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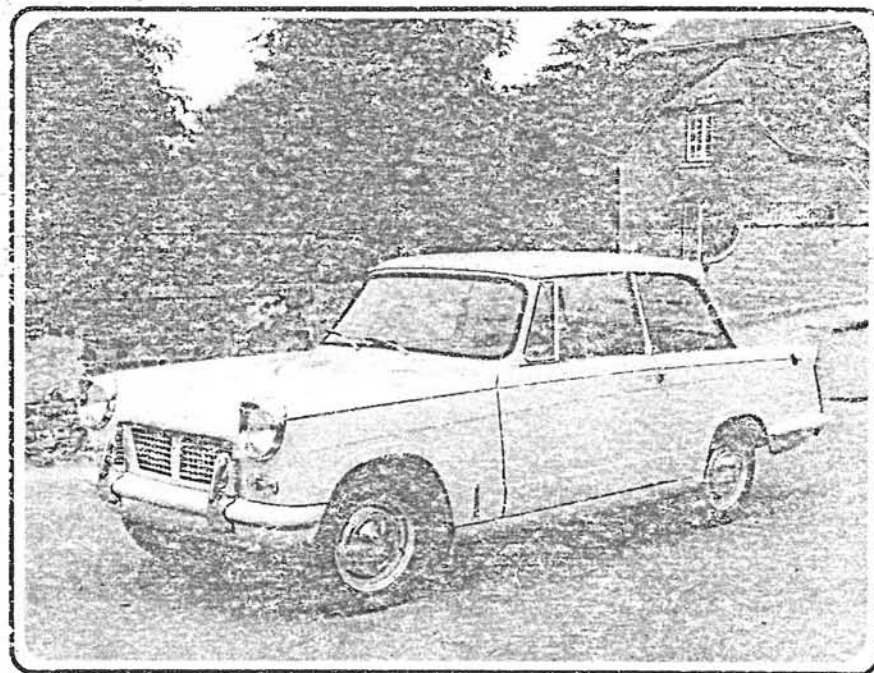
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# Turning Circle

October 1981,  
No1

Incorporating  
The Courier



The Birth of the  
Triumph Herald, Spring 1959



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TURNING CIRCLE  
Editor: W. E. SUNDERLAND



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Photographs within this magazine were reproduced courtesy of Pete Williams, Bob Notley and John Davey.

Turning Circle is published bi-annually by the Triumph Sports Six Club.

# Editorial

BILL SUNDERLAND



Welcome to the first Turning Circle that we have produced. As you will have noticed, it is as different in size as in format. Turning Circle's aim will be to relay the History of 'our' cars, larger events in detail - using photographs to tell a story in some cases - and at all times complementing features and articles. Basically it is a magazine which is an extension of the now established Courier and speaking of which, you will find a copy stapled inside this Turning Circle. The reason there is a separate Courier is for the large amount of important information with regard to every day events, such as Nationwide, events and adverts and the pledge in our joining letter that the club offers 14 magazines a year of which I undertake that commitment. Also, the Triumph Sports Six Club prides itself with getting news to its' members as it happens. I hope that explains the aims of the two magazines.

How to get down to the current edition of Turning Circle; in this first issue we trace the birth of the Herald back to the drawing board in 1956 to being the first car to cross the E91H Humber Bridge in 1981. The Herald is our theme for this magazine and the Spitfire is planned to feature in the March 1982 Turning Circle, so start to get those articles written and send them to me. I hope you will enjoy reading our first issue, and I look forward to hearing your comments. HAPPY READING FOLKS!

P.S. The 1981/82 window stickers you will have received on renewing are meant for the front windscreen of your car. Please place them there as this will enable passing traffic (club cars), to recognise a club car when they see one.



EDITORIAL

TRIUMPH herald

## Happy Event

IN this issue we present the first announcement regarding an entirely new motorcar. To obtain a pre-review of such an important model involved us in a journey of several thousand miles in Africa coupled with a sortie which took us into the less-populated areas of West Wales at a time when winter conditions much reduced public interest in experimental models. There were many other journeys as well as considerable track testing.

Those who have been pleading for independently sprung rear wheels on popular British cars have been granted their wish, but they have been given also a feature which may prove far more valuable—the ability of this new car to operate for 10,000-mile periods without need of routine greasing. This, indeed, is a welcome application of modern techniques and materials.

It is no secret within the motor industry that the new Triumph has cost its sponsors several million pounds and has involved intensive research and planning by a team of engineers over a number of years.

Certain aspects of the new vehicle are not readily apparent to the general public but have, nevertheless, considerable significance when applied in explanation of the ultimate design. For example, it may not be generally understood that the Standard Motor Company, alone among the big producers in Britain, were hitherto very largely dependent upon outside resources for the fabrication of their coachwork. This in turn meant that although they could benefit by some of the best body press facilities in the world, they nevertheless were somewhat hamstrung by having to "buy out" the "envelope" to cloak their chassis design. Moreover, in common with much of the Industry they were confined to a design which could not readily or economically be recast for a period of perhaps three to five years according to the sales position.

Faced therefore with this formidable series of problems the Standard-Triumph organization sought a way of making motorcars on an entirely new basis. They reverted to the chassis, which was a word sinking into obscurity, thus opening the door to the possibility of a number of attractive body variations and, moreover, introducing a form of coachwork which may be highly desirable from the insurance point of view; whereas the pressed-out monocoque construction carries with it many desirable attributes, among these cannot be numbered easy replacement of damaged parts. The new Triumph therefore looks like being able to offer reduced repair costs.

As in the case of all newcomers the public will be watchful and critical for the first few months. It is clear that other great manufacturers will study what we must assess as a bold example of technical enterprise. It has required courage and initiative to contrive a vehicle capable of offsetting, in its class, the best that other nations have achieved. We offer our best wishes to a model which may well establish a new conception of high quality, small-car motoring throughout the world.

REPRINTED FROM 'THE MOTOR' APRIL 22, 1959





1959 CARS

COUPE and saloon versions of the Herald are here seen together, the two-carburettor coupe offering greater performance but less accommodation than the single-carburettor saloon.

Refreshing Ideas in  
Small-car Construction.

Features

Include Well-proved

948 c.c. Engine, Entirely

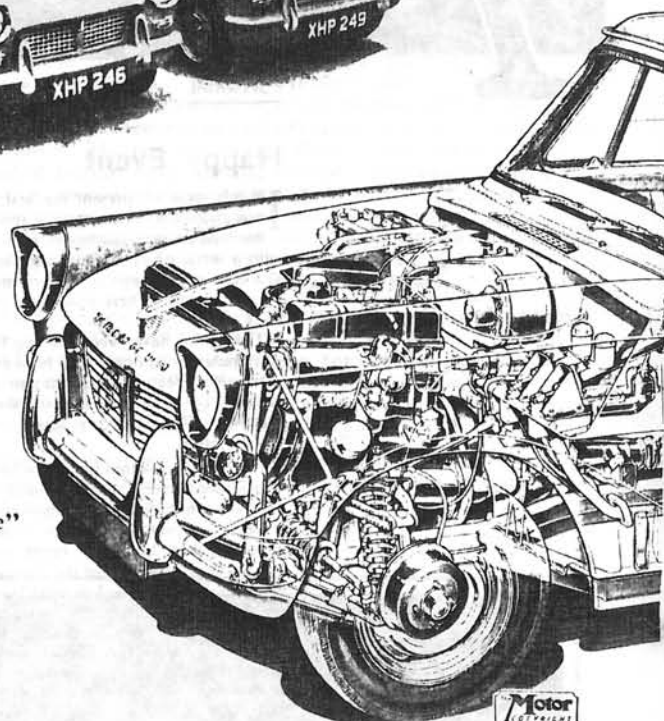
New "Minimum Maintenance"

Chassis with

All-independent Suspension

and Italian-styled Body

Built on Unusual Principles



FORWARDERS designed by a fine British manufacturer in recent years. In place of much original thinking as the new Triumph Herald. Powered by the well tried 948 c.c. engine and offering comfortable seating within compact overall dimensions of 12 ft. 9 in. by 5 ft. 0 in., it is available in two body styles: Italian-styled saloon and coupe types. Notable features include a very sturdy separate chassis frame, good all-round visibility, a remarkably small turning circle and a complete absence of grease gun nipples, no lubrication apart from routine maintenance of engine and transmission and oil levels being called for at intervals of less than 1000 miles.

**BUILD-UP.**—In place of a completely welded shell, the new Triumph Herald has a steel body built up from sub-assemblies which are bolted to the separate chassis frame and to each other. These drawings, which should be studied in conjunction with the text, show how the various assemblies fit together to form the complete car.

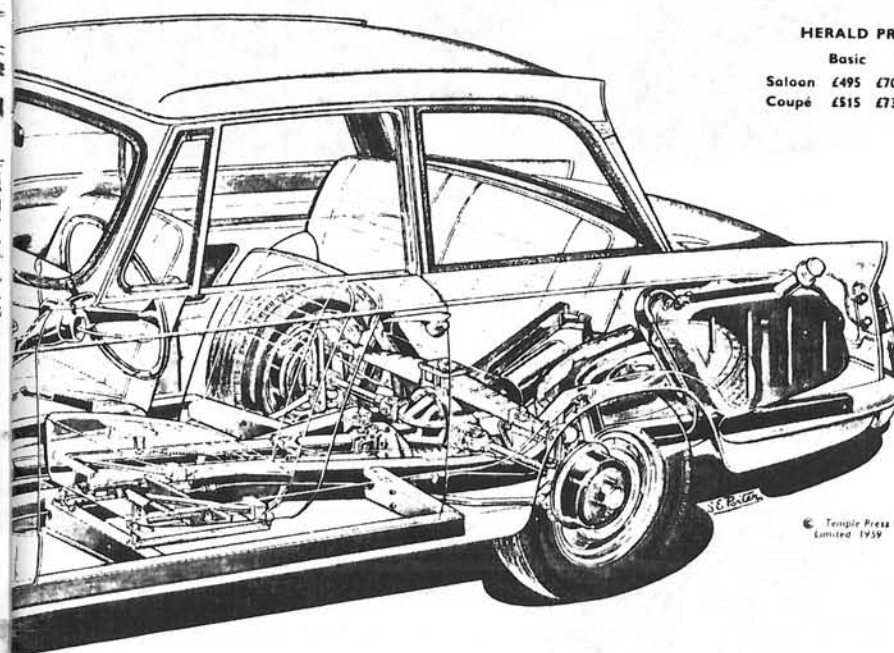


Reprinted from "The Motor," April 22, 1959

# The New TRIUMPH HERALD

## HERALD PRICES

	Basic	Total
Saloon	£495	£702 7s. 6d.
Coupe	£515	£730 14s. 2d.



© Temple Press Limited 1959

**BREAKING AWAY** from current practice, the Herald, seen here in saloon form, uses a robust backbone chassis frame with side members outriggered to the full width of the body. Independent suspension is used front and rear.

problems as they affect both manufacture and assembly of body and chassis components.

On the sales side, it was stipulated that the car must be economical, must look attractive, must be outstandingly easy to park (a 25-ft. turning circle was specified), must have good all-round visibility, must call for minimum routine maintenance, must have generous luggage accommodation and must be designed with safety as well as comfort in view.

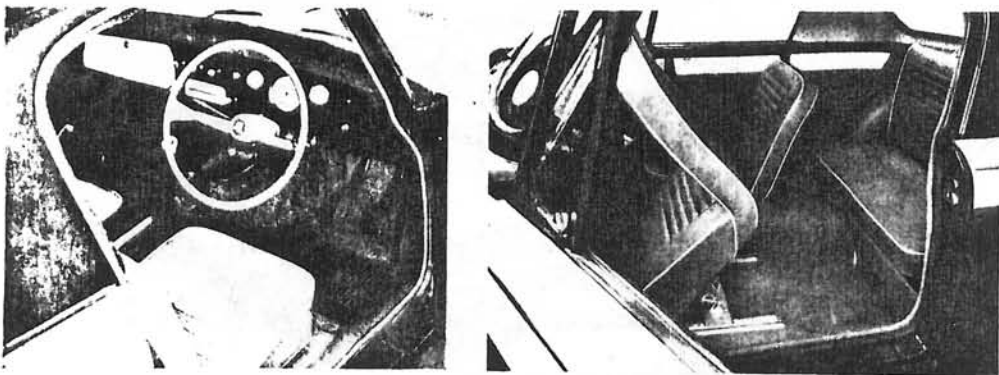
On the service side, ease of overhaul and of repair in the event of accident were to be prime requirements.

Finally, on the production side, the problem of body supply loomed large and it was decided that the design must be such that both paint and trim could be carried out in the organization's own works and that the design must be such that a number of suppliers could be called upon for individual pressings so that the company would not be dependent on a single con-

cern for the supply of complete bodies. It was laid down, too, that the basic design must be capable of the maximum number of variants to deal with whatever demands might arise during the life of the model for alternative body types. From this versatility, ease of modification to keep pace with changing fashion would automatically follow.

With this brief, Mr. Harry G. Webster, director of engineering, and the planning and design staffs went into action. The first point that was decided was that a separate chassis was essential and that the body would be built up from easily attached sub-assemblies bolted, rather than welded, together. From that point, the chassis layout took shape and tentative designs for the body were considered. At this stage, the Italian stylist Michelotti was consulted and, after further designs had been considered, an actual body was constructed by Vignale and dispatched to Banner Lane where, eventually, the design was finalized in production form.





With this background picture in mind, it is possible to appreciate the detail features in better perspective.

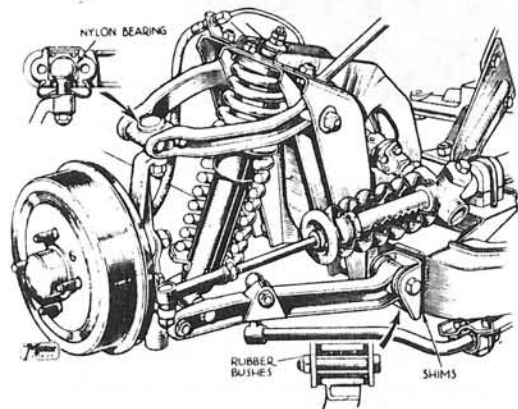
Basis of the design is a sturdy boxed and channel-section chassis frame in which a pair of 3-in. square box-section members form the main backbone, running parallel with the ground from a stout front cross-member to a point where they pass below the final-drive half-shafts and are joined by a box-section rear cross-member. At the front, upswept extensions carry a tubular full-width cross-member of 1½-in. diameter which serves the double purpose of bumper re-inforcement and a hinge attachment point for the whole nose section of the car. At the rear, the main longitudinals are tapered and swept upwards and outwards to carry the body tail section.

In the centre, where the longitudinals are brought close together, they are joined at three points by further pressings. To this main backbone, outrigger members are extended to the full width of the centre section of the body and are joined by

2-in. channel-section side members which not only support the body, but give good passenger protection in the event of an accident involving side impact.

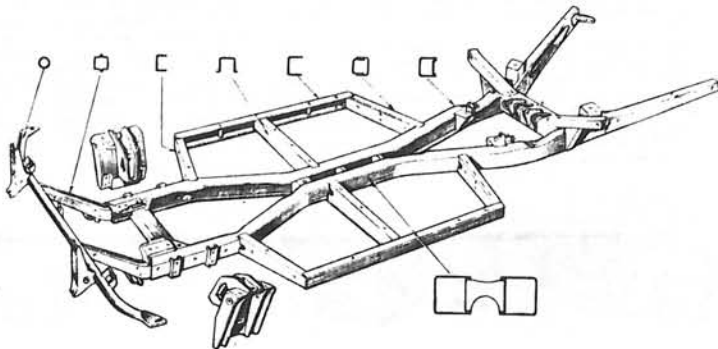
The front suspension is similar in general design to that of the Pennant, with upper and lower wishbones of unequal length and inclined coil springs enclosing telescopic hydraulic dampers. Instead, however, of the whole suspension assembly being built up on a detachable cross-member bolted to the chassis, each wishbone, hub and spring assembly is carried on a vertical built-up pressed structure which is attached to the chassis frame by five bolts with shim adjustment for camber and castor. One advantage of the arrangement is that accidental damage affecting one side only can be rectified without disturbing the other and in this connection it is worth noting that spare-parts stocking has been eased by the use of common right and left-hand parts.

From a maintenance aspect, the design is notable for the use of rubber bushes for the widely-spaced inner wishbone bearings, with nylon bushes for both the top outer joint (which is of the ball type to allow for steering movements) and for the outer lower joints. The latter are of the trunnion type and also incorporate threaded aluminium-bronze bearings to accommodate steering movements. The king-pin is hollow to act as an oil reservoir and is filled with



**FRONT-END DETAILS.**—Inclined coil springs enclosing telescopic dampers and unequal-length wishbones form the i.f.s. of the Herald. Note the absence of grease-gun nipples made possible by the use of rubber bushes for the inner wishbone pivots and nylon for the outer joints; the lower trunnion steering joints also incorporate aluminium-bronze threaded bushes to accommodate steering movements and these are provided with built-in oil reservoirs. The drawing also shows the rack-and-pinion steering with its friction damper, the anti-roll bar and the way shims are used to obtain correct wheel alignment.

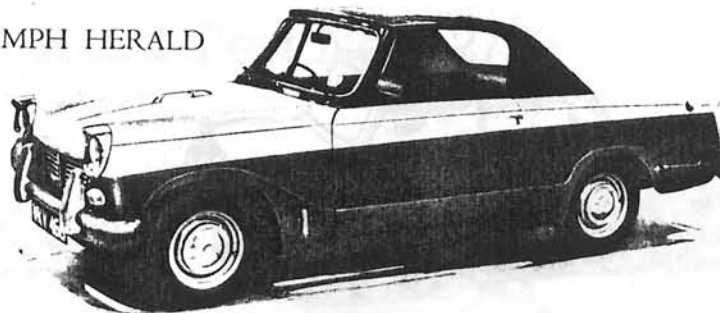
**LOW AND WIDE.**—The very sturdy separate chassis frame of the Herald, showing the sections of the various members. The main box-section longitudinals which form the backbone are of 3 in. square box-section. Points to note are the individual bolt-on structures which carry the independent front spring assemblies, the mounting points for the inboard final-drive casing and the fact that the outer longitudinals extend to the full width of the car.



Reprinted from "The Motor," April 22, 1959

## The New TRIUMPH HERALD

THESE three photographs show the Herald coupé, which unlike the saloon has a lockable lid on the fascia cubby-hole, and separate water thermometer and fuel gauges. The small rear seat shown in place is an optional extra, the coupé being normally supplied with a carpet-covered luggage shelf only.



hypoid oil at long intervals via a plug and drilling; an important point is that the slight vertical movements of the king-pin in its screwed bush as the steering is turned has a pumping action which distributes the oil.

The layout is arranged to give a front roll centre about 3 in. above the ground, and to overcome the rear-end break-away tendencies which exist with swing-axle i.f.s. practically the whole roll couple is taken at the front, assisted by an unusually stiff anti-roll bar.

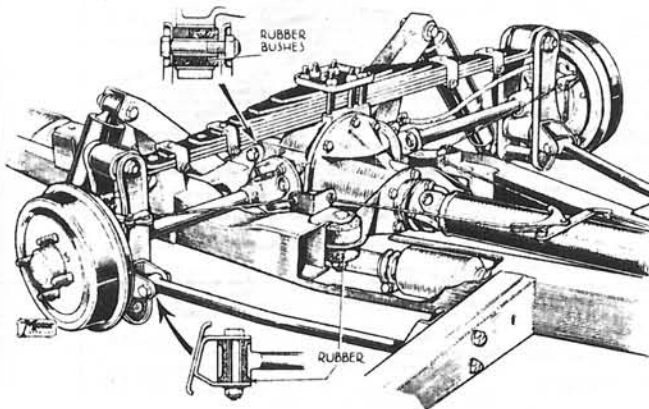
### Safety Factors

Steering is by a rack-and-pinion assembly in which the rack member acts as the centre portion of a three-piece track rod and a friction damper is provided to eliminate kick-back from the road wheels. Here again, nylon joints are used. At the lower end of the steering column there is a rubber-bushed universal joint and the column itself is telescopic and arranged with a spanner adjustment for length on the basis that a correctly-placed wheel is an aid to both comfort and safety; in the latter connection, it is noteworthy that the adjustment is deliberately designed so that, in the event of the driver being thrown forward in an accident, the column will telescope. Actually, a force of between 2 g. and 2½ g. will cause this to happen.

The front engine bearers rest on rubber blocks adjacent to the front suspension brackets and at the rear the engine-gearbox unit is carried on a pair of closely-spaced bonded-rubber bobbins, partly in compression and partly in shear, below the gearbox extension.

The engine itself calls for little comment because it is already familiar in both the Standard Ten and Pennant models, in which its good all-round qualities have been well established. A point of interest, however, is the use of a small expansion chamber in the exhaust pipe line in addition to the main silencer at the rear.

On the saloon, the engine is used in normal single-carburettor form with 8.0:1 compression ratio and a gross output of 38.5 b.h.p.



**INDEPENDENT REAR.**—A notable feature of the Herald is its swing-axle independent rear suspension. A transverse leaf spring serves as the springing medium and radius rods provide for braking torque. Rubber bushes are used to isolate the final-drive casing from the frame and also for the shackles, radius arms and damper mountings to eliminate lubrication points. Note the small auxiliary expansion chamber which cuts out exhaust resonance.



## The New TRIUMPH HERALD

CRISP lines and large windows characterize the Herald saloon, more pictures of which appear in the road test report.

Guide over which a single exposed cable leads (via further guides) to the shoe expanders.

The body construction is of particular interest. As indicated earlier, the principle has been adopted of using relatively small pressings welded up to form sub-assemblies which are bolted together. There are ten such sub-assemblies consisting of:—(1) the scuttle, screen and front floor, (2) the rear section including the rear wings and floor, (3) the boot lid, (4) the bumper and front grille assembly, (5) the complete nose comprising bonnet and front wings, (6 and 7) the lower body sills, (8 and 9) the two doors, and (10) the roof.

How these various assemblies fit together is shown in a series of small drawings. Whilst it may sound as though this method of assembly is cumbersome, in a demonstration given to distributors at the Banner Lane factory by apprentices, a car was built up from a bare chassis to a complete vehicle in under five minutes. This demonstration did not actually follow the exact sequence used in production, but shows that the plan of a bolted-up assembly need not entail any serious handicap in production time.

The two body types, saloon and coupé, follow similar lines, but the roof contour is sloped down earlier in the coupé, whilst solid rear quarters take the place of the large fixed quarter lights. Both bodies have two doors, and counterbalanced tip-up front seats to give access to the rear. The latter provides very comfortable accommodation for two adults, but the rear compartment of the coupé is normally carpet-covered as luggage space; for those who desire it, however, a seat cushion and squab can be provided as an extra.

In both cases, the rear squab is arranged to hinge forward and button down, so linking up the rear compartment with the very generous boot to permit the carriage of awkward objects. The boot itself is not only large, but has a flat unobstructed floor (with the spare wheel in a covered well beneath) and a low loading level.

The fuel tank occupies the left-hand wing recess and above it is a simple reserve fuel tap.

Both the separate front seats are on sliding runners and rest on eccentrically fitted rubber blocks which can be turned to give four angles of tilt to the whole seat.

An interesting feature of the interior is the use of compressed fibre for both the gearbox cover and the fascia board, this material combining lightness with good sound-deadening properties and having the further advantage, in the case of the fascia panel, of being less liable than metal to cause injury in the event of accident. The fascia board incorporates a large-dial speedometer with trip and appropriate warning lights directly in front of the driver and visible through the two-spoke wheel. On the coupé, it is flanked by separate dials for a coolant thermometer and fuel gauge, but the former is omitted and the latter incorporated in the speedometer dial in the case of the saloon.

Smaller controls are grouped in the centre of the board and a cubby hole (open in the saloon and with a lockable lid in the coupé) is provided on the passenger's side. Other storage places for oddments include a neat tray built into the gearbox cover, a plastic parcel net below the fascia on the passenger's side and neat pockets in the body sides at the rear.

General equipment is comprehensive, including twin wipers, a screen washer, ashtrays at both front and rear, twin visors and a heating and demisting system as standard. The front windows are of the winding type and the usual hinged ventilation panels are provided on the leading edges, a sensible feature being that their catches have a button-type lock making it impossible to force them without breaking the glass.

In all, this new Triumph Herald is a most interesting newcomer of which very much more is likely to be heard in the next few years. How it performs is told in a road test report which appears on pages 431-434 in this issue.

### TRIUMPH HERALD SPECIFICATION

SALOON	
ENGINE	4 in. line, with 3 bearing crankshaft; 63 mm. x 76 mm. (2.48 in. x 2.99 in.)
Bore and stroke	63 mm. x 76 mm. (2.48 in. x 2.99 in.)
Compression ratio	19.35 to 1
Fuel system	In line p.h.v. operated by pushrods and rockers. Single Solex carburettor, type 28 21C/2, fed by A.C. Y-type mechanical pump from 7-gallon tank.
Ignition	Coil. Centrifugal and vacuum automatic advance. Lodge type H.F. plugs.
Lubrication	87-pass type cleaner, oil capacity 7 pints.
Cooling	Water cooling with pump, fan and thermostat. Capacity 6 pints (inc. heater).
Electrical system	12-volt with 38 amp./hr. capacity (10-hour rating).
Maximum power	38.5 b.h.p. gross at 4,500 r.p.m., equivalent to 117 lb./sq. in. b.m.e.p. at 2,236 ft./min. piston speed and 1.99 b.h.p. per sq. in. of piston area.
Maximum torque	615 lb. in. at 2,750 r.p.m., equivalent to 134 lb./sq. in. b.m.e.p. (gross) at 1,370 ft./min. piston speed.
TRANSMISSION	
Clutch	Borg & Beck 6½-in. single dry plate, with hydraulic operation.
Gearbox	4-speed with direct top gear and synchromesh on upper 3 ratios.
Overall ratios	4.675, 7.09, 11.99 and 20.82. Reverse, 20.82.
Propeller shaft	Hardy Super anti-metal with needle roller bearings. Hypoid bevel.
CHASSIS	
Front	Coil spring, two leading shoes in front drums. Brk. 2 wheels.
Rear	73 lb. in. of lifting working on 117.8 sq. in. rubber area of drums.
Independent	by coil springs and wishbones controlled by Armstrong or Woodhead Monroe telescopic dampers.
REAR SUSPENSION	
Swinging axle	independent, transverse leaf spring and radius rods, controlled by Armstrong or Woodhead Monroe telescopic dampers.
WHEELS AND TYRES	
Dunlop	5.20-13 in. tyres on four-stud ventilated disc wheels.
STEERING	
Rack and pinion.	
DIMENSIONS	
Overall	12 ft. 9 in.; wheelbase, 7 ft. 7½ in.
Width	Overall, 5 ft. 0 in.; track, front and rear, 4 ft. 0 in.
Height	Overall, 4 ft. 4 in.; ground clearance 6½ in.
Turning circle	25 ft.
Kerb weight	15½ cwt. (inc. tank full of fuel, oil, water and spare wheel, etc.).
EFFECTIVE GEARING	
Top gear ratio	13.25 m.p.h. at 1,000 engine r.p.m. and 26.6 m.p.h. at 1,000 ft./min. piston speed.
Maximum torque	2,750 r.p.m. corresponds to 36.5 m.p.h. in top gear.
Maximum power	4,500 r.p.m. corresponds to 59.6 m.p.h. in top gear.
Performance	See road test report in this issue.
COUPÉ	
The coupé follows the same general specification, but with the following exceptions:	
ENGINE: Compression ratio, 8.5/1. Fuel system twin S.U. type M1 carburetters. Maximum power, 50½ b.h.p. gross at 6,000 r.p.m., equivalent to 115 lb./sq. in. b.m.e.p. at 2,950 ft./min. piston speed and 2.61 b.h.p. per sq. in. of piston area. Maximum torque, 610 lb. in. at 4,200 r.p.m., equivalent to 133 lb./sq. in. b.m.e.p. (gross) at 1,090 ft./min. piston speed.	
TRANSMISSION: Overall ratio, 4.55, 6.62, 11.2 and 19.45. Reverse, 19.45.	
DIMENSIONS: Overall height, 4 ft. 3½ in. Kerb weight, 15½ cwt.	
EFFECTIVE GEARING: Top gear ratio, 14.2 m.p.h. at 1,000 engine r.p.m. and 28.6 m.p.h. at 1,000 ft./min. piston speed. Maximum torque, 4,200 r.p.m. corresponds to 59.6 m.p.h. in top gear. Maximum power, 6,000 r.p.m. corresponds to 85 m.p.h. in top gear.	

# The Motor Road Test No. 12/59

Make: Triumph

Type: Herald Saloon

Makers: The Triumph Motor Co. (1945), Ltd., Coventry.

## Test Data

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CONDITIONS: Weather: fine and warm with light wind. Temperature 54° (64° F.). Barometer 13.38—30.0 in. Hg. Surface: dry tarmac. Fuel: Premium grade pump (petrol) 96 (Research's Method of Octane Rating).

INSTRUMENTS  
Speedometer at 30 m.p.h. ... 7½ sec.  
5 seconds to 60 m.p.h. ... 6½ sec.  
Distance record ... 12.44

WEIGHT  
Kerb weight (unladen, but with oil, coolant and fuel for reserve, 50 miles) ... 164 cwt.  
Front/rear distribution on kerb weight ... 52/44  
Weight laden (incl. test) ... 17½ cwt.

MAXIMUM SPEEDS  
Flying Quarter Mile ... 40.9 m.p.h.  
1/4 mile (city time) equals ... 72.6 m.p.h.  
"Maximile" Speed: at level quarter mile after 1/4 mile of four seconds (city time) ... 69.8 m.p.h.  
1/4 mile (city time) equals ... 71.4 m.p.h.

Speed in Gears  
1st gear (at 1st gear) ... 52 m.p.h.  
1st gear (at 2nd gear) ... 22 m.p.h.

FUEL CONSUMPTION  
43 m.p.g. at constant 30 m.p.h. on level  
43 m.p.g. at constant 40 m.p.h. on level  
38 m.p.g. at constant 50 m.p.h. on level  
33 m.p.g. at constant 60 m.p.h. on level

Overall Fuel Consumption for 1,075 miles  
30.1 gallons, equal 34.5 m.p.g. (8.2 ltr/100 m.)

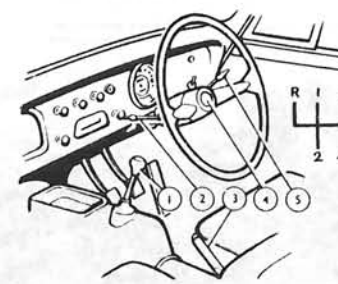
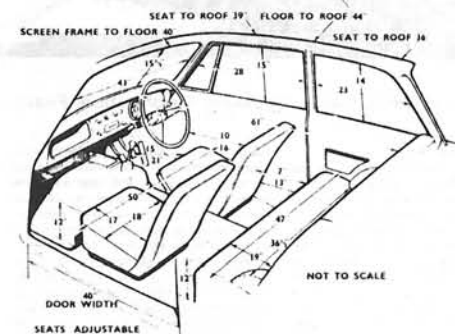
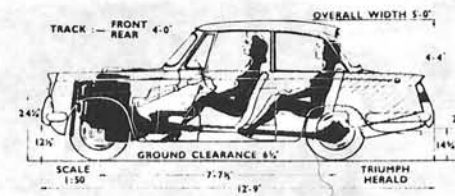
Touring Fuel Consumption (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 3% allowance for acceleration) ... 36 m.p.g.  
Fuel tank capacity (max.) ... 14.5 gallons (incl. reserve).

STEERING  
Turning circle (maker's figure) ... 25 ft.  
Turns of steering wheel from lock to lock ... 31

BRAKES from 30 m.p.h.  
0.96 g retardation (equivalent to 31 ft. stopping distance) with 8½ lb. pedal pressure.  
0.88 g retardation (equivalent to 34 ft. stopping distance) with 7½ lb. pedal pressure.  
0.56 g retardation (equivalent to 54 ft. stopping distance) with 50 lb. pedal pressure.  
0.28 g retardation (equivalent to 108 ft. stopping distance) with 25 lb. pedal pressure.

ACCELERATION TIMES from standstill  
0-30 m.p.h. ... 7.2 sec.  
0-40 m.p.h. ... 12.1 sec.  
0-50 m.p.h. ... 19.2 sec.  
0-60 m.p.h. ... 31.1 sec.  
Standing quarter mile ... 24.6 sec.

HILL CLIMBING at sustained steady speeds  
Max. gradient on top gear ... 1 in 12.4 (14.1 mph 180 lb. test)  
Max. gradient on 2nd gear ... 1 in 8.1 (14.1 mph 275 lb. test)  
Max. gradient on 1st gear ... 1 in 5.5 (14.1 mph 450 lb. test)



1. Gear shift. 2. Lights (dip/main/light switch). 3. Handbrake. 4. Horn button. 5. Direction indicator switch. 6. Heater temperature control. 7. Heater air distribution control. 8. Fuel contents gauge. 9. Trip adjusting knob. 10.

Heater fan switch. 11. Screen washer button. 12. Windscreen wiper switch. 13. Side and panel light switch. 14. Interior light switch. 15. Clock. 16. Ignition and starter switch. 17. Oil pressure warning light. 18.

Handbrake. 19. Fuel gauge. 20. 21. Windscreen wiper switch. 22. Side and panel light switch. 23. Interior light switch. 24. Clock. 25. Ignition and starter switch. 26. Oil pressure warning light. 27.



# The Triumph Herald Saloon



## A New Small Car with Many Outstanding Features

ELSEWHERE in this issue we publish a full description of the new Triumph Herald. Here we report on our experiences of more than a thousand miles on a pre-production example of the saloon model. Before individual details are considered at length, a quick summary of the outstanding impressions of the Herald will be of interest. These were the unusually quiet and effortless performance for a saloon in the one-litre class, the very comfortable ride, the light steering and quite surprising turning circle, the wide range of vision and, above all perhaps, the essentially likeable character of the car as a whole.

Now for a more thorough analysis. The general performance of the engine is already well known because the unit used is, in fact, the normal 948 c.c. Pennant engine, but it was interesting to see how this unit fits into its completely new surroundings. In the first place, it is particularly smooth and quiet, the only exception being a very slight suggestion of drumming from 30 to 35 m.p.h., but this period is noticeable only because the car is so pleasantly quiet and effortless elsewhere in the range. A true 60 m.p.h. is, perhaps,

the best cruising speed of all, with the willing engine, the low level of wind noise and the good suspension combining to give the impression of a much larger car. So, too, does the unusual top-gear flexibility. Acceleration is well up to the current standards, as the stop-watch figures testify.

Second gear is, perhaps, slightly lower than some enthusiasts would like, but the choice will undoubtedly please the average driver because starts from rest in this gear call for no finesse and first gear can be regarded purely as an emergency ratio. In this connection, it is worth recording that neither Bulch-y-Groes nor the Hirnant Pass in Wales called for bottom gear when tackled with a load of two plus week-end luggage.

Fuel-consumption figures reveal a satisfactory standard of economy and in this connection it should be pointed out that the overall figure, inevitably, represents the hard driving to which a test car is always subjected. Other features of the

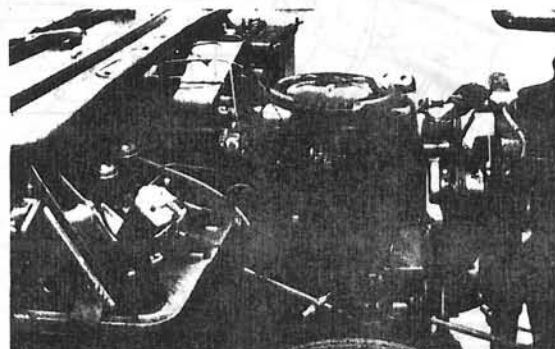
SEEN here on the coast of Wales, the Herald saloon shows its crisp, distinctive lines. This test model had left-hand drive, but interior illustrations are of an r.h.d. model.

engine include easy starting, quick warming-up, and an entire absence of pinking on normal premium-grade fuel. Outstanding is the accessibility of the unit, due to the entire nose of the car hinging forward for engine attention.

A central remote-control gear lever earns the greatest approval, both for being placed exactly where the driver wants it and for providing quick and fool-proof changes, whilst a press-down arrangement prevents accidental engagement of reverse without making that ratio difficult to find in a hurry. Indirect-gear noise is very obtrusive and the inboard-mounted final drive is almost inaudible.

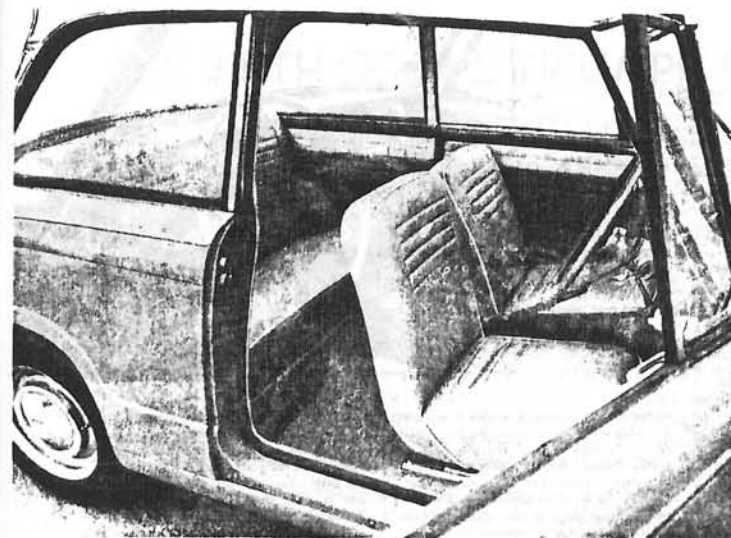
Braking reaches a high standard, with light pedal pressures giving retardations of rather better than 1% for each pound of

QUITE exceptional accessibility to engine, accessories, steering and suspension is provided when the spring-balanced front body structure is pivoted forward on its hinges.



### In Brief

Price £495 plus purchase tax £207 7s. 6d., equals £702 7s. 6d.	
Capacity	948 c.c.
Unladen kerb weight	16½ cwt.
Acceleration:	
0-20 m.p.h. in top gear	12.7 sec.
0-50 m.p.h. through gears	19.2 sec.
Maximum top gear gradient	1 in 12.4
Maximum speed	70.9 m.p.h.
"Maximile" speed	69.8 m.p.h.
Touring fuel consumption	36.4 m.p.g.
Gearing 13.25 m.p.h. in top gear at 1,000 r.p.m.	
26.6 m.p.h. at 1,000 ft./min. piston speed.	



## The Triumph Herald

LARGE windows give the Herald saloon (seen here in right-hand drive form) a very light interior. The separate front seats, which tilt very easily for access to the rear, can be set at different angles merely by rotating simple rubber blocks on the seat frame.

extremes of movement so that there is no risk of overshadowing either position when giving the lever a quick flip from side to side or vice versa, and thereby unintentionally dazzling an oncoming driver with the main beam. The latter gives an exceptionally good range whilst, in the dipped position, the combination of range and spread is very nearly the ideal. Still on the subject of lighting, a neat little lamp below the top cowling above the fascia board is worth mention. Controlled by courtesy switches on

effort on the pedal. A nicely-placed hand-brake closely adjacent to the gear lever is an aid to manoeuvring, and is of adequate power.

As indicated earlier, the rack-and-pinion steering is very light and gives a quick and accurate response, but the fault sometimes found with this type of mechanism—namely, unpleasant reactions through the steering wheel—is almost entirely absent. The phenomenally small turning circle is a sheer joy in town. Just how useful this is in practice can be gathered from the fact that it is possible to park a Herald in a line of cars with only 18 in. clearance fore and aft and, with a single reverse to take up the space behind, to drive straight out in a single sweep.

On corners, the Herald is particularly pleasing and the introduction of independent rear suspension has brought no discerning penalties. Indeed, this car follows the line chosen on a corner with particular accuracy and with no pronounced over- or under-steer characteristics. Roll is very efficiently checked by the stiff front end with its powerful anti-roll bar, and only when the car is taken round a corner very fast indeed does the r.r.s. become noticeable by imparting a somewhat flexible feel to the back end. A full load greatly reduces this effect.

References in the previous paragraph to

the stiffness of the front refer purely to anti-roll characteristics and should not be taken to imply any harshness in the suspension which does, in fact, provide an unusually high standard of comfort and excellent road holding. The only criticism that can be levelled in this respect is one inseparable from the use of rather small wheels which do, inevitably, cause cats'-eyes and certain types of pot holes to be felt more prominently than when road wheels of larger diameter are employed. Very pleasing, on the other hand, is the fact that road noise is much less pronounced than on most small cars.

The layout of the controls and instruments is simple and straightforward. Directly in front of the driver is a single large dial comprising the speedometer (with trip and k.p.h. as well as m.p.h. markings) and the fuel gauge. The light-grey background of the dial is satisfactory in daylight but the degree of illumination provided at night is distracting and it was found better to switch off the panel light on country roads.

The lighting switch arrangement is slightly unusual but very effective in practice. A knob on the fascia board brings the lights into use, and a finger-tip lever on the steering column selects side, head or dip as required, a good point being that the side and dip positions represent the

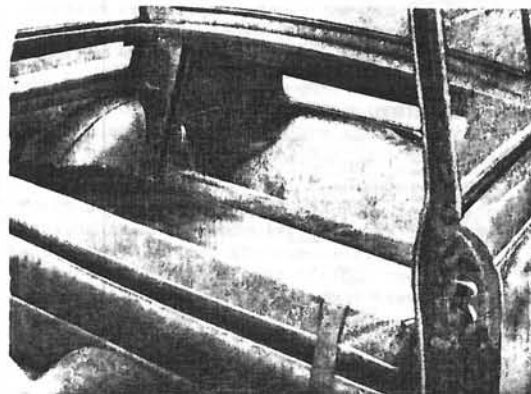
both doors, it serves well as an interior light for entering and leaving the car and, having an independent switch, it is also excellent for map reading.

Pendant pedals are used for the clutch and brake, with an organ-type for the accelerator, and heel-and-toe operation of the brake and accelerator is possible for simultaneous braking and gear changing. There is, moreover, room for the driver's left foot at the side of the clutch pedal.

### Triple Adjustments

All-round vision is an outstanding feature, with both the front wing tips and the tail fins readily visible, whilst the falling bonnet line gives a good view of the road close to the car—a great help in traffic, although giving a somewhat heightened impression of speed when driving fast on empty highways. Both driver and front passenger are provided with a vision—the pan being cleverly mounted on a single bar on the mirror bracket.

In the design of this car, special attention has been paid to driver adjustments and, in addition to the usual sliding seat mechanism (which works particularly freely), the frames of the front seats are supported by eccentrically mounted rectangular rubber blocks which can be set in four positions to give a useful adjustment



THE BOOT itself is large and usefully boxy in shape but by folding forward the rear seat squab, long or awkward loads can be carried under cover. The spare wheel is housed in a well in the boot floor, the fuel tank being built into the left-hand wing.



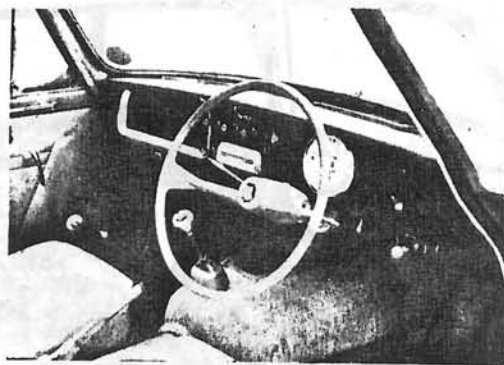
Reprinted from "The Motor," April 22, 1959

of seat and squab angle. In addition, there is a swivel adjustment for the steering column which enables a regular driver to adjust its length to suit his particular anatomy.

Ventilation is catered for by winding front windows (which disappear fully into the doors), the usual hinged ventilating panels and a fresh-air type of heater and demister which is supplied as standard. The rear quarters are fixed and, in certain conditions of wind, this makes it somewhat difficult to arrive at a window or ventilating-panel setting which provides as much fresh air as some would like without one or other of the occupants complaining of slight draughts. The heater whilst of adequate power, directs the warm air on to the gearbox cover rather than on to the feet of the occupants. A good detail is the provision of catches for the ventilation panels which automatically lock in the closed position and can be released only on the pressure of a small button.

The front seats provide a very adequate degree of comfort, although they are rather on the small side and positioned closer to the sides of the car than to each other; the arrangement results in the driver sitting in a slightly off set position in relation to the wheel and although this

LARGE speedometer dial and roomy cubby-hole are features of the plain but attractive fascia; this picture also shows the stubby remote-control gear lever which works crisply and positively.



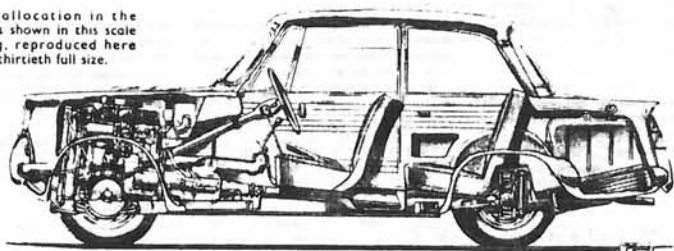
seems strange at first, it is soon forgotten. For easy access to the rear, the front seats tip up complete, and the presence of counterbalance springs makes this an easy operation. At the rear, the seating is comfortable for a car of this size and a good point is that there is plenty of foot room under the front seat cushions for the rear occupants. Another welcome feature is the really excellent side and back view enjoyed by those in the rear compartment.

Luggage accommodation and storage

for odds and ends is distinctly above average for a car of this type, but as full details are contained in the description elsewhere in this issue, the point need not be elaborated here. Equally, the standard equipment is more than usually generous, as a study of the data panel will show.

In all, this new Triumph model is a most promising newcomer. Not only does it offer what many people want, but it also possesses in high degree that elusive quality of charm which makes so much difference to motoring.

SPACE allocation in the Herald is shown in this scale drawing, reproduced here one-thirtieth full size.



## Specification

Engine	
Cylinder	4
Bore	63 mm.
Stroke	76 mm.
Carburettor	948 c.c.
Power (bhp)	19.35 at 4,000 r.p.m.
Valves	Overhead (pushrod)
Compression ratio	8.5:1
Camshaft	Solex 28 ZIC/2
Ignition	AC, 6-type
Ignition timing control	Central
Oil pump	By pump
Max. speed (m.p.h.)	35.5 (at 4,500 r.p.m.)
0-100 m.p.h.	14.5 sec.
Top speed (m.p.h.)	45.0 (at 5,000 r.p.m.)
Top speed (m.p.h.)	22.6 (at 4,000 r.p.m.)
Transmission	
Gears	5 in. Borg and Beck, 4 d.p.
1st gear (m.p.h.)	4.87
2nd gear (m.p.h.)	7.04
3rd gear (m.p.h.)	11.99
4th gear (m.p.h.)	20.82
5th gear (m.p.h.)	20.82
Propeller shaft	Hardy Spicer with needle roller universal joints
Final drive	Ratio 4.87:1 (4.87:1 hypoid) and 12.25:1 (12.25:1 hypoid)
Top speed (m.p.h.)	26.6

Chassis	
Front	Carling 1 1/2 ton (2 1/2 in. on front)
Rear	1 1/2 ton (2 1/2 in. on rear)
Front suspension	Independent. Coil and wishbone with anti-roll torsion bar
Rear suspension	Independent. Spring axle and transverse leaf spring
Shock absorbers	Armstrong or Woodhead
Steering gear	Manroe tele-copic hydraulic
Brakes	5.0-11.5, tubless

## Coachwork and Equipment

Starting handle	None
Battery mounting	Under bonnet
Lock	Scissor type
Latching points	Under chassis frame at appropriate spots
Standard tool kit	Jack, wheel nut remover, open ended spanner, box spanner, combination tool, feeler gauge
Exterior lights	Two headlamps, two side-lamps, two tail-top lamps, number plate lamp
Function of electrical fuse	Fuse
Directional indicators	Amber flasher type, self-cancelling
Windscreen wipers	Twin, self-parking
Windscreen washers	Twin, manually operated
Sun visors	Two (with vanity mirror for passenger)
Instruments	Speedometer (with decimal trip), incorporating fuel gauge
Warning lights	Ignition, oil pressure, main beam, direction indicators

Lock	With ignition key
Glove locker, etc.	Open cubby in foot well parcel net below, additional tray on gear box cover, recessed pockets in rear side panels
Parcel shelves	Behind rear seat
Armchairs	One (central) in back, two in rear body sides
Cigar lighters	None
Interior lights	One, below fascia coat with independent and courtesy door switches
Interior heater	Fresh-air type with demister
Car radio	Provision for, but not supplied
Extras available	Tailgate dampers, water temperature gauge, leather upholstery
Upholstery material	P.V.C. leatherette
Floor covering	Carpet
Exterior colours standardised	Nine single colours and (at extra cost) six two-tone colours
Alternative body styles	Coupe (with 2-car-burettor engine)

## Maintenance

Surge	7 pints, S.A.E. 20 or 10W/30 Multigrade
Gearbox	1 1/2 pints, S.A.E. 90 hypoid
Rear Axle	1 pint, S.A.E. 90 hypoid
Steering gear lubricant	Multi-purpose grease
Cooling system capacity	8 1/2 pints (4 drain holes)
Chassis lubrication	No grease-gun nipples and no points requiring routine lubrication (apart from maintenance of engine, gearbox and final drive oil levels) under 10,000 miles
Ignition timing	10 degrees B.T.D.C. static
Contact breaker gap	0.015 in.
Spark plug type	Lodge HLN
Spark plug gap	0.032 in.
Valve timing	Inlet opens 12 degrees B.T.D.C. and closes 52 degrees A. B. D. C. Exhaust

opens 52 degrees B.T.D.C. and closes 12 degrees A.T.D.C.	
Tappet clearances (Cold) Inlet and exhaust	0.019 in.
Front wheel bearing	1/16 in.
Camber angle	2 degrees positive (static, laden)
Castor angle	4 degrees positive (static, laden)
Steering wheel pin inclination	6 degrees (static, laden)
Tyre pressures:	
Front	24 lb.
Rear	24 lb. two-up or 28 lb. four-up
Brake and clutch fluid	Wasteless-Girling
Battery type and capacity	12 cells, 39 amp. hr.

NOTE: Coupe not available in some paintwork.

# THE BIRTH OF THE TRIUMPH HERALD

As the founder of the Standard Register and a privileged honorary member of most of the Clubs and Registers catering for Standard and Triumph cars, I look forward to receiving the various newsletters and magazines each month which I read with agreeable interest. Sometimes a remark or comment causes me to disappear into my library for an hour or two with the thought of checking a statement made or a view expressed and such a stimulus was occasioned by your request for reminiscences from those who bought a new Triumph Herald.

I can be numbered amongst this band of pioneers, as I acquired a Monaco Blue/Sebring White example of the coupe, with Phantom Grey trim, in July 1959, YDU 186, which was in fact the first coupe delivered under the Staff and Works Scheme to an employee of the Standard Motor Company, which I was from 1955 to 1974, although of course the name changed several times during that period. It replaced a 1957 Standard Pennant which gave the Herald its engine and gearbox, with the remote control gear-change which helped to make the new car a delight to drive. Before this, in early 1959, I was able to join other senior staff at the Banner Lane factory to see the prototype cars, codenamed Zobo, which differed in a number of detailed ways from the later production vehicles.

But I proceed too quickly with my narrative and it is important to look further back to place the evolution of the Herald in true perspective.

By the mid 'fifties, with the well loved Standard 8 and 10 models becoming a little passe in both style and mechanical specification, it was time for the directors of the Standard Motor Company, under their new leader, Alick Dick, still only 37 years of age, to assess their requirements for a successor in the small car field. The tie-up with the manufacture of tractors at Banner Lane was profitable but would not continue much longer as Massey Harris courted Ferguson and so it was important to make the correct decisions about this new 'bread and butter' car, while the Vanguards and TR range provided the jam and cream.

They decided that not enough attention was being paid to safety, to ease of handling and control, and to parking problems. Important too, was the cost of servicing, which they were determined to reduce by the application of new techniques designed to make the grease gun redundant in all climatic conditions. To achieve this aim an enquiry into the needs of a wide cross-section of the motoring public throughout the world was made, in an attempt to provide not only an answer to small car requirements at that time but also for many years to come. By April 1956, the directors were actively involved with planning a replacement for tooling-up during 1957 and launch at Earls Court in 1958 but although many designs were proposed and rejected, it was not until the Geneva Motor Show of 1957 that the search for a stylist capable of creating an attractive modern shape was ended by the engagement of Torinese stylist, Giovanni Michelotti, whose designs were interpreted by Vignale, the specialist coachbuilders.

At Coventry, in less exotic surroundings, the project engineers were designing a new chassis which meant that the Herald was to be the first small car for many years to be so equipped. This provided a firm mount for the body which was designed as seven major units, all of which were easily removed in case of damage - this also provided for ease of assembly in foreign countries, using the chassis as a jig - a distinct advantage over a monocoque design. Indeed, the Herald was subsequently built in six overseas countries and, as the Standard Herald, it left the Madras factory in FOUR DOOR form and by 1969, 95% of the car was made in India and the value of the kit sent out from Coventry was £15.11.2d.

Even as early as August 1957, when the directors gave the formal go-ahead for the Herald project, they were far sighted enough to realise that the separate chassis form would also potentially form the basis for a small sports car for the American market - which would eventually appear as the Spitfire and subsequently the GT6.

On Christmas Eve 1957 a prototype body arrived from Turin and by the following March a prototype coupe, VRW 589, was being tested in Spain and later at the MIRA proving tracks at Lindley. It was felt that this strenuous exercise was not enough adequately to test the car in all conditions, so Heralds were shipped to Capetown to cover the entire length of the African continent - including a crossing of the Sahara. How these cars achieved this ordeal (two prototype Heralds, saloon WRW 404 and coupe WRW 405, an Atlas van and a Standard Companion estate car) is documented in 'Turn Left for Tangier', subtitled 'The Hard Way for Heralds' by Richard Bensted-Smith, published by Temple Press in 1960 and no doubt your more avid readers will search out a copy.





By January 1959 assembly jigs were in use and the first of the new cars in saloon and coupe forms (although Michelotti had submitted the estate car very soon after the first prototype arrived) were coming off the tracks at Canley.

In April 1959, the Herald (it was nearly called the Triumph Torch, but luckily Alick Dick's motor yacht - two Standard Vanguard diesels, of course - was called 'Herald' and this name was adopted) was launched with a touch of theatrical drama at the Royal Albert Hall. It was described as 'a new experience in motoring' and acclaimed as such by the press, public and trade, who were keen to get on with the job of selling the new creation which they believed, rightly as it turned out, would provide unrivalled opportunities to develop the Triumph image. They were treated to a special demonstration when the team of four immaculately boiler-suited apprentices showed that a specially 'doctored' Herald could be assembled and running in 3½ minutes. This act was repeated various times and on TV and I can well recall the letters we received from enthusiasts who had been reading the Lotus advertisements of the period who were prompted to write to the Standard Motor Company asking to purchase the Herald in Kit Form!

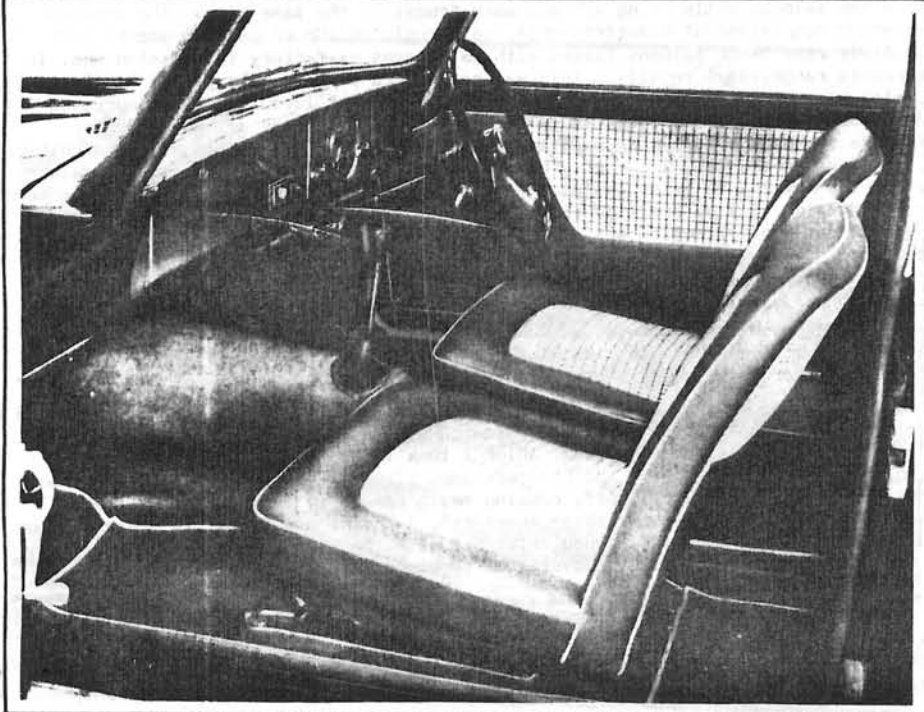
The motoring correspondent of the Times summed it all up neatly - 'The Triumph Herald introduced by the Standard Motor Company is more than an interesting new model with many interesting features: it is the Company's considered answer to the intensifying struggle between British and Continental firms in the world market for small cars. Clearly the public liked the new recipe, especially the separate chassis and this was reflected in the sales figures for 1959, which reached 27,000 in the remaining months of that year.

Whilst I never went a bundle on some of the early colour schemes, particularly Alpine Mauve and Targo Purple, my first Herald served me well, especially in August 1959, when I drove it up to the North of Scotland and back on holiday, causing much interest amongst the natives, to whom it was a novelty. An account of my exploits is contained in a contemporary issue of the Standard-Triumph Review magazine under the title 'Herald's Highland Fling', published in 1960. I was much attracted to the greater flexibility of the twin carb engine in the coupe, which gave it a top speed of nearly 80 mph, 10 mph more than the saloon, while being 4/5 mpg more frugal at the same time. The occasional rear passenger complained of claustrophobia, so I replaced the coupe with one of the comparatively rare 948cc saloons fitted with twin-carbs ex-factory (commission nos. in the GY prefix range, as I recall). This was registered 3135 HP, was Signal Red/Sebring White, with black trim and shared the same extra instrument layout on the compressed 'All Bran' dash as its predecessor in my stable. There was quite a thriving order book for the Stanpart wooden dashboard at this time - not such a highly polished edition as that offered on the 1200 later on. One thing that really stands out as an Heraldic memory was the way the interior was planned so that 'things' could be stowed. Your members with early Heralds will be familiar with the hinged parcel rack (better known as the 'chip-basket' at Canley), which was slung beneath the dash where most people forgot its existence.

The Herald twin-carb saloon served us well for several years until my wife, Barbara (then running a Standard 8, POH 354) was much taken with an Olive/Cactus 12/50 saloon and an example of this model was added to our stable, AAC 448B, in place of the Standard. With its punchy engine and disc brakes, this was probably representative of the ultimate in Herald motoring and we enjoyed its use for many years.

Luckily, I was able to use all the various models and derivatives made at Triumph to take me to various parts of the country and Europe as part of my job and I was very impressed with a Bond 2-litre press car which I took to Belgium on an extended road test, which included lapping the Spa/Francorchamps circuit at speed. Despite the fact that one of the wire wheels fell off, causing me to remark in my report that 'Bonds were always more famous for their three wheelers', I bought one myself in Prairie Beige with black trim, RNR 573G. I had good relations with the Bond in the late 'sixties' and I remember they let me have a convertible to play with for a few days when they were quite new.

Since those days of the smaller Triumphs, which I always look back on with great affection, I have been a staunch supporter of the marque even though I left the factory in 1974. Twelve Triumph cylinders are still in my garage, represented by my ex-works Emerald Green Triumph 2000, which has covered nearly 80,000 miles in my hands only and



PROTOTYPE HERALD COUPÉ

is easily recognisable by the Standard Triumph club badges and emblems it carries. Its stable-mate is a Mimosa TR6, GWK 4N, which is pristine, only appears in the summer, never goes out in the wet and never exceeds 2500 rpm until it has covered at least three miles. Looking back over thirty years of motoring, I have been fortunate to drive virtually every surviving example of Standard and Triumph car and commercial vehicle ever made, including many thousands of miles in the oldest vehicle Standard, the 1907 Roi de Belges 30 hp car, from 1960 to 1974, right through to the TR7 convertible which I sampled at STIR V last year, immediately prior to trying a newly restored 1913 Standard which had been brought to Charlecote Park. Perhaps I am not quite so active these days as in the 'sixties' and 'seventies', when I three times drove an 1897 Daimler to acquire finishers' medals for the London-Brighton run, or, at the other end of the scale, enjoyed conducting a Rolls Royce Corniche in New York during a Stateside visit to STIR11, immediately after sampling a Triumph Renown which still sports its British registration number on American roads.

Whilst I can understand the partisan stance of many of your members who believe that the cars you cater for are THE cars to own from the Triumph range - 'a GT6 can drive circles round any TR', I read from Miss or M/s or Mrs Cheryl Home of Brownsville, USA - I firmly believe that after a while interest broadens to embrace a rather more catholic attitude in members who take a look back at the heritage of the marque they enjoy. For this reason, I originated the STIR series of events six years ago and your club was represented by John Griffiths at the meeting prior to the 1978 event STIR 111, which was held at Rousham Park, in Oxfordshire. At this rally I can recall best car submitted for judging was a 1969 GT6 belonging to Matt Maudsley, which set a high standard for your fellow members to attain.

I hope your club will again be represented at the pre-STIR VII meeting which will be called in the autumn of this year to plan the 1982 rally, while as I write this the US Clubs are meeting to celebrate STIR VI in Washington, DC. Meanwhile, you don't have to be too old to have bought one of these cars new!

P.S. A very limited number of copies of my book, 'The Standard Car 1903-1963' is still available directly from me at £3.50, including postage and packing. Telephone number Bigbury-on-Sea (054 881) 446.

JOHN DAVY





# 4TH NATIONAL CONCOURS

That you have been inflicted with me again, you can blame on Chris Squibbs, (strange though it may seem, his car is not a banger!). Anyway, that's what you've got and if it is all completely unintelligible, please blame it on my having driven off with my glasses on the roof of the car, so I have no idea what I am writing. Furthermore, I am still suffering from shock resulting from the end of the petrol price war in N.E. Cheshire. I don't think the car runs as well on Haigs as it did on Esso, and the odd valve sticks occasionally but beggars can't be choosers.

Right, Donnington. Get there early and catch the best of the goodies when they arrive, (I know it was a concours). That meant sleeping there, so I arrived on Friday evening (7.30pm) and found Janis and Tony slaving away setting things up for Saturday. Janis told me that they had decided to put the tents around the corner and have the cars where the tents were last year. This was very good thinking as it put the cars in the select position, making the whole set up more aesthetic for the photographers, gave the campers peace and privacy and put them practically next door to the Redgate Pub.

Janis insisted on showing me where to pitch the tent and ran in front of the car to guide me. I did offer her a lift, which she declined, having seen the inside of the car at last year's concours, (it is very muddy at home). This was just as well as I have a crop of malting barley on the passenger side.

Having pitched the tent, I offered to help Janis and Tony but, luckily, they were about to leave. The Yorkshire contingent were just arriving, so, before Janis changed her mind, I took off for the John Thompson and a couple of pints of their own brew. Unfortunately, I couldn't drag Paul along this time, something that added a touch of sadness to the weekend.

Saturday morning was overcast and chilly but showed some signs of clearing up later. People were arriving; also the 'goody waggons'. The bales of straw for the autotests were being dumped at the bottom of the loop and the providers of food, drink and icecream were setting up shop. The promised bar did not arrive and I suspect that it was hijacked by MGOC mercenaries. Roland Drew emerged from his mobile Aladin's cave with all sorts of bargain priced treasures, the sight of which caused the cloud cover to break up, revealing a strange, bright object in the sky. The appearance of the sun also heralded the arrival of the Club Convoy.

By this time some really beautiful cars had assembled in the concours area and more were arriving all the time. Club members were flocking in and the parking area was filling up. There was a little cooking activity but most of the hungry seemed to be quite content with the hotdog/icecream department or else disappeared in search of an hydraulic lunch.

In the afternoon judging started and nobody envied the judges their task. At the bottom of the loop an Autotest was being held. This consisted of five tests: Keeping a back wheel between two curving lines, backing into a 'garage', judging the width of the car, free wheeling to stop over given spot and a timed forward and reverse slalom. Penalty points were awarded for each test; the winner being the driver to collect the fewest points.

Eventually the judges completed their difficult task, Janis succeeded in sorting out the figures and the results were announced and the presentations made by Dave Marklew of Custom and Coachcraft.

The Results Were:-

## ELITE

## ORIGINAL

## WORKING

Roger Collins

Roger Rowley  
Reg Woodcock  
Clive Wood

Stephen Willis  
E A Harris  
Barry Newitt

Spitfire MK111

Spitfire MK111  
Vitesse MK11  
Vitesse 6

Vitesse MK11  
948 Herald Coupe  
Herald Convertible

## WORKING MODIFIED

## MODIFIED

## BEST PERSONAL CHOICE

## SPITFIRE UK SHIELD (Best Convertible)

## MIKE LONG TROPHY (Best GT6)

## DISTANCE AWARD

## AUTOTEST

Chris Briers  
Bill Hewer  
R Husband

Tony Jones  
Bev Warren  
Stephen Little

Roger Collins

Roger Rowley

Bev Warren

Keith Mitchell

J A Hall

GT6 MK11  
GT6 MK111  
Vitesse MK11

Vitesse MK1 Convertible  
GT6 MK111  
Vitesse MK11 Convertible

Spitfire MK111

Spitfire MK111

GT6 MK111

Budleigh Salterton

The judges for all the concours were Dave Marklew, Tony Baird of Spitfire UK and the editor of Motor.

I tried counting the club cars; not too easy a task as there was constant movement; and counted 155. Admission was by programme and raffle ticket, which cost the colossal price of 40p. £91 was taken at the gate on Saturday. This makes it 227½ cars, plus the Yorkshire cars which arrived the previous day, those of the organisers and my own, so getting on for 250½ club cars must have turned up. It was also good to see two Spartans and a Gentry in the Concours, the standard of which went without saying.

For better, or for worse, the MG Owners Club were also at Donington and had taken over the nosh part of the Redgate. They very kindly invited all TSSC members to their Steak Buffet, for which the charge was £4 and to their Disco in the Hangar (entrance fee £1.50). So the evening was spent between the Redbrook and the Hangar and everyone seemed to enjoy themselves, although the large numbers present precluded the family atmosphere associated with most club does.

Sunday was the MGOC day, so, needless to say, the sun was not so much in evidence. Our club organised an Autotest for them, using the same course as our tests and provided the marshalls. There was a little panic by certain MG owners around 9am due to a misunderstanding about times but it got underway around 10am and lasted until 2pm. It was evident that the MGB's were not as manoeuvrable as the Midgets, let alone our cars.

That was the end of TSSC activities, (I had sneaked off at one to refuel at the White Swan in Melbourne). There was the inevitable feeling of antilimax and our members either set off for home or else to visit the Donington Collection and/or MG do, with which this account is not concerned. A few TSSC members were just arriving, having apparently misunderstood the publicity given to the event.

It was a very enjoyable weekend (it always is). The organisers did a great job and so did the members. Not all the gorgeous cars were in the concours, the parking area held it's fair share. The weather was kind and we can now look forward to Cambridge, Stoneleigh, Stow and next year's Concours, not to mention all the other activities in between. If past records are anything to go by, these events should bring a little sunshine into the lives of not only the club members present but into those of all the inhabitants of this cloud surrounded haven of lows and fronts. Maybe it pays to have the same initials as the sun shine club!

## BOB HEATH





# TOWN&COUNTRY FESTIVAL

Friday the 28th Heralded three days and three nights of solid enjoyment based on this year's Town & Country Festival.

After throwing the tents up, the early starters set off in convoy for the nearest real ale pub at Bubbenhall; disagreements regarding its whereabouts being settled en-route by the whole convoy making a U-turn around a traffic island. This relaxed style was maintained on arrival at the pub when half the members marched into the public bar and half into the lounge. Perhaps cheaper drinks in the public bar got us all together again, so that old acquaintances and new introductions could be made, amid chit-chat about old events and plans for the weekend ahead. On return to the campsite it was a quick night cap and heads to the pillow, for an early start on Saturday.

7.30am saw our campsite bustling again - is it true Bill Hower was up at six o'clock polishing his GT6? And by 8.30am, final touches were being made to the Club stand in the showground, with vehicles already displayed outside the marquee. The Club cars were nicely arranged in a horseshoe depicting the progression of the marque from 1959 to 1980; early days being represented by 'Holly', the very original Herald Coupe of E Harris whilst at the other extreme, Paul Harris' X reg'd Spitfire made you wonder why production was ever stopped. Alongside these were a pair of GT6 MK111's, Matt Maudsley's MK11, Roger Collins MK111 Spit., Barry Newitts open Herald and a very late H reg'd 13/60 estate. The toe of the horseshoe was graced by Steve Little's MK11 Vitesse convertible with its rear end on ramps and immaculate chrome wires enticing visitors to wend their way down the aisle of cars. Lurking behind Steve's car was the club's marquee where ambitious visitors were acosted over the weekend by members waving membership forms and purveying club regalia. The stand was finished off by a photographic display illustrating highlights of previous club events; and also a family tree, showing the development of the Herald chassis vehicles and finely illustrated by water colour pictures of each variant painted by Matt Maudsley. The first stand judges arrived just as these latter items had been installed and they seemed very impressed with our efforts.

The days events were slightly dampened by a steady drizzle of rain but this disappeared by evening when we boarded coaches to take us to the Green Man pub at Little Itchington for an evenings entertainment. A private room was laid on and the buffet was a feast, helped down by a very real ale, whilst the singer/guitarist ensured a good atmosphere throughout the evening. More entertainment on the coachride back was provided by Chris (Sir Jasper) Squibbs, who sparked off a succession of interesting songs. After nightcaps and a natter back at the campsite, it was suddenly Sunday.

Sunday was hot and the crowds bowled into the festival all day long. Our stand received plenty of interest but more club cars were on display elsewhere in the concours, namely Bev Warren's MK111 GT6, R J Rawley's Spit. MK111, Stan Walter's Vitesse MK11 Saloon, and, still trembling after it's duel with my Vitesse a few weeks ago, Bill Hower's rapid GT6 MK111.

Many new members were recruited over the three days, including someone I only know as Nigel, with a very well prepared MK111 GT6, fitted with a 2500cc fuel injected engine. The turnout of existing club members was excellent, showing how popular this event is and it was good to see three members coming all the way from Germany.

5.30 Sunday evening saw us all preparing for another night's entertainment. Nearly 100 members and a monkey filled two coaches bound for the Eathorpe Park Hotel at - would you believe - Eathorpe; where an excellent buffet and disco awaited our arrival. Once again the night was a success and for the diehards there was more back at the campsite, where an oak tree in the middle of a field proved far enough away to have a party without wakening everyone else; lights and music being provided by Jeff's Herald convertible.

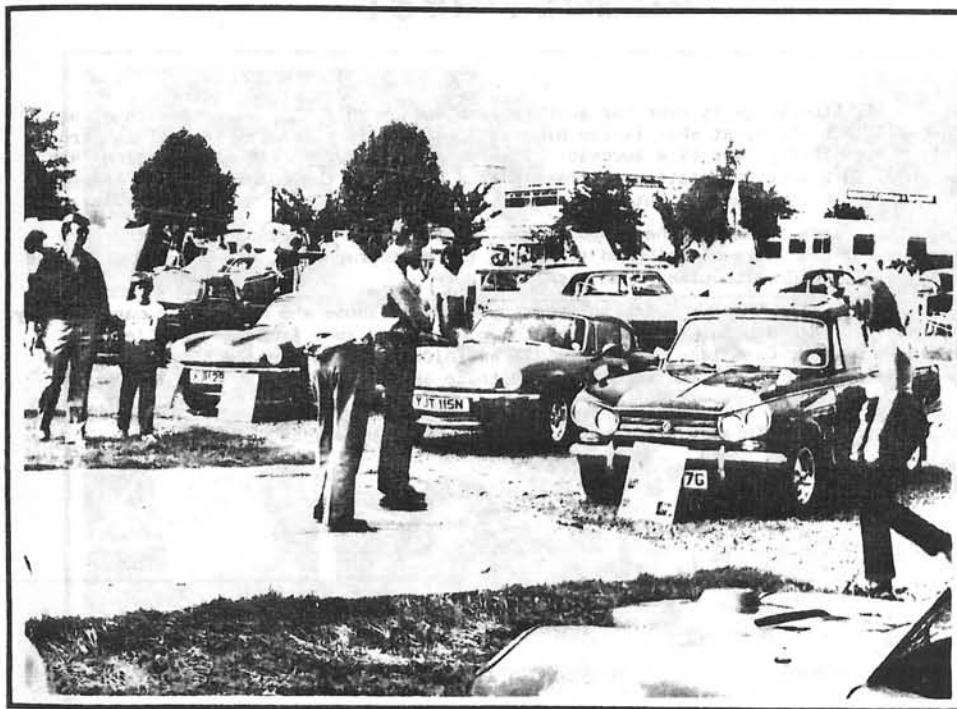
Monday was really hot and provided a last chance for people to look around all the stalls and activities which made up the Festival, of which, TSSC was but a small part. The motoring stands has a few notable absences such as the Jensen club and the Bentleys, but it was good to see new clubs coming up so well; the Cortina 1600E club had an impressive display and the 'baby' Austins too were out in force. Most people had a fumble through the autojumble stalls where Bond spares were very much in evidence at bargain prices.

The non-motoring section of the festival was unending. Trade stalls formed a giant market place, whilst the central arena hosted a non-stop show of horse riding, motorcycle displays, some chap driving a Japanese car around with his eyes shut (can't say I blame him), parachuting, vehicle displays and many others. For kids there was an old tyme fair ground and for farming types, there was a large agricultural centre to walk around, provided you didn't mind being engulfed in soot and smoke from the adjacent tractor engine rally. Highlight for me was the tractor pulling event in which dragster-like tractors strained to drag a load as far as possible before stalling. Engines used ranged from a helicopter turbine to four Rover V8's in line. The sound of those engines straining till they stalled on full power with the ground vibrating, can only be matched by our membership secretary's Peco exhaust system. Other attractions included a Jaguar aircraft, a rather gruesome hog-roasting and ironically next to that, a pet's corner.

All three days were needed in order to see everything, before people began drifting away by Monday tea time. It's always sad to see the Club stand coming down and friends driving off but then there is next year.

Thanks must go to the people who made it all possible, Bob Notley for organising our Club's participation in the festival, Tony and Janis for fixing our campsites, Dave and Marj McDougall for the two nights out, Chris Evans for bringing club regalia and Matt and Maggie Maudsley. Also thanks to all the people who displayed their cars and everybody else who helped out one way or another.

EDDIE EVANS





**AUGUST 1981**

Well, Stoneleigh is over for another year and as this was my first attempt at organising our stand, at what is the biggest concours in Europe, I am well and truly shattered. Firstly, was it a success - I think so with our club's stand coming 14th out of 27 in a very competitive environment and giving us the opportunity to 'spread the gospel' to thousands of interested spectators.

This year's theme for the concours was 'A Century of Motoring' and we tried to show how our club cars contributed to this - the photograph(s) elsewhere in this issue should illustrate this better than words.

I would like to say a personal thank you to all those who helped and particularly to those who came and put their cars on the club stand, some from as far afield as Sidmouth, Bolton, Cambridge and Essex. It was nice to see a club contingent amongst the individual entries with two GT6's, a Vitesse and a Spitfire.

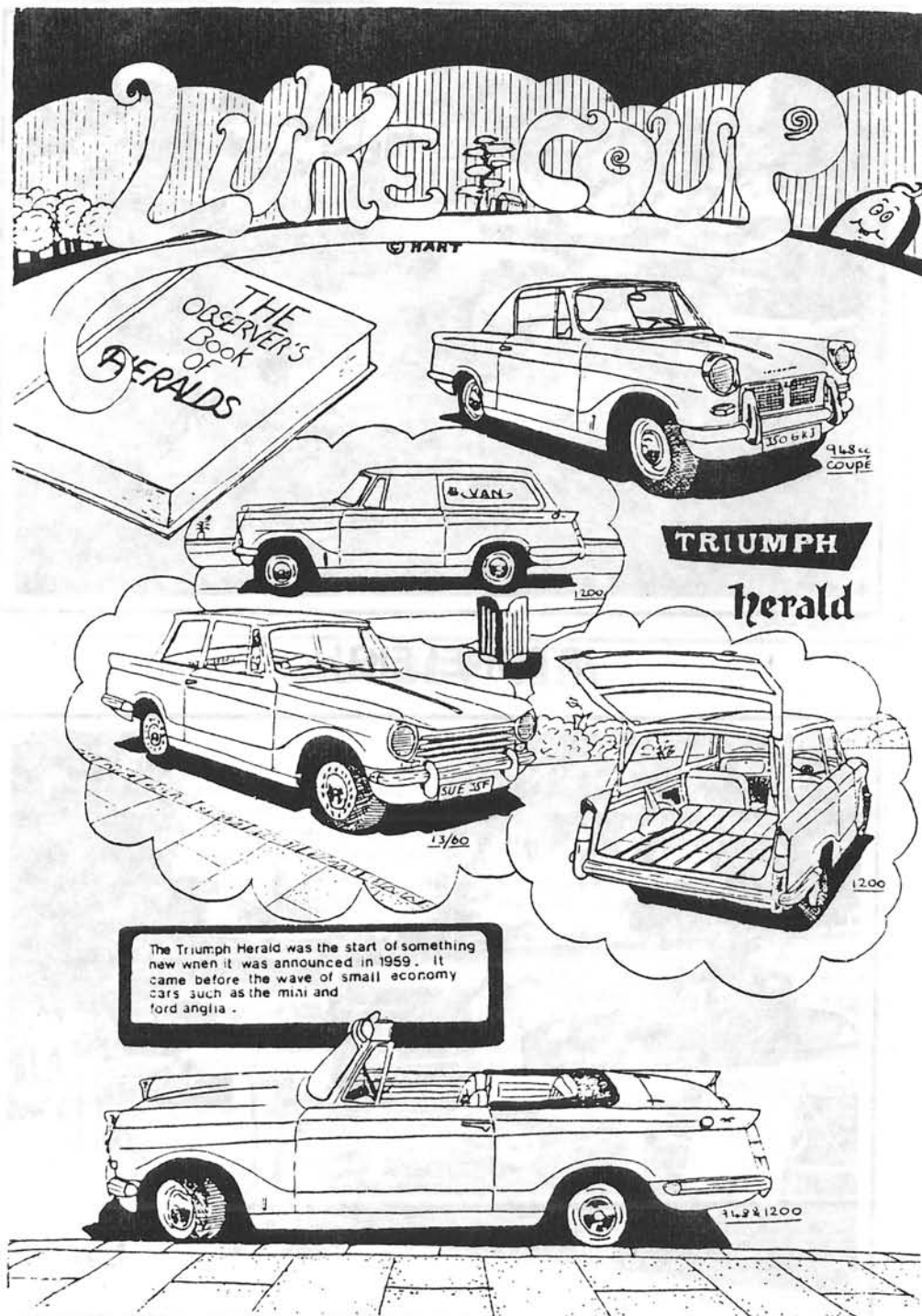
Well, back to what we are going to do next year to improve on this year's results - suggestions and preferably offers of help will be gratefully received.

BOB NOTLEY



**STONELEIGH**





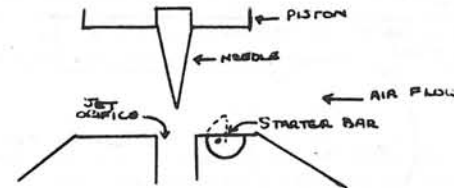
## CD CARBURETTORS

### CD 150 Carbs:

As many people have asked me about Stromberg CD carbs, I think it may be of interest if I explain the main features of the CD carb. family with regard to club cars.

#### The CD

The standard basic carb has an adjustable but rigid needle and a jet which must be centralised to allow the needle to drop cleanly into it. This carb is also fitted with a 'Bar Type' starter mechanism which simply rotates to lift the piston - and hence, the needle enriching the mixture.



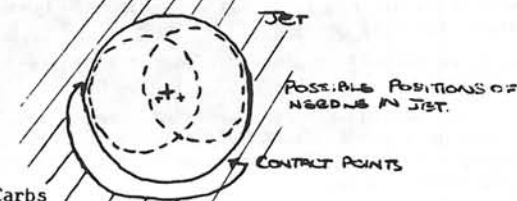
#### CDS

This is the next stage in the development of the CD range. The main feature to note is the different cold starting mechanism. Instead of the Bar starter, a 'Disc Starter' mechanism is used. This consists of an extra piece bolted on to the side of the carb body, inside which are two discs, one of which is fixed, the other is free to rotate under the control of the choke cable. These discs have graduated drillings, which allow, depending on relative position, some or no extra fuel to flow into the main inlet tract of the carb, just upstream of the throttle butterfly. The starter circuit operates in parallel with the main part of the carb.

In my experience some cars fitted with this type of choke can be hard to start, this can be because the disc holes have become blocked. If, however, the cylinders never receive sufficient fuel for cold starts, then extra choke enrichment can be obtained by drilling out the holes in stages of 5 - 10 thou. Note Please don't forget that this is only one reason for poor cold starting, there are many things to check before you start drilling.

#### CD3

This carb has the same disc starter as the CDS but is fitted with a 'Bias Needle'. It was found that the position of the needle in the jet had an effect on the mixture. In the CD and CDS the needle could float in the jet and touch at the front, rear or sides.



#### CD & CDS Carbs

To overcome this problem, the Bias Needle was introduced. The Bias Needle is a spring loaded to always contact the front of the jet.

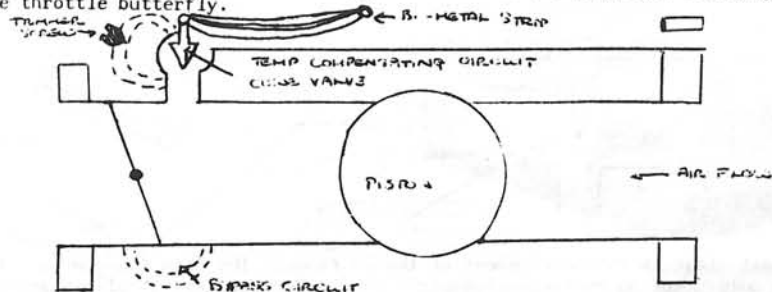
Sketches exaggerated for more clarity.  
Jet dia 0.090", needle dia 0.088".



## CDSE

This carb uses the bias needle and has a disc starter, but has a number of extra refinements.

The most important being temperature compensator. Consider an engine starting from cold, with a correct mixture. As the under bonnet temp rises, the density of the air being drawn into the carbs is reduced, causing the mixture to become over rich. To overcome this tendency, an air bypass circuit takes air from an opening in the inlet flange of the carb (i.e. pure air), through a 'Cone Valve' controlled by a Bi-Metallic Strip and out through a hole in the main carb tract, just a hole in the main carb tract, just upstream of the throttle butterfly.



A further refinement is a 'Trimmer Screw' which acts as a bypass round the 'Cone Valve'. The trimmer allows very fine adjustments to be made to the mixture strength. Fine enough to hardly show on the tacho but suitable for adjustment by CO meter.

The CDSE is also fitted with a 'Throttle Bypass Circuit'. This consists of a valve which opens when the engine is being decelerated (i.e. a high manifold depression) because under this condition the air leaking around the throttle butterfly carries a very high fuel density. If the valve opens under high vacuum conditions, then the mixture downstream of the throttle butterfly is weakened.

Finally, the Float Chamber Venting can, on the CDSE, be either internal, external, both together or controlled by throttle position to be internal above idle and external at idle or stopped.

It is important to remember that just because your car has CDS, CD3 or CDSE carbs, all of which or 'Emission Controlled', that changing to non-emission carbs will increase the engine power, because it won't!

Emission carbs are just as effective at producing power, all they do is use the fuel more sparingly, by not supplying it when it is not required. If an engine can burn X amount of fuel and you give it X and Y then you will get less power!

The reasons for lower engine outputs on emission engines are more related to the ignition and valve timings used on these engines.

Finally, fuel consumptions for Vitesse's should be in the order of 30mpg for normal, sensible driving, with 35mpg possible on a gentle, long trip, (I get 26 from mine in city driving and I'm not known for hanging around!). GT6's are even better - 30 - 35mpg for normal driving with 45mpg possible on a trip.

ROLAND DREW

## THE CROSSING of the HUMBER BRIDGE

As most club members probably know, the new £91M Humber Bridge recently opened here in Hull, after one or two small delays like bomb hoaxes etc. Cars have literally poured over the bridge since it's opening in June '81, with both north and south banks of the Humber estuary exploring each others territories.

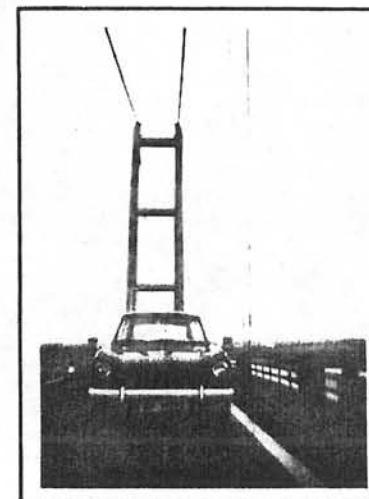
Shortly after the opening, I was reading a local paper and you can imagine my surprise when I read that the first official car over the bridge was none other than a 1972 Triumph Herald Estate. I read on and discovered that the car belonged to the Chairman of the Humber Bridge Board, councillor Alec Clarke.

Being the only member of the TSSC in Hull, I felt it was my duty to approach Mr Clarke to the view of perhaps having some photos taken of him with his car for our club magazine. He was very pleased to oblige and we arranged to meet and then drive on to the bridge site for the photos. A friend, Erick Willson, kindly offered to take the pictures for me.

We arrived at the bridge in the early evening and were met by the bridgemaster, Mr Malcolm Stockwell, who kindly invited us all up to the control tower near the approach roads, where we were taken on a guided tour. This is obviously a privilege given only to VIP's and so, suitably impressed by everything we saw, we left to take the photos.

Unfortunately, the weather was not on our side which explains the rather dull light on the photographs, also the wind was gail force, not uncommon as I was later told, when you are perched hundreds of feet up in the middle of a river. Nevertheless, we all persevered including Eric, who spend most of his time dodging cars!

I hope this article has shown that Hull is no longer a fishing village as I'm sure most people think it is. We are a city of over 500,000 people and this bridge is our proudest possession. All members would be welcome in Hull so when you have got some time on your hands, come and have a look for yourselves.



Tony Lambert.

## BRITISH SPORTS CAR DAYS— Walsdorf, Luxembourg, June 1981

Inevitably, when going 'sur le continent dans une tente' in a GT6, one forgets a few minor things. We forgot the map! Finding Dover was no great problem and fortunately we met several other club members on the quayside. (That was hardly surprising since we were all on our way to the 4th National British Sports Car Owner's Club weekend in Luxembourg). Our worries over finding the right campsite in Luxembourg without a map were over - we could travel in convoy from Calais. This was harder than one might expect what with driving on the left and Glynn Ridgewell's 'scenic route'! In case we did get lost 'en route', Glynn came up trumps again and lent us a spare map he had - a 1959 edition of the Michelin Guide to France. I must admit this was most valuable - until we crossed the border into Belgium. We lost one another several times on the way but, somewhat miraculously, as evening drew in on Friday, 19th June, five GT6's and one Vitesse rolled into 'Camping Romantique' - our home for the next few days - ready to enjoy what was in store.

What's British Sports Car Days like then? Well, it is something like TSSC's Concours Birthday Barbecue and Christmas Weekend, all rolled into one. It is set in a beautiful part of Luxembourg and hosted by the British Sports Car Owner's Club of Luxembourg, (BSCOC). The meeting has grown substantially in the four years of its existence and this year about seventy entrants took part from various clubs such as the Triumph Enthusiasts Club, Belgium, the Morgan Car Club, Belgium, the MGB Car Club, Luxembourg, not forgetting the BSCOC. Seventeen of the entrants were TSSC members.

BSCOC had virtually taken over 'Camping Romantique' for the weekend, (caravans and rooms available for the less hardy) and had arranged the following impressive programme:-

Friday Evening - eating, drinking and putting up tents as necessary.

Saturday morning - breakfast. I don't think Chris Squibbs ever came to terms with the Luxembourg interpretation of an English Breakfast.

Saturday midday - for a 'club that's going places', we didn't do too badly in Luxembourg, for midday found all cars and their occupants at the home of Brian and Maureen McCluskey, prominent members of the British Contingent of the EEC commission based in Luxembourg. This all came about after TSSC member and AA man, Jerry Hurst, came to their rescue when their Mercedes broke down in London last Christmas. On learning of Club's proposed visit to Luxembourg, the McCluskeys invited us all to their home for a drink (or several).

Saturday evening - was spent eating, drinking and making merry at the campsite, with barbecued steak a poivre and plenty of wine. Films of earlier BSCOC events were shown, which was followed by more wine and music to dance the night away. And by the look of Messrs Squibbs and Lane at Sunday breakfast, they certainly did.

Sunday morning - breakfast was followed by what some might consider as the whole reason for being - The Concours D'elegance. Sixty two cars were entered and TSSC put up a credible performance. Matt Maudsley was one of the front runners despite the judges noting a small, furry animal decorating his engine compartment as 'non-original'. Steve Willis, Bill Sunderland and Glynn Ridgewell were also placed in the top twelve. Just to prove the club means it when it says 'You do not need an immaculate car to join, just owning one and wanting to keep it is enough', we had Nick Hurst and Jeff Moore bringing up the rear in sixty first and sixty second places.

Sunday afternoon - saw the more adventurous taking part in a driving test. It was not as testing as that at the Cambridge Barbecue but then everyone was recovering from a surplus of German Bier and salad at lunchtime.

British Sports Car Days was drawing to a close. Those left standing and able, spruced themselves up and made their way to Vianden, the major town in the area, for a final evening of merry making. I think by now we had all become delightfully accustomed to that warm glow and full bellied feeling which seemed to pervade the whole weekend. During the course of the evening the results of the various events were announced, trophies were presented to the winners by the under secretary to the British Ambassador in Luxembourg and every participant received a handsome plaque to remember the weekend by. The outright winner was Ed Leysen, a native of Luxembourg and a member of BSCOC - the driver of a rather smart (dare I say it) MGB - but TSSC were well represented at the top end with:

Matt Maudsley	placed 6th overall
Steve Willis	placed 7th overall
Mike Long	placed 10th overall
and Glynn Ridgewell	placed 12th overall

During the course of our stay, we got to know Udo Stadler and Rolf Zimmer of West Germany and Kalunzy Eugene of Belgium - all Spitfire owners and members of TSSC. They had never met other TSSC members before and were delighted to meet so many in Luxembourg. It helped them to feel a real part of the club. Udo and Rolf (who were at Stoneleigh this year), enjoyed the weekend so much they have decided to arrange something similar in Germany - and extend an invitation to us all to join them (but nothing is planned yet).

British Sports Car Days '81 was over (although I already hear mumblings of a combined Luxembourg/Le Mans trip in '82 for the enthusiastic). For some, however, Luxembourg was just a great start to a holiday - Bob and Sue Notley went to the South of France with Glynn and Audrey Ridgewell. Jonty Wild, Teresa and their roof rack went camping in Italy. Matt and Maggie Maudsley (most sensibly perhaps) just stayed in Luxembourg for more eating and drinking. As for Mike and me, we drove down to the Loire Valley with Bill and Jo Sunderland, Chris and Trudi Squibbs and Chris Lane. The wine flows freely there and together we enjoyed a week of champagne breakfasts and lazy days.

JANETTE LONG



# DISC BRAKE CONVERSION

## ON YOUR TRIUMPH HERALD

WITH THE EVER-INCREASING number of road users it becomes more important that our brakes should be efficient and reliable. This brings us to a point where we want a brake that is efficient and reliable, which will require the minimum amount of maintenance and service. A disc brake conversion kit under the part number S.11045 will contain the necessary parts to convert the front brakes of your 948 c.c. or 1200 Herald to disc brake specification. The 9 in. dia. discs will give a total swept area of 141.2 sq. in. over the two front brakes.

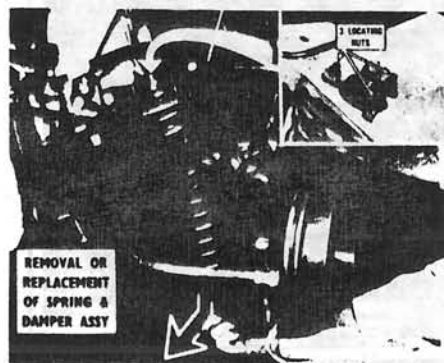
The amount of work involved in this conversion should not be beyond the person who is mechanically minded. No special tools are required and only a small number of spanners etc. which would be included in the average amateur mechanic's kit, should be sufficient to tackle the job.

### Stripping the Front Brake Assembly

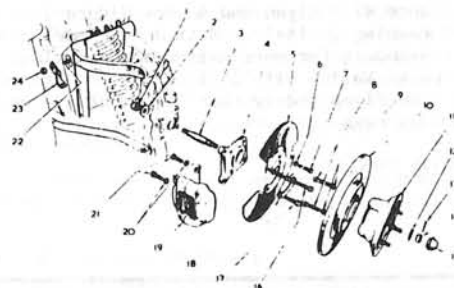
Disconnect the battery, then jack up the car and place stands under the chassis at the four jacking points. Remove the road wheels from the front of the car. Attach a piece of plastic or rubber tube to one of the front bleed nipples, which is located on the backing plate, and let the tube hang into a clean container. Slacken off the nipple one full turn using a  $\frac{1}{2}$  in. A.F. O/E spanner. By pumping the foot brake the brake fluid will be pressure drained from the system.

Remove both engine side valances which are secured by four bolts each side of the radiator, two bolts to the chassis and one bolt to the front suspension bracket.

Disconnect both Bundy tube pipes feeding the front brakes at the five way connector, which is located on the chassis under the distributor. Remove the flexible hoses connected to the two front backing plates.



1. Removing the spring and shock absorber assembly.



2. Exploded view of disc brake assembly.

Remove the backing plate by unscrewing four bolts; then the nut holding the stub axle. Drive out the stub axle. If the stub axle is very difficult to drive out, it may be advisable to remove the vertical link and give more support by using a vice to hold the link.

The front spring and shock absorber assembly has to be removed. This is a simple operation which can be done by removing the three  $\frac{1}{2}$  in. A.F. nuts on the upper spring pan and the single bolt which secures the bottom of the shock absorber between the lower wishbone arms. Support the lower wishbone arm with one hand and withdraw the spring and shock absorber assembly. It is not necessary to separate the spring from the shock absorber and to attempt this operation would be very dangerous without the correct special tools.

### Engine side valance

A section of the engine side valance has to be cut away to allow the new run of the Bundy brake pipe. The illustration in fig. 3 shows the dimension.

### Fitting the new components

Position the new stub axle into the vertical link with the machined flat facing towards the rear of the vehicle. Secure with the new nylon nut ensuring it is pulled down tight. If a torque wrench is available tighten to 55-60 lb. ft. Fit the new mounting plate so the bosses are facing to the rear of the vehicle. Position the dirt shield with the larger cut out to the rear and the dished part facing away from the centre line of the car. One long and one short  $\frac{1}{2}$  in. U.N.F. bolt and locking plate will hold the dirt shield and outer track rod steering arm, a nylon nut will secure the longer bolt. Using a  $\frac{1}{2}$  in. A.F. spanner ensure the bolts are

### GENTLE WARNING

This series of technical articles has been designed for the "mechanically-minded" reader who feels capable of carrying out his own maintenance to this degree. If you have doubts about your ability to cope with the instructions, you are earnestly advised to leave the job in the hands of an appointed Standard-Triumph dealer.

tight (26-28 lb. ft.) then lock up the locking plate tabs. Two  $\frac{1}{2}$  in. U.N.F. bolts and spring washer will fit into the upper holes and should be tight (16-18 lb. ft.).

### Fitting the disc on to the hub

Clean and examine the taper roller bearings from the hub assembly which has been removed from the car. If they are in good condition, fit them into the new hub. If signs of wear or pitting are evident on the roller tracks it would be advisable to fit new races. Take the disc and using the four  $\frac{1}{2}$  in. bolts and spring washers, fit the disc onto the hub with the outstanding dished part facing the hub. Tighten the bolts (32-35 lb. ft.).

Take the seal retainers from the original hubs and fit into the new hub assembly. Soak the felt seal in oil and fit into the seal retainer. Pack the hubs with a recommended grease working the grease well into the rollers. Fit the hub assembly onto the stub axle and position the washer over the machined flat followed by the slotted nut.

It is most important that the hub should be adjusted to give the correct end float. An over tight hub can cause excessive heating and seizure, where a hub with too much end float may affect the efficiency of the disc brakes.

If a torque wrench is available tighten the slotted nut on the stub axle to a torque of 5 lb. ft. then slacken the nut back one flat to give a 0.002 in.—0.005 in. end float.

Alternatively fit the road wheel to the hub and tighten the slotted nut until slight resistance is felt when the wheel is being rotated, then slacken the nut back one flat.

Position the nut to the nearest slot that will allow a new split pin to be fitted, bend the end of the split pin over the stub axle. Using a soft hammer, drift on the hub cap supplied in the kit.

### Fitting the calipers

You may note that the calipers are in two halves, but they have been bolted together by the manufacturer. Under no circumstances must these bolts be removed during fitting or service.

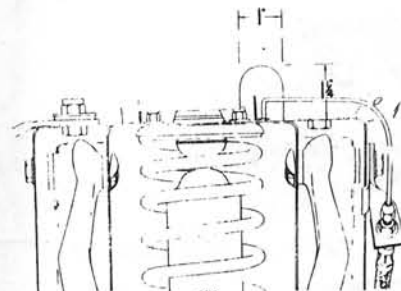
Assemble the caliper to the mounting plate ensuring the bleed nipple is facing in towards the centre line of the car and to the top. Using two  $\frac{1}{2}$  in. U.N.F. bolts and spring washers secure the assembly to the mounting plate (50-55 lb. ft.).

Remove the top wishbone inner fulcrum bolt on the wishbone arm nearest the rear of the car, fit the longer  $\frac{1}{2}$  in. U.N.F. bolt and assemble onto the bolt the pin abutment bracket, with the hexagonal seating facing downwards, secure with the  $\frac{1}{2}$  in. U.N.F. nylon nut.

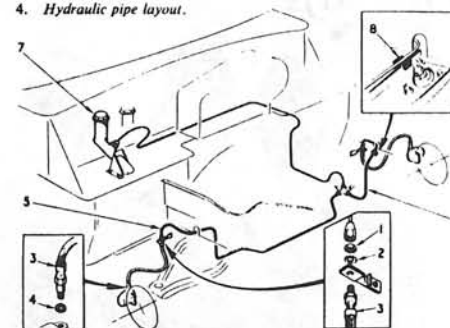
Refit the spring and shock absorber assembly unit to the front suspension, taking care not to damage the threads of the three studs that protrude from the spring pan when passing them through the holes in the front suspension bracket.

Fit a new copper washer to the flexible brake hose and screw

3. Details of hole in engine side valance.



4. Hydraulic pipe layout.



this tight into the vertical hole in the caliper unit. The union at the opposite end of the hose fits into the hexagonal portion of the abutment bracket, to ensure the best possible run. Test this by turning the road wheel from lock to lock to see the flexible hose does not foul the road wheel. Secure the union using the original shakeproof washer and nut. Fit the short length of Bundy tube between the five way union and left hand brake hose, and the long tube between the five way union, passing round the front of the engine, to the right hand brake hose. Clips are supplied to hold the tube to the chassis cross-member and front suspension bracket flanges. Carefully lower the bonnet and observe that the inner wheelarch valance will foul the Bundy tubing at the front suspension bracket. Cut approximately 1 in. away from the valance to give clearance when the bonnet is closed.

### Brake master cylinder

The brake master cylinder has to be changed for the larger capacity one supplied in the kit. Disconnect the old master cylinder by sliding up the rubber dust excluder, remove the clevis pin securing the push rod to the pedal. Uncouple the hydraulic pipeline from the master cylinder. Remove the two bolts from the master cylinder mounting flange and withdraw the unit from the bulkhead bracket.

Refit the larger capacity unit using the reverse procedure

### Rear wheel brake cylinders

When disc brakes are fitted, the rear wheel cylinders should be  $\frac{1}{2}$  in. dia. All Heralds after Commission Numbers G.65719 and G.A.15031 and all Herald I state cars have  $\frac{1}{2}$  in. dia. rear wheel cylinders fitted in production. Vehicles prior to these commission numbers must change to the  $\frac{1}{2}$  in. type which are supplied in the kit.

To change the wheel cylinders, jack up the rear of the car, remove road wheels, brake drums and brake shoes, disconnect the Bundy tube from the wheel cylinder casting. Remove the retaining clips which hold the wheel cylinders to the backing plate with a screwdriver and withdraw the wheel cylinder. Fit the new  $\frac{1}{2}$  in. cylinder ensuring the retaining clips are secure. Refit the Bundy tube, brake shoes and drum. Open up the adjusting screw until the brake shoes are tight into the drum.

### Bleed the system

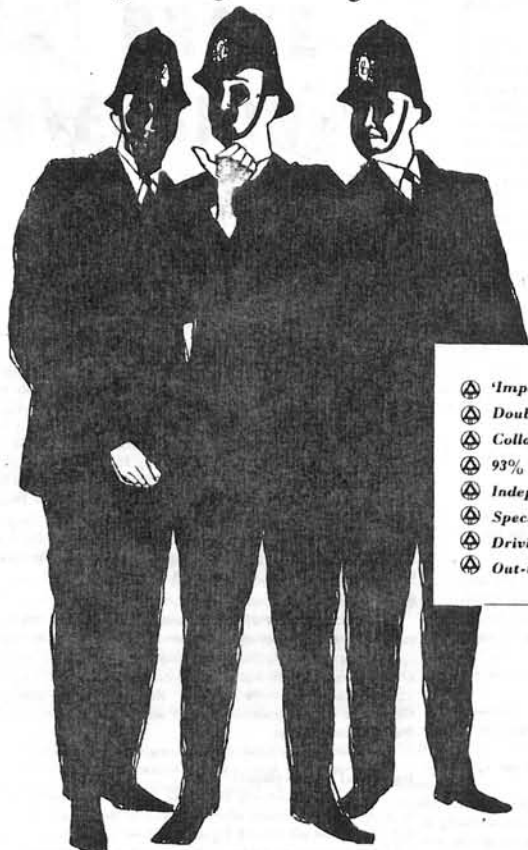
Before bleeding the system ensure the brake pads are fitted into the calipers. Using new Girling brake fluid (SAE 70 R3 spec.) from a sealed container, bleed the system, starting with the nipple furthest away from the master cylinder. (See Brake and Tyre maintenance No. 4, Vol. 24).

Adjust the rear brake shoes, then test the system for fluid leaks by having an assistant apply pressure to the brake pedal, inspect all the hydraulic unions.

Refit the road wheels, lower the vehicle to the ground and road test.



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