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workshop manual



8104976

INTRODUCTION

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0.1. INTRODUCTION

0.1.1. FOREWORD

This manual provides the information required for normal servicing.

This publication is intended for use by **aprilia** Dealers and their qualified mechanics; many concepts have been omitted on purpose as their inclusion would be superfluous. Since complete mechanical explanations have not been included in this manual, the reader must be familiar with basic notions of mechanics, as well as with basic repair procedures. Without such familiarity, repairs and checks could be ineffective and even hazardous. Since the repair and vehicle check instructions are not exhaustive, special care must be taken to avoid damage and injury. **Piaggio & C. S.p.A.** undertakes to constantly improve the design of its products and the relevant literature to ensure maximum customer satisfaction. The main technical modifications and changes in repair procedures are communicated to all **aprilia** dealers and agencies worldwide. Such modifications will be entered in subsequent editions of the manual. Should you need assistance or clarifications about the inspection and repair procedures, please contact the **aprilia** SERVICE DEPT., they will be glad to give you any information on the matter, or supply you with any detail on updates and technical changes applied to the vehicle.

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0.1.2. REFERENCE MANUALS

SPARE PARTS CATALOGUE

aprilia part# (description)	I	F	D	E	UK
3406	I	F	D	E	UK

MANUALI ATTREZZI SPECIALI

aprilia part# (description)	I	F	D	E	UK
8202278	I	F	D	E	UK

CHASSIS WORKSHOP MANUAL

aprilia part# (description)	I	F	D	E	UK
8104972	I				
8104973	E				
8104974	F				
8104975	D				
8104976	UK				
8CM0101	I	F	D	E	UK

ENGINE TECHNICAL MANUAL

aprilia part# (description)	I	F	D	E	UK
8140880	I				
8140883	E				
8140881	F				
8140882	D				
8140884	UK				
8CM0027	I	F	D	E	UK

OWNER'S MANUALS

aprilia part# (description)	I	F	D	E	UK
Model Year 1993					
8102260	I				
Model Year 1994					
8102260	I				
8102319	D	F			UK
Model Year 1995					
8102476	I				
8102530	D		UK	F	
8102543	E				
Model Year 1996					
8102685	I				
8102682	D	UK		F	
8102530	D	UK		F	
8102683	P	E		NL	
8102543	E				
Model Year 1997					
8102685	I				
8102682	D	UK		F	
8102683	P	E		NL	
8102530	D	UK		F	
8102543	E				
8102752	DK	SF		GR	
8102753	DK	NL		P	
Model Year 1998					
8102685	I				
8102682	D	UK		F	
8102683	P	E		NL	
8102849	DK				
8102934	D	UK		F	AUS
Model Year 1999					
8102821	I	F	D		
8102937	P	E	UK		AUS
8102938	DK	NL	SF		
8102939	GR	J	UK		
Model Year 2001					
8202248	USA				
8102821	I	F	D		
8102937	P	E	UK		AUS
8102938	DK	NL	SF		
8102939	GR	J	UK		
Model Year 2002					
8104465	I	F	D		
8104466	P	E	UK		
8104467	DK	NL	SF		
8104468	GR	J	UK		
Model Year 2006					
8104917	I				
8104934	F	D	E	UK	
8104935	NL	DK	SF	GR	J

0.1.3. ABBREVIATIONS/SYMBOLS/CONVENTIONS

#	= number
<	= less than
>	= greater than
≤	= less than or equal to
≥	= more than or equal to
~	= approximately
∞	= infinity
°C	= degrees Celsius (centigrade)
°F	= degrees Fahrenheit
±	= plus or minus
a.c	= alternating current
A	= Ampere
Ah	= Ampere per hour
API	= American Petroleum Institute
AT	= high voltage
AV/DC	= Anti-Vibration Double Countershaft
bar	= pressure measurement unit (1 bar = 100 kPa)
d.c.	= direct current
cc	= cubic centimetres
CO	= carbon monoxide
CPU	= Central Processing Unit
DIN	= German industrial standards (Deutsche Industrie Norm)
DOHC	= Double Overhead Camshaft
ECU	= Electronic Control Unit
rpm	= revolutions per minute
HC	= unburnt hydrocarbons
ISC	= Idle Speed Control
ISO	= International Standardisation Organisation
kg	= kilograms
kgm	= kilograms per metre (1 kgm = 10 Nm)
km	= kilometres
km/h	= kilometres per hour
kΩ	= kiloOhm
kPa	= kiloPascal (1 kPa = 0.01 bar)
KS	= clutch side (from the German "Kupplungsseite")
kW	= kilowatt
ℓ	= litres
LAP	= racetrack lap
LED	= Light Emitting Diode
LEFT	
SIDE	= left side
m/s	= metres per second
max	= maximum
mbar	= millibar (1 mbar = 0.1 kPa)
mi	= miles
MIN	= minimum
MPH	= miles per hour
MS	= flywheel side (from the German "Magnetoseite")
MΩ	= MegaOhm
N.A.	= Not Available
N.O.M.M.	= Motor Octane Number
N.O.R.M.	= Research Octane Number
Nm	= Newton metre (1 Nm = 0.1 kgm)
Ω	= ohm
PICK-UP	= pick-up
BDC	= Bottom Dead Centre
TDC	= Top Dead Centre
PPC	= Pneumatic Power Clutch

RIGHT**SIDE** = right side**SAE** = Society of Automotive Engineers**TEST** = diagnostic check**T.B.E.I.** = crown-head Allen screw**T.C.E.I.** = cheese-head Allen screw**T.E.** = hexagonal head**T.P.** = flat head screw**TSI** = Twin Spark Ignition**UPSIDE-****DOWN** = inverted fork**V** = volt**W** = watt**Ø** = diameter

GENERAL INFORMATION

1

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1.1. GENERAL INFORMATION













1.1.1. CONVENTIONS USED IN THE MANUAL

- This manual is divided in sections and subsections, each covering a set of the most significant components. Refer to the index of sections when consulting the manual.
- Unless expressly specified otherwise, assemblies are reassembled by reversing the dismantling procedure.
- The terms "right" and "left" are referred to the rider seated on the vehicle in the normal riding position.
- Motorcycle operation and basic maintenance are covered in the "OWNER'S MANUAL".

In this manual any variants are identified with these symbols:

-  optional
-  catalytic version
-  Full Power version
- all versions
-  250 cc version
-  200 cc version
-  125 cc version
- MP national certification
- SF European certification (EURO 3 limits)

VERSION:

- | | | |
|--|---|--|
|  Italy |  Greece |  Malaysia |
|  United Kingdom |  Holland |  Chile |
|  Austria |  Switzerland |  Croatia |
|  Portugal |  Denmark |  Australia |
|  Finland |  Japan |  United States of America |
|  Belgium |  Singapore |  Brazil |
|  Germany |  Slovenia |  South Africa |
|  France |  Israel |  New Zealand |
|  Spain |  South Korea |  Canada |