



**UNITED MOTORS SERVICE**  
**TEST**  
**EQUIPMENT**

*Approved*  
**AND**  
*Recommended*

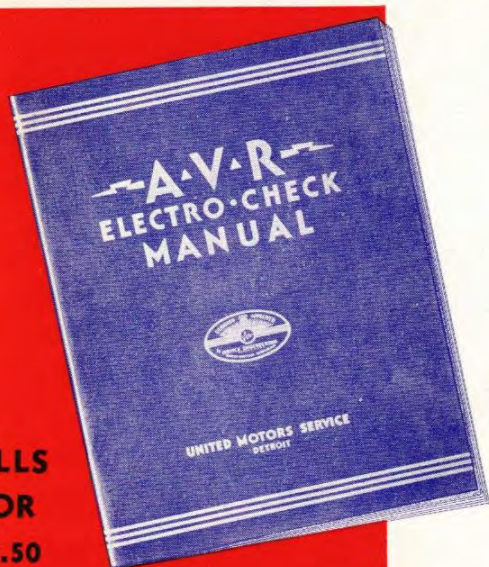


**FOR PACKARD SERVICE STATIONS**

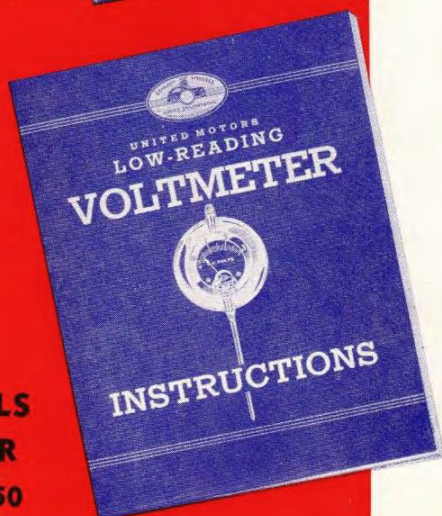


**UNITED MOTORS SERVICE**  
**DETROIT, MICHIGAN**

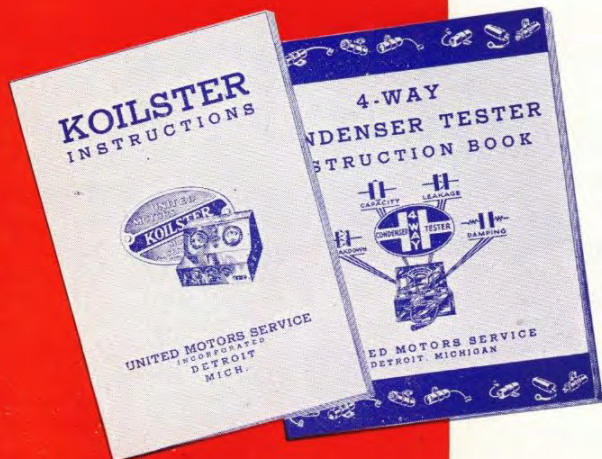
# TYPICAL INSTRUCTION BOOKS FURNISHED



**SELLS  
FOR  
\$3.50**



**SELLS  
FOR  
\$2.50**



## A.V.R. Electro-Check Manual

The A.V.R. Electro-Check Manual gives complete information as to test procedure for all makes of automotive electrical units and circuits. Below is a typical excerpt from this manual:

"A voltage regulator will not increase the capacity of a generator as this is determined by the original design of the generator and the location of the third brush. It will, however, control the output of the generator by automatically decreasing the charging rate when the battery approaches a fully charged condition. When the lights or other electrical loads are turned on, the charging rate will increase to take care of the load, up to the rated output of the generator."

## The Red Head Voltmeter Instruction Book

Resistance creates voltage drop and is one of the most detrimental conditions to all electrical apparatus. Here is a typical quotation from the Red Head Voltmeter Instruction Book:

"Misleading results may be obtained with a low reading voltmeter unless it is correctly used. As explained, a drop in voltage exists along any resistance to which electrical potential is applied. When an indication is given by the meter it means that voltage exists between the test prods. Therefore, good contact must be maintained at the prod points. One of the prods is connected to the terminal post (as this post is the actual metal connected into the unit on which the terminal is located). The other prod is connected with the metal of the conducting wire."

## From the Koilster Instruction Book:

"The average ignition coil has approximately 80 turns of wire on the secondary for every turn on the primary. Therefore, the voltage in it will be about 80 times that of the primary. The voltage across the primary in an ignition circuit is about 150 to 300 volts (the voltage to which the condenser becomes charged as the points open). The voltage in the secondary will therefore be from about 12,000 to 20,000 volts."

## From the Condenser Tester Instruction Book:

"Usually point pitting is caused by troubles other than the wrong condenser capacity, because when the car leaves the factory it has the proper size of condenser installed. In cases where the wrong capacity condenser has been erroneously installed by a service man, it should immediately be replaced with the condenser capacity specified by the car manufacturer."

**COMPLETE INSTRUCTION BOOKS FURNISHED WITH EACH PIECE  
OF EQUIPMENT WITHOUT CHARGE**

# THE UNITED MOTORS EKONOMIST

INCLUDES THE SCIENTIFIC AUTOMOTIVE TESTING INSTRUMENTS ILLUSTRATED AND DESCRIBED BELOW



## KOILSTER

The only coil tester that definitely and accurately discriminates between good and bad coils. The Koilster makes 4 important tests: (1) Short-Circuited Turns, (2) Open Circuits, (3) Insulation Breakdown, (4) Abnormal Core Losses. INDUCTIVE COMPENSATOR ASSURES CORRECT READINGS, under all conditions.



## 4-WAY CONDENSER TESTER

Direct reading, simple in operation. Makes 4 vital tests: (1) Breakdown, (2) Capacity, (3) Leakage, (4) Damping. The only condenser tester which will test a condenser for damping effect, which is the main reason for premature breaker point failure and high speed miss.

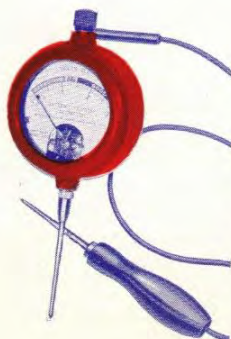
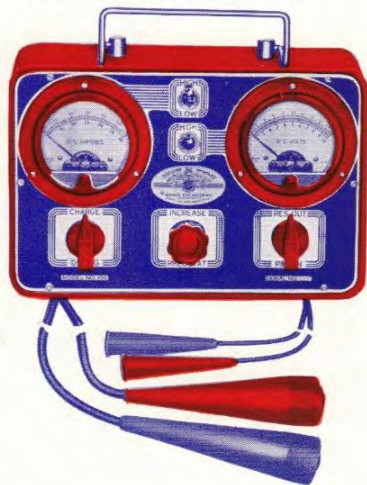
## VACUUM GAUGE



An improved type, mechanical vacuum gauge for carburetion and motor service. Special automatic metering device incorporated in unit to assure accurate readings at any pressure.

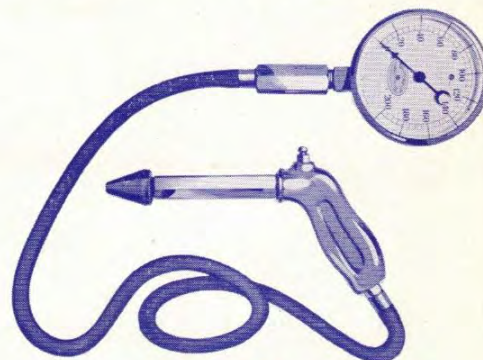
## A-V-R ELECTRO-CHECK

A compact portable unit, combining ammeter, voltmeter and variable resistance. A versatile instrument for setting generator charging rates accurately, adjusting regulators and relays and taking lamp and accessory load readings and many other important tests. Grade "A" Meters.



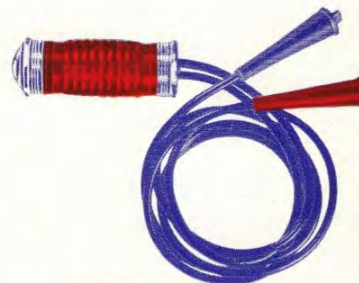
## THE RED-HEAD LOW-READING VOLTMETER

Provides the only means of determining true condition of a battery. Measures voltage across individual cells while battery is in car with starter in operation. Fits the hand and is an ever ready instrument for checking electrical circuits and measuring voltage drop across connections.



## COMPRESSION TESTER

For testing individual cylinder compression pressures. A high-grade 200-pound gauge with gasoline and oil resisting hose and special designed pistol-type gun. Gun specifically designed for universal use in motor compression testing. Quick, positive relief valve. Pressure gauge can be held so car owner can read indicated pressure while test is being made, enabling mechanic to SHOW and SELL.

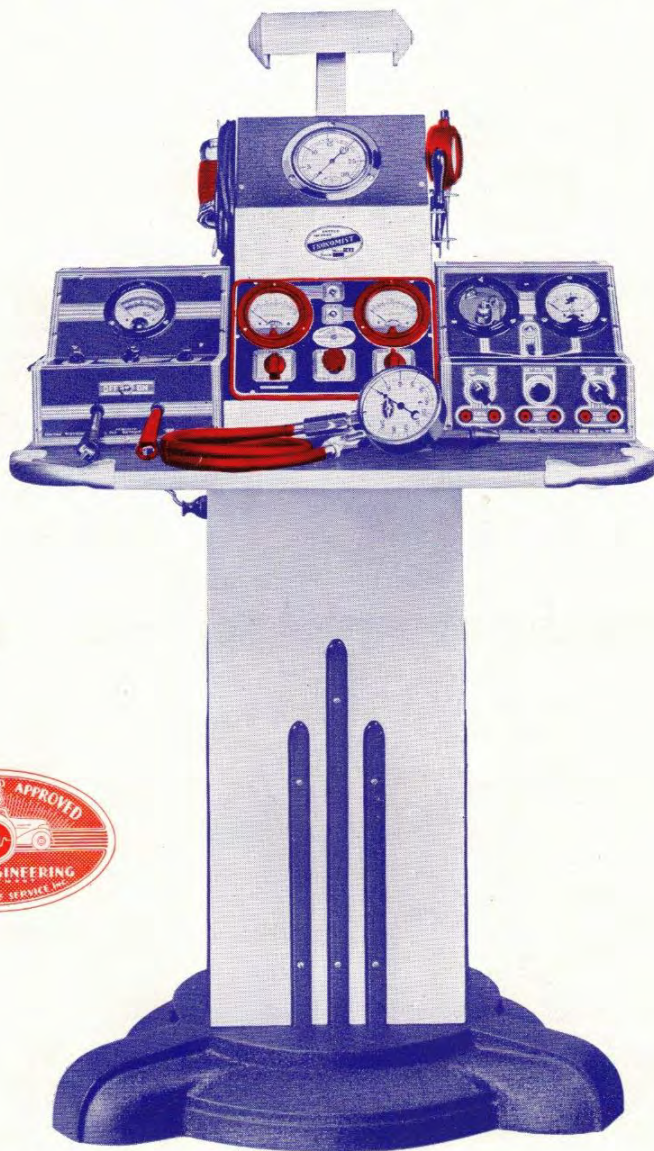


## SYNCROLAMP

Employs the principle of light synchronized with motion. Operates with the engine running and checks the exact time the ignition occurs in relation to piston travel. Shows the exact action of the automatic governor, indicating if the springs are weak, permitting a too rapid advance, or if the governor is in a frozen condition, permitting no advance. Checks the distributor shaft indicating if the bushings are worn or if the shaft is sprung.

# THE UNITED MOTORS **EKONOMIST**

**FOR A COMPLETE MOTOR ANALYSIS**



The Ekonomist combines advanced design precision instruments into one complete portable unit. Can be readily moved over service station floor direct to car to be serviced. Use the direct method—show your customers true operating condition of their motors before and after servicing.

Each individual testing instrument specifically designed to make approved tests, according to specifications of manufacturer of unit being tested.

Complete operating instructions and technical data furnished in book form with each individual unit included with the Ekonomist. Each book is written in concise, understandable language and contains ample diagrams illustrating operation and function of instrument. Comprises a valuable library of modern automobile service which every service station should have.

**CAN BE PURCHASED ON CONVENIENT TERMS IF DESIRED**

NET PRICE LIST--MODEL 148 EKONOMIST AND COMPONENT PARTS

<u>Part No.</u>	<u>Description</u>	<u>Net Price</u> <u>F.O.B. U.M.S. Branch</u>
(1) 47	Red Head Voltmeter	\$12.50
(2) 100	A.V.R. Electrocheck	39.50
(3) 115	Syncrolamp	3.95
(4) 116	Compression Tester	7.50
(5) 143	4-Way Condenser Tester	39.50
(6) 144	Koilster	49.50
(7) 142	Ekonomist Stand Complete with Vacuum Gauge and Overhead Light	42.55
148	Complete Ekonomist (Part No. 148 applies when items (1) to (7) inclusive are sold as a complete Ekonomist) Net Price Complete	\$195.00*

\* Price subject to change without notice.

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