

Gasoline Engine  
Instruction Manual

**MODEL: 1E48F-E**

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Thank you for purchasing our engine.

This manual covers the operation and maintenance of your engine.

All information in this publication is based on the latest product information available at the time of printing.

Shandong Huasheng Zhongtian Machinery Group Co.,Ltd reserves the right to make changes at any time without notice and without incurring any obligation.

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This manual should be considered a permanent part of the engine and should remain with it if it is resold.

Pay special attention to statements preceded by the following words:

**WARNING!** Indicates a strong possibility of severe personal injury or death if instructions are not followed.

**CAUTION!** Indicates a possibility of personal injury or equipment damage if instructions are not followed.

## **WARNING!**

- Read the instruction carefully. Be familiar with the controls and proper use of the engine.
- Store fuel in containers specifically designed for this purpose. Refuel outdoors only and do not smoke while refueling. Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.
- Replace faulty muffler.
- Replace all fuel tank and container caps securely.
- Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or fire.
- Allow the engine to cool before storing in any enclosure.
- Against the fire, stop running the gasoline engine before the tank is refueled, and ensure that the gasoline engine is far from the fire. Against the poisoning, discharge the exhaust gas from the rooms、 channels using gasoline engine or any other closed

places.

- Forbid to touch the muffler and the body when the gasoline engine runs and just stops.
- Against the electrical shock , don't touch the ignition plug cap and wires.
- Forbid children and persons unconcerned to touch the gasoline engine.
- Muffler exhaust outlet can not point to the operator.
- Ensure the cooling of the muffler and the body, cover the gasoline engine after daily work.
- Against the problem、 the damage or the misfire of gasoline engine, check and maintain the gasoline regularly and clean the deposit carbon in the muffler and in the cylinder exhaust.
- Forbid to use pure gasoline (without two-stroke engine oil) as fuel.
- Gasoline engine can not work at high speed for long time without load.
- Forbid the drunk、 the dizzy and the pregnant to use the gasoline engine.

## I . FOREWORD

Model 1E48F-E gasoline engine is single-cylinder two-stroke air-cooled small-size and light-weighted gasoline engine, its construction is simple , operation and maintenance are easy.

1E48F-E Gasoline engine are used as power for back pack brush cutter, water-pump, mini-cultivator etc.

## II . TECHNICAL DATA

ITEM	UNIT	TECHNICAL DATA
Type		Single-cylinder,two-stroke, air-cooled
Model		1E48F-E
Discharging capacity	cc	63.3
Max. power/rotating	kW/r/min	1.9/7500
Specific fuel	g/kW.h	≤500
Noise	dB(A)	≤110
Volume of fuel tank	l	1.3
Fuel brand		90 gasoline(GB17930-2006)
Lubricant		2-stroke oil(JASO FC)
Ratio of fuel and oil		30:1
Gap of spark plug	mm	0.5~0.7
Starting method		Manually drawing wound rope
Net weight	kg	≤4.9
Overall dimension(L×W×H)	mm	285×195×282



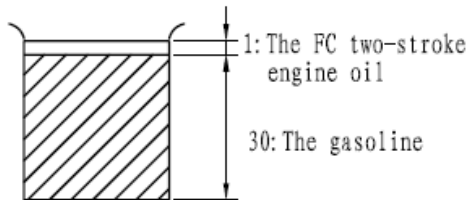
### III. PREPARATION

#### 1. Refuel

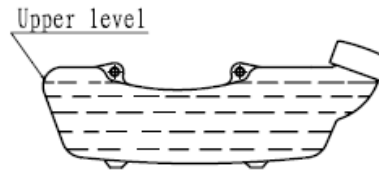
Use the mixture of the gasoline and the two-stroke engine oil, the volume ratio is 30:1. (Graph 1). Fill the gasoline to the edge of the tank neck. (Graph 2).

#### 2. Check and clean the air filter

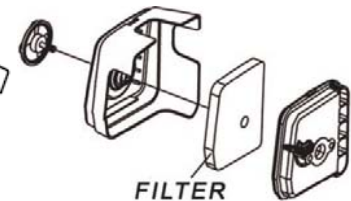
The air filter must be often cleaned, or the polluted air filter will lower the output power of the engine. If the air filter is blocked by dusts, use gasoline to clean the air filter, then dip in the oil, wring oil out and put the air filter back. (Graph 3)



Graph 1



Graph 2



Graph 3

## IV. STARTUP

1. Turn on the gasoline switch until the gasoline flows out of the clear plastic pipe.
2. Close the choke totally.  
If the engine is heated, the choke must be totally opened.

3. Open the throttle half.

4. Draw the starter several times slowly, and then draw quickly.

Note: If the excessive gasoline causes the start difficulty, take down the ignition plug and the input pipe, open the choke and the throttle totally, draw the starter several times, then install the input pipe and start the engine. After the startup, open the choke totally.

## V. RUNNING

1. After the engine starts, run 3~5 minutes at a low speed.
2. When the engine is heated enough, adjust the throttle handle to the corresponding according to needed speed.

**CAUTION:** ● Don't accelerate abruptly due to bad lubrication of the engine at the beginning of startup.

- Avoid the speedy idle motion and over speed motion. If the throttle is totally opened, the engine will run over speed, which not only shortens the service life of the engine but also causes more problems in the engine.

## VI. STOPPING

1. Reduce the gasoline engine to the slowest speed and run 3~5 minutes.
2. Press the stop switch and stop the engine.(Only the gasoline engine leaving factory, no stop switch)

## VII. MAINTENANCE

### 1. Daily check

★ Check all screws and nuts looseness   ★ Check fuel leakage or air leakage

### 2. Check after running 20 hours

★ Clean the air filter                      ★ Clean the fuel strainer

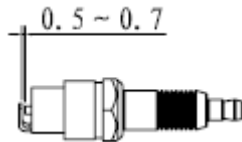
### 3. Check after running 50 hours

★ Refasten the nuts of the cylinder

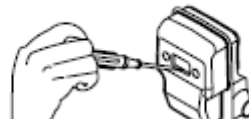
★ Clean the accumulated carbon both in the combustion chamber and in the exhaust of the cylinder

★ Clean the accumulated carbon in the spark plug, adjust the clearance to (0.5~0.7)mm.(Graph 4)

★ Clean the accumulated carbon both in the intake and in the exhaust of the muffler. (Graph 5)



Graph 4



Graph 5

## VIII. STORAGE

If the gasoline engine isn't used for a long time, it must be maintained as follows:

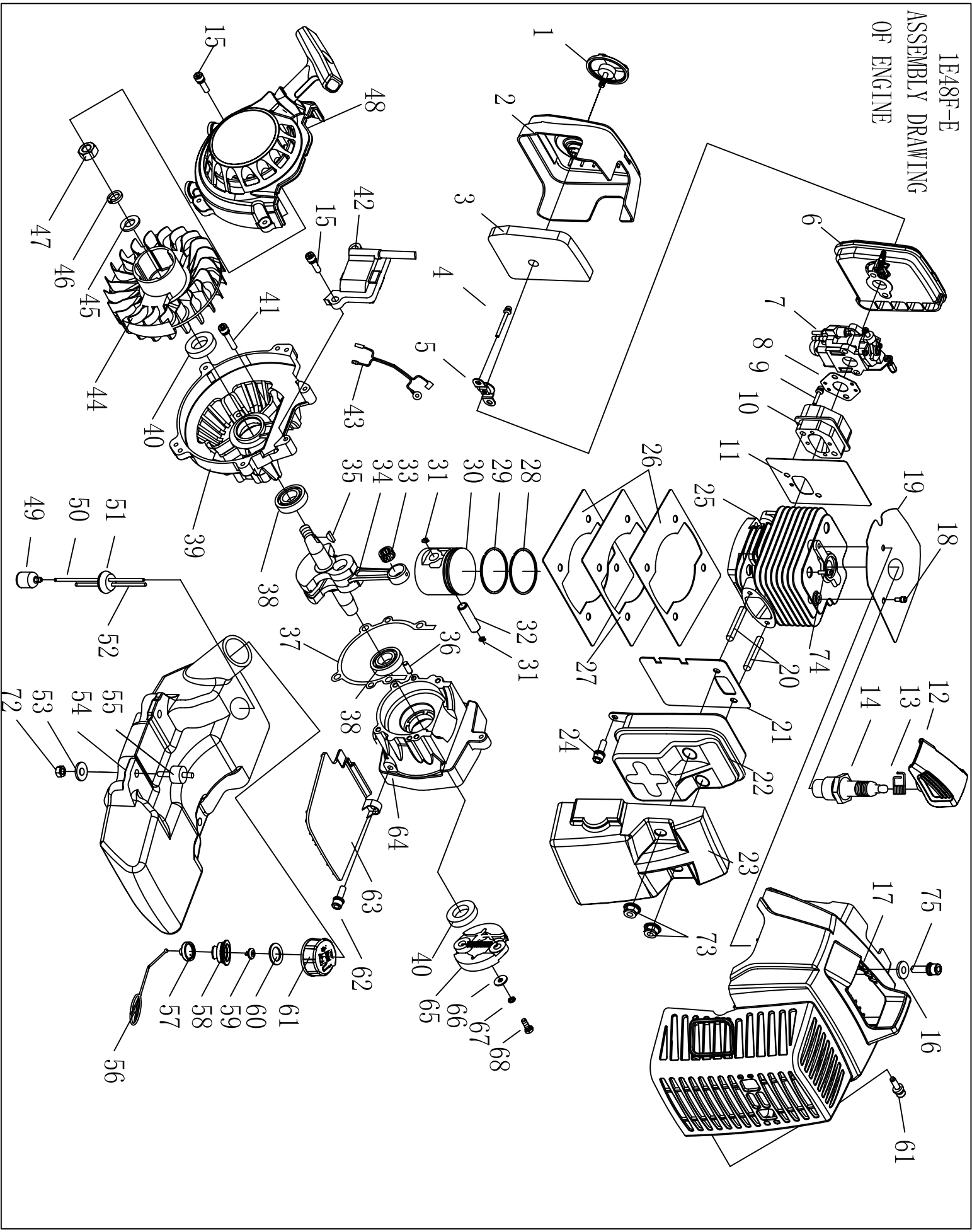
1. Remove the fuel in the tank and in the carburetor, close the chock totally, draw the starter 3~5 times.
2. Take down the spark plug, add certain engine oil from the spark plug hole into the cylinder, and draw the starter 2~3 times to move the piston to the top dead center, the install the spark plug.
3. Use the soft cloth with engine oil to clean the surface of the engine, put the engine to the dry and windy place for the next use.

## IX .TROUBLE SHOOTING

1. Fail to start
  - ★ Gasoline mixed with water, replace
  - ★ The spark plug has accumulated carbon or has been broke through
  - ★ Poor contact of the high-voltage wire with the spark plug
2. The engine can start, but can't run speedily

- ★ The choke is open totally or not
  - ★ The ratio of the engine oil and the gasoline is normal or not
  - ★ Maybe there is water in the gasoline
3. The gasoline engine can run, but has not enough power
- ★ Maybe the air filter is blocked by dusts
  - ★ Maybe the cylinder exhaust and the muffler are blocked by the accumulated carbon
  - ★ The piston, The piston rings and the cylinder have been badly worn out
  - ★ Maybe the fuel strainer is blocked by dusts
  - ★ The body or the top of the shaft has oil leakage and air leakage
4. The gasoline engine stops suddenly when running
- ★ Run out of the gasoline      ★The high-voltage wire drops
  - ★ The spark plug has accumulated carbon or has been broken through
  - ★ The fuel strainer is blocked by dusts    ★ Maybe there is water in the gasoline
  - ★ The air hole of the tank lid is blocked by dusts

1E48F-E  
ASSEMBLY DRAWING  
OF ENGINE







NO.	PART NO.	PART NAME	QTY.	NO.	PART NO.	PART NAME	QTY.	NO.	PART NO.	PART NAME	QTY.
73	GB6177	NUT M8	2								
74	GB/T70.1	SCREW M5 × 20	4								
75	GB/T70.1	SCREW M5 × 16	1								

## **XI. SERVICE INFORMATION OF EPA**

Contact person: David Kostka

Company name: LEHR Inc.

Address: 8922 Ellis Ave.

Los Angeles, CA 90034 USA

Telephone number: 1-877-387-4215

## **XII. EMISSION CONTROL WARRANTY STATEMENT**

### **I. CALIFORNIA AND FEDERAL EMISSION CONTROL WARRANTY STATEMENT**

#### **YOUR WARRANTY RIGHTS AND OBLIGATIONS**

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (EPA), together with Shandong Huasheng Zhongtian Machinery Group Co., Ltd. are pleased to explain the Emission Control System Warranty on your new small off-road engine. New small off-road engines must be designed, built and equipped to meet stringent anti-smog standards for the state of California and the federal government. Shandong Huasheng Zhongtian Machinery Group Co., Ltd. will warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect, unapproved modification or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor, ignition, intake and exhaust systems. Shandong Huasheng Zhongtian Machinery Group Co., Ltd. will repair your engine at no cost to you for diagnosis, replacement parts and labor, should a warrantable condition occur.

#### MANUFACTURER'S EMISSION CONTROL SYSTEM WARRANTY COVERAGE:

Emission control systems on 1997 and later model year engines are warranted for two years as hereinafter noted. If, during such warranty period, any emission-related component or system on your engine is found to be defective in materials or workmanship, repairs or replacement will be performed by a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility.

#### PURCHASER'S/OWNER'S WARRANTY RESPONSIBILITIES:

As the small off-road engine purchaser/owner, you are responsible for the completion of all

required maintenance as listed in your factory supplied Owner's Manual. For warranty purposes, Shandong Huasheng Zhongtian Machinery Group Co., Ltd. recommends that you retain all receipts covering maintenance on your engine. However, Shandong Huasheng Zhongtian Machinery Group Co., Ltd. cannot deny warranty solely because of the lack of receipts or for your failure to ensure the completion of all scheduled maintenance.

As the small off-road engine purchaser/owner, you should, however, be aware that Shandong Huasheng Zhongtian Machinery Group Co., Ltd. may deny any and/or all warranty coverage or responsibility if your engine, or a part/component thereof, has failed due to abuse, neglect, improper maintenance or unapproved modifications, or the use of counterfeit and/or "grey market" parts not made, supplied or approved by Shandong Huasheng Zhongtian Machinery Group Co., Ltd.

You are responsible for presenting your engine to a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility as soon as a problem

occurs. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

Warranty service can be arranged by contacting either your selling dealer or a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility. To locate the Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility nearest you at 877-387-4215 or email: [david@golehr.com](mailto:david@golehr.com).

**IMPORTANT NOTE:** This warranty statement explains your rights and obligations under the Emission Control System Warranty (ECS Warranty), which is provided to you by Shandong Huasheng Zhongtian Machinery Group Co., Ltd. pursuant to California and federal law. See also the "Limited Warranties for Shandong Huasheng Zhongtian Machinery Group Co., Ltd." which is enclosed herewith on a separate sheet, also provided to you by Shandong Huasheng Zhongtian Machinery Group Co., Ltd. The ECS Warranty applies only to the emission control system of your new engine. If there is any conflict in terms between the ECS Warranty and the Shandong Huasheng Zhongtian Machinery Group Co., Ltd.

Warranty, the ECS Warranty shall apply except in circumstances where the Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Warranty may provide a longer warranty period. Both the ECS Warranty and the Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Warranty describe important rights and obligations with respect to your new engine.

Warranty service can be performed only by a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility. When requesting warranty service, evidence must be presented showing the date of the sale to the original purchaser/owner. The purchaser/owner shall be responsible for any expenses or other charges incurred for service calls and/or transportation of the product to/from the inspection or repair facilities. The purchaser/owner shall also be responsible for any and/or all damages or losses incurred while the engine is being transported/shipped for inspection or warranty repairs.

IF YOU HAVE ANY QUESTIONS REGARDING YOUR WARRANTY RIGHTS AND RESPONSIBILITIES, YOU SHOULD CONTACT Shandong Huasheng Zhongtian

Machinery Group Co., Ltd. at 877-387-4215 or email: david@golehr.com.

## II. EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty (ECS Warranty) for 1997 and later model engines:

(a) Applicability: This warranty shall apply to 1997 and later model year engines. The ECS Warranty Period shall begin on the date the new engine or equipment is purchased by/delivered to its original, end-use purchaser/owner and shall continue for 24 consecutive months thereafter.

(b) General Emissions Warranty Coverage: Shandong Huasheng Zhongtian Machinery Group Co., Ltd. warrants to the original, end-use purchaser/owner of the new engine or equipment and to each subsequent purchaser/owner that each of its engines is...

(1) Designed, built and equipped so as to conform with all applicable regulations adopted by



the EPA and CARB pursuant to their respective authority, and

(2) Free from defects in materials and workmanship which, at any time during the ECS Warranty Period, may cause a warranted emissions-related part to fail to be identical in all material respects to the part as described in the engine manufacturer's application for certification.

The ECS Warranty only pertains to emissions-related parts on your engine, as follows:

(1) Any warranted, emissions-related parts that are not scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by Shandong Huasheng Zhongtian Machinery Group Co., Ltd. according to Subsection (4) below. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.

(2) Any warranted, emissions-related part that is scheduled only for regular inspection as specified in the Owner's Manual shall be warranted for the ECS Warranty Period. A statement in such written instructions to the effect of "repair or replace as necessary" shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.

(3) Any warranted, emissions-related part that is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by Shandong Huasheng Zhongtian Machinery Group Co., Ltd. according to Subsection (4) below. Any such emissions-related part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period prior to the first scheduled replacement point for such emissions-related part.

(4) Repair or replacement of any warranted, emissions-related part under this ECS

Warranty shall be performed at no charge to the owner at a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility.

(5) When the engine is inspected by a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. Authorized Warranty Service Facility, the owner shall not be held responsible for diagnostic costs if the repair is deemed warrantable.

(6) Shandong Huasheng Zhongtian Machinery Group Co., Ltd. shall be liable for damages to other original engine components or approved modifications proximately caused by a failure under warranty of any emission-related part covered by the ECS Warranty.

(7) Throughout the ECS Warranty Period, Shandong Huasheng Zhongtian Machinery Group Co., Ltd. shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such emission-related parts.

(8) Any Shandong Huasheng Zhongtian Machinery Group Co., Ltd. authorized and

approved emission-related replacement part may be used in the performance of any ECS Warranty maintenance or repairs and will be provided without charge to the purchaser/owner. Such use shall not reduce Shandong Huasheng Zhongtian Machinery Group Co., Ltd.'s ECS Warranty obligations.

(9) Unapproved, add-on, modified, counterfeit and/or "grey market" parts may not be used to modify or repair a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. engine. Such use voids this ECS Warranty and shall be sufficient grounds for disallowing an ECS Warranty claim. Shandong Huasheng Zhongtian Machinery Group Co., Ltd. shall not be held liable hereunder for failures of any warranted parts of a Shandong Huasheng Zhongtian Machinery Group Co., Ltd. engine caused by the use of such an unapproved, add-on, modified, counterfeit and/or "grey market" part.

EMISSION RELATED PARTS INCLUDE THE FOLLOWING:

1) Fuel Metering System including:

- a) Gasoline carburetor assembly and its internal components
- b) Fuel filter (if so equipped)
- c) Carburetor gaskets
- d) Fuel pump (if so equipped)

2) Air Induction System including:

- a) Intake pipe/manifold
- b) Air cleaner

3) Ignition System including:

- a) Spark plug
- b) Ignition module/coil

4) Catalytic Muffler Assembly (if so equipped) including:

- a) Muffler gasket
- b) Exhaust manifold

5) Miscellaneous including:

a) Hoses, belts and connectors.

