

155

REPAIR
MANUAL

SUPPLEMENT
FOR

155 T.SPARK 16V

- ENGINES
- MECHANICAL UNITS
- BODY
- ELECTRICAL & ELECTRONIC
DIAGNOSIS

PA49780016V001
(60494512)

Alfa Romeo 

(PAGE NOT TO BE INSERTED IN THE VOLUME)

155

REPAIR MANUAL

SUPPLEMENT
FOR

155 T.SPARK 16V

- ENGINES
- MECHANICAL UNITS
- BODY
- ELECTRICAL &
ELECTRONIC DIAGNOSIS

Alfa Romeo 

60494476
PA49780016V000

12-1994

ALFA ROMEO 155

16V SUPPLEMENT

[SMS PART No Z6015]

THIS MANUAL CONTAINS THE FOLLOWING
UPDATES

DESCRIPTION	PRINT No
MAIN MANUAL	49780016V000
SUPPLEMENT	49780016V001
SUPPLEMENT	49780016V002

155

REPAIR MANUAL

SUPPLEMENT
FOR

155 T.SPARK 16V

- ENGINE
- MECHANICAL UNITS
- BODY
- ELECTRICAL &
ELECTRONIC DIAGNOSIS

PA49780016V002
(60494598)

Alfa Romeo 

(PAGE NOT TO BE INSERTED IN THE VOLUME)

UPDATES CARD

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
2(12/1995)	Introduction	Division of Manual	
2(12/1995)		V	
	Engine (PA 4978B116V000)	Divisor	
2(12/1995)		01-1	
1(1/1995)		01-1	
2(12/1995)		01-1	
1(1/1995)		01-1/6	01-1/1 - 01-1/24
2(12/1995)		01-1/14	
2(12/1995)		01-1/20 - 01-1/22	
1(1/1995)		01-2	
2(12/1995)		01-2	
1(1/1995)		01-10	
2(12/1995)		01-10	
2(12/1995)		01-11	01-11 - 01-25
1(1/1995)		04-1	
2(12/1995)		04-1 - 04-1/1	
1(1/1995)		04-1/1 - 04-1/2	
2(12/1995)		04-2	
2(12/1995)		04-6	
2(12/1995)		04-8/1 - 04-8/8	
1(1/1995)		04-9 - 04-34	
2(12/1995)		04-10	
2(12/1995)		04-10/1 - 04-10/2	
2(12/1995)		04-14/1 - 04-14/2	
2(12/1995)		04-27	
2(12/1995)		04-29/1 - 04-29/2	
2(12/1995)		04-29 - 04-30	
2(12/1995)		04-33 - 04-34	
1(1/1995)		05-1	
2(12/1995)		05-1	
1(1/1995)		05-2	05-2 - 05-13
2(12/1995)		05-13	
1(1/1995)		07-1	
1(1/1995)		07-2	07-2 - 07-15
2(12/1995)		07-1 - 07-4	
2(12/1995)		07-7 - 07-8	
2(12/1995)		07-8/1 - 07-8/2	
2(12/1995)		07-10	
2(12/1995)		07-12 - 07-15	

155

REPAIR
MANUAL

SUPPLEMENT FOR

155

- ENGINES
- MECHANICAL UNITS
- BODY
- ELECTRICAL & ELECTRONIC DIAGNOSIS

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
	Mechanical units (PA4978C116V000)		
1(1/1995)		12-1 - 12-3	
1(1/1995)		12-4 - 12-6	
1(1/1995)		13-1 - 13-5	
1(1/1995)		13-6 - 13-10	
2(12/1995)		13-7	
1(1/1995)		17-1 - 17-2	
2(12/1995)		17-1	
2(12/1995)		17-2/1 - 17-2/2	
1(1/1995)		17-3	
2(12/1995)		17-3	
1(1/1995)		21-4	
1(1/1995)		21-3 - 21-4	
1(1/1995)		21-5 - 21-7	
2(12/1995)		21-3 - 21-5	
1(1/1995)		22-1	
1(1/1995)		23-1 - 23-3	
1(1/1995)		23-4 - 23-5	
1(1/1995)		25-1	
1(1/1995)		25-3	
2(12/1995)		25-3	
1(1/1995)		25-4	
1(1/1995)		28-1	
	Bodywork (PA4978D116V000)		
1(1/1995)		40-1	
1(1/1995)		40-4	
2(12/1995)		40-3 - 40-5	
1(1/1995)		40-6	
1(1/1995)		80-1	
2(12/1995)		80-8	
1(1/1995)		80-9 - 80-11	
1(1/1995)		80-12 - 80-17	

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
	Electrical & Electronic Diagnosis (PA4978E116V000)		
2(12/1995)		I - II	
2(12/1995)		VIII	
2(12/1995)	Index	2-4	
2(12/1995)	Introduction	2-6 - 2-7	
2(12/1995)		2-11 - 2-12	
2(12/1995)		3-3 - 3-4	
2(12/1995)		13-4	
2(12/1995)		13-10	
1(1/1995)		13-13	
1(1/1995)		13-16 - 13-17	
2(12/1995)		13-17	
2(12/1995)		14-4	
2(12/1995)		14-6	
2(12/1995)		14-9	
2(12/1995)		14-12 - 14-13	
1(1/1995)		19-5	
1(1/1995)		21-2	
2(12/1995)		21A-2 - 21A-3	
2(12/1995)		21A-9	
2(12/1995)		21A-20	
2(12/1995)		22-1 - 22-6	
2(12/1995)		26-7 - 26-8	
2(12/1995)		26-16 - 26-19	
2(12/1995)		26-21	
2(12/1995)		26-23	
2(12/1995)		26-24	
1(1/1995)		26-25	
2(12/1995)		26-25	
2(12/1995)		28-1 - 28-5	
2(12/1995)		29A-7 - 29A-9	
1(1/1995)		29A-13	
2(12/1995)		29A-14 - 29A-15	
2(12/1995)		29B-1 - 29B4	
2(12/1995)		29B-6	
1(1/1995)		29B-7	
1(1/1995)		29B-11	
2(12/1995)		29C-1 - 29C-12	

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
	Components and connectors		
2(12/1995)		3 - 7	
2(12/1995)		9	
2(12/1995)		13 - 16	
2(12/1995)		18	
2(12/1995)		20 - 21	
2(12/1995)		23 - 26	
2(12/1995)		28	
2(12/1995)			28/1 - 28/2
2(12/1995)		29	
2(12/1995)		31 - 33	
2(12/1995)		36 - 39	
2(12/1995)		41 - 42	
2(12/1995)		46 - 56	

UPDATE CHART


UPDATE CHART			
UPDATE (DATE)	ENGINE	PAGE	
		SUBSTITUTED	ADDED
	Engines (pages PA4978B116V001)		
1 (1/1995)		01-1	
1 (1/1995)			01-1/1 to 01-1/24
1 (1/1995)		01-2	
1 (1/1995)		01-10	
1 (1/1995)		04-1	
1 (1/1995)			04-1/1 to 04-1/2
1 (1/1995)			04-9 to 04-34
1 (1/1995)		05-1	
1 (1/1995)			05-2 to 05-13
1 (1/1995)		07-1	
1 (1/1995)			07-2 to 07-15
	Mechanical units (pages PA4978C116V001)		
1 (1/1995)		12-1 to 12-3	
1 (1/1995)			12-4 to 12-6
1 (1/1995)		13-1 to 13-5	
1 (1/1995)			13-6 to 13-10
1 (1/1995)		17-1 to 17-2	
1 (1/1995)			3
1 (1/1995)		21-1	
1 (1/1995)		21-3 to 21-4	
1 (1/1995)			21-5 to 21-7
1 (1/1995)		22-1	
1 (1/1995)		23-1 to 23-3	
1 (1/1995)			23-4 to 23-5
1 (1/1995)		25-1	
1 (1/1995)		25-3	
1 (1/1995)			25-4
1 (1/1995)		28-1	
	Body (pages PA4978D116V001)		
1 (1/1995)		40-1	
1 (1/1995)		40-4	
1 (1/1995)			40-6
1 (1/1995)		80-1	
1 (1/1995)		80-9 to 80-11	
1 (1/1995)			80-12 to 80-17
	Electnc-Electronic Diagnosis (pages PA4978E116V001)		
1 (1/1995)		13-13	
1 (1/1995)		13-16 to 13-17	
1 (1/1995)		14-12 to 14-13	
1 (1/1995)		19-5	
1 (1/1995)		26-24	
1 (1/1995)		29A-13	
1 (1/1995)		29B-7	
1 (1/1995)		29B-11	

155

REPAIR
MANUAL
SUPPLEMENT FOR
155 T.SPARK 15V

- ENGINES
- MECHANICAL UNITS
- BODY
- ELECTRICAL & ELECTRONIC DIAGNOSIS


NOTICE

This manual "155 - REPAIR MANUAL - SUPPLEMENT FOR  T.SPARK 1.5V" comprises the following subjects:

- Engine
- Mechanical units
- Body
- Electrical & electronic diagnosis

The subjects relative to:

- Vehicle characteristics and maintenance

are described also for the  T.SPARK 1.5V in the volume "155 - VEHICLE CHARACTERISTICS AND MAINTENANCE.

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.

INTRODUCTION

This publication provides the information necessary for the maintenance and repair operations regarding the 155 TSPARK 16v. 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.

In the sections of "ENGINES", "MECHANICAL UNITS" and "BODY", 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.

For overhauling engines and mechanical groups refer to the following manuals:

- PA49360000000 REPAIR INSTRUCTIONS - ENGINE OVERHAUL.
- PA49420000000 REPAIR INSTRUCTIONS - OVERHAULING MECHANICAL GROUPS.

For information relative to the electrical systems of the vehicle the ELECTRICAL - ELECTRONIC DIAGNOSIS section should be consulted. This section gives the electrical diagrams and the descriptions of each function, the tables of the connectors and the location of the relative components.

How to use this manual

(In the sections of "ENGINES", "MECHANICAL UNITS" and "BODY").

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:

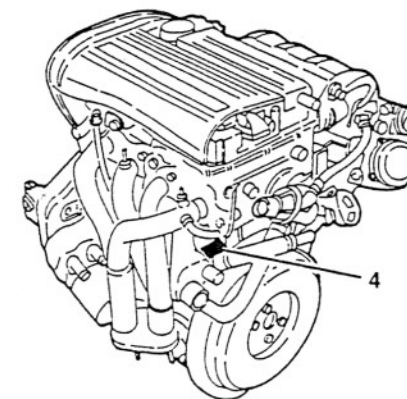
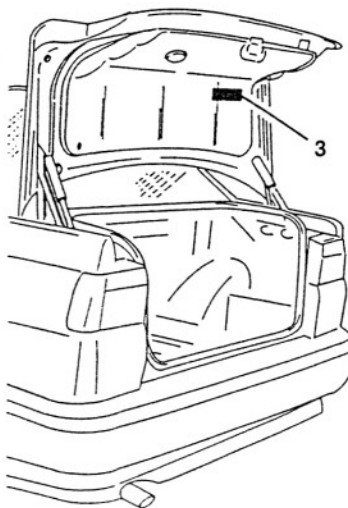
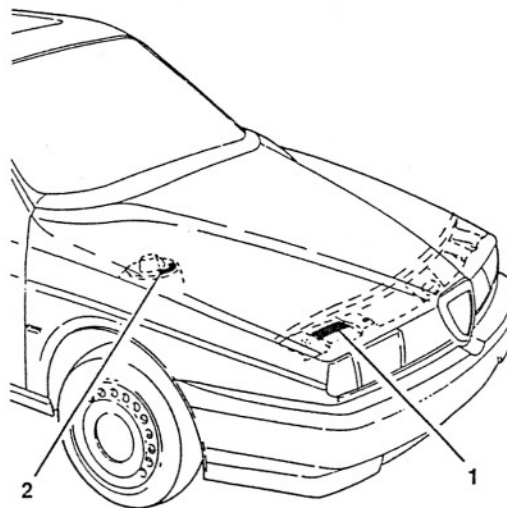
It is possible that some subjects have not been covered in time for publication.

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.

VEHICLE IDENTIFICATION

IDENTIFICATION PLATES



1. Data plate
2. Body code
3. Paint identification plate
4. Engine code

MODELS IDENTIFICATION LABEL

Version		155	155	155
Model		2.0 T. SPARK 16V	1.6 T. SPARK 16V	1.8 T. SPARK 16V
Cylinder displacement		1970 cm ³	1598 cm ³	1747 cm ³
Trim level		4-door saloon		
Drive		LH + RH		
Car model no.	on identification label	167A2G	167A6	167A4N
	on upper part of RH side panel, engine compartment	167000	167000	167000
N° chassis serial number (on two assembly lines)		121000 1022000	(*)	(*)
N° engine type and serial number (intermittent)		AR67204 from 3259	AR67601 from (*)	AR67106 from (*)

(*) : Data not available at time of going to press.