

# 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)



(PAGE NOT TO BE INSERTED IN THE VOLUME)

# 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* 

60494512  
PA49780016V



REPAIR  
MANUAL

SUPPLEMENT FOR

1995 T. B. & C. I. E.

- ENGINES
- MECHANICAL UNITS
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- ELECTRICAL & ELECTRONIC DIAGNOSIS

UPDATES CARD

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
2(12/1995)	Introduction		
2(12/1994)	Engines (PA 49780116V000)	V	
2(12/1995)	Diagnos	01-1	01-1/1 - 01-1/24
1(1/1995)		01-1	
2(12/1995)		01-1/8	
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	
1(1/1995)		04-1	01-11 - 01-25
2(12/1995)		04-1 - 04-1/1	
1(1/1995)		04-2	04-1/1 - 04-1/2
2(12/1995)		04-6	
1(1/1995)		04-10	04-6/1 - 04-6/8
2(12/1995)		04-9	04-9 - 04-34
2(12/1995)		04-10	
2(12/1995)		04-27	04-10/1 - 04-10/2
2(12/1995)		04-27	04-10/1 - 04-10/2
2(12/1995)		04-29 - 04-30	04-29/1 - 04-29/2
2(12/1995)		04-33 - 04-34	
1(1/1995)		05-1	
2(12/1995)		05-1	05-2 - 05-13
1(1/1995)		05-13	
2(12/1995)		07-1	07-2 - 07-15
1(1/1995)		07-1	
2(12/1995)		07-1 - 07-4	
2(12/1995)		07-7 - 07-8	
2(12/1995)		07-10	07-8/1 - 07-8/7
2(12/1995)		07-12 - 07-15	

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
1(1/1995)	Mechanical units (PA4878C116V000)	12-1 - 12-3	12-4 - 12-6
1(1/1995)		13-1 - 13-5	13-6 - 13-10
2(12/1995)		13-7	
1(1/1995)		17-1 - 17-2	
2(12/1995)		17-1	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	
2(12/1995)		21-3 - 21-5	21-5 - 21-7
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	25-4
1(1/1995)		28-1	
1(1/1995)	Bodywork (PA4878D116V000)	40-1	
2(12/1995)		40-4	
1(1/1995)		40-3 - 40-5	40-6
2(12/1995)		80-1	
1(1/1995)		80-8	
1(1/1995)		80-9 - 80-11	
1(1/1995)			80-12 - 80-17

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
2(12/1995)	Components and connectors		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)		29	
2(12/1995)		31 - 33	
2(12/1995)		36 - 39	
2(12/1995)	41 - 42		
2(12/1995)	46 - 56		
			281 - 282

UPDATES CARD			
UPDATE (DATE)	SECTION	PAGE	
		REPLACED	ADDED
2(12/1995)	Electrical & Electronic Diagnos (PA4878E116V000) Index Introduction	1 - 11	
2(12/1995)		VIII	
2(12/1995)		2-4	
2(12/1995)		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	
1(1/1995)		14-12 - 14-13	
1(1/1995)		19-5	
2(12/1995)		21-2	
2(12/1995)		21A-2 - 21A-3	
2(12/1995)		21A-8	
2(12/1995)		21A-20	
2(12/1995)		22-1 - 22-8	22-7
2(12/1995)		26-7 - 26-8	
2(12/1995)		26-16 - 26-19	
2(12/1995)		26-21	
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1(1/1995)		26-24	
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 - 29B-4		
2(12/1995)	29B-6		
1(1/1995)	29B-7		
1(1/1995)	29B-11		
2(12/1995)		29C-1 - 29C-12	



**REPAIR  
MANUAL  
SUPPLEMENT FOR  
1995 T.SPARK 18V**

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

# UPDATE CHART

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

## NOTICE

This manual "155 - REPAIR MANUAL - SUPPLEMENT FOR ~~155~~ T.SPARK 15V" comprises the following subjects:

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

The subjects relative to:

- Vehicle characteristics and maintenance
- are described also for the "155 T.SPARK 15V" 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:

- PA493600000000 REPAIR INSTRUCTIONS - ENGINE OVERHAUL.
- PA494200000000 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		removal/disassembly
	refitting/reassembly		refitting/reassembly
	Tighten to the torque		tightening torque in oil
	Rivet nut		exhaust
	adjustment/regulation		lubricate with engine oil
	visual check		left-hand thread
	lubricate		engine idle speed
	weight difference		ovalization
	angular value		taper
	pressure		eccentricity
	temperature		flatness
	Bleed air from brake system		diameter
	surface to be treated		linear dimension
	interference		parallelism
	play		top-up with grease
	intake		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.

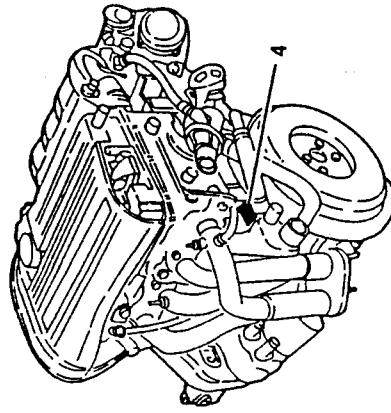
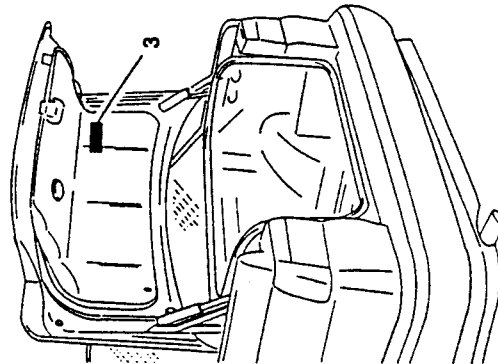
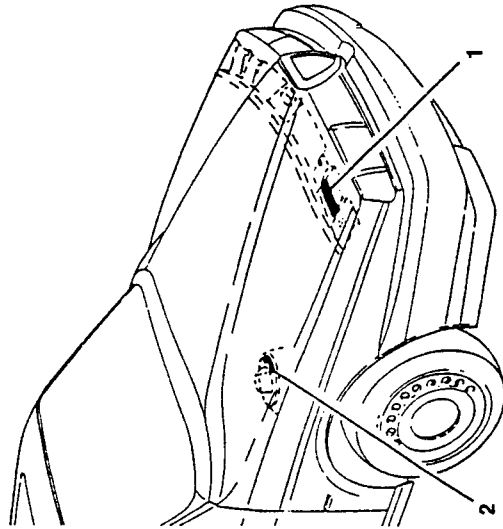
#### NOTE:

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 <sup>3</sup>	1598 cm <sup>3</sup>	1747 cm <sup>3</sup>
Trim level	4-door saloon		
Drive	LH + RH		
Car model no.	on identification label	167A2G	167A6
	on upper part of RH side panel, engine compartment	167000	167000
N° chassis serial number (on two assembly lines)	121000	(*)	(*)
	1022000		
N° engine type and serial number (intermittent)	AR67204	AR67601	AR67106
	from 3259	from (*)	from (*)
			167A4N
			167000

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



DIVISION OF  
"REPAIR MANUAL"



Models

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

	T.SPARK V6 - PA4655A1000000: GROUP 00
	TD - PA4655A24x4000: GROUP 00
	TD - PA4655A3TD0000: GROUP 00
	TD 2.5 - PA4655A4TD2500: GROUP 00
	T.SPARK 16V - PA4655A516V000: GROUP 00

REPAIR MANUAL

• VEHICLE CHARACTERISTICS AND MAINTENANCE

REPAIR MANUAL

• ENGINES

- PA4655B1000000: T. SPARK ENGINE

- PA4655B2000000: V6 ENGINE

REPAIR MANUAL

• MECHANICAL UNITS  
• BODY

- PA4655C1000000: MECHANICAL UNITS

- PA4655D1000000: Electrical components, Bodywork, Trim, Heating and Ventilation

REPAIR MANUAL

• ELECTRICAL & ELECTRONIC DIAGNOSIS

- PA4655E1000000: Wiring diagrams and Troubleshooting

N.B. THE UPDATE OF THIS CARD IS SHOWN BY ONLY DATE, WHILE THE PUBLICATION NUMBER REMAINS THE BASIC ONE.

continues →

REPAIR MANUAL

SUPPLEMENT FOR 155

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

- PA4736B14x4000: ENGINE

- PA4736C14x4000: MECHANICAL UNITS

- PA4736D14x4000: Electrical components, Bodywork, Trim, Heating and Ventilation

- PA4736E14x4000: Wiring diagrams and troubleshooting

REPAIR MANUAL

SUPPLEMENT FOR 155 TD

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

- PA4805B1TD0000: ENGINE

- PA4805C1TD0000: MECHANICAL UNITS

- PA4805D1TD0000: Electrical components, Bodywork, Trim, Heating and Ventilation

- PA4805E1TD0000: Wiring diagrams and troubleshooting

REPAIR MANUAL

SUPPLEMENT FOR 155 TD 2.5

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

- PA4830B1TD2500: ENGINE

- PA4830C1TD2500: MECHANICAL UNITS

- PA4830D1TD2500: Electrical components, Bodywork, Trim, Heating and Ventilation

- PA4830E1TD2500: Wiring diagrams and troubleshooting

REPAIR MANUAL

SUPPLEMENT FOR 155 T.SPARK 16V

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

- PA4978B116V000: ENGINE

- PA4978C116V000: MECHANICAL UNITS


- PA4978D116V000: Electrical components, Bodywork, Trim, Heating and Ventilation


- PA4978E116V000: Wiring diagrams and troubleshooting

# 155 T.SPARK 16V

## REPAIR MANUAL

### ● ENGINES

(▲)  GROUP 01 - ENGINE MAIN MECHANICAL UNIT

 GROUP 04 - FUEL SYSTEM

 GROUP 05 - ENGINE IGNITION, STARTING  
AND RECHARGING

 GROUP 07 - ENGINE COOLING SYSTEM

(▲): For overhauling the engine on the bench see manual  
"ENGINE OVERHAULING" PA493600000000.