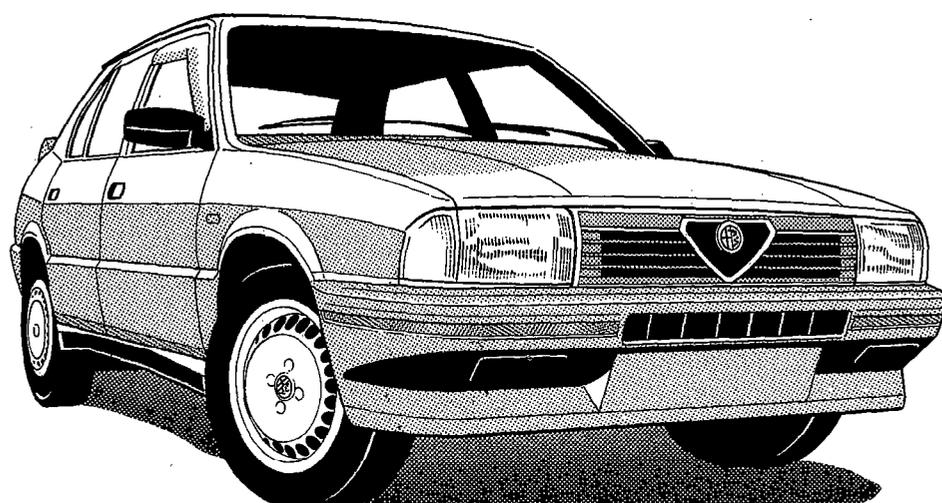


Product: 1983-1988 Alfa Romeo 33 models Car Service Repair Workshop Manual  
Full Download: <https://www.aresairmanual.com/downloads/1983-1988-alfa-romeo-33-models-car-service-repair-workshop-manual/>

# WORKSHOP MANUAL

**Alfa 33** MANUAL SUPPLEMENT

models  
**33**

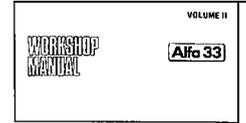


ASSISTENZA TECNICA *Alfa Romeo* 

Sample of manual. Download All 210 pages at:

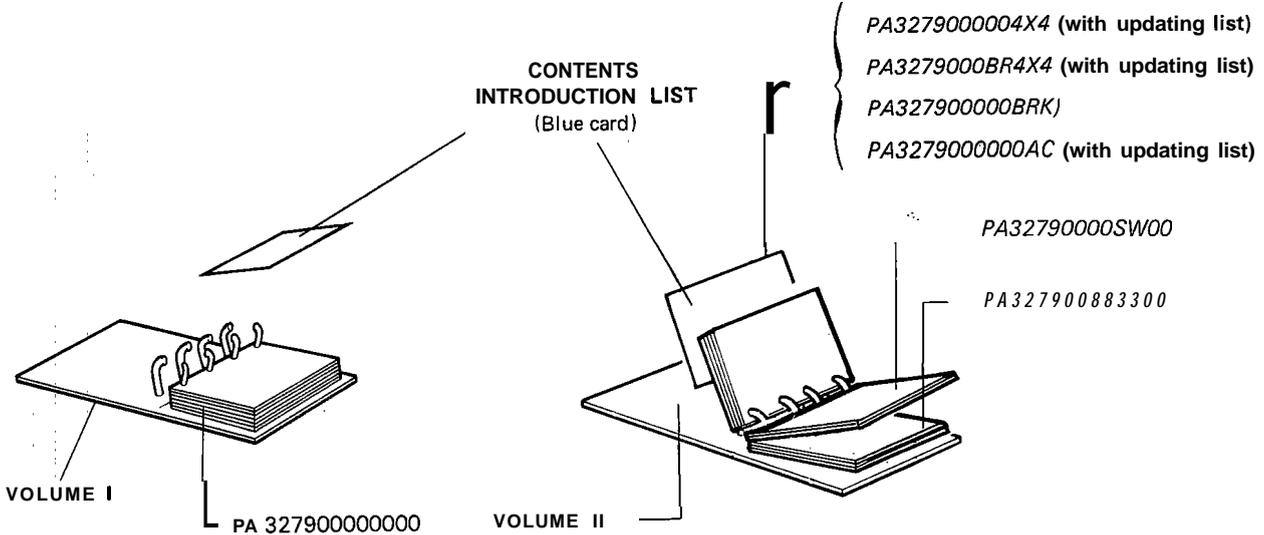
<https://www.aresairmanual.com/downloads/1983-1988-alfa-romeo-33-models-car-service-repair-workshop-manual/>

May 1988



Instructions for the insertion of the technical data in the binders

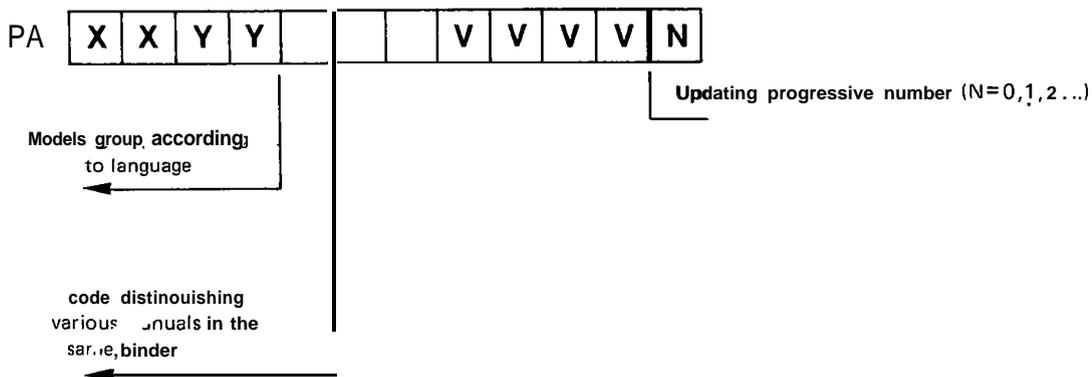
When inserting the updating pages in the **Alfa 33** VOLUME II binder, it is advisable to proceed as shown in the diagram below and to follow the order indicated.



Detailed contents:

PA3279000004X4	"Workshop Manual <b>Alfa 33</b> 4 x 4"
PA3279000BR4X4	"Workshop Manual <b>Alfa 33</b> 4 x 4 giardinetta"
PA327900000BRK	"Workshop Manual <b>Alfa 33</b> giardinetta"
PA3279000000AC	"*installation Instructions <b>Alfa 33</b> r conditioner"
PA32790000TD00	"Workshop Manual <b>33</b> 1.8 TD"
PA327900003300	"Workshop Manual- models <b>33</b> "
PA327900000SW00	"Workshop Manual models <b>Sport Wagon</b> "
PA327900883300	"Workshop Manual models <b>33</b> "

NOTE: For correct interpretation of the issue number, refer to the following code figures:



Sample of manual. Download All 210 pages at:

<https://www.arepairmanual.com/downloads/1983-1988-alfa-romeo-33-models-car-service-repair-workshop-manual/>

## FOREWORD

This manual is intended for models **33 1.3** **33 1.3 s** **33 1.5 TI** **33 1.7 IE** **33 1.7 \***  
**33 1.8 TD** **33 1.5 4x4** It complements the manuals referring to the corresponding (Alfa) models indicated here below:

PA32 7900000000	"WORKSHOP MANUAL	<b>Alfa 33</b>	"
PA3279000004x4	"WORKSHOP MANUAL	<b>Alfa 33</b> <b>4x4</b>	"
PA3279000B R4x4	"WORKSHOP MANUAL	<b>Alfa 33</b> <b>4x4</b>	"giardinetta"
PA327900000B RK	"WORKSHOP MANUAL	<b>Alfa 33</b>	"giardinetta"
PA327900000TD00	"WORKSHOP MANUAL	<b>33 1.8 TD</b>	
PA32 7900003300	"WORKSHOP MANUAL - models	<b>33</b>	

Key to symbols:

**Alfa 33** ← means that the corresponding Group in the basic manual **Alfa 33** should be referred to, for all details not dealt with specifically in this manual.

## QUICK REFERENCE INDEX

	COMPLETE CAR	GR. 00
	ENGINE MAIN MECHANICAL UNIT	GR. 01
	FUEL SYSTEM	GR. 04
	IGNITION, STARTING, CHARGING SYSTEM	GR. 05
	ENGINE COOLING SYSTEM	GR. 07
← Alfa 33	CLUTCH	GR. 12
	GEARBOX	GR. 13
← Alfa 33	MOTION TRANSMISSION	GR. 15
	DIFFERENTIAL AND DRIVE SHAFT ASSEMBLY	GR. 17
	FRONT SUSPENSION	GR. 21
	FRONT AND REAR BRAKES	GR. 22
Alfa 33 ←	STEERING SYSTEM	GR. 23
	REAR SUSPENSION	GR. 25
	WHEELS AND TIRES	GR. 28
	ELECTRICAL SYSTEM	GR. 40
	BODY-SHEET METAL PANELS	GR. 49
	DOORS	GR. 55
	HOODS	GR. 56
Alfa 33 ←	INTERNAL TRIMMING	GR. 66
	EXTERNAL TRIMMING	GR. 75
	AIR VENTILATION	GR. 80

# GROUP 00

## CONTENTS

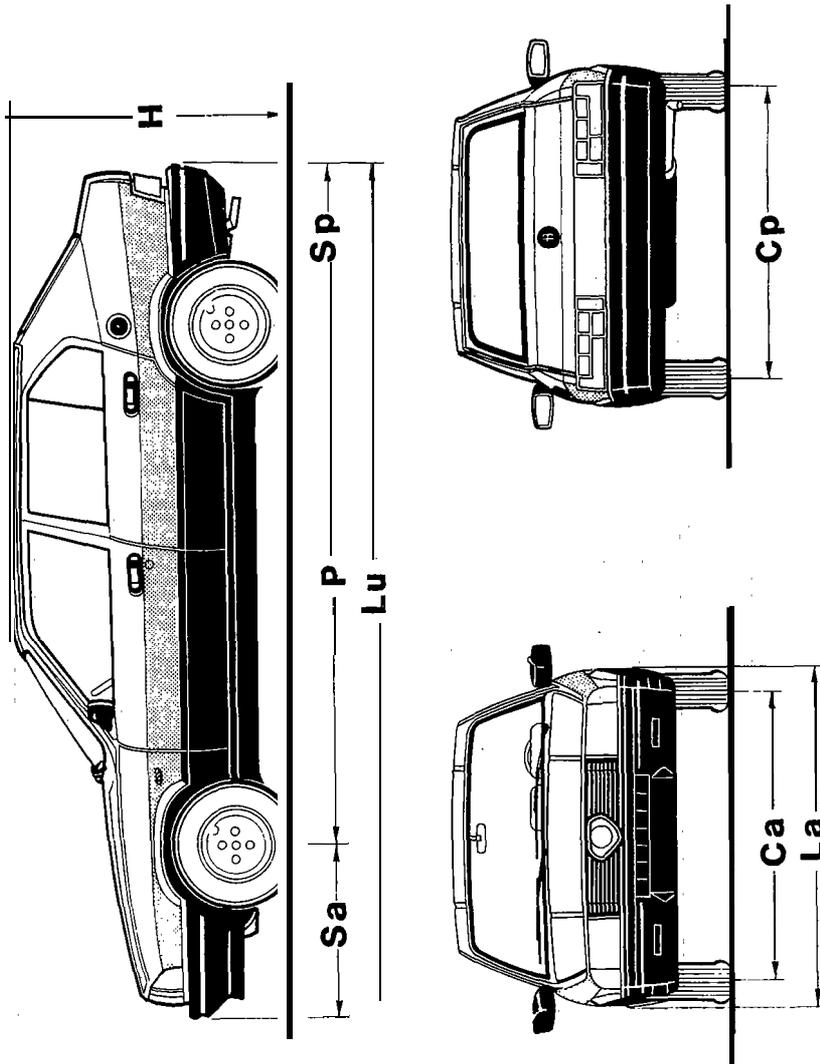
GENERAL VIEWS .....	00-2	TRUBLE DIAGNOSIS AND CORRECTION	
Dimensions and weights .....	00-3	ON IGNITION SYSTEM LE3.2 JETRONIC	
MODEL VARIATIONS .....	00-4	(1.7 IE with catalytic converter) .....	00-21
IDENTIFICATION DATA .....	(*)	ELECTRIC TROUBLESHOOTING	
Identification label .....	(*)	PROCEDURE	
Car identification codes .....	(*)	(1.7 IE with catalytic converter) .....	00-27
LIFTING AND TOWING POINT .....	(*)	INJECTION-IGNITION WIRING DIAGRAM	
SPECIAL SERVICE TOOLS .....	(*)	(1.7 IE with catalytic converter) .....	00-35
INSTRUCTIONS FOR PRE-DELIVERY		TRUBLE DIAGNOSIS AND CORRECTION	
EXECUTION AND PERIODICAL		ON INJECTION-IGNITION SYSTEM	
MAINTENANCE COUPONS.. .....	(*)	(1.7 IE without catalytic converter) . . . . .	00-35/1
MAINTENANCE SCHEDULE .....	00-6	TRUBLESHOOTING PROCEDURE	
NEW IDENTIFICATION LABEL.. .....	00-10/3	ON INJECTION SYSTEM	
MODEL VARIATION		(1.7 IE without catalytic converter) . . . . .	00-35/6
(according to new identification label)	00-10/4	TRUBLESHOOTING PROCEDURE	
FLUIDS AND LUBRICANTS CHARTS .....	(*)	ON IGNITION SYSTEM	
RECOMMENDED FUEL AND LUBRICANT .	00-11	(1.7 IE without catalytic converter) . . . . .	00-35/13
Fuel .....	00-11	INJECTION-IGNITION WIRING DIAGRAM	
Fluids and lubricants .....	00-11	(1.7 IE with catalytic converter) .....	00-35/18
APPROXIMATE REFILL CAPACITIES . . . . .	00-12	COMPONENTS AND BODY MAINTENANCE (*)	
ENGINE MAINTENANCE .....	00-13	SERVICES DATA AND SPECIFICATIONS . .	00-36
Basic mechanical system.. .....	00-13	Engine maintenance .....	(*)
Fuel system .....	00-13	Components and body maintenance . .	00-36
Exhaust checking .....	00-15	SPECIAL SERVICE TOOLS .....	00-37

00

(\*) See: "REPAIR MANUAL **Alfa 33**" VOLUMES I and II - Group 00

**Alfa 33**

# GENERAL VIEW



## DIMENSIONS AND WEIGHTS

Model	ENGINES WITH ONE CARBURETOR		ENGINES WITH TWO CARBURETORS				ENGINES WITH ELECTRONIC FUEL INJECTION		ENGINES WITH TURBO COMPRESSOR
	33 *	33 1.3	33 1.3 s	33 1.5 TI	33 1.5 a x a	33 1.7 *	33 1.7 IE	33 1.7 *	33 1.5 TO
Identification number	908.260	908.060 908.061 A	908.080	908.100 908.110 908.101▲	908.220	908.160 908.170 908.161▲	908.140 908.200△ 908.150△	908.180△	908.120
Wheelbase	P (mm)	2470	2465						2455
Track	Front Ca (mm)	1366	1367		1362	1367		1397	
	Rear cp (mm)	1362	1364		1375	1364		1364	
Overall length	Lu (mm)	4015						4040	
Overhang	Front Sa (mm)	800	790				825		
	Rear SP (mm)	760	760				760		
Overall width	La (mm)	1612							
Height (unladen)	H (mm)	1340		1345	1370	1345			
Min. steering radius	(mm)	5500						5350	
Kerb weight	(kg)	910			970	930		1010	
Max. allowed gross weight	(kg)	1335			1395	1355		1435	
Payload	(kg)	3 5 5							
Max. allowed axle gross weight	Front (kg)	800			800				
	Rear (kg)	800			900				
Max. towing gross weight	(kg)	1000			1100	1000		1100	
Seating capacity	Front	2							
	Rear	3							

(A) With ecological materials for countries where antipollution regulations are in force

(\*) With 1.2 engine not marketed in all countries

[A] With ecological materials.

# MODEL VARIATION

		ENGINES WITH ONE CARBURETOR				ENGINES WITH TWO CARBURETORS						
Modal		33 *		33 1.3		33 1.3 S		33 1.5 TI		33 1.5 axa		
Body		5 door saloon										
Drive		L	R	L	R	L	R	L	R	L	R	
Identification NO.	Label type and location	- on certification label and - on identification label	908.260	-	908.060 908.061▲	-	908.080	-	908.100 908.101▲	908.110	908.220	-
		on identification label	905AB		905A1G		905A1H		905A2V		905A2T	
Chassis No.	Label type and location	- on intermediate bulkhead label	905A00		905A10				905A20			
		- on intermediate bulkhead label	-	-	▲	-	05410589	-	▲	05414309	05411133	05414275
Engine No.	Type and serial NO.	- on cylinder block label	30585 from 0000001		30586 from 0000001		30587 from 0000001		30588 from 0000001			
Tire dimensions		165/70 SR 13						175/70 RI 3 82T				
Rim dimensions		5½ J x 13"										

(A) With ecological materials  
 (\*) With 1.2 engine not marked in all countries

# MODEL VARIATION

Model		Sport Wagon							
Versions		33 1.3 S				33 1.5 4x4			
Body		5 DOOR STATION WAGON							
Drive		L	R	L	R	L	R	L	R
Identification No.	- on certification label - on identification label	906.600	-	908.600	-	908.800	-	908.800	-
						908.801 ▲		908.801 ▲	
Chassis No.	- on identification label	905A1D		905A1F		905A2S		905A2U	
	- on intermediate bulkhead label	905A10		905A10		905A20		905A20	
	- on intermediate bulkhead label	05379411	-	-	-	05407366	-	-	-
Engine No.	- on cylinder block label	30168 from 0000001		30587 from 0000001		30508 from 0000001		30588 da 0000001	
Tyres dimensions		165/70XR13				175/70R1382T			
Rim dimensions		5½Jx13				5½Jx13			

(A) with ecological material

PA33350000SW01

00-3

MAY 1988

# MODEL VARIATION

Model		Sport Wagon								
Versions		33 1.3 S		33 1.7 B Δ		33 1.7 4x4 Δ		33 1.8 TD		
Body		5 DOOR STATION WAGON								
Drive		L	R	L	R	L	R	L	R	
Identification No.	Label type and location	- on certification label	908.640	908.650	908.660	-	908.820	-	908.620	-
		- on identification label	908.641▲							
Chassis No.	Label type and location	- on identification label	905A30		905A3F		905A3G		905A4A	
		- on intermediate bulkhead label	905A30		905A30		905A30		905A40	
Serial No.	Label type and location	- on intermediate bulkhead label	05381288	-	65407756	-	05408476	-	05381261	-
			▲							
Engine No.	Type and'serial No.	- on cylinder block label	30550 from 0000001		30558 from 0000001		30558 from 0000001		VM82A from 0000001	
Tyre dimensions		185/60R1482H						175/70R1382T		
Rim dimensions		5½Jx14						5½Jx13		

(A) With ecological material and electronic injection engine for countries where antipollution regulations are in force

(A) With ecological material

# APPROXIMATE REFILL CAPACITIES

Model		Sport Wagon 33 1.3 S		Sport Wagon 33 1.7 B		Sport Wagon 33 1.6 4x4 33 1.7 4x4		Sport Wagon 33 1.8 TD		
		Measurement unit		Kg (lb)	l (imp. gal)	Kg (lb)	l (imp. gal)	Kg (lb)	l (imp. gal)	Kg (lb)
Component										
FUEL TANK		-	50 (11)	-	50 (11)	-	53 (11.66)	-	50 (11)	
FUEL RESERVE			6.5 (1.43)	-	6.5 (1.43)	-	6.5 (1.43)	-	6.5 (1.43)	
ENGINE OIL SUMP	With filter (*)	3.6 (7.94)	4 (0.88)	3.6 (7.94)	4 (0.88)	3.6 (7.94)	4 (0.88)	4.57 (10.07)	5.25 (1.15)	
	Without filter (*)	3.15 (6.94)	3.5 (0.77)	3.15 (6.94)	3.5 (0.77)	3.15 (6.94)	3.5 (0.77)	4.35 (9.59)	5 (1.10)	
GEARBOX - DIFFERENTIAL OIL		2.4 (5.29)	2.6 (0.57)	2.4 (5.29)	2.6 (0.57)	2.4 (5.29)	2.6 (0.57)	2.4 (5.29)	2.6 (0.57)	
REAR DIFFERENTIAL OIL			-	-	-	0.9 (1.98)	1 (0.22)	-		
ENGINE COOLING SYSTEM		-	7.3 (1.61)	-	7.3 (1.61)	-	7.3 (1.61)	-	8	
CONCENTRATE ANTIFREEZE →		-	2.2 (0.48)	-	2.2 (0.48)	-	2.2 (0.48)	-	2 (0.44)	
QUANTITY DEPENDING ON →		-	2,6 (0.57)	-	2,6 (0.57)	-	2,6 (0.57)	-	2,64 (0.58)	
TEMPERATURE 3 →		-	3.65 (0.80)	-	3.65 (0.80)	-	3.65 (0.80)	-	4 (0.88)	
ANTIFREEZE QUANTITY READY → FOR USE		-	7.3 (1.61)	-	7.3 (1.61)	-	7.3 (1.61)	-	8 (1.76)	

(\*) The indicated quantity refers to periodical changes.

# COMPLETE CAR

## CHASSIS AND BODY MAINTENANCE

### TECHNICAL DATA - INSPECTION AND ADJUSTMENT

Axles and suspensions

Model	Sport Wagon	Sport Wagon	Sport Wagon	Sport Wagon
33 1.3 S	33 1.7 S	33 1.5 4x4 33 1.7 4x4	33 1.8 TD	33 1.8 TD
Features				
Vehicle static loading arrangement (1)	$2 + 3 = 490 + 245 = 735 \text{ N}$ $(50 + 25 = 75 \text{ kg})$ $C = 490 (50); (110)$			
Front wheel alignment	$A = -12_{-5}^{+10} (-0.47_{-0.20}^{+0.39})$ $B = 27_{-5}^{+10} (1.06_{-0.20}^{+0.39})$	$A = 3_{-5}^{+10} (-0.12_{-0.20}^{+0.39})$ $B = 53_{-5}^{+10} (2.09_{-0.20}^{+0.39})$	$A = -2_{-5}^{+10} (-0.47_{-0.20}^{+0.39})$ $B = 33_{-5}^{+10} (0.91_{-0.20}^{+0.39})$	$M - H = 2 \pm 2 (0.157 \pm 0.157)$
Rear wheel alignment				
Front wheel toe-out (2) (3)	$M - H = 4 \pm 5 (0.57 \pm 0.079)$			
Front toe-out angle	$\alpha = 0'$			
Wheel rim diameter	340 (13.38)   365 (14.37) (4)   340 (13.38) 365 (14.37) (4)			
Rear wheel toe-in	$\alpha = 0 \pm 10'$			
Front wheel camber (3)	$\beta = -1' \pm 30'$			
Rear wheel camber (3)	$\beta = 0' \pm 25'$			
Front wheel caster (3)	$\gamma = 2' \pm 30'$			
Steering lock (3)	$\delta_1 = 27^\circ 50'$			
	$\delta_2 = 33^\circ 45'$			
	$\delta_3 = 35^\circ 10'$			

(1) Load vehicle, move it up and down on suspensions a few times. Checking operations must be performed with vehicle fully set up for driving

(2) When turning a steering side rod joint 360°, M - H dimension changes by 2 mm (0.079 in).

(3) These values are referred to a vehicle in nominal driving condition, i.e. with static load.

(4) With rim 5½ Jx14".

# MODEL VARIATION

		ENGINES WITH TWO CARBURETORS		ENGINES WITH ELECTRONIC FUEL INJECTION				ENGINE WITH TURBO COMPRESSOR	
<b>Model</b>		<b>33 1.7 *</b>		<b>33 1.7 IE</b>		<b>33 1.7 *</b>		<b>33 1.8 T0</b>	
<b>Body</b>		5 door saloon							
<b>Drive</b>		L	R	L	R	L	R	L	R
<b>Identification NO.</b>	- on certification label and - on identification label	908.160	908.170	908.140	908.150.	905.180.		908.120	-
		908.161▲		908.200▲					
<b>Chassis No.</b>	- on identification label	905A3		905A3D				905A4	
	- on intermediate bulkhead label	905A30						905A40	
	- on intermediate bulkhead label	05411704 A	-	05410692 A	-	-	-	05411250	-
<b>Engine No.</b>	<b>Type and serial NO.</b>	30550 from 0000001		305.58 from 0000001*		305.58 from A000001		VM82A from 00001	
<b>Tire dimensions</b>		185/60 R1482H		185/60 R1482H				175/70 RI 382T	
<b>Ftirn dimensions</b>		5½ J x 14"						5½ J x 13"	

(A) With ecological materials

(\*) Not including numbers 908.200  
908.150 that take the serial number A000001, as with number 908.180



N.	OPERATION	A (1)	Km/1000																		Notes	
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180		190
19	Check tension of and if necessary replace drive belts of: alternator, coolant pump and air conditioner compressor (if fitted)	X		X					X				X			X				X		
20	Replace drive belt of alternator and air conditioner compressor (if fitted)					X				X			X					X			X	
21	Replace camshaft drive belts							X					X							X		
22	Check fuel system for leaks	X		X		X			X		X		X		X		X			X		X
23	Clean and check air filter element		X		X		X		X		X		X		X		X		X		X	(3)
24	Check tightness of air intake system downstream from the air flow gauge (petrol Injection only)			X		X			X		X		X		X		X			X		X
25	Replace fuel filter (where necessary)					X				X			X				X				X	
26	Replace air filter cartridge			X		X			X		X		X		X		X			X		X
27	Clean carburetor jets and crankcase ventilation system backfire shield			X		X			X		X		X		X		X			X		X
28	Check exhaust emissions	X		X		X			X		X		X		X		X			X		X
29	Check and if necessary adjust ignition timing			X		X			X		X		X		X		X			X		X
30	Inspect and clean spark plugs		X		X		X			X		X		X		X			X		X	
31	Replace spark plugs			X		X			X		X		X		X		X			X		X
32	Check battery electrolyte level, top up, tighten and grease terminals			X		X			X		X		X		X		X			X		X (4)
33	Lubricate door and hood/backdoor hinges. Adjust strikers, as necessary. Greasing of hood and backdoor catches			X		X			X		X		X		X		X			X		X
34	Check underbody and body work			X		X			X		X		X		X		X			X		X
35	Test vehicle	X		X		X			X		X		X		X		X			X		X

(1) A = 1500 ÷ 2500 Km (621 ÷ 932 mi)

(2) To be performed in any case every 6 months. Check oil level frequently when refuelling

(3) Check more frequently if driving in very dusty areas

(4) Check frequently when refuelling

(5) To be performed more frequently when driving under particular stress conditions (sport driving) or on hilly roads

(6) To be performed in any case every 12 months

# MAINTENANCE SCHEDULE

The following schedule is not valid for the Italian market and for countries where antipollution regulations are in force

N.	A	Km/1000																Notes					
		10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160		170	180	190	200	
1	1)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)
2	X				X			X															
3			X			X																	
4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(4)
5	X	X	X		X			X															
6				X								X											(6)
7	X	X	X		X			X															(4)
8				X																			
9	X																						
10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12	X																						
13					X			X															
14					X			X															(5)
15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(4)
17	X																						
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

N.	OPERATION	A (1)	Km/1000																		Notes		
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180		190	200
19	Check tension of and if necessary replace drive belts of; alternator. coolant pump and air conditioner compressor (if fitted)	X		X			X				X				X				X				
20	Replace drive belt of alternator and air conditioner compressor (if fitted)					X				X			X				X					X	
21	Replace camshaft drive belts						X						X							X			
22	Check fuel system for leaks	X		X		X		X		X		X		X		X		X		X		X	
23	Clean and check air filter element		X		X		X		X		X		X		X		X		X		X		(3)
24	Check tightness of air intake system downstream from the air flow gauge (petrol injection only)			X		X		X		X		X		X		X		X		X		X	
25	Replace fuel filter (where necessary)				X				X				X				X					X	
26	Replace air filter cartridge			X		X		X		X		X		X		X		X		X		X	
27	Clean carburetor jets and crankcase ventilation system backfire shield			X		X		X		X		X		X		X		X		X		X	
28	Check exhaust emissions	X		X		X		X		X		X		X		X		X		X		X	
29	Check and if necessary adjust ignition timing	X		X		X		X		X		X		X		X		X		X		X	
30	Inspect and clean spark plugs		X		X		X		X		X		X		X		X		X		X		
31	Replace spark plugs			X		X		X		X		X		X		X		X		X		X	
32	Check battery electrolyte level, top up, tighten and grease terminals	X		X		X		X		X		X		X		X		X		X		X	(4)
33	Lubricate door and hood/backdoor hinges. Adjust strikers, as necessary. Greasing of hood and backdoor catches	X		X		X		X		X		X		X		X		X		X		X	
34	Check underbody and body work			X		X		X		X		X		X		X		X		X		X	
35	Test vehicle	X		X		X		X		X		X		X		X		X		X		X	

(1) A = 1000 ÷ 1500 km (621 ÷ 932 mi)

(2) To be performed in any case every 6 months. Check oil level frequently when refuelling

(3) Check more frequently if driving in very dusty areas

(4) Check frequently when refuelling

(5) To be performed more frequently when driving under particular stress conditions (sport driving) or on hilly roads

(6) To be performed in any case every 12 months

# MAINTENANCE SCHEDULE

The following schedule is valid only for those countries where antipollution regulations are in force

N.	OPERATION	A (1)	Km/1000													Notes								
			10	20	30	40	50	60	70	80	90	100	110	120	130		140	150	160	170	180	190	200	
1	Replace engine oil and oil filter; check oil system for leaks	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2) (7) E
2	Replace gearbox and differential oil	X			X																			
3	Check gearbox and differential oil level		X																					
4	Check and top up the fluid level of windscreen, and rear window wash. Check correct operation of the system	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(4)
5	Check brake fluid and clutch fluid level	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	Replace brake and clutch fluid				X				X					X										(7)
7	Check and top up the cooling system and verify system tightness	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(4) E
8	Replace cooling fluid and check cooling circuit for leaks				X				X					X										(5) E
9	Check all bolts for tightness	X																						
10	Check front wheel toe-out and adjust, if necessary	X																						
11	Check condition of protective boots of constant velocity joints and steering box	X	X		X				X					X										
12	Inspect	X	X		X				X					X										
13	Check of pads wear degree and rear drums friction gaskets. Replace if necessary		X		X				X					X										(6)
14	Check and if necessary adjust handbrake travel	X	X		X				X					X										
15	Check tire pressure	X	X		X				X					X										(4)
16	Check accelerator cable adjust if necessary	X																						
17	Check integrity and if necessary adjust alternator control and conditioner compressor (if mounted belts).	X	X		X				X					X										E

COMPLETE CAR

N.	OPERATION	A (1)	Km/1000																Notes					
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160		170	180	190	200	
			18	Check valve timing and timing belt tensions	X	X		X												X				
19	Replace alternator control and conditioner compressor (if mounted) belts				X							X					X						X	E
20	Replace timing control belts						X																	
21	Check tightness of fuel supply system. Check evaporation system	X	X		X						X				X							X		E
22	Check and clean air filter element		X		X					X					X							X		(3) E
23	Replace air filter element		X			X					X					X						X		E
24	Check tightness of air supply system downstream from the air flow gauge	X	X		X					X					X							X		E
25	Replace fuel filter	X			X																	X		E
26	Check and, if necessary adjust, idle speed, ignition timing and exhaust emissions	X	X		X					X					X							X		E
27	Clean and check spark plugs		X		X					X					X							X		E
28	Replace spark plugs		X		X					X					X							X		E
29	Check and if necessary tap up battery electrolyte level, tighten and grease terminals	X	X		X					X					X							X		(8) E
30	Check head lamps beam aiming and adjust it, if necessary	X																						
31	Lubricate door and hood hinges. Adjust strikers, as necessary. Grease the hood locking catches.	X	X		X					X					X							X		
32	Check underbody and body work		X		X					X					X							X		
33	Tune vehicle	X	X		X					X					X							X		

No.	OPERATION	A (1)	Km11000																		Notes		
			10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180		190	200
34	Check sensor of oxygen contents in exhaust gas										X											X	E
35	Replace catalyst of exhaust gas										X											X	(B) E

(1) A= 1000÷1500 K m

(2) Check **oil level** every 500 km and when refuelling

(3) Check more frequently if driving in **very dusty areas**

(4) Check frequently **when** refuelling

(5) To be performed in **any** case every **two** years

(6) To be **performed** more frequently when driving **under particular** stress conditions (sport driving) or on **hilly** roads

(7) To be performed in **any** case every 12 months

(8) To be performed in **any** case every 5 years

E) Operation relevant to **emission** control

# COMPLETE CAR

## MAINTENANCE SCHEDULE

The present periodical maintenance schedule, for all markets, is applicable to vehicles equipped with SERVICE BOOKLET having the new programmed maintenance.

N.	OPERATION	A (1)	Km/1000										Note	
			20	40	60	80	100	120	140	160	180	200		
1	Replace engine oil and oil filter; check tightness of lubricating circuit (every 10.000 km for diesel versions)	X	X	X	X	X	X	X	X	X	X	X	X	(2)
2	Replace oil in gearbox - differential (and rear differential in 4wd versions)			X		X		X		X		X		
3	Check oil level in gearbox - differential (and rear differential in 4wd versions)		X		X		X		X		X		X	
4	Check fluid level of windscreen, headlights and rear window wipers. Check correct operation of system	X												(4)
5	Check brake and clutch fluid levels	X	X	X	X	X	X	X	X	X	X	X	X	(6)
6	Check antifreeze mixture level and cooling system tightness	X												(4)
7	Replace antifreeze mixture				X			X				X		(7)
8	Check toe-out for front wheels	X												
9	Grease propeller shaft sleeve (4wd versions)		X	X	X	X	X	X	X	X	X	X	X	
10	Check conditions of semi-axle's protective boots and steering joint hoods	X	X	X	X	X	X	X	X	X	X	X	X	
11	Check tightness of braking system pipes	X	X	X	X	X	X	X	X	X	X	X	X	
12	Check wear of front brake pads		X	X	X	X	X	X	X	X	X	X	X	(5)
13	Check wear of friction gaskets for rear brake drums			X		X		X		X		X		(5)
14	Check hand brake travel	X	X	X	X	X	X	X	X	X	X	X	X	
15	Check adjustment of accelerator cable	X												
16	Check valve clearance (if required)		X	X	X	X	X	X	X	X	X	X	X	
17	Clean injectors (only in diesel engine vehicles)			X		X		X		X		X		
18	Check glow plugs (only in diesel engine vehicles)			X		X		X		X		X		
19	Check axial and radial play of supercharger rotor shaft and by-pass valve (only in diesel engine vehicles)							X					X	
20	Check idle r.p.m. (petrol versions)	X	X	X	X	X	X	X	X	X	X	X	X	
21	Check idle r.p.m. (diesel engine versions)	X												
22	Replace exhaust gas oxygen sensor ( Lambda sensor) (only in vehicles with catalytic converters)							X					X	
23	Check integrity and tension of cooling liquid pump, alternator and conditioner compressor (if installed) drive belt	X	X	X	X	X	X	X		X		X	X	

**COMPLETE CAR**

N.	OPERATION	A (1)	Km/1000										Note	
			20	40	60	80	100	120	140	160	180	200		
24	Replace timing belts				X			X			X			
25	Check tightness of fuel supply circuit Check fuel vapour emission control circuit (if installed)	X												
26	Check air filter cartridge		X		X			X		X		X		(3)
27	Check tightness of air supply system downstream the air flow meter (only in fuel injection engines)	X												
26	Replace fuel filter (where foreseen)		X	X	X	X	X	X	X	X	X	X	X	
29	Replace air filter cartridge			X		X		X		X		X		
30	Clear flamedamper in exhaust gas recycling circuit (except in diesel or fuel injection cars)			X		X		X		X		X		
31	Check exhaust emission (only in vehicles with catalytic converter)	X	X	X	X	X	X	X	X	X	X	X	X	
32	Check spark advance (except diesel models)	X	X	X	X	X	X	X	X	X	X	X	X	
33	Replace spark plugs (except diesel engines)		X	X	X	X	X	X	X	X	X	X	X	
34	Check electric connections in engine compartment (condition and position of connectors and hoods)			X		X		X		X		X		
36	Grease door and hood hinges, grease hood locking catches.		X	X	X	X	X	X	X	X	X	X	X	
36	Test vehicle	X	X	X	X	X	X	X	X	X	X	X	X	

(1) A = 1500 - 2500 Km

(2) Check oil level every year and when refuelling

(3) Check more frequently if driving in very dusty areas

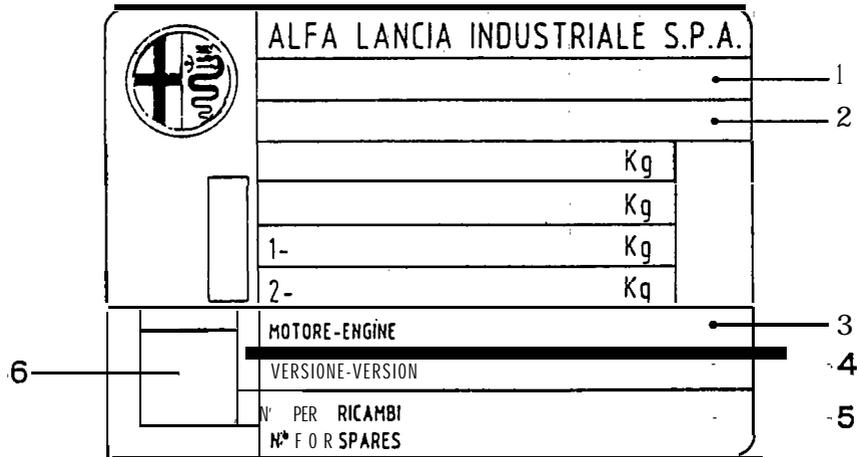
(4) Check frequently when refuelling

(5) To be performed more frequently when driving particular in stress conditions (sport driving) or on mountain roads

(6) To be replaced in any case every 12 months

(7) To be performed in any case every 2 years

# NEW IDENTIFICATION LABEL



1 - Homologation code

2 - Body marking

3 - Engine type number

4 - Base type and vehicle version

5 - Serial number with relation to finished units: necessary when ordering spare parts, for identification of production or assembly plant and as reference for introduction of modifications.

6 Marking of correct value of smoke absorption coefficient (for diesel engines'only).

## BODY MARKING

ZAR 905A00 + 05455.737  
 (1) (2) (3)

(1) - Constructor identification code

(2) - Vehicle model

(3) - Chassis serial number

# MODEL VARIATIONS

(According to E.E.C. markings adopted on new identification labels)

		ENGINES WITH ONE CARBURETOR		ENGINES WITH TWO CARBURETORS		
Model		33♦♦	3 3 1.3	3 3 1.3 s	3 3 1.9 TI	3 3 1.5 4x4
Body		5 DOOR SALOON				
Drive		LEFT	LEFT	LEFT	LEFT/RIGHT	LEFT
vehicle type No.	— on identification label	905AP	905A1G	905A1H	905A2V	905A2T
		905A00	905A10		905A20	
		05.455.737				
		905A00	905A10	905A1H	905A2V	905A2T
Chassis serial No:	— on service compartment front cross member, right side, horizontal plane	05.455.737				
Engine type and serial No.	— on special risid block on engine block, upper right part flywheel side	30565 0000001	30566 0000001	30567 0000001	30588 0000001	
Tyre dimensions		165/70 SR 13			175/70 R13 82T	
Rim dimensions		5½ J x 13"				

(\*) With 1.2 engine *commercialised* only in certain countries.

# MODEL VARIATIONS

(According to E.E.C. marking adopted on new identification labels)

		ENGINES WITH TWO CARBURETORS	ENGINES WITH ELECTRONIC FUEL INJECTION		ENGINES WITH TURBO COMPRESSOR
Model		33 9.7 ♣	33 1.7 IE	33 1.7 ♣	<b>331.8TD</b>
Body		5 DOOR SALOON			
Drive		left/right	leftright	leftright	left
vehicle type No.	— on identification label	905A3	905A3D		905A4
		— on service compartment front cross member, right side, horizontal plane.			905A40
	— on service compartment front cross member, right side, horizontal plane			05.455.737	
Chassis serial No.					
Engine type and serial No.	— on special raised block on engine block, upper right part flywheel side	30550 from 0000001	305.58 from 0000001*	305.58 from A000001	VM82A from 00001
Tyre dimensions		185/60 R1482H	185/60 R1482H		175/70 R1382T
Rim dimensions		5½ J x 14"			5½ J x 13"

(\*) Excluding Nos. 908.2201908.150 which take serial No. A000001 as with No. 908.180.

PA327900883301

00-1015

October 1988

COMPLETE CAR

# RECOMMENDED FUEL AND LUBRICANTS

00-I 1

## FUEL

For correct engine functioning the specification is for premium grade or unleaded petrol: RON  $\geq$  95.

For models **33 1.7** and **33 1.7 IE** with electronic injection and catalytic convertor only unleaded petrol to the following specifications must be used:

- Octane Number (Research method) R.O.N.  $\geq$  95 (for Switzerland, Sweden versions)
- Octane Number (Research method) R.O.N.  $\geq$  91 (for Australia version)

## WARNING:

Never neither in an emergency nor in small quantities use conventional lead petrol. To do so will result in permanent damage to the exhaust gas catalyzer.

To prevent the tank from being accidentally filled with lead petrol, the inlet filler has been designed in such a way as to permit, the entry of only special filler spouts fitted exclusively on unleaded petrol pumps. Should the tank be filled with even a small quantity of lead petrol, do not start the engine, but proceed to the complete emptying of the tank and the fuel delivery system.

## FLUIDS AND LUBRICANTS

As per **Alfa 33** except:

Type	Application	Classification	Name			Notes
			AGIP	IP	SHELL	
Oil	Engine - 01	API SF/CC MIL L46152B CCMC G2D1	Sint 2000 SAE 10W/40	Sintiax SAE 10W/40	Super Plus- Motor Oil SAE 15W/50	Environmental temperature — 18 ÷ + 40°C
	Gearbox - 13 Differential	SAE J 306a API GL-5	Rotra MP SAE 80W/90	Pontiax HD SAE 80W/90	Spirax HD SAE 80W/90	Environmental temperature — 30 ÷ + 40°C

# APPROXIMATE REFILL CAPACITIES

Models		33♦* 3 3 1.3 3 3 1.3 S 33 1.5 TI 33 1.5 a x a 3 3 1.7♦ 3 3 1.7 IE	33 1.8 TD		
Measurement unit		Kg	Liters	Kg	Liters
FUEL TANK		—	50	—	50
FUEL RESERVE		—	6,5	—	6,5
ENGINE OIL SUMP	With filter (●)	3,6	4	4,57	5,25
	Without filter (●)	3,15	3,5	4,35	5
GEARBOX - DIFFERENTIAL OIL		2,4	2,6	2,4	2,6
REAR DIFFERENTIAL OIL (4x4 models)		0,9	1,0	—	—
ENGINE COOLING SYSTEM		—	7,3	—	7,5
CONCENTRATE ANTIFREEZE		—	2,2	—	2
QUANTITY DEPENDING ON		—	2,6	—	2,64
TEMPERATURE		—	3,65	—	4
ANTIFREEZE QUANTITY READY FOR USE		—	7,3	—	7,5

(●) The indicated quantity refers to periodical changes

(\*) Not marketed in all countries with 1.2 engine.

# ENGINE MAINTENANCE

## BASIC MECHANICAL SYSTEM

### CHECK AND POSSIBLE ADJUSTMENT OF VALVE CLEARANCE

As for **Alfa 33** except for the 1.7 engine with hydraulic tappets which does not require any check or adjustment of valve clearance

### CHECKING, REPLACING AND ADJUSTING DRIVE BELTS

#### Alternator and water pump control belt.

As for **Alfa 33** except for 1.3 - 1.5 - 1.7 engines with one carburetor where the tension value to be measured with the appropriate tool is:  
 $78 \div 88$  N (8 ÷ 9 kg)

#### Replacing timing belts with engine on car

As for **Alfa 33**, only for 1.7 engines the procedure for the,  model is to be applied

### CHANGING ENGINE OIL AND REPLACING OIL FILTER

As per **Alfa 33** except for the table referring to the refill capacities which has to be modified as follows:  
 for 1.7 engines

#### ENGINE OIL QUANTITY

Capacity	l (Imp. Gal.)
Engine oil sump at max level	3.5 (0.77)
Oil filter and inner ducts	0.6 (0.13)
Periodical change (engine oil for sump and filter)	4.0 (0.88)

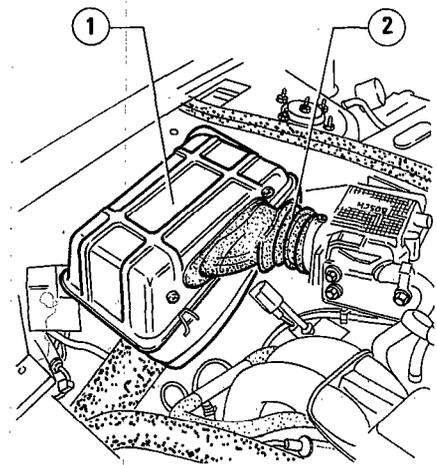
Before extracting the dipstick, disconnect the minimum oil level sensor wiring from the stick.

### COOLING SYSTEM

Proceed as per **Alfa 33** except for the table referring to antifreeze fluid composition provided in "System Refill", which has to be changed as follows. for 1.7 engines

Minimum out-°C side temperature (°F)	-15 (+5)	-20 (-4)	-35 (-31)
Concentrated anti-freeze Std. No. 3681-69956	2.2 (0.48)	2.6 (0.57)	3.65 (0.80)
Diluting drinkable water	5.1 (1.12)	4.7 (1.03)	3.65 (0.80)
Ready-to-use anti-freeze Std. No. 3681-69956	—	7.3 (1.61)	—

1. Release clips which secure cover ① to container.
2. Lift cover enough to remove cartridge without damaging sleeve ②.
3. Clean the cartridge thoroughly, by blowing low pressure compressed air in the opposite direction with respect to the normal air flow.



1 Air filter cover  
2 Corrugated sleeve

### CYLINDER COMPRESSION TEST

As per **Alfa 33**.

4. Clean the cartridge container.
5. Insert the cartridge into container positioning the protruding part downwards and hook the cover clips again.

Replace the element at the recommended intervals (see: Vehicle Maintenance Schedule).

### FUEL SYSTEM

#### CHECK, CLEANING AND REPLACEMENT OF AIR FILTER CARTRIDGE

As per **Alfa 33** except for 1.7 electronic injection engines which require the following procedure.

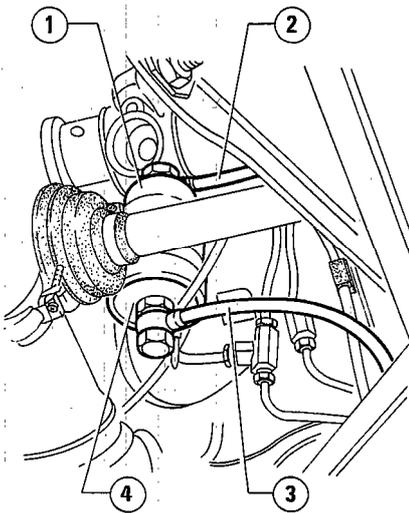
#### FUEL FILTER REPLACEMENT

As per **Alfa 33** except for 1.7 electronic injection engines which require the following procedure.

1. Unscrew tubes ② and ③ fittings and recover the gaskets.

**Properly plug fittings to prevent fuel outlet.**

2. Loosen clamp ① and remove filter ④.
3. Remount the new filter in order that the arrow printed on filter body be positioned towards fuel delivery direction.
4. Complete the filter assembly operating in opposite order in respect to removal.



1 Filter support clamp  
2 Fuel outlet tube  
3 Fuel inlet tube  
4 Fuel filter

**CHECKING FUEL SUPPLY PRESSURE AND CIRCUIT TIGHTNESS**

As for **Alfa 33** except for 1.7 electronic injection engines which require the following procedure

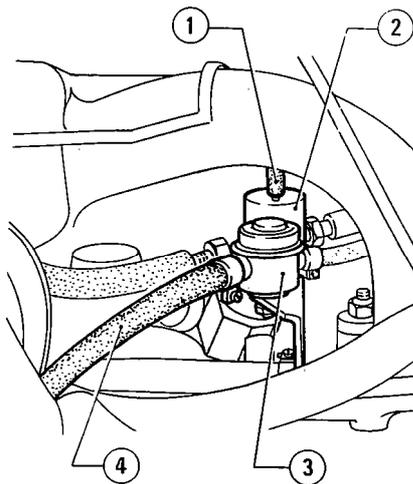
Effect checking as follows:

**1. Circuit pressure checking**

- a. Disconnect fuel delivery tube ④ downstream from the damper ③
- b. Connect a gauge by means of a T adaptor between damper ③ and tube ④ previously disconnected.
- c. Detach tube ① from pressure gauge ②.  
This is in order to avoid that any possible anomalies on idle rotation speed could cause unusual readings.
- d. Start the engine; at idle speed check that fuel pressure value is:

**280 ÷ 320 KPa**  
**(2.8 ÷ 3.2 bars; 2.9 ÷ 3.3 Kg/cm<sup>2</sup>)**

- e. Reconnect tube ① to pressure gauge; at idle, fuel pressure should drop of 0.5 bars approximatively and then rise again when throttle valve will open. Should this occur, please check any possible tube ① depression leaks.



1 Depression tube  
2 Fuel pressure gauge  
3 Throb damper  
4 Tube delivery to fuel distribution manifold

2. Checking on circuit tightness

- a. With pressure gauge plugged, and with engine on idle, throttle the delivery tube immediately downstream from pressure gauge, detecting a pressure increase up to

**400 KPa**  
**(4 bars; 4.1 Kg/cm<sup>2</sup>)**

(do not let the pressure exceed this value)

- b. With pressure on 2.5 bars check that fuel delivery tubes and fittings do not show leaks.
- c. If fuel pressure does not reach this value and if no leaks are detected check the filter and/or the pump operation.

**CHECKING AND POSSIBLE ACCELERATOR CONTROL ADJUSTMENT**

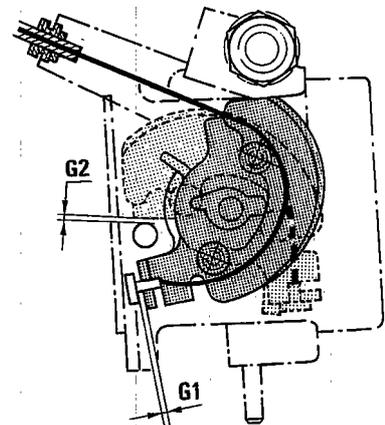
As for **Alfa 33** except for 1.7 electronic injection engines which require the following procedure

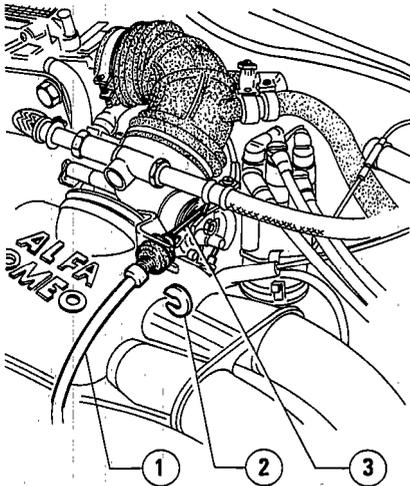
1. Check cable sliding  
Check that the accelerator control cable slides freely in its sheath

2. Check cable clearance

- a. With the accelerator pedal released, check that the accelerator pedal on control lever has an axial clearance of  $G_1 = 1 \div 2 \text{ mm}$ .

- b. If necessary, proceed to adjust the cable clearance extracting the adjustment clip ② in order to give the prescribed clearance to the cable, and reinsert the clip in the new position.





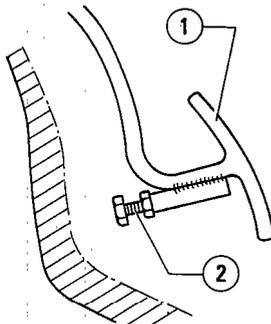
- 1 Accelerator cable
- 2 Adjustment clip
- 3 Accelerator cable sheath

### 3. Checking on maximum throttle valve opening

a. With accelerator pedal pressed as far as it will go, check that the accelerator control cam can still rotate by

$$. G_2 = 1 \div 2 \text{ mm}$$

If necessary, proceed to adjustment by acting on stop screw (2) below the accelerator pedal.



- 1 Accelerator pedal
- 2 Stop screw

## CHECKING OF EMISSIONS

### CHECK AND ADJUSTMENT OF IDLE R.P.M. AND EXHAUST EMISSIONS

Effect the following preliminary checks:

- a. Cleaning and replacement of air filter cartridge.
- b. Ignition system efficiency: spark plugs, cables, cap, rotary rotor (see Group 05 - transistorised ignition without contacts).
- c. Ignition timing.
- d. Checking of accelerator control adjustment (see Group 04 - Checking and accelerator control adjustment).

#### CAUTION

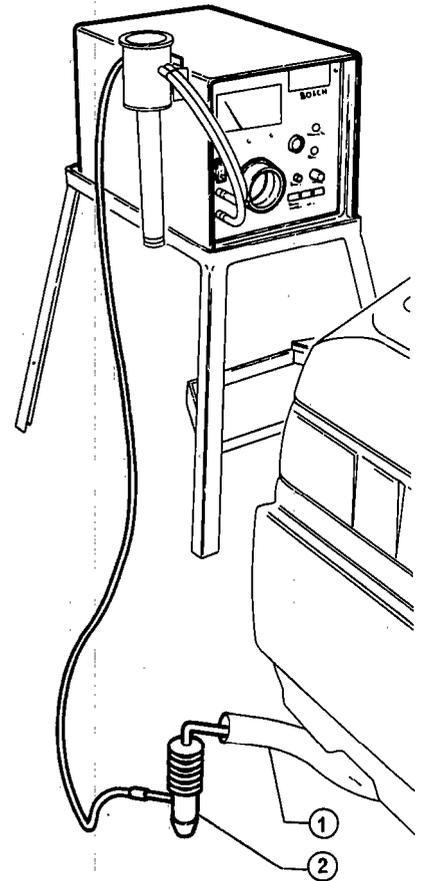
If during engine tuneup there is no extra cooling fan available, keep checking the thermometer and the water temperature warning light on dashboard and immediately suspend testing if temperature goes up, meaning that engine is overheating.

#### Single carburetor models

Check idle-rpm and overall CO% as follows:

1. Insert CO-tester probe (2) into the tail pipe (1).
2. Connect an electronic tachometer to the engine.
3. Start the workshop gas exhauster.
4. Start the engine and warm it up to normal running temperature.
5. Now check that engine rpm is within specified value.

**Idle-rpm**  
 900 ÷ 1000 r.p.m.



- 1 Tail pipe
- 2 CO-tester probe

6. If not within specified value, adjust idle-rpm just by turning relevant idle-adjusting screw (2) which makes it possible to change rpm without changing CO percentage (Carbon monoxide).

7. Verify that CO percentage picked up by tester corresponds to specified value and that engine runs smoothly.

**Allowed CO%**  
 1.5 ÷ 1.8