ROBERT BOSCH CORPORATION ROBERT BOSCH

Subsidiary of Robert Bosch GmbH

BROADVIEW, ILLINOIS

Jetronic Service Manual

This is your copy of the new **Robert Bosch Jetronic Service Manual**. It consists of three separately wrapped sections. The **D** and **L Jetronic** sections go in the binder titled **D & L Jetronic** with the yellow plastic tab marked **L-Jetronic** separating them and the Technical Instruction booklet placed at the back of the binder. The **K Jetronic** section goes by itself into the K-Jetronic binder with the yellow Technical Instruction booklet on CIS placed at the end of the volume. Be sure to place the white plastic sheet lifter at the front of each binder to protect the pages.

The manual contains **Equipment Lists** showing the order number for replacement components for all vehicles with Robert Bosch gasoline fuel injection. The **Workshop Manuals** for each vehicle cover full servicing information, including trouble-shooting and test specifications for all system components. This information is valid through the 1977 model year. You will receive a supplement each year containing up-to-date information for all new models.

In order to make the Jetronic Service Manual available as soon as possible, it was necessary to omit one section, the Workshop Manual for Renault vehicles with L-Jetronic, pages 101–128 in the L-Jetronic section. This will be sent to you in the near future.

The yellow peel-off labels supplied with the manual are designed to fit over the wiring harness plug on EFI-equipped vehicles to facilitate terminal identification.

We hope this new Jetronic manual will assist you in the servicing of vehicles equipped with Robert Bosch fuel injection and invite your comments and suggestions for improving the manual.

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Automotive Service Department

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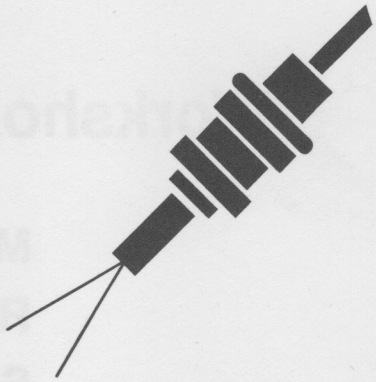
ROBERT BOSCH

D-JETRONIC SERVICE MANUAL



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ROBERT BOSCH
LIMITED WARRANTY POLICY

THE FOLLOWING WARRANTY HAS BEEN DRAFTED TO COMPLY WITH THE NEW FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975. IT REPLACES ANY WARRANTY WHICH MAY BE INCLUDED ELSEWHERE IN THIS PACKAGE. THIS WARRANTY DOES NOT IN ANY WAY REDUCE THE COVERAGE PROVIDED TO YOU UNDER THE WARRANTY IT REPLACES.

The Robert Bosch Corporation warrants the products listed on the reverse side to be free of defects in material and workmanship for the periods also stated on the reverse side. The obligation of the Robert Bosch Corporation under this warranty is limited to replacing any part which, under normal conditions of use and service, proves to be faulty because of any defect in material or workmanship.

To obtain performance of any warranty obligation the consumer should contact the nearest Robert Bosch Representative, whether it be a contracted service account or retail outlet. Further information may be obtained by contacting the Robert Bosch offices listed with telephone numbers on the reverse side. There will be no charge for labor costs incurred in making a warranty repair, if the work is performed by the Robert Bosch Corporation or any of its authorized or contractual Service Representatives. This warranty, however, does not cover labor costs incurred in diagnosis of defects, removal or reinstallation of the equipment, nor does it cover any other contingent expenses.

This warranty is limited to the original purchaser. Specifically excluded from this warranty are products which have been subjected to neglect, abuse or improper application, equipment which has been repaired or adjusted by persons other than authorized or contractual Robert Bosch Corporation Service Representatives, and products in which parts other than those manufactured or supplied by the Robert Bosch Corporation have been used. Also excluded from the coverage of this warranty are standard accessories, components and parts (for example, light bulbs, fuses, etc.) which are subjected to normal wear and tear.

Under no circumstances will the Robert Bosch Corporation be liable for consequential damages or for any expenses incurred by reason of the use or sale of any such equipment. NO EXPRESS WARRANTY OTHER THAN THAT SET FORTH ABOVE SHALL APPLY. ANY WARRANTY IMPLIED BY STATE LAW (WHETHER OF MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR OTHERWISE) SHALL BE EFFECTIVE FOR ANY PRODUCT ONLY FOR THE DURATION OF THE WARRANTY PERIOD LISTED FOR SUCH PRODUCT ON THE REVERSE. Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

ISSUED: DECEMBER 1975
AUTOMOTIVE SERVICE DEPT.

Robert Bosch Warranty Procedure
Automotive Products

All contracted Service Accounts are obligated to service those products manufactured or supplied by the Robert Bosch Corporation, as stated in the contract agreement, in accordance with the **Robert Bosch Limited Warranty Policy**.

All contracted Service Accounts are authorized to accept or reject warranty claims, and in so doing shall be guided by their professional experience in conjunction with any technical information issued by the Robert Bosch Corporation relative to the particular product.

The cost of products or parts thereof and repairs of said products, if diagnosed defective and otherwise qualifying for warranty, **will be reimbursed** to the respective contracted Service Account.

Replacement of a product at the **Service Account's level** is required, if (1) the nature of the defect excludes economical repair, if (2) the total repair costs, at the Service Account's purchasing level, are in excess of the cost of a new product, or if (3) the product is part of a national exchange program.

Repairs of products which are part of a national exchange program established by the Robert Bosch Corporation will be disallowed. Exchange items are to be submitted intact to the Robert Bosch Corporation for warranty consideration.

Any remanufactured automotive product, which is part of a national exchange program, with a remanufacturing date going back 3 or more years from the replacement date will not be processed under warranty.

The Robert Bosch Corporation will reimburse contracted Service Accounts at their Standard Workshop Labor Rates and reimburse, at their cost, the parts used for the repair, plus 10% for handling.

ACCEPTABLE WARRANTIES

The Robert Bosch Corporation will consider the following Bosch products to be **acceptable** if within the terms of warranty:

1. A defective product which is part of a national exchange program
2. A defective replacement part
3. A faulty or damaged component caused by a defect in material or faulty workmanship, either supplied or manufactured by the Robert Bosch Corporation
4. Repairs performed by a contracted Service Account are warranted for a period of 6 months or 6,000 miles. This is assuming that the original product warranty has expired. If a product which has been repaired by a contracted Service Account fails, only defects in material of those parts replaced in the repair will be considered under warranty by the Robert Bosch Corporation. Faulty workmanship, which is also warrantable, is the responsibility of the contracted Service Account.
5. Labor in accordance with industry practices or Flat Rate Labor Schedules issued by the Robert Bosch Corporation (i.e. BB 001-1) for the contracted Service Accounts.

UNACCEPTABLE WARRANTIES

The Robert Bosch Corporation will consider the following to be **unacceptable** under warranty:

Unless requested by the Robert Bosch Corporation, labor costs incurred in diagnosis of defects, removal or reinstallation of the equipment, labor in excess of industry practices or Flat Rate Labor Schedules issued by the Robert Bosch Corporation, and labor for non-warranty work will not be reimbursed.

The following which may be entered on the Warranty Repair Claim Form and/or Warranty Claim Tag describe the reasons for rejection:

Rejection Code	Description
R01	Improper packaging (handling)
R02	Material not available for inspection
R03	Part not supplied by Robert Bosch
R04	Normal wear and tear items which are not subject to warranty
R05	Improper application. Component used for a purpose other than which it was intended.
R06	Improperly capped or protected (safety related)
R07	Information needed for processing was not available
R08	Physically damaged or abused
R09	Failure due to corrosion
R10	Unit was found to be incomplete
R11	Faulty workmanship
R12	Applicable terms of coverage have expired
R13	Met Robert Bosch specifications upon testing
R14	Failed component credited under warranty. Failed components should have been repaired or replaced at dealer level. Remaining component or assembly should not have been submitted for warranty.
R15	Consequential damage; damage to a Robert Bosch product caused by the failure of a product neither manufactured nor supplied by Robert Bosch.
R16	Equipment which has been tampered with or serviced by other than an authorized Robert Bosch Service Account or repaired with parts other than those manufactured or supplied by Robert Bosch.

ISSUING OF THE ROBERT BOSCH WARRANTY REPAIR CLAIM (FORM NO. 224674 6/75)

This form is to be used for authorized warranty repairs of all automotive products manufactured or supplied by the Robert Bosch Corporation.

This form must be used whenever labor costs are incurred in making a warranty repair.

The Warranty Claim Tag, not the Warranty Repair Claim, is to be used for new defective units or spare parts and defective items which are part of a national exchange program.

On Warranty Repair Claims for fuel injection equipment the submitting Service Account is required to enter in the block titled "Bosch Flat Rate Labor Schedule and Operation No." the section and repair operation No.(s) as outlined in the latest "Flat Rate Labor Schedule" (i.e. BB 001-1).

A separate claim must be issued for each repair.

Within 60 days following completion of a warranty claim, the Service Account must mail copies 1 and 2 of the claim form directly to the respective Robert Bosch Regional Service Department. Within the same time period, the Service Account will forward copy 3 (pink packing slip) of the claim form along with the major defective components related to the failure to the respective Robert Bosch Regional Service Department.

If parts of only one claim are returned, it will be sufficient to enclose the pink packing slip in a suitable plastic envelope with the parts. But, if the warranty parts shipment contains the claims and parts of more than one repair, the parts of each repair must be individually packaged (plastic bags, cartons, etc.). The pink packing copies of all claims should be enclosed separately in one suitable plastic envelope. Each claim's parts package must be identified with a suitable tag of the Service Account's choice and must have the respective claim number written on it.

Subsequent to the processing of a Warranty Repair Claim, the claim will be stamped and marked either "Warranty Accepted" or "Warranty Rejected" with the appropriate Rejection Code (RC) entered. Then copy 2 of all Warranty Repair Claims will be returned to the submitting Service Account advising him of the disposition of the claim.

If a warranty repair was performed by an authorized Central Distributor's service dealer and accepted under warranty, then copy 2 of the Warranty Repair Claim will be sent to the service dealer's Central Distributor and copy 3 of the claim form will be returned to the service dealer.

An advisement letter will not be issued unless specifically requested.

Reimbursement will be made directly to the Service Account. If the authorized service dealer is handling and submitting warranty claims via his Central Distributor, then reimbursement will be made directly to the Central Distributor. The Central Distributor is then obligated to make reimbursement to the service dealer within 30 days of receipt of reimbursement from the Robert Bosch Corporation. The labor cost credited by the Robert Bosch Corporation will be at the Standard Workshop Labor Rate of the service dealer and should be reimbursed in full by the Central Distributor to the service dealer. In addition, the Central Distributor will reimburse the service dealer, at the service dealer's net cost, for the parts used for the repair, plus 10% handling.

ISSUING THE ROBERT BOSCH WARRANTY CLAIM TAG (FORM NO. 224610)

This tag is to be used only for automotive products which are part of a national exchange program and products which are non-repairable or new defective.

This tag will not be used for warranty claims involving labor charges.

The redistributing wholesaler (Jobber) will attach **ONE COMPLETED TAG TO EACH DEFECTIVE PART/UNIT** and forward same to his Robert Bosch distributor. The bottom stub will be detached and retained by the wholesaler until the warranty claim is settled.

In case a Robert Bosch warranty claim tag is not available a suitable substitute tag, which has a preprinted reference number, of the Service Account's choice, is acceptable for processing only if this tag contains **all** the required information: Part Number, Quantity, Date Installed, Mileage at Date of Installation, Date Removed, Mileage at Date of Removal, Make of Car, Year or Model. For a warranty claim on a new defective product only the Part Number, Quantity and claim date are required to be entered on the tag. The substitute tag, if used, must be of a size equivalent to a Robert Bosch tag.

Subsequent to the processing of a warranty claim, the tag will be marked either "Warranty Accepted" or "Warranty Rejected" with the appropriate Rejection Code (RC) entered on the claim tag in the block titled "RC". Then a photostat of the tag will be returned to the submitting account advising him of the disposition of the claim. An advisement letter will not be issued unless specifically requested.

The following handling procedures should be adhered to for all warranty claims using either the Warranty Repair Claim or the Warranty Claim Tag:

All required information will be typed or printed clearly with a ballpoint pen. A clear and precise description of the conditions found must be given in the designated field.

All products and parts to be returned to the respective Robert Bosch Regional Service Department for warranty consideration should be shipped the least expensive way, freight PREPAID, within 60 days of the claim date. Freight charges will be reimbursed to the Service Account providing the Robert Bosch Corporation is supplied with copies of the freight bills.

All shipping cartons containing parts for warranty consideration must be clearly identified on the outside of the carton "Warranty Material" and must NOT contain non-warranty products or parts, i.e. cores.

All material rejected under warranty will be held by the Robert Bosch Corporation for a period of 30 days from the date of notification or the date inspected by the Robert Bosch Corporation which will be so indicated on the returned copy of the Warranty Repair Claim or Warranty Claim Tag. If requested within this 30 day period, the rejected parts will be returned to the respective Service Account. If no notification is given to the Robert Bosch Corporation within this 30 day period, parts will be scrapped and units, which are part of a national exchange program, will be used as cores for remanufacturing. After the same 30 day period, core credit will be given for those units retained for remanufacturing.

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264614 1200 1275

Printed in USA

MANUFACTURING DATES

The first three digits of all serial numbers stamped into Robert Bosch products indicate the manufacturing date of the product according to the table below. The designations change every ten years. For the decade 1970 - 1979 the month digits 21 - 32 will be used for January through December and the quarterly digits (3 month period) will be 33 - 36. The year digit precedes the month or quarter digits.

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
January	801	901	021	121	221	321	421	521	621	721	821	921
February	802	902	022	122	222	322	422	522	622	722	822	922
March	803	903	023	123	223	323	423	523	623	723	823	923
April	804	904	024	124	224	324	424	524	624	724	824	924
May	805	905	025	125	225	325	425	525	625	725	825	925
June	806	906	026	126	226	326	426	526	626	726	826	926
July	807	907	027	127	227	327	427	527	627	727	827	927
August	808	908	028	128	228	328	428	528	628	728	828	928
September	809	909	029	129	229	329	429	529	629	729	829	929
October	810	910	030	130	230	330	430	530	630	730	830	930
November	811	911	031	131	231	331	431	531	631	731	831	931
December	812	912	032	132	232	332	432	532	632	732	832	932
Jan.-March	813	913	033	133	233	333	433	533	633	733	833	933
Apr.-June	814	914	034	134	234	334	434	534	634	734	834	934
July-Sept.	815	915	035	135	235	335	435	535	635	735	835	935
Oct.-Dec.	816	916	036	136	236	336	436	536	636	736	836	936

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Robert Bosch Corporation

Conversion to metric (SI) units

With the introduction of the International Standard System (SI), a standardized terminology has been established for the world-wide use of metric units in all technical and automotive fields. The tables below explain these units and give conversion factors for metric SI units to conventional US units, as well as some typical values.

unit	SI name	symbol	former term
length	meter	m	inch
area	square meter	m^2	square inch
volume	cubic meter	m^3	cubic inch
mass (weight)	kilogram	kg	pound
force	newton	N	pound-foot
pressure	bar	bar	pounds/square inch
torque	Newtonmeter	Nm	foot-pound
power	Watt	W	horsepower
potential	volt	V	volt
current	ampere	A	ampere

length

The *meter* (m) is the basis of the entire metric SI system. Like all other SI units, which are derived from the meter, it can be divided or multiplied by any factor of 10, since the system is entirely decimal. This is in contrast to the inch system, where 12 inches = 1 foot and 3 feet = 1 yard, etc.

1 meter (m) = 39.4 inches, 3.28 feet, 1.09 yards

1 centimeter (cm) = $\frac{1}{100}$ meter = .394 inch

1 millimeter (mm) = $\frac{1}{1000}$ meter = .0394 inch

1 kilometer (km) = 1000 meters = .62 miles

area

The SI unit is a *square meter* (m^2). Other units are created by dividing or multiplying by a factor of 10.

1 square meter (m^2) = 10.76 square feet

1 square centimeter (cm^2) = $\frac{1}{10,000}$ m^2 = .155 square inch

volume

The SI unit is the *cubic meter* (m^3).

1 cubic meter (m^3) = 35.31 cubic feet

1 cubic centimeter (cc, cm^3) = $\frac{1}{1,000,000}$ m^3 = .061 cubic inch

1 cubic decimeter (dm^3) = $\frac{1}{1,000}$ m^3 = 1 liter

1 liter = 61.032 cubic inches, 33.8 fluid ounces, 1.05 quarts, .264 gallons

mass (weight)

The SI unit is the *kilogram* (kg). It is based on the meter, since one kg is defined as the mass of one liter of water at 4°C (39°F).

1 kilogram (kg) = 2.20 pounds, 35.2 ounces

1 gram (g) = $\frac{1}{1{,}000}$ kg = .035 ounce

force

The SI unit is the *Newton* (N). It is defined as the force required to move a mass of one kilogram a distance of one meter.

1 Newton (N) = 1 kilogram/meter (kgm) = .224 pound-foot

pressure

The basis for SI pressure values is *Newtons per square meter* (N/m^2). This is the force of one Newton spread over an area of one square meter. The name for this unit is the *Pascal.* Because the value of a Pascal is so small, another unit equal to 100,000 Pascals, called a *bar,* is often used. The bar is roughly equal to one atmosphere (air pressure at sea level) or one kilopond per square centimeter (kp/cm^2) of pressure. The actual values are as follows:

1 Newton per square meter (N/m^2) = 1 Pascal = .00001 bar = .0015 pounds per square inch

1 bar = 100,000 Pascals = 1.02 technical atmospheres (atm) = 1.02 kp/cm^2 = 14.22 psi

torque

The SI unit for torque is the *Newtonmeter* (Nm). It is the force of one Newton applied at a distance of one meter from the axis of rotation.

1 Newtonmeter (Nm) – .737 foot-pounds = 8.85 inch-pounds

power

The SI unit for mechanical or electrical power is the traditional unit of the *Watt* (W). This is the power required to move a weight-force of one Newton a distance of one meter in the time of one second. Future engine and motor power ratings will be in terms of Watts or kilowatts (1000 Watts).

1 Watt = 1 Nm/sec. = .00134 horsepower

1 kilowatt (kW) = 1.34 horsepower

1 PS (European horsepower) = .986 Hp

The units for electrical potential (volt) and current (ampere) are the same units commonly in use in the U.S.A.

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EQUIPMENT LISTS

D-Jetronic

ROBERT BOSCH

MERCEDES-BENZ D-Jetronic Equipment

MODEL	YEAR	CONTROL UNIT 0 280 002...	INJECTION VALVE 0 280 150...	FUEL PUMP 0 580 464...	FILTER 0 450 905...	FUEL PRESSURE REGULATOR 0 280 160...	PRESSURE SENSOR 0 280 100...
280 SE, SEL 300 SEL 3.5 Liter	1971	004	044	005	007	004	012
280 SE, SEL 300 SEL 350 SL 4.5 Liter	1972	004	036	005	007	007	100
450 SE, SEL	1973	008	036	005	007	007	100
	1974	008	036	005	007	007	100
	1975	013	036	005	007	007	122
450 SL, SLC	1973	009	036	005	007	007	112
	1974	014	036	005	007	007	122
	1975	014	036	005	007	007	122

All Mercedes models use diaphram damper 0 280 161 002

THROTTLE VALVE SWITCH **0 280 120...**	TEMPERA-TURE SENSOR I **0 280 130...**	TEMPERA-TURE SENSOR II **0 280 130...**	AUXILIARY AIR VALVE **0 280 140...**	COLD START VALVE **0 280 170...**	THERMO-TIME SWITCH **0 336 003...**	MAIN RELAY **0 332 003...**	BREAKER PLATE W/ CONTACTS **1 230 090...**
042	006	012	007	017	007	021	000
042	006	012	007	017	007	021	000
021	006	012	007	017	007	021	000
021	006	012	007	017	007	021	000
032	006	017	007	015	007	–	000
032	006	017	007	015	007	–	000
032	006	012	007	015	0 280 130 205	–	000