CONCRETE SAW
OPERATOR’S
MANUAL
MODELS
CC190XL, CC190PRO
Dec 2016
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Safety Precautions

Operate the CC190XL Concrete Saw and all of the components according to this manual. Failure to comply with and understand the following safety, operations, and maintenance instructions can result in serious injuries and/or death. All operators must be properly trained or supervised prior to using these saws and should understand the risks and hazards involved. Improper or unintended saw usage is discouraged and Diamond Products cannot be held liable for any resulting damages.

Saw modifications should be made by Diamond Products to ensure proper safety and accuracy. Modifications made to these saws by the owner are not the responsibility of Diamond Products and void all saw warranties if a problem arises as a result of the modification.

Refer to the Diamond Products’ Parts Lists for additional information and part diagrams. Prior to operating the saw, record the saw’s serial number, and the engine’s model and serial numbers in the Serial Tags section in the Index for future reference.

The information in this manual may be updated at any time!

Safety Alerts

⚠️ DANGER
Serious injuries and/or death will occur if these instructions are not followed.

⚠️ WARNING
Serious injuries and/or death could occur if these instructions are not followed.

⚠️ CAUTION
Mild and/or moderate injuries could occur if these instructions are not followed.

Proposition 65

⚠️ WARNING
Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and/or other reproductive harm.

Spark Arrester Requirement

⚠️ WARNING
In the State of California it is a violation of Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester, as defined in Section 4442, maintained in effective, working order or the engine is constructed, equipped, and maintained for the prevention of fire pursuant to Section 4443.

Respiratory Hazards

⚠️ WARNING
Concrete cutting produces dusts and fumes known to cause illness, death, cancer, respiratory disease, birth defects, and/or other reproductive harm. Safety protection techniques include, but are not limited to:

- Wearing gloves.
- Wearing safety goggles or a face shield.
- Using approved respirators.
- Washing work clothes daily.
- Using water when wet cutting to minimize dust.
- Washing the hands and face prior to eating/drinking.

For additional safety and self-protection information contact your employer, the Occupational Safety and Health Administration (OSHA), and/or The National Institute for Occupational Safety and Health (NIOSH).
**General Safety**

- Read and understand all of the safety, operations, and maintenance instructions provided in this manual prior to operating or servicing the saw.
- Keep saw components clean and free of slurry, concrete dust, and debris.

- Raise the saw to a proper height for access when working underneath the saw. Use chocks to block the wheels, and fit blocks or jacks under the frame edges at the front and back of the frame for additional support.

- When using a jack to raise the saw, place the jack against a solid, flat area under the frame base to properly support the saw while lifting.
- Repair the saw immediately when a problem arises.
- Replace saw decals if unreadable.
- Dispose of all hazardous waste materials according to city, state, and federal regulations.
- Always have a phone nearby, and locate the nearest fire extinguisher and first aid kit prior to operating the saw.
- Operate the saw wearing flame resistant clothing.
- Always wear safety glasses when removing retaining rings.
- Persons under the statutory age limit should not operate the saw.
- Keep all body parts away from rotating machinery.
- Replace all guards and access panels (unless stated otherwise) prior to operating the saw.
- DO NOT assume the saw will remain still when in Neutral or when parking/stopping the saw on a slope. Chock the tires to help prevent unnecessary movement.
- All non-routine maintenance tasks should be performed by an authorized service center.

**DO NOT:**

- Drop equipment, supplies, tools, etc., when handling to help prevent injuries.
- Operate the saw around combustible materials or fumes to prevent fires/explosions.
- Lift and carry equipment, supplies, tools, etc., that are too heavy and/or cannot be lifted easily.
- Operate the saw without using the appropriate safety equipment required for the work task.

- Operate or service the saw with clothing, hair, or accessories that can snag in the machinery, which could lead to serious injuries or death!
- Operate the saw with anyone near the work area.
- Operate the saw until unnecessary materials have been removed from the work area.
- Operate the saw using attachments not associated with or recommended for the saw.
- Operate the saw around combustible materials or fumes to prevent fires/explosions.
- Operate the saw with anyone near the work area or within the direct line of the blade.
- Operate the saw with loose nuts, screws, and bolts.
- Operate the saw when ill or fatigued.
- Operate the saw under the influence of drugs and/or alcohol.
- Operate the saw on steep slopes.
- Cut concrete with guards and access panels removed.
- Grease the saw with the engine running (unless stated otherwise).
- Touch hot components when operating the saw.
- Leave the saw unattended until the engine is off and the blade has stopped spinning.
- Place the saw into storage until it has cooled down.
- Service the saw until it has cooled down.
- Service the saw with the engine running (unless stated otherwise).
Battery and Electrical Safety

- Ignitable explosive gases are emitted from the battery. DO NOT expose the battery to sparks or open flames.
- Keep the area around the battery well-ventilated.
- Keep the battery level when handling it.
- Always be sure to connect the battery cables to the proper terminal when reconnecting the cables.
- Regularly inspect the battery, cables, clamps, and terminals for damages. Clean, replace, tighten and grease components as necessary.
- Always keep the battery cable clamps away from the battery terminals when the battery is disconnected to avoid accidental connections while servicing.
- Immediately rinse your clothing, skin, or eyes with water if exposed to battery acid. Seek medical attention immediately!
- Disconnect the battery prior to servicing all saw components (unless stated otherwise).
- Remove the battery when storing the saw for longer periods.
- Always use the correct size fuses (amps) to prevent fires.

**CAUTION**
Use a proper battery tester, such as a voltmeter, to test the battery strength. Use protective eyewear or a face shield, and avoid contact with the skin when handling a battery.

Blade Guard Safety

- DO NOT operate the saw with the blade guard removed.
- Blade exposure should not exceed 180° while cutting.
- DO NOT install or remove the blade guard while the engine running.
- Always use a blade guard that corresponds with the blade size.
- Inspect the blade guard prior to starting the saw. Clean or replace dirty/damaged components immediately.

Blade Safety

- Always use reinforced abrasive blades or steel-centered diamond blades.
- Inspect all blades prior to usage and discard damaged blades. Clean dirty blades as necessary.
- DO NOT install or remove a blade with the engine/motor running.
- Keep all body parts away from rotating blades.

Fuel Safety

- Always use caution when refueling.
- Store all fuel in appropriate safety containers.
Let the engine cool prior to adding fuel.
- Refer to the engine manual for recommended fuels.
- Move the saw away from the refueling area prior to starting the engine.
- Drain the fuel tank and fuel lines when storing the saw for longer periods of time. Refer to the engine manual for additional recommendations.

**CAUTION**
- Clean up spilled fuel prior to starting the engine.
- If over filled fuel may seep out from the fuel cap vent when the saw is raised.

**WARNING**
- DO NOT operate the saw with a fuel leak.
- DO NOT fuel the saw with the engine running.
- DO NOT smoke or expose fuel to open flames when filling the fuel tank and/or working with fuel.

**Engine Safety**
- Refer to the engine manual as the primary source for engine safety.
- Refer to the engine manual for recommended oil.
- Always know how to turn off the engine quickly for emergency purposes.
- Make sure the speed control lever (applicable models) is at Neutral when starting the engine.
- Fill the fuel tank and check the oil level prior to starting the engine.
- Keep all body parts away from rotating parts with the engine running.
- DO NOT start the engine without the air filter(s) installed.
- DO NOT allow dust to enter the air intake tube when cleaning/replacing air filter(s).
- Immediately replace damaged saw components that may allow dust to enter the engine.
- DO NOT leave the engine/motor running unattended.
- Always operate the saw in well-ventilated areas. Concentrated engine exhaust can cause loss of consciousness and/or death.
- DO NOT operate the saw around combustible materials or fumes to prevent fires/explosions.
- DO NOT touch the engine/muffler assembly with the engine running, and always let them cool down prior to touching or servicing the saw.
- Handle hot oil carefully when changing the oil.
- DO NOT spray the engine/motor with water to prevent engine/motor damage.
- Let the engine cool prior to removing pressurized caps (applicable models).
- DO NOT use any starter substances or starter fluids (e.g., starter fluid sprayed into the air filter) when starting the engine using a glow plug (applicable models). These materials are extremely flammable and explosive, and can melt parts or possibly explode when used to help start the engine.

**Stopping the Engine**

**CAUTION**
- DO NOT leave the saw unattended until the engine is off and the blade has stopped spinning.

**Cutting Safety**
- The direct work area should not contain buried or embedded electrical, gas, or water lines that could be damaged and/or cause personal injury while cutting.
- Turn off all electricity, gas, and water around the direct work area prior to cutting.
- DO NOT expose yourself or anyone else to the direct line of the blade when operating the saw.
- DO NOT allow any person, animal, and/or object in and around the work area while cutting.
- DO NOT assume the saw will remain still while in Neutral when stopping and/or parking the saw on a slope. Chock the wheels to prevent unnecessary movement.
**Belt Safety**

- Turn off the engine and let the belts cool down prior to servicing them.
- Regularly inspect the belts for fraying, stress cracks, and/or breakage and replace immediately when damaged.
- Always check belt alignment prior to operating the saw.
- Over-tensioning the belts may damage the power take-off (PTO). Under-tensioning the belts may cause slippage, shorter belt life, and/or poor saw performance.
- Squealing belts indicate looseness.
- DO NOT use old and new belts on the same sheave together.

**Transporting Safety**

- Remove the blade prior to transporting the saw.
- Close the fuel shutoff valve when transporting.
- Drain the fuel tank when transporting long distances.
- Use heavy-duty ramps that will support the weight of the saw and yourself when loading or unloading.
- Raise the saw to avoid damaging components while moving up and down ramps.

- Use extreme caution when guiding the saw up and down ramps. Slowly drive/push the saw forward down the ramp. Slowly back/pull the saw in reverse up the ramp. Avoid standing directly downhill from the saw to avoid serious injuries.
- Chock the wheels and secure the saw in a truck/trailer prior to transporting.
- Refer to the Department of Transportation (DOT) for additional information on proper transportation techniques and truck/trailer requirements.

**Lifting Safety**

- Move yourself and all others away from the lifting area when hoisting the saw to prevent being crushed.
- Secure the appropriate hoisting cables, straps, and/or chains to the saw’s designated lift points prior to hoisting. DO NOT attempt to lift the saw irresponsibly and/or improperly.

**Diamond Blade Safety**

**WARNING**

DO NOT exceed the blade’s maximum recommended speed when cutting. Excessive blade speeds can cause blade breakage, resulting in serious injuries and/or death.

Using the proper blade (size and type) preserves the blade and improves cutting and operator efficiency, resulting in lower costs. Refer to www.diamondproducts.com for a list of different blade types and additional blade information.

**Inspecting the Blade**

Inspect each blade prior to installation and discard all damaged blades. Inspect all blades for:

- Cracks, nicks, and dents.
- A damaged and/or deformed arbor (center hole).
- Darkness and/or discoloration near edge of blade.
- A deformed blade circumference.
- Segment loss and/or segment cracks.
- Core wear.
- Bending.
- Uneven side-widths.
**Blade and Skid Plate Installation**

1. Remove the blade guard cover by turning the two locking knobs counter-clockwise. With the two wrenches supplied with the saw, place one wrench end on the nut on the blade shaft in the blade guard and rotate the blade shaft clockwise until flats on blade shaft can be accessed with the second wrench. Place second wrench on blade shaft flats and hold shaft while turning nut counter-clockwise. Remove nut and outer blade flange.

2. Mount blade on blade shaft arbor. Install outer blade flange so that the lock pin on the outer blade flange goes completely through the blade and into the matching hole on inner blade flange. Install blade shaft nut by turning clockwise. Tighten nut securely (Approximately 50 ft-lb).

3. Install a new skid plate by hooking the front on the front blade guard shaft pin. Connect the rear blade guard shaft and the rear of the skid plate by installing the locking pin.

**Operating Instructions**

1. Check the fuel and oil level per the enclosed engine manual. SAE 10W-30 or 5W-30 oil and unleaded gasoline with an 86 or higher octane should be used. Please read the enclosed Honda Operator's manual for complete oil and fuel information.

2. Check the air filter and clean or replace if necessary

3. Check that the blade and skid plate are in good condition. Make sure the work site is clean, well lit and hazard free.

4. Raise blade by pushing rocker switch on console to full up position.

5. To start saw, move throttle lever to 1/2 of the open position, pull choke lever out and turn key to the start position and release once engine starts. Slowly close choke lever as engine warms. Allow engine to warm for a few minutes.

6. Open engine throttle to full open position. (All cutting to be at full throttle). Lower the front guide to the full down position by pushing control lever forward.

7. Line up the saw with the cut line using the front guide wheel and the triangle pointer on the back of the blade guard. Pull transmission control lever the back to a full stop position.

8. Lower the blade by into the cut by pressing blade rocker switch. Lower the blade to full depth. Move the saw forward by pressing transmission rocker switch by pushing the control lever until the desired cutting speed is reached.

9. Make small adjustments by applying side pressure on the handle to keep saw straight.

10. Move the saw at about half speed for the first 200 feet to allow the blade to develop good diamond exposure or open up and promote blade life. Increase the forward speed of the saw until the blade and the engine are working at maximum efficiency.

11. Increase the forward speed if the saw is pulling left. Decrease the forward speed if the saw is pulling right. **Do not force the saw.** When approaching a wall, raise the front guide and use the triangle guide at the back of the blade block to cut the last few feet.

12. Do not hit the blade guard assembly against any object. Damage may result. Slow the forward speed by pressing transmission rocker switch to neutral until the saw stops. Raise the saw out of the cut to maximum height by pressing the blade rocker switch in the “RAISE” position.

13. The self propel function of the saw will not operate with the unit raised. Move the engine throttle lever to the full closed position. Turn the engine key switch to the “OFF” position.

14. Always clean the blade guard assembly thoroughly before storing the saw.
MAINTENANCE INSTRUCTIONS

1. **Lubricate the blade shaft bearings** and other fittings (wheels, bearings, etc.) should be greased every 50 hours of operation. Use only premium lithium-based grease conforming to NLGI No. 2 consistency.

2. **Check the engine oil daily.** Keep oil clean and at proper level. Since the engine often operates at an angle, check the engine oil level (with the engine horizontal) frequently to ensure that the oil level never fails below the minimum mark on the dip stick. Follow the engine manufacturer’s recommendations for changing oil.

3. **Air filter.** The air cleaner assembly is accessed on the top of the engine. The air cleaner should be replaced every 50 hours. See engine manual and emission-related supplement for additional information.

4. **Blade shaft V-belts tension:** This model concrete saw is equipped with 3VX premium V-belts. These belts are properly tensioned at the factory. Severe damage or even breakage of the crankshaft might occur if the belts are tensioned too tight. Check belt tension as set on the new saw and never set belts beyond original factory tension. Not enough tension will result in poor saw performance and short belt life. Belts should never be allowed to slip. After four hours of use, re-tension belts to make up for initial stretch. To re-tension the belts, turn the engine off. Remove belt guard. Turn the vertical tensioning bolt on tension arm clockwise until the belts are tight. Continue to check the belt tension on a daily basis, and re-tension as necessary. To obtain accurate V-belt setting, a V-belt tension tester should be used. Check the setting on a single belt of a matched set of V-belts. Apply load on the center of the span. Deflection should be 3/16” with a 5 to 6 lb. load.

5. **Tighten fasteners regularly:** Nuts and bolts may become loose particularly after the first few hours of operation. Most fasteners on this unit are metric. Please use the correct tool.

6. **Cleaning:** Use a wire brush to clean the blade guard assembly of any excess concrete buildup after each use. Keep controls and handle bars clean and dry. Immediately clean any spilled fuel from the saw.

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**In-Line Fuel Filter**

Replace the in-line fuel filter every 250 to 500 hours depending on the amount of sediment in the filter.

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**Replacing the In-Line Fuel Filter**

1. Turn off the engine.
2. Lower the saw so the engine is level.
3. Place a drainage tray below the fuel hoses and in-line fuel filter.
4. Remove the clamps, one on each side of the in-line fuel filter, from the hoses. Excess fuel may release from the hoses.
5. Point the arrow on the new filter toward the engine and place the rear hose onto the rear end of the filter. Push the hose tightly up against the edge of the filter.
6. Place one hose clamp next to the filter (on the rear hose) and tighten the clamp to secure the hose and filter.
7. Place the front hose onto the front end of the filter. Push the hose tightly up against the edge of the filter.
8. Place one hose clamp next to the filter (on the front hose) and tighten the clamp to secure the hose and filter.
9. Dispose of the used fuel and filter according to city, state, and federal regulations.
**Fuel Lines**
Regularly check fuel lines for damage and/or leaks and service as necessary. Refer to engine operator's manual.

**Storing**
Complete the tasks listed below prior to storing the saw for longer time frames:

- Lower the saw completely to remove strain on the lifting mechanism.
- Turn off all switches and controls.
- Remove the battery from the saw and store it in a proper location, out of reach for children.
- Drain the fuel tank and fuel lines.
- Use a wire brush to clean the blade guard
- Refer to the engine manual for information on proper engine care when storing the saw.
- Clean the saw and store it in a dry area, out of reach from children.

**Disposal**
Properly dispose of the saw when it's no longer repairable, and/or contains safety hazards not worth repairing and/or maintaining. Complete the tasks listed below to properly dispose of the saw when discontinuing usage:

- Drain all fluids from the saw and dispose according to city, state, and federal regulations.
- Remove the battery from the saw and bring it to a recycling facility. Many battery retailers accept old batteries as well.
- Secure the saw in a truck/trailer and transport it to a salvage yard for appropriate disposal.
TROUBLESHOOTING

CUT OF SAW IS SPALLING OR RAVELLING

- Check bottom of skid plate for burrs
- Check skid plate for excessive wear or gap around blade slot
- Check if skid plate is bent.
- Insure skid plate is mounted properly
- Check to see if skid plate moves freely
- Check lexan covers for free movement
- Clean excess concrete from blade guard assembly
- Check that front diverter in blade guard assembly is not bent. Diverter legs should not be contacting concrete
- Check to see if both diverters in the blade block are not bent or binding
- Insure blade guard shafts are not bent
- Insure there is spring tension at each end of skip plate
- Check to see if blade is damaged. Worn, warped, glazed or damaged blades in any way must be replaced
- Insure the blade is properly mounted and secured.
- Insure that the blade is the correct specification for the area
- Insure that the concrete slab is in clean with no debris that could raise the skid plate or saw while cutting.
- Insure joint protectors are used at all cut intersections.
- Check belts and belt idler for proper tension.
- Do not twist or move the saw sideways while cutting
- Engine should be at full throttle and running properly

ENGINE RUNS ROUGH, BACK FIRES OR CAN NOT REACH FULL SPEED

- Check to see if there is the correct fuel in the tank. Make sure there is not water in the fuel.
- Check that the spark plugs are properly gapped and clean.
- Insure that choke is in the “off” position after engine is warm.
- See is air filter is not dirty or plugged.
- Check that the throttle lever is properly set.

ENGINE WILL NOT START

- Check if there is fuel in the tank and no water in the fuel
- Check that the spark plug wires are connected to the spark plugs.
- Engine is flooded. Adjust the choke per the engine owner’s
- Insure blade shaft rotates freely

**SAW PULLS TO ONE SIDE WHILE SAWING**

- Check skid plate for burrs
- Check to see if rear and front guide is properly aligned with the center of the blade.
- Check to see if blade is worn out, glazed, warped or damaged.
- When cutting, do not twist or move the saw sideways. Make gradual changes in pressure on the handlebars to control the saw in the cut.
- Insure that all wheels rolls freely and smoothly.
- Insure both wheel drives are contacting the rear wheels. Wheel drives should be clean.
- If saw is pulling left, increase forward speed. Decrease speed if saw is pulling right. Do not force the saw.
References

Model and Serial Numbers
Record the saw’s serial number below for future reference and customer service purposes.

Serial Number

Record the engine’s model and serial numbers below for future reference and customer service purposes.

Model Number
Serial Number

Appendix A

Additional Resources
1. Diamond Products (www.diamondproducts.com)
   - CC190XL Concrete Saw Parts List, Ohio 2015
   - A Guide for Professional Concrete Cutters
   - Training Manual – Introduction to Diamond Blades, Bits, and Equipment
   - Diamond Products’ Equipment Catalog
   - Diamond Products’ Website (www.diamondproducts.com)

2. Concrete Sawing and Drilling Association (www.csda.org)
The CSDA has many helpful concrete cutting publications available to members and non-members.

3. Association of Equipment Manufacturers (www.aem.org)
The AEM has a variety of safety and technical manuals available for various types of equipment, along with a list of industry-standardized safety symbols.

4. Occupational Safety & Health Administration (OSHA) (www.osha.gov)
OSHA provides information on work-related safety and health practices.

5. The National Institute for Occupational Safety and Health (NIOSH) (www.cdc.gov/NIOSH/)
NIOSH provides information on work-related safety and health practices.
# Service Filters/ Belts

<table>
<thead>
<tr>
<th>DP Part No.</th>
<th>Description</th>
<th>Manufacturer’s Part No.</th>
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<tr>
<td>2501211</td>
<td>Air Filter for Honda (GX630)</td>
<td>(Donaldson #P821575)</td>
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<td>2700348</td>
<td>Fuel Filter for Honda (GX630)</td>
<td>(Honda #17672-880-000)</td>
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<td>2702741</td>
<td>Oil Filter for Honda (GX630)</td>
<td>(Honda #15400-PLM-AO1PE)</td>
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<td>2503678</td>
<td>Blade Shaft Belt (3) for Honda (GX630)</td>
<td>(Gates #3VX390)</td>
</tr>
<tr>
<td>2501969</td>
<td>Transmission Belt for Honda (GX630)</td>
<td>(Gates #AX-41)</td>
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EQUIPMENT AND PARTS
WARRANTY

Diamond Products warrants all equipment manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to Customer.

The responsibility of Diamond Products under this Warranty is limited to replacement or repair of defective parts at Diamond Products’ Elyria, Ohio factory, or at a point designated by it, of such parts as shall appear to us upon inspection at such parts, to have been defective in material or workmanship, with expense for transportation and labor borne by Customer.

In no event shall Diamond Products be liable for consequential or incidental damages arising out of the failure of any Product to operate properly.

Integral units such as engines, electric motors, batteries, transmissions, etc., are excluded from this Warranty and are subject to the prime manufacturer’s warranty.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ALL SUCH OTHER WARRANTIES ARE HEREBY DISCLAIMED.