

EURO IV - VEHICLE SERVICE MANUAL



Classic Bullet EFI



Bullet EFI



Continental GT

PREFACE

“FIRST TIME RIGHT” is a very important element for enhancing Customer Satisfaction.

Royal Enfield is committed to upgrade the skills and knowledge of technicians so that they follow scientific repair techniques to ensure “FIRST TIME RIGHT” practices and carry out repairs accurately so that customers will enjoy trouble free performance at all times.

This Maintenance and service manual is specifically for the following EURO IV Regulation models being currently sold only in UK & European countries.

- BULLET EFI
- BULLET CLASSIC EFI
- CONTINENTAL GT

This Manual is intended for use primarily by a person who is well versed with basic repair technique of a motorcycle & usage of general purpose tools and special service tools & diagnostic tools, while basic & routine service maintenance may be in the event of not having possibility in carrying out using basic tools, required tools it is recommended that the motorcycle may please be get inspected and serviced through an Authorized Royal Enfield Service Station.

This manual will help in guide in the basic servicing, periodical maintenance, systematic disassembly, Parts inspection and assembling procedures of various mechanisms / systems of the motorcycle which has to be carried out in Royal Enfield Authorised Dealership or Service Station.

While this manual is updated with latest Information and Specifications, at the time of going to print, due to continuous improvements being done to improve performance, some of the data, illustrations etc., in this manual may differ from the actual parts fitted in the engine.

Subsequent & continuous improvement that may be done on the motorcycles to enhance customer satisfaction, will be uploaded also in the RMI portals & also available with Royal Enfield Authorised dealer & Service Station.

Please do feel free to write to us at support@royalenfield.com. if you have any queries, clarification, suggestions or feedback.

With warm regards

SERVICE HEAD QUARTERS

Royal Enfield, A Unit of Eicher Motors Limited,
Thiruvottiyur High Road, Thiruvottiyur, Chennai - 600 019.
E-mail: Support@royalenfield.com
Website: www.royalenfield.com

Part No: 888569 / Feb. '17

EURO IV BIKES - VEHICLE VIEWS



TABLE OF CONTENTS

SL.NO.	DESCRIPTION	PG.NO.	SL.NO.	DESCRIPTION	PG.NO.
1.	Technical Specifications	4	7.	Rear Suspension	
2.	Periodical Maintenance	6	7.1	Rear Wheel	103
3.	Special Tools Usage List	8	7.2	Rer Sprocket / Drive Chain Adjustment	111
4.	Engine Removal from Frame	9	7.3	Rear Shockers	113
5.	Vehicle Aggregagetes		7.4	Rear Mudguard / Rear Number Plate	119
5.1	Cables	11	7.5	Swing Arm	126
5.2	Airfilter Paper Element	16	8.	ABS	133
5.3	Fuel Tank	23	9.	EVAP	167
5.4	Seat Assembly	30	10.	EMS	174
5.5	Exahust Pipe & Silencer	39	11.	NACS II DIAGNOSIS	213
6.	Front Suspension		12.	Electricals	
6.1	Front Wheel	46	12.1	Battery	233
6.2	Front Mudguard	54	12.2	Bulbs	239
6.3	Handle Bar	60	12.3	Electrical Components	261
6.3	Front Fork	70	12.4	Wiring Diagram	277
6.4	Steering Stem	87	13.	Trouble Shooting	286

SECTION 01 - TECHNICAL SPECIFICATION

TECH SPEC POINT	BULLET CLASSIC EFI	BULLET EFI	CONTINENTAL GT
ENGINE			
Engine	4 Stroke, air cooled, single cylinder		4 Stroke, air cooled, single cyl., OHV, SI
Capacity	499 cc (Displacement)		535 cc
Bore	84 mm		87 mm
Stroke	90 mm		90 mm
Compression ratio	8.5 : 1		8.5 : 1
Max. Power @ RPM	20.3 Kw @ 5250 RPM		21.4 kw @ 5100 RPM
Max. Torque @ RPM	41.3 Nm @ 4000 RPM		44 Nm @ 4000 RPM
Air filter Element	Paper Element		Paper Element
Lubrication	Forced Lubrication, Wet Sump		Forced Lubrication, Wet Sump
Fuel Supply	Electronic Fuel Injection		Electronic Fuel Injection
IGNITION SYSTEM			
Ignition system	Digital Electronic Ignition		Electronic Ignition
Spark plug gap	0.8 mm		0.8 - 0.9 mm
Spark plug	WQR8DC (Bosch)		WQR8DC (Bosch)
TRANSMISSION			
Clutch	Wet Multiplate		Wet Multiplate (7 Plates)
Drive Chain links	102 pitch 101 pitch		101 Pitch
Primary drive	Duplex Chain drive 3/8" pitch		Duplex Chain
Gear box	5 Speed Constant Mesh		Constant Mesh 5 Speed
Gear Ratios	I - 3.063 : 1		I - 3.063 : 1
	II - 2.013 : 1		II - 2.013 : 1
	III - 1.522 : 1		III - 1.522 : 1
	IV - 1.212 : 1		IV - 1.212 : 1
	V - 1.000 : 1		V - 1.000 : 1
Primary Drive Ratio	2.15 : 1		2.15 : 1
Secondary Drive	Chain Drive		18 Teeth (F.D. Sprocket)
Secondary ratio	2.235:1		2.12:1
ELECTRICALS			
Generation	Alternator		Alternator
System	12V DC		12V DC
Battery	12V - 14 AH		12V - 14 AH
Head lamp	12V, 60/55 W		12V, 60/55 W, Halogen Bulb
Tail / Brake lamp	12V, 5/21 W		5/21 W
Turn signal	12V, 10W X 2 Nos.		12V, 10W X 4 Nos.
Pilot lamp	12V, 2 W X 2 Nos. / 12V, 4 W X 1 No.		NA
Instrument Cluster	NA		Digital instrument Cluster with LCD
High beam indicator	NA		12V, 0.2W (LED)
Neutral Indicator	NA		12V, 1.12W
Horn	12V, 2.5 Amp (Max.)		12V, 2.5A (Dual tone-LT, HT)
Starter Motor	NA		12V, 0.9 KW

TECH SPEC POINT	BULLET CLASSIC EFI	BULLET EFI	CONTINENTAL GT
CHASSIS			
Frame	Tubular Frame		Tubular steel double cradle
Tyre size	Fr: 90/90-19"-52 V Rr: 110/80-18"-58 V	3.25 X 19" 3.50 x 19"	110/90-18 M/C 56H 130/70-18 M/C 63H
Tyre pressure	Front-Solo: 18 PSI Pillion: 20 PSI		Front- Solo:1.41 Kg/cm2 (20 PSI) Pillion:1.55 Kg/cm2 (22 PSI)
	Rear-Solo: 28 PSI Pillion: 30 PSI		Rear- Solo:2.11 Kg/cm2 (30 PSI) Pillion:2.25 Kg/cm2 (32 PSI)
Fuel tank capacity	14.5 ± 1 Litres		13.5 Litres***
Suspension	Front: Telescopic, Hydraulic Damping stroke 110 mm		Front:Telescopic, Stroke 110mm
	Rear: Swing arm with gas filled shock absorbers with adjustable 5 step spring tension load.		Rear:Twin - Gas Charged, Stroke 80 mm
Front fork oil capacity	430 ml per leg		430 ml per leg
Front fork oil	Gabriel Fork Oil 2W 35		Gabriel Fork Oil 2W 35
Brakes	Hydraulic Disc Brakes Front & Rear with ABS System		Hydraulic Disc Brakes Front & Rear with ABS System
	Front: 300 mm dia disc with twin piston caliper		Front:300 mm dia floating disc, twin piston floating caliper
	Rear: 240 mm dia disc with single piston & floating caliper		Rear:240mm dia disc, single piston floating caliper
Brake oil grade	DOT 4 or above		DOT 4 or above
Brake oil capacity	Front:60 ml Rear: 100 ml		Front:50 ml Rear: 100 ml
Speedometer lamp	12V, 3.4 W X 1 No.		NA
Turn signal / High beam indicator	12V, 1.7 W each		NA
Neutral Indicator	12V, 1.7 W X 1 No.		NA
DIMENSIONS			
Length	2140 mm		2060 mm
Width	800 mm		760 mm
Height	1080 mm		1070 mm
Wheel base	1360 mm		1360 mm
Saddle height	805 mm 790mm		810 mm
Ground clearance	140 mm		140 mm
WEIGHTS			
Mass of motorcycle in running order	270 Kg		267 Kg
Max pay load	95 Kg		98 Kg
Max technical permissible mass	365 Kg		365 Kg
PERFORMANCE			
Maximum Speed	128 kmph		137 Kmph

- Values / Dimensions mentioned above are for reference only.
- In view of continuous improvements being done on our motorcycles, the specifications are subject to change without prior notice.

SECTION 02 - PERIODICAL MAINTENANCE

BULLET CLASSIC EFI & BULLET EFI

The Periodical maintenance schedule detailed below is based upon average riding conditions and indicates the Intervals at which regular inspections, adjustments, replacements and lubrications must be carried out to help maintain your motorcycle meticulously.

If in case the motorcycle is used frequently in very dusty environment / severe climatic conditions / Poor Roads / stagnant water etc., the maintenance will need to be done earlier as may be required.

Contact a nearest Royal Enfield Authorized Dealer / Service Center to carry out the periodical maintenance and for any expert advice.

S. No.	DESCRIPTION	SCHEDULE												
		Kms (x1000)		0.5	3	6	9	12	15	18	21	24	27	30
		Miles (x1000)		0.3	2	3.75	6	7.5	9.5	11.25	13	15	17	18.75
1	Engine Oil	R		R		R		R		R		R		R
		Check level every 500 Kms or earlier as required												
2	Engine oil filter element	R		R		R		R		R		R		R
3	Engine sump filter (oil strainer)	C		C		C		C		C		C		C
4	Magnetic drain plug under gear box and secondary drain plug under crankshaft in crankcase right	C		C		C		C		C		C		C
5	Spark plug	A	A	A	A	A	R	A	A	A	A	A	A	R
6	HT lead	I	I	I	I	I	I	I	I	I	I	I	I	I
7	Fuel hose	I	I	I	I	R	I	I	I	R	I	I	I	I
8	Fuel Pump	Check for screw tightness in all services												
9	Accelerator cable play	A	A	A	A	A	A	A	A	A	A	A	A	A
10	Rubber hose, Air filter to Throttle body	I	I	I	I	R	I	I	I	R	I	I	I	I
11	Rubber hose, Inlet manifold / Adaptor	I	I	I	I	R	I	I	I	R	I	I	I	I
12	Airfilter paper element	C	C	C	C	R	C	C	C	R	C	C	C	C
13	Inlet/Exhaust valve seating (compression/vacuum test)						I							I
14	Cylinder head													D
15	Exhaust system													D
16	Clutch free play	Adjust every 1000 Kms or earlier as required												
17	Rear brake pedal pivot	L	L	L	L	L	L	L	L	L	L	L	L	L
18	Battery terminals (apply petroleum jelly)	C	C	C	C	C	C	C	C	C	C	C	C	C
19	Battery Electrolyte level	I	I	I	I	I	I	I	I	I	I	I	I	I
20	Earth wire eyelet (behind battery carrier)					I								I
21	Rear Wheel Drive Chain	Lubricate & Adjust every 1000 Kms/Clean, Lubricate & Adjust every 3000 Kms or earlier as required												
22	Front Fork oil				R			R				R		
23	Rear brake play	Adjust every 1000 Kms or earlier as required												
24	Rear brake cams			L		L		L		L		L		L
25	Steering ball races play	I	A	L	A	L	A	L	A	R	A	L	A	L
26	Spokes tightness / Wheel rim run out front & rear	I		I		I		I		I		I		I
27	Pivot-Side Stand, Center Stand, Pillion Foot Rest	L	L	L	L	L	L	L	L	L	L	L	L	L
28	Tyre wear pattern (Front & Rear)	I	I	I	I	I	I	I	I	I	I	I	I	I
29	Hand levers pivot	Lubricate every 1000 Kms or earlier as required												
30	Front Disc Brake Oil level check	I	I	I	I	I	R	I	I	I	I	I	I	R
31	Evaporative Emission Equipment rubber hoses	I	I	I	I	R	I	I	I	R	I	I	I	I

A : Adjust C : Clean D : De-carbonise I : Inspect L : Lubricate R : Replace

NOTE:

For maintenance after 30,000 Kms, (18,750 miles) please repeat the same frequency levels specified above, in consultation with a Royal Enfield Authorized Dealer.

CONTINENTAL GT

The Periodical maintenance schedule detailed below is based upon average riding conditions and indicates the Intervals at which regular inspections, adjustments, replacements and lubrications must be carried out to help maintain your motorcycle meticulously. If in case the motorcycle is used frequently in very dusty environment / severe climatic conditions / Poor Roads / stagnant water etc., the maintenance will need to be done earlier as may be required.

Contact a nearest Royal Enfield Authorized Dealer / Service Center to carry out the periodical maintenance and for any expert advice.

S. No.	DESCRIPTION	SCHEDULE												
		Kms (x1000)		0.5	3	6	9	12	15	18	21	24	27	30
		Miles (x1000)		0.3	2	3.75	6	7.5	9.5	11.25	13	15	17	18.75
1	Engine Oil	R		R		R		R		R		R		
		Check level every 500 Kms or earlier as required												
2	Engine oil filter	R		R		R		R		R		R		
3	Engine sump filter	C		C		C		C		C		C		
4	Magnetic drain plug under gear box on crankcase right	C		C		C		C		C		C		
5	Spark plug	C&A	C&A	C&A	C&A	C&A	R	C&A	C&A	C&A	C&A	C&A	R	
6	HT lead	I	I	I	I	I	I	I	I	I	I	I	I	
7	Fuel hose	I	I	I	I	R	I	I	I	R	I	I	I	
8	Fuel Pump	Check for screw tightness in all services												
9	Accelerator cable play	A	A	A	A	A	A	A	A	A	A	A	A	
10	Rubber hose, Air filter to Throttle body	I	I	I	I	R	I	I	I	R	I	I	I	
11	Rubber hose, Inlet manifold	I	I	I	I	R	I	I	I	R	I	I	I	
12	Airfilter element	C	C	C	C	R	C	C	C	R	C	C	C	
13	Inlet / Exhaust valve seating												I	
14	Cylinder head												D	
15	Exhaust pipe												D	
16	Clutch free play	Adjust every 1000 Kms (600 Miles) or earlier as required												
17	Rear brake pedal pivot	L	L	L	L	L	L	L	L	L	L	L	L	
18	Battery terminals (apply petroleum jelly)	C	C	C	C	C	C	C	C	C	C	C	C	
19	Battery Electrolyte level	I	I	I	I	I	I	I	I	I	I	I	I	
20	Earth wire eyelet contact					I							I	
21	Rear Chain	Adjust every 1000 Kms (600 Miles) or earlier as required Lubricate every 3000 Kms (1800 Miles) or earlier as required												
22	Fork oil					R				R				
23	Steering ball races			A		L		A		L			A	
24	Spokes tightness	I		I		I		I		I			I	
25	Wheel rim run out			I		I		I		I			I	
26	Tyre wear		I	I	I	I	I	I	I	I	I	I	I	
27	Hand levers & Kick starter pivot	Lubricate every 1000 Kms or earlier as required												
28	Brake Oil level check / Replacement	I	I	I	I	I	I	I	R	I	I	I	I	
29	Pivot-Side Stand	L	L	L	L	L	L	L	L	L	L	L	L	
30	Center Stand pivot	L	L	L	L	L	L	L	L	L	L	L	L	
31	Pillion Foot rest pivot	L	L	L	L	L	L	L	L	L	L	L	L	
32	Swing arm bearings					L				L				
31	Evaporative Emission Equipment rubber hoses	I	I	I	I	R	I	I	I	R	I	I	I	

A : Adjust C : Clean D : De-carbonise I : Inspect L : Lubricate R : Replace

NOTE:

For maintenance after 30,000 Kms, (18,750 miles) please repeat the same frequency levels specified above, in consultation with a Royal Enfield Authorized Dealer.

SECTION 03 - SPECIAL TOOLS USAGE LIST

PART NO.	DESCRIPTION	PHOTOS	APPLICATION
ST-25834-2	Front fork Dismantling tool		To hold pipe seat of front fork while dismantling & tightening of front fork main tube with bottom case (fork end assy.).
ST-25114-4	Extractor for fork oil seal		To remove oil seal in front fork bottom case.
ST-25113-4	Mandrel for oil seal		Fitment of oil seal into front fork bottom case.
ST-25112-4	Expander for front fork Oil seal		Expanding the oil seal lip while inserting main tube into bottom case of front fork
ST-25110-3	Gauge plate for tightening chain stay		Alignment of Swing Arm while mounting tightening into chassis.
ST-25244-4	Special spanner adjuster		To adjust gas filled shockabsorber spring load.
ST-25833-4	Front Fork Tool 1/2 SD		To Loosen and tightening of front fork assembly from the head lamp casing.
ST-26461-2	Front Fork Assembling & Dismantling Tool		To hold pipe seat of front fork while dismantling & tightening of front fork main tube with bottom tube (fork end).
ST-26485-3	Front Fork Oil Seal Driver (Dia 41mm)		Fitment of slide bush and fork oil seal into front fork bottom case.