

OWNER'S MANUAL RIDE-ON GRINDER



OPERATION & MAINTENANCE MANUAL

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE



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WARRANTY REGISTRATION CARD

Form must be completed and submitted within 30 days from the date of purchase.

Customer Information			
First and Last Name			
Company Name			
Address	City	State	Zip Code
Phone Number	Email		
Machine Information			
Machine Type	Machine Model		
Serial #	Purchase Date (dd/mm	ı/yy)	
	DiamaPro Systems® 3343 Peachtree Road NF		

Suite 145 #24 Atlanta, GA 30326

INTRODUCTION



The operation and maintenance manual is an integral part of the ROG-60 ride-on grinding machine: it is necessary to keep it intact and in a safe place during the entire life of the machine, even in the case of switching to another user. Carefully follow the instructions in the manual and read it in its entirety to better know the machine and avoid running into problems caused by improper use.

According to accident prevention regulations, operators must be provided with all necessary personal protection equipment (P.P.E.) for their own safety (safety shoes, safety helmet, gloves, ear protectors, etc.). The MACHINE must be used in accordance with what is specified in this manual: it is recommended, therefore, to read it carefully before operating it, leaving out nothing from what is written and paying particular attention to text boxes. This manual has been created, in reference to the provisions of the machinery directive 2006/42/EC as amended, with the purpose of providing the user with a general knowledge of the machine and the information for:

· Correct awareness of operators regarding SAFETY issues.

 The intended use of the MACHINE, the characteristic of the user and the residual risks present.

• The handling, installation, use and maintenance of the machine safety. Compliance with the rules and recommendations contained in the manual, provide safe use and appropriate operation.

Disclaimer: DiamaPro[®] Systems and its affiliates take no responsibility for any damage, injury or death resulting from the incorrect or unsafe use of this product. Use of this product should be undertaken by competent persons only. It is the operator's responsibility to ensure that the following safety procedures are followed. If you are unsure, do not operate this product.

1. GENERAL INFORMATION

1.1 GLOBAL ASPECTS OF SECURITY

Compliance with the rules and recommendations contained in this publication provide safe use and appropriate operation of the machine.



1) The best performance and long life of the machine will be obtained from its appropriate use. Scrupulous observation of the instructions contained in this manual becomes, therefore, necessary;

2) Any spare parts request must include the model type and serial number provided in the list of spare parts or applied on component's plates;

3) Installation of the machine must be carried out in compliance with the safety regulations in force;

- Do not remove or tamper with the protections and safety devices, check their effectiveness periodically;
- 5) Strictly observe the instructions mentioned by hazard symbols (pictograms) and maintain readability of the message;

6) Operation and maintenance must be performed by qualified personnel, trained and enabled to perform the tasks foreseen.

- Operation procedures and responsibilities of operators must be clearly defined to ensure safe and proper use and maintenance;
- 7) Before any maintenance or adjustment operation you must select and block all power sources, making sure to avoid unexpected starts;
- 8) If the machine maintenance is not performed in accordance with instructions provided, is carried out with non-original spare parts or without written permission of the company that performed maintenance of the used machine, or otherwise in such a way as to compromise its integrity or modify its characteristics relieves the company from any responsibility regarding the safety of persons and the faulty operation of the machine.
- The user shall be required to comply with periodic maintenance warning indicated in Chapter 6;
- The user shall be required to comply with the qualifications of the relevant personnel:



OPERATOR / ORDINARY MAINTENANCE TECHNICIAN: carries out the tasks necessary for the basic functioning of the machine:

execution of the work cycle, implementation of operator commands, other operations closely linked to normal production, any cleaning and inspection operation performed on a daily basis, enforcement of ordinary maintenance operations (see Chapter 6). Works only with enabled safety functions. ĬĨ

MAINTENANCE TECHNICIAN SPECIALIST (AUTHORIZED DEALER)

He's involved in all operating conditions and at all protection levels. Makes extraordinary operations that cannot be run by the user (see Chapter 6 regarding maintenance).

1.2. SAFETY SIGNS (PICTOGRAMS ON THE MACHINE)

It is absolutely necessary to recognize the meaning of the signs present on the machine and keep their message readable. In case of damage replace them immediately preventing the use of the machine. It bears the following safety signs (pictograms). Residual risks are summarized in Chapter 2.



GENERIC HAZARD SIGN "OBLIGATION TO READ THE MANUAL"

INSTRUCTION SIGN

"USE LIFTING HOOK"

INSTRUCTION SIGN

"FIX THE LOAD TO THE TRANSPORT MEANS"

(if applicable)

HAZARD SIGN

"DANGER OF MOVING PARTS"

HAZARD SIGN

"DANGER OF HIGH TEMPERATURES"

HAZARD SIGN

"DANGER OF CUTTING AND SECTIONING"

OBLIGATION SIGN

"MANDATORY USE OF EAR PROTECTORS"

OBLIGATION SIGN

"OBLIGATION TO USE SAFETY SHOES"

OBLIGATION SIGN

"OBLIGATION TO USE AIRWAY PROTECTION"



CAUTION

DO NOT REMOVE, DAMAGE OR MODIFY THE PICTOGRAMS ON THE MACHINE. BEFORE EACH WORK SHIFT CHECK THEIR PRESENCE AND GOOD CONDITION. IN CASE OF THEIR DETERIORATION, REPLACE THEM, PREVENTING THE USE OF THE MACHINE UNTIL THE REPLACEMENT HAS TAKEN PLACE.

1.3. SYMBOLS AND GLOSSARY

- HAZARD: a potential source of injury or damage to health;
- HAZARDOUS AREA: any area within and/or in the vicinity of the machine where the presence of a person constitutes a risk to the health and safety of the said person;
- EXPOSED PERSON: any person wholly or partially located in a hazardous area;
- **OPERATOR:** the person or persons tasked with installing, operating, adjusting, cleaning, repairing and moving a machine or performing its maintenance;
- **RISK:** combination of likelihood and severity of an injury or harm to health that can arise in a dangerous situation;
- INTENDED USE: the use of the machine in accordance with the information provided in the Instructions for Use (Par. 2.1);
- ANY REASONABLY FORESEEABLE MISUSE: machine use other than that indicated in the Instructions for Use, but that may derive from the easily predictable human behavior;
- HUMAN MACHINE INTERACTION: any situation in which an operator has to interact with the machine in any of the operational phases at any moment in the machine's life;
- **OPERATOR QUALIFICATION:** minimum level of skills that the operator must possess in order to carry out the described operation;
- NUMBER OF OPERATORS: appropriate number of operators to optimally carry out the operation described and deriving from a careful analysis conducted by the "Manufacturer", meanwhile the use of a different number of workers could prevent the desired result from being achieved or endanger the safety of the personnel involved;
- MACHINE STATUS: the mode of operation: automatic gear, manual operation, shutdown. The condition of the safety devices on the machine: with or without guards, emergency shut-down pressed, type of selection of energy sources, etc.;
- **GUARD**: piece of the machine used specifically for protection through a material barrier;
- SAFE SHUT-DOWN: condition of shutdown obtained with safety measures which avoid unexpected start-ups of hazardous parts;
- **RESIDUAL RISK:** risk that has not been possible to eliminate or sufficiently reduce through the design, against which the protections are not (or are not totally) effective. <u>The manual gives information of its existence</u> <u>and instructions/warnings to avoid it</u>.
- SAFETY COMPONENT: means a component used for ensuring a safety function and whose breakdown or malfunction affects the safety and/or health of exposed persons (eg. lifting device; fixed, mobile, adjustable guard, etc., electrical, electronic, optical, pneumatic, hydraulic device, guard interlocking, etc.).

• ABBREVIATIONS: CHAP. = Chapter

- PAR .= Paragraph
- PAG. = Page
- FIG. = Figure
- TAB. = Table
- P.P.E. = Personal Protective Equipment

The present publication uses symbols with the following meaning:

!IMPORTANT: Indicates important technical information which must not be overlooked.

IMPORTANT

!CAUTION: Indicates the need to adopt specific precautions for not putting at risk the health and safety of persons and not cause economic damage.

CAUTION

Generic warning sign that defines the obligation to read the manual:



1.4. SPARE PARTS ORDER

The order of replacement parts must clearly state the data necessary for their identification and the data shown on the machine identification plate. Ex.:

- Machine model
- Type
 - Serial numberYear of construction
 - Description
 - · Requested quantity
 - Shipping method

Address, telephone number and name
 For any additional information please contact the manufacturer.

1.5. REVIEW OF THE MANUAL

We recommend to constantly update this manual, integrating it with the comments received from the maintenance technician. It is appropriate to clearly insert any annotations or comments. Any amendments, additions or modifications must be documented.

The first review for the manual's release is validated by the manufacturer which examines it and adopts the indications contained therein.



1.6. SAFETY WARNINGS

CALIFORNIA PROP 65 WARNING

Thank you for purchasing a DIAMAPRO SYSTEMS® product. This manual provides information and procedures to safely operate and maintain the DiamaPro ROG-60. For your own safety and protection from injury, carefully read, understand, and observe the safety instructions described in this manual. Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact DiamaPro Systems®. This machine is designed and built with user safety in mind; however, it can present hazards if improperly operated and serviced. Please follow the operating instructions carefully. If there are any questions regarding operating or servicing of this machine, please contact DiamaPro Systems®.



THIS PRODUCT CONTAINS LEAD, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.



THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.



EXHAUST GASES FROM THIS PRODUCT CONTAIN CHEMICALSKNWON TO THE STATE OF CALIFONIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

CALIFORNIA PROP 65 WARNING

Use of this product can cause exposure to materials known to the State of California to cause cancer and/or birth defects or other reproductive harm.

CAUTION

Respirable crystalline silica. May cause cancer. Causes damage to lungs. Wear respiratory protection during exposure. Use appropriate dust control equipment to keep dust within OSHA and local regulation limits.



DUST WARNING

Cutting, especially when DRY cutting, generates dust that comes from the material being cut, which frequently contains silica. When dry cutting, be sure to use a HEPA filtered dust collector. Silica is a basic component of sand, quartz, brick clay, granite and numerous other minerals and rocks. Exposure to excessive amount of such dust can cause:

- Respiratory diseases (affecting your ability to breath), including chronic bronchitis, silicosis and pulmonary fibrosis from exposure to silica. These diseases may be fatal;
- Skin irritation and rash; and
- Cancer according to NTP* and IARC*

*National Toxicology Program, International Agency for Research on Cancer

Take precautionary steps

Avoid inhalation of and skin contact with dust, mist and fumes;

- Wet cut when feasible, to minimize dust;
- Wear and ensure that all bystanders wear appropriate respiratory protection such as dust masks designed to filter out microscopic particles. (See OSHA 29 CFR Part 1910.1200)

CARBON MONOXIDE WARNING

OPERATING ENVIRONMENT

The DiamaPro ROG-60 can be operated outdoors within the temperature range of 41°F to 86°F (5°C to 30°C). It's crucial to avoid using the machine during rainy or snowy weather conditions. When using the machine indoors, make sure to work in areas that are adequately ventilated.

PROTECTION DEVICES

The machine is equipped with multiple safety mechanisms, including: a protective skirt and a hood that shield the tool plates. These contrivances safeguard the operator and any other individuals from potential harm. It is imperative not to remove them. Instead, prior to utilizing the machinery, ensure that all safety devices are appropriately installed and operational.

USAGE SAFETY

The DiamPro Systems ROG-60 is intended to minimize all associated hazards related to its operation. Nonetheless, it is not entirely feasible to eliminate the possibility of accidents with the machine. Inexperienced or untrained operators may cause residual risks associated with:

- Positional hazards due to improper operator posture
 Entanglement hazards arising from the use of unsuitable work attire
 Training hazards caused by insufficient operational training

SAFETY MEASURES FOR PROPANE

SAFE IY MEASURES FOR PROPANE Propane is a flammable gas with vapors that are denser than air. Similar to gasoline, improper handling of propane can lead to explosions. To aid in de-tecting leaks, propane is mixed with an odorant that has a distinctive smell, detectable at low concentrations. When working with propane, it is essential to be aware and take necessary safety precautions. As long as these mea-sures are observed, the risk is minimal. However, lack of awareness could result in needless bazards. The two most similirant dangers associated It is the use of the transformation in the transformation of transformation of the transformation of transformation of the transformation of the transformation of

- sive exhaust emissions. The symptoms include headaches, dizziness, and nausea. Engines with inadequate preventive maintenance practices, particularly those with unclean air filters and machines operated in enclosed spaces without sufficient ventilation, are a significant cause. The use of substandard, inexpensive machines without emissions control technology and improperly adjusted carburetion could also contribute to the problem.
- Overfilled Fuel Cylinders:

Almost all fire-related incidents reported occur when a cylinder is brought into a building without first checking for overfill. This practice is hazardous, imprudent, and avoidable.

SAFETY AGAINST FIRE

Be mindful of the potential risks of fire or explosion when working with propane and take standard fire-safety measures.

Fire:

There is a likelihood of fire resulting from leakage or venting of LPG vapor from fuel cylinders or carburetion equipment. Explosion.

- Concentration or confinement of LPG vapor in a restricted or small space may cause ignition or explosion.
- Propane may also experience a BLEVE: Boiling Liquid Expanding Vapor Explosion.

EMISSIONS

All propane-powered floor care machines generate emissions. While most are innocuous, some can be hazardous, even fatal. Carbon monoxide (CO) presents the most significant danger since exposure to CO at a concentration of 3,000 parts per million (ppm) for as little as 30 minutes can be lethal. Carbon monoxide is a colorless, odorless, and invisible gas formed when fossil fuels, including propane, gasoline, wood, coal, oil, and methane, burn incompletely

AGENCIES AND REGULATIONS

 AGENCIES AND REGULATIONS
 National Fire Protection Agency (NFPA) To operate a propane-powered floor care machine safely, it is necessary to adhere to specific safety regulations. The NFPA is responsible for ensuring safe propane use and storage, and their Standard for Storage and Handling of LP Gas should be consulted for guidance. Copies of this publication can be obtained by contacting the NPFA in Ouring: MA at 1, 800, 232, 2555 Quincy, MA at 1-800-334-3555.

One important regulation set forth by the NFPA #58 is that all personnel who handle propane gas must be properly trained in its safe handling and operation procedures and carry a certification from their employer or training supervisor attesting to this fact. While this requirement primarily applies to individuals who fill and transport liquid propane gas, Diama-Pro® Systems recommends that operators of propane-powered floor care machines in public areas also receive proper training and certification.

Although NFPA 58 8-4.5 permits the use of propane-powered floor care equipment in buildings frequented by the public, including when they are occupied, DiamaPro® Systems suggests that these machines be used when occupancy is minimal

- California Air Resource Board (CARB) & Environmental Protection Agency (EPA)
- While CARB and EPA establish limits for propane-powered engines used outdoors, it is important to note that approval from CARB/EPA does not indicate that the engine is safe for indoor use.
- Canadian Gas Association (ČGA)

A limit of 1500 ppm CO in exhaust flow has been established by the CGA.

- Occupational Health and Safety Administration (OSHA) When it comes to propane-powered machines utilized indoors, OSHA has implemented an 8-hour time-weighted average (TWA) limit of 50 ppm CO in ambient air. OSHA is also contemplating the establishment of a limit of 800 ppm CO in exhaust flow.
 Department of Transportation (DOT)
- Regulations have been set forth by the DOT regarding the safety of fuel cylinders, including those utilized on propane-powered floor care machines
- Local Agencies

Before granting approval for the use of certain equipment, local law enforcement agencies such as the Fire Marshall may rely on independent testing laboratories like UL and CGA. These labs conduct extensive testing of equipment and only issue their approval after a rigorous eval-uation process. While not mandatory for all law enforcement agencies, the stamp of approval from these organizations serves as an additional assurance for operators that they are working with and around safe equipment.

PERSONAL PROTECTIVE EQUIPMENT

- When operating the machine, it is important to:
- Wear safety shoes at all times.
- Wear ear protectors to safeguard your hearing.
 Ensure that all personnel in the immediate work area wear safety glasses with side shields. Wear safety gloves when changing tools.
- Dress appropriately for the work environment.
- Use Carbon Monoxide monitors as an additional precaution.

TESTING:

Numerous tools are available in the market for detecting toxic gases. However, from combustion engines are deemed suitable for testing exhaust emissions from floor machines powered by propane. Certain instruments are meant for detecting "ambient air" and may get damaged if utilized for taking readings in the muffler or tailpipe. Hence, it is crucial to select the appropriate instrument to fulfill the testing requirements. In general, instruments that can detect readings in ppm (parts per million) ranging from 0 to 1000 are sufficient for examining ambient air, i.e., the air in the breathing zone of the operator. On the other hand, devices capable of testing carbon monoxide in the exhaust should be certified by the manufacturer for that purpose and should be able to read from 0 to at least 2000 ppm.

Several instruments and systems for these purposes include:

- 1. AMBIENT AIR MONITORING
- DRAGER Model 190 manufactured by National Drager
- SENSIDYNE gas sampling system with YB-11038 Sensidyne detector tubes
- DRAGER gas sampling system with YB-4620 Drager detective tubes GAS-TECH Model CO-95
- ENERAC POCKET 60 manufactured by Energy Efficiency System
- 2. ENGINE EXHAUST ANALYZERS
- HORIBA GAS ANALYZER
- ENERAC 2000 COMBUSTION ANALYZER
- ENERAC POCKET 60
- 3. DATA LOGGERS
- INDUSTRIAL SCIENTIFIC CORP. MODEL STX-70 CO MONITOR, Data-Logger BIOSYSTEMS INC. "TEXILOG" Data-Logger

All instruments used for testing must be calibrated at the intervals recommended by the manufacturer. The test results must include the monitor's model number and date of calibration.

CAUTION

During the working phases pay particular attention to possible control loss by the ride-on grinder. Check there are no obstructions or obstacles on the work surface.

CAUTION

For stability reasons it is important to use the machine on a very stable, flat, and horizontal surface. Do not use the machine on slopes greater than 4% - 5%.

CAUTION

The user must be aware the moving parts are dangerous;

therefore, to prevent damage, it is important to follow

instructions provided in this manual.

2. MACHINE CHARACTERISTICS

CAUTION

Do not remove, damage or modify the identification information on the machine. If the information becomes unreadable, immediately contact the manufacturer.

2.1. INTENDED USE

The "ROG-60" machine is designed and manufactured to perform floor grinding, preparation and polishing. In order to operate efficiently, the machine is equipped with two rotors: one left-rotating and one right-rotating. The engine and the operator's seat are both fixed to the machine frame, which is connected to both rotors. This machine may only be used by professional operators.

2.2. PROHIBITED USE

Any use other than what is explicitly stated in PAR. (2.1) and implemented differently or contrary to what is stated in this publication represents a possible misuse. The manufacturer accepts no responsibility resulting from improper use which may lead to personal injury and any system malfunctions.

IMPROPER USE IS CONSTITUTED BY THE FOLLOWING "PROHIBITED" ACTIVITIES:

- THE MACHINE IS USED IN AN EXPLOSIVE ENVIRONMENT (THIS FACILITY IS NOT IN COMPLIANCE WITH ATEX 2014/34/EU).
- OTHER SYSTEMS AND/OR EQUIPMENT ARE ADDED EVEN IF THEY ARE NOT INCLUDED BY THE MANUFACTURER IN THE EXECUTIVE PROJECT.
- THE MACHINE IS ATTACHED TO POWER SOURCES OTHER THAN THOSE SPECIFIED BY THE MANUFACTURER.
- THE MACHINE IS USED FOR A PURPOSE OTHER THAN THAT INTENDED AND SHOWN IN THIS PUBLICATION.
- THE MACHINE IS USED IN POORLY VENTILATED AREAS.
- VIOLATE THE MAINTENANCE RULES DESCRIBED HEREIN.
 THE MACHINE IS USED IN AIR CONTAINING SMOKE, DUST, WATER VAPOR OR SOLVENT.
- EQUIPMENT OTHER THAN THAT EXPRESSLY DESIGNATED BY THE MANUFACTURER IS USED.

2.3. OPERATOR POSITION / LAYOUT / OPERATION AND MAINTENANCE AREA

IMPORTANT!

To define the maintenance area you need to consider about 5 ft. on all sides of the machine (fig. 2.3 on next page).

CAUTION

Only one operator is required to operate the machine. Tasks and positions are detailed in PAR. 2.5 of this publication. Failure to follow the indications above represents possible MISUSE and relieves the manufacturer from any liability arising from incorrect use / misuse.

Tier 1 operator

The machine must be operated by one, single operator. The latter one operates the machine during the normal work cycle. The machine controls consist of two steering levers positioned



on the left and right side of the operator and the accelerator pedal. All controls are operated from a sitting position. The operator position (figure below) is also an inspection location from where it is possible to supervise the proper conduct of the work cycle.



The tier 1 operator is responsible for carrying out cleaning after use.

Authorized Service Center

The Authorized service center performs maintenance and repair tasks designed by the manufacturer (compare chapter 6 of this publication). He / she always operates with the machine stopped and power disconnected unless expressly provided otherwise.

2.4. GENERAL DESCRIPTION

The ride-on grinding machine "ROG-60" is designed and manufactured to perform grinding and polishing of floors. The power supply is provided by an internal combustion engine running on vapor propane. The following table lists the functional groups of the machine.

	FUNCTIONAL GROUPS ROG-60 RIDE-ON GRINDER
1	RIGHT ROTOR
2	LEFT ROTOR
3	THROTTLE
4	TILT ADJUSTMENT LEVER ON THE RIGHT
5	TILT ADJUSTMENT LEVER ON THE LEFT
6	20LB VAPOR PROPANE TANK
7	SEAT
8	MOTORIZATION
9	SAFETY DEVICES (SEE RELEVANT PARAGRAPH)



IMPORTANT!

For more detailed information about engine characteristics refer to the manual of the component that is an integral part of this publication.

The machine must be powered following the instructions provided by DIAMAPRO® SYSTEMS. For safe operation read the following precaution carefully:

- The power supply of the device is provided by an air-cooled internal combustion engine running on propane.
- Start the engine by turning the ignition key in the appropriate panel.
- · Follow all startup safety inspections & procedures.

Polishing disk rotation in the polishing machine is transmitted by the engine to a pair of centrifugal clutches, connected with two trapezoidal belts to rotor gearboxes.

2.5. SAFETY DEVICES

Security measures included are represented by (see figure: 2.1):

1) fixed guard of timing belts;

2) fixed guards for safeguarding of the rotors.

2.6. INFORMATION ON RESIDUAL RISKS

Despite the application, at the design stage, of the rules contained in the safety requirements (RESS) as required by current legislation and despite the adoption of safety measures, there is a residual risk that cannot be eliminated

Residual risks are appropriately reported through the application of specific SAFETY SIGNS called PICTOGRAMS located at the dangerous areas. The pictograms have different meanings, in particular:

- HAZARĎ SIGN: BLACK AND YELLOW OF TRIANGULAR FORM
- PROHIBITION SIGNS: WHITE AND RED OF CIRCULAR FORM
- OBLIGATION SIGNS: BLUE AND WHITE.

RANSPORT AND LIFTING



Parts of packing, handling, transport and unpacking, must only be carried out by qualified personnel with perfect knowledge of the equipment to be used and of the relevant safety rules and regulations. The

means used for handling, lifting and transport must be intact and capable of performing the required operations safely, taking into account the size, weight, projections, delicate parts and the center of gravity of the machine. Avoid improper uses and maneuvers, especially avoid maneuvers outside the respective field of competence and responsibility. Perform handling and lifting using exclusively the recommended means where indicated. Always use work gloves and safety shoes. Do not place hands or other body parts under raised components.

3.1. LIFTING AND HANDLING

The total weight of the machine is about 825 lbs. The lifting must be performed from the top.

CAUTION

Slinging / transport gear must take into account the shape and volume and the mass indicated on the machine specifications. Make use of ropes or straps and lifting gear (crane or forklift truck) with a capacity greater than that to be lifted.

1. The machine is equipped with a hook (eye bolt for lifting as shown in fig. 3.2. In this case the lifting is done by being anchored to this element in the only single central point as shown in fig. 3.2. 2. Use a lifting tool (crane or forklift)

- 3. The lifting gear must be approved for lifting, without imbalance, a load with a capacity exceeding the total weight of the machine.
- 4. Lift the machine as close as possible to the ground and avoid obligue pulling.
- 5. Perform displacements and maneuvers with the help of one person on the ground responsible for the signs that will have to remain distant from the suspended load.

3.1. LIFTING AND HANDLING (cont.)



Figure 3.2

Horizontal displacement

1. Place ride-on grinder stands on both right and left of machine

2. Put in four cotters pins to secure stands

3. Lock wheels

- 4. Rotate handle to desired height
- 5. Place two jack stands on the front and rear frame rail of the ride on grinder for extra safety (recommended)
- 6. (When in storage it's recommended to keep lifted off the ground)

CAUTION

Never put the machine with full propane tank in places where fumes could come into contact with ignition source (flames and/or sparks).

3.2. CHECK FOR POSSIBLE DAMAGES

Upon delivery of the machine the staff responsible should check for its completeness and any transportation damage. Any faults must be reported immediately to the supplying company.

3.3. STORAGE

In case the machine is not immediately installed, it is appropriate to place it in an environment with characteristics equal to those of the environment of use, in particular:

- In the event storage exceeds one month, always interpose between the floor and the machine parts, wooden pallets or other material;
- place the machine away from areas exposed to moisture or inclement weather:
- · protect unpainted parts with antioxidant oil and fat-based product.

If you plan to not use the machine for a period longer than one month, you must remove and properly store the propane tank and detach the battery cable (negative pole, see PAR. 4.1).

CAUTION

In the event of road transport, the load of vehicles shall be arranged in such a manner as to avoid its falling or dispersion, in order to neither decrease the visibility of the driver nor to prevent the free driving movements, nor to mask the lighting devices, visual signaling recognition plates or hand signals.

CAUTION

During unloading from transport means and placement of the machine, the maneuvering area is only accessible to authorized persons. Do not allow unauthorized personnel in the vicinity of the structure during the lifting operations. During the execution of these activities make use of the appropriate P.P.E. (personal protection equipment): accident prevention gloves & footwear, eye protection, face masks, etc.



4. MACHINE INSTALLATION

CAUTION



Machine installation and operations related to it must only be carried out by qualified personnel of the user.

- Always use all appropriate P.P.E.
- Never place hands or other body parts under components which are raised or could fall down.
- Do not wear rings, watches, bracelets or clothes that are too large or dangling during the assembly and/or maintenance operations.

• Do not perform actions outside their field of knowledge and responsibility. THE SYSTEM IN QUESTION CANNOT OPERATE IN AN EXPLOSIVE ATMOSPHERE.

4.1. INSTALLATION

CAUTION

It is recommended to connect the battery cable correctly. Please refer to the manual of the manufacturer of the engine that is an integral part of this publication.

o Insert the tie rod joint into its housing (1), the side tie rod joint (2) of the side lever, screw and tighten the nuts securely.



o Replace the lock of the tie rods (fig.4.3).



- Connecting the battery cable: Connect the quick disconnects from the battery to the machine (fig. 4.4) Note: battery connector color and machine connector color must match to fit.
- For more details of battery installation go to section 6.2.5.



4.2. INITIAL CHECKS

- 1. Check the oil level in the engine and, if necessary, top it up (par. 4.3.3).
- 2. Check the fuel level in the tank and, if necessary, arrange its filling (par.4.3.2).
- 3. Ensure that all guards are present, efficient and functional.
- 4. Adjust the position of the seat horizontally in order to obtain the best possible working position (par. 4.3.).
- 5. Make sure that the ride-on grinder is placed on an equal plane with a capacity greater than 100 lbs/sq.ft. and that there is sufficient space around the ride-on grinder (at least 7ft on all sides).
- 6. Check that the two control levers are perpendicular, if necessary adjust them (par. 4.3.2).

4.3. GRINDER STEERING

To make the grinder move the operator must activate the grinder control levers according to the diagram in par. 5.2. of this publication.

IMPORTANT!

Use the machine at a reduced speed until you have a perfect mastery of steering and operation.

To direct the machine in the desired direction, there are two control levers. The operator must slowly and smoothly move the steering levers. To stop the grinder movement you can simply slip the steering levers back into the rest position. Chapter 5 (PAR. 5.2) of this manual includes the positions of the control levers and the relative displacements.

4.4. GRINDER STOP

- To stop the ride-on grinding machine, take the following steps:
- 1. Bring the accelerator to idle speed.
- 2. Bring the steering levers in an upright position.
- 3. Close the throttle activating the black lever
- 4. Turn the ignition key off.
- 5. Close the propane tank valve

5. RIDE-ON GRINDER USAGE

5.1. LAYOUT OF CONTROLS



6. MAINTENANCE AND REPAIR

CAUTION

During the execution of maintenance tasks you must wear the following P.P.E.: CUT RESISTANT GLOVES AND SAFETY SHOES.

ry SHOES.

For certain types of activities (lubricant filling-up) make use of airway protection equipment as indicated in the residual risks.



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Before carrying out the maintenance of the machine make sure you understand the contents of this manual. Please contact the manufacturer for further explanations and information. Maintenance workers must possess the skills required by this manual,

as well as the mental and physical requirements necessary and sufficient in order to maintain and operate the machine. To ensure the functionality and durability of the machine daily maintenance must be performed, carrying out operations in compliance with the safety requirements.

Only the authorized dealer can make adjustments and operations that are not assigned to the operator. It is forbidden to make adjustments and interventions during machine operation. Before performing any maintenance operation disconnect the machine from the power sources and wait for the cooling of the hot parts (engine, spark-plug area, air filter area, etc.)

- 1. Bring the accelerator at idle speed.
- 2. Release both controls.
- 3. Stop the engine (position the ignition key to OFF).
- 4. Close the propane tank valve.
- 5. Carry out maintenance operations with the machine stopped.
- 6. Allow machine to properly cool off
- 7. Lock wheels

Before performing maintenance:

- Thoroughly clean the ride-on grinder machine. If in doubt about how to perform occasional repairs contact our Technical Support or an authorized dealer.
- 2. Upon finishing the job perform a thorough cleaning from processing residues.

6.1. SCHEDULED MAINTENANCE

Good maintenance requires constant and methodical control of all parts of the machine and adaptation of tests to its actual usage. Periodic inspections are crucial to keep the machine efficient and reduce repairs and any resulting dangers.

We recommend that you have your ride-on grinder serviced by the authorized dealer or a DiamaPro[®] Systems technician every 500 hours. Note: frequency is taken over considering a working day of 8 hours.

CAUTION

Some operations of maintenance / replacement of worn components may only be carried out by the authorized dealer or the manufacturer's technician. They are reported later in this publication. Please note that failure to comply with the requirements of maintenance represents a possible MISUSE or PROHIBITED USE and relieves the manufacturer from any liability for damage to persons and property.

NAME OF OPERATION	FREQUENCY	PERSON IN CHARGE	OPERATING INSTRUCTIONS	STATE OF MACHINE
MECHANICAL PARTS				
Engine air filter cleaning	Daily		Clean engine air filter, especially if you are working in dusty conditions or replace it; follow the instructions given in the engine manual.	Machine stopped /Power sources disconnected
Check for wear of drive transmission belts, cardan shaft (drive shaft) greasing	Weekly		Follow the procedures in PAR. 6.2.1 in case of breakage or important wear of the belts to provide for their replacement.	Machine stopped /Power sources disconnected
Spark-plug cleaning	Weekly		If you need a replacement, refer to the engine manual attached to this publication. Be careful when removing the spark-plug:	Machine stopped /Power sources disconnected
Check clutch wear	Weekly	Ĭ	If clutch shoes need replacement, please contact DiamaPro® Systems.	×
Gearboxes	In case of leaks and at the time of installation	In case of breakage or faults that cannot be resolved and require the replacement of the component, REFER TO SKILLED LABOR (AUTHORIZED DEALER)	The gearboxes are sealed upon assembly; if you notice oil leaks, carefully find out their origin because there may be leaks from other sources. If the leaks come from the gearbox, con- tact our technical service or a qualified technician. Clean any oil leaks at the bottom of the grinder. For a possible change of the lubricant due to leaks or for the topping up oper- ations, use the following type of lubricant: GLY- GOYLE 30 OIL N.C.34039910 CAUTION IT IS FORBIDDEN TO REPLACE THE GEARBOX. REFER TO THE MANUFACTURER OR THE AUTHORIZED DEALER.	Machine stopped /Power sources disconnected
Check of propane level and supply	Prior to each start		CAUTION It is recommended to make sure that the propane con- tains no water and not to use mixtures or diesel. Per- form this operation in a well ventilated environment and away from possible sources of heat or flames. Make use of specific P.P.E. (mask) as shown in the residual risks table of this publication. REFER TO THE ENGINE MANUAL.	X

NAME OF OPERATION	FREQUENCY	PERSON IN CHARGE	OPERATING INSTRUCTIONS	STATE OF MACHINE	
	MECHANICAL PARTS				
Engine oil level and filter check and possible replacement	At each start	T	The engine oil can be verified via dipstick. The transmission fluid inspection windows are viewable from underneath on either side. Check the manufacturer's instructions present in the component's manual (attached to this manual) and in PAR. 6.2.2 of this manual.	Machine stopped /Power sources disconnected	
Battery	Daily/Weekly		The ROG-60 is equipped with a maintenance free battery. DO NOT TRY TO FILL. Clean the two battery poles to remove oxidation. For battery replacement refer to PAR. 6.2.5 of this publication. It is recommended to disconnect the battery via quick-disconnect (rear under seat) when storing or transporting the machine	Machine stopped /Power sources disconnected	
General Cleaning	Daily	P.P.E. USE	Wash the dirty parts with a brush and water. Moisten the parts exposed to the cement with disarming oil (never fuel oil); Do not lubricate the rubber parts subjected to motion (belts, etc).	×	
Plate Bearings	Daily/Weekly	P.P.E. USE	Inspect tooling plate bearings before each use. For optimal performance, it is recommended to grease heads daily. Heads MUST be greased weekly and after each cleaning to ensure proper function. This service can be performed using lithium grease via grease fitting on each bearing body. Keeping the bearing free of contaminants and well-greased would be considered regular preventative maintenance.	X	
SAFETY SYSTEMS					
SAFETY SYSTEMS (FIXED GUARDS)	Daily		Please note the requirement to perform the checking and recording of verifications of safety components every 6 months.	X	
CHECK INTEGRITY OF PICTOGRAMS	At the shift start			×	

6.2. ROUTINE AND ADDITIONAL MAINTENANCE

6.2.1. Replacement of the belt(s)

If, as a result of a visual inspection, it appears that the belts are worn or cracked, replace them, operating as follow:

- ں ۱۱ • remove the fixed guard of segregation of the belt and loosen the locknut;
- Use an appropriate tool on the tensioning screw (1, fig. 6.1) by turning counterclockwise to release tension and allow the removal of belts (to
- tension turn clockwise). • Remove the worn belts (2) by turning the pulley, by leveraging with a tool to remove the belt to be replaced and replace it with another of the same size.
- Mount the new belt(s), by rotating the pulley to position it correctly.
- Mount the previously removed guard around belt area

6.2.2. Engine oil filling

Refer to the engine manual attached and to the MAINTENANCE CHAPTER OF THIS PUBLICATION. The oil filling must be performed with the machine off after waiting for the cooling of hot parts.



1. At first proceed by emptying the tank through unscrewing the nut that is closest to the exhaust, visible in the following figure.





Figure 6.2

- 2. Then perform the oil topping off after having checked the level on the graduated dipstick integrated into the cap.
- 3. If necessary top off with oil of the type shown in the warning (important!) until the notch in the upper end of the dipstick.
- 4. Screw the cap back on and tighten securely

IMPORTANT First oil change is recommended at the first 30 hours or within the first month, then every 50 hours or every 3 months.

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6.2.3. Replacement of clutch shoes or bearings

- 1. Remove the fixed guard of the belts area and subsequently the protective cover of the clutch as well by tightening the three allen screws.
- 2. To replace the clutch shoes, you can simply extract them.
- To replace the inner bearing to the clutch, unscrew the central screw in order to remove the clutch and work from the inside.
- After these operations replace the cover and the fixed guard of the belt area.

6.2.4. Gearmotor oil filling



IMPORTANT! TO AVOID DAMAGE TO THE MACHINE STRICTLY USE THE FOLLOWING TYPE OF LUBRICANT: GLYGOYLE 30 OIL N.C.34039910

The machine is equipped with two gearmotors. Periodically check the oil level of the gear units and PERFORM OIL TOPPING OFF AS NEEDED. There are two caps on the side face of the two gearboxes: the top cap detects the oil level of the box itself.

Be especially careful if you see oil at the bottom of the ride-on grinder;

- 1. Perform a thorough cleaning and check the origin of the leak;
- 2. If topping off is necessary, proceed as follow:
- 3. When the machine is stopped, wait until the engine has cooled down:
- 4. Remove the cap from the gearbox that also works as a level indicator (figure to the right).

If necessary, perform topping off, taking care to lift the machine from the opposite side to that of the topping off following the procedures outlined in PAR. 3.1 of this publication.

Repeat the same operations from the opposite side.







If not using the machine for a period of time, disconnect the battery utilizing the quick disconnect cables.

IMPORTANT!

Only recharge the battery in a dry environment. Protect the contacts from dirt and moisture stagnation. Don't spray with water.

Battery replacement

- 1. Remove the enclosing lid by removing the retaining screw.
- 2. Disconnect the battery by means of the quick disconnects.



4. Remove the battery and replace it with another one having the same characteristics.

Battery change and maintenance

Figure 6.3

When replacing the battery on the ROG-60, Always remove the battery from the battery box. When changing the battery, ensure the terminals are firmly connected to the terminal posts (See Figure 6.6, & Figure 6.7).



CAUTION ALWAYS REPLACE TERMINAL COVERS OVER THE TERMINALS OF THE BATTERY (Figure 6.8)



When charging the battery, ALWAYS remove and disconnect from the ROG-60. Failure to do so may cause damage to the machine

6.3. NOTES ON DISMANTLING

As regards dismantling activities there are no security-related or environmental problems. In case you wish to proceed with the dismantling of the various machine parts, it is necessary to pay attention to their movement taking into account the respective masses to be handled. In case of machines used in working environments it's necessary to dispose of the electrical and electronic products, if any, contained in them in accordance with the current legislation.

IMPORTANT

Do not dispose into the environment products which are not biodegradable, lubricant oils and relevant filters as well as non-ferrous parts (rubber, PVC, etc.). Perform their disposal in accordance with the laws in force and before taking care of this disposal, consult your authorized dealer in order to check whether there are specific programs of withdrawal.



IMPORTANT

At the time of dismantling, the user shall be required to

- recover the identification plate of the equipment to pre-
- vent the machine from being put back into service without its guards because the MANUFACTURER IS NO LONGER HELD RESPONSIBLE.

ISSUES	CAUSES	REMEDIES
Grinder oil leakage	Gearbox cover screws are loose Faulty seals Oil seals on central and lateral shaft worn Engine oil leakage	Tighten the screwsContact the authorized serviceContact the authorized serviceContact the authorized service
The engine doesn't start	Low fuel Fuel tap closed Propane filter clogged No spark Flooded engine / Ignition trouble	Fill the fuel tank suitable for the engine used Open the propane valve (*) Replace the filter (*) Clean the spark plug and, if necessary, replace it (*) Check the connection pin (*) Unscrew the spark plug and dry it
The engine speed falls	Accelerator cable broken or bent Engine trouble Dirty carburettor Clogged air filter	Replace accelerator cable Contact the authorized service Contact the authorized service Clean or replace air filter (*)
The grinder goes neither forward nor backward	Broken tie rod (internal or external tie rods) Retainer clip of tie rods is broken or unthreaded Swivel support seized	Replace tie rod (internal or external tie rods) Replace the clip if broken Contact the authorized service
The grinder steers neither to the right nor to the left	Broken ball joints Rim supports broken Steering holders out of housing	Replace the ball joints (contact the authorized service) Replace rim supports (contact the authorized service) Adjust steering supports (contact the authorized service)
The grinder jumps on the floor	Central shaft bent (blocked cover plate or cross) Steering control is not perfectly vertical	Contact the authorized service Adjust the position of the steering control (PAR. 4.1)
With the engine revved, the rotors do not turn	Loose and/or a worn transmission belts Brake linings or clutch pads worn	Tighten the transmission belts or replace them (PAR. 6.2.1) Replace brake linings or pads (PAR. 6.2.3)

(*) REFER TO THE ENGINE MANUAL WHICH IS AN INTEGRAL PART OF THE SUPPLY



MODEL ROG-60



TABLE A



TABLE A

Cod. Art. Compon.	Description
0006	NUT M8 UNI 5588
0016	SCREW 4,8*x16 UNI 6950
0050	BLOCK NUT M8
0104	BLOCK NUT M6
0121	BLOCK NUT M14
0139	SCREW M8x16 UNI 5739
0335	SCREW M8X50 UNI 5737
0453	SEATGT60
0468	WASHER 6x18
0471	SCREW M6x65 UNI 5737
0535	SCREW M6x35 UNI 5737
0610	SCREW M6x40 UNI 5737
0705	WASHER D8
0714	SCREW M14x45 UNI 5933
0987	SEAT PLATFORM
1486	WASHER D8
1513	PROTECTION COVER
1514	FEET BOARD
1516	HIGHER FRONT BOARD
1517	HIGHER REAR BOARD
10459	BELT GUARD
13148	RIGHT GUARD
13149	LEFT GUARD
17010	PVC TRANSPARENT GUARD
17011	ROD STRIPP PPL 020 HT 75
2218	NYLON WHEEL D60x22
3392	LIFTING HOOK ASSEMBLY

TABLE **B**



Cod. Art. Compon.	Description
0035	BLOCK NUT MI0
0050	BLOCK NUT M8
0053	NUT M14 UNI 5589
0082	ANGLED ARTICULATION LHSA 14
0084	SCREW 10x45 UNI 5737
0092	GROWER WASHER 14
0101	GREASE FITTING M6xI
0121	BLOCK NUT M14
0158	SCREW M10x55 UNI 5737
0273	BLOCK NUT M12
0337	SCREW M8x40 UNI 5737
0465	DOWEL M6x8 UNI 5927
0499	ELASTIC PIN 6x30
0504	STUD M14x140
0506	TIEROD M14x185
0509	SUPPORT UCFL 204 FK
0511	RIGHT DOUBLE LEVER L=148
0514	SCREW M14x40 UNI 5739
0515	TRANSLATION LEVER D20 L=395
0567	LATERAL TRANSLATION LEVER
0571	TIEROD M14x95
0714	SCREW M14x45 UNI 5933
1040	WIRE 1,5x1900x1800
1158	BLOCK FOR CONTROL BAR
1191	STOP D27 + WIRE
1192	CLOSE KNOB D27
1194	SLEEVE D26-22-15 L=16
1195	SLEEVE 18-12 L=12 DIN179/C
1215	WASHER 10x30
1217	SCREW M10x30 UNI 5739
1360	LEFT DOUBLE LEVER L=255
1510	PLASTIC THROTTLE LEVER
1515	LEVER SPACER
1635	JOINT ARTICULATION "SB" JAM 14
1636	JOINT ARTICULATION "SB" JAF 14
1870	SCREW M12x70 CARBONITRURIZED
1978	CON FROL BAR

TABLE C



Cod. Art. Compon.	Description
0273	BLOCK NUT M12
0302	DOWEL M6x16 UNI 5927
0314	PULLEY 140x2A D20H7
0326	SCREW M12x60 UNI 5737
0379	KEY 6x6x35 C45
0450	COMPLETE GEARBOX V75 RIGHT S/M
0451	COMPLETE GEARBOX V75 LEFT S/M
0465	DOWEL M6x8 UNI 5927
0485	SCREW M14x37,5 CH22
0488	CARDAN SHAFT
0489	CARDAN BOOT
0494	TIMING BRIDGE
1078	WASHER DIO
1205	SCREW M10x20 UNI 5739
1314	TIMING SCREW M14x50
17002	RIGHT TILTER
17003	LEFT TILTER
8030	BLACK HOSE CLAMP 4,8x200

TABLE D



TABLE D

Cod. Art. Compon.	Description
0035	BLOCK NUT MIO
0128	OIL PLUG 3/8" GAS
0130	CONICAL BEARING 30306 ex
0133	KEY 10x8x35
0145	WASHER DI0 UNI 6592
0168	SCREW M12x30xI,5 12.9 DIN912
0171	GRINDER FIXING WASHER
0250	HIGHER COVER
0251	HIGHER SEAL
0253	SEEGER "E" 20 UNI 7435
0254	GEAR CROWN RIGHT
0255	SPHERICAL BEARING 6207-2RS ex
0256	SLOW SHAFT
0257	OIL DOUBLE SEAL 35x55x10
0258	SCREW M8x16 UNI 5931
0259	ALUMINUM WASHER 17x23xl.5
0261	WORM SCREW RIGHT
0262	CONICAL BEARING 30305 ex
0263	SIDE SEAL
0264	OIL DOUBLE SEAL 25x45x10
0265	PERFORED SIDE SEAL
0266	CLOSED SIDE SEAL
0267	SPHERICAL BEARING 6305 ex
0343	RING DI0
0371	VENT PLUG+ COPPER WASHER
0450	COMPLETE GEARBOX V75 RIGHT S/M
0517	SCREW M10x40 - UNI 5737
0523	RIGHT REDUCTION GEARBOX
1124	OIL LEVEL INDICATOR 3/4" GLASS
1250	ALUMINUM WASHER 27x33xl,5 3/4"
13064	SCREW M8x20 UNI 7984
1486	WASHER D8
17004	POLISHING GRINDER
17005	GRINDER ROTATING DISK D300
2287	BEARING BRACKET UCF 206

TABLE **E**



Cod. Art. Compon.	Description
0035	BLOCK NUT MIO
0128	OIL PLUG 3/8" GAS
0130	CONICAL BEARING 30306 ex
0133	KEY 10x8x35
0145	WASHER DI0 UNI 6592
0168	SCREW M12x30xl,5 12.9 DIN912
0171	GRINDER FIXING WASHER
0250	HIGHER COVER
0251	HIGHER SEAL
0253	SEEGER "E" 20 UNI 7435
0255	SPHERICAL BEARING 6207-2RS ex
0256	SLOW SHAFT
0257	OIL DOUBLE SEAL 35x55x10
0259	ALUMINUM WASHER 17x23xl.5
0262	CONICAL BEARING 30305 ex
0263	SIDE SEAL
0264	OIL DOUBLE SEAL 25x45x10
0265	PERFORED SIDE SEAL
0267	SPHERICAL BEARING 6305 ex
0343	RING DI0
0371	VENT PLUG+ COPPER WASHER
0451	COMPLETE GEARBOX V75 LEFT S/M
0517	SCREW M10x40 - UNI 5737
0524	LEFT REDUCTION GEARBOX
0525	GEAR CROWN LEFT
0537	LEFT REDUCTION GEARBOX
1124	OIL LEVEL INDICATOR 3/4" GLASS
1250	ALUMINUM WASHER 27x33xl,5 3/4"
13064	SCREW M8x20 UNI 7984
1486	WASHER D8
17004	POLISHING GRINDER
17005	GRINDER ROTATING DISK D300
2287	BEARING BRACKET UCF 206

TABLE **F**



TABLE **F**

Cod. Art. Compon.	Description
0065	NUTMIO
0112	SCREW M10X40 UNI 5933
0161	SCREW M10X35 UNI 5737
0391	BEARING NKE 6004 2RS 42-12
0406	FIXING CLUTCH BUSHING PAF105
0529	SCREW UNF 3/8xl" 3/4
0645	SEEGER "E" 20 UNI 7435
0705	WASHER D8
0761	SCREW UNF 5/16xl
1078	WASHER DIO
1369	COMPLETE BELT STRETCHER
1370	BELT STRETCHER
1428	FRONT ENGINE BRACKET
1429	REAR ENGINE BRACKET
1461	PULLEY D70 L=50
1661	OPTIBELT BELT XPA 850
1815	CLUTCH
1822	CLUTCH MASSES
1825	CLUTCH SPRING
1828	CLUTCH COVER

TABLE **G**

Cod. Art. Compon.	Description
N/A	Grinder Lifting System
N/A	Tank Bracket
N/A	Battery/Regulator
N/A	Brush Extension
N/A	Motobat
N/A	12v Cable Assembly (Battery)
N/A	Propane Tank (20lb Vapor)



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