

# SERVICE MANUAL

1986 TO 1990 XLH MODELS

OFFICIAL FACTORY MANUAL



HARLEY-DAVIDSON, INC.

# 1986 to 1990 XLH MODELS SERVICE MANUAL

*The maintenance and repair information in this manual applies to the 1986 to 1990 XLH Models*

PRODUCT 1

CHASSIS 2

ENGINE 3

FUEL SYSTEM 4

ELECTRIC  
STARTER 5

DRIVE/  
TRANSMISSION 6

ELECTRICAL 7

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# FOREWORD

This service and repair manual has been prepared with two purposes in mind. First, it will acquaint the reader with the construction of the Harley-Davidson product and assist him in performing basic maintenance and repair. Secondly it will introduce to the professional Harley-Davidson mechanic the latest field-tested and factory -approved major repair methods, We sincerely believe that this manual will make your association with Harley-Davidson products more pleasant and profitable.

## HOW TO USE YOUR SERVICE MANUAL

Your Service Manual is arranged for quick easy reference. This manual is divided into numbered sections. Sections are then divided into subjects. Use this manual as follows:

1. Check the TABLE OF CONTENTS located in the front of each section to find the subject desired.
2. The number listed across from subject consists of the section number and page number within that section.
3. Information is presented in a definite order as follows:

- Specifications
- General
- Troubleshooting
- Adjustment/Testing
- Removal/Disassembly
- Cleaning, Inspection and Repair
- Assembly
- installation

In figure legends, the number following the name of a part indicates the quantity necessary for one complete assembly.

### NOTE

*All information for servicing a part should be read before repair work is started to avoid needless disassembly.*

## PREPARATION FOR SERVICE

Proper preparation is very important for efficient service work. A clean work area at the start of each job will allow you to perform the repair as easily and quickly as possible, and reduce the incidence of misplaced tools and parts. A motorcycle that is excessively dirty should be cleaned before work starts. Cleaning will occasionally uncover trouble sources, Tools, instruments and parts needed for the job should be gathered before work is started. Interrupting a job to locate tools or parts is a needless delay. Special tools required for a job are listed at the end of section 1.

### WARNING

**Gasoline is extremely flammable and highly explosive under certain conditions. Always stop engine and do not smoke or allow open flame or sparks when refueling or servicing the fuel system.**

## SERVICE BULLETINS

In addition to the information given in this Service Manual, Service Bulletins are issued to Harley--Davidson Dealers from time to time, which cover interim engineering changes and supplementary information.

## USE GENUINE REPLACEMENT PARTS

### WARNING

**When replacement parts are required, use only genuine Harley-Davidson parts or parts with equivalent characteristics including type, strength and material . Failure to do so may result in product malfunction and possible injury to the operator and /or passenger.**

To ensure as satisfactory and lasting repair job, follow the manual instructions carefully and use only genuine Harley-Davidson replacement parts, Behind the emblem bearing the words GENUINE HARLEY-DAVIDSON is more than three-quarters of a century of designing research, manufacturing, testing and inspecting experience.

This is your insurance that the parts you are using will fit right, operate properly and last longer. When you use genuine Harley-Davidson parts, you use the best.

## PRODUCT REFERENCES

### WARNING

**Follow the directions listed on all products, Read all labels, warnings and cautions carefully before using.**

When reference is made in this manual to a specific brand name product, tool or instrument, an equivalent product tool or instrument may be used in place of the one mentioned.

## Tools

All tools mentioned in this SERVICE MANUAL with HD or J preceding the part number must be ordered through:

Kent-Moore Allied Division  
Sealed Power Corporation  
29784 Little Mack  
Roseville, Michigan 48066-2239  
Telephone: (313) 774-9500

## Sealing and Threadlocking Products

### LOCTITE PRODUCTS

Some procedures in this manual call for the use of Loctite products. If you have any questions regarding the correct use of the Loctite products or where to obtain them, please call Loctite Corp. at 1-800323-5106

## WARNINGS AND CAUTIONS

Statements in this manual preceded by the words WARNING or CAUTION and printed in bold face are very important.

### WARNING

**Means there is the possibility of personal injury to yourself or others.**

### CAUTION

**Means there is the possibility of damage to the vehicle.**

We recommend you take special notice of these items.

### WARNING

**Proper service and repair is important for the safe, reliable operation of all mechanical products. The service procedures recommended and described in this Service Manual are effective methods for**

performing service operations. Some of these service operations require the use of tools specially designed for the purpose. These special tools should be used when and as recommended. It is important to note that some warnings against the use of specific service methods which could damage the motorcycle or render it unsafe are stated in this Service Manual. However, please remember that these warnings are not all inclusive.

Since Harley-Davidson could not possibly know, evaluate and advise the service trade of all possible ways in which service might be done or to the possible hazardous consequences of each way, we have not undertaken any such broad evaluation. Accordingly, anyone who uses a service procedure or tool which is not recommended by Harley-Davidson must first thoroughly satisfy himself that neither his nor the operator's safety will be jeopardized by the service methods selected.

Wear eye protection while using any of these tools: hammers, arbor or hydraulic presses gear pullers, spring compressors, and slide hammers. Be especially cautious when using pulling, pressing or compressing equipment. The forces involved can cause parts to "fly-out" with considerable force and cause bodily injury.

## CONTENTS

All photographs and illustrations may not necessarily depict the most current model or component, but are based on the latest production information available at the time of publication.

Since product improvement is our continual goal, Harley-Davidson, Inc. reserves the right to change specifications, equipment, or designs at any time without notice and without incurring obligation.

Harley-Davidson products are manufactured under one or more of the following patents: U.S. Patents-2986161, 2987934, 2998809, 3116089, 3144531, 3144860, 3226994, 3229792, 3434887, 3559773, 3673359, 3709317, Des. 225 626.

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