

Bäumr-AG

TORNADO

680SX

ETEC | eco-efficient
4 stroke

MANUAL GASOLINE LAWN MOWER



©N19071

SAFETY WARNINGS

WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

-This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

-Children should be supervised to ensure that they do not play with the appliance. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Caution – Do not touch rotating blade.

Safe operation practices for pedestrian- controlled rotary lawnmowers

1. Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the equipment;
- Never allow children or people unfamiliar with these instructions to use the lawnmower. Local regulations can restrict the age of the operator;
- Never mow while people, especially children, or pets are nearby;
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

2. Preparation

- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals;
- Thoroughly inspect the area where the equipment is to be used and remove all objects which can be thrown by the machine;
- WARNING – Petrol is highly flammable**
 - Store fuel in containers specifically designed for this purpose;
 - refuel outdoors only and do not smoke while refueling;
 - add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot;
 - If petrol is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated;
 - Replace all fuel tank and container caps securely;
- Replace faulty silencers;

- Before using, always visually inspect to see that the blade, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance;
- On multi-bladed machines, take care as rotating one blade can cause other blades to rotate.

3. Operation

- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect;
- Mow only in daylight or in good artificial light;
- Avoid operating the equipment in wet grass, where feasible;
- Always be sure of your footing on slopes;
- Walk, never run;
- For wheeled rotary machines, mow across the face of slopes, never up and down;
- Exercise extreme caution when changing direction on slopes;
- Do not mow excessively steep slopes;
- Use extreme caution when reversing or pulling the lawnmower towards you;
- Stop the blade(s) if the lawnmower has to be tilted for transportation when crossing surfaces other than grass, and when transporting the lawnmower to and from the area to be mowed;
- Never operate the lawnmower with defective guards, or without safety devices, for example deflectors and/or grass catchers, in place;
- Do not change the engine governor settings or over speed the engine;
- Disengage all blade and drive clutches before starting the engine;
- Start the engine or switch on the motor carefully according to instructions and with feet well away from the blade(s);
- Do not tilt the lawnmower when starting the engine or switching on the motor, except if the lawnmower has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator;
- Do not start the engine when standing in front of the discharge chute;
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times;
- Never pick up or carry a lawnmower while the engine is running;
- Stop the engine and disconnect the spark plug wire, make sure that all moving parts have come to a complete stop and, where a key is fitted remove the key;
 - Before clearing blockages or unclogging chute;
 - Before checking, cleaning or working on the lawnmower;
 - After striking a foreign object. Inspect the lawnmower for damage and make repairs before restarting and operating the lawnmower;
 - If lawnmower starts to vibrate abnormally (check immediately);

t) Stop the engine and disconnect the spark plug wire, make sure that all moving parts have come to a complete stop and, where a key is fitted remove the key:

- Whenever you leave the lawnmower;
- Before refueling;

u) Reduce the throttle setting during engine shut down and, if the engine is provided with a shut-off valve, turn the fuel off at the conclusion of mowing;

v) Go slow when using a trailing seat.

4. Maintenance and storage

a) Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition;

b) Never store the equipment with petrol in the tank inside a building where fumes can reach an open flame or spark;

c) Allow the engine to cool before storing in any enclosure;

d) To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease;

e) Check the grass catcher frequently for wear or deterioration;

f) Replace worn or damaged parts for safety;

g) If the fuel tank has to be drained, this should be done outdoors.

SYMBOLS



Read instruction handbook before operation this machine



Keep bystanders away.



Beware of sharp blades - remove Spark plug lead before maintenance



Forbid smoking and firing



Appropriate ear, eye, and head protection must be worn.



Hot surfaces will burn fingers or palms



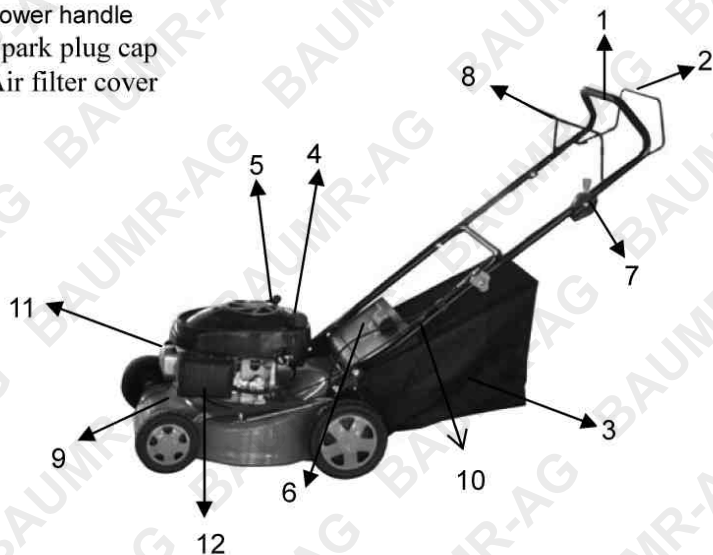
Warning! The lawnmower exhaust as contain poisonous substances. Do not run the engine in closed or poorly ventilated areas.



Blade continues to rotate after the machine is switched off. Wait until all machine components have completely stopped before touching them.

COMPONENT LIST

1. Upper handle
2. Self propelled bar
3. Grass collection bag
4. Petrol filler cap
5. Engine Starter
6. Safety back cover
7. Throttle lever
8. Starting Bail arm lever
9. Steel deck
10. Lower handle
11. Spark plug cap
12. Air filter cover



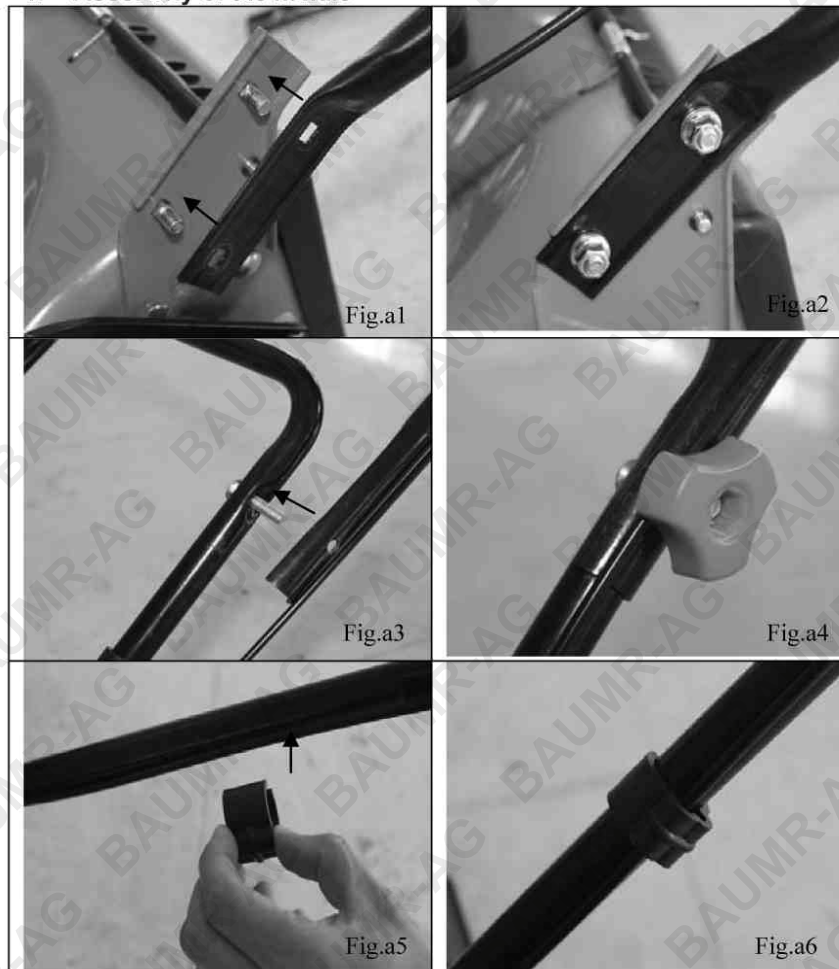
TECHNICAL SPECIFICATIONS

Engine speed:	3000/min
Cutting width:	400mm
Cutting height range:	25-75mm
Grass bag capacity:	45L
Wheels diameter	Self propelled 6"/8"
Ignition:	CDI
Fuel tank capacity:	0.8L
Sound pressure level:	85dB(A)
Sound power level:	96dB(A)
N.W.:	22.2KGS
G.W.:	24.2KGS

ASSEMBLY

Warning! Lift your lawnmower from the carton required two people. Make sure that you have sufficient space to put the lawn mower down. Keep your feet apart so that you have a stable position, bend at the knees and keep your back straight.

1. Assembly of the handle



- 1) Remove the packaging from the handle and insert the lower handle into the deck; as shown and fix it with a screw (Fig.a1 a2);
- 2) Lift the upper handles, align it with the lower handle making sure the cables are not twisted, fasten them by using the bolts and nuts (Fig.a3 a4);
- 3) Make sure the lower and upper handle are tightened firmly.

- 4) Ensure that the cable clips supplied are used to fix the cable to the lower handle. Attach the cable clips and make sure there is enough cable slack (Fig.a5 a6).

2. Adjustment of the throttle line



- 1) Make sure the tightness of throttle line is just appropriate. Use fingers to feel the tightness whether it is appropriate (Fig.b1);
- 2) If the tightness of throttle line is not good, use spanner to adjust nut of throttle line (Fig.b2).

3. Install the grass collection bag



- 1) Raise the safety flap, and hook the collection bag onto the mower as shown in Fig.c1
- 2) Release the safety flap (Fig.c2).

Note: always fit the grass collection bag before start the engine.

Operation Instruction

1. Before start the engine

The following procedures and adjustments must be performed before the engine is started. Do not attempt to make any of these adjustments with the engine is running.

2. Oil type

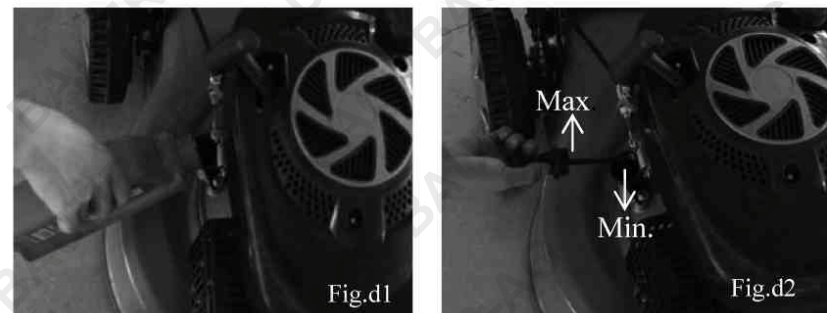
Always use high quality detergent oil. Never use additives with recommended oil. To prolong the life of your engine, it is important that the oil is changed after the first 5 hours of use.

3. Fuel type

Always use clean, fresh unleaded petrol. Purchase fuel in quantities that can be used within 30 days. Never mix oil with petrol.

Fill to base of neck to allow for fuel expansion. Do not overfill the fuel tank

4. Filling with engine oil



To prevent engine damage the engine is shipped without oil or petrol. The engine must be with the correct grade of oil and petrol before starting the engine. Check the engine oil level with the engine stopped and the mower on a level surface.

- 1) Remove the oil filler dipstick and fill into engine oil (Fig.d1);
- 2) Insert the dipstick into the oil filler neck, but do not screw it in;
- 3) Check the oil level. The oil level must between the Min and Max marks on the dipstick. If near the lower level, fill to upper level with the recommended oil. Do not overfill. Wipe away any spilt oil (Fig.d2).

NOTE: running the engine with a low oil level will cause engine damage. Recommend use high detergent, premium quality 4-stroke engine oil. Use non-detergent oil can shorten the engine's service life and using 2-stroke oil will damage the engine.

5. Filling with fuel

Petrol is highly inflammable and extreme precaution must be taken when handling or working with it. Keep out of reach of children.

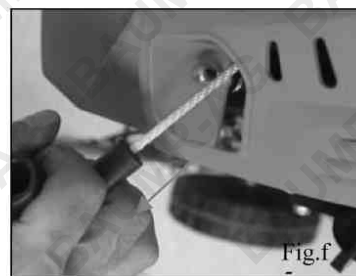
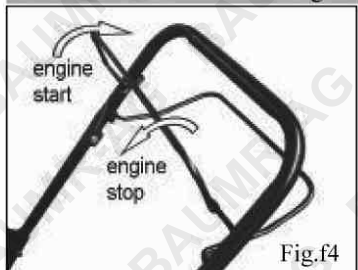
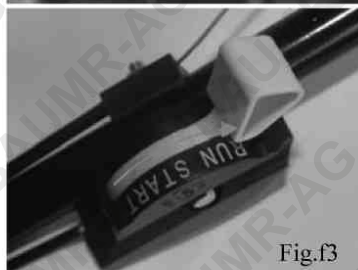
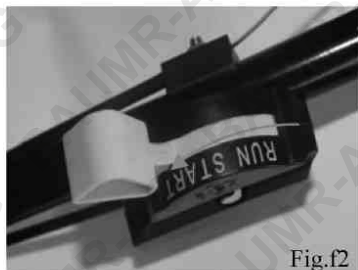
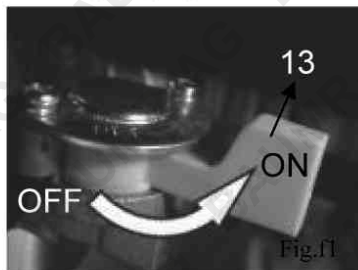


- 1) Clean the area around the petrol cap before removing the cap;
- 2) Refill the tank if the fuel level is low. Refuel carefully to avoid overfilling or spilling fuel. There should be no fuel in the filler neck (Fig.e1);
- 3) Clean up any overflow or splash of petrol before starting the engine;
- 4) Tighten the filler cap securely after filling.

6. Starting the engine

Do not operate the machine in a closed or poorly ventilated areas as the exhaust gas contain poisonous substance. Keep hands, feet, hair and clothing away from all the moving parts of the machine. The exhaust and other parts of the machine will become hot during use. Make sure that the blade is securely fastened before starting the engine.

NOTE: To start the engine, make sure that the spark plug cap is located on the spark plug and the machine is filled with sufficient oil and petrol.



Step1: Open petrol tap

Turn the petrol tap to the ON position (Fig. F1).

Step2: Throttle lever-Starting

For starting a cold engine, move the throttle lever to the START position (Fig.f2). When operation for 5~10 seconds, the throttle lever is back to RUN position (Fig.f3). For starting a warm engine, move the throttle level also to the START position;

Step3: Bail arm closed

Lift the starting bail arm lever towards the upper handle (Fig.f4);

Step4: Pull cord handle

Slowly but firmly pull the engine pull cord and rope out until you feel resistance. Let the rope recoil, then pull briskly (Fig.f5). If the engine fails to start after 2-4 pulls, repeat the start process. When the engine starts, return the starter rope gently.

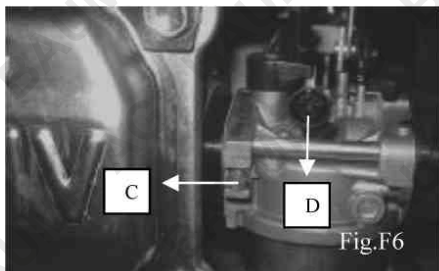
Step5: Throttle lever-RUN

Move the throttle level to the position RUN position (Fig. F3).

7, Clear a flooded engine

If the engine won't start after you operated the starter several times, the engine may be flooded with excess fuel. Use following procedure to clear and start a flooded engine.

- 1) Release the starting bail arm lever, and turn the petrol tap OFF (Fig. F1& F4).
- 2) Remove the spark plug, dry it, then reinstall it.
Note: install the spark plug carefully by hand, to avoid cross-threading. After the plug is seated, tighten 1/8 to 1/4 turn with socket spanner of spark plug to compress the washer.
- 3) Turn the petrol tap ON, and move the starting bail arm lever towards the upper handle.
- 4) Operate the starter as described above



WARNING: Don't operate the petrol & air mixing adjustment bolt (c) and the idling speed adjustment bolt (d) (Fig. E6), it must be operated by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

8. STOPPING THE ENGINE

Release the starting bail arm lever. The engine and blade will stop. (Fig.E4) When the mower is not in use, turn the petrol tap to the OFF position to prevent the possibility of carburetor flooding, and to reduce the possibility of fuel leakage.

9. Adjusting the cutting height

WARNING: the blade can cause serious injury. Before adjusting the mower height, stop the engine and wait for the mower to completely stop.



The height handle goes to the front, the cutting height is more and more higher (Fig.g1).

10. MOWING



Always observe the strictest safety procedures when using the lawnmower.

Carefully read the safety instructions of this manual before using the lawnmower.

Start the engine and allow it run .See "Starting the engine"

To stop the engine, release the starting bail arm lever (Fig. F4).

If the lawnmower is not going to be used for a while, turn the petrol tap to OFF position (Fig.F1).

For self-propelled lawnmower:

Lift the self-propelled bar to the upper handle (Fig.G), the mower will

move by itself. If release the self-propelled, it will stop moving by itself and the self-propelled lawnmower will be the same as the hand push lawnmower. Hold the starting bail arm lever with the self-propelled bar for self- propelled mowing in open areas. When mowing around trees or other obstacles, release the self-propelled bar, while holding the starting bail arm lever forward, push the mower for the better direction control.



Keep a firm grip on the upper handle and walk, never run with the mower, be very careful when mowing uneven or rough ground. Mow across slopes, never up and down. Be careful when changing the direction of the mower on a slope. Do not use the mower on a steep slope of more than 20°.

The best result will be achieved if the grass is dry. Wet grass will tend to clog the blade and the grass collection system. Grass grows at different rates at different time of the year.

Never use the lowest cutting height for the first cut of the season or in drought conditions. Only about one thirds of the grass height should be cut.

If the lawnmower will not collect the cuttings efficiently, the grass discharge chute may be blocked. The grass bag may be full, or the underside of the mower deck may be clogged.

10. EMPTING THE GRASS BAG



IMPORTANT! Before you remove the grass collection bag, stop the engine and wait the blade stops completely.

- 1). To remove the grass collection bag, raise the discharge flap with one hand and remove the grass bag using its handle with your other hand.
- 2). To maintain safety, the discharge flap will close back to cover the rear discharge chute, when you release the flap.
- 3). Empty the grass debris in the grass collection bag, and refit grass collection bag.
- 4). If any grass residues are caught in the discharge chute, clean it using a brush.
- 5). Do not remove grass debris in the mower casing or on the blade by hand or with your feet. Instead use suitable tools such as a brush or broom.
- 6). To ensure that the cut grass can be collected into grass collection bag, the discharge opening and inside the mower casing must be cleared of any blockage. Always empty the grass bag when you have finished the mowing, even if it is not full. Stored grass residues are a fire hazard.

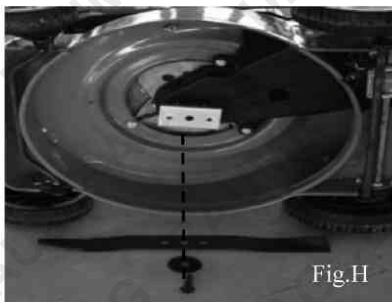


Fig.H

11. RELACING THE BLADE (SEE Fig. H)

Maintain the sharpness of the blade

When cutting grass. If the blade has worn excessively and become pitted and blunt, it should be replaced or sharpened. The sharpness of the blade will affect the performance of the lawnmower.

For safety reasons we recommend that the blade will only be changed by persons qualified and authorized to do so



Warning! Before replacing the blade, ensure that the engine is switched off and the spark plug cap is disconnected and moved away from the spark plug.

1) You will need garden gloves (not provided) and a spanner wrench to remove the blade.

2) Hold the blade and unscrew the blade bolt counterclockwise using a spanner wrench. Remove the washer and the blade.

3) Fit a new blade or re-sharpen the blade, locate the blade on the two studs on the blade flange and then replace the washer and bolts. Make sure the blade is correctly located, then firmly tighten the bolt. Do not over tighten.

The upturn of the blade must project into the motor compartment.

Always handle the blade with care-sharp edges could cause injury
USE GLOVES Renew your metal blade after 50Hrs mowing or 2yrs
which ever is sooner regardless of condition.

If the blade is cracked or damaged replace it with a new one.

MAINTENANCE

1. Cleaning

To ensure the best performance of your lawnmower, it is important to keep it clean. Always clean your lawnmower immediately after use. Do not allow grass cuttings and other debris to become dry and hard on any of the mower surface. This will directly affect the cutting and grass collection performance. Make sure that the underside of the lawnmower deck is clean and clear.

Ensure the discharge chute and grass discharge flap are clean. The grass bag must always be emptied after use. Make sure that the exterior of the engine is clear of all debris, cuttings and dirt.

Maintenance schedule			
	12 hours of use	24hours of use	36hours of use
Air filter	Clean	clean	replace
Spark plug	check	Clean	replace
Engine oil	check	replace	Check

2. Spark plug



1) Once the engine has cooled, remove the spark plug cap and get spark plug out using the socket spanner supplied (Fig.h1).

2) Clean the plug with a wire brush.

3) Using a feeler gauge, set the gap to 0.75mm (Fig.h2).

4) Install the spark plug carefully by hand to avoid cross-threading.

5) After the spark plug is seated, tighten with spanner to compress the washer.

3. Air filter



Fig.i1



Fig.i2

Unclip the air filter cover and remove the sponge filter element (Fig.i1). To avoid objects falling into the air tank, replace the air filter cover. Wash the filter element in warm soap water, rinse and allow to dry naturally (Fig.i2).

Warning! Never run the engine without the air filter element installed.

4. CHANGING THE OIL

The oil drain plug (14) is located under the oil filter (Fig. K). Please use 12mm socket to remove the bolt

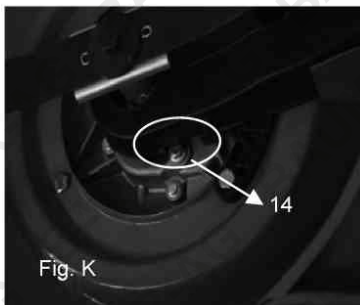


Fig. K

Tilt the lawnmower towards the oil filler, have a container ready to catch the oil and remove the drain plug. Once the oil has been emptied, replace the dipstick and wipe clean any spillages.

Refill of SAE30 oil. When the dipstick is rested on the filler pipe (i.e. not screwed in place), the oil level must be between the **min** and **max** marks on the dipstick. See "Filling with Engine Oil". **Do not overfill.** Start the engine and allow it run briefly. Stop the engine, wait one minute and check the oil level. Top up if necessary.

5. ADJUSTING THE SELF PROPELLED ROPE (Fig. L1&L2)

- 1) To make the adjustment, slacken off the lock nut (e) and lighten the adjusting bolt (f) a few turns (clockwise) (Fig.L2).
- 2) Re-tighten the lock nut.



Fig.L1

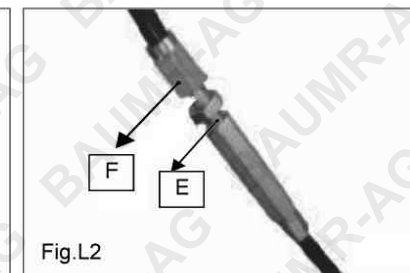


Fig.L2

6. BLADE SHARPENING (Fig. M1&M2&M3)



Fig.m1

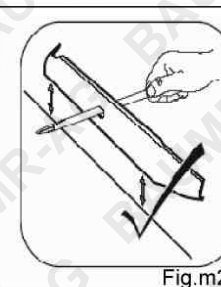


Fig.m2

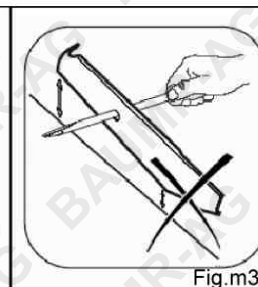


Fig.m3

A slightly worn blade may be re-sharpened. Both blade edges must be sharpened equally to ensure balance. Sharpen the blade every 25 mowing hours or more frequently if conditions require. Remove the blade from the mower and clean using a brush and water. Inspect the blade for signs of damage.

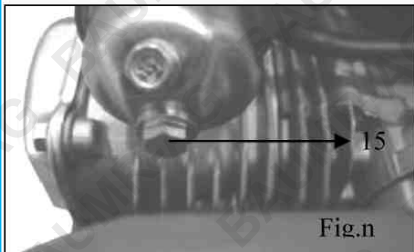
Sharpen both cutting edges with a flat file to restore performance. Ensure that the blade is balanced. Use a screw driver with a round shaft to support the blade through its centre hole. Hold the blade horizontal and then release. A balanced blade will remain horizontal.

If the blade is not balanced the heavy end will rotate downwards. Sharpen the heavy end until the blade is correctly balanced.

11. Storage



Caution! Petrol left in the fuel tank over the winter period will become state and the engine will not start.



For long term storage and at the end of the season, the petrol tank should be drained, with the engine running, switch off the petrol tap and wait until the engine stops. Ensure that the engine is cold before draining the tank. Turn the petrol tap on and release the petrol drain plug (15).

Please use 12mm socket to remove the bolt (Fig.n). Allow the petrol to drain into an appropriate container. Do not store petrol for long periods of time. Dispose of excess petrol in an environmentally safe way. Your local recycling centre can advise you on the best method of disposal. Make sure the lawnmower has been thoroughly cleaned before storing it in a clean dry place.

TROUBLE SHOOTING

PROBLEM	POSSIBLE FAULT	REMEDY
Engine will not turn over	Engine Starting Bail arm lever released.	Operate engine Starting Bail arm lever
	Incorrect oil level.	Check oil level.
	Obstruction under deck.	Remove obstruction.
Engine runs then stops	Fuel starvation.	Fill fuel tank.
	Fuel cap vent blocked. Petrol tap closed	Clean fuel cap vent. Check petrol tap position
Engine will not start	Engine under load.	Raise height of cut.
	Fuel starvation.	Fill fuel tank. Check petrol tap position
	Incorrect/contaminated fuel.	Drain fuel tank and fill with correct fuel.
	Spark plug lead disconnected.	Connect spark plug lead.
	Faulty spark plug.	Clean and adjust gap or replace.

	Faulty spark plug.	Clean and adjust gap or replace.
	Air cleaner blocked.	Service air cleaner.
	Incorrect/contaminated fuel.	Drain tank and fill with correct fuel.
Engine vibrates excessively	Mounting bolts loose.	Tighten bolts
	Blade bolt loose.	Tighten bolt
	Blade out of balance.	Balance blade
	Bent crankshaft.	Consult your dealer
Uneven cut	Undulating ground conditions	Change direction of travel
	Blade worn	Sharpen the blade
	Blade out of balance	Balance the blade
	Wheels / roller damaged	Inspect and replace as necessary

Discharge chute blocks	Grass is wet	Mow dry grass
	Cut height too low	Increase cut height
	Grass bag full	Empty grass bag
	Airflow through the grass bag is restricted	Clean the grass bag
	Engine speed too slow	Airflow through the grass bag is restricted
Mower is hard to push	Cut height too low	Increase cut height
	Wheels / roller damaged	Inspect and replace as necessary
Poor grass collection	Airflow through the grass bag is restricted	Clean the grass bag
	Discharge chute blocked	Remove blockage
	Wet grass	Mow dry grass
	Grass bag full	Empty grass bag
	Engine speed too slow	Set throttle to fast position



Some experts believe the incorrect or prolonged use of almost any product could cause serious injury or death. For information that may reduce your risk of serious injury or death consult the points below and additionally, the information available at www.datastreamserver.com/safety

- Consult all documentation, packaging and product labelling before use. Note that some products feature online documentation which should be printed and kept with the product.
- Check product for loose / broken / damaged / missing parts, wear or leaks (if applicable) before each use. Never use a product with loose / broken / damaged / missing parts, wear or leaks (if applicable).
- Products must be inspected and serviced (if applicable) by a qualified specialist every 6 months assuming average residential use by a person of average weight and strength, above average technical aptitude, on a property matching average metropolitan specification. Intended use outside these guidelines could indicate the product is not suitable for intended use or may require more regular inspection or servicing.
- Ensure all possible users of the product have completed an industry recognised training course before being given access to the product.

- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or your description of the application. Be sure to attain third party approval for your application from a qualified specialist before use regardless of prior assurances by the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (take an automobile, aircraft, computer or ball point pen for example) there is always a small chance of a technical issue that needs to be repaired or may require replacement of the product or a part. If the possibility of such failure and the associated time it takes to rectify could in any situation inconvenience the user, business or employee or could financially affect the user, business or employee then the product is not suitable for your requirements. This product is not for use where incorrect operation or a failure of any kind, including but not limited to a condition requiring product return, replacement, service by a technician or replacement of parts could cause a financial loss, loss of employee time or an inconvenience requiring compensation.
- If this item has been purchased in error considering the points above simply contact the retailer directly for details of their returns policies if required.

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