

# The Motor Road Test No. 30/58

**Make:** Isetta

**Type:** "Plus" 3-wheeler

**Makers:** Isetta of Great Britain Ltd., New England Road, Brighton, Sussex

## Test Data

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**CONDITIONS:** Weather: Mild and showery with moderate breeze (Temperature 62°-65° F., Barometer 29.8 in. Hg.). Surface: Smooth tarred macadam. Fuel: Standard-grade pump petrol (approx. 80 Research Method Octane Rating).

### INSTRUMENTS

Speedometer at 30 m.p.h. ... 2% slow  
Speedometer at 50 m.p.h. ... 2% slow  
Distance recorder ... 2% slow

### WEIGHT

Kerb weight (unladen, but with oil and fuel for approx. 50 miles) ... 7 cwt.  
Front/rear distribution of kerb weight 55/45  
Weight laden as tested ... 10 cwt.

### MAXIMUM SPEEDS

"Maximile" Speed (Timed quarter mile after one mile accelerating from rest.)  
Mean of four opposite runs ... 51.9 m.p.h.  
Best one-way time equals ... 53.9 m.p.h.

### Speed in gears

Max. speed in 3rd gear ... 41 m.p.h.  
Max. speed in 2nd gear ... 28 m.p.h.

### FUEL CONSUMPTION

88.5 m.p.g. at constant 20 m.p.h. on level.  
83.5 m.p.g. at constant 30 m.p.h. on level.  
71.5 m.p.g. at constant 40 m.p.h. on level.  
48.0 m.p.g. at constant 50 m.p.h. on level.

**Overall Fuel Consumption** for 582 miles, 10.6 gallons, equals 54.9 m.p.g. (5.15 litres/100 km.).

**Touring Fuel Consumption** (m.p.g. at steady speed midway between 30 m.p.h. and maximum, less 5% allowance for acceleration), 66 m.p.g.

**Fuel Tank Capacity** (maker's figure) 2.8 gallons (including 0.65 gallon reserve).

### STEERING

Turning circle between kerbs:  
Left ... 27½ feet  
Right ... 27 feet  
Turns of steering wheel from lock to lock ... 2½

### BRAKES from 30 m.p.h.

1.00g retardation (equivalent to 30 ft. stopping distance) with 80 lb. pedal pressure  
0.87g retardation (equivalent to 34½ ft. stopping distance) with 50 lb. pedal pressure  
0.38g retardation (equivalent to 79 ft. stopping distance) with 25 lb. pedal pressure

### HILL CLIMBING at sustained steady speeds

Max. gradient on top gear 1 in 16.6 (Tapley 135 lb./ton)  
Max. gradient on 3rd gear 1 in 11.1 (Tapley 200 lb./ton)  
Max. gradient on 2nd gear 1 in 7.3 (Tapley 305 lb./ton)

## Maintenance

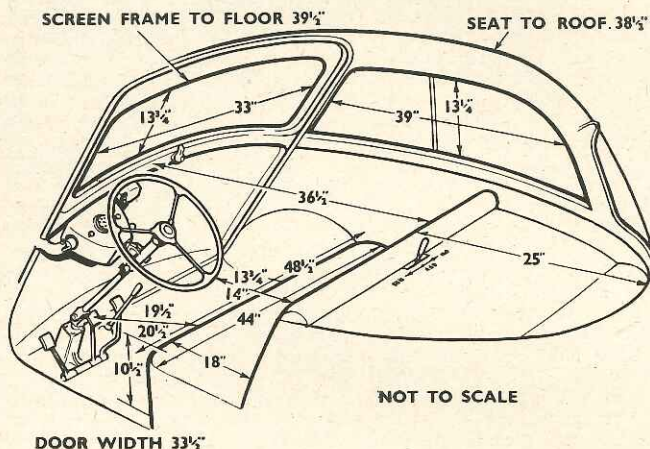
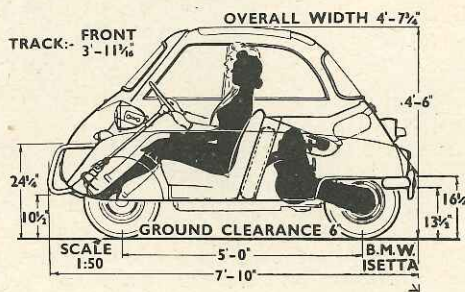
Sump 3 pints, S.A.E. 40 summer, S.A.E. 20 winter  
Gearbox ... 1 pint, S.A.E. 40  
Rear axle ... ½ pint, S.A.E. 40  
Steering gear lubricant ... Grease  
Cooling system capacity ... nil (air cooled)  
Chassis lubrication By grease gun every 1,000 miles to 4 points

Ignition timing ... 8° b.t.d.c. static  
Contact-breaker gap ... 0.016 in.  
Spark plug type ... Lodge HH14  
Spark plug gap ... 0.024 in.  
Valve timing Inlet opens 6° a.t.d.c. and closes 34° a.b.d.c. Exhaust opens 34° b.b.d.c. and closes 6° b.t.d.c.

Tappet clearances (cold) Inlet 0.004—0.006 in.  
Exhaust 0.006—0.008 in.

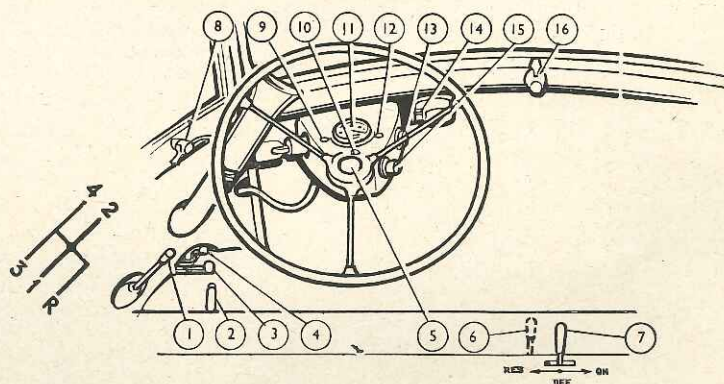
Front wheel toe-in ... ⅛ to ¼ in.  
Camber angle ... 1½°  
Castor angle ... 5°  
Steering swivel pin inclination ... 12°  
Tyre pressures ... Front, 16 lb.  
Rear, 24 lb.

Brake fluid ... Girling crimson  
Battery ... 12 volt, 32 amp. hr.  
Miscellaneous Final drive chain tension adjustable



ACCELERATION	TIMES	from standstill
0-30 m.p.h.	...	11.3 sec.
0-40 m.p.h.	...	19.4 sec.
0-50 m.p.h.	...	41.5 sec.
Standing quarter mile	...	27.9 sec.

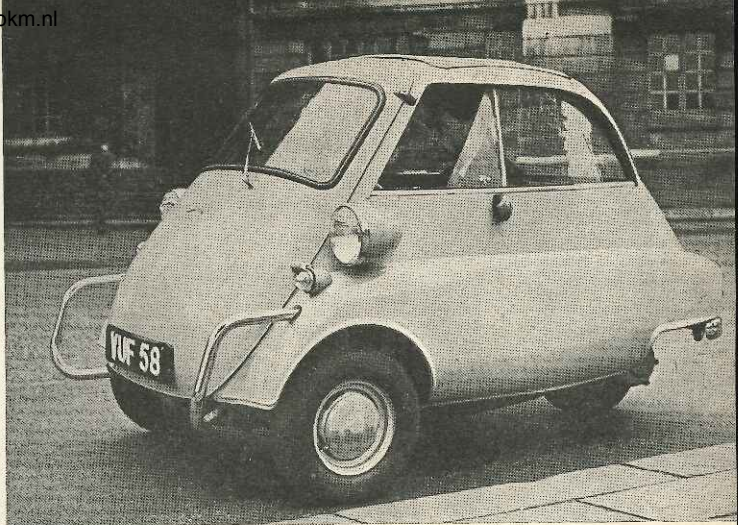
ACCELERATION	TIMES	on Upper Ratios
10-30 m.p.h.	...	Top gear 3rd gear 20.5 sec. 12.1 sec.
20-40 m.p.h.	...	23.1 sec. 16.1 sec.
30-50 m.p.h.	...	38.4 sec. —



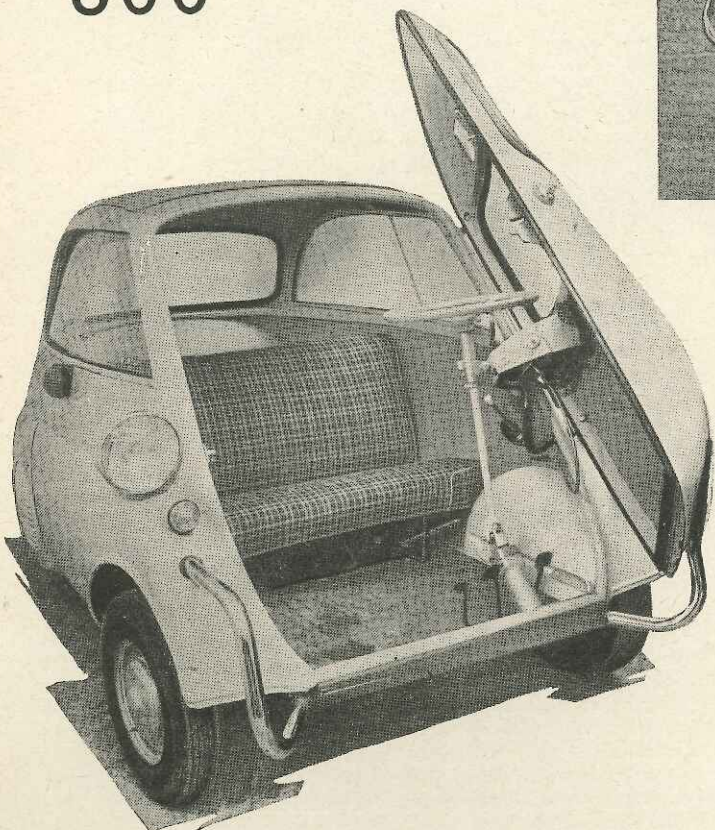
1, Gear lever. 2, Handbrake. 3, Heater control. 4, Choke control. 5, Horn button. 6, Demister control. 7, Petrol tap. 8, Headlamp dip switch. 9, Direction indicator warning light. 10, Headlamp main beam indicator lamp. 11, Speedometer and distance recorder. 12, Dynamo charge warning light. 13, Ignition and starter switch. 14, Windscreen wiper motor and switch. 15, Lights switch. 16, Direction indicator switch.

# The Isetta

## 300



COMPACT in overall length, even with the unusual tubular bumpers used to guard the front door, the Isetta is neat in appearance and easy to park. Entry to the coupé body is from the front, the bench seat having room for an adult and two children; the steering column swings forward with the door to simplify access to the driving seat.



### Three-wheeled Version of a Well-tried Miniature Convertible

CONVERSION of the Isetta 300 coupé from four to three wheels, by elimination of the former narrow-track solid rear axle, is a change which in Britain leads to a diminution in the rate of purchase tax levied and also to a reduction in the annual licence fee from £12 10s. to £5. Whilst certain insurance companies may still treat three-wheeled cars with exaggerated caution, we have been able to verify that the Isetta made into a tricycle is fully as serviceable a miniature car as it is already known to be in four-wheeled form. The main limitation is that, in order that the weight of an unaccompanied driver shall balance that of the engine, left-hand drive only is offered, an arrangement which scarcely proves objectionable either in city traffic or in open country, but which does interfere with visibility when pulling out to overtake other cars on busy out-of-town roads.

In respect of road manners, the Isetta three-wheeler has lost little of the merit of the four-wheeler. On the open road at speeds in the 40-50 m.p.h. region there is a slight loss of straight-running stability, as if the oversize rear tyre has slight side-ways flexibility on a too-narrow rim, this effect being more evident two-up than when the driver is alone, but soon ceasing to be noticed. Experiments with really tight turns on an adhesive concrete surface showed that by fierce cornering it was possible to lift a front wheel off the ground,

but this was only achieved two-up and turning to the left, only by really deliberate effort. Extremely effective braking with quite modest pedal pressures will be noted on the data page, although whereas normal stops were made in a straight line, fierce braking could induce some snaking; the pull-up lever hand-brake used on "Plus" models works well, although its location below the driver's legs is not very convenient. The springing allows some roll on corners but absorbs road shocks surprisingly well.

#### Cruising at 45 m.p.h.

The performance figures for this 300 c.c. car, showing a top speed comfortably in excess of 50 m.p.h., are highly creditable and better than those of the heavier four-wheeled Isetta tested by us in 1957. As is our usual practice, they were recorded with two men in the Isetta, which when driven solo becomes very much more lively. Almost new and rather stiff when handed over to us, the four-speed gearbox soon began to show its true merit, it being normal to run up to nearly 40 m.p.h. in third gear and to cruise at 45 m.p.h. on the open road. The very low first gear is at times a nuisance, but will easily re-start the car on astonishingly steep hills. Whilst the need to make free use of the four gears (which have a "back-to-front" gate arrangement) does not make this an especially easy car to drive, a competent

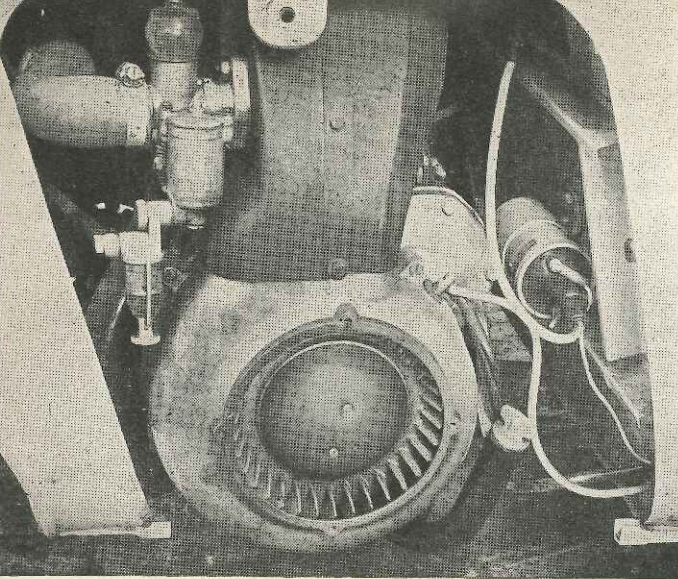
man or woman soon becomes thoroughly at home in it. Starting the engine from cold requires some correlation of choke and accelerator, but can be quick and easy.

The electric starter which is also the dynamo is completely silent in operation, and is controlled by turning the ignition key beyond the "on" position. Absence of any water jackets or radiator results in the air-cooled engine being quite quick to warm up after being started or to cool down when standing, so far as response to the throttle is concerned. Full power is not, however, available until the engine and transmission lubricants have also had time to attain their running temperatures.

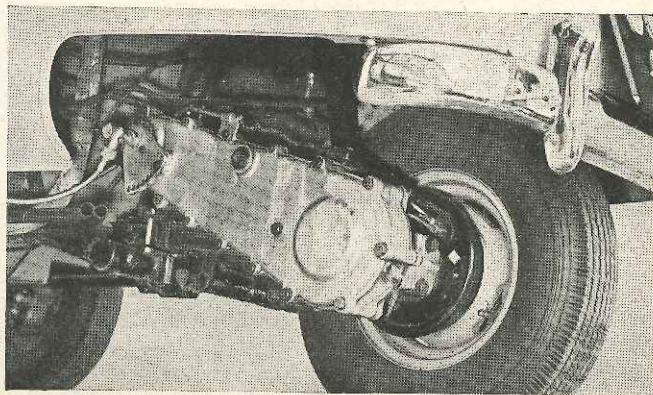
Noise from the hard-working little air-cooled engine is well silenced, apart from some rattle from the rubber-suspended silencer at low r.p.m., but whine from the transmission or cooling fan is rather prominent at main road cruising speeds.

#### In Brief

Price	£291 1s. 6d. as tested, plus purchase tax £74 18s. 0d. equals £365 19s. 6d.
Price without "Plus" equipment (including purchase tax)	£339 19s. 6d.
Capacity	... .. 298 c.c.
Unladen kerb weight	... .. 7 cwt.
Acceleration:	
20-40 m.p.h. in top gear	... .. 23.1 sec.
0-50 m.p.h. through gears	... .. 41.5 sec.
Maximum direct top gear gradient	... .. 1 in 16.6
"Maximile" speed	... .. 51.9 m.p.h.
Touring fuel consumption	... .. 66 m.p.g.
Gearing: 9.4 m.p.h. in top gear at 1,000 r.p.m.; 19.6 m.p.h. at 1,000 ft./min. piston speed.	



FAN-COOLED, the 298 c.c. single-cylinder o.h.v. engine of B.M.W. manufacture is mounted ahead of the rear wheel, on the right of the car. A separate panel gives access to the sparking plug from above.



CONVERSION of the Isetta to a single rear wheel allows the adjustable fully-enclosed rear chain to be retained.

## The Isetta 300

Essentially the Isetta is a two-seater, but its rather hard bench seat is wide enough to make an adult and two fair-sized children at ease. The forward door soon proves itself to be entirely practical, but tall drivers were apt to find their left knee inconvenienced by a projection from the steering column and also by the gear lever when reversing—if reverse gear is rendered inoperative, this runabout can legally be driven by a 16-year-old with a motorcycle licence, but without reverse gear the 27-28 ft. turning circle would prove insufficiently compact for convenience.

Practical amenities include rather stiff-to-move sliding glass side windows and an excellent little folding roof panel for fine days (or for fine minutes, so quick is the process of opening and closing the roof) plus a heater system which on a cool night in August de-misted the screen effectively, but seemed rather limited in heat output. Minor luggage can go on a huge shelf behind the seat, and there is a map pocket,

a single-blade electric wiper for the screen (which is flanked by unpleasantly wide pillars), flashing turn indicators, excellent dipping headlights, and a petrol reserve tap, but no fuel contents gauge.

In respect of petrol economy, the Isetta runs happily on the cheapest grades of fuel, but its consumption rate varies sharply with driving technique—as witness steady-speed figures which on a scarcely run-in car ranged from 88½ m.p.g. at a mere 20 m.p.h. to 48 m.p.g. at a bustling 50 m.p.h. As it seems natural either to use the Isetta as a runabout for frequent short runs which hardly warm up the engine and transmission, or on longer journeys to make much use of the gears for acceleration, it is optimistic to expect much more than 50-60 m.p.g. As this is a four-stroke engine with pressure lubrication from a three-pint sump, only slight oil consumption should have to be allowed for in predicting penny-a-mile petrol and lubricant bills.

For many people, the virtue of the Isetta which will be even more important than its low cost and inexpensive thirst for petrol is its compactness. With an overall length including bumpers of only 7 ft. 10 in. it can be garaged in a very small area, and parking places are exceptionally easy to find; apart from the possibility of nose-to-kerb parking, it is possible to go forwards into a short gap between other parked cars and stop at an angle to the kerb without needing to reverse into position, the narrow tapering tail of the Isetta not projecting obstructively into the roadway.

Perhaps primarily as a "second car" but also as a one-man business runabout or a vehicle for a small family, the Brighton-built Isetta in this three-wheeled form gains in attractiveness from its reduced annual licence fee. Within the visible limits of its carrying capacity it is, in the old phrase, willing to go anywhere and do anything, and the manner of its going entertains some people very much indeed.

## Mechanical Specification

### Engine

Cylinders ... ..	1 (fan cooled)
Bore ... ..	72 mm.
Stroke ... ..	73 mm.
Cubic capacity ... ..	298 c.c.
Piston area ... ..	6.3 sq. in.
Valves ... ..	Pushrod o.h.v.
Compression ratio ... ..	7/1
Carburettor ... ..	Bing 1/24
Fuel pump ... ..	Gravity feed
Ignition timing control ... ..	Centrifugal
Oil filter ... ..	Full flow
Max. power (net) ... ..	13 b.h.p.
- at ... ..	5,200 r.p.m.
Piston speed at max. b.h.p. ... ..	2,490 ft./min.

### Transmission

Clutch	Single dry plate (Fichtel & Sachs)
Top gear ... ..	6.1
3rd gear ... ..	8.17
2nd gear ... ..	12.18
1st gear ... ..	23.21
Reverse ... ..	30.0
Final drive ... ..	Enclosed chain
Top gear m.p.h. at 1,000 r.p.m. ... ..	9.4
Top gear m.p.h. at 1,000 ft./min. piston speed ... ..	19.6

### Chassis

Brakes ... ..	Hydraulic on 3 wheels
Brake drum internal diameter... ..	7.1 in.
Friction lining area ... ..	50 sq. in.
Suspension:	
Front	Dubonnet-type i.f.s. by coil springs
Rear ... ..	¼-elliptic leaf springs
Shock absorbers ... ..	Girling telescopic
Steering gear ... ..	B.M.W. worm and nut
Tyres:	
Front ... ..	4.80—10
Rear ... ..	5.20—10

## Coachwork and Equipment

Starting handle ... ..	None
Battery mounting ... ..	Under seat
Jack ... ..	Screw-type
Jacking points ... ..	Front cross member and rear wheel carrier
Standard tool kit: Tool roll containing 5 open-ended spanners, sparking plug spanner and tommy bar, screwdriver.	
Exterior lights: 2 headlamps, 2 sidelamps, 2 tail lamps, 1 number plate/stop lamp.	
Number of electrical fuses ... ..	1
Direction indicators: Amber flashers (non self-cancelling) on sides of body.	
Windscreen wipers ... ..	Single-blade electrical
Windscreen washers ... ..	None

Sun vizors ... ..	None
Instruments: Speedometer with non-decimal total distance recorder.	
Warning lights: Direction indicators, headlamp main beam, dynamo charge.	
Locks:	
With ignition key	Ignition/starter switch
With other keys	Front door, engine cover
Glove lockers ... ..	None
Map pockets... ..	One inside front door
Parcel shelves ... ..	One behind seat
Ashtrays ... ..	None
Cigar lighters ... ..	None
Interior lights: Instrument lighting only (with front door open, right sidelamp illuminates body interior).	

Interior heater: Fan-circulated hot air from engine and exhaust system ducted to body interior and windscreen.	
Car radio ... ..	Optional extra
Extras available: Radio, luggage carrier, locking petrol cap, inspection lamp, seat covers, wheel embellishers, spare wheel, two-colour finish, windscreen washers, interior grab handles, etc.	
Upholstery material ... ..	Cloth
Floor covering ... ..	Rubber mats
Exterior colours standardized ... ..	4 (two-tone at extra cost)
Alternative body styles ... ..	None