

WARRANTY

POLICY AND PROCEDURE

KOHLER
ENGINES

A. The Warranty Decision

Warranty decisions must be based on careful examination of the facts and circumstances surrounding the warranty request. The warranty covers defects in material or workmanship, so you must try to decide if the failure resulted from a manufacturing defect and is eligible for warranty consideration. If you feel that a decision will be difficult, or the customer is disputing your decision, complete an Engine Inspection Data Record (TP-2435), as shown on pages 17-19, and follow a systematic analysis procedure.

1. Complete the Owner's Information portion of the Engine Inspection Data Record when the customer brings the unit in for consideration.
2. Inspect the unit as delivered and complete the Air Filter Assembly, Crankcase Oil, Engine Cooling System, and Governor sections of the Engine Inspection Data Record.

NOTE: Experience has shown that the information gained from these sections frequently will lead to the cause of the failure, and will determine what corrective action must be performed to prevent repeat failures.

3. Carefully disassemble the engine and check components for any unusual markings or wear patterns.
4. Take the necessary measurements and enter them in the proper sections in the Engine Inspection Data Record. Compare the measurements against published specifications in Kohler service literature to identify parts that may require rework or replacement.

If your analysis points to a deficiency in engine care or maintenance, recommend to your customer the preventive measures that must be performed to prevent repeat failures.

If there is a question whether the repair is covered by the Kohler Limited Engine Warranty, contact your Kohler Distributor to assist you in the analysis and warranty decision.

If, after reviewing the matter with the Kohler Distributor representative, a warranty decision still cannot be made, have the representative follow the "chain of command" until a decision is reached. Remember, **always** keep the customer advised as to what is being done, and why. This will show the customer full consideration is being extended and will demonstrate our mutual concern.

B. Pre-Sale Disclosure Requirement

One of the provisions of the Magnusson-Moss Consumer Products Warranties Law is that a retail seller of consumer products must make the text of the warranty available for review by the prospective buyer prior to sale. To help you comply with this law, the warranty statements for each model series are printed at the back of the owner's manual for that series. All of the warranty statements are included in Section 2 of this booklet.

C. Warranty Responsibility Begins Before Delivery

Each Kohler Service Account is responsible for preventing new engines (and parts) from deteriorating in storage, and also for preparing new engines for delivery. Failure to adequately protect and store engines and parts will result in unnecessary expense to the dealer, and will inconvenience and annoy customers. Successful service accounts have proven that the minimal investment involved in preparing an engine prior to delivery eliminates unnecessary service calls and results in improved over-all profit. Before turning an engine over, review the Owner's Manual with the customer—stress the importance of good maintenance and explain the warranty.

KOHLER COURAGE PROTM SV810-840 ENGINE LIMITED WARRANTY

Kohler Co. warrants to the original retail consumer that each new COURAGE PROTM engine sold by Kohler Co. will be free from manufacturing defects in materials or workmanship in normal residential homeowner service for a period of two (2) years from date of purchase, provided it is operated and maintained in accordance with Kohler Co.'s instructions and manuals. If used commercially the COURAGE PROTM engine is covered by a one (1) year limited warranty.

The warranty period begins on the date of purchase by the original retail consumer or commercial end user. "Residential homeowner service" means residential use by a retail consumer. "Commercial use" means all other uses, including use for commercial, or rental purposes. Once in commercial use, the engine will thereafter be considered a commercial use engine for the purposes of this warranty.

Our obligation under this warranty is expressly limited, at our option, to the replacement or repair at Kohler Co., Kohler, Wisconsin 53044, or at a service facility designated by us of such parts as inspection shall disclose to have been defective.

EXCLUSIONS:

Mufflers on engines used commercially (non-residential) are warranted for 90 days from date of purchase.

This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

The following items are not covered by this warranty:

Engine accessories such as fuel tanks, clutches, transmissions, power-drive assemblies, and batteries, unless supplied or installed by Kohler Co. These are subject to the warranties, if any, of their manufacturers.

KOHLER CO. AND/OR THE SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, including but not limited to labor costs or transportation charges in connection with the repair or replacement of defective parts.

IMPLIED OR STATUTORY WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is any one authorized to make any on our behalf.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitation 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.

TO OBTAIN WARRANTY SERVICE:

Purchaser must bring the engine to an authorized Kohler service facility. To locate the nearest facility, visit our website, www.kohlerengines.com, and click on SALES AND SERVICES to use the locator function, consult your Yellow Pages or telephone 1-800-544-2444.

ENGINE DIVISION, KOHLER CO., KOHLER, WISCONSIN 53044

COMMAND PRO/Command/Magnum/OHC Warranty Statement Limited 2 Year COMMAND PRO/Command/Magnum/OHC Engine Warranty

Kohler Co. warrants to the original consumer that each new COMMAND PRO/Command/Magnum/OHC engine sold by Kohler Co. will be free from manufacturing defects in materials or workmanship in normal service for a period of two (2) years from date of purchase, provided it is operated and maintained in accordance with Kohler Co.'s instructions and manuals.

Our obligation under this warranty is expressly limited, at our option, to the replacement or repair at Kohler Co., Kohler, Wisconsin 53044, or at a service facility designated by us of such parts as inspection shall disclose to have been defective.

EXCLUSIONS:

Mufflers on engines used commercially (non-residential) are warranted for one (1) year from date of purchase, except catalytic mufflers, which are warranted for two (2) years.

This warranty does not apply to defects caused by casualty or unreasonable use, including faulty repairs by others and failure to provide reasonable and necessary maintenance.

The following items are not covered by this warranty.

Engine accessories such as fuel tanks, clutches, transmissions, power drive assemblies, and batteries, unless supplied or installed by Kohler Co. These are subject to the warranties, if any, of their manufacturers.

KOHLER CO. AND/OR THE SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, including but not limited to labor costs or transportation charges in connection with the repair or replacement of defective parts.

IMPLIED OR STATUTORY WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is anyone authorized to make any on our behalf.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitation 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.

TO OBTAIN WARRANTY SERVICE:

Purchaser must bring the engine to an authorized Kohler service facility. To locate the nearest facility, visit our website, www.kohlerengines.com, and click on SALES AND SERVICE to use the locator function, consult your Yellow Pages or telephone 1-800-544-2444.

ENGINE DIVISION, KOHLER CO., KOHLER, WISCONSIN 53044

KOHLER CO.

FEDERAL AND CALIFORNIA EMISSION CONTROL SYSTEMS LIMITED WARRANTY

SMALL OFF-ROAD ENGINES

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Kohler Co. are pleased to explain the Federal and California Emission Control Systems Warranty on your small off-road equipment engine. In California beginning in 2006 "emissions" means both exhaust and evaporative emissions. For California, engines produced in 2006 and later must be designed, built and equipped to meet the state's stringent anti-smog standards. In other states, 1997 and later model year engines must be designed, built and equipped, to meet the U.S. EPA regulations for small non-road engines. The engine must be free from defects in materials and workmanship which cause it to fail to conform with U.S. EPA standards for the first two years of engine use from the date of sale to the ultimate purchaser. Kohler Co. must warrant the emission control system on the engine for the period of time listed above, provided there has been no abuse, neglect or improper maintenance.

The emission control system may include parts such as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included are the hoses, belts and connectors and other emission related assemblies.

Where a warrantable condition exists, Kohler Co. will repair the engine at no cost, including diagnosis (if the diagnostic work is performed at an authorized dealer), parts and labor.

MANUFACTURER'S WARRANTY COVERAGE

Engines produced in 2006 or later are warranted for two years in California. In other states, 1997 and later model year engines are warranted for two years. If any emission related part on the engine is defective, the part will be repaired or replaced by Kohler Co. free of charge.

OWNER'S WARRANTY RESPONSIBILITIES

- (a) The engine owner is responsible for the performance of the required maintenance listed in the owner's manual. Kohler Co. recommends that you retain all receipts covering maintenance on the engine. But Kohler Co. cannot deny warranty solely for the lack of receipts or for your failure to assure that all scheduled maintenance was performed.
- (b) Be aware, however, that Kohler Co. may deny warranty coverage if the engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.
- (c) For warranty repairs, the engine must be presented to a Kohler Co. service center as soon as a problem exists. Call 1-800-544-2444 or access our web site at: www.kohlerengines.com, for the names of the nearest service centers. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding warranty rights and responsibilities, you should contact Kohler Co. at 1-920-457-4441 and ask for an Engine Service representative.

COVERAGE

Kohler Co. warrants to the ultimate purchaser and each subsequent purchaser that the engine will be designed, built and equipped, at the time of sale, to meet all applicable regulations. Kohler Co. also warrants to the initial purchaser and each subsequent purchaser, that the engine is free from defects in materials and workmanship which cause the engine to fail to conform with applicable regulations for a period of two years.

Engines produced in 2006 or later are warranted for two years in California. For 1997 and later model years, EPA requires manufacturers to warrant engines for two years in all other states. These warranty periods will begin on the date the engine is purchased by the initial purchaser. If any emission related part on the engine is defective, the part will be replaced by Kohler Co. at no cost to the owner. Kohler Co. is liable for damages to other engine components caused by the failure of a warranted part still under warranty.

Kohler Co. shall remedy warranty defects at any authorized Kohler Co. engine dealer or warranty station. Warranty repair work done at an authorized dealer or warranty station shall be free of charge to the owner if such work determines that a warranted part is defective.

Continued on next page.

Section 3 – Warranty Procedures

A. Service Information Record (SIR)

KOHLER[®] ENGINES

Service Information Record

SIR Form #:

Central Distributor Name*

REASON FOR SUBMITTAL*

☐ SIR Change ☐ Re-sign ☐ New ☐ Termination (Effective Date)
☐ Change Type
☐ Name ☐ Address ☐ Labor Rate ☐ Ownership ☐ Other:

COMPANY*

☐ Authorized Dealer ☐ Expert Dealer
☐ Specialized Dealer ☐ Other

Current Dealer Warranty Code #

Company Name*

☐ LLC* ☐ Corporation ☐ Partnership ☐ Sole Proprietor ☐ Other

Is your source of supply changing? ☐ Yes

BUSINESS ADDRESS

Country*

Address*

City*

State*

Zip/Postal Code

Phone*

Fax

Business EMail

Year Established

WebSite Address

Type of Internet Connection

☐ Internet High Speed ☐ Dial Up

☒ Please sign me up to receive notification of new or updated service information, bulletins, alerts, new application information, and product specials by email. Kohler will not sell or distribute contact information under any circumstances.

A Service Information Record must be on file at Kohler Co. before a service account will be authorized to do warranty repairs.

Failure to supply or provide a correct Fed. I.D. or Social Security number will result in a 20% net withholding payable to the IRS.

Important: Section 6109 of the IRS Code requires recipients of payments to give their identifying number to payers.

The Service Information Record is an electronic form that is available in our electronic parts lookup system, Kohler PLUS. **You must login** to Kohler PLUS with your user name and password to see the SIR form.

NOTE: Do not return failed parts unless you have received instructions and an EWR Number from the Kohler Co.

Keep a record of the EWR Number for future reference.

NOTE: If you are located outside the continental U.S., send only the completed Warranty Claim and Engine Inspection Data Record to Kohler Co., Engine Warranty, Kohler, WI 53044. If the failed parts are needed to make the warranty decision, Kohler Co. will contact you with specific instruction concerning the return of the failed parts.

H. Disputed, Questionable, Unusual Warranty, or Policy Adjustments

In the event a customer requests or insists on a warranty repair that, in your opinion, is not covered by the Kohler Limited Engine Warranty, offer the customer one of the following options:

1. Repair the engine and charge the customer with the understanding that you will issue reimbursement, if the claim is approved. Complete a Warranty Claim, (see Section 6), and an Engine Inspection Data Record (TP-2435), and have the damaged parts reviewed by your Central Distributor representative. If the claim is approved, have the Central Distributor representative note authorization for the repair, reimburse the customer for the charges, and send the completed Warranty Claim and Engine Inspection Data Record to Kohler Co., Engine Warranty, Kohler, WI 53044 for payment.
2. If the customer is willing to wait for a warranty decision prior to having the services performed, complete a Warranty Claim, and an Engine Inspection Data Record. Have your Central Distributor representative review the failed parts, Warranty Claim, and Engine Inspection Data Record. If the claim is approved, have the representative note authorization for the repair, perform the repair, and send the completed Warranty Claim and Engine Inspection Data Record to Kohler Co., Engine Warranty, Kohler, WI 53044 for payment.
3. If the customer insists on a decision by Kohler Co., complete an Engine Inspection Data Record and a Warranty Claim. Check the "DISPUTED WARRANTY" box at the top of the claim. Contact the Kohler Service Department for an EWR Number. This number should be placed on the outside of the return carton. Send the completed Warranty Claim, Engine Inspection Data Record, and the relevant engine parts, freight prepaid, to Kohler Co., Engine Warranty – Disputed Claim, Bldg. 604, Kohler, WI 53044.

4. If a customer insists on warranty coverage for a situation you feel is not covered by the standard policy, contact the Central Distributor for a "Policy Adjustment" Authorization. The Central Distributor must fill out and sign the Policy Adjustment Explanation Form (TP-2466-A shown on page 29) and attach it to the Warranty Claim.

Kohler Co. will advise you regarding its decision. If the repair in question is determined to be covered by warranty, payment will be made. If the customer has already paid for the repair, issue reimbursement for all charges paid relating to the Kohler engine warranty.

If, for some reason, the request for warranty consideration is denied, or a partial allowance is offered, you will be advised of our findings, along with the reasons for our decision.

I. Engines Manufactured Over 3 Years Ago

A verification of the date of purchase (Example: Bill of Sale, Receipt or Invoice) must accompany the Warranty Claim for all engines that are 3 or more years old. The chart on the next page will aid in determining the year of manufacture.

Section 5 – Warranty Exclusion

A. Non-Reimbursable Items

1. Repairs required to correct failures caused by neglect, normal wear, improper lubrication or abuse. Kohler Co. warranty covers defective workmanship and materials only.
2. Parts and labor supplied by the user or any unauthorized repair facility.
3. Normal maintenance, adjustments, or consumable items, such as fuel, spark plugs, filters, lubricating oil, and hoses.
4. Parts and accessories not installed or supplied by Kohler Co.
5. Rental of another engine or other related equipment while engine repairs are in progress.
6. Telephone, facsimile, and/or other related communications expenses.
7. Replacement and accessory parts not supplied by Kohler Co. and damages resulting from their installation.
8. Loss of revenue resulting from the failure.
9. Loss or damage to personal property.
10. Transportation charges accrued during transportation of failed unit or equipment.*

*Expert classifications are exempt.

Section 6 – Claims Procedure

NOTE: Warranty Claims received without required information **WILL BE RETURNED!**

A. Responsibility for Submitting Proper and Completed Warranty Claim Forms

Warranty repairs and completion of properly filled out warranty claim forms are the responsibility of the authorized service outlet. It is the responsibility of the service outlet to review each claim for thoroughness, authenticity, and accuracy of information. Warranty claims will not be considered complete unless all the information requested on the claim form is filled in. Incomplete or inaccurate claims will be returned to the service outlet. Claim forms received more than 30 days after warranty repairs are completed will not be accepted. Complete engines, short blocks, and miniblocks must have Central Distributor approval for non-expert dealers, or certified Expert Dealer approval with signatures. When authorized, the signature of the person authorizing, and date, must be on the warranty claim.

B. Warranty Claim Report Forms

Three different Warranty Claim Report Forms are accepted by Kohler Co. – the OPEESA (Outdoor Power Equipment and Engine Service Association), the OPEI (Outdoor Power Equipment Institute), and Electronic.

The electronic Warranty Claim is available in Kohler PLUS. **You must login** to Kohler PLUS with your user name and password to see the electronic Warranty Claim.

The OPEESA Warranty Claim Form is illustrated, and instructions for completing it are given. Please follow the instructions when making out the report. Do not combine claims for more than one repair on a single form – each claim must be filed separately. Claims must be received at Kohler Co. **within 30 days** after warranty repairs are made. Send the white copy of the paper claim directly to Kohler Co., Engine Warranty, Kohler, WI 53044, except in cases where Central Distributor approval for non-expert dealers, or certified Expert Dealer approval is required. (See Section A.)

C. Warranty Claim Instructions

The Outdoor Power Equipment and Engine Service Association, in conjunction with the manufacturers who use it, have developed the following warranty claim form. Follow these instructions when filling out a paper claim.

The part number should normally not be an assembly part number. The actual part number of the component within an assembly that failed should be shown. For example, a wrist pin retainer failure caused extensive damage to the cylinder bore requiring a miniblock assembly. The Kohler Engine Failure code in this case would be the part number of the retainer, 235811. You would **not** enter the miniblock assembly number in this case.

4000 for removing and reinstalling (R & R) as a separate item. Check against the flat rate maximums.

The flat rate times have been established using facilities and equipment that all Service Accounts should have available. If your repair time exceeds the flat rate, and additional labor allowance is requested, please send a note of explanation so consideration can be given.

The only time an assembly number should be entered is when no parts breakdown is given for the failed assembly (Example: a magnet came loose on a flywheel. There is no service part number for the flywheel magnet, therefore, the part number for the flywheel would be listed).

Important: Using the incorrect Flat Rate Schedule could result in incorrect payment and/or delay in the processing of your claim.

Box 10: Enter failure suffix from listing on claim, also shown below.

Box 13: Fill in freight allowance details if applicable.

Box 11: Conditions Found – Describe in detail the failure. If more space is required attach a note.

Box 14: Enter labor time in hours and decimal fractions (Example: 1.5).

Probable Cause of Failure – List in detail the most probable cause.

Box 15: Leave blank – factory use only.

Box 12: Enter the job numbers of work performed as stated in the Flat Rate Schedule and indicate time spent in repairing the engine. When it becomes necessary to remove an engine to make the repair, enter job number

Box 16: List part numbers and description of each part replaced.

Box 17: Must be filled in and signed by a Central Distributor representative for non-expert dealers, or a certified Expert Dealer when any short block, miniblock, or engine is replaced. An Engine Inspection Data Record (TP-2435) should be completed and submitted with the Warranty Claim.

Failure Type Suffix			
AW	Assembled Wrong	LK	Leaked
BC	Broken/Cracked	MI	Missing
BL	Blown	ML	Magnets Loose
BT	Bent/Twisted	NS	Not Seating
CD	Porous/Casting Deficiency	NY	Noisy
CL	Came Loose/Off	OA	Out of Adjustment
CP	Corroded/Pitted	OB	Out of Balance
DE	Dented	PK	Packing Material Defective
EF	Electric Failure	PM	Part Made/Machined Incorrectly
FM	Foreign Material	PP	Paint Peeling
IF	Improper Fit	SD	Shipping Damage
		SG	Scored/Galled
		SS	Stuck/Seized
		ST	Stripped
		TR	Trucking Damage
		UO	Unknown/Other
		VC	Valve/Clearance
		WW	Weak Weld
		WN	Worn
		WP	Warped
		ZZ	Others

Section 7 – Reimbursement Procedures

A. Policy

Kohler Co. will reimburse only registered service outlets for warranty services performed provided a completed warranty claim is submitted and approved. Method of reimbursement is by direct check within the United States or Canada. International service outlets will be reimbursed through their local Central Distributor.

1. U.S.A. & CANADA, NON-EXPERT

Standard Warranty Repair - Parts and Labor (no engines)

Total Credit = Net price of replacement part +
Parts Profit (a),(b),(c),(d) + Posted Full Shop Labor Rate
(U.S. dollars) + Miscellaneous Costs (e) +
Freight (short blocks & miniblocks only, see section C).

B. Reimbursement Calculation Details

Warranty reimbursement is calculated by using the following formulas for each worldwide service outlet classification.

- (a) Parts Profit % may vary depending on individual state regulation.
- (b) Short Blocks or Miniblocks = 10%.
- (c) Parts Profit for Authorized Service Outlet = 20%.
- (d) Parts Profit for Specialized Service Outlet = 10%.
- (e) Miscellaneous Cost = Cylinder honing and crankshaft grinding.

B. Engine Inspection Data Record

KOHLER ENGINES

Engine Inspection Data Record

To facilitate accurate evaluation:

- enter as much information as possible
- provide as many dimensions as possible.

- mark location of break or crack on drawing
- record conditions found with check mark (X) whenever possible

SECTION 1

OWNER AND EQUIPMENT INFORMATION

Owner's Name		Street Address	
City	State	Zip Code	Phone No. () -
Model No.	Spec. No.	Serial No.	
Type Equipment		Manufacturer of Equipment	
Date Purchased	Date Failed	Hours Used	Times Used
Previous Repairs <input type="checkbox"/> YES <input type="checkbox"/> NO		Warranty Claim No.	

USAGE/MAINTENANCE INFORMATION

Oil type: <input type="checkbox"/> 30W <input type="checkbox"/> 10W-30 <input type="checkbox"/> 10W-40 <input type="checkbox"/> 5W-20 <input type="checkbox"/> 5W-30 <input type="checkbox"/> Other _____	Hours since last oil change? _____
How often is the oil level checked? <input type="checkbox"/> Every time <input type="checkbox"/> Never <input type="checkbox"/> Other _____	Must oil be added between changes? <input type="checkbox"/> Yes <input type="checkbox"/> No How much? _____
Was an oil additive used? <input type="checkbox"/> Yes <input type="checkbox"/> No What brand? _____	How often is the air cleaner checked? Precleaner _____ Element _____
Was it ever replaced or cleaned? Precleaner: <input type="checkbox"/> Yes <input type="checkbox"/> No Element: <input type="checkbox"/> Yes <input type="checkbox"/> No	How recently? Precleaner _____ Element _____
Were any adjustments made to the carburetor or governor? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify _____	By whom? <input type="checkbox"/> Customer <input type="checkbox"/> Dealer

PRELIMINARY EXAMINATION

Air Cleaner Assembly

Type: <input type="checkbox"/> Dry <input type="checkbox"/> Precleaner <input type="checkbox"/> Remote <input type="checkbox"/> Oil Bath <input type="checkbox"/> Tri-Phase
1. Wing Nut: <input type="checkbox"/> Factory Original <input type="checkbox"/> Non-standard replacement
Wing nut seal: <input type="checkbox"/> Intact <input type="checkbox"/> Separated <input type="checkbox"/> Missing
2. Outer Cover: <input type="checkbox"/> Good condition <input type="checkbox"/> Center hole oblong <input type="checkbox"/> Other damage (specify) _____
3. Precleaner: <input type="checkbox"/> Clean <input type="checkbox"/> Dirty <input type="checkbox"/> Plugged <input type="checkbox"/> Oiled <input type="checkbox"/> Dry <input type="checkbox"/> Torn <input type="checkbox"/> Other damage _____
4. Inner Cover: <input type="checkbox"/> Retaining seal/nut in place <input type="checkbox"/> Center hole oblong <input type="checkbox"/> Distorted <input type="checkbox"/> Other damage _____
5. Element: <input type="checkbox"/> Clean <input type="checkbox"/> Dusty <input type="checkbox"/> Dirty <input type="checkbox"/> Plugged <input type="checkbox"/> Missing <input type="checkbox"/> Dry <input type="checkbox"/> Non-factory replacement <input type="checkbox"/> Other damage _____
6. Element seals: <input type="checkbox"/> Pliable <input type="checkbox"/> Hard <input type="checkbox"/> Sealing <input type="checkbox"/> Leaking <input type="checkbox"/> Other damage _____
7. Air cleaner base: <input type="checkbox"/> Tight <input type="checkbox"/> Loose <input type="checkbox"/> Screw(s) missing <input type="checkbox"/> Distorted/Cracked <input type="checkbox"/> Breather hose detached <input type="checkbox"/> Other damage _____

Crankcase Oil

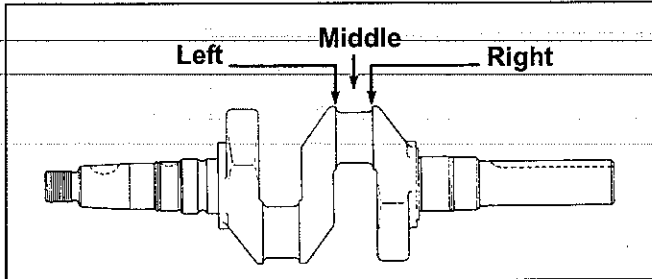
1. Amount on dipstick: <input type="checkbox"/> Overfilled <input type="checkbox"/> Full <input type="checkbox"/> Above "add" <input type="checkbox"/> Below "add" <input type="checkbox"/> No reading
2. Condition of oil: <input type="checkbox"/> New <input type="checkbox"/> Used <input type="checkbox"/> Dirty <input type="checkbox"/> Black <input type="checkbox"/> Thick/Sticky <input type="checkbox"/> Burnt smelling <input type="checkbox"/> Fuel diluted
3. Quantity of oil: Amount drained: _____ Amount req'd: _____
Observations: <input type="checkbox"/> Metal chips present <input type="checkbox"/> Sludge present <input type="checkbox"/> Non-factory oil filter

TP-2435

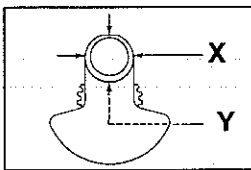
(Continued on page 2)

Tear Down Analysis (continued)

CRANKSHAFT ROD JOURNAL



	CYLINDER 1	CYLINDER 2
Scored	<input type="checkbox"/>	<input type="checkbox"/>
Worn	<input type="checkbox"/>	<input type="checkbox"/>
Unmeasureable	<input type="checkbox"/>	<input type="checkbox"/>
Broken	<input type="checkbox"/>	<input type="checkbox"/>
Not Damaged	<input type="checkbox"/>	<input type="checkbox"/>
Others		
Maximum Wear Spec.		



	CYLINDER 1		CYLINDER 2		MAX. OUT OF ROUND
	X	Y	X	Y	
Left					
Middle					
Right					
Max. Taper					

PISTON

Select the following piston type and measure diameter using appropriate method.

Style A

Measure just below oil ring groove and at right angle to piston pin.

Style B

Style C

Measure 1/2 inch above the bottom of the skirt and at right angle to piston pin.

Style D

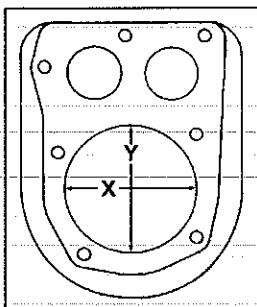
Style E

Measure 6 mm (0.24 in.) above the bottom of piston skirt at right angles to piston pin.

	CYLINDER 1	CYLINDER 2		CYLINDER 1	CYLINDER 2
Scored	<input type="checkbox"/>	<input type="checkbox"/>	Scratched	<input type="checkbox"/>	<input type="checkbox"/>
Worn	<input type="checkbox"/>	<input type="checkbox"/>	Not Damaged	<input type="checkbox"/>	<input type="checkbox"/>
Cracked	<input type="checkbox"/>	<input type="checkbox"/>	Others		
Broken	<input type="checkbox"/>	<input type="checkbox"/>			
Ring Grooves Worn	<input type="checkbox"/>	<input type="checkbox"/>			
Galled	<input type="checkbox"/>	<input type="checkbox"/>			
Discolored	<input type="checkbox"/>	<input type="checkbox"/>			

Piston Diameter

CYLINDER BORE



	CYLINDER 1	CYLINDER 2
Bore Scored	<input type="checkbox"/>	<input type="checkbox"/>
Worn	<input type="checkbox"/>	<input type="checkbox"/>
Not Damaged	<input type="checkbox"/>	<input type="checkbox"/>
Others		
MAXIMUM WEAR SPEC.		

	CYLINDER 1		CYLINDER 2		MAX. OUT OF ROUND
	X	Y	X	Y	
Top					
Center					
Bottom					
Max. Taper					

Courage XT-Series, Courage Single & Command Single Flat Rate Schedule		Maximum Time (Hr.)			
Job No.	Description	XT-6, XT-7	SV470-620	CH5,6	CH11-16 CV11-495
	Major Repairs				
4000	Engine R & R	0.4	1.0	1.0	1.0
4001	Generator Set R & R – Motor Home	–	–	2.0	2.0
4002	Engine R & R From Generator Set	–	–	1.0	1.0
4010	Short Block Replacement	–	2.0	1.0	1.5
4012	Major Overhaul (Includes Valve Service)	–	–	3.0	4.0
4013	Minor Overhaul (Excludes Valve Service)	1.0	–	2.5	3.0
4015	Connecting Rod	–	1.8	2.0	2.5
4016	Piston and/or Rings	–	1.8	2.0	2.5
	Crankshaft				
4020	Crankshaft & Main Bearing R & R	–	1.5	2.5	3.0
4021	Crankshaft – PTO Seal	0.3	0.3	0.5	0.5
4022	Crankshaft – Flywheel Seal	0.4	0.6	1.5	1.5
4023	Crankshaft & Connecting Rod	–	–	2.5	2.5
4024	Balance Shaft/Weights – R & R	–	1.5	–	1.5
	Camshaft & Valves				
4028	Lifters	–	–	–	1.0
4029	Valve R & R (No Grinding)	1.0	1.2	1.0	1.0
4030	Valve Adjustment	0.5	0.5	0.5	–
4031	Valve Grinding	1.2	–	1.2	1.2
4033	Valve Spring Replacement	0.3	–	0.5	1.0
4034	Valve Cover Gasket and/or Breather	0.3	0.3	0.3	0.5
4035	Camshaft R & R	–	1.3	1.5	2.0
4037	Camshaft PTO Seal	–	–	0.5	–
4039	Rocker Arm	0.5	0.6	0.7	0.7
	Ignition				
4046	Ignition Module R & R	0.3	0.3	1.0	1.0
4047	Flywheel R & R	0.4	0.5	1.2	1.2
4048	Spark Advance Module	–	–	–	0.5
	Charging				
4050	Regulator – Test & Replace	–	0.5	–	0.5
4051	Stator – Test & Replace (Includes Flywheel R & R)	–	0.8	1.0	1.5
	Starter				
4060	Retractable – R & R, Replace Rope & Spring	0.5	–	1.0	1.0
4061	Starting Motor – Bendix Type R & R	–	0.3	0.5	0.5
4063	Starter – Bendix Rebuild (Includes R & R)	–	1.0	1.0	1.0
4064	Starter Drive R & R	–	0.7	1.0	1.0
4065	Starter Solenoid R & R	–	–	0.5	0.5
4066	Recoil Cup R & R	0.3	–	–	–
	Fuel System & Air Intake				
4067	Carburetor Solenoid (Includes Test)	–	0.3	–	0.3
4070	Carburetor R & R	0.3	0.5	1.0	0.5
4071	Carburetor – Rebuild (Includes R & R)	0.7	1.0	1.5	1.0
4072	Carburetor – Adjust	0.2	0.2	0.3	0.3
4073	Air Cleaner – Damage in Shipment	0.3	–	0.5	0.3
4074	Fuel Tank – R & R	0.5	–	1.0	0.5
4075	Fuel Pump – R & R	–	0.3	0.3	0.3
4078	Primer Assembly R & R	0.2	–	–	–
	Miscellaneous Repairs				
4080	Cylinder Head and/or Gasket	0.7	1.0	1.0	1.0
4082	Blower Housing/Shrouds only – R & R	0.2	0.2	0.5	0.5
4083	Oil Pan, Closure Plate, and/or Gasket – Replace	1.0	0.8	–	1.5
4084	Muffler – Replace	0.2	0.3	0.3	0.3
4085	Governor – Adjustment	0.2	0.3	0.5	0.5
4086	Governor R & R	–	1.1	1.5	2.0
4087	Oil Pump R & R	–	1.4	–	0.5
4088	Crankshaft – Grinding (ENTER NET COST)	–	–	–	–
4089	Crankcase – Boring (ENTER NET COST)	–	–	–	–
4090	Governor Seal Replacement	0.3	–	–	0.8
4091	Oil Sentry/Oil Temp./Oxygen Sensor	–	0.3	0.3	0.2
4096	Cam Followers (Includes Valve Adjustment)	–	1.3	–	–
4106	Control Bracket R & R	0.3	–	–	–
4108	Control Linkage	0.3	–	–	–
4109	Dipstick & Tube	0.1	–	–	–
4110	Fuel Line and/or Filter	0.3	–	–	–
4111	Cooling Fan (Flywheel)	0.3	–	–	–
4112	Breather Assembly Repair	0.5	–	–	–
4113	Breather Hose R & R	0.1	–	–	–
4114	Flywheel Brake Assembly R & R	0.4	–	–	–

Command Twin & Command PRO Twin Flat Rate Schedule		Maximum Time (Hr.)			
		Command Twin		Command PRO Twin	
		CH18-23 CV17-23 CH/CV730-740 CH/CV750	CH/CV25,26 CH/CV745	CH940-980	CV940-980
Job No.	Description				
	Miscellaneous Repairs				
4080	Cylinder Head and/or Gasket – Replace/each	1.0	1.0	1.2	1.2
4082	Shrouds only – R & R	0.5	0.5	0.3	0.3
4083	Oil Pan, Closure Plate, and/or Gasket – Replace	1.0	1.0	1.0	1.0
4084	Muffler – Replace	0.3	0.3	0.3	0.3
4085	Governor – Adjustment	0.5	0.5	0.5	0.5
4086	Governor R & R	1.5	1.5	1.5	1.5
4087	Oil Pump R & R	1.5	1.5	1.5	1.5
4088	Crankshaft – Grinding (ENTER NET COST)	–	–	–	–
4089	Crankcase – Boring (ENTER NET COST)	–	A	–	–
4090	Governor Seal Replacement	0.8	0.8	1.5	1.5
4091	Oil Sentry/Oil Temp./Oxygen Sensor	0.3	0.3	0.3	0.3
4094	Adjust Belt Tension	–	–	–	–
4095	Flywheel Cover	–	–	–	–
4097	Breather Cover R & R	2.0	2.0	0.5	0.3
4100	Lifter Feed Chamber Cover R & R	–	–	2.5	2.5
4101	Oil Cooler R & R	–	–	0.5	0.5
4102	Oil Filter Housing R & R	–	–	0.5	0.5
4103	Oil Filter Adapter R & R	–	–	0.5	–
4104	Backing Plate Shroud Assembly	–	–	2.5	2.5
4105	Valley Baffle R & R	–	–	0.3	0.3
4106	Control Bracket R & R	–	–	0.5	0.5
4107	Oil Reservoir/Gasket R & R	–	–	0.5	–

*Time allowed is for each cylinder.

**Additional 0.5 for 2nd cylinder.

***Additional 0.5 for EFI engines.

¹ECU-Engine Control Unit; TPS-Throttle Position Sensor.

^APlated cylinders cannot be rebored.

Courage Twin, Courage PRO Twin, & Aegis Flat Rate Schedule		Maximum Time (Hr.)			
		Courage Twin	Courage PRO Twin	Aegis	
Job No.	Description	SV710-740	SV810-840	LV560-680	LH630-775
	Miscellaneous Repairs				
4080	Cylinder Head and/or Gasket – Replace/each	1.0	1.0	3.3**	2.5**
4082	Shrouds only – R & R	0.5	0.5	–	0.3
4083	Oil Pan, Closure Plate, and/or Gasket – Replace	1.0	1.0	1.0	1.0
4084	Muffler – Replace	0.3	0.3	0.3	0.3
4085	Governor – Adjustment	0.5	0.5	0.5	0.5
4086	Governor R & R	1.5	1.5	1.5	1.5
4087	Oil Pump R & R	1.5	1.5	1.5	1.5
4088	Crankshaft – Grinding (ENTER NET COST)	–	–	–	–
4089	Crankcase – Boring (ENTER NET COST)	–	–	–	–
4090	Governor Seal Replacement	0.8	0.8	0.8	0.8
4091	Oil Sentry/Oil Temp./Oxygen Sensor	0.2	0.2	0.3	0.3
4094	Adjust Belt Tension	–	–	–	0.7
4095	Flywheel Cover	–	–	2.3	–
4097	Breather Cover R & R	–	–	–	–

*Time allowed is for each cylinder.

**Additional 0.5 for 2nd cylinder.

***Additional 0.5 for EFI engines.

*ECU-Engine Control Unit; TPS-Throttle Position Sensor.

*Plated cylinders cannot be rebored.

Magnum Flat Rate Schedule		Maximum Time (Hr.)		
		Single	Twin	
Job No.	Description	M8,M10, M12,M14,M16	MV16,MV18,MV20	M18 & M20
	Major Repairs			
4000	Engine R & R	1.0	2.5	2.5
4001	Generator Set R & R – Motor Home	2.0	–	2.0
4002	Engine R & R From Generator Set	1.0	–	3.0
4010	Short Block Replacement	3.0	3.0	3.0
4011	Miniblock Replacement	3.5	–	–
4012	Major Overhaul (Includes Valve Service)	5.0	6.0	6.0
4013	Minor Overhaul (Excludes Valve Service)	4.0	5.0	5.0
4015	Connecting Rod	2.0	5.0	5.0
4016	Piston and/or Rings	2.0	3.0	3.0
	Crankshaft			
4020	Crankshaft & Main Bearing R & R	3.0	5.0	5.0
4021	Crankshaft – PTO Seal	0.5	1.5	0.8
4022	Crankshaft – Flywheel Seal	1.5	1.5	1.5
4023	Crankshaft & Connecting Rod	3.0	5.0	5.0
4024	Balance Gears – R & R	3.0	–	–
	Camshaft & Valves			
4029	Valve R & R (No Grinding) (Each Cylinder)	1.0	1.0	1.0
4030	Valve Tappet Adjustment	1.0	1.0	1.0
4031	Valve Grinding (Each Cylinder)	1.2	1.2	1.2
4032	Valve Guide Replacement	1.5	1.5	1.5
4033	Valve Spring Replacement	1.0	1.0	1.0
4034	Valve Cover Gasket and/or Breather	0.5	0.6	0.6
4035	Camshaft R & R	3.2	4.5	4.5
	Ignition			
4046	Ignition Module R & R	1.0	1.0	1.0
4047	Flywheel R & R	1.2	1.2	1.2
	Charging			
4050	Regulator – Test & Replace	0.5	0.5	1.0
4051	Stator – Test & Replace (Includes Flywheel R & R)	1.5	1.5	1.5
	Starter			
4060	Retractable – R & R, Replace Rope & Spring	1.0	1.0	–
4061	Starting Motor – Bendix Type R & R	1.0	0.5	1.0
4063	Starter – Bendix Rebuild (Includes R & R)	1.5	1.0	1.5
4064	Starter Drive R & R	1.2	1.2	1.2
4065	Starter Solenoid R & R	0.5	0.5	0.5
	Carburetor & Air Intake			
4070	Carburetor R & R	1.0	0.5	0.5
4071	Carburetor – Rebuild (Includes R & R)	1.5	1.0	1.0
4072	Carburetor – Adjust	0.2	0.3	0.3
4073	Air Cleaner – Damage in Shipment	0.3	0.3	0.3
4074	Fuel Tank – R & R	0.5	–	–
4075	Fuel Pump – R & R	0.5	0.3	0.3
4076	Fuel Pump – Rebuild (Includes R & R)	1.0	0.8	0.8
	Miscellaneous Repairs			
4080	Cylinder Head and/or Gasket – Replace/each	1.0	0.6	0.6
4081	Cylinder Head Retorque	0.8	0.4	0.4
4082	Shrouds only – R & R	0.6	0.6	0.6
4083	Oil Pan and/or Gasket – Replace	0.5	1.0	–
4084	Muffler – Replace	0.3	0.3	0.3
4085	Governor – Adjustment	0.5	0.3	0.3
4086	Governor R & R	3.0	4.3	4.3
4087	Oil Pump R & R	–	2.0	2.0
4088	Crankshaft – Grinding (ENTER NET COST)	–	–	–
4089	Crankcase – Boring (ENTER NET COST)	–	–	–



Claim No. _____

Purpose: The Engine Service Department is responsible for providing an explanation for each warranty claim processed. This form will fulfill the requirement for a uniform "letter of explanation." It is to be completed and attached to any warranty claim that is classified a policy adjustment, or to be used with any claim that requires further explanation. Failure to attach this form on all Policy Adjustment Claims will result in the warranty claim being returned to the Central Distributor, which will delay processing.

Please Check One:

- ☐ Known defect that failed outside the standard warranty period.
- ☐ Non-warranty situation – irate customer.
- ☐ Benefit of doubt.

Written Explanation (Required):

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