

MZ - MZ_ETZ_125_150_Manual_de_reparatie

Index

Preface In the high latitudes of Finland, in the parching heat of Africa, hence, under the most different conditions, the MZ motorcycles run to the satisfaction of their owners. To ensure that the vehicles remain in perfect working order and reliable in service after a long period of operation, involving a certain amount of wear, we issue this Repair Manual to give the necessary instructions to our MZ Workshops at home and abroad.

Repair work is a matter of confidence in several respects:

The safety of the driver depends on the reliability and workmanship of the mechanic. The finding of the actual cause of the trouble ensures that no material is wasted and labour costs are restricted to a minimum.

From these items, 3 advantages result:

No retouching work,
short times of in operation, and
low repair costs!

A good workmanship in repairs largely depends on the use of the special tools and means recommended by MZ. We should like to underline that especially self-service workshops and amateur constructors should bear this in mind in order to avoid considerable additional expenditure of labour and material costs.

Our MZ Workshops may purchase the special tools from the MZ Spare Sales Department - for amateur constructors, there is only the possibility of constructing them with the help of the sketches given in Section 8.2.

We hope this Reference Book offers the required information to the staffs of the workshops contracted for servicing our products at home and abroad, and to the friends of MZ motorcycles throughout the world; and we wish good success to each and all. REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

1 von 345 03.11.2008 01:46

VEB MOTORRADWERK ZSCHOPAU
Betrieb des IFA-Kombinates Zweiradfahrzeuge
Service Department

Table of Contents

- 1. Technical Data
 - 1.1. Engine
 - 1.2. Carburetter
 - 1.3. Electrical Equipment
 - 1.4. Gearbox

- 1.5. Power Transmission
- 1.6. Cycle Parts
- 1.7. Masses (Weights)
- 1.8. Capacities
- 1.9. Dimensions, Measured Values, Diagrams

- 2. Fuel, Lubricants and Fluids
 - 2.1. Fuel
 - 2.2. Two-stroke Engine Oil for Preparing the Fuel-oil Mixture
 - 2.3. Lubricants for Motorcycles Provided with Oil Dosing Equipment
 - 2.4. Amount of Oil in Gearbox
 - 2.5. Lubricants for the Cycle Parts REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

- 2 von 345 03.11.2008 01:46

- 2.6. Shock-absorber Oil - Telescopic Fork
- 2.7. Shock-absorber Oil - Spring-loaded Suspension Units
- 2.8. Lubricant for Contact Breaker
- 2.9. Brake Fluid

- 3. Disassembly of the Engine
 - 3.1. Preliminaries
 - 3.1.1. Right-hand Side of Motorcycle
 - 3.1.2. Demounting the Carburetter
 - 3.1.3. Demounting the Engine
 - 3.2. Dismantling the Engine
 - 3.2.1. Preliminaries
 - 3.2.2. Removing the Clutch Cover
 - 3.2.3. Removing the Clutch and the Primary Drive
 - 3.2.4. Removing the Kick-starter and the Revolution Counter Drive
 - 3.2.5. Removal of the Cylinder Assembly
 - 3.2.6. Engine - Demounting the Dynamo Side
 - 3.2.7. Separating the Two Casing Halves
 - 3.2.8. Removing the Gear-shift Mechanism and the Gearbox
 - 3.2.9. Dismantling the Gear-shift Shaft
 - 3.2.10. Pressing-out the Crankshaft
 - 3.2.11. Demounting the Bearings
 - 3.2.12. Pulling the Bearings from the Crankshaft
 - 3.3. Cleaning all Engine Parts
 - 3.4. Inspections for Wear
 - 3.4.1. Clutch and Clutch Actuation Mechanism
 - 3.4.2. Primary Drive
 - 3.4.3. Kick-Starter
 - 3.4.4. Gears, Shafts and Gear-shift Forks REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis

<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

3 von 345 03.11.2008 01:46

- 3.4.5. Gear-shift Mechanism
- 3.4.6. Crank Assembly
 - 3.4.6.1. Cylinder and Piston
 - 3.4.6.2. Checking Piston and Cylinder
 - 3.4.6.3. Elimination of a Slight Piston Jamming
 - 3.4.6.4. Piston Rings
 - 3.4.6.5. Cylinder Cover
 - 3.4.6.6. Crankshaft
- 3.4.7. Casing and Packings
- 3.4.8. Radial Grooved Ball Bearings for Crankshaft and Gearbox

- 4. Assembling the Engine
 - 4.1. Preliminaries
 - 4.1.1. Selection of Piston and Cylinder
 - 4.1.2. Regeneration of the Cylinder
 - 4.1.3. Selection of the Needle Bearing for the Gudgeon Pin
 - 4.2. Pre-assembling the Replacement Casing
 - 4.3. Preparing the Left-hand Casing Half
 - 4.4. Mounting the Crankshaft and the Gearbox
 - 4.5. Mounting the Right-hand Casing Half
 - 4.6. Mounting Piston, Cylinder and Cylinder Cover
 - 4.6.1. Piston and Cylinder
 - 4.6.2. Cylinder Cover and Compression Ratio
 - 4.7. Mounting the Revolution Counter Drive and the Kick-starter
 - 4.8. Mounting the Primary Drive
 - 4.9. Mounting the Clutch
 - 4.10. Mounting the Engine

5. Cycle Parts

5.1. Rear Wheel Springing and Elastic Rear Engine Support REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis <http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

4 von 345 03.11.2008 01:46

- 5.1.1. Bearing of the Rear Wheel Swing Arm
- 5.1.2. Replacement of the Rubber Bearing - Rear Wheel Swing Arm
- 5.1.3. Demounting and Mounting the Swing Bearing Bolt
- 5.1.4. Mounting the Rear Swing Including the Engine Suspension
- 5.1.5. Rear Engine Suspension
- 5.1.6. Repairing the Spring-loaded Suspension Units
- 5.2. Engine Suspension at the Cylinder Cover

5.3. Telescopic Fork

5.3.1. Steering Bearing

5.3.2. Criteria for Demounting the Telescopic Fork

5.3.3. Demounting and Mounting the Complete Telescopic Fork

5.3.4. Demounting and Mounting the Telescopic Fork Members

5.3.5. Dismantling the Telescopic Fork Members Removed from the Vehicle

5.3.6. Mounting the Telescopic Fork Members and Checking for Wear

5.3.7. Functional Test of the Telescopic Fork

5.4. Fuel Tank

5.5. Fuel Shut-off Cock

5.6. Rear Wheel Drive and Rear Wheel Hub

5.6.1. Dismantling the Rear Wheel Drive

5.6.2. Speedometer Drive

5.7. Replacement of the Wheel Bearing

5.8. Brakes

5.8.1. Internal-expanding Shoe Brake

5.8.2. Disk Brake for the Front Wheel

5.9. Secondary Chain

5.10. Aligning the Wheels, Balancing the Front Wheel

5.11. Exhaust System

5.12. Cable Controls REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis

<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

5 von 345 03.11.2008 01:46

6. Electrical Equipment

6.1. Three-phase Current Dynamo

6.1.1. Mode of Operation

6.1.2. Technical Data

6.1.3. Technical Characteristic

6.1.4. Fault Diagnoses

6.1.5. Behaviour of the Charging Control Lamp

6.1.6. Measuring Instruments

6.1.7. Measurements in the Vehicle

6.1.7.1. Fault Location - Simple Method

6.1.7.2. Fault Location Scheme

6.1.8. Removal from the Vehicle

6.1.8.1. Demounting the Three-phase Current Dynamo

6.1.8.2. Demounting the Rectifier

6.1.9. Dismantling the Three-phase Current Dynamo

6.1.9.1. Stator with Retaining Cap

6.1.9.2. Rectifier

6.1.10. Checking the Components

6.1.10.1. Checking the Rectifier

6.1.10.2. Checking the Stator

- 6.1.10.3. Checking the Rotor
- 6.1.10.4. Checking the Length of the Carbon Brushes
- 6.1.11. Assembling Instructions
- 6.1.12. Important Information
- 6.2. Regulator
 - 6.2.1. Mounting
 - 6.2.2. Maintenance
 - 6.2.3. Adjustment REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

6 von 345 03.11.2008 01:46

- 6.2.4. Damages and Their Causes
- 6.3. Battery
- 6.4. Ignition
 - 6.4.1. Ignition Coil
 - 6.4.2. Contact Breaker
 - 6.4.3. Spark Setting
 - 6.4.4. Sparking-plug
 - 6.4.5. Ignition Line Terminal (Plug Terminal)
 - 6.4.6. Faults in the Ignition System
- 6.5. Lighting and Signalling Installation
 - 6.5.1. Headlamp
 - 6.5.2. Combined Stop, Tail, Number-plate Lighting Fitting
 - 6.5.3. Ignition-light Switch
 - 6.5.4. Switch Combination at the Handle-Bars
 - 6.5.5. Stop-light Switch
 - 6.5.6. Flashing-light Direction Indicator System
 - 6.5.7. Horn
 - 6.5.8. Wiring diagram and Circuit Diagram
- 6.6. Instruments and Indicator Lamps

- 7. Induction System
 - 7.1. Description and Function of the System
 - 7.1.1. Air Filter
 - 7.1.2. Intake Silencer
 - 7.1.3. Connecting Piece to Carburetter
 - 7.1.4. Carburetter
 - 7.1.4.1. Design and Function of the Carburetter
 - 7.1.4.2. Fuel Level - Basic Setting
 - 7.1.4.3. Slow-running Adjustment REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

7 von 345 03.11.2008 01:46

7.1.5. Intake Socket

7.2. Fault Finding Procedure

7.2.1. Too Lean Mixture

7.2.2. Too Rich Mixture

7.3. Oil dosing

8. Special Tools

8.1. List of Special Tools

8.2. Drawings for Special Tools

Fig. 1. ETZ 125/150 with disk brake REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

8 von 345 03.11.2008 01:46

Fig. 2. ETZ 125/150 with drum brake in standard design REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

9 von 345 03.11.2008 01:46

Fig. 3. Exploded view of the EM 125/150 engine REPAIR MANUAL for the MZ motorcycles ETZ 125 and ETZ 150 - Miraculis
<http://www.mz8b.de/miraculis/aw/mz/text/etz15re/etz15re.html>

10 von 345 03.11.2008 01:46