1945. He came to Queensland and Mr Arch Guymer bought it in 1946 or 47 who sold it to Mr Henderson in 1951, who sold it to Mr Broad in 1952 (?) who sold it to me (Malcolm MacDonald) in 1958.

Bentley Motors fitted a 4 1/2 litre water pump and Mr Guymer thinks new front wings were fitted at the same time and possibly the bench type front seat replaced the bucket seats.

Mr Arch Guymer, London St., Johns' Wood (2 doors away from Mr. W. Anderson, No. 19, London Street, St. John's Wood

The above was retyped by me by me for safe keeping and ease of forwarding by email, Brisbane, Queensland, June, 2011. Peter R. Gargett