

## 1 Spezifikationen Sunbeam Alpine IV

### 1.1 Sunbeam Alpine nach Chris McGovern, 1980, 2008

## II Identification of Engine and Chassis Numbers

The series of the vehicle can now be identified from these numbers:

<i>Commencing chassis number</i>		<i>Series of vehicle</i>
B9000001		Series 1
B9100001		Series 2
B9150001		Series 2 CKD*
B9200001		Series 3
B9250001		Series 3 CKD*
B9400001		Series 4
B9450001		Series 4 CKD*
B941000001	Late	Series 4
B94600001	Late	Series 4 CKD*
B395000001		Series 5
B395900001		Series 5 CKD*

When two combinations are present on Rootes vehicles, the first indicates:

- G.T. – Gran Turismo (hard top)
- B.W. – Borg Warner automatic transmission
- P.O.S. – Power operated steering
- O.D. – Overdrive transmission
- E. – Easidrive automatic transmission
- L. – Low compression engine
- M. – Medium compression engine
- H. – High compression engine

The first letter of the final combination indicates:

- H – home market
- R – R.H.D. export
- L – L.H.D. export
- E – CKD export home specification
- W – CKD R.H.D. export
- X – CKD L.H.D. export

the second letter:

- C – Convertible
- H – Hard top
- R – Roadster
- S – Saloon
- P – Pick-up
- U – Estate car
- V – Van
- X – Chassis only

and the third letter or number:

- M – Ministry of Supply
- O – Standard
- 3 – Small bore engine for Bermuda
- X – Non-standard
- P – Police specification

Thus, if your chassis number is: B 941003765 GT. OD/HRO, you have a late type Series 4 Alpine made with a Gran Turismo hard top and overdrive transmission; the vehicle was made for the home market and is a Roadster of standard specification.

### III Production Figures

<i>Series</i>	<i>Chassis numbers</i>	<i>Date</i>	<i>Total built</i>
1	B9000001 to B9011904	Oct. 59–Oct. 60	11,904
2	B9100001 to B9119956	Oct. 60–Feb. 63	19,956
3	B9200001 to B9205863	Mar. 63–Jan. 64	5,863
4	B9400001 to B9407936	Jan. 64–Sep. 65	7,936
	B94100001 to B94104470		4,470
5	B395000001 to B395019122	Sep. 65–Jan. 68	19,122
			<u>69,251</u>

Again, due to the lack of documentation, no final production figures are available for the CKD Alpines. The figures shown below are all that are available:

<i>Series</i>	<i>Chassis numbers</i>	<i>Total known kits</i>
2	B9150001 to B9150073	73
3	B9250001 to B9250241	241
4	B9450001 to B9450055	55
		<u>369</u>



## IV Performance Figures

<i>Series</i>	<i>B.h.p. gross</i>	<i>B.h.p. nett</i>	<i>Developed at r.p.m.</i>	<i>Max. torque lb./ft.</i>	<i>Developed at r.p.m.</i>
1	83.5	78	5300	89.5	3400/3800
2	85.5	80	5000	94	3800
3 (S.T.D.) Zenith	87.7	82	5200	93	3600
3 (G.T.) Zenith	80.2	75	5000	92	3600
3 (S.T.D.) Solex	86	80.5	5000	93.4	3500
3 (G.T.) Solex	82.5	77	5000	91	3500
4	86.1	80.5	5000	93.4	3500
5	96.8	90.5	5400	103	3700

**Road speed in m.p.h. at 1,000 r.p.m.** (Note: speeds for North American Alpines are lower.)

<i>Series</i>	<i>Standard Top gear</i>	<i>Overdrive Direct top gear</i>	<i>o/d top gear</i>
1	17.3	15.9	19.8
2	17.3	15.9	19.8
3	17.6	17.6	21.9
4	17.6	16.2	20.2
5	17.82	16.4	22.2
5 (Dunlop R.S.5 tyres)	17.71	16.3	20.3

## VII Technical Specifications

### General Data

	<i>Series 1</i>	<i>Series 2</i>	<i>Series 3</i>	<i>Series 4</i>	<i>Series 5</i>
<i>Engine</i>					
Capacity	1494 cc	1592 cc	1592 cc	1592 cc	1724 cc
Number of cylinders	4	4	4	4	4
Bore	3.11 in.	3.21 in.	3.21 in.	3.21 in.	3.21 in.
Stroke	3 in.	3 in.	3 in.	3 in.	3.25 in.
Compression ratio	9.2:1	9.1:1	9.1:1	9.2:1	9.2:1
Maximum b.h.p. (net)	78	80	82	80.5	92.5
@ r.p.m.	5,300	5,000	5,200	5,000	5,500
Maximum torque lb/ft.	89.5	94	93	93	103
@ r.p.m.	3,400	3,800	3,600	3,500	3,700
Oil pressure (hot) at 50 m.p.h. lbs./sq. in.	30/50	30/50	40/50	55/65	40

### Ignition

Static timing (full retard)					
all b.t.d.c.	5-7	5-7	9-11	9-11	6-10
Sparking plug type (Champion)	N5	N5	N5	N9Y	N9Y
Sparking plug gap	.025 in.	.025 in.	.025 in.	.025 in.	.025 in.
Distributor contact gap	.016 in.	.016 in.	.015 in.	.015 in.	.015 in.

### Valves

Rocker clearance (hot) inlet	.012 in.	.012 in.	.012 in.	.012 in.	.012 in.
exhaust	.014 in.	.014 in.	.014 in.	.014 in.	.014 in.
Timing inlet opens	14 b.t.d.c	14 b.t.d.c	14 b.t.d.c	*19 b.t.d.c	29 b.t.d.c
inlet closes	52 a.b.d.c	52 a.b.d.c	52 a.b.d.c	*57 a.b.d.c	63 a.b.d.c
exhaust opens	56 b.b.d.c	56 b.b.d.c	56 b.b.d.c	*61 b.b.d.c	69 b.b.d.c
exhaust closes	10 a.t.d.c	10 a.t.d.c	10 a.t.d.c	*15 a.t.d.c	23 a.t.d.c

\*From chassis number B.94100000: All Series 4 vehicles prior to this as per Series 3 timings.





Valve guides – outside diameter	0.5640 in./0.5635 in.
– length inlet	2.0 in.
– length exhaust	2.15 in.
– interference fit	0.0025 in./0.0045 in.
– fitted height above head	0.50 in.

### Camshaft

No. of bearings	3
Type of bearings	steel back white metal
End thrust	location plate at front
Drive	duplex chain
Lubrication	oil jet
Chain tensioner	spring blade
End float	0.002 in./0.004 in.
Journal diameters	1.7477 in./1.7470 in.

### Crankshaft

Balance: integrally forged counterweights.

Number of main bearings – Series 1, 2, 3, 4	3
Series 5,	5

Type of main bearings	steel shell white metal
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Diameter of main journals Series 1, 2, 3, 4	2.365 in./2.375 in.
Series 5	2.249 in./2.2495 in.

Diameter of crankpin bearings Series 1	1.8755 in./1.876 in.
Series 2, 3, 4	2.0005 in./2.001 in.
Series 5	2.115 in./2.125 in.

End float Series 1, 2, 3, 4	0.002 in./0.004 in.
Series 5	0.002 in./0.008 in.

Main bearing running clearance	0.0010 in./0.0025 in.
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Maximum undersize for regrinding	
Series 1, 2, 3, 4	0.06 in.
Series 5	0.04 in.

### Connecting Rod

Material	steel forging
Type	'H' section
Distance between centres Series 1, 2, 3, 4	5.751 in./5.749 in.
Series 5	5.626 in./5.624 in.
Big end bearings	steel shell with copper-lead bearing, indium coated

Big end bore (without bearings) Series 1	2.0215 in./2.0210 in.
Series 2, 3, 4	2.1465 in./2.1460 in.
Series 5	2.2715 in./2.2710 in.

Big end bearing running clearance	0.0015 in./0.002 in.
Big end, end float	0.0125 in./0.0075 in.

#### Small end bore size (bushed) Series 1

high grade	0.8753 in./0.8752 in.	(painted white)
medium grade	0.8752 in./0.8751 in.	(painted green)
low grade	0.8751 in./0.8750 in.	(painted yellow)

#### Series 2, 3, 4, 5

high grade	0.9379 in./0.9378 in.	(painted white)
medium grade	0.9378 in./0.9377 in.	(painted green)
low grade	0.9377 in./0.9376 in.	(painted yellow)

### Gudgeon Pin

Type	floating	
Location	circlips	
Diameter:	Series 1	
high grade	0.8752 in./0.8751 in.	(painted white)
medium grade	0.8751 in./0.8750 in.	(painted green)
low grade	0.8750 in./0.8749 in.	(painted yellow)
	Series 2, 3, 4, 5	
high grade	0.9377 in./0.9376 in.	(painted white)
medium grade	0.9376 in./0.9375 in.	(painted green)
low grade	0.9375 in./0.9374 in.	(painted yellow)

### Pistons

Type	slotted
Material	aluminium alloy tin plated
Length	3.25 in.
Rings – compression	two
– scraper	one
Compression – identific mark on crown	H.C. (high)
	L.C. (low)
Pistol bowl volume	H.C. 6.9–7.5 c.c.
	L.C. 15.3–15.7 c.c.
Max. permissible weight variation per set	2 drams.
Diameter of piston	Series 1
grade A	3.1088 in./3.1092 in.
grade B	3.1092 in./3.1096 in.
grade C	3.1096 in./3.1100 in.
grade D	3.1100 in./3.1104 in.



		Series 2, 3
grade A		3.2088 in./3.2092 in.
grade B		3.2092 in./3.2096 in.
grade C		3.2096 in./3.2100 in.
grade D		3.2100 in./3.2104 in.
		Series 4, 5
grade A		3.2092 in./3.2096 in.
grade B		3.2096 in./3.2100 in.
grade C		3.2100 in./3.2104 in.
grade D		3.2104 in./3.2108 in.
Piston ring clearance (between ring and groove)		0.0015 in./0.0035 in.
Ring gap	top ring Series 1	0.012 in./0.020 in.
	Series 2, 3, 4, 5	0.024 in./0.032 in.
	second and third ring	0.009 in./0.014 in.

### Carburation

#### *Series 1 with gauze type air filter*

Make	2 × Zenith
Type	36 W.I.P. 2
Choke	28 m.m.
Main discharge jet	016289
Main jet	130
By-pass jet	blank
High speed bleed	100
Slow running	50
Progression holes	2 × 0.8
Pump jet	50

#### *Series 2 with gauze type air filter*

Make	2 × Zenith	2 × Zenith
Type	36 W.I.P. 2	36 W.I.P. 3
Choke	30 m.m.	30 m.m.
Main discharge jet	016289	016289
Main jet	142	142
By-pass jet	blank	blank
High speed bleed	100	100
Slow running	50	45
Progression holes	2 × 0.8	2 × 1.0
Pump jet	*50	70

N.B. Export car settings may differ.

\*70 accelerator pump jet is used if 7 m.m. radius pump cam is fitted. Where this cam and jet are used, there is a 50 leak hole in the accelerator pump suction valve.

*Series 2 with dry element type air filter*

Make	2 × Zenith	2 × Zenith
Type	36 W.I.P. 2	36 W.I.P. 3
Choke	28 m.m.	28 m.m.
Main discharge jet	016219	016219
Main jet	112	112
By-pass jet	57	57
High speed bleed	60	60
Slow running	45	45
Progression holes	2 × 0.8	1 × 1.1 + 1 × 1.0
Pump jet	70	70

*Series 3*

*(S.T.D.)*

*(G.T.)*

*with gauze type  
air filter*

*with dry element  
type air filter*

Make	2 × Zenith	2 × Zenith
Type	36 W.I.P. 3	36 W.I.P. 3
Choke	29 m.m.	29 m.m.
Main discharge jet	016289SE	0.16289
Main jet	127	105
By-pass jet	blank	55
High speed jet	100	120
Slow running	45	45
Progression holes	1 × 1.0    2 × 1.1	1 × 0.8    1 × 1.1
Pump jet	90	90

*Series 3 and 4*

*Series 3*

*Series 3*

*Series 4*

*(S.T.D.)*

*(G.T.)*

*(S.T.D. + G.T.)*

Make		All fitted with Solex Compound (twin choke)		
Type		All fitted with 32 P.A.I.A.		
Choke	* (1)	24 m.m.	24 m.m.	24 m.m.
	* (2)	26 m.m.	26 m.m.	26 m.m.
Main jet	* (1)	120	117.5	120
	* (2)	155	130	155
Air correction	* (1)	210	190	210
	* (2)	210	190	210
Pilot jet	* (1)	60	60	60
	* (2)	60	60	60
Pilot air bleed	* (1)	nil	1.0	1.0
	* (2)	1.0	0.8	1.0
Pump jet	* (1)	70	70	70
	* (2)	nil	nil	nil

\* (1) Primary throttle; \* (2) Secondary throttle.



### Series 5

Make	2 × Stromberg
Type	150 C.D.
Needle type	5 M
Spring	plain (uncoloured) 0.032 in.
Fast idle gap	0.029

### Lubrication System

Type of pump	eccentric lobe type
Type of intake	gauze filter on pump
Pump drive	skew gear on camshaft
Normal pressure	(hot at 50 m.p.h.)
Series 1, 2, 3, 4	55 lb./sq. in.
Series 5	40/45 lb./sq. in.
Filter type	full flow

### Fuel Pump

Make	A.C.
Operation	lever by eccentric on camshaft
Pressure	1½–2½ lb./sq. in.

### Cooling System

Type system	centrifugal pump and fan
Pump drive	'V' belt from crankshaft pulley
Thermostat (wax type) opens at	180°F (82°C)
Relief valve pressure (in filler cap)	
Series 1, 2	7 lb./sq. in.
Series 3, 4, 5	9 lb./sq. in.

### Ignition System

Type	coil and distributor
Firing order	1 : 3 : 4 : 2
Ignition control	full automatic – vacuum and centrifugal
Distributor – makers, type	Lucas DM2.P.4 or 25 D.4
Makers dispatch no.	
Series 1	40683B
Series 2	40766A or 40799
Series 3	40924B
Series 4	40924A
Series 5	41077
Drive	skewgear on camshaft and offset coupling
Direction of drive	anti-clockwise (viewed from above)

Cam dwell angle	60° ± 3°
Coil make and type	
Series 1, 2	Lucas L.A. 45053E
Series 3, 4, 5	Lucas H.A. 45102

### Clutch

Make	Borg and Beck
Type Series 1, 2, 3, 4	single dry plate
Series 5	diaphragm
Operation Series 1, 5	hydraulic
Series 2, 3, 4	hydrostatic
Thrust bearing	carbon ring
Driven plate – diameter Series 1, 2, 3, 4	8 ins.
Series 5	7½ ins.

### Gearbox Ratios

	<i>Series 1</i>	<i>Series 2</i>	<i>Series 3</i>	<i>Series 4</i>	<i>Series 5</i>
Overdrive	0.803:1	0.803:1	0.803:1	0.803:1	0.803:1
Top	1.00:1	1.00:1	1.00:1	1.00:1	1.00:1
Third	1.39:1	1.39:1	1.23:1	1.39:1	1.295:1
Second	2.14:1	2.14:1	1.89:1	2.14:1	1.99:1
First	3.35:1	3.35:1	2.96:1	3.35:1	3.12:1
Reverse	4.24:1	4.24:1	3.75:1	4.24:1	3.32:1

### Final Drive Ratios

	<i>Series 1</i>	<i>Series 2</i>	<i>Series 3</i>	<i>Series 4</i>	<i>Series 5</i>
<i>With overdrive</i>					
Overdrive top	3.39:1	3.39:1	3.12:1	3.39:1	3.388:1
Direct top	4.22:1	4.22:1	3.89:1	4.22:1	4.22:1
Overdrive third	4.72:1	4.72:1	3.85:1	4.72:1	4.388:1
Direct third	5.88:1	5.88:1	4.80:1	5.87:1	5.465:1
Direct second	9.04:1	9.04:1	7.38:1	9.04:1	8.397:1
Direct first	14.13:1	14.13:1	11.53:1	14.13:1	13.166:1
Reverse	17.90:1	17.90:1	14.61:1	17.90:1	14.010:1

### *Without overdrive*

Top	3.89:1	3.89:1	3.89:1	3.89:1	3.89:1
Third	5.41:1	5.41:1	4.80:1	5.41:1	5.037:1
Second	8.33:1	8.33:1	7.38:1	8.32:1	7.741:1
First	13.01:1	13.01:1	11.53:1	13.01:1	12.137:1
Reverse	16.49:1	16.49:1	14.61:1	16.48:1	13.014:1



### Propeller Shaft

Type	open shaft (reverse spline)
Length between centres Series 1, 2, 3, 4	S.T.D. – 32.25 ins.
Series 1, 2, 3, 4, 5	O/D – 29.5 ins.
Series 5	S.T.D. – 32.35 ins.

### Rear Axle

Type	semi-floating hypoid
Bearings	bevel pinion – taper roller
Differential & crown wheel assembly	taper roller
Hub	ball
Adjustment	bevel pinion – shims
	differential assembly – shims
Crown wheel to pinion (backlash)	0.005 ins./0.009 ins.
Number of teeth – crown wheel	(3.89) 35
pinion	(3.89) 9
crown wheel	(4.22) 38
pinion	(4.22) 9

### Front Suspension

Spring – outside diameter	
Series 1, 2	3.87 ins.
Series 3	4.40 ins.
Series 4, 5	4.47 ins.

### Free Length

Up to chassis no. B9106289 and Series 3	11.175 ins.
From B9106290	11.65 ins.
Series 4, 5	12.62 ins.
Castor angle	3° 50'
Wheel camber angle	0° 30' ± 15'
Steering axis inclination	5° 15' ± 15'
Toe in	$\frac{1}{8}$ in.
Ackerman angles inner wheel	22° 45' ± $\frac{1}{2}$ °
Ackerman angles outer wheel	20°
Front hub and float	0.002 in./0.007 in.

### Rear Suspension

Type	semi elliptic
Number of blades Series 1	8
(up to B9203547) Series 2, 3	6

(from B9203548) Series 3, 4	5
Series 5	6
Laden camber load (to be evenly distributed over centre line of rear axle)	165 lb.

### Steering

Make	Burman 'F'
Type	re-circulating ball
Adjustment – rocker arm	shims

### Brakes

Make	Girling
Type	hydraulic
Brake discs material	cast iron
Diameter Series 1, 2	9.5 ins.
Series 3, 4	9.85 ins.
Series 5	10.3 ins.
Linings Series 1, 2	DON 55
Series 3, 4, 5	M40
Brake drums material	cast iron
diameter	9 ins.
linings	DON 24

### Torque Loading Figures

<i>Engine</i>	lb./ft.
Cylinder head (tighten when cold)	48
Crankshaft (mains)	55
Con. rod (big-end) Series 1	20
Series 2 onwards	24
Flywheel	40
<i>Gearbox</i>	
Mainshaft nuts	80
<i>Rear axle</i>	
Hypoid bevel pinion nut	110
Axle shaft	180
Crown wheel setscrews	50
Differential bearing cap nuts	53
<i>Propeller shaft</i>	
Universal joint – metal to rubber (where fitted)	50



### *Front suspension*

Fulcrum pin to crossmember mounting bolts (upper)	48
Fulcrum pin to crossmember mounting bolts (lower)	32
Eye bolt – trunnion to link	{ 40 85
Ball pin – stub carrier to link	52
Ball pin – housing to link	33
Shock absorber to spring pan	6
Crossmember to frame	62
Road wheel nut	48
Top swivel bearing to axle carrier Serial 5	44
Bottom swivel bearing to axle carrier Series 5	60
Bottom swivel bearing to bottom link Series 5 $5 \frac{3}{8}$ in. U.N.F.	26
$\frac{1}{2}$ in. U.N.F.	75

### *Rear suspension*

Rear spring 'U' bolts – Alpine	42
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### *Steering*

Box to frame	30
Relay level to frame	30
Steering crosstube ball pin – centre	30
– outer	28
Swing lever to rocker shaft	75

### *Brakes*

Brake disc to hub	38
Caliper to adaptor	52
Steering arm to carrier and adaptor	{ 38 60
Adaptor to carrier	38
Bleed screws	6
Union nuts (male)	7
Union nuts (female)	9
Backplate to casing	17
Wheel cylinder to backplate	12
Steering arm to backplate Series 5	48
Backplate to hub Series 5	34

### *Alternator (Series 5)*

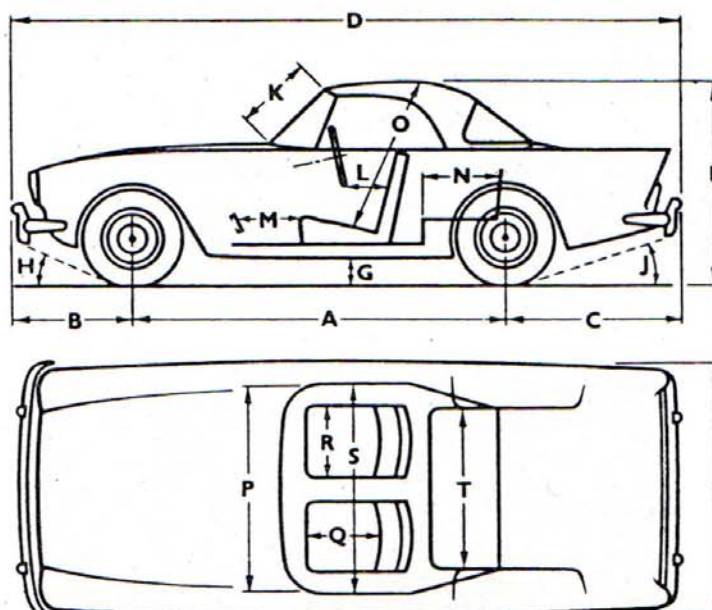
Assembly torque load – brush box screws	10
– diode heat sink fixings	25
– 'through' bolts	45

## VI Body Dimensions, Weights and Capacities

Body Dimensions	Series 1		Series 2	
	Ft.	In.	Ft.	In.
A. Wheelbase	7	2	as Series 1	
B. Front overhang	2	$3\frac{3}{4}$	"	"
C. Rear overhang	3	$5\frac{1}{2}$	"	"
D. Overall length	12	$11\frac{1}{4}$	"	"
E. Overall width	5	$0\frac{1}{2}$	"	"
F. Overall height	4	$3\frac{1}{2}$	"	"
G. Ground clearance		$5\frac{1}{8}$	"	"
H. Front clearance angle		$25^{\circ}$	"	"
J. Rear clearance angle		$20^{\circ}$	"	"
K. Windscreen depth	1	4	"	"
L. Steering wheel to front squab (min.)		10	1	0
(max.)	1	5	1	7
M. Pedals to seat cushion (min.)	1	2	1	$3\frac{1}{2}$
(max.)	1	9	2	0
N. Rear seat depth	1	$4\frac{1}{2}$	as Series 1	
O. Front headroom	3	0	"	"
P. Windscreen width (projected)	3	11	"	"
Q. Front seat depth	1	$7\frac{3}{4}$	"	"
R. Front seat width	1	$7\frac{1}{2}$	"	"
S. Maximum interior width	3	11	"	"
T. Rear seat width	3	$2\frac{1}{2}$	"	"

The above measurements are approximate and apply to both hard top and soft top.

*Plan of body dimensions for Series 1 and 2.*



## 1 Spezifikationen Sunbeam Alpine IV

### Kerb Weight

Soft top without overdrive	2184 lb.	as Series 1
Soft top with overdrive	2204 lb.	" "
Hard top without overdrive	2218 lb.	" "
Hard top with overdrive	2238 lb.	" "

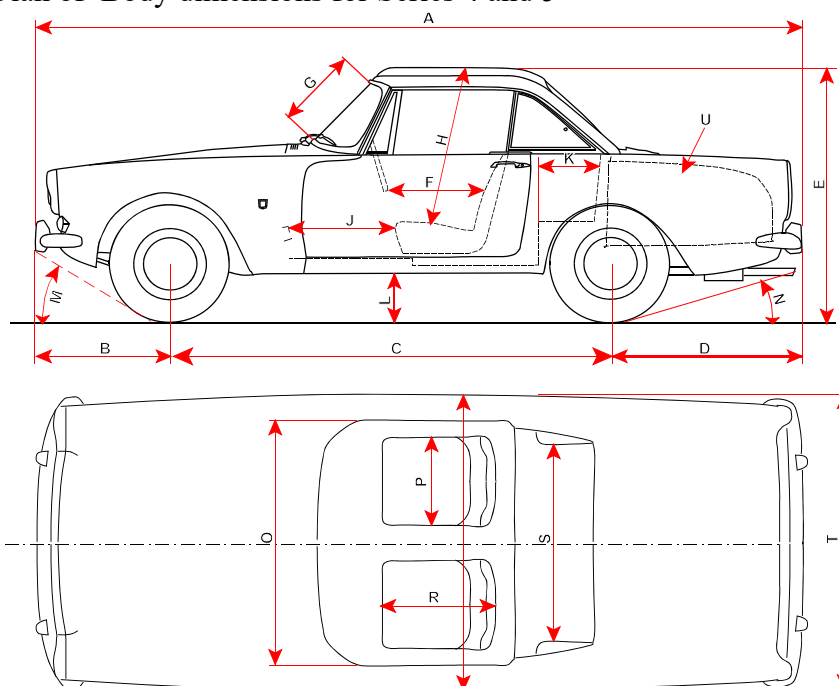
### Capacities

Engine including filter	8 pts.	as Series 1
Gearbox without overdrive	2 $\frac{3}{4}$ pts.	" "
Gearbox with overdrive	4 pts.	" "
Rear axle	1 $\frac{3}{4}$ pts.	" "
Coolant with heater	15 pts.	" "
Fuel	9 galls.	" "

### Series 3

Body Dimensions	<i>Sports Tourer</i>		<i>Gran Turismo</i>	
	Ft.	Ins.	Ft.	Ins.
A. Overall length	12	11 $\frac{1}{4}$	as S.T.	
B. Front overhang	2	3 $\frac{3}{4}$	" "	
C. Wheelbase	7	2	" "	
D. Rear overhang	3	5 $\frac{1}{2}$	" "	
E. Overall height	4	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$
F. Steering wheel to front squab (min.)		11 $\frac{1}{2}$	as S.T.	
(max.)	1	8 $\frac{3}{4}$	" "	
G. Windscreen depth	1	4	" "	
H. Front headroom	3	1 $\frac{1}{2}$	" "	
J. Pedals to seat cushions (min.)	1	4 $\frac{3}{4}$	" "	
(max.)	2	1 $\frac{1}{4}$	" "	
K. Rear seat depth	1	4 $\frac{1}{2}$	" "	
L. Ground clearance (laden)		4 $\frac{1}{4}$	" "	

Plan of Body dimensions for Series 4 and 5





M. Front clearance angle		25°	„	„	
N. Rear clearance angle		20°	„	„	
O. Windscreen width (projected)	4	1	„	„	
P. Front seat width	1	7	„	„	
Q. Front elbow room	4	3½	„	„	
R. Front seat depth	1	6	„	„	
S. Rear seat width	3	1¾	2		11½
T. Overall width	5	0½	as S.T.		
U. Luggage capacity	10¾ cu. ft.		„	„	

All dimensions are approximate only, and are taken with the vehicle in an unladen condition.

### Kerb Weight

Without overdrive	2223 lb.	2278 lb.
With overdrive	2243 lb.	2298 lb.

### Capacities

Engine including filter	8 pts.	as S.T.
Gearbox without overdrive	2¾ pts.	„
Gearbox with overdrive	4 pts.	„
Rear axle	1¾ pts.	„
Coolant with heater	12½ pts.	„
Fuel	11¼ galls.	„

### Series 4 and 5

Body dimensions	Sports Tourer		Gran Turismo	
	Ft.	Ins.	Ft.	Ins.
A. Overall length	13	0	as S.T.	
B. Front overhang	2	3¾	„	„
C. Wheelbase	7	2	„	„
D. Rear overhang	3	6¼	„	„
E. Overall height	4	3½	4	4½
F. Steering wheel to front squab (min.)		11½	as S.T.	
(max.)	1	8¾	„	„
G. Windscreen depth	1	4	„	„
H. Front headroom	3	1½	„	„
J. Pedals to seat cushion (min.)	1	4¾	„	„
(max.)	2	1¼	„	„
K. Rear seat depth	1	4½	„	„
L. Ground clearance (laden)		4¼	„	„
M. Front clearance angle		25°	„	„
N. Rear clearance angle		20°	„	„

## Spezifikation der Zylinderkopfteile

Zylinderkopfmaterial	Alu-Guss	
Zylinderdichtung Typ	Stahl-Kupfer-Asbest, gepresst	
Dicke	0.76 mm, zusammengepresst	
Ventiltellerdurchmesser	Einlassventil	36.37 - 36.47 mm
	Auslassventil	29.77 - 29.87 mm
Ventilstangedurchmesser	Einlassventil	7.89 - 7.99 mm
	Auslassventil	7.86 - 7.87 mm
Ventilsitzwinkel	Einlassventil	45°
	Auslassventil	45°
Ventilstangenspiel	Einlassventil	0.025 - 0.064 mm
	Auslassventil	0.051 - 0.089 mm
Ventillängen	Ein-Auslassventil	118.36 mm
Federlängen, entspannt	äussere Feder	56.6 mm
	Innere Feder	49 mm
in Block gespannt	äussere Feder	39.3 mm
	Innere Feder	36.3 mm
Federkraft gespannt	äussere Feder	32.20 kg
	Innere Feder	16.32 kg
Ventilstangenführung	Material	
Länge	Einlassventil	50.7 mm
Länge	Auslassventil	54.6 mm
Aussendurchmesser	Einlassventil	14.27 - 14.3 mm
	Auslassventil	14.27 - 14.3 mm
Interferenz	Ein-Auslassventil	0.063 - 0.114 mm
Ventilspiel bei 85°C	Einlassventil	0.30 mm
	Ein-Auslassventil	0.35 mm

# TORQUE LOADING FIGURES

## ENGINE

Cylinder head (tighten when cold) ...	48 lbs. ft. (6.6 kg.m)
Crankshaft (mains) ...	55 lbs. ft. (7.6 kg.m)
Con. rod (big-end)—Series I Alpine, Series III Rapier ...	20 lbs. ft. (2.7 kg.m)
—Alpine, II Series Rapier IIIA Onwards ...	24 lbs. ft. (3.3 kg.m)
Flywheel ...	40 lbs. ft. (5.5 kg.m)

## GEARBOX

Mainshaft nuts ...	80 lbs. ft. (11.0 kg.m)
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## REAR AXLE

Hypoid bevel pinion nut ...	110 lbs. ft. (15.2 kg.m)
Axle shaft ...	180 lbs. ft. (24.8 kg.m)

## PROPELLER SHAFT

Universal joint—metal to rubber (where fitted) ...	50 lbs. ft. (6.9 kg.m)
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## FRONT SUSPENSION

Fulcrum pin to crossmember mounting bolts (upper) ...	48 lbs. ft. (6.6 kg.m)
Fulcrum pin to crossmember mounting bolts (lower) ...	32 lbs. ft. (4.4 kg.m)
Eye bolt—trunnion to link ...	40 lbs. ft. (5.5 kg.m)
Ball pin—stub carrier to link ...	85 lbs. ft. (11.7 kg.)
Ball pin—housing to link ...	52 lbs. ft. (7.1 kg.m)
Shock absorber to spring pan ...	33 lbs. ft. (4.5 kg.m)
Crossmember to frame ...	6 lbs. ft. (.8 kg.m)
Road wheel nut ...	62 lbs. ft. (8.5 kg.m)
	48 lbs. ft. (6.6 kg.m)

## REAR SUSPENSION

Rear spring "U" bolts—Alpine ...	42 lbs. ft. (5.8 kg.m)
—Rapier ...	16 lbs. ft. (2.2 kg.m)

## STEERING

Box to frame ...	30 lbs. ft. (4.1 kg.m)
Relay lever to frame ...	30 lbs. ft. (4.1 kg.m)
Steering crosstube ball pin—centre ...	30 lbs. ft. (4.1 kg.m)
—outer ...	28 lbs. ft. (3.8 kg.m)

## BRAKES (Front)

Brake disc to hub ...	38 lbs. ft. (5.2 kg.m)
Caliper to adaptor ...	52 lbs. ft. (7.1 kg.m)
Steering arm to carrier and adaptor ...	38 lbs. ft. (5.2 kg.m)
Adaptor to carrier ...	60 lbs. ft. (8.2 kg.m)
	38 lbs. ft. (5.2 kg.m)

## BRAKES (Rear)

Backplate to casing ...	17 lbs. ft. (2.0 kg.m)
Wheel cylinder to backplate ...	12 lbs. ft. (1.6 kg.m)



## **Spezialfirmen für Motoren- und Zylinder-Revision**

Motech GmbH, Bühlwiesenstrasse 5, CH-8309 Nürensdorf  
www.motech.ch, info@motech.ch, Tel. 0041 44 836 66 67

Auer Motoren GmbH, Industriestrasse 8, D-78224 Singen (Hohentwiel)  
www.auer-motoren.de, info@auer-motoren.de, 0049 7731 93 25-0

## **Ersatzteile-Lieferanten**

### **Diverse Ersatzteile**

Erich Hammer  
Rüttenstrasse 17, CH-4513 Langendorf, Schweiz  
e.hammer@gawnet.ch, Tel. 079 202 99 56

### **Auto-Zubehör**

Derendinger AG  
Längenbergstrasse 13, CH-8207 Schaffhausen  
filsh@derendinger.ch, Tel. 052 644 57 10  
www.derendinger.ch

### **Innenauskleidung, Polsterung**

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Dorfbachstrasse 1, CH-8162 Steinmaur, Schweiz  
Four-stroke-team@gmx.ch, Tel. 044 840 07 07, 079 711 53 09  
www.autosattlerei-zuerich.ch

### **Ventile**

Classic Sunbeam Autoparts  
166 West Oneonta Road, Otego, NY 13825, USA  
orders@classicsunbeam.com, Tel. 001 800 247 8623  
www.classicsunbeam.com

### **Zündung**

Powerspark Ignition Ltd  
Unit 16 Sanders Road ind Est, Broomsgrove  
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Sales@simonbbc.com, Tel. +44 1527889453

### **Instrumente**

Smiths-Gauges  
Gouldens Farm, Guidable Lanes  
The Bangalow, Edenbridge TN8 6QU, United Kingdom  
Info@smiths-gauges.co.uk Tel. 01732 863073

### **Elektroteile**

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### **Instrument-Glühbirnen**

Distrelec Schweiz  
Grabenstrasse 6, CH-8606 Nänikon, Schweiz  
Info@distrelec.com, Tel, 044 944 99 11  
www.distrelec.ch

### **Auto Restaurierung**

R+R Klassiker Werkstatt  
Durachstrasse 2, CH-8232 Merishausen  
Info@klassikerwerkstatt.ch, Tel. 052 653 10 58  
www.klassikerwerkstatt.ch