



Operator's Manual

Edging Power Trowel CT424 Series

Edging Power Trowel CT430 Series



Manufacturer

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Original instructions

This Operator's Manual presents the original instructions. The original language of the Operator's Manual is English.

Foreword

This manual contains important instructions for this machine. These instructions must be followed during installation, operation, and maintenance of the machines.

This manual provides information and procedures to safely operate. For your own safety and to reduce the risk of injury, carefully read, understand, and observe all instructions described in this manual.

We reserves the right to change any of the contents in this manual without notice.

Warranty

Our products are covered by warranty for a period of twelve (12) months from the date of purchase against defects in material or workmanship provided that:

- The product concerned has been operated and maintained in accordance with the operating instructions.
- Has not been damaged by accident, misuse or abuse.
- Has not been tampered with or repaired by any unauthorized person.

Any evidence of failure to meet these conditions may result in a denial of the warranty claim.

The owner is responsible for the cost of transportation to and from the authorized repairer and the unit is at the owners risk while in transit to and from the repairer.

Impact damage is not covered under warranty. Clutches are not covered under any warranty.

Engines are officially guaranteed by engine manufacturer. Please refer to the annex for engine warranty.

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1. SAFETY INFORMATION

1.1 Operating Safety

- Only trained personnel are permitted to start, operate, and shut down the machine. They have received instruction on how to properly use the machine and are familiar with required safety devices
- The machine must not be accessed or operated by children and people impaired by alcohol or drugs.
- NEVER operate this machine in application for which it is not intended.
- NEVER allow anyone to operate this equipment without proper training. People operating this equipment must be familiar with the risks and hazards associated with it.
- NEVER operate the machine with the beltguard missing. Exposed drive belt and pulleys create potentially dangerous hazards that can cause serious injuries.
- DO NOT allow anyone to stank or lean on the unit during operation.
- Do not run the machine indoors or in an enclosed area such as a deep trench unless adequate ventilation, through such items as exhaust fans or hoses, is provided. Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell. Exposure to carbon monoxide can cause loss of consciousness and CAN KILL YOU IN MINUTES.
- Do not operate the machine with unapproved accessories or attachments.
- ALWAYS Keep the safety stop switch system in adjustment and good operating condition at all times. Do not operate the trowel if it does not work properly. Out of control Trowels can cause serious personal injury and damage to fresh concrete surfaces. This system will automatically stop the unit if the operator loses control of it during operation.
- ALWAYS make sure the safety stop switch is disengaged (lever in the down position) before starting the unit. Keep one hand firmly on the handle while starting and do not let go of the handle during operation.
- ALWAYS wear protective clothing appropriate to the job site when operating the machine.
- ALWAYS close fuel valve on engines equipped with one when machine is not being operated.
- ALWAYS store the machine properly when it is not being used. The machine should be stored in a clean, dry location out of the reach of children.
- Read, understand, and follow procedures in the Operator's Manual before attempting to operate the machine.

1.2 Operator Safety while using Internal Combustion Engines

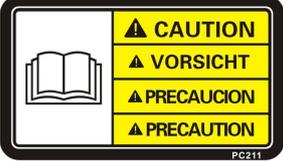
- DO NOT smoke when refueling the engine or during any other fuel handling operation.
- DO NOT refuel a hot or running engine.
- DO NOT refuel the engine near an open flame.
- DO NOT spill fuel when refueling the engine.
- Do not touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place. Do not operate the unit if fuel or oil leaks exist-repair immediately.
- NEVER operate this equipment in an explosive atmosphere.
- NEVER operate any gas powered equipment in a poorly ventilated or enclosed area.
- NEVER perform any work on the unit while it is running. Before working on it, stop the engine and disconnect the spark plug wire to prevent accidental starting.
- Avoid prolonged breathing of exhaust gases.
- Avoid contact with hot exhaust systems and engine parts.
- Allow engine to cool before performing any repairs or service.
- ALWAYS transport and handle fuel only when contained in approved safety containers.
- ALWAYS keep the area around the muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite the debris and start a fire.

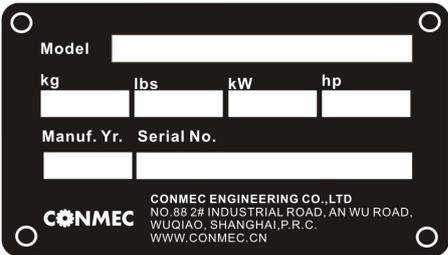
1.3 Label Location



1.4 Safety and Operating Labels

CONMEC machines use international pictorial labels where needed. These labels are described below:

Label	Meaning
	<p>DANGER! Engines emit carbon monoxide; operate only in well-ventilated area. Read the Operation Manual for machine information. No sparks, flames, or burning objects near the machine. Shut off the engine before refueling. Use only clean, filtered unleaded gasoline.</p>
	<p>WARNING! Cutting hazard. Always replace blade guard!</p>
	<p>CAUTION! Read and understand the supplied Operator's Manual before operating the machine. Failure to do so increase the risk of injury to yourself or others.</p>
	<p>WARNING! Always wear hearing and eye protection when operating this machine.</p>

Label	Meaning
	<p>WARNING! Hand injury if caught in moving belt. Always replace belt guard.</p>
	<p>CAUTION! Lifting point.</p>
	<p>CAUTION! Use only clean, filtered fuel.</p>
	<p>WARNING! Hot surface!</p>
	<p>A nameplate listing the model number and serial number is attached to each unit. Please record the information found on this plate so it will be available if the nameplate is lost or damaged. When requesting service information, the serial number should be specified of the unit.</p>

2. OPERATION

2.1 Operating Principle

The following instructions were compiled to provide you information on how to obtain long and trouble free use of the machine. Periodic maintenance of the machine is essential. Read the manual carefully and thoroughly familiarize yourself with the machine and all it's functions. Failure to do so may injure yourself or a bystander.

2.2 Application—Standard Features

Your new Power Trowel comes standard with many features to enhance productivity, performance and safety. Listed below are just a few of these features.

1. **Safe Stop Switch**—The switching mechanism of this switch should operate freely and should always be kept in this condition. With the switch in the OFF position, the engine should not start or run. The purpose of this switch is to stop the engine in a runaway situation, (i.e. the operator releasing the handle during operation).
2. **Adjustable Throttle**—Located in a convenient location, this push-pull throttle control can be set to provide any blade speed from 50 to 130 RPM, and located in place at the desired operating speed.
3. **Bent Arm Adjustable**—Allows blades to be adjusted to compensate for bent arms caused by dropping or mishandling the trowel. Can be easily adjusted on-site for consistent finishing.
4. **Heavy Duty Ring Guard**—Protects operator and unit while providing lower center of gravity which contributes to unit stability and performance.
5. **Cast Iron Spider**—Extra strong for insure alignment. Also contributes to lower center or gravity for increased trowel performance.
6. **Adjustable Handle**—Can be positioned to provide comfort and control for any operator's height.
7. **Tilt Adjustment Knob** – adjusts the angle of the blades for different curing stages and conditions of the concrete. Turning the knob clockwise increases the angle of the blades to the concrete. Turning the knob counter-clockwise flattens or decreases the angle of the blades.

2.3 Delivery Checks

Immediately on taking delivery of your new machine and before putting it into service.

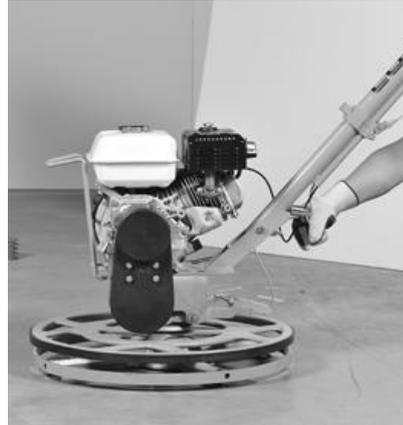
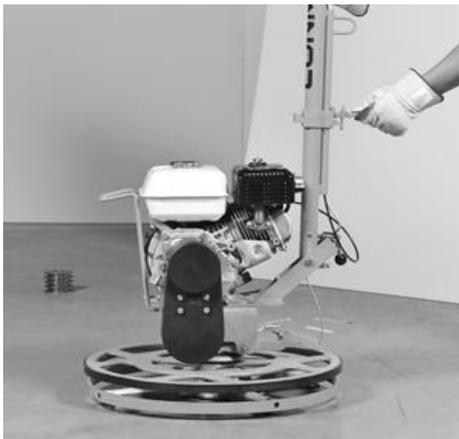
- Read the operation manual completely—it could save a great deal of unnecessary expense. Read the engine manual supplied.
- Check the general condition of the machine – has it been damaged during delivery?
- Check engine oil level.
- Check fuel level.

Recommended lubricants are detailed in the Care and Maintenance section.

2.4 Unfolding the Handle

To unfold and secure the handle assembly:

1. New machine with folded handle.
2. Unfolding the adjustable handle and lock the screw.
3. Straighten the handle and lock the hinge pin.
4. Tighten the adjustable lever to lock the handle in its fully opened position.



2.5 Before Starting

Before starting the machine, check the following items:

- All handles are free from grease, oil and dirt.
- All control levers are in the neutral position.
- All bolted joints are tightened.
- Fuel level
- Oil level in the engine
- Air cleaner maintenance indicator

NOTICE: Check the oil level in the engine and machine before starting. The warranties are VOID if the machine run without oil.

2.6 To Start

Before starting the machine must know the location and function of all controls.

Make sure the safety stop switch is in the stop position. If it is not, push the lever down to the stop position before attempting to start the engine. Open fuel valve under fuel tank (if so equipped), open throttle approximately half way down and apply choke. Holding unit handle firmly with one hand, pull the starter rope sharply with the other about (3) times. When engine starts, open choke and adjust throttle as necessary to keep it running. If engine doesn't start after (3) pulls, open choke slightly.

NOTE: These starting instructions are general guidelines only. Since many engine options are available on our power trowels, consult the ENGINE MANUAL included with the unit for specific instructions.

2.7 To Stop

Push the safety stop switch down to the stop position. Close throttle all the way, and turn the engine switch to off position.

2.8 Initial Operation

With engine started as instructed previously and at operating temperature, adjust speed to about half throttle. Hold the handle firmly with one hand and move the safety stop switch to RUN position to engage the trowel blades.

2.9 Finishing Operation

After floating, allow the concrete to set until it will support the weight of the trowel. Set the pitch to approximately 1/4" to 3/8" on the blades. If the blades start to dig into the concrete, decrease the amount of pitch.

3 MAINTENANCE

3.1 Periodic Maintenance Schedule

The chart below lists basic trowel and engine maintenance. Refer to engine manufacturer's Operator's Manual for additional information on engine maintenance. A copy of the engine Operator's Manual was supplied with the machine when it was shipped. To service the engine, tilt the seat forward.

	Daily	Every 20 hours	Every 50 hours	Every 100 hours	Every 200 hours	Every 300 hours
Check fuel level.	●					
Check engine oil level.	●					
Inspect air filter. Replace as needed.	●					
Check external hardware.	●					
Clean trowel after each use to remove concrete splatter.	●					
Replace the engine oil		●				
Grease blade arms		●				
Clean air filter		●				
Thrust collar and clutch. Replace blade if necessary		●				
Check drive belt for wear.			●			
Change engine oil.				●		
Check fuel filter.				●		
Clean and check spark plug.					●	
Replace oil filter.					●	
Replace spark plug.						●
Replace fuel filter.						●
Adjust blade speed						●
Replace oil in gearboxes.						●

3.2 Lubrication

The long life and successful operation of any parts of machinery is dependent on frequent and thorough lubrication. Before using the machine, always check the oil and use proper oil with the correct type and grade as recommended.

NOTICE: DO NOT mix types of oil in gearbox and DO NOT overfill the oil. Damage to the machine may occur if oils are mixed or overfilled. See Technical Data for oil quantity and type.

3.3 Transporting Trowels

1. Before lifting the machine, ALWAYS turn off the engine and pull out the key from the machine.
2. Make sure lifting device has enough capacity to hold machine (see identification plate on machine for weight).
3. DO NOT lift the machine overhead with a float pan attached.
4. NEVER lift the machine only by the handle.
5. Use lifting point (see safety label stick in the machine) when lifting the machine.

3.4 Trouble Shooting

SYMPTOM	POSSIBLE CAUSES	SOLUTION
Engine running rough or not at all.	Safety switch malfunction?	Make sure that the safety switch is ON or replace switch if necessary.
	Fuel?	Look at the fuel system. Make sure there is fuel being supplied to the engine. Check to ensure that the fuel filter is not clogged.
	Ignition?	Check to ensure that the ignition switch has power and is functioning correctly.
Safety switch not functioning.	Bad contacts?	Replace switch.
	Loose wire connections?	Check wiring. Replace as necessary.
	Other problems?	Consult engine manufacturer's manual.
If trowel "bounces, rolls concrete, or makes uneven swirls in concrete".	Blades? Spider?	Make certain blades are in good condition, not excessively worn. Finish blades should measure no less than 2" (50mm) from the blade bar to the trailing edge, combination blades should measure no less than 3.5" (89mm).
	Bent trowel arms?	Check that all blades are set at the same pitch angle as measured at the spider.
	Trowel arm bushings?	Check the spider assembly for bent trowel arms. If one of the arms is even slightly bent, replace it immediately.
	Thrust collar?	Check the trowel arm bushings for tightness. This can be done by moving the trowel arms up and down. If there is more than 1/8" (3.2mm) of travel at the tip of the arm, the bushings should be replaced. All bushings should be replaced at the same time.

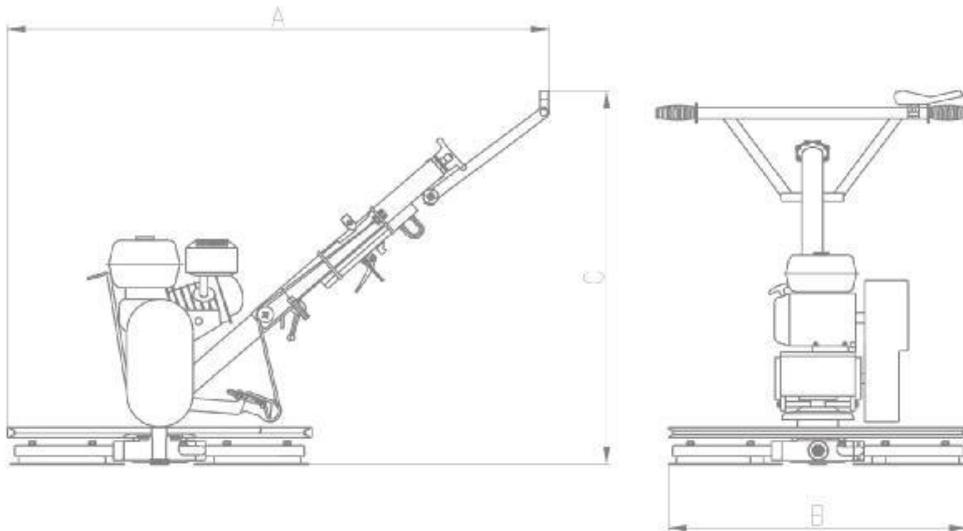
	Thrust collar bushing?	Check the thrust collar by rocking it on the spider. If it can tilt more than 3/32" (2.4mm) [as measured at the thrust collar O.D.], replace the bushing in the thrust collar.
	Thrust bearing worn?	Check the thrust bearing to see that it is spinning free. Note: Thrust cap, replace if necessary.
Machine has a perceptible rolling motion while running.	Main shaft?	The main output shaft of the gearbox assembly should be checked for straightness. The main shaft must run straight and cannot be more than 0.003" (0.08mm) out of round at the spider attachment point.
	Yoke?	Check to make sure that both fingers of the yoke press evenly on the wear cap. Replace yoke as necessary.
	Blade Pitch?	Check to ensure that each blade is adjusted to have the same pitch as all other blades. Adjust per maintenance section in manual.
Clutch slipping or sluggish response to engine speed change.	Worn V-belts?	Replace V-belt.
	Dirty centrifugal clutch?	Disassemble and clean clutch.
	Defective or worn out centrifugal clutch?	Replace entire clutch.
	Worn bearings in gearbox?	Rotate input shaft by hand. If shaft rotates with difficulty, check the input and output shaft bearings. Replace as necessary. Verify that the gearbox shaft rotates when the input shaft is rotated.
	Worn or broken gears in gearbox?	Replace both the worm and worm gear as a set.

4. TECHNICAL DATA

Model		CT424-2	CT424-3	CT424-4
Engine type		Chinese Petrol Engine	Robin EX13	Honda GX160
Power	kw(hp)	4.0(5.5)	3.2(4.2)	4.0(5.5)
Operating weight	kg(lb)	60(131)	59(130)	59(130)
Blade speed	rpm		70-150	
Rotor Dia.	cm(in)		60(24)	
Combination Blade	in		4.75 x 9	
Float Pan	in		25	

Model		CT430-2	CT430-3	CT430-4
Engine type		Chinese Petrol Engine	Robin EX17	Honda GX160
Power	kw(hp)	4.8(6.5)	4.2(5.7)	4.0(5.5)
Operating weight	kg(lb)	76(167)	75(165)	75(165)
Blade speed	rpm		70-150	
Rotor Dia.	cm(in)		79(30)	
Combination Blade	in		6 x 10.5	
Float Pan	in		31	

Working Size (A x B x C): 1540mm x 770mm x 980mm



Model	L (mm)	W(mm)	H(mm)
CT424 Series	1560	610	950
CT430 Series	1560	770	980

4.3 Sound Specification

The required sound specification:

	CT424 Series	CT430 Series
The sound pressure level at operator's location (L_{pA})	87dB(A)	90dB(A)
The guaranteed sound power level (L_{WA})	102dB(A)	115dB(A)

These sound values were determined according to ISO 3744 for the sound power level (L_{WA}) and ISO 11204 for the sound pressure level (L_{pA}) at the operator's location.

4.4 Vibration Specification

The weighted effective acceleration value, determined according to ISO 2361-1 and ISO 5349, is:

for **hand arm**:

CT424 Series: 1.1 m/s²

CT430 Series: 1.3 m/s²

The sound and vibration specifications were obtained with the unit operating on fully cured, water wetted concrete at nominal engine.

**EC DECLARATION OF CONFORMITY
CE-KONFORMITÄTSERKLÄUNG
DECLARACIÓN DE CONFORMIDAD DE LA CE
DÉCLARATION DE CONFORMITÉ C.E.**

**CONMEC ENGINEERING CO., LTD
NO.88, 2# INDUSTRIAL AVENUE, AN WU ROAD, WU QIAO COUNTY,
FENG XIAN, SHANGHAI, P.R.C**

hereby certifies that the construction equipment specified hereunder /bescheinigt, da. das Baugerät/
certifica que la máquina de construcción/atteste que le matériel :

1. Category / Art / Categoría / Catégorie:

Power Trowel

2. Type / Typ / Tipo / Type:

CT424-2, CT424-3, CT424-4,

CT430-2, CT430-3, CT430-4

has been produced in accordance with the following standards:/in übereinstimmung mit folgenden
Richtlinien hergestellt worden ist:/ha sido fabricado en conformidad con las siguientes normas: / a été
produit conformément aux dispositions des directives européennes ci-après :

2006/42/EC

2004/108/EC

EN12649



03.20.13

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John Lee

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