



# **GAS HAMMER DRILL**

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**MOD: AUS-250-GHD**

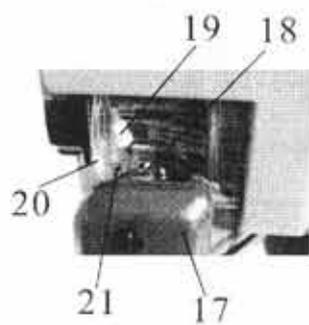
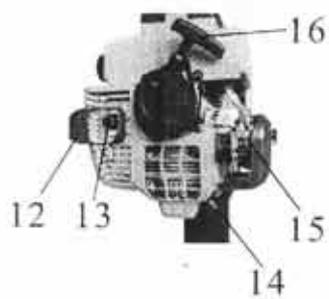
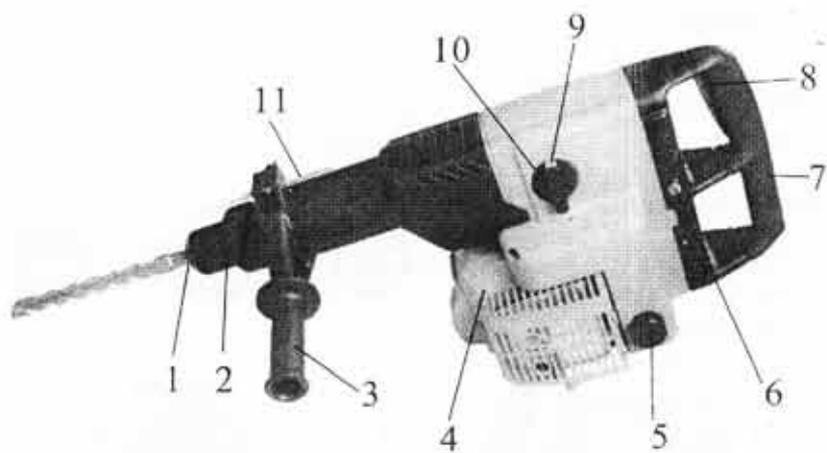
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Handling Instructions



**CAUTION:**

Read through carefully and understand these instructions before use.



## Technical Specifications:

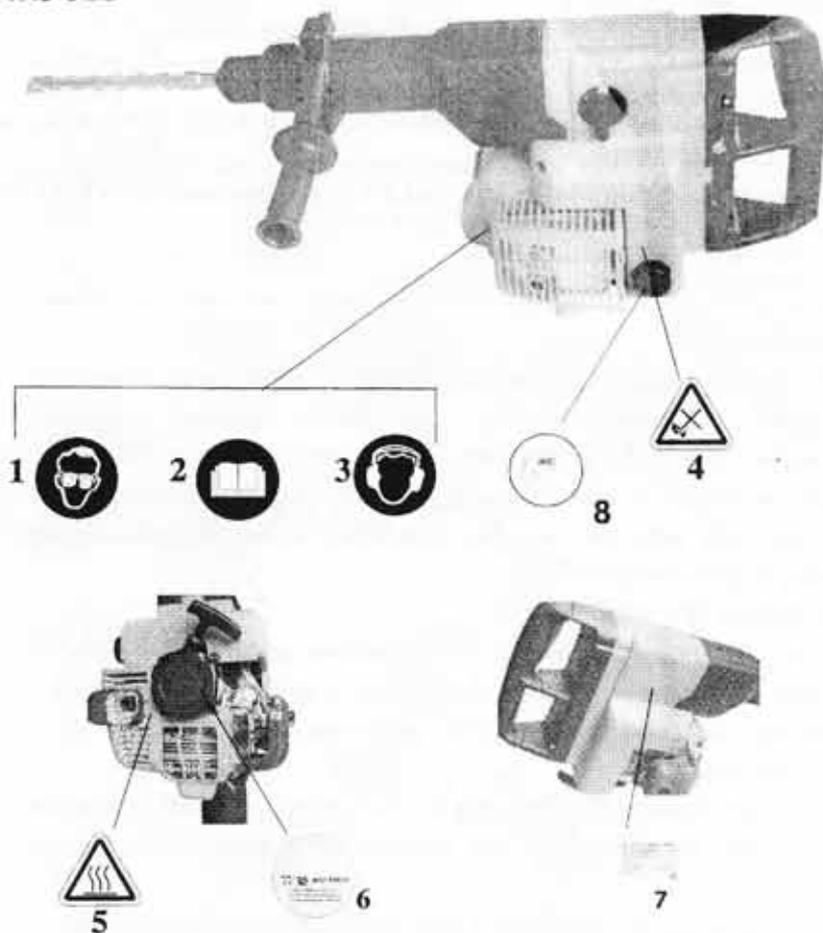
Drive Motor	2-Stroke Petrol Engine (1E44F-E)
Displacement (ml)	51.7
Engine Max Power/Speed (kw/r/min)	1.4 / 6500
Fuel Type Petrol/oil	30:1
Percussion Rate (1/min)	2400 Per Min.
Rotary Hammer Speed (r/min)	300
Tank Capacity (L)	0.9
Max Drill Dia. (mm)	2.0
Lubricant Requirement	JASO FC / API1TC/ISO-LEGC2T LUBRICANT OIL
Net Weight	33 lbs.

## Product Elements:

The numbering of the machine elements refers to the illustration of the machine on the graphic page.

- 1 Dust Protection Cap
- 2 Locking Sleeve
- 3 Auxiliary Handle
- 4 Gasoline Engine
- 5 Tank Cap
- 6 Push Button Switch
- 7 Handle
- 8 Trigger Switch
- 9 Release Button
- 10 Mode Selector Switch
- 11 Depth Gauge
- 12 Anti-Heated Shield
- 13 Muffler
- 14 Spark Plug
- 15 Carburetor
- 16 Starter
- 17 Cleaner Outside Cover
- 18 Priming Bulb
- 19 Intake Stud
- 20 Fuel Return Tube (White)
- 21 Fuel Supply Tube (Yellow)

# Labels



- 1 Eye protection label
- 2 Instruction Manual label
- 3 Earplug label
- 4 Fireproof label
- 5 Thermal risk warning label
- 6 Model Label with Trademark and Manufacturer's address
- 7 Information label(see technical specification)
- 8 Gasoline with Mixture of lubricant oil

## Noise / Vibration:

### DECLARED SINGLE NUMBER NOISE EMISSION VALUES

#### in accordance with ISO4871

A-Weighted sound power level, L in decibels 109.3 dB(A)

A-Weighted emission sound pressure level L at the operator's position, in decibels. 99.6 dB(A)

Values determined according to noise test code given in ISO 15744, using the basic standard ISO3744.

### DECLARED Vibration EMISSION VALUES in accordance with EN 12096

Measured vibration emission value a: 20.9m/s

Uncertainty K: 1.37m/s

Value determined according to EN 28662-3

## Applications:

For breaking concrete and asphalt as well as rubble-laden ground, for demolishing concrete, masonry and similar building materials (undisturbed and frozen ground) etc., for ripping up roads and concrete, asphalt, tar as well as wood-block and stone paving, for cutting off clay, loam, turf and salts, for breaking compacted or tamped ground, for ramming in posts and earth rods.

## Description of Components:

The engine, which is flanged to the crankcase and is held in place by 3 screws, drives the percussion system over a gear transmission and a connecting rod. The engine torque is transmitted by means of a centrifugal clutch.

The centrifugal clutch interrupts the flow of the percussion system at low engine speeds, thus allowing for a perfect idling of the engine.

The engine can be switched off with the stop button or the fuel tap.

The drive engine works according to the 2-stroke principle, and is started mechanically by means of a recoil starter. The engine is air cooled and the air is necessary for combustion is directed through the air filter.

## Safety Instructions:



For Your Safety



Working safely with this machine is possible only when the operating and safety information are read completely and the instruction contained therein are strictly followed.



Before using for the first time, ask for a practical demonstration. Wear ear protection to prevent damage to your hearing.



Wear safety glasses and sturdy shoes. For long hair, wear hair protection. Work only with close-fitting clothes.

## **1. General**

1.1 Drilling and breaking hammers may only be operated by persons who:

Are at least 18 years of age,

Are physically and mentally fit for this job,

Have been instructed in operating drilling and breaking hammers and proven their ability for the job to the employer.

May be expected to carry out the job they are charged with carefully.

1.2 Drilling and breaking hammers are to be applied for their proper use. Both the manufacturer's operating instructions and these safety instructions have to be observed.

1.3 The persons charged with the operation of these hammers have to be made familiar with the necessary safety measures relating to the machine. In case of extraordinary uses, the employer shall give the necessary additional instructions.

## **2. Operation**

2.1 The function of operation levers or elements is not to be influenced or rendered ineffective.

2.2 Before going on breaks, the operator has to switch off the engine and has to place the drilling and breaking hammers in such a manner that it cannot turn over.

2.3 Wear safety goggles in order to avoid injuries to the eyes.

2.4 Wear ear protection to prevent damage to your hearing.

2.5 We recommend wearing suitable working gloves.

2.6 Wear safety shoes while working with drilling and breaking hammers.

2.7 Drilling and breaking hammer should not be used in the potentially explosive atmosphere (mine)

2.8 It should not be used under water.

2.9 The ear protector is recommended for the operator during an operation

2.10 Drilling and breaking hammer are not generally insulated for coming into contact with electric power source.

2.11 Before starting hammer make sure that it does not involve a risk of coming into contact with electric live cables, gas mains and water pipes.

- 2.12 Drilling and breaking hammer shall not be used in explosive atmosphere unless specially designed for that purpose.
- 2.13 The inserted tool on heavy types of drilling and breaking hammer, e.g. rock drills, is exposed to heavy strains and can after a long period of use break due to fatigue.
- 2.14 Unexpected tool movement or breakage of inserted tool may cause injuries.
- 2.15 Unsuitable postures may not allow counteracting of normal or unexpected movement of the drilling and breaking hammer. A working position shall be adopted which remains stable in the event of a break of the inserted tool.
- 2.16 It is recommended to use dust collection devices or water flushing where ever appropriate.
- 2.17 Drilling and breaking shall be isolated from the energy source before changing an inserted tool.
- 2.18 Reaction torque may occur.
- 2.19 If the application for which the hammer is being used may result in the reaction torque upon the operator, a second handle shall be used. The risk of drawing in or trapping due to the rotating inserted tool should be taken care.
- 2.20 The risk of fire when spillage of fuel occurs should be prevented.
- 2.21 No smoking when filling with fuel.
- 2.22 Avoiding contact of fuel and oil with the skin.
- 2.23 Do not use in an unventilated environment, in closed pits, where the surrounding hinders or prevents air circulation. The use of an exhaust hose can in many cases be recommended. Care should be taken to minimize the risk of fuel leakage during transport.
- 2.24 Specification of the fuel quality (90 gasoline; Lubricant Oil FC/2T)
- 2.25 Empty liquid petrol gas container shall be taken care of and sent back to the retailer.
- 2.26 Drilling and breaking hammers are always to be operated with both hands and on handles provided for this purpose.
- 2.27 When working with drilling and breaking hammers, especially when carrying out drilling jobs, the operator has to have a firm stand, particularly when working on scaffolding and ladders.
- 2.28 Drilling and breaking hammers are to be guided such that hand injuries caused by solid objects are avoided. When carrying out demolition jobs at elevated places, special care is required to prevent the machine or the operator from falling stones or tools.

- 2.29 During operation the tool holder must be closed. Tools and tool holder must be checked for wear in order to guarantee proper functioning of holder.
- 2.30 The operation of this machine may cause broken-off pieces to be flung away. Therefore, during operation, no one except the operator is to come near this machine.
- 2.31 Switch off the engine of drilling and breaking hammers before changing tools.
- 2.32 The tools always have to be in perfect conditions.
- 2.33 Do not smoke or handle open fire near this machine.
- 2.34 The tank lid must fit tightly. Shut fuel cock if available when stopping the engine. For long distance transports of machines operated by fuel or fuel-mixtures, the fuel tank has to be drained completely.
- 2.35 Stop engine before filling fuel tank. When refilling fuel tank, do not allow fuel to come into contact with the hot parts of the engine or spill onto the ground.
- 2.36 Make sure that sufficient fresh air is available when operating drilling and breaking hammers with combustion engines in enclosed areas, tunnels, adits, and deep trenches. For this particular use we offer drilling and breaking hammers with elect rive drive.
- 2.37 Do not operate this machine in areas where explosions may occur.

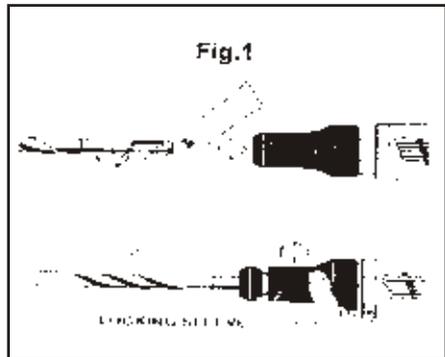
**2.38 Installing Accessories:**

Clean the insert shank end of the accessory to remove any debris, then lightly grease with a light oil or lubricant.

Insert accessory into the tool holder through the dust shield, while twisting and pushing inward until it locks automatically into place.

Pull outward on the accessory to be certain it is locked into the tool holder. (Fig.1)

Note: The high efficiency available from the rotary hammer can only be obtained if sharp and undamaged accessories are used. The "cost" to maintain sharp and undamaged accessories is more than offset by the "time saved" in operating the tool with sharp accessories.



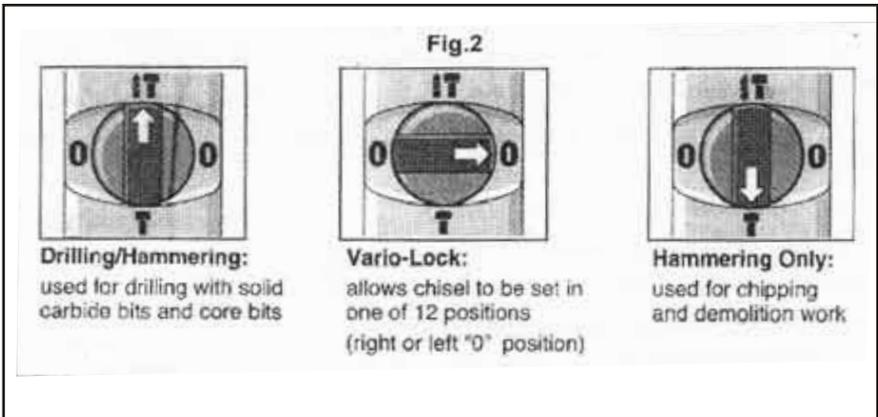
### 2.39 Removing Accessories:

**WARNING** Accessories may be hot to skin and proper protective gloves or cloth to remove.

To remove an accessory, pull and hold locking sleeve backward and pull bit forward. all accessories should be wiped clean after removing.

### 2.40 Selector Lever:

The selector lever allows the tool to be set for various applications as listed in the following chart. (Fig.2)



When using demolition or chipping bits such as bull points, chisels, spades, gouges, etc. the "Hammer Only" mode must be selected.

### 2.41 Selector Lever - "Vario-Lock"

The vario-lock can be set in any one of twelve positions (30 increments).

Choose a position which is best suited for your operation. The Vario-Lock position is intended for use with chipping bits such as bull points, spades, gouges, etc.

Depress release button and turn the selector lever, to the "Vario-Lock" setting. Next, rotate the locking sleeve, along with the accessory, to the desired position. Then turn the selector lever to the "Hammer Only" setting and slightly turn the locking sleeve to have it automatically lock into a definite position.

### **3 Safety Checks:**

- 3.1 Drilling and breaking hammers may only be operated with all safety devices installed.
- 3.2 Before starting operation, the operator has to check that all control and safety devices function properly.
- 3.3 Before starting operation, the overload clutch of drilling hammers has to be checked for proper functioning.
- 3.4 In case of defects of the safety devices or other defects reducing the operational safety of the drilling and breaking hammers, the supervisor has to be informed immediately.

### **4 Maintenance:**

- 4.1 Only use original spare parts. Modifications to this machine, including the adjustment of the maximum engine speed set by the manufacturer, are subject to the express approval of HUASHENG. In case of nonobservance all liabilities shall be refused.
  - 4.2 Stop engine and pull off spark plug cap (if available) before carrying out maintenance jobs, to avoid unintentional starting of the machine. Deviations from this are only allowed if the maintenance job requires a running engine.
- Warning: Take care when checking the ignition system. The electronic ignition system produces a very high voltage.**

### **5 Transport:**

When being transported on vehicles, precautions have to be taken that these hammers do not slip or turn over.

**Please also observe the corresponding rules and regulations valid in your country.**

#### **Preparation before start:**

1. Read safety instructions at the beginning of this manual.
2. For new or long storage machines, oil sealed in the cylinder must be removed first. The removing method: Take off the spark plug, use the lift thumb to stop the spark plug hole and pull the starter with strength to spray the oil out.
3. Check the sparks of the spark plug. Normally the sparks should be blue.
4. Check if the air cleaner is clean. Dirty air cleaner will influence the volume of incoming air that can cause the bad performance of the engine.

**Start:**

1. Adding fuel: This gasoline engine is the type of single-cylinder and two-stroke. The fuel is the mixture of NO. 90 gasoline and two-stroke automobile oil that cannot be replaced by any other kind. The ratio between gasoline and oil is 25-30 :1. One fuel adding bottle is supplied.

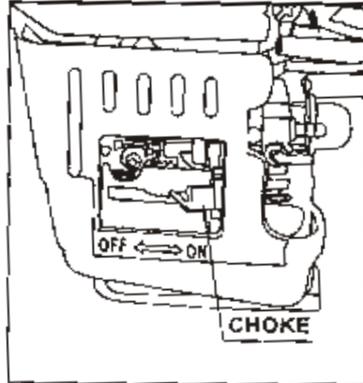
It has scales for the conveyance.

2. Regulate the choke to close position in winter and at the first time to full open position when the engine is hot. (Fig. 3)

Pull the starter lightly for 3-5 times to make the fuel into the cylinder. Then pull it fast to start the engine. Note: After start, the start rope should be contracted back slowly with hand's help. If

the rope contracts back fast, it may cause damage or the starter. After start, put the choker slowly to full open position. Regulate the fuel handle to a proper position to run at low speed for 3.5 minutes, and then make the machine working. New machine should not work at full open position within the first 4 hours, thus enabling the engine to have a good match and do reliable job.

Fig.3

**Stop of Engine:**

Move the throttle lever to the slow speed position, and operate the engine for its cooling at time 2 or 3 minutes.

Keep pressing the stop button until the engine stops completely.

The sudden stoppage of the engine during high-speed operation may cause the engine trouble; therefore, avoid it except for the emergency case.

### Technical Maintenance and Long Time Storage Checks:

According to the conditions and frequency of use, drilling and breaking hammers have to be checked for safe operation at least once a year by skilled technicians, and have to be repaired if necessary.

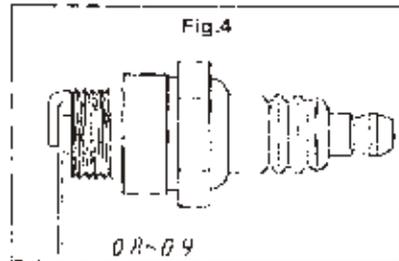
#### 1. Fuel System Maintenance:

Water or dirt in fuel is one of the main causes of the engine trouble, clean the fuel system regularly as mentioned below.

Residual fuel remaining in the fuel tank and carburetor for longtime gum and clog the fuel system, thus causes the engine not to work properly, so all of the fuel should be discharged if the machine isn't used after one week.

#### 2. Air Filter and Plug:

Clean the filter after every day operation: Dirt adhering to sponge reduces the engine power. Dry the filter before reinstalling. Clean stains or carbon off the spark plug and adjust spark gap to 0.8 - 0.9mm (Fig.4)



The plug model of this machine is L8RTC. Do not use other models. If it is necessary for change, you may buy it from local agricultural department or plant protection department.

#### 3. Maintenance Schedule:

Check all external screw connections for tight fit approx. 8 hours after first operation.		
Component	Maintenance Work	Maintenance Interval
Air Filter	Check for external damage and tight fit.	Daily
Fuel	Check tank lid for tight fit. Replace if necessary.	
Miscellaneous	Check Bowden cable for smooth running. Checking of electrical cables and electric insulation for wear and tear and replace it if necessary.	

Tools	Check shafts and cutting edges- if necessary sharpen, re-forged or replace	Daily	
Air Filter	Check filter cartridge, clean or replace if necessary	Weekly	
Cylinder	Cooling fins dirt-free - if necessary clean dry		
Ignition	Clean spark plug, check spark plug gap	Monthly	
Miscellaneous	Check tool holder for wear- replace if necessary		
	Re-grease via grease nipples		20 hours
	Check anti-fatigue shaft bolts for tight fit - retighten if necessary - 75Nm.		80 hours
	Re-grease crankshaft drive	600 hours	

#### 4. Long Time Storage:

Clean the machine and apply ant-irust oil to metal parts.

Remove the spark plug and pour 15-20g of 2 stroke engine oil into the cylinder through the spark plug pole. Pull the starter handle 4-5 times to distribute the oil inside the engine. Pull the handle slowly until the piston reaches the top of its travel and leave it there, then install the spark plug.

Remove the chemical tank, clean the dust gate and inside and outside of chemical tank, then install the tank and leave lid loose.

Discharge fuel in the tank and carburetor entirely.

Cover the machine with plastic dustcoat and store it in a dry and clean place.

#### Trouble Shooting:

1. Engine fails to start or hard to start.

Problem		Cause	Remedy
No Flash	Spark Plug	1. Pole wet	Dry It
		2. Covered with carbon	Clean and carbon
		3. The insulation damaged	Replace
		4. Spark gap incorrect	Adjust 0.8 - 0.9 mm

No Flash	Magneto	1. The wrap of wire damaged	Remedy or Replace
		2. Insulation of coil bad	Replace
		3. The wire of coil broken	Replace
		4. The electronic firing unit defective	Replace
Normal	Compression ratio & fueling well	1. Too much fuel in cylinder	Drain
		2. Water or dirt in fuel	Replace
	Fueling well but compression ratio bad	1. Cylinder and piston ring wore or tore.	Replace Them
		2. The plug loose	Tighten it
	Carburetor not Fueling	1. No fuel in tank	Fuel
		2. Filter gauze clogged	Clean
3. The air hole of the tank clogged		Clean	

## 2. Engine Lacks Power

Problem	Cause	Remedy
The Compression ratio is fine	1. The filter plate clogged	Clean
	2. Air passes through the connection of carburetor	Tighten
	3. Engine overheat	Stop the engine and cool it
	4. Water in fuel	Refill with fresh fuel
	5. The carbon clogs muffler	Clean
Engine Overheats	1. Mixed gas (fuel) thin	Adjust the carburetor
	2. Cylinder covered with carbon	Clean
	3. Oil bad	Use 2-T engine oil and adjust the mix ration
	4. No connection with hose	Correctly assemble the machine

Engine noisy or Knocking	1. Fuel Bad	Replace
	2. Carbon in Cylinder	Clean
	3. The Running part wore and tore.	Check and Replace

### 3. Engine stops while running

Problem	Cause	Remedy
Engine Stops Suddenly	1. The lead wire of plug loose.	Replace firmly
	2. Piston bitten	Change or remedy
	3. Plug covered with carbon	Clean plug
	4. Fuel used up	Fill the fuel tank
The Engine Stops Slowly	1. Carburactor clogged	Clean
	2. The air hole in the tank clogged	Clean
	3. Water in fuel	Refill with fresh fuel

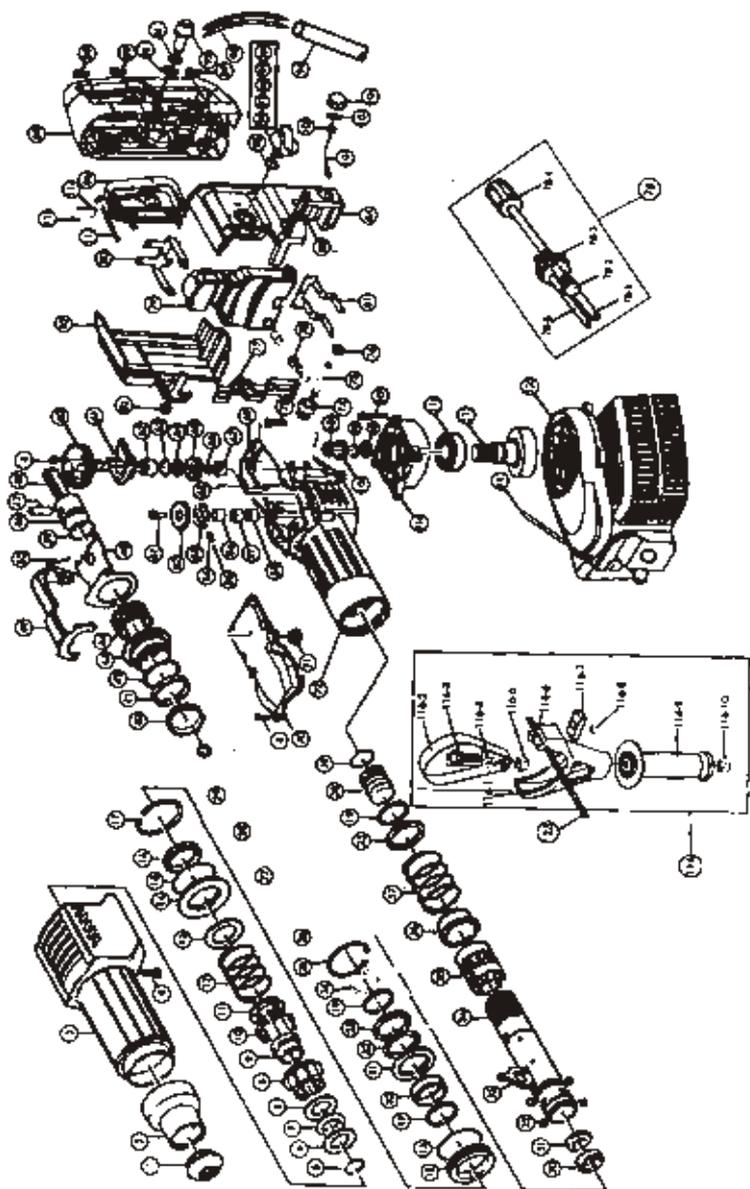
### 4. Engine hard to stop

Problem	Cause	Remedy
Throttle handle put to the lowest position, the engine still runs	The throttle cord is short or piston of carburetor is blocked	Adjust the cord or remedy the carburetor

### 5. Ramming Abnormality

Problem	Cause	Remedy
Lacks power or work abnormality	1. Clutch damaged	Replace
	2. Crankcase cpl. problem	Change or remedy
	3. Grease lack	Re-grease
	4. Something gets in percussion system	Clean
	5. Cushion damaged	Replace

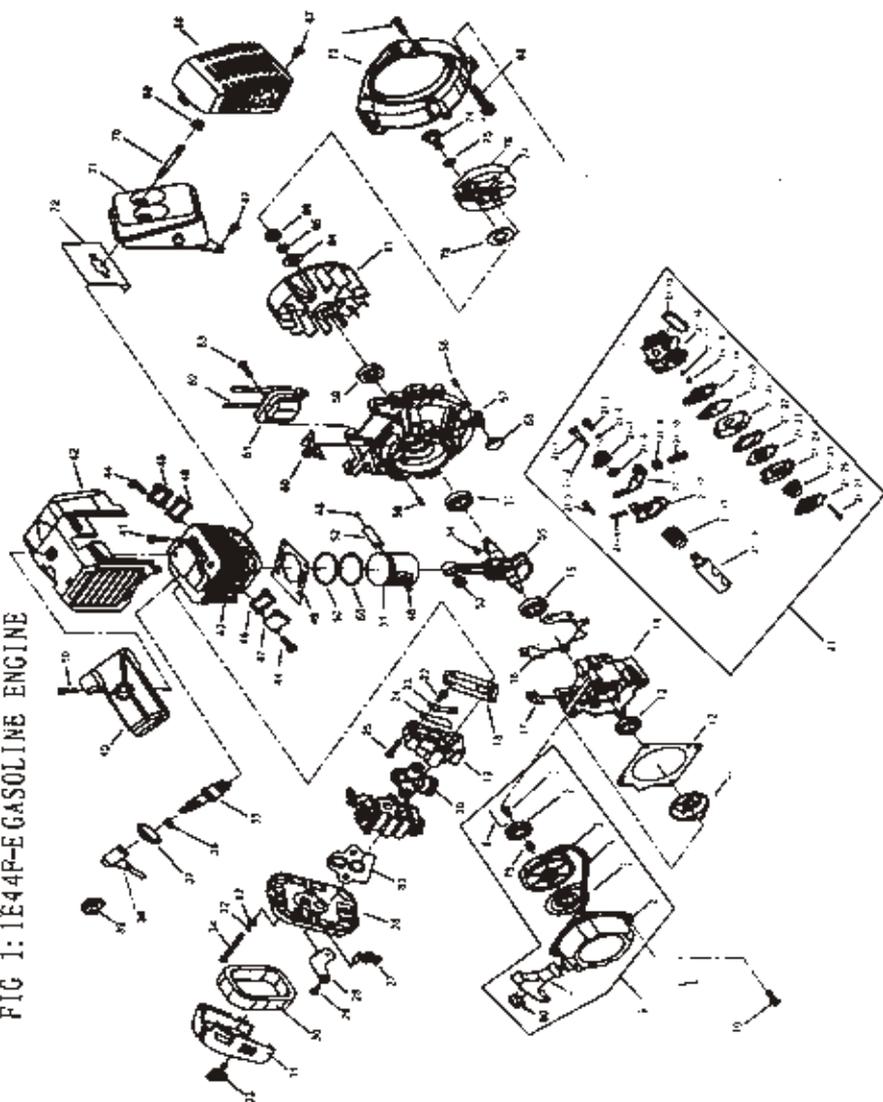
**GAS HAMMER DRILL  
MOD. AUS-250-GHD**



# GAS HAMMER DRILL MOD. AUS-250-GHD

NUM	DESCRIPTION	QTY	NUM	DESCRIPTION	QTY	NUM	DESCRIPTION	QTY
1	PROTECTIVE CAP	1	48	CONNECTING ROD	1	87	SHIFT LEVER	1
2	PROTECTION SLEEVE	1	49	CONTROL FORK	1	88	HANDLE	1
3	HOOD BLACK	1	50	SPRING	1	89	SCREW (6X120)	6
4	HEX SOCKET HEAD CAP SCREW (05X16)	13	51	BEVEL GEAR	1	90	NUT	1
5	RETAINING RING	1	52	GEAR (2=53)	1	91	SPRING WASHING	1
6	SUPPORTING DISC	2	54	CLUTCH	1	92	PUSH BUTTON SWITCH	1
7	O-RING	1	55	CLUTCH SPRING	8	93	OUTGOING LINE	2
8	SPACER TUBE	1	56	PIN	8	94	TUBE	1
9	STOP SLEEVE	1	57	BEARING SLEEVE	1	95	O-RING	1
10	STOPPING DEVICE	2	58	NEEDLE BEARING	1	96	SELECTOR KNOB	1
11	INDEXING DISK	1	59	NEEDLE BEARING	1	97	RED BUTTON	1
12	COMPRESSION SPRING	1	59	WASHER	1	98	SPRING	1
13	SUPPORTING DISK	1	60	ECCENTRIC COG WHEEL	99	99	PIN	1
14	INTERMEDIATE RING	1	61	GEAR COVER	1	100	DRIVER PIN	1
15	O-RING	1	62	NEEDLE BEARING	1	101	CHAIN	1
16	SHAFT SEALING RING	1	63	CIRCLIP	1	102	END COVER	1
17	CIRCLIP	1	64	O-RING	1	103	GASKET	1
18	BEARING RING	1	65	GEAR (2=19)	1	104	TANK COVER	1
19	SNAP RING	3	66	CIRCLIP	1	105	SHAFT SEALING RING	1
20	INNER RING	1	67	NEEDLE BEARING	1	106	BUSHING	1
21	THRUST BEARING DISC	1	68	SPRING PIN	1	107	CIRCLIP	1
22	O-RING	2	69	SEALING FRAME	1	108	BALL BEARING 6807	1
23	SUPPORTING DISC	1	70	HOUSING COVER	4	109	SCREW (M6X20)	4
24	SHANK SLEEVE	1	71	PLUG	1	110	BEARING HOUSING	1
25	CIRCLIP	1	72	GEAR HOUSING ASS.	1	111	BALL BEARING 6007	1
26	O-RING	1	73	SCREW (6X 20)	4	112	CLUTCH DRUM	1
27	TOOL HOLDER	1	74	STOP BUFFER	1	113	THROTTLE CABLE ASS.	1
28	O-RING	3	75	STUD	1	114	CLIP	1
29	STRIKER PIN	1	76	NUT	2	115	SCREW (ST3X5)	2
30	GUIDE BUSHING	1	77	SEAL SHEET	1	116	SIDE HANDLE ASS.	1
31	DAMPING RING	1	78	FUEL HOSE ASS.	1	116-1	SUPPORT CLAMP	1
32	PIN	4	78-1	FUEL SUPPLY TUBE	1	116-2	CLAMPING BAND	1
33	CONTROL DISC	1	78-2	INTAKE STUD	1	116-3	3 SCREW (M8X50)	1
34	HAMMER PIPE	1	78-3	PLUG	1	116-4	PLASTIC LEVEL	1
35	PLASTIC SLEEVE	1	78-4	CLEANER	1	116-5	NUT	1
36	CONTROL BUSHING	1	78-5	FUEL RETURN TUBE	1	116-6	WINGED SCREW	1
37	COMPRESSION SPRING	1	79	FUEL TANK	1	116-7	SUPPORT BLOC.	1
38	STICKER	1	80	SUSPENSION UNIT 1	1	116-8	NUT	1
39	O-RING	2	81	SUSPENSION UNIT 2	1	116-9	AUXILIARY HANDLE	1
40	BUSHING	1	82	RIGHT HOOD COVER	1	116-10	NUT	1
41	THRUST RING	1	83	NUT	1	122	GASOLINE ENGINE	1
42	SHIM	1	84	LEFT HOOD COVER	1	123	DEPTH GAUGE	1
43	CROWN GEAR (2=49)	1	85	SCREW (6X20)	1			
44	GEAR SLEEVE	1	86	SWITCH PAWL	1			
45	NOTCHED PLATE	1						
46	HAMMER PISTON	1						
47	STRAIGHT PIN	1						

FIG 1: 1E44F-E GASOLINE ENGINE







## Environmental Protection



Recycle raw material instead of disposing as waste.

The machine, accessories and packaging should be submitted for environment-friendly recycling.

These instructions are printed on recycled paper manufactured without chlorine.

The plastic components are labeled for categorised recycling

**Service Center:**  
6640 Old Chaney Highway  
Orlando, FL 32807  
(407) 257-5265  
Fax: (407) 281-6070