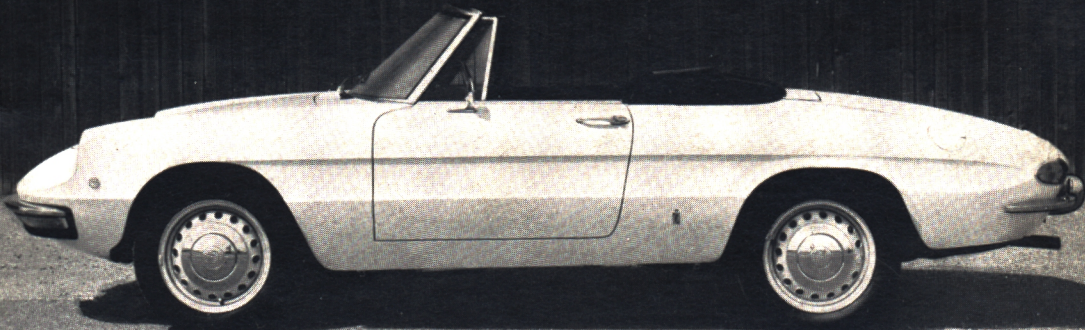


ALFA ROMEO SPIDER 1300 JUNIOR



INSTRUCTION BOOK

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4 Driving seat

HOW TO USE YOUR CAR

6 Starting the engine. Precautions

7 Winter precautions

8 Interior

LUBRICATION

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15 Front & rear suspension

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17 Brakes

ELECTRICAL EQUIPMENT

18 External lights

20 Wiring diagram

21 TOOL KIT

It is a good rule to make a note of the symbol stamped on the key handle.

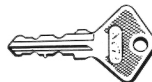
Ignition and antitheft
device key

SYMBOL



Key to driver's and
passenger's door,
glove compartment,
boot lid

SYMBOL



Note: To open the boot lid lift the lever situated on the door jamb on the passenger's side. The lock utilises the same key as the doors.

When ordering duplicate keys, **please quote the symbol.**



The operation and maintenance instructions contained in this handbook.

M U S T B E C A R E F U L L Y O B S E R V E D

by every owner who desires to get the best from this vehicle and to ensure a long life for every component.

Owners are recommended, in their own interest, to entrust all maintenance and repair work to an authorized Alfa Romeo Service Station as such Stations are equipped with the proper tools and staffed by specially trained mechanics who are kept up-to-date by our technical literature.

Owners are reminded that Alfa Romeo cannot be responsible for any errors made by unauthorized service stations or for any damage resulting from the use of nongenuine spare parts and/or lubricants other than those recommended.

Direzione Assistenza

The data relating to weights, consumptions and speeds are approximate only; Alfa Romeo reserves the right to change without notice any features and data given in this book.



Specification

Engine	Number and layout of cylinders	4 in line		
	Bore and stroke mm	74 x 75		
	Total displacement cc	1290		
	Max. power at 6000 rpm (SAE) HP	103		
Chassis	Min. turning circle mm	10,500		
	Number of seats	2		
	Tyres (Michelin X - Pirelli Cinturato S)	155-15		
	Kerb weight (full tank) lbs	2182 (990 kg)		
Fuel consumption	Per 100 Km to Italian C U N A standards (full load) abt.	I	GB	USA
		9.8 lt	29 mpg	24 mpg
Fuel, oil and water	Water abt.	7.5 lt	1.65 gals	1.98 gals
	Fuel »	46 lt	10.1 gals	12.1 gals
	For best engine performance the use of premium grade fuel is advised.			
	Fuel reserve »	6 to 7 lt	1.3-1.5 gals	1.6-1.8 gals
	OIL			
	Engine (sump and filter) { when full ★ . . . » danger level . . . »	6.00 kg 4.00 kg	5.95 qts 3.95 qts	7.1 qts 4.7 qts
	Gearbox »	1.65 kg	3.2 pts	3.8 pts
	Differential »	1.25 kg	2.5 pts	3.0 pts
	Steering box »	.25 kg	.5 pt	.6 pt
	★ This quantity is that needed for regular changing. The total amount of oil in the circuit (sump, filter and passages) is »			
		6.50 kg	6.5 qts	7.8 qts

PERFORMANCE (with 41 : 9 final drive)

GEAR	RUNNING IN distance covered				AFTER RUNNING IN	
	1st 1000 Km 600 mi.		1000 to 3000 Km 600 to 1900 mi.			
	Km/h	mph	Km/h	mph	Km/h	mph
1st	30	18	38	24	44	27
2nd	49	30	62	38	74	46
3rd	72	45	91	56	108	67
4th	98	60	123	76	146	90
5th	114	71	143	92	170 ^{over}	105
Rev.	—	—	—	—	48	30

The maximum speed indicated should not be exceeded or mechanical damage may result.

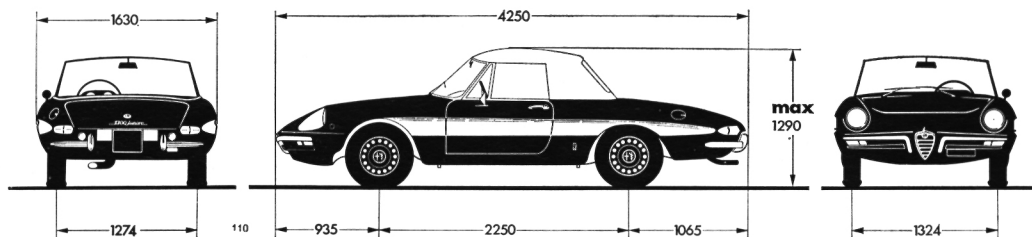
The performances given are related to the use of the vehicle in normal travelling conditions in Central Europe.

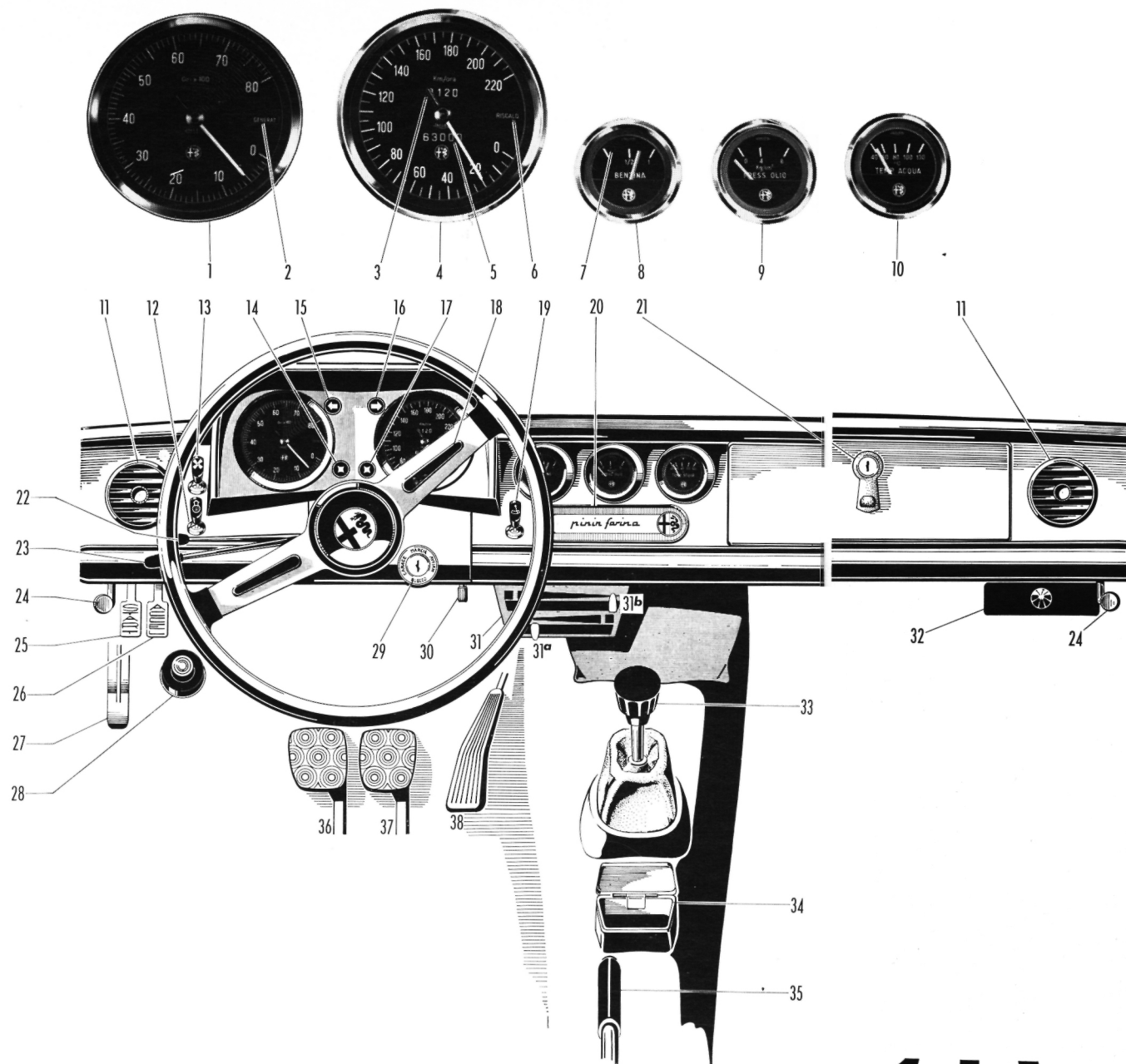
Alfa Romeo 1300 Junior



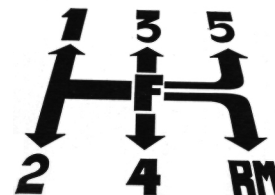
935 mm = 36.8 in.
 1065 mm = 41.9 in.
 1274 mm = 50.1 in.
 1290 mm = 50.8 in.
 1324 mm = 52.1 in.
 1630 mm = 64.2 in.
 2250 mm = 88.6 in.
 4250 mm = 167.3 in.

dimensions in mm - overall height with unladen car





To engage the REVERSE merely shift gear lever
from neutral (N) as shown. ▶



- 1 Tachometer
- 2 Generator warning light
- 3 Trip odometer
- 4 Speedometer
- 5 Main odometer
- 6 Blower warning light
- 7 Fuel reserve warning light
- 8 Fuel level indicator
- 9 Oil pressure gauge
- 10 Water temperature gauge
- 14 External light warning
- 15 Warning light for L.H. direct. indicator
- 16 Warning light for R.H. direct. indicator
- 17 Headlamp high beam warning light
- 32 Fusebox

- 12 Instrument light switch
(operates when external lights are on)
- 18 Horn
- 19 Windscreen wiper switch (2-speed)
- 22 Direction indicator switch
- 23 Light dipping and flashing switch
- 25 Choke
- 26 Hand throttle
- 27 Bonnet catch release
- 28 Windscreen washer: when the control
is pressed the windscreen wiper
also comes into action
- 29 Ignition switch & anti-theft
- 30 Trip odometer zero setting
- 33 Gear lever
- 35 Handbrake (for emergency and parking)
- 36 Clutch
- 37 Brake
- 38 Accelerator

- 11 Air outlets (adjustable)
- 13 Blower switch
- 20 Radio compartment
- 21 Glove compartment
- 24 Air flow control (through outlets)
- 31 Heating, ventilating and demisting
- 31a Temperature control
- 31b Ventilating air control
- 34 Ash tray

Instruments

Controls

Luxury fittings

From cold

Particularly when starting from cold in winter, it is advisable, in order to facilitate starting, to press the clutch pedal down fully and the accelerator through about one quarter of its stroke while at the same time operating the choke lever.

As soon as the engine fires release the ignition key.

If the engine fails to start at once, do not keep the starting motor running (or the battery will soon become discharged) but wait a few minutes and try again.

When the engine has started move choke lever halfway back until the engine is warm and then push it down.

Do not accelerate the engine until it has warmed up, since when the engine is cold the oil cannot reach all points requiring lubrication.

Make sure the oil pressure shown by the gauge is as prescribed (minimum 7 to 14 psi —.5 to 1 Kg/cm² at idling speed).

Make sure the generator warning light goes off as soon as engine speed exceeds 1,100 r.p.m.

Hot engine

In summer, or when the engine is already hot, do not use the choke. Starting will be facilitated if the accelerator is depressed about half way so that the carburettor throttles are opened in order to lean the mixture.

PRECAUTIONS

Take care not to run the engine beyond the maximum R.P.M.

Check the oil pressure gauge from time to time and stop the engine if the pressure with a hot engine and at maximum revolutions should fall below 50 psi (3.5 Kg/cm²).

Do not drive at high speed until the oil in the engine, in the gearbox and in the differential has warmed up properly.

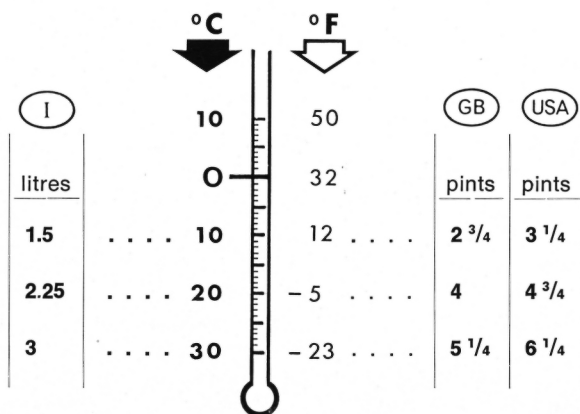
Do not coast downhill with the engine stopped; there will be no suction in the brake vacuum servo and a greater pressure will be needed with the brake pedal to obtain comparable braking effect.

How to use your car

WINTER PRECAUTIONS

In places where the temperature falls below freezing point, a suitable antifreeze must be added to the engine cooling water to prevent the water in the radiator from freezing while the car is in motion and the water in the engine from freezing during prolonged stops.

Antifreeze



Recommended products

AGIP . . F1 antifreeze

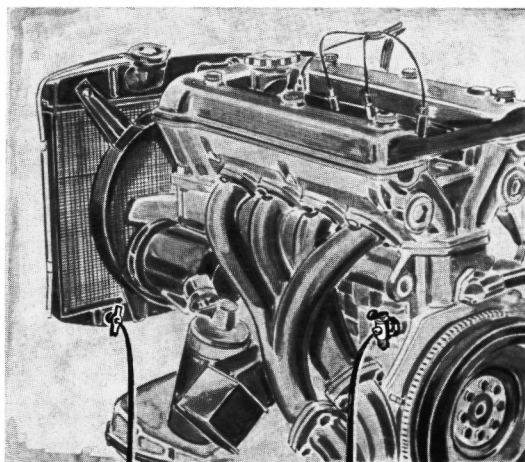
SHELL . . Antifreeze

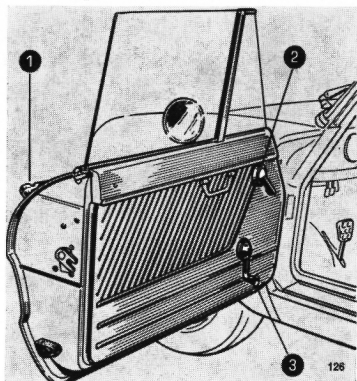
Quantities of antifreeze to be used, depending on the lowest anticipated temperature

Draining off the water

In icy weather even a short stop may be enough to freeze the engine water if an antifreeze has not been added.

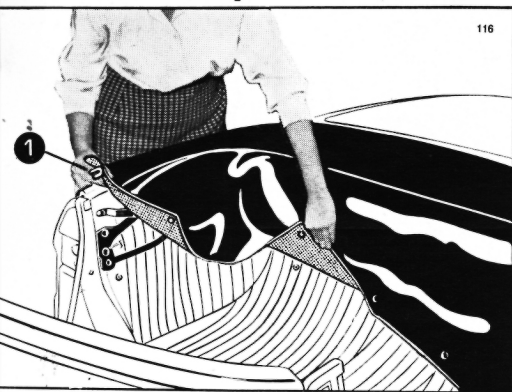
If no antifreeze is used, **to avoid very serious damage**, it is essential to drain the radiator, the engine and the heating system by opening the cocks positioned at the bottom of the radiator and on the left-hand side of the engine and by shifting the heater temperature control to the maximum position.





DOORS

- 1 Handle: both doors can be locked from the outside.
- 2 Lever to actuate (pushing forward) and release the safety device.
- 3 Window regulator handle.

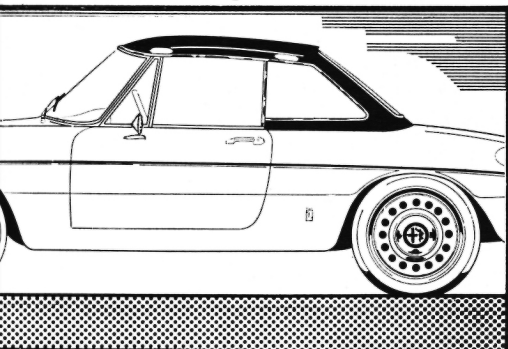


FOLDING TOP

A cover for the folding top is provided optionally.

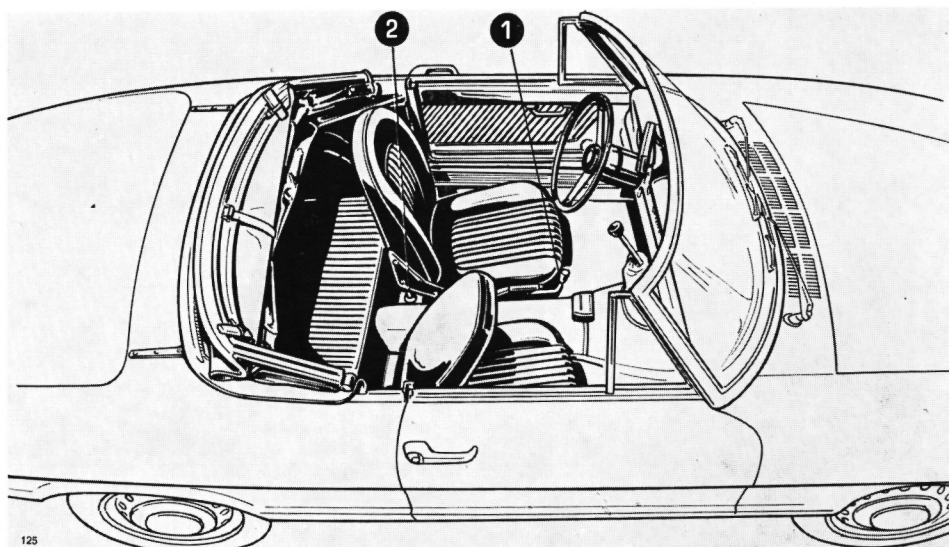
To fit the cover:

- Spread it onto the top and engage the bows in the hooks on the body.
- Insert the prongs 1 into their seats in the door jambs.
- Finally, secure the cover to the inside of the car with the fasteners.



HARD TOP

Provision is made for the installation of the hard top. Attachment is effected through the hooks suitably provided on the body.



125

- The car can be optionally equipped with sun visors. Provision is made for their installation.
- The positioning of the front seats is controlled by a lever situated on the front edge of each seat: by freeing the lever the seat may be moved to the position desired.
- Suitable adjusting screws situated at the side of the seats controls the angle of the backrests; these may also be tipped forward to facilitate access of passengers to the rear seat.

Sun visors

Seats



Provision is made for the fitting of safety belts.

Suitable reinforced attachment points are located:

- for lap belts: on the central tunnel and on side rails
- for shoulder belts: on the central tunnel and on rear side panels.

Furthermore, all three attachment points can be used for the installation of lap and diagonal harness.

SAFETY BELTS

PART	Classification	Commercial equivalents	
		AGIP	SHELL
Engine	SAE 20 W/40 API MS	F.1 Supermotoroil Multigrade 20 W/40	● X-100 Multigrade 20 W/40 ● Super Motor Oil « 100 »
Gearbox Steering box Differential	SAE 90 API EP	F.1 Rotra Hypoid SAE 90	Spirax 90 EP
Propeller shaft universal joints and sliding yoke	NLGI 1	F.1 Grease 15	Retinax G
Front wheel bearings (see maintenance schedule)	NLGI 2/3	F.1 Grease 33 FD	Retinax AX

SAE - Society of Automotive Engineers

API - American Petroleum Institute

NLGI - National Lubricating Grease Institute

In Countries where the recommended lubricants are not available, it is possible to replace them with products of other leading makes provided that **in accordance with the prescribed specifications and grades.**

Engine oil level

Every 300 miles (500 Km) check the oil level in sump taking care to push the dipstick all the way down. Never allow the oil level to fall below the MINimum or exceed the MAXimum when topping up.

**Oil change
(engine
warmed up)**

At the prescribed periods

With the engine stopped, drain off old oil thoroughly.
Remove the filter body and clean the inside of it.
Replace the filter element.
Refill with new oil.

Engine maintenance

NUT TIGHTENING

To avoid stressing the metal, tighten as follows **with a torque wrench set to the prescribed torque.**

Tightening torque specifications

Camshaft journal caps: lubetorque to

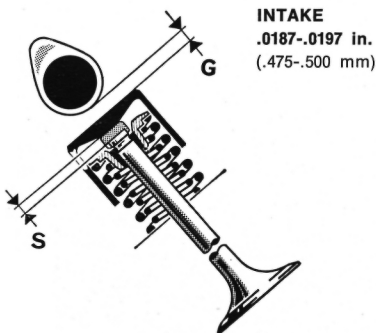
Cylinder head

lubetorque when cold to .
when hot retighten without
unscrewing to

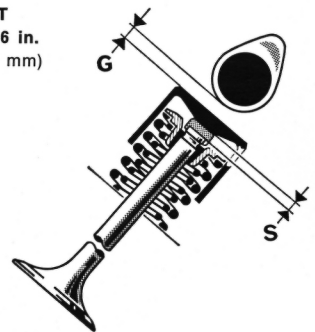
lb-ft	Kgm
14.5-15.9	2-2.25
45-46	6.2-6.4
47.7-48.5	6.6-6.7

The V-mounted overhead valves are directly operated by two camshafts acting through oil bath cups.

VALVE TIMING



EXHAUST
.0206-.0216 in.
(.525-.550 mm)

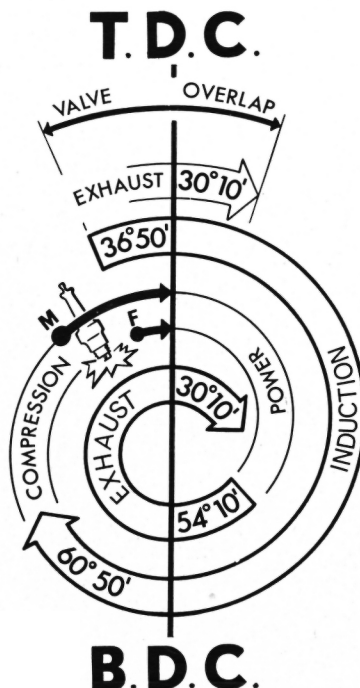


M

**MAXIMUM
ADVANCE**

F

**FIXED
ADVANCE**

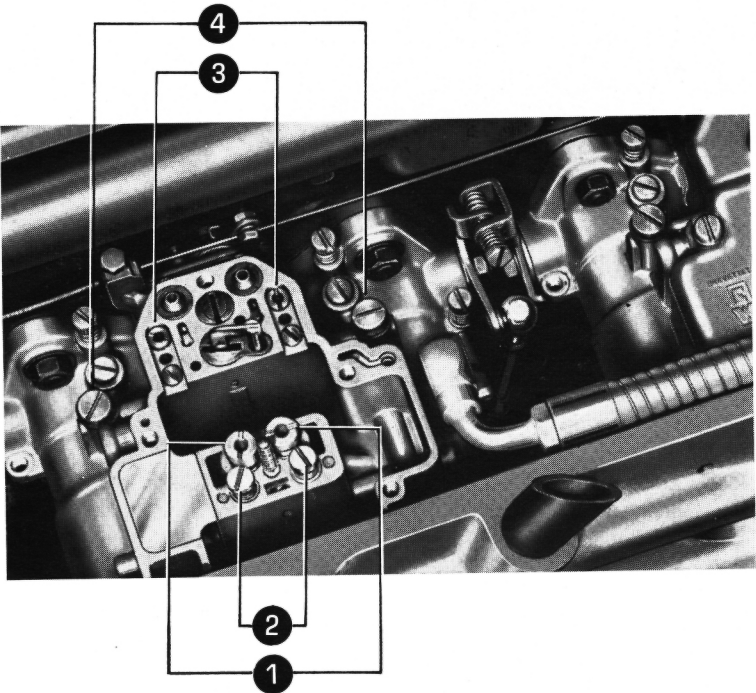


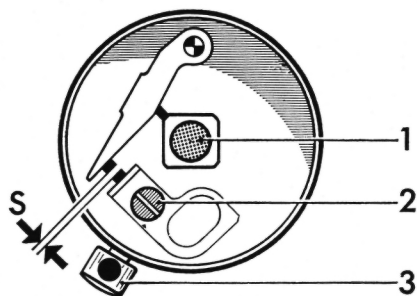
**Valve clearance
and timing diagram**

Rating

1	Main jets	112
	Main air restrictor jets	220
2	Idling jets	50 F 11
	air restrictor jet	120
	axial passage	150
3	Choke jets	65 F 5
4	Acceleration pump jets	35
	Venturis (mm)	28

2 CARBURETTORS
WEBER
40 DCOE 28

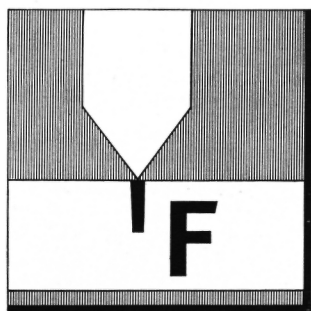




- Check with a feeler gauge the contact-breaker point gap: **S = .0138 to .0157 in.** (.35 to .40 mm). Adjust by means of screw **2** if necessary.
- Soak the felt **1** with oil.
- Apply some drops of oil through the lubricator **3**.

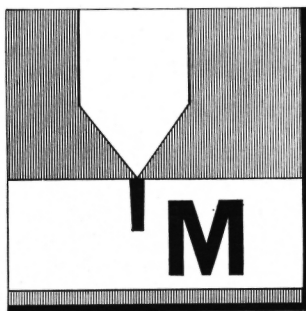
Distributor

Checking the ignition timing



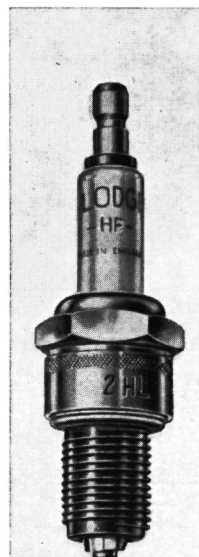
FIXED ADVANCE

2°/4° BTDC



MAX ADVANCE

40°/43° at 5300 rpm



Spark plugs LODGE **2 HL**

The spark plugs are of the type with four points and a central electrode. The only maintenance required is occasional cleaning of the central and earth electrodes.

No routine adjustment is necessary of the gap between the electrode and points.



CLUTCH**Chassis maintenance****Pedal free travel**

The clutch is of the single plate dry type. Its operation is ensured by 9 helical springs.

The pedal should move through:

a free travel of approximately 1 inch. (23 mm)

before actual disengagement begins.

When, owing to wear on the clutch disc facing, the pedal free travel is reduced to $\frac{1}{2}$ inch (10-12 mm) the free travel must be restored by means of the adjusting rod.

GEARBOX

The gearbox has 5 synchromesh forward gears, and one reverse.

The gear lever is floor mounted.

1st 3.30 : 1

2nd 1.99 : 1

3rd 1.35 : 1

4th 1.00 : 1

5th86 : 1

Reverse . . . 3.01 : 1

Transmission ratios

Any inspection or adjustment of the gearbox must be done only by an **authorized Alfa Romeo Service Station.**

Regularly check oil level or change the oil.

REAR AXLE

The rear axle is attached longitudinally to the supporting structure by means of two trailing arms with rubber bushes at the ends; transverse attachment is effected by means of an upper T-arm hinged to the body and to the rear axle through rubber bushes. The final drive is of the hypoid type.

Overall ratios

with **41 : 9** final drive

1st 15.049 : 1

2nd 9.055 : 1

3rd 6.172 : 1

4th 4.555 : 1

5th 3.918 : 1

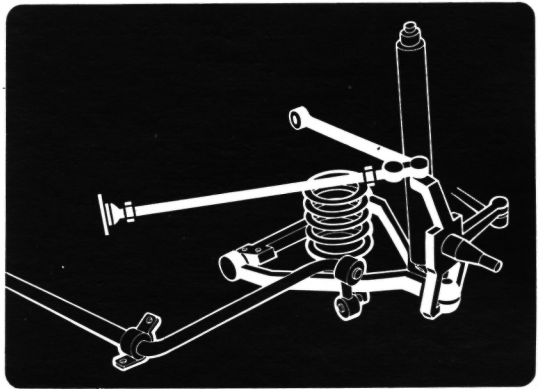
Reverse 13.710 : 1

Check oil level or change the oil at the prescribed intervals.

The front wheels are independently suspended and connected to the body by transverse arms.

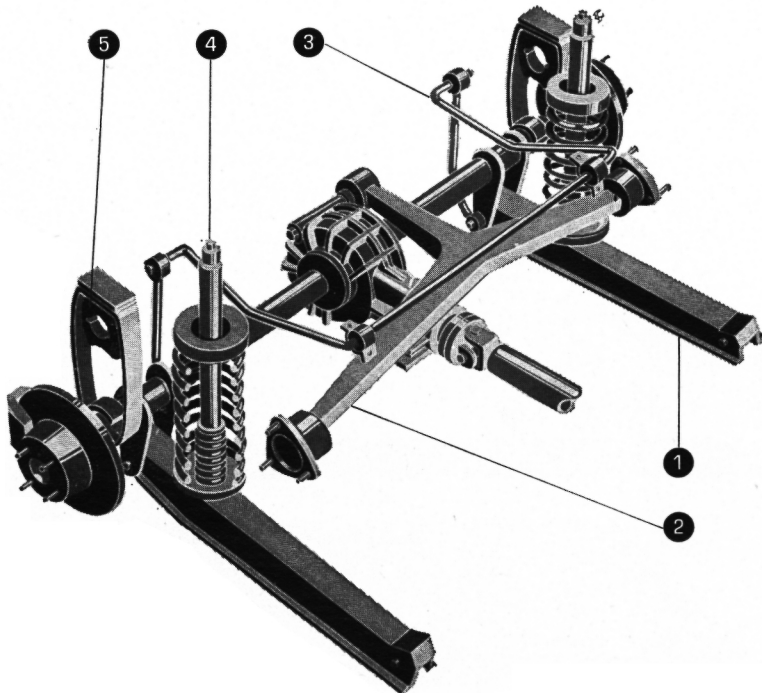
The suspension system is completed by a transverse stabilizer rod which improves the stability of the vehicle when cornering.

Suspension components require no regular lubrication.



The rear suspension consists of coil springs and large diameter telescopic shock absorbers coaxial with the springs. The suspension system is completed by a transverse stabilizer rod.

REAR SUSPENSION



- 1 Trailing arm
- 2 T-arm
- 3 Stabilizer rod
- 4 Shock absorber
- 5 Rubber buffer and rebound strap.

Camber

Non-adjustable; check chassis and suspension arms for distortion, if necessary.

Turning circle

The turning circle may be adjusted by means of the screws 4 indicated in the diagram.

**Length of
track rods**

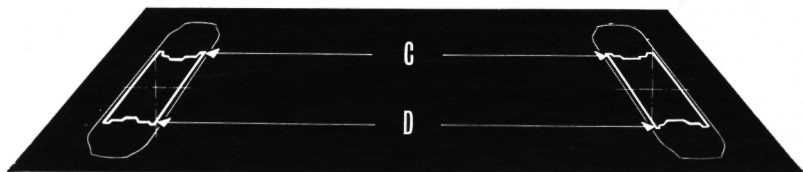
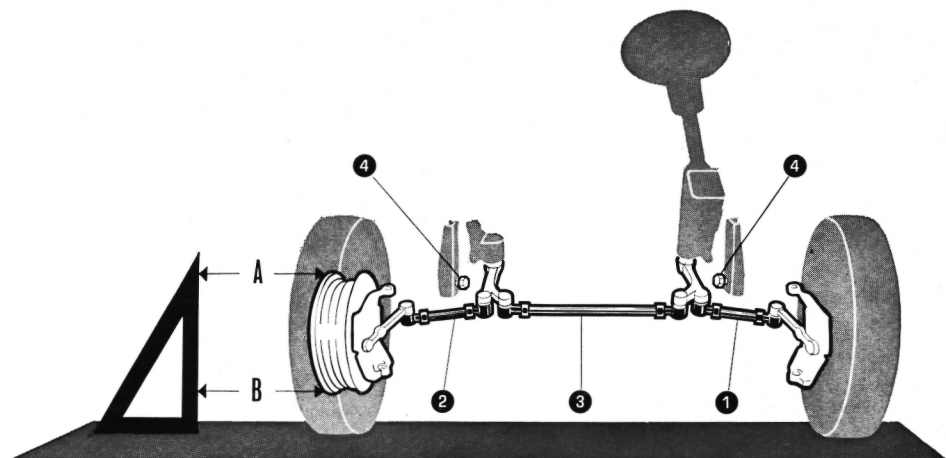
As measured between ball joint centres, the length should fall within the following limits:

- | | | | | |
|----------|----------|---------------------------------------|----------|--|
| 1 | 2 | 10.71 ± .3 in.
(272 ± 8 mm) | 3 | 21.26 ± .4 in.
(540 ± 10 mm) |
|----------|----------|---------------------------------------|----------|--|

$$\text{Camber } B = A + .20'' (+ 5 \text{ mm})$$

$$- .04'' (- 1 \text{ mm})$$

$$\text{Toe-in } C = D + .12'' (+ 3 \text{ mm})$$



The ATE brake system consists of four caliper type disc brakes operated by a servo assisted master cylinder. The friction pads of the front and rear brakes are directly actuated by the cylinders integral with the calipers.

Hydraulic brake

To maintain the brakes in good operating condition, follow the servicing instructions given below:

- Take care to prevent the **minimum level** of fluid in the reservoir from falling below the **maximum level** by more than a quarter.
- For renewal or topping up, it is absolutely essential to use only

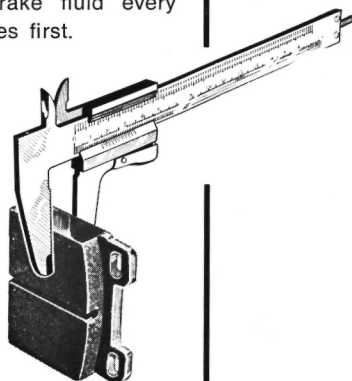


from freshly opened sealed containers. Renew the brake fluid every 11,250 mi. (18,000 Km) or once a year whichever comes first.

Thickness:
new
.6 in. (15 mm)
wear limit
.28 in. (7 mm)
REPLACE

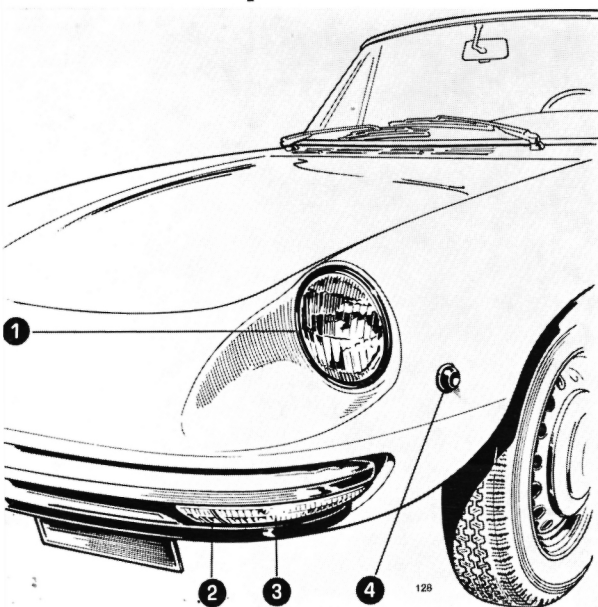
- Check pad thickness.

In case of uneven wear of pads, it is advisable to replace the whole set (front or rear).

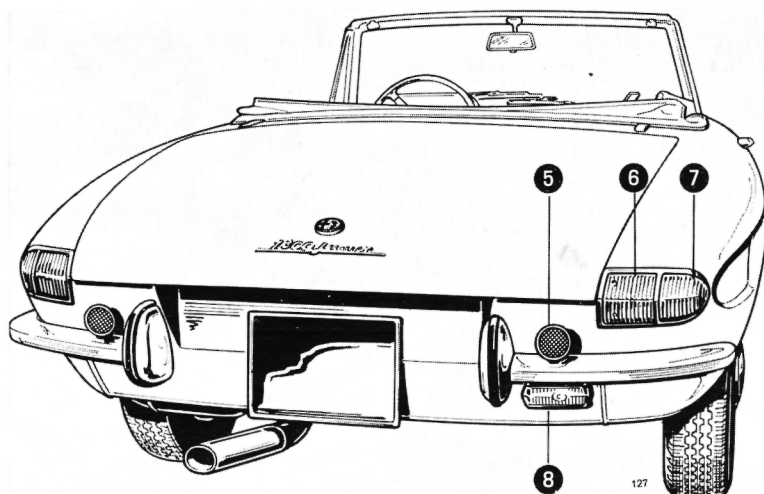


It is mechanically-operated: the rear wheels are locked through shoes 4 acting against a drum machined in the disc casting. The handbrake is correctly adjusted when the wheels become locked as the lever is drawn through half its total travel.

Handbrake system



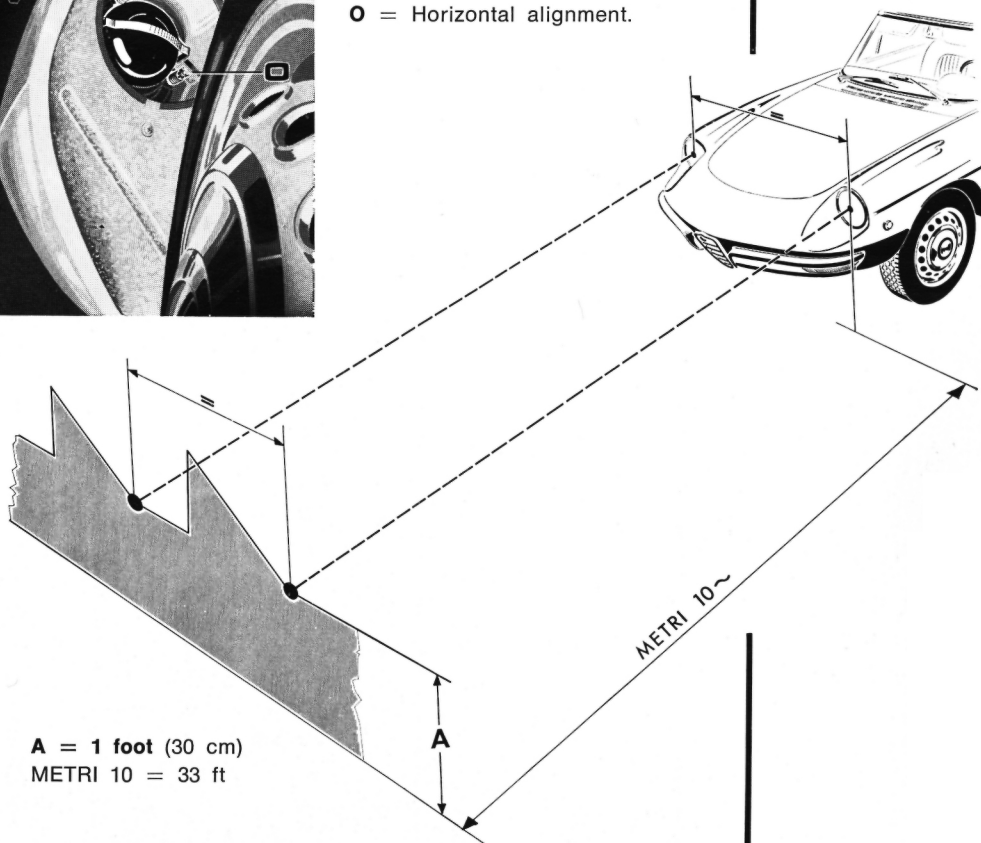
- 1 Headlamp: high/low beam
- 2 Parking light
- 3 Direction indicator (front)
- 4 Direction indicator (side)



- 5 Reflector
- 6 Parking and stop light
- 7 Direction indicator (rear)
- 8 Reversing light



V = Vertical alignment
O = Horizontal alignment.



A = 1 foot (30 cm)
METRI 10 = 33 ft

To align the beams, position the car, unloaded on level ground away from a screen perfectly vertical and check for dimension **A** as shown in the figure.

Proceed as follows:

- Remove the protecting cover by unscrewing the wingnut from the wheelhouse.
- Align the beams by adjusting the proper wingnuts.

From the wheelhouse remove the following:

- the protective cover;
- the metal housing;
- the lamp holder after having disconnected the feed wire and the spring clips.

Setting

Replacing a bulb

WIRING DIAGRAM

- 1 Battery 12 V-60 Ah
- 2 Coil Bosch TK 12A 19
- 3 Ignition distributor . . . Bosch JF 4
- 4 Starting motor Bosch EF(R) 12V 0,7PS
- 5 Generator Bosch EG(R) 14V 25A 29
- 6 Voltage regulator . . . Bosch VA 14V 25A
- 7 Windscreen wiper . . . Bosch WS 13/11 T3A
- 8 Horns
- 9 Flasher unit, directional
- 10 Fuel level sender
- 11 Fusebox (8-amp. fuses)
- 12 Junction box
- 13 Relay
- 14 Coolant temperature gauge bulb
- 15 Oil pressure gauge sender
- 16 Blower motor

SWITCHES

- 17 Parking lights, headlamps and flashing
- 18 Direction indicator
- 19 Horn control
- 20 Stop lights
- 21 Reversing lights
- 22 Dashboard lights
- 23 Blower motor
- 24 Windscheen wiper motor
- 25 Ignition and starting
- 26 Windscreen washer, foot operated
- 27 Engine compartment light

- 28 Ceiling light (microswitch on door jambs)
- 29 Ceiling light (toggle switch in light unit)

BULBS

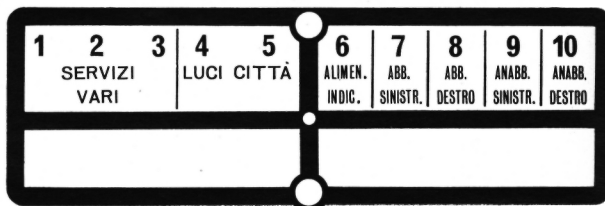
- 30 High/low beam (head-lamps) . . . 45/40 watts asymmetric
- 31 Parking & Stop lights 5/21 watts
- 32 Front direction indicators . . . }
- 33 Rear direction indicators . . . } 21 watts
- 34 Back-up lights }
- 35 Front parking lights } 5 watts globular
- 36 Number plate light }
- 37 Engine compartment light . . . } 5 watts cylindrical
- 38 Ceiling light (in mirror) . . . }
- 39 Laterale di direzione 4 w tubular
- 40 Instrument light }
- 41 Generator warning light . . . } 3 watts tubular
- 42 Blower warning light }
- 43 Fuel reserve warning light . . . }
- 44 Direction indicator warning lights }
- 45 Parking light warning } 1.2 watt tubular
- 46 High beam warning light . . . }

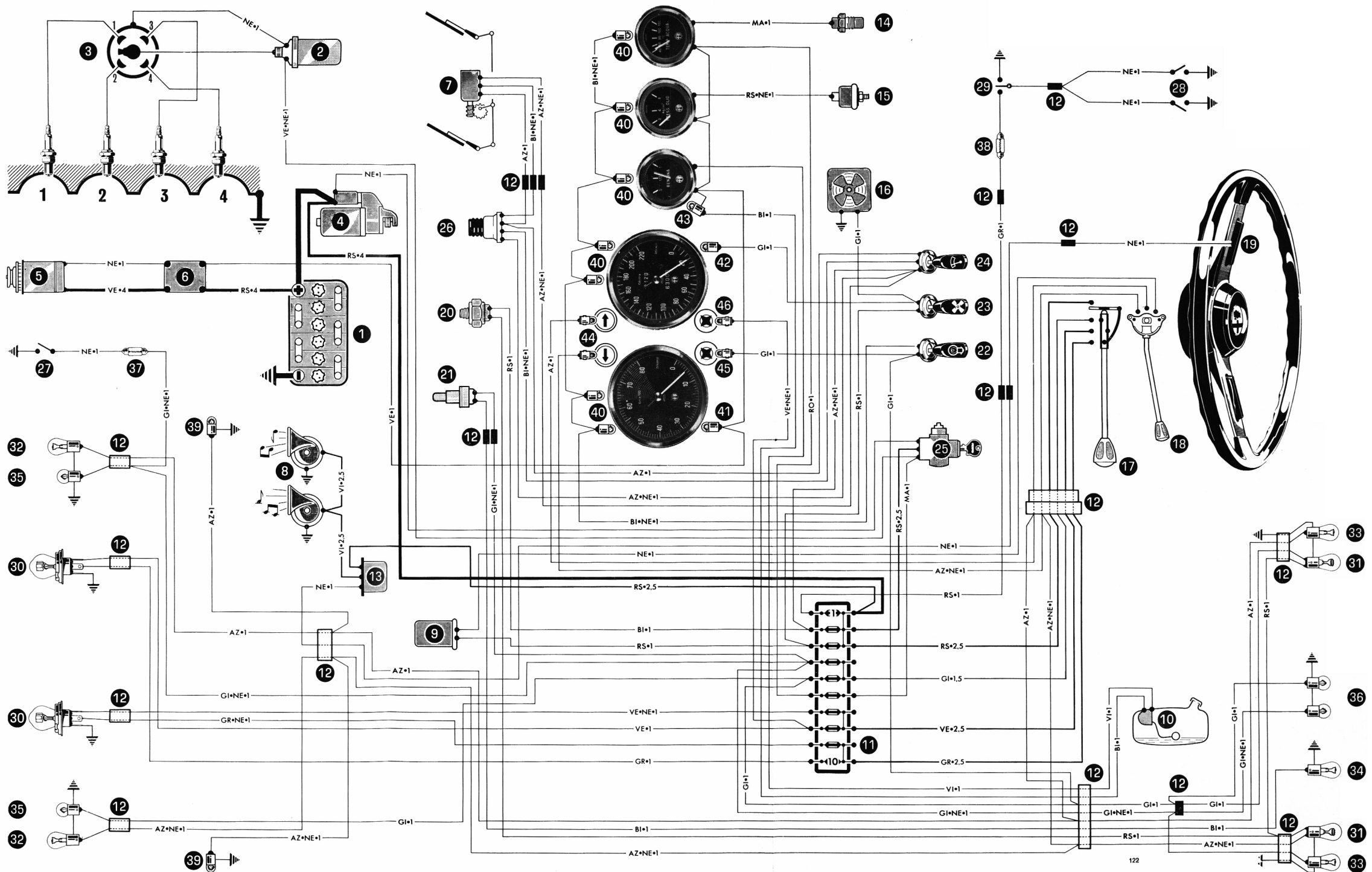
CABLE COLOR CODE

- | | | |
|-----------|----------|----------|
| AZ blue | GR grey | RO pink |
| BI white | MA brown | RS red |
| GI yellow | NE black | VE green |

PLATE ON FUSEBOX

- 1, 2, 3 Main devices
- 5 Parking lights
- 6 Indicating devices
- 7 L.H. high beam
- 8 R.H. high beam
- 9 L.H. low beam
- 10 R.H. low beam





EQUIPMENT

In the boot:

- Spare wheel under the mat



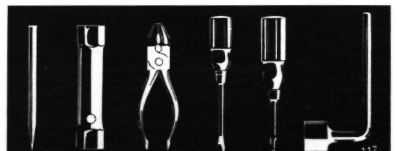
- Jack on the bulkhead



- Tool kit at the L.H. side

Tool kit

- Wheel brace
- Pliers
- Box spanner for plugs
- Tommy bar for plug spanner
- Phillips screwdriver
- Screwdriver





INFLATION PRESSURES WHEN COLD

With reduced load & touring riding.

With full load and top range of speed.

MICHELIN				PIRELLI			
Front		Rear		Front		Rear	
24	1.7	24	1.7	24	1.7	25.6	1.8
27	1.9	27	1.9	25.6	1.8	30	2.1
psi	Kg/cm ²	psi	Kg/cm ²	psi	Kg/cm ²	psi	Kg/cm ²

Alfa Romeo

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