



65.99599-0001B

WARRANTY GUIDE

FOR DIESEL ENGINE

DOOSAN WARRANTY GUIDE

INTRODUCTION

This guidebook has been prepared to provide a convenient reference to DOOSAN service policies and procedures.

The obligations and responsibilities of Doosan Infracore Co., Ltd. (hereinafter referred to "DOOSAN") and DOOSAN's authorized distributor (hereinafter "DISTRIBUTOR") concerning warranty and after sale service are outlined in the DOOSAN Distributorship Agreement, however detailed policies and procedures are necessary to supplement the Distributorship Agreement.

NOTE

If there are any discrepancies between the information contained in this guidebook and provisions in the Distributorship Agreement, the Distributorship Agreement shall prevail.

Also included in this guidebook are sections on DISTRIBUTOR service management operations and information on the responsibilities, organization and operations of DOOSAN Quality Control Department.

This guidebook is a new edition. Revisions and additions will be issued, as necessary, to keep your guidebook current and useable as a guide in your daily activities as service manager.

Engine Division
DOOSAN Infracore Co., Ltd

PRINTED IN KOREA

1. WARRANTY

1.1. New Engine Warranty

1.1.1. Warranty Coverage

DOOSAN warrants DOOSAN Diesel Engine (here in after ENGINE) to be free from defects in material and workmanship within the period as follows;

For Vehicle	For Marine (Heavy/Medium/Light)
<ul style="list-style-type: none"> ● 30months after the shipping date ● 24months after the date of delivery to the customer or 40,000km after operating the vehicle 	<ul style="list-style-type: none"> ● 18months after the shipping date ● 12months after the date of delivery to the customer or 2,000/1,000/500Hrs after operating the ENGINE
For Gen. Drive (LTP)	For Gen. Drive (PRP) and Industries
<ul style="list-style-type: none"> ● 24months after the shipping date ● 18months after the date of delivery to the customer or 500Hrs after operating the generator 	<ul style="list-style-type: none"> ● 18months after the shipping date ● 12months after the date of delivery to the customer or 2,000Hrs after operating the engine

*** Whichever occurs first**

DOOSAN's obligation under this warranty is limited to repairing or replacing, at its option, any parts which are defective in material or workmanship at no cost to the user. DOOSAN will reimburse the DISTRIBUTOR, to the extent established by its policy in effect at the time of delivery, the cost of part and labor to install any repaired or replacement part provided under this warranty. This warranty does not apply in the following cases even though they occur during warranty period.

- (1) Damage or defects caused by accident, misuse, negligence in operation and maintenance not in accordance with the manual provided by DOOSAN or natural calamity.
- (2) Damage or defects caused by using other than Doosan Infracore Co., Ltd. genuine parts or installing attachments to the ENGINE not authorized in writing by DOOSAN.

- (3) Change, alteration or modification to the ENGINE or any of its components/ parts by other than DOOSAN authorized dealers which in the sole judgement of DOOSAN, affects the performance, stability or purpose for which it was manufactured.
- (4) Slight defects which generally do not affect the stability or reliability of the ENGINE.
- (5) Service maintenance, such as engine cleaning, replacement of consumable parts, lubrication etc.
- (6) Consumable articles, such as oil, grease, fan belt, gaskets, fuses, or clutch lining, fuel filter, cables, bulbs, fuel injection nozzles, glow plugs and other similar parts.
- (7) Damage or defects caused by normal wear and tear.

This warranty is expressly in lieu of any other warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose. The warranty provided herein is exclusive remedy for claims based on defects in or non-conformity of Engine, whether the claim is in contract, tort or otherwise, and in lieu of any other remedies, liabilities or right arising by law or otherwise.

1.1.2. Warranty limitations

- (1) Any unauthorized modification (such as increasing power or performance) or improper use, including operation after discovery of defective or worn parts will void this warranty.
- (2) The warranty doesn't cover any incidental, consequential or rated costs such as costs for traveling, transport, extra costs due to the installation in making the products accessible, docking and cranes, lose of use, loss of income, loss of time, loss of property, personal injury, or damages other parts or goods than the indicated products delivered by DOOSAN.
- (3) The warranty for medium duty marine engine will void, if the operating condition of the customer is not satisfied with the following condition(s):
 - Full power is limited to 4 hours out of every 12 hours of operation
 - Reduced power operation must be at or below 200 RPM of the maximum rated RPM
 - Annual operation is limited to less than 3,000 hours

1.1.3. Reimbursement

When an DISTRIBUTOR provides warranty service at no charge to the customer,
For a failure which occurs on an ENGINE that is within the warranty period, the DISTRIBUTOR will be reimbursed for the cost of the repair or the replacement on the following bases;

Parts : The part costs include the defective parts and the damaged parts caused by the parts which the defect is occurred. These are reimbursed for the 120% of the DOOSAN supply price, on CIF... seaport basis, including the management fee and the customs clearance fee.

Labor : The labor rate will be established by agreement of DOOSAN and dealer and generally local labor rate will be applied. This rate is the basis for all labor costs. DOOSAN reimburse for the cost of the warranty repair on the one of following bases.

- In case that DOOSAN has established a certain amount of money to cover the warranty repair costs for the dealer DOOSAN reimburse for the amount so established regardless of the actual time expended for the repair or replacement of the parts.
- When the warranty repair cost should be reimbursed case by case.
The standard labor hour shall be applied which are based on the Time Table issued by DOOSAN. If the labor hours are not specified in the Time Table, the actual labor hours used to repair the parts, which the defect is occurred and the related parts -approved by DOOSAN- are applied.

The costs caused by the lack of trained personnel or proper tooling will not be reimbursed.

Other Charges : IF the warranty services must be carried out by third party other than the dealer or repair shop authorized by DOOSAN because of inevitable cause, consultation with DOOSAN prior to service shall be required for DOOSAN's reimbursement of the charge billed by such third party

1.2. Service Parts Warranty

New DOOSAN service parts purchased from DISTRIBUTORS are warranted against defects in material and workmanship for a period of six(6) consecutive months from either the date of purchase if installed by the customer or the date of installation if installed by the DISTRIBUTOR. When the DISTRIBUTOR repairs or provides replacement parts, at no charge to the customer, for the failure of a service part during the warranty period, reimbursement will be made on the following bases:

Parts : Provided both the defective or failed and replacement part are approved by DOOSAN, the DISTRIBUTOR will be reimbursed for the replacement part at a published (not an effective) price on the date of repair. Warranty coverage will apply only to the defective part or assembly purchased - not to any associated or related part failures.

Labor : None.

Exception : If the defective or failed part is repairable by the DISTRIBUTOR and the repair is less costly than replacement, the DISTRIBUTOR's labor to perform the repair will be reimbursed at 100% of his established and approved warranty labor rate. The labor hours will be those listed in the applicable or equivalent Labor Time Guide Manual or the hours clearly justified and/or reasonably expended. (See 1.4 for Freight and Other Charges)

Remember that the service parts warranty herein covers only those parts that are installed on ENGINES which are out of warranty. Part failures on ENGINES which are within the ENGINE warranty period should be claimed under the ENGINE warranty policy.

Note: Any service parts which was found defective and replaced or repaired as provided herein above shall have their warranty period equal to the remaining warranty period for the original service part purchased and

2. DOOSAN RESPONSIBILITY

2.1. Service Training

From time to time DOOSAN will offer factory training. Depending on the type of the training, it could be held at any one site or combination of sites such as: DOOSAN's warehouse, a motel, a DISTRIBUTOR location, a customer location, etc. DOOSAN will provide DISTRIBUTORS with ample notification time in order that service personnel can be scheduled to attend and attend the training being offered.

2.2. Service Assistance

The DOOSAN service manager has the primary responsibility for the technical product support of DOOSAN ENGINES. He will work closely with DISTRIBUTOR Service management, concerning warranty, service training, assistance in delivery of new ENGINES, etc.

2.3. Service Literature

A. Parts Bulletins and Service Information

The parts or related items could be changed due to the improvements on performance and maintenance without dealer's or user's agreements. If it is necessary to inform the changed facts, the changed information will be informed to the dealer or user. DOOSAN does not have responsibilities for changing new parts, if the modified parts do not adversely affect the performance of Engine or a part thereof directly.

3. CLAIM SUBMITTAL PROCEDURE

3.1. General Information

It is our desire to correct the defective material and/or workmanship in our product and thus to fulfill our warranty obligations in a fair, equitable and timely manner. We are better able to compensate the DISTRIBUTOR for the repair of these defects when the warranty claims that reach us are well prepared and in accordance with the warranty policies and procedures defined herein. All information necessary to properly process the claim must be stated on the CLAIM FORM itself.

Other than performance check sheets, other required forms and photographs, do not attach notes, letters, or other clarifying information to the claim; write the information on the claim or add a second or subsequent page to the claim if necessary.

If there is a question whether to include information on the claim or not, include it.

Claims are never returned due to too much information or are processed and judged on the basis of the minimal information provided.

3.2. Procedure for Ordering Claim Forms

Order your requirements on a "no charge" basis by attached form (DOOSAN CLAIM REPORT).

3.3. Warranty Claim Preparation

The DOOSAN CLAIM REPORT form (hereafter the "CLAIM FORM") is designed to simplify preparation and closely simulate the routine used in processing a regular customer job ticket. It is designed to accommodate only one failure on a given ENGINE.

If more than one failure occurs on the same ENGINE, an additional claim report form must be prepared and submitted under a different request number.

No more than one failure may be listed on a DOOSAN CLAIM REPORT.

If more than one failure is involved, an additional CLAIM FORM or FORMS must be prepared and submitted under a different request. The completed warranty CLAIM FORM must be signed by and dated by an authorized representative of the DISTRIBUTOR and mailed to:

DOOSAN INFRACORE CO., LTD.

ENGINE QUALITY CONTROL TEAM

7-11, HWASU-DONG, DONG-GU, INCHEON, KOREA 401-020

Warranty claims must be received by DOOSAN within forty-five(45) days from the date the DISTRIBUTOR furnished and/or installed the new part to replace the defective part (repair date). Warranty claims received beyond the forty five(45) day period will automatically be denied.

A. Trouble Description

Here, failure information should be shown as follow;

Complaint: Briefly and concisely describe the complaint or failure. Be as descriptive as possible. This is all the information available for DOOSAN to make their decision. Attach clear and in-focus photographs of the defect if available.

Cause : Provide your analysis of what caused the complaint or failure. Include the condition of the failed part if it helps clarify the cause.

Correction: Once the problem has been corrected, provide a concise explanation of how the problem was corrected. This explanation must justify the parts and/or labor requested on the claim or claim will be denied.

B. Part Amount and Parts Total

Enter the part's no., part's name, quantity and warranty unit price of the parts used in the repair. "Part Amount" can be calculated by Quantity and Unit Price.

(Parts Amount = Quantity X Unit Price) The sum of all parts price (Part Amount) should be shown as "PARTS TOTAL" and also be added to "GRAND TOTAL" as one part of it. (GRAND TOTAL = PARTS TOTAL + LABOR TOTAL)

C. Other Cost

All incidental costs are not approved except items that have been discussed previously

D. Labor Amount and Labor Total

The labor cost (Labor Amount and Labor Total) must be determined by one of the three ways described under "New ENGINE Warranty" in Section 1.4 and "New Parts Warranty" in Section 1.5. If a dollar amount has been established, enter it here. Or, if a dollar amount has not been established and a flat rate has been established, enter the allowed hours multiplied by the DISTRIBUTOR's warranty labor rate here. And enter hours clearly justified and/or reasonably expended multiplied by the DISTRIBUTOR's warranty labor rate here. The sum of all labor cost (Labor Amount) should be shown as "LABOR TOTAL" and also be added to "GRAND TOTAL" as one part of it.

(GRAND TOTAL = PARTS TOTAL + LABOR TOTAL)

E. Grand Total

Enter here the Grand Total of part cost(part amount), labor cost(labor amount)and others cost.

G. DISTRIBUTOR Signature and Date

The DISTRIBUTOR's authorized signature and date of claim must appear here. This indicates compliance with current warranty policies and limitations. An unsigned claim is not an official request for warranty consideration and will be returned to the DISTRIBUTOR for his signature. The date below the signature should be the actual date signed. Individuals authorized to sign warranty claims by the DISTRIBUTOR should be fully aware of and understand the implications associated with knowingly providing inaccurate or false information. The falsification of warranty claims in any manner, if discovered by DOOSAN through any means, can cause contract termination.

3.4. Important Time Limitations Factors

In order to effectively carry out the function of product reliability and product improvement, timeliness is of the utmost importance. The following will review and reemphasize the time limitations which must be adhered to for a claim to be accepted for processing. Failure to adhere to these time limits can cause a claim to be denied or later be reversed.

A. Original Submittal of a Warranty Claim

The claim sheet should be made within 45 days from repair date. The repair date is the last day A/S man work on the job. The claims received after 45 days will not be covered from the warranty.

The claim must be received by the ENGINE Quality & Service Team within 75 days from the failure date. When the repairs are delayed, the proper reasons should be explained. If there were no proper reasons, DOOSAN would not be responsible for the incurred costs.

B. Request for Corrected or Additional Information

If a corrected or additional information is requested, the requested information attached by a copy of the claim will be submitted by the DISTRIBUTOR. The area on which the additional data has been requested will be highlighted. The DISTRIBUTOR will be allowed thirty (30) days from the receipt of the request to provide that information.

Do not prepare a new claim. Warranty claims returned beyond this thirty (30) day limit will be subject to denial.

C. Request for Adjustment, Reinstatement of Claim.

In case of losing the CLAIM SHEET, the request of re-claim must be made within 75 days from the date that the distributor signed the SHEET.

Note: When the claim is not approved, the formal objection must be made by the claimant within 30 days from the date when the claimant was informed of such rejection, by submitting the CLAIM FORM with "RE-CLAIM" typed on it to DOOSAN.

3.5. Highlights of Claim Submittal

- Use current warranty CLAIM FORM
- Prepare a separate claim for each failure/ repair.
- Type the claim or print neatly
- Make sure the ENGINE or the part is within warranty period

- Attach photographs if they support the failure description
- Explain failure and repair description of problem
- Attach copies of outside invoices for parts and service
- Claims must show delivery date, failure date and repair date.
- Claims must be signed and dated
- Submit claims promptly so that they reach DOOSAN within forty-five(45) days of the repair date (maximum time)
- Lamps and v-belts are expendable items and are considered the responsibility of the customer under maintenance
- Diagnostic time is not a warranty reimbursable item

3.6. Removed Parts Return Program

DOOSAN has established the Removed Parts Return Program for the purpose of requesting selected parts from DISTRIBUTOR. By various departments, such as Quality Control, Technical Research, and DOOSAN's vendors, these parts are utilized for defect analysis, quality control analysis and product evaluation. Furthermore, these are used to determine future training needs by the service training personnel.

A. Storage and Disposition of Removed Parts

In case that the removed parts are damaged or not shipped to DOOSAN by the require date it will be excepted from the warranty. It is possible for dealer or user to throw away removed parts after 180 days.

B. Return of Removed Parts

All the removed parts requested by DOOSAN must be shipped to the designated address within 10days from the date requested.

- 1) The distributor should attach the tags to all the removed parts. If not available ,the explanation should be included. DOOSAN recommends the use of the Removed Part Tag included the following information.

- Distributor Code

- Claim Number
- ENGINE NO
- ODOMETER/operating time
- PART NUMBER
- Repair Date
- Broken date

The Removed Part Tags are available from DOOSAN.

2) Shipping Requirement

The following procedures must be followed when parts are shipped.

- Parts to be shipped must be clean and drained lubricants or fluids thoroughly from components.
- To prevent damage in transit, the parts should be wrapped and tightly packaged.
- Do not ship including any potentially hazardous material.
- The Removed Part Tag must be completely filled out and attached to the part being returned.

3) Charge Back Procedures

Warranty claims will be charged back to the Distributor after warranty obligations were fulfilled by DOOSAN, if one of the following cases shall be found:

- Removed part is not shipped within 10 days from shipping request date
- Part is not defective.
- Incorrect part was shipped.
- Part was damaged due to abuse.
- Part was damaged during repair.
- Part is not a DOOSAN genuine part.
- Part was damaged during shipment.

Part was not covered by warranty obligation pursuant to Clause 1.1 Warranty or Clause 1.2 Warranty limitations.

DOOSAN CLAIM REPORT

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UNIT : US DOLLAR

DISTRIBUTOR NAME			DCR NO.		CUSTOMER NAME		MODEL.		ENGINE NO.		MONTH / DAY / YEAR					
											DELIVERY DATE					
MF	ODOMETER READING	CLAIM TYPE	CAUSE CODE	CAUSAL PART NO.		PLATE NO		FAILURE DATE		WRITTEN DATE						
NO.	PF	PART NO.	Q'TY	UNIT PRICE	PART AMOUNT	PART NAME/SUBLET EXPLANATION		OPERATION NO.	HOURS	LABOR AMOUNT						
01																
02																
03																
04																
05																
06																
07																
08																
				PARTS TOTAL				LABOR TOTAL								
TROUBLE DESCRIPTION												DISTRIBUTOR		GRAND TOTAL		
												SIGNATURE				
												JUDGEMENT				
												APPROVED	ADJUSTMENT	CODE	PARTS	LABOR
												REJECTED	DENIED			
DOOSAN SIGNATURE												TOTAL				



SUPPLEMENT

◎ DOOSAN ORGANIZATION AND OPERATIONS

1. Organization and Function

(1) Sales Department

- Sales Diesel Engines for Vehicle, Industrial, and Marine application
- Overseas Service - Maintenance Service Support
 - Warranty and Claim Processing
 - Service Training

(2) Quality Control Department

- Product Quality Control
- Product Inspection and Evaluation
- Quality Assurance Test
- Quality Engineering Support

(3) Design and Development Department

- Design and Application Engineering
- Technical Back-up for Installation and Operation

SERVICE MANAGER'S GUIDEBOOK

2. Operations

(1) Working Hours (Local Time)

Our offices are open Monday through Saturday.

- Monday through Friday : 08:00 - 19:00

- Saturday : 08:00 - 12:00

(2) Address, Telephone, Fax. and E-mail Address

Refer to DOOSAN homepage

Domain address : <http://www.dhiltltd.co.kr>

<http://www.enginepark.co.kr>

<http://www.enginepark.com>

<http://service.dhiltltd.co.kr>

<http://doosaninfracore.co.kr>