

WORKSHOP MANUAL

VOLKSWAGEN 1200, Type 11, 14 and 15



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W O R K S H O P M A N U A L

VOLKSWAGEN 1200, Type 11, 14 and 15



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Copies of this manual may be purchased from authorized Volkswagen dealers, from selected booksellers and automotive accessories and parts dealers, or directly from the publisher by mail.

This publication is a reproduction of the original Volkswagen service and repair information covering the original removal, installation and adjustment procedures for the 1961 through 1965 Volkswagen Type 1 models: Sedan and Convertible, and Karmann Ghia Coupe and Convertible. Because this manual is a reprint of historic, dated, information it is reprinted here for historical interest only.

The publisher encourages comments from the reader of this manual. These communications have been and will be considered in the preparation of this and other manuals. Please write to Robert Bentley Inc., Publishers at the address listed on the top of this page. This manual was published by Robert Bentley, Inc., Publishers. Volkswagen has not reviewed and does not vouch for the accuracy of the technical specifications and procedures described in this manual. The publisher would like to thank Volkswagen of America, Inc., for its support of this project.

CAUTION—Important Safety Notice

This manual is a reproduction of original, dated material and is for historical reference only. This manual has not been updated or revised to include safety precautions, cautions or warnings, nor does it include technical changes, corrections or updates that may have been made to this information since its original publication. Therefore, procedures, specifications and part numbers are for historical reference only and may be obsolete or unacceptably hazardous by current standards.

Do not use this manual unless you are familiar with basic automotive repair procedures and safe workshop practices. This manual illustrates the workshop procedures required for most service work; it is not a substitute for full and up-to-date information from the vehicle manufacturer or for proper training as an automotive technician. Note that it is not possible for us to anticipate all of the ways or conditions under which vehicles may be serviced or to provide cautions as to all of the possible hazards that may result.

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Your common sense and good judgment are crucial to safe and successful service work. Read procedures through before starting them. Think about whether the condition of your car, your level of mechanical skill, or your level of reading comprehension might result in or contribute in some way to an occurrence which might cause you injury, damage your car, or result in an unsafe repair. If you have doubts for these or other reasons about your ability to perform safe repair work on your car, have the work done at an authorized Volkswagen dealer or other qualified shop.

Before attempting any work on your Volkswagen, read the warnings and cautions on page vi, and any warning or caution that accompanies a procedure in the service manual. Review the warnings and cautions on page vi each time you prepare to work on your Volkswagen.

The publisher cannot be responsible for the result of any error in this manual.

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Manufactured in the United States of America

CONTENTS

Index to Sections:

Engine and Clutch

M

Fuel System

K

Front Axle and Steering

V

Rear Axle

H

Brakes, Wheels and Tires

B

Lubrication and Maintenance

S

Technical Data

T

Electrical System

E

Frame

R

Body

A

CONTENTS

Index to Sections:

Engine and Clutch

M

Fuel System

K

Front Axle and Steering

V

Rear Axle

H

Brakes, Wheels and Tires

B

Lubrication and Maintenance

S

Technical Data

T

Electrical System

E

Frame

R

Body

A

Please read these Warnings and Cautions before proceeding with any maintenance and repair work.

WARNING—

• This Volkswagen Type 1 Workshop Manual is the original service and repair information which was available in 1965. Volkswagen has constantly improved its cars, and these changes, both in parts and specifications, are often applicable to earlier models. This manual has not been updated or revised to include safety precautions, cautions or warnings, nor does it include technical changes, corrections or updates that may have been made to this information since its original publication. Therefore, procedures, specifications and part numbers are for historical reference only and may be obsolete or unacceptably hazardous by current standards.

• Do not re-use any fasteners that are worn or deformed in normal use. Many fasteners are designed to be used only once and become unreliable and may fail when used a second time. This includes, but is not limited to, nuts, bolts, washers, self-locking nuts or bolts, circlips, cotter pins. Always replace these fasteners with new parts.

• Never work under a lifted car unless it is solidly supported on stands designed for the purpose. Do not support a car on cinder blocks, hollow tiles, or other props that may crumble under continuous load. Never work under a car that is supported solely by a jack. Never work under the car while the engine is running.

• If you are going to work under a car on the ground, make sure that the ground is level. Block the wheels to keep the car from rolling. Disconnect the battery negative (-) terminal (ground strap) to prevent others from starting the car while you are under it.

• Never run the engine unless the work area is well ventilated. Carbon monoxide kills.

• Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace when you work near machine tools or running engines. If your hair, clothing, or jewelry were to get caught in the machinery, severe injury could result.

• Finger rings, bracelets and other jewelry should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.

• Do not attempt to work on your car if you do not feel well. You increase the danger of injury to yourself and others if you are tired, upset or have taken medicine or any other substance that may impair you from being fully alert.

• Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the car. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

• Catch draining fuel, oil, or brake fluid in suitable containers. Do not use food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.

• Always observe good workshop practices. Wear goggles when you operate machine tools or work with battery acid. Gloves or other protective clothing should be worn whenever the job requires working with harmful substances.

• Friction materials such as brake and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.

• Disconnect the battery negative (-) terminal (ground strap) whenever you work on the fuel system or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an approved fire extinguisher handy.

• Batteries give off explosive hydrogen gas during charging. Keep sparks, lighted matches and open flame away from the top of the battery. If hydrogen gas escaping from the cap vents is ignited, it will ignite gas trapped in the cells and cause the battery to explode.

• Connect and disconnect battery cables, jumper cables or a battery charger only with the ignition switched off, to prevent sparks. Do not disconnect the battery while the engine is running.

• Do not quick-charge the battery (for boost starting) for longer than one minute. Wait at least one minute before boosting the battery a second time.

• Do not use excessive battery charging voltage. If the battery begins producing gas or boiling violently, reduce the charging rate. Boosting a sulfated battery at a high charging rate can cause an explosion.

• Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times before breaking the bead from the rim. Completely remove the tire from the rim before attempting any repair.

• Greases, lubricants and other automotive chemicals contain toxic substances, many of which are absorbed directly through the skin. Read manufacturer's instructions and warnings carefully. Use hand and eye protection. Avoid direct skin contact.

CAUTION—

• Before starting a job, make certain that you have all the necessary tools and parts on hand. Read all the instructions thoroughly, do not attempt shortcuts. Use tools appropriate to the work and use only replacement parts meeting Volkswagen specifications. Makeshift tools, parts and procedures will not make good repairs.

• Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten fasteners to the tightening torque specification listed.

• Be mindful of the environment and ecology. Before you drain the crankcase, find out the proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.

Foreword

The Volkswagen Beetle's sales success and its dramatic impact on the automotive world is legendary. From its pre-war beginnings through its remarkable ascent from industrially ravaged post-war Germany, the Type 1, or Beetle, went on to sell over twenty million units of production over a span of more than three decades, becoming one of the most significant and influential automobiles of all time.

Volkswagen's elegantly simple, functional design and outstanding sales success produced a vast and loyal following of owners and enthusiasts. More than any of its contemporaries, the Beetle was fun to drive, inexpensive to own and operate, and easy to maintain. These same virtues are the basis for the enthusiasm that continues to surround the cars to this day. Interest in the preservation and restoration of older Volkswagens has never been greater. This manual provides fascinating historical perspective on these early cars, and is a comprehensive source of original technical information.

This manual is the original Volkswagen service and repair information available to the authorized Volkswagen dealer technician in 1965. This manual covers the following Volkswagen Type 1 models produced between 1961 and 1965:

- 1200 Sedan
- 1200 Convertible
- 1200 Karmann Ghia Coupe
- 1200 Karmann Ghia Convertible

Users of this manual are cautioned to be particularly aware of its limitations as a present-day guide to service and repair. Because this manual is a reproduction of dated information, no attempt has been made to revise or update the information to reflect changes in safety precautions, procedures, materials or specifications which may have been made by Volkswagen at a later time. References to procedures, specifications and part numbers are historical and may not accurately represent today's knowledge of workshop practices, assembly materials or repair methods, fluid and lubricant specifications, or important health and safety issues.

Volkswagen improved their cars many times throughout the production cycle. Sometimes these improvements did not coincide with a new model year but were noted by the date of production and the engine or chassis number of the first car to carry the change. Where the point of introduction of an improvement is less clear, the repair information in this manual has been amended to note that it covers "Early" or "Late" models within the 1961 to 1965 range of production.

Robert Bentley, Inc.



Contents: M

Engine

- M-1 Description**
- M-2 Engine Removal and Installation**
- M-3 Engine Disassembly and Assembly**
- M-4 Cooling System**
- M-5 Intake, Exhaust and Heating System**
- M-6 Cylinder Head and Valves**
- M-7 Cylinders and Pistons**
- M-8 Oil Circulation**
- M-9 Crankcase**
- M-10 Crankshaft with Connecting Rods and Camshaft**
- M-11 Engine on Test Bench**
- M-12 Special Hints**

Clutch

- M-13 Description**
- M-14 Clutch Removal and Installation**
- M-15 Clutch Repair (Early)**
- M-15A Clutch Overhaul (Late)**
- M-16 Clutch Release Bearing**
- M-17 Clutch Cable Removal and Installation**
- M-18 Adjustment of Clutch Pedal Free-play**
- M-19 Special Hints**

Automatic Clutch

- M-20 Description**
- M-21 Automatic Clutch Removal and Installation**
- M-22 Starting Clutch Disassembly**
- M-23 Gearshift Clutch Repair**
- M-24 Control Valve Removal and Installation**
- M-25 Clutch Servo and Vacuum Tank Removal and Installation**
- M-26 Cleaning and Adjusting Shift Lever Contacts**
- M-27 Adjustment of Clutch Clearance**
- M-28 Special Hints**
- M-29 Workshop Equipment**

Important — Friction materials such as brake or clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.