

ALFA ROMEO 155

VOLUME 2 (ENGINES)

[SMS PART No Z6017]

THIS MANUAL CONTAINS THE FOLLOWING
UPDATES

155

REPAIR MANUAL

● ENGINES



DESCRIPTION	PRINT No
MAIN MANUAL	4655***00000
SUPPLEMENT	4655***00001
SUPPLEMENT	4655***00002
SUPPLEMENT	4655***00003
SUPPLEMENT	4655***00004
SUPPLEMENT	4655***00005
SUPPLEMENT	4655***00006

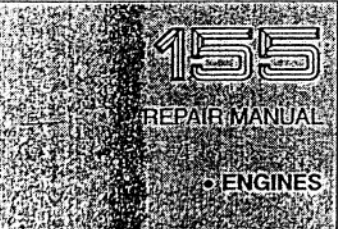
Alfa Romeo 


DIVISION OF
"REPAIR MANUAL"


Models **155**


The documentation published by the Alfa Romeo Assistance Service for the "155" vehicle is composed of the following publications:


 <p>REPAIR MANUAL</p> <p>• VEHICLE CHARACTERISTICS AND MAINTENANCE</p>	155 T.SPARK V6 - PA4655A1000000: GROUP 00
	155  - PA4655A24x4000: GROUP 00
	155 TD - PA4655A3TD0000: GROUP 00
	155 TD 2.5 - PA4655A4TD2500: GROUP 00
	155 T. SPARK 16V - PA4655A516V000: GROUP 00


 <p>REPAIR MANUAL</p> <p>• ENGINES</p>	- PA4655B1000000: GROUPS 01, 04, 05, 07 Engine 1995 cm ³ (code AR 67202) Engine 1773 cm ³ (code AR 67102) Engine 1749 cm ³ (code AR 67103)
	- PA4655B2000000: GROUPS 01, 04, 05, 07 Engine 2492 cm ³ (code AR 67301)


 <p>REPAIR MANUAL</p> <p>• MECHANICAL UNITS • BODY</p>	- PA4655C1000000: MECHANICAL UNITS
	- PA4655D1000000: Electrical components, Bodywork, Trim, Heating and Ventilation

 <p>REPAIR MANUAL</p> <p>• ELECTRICAL & ELECTRONIC DIAGNOSIS</p>	- PA4655E1000000: Wiring diagrams and Troubleshooting
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 <p>REPAIR MANUAL</p> <p>SUPPLEMENT FOR 155 Q</p> <p>• ENGINES • MECHANICAL UNITS • BODY • ELECTRICAL & ELECTRONIC DIAGNOSIS</p>	- PA4736B14x4000: GROUPS 01, 04, 05, 07 Engine 1995 cm ³ TURBO (code AR 67203)
	- PA4736C14x4000: MECHANICAL UNITS - PA4736D14x4000: Electrical components, Bodywork, Trim, Heating and Ventilation - PA4736E14x4000: Wiring diagrams and Troubleshooting

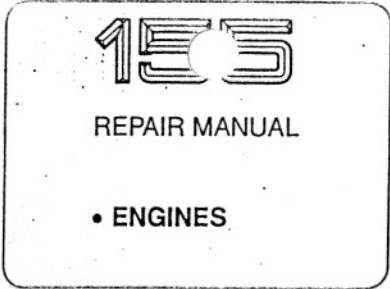
 <p>REPAIR MANUAL</p> <p>SUPPLEMENT FOR 155 TD</p> <p>• ENGINES • MECHANICAL UNITS • BODY • ELECTRICAL & ELECTRONIC DIAGNOSIS</p>	- PA4805B1TD0000: GROUPS 01, 04, 05, 07 Engine 1929 cm ³ TURBO DIESEL (code AR 67502)
	- PA4805C1TD0000: MECHANICAL UNITS - PA4805D1TD0000: Electrical components, Bodywork, Trim, Heating and Ventilation - PA4805E1TD0000: Wiring diagrams and Troubleshooting

 <p>REPAIR MANUAL</p> <p>SUPPLEMENT FOR 155 TD 2.5</p> <p>• ENGINES • MECHANICAL UNITS • BODY • ELECTRICAL & ELECTRONIC DIAGNOSIS</p>	- PA4830B1TD2500: GROUPS 01, 04, 05, 07 Engine 2.498 cm ³ TURBO DIESEL (code VM07B)
	- PA4830C1TD2500: MECHANICAL UNITS - PA4830D1TD2500: Electrical components, Bodywork, Trim, Heating and Ventilation - PA4830E1TD2500: Wiring diagrams and Troubleshooting

 <p>REPAIR MANUAL</p> <p>SUPPLEMENT FOR 155 T.SPARK 16V</p> <p>• ENGINES • MECHANICAL UNITS • BODY • ELECTRICAL & ELECTRONIC DIAGNOSIS</p>	- PA4978B116V000: GROUPS 01, 04, 05, 07 Engine T.SPARK 16V (code A11 6/204)
	- PA4978C116V000: MECHANICAL UNITS - PA4978D116V000: Electrical components, Bodywork, Trim, Heating and Ventilation - PA4978E116V000: Wiring diagrams and Troubleshooting

continues →

UPDATE CARD



UPDATE CARD			
UPDATE (DATE)	SECTION	PAGE	
		SUBSTITUTED	ADDED
1 (12/1994)	Introduction Engines (pages with PA4655B1000001)	Division of manual	VI
1 (12/1994)			
1 (12/1994)		04-4	
1 (12/1994)		04-6	
1 (12/1994)		04-7	
1 (12/1994)		04-8	
	Engines (pages with PA4655B2000001)		
1 (12/1994)		04-4	
1 (12/1994)		04-6	
1 (12/1994)		04-7	
1 (12/1994)		04-8	

INTRODUCTION

This publication provides the information necessary for the maintenance and repair operations regarding the 155 for the models listed in the "vehicle identification" table. The aim of this publication is to provide the Alfa Romeo Service staff with a tool which can be used to rapidly identify any faults and help to render the intervention precise and efficient.

The manual shows the procedures relative to the removal and refitting operations, disassembly and checks regarding the various groups which form the vehicle. The procedures are illustrated in detail as is the use of any necessary tools. A system of symbols combined with the basic technical data given to one side of each drawing facilitate a rapid and complete consultation of the manual.

Particular attention has been given to the fault diagnosis procedures which can be found at the end of each group. These combine with the irreplaceable experience of the operator and help to correctly identify and rectify the fault starting from the malfunction which the operator himself has detected and carrying out a series of tests on the system affected by the fault.

For the information relative to the vehicle's electrical system the "155 - Repair Manual - Electrical-Electronics Diagnosis" manual should be consulted.

All the information contained in this manual is accurate to the date of publication.

Alfa Romeo reserves the right to carry out any modifications to its products considered necessary without warning, though the technical information and up-dates regarding this manual will be promptly published.

How to use this manual

This manual is divided into chapters (GROUPS) relative to each of the assemblies which make up the vehicle.

To rapidly identify the group required, refer to the initial index.

Each group is accompanied by an analytic index and an illustrated index in order to facilitate the search for the required subject.

A brief description of the "removal/refitting", "disassembly/reassembly" and "checking and adjustment" procedures follows.



















The procedures show the complete disassembly of the components and should be carried out alone only when strictly necessary. The "reassembly" and "refitting" procedures are normally a simple reversal of the "disassembly" and "removal" procedures and only the reassembly procedures which are significantly different are illustrated.




















The technical data, specific tools and fault diagnosis procedures follow the procedures mentioned above.

Symbols

This manual employs a series of symbols in order for the main technical information provided to be easily located.

The list of the symbols follows.

	removal/disassembly	
	refitting/reassembly	
	Tighten to the torque	
	Rivet nut	
	adjustment/regulation	
	visual check	
	lubricate	
	weight difference	
	angular value	
	pressure	
	temperature	
	Bleed air from brake system	
	surface to be treated	
	interference	
	play	
	intake	

	exhaust
	lubricate with engine oil
	left-hand thread
	tightening torque in oil
	engine idle speed
	ovalization
	taper
	eccentricity
	flatness
	diameter
	linear dimension
	parallelism
	top-up with grease
	heating temperature
	seal
	top-up with engine oil
	grease
	WARNING!
	CAUTION!

Indications for the operators

All the operations must be carried out with the greatest care in order to avoid damaging vehicles and persons.

- For some procedures the use of the Alfa Romeo specific tools is indicated. The use of these tools is indispensable to the safety of the operation and to avoid damage to the parts involved in the procedure.
- To detach adhering parts, lightly tap with an aluminium or lead mallet; for parts in metal and a wooden or resin mallet for parts in light alloy.
- When disassembling check that the necessary parts have been marked.
- If necessary when refitting, lubricate the parts to prevent seizing or binding during the initial stages of operation.
- Using adhesive tape or clean rags, protect the parts which, after disassembly may allow dust or foreign particles to enter the engine.
- When refitting it is vital that the tightening torques and regulation settings are respected.
- During removal substitute the seal rings, oil seals, flexible washers, safety plates, self locking nuts and any other part showing signs of wear.
- Avoid marking the fittings inside the vehicle.

Assemblies or detached parts must only be replaced by original spare parts as only in this way can the suitability of the part and its perfect operation be guaranteed.

- CAUTION and WARNING indicate those procedures which must be carried out with particular care in order to prevent personal injury or damage to the vehicles.



WARNING:
is used when lack of care may cause personal injury.



CAUTION:
is used when lack of care may cause damage to the vehicle or parts of it.

- Obey the current safety regulations regarding operation in the workshop. Where necessary specific precautions have been given in the manual in order to prevent dangerous situations from arising.

NOTE:

It is possible that some subjects have not been covered in time for publication.

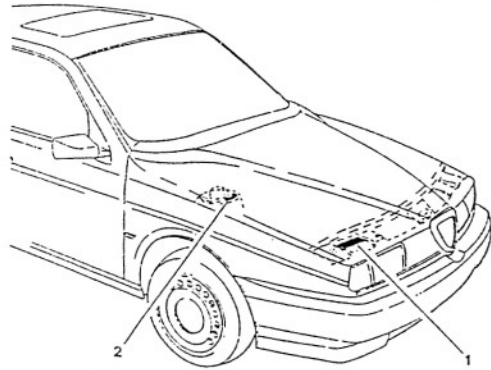
In the indexes to the individual groups these subjects are indicated however and are accompanied by the words "Due for publication".

The Technical Assistance will provide documentation relative to these subjects in the form of up-date sheets or in "Technical Bulletins" which will promptly be sent to the Alfa Romeo Assistance Network.

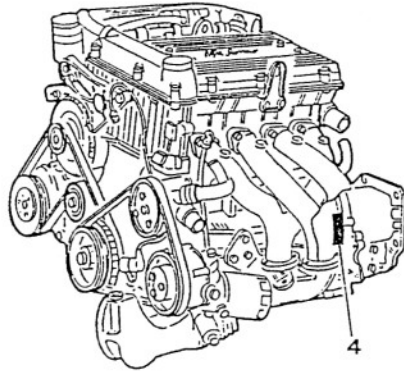
NOTE:

It should be pointed out that inside this manual the "155" vehicle may also be indicated with the "167" vehicle code.

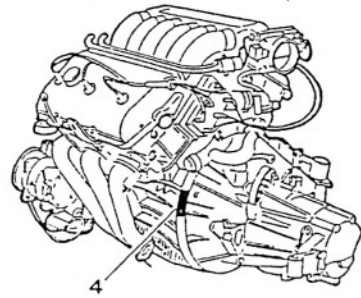
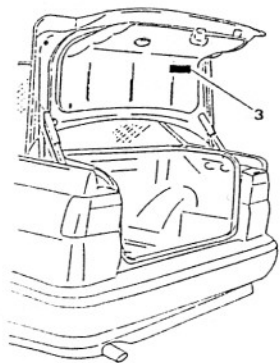
VEHICLE IDENTIFICATION IDENTIFICATION LABELS



TWIN SPARK ENGINES



V6 ENGINE



1. Label carrying identification data
2. Body label
3. Body paint identification label
4. Engine label

MODEL IDENTIFICATION

Vehicle	155				
Model	T. SPARK 1.8	T. SPARK 1.8	T. SPARK 2.0	V6	
Cylinder displacement	1.749 cm ³	1.773 cm ³	1.995 cm ³	2.492 cm ³	
Trim level	4-door saloon				
Drive	LH + RH	LH + RH	LH + RH	LH + RH	
Car model no.	on identification label	167A4B	167A4A	167A2A	167A1
	on upper part of RH side panel, engine compartment	167000	167000	167000	167000
Engine type and serial no.	AR67103 from 000001	AR67102 from 000001	AR67202 from 000001	AR67301 from 000001	

MODEL IDENTIFICATION ('95 Versions)

Vehicle		155					
Model		1.7 T. SPARK		1.8 T. SPARK		V6	
Cylinder displacement		1.749 cm ³		1.773 cm ³		2.492 cm ³	
Trim level		4-door saloon					
Drive		LH + RH		LH + RH		LH + RH	
Car model no.	on identification label	167A4H	167A4G <input type="checkbox"/>	167A4L <input type="checkbox"/>	167A4E	167A4M <input type="checkbox"/>	167A1E
	on upper part of RH side panel, engine compartment	167000		167000		167000	
Engine type and serial no.		AR 67105 from (*)	AR 67103 from (*)	AR 67105 from (*)	AR 67102 from (*)	AR 67202 from (*)	AR 67303 from (*)

(*) Engine no. not available at time of going to press

() Only for certain markets