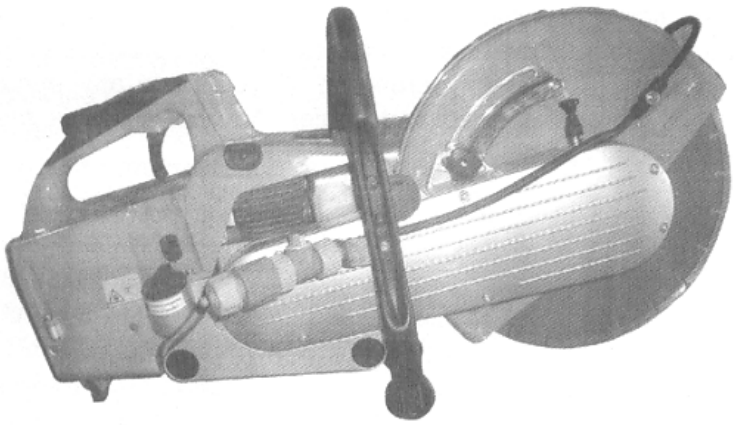
PORTABLE CUT–OFF SAW
ECF350

OPERATION/PARTS MANUAL



WARNING: For safety and efficient operation, always follow the instructions im this manual

Introduction

Thank you for purchasing ECF350 cut-off saw . ECF350 is a gas powered cutting tool,ideal for building, road renovation and emergency rescue operations.

This machine is designed according to EN1454 standard. It is motivated by small petrol engine and in common use outdoors.

ECF350 operates at high speed, special safety precautions must be observed before operating the saw. Careless or improper use could cause serious or even fatal injury. TO
Receive maximum perfoemance and satisfaction from you cut-off saw maodel ECF350 , it is
Important that you read and understand the maintenance instruction manual before operating the saw

This instruction manual contains operation guide, maintenance of machine and some important notices. The contents in the instruction manual are printed in latest edition. We reserve the rights to modify the instruction manual without any prenotice. If you have any enquiries, please contact us or our appointed dealer. Any copy of this manual without permission is prohibited.

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Main parts of ECF350 and their functions

This product is composed of two main sections: a gasoline powered 2-stroke engine and a driving/cutting system. When engine speed is up to 3800 RPM, the cutting blade, driven by the engine via belt transmission system, begins to rotate at high speed, and is ready for cutting work.

Showed below are the main parts of the ECF350 cut-off saw (Ref. Fig 1):

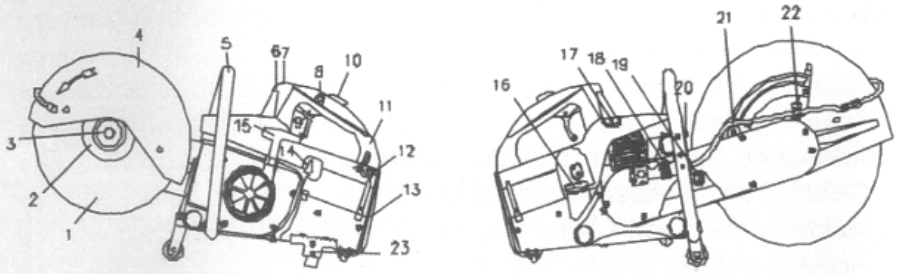


Fig 1

1. Blade
2. Flanges
3. Hexagon Bolt
4. Blade Guard
5. Front Handle
6. Spark Plug Cover
7. Kill Switch
8. Full throttle lock button
9. Throttle Trigger
10. Throttle Trigger Interlock
11. Rear Handle
12. Filter Cover Lock Lever
13. Air Filter
14. Choke Lever
15. Starter Grip
16. Fuel Tank Cap
17. Decompression Valve
18. Water Attachment
19. Tensioning Nut
20. Muffler
21. Blade Guard Positioning Knob
22. Shaft Lock
23. Foot Plate

Main function of different parts :

1.Blade: The main part when machine is cutting. Be sure to choose right blade for the material being cut.

2. Flanges: Two same sized flanges to clamp and support the diamond or abrasive blade.

3.Hexagon Bolt: Tightens blade.

4.Blade Guard:

Safety guard, directs sparks and dust away from operator.

5.Front Handle:

Used to securely hold the saw while under operation.

6.Spark Plug Cover:

A removable cover for access to check, maintain and change the spark plug.

7.Kill Switch:

Engine stops when this switch is pressed and held.

8.Full throttle lock button:

Locks the throttle in full open position by pressing this button while the trigger is fully depressed. Pressing and releasing the trigger returns the throttle to idle position.

9.Throttle trigger:

Controls engine speed by manipulating the throttle. Pulling the trigger backward opens
the throttle and the engine accelerates. Releasing the trigger slows down the engine.

10. Throttle Trigger Interlock:

Avoid occurrence of danger, in case throttle trigger is pressed by mistake while engine is operating at idle speed. Only when you grip the rear handle and press down the interlock, the throttle trigger can function. Consequently, the engine accelerates and drives cutting blades.

11.Rear Handle:

Used to securely hold the saw when operating.

12. Filter Cover Lock lever:

Locks the air filter cover. Pull back on the Filter Cover Lock Lever to open the filter cover.

13.Air Filter:

Filters the air, preventing dirt and debris from entering carburetor.

14.Choke Lever:

Adjust air fuel mixing ratio. If you turn the choke lever anticlockwise, air-fuel mixture becomes thick; if you turn the choke lever clockwise, air-fuel mixture becomes thin.

15.Starter Grip:

Pull to start engine.

16.Fuel Tank Cap:

Open this cap for filling the fuel. Close the tank for starting and operation.

17.Decompression Valve:

Press down on this valve to make starting easier. When air pressure in the engine reaches a preset value, it automatically closes.

18.Water Attachment:

Feeds water to both sides of diamond blade. Connect to water supply for wet cutting.

19.Tensioning Nut:

For V-belt tension adjustment. Turn this nut clockwise to tight the V-belt, turn the nut counter clockwise to loose the V-belt.

20.Muffler:

Reduces exhaust noises and emissions.

21.Blade Guard Positioning Knob :

Loosen the knob to adjust blade guard position.

22.Shaft lock:

Lock the blade shaft to facilitate blade changing and installation.

23. Foot Plate: Foot plate for starting the saw.

Safety Precautions:

As the ECF350 cutoff saw is a high-speed power tool, improper use of this saw might be hazardous. To avoid property damage or personal injury, it is *EXTREMELY IMPROTANT* to read, fully understand, and follow safety precautions before operating this cut-off saw.

1. Worksite Requirements:

Ⅰ. The worksite should be free of any materials or objects that are flammable or explosive.

Ⅱ. Surroundings should be in order, with no clutters, having sufficient visibility, and be well ventilated. The ground operator stands on should be non-skid. Take extreme care when working in wet and freezing weather (rain, snow, frost, ice).

Ⅲ. Bystanders should keep away from the saw when it is operating. Children, the handicapped and animals should never be allowed in the work area.

Ⅳ. Chip may be thrown toward the operator by the cutting tool. So position the object to be cut securely to ensure it won't be pushed around by the blade when cutting.

2. **Blade:**

1) Before installing a blade make sure that the maximum operating speed of the blade is above or equal to the spindle speed of your cut-off saw.

2) Inspect the cutting blade frequently and replace immediately if the cutting blade is cracked or warped. Cracked or warped blades may shatter or break and cause serious personal injury. Failure to follow these directions may cause the blade to shatter or crack in use causing serious or fatal injury.

3) Never use carbide-tipped, woodcutting or circular machine blades. Use of the wrong cutting blade for which it was not designed may cause that blade to shatter or cause serious or fatal injury.

Use correct blade for different material to be cut.
Diamond blades have a much better cutting performance than standard abrasive blades. The blades are steel centered and diamond particles are imbedded in their cutting edges.

Diamond blade is can be used for both wet and dry cutting.Wet cutting will extend the life of your diamond blades.

4)When install the blade, please make sure the arrow on the blade points in direction of the rotation of the spindle.

5) The engine must be off when installing blade.

6)Proper tension of the V-belt is important. In order to avoid a false setting, the tensioning procedure must be followed as described in your manual.

3. Operator:

1) The cut-off saw is a one–person tool.

2) Make sure the operator is in good physical condition and are not under the influence of any substance such as drugs or alcohol which may impair vision or dexterity. Take breaks as needed to prevent you from getting fatigued. Bystanders, especially children should not be allowed in the area where a cut-off machine is in use.

3) Never let the ECF350 saw run unattended. ***NO*** untrained personal should ever be allowed to use the cut-off machine.

4)Do not lend or rent your cut-off machine without the Operation Manual.

5) Employers should establish a training program for operators of this saw to ensure safe operation of the ECF350 .

6)Avoid loose fitting jackets, scarf, neckties, jewelry, flared or cuffed pants, unconfined long hair or anything that could become caught on any obstacles or moving parts of the unit. Wear overalls or long pants to protect your legs. Do not wear shorts.

7)Protect your hands with gloves when handing the cut-off saw. Heavy-duty, non-slip gloves improve your grip and protect your hands.

8)Use ECF350 cut-off saw only with both hands, keeping a firm grip on the front and rear handles. Maintain good balance and footing at all times.

9)Good footing is most important. Wear sturdy boots with nonskid soles. Steel-toed safety boots are recommended.

10) To reduce the risk of injury to your eyes, never operate the cut-off saw **unless wearing goggles** or properly fitted safety glasses with adequate top and side protection. ***Proper eye protection is a must!***

11) Wear an approved safety hard hat to protect your head. Cut-off machine noise could damage your hearing. Earplugs or ear mufflers shall be worn at all times.

12) Wear Mask. Cutting masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. Cutting masonry, concrete and other materials with silica in their composition may give off dust containing crystalline silica. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Use of an approved respirator is recommended.

13)Do not cut materials containing asbestos as asbestos dust can cause severe physical injury. Do not cut materials containing highly volatile or flammable substances.

14) Do not leave the machine unattended.

4. Inspection of the cutoff saw before use:

I . Make sure there are no loose objects on or near the saw.

II . Except for the carburetor adjustment screws, all other bolts, nuts, screws and the fuel tank cap should be securely tightened. Make sure all rubber hoses for oil flow are tightly connected with no leaks.

III. Make sure the blade rotates smoothly.The starter rope can be pulled through and guided back without being tangled.

IV. Check to make sure the Throttle Trigger, the Full Throttle Lock Button, the Choke Lever, the Decompression Valve and the Kill Switch all function well.

Ⅴ. Check to make sure the blade guard has no visual damage. Adjust the guard as necessary so the spark generated during cutting can be directed away from the operator. (Ref. Fig.2)

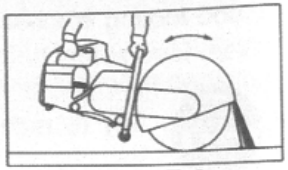


Fig 2

Ⅵ. Check to make sure the V-belt is properly tensioned.
Ⅶ. Make sure the saw is free of oil spillage.
Ⅷ. Make sure the main cover and the handles are dry and clean

5. Precautions on starting:

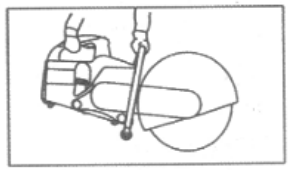


Fig 3

1） Keep a good balance and secure footing.
2） Do not attempt to start the saw if damage is found or if it's not completely and securely assembled and properly adjusted.
3） To start, place the machine firmly against the ground and make sure the blade is not in contact with the ground or the object to be cut.
4） Pull sharply on the rope and guide it back slowly. Do not let go of the grip halfway through the pull to prevent it from snapping back.

6. Precautions on operation:

Ⅰ. Keep a good balance and secure footing while holding the saw firmly at all times.
(Ref. Fig.3)
Ⅱ. Press the throttle trigger backward slowly to make the engine accelerate gradually. Wait until the blade builds up the rpm's before beginning to work.
Ⅲ. Move the rotating blade slowly toward the object to be cut, increase the pressure gradually after the cutting edge comes in contact with the object. Make sure the cutting depth is appropriate.
Ⅳ. Do not change direction of the cut or twist during the cut as this may produce a high torsion load on the blade and may cause it to break or shatter. Only move the machine along a straight line, forward or "to backward fro" in the cutting direction.

Ⅴ. When cutting, keep certain distance between your body and the saw. Make sure your body does not contact blade and rotating part.
Ⅵ. Release the pressure on the saw when the blade completes a cut. The cut-off portion of the object may drop, so make sure it won't hit any part of your body or pinch the blade.
Ⅶ. Whenever you hear an abnormal sound coming out of the cut-off saw, stop cutting immediately for inspection (Note the muffler and the blade are very hot at this time. so take care not to get burned). Only resume work after the trouble is eliminated
Ⅷ. Do not make adjustments or any other maintenance or troubleshooting with the cut-off saw while it is running.
Ⅸ. Take precaution when re-entering a cut and do not turn the blade at an angle or push it into the cut as this may damage the blade.

7. Precautions on fueling:

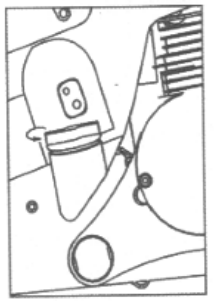


Fig. 4

Ⅰ. Fuel the machine only in a well-ventilated environment.
Ⅱ. Before refueling, let the engine cool off naturally. Do not take any other forceful measures to cool the engine down.
Ⅲ. Remove the fuel tank cap carefully so as to allow any pressure build-up in the tank to release slowly. (Ref. Fig.4)
Ⅳ. Tighten fuel cap securely after fueling and clean off spillage if any.

8. Notes on transporting:

Ⅰ. Always stop the engine before relocating the saw.
Ⅱ. When carrying the machine with a hot engine, take care not to have your body get burned by the muffler.
Ⅲ. Prevent the saw from touching the ground or any hard objects.

9. Notes on maintenance:

Perform any maintenance or repair work in clean and neat environment. Use proper tools and operate with caution.

10.Do not attempt to modify your cut-off saw in any way. Use only identical spare parts for replacement.

11.The cut-off saw is only intended for cutting work and cannot be used for prying or shoveling away any objects, or used as a grinding tool with the sides of the blade.

Specifications:

	Item			Unit	Specification
Engine	Model				1E49F
	Type				Single-cylinder, two stroke, air-cooled
	Cylinder bore			mm	49
	Piston stroke			mm	34
	Displacement			cm3	64.1
	Max. output			kw	≧2.7
	Speed at max. output			r/min	8500
	Max. torque			N.m	≧3.3
	Idle speed			r/min	2600±100
	Min. fuel consumption			g/(kw.h)	≦544
Engine	Fuel mix	Gasoline			Minimum octane rating 93
		Oil			Two stroke engine oil
		Mix ratio			50:1
	Fuel tank capacity			L	1.5
	Ignition type				Electronically controlled (breakerless) magneto ignition
	Electrode gap of spark plug			mm	0.5
	Spark plug thread	length		mm	9.5
		thread			M14x1.25
	Starting method				By pulling through the rope starter
	Rotation direction				Anticlockwise
Blade	Diameter			mm	300,350
	Max. operating speed			r/m	4850
	Thickness			mm	2～4
	Arbor hole diameter			mm	25.4
	Types				Composite abrasive blade or Diamond abrasive blade
	Cutting depth (with thrust plate dia. 115 mm)	for300mm(12")blade		mm	92
		for350mm(14")blade			115
The Whole Unit	Size(length X width X height)			mm	750×320×420
	Weight			kg	13
	Sound level from operator position			dB(A)	99.1
	Sound level from machine			dB(A)	115
	Vibrating level	Forward(idle)		m/s²	9.08
		Forward(rated spindle speed)		m/s²	6.52
		Reverse(idle)		m/s²	8.97
		Reverse(rated spindle speed)		m/s²	5.49

Operation Guide to ECF350 cut-off saw

1. Before starting

Preparation includes clear up and arrangement of work surroundings, wearing proper clothing and protection and inspecting of the cut-off saw. In preparation, please follow the procedures described in the appropriate section of this manual. For additional preparation work before starting, please follow instructions given below:

Ⅰ. Fueling:

a) Before starting, check if there is any fuel left in the fuel tank. This engine is engineered to operate on mixture of unleaded gasoline and quality two-stroke engine oil. Octane rating of the gasoline should at least be 93.

b) Gas to Oil mix ratio is 50:1.

c) When mixing fuel, pour engine oil into the canister first, and then add gasoline (make sure the mix ratio is 50:1). Shake the mixture in the canister thoroughly. Clean the fuel tank cap and the area around it as necessary to ensure no dirt falls into the tank. Finally pour the fuel mixture into the tank and tighten fuel tank cap securely.

d) Only mix sufficient fuel for a few days work, the maximum storage time of mixed fuel is 3 months.

Ⅱ. Choosing the right blade:

a. Blade diameter can be 300 mm (12") or 350mm (14"). The diameter of the arbor hole has two sizes 25.4mm .Blade thickness should be within the range of 2-4mm.

b. Blade types:

For your reference, choose composite abrasive blades for cutting of asphalt, concrete, stone, brick, steel and plastics. Choose diamond abrasive blades for cutting of asphalt, concrete, stone, hard rock, brick, etc.

Note: There is a rotation direction indicator marked on each diamond blade. When mounting, make sure it corresponds to the rotation direction of the arbor.

c. Fitting/Replacing the blade: (Ref. Fig.5)

- Gently press down on the Shaft Lock (1), use the combination wrench to turn the Blade (5) back and forth until the shaft lock engages in the blade shaft.
- Use the combination wrench to loosen and unscrew the Hexagon Bolt (2).
- Remove the metal Washer (3), the Flange (4) from the blade shaft together with the blade to be replaced.
- Mount the new blade.
- Fit the Flange(4) and Metal Washer(3).
- Screw in the Hexagon Bolt (2) and tighten it with the combination wrench with 25N.m torch.
- Finally let go of the Shaft Lock so that the blade can turn freely.

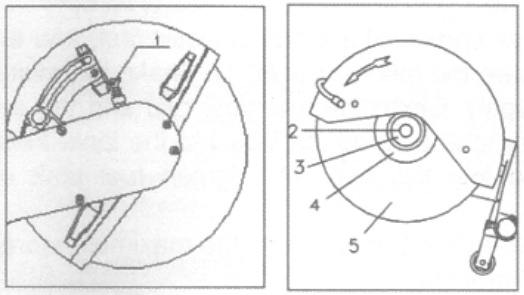


Fig 5

III. Tensioning the V-belt: (Ref. Fig.6)

- Loosen and unscrew the Hexagon Bolts (1) on the transmission box and then remove transmission box cover (2).
- Loosen the three Hexagon Bolts (5) on the bearing plate.
- Turn the Tensioning Nut (6) clockwise (or turn the adjusting Bolt (3) clockwise) until the V-belt is tensioned.

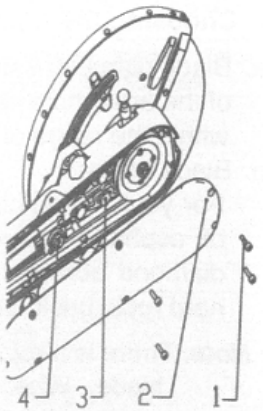


Fig. 6

- Tighten the three Hexagon Bolts (5) on the bearing plate.
- Fit the transmission box cover (2) and fit and tighten the Hexagon Bolts (1).

2. Starting (Ref. Fig.7)

1) Place the cut-off saw on the ground and make sure it's in good balance, see to it that the saw blade does not touch any objects or the ground, and there is no person within the swivel range of the saw.

2) Set the Kill Switch to "ON" position.

3) Press the button of the Decompression Valve

4) Set the Choke Lever (2) to an appropriate position:

to if the engine is cold;

to if the engine is warm(even if the engine has already run but is still cold);

to if the engine is warm (latched position for warm start).

5)Press down Throttle Trigger Interlock (3) and pull the Throttle Trigger (4) backward to the end.

6) Press down Full Throttle Trigger Lock Button (5).

7) Hold the front handle with left hand and firmly press the cut-off saw against ground , place the left foot on the carburetor box cover.

8)Holding the Starter Grip (5) securely, slowly pull out the starter rope for a short distance, and then pull it through quickly and strongly.

Note: a. Starter rope is 1.15m long, do not pull the rope out more than it's length otherwise it may break or cause damage to the starting system.

b. Do not let go of the starter grip. After pulling, guide the rope back into place slowly.

c. Pull the rope only straight up and down through the rope guide bushing to prevent it from wearing.

9) After the rope has been pulled through:

a. If the engine does not start, press the button of the Decompression Valve again and restart the engine.

b. If the engine runs for a while but stop suddenly, press the Decompression Valve in, move the choke lever to and then restart the engine.

c. As soon as the engine starts successfully, briefly pull the Throttle Trigger (4) at once. The Full Throttle Trigger Lock Button (5) reverts to its original position and the engine idles.

10) If the engine is new, or has been stored for a long period of time, pull the starter rope through several times to ensure that sufficient fuel is delivered into the fuel line and combustion chamber of the engine.

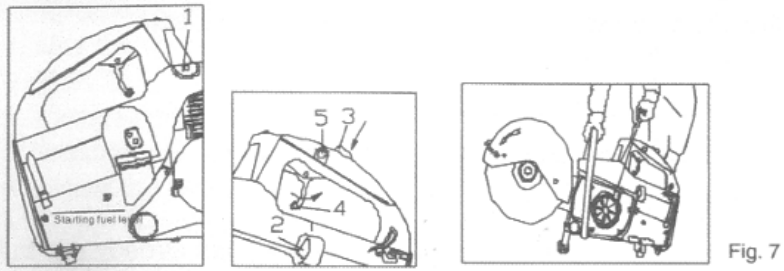


Fig. 7

11) When the machine can not be started, please check if the fuel in tank reach "starting fuel level" firstly(see fig.7),otherwise please fill the tank and start again.

3. Operation (Ref. Fig.7)

Ⅰ. The blade will not run when the engine idles.

Ⅱ. When the cut-off saw is ready for actual cutting work, gently pull the throttle trigger (3) backward to accelerate the engine.After the speed is over 3700 ±100 rpm, the blade begins to rotate and speeds up. When the blade speed is up and stable, you can begin to move the saw slowly toward the object to be cut. After the cutting edge comes in contact with the object, increase pressure to the saw slowly until the blade is at the desired depth. Finally hold the machine securely and move along a straight line to complete the cut.

Ⅲ. To stop or halt the cut (when a cut is completed, or the engine runs out of fuel halfway, or abnormal sound is heard), first lift the blade out of the cut, then release the throttle trigger, wait until the engine slows down to idle speed and the blade stops running, then finally turn off the machine.

4. Emergency stopping (Ref. Fig.8)

Under normal conditions, the machine is to be turned off when the engine idles. However, if a malfunction or emergency occurs during cutting, you can stop the engine immediately by pressing and holding the kill switch (2) on the front end of the rear handle (1).

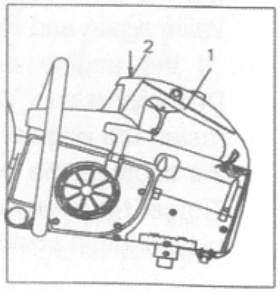


Fig. 8

5. Notes on operation

Ⅰ. Follow all applicable instructions in this manual when operating the cut-off saw.

Ⅱ. During the break-in phase, which takes about 8 hours, the saw must not be operated at high speeds without load (normaily do not pull the throttle trigger beyond 3/4 of full throttle.). Following this procedure will lengthen the service lifetime of your machine.

Ⅲ. After the saw works for a certain period of time, let the engine idle on for a while to dissipate the heat. This will prevent some engine parts (ignition system, carburetor etc.) from being damaged by over heating.

Adjustment of ECF350 cut-off saw

1. Adjusting V-belt tension

Refer to the instruction described above in the section titled "Tensioning the V-belt".

2. Adjusting carburetor

The carburetor has been preset and adjusted at the factory to reach the optimum fuel-air mixture for a smooth, fuel efficient, reliable running engine with low emission. The air filter and the spark plug need to be checked and maintained regularly. However if the cut-off saw is found to be unsatisfactory in operation (such as the idle speed either too high or too low, or abnormal exhaust emission still persist), a slight adjustment on the carburetor might be necessary, which includes: (Ref. Fig. 9)

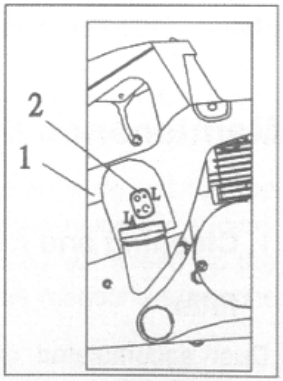


Fig 9

a. Standard setting adjustment:

Find the Low Speed Adjusting Screw "L" (see Fig.9, inside the upper hole of the carburetor seal cover), use a screwdriver to turn the screw L clockwise all the way to its end. Then turn the screw L backwards (counter-clockwise) 360° .

b. Adjusting idling speed:
It is usually necessary to adjust the idle speed after Standard setting adjustment (a). To adjust idle speed, start the engine first.

- If the idle speed is too low, the engine may shut off after starting. In this case, make the standard setting first as instructed in (a), then turn the idle speed adjusting screw LA (see Fig 9,) inside the lower hole of carburetor seal cover clockwise until the blade starts to run. Then turn the screw LA backwards (counter-clockwise) 1/4 circle (90°).
- If the idling speed is too high, the blade will run at idling speed, which is not good for the Cut-off saw. In this case, make standard setting first, then turn the idling speed adjusting screw LA counter-clockwise until the blade stops running. Then turn the screw LA 90° further (counter-clockwise).

3. Adjusting blade guard (Ref. Fig.10)

The blade guard (1) deflects sparks from the operator. To adjust its position, loosen the blade guard Positioning Knob (2) first, then move the blade guard to a desired position by hand. Finally tighten the Positioning Knob (2) to continue cutting.

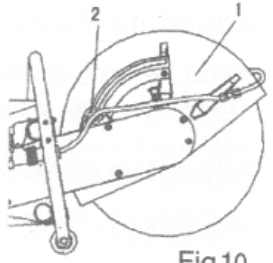


Fig 10

Maintenance & repair of ECF350 cut-off saw

1. Cleaning and maintenance of the air filter

Dust accumulated on the air filter may affect engine performance, increase fuel consumption, and cause difficulty in starting. Therefore, it's important to perform regular maintenance. The frequency of this depends on the conditions of the cutting jobs as well as material being cut both wet and dry. (kefer to maintenance chart) --see Fig11

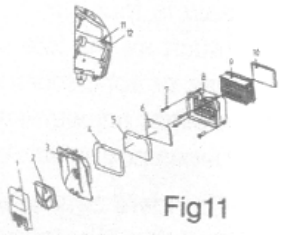


Fig11

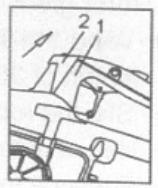
1) Set the choke lever to .
2) Press the button(12) on oil filter cover (1) downwards, then turnto take out the oil filter(2). Please clean it then fill in the engine oil reserve for gasoline engine. Assemble it well after drying.
3) Hook backward the flat spring (11) in the middle of slot that lies in the back of manipulation frame, the filter cover (3) opens automatically. Take out the pre–filter I (5), pre–filter II (6) one by one, thenloosen 4 screw bolts (7) and take out filter housing (8), paper air filter (9), filter inner net (10).
4) Check and change paper air filter and sponge (Pre-Filter) if they are damag ed.
5) Clean filter:

Clean paper filter and filter net: Shake paper air filter or knock it on the ground to get the dust off. Or use high pressure air (Do not exceed 207kPa, 2.1kgf/c ㎡) to blow the dust away. Do not use brush to clean. Dust will go inside fibre of the paper filter if using brush to clean
Clean Pre-Filter: Use warm detergent water to wash Pre-Filter (sponge). Or use non inflammable solvent to wash. Rinse and dry.

6) Use clean cloth to clean the dust inside filter housing.
7) Change the parts if there is any broken. And install the parts back in order and close the filter cover.
8) When cutting dry concrete or something that will bring much dust, it is advised to clean oil filter components every hour after working.

Notice: Never run the engine without filter. Also please do not run the engine when the filter is damaged or after the dirt goes inside the engine. Running the machine under the above circumstances will speed up the damage to the engine. Damages relate to the above mentioned reasons are not under warranty.

2. Maintenance of spark plug (Ref. Fig. 12)



Wrong fuel mixture (too much engine oil in the gasoline), low quality gasoline or oil, dirty air filter, muffler jammed and other unfavorable running conditions are factors affecting the condition of

the spark plug as they cause carbon deposits accumulation, which results in trouble in engine operation. Therefore, if the engine is not powerful, difficult to start or runs poorly at idle speed, firstly check the spark plug.

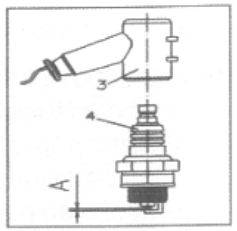


Fig 12

- Remove the spark plug cover (2) on the front end of the main cover (1).
- Remove the plug boot (3) and the spark plug (4) in succession.
- Clean off the carbon build-up on the spark plug.
- Check electrode gap A to see if it is 0.5mm, re-adjust if the gap is too small or big.
- Replace spark plug if the electrodes are badly eroded.

Suggestion: A BPMR7R type spark plug is recommended for replacement. After check and change the spark plug, refit the plug boot and make sure it is snugly connected to the spark plug.

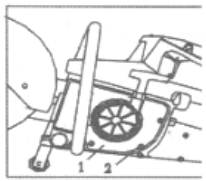
3. Replacing starter rope (Ref. Fig. 13)

The Starter rope may need to be replaced when frayed or broken.

- Unscrew the screws (2) on the flywheel/starter cover (1) and remove the cover from the engine unit.
- Remove the spring clip (8), remove the rope rotor (7) with pawl (9).
- Using a screwdriver, unscrew the screw plug (3) on top of the starter grip, remove the starter rope (4) out of the grip.
- Put a new rope down through the grip and the rope guide bushing (5), make a simple knot at the end of the rope and screw in the screw plug (3)
- Thread the rope through the rope rotor (7) (enter from the hole on the rotor groove) and secure it with a simple knot.
- Wind the rope around the rope rotor (7) clockwise until there is a length of 300mm left unwound.
- Slip the rope rotor onto the starter post (6) and turn it back and forth a little until the anchor loop of the rewind spring engages.
- Replace the pawl (9) in the rope rotor.

- Press the spring clip (8) onto the starter post and over the peg of the pawl with a screwdriver.
  Note: The spring clip must point counter-clockwise.
- To tension the rewind spring, first guide the rope through the notch on the edge of the rope rotor and form a loop, use it to turn the rope rotor 4-5 times counter-clockwise.
- Then hold the rope rotor tight, pull out the twisted rope and untangle it.
- Release the rope rotor, slowly let go of the starter rope so that it rolls on the rope rotor.
- Refit the flywheel/starter cover (1) and screw in the four screws (2).

4. Replacing pawl (Ref. Fig. 13)



The pawl functions as a link between the rope rotor and the crankshaft (by engaging and disengaging the starter cup) and needs to be replaced if damaged.

- Unscrew the screws (2) on the flywheel/starter cover (1) and remove the cover from the engine unit.
- Remove the spring clip (8), and remove the damaged pawl (9).
- Replace a new pawl.
- Refit the spring clip (8) and the flywheel/starter cover (1) in succession.

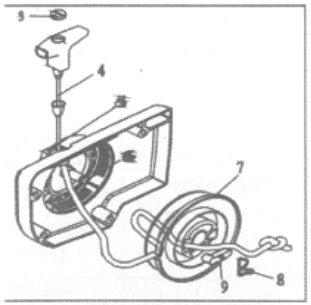


Fig 13

5. Maintenance chart

The following information refers to normal operating conditions. The specified interval must be reduced accordingly when working under aggravated conditions (severe dust formation, for example) and with longer daily working hours (over 8 hours daily).

		Before starting work	After work or daily	Every time after refueling	Weekly	Monthly	In the event of a malfunction	If damaged	As required
Complete Machine	Visual inspection	√		√					
	Clean		√						
Throttle trigger, Kill Switch	Functional test	√		√					
Filter in fuel tank	Check					√			
	Replace						√		
Fuel tank	Clean					√			
V-belt	Clean					√			
	Replace								
Air filter (all filter components)	Clean		√						
	Replace								
Cylinder fins	Clean		√						
Spark arresting screen in the muffler	Inspect		√						√
	Clean or replace								
Carburetor	Check idle speed (the cutting wheel must not run)	√		√					
	Adjust idle speed								√
Spark plug	Adjust electrode gap						√		√
Nuts and bolts (but not adjusting screws)	Retighten	√	√						
Rubber buffer	Replace						√		
Blade	Check and clean	√		√					√
	Replace							√	√
Support/Bracket	Clean		√						
	Replace							√	√

Storing ECF350 cut-off saw

For long storage:

1. Empty and clean the fuel tank, run engine until carburetor is dry.
2. Thoroughly clean the cut-off saw, tighten all nuts and bolts (except for adjusting screws).
3. Remove the blade and loosen the V-belt.

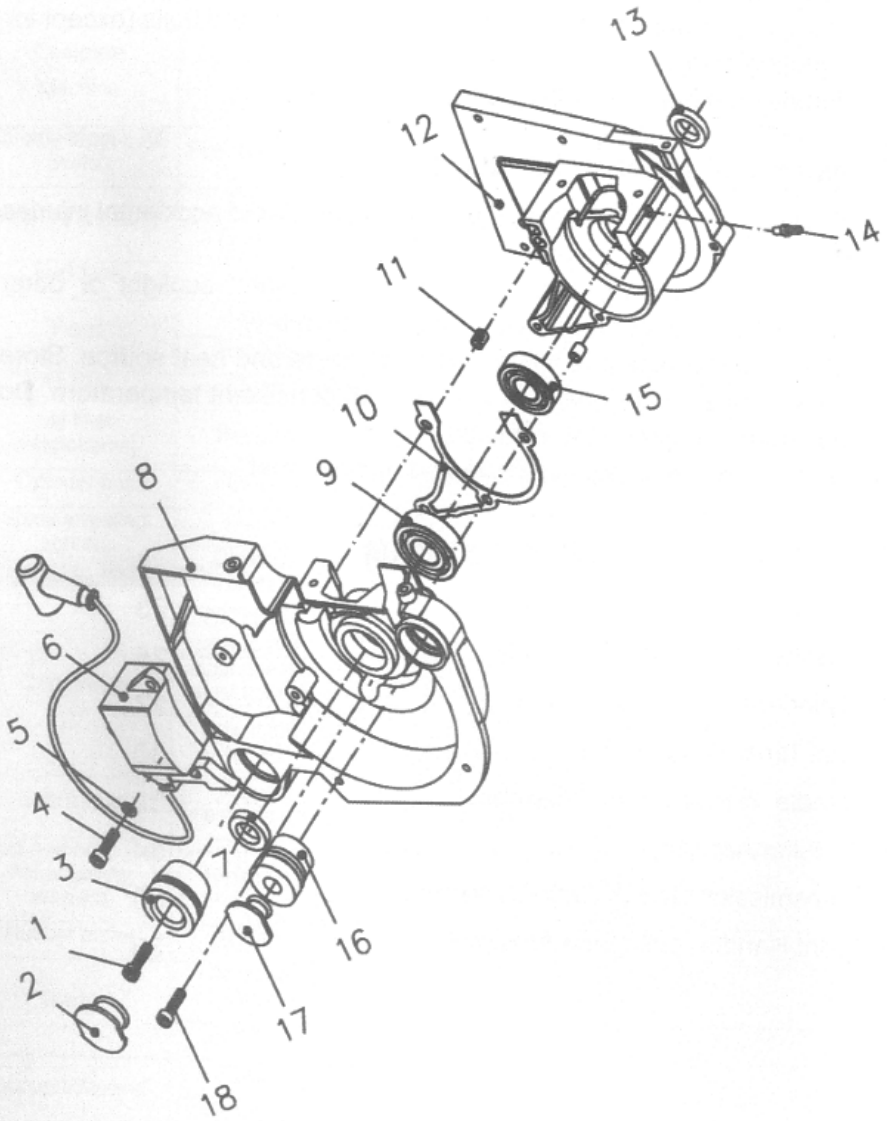
Notes on transport and storage:

1. Store cut off saw on a solid and stable place. Avoid accidental injuries. Avoid knocks and bumps.
2. Abrasive blades must not be exposed to direct sunlight or other sources of heat during transportation and storage.
3. Store the machine in a place free of moisture and heat source. Store the cut-off saw preferably in a place with consistent temperature. Do not store it near corrosive liquids.
4. Composite blade must be protected against frost.

PARTS LIST /ASSEMBLY DIAGRAM

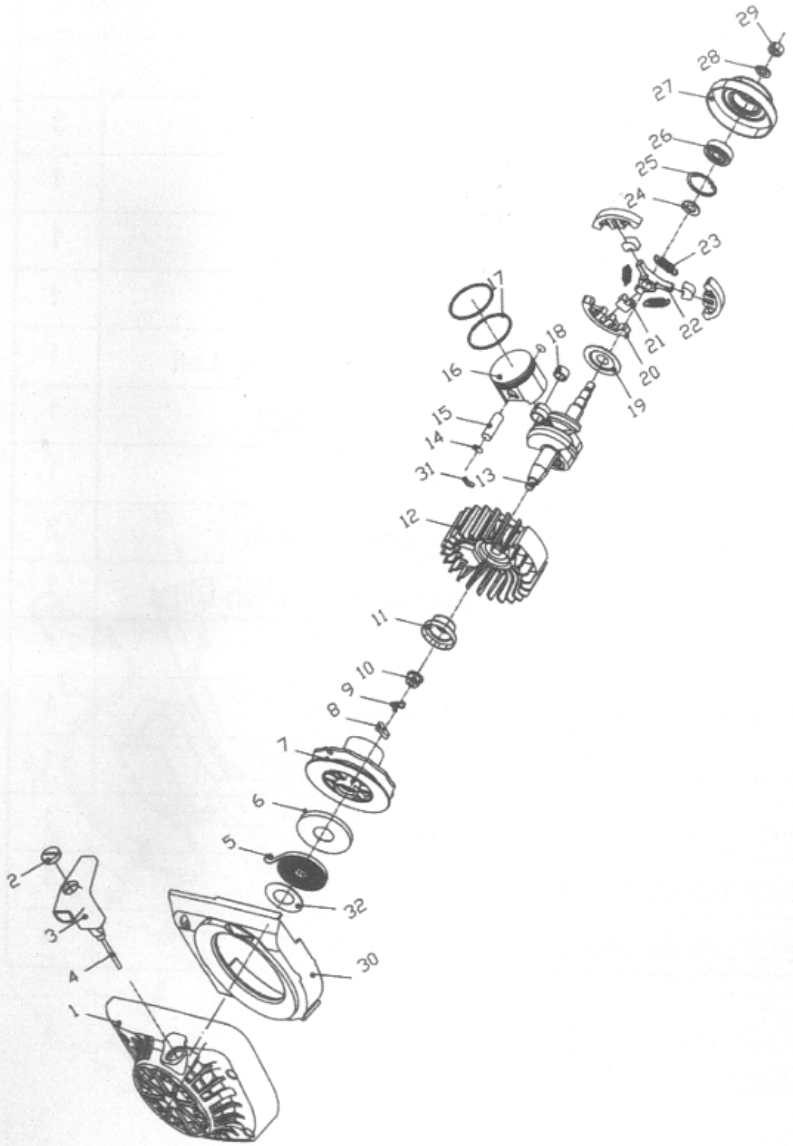
Exploded parts views and parts lists

1. Crankshaft Housing Assembly



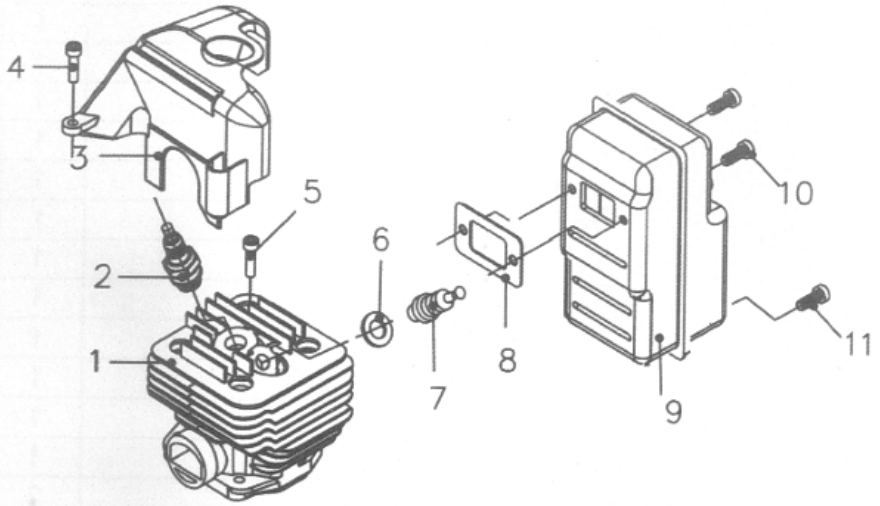
Item	Ref	Description	Qty
1	ECF350-05-00013	Screw M6×16	2
2	ECF350-01-00006	Plug	1
3	ECF350-01-20000	Cover	1
4	ECF350-05-00005	Screw M5×20	3
5	GB/T97.1-1985	Washer	1
6	ECF350-06-00000	Ignition Coil	1
7	ECF350-01-00009	Oil seal 17X28X7	1
8	ECF350-01-00001	Crankshaft Housing-Left	1
9	GB/T276-94	Ball Bearing 6203	1
10	ECF350-01-00002	Gasket	1
11	ECF350-01-00007	Positioning Sleeve	2
12	ECF350-01-00003	Crankshaft Housing-Right	1
13	ECF350-01-00010	Oil Seal 15X24X7	1
14	ECF350-01-00008	Oil Needle	1
15	GB/T276-94	Ball Bearing 6202	1
16	ECF350-01-10000	Cover	1
17	ECF350-01-00005	Plug	1
18	ECF350-05-00007	Screw M5 X 25	4

2. Crankshaft & Piston Assembly



Item	Ref	Description	Qty
1	ECF350-08-10000	Flywheel	1
2	ECF350-08-20002	Screw Plug	1
3	ECF350-08-20001	Starter Grip	1
4	ECF350-08-20003	Starter Rope	1
5	ECF350-08-00002	Rewind Spring	1
6	ECF350-08-00003	Spring Cover	1
7	ECF350-08-00006	Rope Rotor	1
8	ECF350-08-00005	Pawl	1
9	ECF350-08-00004	Spring Clip	1
10	ECF350-03-00005	Collar Nut	1
11	ECF350-03-00004	Starter Cup	1
12	ECF350-03-20000	Flywheel	1
13	ECF350-03-10000	Crankshaft	1
14	ECF350-03-00003	Clip Spring	2
15	ECF350-03-10003	Piston Pin	1
16	ECF350-03-00001	Piston	1
17	ECF350-03-00002	Piston ring	2
18	GB/T5801-94	Needle Bearing	1
19	ECF350-03-00006	Washer	1
20	ECF350-03-30002	Clutch shoe	3
21	ECF350-03-30004	Retainer	3
22	ECF350-03-30005	Clutch	1
23	ECF350-03-30003	Tension Spring	3
24	ECF350-03-30001	Ring	1
25	GB/T893.2-86	Retainer Ring 30	1
26	GB/T276-94	Bearing 6200	1
27	ECF350-03-31000	V-belt Pulley	1
28	ECF350-03-30008	Washer	1
29	ECF350-03-00007	Collar Nut M8×1	1
30	ECF350-08-00001	Flywheel Inner Cover	1
31	GB 1099-1979	Key 3×5×13	1
32	ECF350-08-00007	Washer	1

3A. Cylinder & Muffler Assembly （commom）

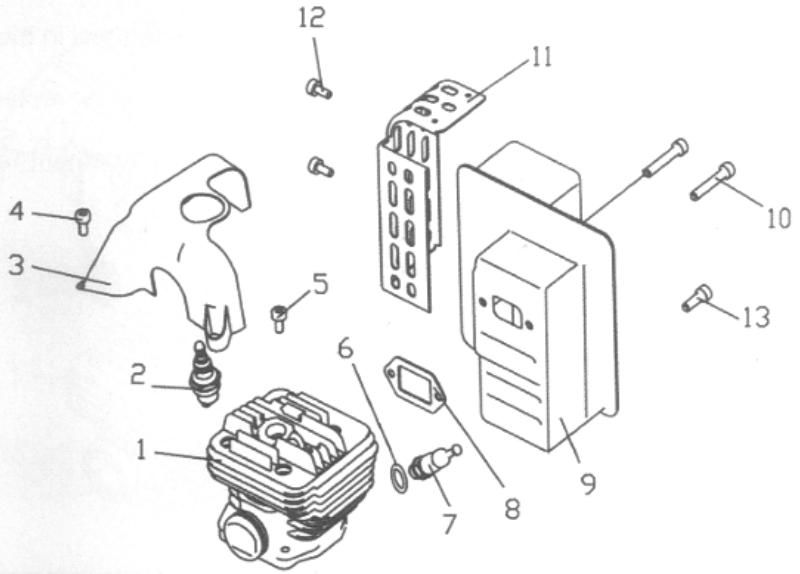


Item	Ref	Description	Qty
1	ECF350-02-00001	Cylinder	1
2	ECF350-02-20000	Spark Plug	1
3	ECF350-02-00002	Cylinder Cover	1
4	ECF350-05-00024	Screw M5×16	3
5	ECF350-05-00005	Screw M5×20	4
6	ECF350-02-10003	Washer	1
7	ECF350-02-10000	Decompression Valve	1
8	ECF350-02-00003	Exhaust Gasket	1
9	ECF350-07A-00000	Muffler Assembly	1
10	ECF350-05-00005	Screw M5×20	2
11	ECF350-05-00024	Screw M5 X 16	1

Remark:

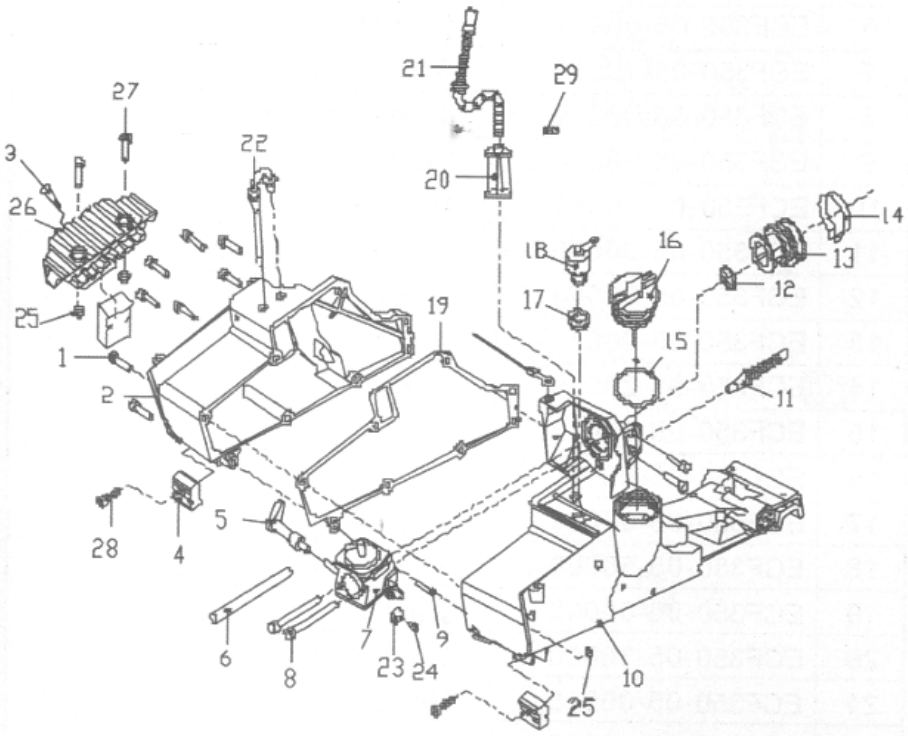
We only offer the general muffler if there is no special request in the order. According to the customer request ， we can use EPA Muffler replace with general muffler which can make the exhaust gas displacement reach to the American EPA standard .

3B. Cylinder & Muffler Assembly （EPA）



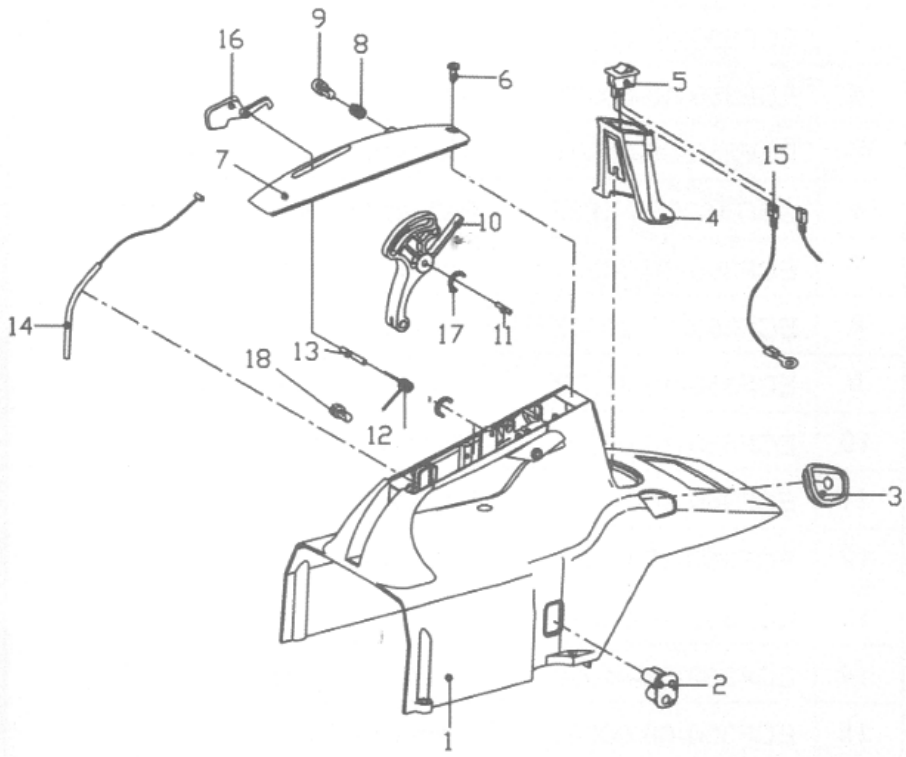
Item	Ref	Description	Qty
1	ECF350-02-00001	Cylinder	1
2	ECF350-02-20000	Spark plug	1
3	ECF350-02-00002	Cylinder cover	1
4	ECF350-05-00024	Screw M5×16	3
5	ECF350-05-00005	Screw M5×20	4
6	ECF350-02-10003	Washer	1
7	ECF350-02-10000	Decompression valve	1
8	ECF350-02-00003	Exhaust gasket	1
9	ECF350-07B-00000	Muffler Assembly	1
10	ECF350-05-00007	Screw M5×25	2
11	ECF350-07B-00004	Muffler guard	1
12	ECF350-05-00011	Screw M5×12	2
13	ECF350-05-00024	Screw M5×16	1

4. Oil Tank & Carburetor



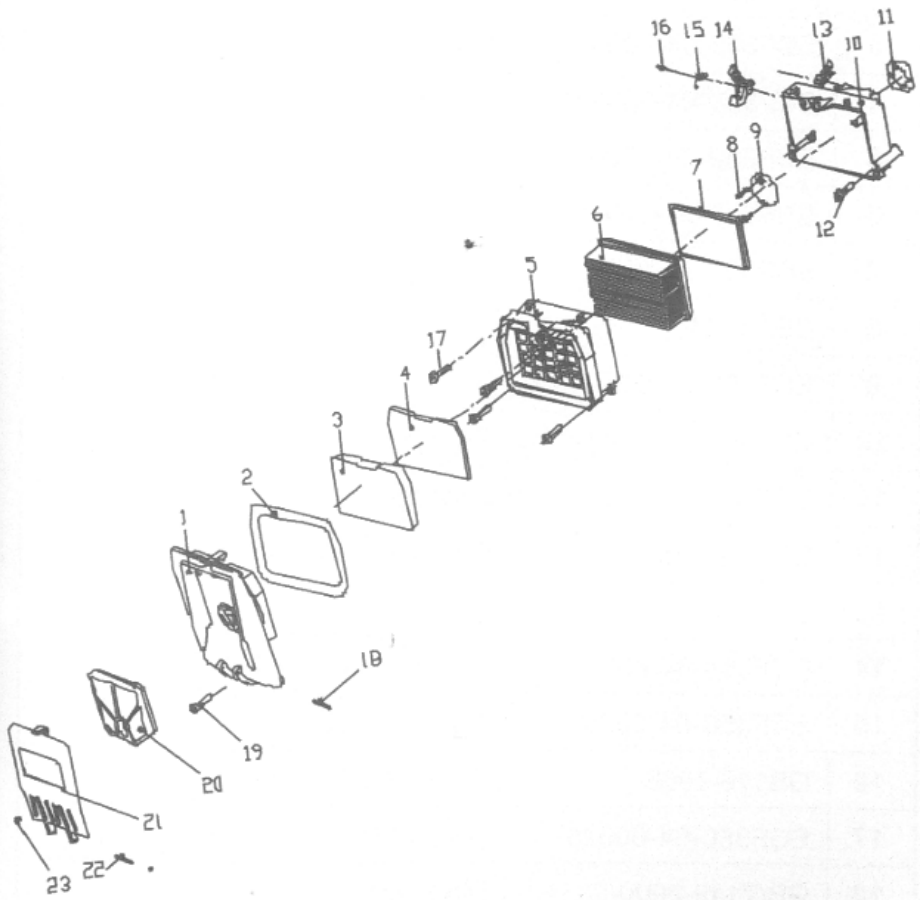
Item	Ref	Description	Qty
1	ECF350-05-00005	Screw M5 x 20	8
2	ECF350-05-00003	Oil Tank-Left	1
3	ECF350-05-00023	Pin	1
4	ECF350-05-00022	Rubber Mount	3
5	ECF350-05-00006	Choke Lever	1
6	ECF350-05-00004	Air Hose	2
7	ECF350-05-10000	Carburetor	1
8	ECF350-05-00009	Screw M5 x 55	2
9	ECF350-05-00014	Split Pin	2
10	ECF350-05-00001	Oil Tank-Right	1
11	ECF350-05-00016	Connecting Hose	1
12	ECF350-05-00008	Sleeve	1
13	ECF350-05-00010	Manifold	1
14	ECF350-05-20000	Hose Clip	1
15	ECF350-05-60002	O-ring	1
16	ECF350-05-60000	Oil Tank Cap	1
17	ECF350-05-00018	Washer	1
18	ECF350-05-50000	Tank vent	1
19	ECF350-05-00002	Gasket	1
20	ECF350-05-30000	Oil Pick-up Filter	1
21	ECF350-05-00015	Hose	1
22	ECF350-05-00019	"U"Rubber Tube	1
23	ECF350-05-41002	Screw Bracket	1
24	ECF350-05-40001	Throttle connecting screw	1
25	GB/T889.1-2000	Nut M5	4
26	ECF350-05-00026	Foot Plate	1
27	GB/T818.1-1985	Screw M5X20	2
28	ECF350-05-00007	Screw M5X25	2
29	ECF350-05-00027	Hose Clip	1

5. Handle & Main Cover Assembl



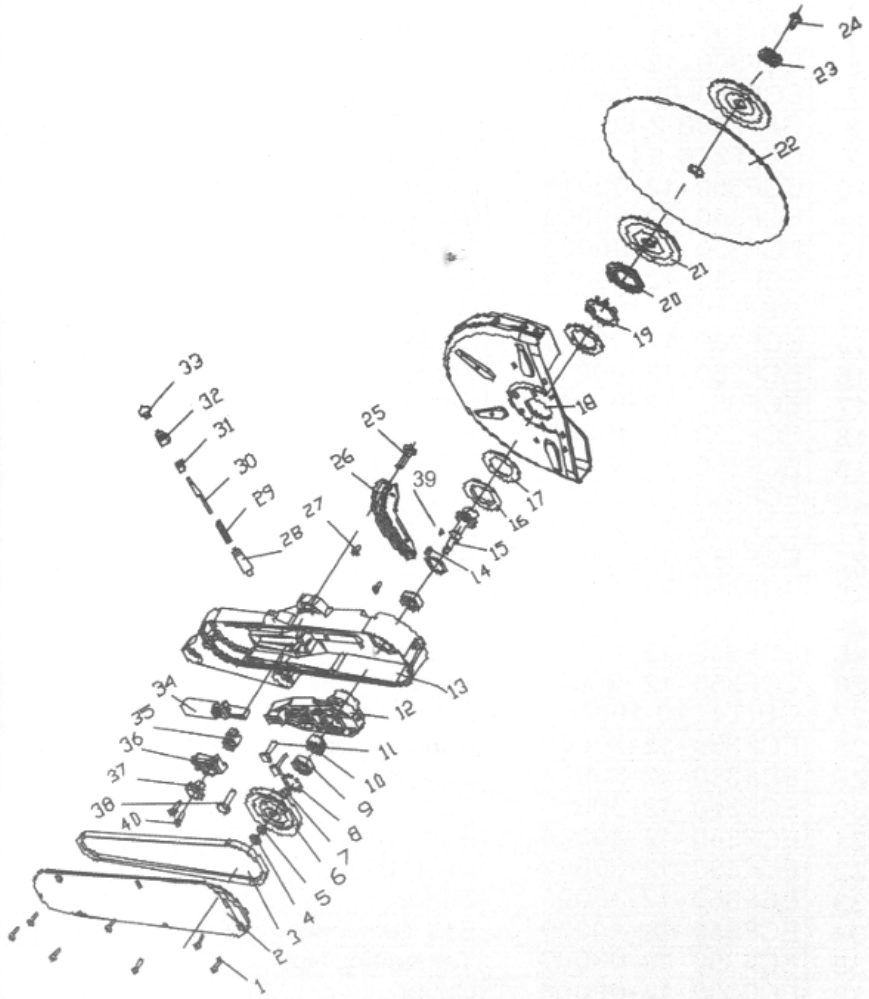
Item	Ref	Description	Qty
1	ECF350-10-00001	Main Cover	1
2	ECF350-10-00008	Side sealing cover	1
3	ECF350-10-00006	Front sealing cover	1
4	ECF350-10-00005	Spark plug cover	1
5	ECF350-06-00001	Kill switch	1
6	GB/T15856.1-1995	Self tapping screw 3.5X16	2
7	ECF350-10-20001	Handle molding	1
8	ECF350-10-20003	Torsion spring	1
9	ECF350-10-20002	Full throttle lock button	1
10	ECF350-10-00003	Throttle trigger	1
11	ECF350-10-00009	Trigger pin	1
12	ECF350-10-00012	Torsion spring	1
13	ECF350-10-00011	Shaft	1
14	ECF350-05-41000	Throttle triggering wire	1
15	ECF350-06-00003	Flameout Wire	1
16	ECF350-10-00002	Positioning plank	1
17	GB/T894.1-86	Retainer ring 4	2
18	GB/T15856.1-1995	Self tapping screw 2.9X16	1

6. Air Filter Assembly



Item	Ref	Description	Qty
1	ECF350-04-00008A	Filter Cove	1
2	ECF350-04-00012	Washer	1
3	ECF350-04-00001	Pre-filter Ⅰ	1
4	ECF350-04-00002	Pre-filter Ⅱ	1
5	ECF350-04-00006	Filter Housing	1
6	ECF350-04-10000	Paper Air Filter	1
7	ECF350-04-20000	Secondary Filter	1
8	GB/T845-85	Screw ST2.9×16	2
9	ECF350-04-00004	Half Round	1
10	ECF350-04-00003	Filter Base	1
11	ECF350-05-00021	Gasket	1
12	ECF350-05-00024	Screw M5×16	2
13	ECF350-04-00005	Flat Spring	1
14	ECF350-04-00006	Filter Cover Lock Level	1
15	ECF350-04-00009	Torsion Spring	1
16	GB119-1986	Pin B3×32	1
17	ECF350-04-00025	Screw M5×20	4
18	GB/T149-2000	Pin 3X40	1
19	ECF350-05-00025	Screw M5×10	1
20	ECF350-04-30000	Oil filter	1
21	ECF350-04-00010	Oil filter cover	1
22	ECF350-04-00011	Round pin 3x55	1
23	GB/T896-1986	Split washer 2.5	2

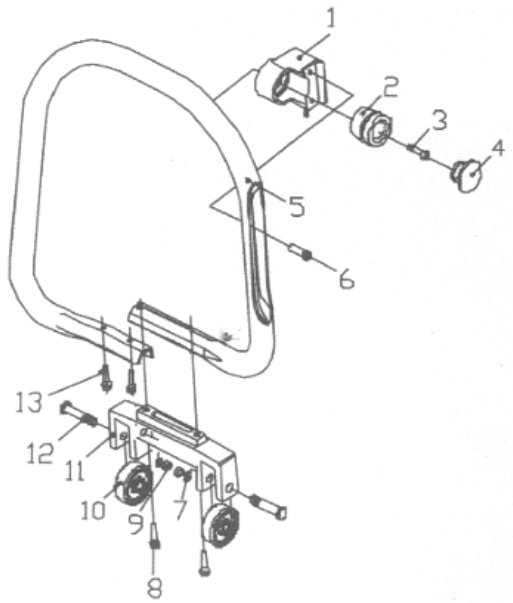
7. Transmission Box & Cutter Assembly



Item	Ref	Description	Qty
1	ECF350-05-00024	Screw M5×16	7
2	ECF350-12-00002	Transmission Box Cover	1
3	ECF350-09-00023	Drive belt	1
4	ECF350-09-00017	Nut M10-Left	1
5	GB/T97-85	Washer 10	1
6	ECF350-12-20000	Belt Pulley Assembly	1
7	ECF350-09-00016	Washer 12	1
8	GB/T893.2-86	Clip 35	2
9	GB/T276-94	Ball Bearing 6202	2
10	ECF350-12-00013	Distance Sleeve of Bearing	1
11	ECF350-12-00008	Bolt M8×30	2
12	ECF350-12-00005	Bearing Plate	1
13	ECF350-12-00001	Transmission Box	1
14	GB/T1099-79	Woodruff Key 4×13	1
15	ECF350-12-00012	Blade Shaft	1
16	ECF350-12-00014	Washer	2
17	ECF350-12-00015	Rubber Ring	1
18	ECF350-09-30000	Blade Guard Assembly	1
19	ECF350-12-00010	Lock Washer	1
20	ECF350-12-00011	Round Locking Nut	1
21	ECF350-09-00007	Flange	2
22	ECF350-09-00001	**Blade***	1
23	ECF350-09-00009	Washer	1
24	ECF350-09-00008	Hexagon Bolt	1
25	ECF350-12-00016	Bolt M8×33	1
26	ECF350-12-00009	Anchor Plate	1
27	GB/T4110-1985	Screw M5×16	2
28	ECF350-12-30005	Rod Sleeve	1
29	ECF350-12-30004	Spring	1
30	ECF350-12-30003	Rod	1
31	ECF350-12-30006	End Cap	1
32	ECF350-12-30002	Dust Shield	1
33	ECF350-12-30001	Button	1
34	ECF350-12-10000	Belt Tensioner	1
35	ECF350-12-00003	Tensioning Nut	1
36	ECF350-12-00004	Cover	1
37	ECF350-12-00007	Blade Guard Positioning Knob	1
38	ECF350-12-00006	Screw M8X35	1
39	GB/T15661-1990	Flat Saddle Key 5x3x14	1
40	ECF350-12-00020	Washe	1
41	ECF350-05-00024	Screw M5X16	2

* Not included for sale, for illustration purpose only.

8.Front Handle & Support Assembly



Item	Ref	Description	Qty
1	ECF350-11-00002	Handle Bracket	1
2	ECF350-01-20000	Cover	1
3	ECF350-05-00013	Screw M6X16	1
4	ECF350-01-00006	Plug	1
5	ECF350-11-00001	Handle Frame	1
6	GB97.2-85	Screw M5×22	2
7	GB/T97.2-85	Washer 8	2
8	ECF350-05-00012	Tapping Screw M5×45	2
9	GB/T889.1-2000	Washer 8	2
10	ECF350-11-10002	Wheels	2
11	ECF350-11-10001	Support	1
12	ECF350-11-10003	Wheel Shaft	2
13	ECF350-05-00024	Screw M5×16	2