

# COBRA

MODELS: T24C (SM-WG430-W01)

## COBRA CULTIVATOR / TILLER OWNER'S MANUAL



**Cobra Garden Machinery**  
Henton and Chattell Ltd., London Road, Nottingham NG2 3HW UK  
[www.cobragarden.co.uk](http://www.cobragarden.co.uk)

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## 1. SAFETY LABELS

The following safety labels appear on the machine. They are there to remind you of the care and attention required in use. This is what the symbols mean:



Read Operator's Manual



Danger! Rotating work machine.



When repairing, please pick up the spark plug, and then repair it according to the operational manual.



Keep Bystanders Away



Fuel is flammable, keep fire away. Do not add fuel with running machine.



Toxic fumes; don't operate inside house.



When working, please wear the glasses and ear plugs to defend the operator himself.



Caution: Engine hot.

## 2. SAFETY INSTRUCTION

**⚠️ WARNING:** When using petrol tools, basic safety precautions, including the following, should always be followed to reduce the risk of serious personal injury and/or damage to the unit. Read all the instructions before operating this product and retain these instructions for future reference.

**⚠️ WARNING:** This machine produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine.

### Training

1. Before using the tiller read the instructions carefully. Familiarise yourself with the controls and pay particular attention in learning how to stop the machine in an emergency.
2. Never allow children or people unfamiliar with these instructions to use the tiller. Local regulations can restrict the age of the operator.
3. Never operate while people, especially children or pets are nearby.
4. Never use the tiller if the operator is taking medicine or substances that could affect or impair his ability to react or concentrate.
5. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

### Before you start

1. While operating the tiller, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open toed sandals.
2. Thoroughly inspect the area where the equipment is to be used and remove all objects which can damage or be thrown by the machine.
3. **WARNING - Petrol is highly flammable.**
  - Store fuel in containers specifically designed for this purpose.
  - Refuel outdoors only and do not smoke while refuelling; 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.
4. Replace faulty silencers.
5. 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.

### Operation and Caution

1. Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect, refuel outdoors only.
2. Operate only in daylight or in good artificial light.
3. Avoid operating the equipment in wet grass, where feasible.
4. Always be sure of your footing on slopes.
5. Walk, never run, always be in control of the tiller and never allow yourself to be pulled along.
6. Exercise extreme caution when changing direction on slopes.
7. Do not operate on excessively steep slopes of more than 20°
8. Use extreme caution when reversing or pulling the tiller towards you.
9. Never operate the tiller with defective guards, covers or without safety devices in place.
10. Do not change the engine governor settings or over speed the engine.
11. Before starting the engine disengage the cultivator blade and drive clutches.
12. Keep your feet well away from the blade when starting the engine and in accordance with the instructions.
13. Do not tilt the tiller when starting the engine and always start on a flat surface.
14. Never put hands or feet near or under rotating parts.
15. Always ensure the engine is fully switched off before picking up/carrying the tiller.
16. 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, make sure engine has had time to cool.

- Before clearing the cultivator tines / blades
  - Before checking, cleaning or working on the tiller.
  - After striking a foreign object. Inspect the tiller for damage and make repairs before restarting.
  - If the tiller starts to vibrate abnormally (check immediately).
17. 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, make sure engine is completely cooled.
- Whenever you leave the tiller.
  - Before refuelling.
18. Reduce the throttle setting during engine shut down and, if the engine is provided with a shut-off valve, turn the fuel valve off.

### **Maintenance and Storage**

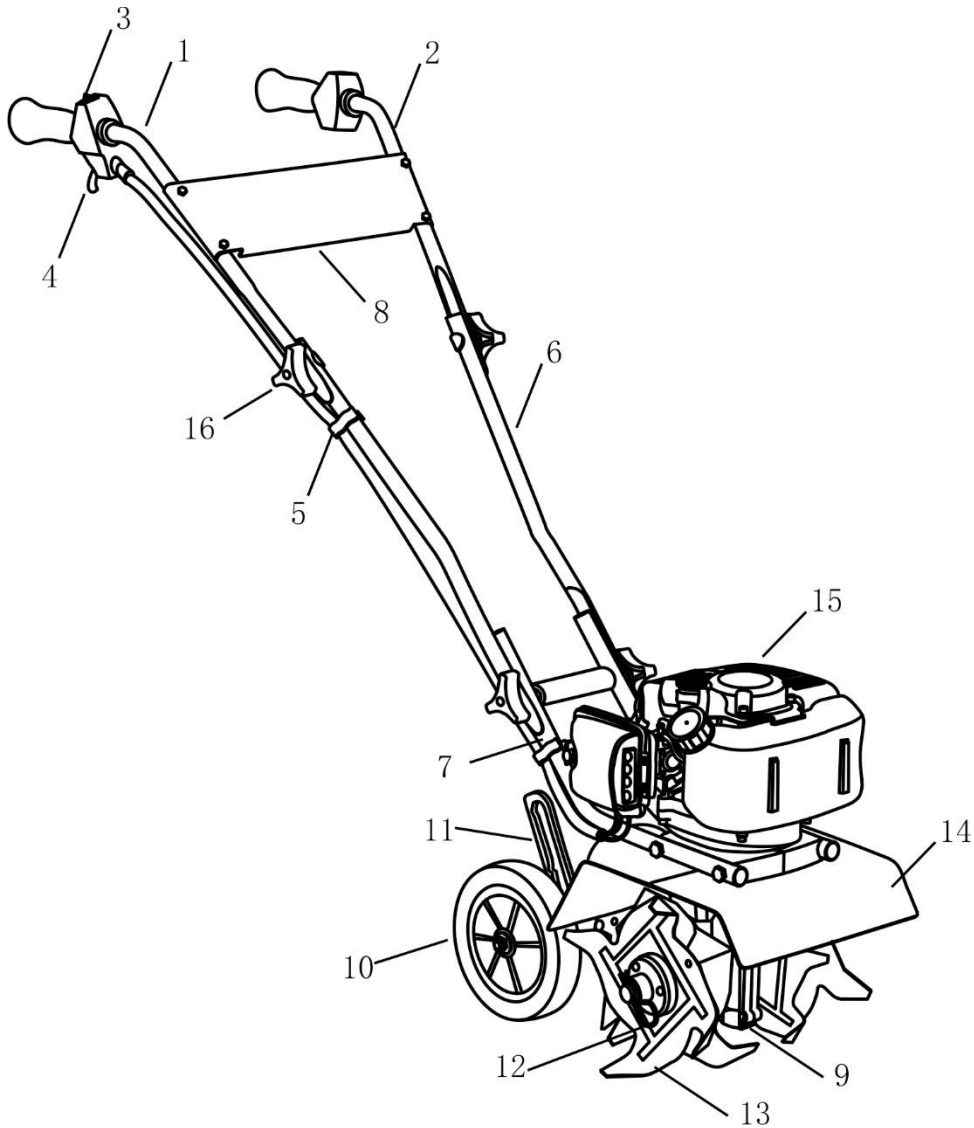
1. Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
2. Never store the equipment with petrol in the tank inside a building where fuel vapours can reach an open flame or spark or where the temperature is high.
3. Before storage allow the engine to cool.
4. To reduce the fire hazard, keep the engine, silencer, battery compartment and petrol storage area free of grass, leaves, or excessive grease.
6. Replace worn or damaged parts for safety. Genuine parts should always be used as parts of inferior quality can damage the equipment and compromise safety.
7. If the fuel tank has to be drained, this should be done outdoors. Always ensure engine is completely cooled before starting this task.
8. If the cultivator blades/tines need to be removed, wear strong gloves to prevent injury to hands and fingers.
9. When transporting the machine make sure you close the fuel cut off. Be careful to ensure weight is evenly distributed. Wear strong gloves.
10. When tilting the machine never tilt towards the air filter as this may become damaged with fuel.
11. Never crank the engine when the spark plug is removed.
12. Frequently check the fuel lines and fittings for damage and cracks, replace if necessary
13. Never start the engine with the air filter cover removed.
14. Carefully clean the tiller after use to remove debris as this can damage and corrode.

 **Warning: Do not touch rotating tines/blade.**

 **Warning: Refuel in a well ventilated area with the engine stopped**

### 3. COMPONENTS

- |                   |                  |                   |                    |
|-------------------|------------------|-------------------|--------------------|
| 1. Right handle   | 2. Left handle   | 3. Stop Switch    | 4. Throttle lever  |
| 5. Clamps         | 6. Middle handle | 7. Lower handle   | 8. Top cover plate |
| 9. Gearbox        | 10. Wheel        | 11. Wheel bracket | 12. Tines lock pin |
| 13. Rotating tine | 14. Tiller cover | 15. Engine        | 16. Hand wheel nut |



## 4. TECHNICAL SPECIFICATION

Type	T24C
Motor	1E40F-5A
Engine displacement	42.7 cm <sup>3</sup>
Rated engine power	1.25 Kw
Blade width	235 mm
Fuel mix, Fuel: 2 Stroke Oil	25:1
Standard engine speed	6500r/min
Net weight	16.2kg
Guaranteed Sound Power level (According to 2000/14/EC)	108 dB(A)
Vibration(According to EN 709)	9.85 m/s <sup>2</sup> , K=1.5m/s <sup>2</sup>

## 5. ASSEMBLING AND ADJUSTMENT

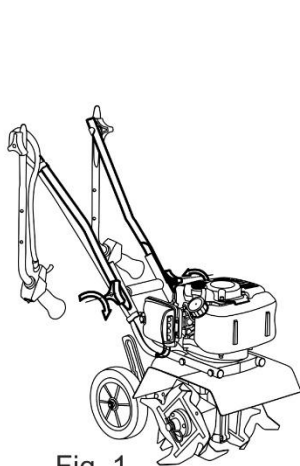


Fig. 1



Fig. 2

### 1. Assembly of Lower Handles

Attach the lower handles and loosely tighten the hand wheel bolts.

### 2. Assembly of Upper Handles

Attach the upper handles and loosely tighten the hand wheel bolts.

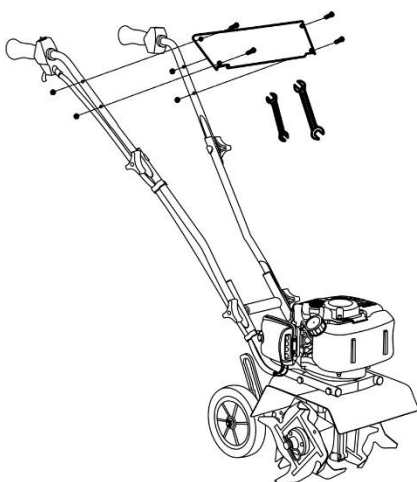


Fig. 3

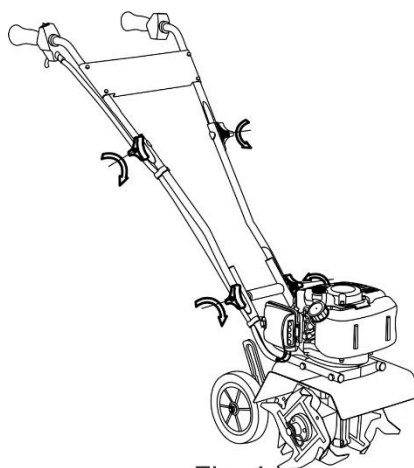


Fig. 4

### 3. Fitting the Cover Plate

Fit the cover plate with the nuts and bolts supplied. Tighten with spanners.

### 4. Tighten and secure the hand wheels and other fixings

**Adjust the rear wheel:** Select the working height for the wheels. Place the wheels in the highest position when operating and the middle and lowest position at other times.

## 6. OPERATION

**⚠ Warning: Only operate with others a safe distance away from the area to be tilled**

### 1. Add oil and fuel mixture

Use the mixture of petrol:2 stroke oil – 25:1 Under no circumstances use petrol without 2 stroke oil. Take care when fueling to avoid possible igniters. Take care not to spill fuel whilst refueling.



### 2. Starting procedure

a. Ensure the 'on/off' switch is selected to 'on'

b. Press the carburetor primer 5 to 6 times. Fuel will be pumped through the transparent fuel pipe. Close the choke lever.

Note: If the engine is warm then adjust the choke position accordingly, i.e. open if warm and closed if cold. It is possible to vary the position between open and closed.

c. Check the tiller tines are clear and will not make contact with anybody or anything.

d. Smoothly pull the start rope and return the starter to the engine position. Repeat the process as necessary to start the engine.

e. Once the engine is running and warm then adjust the choke lever to the open position.

f. Engage the throttle on the handles to increase the speed of the engine and to operate the tiller tines. Gradually increase the speed to a satisfactory tilling speed.

g. Always adjust the tiller operating height as required with the rear height adjustment, with the engine switched off.

h. When stopping, gradually reduce the speed, let the engine idle a few minutes and then switch the engine 'off'

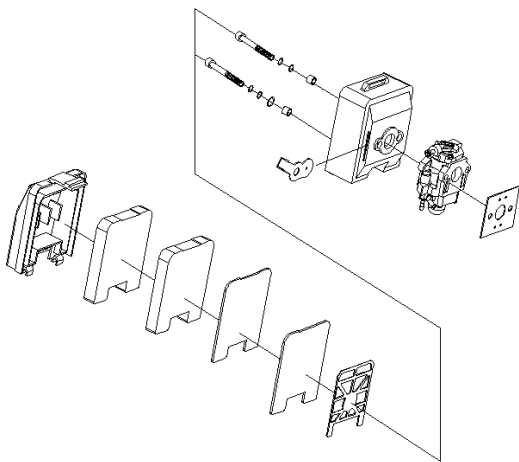


## 7. MAINTENANCE

**⚠ Warning: Only maintain the tiller when the tiller is cool and switched off.**

- a. Ensure that all the bolts and fixings of the tiller are fixed tightly, before operating and periodically after one or two hours of usage.
- b. Every 20 hours of usage add lubrication to the gear case and check the gear wheels conditions. Where the gears are damaged contact your local Cobra dealer.
- c. Engine maintenance:
  - Spark plug, periodically clean or replace. Ensure the gap is 0.6 to 0.7mm, adjust as necessary.
  - Air filter cleaning, clean or replace frequently to protect the engine:

Air filter and carburettor:



Cleaning the air filter:

- Remove the air cleaner cover by pulling the tab on side and take out the 3 filter element.
- Use a detergent and warm water to clean the filter elements. After cleaning, air dry the element completely and moisten with a small amount of motor oil.
- Place the filter element into the air cleaner housing and press the cover against the housing until it clicks.

x

-Idle Speed Adjustment:

Once the engine is warm then it is advised to check and adjust the idle speed. If the engine tends to stop at idle speed, then increase the idle speed with the idle speed adjustment screw on the carburettor. Turn the idle speed screw clockwise to increase idling speed.

If the tiller tines rotate even when idling, then slow the engine idle speed by turning the idle screw anti-clockwise.

-Check the fuel and fuel filter for blockages each season. Contaminated fuel lines or filters will restrict fuel flow and may prevent starting. Replace blocked fuel lines or filters.

- Check the exhaust condition and tighten fixings – replace the exhaust if damaged.

-Clean the air cooling vents around the engine to ensure the engine operates correctly and does not over heat and become potentially dangerous.

-Every 100 hours of usage:

Check and clean the exhaust, tighten the screws and check the condition of clutch lining and drum. Ensure the lining and drum are clean and oil/grease free, clean as necessary.

## Maintenance Schedule:

System or Component	Procedure	Before Use	Every 25 Hours	Every 50 Hours	Every 100 Hours	Note
Fuel Leaks, Fuel Spillage	Wipe out and clean thoroughly	✓				
Fuel Tank, Air Filter, Fuel Filter	Inspect, clean	✓	✓			Replace if necessary
Idle Adjusting Screw	See Adjusting Idling Speed	✓				Replace carburetor if necessary
Spark Plug	Clean and re-adjust plug gap			✓		GAP: .025" (0.6 - 0.7 mm) replace if necessary
Cylinder Fins, Intake Air Cooling Vent	Clean		✓			
Muffler, Spark Arrester, Cylinder Exhaust Port	Clean			✓		

IMPORTANT: Time intervals shown are maximum. Actual use and your experience will determine the frequency of required maintenance.

## 8. STORAGE

- After use ensure that the tiller is stored in a dry and secure location out of the way of children.

- When storing the tiller for 2 weeks or more then complete the following procedure.

Firstly, carefully drain all remaining fuel from the tank. Clear the carburetor of fuel by running the engine until it stops. This will ensure that the fuel does not produce gum deposits, which will block the flow of fuel and prevent the engine from operating correctly.

When cool, remove the spark plug and add a teaspoon of clean 2 stroke oil into the spark plug hole. Slowly pull the starter cord two or three times to oil and protect the internal components of the engine. Refit the spark plug.

Oil the tines and other exposed parts of the tiller to prevent rusting.

## 9. TROUBLESHOOTING GUIDE

### Case 1. Starting failure

Check	Probable Causes	Action
Fuel Tank	Incorrect fuel	Drain it and fill with correct fuel
Fuel Filter	Fuel filter is clogged	Clean
Carburetor Adjustment Screw	Out of normal range	Adjust to normal range
Sparking (no spark)	Spark plug is fouled/ wet plug gap is incorrect	Clean/ dry and correct (GAP: 0.6 ~0.7 mm)
Spark Plug	Disconnected	Re-connect and ensure tightly fitted

### Case 2. Engine starts but does not keep running or hard re-starting.

Check	Probable Causes	Action
Fuel Tank	Incorrect fuel	Drain it and fill with correct fuel
Carburetor Adjustment Screw	Out of normal range	Adjust to normal range
Muffler,Cylinder(exhaust port)	Carbon is built-up	Wipe away
Air Cleaner	Clogged with dust	Wash
Cylinder Fin, Fan Cover	Clogged with dust	Clean

## **10. WARRANTY**

This product is warranted in accordance with legal regulations for a 24 month period effective from the date of purchase by the first user.

This product will not be covered if used in a commercial application.

This warranty covers all material or production failures, it does not include: defects from normal wear and tear, parts such as, bearings, brushes, cables, air cleaning elements, brake pad, clutch disc, tyre, wheel, recoil starter rope, belts, cutter blades, plugs, lubricant oils and grease or accessories. Damage or defects resulting from abuse, accidents or alterations, natural fading of painted or plated surfaces, sheet peeling and other natural deterioration.

Any damage that occurs from the use of non-genuine Cobra parts will not be covered.

We reserve the right to reject any claim where the purchase cannot be verified or when it is clear that the product was not maintained properly. (Clean ventilation slots, carbon brushes and serviced regularly)

Expenses incidental to the warranty claim that are not covered;

-Compensation for loss of time, commercial loss or rental costs of substitute product.

-Costs incurred for transportation to and from the dealership.

Any damage that occurs from the following will not be covered; exposure of the product to smoke and soot, chemical agents, bird droppings or other animal waste, seawater, sea breeze, salt or other environmental phenomena.

Any damage resulting from operating methods other than those indicated in the owner's manual will not be covered.

Your purchase receipt must be kept as proof for date of purchase. Your un-dismantled tiller must be returned to your dealer in an acceptably clean state, accompanied by your proof of purchase.

### **Please Register Your Tiller**

If your dealer did not collect registration information from you, please take a few minutes and register your purchase with Cobra.

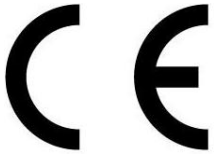
You can register by completing and mailing the registration card that should be in the box or by going online to:

[www.cobragarden.co.uk](http://www.cobragarden.co.uk) and clicking on Product Registration.


Before using the tiller, all operators must read this manual

## **11. ENVIRONMENT**

Should your machine need replacement after extended use, do not put it in the domestic waste but dispose of it in an environmentally safe way.



## 12. EC-DECLARATION OF CONFORMITY

<b>EC Declaration of Conformity</b>	
We herewith declare,	Cobra Garden Machinery Henton & Chattell Ltd, London Road, Nottingham NG2 3HW United Kingdom
that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.	
In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity	
Machine Description:	Cultivator / Tiller
Machine Type:	T24C (SM-WG430-W01)
Displacement	42.7 cm <sup>3</sup>
Max, Cutting width	235mm
Measured sound power level:	103dB(A)
Guaranteed sound power level:	108dB(A) Notified Body for EC Directive 2000/14/EC:0499 TÜV Rheinland LGA Products GmbH Tillystrasse 2, 90431 Nürnberg, Germany 0197
Applicable EC Directives	EC Machinery Directive:2006/42/EC EC Directive of Electromagnetic Compatibility:2004/108/EC EC Directive of noise emission: 2000/14/EC&2005/88/EC
Applicable Harmonized Standards	EN 709 EN ISO 14982
Authorized Signature/Date	  Peter J. Chaloner 02-12-2016
Title of Signatory	Managing Director
Name and address of the person authorized to compile the technical file	Cobra Garden Machinery Henton & Chattell Ltd, London Road, Nottingham NG2 3HW United Kingdom