



# Owner's Manual

Model Numbers:

**TED-210, TED-262DH  
TED-262L/R/HS  
DRILLS**

P/N 24929

Date 01-24-04



TED-210



TED-262L

*Supplier To The Outdoor Power Equipment Industry*

ISM, Inc. • 1028 4<sup>th</sup> Street SW • Auburn, WA 98001 • Phone: (253) 333-1200 • Fax: (253) 333-1212

**Before using this unit:**

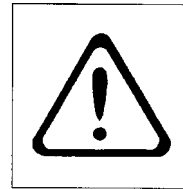
- Read the operator's manual carefully.
- Check that the cutting equipment is correctly assembled and adjusted.
- Start the unit and check the carburetor adjustment. See "Maintenance".

**⚠ WARNING**

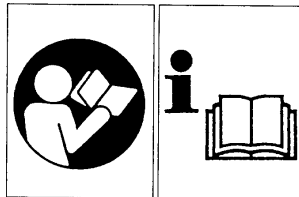
**The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.**



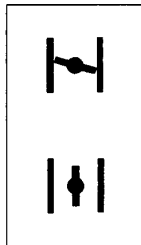
Read, understand and follow all warnings and instructions in this manual and on the unit.



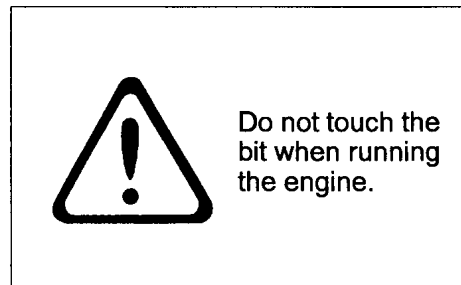
Always wear eye, head and ear protectors when using this unit.



It is important that you read, fully understand and observe the following safety precautions and warnings. Careless or improper use of the unit may cause serious or fatal injury.



Explains choke position. Upper sign indicates choke closed and the lower fully open.

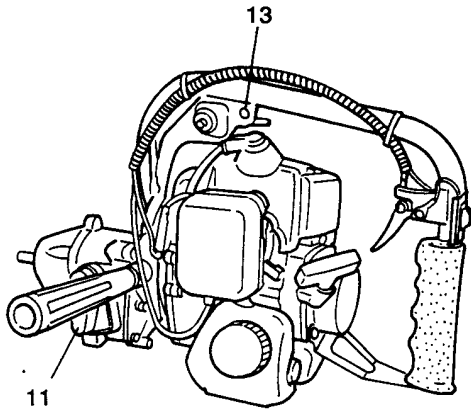
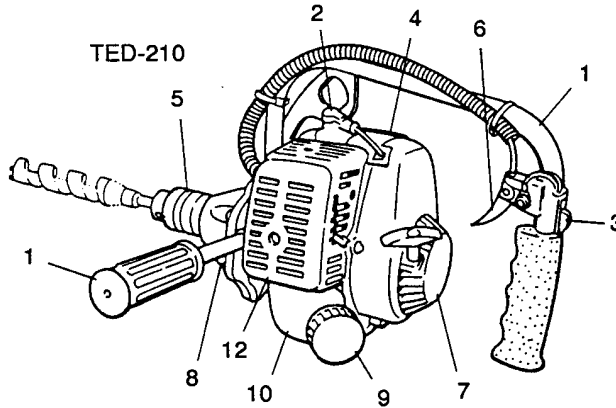


Do not touch the bit when running the engine.

**1. What is What?**

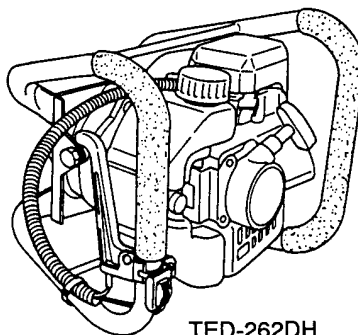
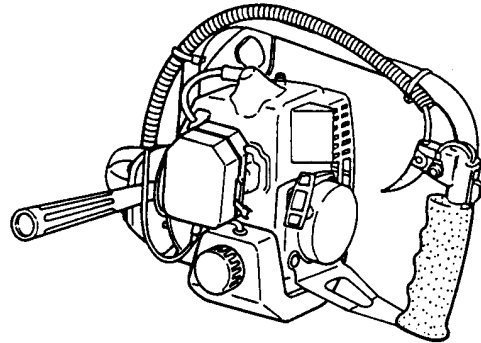
Since this manual covers several models, there may be some difference between pictures and your unit. Use the instructions that apply to your unit.

1. Handle
2. Plug cap
3. Ignition Switch
4. Muffler
5. Chuck unit
6. Throttle trigger
7. Recoil starter
8. Gear case
9. Fuel tank cap
10. Fuel tank
11. Shift lever
12. Air cleaner
13. Hole for strap



TED-262R

TED-262L/HS



## 2. Warnings and safety instructions

### Operator safety

- Always wear a safety face shield or goggles.
- Always wear heavy, long pants, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair so it is above shoulder length.
- Do not operate that tool when you are tired, ill or under the influence of alcohol, drugs or medication.
- Never let a child or inexperienced person operate the machine.
- Wear hearing protection.
- Never start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- Keep handles free of oil and fuel.
- Keep hands away from drilling equipment.
- Do not grab or hold the unit by the drilling equipment.
- When the unit is turned off, make sure the drilling attachment has stopped before the unit is set down.
- When operation is prolonged, take a break from time to time so that you may avoid possible whitefinger disease, which is caused by vibration.

### Tool safety

- Inspect the entire tool before each use.
- Replace damaged parts. Check for fuel leaks and make sure all fasteners are in place and securely fastened.
- Replace parts that are cracked, chipped or damaged in any way before using the tool.
- Keep others away when making carburetor adjustments.
- Use only accessories as recommended for this tools by the manufacturer.

### WARNING!

Never modify the tool in any way. Do not use your drilling tool for any job except that for which it is intended.

### Fuel safety

- Mix and pour fuel outdoors and where there are no sparks or flames.
- Use a container approved for fuel.
- Do not smoke or allow smoking near fuel or the tool or while using the tool.
- Wipe up all fuel spills before starting engine.
- Move at least 3 m (10 ft.) away from fueling site before starting engine.
- Stop engine before removing fuel cap.
- Empty the fuel tank before storing the tool. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store so fuel will not leak.
- Store tool and fuel in area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

### WARNING!

**Antivibration systems do not guarantee that you will not sustain whitefinger disease or carpal tunnel syndrome. Therefore, continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.**

### Drilling safety

- Do not drill any material other than that for which is intended.
- Inspect the area to be drilled before each use. Remove objects which can be thrown or become entangled.
- For respiratory protection, wear an aerosol protection mask when drilling the area after insecticide is scattered.
- Keep others including children, animals, bystanders and helpers outside the 5 m (17 ft.) hazard zone. Stop the engine immediately if you are approached.
- Hold the tool firmly with both hands.
- Keep firm footing and balance. Do not over-reach.
- Keep all parts of your body away from the muffler and drilling attachment when the engine is running.


### Maintenance safety

- Maintain the tool according to recommended procedures.
- Disconnect the spark plug before performing maintenance except for carburetor adjustments.
- Keep others away when making carburetor adjustments.
- Use only genuine replacement parts as recommended by the manufacturer.

### Transport and storage

- Carry the tool by hand with the engine stopped and the muffler away from your body.
- Allow the engine to cool, empty the fuel tank, and secure the tool before storing or transporting in a vehicle.
- Empty the fuel tank before storing the tool. It is recommended that the fuel be emptied after each use.
- If fuel is left in the tank, store so fuel will not leak.
- **Store tool out of the reach of children.**
- Clean the unit carefully and store it in a dry place.
- Make sure engine switch is off when transporting or storing.
- When transporting in a vehicle, cover bit with bit cover or rug.

If situations occur which are not covered in this manual, take care and have good judgement. Contact your dealer if you need assistance.

 Pay special attention to statements preceded by the following words:

### WARNING!

Indicates a strong possibility of severe personal injury or loss of life, if instructions are not followed.

### CAUTION!

Indicates a possibility of personal injury or equipment damage, if instructions are not followed.

### NOTE!

Helpful information for correct function and use.

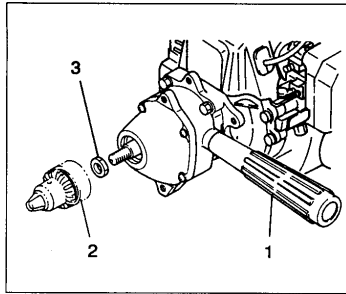


Fig. 1-1

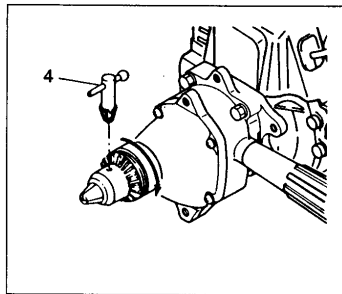


Fig. 1-1B

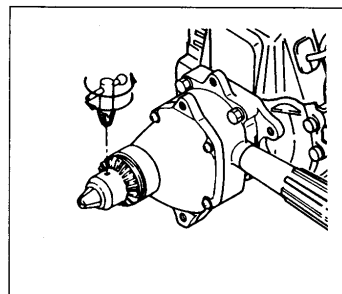


Fig. 1-1C

## Assembly procedures

### Assembling (Fig. 1-1, 1B, 1C)

1. Assemble the handle (1), which is supplied with the unit to the gear case.
2. Screw the chuck unit (2) into the drive shaft (clockwise) after the collar B (3) has been installed.

**NOTE!** The collar B(3) is not used on Model TED-262 series.

3. Insert the drill bit to be used after opening the chuck by the chuck handle (4) and tighten the chuck by the handle.

### Selection of a Suitable Bit

Choose a drill bit according to material to be drilled.

## Operating procedures

### Fuel (Fig. 2-1)

#### **⚠ WARNING!**

**The power drill is equipped with a two-stroke engine. Always run the engine on fuel, which is mixed with oil. Provide good ventilation, when fueling or handling fuel.**

#### Fuel

- Always use branded 89 octane unleaded gasoline.
- Use Tanaka two-cycle oil or a quality two-cycle oil at mixing ratio of 25-50:1 (Gasoline (A) : Oil (B)), only for the state of California at 50: 1.
- Never use multi-grade oil (10 W/30) or waste oil.
- Always mix fuel and oil in a separate clean container.
- Always start by filling half the amount of fuel, which is to be used. Then add the whole amount of oil. Mix (shake) the fuel mixture.
- Add the remaining amount of fuel.
- Mix (shake) the fuel-mix thoroughly before filling the fuel tank.

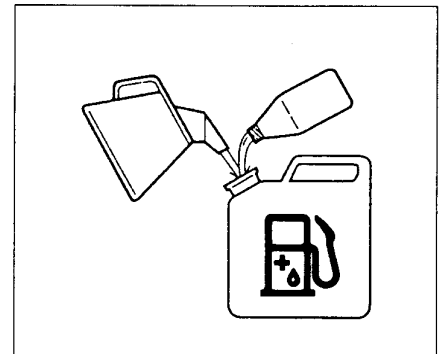


Fig. 2-1

#### Fueling

#### **⚠ WARNING!**

- **Always shut off the engine before refueling.**
- **Slowly open the fuel tank, when filling up with fuel, so that possible over-pressure disappears.**
- **Tighten the fuel cap carefully, after fueling.**
- **Always move the unit at least 3 m (10 ft.) from the fueling area before starting.**

Before fueling, clean the tank cap area carefully, to ensure that no dirt falls into the tank. Make sure that the fuel is well mixed by shaking the container, before fueling.

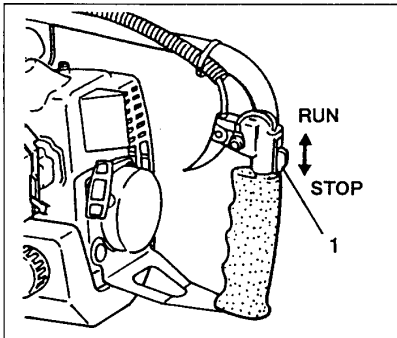


Fig. 2-2

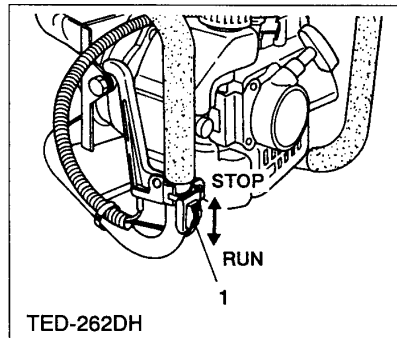


Fig. 2-2B

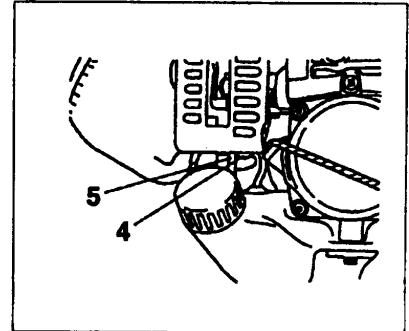


Fig. 2-2C

## Starting

1. Set ignition switch (1) to (RUN) position. (Fig. 2-2, 2B)  
 \*Push priming bulb (4) several times so that fuel flows through the bulb or return pipe (5). (If so equipped) (Fig. 2-2C)
2. Set choke lever to (CHOKED) position. (Fig. 2-3, 3B)
3. Pull the recoil starter handle briskly, taking care to keep the handle in your grasp; and not allowing it to snap back. (Fig. 2-4)
4. Once the engine is running, move the choke to the run-position. (Fig. 2-3, 3B)

**NOTE! At this stage if the engine does not start, repeat procedure from 2 to 4.**

5. After starting the engine, allow the engine about 2-3 minutes to warm up before subjecting it to any load.

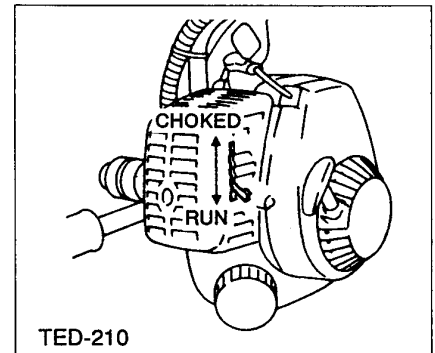


Fig. 2-3

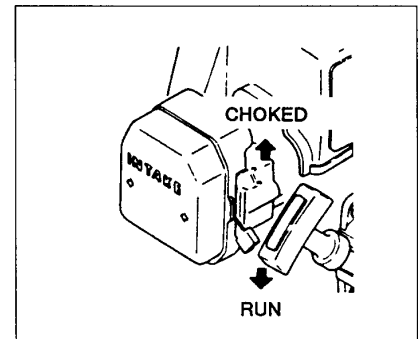


Fig. 2-3B

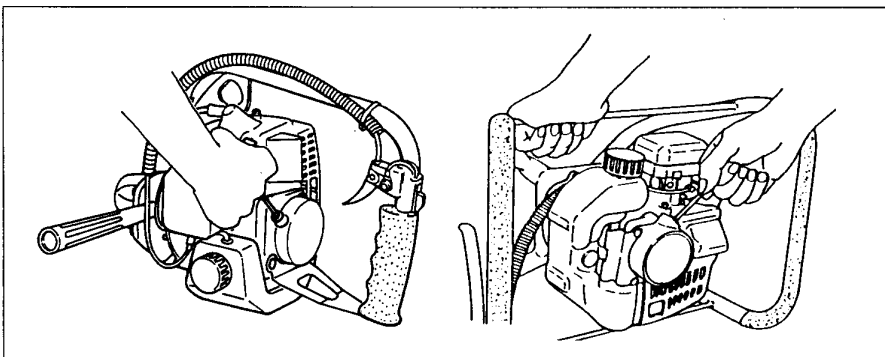


Fig. 2-4

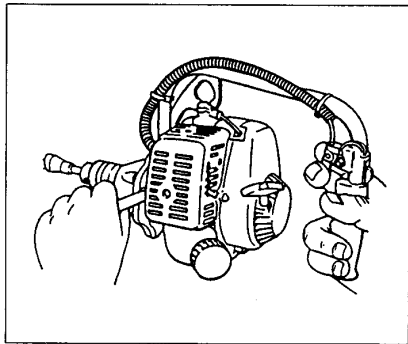


Fig. 2-5

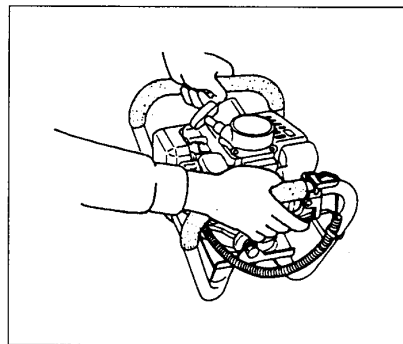


Fig. 2-5B

**Drilling (Fig. 2-5,5B)**

- Always hold unit firmly with both hands on handles and body well balanced.
- Operate at a high engine speed and let the drill bit do the work. Do not force bit into the hole.
- If materials become twisted around drill bit, stop engine, allow unit to cool and remove wire from spark plug before attempting to clear bit.
- Stop engine and inspect unit if abnormal vibration or noise is generated.

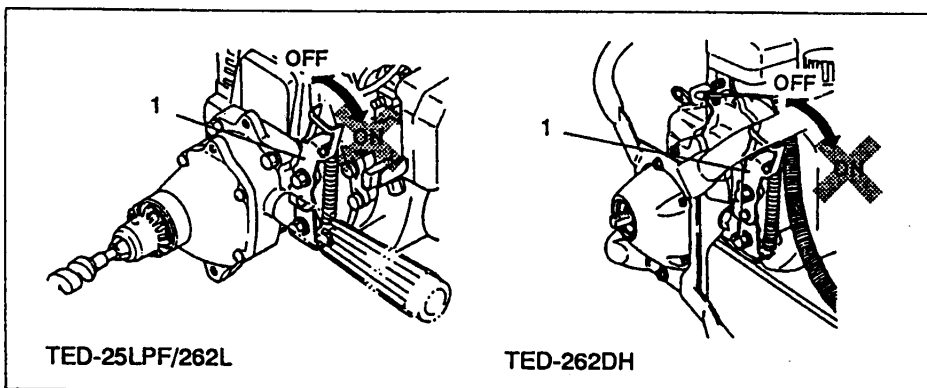


Fig. 2-5C

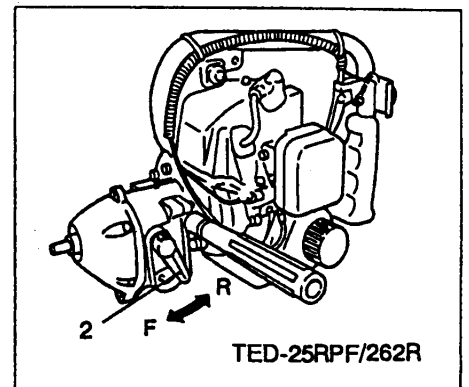


Fig. 2-5D

**How to operate Lock control (on TED-262L/262DH) (Fig. 2-5C)**

**NOTE! Always stop the engine before operation of lock control.**

- When bit has stuck in object, stop engine and turn on lock lever (1).
- Rotate whole unit counter-clockwise so that the bit can be pulled out easily.
- If the unit would not move, rotate it clockwise a little and then counter-clockwise again.

**How to operate Reverse control (on TED-262R) (Fig. 2-5D)**

- Decrease engine speed to idle and move shift lever (2) to R (Reverse) position, then accelerate to pull out.
- Shift lever may not move unless engine is running. If so, turn drill chuck a little bit by hand.
- The purpose of Lock control and Reverse control is mainly for easy removal of bit.



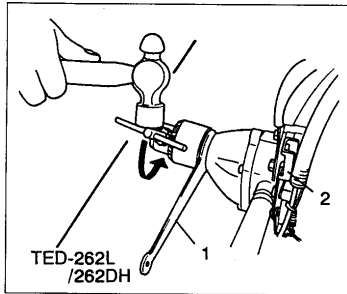


Fig. 2-6

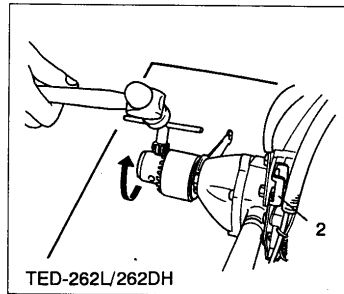


Fig. 2-6B

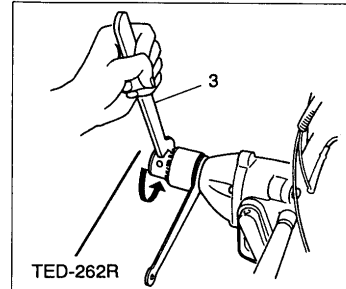


Fig. 2-7

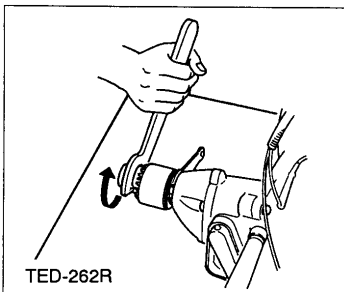


Fig. 2-7B

- **To tighten the chuck more securely**, set a 19mm spanner (1) between gear case and drill chuck to lock drive shaft. Turn on lock lever (2) first, then hit the mounted chuck handle with a hammer to screw in (clockwise) the chuck. (TED-262L~262DH) (Fig. 2-6)
- To loosen the chuck, set the spanner on the other side and hit the chuck handle from this side to screw out (counterclockwise), the chuck with the lock lever on. (TED-262L/262DH) (Fig. 2-6B)
- **Note!** In case of TED-262R, use chuck mount wrench (3) in place of chuck handle and tighten or un-tighten manually instead of hitting. Do not hit the chuck mount wrench. (Fig. 2-7, 7B)

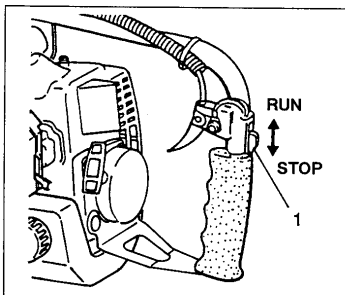


Fig. 2-8

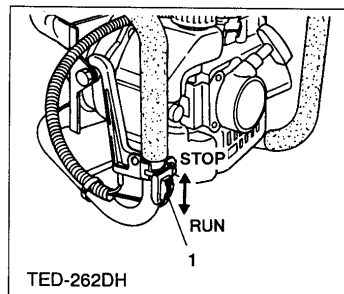


Fig. 2-8B

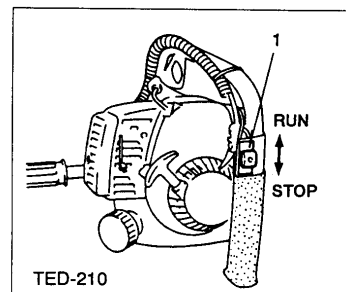


Fig. 2-8C

### Stopping (Fig. 2-8, SB, SC)

Gradually decrease the engine speed to an idle speed, and then slide ignition switch (1) to STOP position.



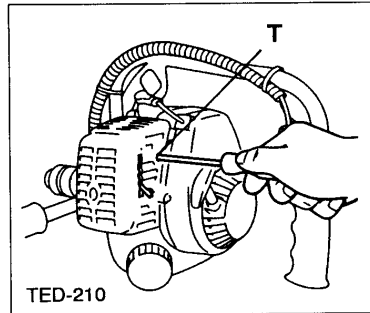


Fig. 3-1

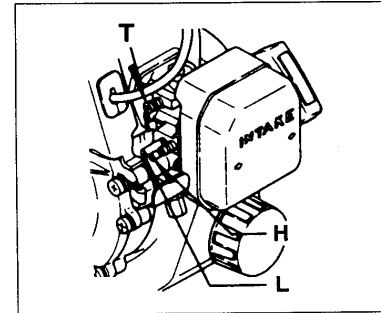


Fig. 3-1B

**Maintenance**

**MAINTENANCE, REPLACEMENT, OR REPAIR OF THE EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY NONROAD ENGINE REPAIR ESTABLISHMENT OR INDIVIDUAL.**

**Carburetor adjustment (Fig. 3-1, 1 B)**

**⚠ WARNING!** The bit may be spinning during carburetor adjustments.

**⚠ WARNING!** Never start the engine without the complete clutch cover and gear case assembled! Otherwise the clutch can come loose and cause personal injuries.

In the carburetor, fuel is mixed with air. When the engine is test run at the factory, the carburetor is basically adjusted. A further adjustment may be required, according to climate and altitude. The carburetor has one adjustment possibility:

T = Idle speed adjustment screw.

**Idle speed adjustment (T)**

Check that the air filter is clean. When the idle speed is correct, the bit will not rotate. If adjustment is required, close (clockwise) the T-screw, with the engine running, until the bit starts to rotate. Open (counter-clockwise) the screw until the bit stops. You have reached the correct idle speed when the engine runs smoothly in all positions well below the rpm when the bit starts to rotate.

If the bit still rotates after idle speed adjustment, contact your service workshop.

**NOTE!** The standard openings (returns) of L/H screws from lightly seated positions are as follows.

	TED-262L/R/DH
L SCREW ↻	1
H SCREW ↻	1 <sup>1</sup> / <sub>8</sub>

This setting is the WA-type carburetor only when the unit is installed.

**⚠ WARNING!** When the engine is idling the bit must under no circumstances rotate.

**NOTE FOR THE US MARKET! (Fig. 3-1C)**

We would like to inform that the power drills TED-262L/R/HS of the US model, which carry the following label on the unit are different from the ones for other market in carburetor adjustment. Adjustment of Standard openings of L/H screws are not necessary.

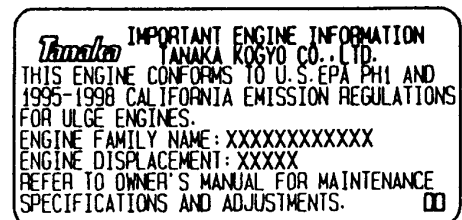


Fig. 3-1C

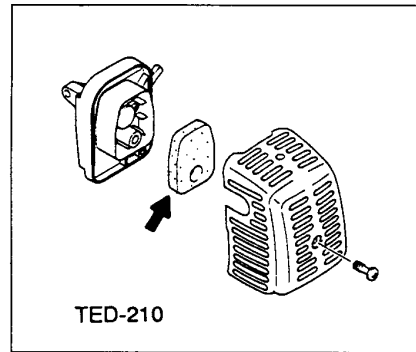


Fig. 3-2

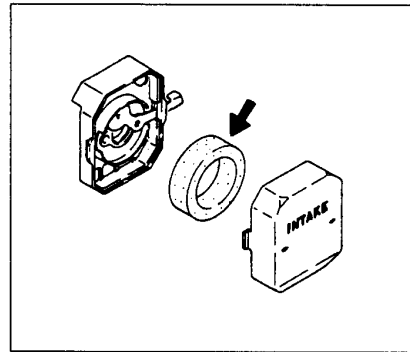


Fig. 3-2B

### Air filter (Fig. 3-2, 2B)

The air filter must be cleaned from dust and dirt in order to avoid:

- Carburetor malfunctions.
- Starting problems.
- Engine power reduction.
- Unnecessary wear on the engine parts.
- Abnormal fuel consumption.

Clean the air filter daily or more often if working in exceptionally dusty areas.

#### Cleaning the air filter

Remove the air filter cover and the filter. Rinse it in warm soap suds. Check that the filter is dry before reassembly. An air filter that has been used for some time cannot be cleaned completely therefore, it must regularly be replaced by a new one. A damaged filter must always be replaced.

#### NOTE! (TED-210)

Saturate the element in 2-cycle oil or the equivalent. Squeeze the element to distribute the oil completely and to remove any excess oil.

### Spark plug (Fig. 3-3)

The spark plug condition is influenced by:

- An incorrect carburetor setting.
- Wrong fuel mixture (too much oil in the gasoline)
- A dirty air filter.
- Hard running conditions (such as cold weather).

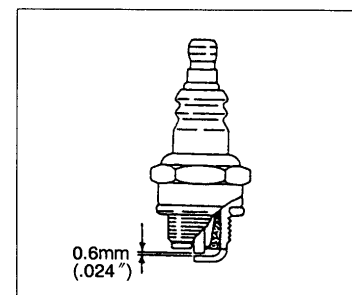


Fig. 3-3

These factors cause deposits on the spark plug electrodes, which may result in malfunction and starting difficulties. If the engine is low on power, difficult to start or runs poorly at idling speed, always check the spark plug first. If the spark plug is dirty, clean it and check the electrode gap. Readjust if necessary. The correct gap is 0.6 mm (.024"). The spark plug should be replaced after about 100 operation hours or earlier if the electrodes are badly eroded.

**NOTE!** In some areas, local law requires using a resistor spark plug to suppress ignition signals. If this machine was originally equipped with resistor spark plug, use same type of spark plug for replacement.

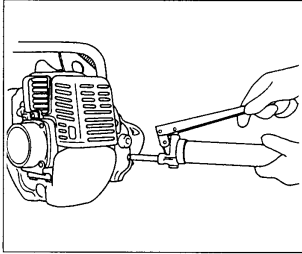


Fig. 3-4

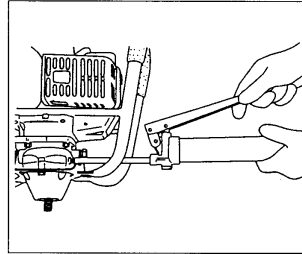


Fig. 3-4B

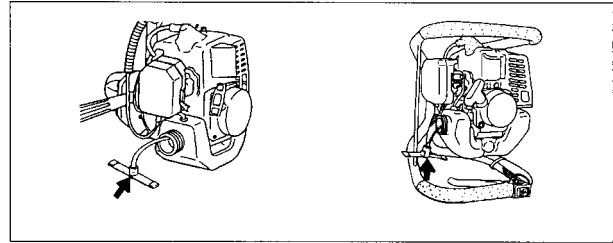


Fig. 3-5

**Fuel filter (Fig. 3-5)**

Remove the fuel filter from the fuel tank and inspect. Replace with new filter if damaged or soiled. Replace with new filter if needed. After that, push the filter into the tank completely.

**Gear case (Fig. 3-4, 4B)**

Apply a good quality lithium based grease through the grease fitting. Lubrication should be applied at 50 hour intervals and more frequent under heavy use.

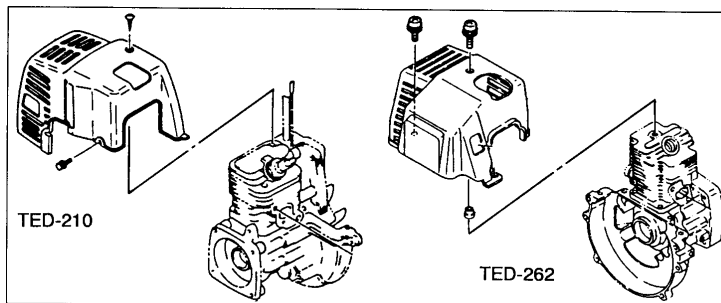


Fig. 3-6

**Cleaning the cylinder fins (Fig. 3-6)**

When wood chips are caught between cylinder fins (1), the engine may overheat, resulting in lower output. To avoid this, always keep cylinder fins and fan case clean. Every 100 Operating hours, or once a year (more often if conditions require), clean fins and external surfaces of engine of dust, dirt and oil deposits, which can contribute to improper cooling.

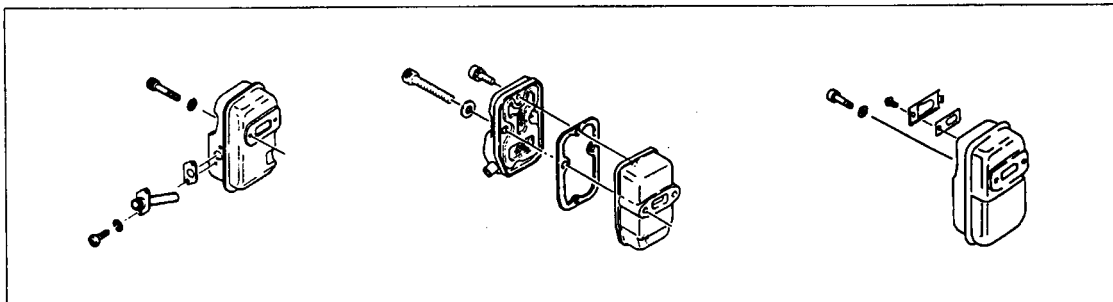


Fig. 3-7

**Cleaning the muffler (Fig. 3-7)**

Remove the muffler and spark arrestor (if so equipped), and clean out any excess carbon from the exhaust port or muffler inlet every 100 hours of operation.

**For long-term storage**

Drain all fuel from the fuel tank. Start and let engine run until it stops. Repair any damage which has resulted from use. Clean the unit with a clean rag, or the use of high pressure air hose. Put a few drops of two-cycle engine oil into the cylinder through the spark plug hole, and spin the engine over several times to distribute oil. Cover the unit and store it in a dry area.

**Maintenance schedule**

Below you will find some general maintenance instructions. For further information, please contact your servicing dealer.

**Daily maintenance**

- Clean the exterior of the unit.
- Check that the drilling attachment is properly centered, sharp, and without cracks. An off-center bit induces heavy vibrations that may damage the unit.
- Check that the drilling attachment is sufficiently tightened.
- Check that nuts and screws are sufficiently tightened.






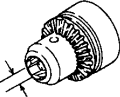



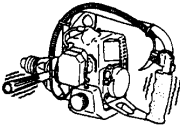
**Weekly maintenance**

- Check the starter, especially cord and return spring.
- Clean the exterior of the spark plug,
- Remove it and check the electrode gap. Adjust it to 0.6 mm (.024'), or change the spark plug.
- Clean the cooling fins on the cylinder and check that the air intake at the starter is not clogged.
- Check that the gear case is filled with grease up to 3/4.
- Clean the air filter.

**Monthly maintenance**

- Rinse the fuel tank with gasoline.
- Clean the exterior of the carburetor and the space around it.
- Clean the fan and the space around it.

**Specifications**

 MODEL	TED-210	TED-262L/R/HS	TED-262DH
 Engine Size (ml) .....	22 (1.34 cu. in.)	26(1.6 cu.in)	←
 Spark Plug .....	NGK BPM-6A or BPMR-6A	NGK BM-6A or BMR-6A	←
 Fuel Tank Capacity (l).....	0.35 (11.8 fl.oz)	0.5 (16.89 fl.oz)	←
 Dry Weight (kg) .....	3.9 (8.6 lbs)	TED-262L 4.5 (9.9 lbs) TED-262R 5.0 (11.0 lbs) TED-262HS 4.4 (9.7 lbs)	6.1 (13.4 lbs)
 Chuck Capacity (mm) .....	12.7(1/2 in)	←	—
Drive Shaft Diameter .....	1/2" – 20 UNF	←	←
 Max. Bit Size (mm) (Wood) .....	25.4 (1 in)	←	←
 Reverse Control .....		TED-262R ○	
Lock Control .....		TED-262L ○	○
 Sound pressure level (dB(A)) .....	91.9	105.0	103.3
Sound power level (dB(A)).....	99.2	113.4	111.6
 Vibration level (m/s <sup>2</sup> )			
Front handle .....	2.7	5.5	Right 9.9
Rear handle .....	3.9	4.9	Left 9.8

**NOTE!** Equivalent noise level/vibration level are calculated as the time-weighted energy total for noise/vibration levels under various working conditions with the following time distribution : 1/2 idle, 1/2 full speed.

All data subject to change without notice.

Declaration of conformity  
Déclaration de conformité  
Dichiarazione di conformità  
Konformitätserklärung  
Declaración de conformidad  
Konformitetsdeklaration

We, Tanaka Kogyo Co., Ltd., 3-4-29 Tsudanuma, Narashino, Chiba, Japan  
Nous, soussignés,  
Noi,  
Der unterzeichnete,  
Nosotros,  
vi,

Declare under our sole responsibility that the product, engine drill model TED-210, TED-262L/R/DH  
Déclarons sous notre seule responsabilité que le produit en question, perceuse modèle  
Dichiariamo sotto la nostra unica responsabilità che il prodotto, il mototrapano modello  
Erklärt unter, eigener Verantwortung, daß das Produkt, Bohrmaschine modell  
Declaramos dajo nuestra única responsabilidad que el producto, motorbormaskin modelo  
Förklarar härmed på eget ansvar att denna produkt, taladro motorizado modell

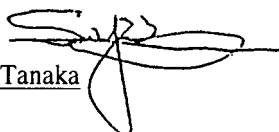
to which this declaration relates is in conformity with the essential safety requirements of directives.  
à laquelle se rapporte la présente déclaration est conforme aux directives concernant les conditions de sécurité essentielles.  
al quale questa dichiarazione si riferisce, é conforme ai requisiti di sicurezza essenziali delle direttive.  
für das these Erklärung gilt, den wesentlichen Sicherheitsanforderungen der Directive entspricht.  
que corresponde a esta declaración, satisface la(s) siguiente (s) exigencia (s) de seguridad esencial (es) de las directivas.  
till vilken denna deklaration tillhör, uppfyller samtliga väsentliga säkerhetskrav föreskrivna i berörda direktiv.

89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC, EMC89/336/EEC

The following standards have been taken into consideration ISO 3864, (EN-292-2)  
Les normes suivantes ont été prises en considération.  
Sono stati presi in considerazione i seguenti standard.  
Die nachfolgenden Standards wurden in Betracht gezogen.  
Se han tenido en consideración las siguientes normas.  
Vi har tagit hänsyn till följande standards.

Manufactured at: Chiba, Japan Serial No. up from Z001001  
Fait á: No. de série á partir de  
Luogo: Num. di serie da  
Erstellt in: Serien-Nr. ab  
Fabricado en: No. de Serie de en adelante  
Tillverkad av: Serienr fr. o. m.

Signature:  
Signature:  
Firma:  
Unterschrift:  
Fimado:  
Signatur:

Seiji Tanaka  


Position: Vice president  
Function: Vice-président  
Incarico: Vicepresidente  
Titel: Stellvertretender Vorsitzender  
Cargo: Vicepresidente  
Befattning: Vice President

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