



**FLOOR GRINDER  
OPERATOR'S MANUAL**

**CPG200  
Dual Head Floor Grinder**

December, 2019

Part #: 1802710



## TABLE OF CONTENTS

### Table of Contents

Introduction .....	5
CPG200 Components (10 HP Gas).....	6
CPG200 Components (2 HP Electric) .....	7
CPG200 Components (7-1/2 HP Electric) .....	8
CPG200 Dimensions .....	9
CPG200 Specifications.....	10
CPG200 Electric Motor Specifications.....	11
CPG200 Gas Engine Specifications .....	11
Safety .....	12
Safety Alerts.....	12
Proposition 65 .....	12
Respiratory Hazards .....	12
General Safety .....	13
Grinding Safety .....	14
Belt Safety.....	14
Transporting Safety.....	14
Lifting Safety .....	14
Operating.....	15
General Operating Precautions.....	15
Handlebar.....	15
Handlebar .....	15
Adjusting the Handlebar .....	15
Rear Axle .....	15
Distributing the Weight for Grinding Operations .....	16
Distributing the Weight to Move the Grinder.....	16
Diamond Grinding Head.....	16
Inspecting the Grinding Head.....	16
Installing the Grinding Head .....	16
Removing the Grinding Head .....	17
Motors .....	17
CPG202E-1 .....	17
CPG275E-1 .....	17
CPG275E-3 .....	18
Starting the Motor.....	18
Stopping the Motor .....	18
Engines .....	18
Starting the Honda engine.....	19
Stopping the Honda engine.....	19
Vacuum Port .....	20
Water Supply.....	20
Grinding.....	20
Tasks Prior to Grinding.....	20
Dry Grinding .....	20
Wet Grinding.....	21
Maintenance .....	22
General .....	22
Pre Maintenance Preparations.....	22
General Cleaning .....	22
Cleaning Techniques.....	22
Starter or Switch Box.....	22

## TABLE OF CONTENTS

Motor .....	22
Part Lubrication .....	22
Post Cleaning .....	22
Service Schedule .....	23
Daily Service .....	24
Check Engine Oil Level .....	24
Check Engine Fuel Level .....	24
Check the Air Filter .....	24
Handlebar .....	24
Lubricate the Blade Shaft and Gear Shaft Bearings .....	24
Inspect the Drive Belts .....	24
Drive Belt Access .....	24
Belt Tensioning .....	25
Tensioning the Drive Belts (Electric Motors) .....	25
Tensioning the Drive Belts (Gas Engine) .....	25
Replacing the Drive Belts .....	26
50 Hour Service .....	26
Clean the Air Filter .....	26
100 Hour Service .....	26
Replace the Engine Oil .....	26
Check and Adjust the Spark Plug .....	26
Yearly Service .....	26
Replace Air Filter (Paper Element) .....	26
Replace the Spark Plug .....	26
General Motor and Engine Service .....	26
Draining the Fuel Tank and Carburetor .....	26
Disconnecting the Power to the Motor .....	26
Lifting .....	26
Transport .....	27
Prior to Transport .....	27
Transport .....	27
Storage .....	27
Disposal .....	27
Appendix A .....	30
Troubleshooting .....	30
Appendix B .....	31
Belt Tension Specifications .....	31
Power Cord Specifications .....	32
Appendix C .....	33
Additional Resources .....	33
Appendix D .....	34
Model and Serial Numbers .....	34

## INTRODUCTION

### **Introduction**

Welcome to the Diamond Products family and thank you for choosing Diamond Products equipment. At Diamond Products we are driven to ensure you are completely satisfied with your product and continually strive to improve our product line so that we can offer you the best possible equipment in the industry.

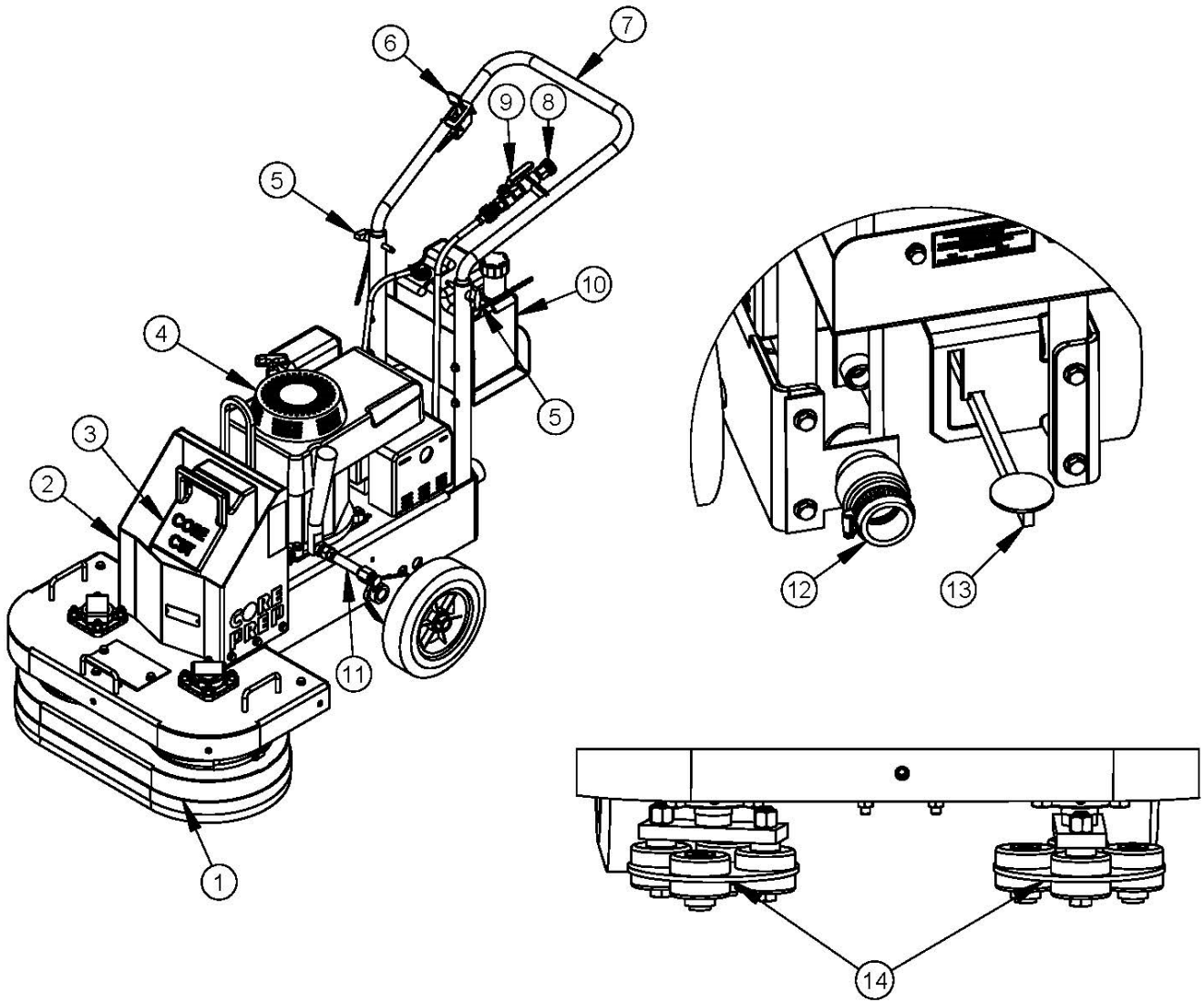
This operator's manual is a critical document that provides pertinent information regarding the safety, operation, maintenance, and care of your new equipment. Keep this manual available at all times. Operate the equipment and all of its components according to this manual. Failure to comply with and understand the following safety, operation and maintenance instructions can result in serious injuries and/or death. All operators must be properly trained or supervised by experienced personnel prior to using this floor grinder and should understand the risks and hazards involved. Diamond Products discourages improper or unintended equipment usage and cannot be held liable for any resulting damages.

Equipment modifications should be made by Diamond Products to ensure safety and design. Any modifications made by the owner(s) are not the responsibility of Diamond Products and void all equipment warranties if a problem arises as a result of the modification.

Refer to the Diamond Products Parts List for additional information and part diagrams. Refer to the motor/engine manufacturer as the primary source for all safety, operations, and maintenance instructions regarding the motor/engine. Prior to operating, record the floor grinder's serial number, and the motor/engine model and serial numbers in Appendix D.

## INTRODUCTION

### CPG200 Components (10 HP Gas)

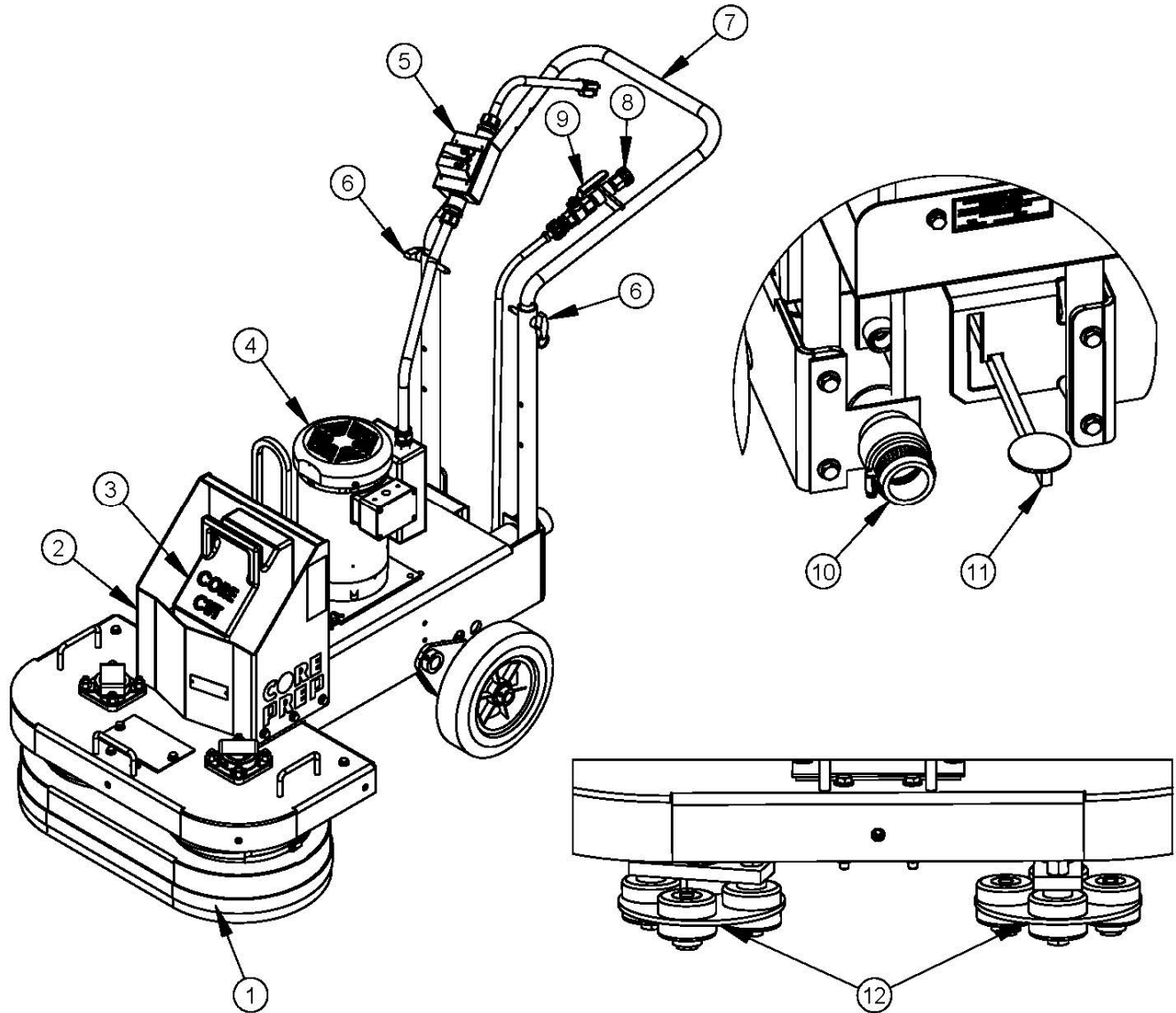


1. Front Guard
2. Weight Box
3. Weight
4. Honda Engine, 10 HP
5. Handlebar Locking Pins
6. Throttle
7. Handlebar

8. Water Supply Connection
9. Water Supply Valve
10. Fuel Tank
11. Oil Drain Hose
12. Vacuum Attachment Port
13. Foot Lever
14. Shaft/Coupling Assembly

## INTRODUCTION

### CPG200 Components (2 HP Electric)

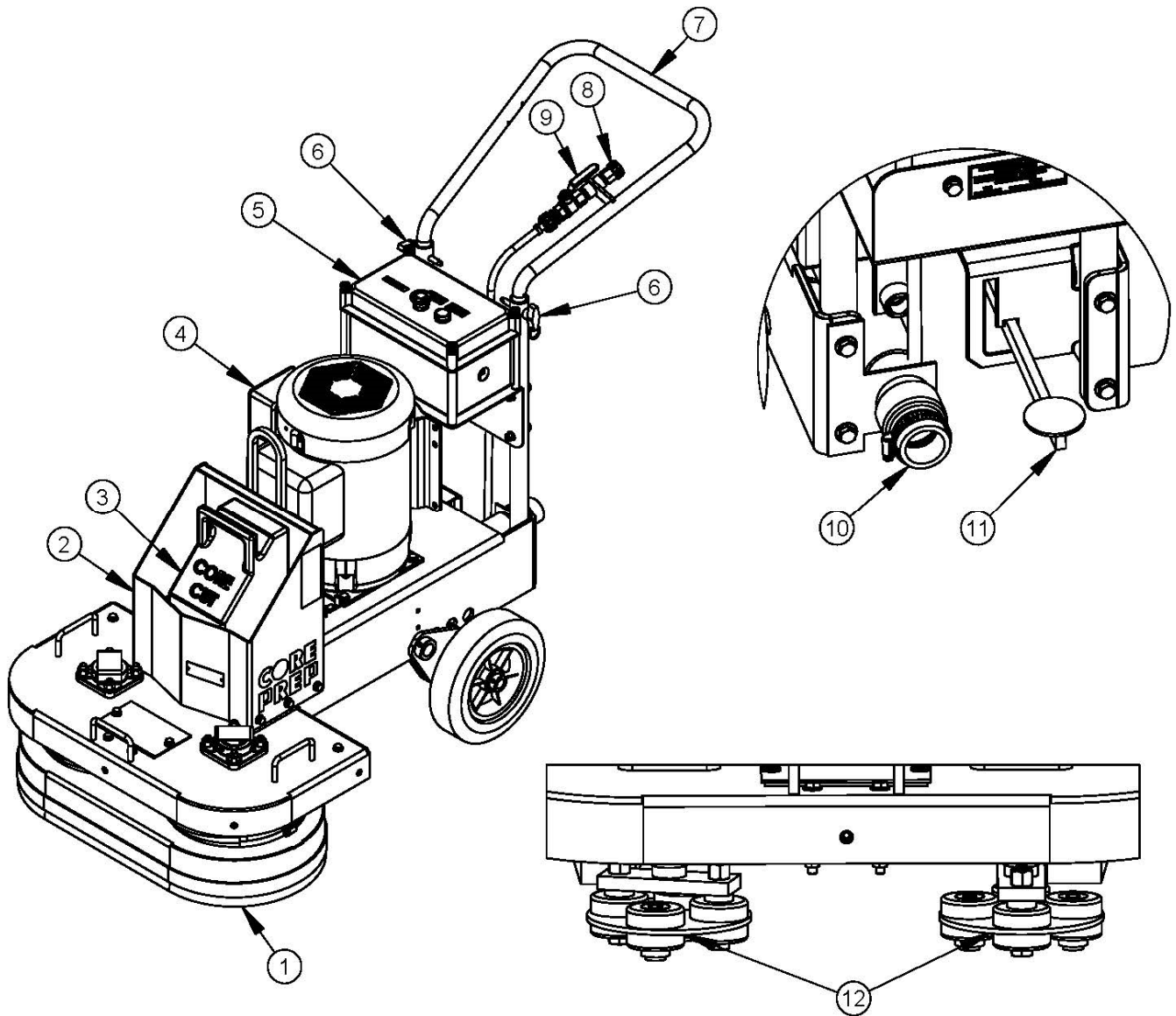


1. Front Guard
2. Weight Box
3. Weight
4. Baldor Motor, 2 HP
5. Motor Control Switchbox
6. Handlebar Locking Pins

7. Handlebar
8. Water Supply Connection
9. Water Supply Valve
10. Vacuum Attachment Port
11. Foot Lever
12. Shaft/Coupling Assembly

## INTRODUCTION

### CPG200 Components (7-1/2 HP Electric)



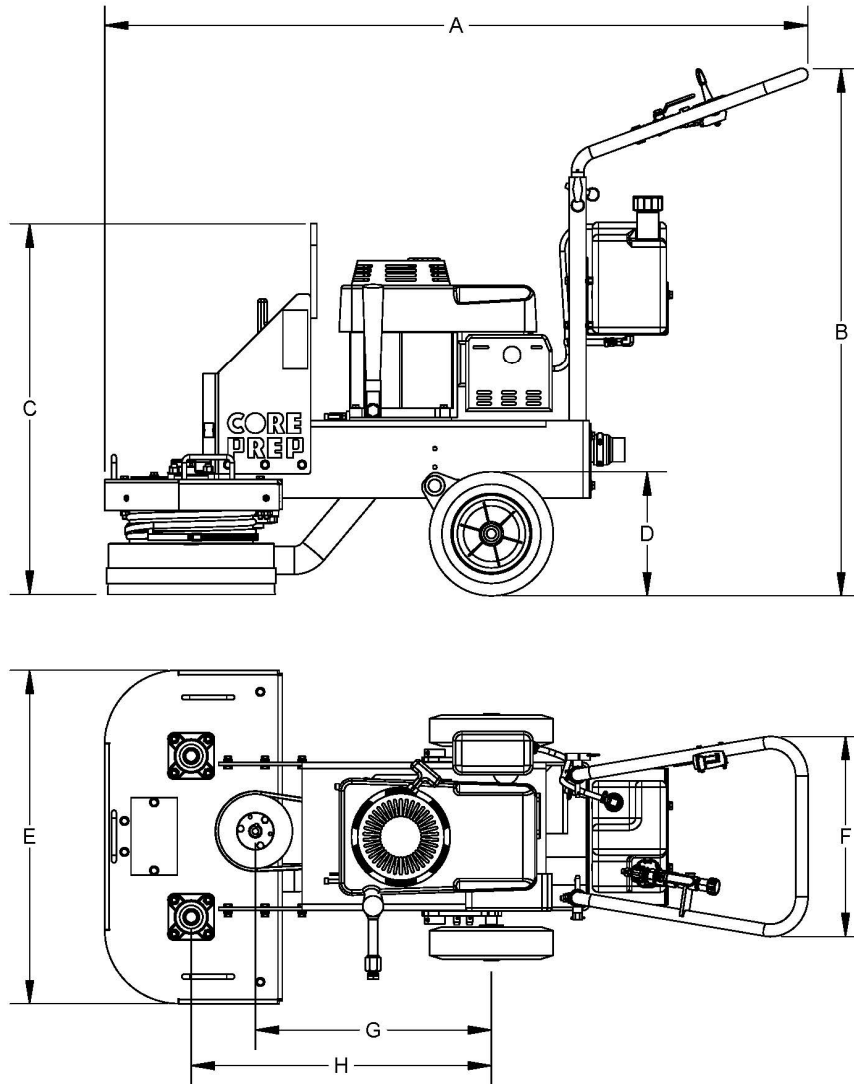
1. Front Guard
2. Weight Box
3. Weight
4. Baldor Motor, 7-1/2 HP
5. Motor Starter Box
6. Handlebar Locking Pins

7. Handlebar
8. Water Supply Connection
9. Water Supply Valve
10. Vacuum Attachment Port
11. Foot Lever
12. Shaft/Coupling Assembly



# INTRODUCTION

## CPG200 Dimensions



CPG200 Dimensions		Inches	Millimeters
A	Grinder Length	57-3/8	1457
B	Grinder Height – Min. (Handlebar in lower position)	41-1/2	1054
	Grinder Height – Max. (Handlebar in upper position)	44-1/2	1130
C	Weight Box Height	30-1/8	765
D	Wheel Height	10	254
E	Grinder Width	27	686
F	Handlebar Width	16	406
G	Wheel to Blade Shaft Length	19	483
H	Wheel to Spindle Length	24-1/4	616

## INTRODUCTION

### CPG200 Specifications

<b>Grinder Model</b>	CPG210H	CPG202E1	CPG275E1	CPG275E3
<b>Grinding Head Capacity</b>	(2) 10" / (2) 12"			
<b>Grinding Head Speed<sup>1</sup></b>	550 rpm	205 rpm	530 rpm	540 rpm
<b>Lubrication Type</b>	NLGI #1 lithium synthetic grease			
<b>Shaft Size</b>	1" Diameter			
<b>Shaft Bearings</b>	(3) 1" flange block bearings			
<b>Blade Shaft Drive</b>	(2) V-Belt 4L-400	(2) V-Belt 4L-420	(3) V-Belt 4L-400	
<b>Grinding Head Raise and Lower</b>	Mechanical spring loaded foot pedal			
<b>Rear Axle Size</b>	1" OD straight			
<b>Rear Wheels</b>	(2) 10" x 2" x 3/4" (Internal bearings)			
<b>Handle Bar Adjustment</b>	Two vertical height level options, 3" range			

1. Theoretical speed. Actual speeds will vary.

## INTRODUCTION

### CPG200 Electric Motor Specifications

<b>Grinder Model</b>	CPG202E1	CPG275E1	CPG275E3
<b>Motor Model</b>	35U782T988G1	L3709T	CEM3709T
<b>Rated Output Power</b>	2 HP	7.5 HP	7.5 HP
<b>Rated Speed</b>	1725 rpm (Baldor rating)	3450 rpm (Baldor rating)	3520 rpm (Baldor rating)
<b>Rated Voltage</b>	115/230 V	230 V	230/460 V
<b>Full Load Amps</b>	17.6/8.8 A	33	18/9
<b>Rated Frequency</b>	60 Hz.		
<b>Phase</b>	1	1	3

### CPG200 Gas Engine Specifications

<b>Saw Model</b>	CPG210H
<b>Engine Model</b>	Honda (GXV390)
<b>Rated Output Power</b>	10.2 HP @3600 rpm
<b>Fuel Type</b>	Gas (87 Octane)
<b>Fuel Tank</b>	.55 Gal. (2.1 Liters)
<b>Engine Oil</b>	SAE 10W-30
<b>Engine Oil Capacity</b>	1.2 Qt. (1.1 Liters)
<b>Safety Alert</b>	Low oil level alert (buzzer)

## SAFETY PRECAUTIONS

### Safety

Operate the equipment and all of its components according to this manual. Failure to comply with and understand the following safety, operation and maintenance instructions can result in serious injuries and/or death. All operators must be properly trained or supervised by experienced personnel prior to using this floor grinder and should understand the risks and hazards involved. Diamond Products discourages improper or unintended equipment usage and cannot be held liable for any resulting damages.

Equipment modifications should be made by Diamond Products to ensure safety and design. Any modifications made by the owner(s) are not the responsibility of Diamond Products and void all equipment warranties if a problem arises as a result of the modification.

Refer to the Diamond Products Parts List for additional information and part diagrams. Refer to the motor manufacturer as the primary source for all safety, operations, and maintenance instructions regarding the motor. Prior to operating, record the floor grinder's serial number, and the motor's model and serial numbers in Appendix D.

**Notice: 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**

#### **PROPOSITION 65**



**WARNING:** Concrete cutting produces dust that can expose you to chemicals including Silica, crystalline (airborne particles of respirable size), which is known to the state of California to cause cancer. For more information go to:

**[WWW.P65WARNINGS.CA.GOV](http://WWW.P65WARNINGS.CA.GOV)**

### **Respiratory Hazards**



#### **WARNING**

Concrete cutting produces dust and fumes known to cause illness, death, 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).

## SAFETY PRECAUTIONS

### General Safety

- Read and understand all safety, operations, and maintenance instructions provided in this manual prior to operating or servicing the floor grinder.
- Keep equipment components clean and free of slurry, concrete dust, and debris.
- Inspect water hoses prior to operating the equipment. Clean, repair, or replace damaged components.
- Repair the equipment immediately when a problem arises.
- Replace equipment 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 equipment.
- Operate the equipment wearing flame resistant clothing.
- Underage or non-trained personnel should not operate the equipment.
- Keep all body parts away from rotating machinery.
- Replace all guards and access panels (unless stated otherwise) prior to operating the equipment.

### DO NOT:

- Assume the equipment will remain still when parking/stopping the equipment on a slope. Chock the wheels to help prevent unnecessary movement.
- Drop equipment, supplies, tools, etc., when handling to help prevent injuries.
- Lift and carry equipment, supplies, tools, etc., that are too heavy and/or cannot be lifted easily.

- Operate the equipment without using the appropriate safety equipment required for the work task.



- Operate or service the equipment with any clothing, hair, or accessories that can snag in the machinery, which could lead to serious injuries or death!
- Operate the equipment using attachments not associated with or recommended for the equipment.
- Operate the equipment around combustible materials.
- Operate the equipment with anyone near the work area.
- Operate the equipment until all unnecessary materials have been removed from the work area.
- Operate the equipment with loose nuts, screws, and bolts.
- Operate the equipment when ill or fatigued.
- Operate the equipment under the influence of drugs and/or alcohol.
- Operate the equipment on steep slopes.
- Grease the equipment with the motor running.
- Touch hot components when operating the equipment.
- Leave the equipment unattended until the motor is off and the blade has stopped.
- Place the equipment into storage until it has cooled down.
- Service the equipment until it has cooled down.
- Service the equipment with the motor running.

## SAFETY PRECAUTIONS

### **Grinding 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 grinding.
- Turn off all electricity, gas, and water around the direct work area prior to grinding.
- Inspect the work area to ensure nothing will impede full control of the machine at all times.
- DO NOT allow any person, animal, and/or objects in and around the work area while grinding.
- Ensure the work area is adequately illuminated to ensure safe operation of the machine.
- Disconnect power when not in use, before servicing, and when changing the grinding head.

### **Belt Safety**

- Turn off the motor 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 the belts alignment prior to operating the equipment.
- Use extreme caution when working with belts and rotating machine parts to avoid entanglement.
- Over-tensioning the belts may reduce the life of the blade shaft bearings. Under-tensioning the belts may cause slippage, shorter belt life, and/or poor equipment performance.
- Squealing belts indicate looseness.

### **Transporting Safety**

- Remove the grinding head prior to transporting the equipment.
- Chock the wheels and secure the floor grinder in the truck/trailer prior to transporting.
- Ensure the grinding head does not make contact with the ground and/or other surface when transporting the floor grinder.
- Refer to the Department of Transportation (DOT) for additional transportation recommendations.

### **Lifting Safety**

- Move yourself and all others away from the lifting area when hoisting the floor grinder to prevent being crushed.
- DO NOT attempt to lift the floor grinder irresponsibly and/or improperly.



## Operating

### **General Operating Precautions**

- Prior to operating the machine, read the operator's manual thoroughly and ensure that you understand the safe and proper operation of the machine.
- Use approved personal protective equipment at all times while operating the machine.
- Ensure that there is firefighting equipment and a first aid kit nearby while operating the machine.
- Ensure the grinding area is free of obstructions, people, and or animals prior to operating the machine.
- Always operate the machine from the operator's position at the rear of the machine.
- Ensure that the proper grinding head is used for the application.

### **Handlebar**

The handlebar helps the operator guide and maneuver the floor grinder. It is important to have the handlebar set to a comfortable working height. There are two height settings for the floor grinder. The lower setting will set the handlebar at a height of 41-1/2" and the upper setting will place it at 44-1/2".



**Handlebar**

### **Adjusting the Handlebar**

1. Pull out the two T-handle locking pins from the handlebar support tubes.



**T-Handle Locking Pins**

2. Adjust the handlebar up or down to the desired working height.
3. Align the holes in the handlebar with the hole in the support tube and reinsert the two T-handle locking pins into the handlebar support tube to secure.

### **Rear Axle**

The rear axle assembly on the CPG200 is designed to allow the rear wheels to pivot either in front or behind the axle. This distributes the weight to the front, for grinding operations, or the rear, to allow the grinder to easily be moved.

There are a set of four horizontal holes located on the side of the grinder frame base. These holes allow the operator to locate the axle forward for less weight on the grinding discs or farther back to allow more weight on the grinding discs.



**Axle Hole Locations**

Additionally, each grinder has a standard 65 pound weight with an option for one more that can be used to add more weight over the grinding discs.

*Distributing the Weight for Grinding Operations*

1. Lift up on the handlebar to raise the rear wheels off of the ground.
2. Slowly lower the grinder back down while pushing forward to allow the rear wheels to pivot behind the rear axle.



**Rear Wheel Pivoted Back**

*Distributing the Weight to Move the Grinder*

1. Lift up on the handlebar to raise the rear wheels off of the ground.
2. Slowly lower the grinder back down while pulling backward to allow the rear wheels to pivot in front of the rear axle.
3. Once the rear wheels are pivoted in front of the rear axle, push down on the handlebar to raise the front of the grinder off of the ground. This allows the operator to manually move the grinder from one location to another location.



**Rear Wheels Pivoted Forward**

**Diamond Grinding Head**

**! WARNING**

- DO NOT use damaged grinding heads when grinding to avoid harming yourself, others, or the floor grinder.
- Always use an appropriate type of grinding head based on the type of material being ground.

Using the proper grinding head preserves the grinding head and improves grinding and operator efficiency, resulting in lower costs.

*Inspecting the Grinding Head*


Inspect each grinding head prior to installation and discard all damaged grinding heads. Inspect all grinding heads for:

- Cracks, nicks, and dents
- A damaged and/or deformed arbor (center hole)
- A deformed blade circumference
- Segment loss and/or segment cracks
- Core wear
- Bending

*Installing the Grinding Head*

**! WARNING**

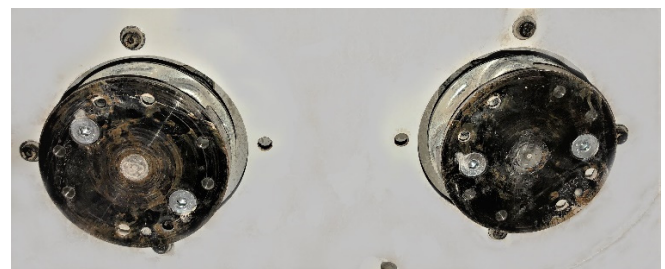
- DO NOT install a grinding head with the motor/engine running. Failure to properly secure the grinding head may cause parts to loosen or fall off the saw.



**! CAUTION**

- Wear gloves and be alert to the surrounding environment when handling grinding heads.

1. Using a hoist, raise the floor grinder high enough to expose the two disc mounting flanges.

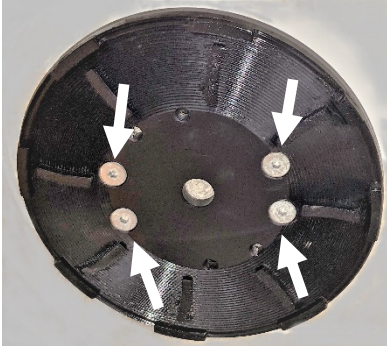


**Disc Mounting Flanges**



## OPERATING

2. With the disc mounting flanges exposed, place a grinding head onto a flange and align the four bolt holes.
3. Attach the grinding head to the flange by installing four 3/8"-16 x 1" flat head cap screws through the grinding head into the disc mounting flange and tighten to secure.



Grinding Head Bolts

4. Repeat steps 2 and 3 with the second grinding head.
5. Lower the floor grinder back down to the ground.

### Removing the Grinding Head

#### CAUTION

- DO NOT remove a grinding head with the motor/engine running.

1. Using a hoist, raise the floor grinder high enough to expose the two disc mounting flanges.
2. Remove the four 3/8-16" x 1" flat heat cap screws attaching each grinding head to the disc mounting flanges and remove the grinding heads.
3. Lower the floor grinder back down to the ground.

### Motors

There are three electric motors associated with the CPG200 series floor grinders.

#### CPG202E-1

The CPG202E-1 floor grinder uses a 2 HP, 115/230 V, single phase electric motor rated at 1725 RPM.

The motor is controlled through a switch box assembly. The switch box allows the operator to start and stop the motor.



Switch Box (CPG202E-1)

The motor is protected by a thermal overload. In the event that the motor overheats, the thermal protector circuit will open shutting the motor off. If this occurs, turn the motor control switch to OFF and allow the motor time to cool. When the motor has cooled, press the reset button located on the motor. A click indicates that the motor is reset and can now be restarted.



Motor Reset Button

#### CPG275E-1

The CPG275E-1 floor grinder uses a 7-1/2 HP, 230 V, single phase electric motor rated at 3450 RPM.

The motor is controlled through a starter box assembly. The starter box allows the operator to start and stop the motor.

## OPERATING



**Starter Box Assembly**

The motor is protected by a current overload relay. In the event of an over current condition, the overload relay will shut the motor off. If this occurs, press the STOP button down on the starter box top and allow the motor to cool down. Remove the top of the starter box and press the blue RESET button down on the overload relay. Reinstall the starter box top and pull up while turning clockwise on the STOP button to reset. Press the START button to restart the motor.

### CPG275E-3

The CPG275E-3 floor grinder uses a 7-1/2 HP, 230/460 V, three phase electric motor rated at 3520 RPM.

The motor is controlled through a starter box assembly. The starter box allows the operator to start and stop the motor.

The motor is protected by a current overload relay. In the event of an over current condition, the overload relay will shut the motor off. If this occurs, press the STOP button down on starter box top and allow the motor to cool down. Remove the top of the starter box and press the blue RESET button down on the overload relay. Reinstall the starter box top and pull up while turning clockwise on the STOP button to reset. Press the START button to restart the motor.

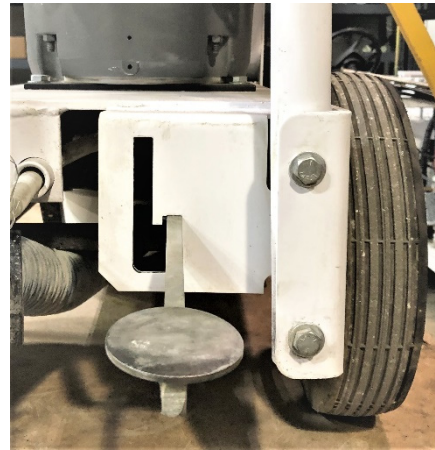
### Starting the Motor



#### **WARNING**

**DO NOT** leave the saw unattended while the motor is running.

1. Ensure the grinding head is disengaged from the floor by putting the foot lever into the lower position.



**Foot Lever –Disengaged (Lower) Position**

2. Connect the floor grinder to a power source using a properly sized power cord in accordance with Appendix B.



#### **CAUTION**

Use of a wire gauge that is too small will cause loss of power or overheating and will damage the electric motor

3. When operating the 2 HP motor, move the starter switch to the ON position on the switch box. When operating a 7-1/2 HP motor, press the START button on the starter box assembly.
4. Allow the motor to come up to full operating speed.

### Stopping the Motor



#### **CAUTION**

**DO NOT** leave the grinder unattended until the motor is off and the grinding head has stopped spinning.

1. When operating the 2 HP motor, move the starter switch to the OFF position on the switch box. When operating a 7-1/2 HP motor, press the STOP button on the starter box assembly.
2. Maintain contact between the grinding head and the ground until the grinding head comes to a full stop.
3. Disconnect the floor grinder from the power source.

### Engines

The CPG210H floor grinder uses a 10 HP, gas engine rated at 3600 RPM.

## OPERATING

The engine is controlled by a throttle control lever located on the handlebar of the machine. The control valve allows for starting, stopping, and adjusting engine speed.

The engine is protected by a low oil level buzzer. The buzzer will alert the operator when the engine needs oil. If the buzzer sounds, stop the engine and add oil.

### Starting the Honda engine

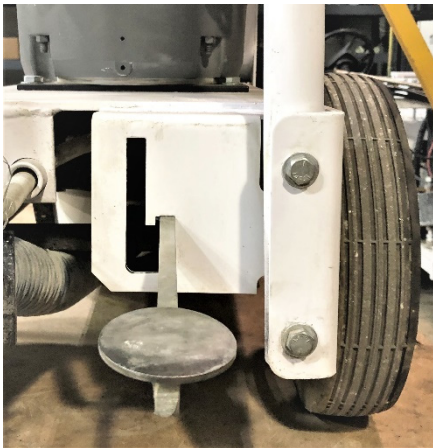
Refer to the manufacturer's engine manual as the primary source of information regarding the engine.



### WARNING

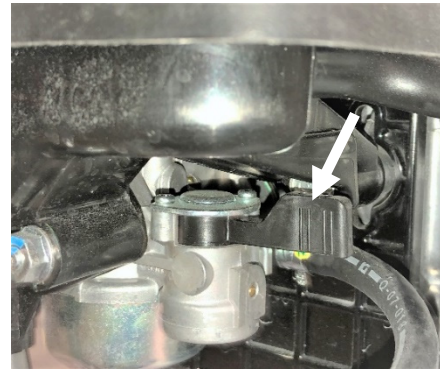
- DO NOT leave the saw unattended while the engine is running.
- Always operate the saw in a well ventilated area. Concentrated exhaust can cause loss of consciousness and/or death.

1. Ensure the grinding head is disengaged from the floor by putting the foot lever into the lower position.



Foot Lever –Disengaged (Lower) Position

2. Move the fuel valve lever to the ON position (All the way to the right).



Fuel Valve "ON"

3. Move the control lever to the CHOKE/FAST position.



Control Lever

*NOTE: To restart a warm engine, move the control lever slightly past the halfway point.*

4. Pull the starter grip lightly until resistance is felt, then pull briskly on the grip away from the engine.
5. Return the starter grip gently to prevent damage to the starter.
6. After the engine starts and has warmed up, slowly move the choke lever back to the desired engine speed.

### Stopping the Honda engine

1. Move the control lever to the STOP/SLOW position.
2. Move the fuel valve lever to the OFF position (All the way to the left).

## Vacuum Port

When dry grinding, it is required to have a dust containment system used in conjunction with the floor grinder. A dust port is located at the back of the grinder to attach a vacuum. Connect the vacuum to the port using a 2 inch (50mm) hose.

Ensure that the vacuum filters are clean prior to use and that the strip brush on the dust guard is in contact with the ground at all times during operation.



Dust Port

## Water Supply

The floor grinder is equipped with a water supply connection located on the left side of the handlebar. The water is metered through the water supply valve to the grinding head to cool the head and minimize dust.



Water Supply Valve

## Grinding

### Tasks Prior to Grinding

Complete the following tasks prior to grinding

- Ensure the handlebar is securely attached and at the desired working height.
- Inspect the grinding heads and shafts for damage and repair or replace as required.
- Make sure that the grinding heads are suitable for the job.
- Ensure there is a water source available if wet grinding.
- Ensure there is an adequate dust collection system available if dry grinding.
- Verify that the power cord is properly sized for the job in accordance with Appendix B.
- Turn off all electricity, gas, and water around the direct work area.

### Dry Grinding

1. Connect a dust collecting vacuum system to the dust port.
2. Start the dust collecting vacuum system in accordance with the manufacturer's instructions.
3. Start the motor/engine in accordance with the instructions provided earlier in this section and allow the motor/engine to come up to full operating speed.
4. Engage the grinding head by carefully moving the foot lever into the upper position.



Foot Lever – Engaged (Upper) Position

5. With both hands firmly on the handlebar, move the grinder from side to side ensuring not to stop in one spot too long as this will lead to grooving of the surface.

**NOTE:** To obtain variations in grinding speed and depth of cut, the axles can be moved

## OPERATING

*forward or backward to change the downward force on the grinding head. If extremely light cuts are desired, remove one or both of the ballast weights from the grinder.*

6. When the grinding is complete, stop the motor/engine in accordance with the instructions provided earlier in this section.
7. Turn off the dust collecting system in accordance with the manufacturer's instructions.
8. Disengage the grinding head from the grinding surface by placing the foot lever in the lower position.

### *Wet Grinding*

1. Ensure water control valve is in the shut position and connect a water supply hose to the inlet of the water control valve.
2. Ensure that water is available to the water control valve and open the valve to begin flow to the grinding head.
3. Start the motor/engine in accordance with the instructions provided earlier in this section and allow the motor/engine to come up to full operating speed.
4. Engage the grinding head by carefully moving the foot lever into the upper position.



**Foot Lever – Engaged (Upper) Position**

5. With both hands firmly on the handlebar, move the grinder from side to side ensuring not to stop in one spot too long as this will lead to grooving of the surface.

*NOTE: To obtain variations in grinding speed and depth of cut, the axles can be moved forward or backward to change the downward force on the grinding head. If extremely light cuts are desired, remove one or both of the ballast weights from the grinder.*

6. When the grinding is complete, stop the motor/engine in accordance with the instructions provided earlier in this section.
7. Maintain contact between the grinding head and the ground until the grinding head comes to a full stop.
8. Shut the water control valve.
9. Turn off the water supply and disconnect the supply hose to the grinder.
10. Disengage the grinding head from the grinding surface by placing the foot lever in the lower position.

## **Maintenance**

### **General**

Failure to read and comply with the maintenance instructions provided in this manual prior to performing maintenance may result in serious injuries and/or death, and may harm the floor grinder. DO NOT attempt to perform maintenance on the floor grinder if you are not properly trained for it, or are not supervised by an experienced person.

Refer to the CPG200 Parts List for additional information and part diagrams when performing maintenance tasks. Refer to the motor/engine manufacturer as the primary source for all safety, operations, and maintenance instructions for the motor/engine. Contact the floor grinder and/or motor/engine manufacturer with any additional questions.

Remove all necessary guards and access panels prior to servicing the floor grinder. Replace prior to operating.

### **Pre Maintenance Preparations**

- Ensure the floor grinder is in a safe area to conduct maintenance.
- Maintain proper cleanliness of the work area to minimize personnel injury or equipment damage.
- Ensure the floor grinder is sufficiently cool to conduct any maintenance.
- Remove the grinding head prior to starting any maintenance.
- Place the floor grinder on a level surface with the motor/engine turned off.
- Ensure there is adequate lighting in the work area to ensure safety.
- Ensure all equipment and tools required for the maintenance task are staged and available for use.
- Prior to any maintenance being performed, know the locations of all safety equipment such as fire extinguishers, first aid kits, etc.
- All maintenance shall be performed by qualified personnel only.

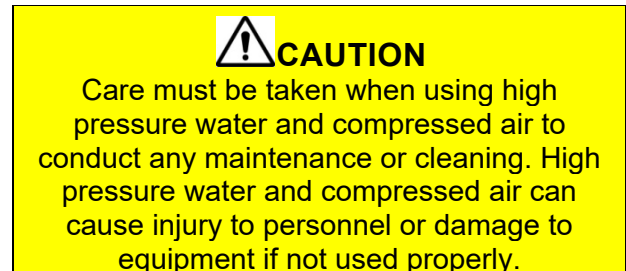
### **General Cleaning**

The floor grinder must be cleaned after each use and prior to conducting any maintenance. Ensure that the floor grinder is cool prior to

cleaning. Ensure affected electrical equipment is properly covered or de-energized prior to cleaning with water or air.

### **Cleaning Techniques**

Various cleaning options can be utilized depending on the type of cleaning required. High pressure washers and a mild detergent will work the best. Compressed air and low pressure water can also be utilized where required.



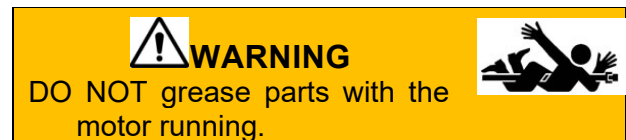
### **Starter or Switch Box**

Do not spray water on the starter or switch box to clean. Use a damp cloth or compressed air to clean electrical components. Dry the starter or switch box after cleaning.

### **Motor**

Use a mild detergent and water to clean the motor. Do not spray water forcefully on the motor to prevent damage to components.

### **Part Lubrication**



Lubricate all necessary parts on schedule for maximum floor grinder efficiency. Use one half to one full pump of NLGI No. 1 premium, lithium-based grease when lubricating all grease fittings.

### **Post Cleaning**

- Lubricate the machine as required.
- Dry all electrical components using compressed air.
- Do not start the machine until it has had time to thoroughly dry.

## MAINTENANCE

### Service Schedule

The service schedule is based primarily on the standard operating time of the machine. The frequency of the maintenance tasks can be increased based on the working environments of the machine.

Task	Cycle			
	Daily	50 Hrs.	100 Hrs.	Yearly
Visually inspect grinder for damage and repair as necessary	X			
Wipe down and clean all components for dust, debris, and slurry	X			
Check that all safety guards are in place and in good operating condition	X			
Check for loose or frayed wiring. Repair/replace as necessary	X			
Check for loose nuts and bolts and retighten	X			
Lubricate blade shaft and gear shaft bearings (End of work day)	X			
Inspect all belts for tension or wear and re-tension or replace as necessary	X <sup>1</sup>			
Check engine oil level	X			
Check fuel level	X			
Check air filter	X			
Clean air filter		X <sup>2</sup>		
Replace engine oil			X <sup>3</sup>	
Check and adjust spark plug			X	
Replace air filter				X
Replace spark plug				X

1 - Initially inspect the belts after the first four hours and then daily.

2 - Service more often as required

3 - Initial change after first 20 hours of operation.

**Daily Service**


For the following daily service items please refer to the motor or engine manuals and the specific manufacturers for a full motor or engine maintenance schedules and additional motor or engine maintenance information.

- **Check Engine Oil Level**
- **Check Engine Fuel Level**
- **Check the Air Filter**


**Handlebar**

The handlebar generally requires little or no maintenance and, when used correctly, should remain in good, working condition. Inspect the handlebar occasionally for bending, unusual cracks, and/or breakage. Replace it immediately when damaged.

**Lubricate the Blade Shaft and Gear Shaft Bearings**



**WARNING**



DO NOT grease parts with the motor running.

Lubricating the blade shaft and gear shaft bearings on schedule increases the floor grinder's efficiency and life. Use NLGI No. 1 premium lithium-based grease when lubricating parts. Use one-half to one full pump of grease when lubricating grease fittings.

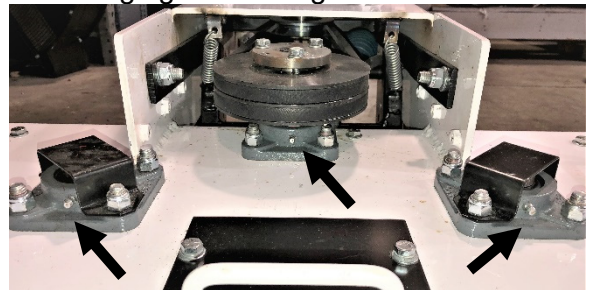
At the end of each work day, lubricate the two blade shaft bearings and one gear shaft bearing. All three bearings and their respective grease fittings are located on the top of the head plate assembly.

1. To access the gear shaft bearing's grease fitting, remove the six 5/16"-18 hex head bolts from the weight box.
2. Remove the weight box.



**Weight Box Bolts  
(Three per side)**

3. Add no more than one pump of bearing grease into the blade shaft and gear shaft bearings grease fittings.



**Blade Shaft and Gear Shaft Bearing Grease Fittings**

4. When the bearings have been greased, reinstall the weight box and secure with the six 5/16"-18 hex head bolts.

**Inspect the Drive Belts**

Inspect the drive belts after the first four hours of use and then daily for tension or wear. Re-tension or replace as required.

**Drive Belt Access**

1. Remove the six 5/16"-18 hex head bolts from the weight box.
2. Remove the weight box.



**Weight Box Bolts  
(Three per side)**



**Belt Tensioning**

When tensioning belts, DO NOT exceed the manufacturer's recommended belt tension settings as specified in Appendix B.

*NOTE: Over-tensioning belts may damage the motor. Under-tensioning belts may cause slippage, shorter belt life, and/or poor floor grinder performance. Squealing belts indicate looseness.*

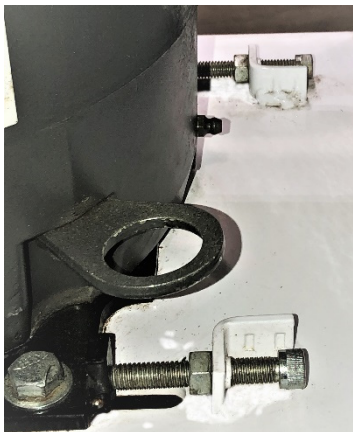
**Tensioning the Drive Belts (Electric Motors)**

1. Using a 9/16" wrench and socket, loosen the four motor mounting bolts and nuts on the motor base.



**Motor Mounting Bolts**

2. Using a 1/2" wrench, loosen the hex nuts on the drive belt tensioning bolts.
3. Using a 1/4" hex drive, turn the drive belt tensioning bolts (2) clockwise to tighten or counter-clockwise to loosen the belts.

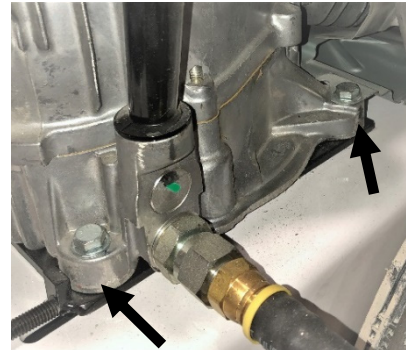


**Drive Belt Tensioning Bolt**

4. Tension the belts as specified in Appendix B and retighten the hex nuts on the tensioning bolts.
5. Retighten the four motor mounting bolts and nuts on the motor base.

**Tensioning the Drive Belts (Gas Engine)**

1. Using a 1/2" wrench and socket, loosen the two engine mounting bolts and nuts on the left side of the engine base.



**Engine Mounting Bolts (Left Side)**

2. Using a 1/2" wrench, loosen the two engine mounting bolts located under the right side frame base of the engine base.



**Engine Mounting Bolts (Right Side)**


3. Using a 1/2" wrench, loosen the hex nuts on the drive belt tensioning bolts.
4. Using a 1/4" hex drive, turn the drive belt tensioning bolts (2) clockwise to tighten or counter-clockwise to loosen the belts.




**Drive Belt Tensioning Bolt**

5. Tension the belts as specified in Appendix B and retighten the hex nuts on the tensioning bolts.
6. Retighten the four motor mounting bolts and nuts on the motor base.

### *Replacing the Drive Belts*



**WARNING**



For all electric grinders, de-energize the power to the floor grinder by unplugging the power cord prior to removing V-belts

1. Remove the six 5/16"-18 hex head bolts from the weight box.
2. Remove the weight box.
3. Remove the tension from the drive belts in accordance with the "Tensioning the Drive Belts" procedures found in this section of the manual.
4. Using a 1/4" hex drive, turn the drive belt tensioning bolt counter-clockwise and push the motor forward to loosen the belts.
5. Remove the old belts and install new belts.
6. Push the motor backward until there is no slack in the belts.
7. Turn the drive belt adjusting bolts clockwise to tension the belts.
8. Tension the belts as specified in Appendix B and retighten the hex nuts on the tensioning bolts.
9. Retighten the engine mounting bolts and nuts on the engine base.
10. Reinstall the weight box.

### **50 Hour Service**

**For the following maintenance service item please refer to the engine manual and the specific manufacturer for a full engine maintenance schedule and additional engine maintenance information.**

- ***Clean the Air Filter***

### **100 Hour Service**

**For the following maintenance service items please refer to the engine manual and the specific manufacturers for a full engine maintenance schedule and additional engine maintenance information.**


- ***Replace the Engine Oil***
- ***Check and Adjust the Spark Plug***

### **Yearly Service**


**For the following maintenance service items please refer to the engine manual and the specific manufacturers for a full engine maintenance schedule and additional engine maintenance information.**

- ***Replace Air Filter (Paper Element)***
- ***Replace the Spark Plug***

### **General Motor and Engine Service**



**WARNING**



Let the motor/engine cool down prior to servicing the floor grinder. **DO NOT** service the floor grinder with the motor/engine running (unless stated otherwise).

**For the following general maintenance service item please refer to the engine manual and the specific manufacturer for a full engine maintenance schedule and additional engine maintenance information.**

- ***Draining the Fuel Tank and Carburetor***

### **Disconnecting the Power to the Motor**

Whenever maintenance is being conducted on the floor grinder, disconnect the power to the motor by unplugging the power cord.

### **Lifting**

1. Ensure the work area is clear of any obstructions and all personnel are at a safe distance prior to lifting the machine.
2. Use a properly rated strap, chain, or hoisting cable, placed in the grinders lifting point to lift the grinder.
3. Slowly lift the machine only high enough to conduct the required work.

### **Transport**

#### ***Prior to Transport***

1. Remove the grinding head.
2. Remove the T-handle locking pins from the handlebar support tubes.
3. Lift the handlebar out of the support tubes and rotate it so that the handlebar is facing forward.
4. Reinstall the handlebar into the handlebar support tubes.
5. Reinstall the T-handle locking pins into the handlebar support tubes to secure the handlebar.

#### ***Transport***

- Always secure the floor grinder when transporting to avoid damage.
- Avoid exposing the floor grinder to the elements while transporting.

### **Storage**

- Always clean the floor grinder before storing.
- Store the floor grinder in a safe area away from unauthorized personnel.
- Store the floor grinder in a dry area.

### **Disposal**

Dispose of the floor grinder when it's no longer repairable, and/or contains safety hazards not worth repairing or maintaining.

Transport the floor grinder to a salvage yard or recycling facility.

REFERENCES

NOTES

Lined area for notes with horizontal lines.



## REFERENCES

### Appendix A

#### Troubleshooting

Troubleshooting the CPG200		
Symptom	Problem	Solution
Engine will not start.	Fuel valve OFF?	Move fuel lever to ON position.
	Choke Open?	Move control lever to CHOKE position unless the engine is warm.
	Out of fuel?	Refuel.
	Bad fuel?	Drain fuel tank and carburetor and refill with fresh fuel.
	Spark plug faulty, fouled, or improperly gapped?	Gap or replace spark plug.
	Spark plug wet with fuel?	Dry and reinstall spark plug. Start engine with control lever in MAX position.
	Fuel filter restricted?	Repair or replace.
Low oil level buzzer sounding.	Engine oil level low?	Fill with recommended oil to proper level.
Engine lacks power.	Filter element restricted?	Clean or replace filter element.
	Bad fuel?	Drain fuel tank and carburetor and refill with fresh fuel.
	Fuel filter restricted?	Repair or replace.
Motor will not start.	Not connected to power source?	Connect to power source.
	<sup>(1)</sup> Starter switch in OFF position?	Move starter switch to ON position.
	<sup>(2)</sup> STOP button pushed down?	Pull up and turn STOP button clockwise.
Motor shuts off during operation.	<sup>(1)</sup> Thermal overload tripped?	Press the red RESET button on the motor and restart.
	<sup>(2)</sup> Overcurrent tripped?	Open starter box and reset current overload button.
	Loss of power supply?	Check power supply connection.
		Use new power supply.
Short belt life.	Loose belts causing slippage?	Check and adjust belt tension.
	Overheating of belts?	
	Sheaves misaligned?	Use straightedge to check blade shaft sheave alignment and adjust as necessary.
	Worn sheave grooves?	Check for groove wear and replace sheaves when necessary.

(1) 2 HP Baldor motor

(2) 7-1/2 HP Baldor motor

## REFERENCES

### Appendix B

#### **Belt Tension Specifications**

<b>CPG210H</b>	<b>New Belt</b>	<b>Used Belt</b>
Belt Type (Qty)	4L-400 (2)	
Static Tension (per rib/strand)	50 to 54 lbf	43 to 47 lbf
Static Belt Pull (total pull)	200 to 215 lbf	172 to 186 lbf
Rib/Strand Deflection Distance	0.12 in	0.12 in
Rib/Strand Deflection Force	2.1 to 2.3 lbf	1.8 to 2.0 lbf
Sonic Tension Meter	223 to 239 N	192 to 208 N
Belt Frequency	90 to 93 Hz	84 to 87 Hz

<b>CPG202E1</b>	<b>New Belt</b>	<b>Used Belt</b>
Belt Type (Qty)	4L-420 (2)	
Static Tension (per rib/strand)	25 to 27 lbf	22 to 23 lbf
Static Belt Pull (total pull)	100 to 108 lbf	86 to 93 lbf
Rib/Strand Deflection Distance	0.14 in	0.14 in
Rib/Strand Deflection Force	1.1 to 1.2 lbf	0.98 to 1.1 lbf
Sonic Tension Meter	112 to 120 N	96 to 104 N
Belt Frequency	55 to 57 Hz	51 to 63 Hz

## REFERENCES

CPG275E1	New Belt	Used Belt
Belt Type (Qty)	4L-400 (3)	
Static Tension (per rib/strand)	29 to 31 lbf	25 to 27 lbf
Static Belt Pull (total pull)	173 to 185 lbf	148 to 161 lbf
Rib/Strand Deflection Distance	0.12 in	0.12 in
Rib/Strand Deflection Force	1.3 to 1.4 lbf	1.1 to 1.2 lbf
Sonic Tension Meter	129 to 138 N	110 to 120 N
Belt Frequency	69 to 71 Hz	63 to 66 Hz

CPG275E3	New Belt	Used Belt
Belt Type (Qty)	4L-400 (3)	
Static Tension (per rib/strand)	29 to 31 lbf	25 to 27 lbf
Static Belt Pull (total pull)	172 to 184 lbf	147 to 160 lbf
Rib/Strand Deflection Distance	0.12 in	0.12 in
Rib/Strand Deflection Force	1.3 lbf	1.1 to 1.2 lbf
Sonic Tension Meter	128 to 137 N	110 to 119 N
Belt Frequency	68 to 71 Hz	63 to 66 Hz

### Power Cord Specifications

CPG200 Recommended Power Cord Gauge - 1 Phase								
Horsepower	Phase	Voltage	Amps	50ft Cord	100ft Cord	150ft Cord	200ft Cord	300ft Cord
2	1	115	16	#10	#8	#6	-	-
7.5	1	230	33	#8	#8	#6	#4	#2
7.5	3	230	17	#12	#10	#8	#6	#6
7.5	3	460	9	#12	#12	#10	#10	#8



#### CAUTION

Use of a wire gauge that is too small will cause loss of power or overheating and will damage the electric motor



### Appendix C

#### **Additional Resources**

1. Diamond Products ([www.diamondproducts.com](http://www.diamondproducts.com))
  - *CPG200 Floor Grinder Parts List; #1802710*
  - *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](http://www.diamondproducts.com))
2. Concrete Sawing and Drilling Association ([www.csda.org](http://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](http://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/](http://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/](http://www.cdc.gov/NIOSH/))
  - NIOSH provides information on work-related safety and health practices.

**Appendix D**

***Model and Serial Numbers***

Record the floor grinder's serial number below for future reference and customer service purposes.

Serial Number	
---------------	--

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

Model Number	
Serial Number	

## *REFERENCES*

## **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.**



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