

PROPANE PDG 6000 Manual



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Congratulations on your decision to get the Power of SASE behind you! SASE is committed to excellence, excellence in the quality of products we sell and excellence in service and support after the sale. It is important to us that your business continues to succeed and grow, and we know that the right products, service and support can have a great impact on your bottom line.

SASE has made great strides in the concrete preparation and polishing industry over the years. With a 40,000 square foot distribution and service facility in Seattle, a 22,000 square foot distribution and service facility in Knoxville, and local sales and technical support representatives throughout the United States, SASE is able to provide unsurpassed service and technical support for the contractor.

At SASE we engineer and manufacture our own equipment, which allows us to be in control of the quality of the equipment we sell. SASE offers a complete line of concrete preparation and polishing equipment, our newest introduction being our new line of PDG planetary diamond grinders, which is setting a new standard for the concrete grinding and polishing industry. SASE is also the leader in diamond tooling technology.

We look forward to a long and prosperous partnership with you! Thank you again for choosing SASE. You won't regret having the Power of SASE behind your company!

Sincerely,

SASE Company, Inc.

Jim Weder

President

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Introduction

The SASE PDG 8000 planetary diamond grinders are designed for wet or dry grinding of marble, terrazzo, granite and concrete. Their applications range from rough grinding through to a polished finish.

It is extremely important all users be familiar with the contents of this manual before commencing operation of either machine. Failure to do so may result in damage to machinery or expose operator to unnecessary dangers.



IMPORTANT



Only staff that has received the necessary training, both practically and theoretically concerning their usage should operate the machinery.

Hazards

While, this machine is easy to use and has been used safely for many years, there are risks involved in operating any large propane machinery.

- * Toxic Emission Exposure
- Fire Relate Incidents
- Mechanical action of moving and hot machine parts

Toxic Emission Exposure

The major toxic gasses created when spent propane is exhausted are:

- Carbon monoxide (CO) Over exposure to carbon monoxide results in brain damage, or death.
- Oxides of nitrogen (NOx) Can damage lung tissue, aggravates respiratory diseases.
- ❖ Hydrocarbons (HC) Can damage lungs.

We have included a sensor to test the air around the machine to limit exposure to toxic levels of emissions. Without proper ventilation, this sensor will shut down the machine after 30 seconds of use.

Fire Relate Incidents

The fire related incidents are few, because of strict fire safety prevention laws, regulations, devices, and practices. Some common causes of fire related hazards.

- Over fill If the tank is too full, and the pressure is vented indoors, that gas can start a fire, or be trapped dangerously in a room.
- Improper storage The storage location must be safe from extreme temperature, but also safe from theft, and tampering.
- Uneducated users The end user that does not understand the danger of improper use can cause unthinkable damage.

Mechanical Action of Moving and Hot Machine Parts

Several parts of this machine are understood to be dangerous.

The front of the machine has a grill indicating it is "HOT", this is an understatement. The muffler can reach nearly 1000F Degrees after use, and air venting from the motor side, can reach 800F to 1000F degrees as well.

The Grind Head has a rotation and a counter rotation, keep body parts clear of the moving grinder head.

The handle is heavy. Failure to lock the handle in place can result in operator injury.

During operation, The entire machine has a force of it's own. If you lose control of the machine, it will walk away without you. The operator has to maintain control of the machine while it is on the ground. The machine moving freely can damage finished floor sections, or wall sections. Not to mention anyone caught by the grind head would be injured.

Preventative Maintenance

Preventing the hazard is the best case scenario. Preventative Maintenance (PM) is the responsibility of the operator.

- Check and clean air filter regularly
- Check Oil and adjust level as needed
- Keep a Log Book for all service done.
- Check fuel cylinder for overfill before taking them into a building
- . Be SURE that adequate ventilation is in use.
- Properly store propane fuel cylinders and machines.
- . Be aware of changes in operation, smell, noise, etc. while operating
- Report to management ANY safety concerns.
- Follow manufacturer recommendations for all motor maintenance.

Propane Cylinder

The cylinder used is classified as a DOT 4E240 cylinder. The service pressure the cylinder is designed for is at 20 PSI. The cylinder has a pressure relief if it reaches an excess of 300 PSI. If the tank is overfilled, this pressure relief will become active once the tank comes up to room temperature.

- Pressure relief is highly flammable!
- Never store the propane tank on the machine.
- Follow local and national regulation when using, storing and filling propane.

In the case of pressure relief catching fire, it is necessary to cool the cylinder. Use non-flammable cooling liquid, or a fire extinguisher, to lower the temperature of the cylinder. The flow of gas should stop, when the cylinder is cooled. Shutting off the flow of gas should extinguish the fire the gas was fueling.

Propane cylinders are above the capacity for storage in a place frequented by the public. So, storage on site at a grocery store would be against national fire safety code. NFPA 58 chapters 5 and 8

Storage

The machine should always be stored in a cool, dry place when not in use.

Do not store the machine with propane attached.

The propane cylinder has to be stored in accordance with local and national regulation. Do not overlook the danger of propane fire or explosion!

Operation

Break-Down

The machine can be divided into two main parts.

- Chassis/Frame section This comprises the handle bars, body panels, Propane tank, Steel frame and wheels.
- Head this comprises the motor, cover, grinding/satellite/ planetary heads and internal components

The machine has been manufactured to allow movement between the chassis and head via the connection point. This movement is important during the grinding process as it creates a "floating" effect for the head. The floating gives the head a self leveling effect, negating the need to adjust the height of the head as the machine passes over floor areas with different slopes or undulations.

Set-Up

Position the grinder in the working area. Make sure there are diamonds underneath the machine, and that the head locks are tight.



IMPORTANT



Planetary head and grinding heads are set to turn in opposite directions of each other. (as shown in this depiction)



- When using the machine, each grinding head must always have the same diamond type and number of diamonds as the other heads.
- Each diamond must also be the same height as the next.
- The Rubber skirt must be adjusted so that a good seal is established, between the floor and the drum.

When setting the height of the handle, the operator is the guide. The comfort of the operator during grinding is key. The handlebar should rest right at the operator's hip bone. When the machine is running, there will be a grinding force to one side that can be felt through the handlebars. Use the hip to resist this force instead of the arms.

Transportation

When transporting, it is important to ensure the machinery is properly secured at all times to eliminate "bouncing". Ensure the chassis or frame section of the machine is secured down at all times when in transit. The machine should always be transported under cover limiting the exposed to natural elements – in particular rain and snow. The machine should not be lifted by handle, motor, chassis or other parts. Transportation of the machine is best done on a pallet/skid to which the machine must be firmly secured. Do not attempt to slide the tines/forks from a fork lift under grinding heads unless on a pallet/skid.

Failure to do so can cause extreme damage to grinding heads of machine and internal parts.

Control Panel

The operator controls consist of a number of toggles and switches, giving 4 separate controls.

Clutch



Engage/disengage the drum rotation

NEVER ENGAGE/ DISENGAGE CLUTCH ABOVE 2000 RPM!

Ignition



Turn to "START" until motor starts, leave in "ON" until finished. Turn to "OFF", for motor stop.

Tachometer



Reads current motor speed or total hours of operation. Push button toggles display.

Speed Control



USB charging ports

USB ports, to use for charging a 2.1A device. Such as a phone or headset.

slow.



Machine Power-Up

- Connect battery harness & propane tank.
- Turn Key to "START" position for a moment
- Turn Key to "ON" position

Drum Rotation

- The green switch controls the electric clutch.
- Do not engage the clutch above 2000 RPM's

In case of emergency stop, disengaging the clutch above 2000 RPM's could be harmful to the motor. As some situations are more important than the service life of your machine, we recommend you use your discretion.

Speed / Throttle

The grinding speed should start low and increase as the operator becomes more comfortable with the application. Be sure that the RPM's do not exceed 2000 when starting and stopping the drum rotation. The machine should be running and the drum rotating before speed selection is fine tuned.





IMPORTANT



It is recommended that machinery be transported with a set of diamonds attached at all times to ensure protection of locking mechanism for diamond plates.

Determining Diamond Selection

Diamond Background

Diamond abrasives usually consist of 2 components:

- Diamond powder (also known as diamond crystals or grit). By changing the size of the diamond powder or grit, we can change how coarse or fine the scratches will be that are left behind from the grinding process.
- A binding agent (metal or resin). Diamond powder is mixed and suspended in either a metal or resin binding agent. When suspended in a metal bond matrix, the finished product is referred to as a Metal Bond or Sintered diamond segment. When suspended in a resin bond matrix, the finished product is referred to as a Resin Bond diamond segment or pad.

General Diamond Principles

Diamond Grit Size:

Changing the size of the diamond grit to a smaller particle/ grit size will affect the performance of the diamond tool in the following ways:

- Create a finer scratch pattern.
- Increase the life of the diamond tool.

The opposite will occur when changing to a larger particle/grit size.

The Binding Agent/Metal Bond or Resin Bond:

Increasing hardness of bond will

- Increase life of diamond tool.
- Decrease production rate.
- Cause diamond tool to leave finer scratches in dry grinding applications (when compared to a softer bond diamond tool with the same diamond grit size).
- A hard bond matrix should be used on a soft floor and a soft bond matrix should be used on a hard floor.

Grinding disc set-up:

The set-up of diamond segments on the grinding heads of the machine will influence the performance of the machine, the productivity levels and also the finished floor quality.

There are basically two types of diamond configurations that can be used when grinding:

- 1. Half set of diamonds when there are diamonds placed at three alternating positions on the diamond holder discs. (See pictures on upper right).
- 2. Full set of diamonds when there are diamonds placed at each of the six positions on the diamond holder discs. (See pictures on middle right).

Changing of Diamonds

Different applications often require different selections of diamond tooling. There will be many occasions when the grinding discs need to be changed.

Following is a guide for this procedure.

Preparation

Turn off the clutch, and then turn the key to the off position..

As an extra precaution, unplug battery from motor, to avoid unintentional starting of the machine while changing disc, which could result in serious injury.



WARNING



It is highly recommended to have a set of gloves ready, as diamonds can get very hot, especially during dry grinding applications.

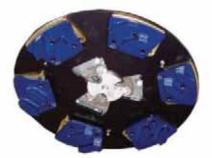
Changing

- 1. Set handle in upright position.
- Pull back on handle to lift grinding head off the ground (Illustrated middle right).
- 3. Lay machine back on the ground
- Put on gloves.
- 5. Remove grinding disc from flex plate.
- 6. Check to ensure that all discs are secure.
- Once new diamonds have been attached, reverse procedure to lower machine to ground.
- As new diamonds may be a different height than the set being previously used, re-adjust skirt to ensure good seal is established with the floor.



HALF-SET OF DIAMONDS

When the diamonds are set-up as a half-set, they tend to follow the surface of the floor. The half-set diamond configuration should only be used when an extremely flat floor finish is not required.



FULL-SET OF DIAMONDS

Diamonds that are set-up as a full-set tend to not follow the surface of the floor. If the floor is wavy the machine will grind the high areas yet miss the low spots. The full-set

diamond configuration should be used when a very flat floor finish is desired.

Personal Safety



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



WARNING! Dust forms when grinding which can cause injuries if inhaled. Use an approved breathing mask. Always provide for good ventilation while machine is in use.

Always wear approved:



Protective helmet



Dust Mask



Non-slip boots with steel toe



Hearing protection



Protective goggles



Protective gloves



WARNING



Under no circumstances may the machine be started without observing the safety instructions.

At no time should lifting of machinery be attempted without mechanical means such as a hoist or a forklift.

Should the user fail to comply with these, SASE Company Inc or its representatives are free from all liability both directly and indirectly.

Read through these operating instructions and make sure that you understand the contents before starting to use the machine.

Should you, after reading these safety instructions, still feel uncertain about the safety risks involved you must not use the machine, please contact your SASE representative for more information.

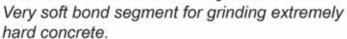
Reminder

- Always check oil level before starting.
- Only qualified personnel should be allowed to operate machinery.
- Never use a machine that is faulty. Carry out the checks, maintenance and service instructions described in this manual. All repairs not covered in this manual must be performed by a repairer nominated by either the manufacturer or distributor.
- Always wear personal safety equipment such as sturdy non-slip boots, ear protection, dust mask and approved eye protection.
- The machine should not be used in areas where potential for fire or explosions exist.
- Machinery should only be started when grinding heads are resting on the ground.
- The machine should not be started without the rubber dust skirt attached. It is essential a good seal between floor and machine be established for safety, especially when operating in dry grinding applications.
- When changing the grinding discs ensure the unit is OFF by turning the Key "OFF", and set the clutch to "OFF". Disconnecting the battery would add another layer of protection.
- The machine should not be lifted by handles, motor, chassis or other parts. Transportation of the machine is best done on a pallet / skid to which the machine must be firmly secured.
- Extreme caution must be used when moving machinery by hand on an inclined plane. Even the slightest slope can cause forces/ momentum making the machinery impossible to brake manually.
- Never use the machine if you are tired, if you have consumed any alcohol, or if you are taking medication that could affect your vision, your judgment or your coordination.
- Never use a machine that has been modified in any way from its original specification.
- Be on your guard for electrical shocks. Avoid having body contact with lightning conductors/metal in the ground.
- Do not disconnect the static strap, this should discharge a great deal of static that is generated during grinding concrete..
- Follow Propane gas safety regulations at all times.



Diamond Tooling Quick Reference Chart

Yellow Series - Extremely Hard Concrete





GRITS 25 | 40 | 80 | 150

Gold Series - Hard to Very Hard Concrete

Very soft bond segment for grinding very hard to hard concrete. Also great for removing mastic.



GRITS 16 | 25 | 40 | 80 | 150 | 300

Blue Series - Medium to Hard Concrete

Soft bond segment for grinding medium to hard concrete.



GRITS 6 | 16 | 25 | 40 | 80 | 150 | 300

Red Series - Soft to Medium Concrete

Medium bond segment for grinding soft concrete.



The red series is a good alternative when the life of the blue series is too short.

GRITS 16 | 25 | 40 | 80 | 150 | 300

Black Series - Soft Concrete



Hard bond segment for grinding soft concrete.

GRITS 16 | 25 | 40 | 80 | 150 | 300

Orange Series - Very Soft Concrete



Very hard bond segment for grinding very soft concrete.

GRITS 16 | 25 | 40 | 80 | 150 | 300

SAFTY WARNING

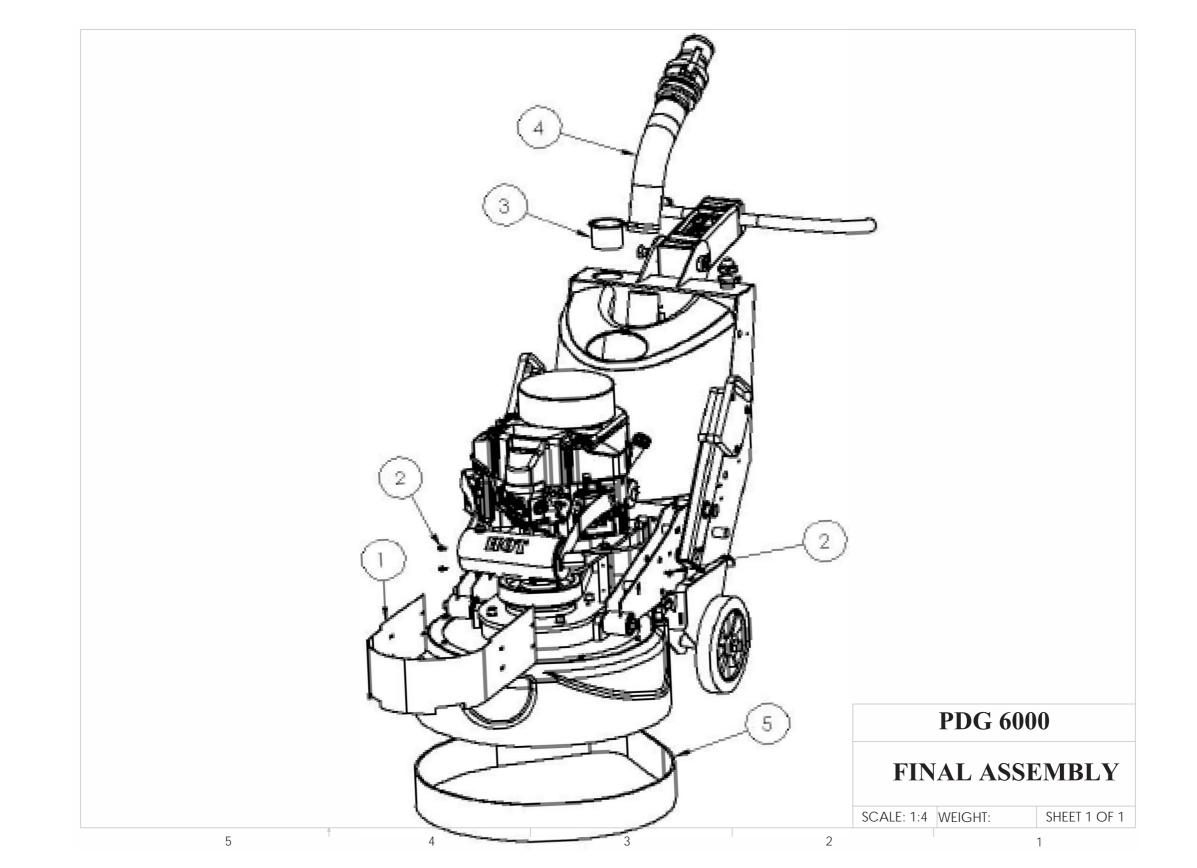
CARBON MONOXIDE can cause severe nausea, fainting or death. Do not operate engine in closed or confined area without proper ventilation! A CO (Carbon Monoxide) monitor is recommended when operating inside.

Torque Conversion Chart

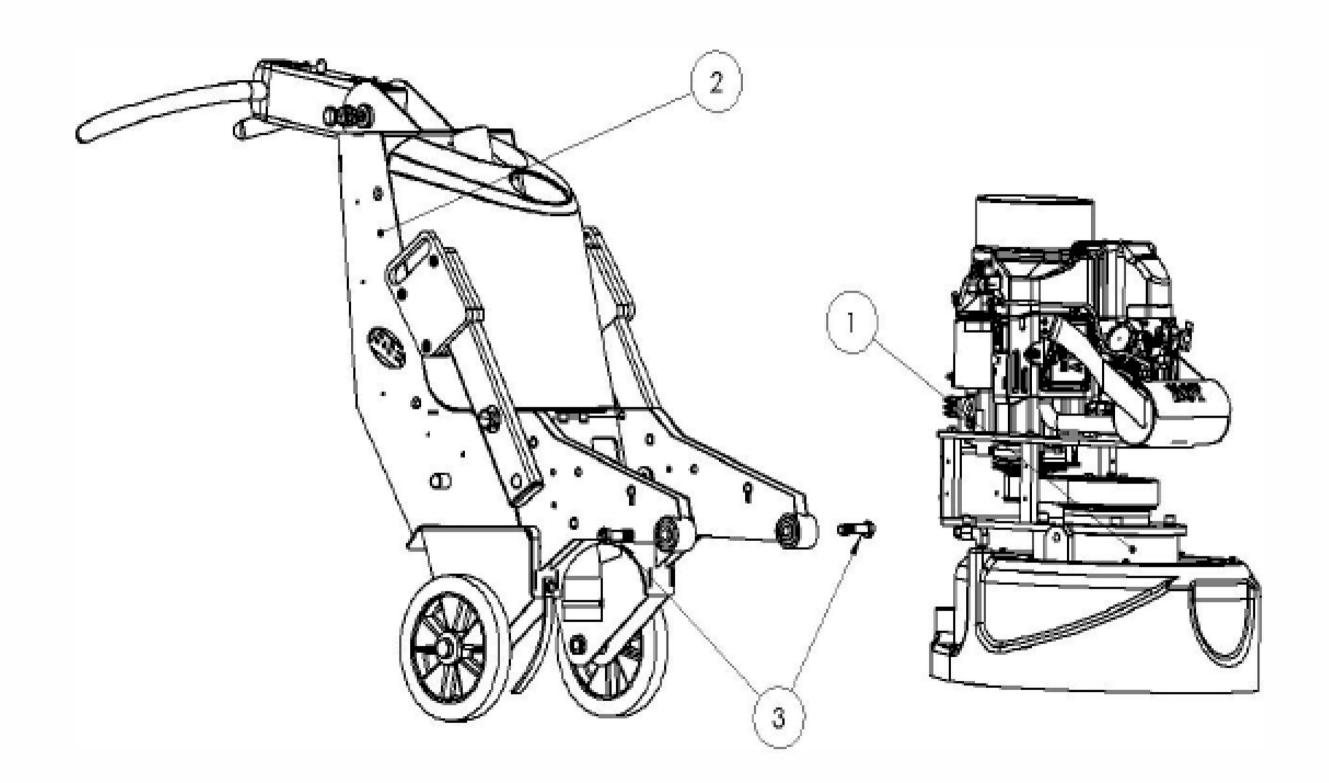
1 ft-lb = 1.3556 Nm

35	ft-lb	=	47.5	Nm

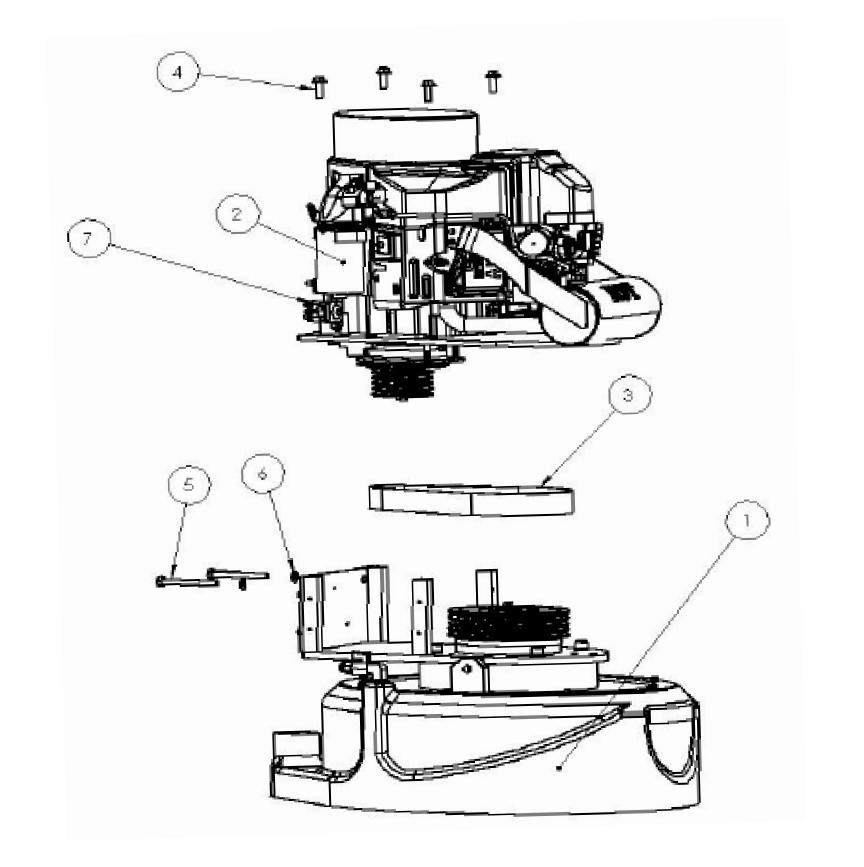
$$80 ft-lb = 108.5 Nm$$



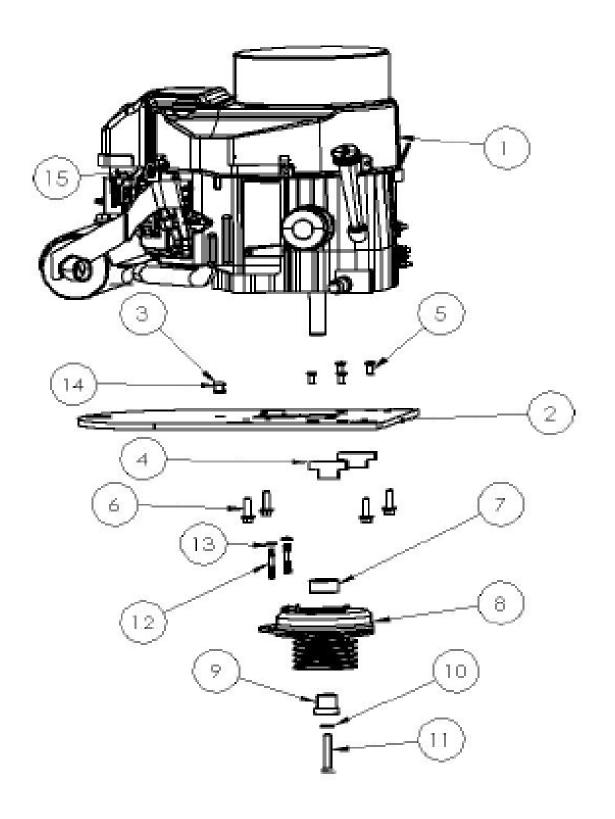
Item #	Part #	Description	Qty.
1	PDG.60405.00	Cover, PDG6000 Propane Clutch Box	1
2	NB.12.108	Screw, Socket Head Cap, M6-1.0 x 12	8
3	PDG.20243.00	Cup Holder, Black Plastic	1
4	Pages 4-5	Vac Hose, 22" Length With Coupler Set	1
5	PDG.60062.00	Dust Skirt, Rubber /6K	1
6	NB.52.206	Clamp, Stainless Steel ¼" (Not Pictured)	1
7	NB.20.139	Nut, Insert M5 - 0.8 (Not Pictured)	1
8	NB.16.116	Screw, Button Head Cap M5-0.8 x 12 (Not Pictured)	1
9	PDG.60041.00	Water Tank, PDG6000	1
10	PDG.60325.00	Decal Set, PDG6KP (Located In Copy Room)	1
11	PDG.60307.00	Hardware, Water Tank	2
12	NB.19.310	Screw, Flat Head Self-Drilling M4.8 x 25	2
13	PDG.20262.00	Tube, Rubber OD ¼" Black	44in



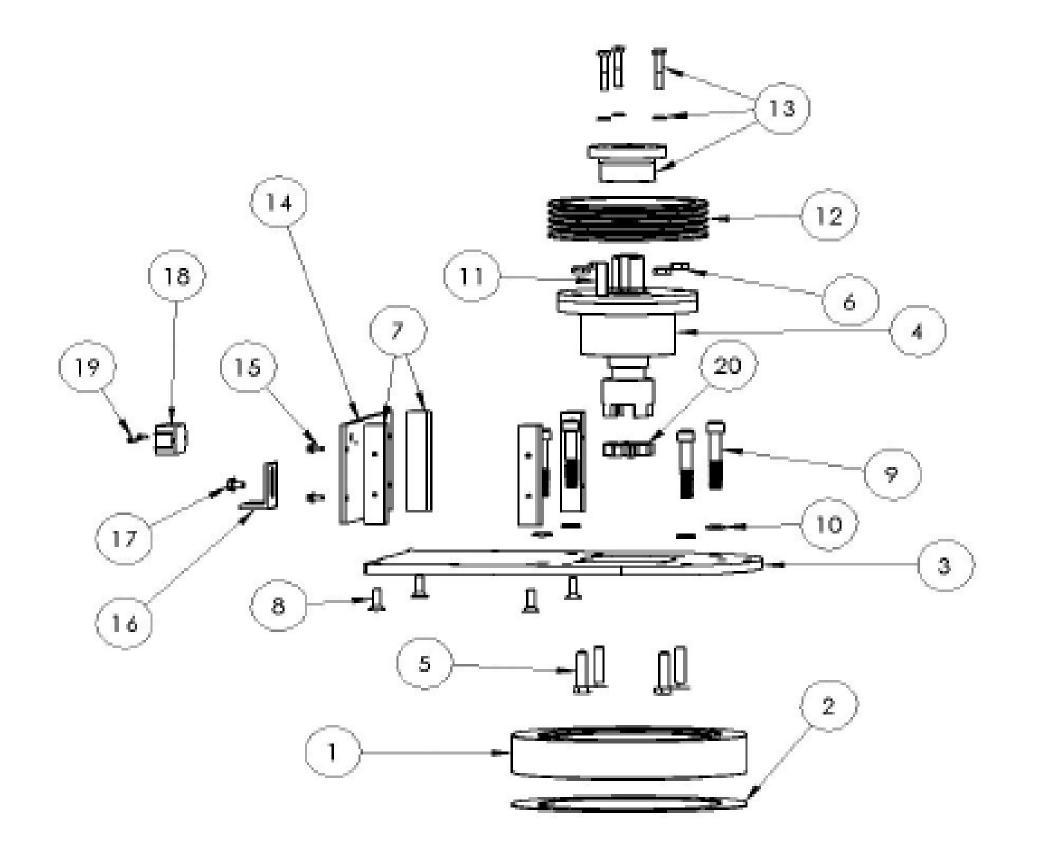
Item #	Part #	Description	Qty.
1	Pages 14-23	Motor And Drum Assembly	1
2	Pages 4-14	Frame Assembly	1
3	NB.10.118	Screw, Hex Head Cap 5/8-11 x 3.5"	2
4	795.000.12	Zip Tie (Not Pictured)	~14
5		Flag Connectors	
6		Clamp Connectors	



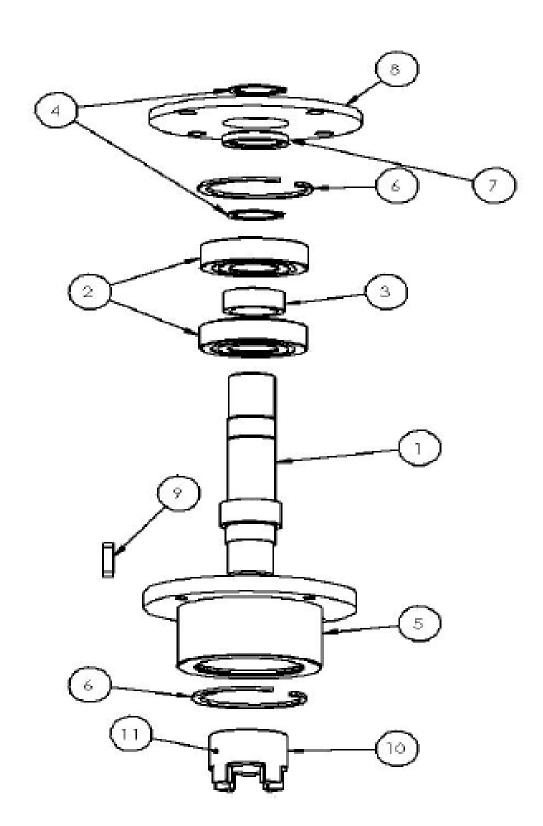
Item #	Part #	Description	Qty.
1	Pages 18-19	Belt Reduction Box Assembly	1
2	Pages 20-21	Motor Assembly	1
3	PDG.60422.00	Belt, 4/3VX 355 Gates Powerband/ PDG6000	1
4	NB.11.130	Screw, Flanged Hex Head Cap Serrated M10-1.5 x 30	4
5	NB.10.245	Screw, Hex Head Cap M10-1.5 x 100 Full Thread	2
6	NB.30.110	Washer, Flat M10 Zinc	2
7	PDG.83346.25	Wire Harness, PDG8K Propane (Not Pictured)	1
8	NB.52.201	Clamp, Adel (Not Pictured)	1



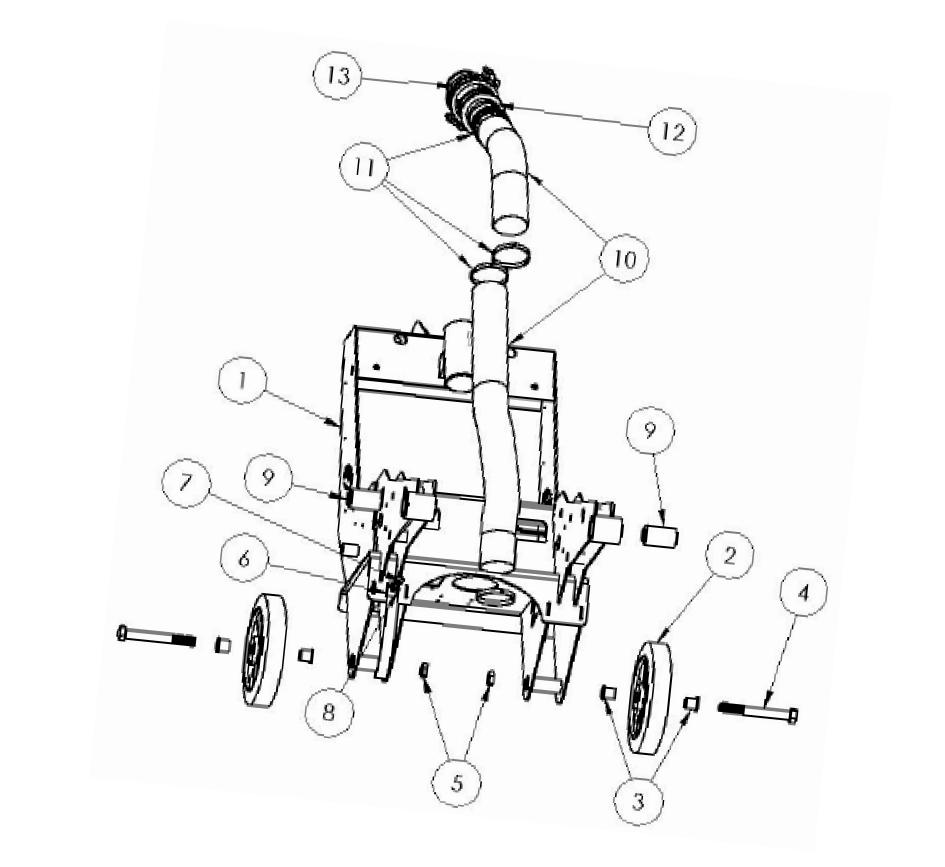
Item #	Part #	Description	Qty.
1	PDG.60350.00	Motor, PDG 6KP Kawasaki LX 600 Onyx Variable Jet Fuel	1
2	PDG.60401.00	Motor Plate, PDG 6KP Electric Clutch Box	1
3	PDG.83529.00	Grommet, High Temp 9/16"-3/8"-3/8"	1
4	PDG.51037.00	Block, Tensioner 8K Polychain	2
5	NB.13.218	Screw, Flat Head Socket Cap M8-1.25 x 20	4
6	NB.11.160	Screw, Flanged Hex Head Cap Serrated 3/8"-16 x 1-1/4"	4
7	PDG.60407.00	Spacer, PDG 6000 Propane Clutch	1
8	PDG.60420.00	Clutch MS, Warner Electric IXR-18133-PDG6000	1
9	PDG.60408.00	Cap, PDG6000 Propane Clutch	1
10	NB.30.406	Washer, Lock 7/16" Grade 8 Yellow	2
11	NB.10.261	Screw, Hex Head Cap 7/16-20 x 2-1/4 Grade 8	2
12	NB.82.100	Stud, Double End Threaded M8-1.25 x 50	2
13	NB.20.127	Nut, Hexagonal Jam M8	2
14	PDG.83233.00	Cable, Soft Start	1
15	PDG.60350.00	Throttle Stops (Included In Motor Manual)	2



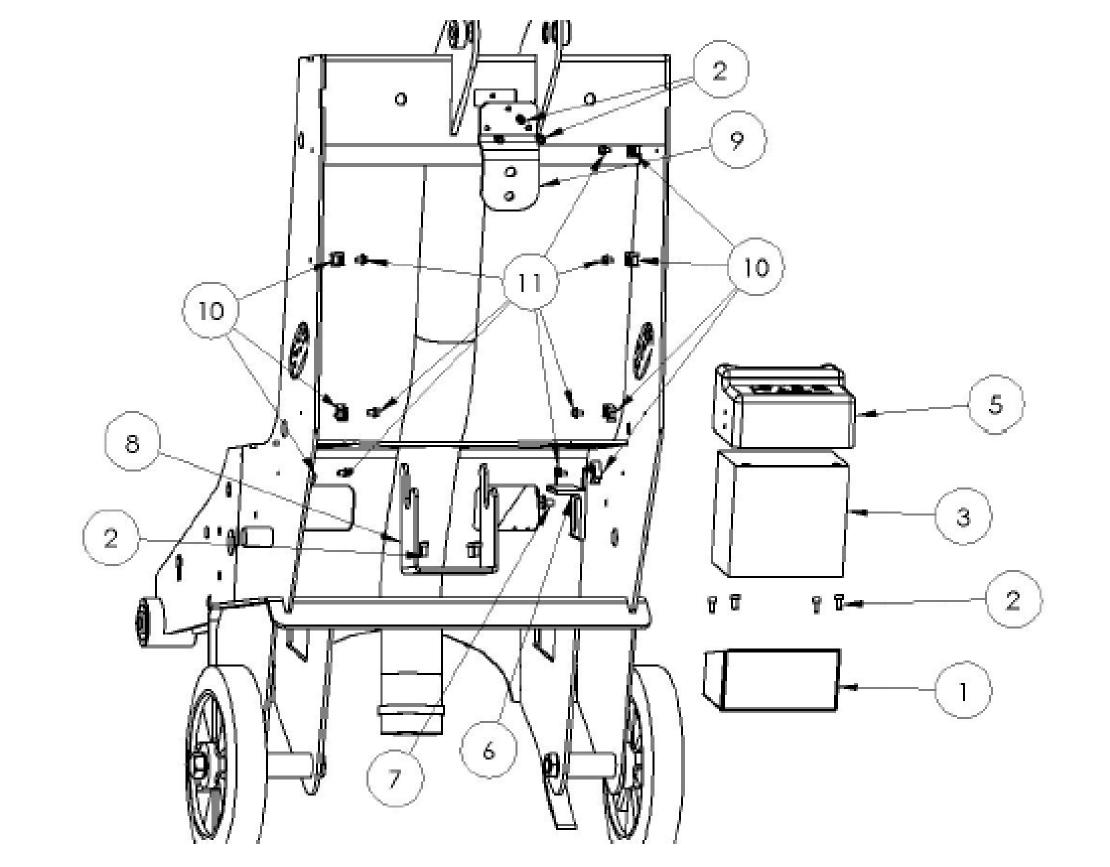
Item #	Part #	Description	Qty.
1	PDG.60409.00	Spacer, PDG6KP Clutch Box	1
2	PDG.60048.25	Gasket, 6K Motor	1
3	PDG.60402.00	Base Plate, PDG6KP Electric Clutch Box	1
4	See Prior Step	Transfer Shaft Assembly	1
5	NB.10.129	Screw, Hex Head Cap M12-1.75 x 50	4
6	NB.20.111	Nut, Jam M12-1.75	4
7	PDG.60403.00	Stanchion, Clutch Box PDG6KP	4
8	NB.13.252	Screw, Flat Head Socket Cap M10-1.5 x 30	4
9	NB.12.270	Screw, Socket Head Cap M14-2.0 x 80	4
10	NB.30.132	Washer, Lock M14 Zinc	4
11	PDG.83525.00	Sheave Key, Centrifugal Clutch	1
12	PDG.60421.00	Sheave, 4/3V OD8"	1
13	PDG.83227.85	Bushing, 40MM-SK (Includes Items 12,13 And A Set Screw)	1
14	PDG.60404.00	Rear Cover, PDG 6KP Clutch Box	1
15	NB.11.109	Screw, Flanged Hex Head Cap M6-1.0 x 12	4
16	PDG.60309.00	Stop, Battery Latch/ Clutch Box	1
17	NB.11.119	Screw, Flanged Hex Head Cap M8-1.25 x 12	1
18	PDG.83232	Soft Start, Clutch	1
19	NB.11.107	Screw, Flanged Socket Head Cap M4-0.7 x 8	2
20	PDG.60064.00	Bushing, Spyder CH 28/38 Red/ PDG 6KP	1



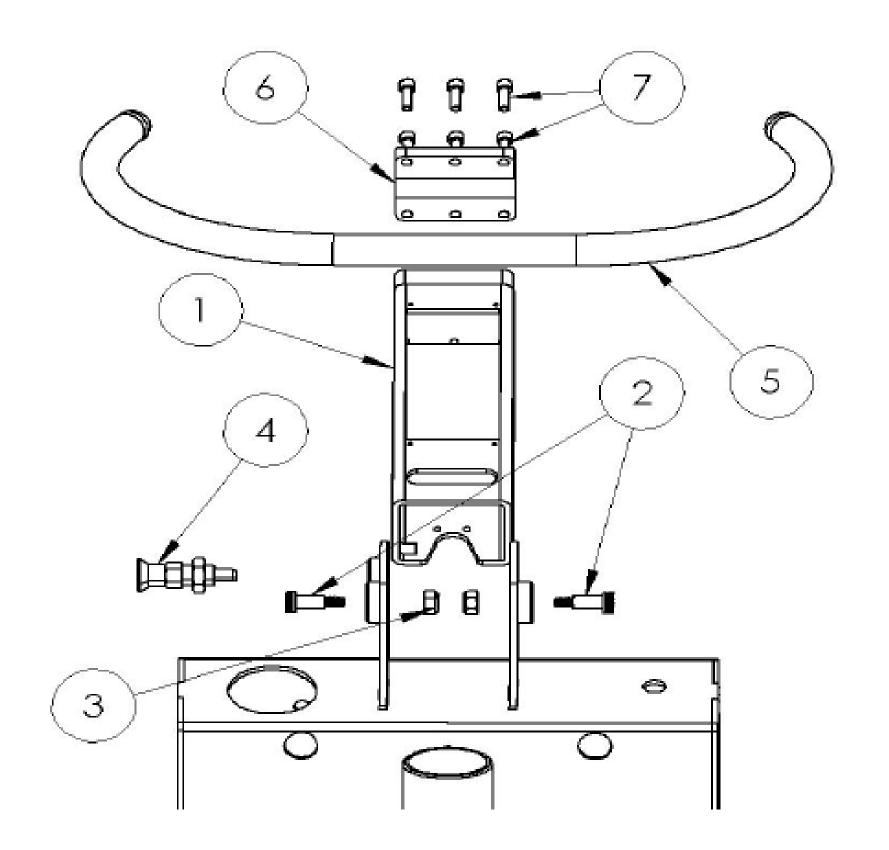
Item #	Part #	Description	Qty.
1	PDG.60406.00	Transfer Shaft, 6KP Clutch Box	1
2	PDG.83530.00	Bearing, 6308-2RS Ball	2
3	PDG.83521.00	Spacer, Inner Diameter	1
4	NB.40.110	Ring, External Retaining M40	2
5	PDG.83520.00	Housing, Primary Bearing	1
6	NB.40.127	Ring, Internal Retaining M90	2
7	PDG.83531.00	Seal, Rotary Shaft M40 x M55	1
8	PDG.83522.00	Plate, Seal	1
9	NB.70.107	Key, Coupler M10/ 8 x 35 Parallel/ PDG6K	1
10	PDG.60063.00	Coupler, CJ28/38 Lovejoy/ PDG6K	1
11	PDG.60063.00	Set Screw, Coupler 6K (Included With Item 10)	1



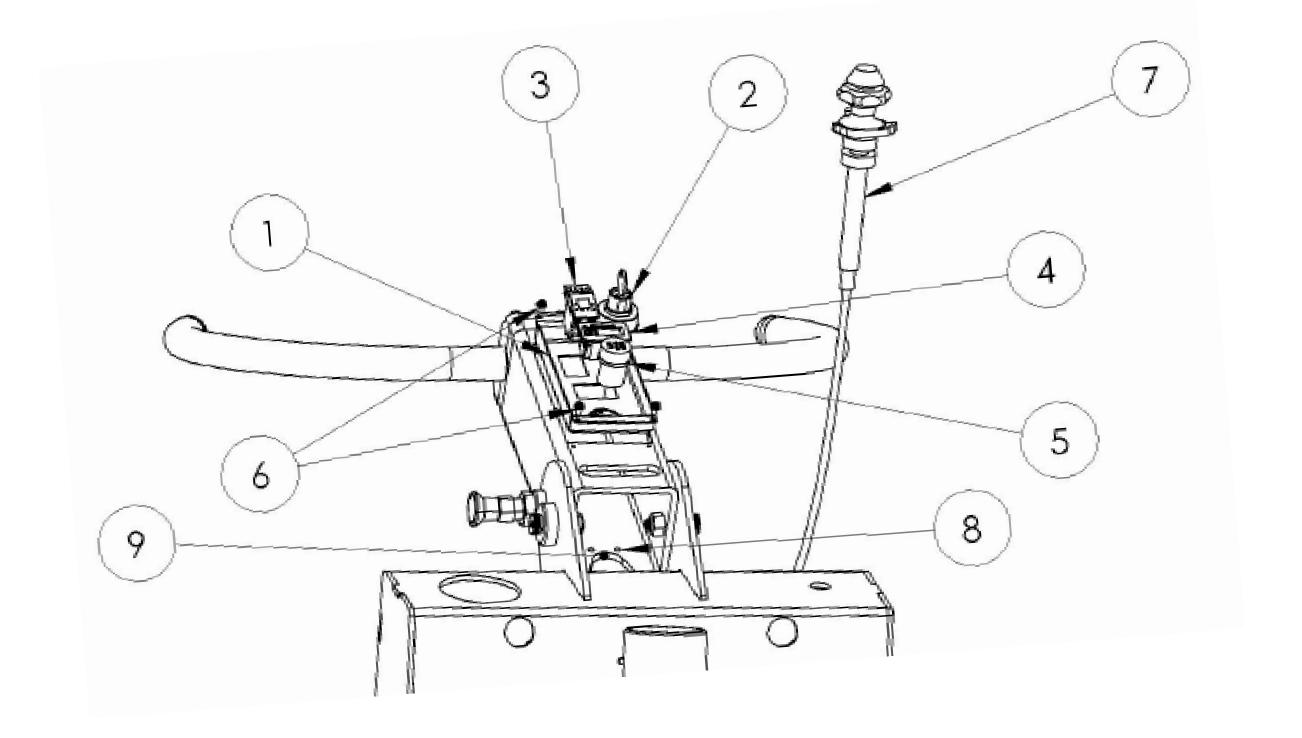
Item #	Part #	Description	Qty.
1	PDG.60300.00	Frame, PDG 6000	1
2	PDG.45077.00	Wheel, PDG5000	2
3	PDG.20255.60	Bushing, 5K Axle	4
4	NB.10.253	Screw, Hex Head Cap M20-2.5 x 160	2
5	NB.20.110	Nut, Jam M20-2.5	2
6	PDG.83356.00	Static Strap	1
7	NB.10.126	Screw, Hex Head Cap M10-1.5 x 16	1
8	NB.30.110	Washer, Flat M10	1
9	PDG.60330.00	Bushing, OD1.77 x ID.625 x 3	2
10	VAC.HS3.00050	Hose, Black PDG vacuum 3.0" ID	~5ft
11	VAC.10.095	Clamp, 3" Black PDG Vacuum Hose	4
12	VAC.10.111	Camlock, Plastic Male For 3" Vac Hose	1
13	VAC.10.113	Camlock, 3" Female	1



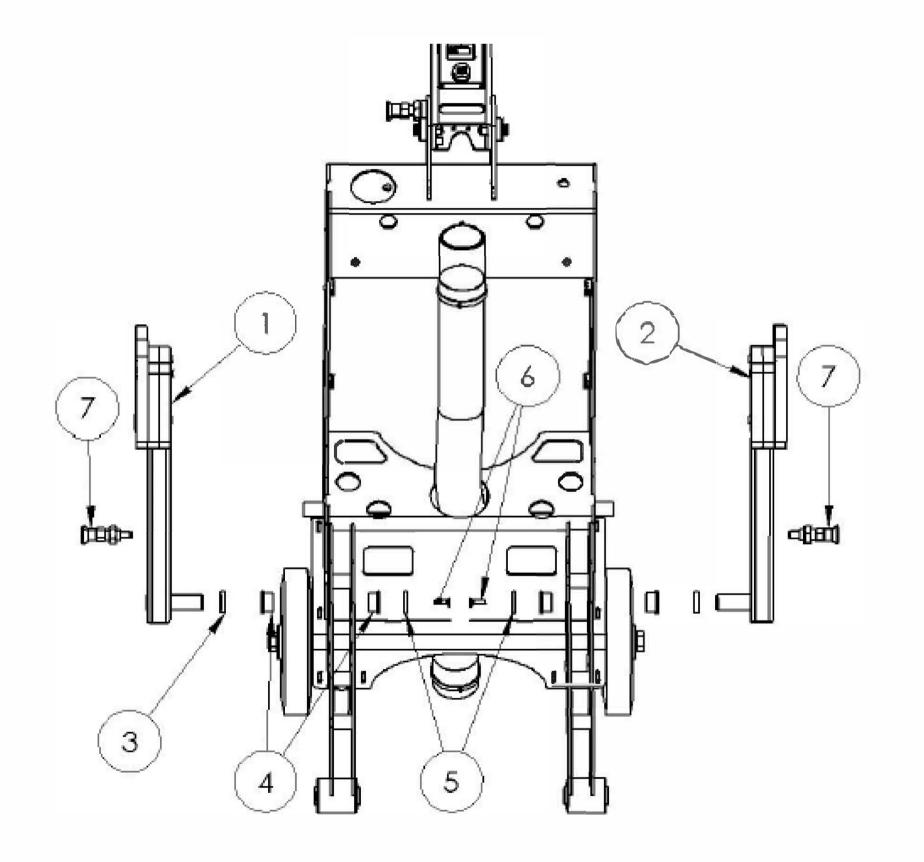
Item #	Part #	Description	Qty.
1	PDG.60308.00	Battery Box	1
2	NB.12.108	Screw, Socket Head Cap M6-1.0 x 12	11
3	PDG.83204.00	Battery, 12V/PDG8KP	1
4	PREMAKE	Harness, Battery (Not Pictured)	1
5	PDG.83560.00	Lid, Battery	1
6	PDG.60309.00	Latch, Battery / Clutch Box Stop	1
7	NB.11.119	Screw, Flanged Hex Head Cap M8-1.25 x 8	1
8	PDG.60306.00	Foot Rest, PDG 6000 Propane Tank	1
9	PDG.60305.00	Lock, Propane Tank	1
10	NB.51.201	Mount, Zip Tie	7
11	NB.11.104	Screw, Hex Flanged Head Cap M5-0.8 x 8	7



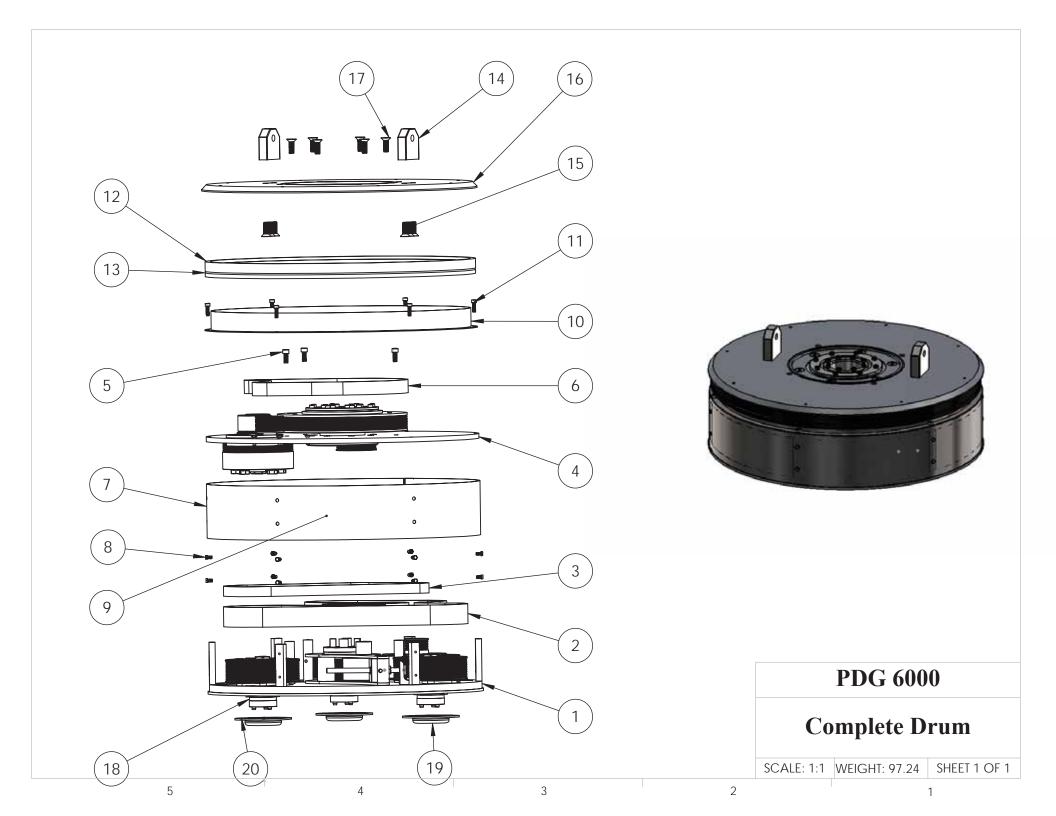
Item #	Part #	Description	Qty.
1	PDG.60303.00	Weldment, 6K Handlebar Stem	1
2	NB.15.253	Screw, Socket Head Shoulder Cap M16 x 20 X M2-1.75	2
3	NB.20.118	Nut, Hex M12-1.75 Nyloc	2
4	PDG.80150.70	Plunger, Pull Knob HD	1
5	PDG.83526.02	Handle Bar Weldment	1
6	PDG.83526.23	Clamp, Handle Bar	1
7	NB.12.219	Screw, Socket Head Cap M8-1.25 x 25	6



Item #	Part #	Description	Qty.
1	PDG.60304.00	Control Panel, PDG6000 Propane	1
2	PDG.83214.25	Switch, Ignition /PDG 8KP	1
3	PDG.83213.00	Switch, 4-Pin Lighted/ PDG 8KP	1
4	PDG.83212.00	Meter, Hour/Tach Digital / PDG 8KP	1
5	PDG.20395.00	Adapter, USB Charger/ PDG 8KP	1
6	NB.11.107	Screw, Flanged Socket Head Cap M4-0.7 x 8	4
7	PDG.83211.00	Throttle Cable, Vernier /PDG 5KP PDG 8KP	1
8	795.00.12	Zip Tie (Not Pictured)	8
9	PDG.83346.25	Wire Harness, PDG8K Propane (Not Pictured)	1

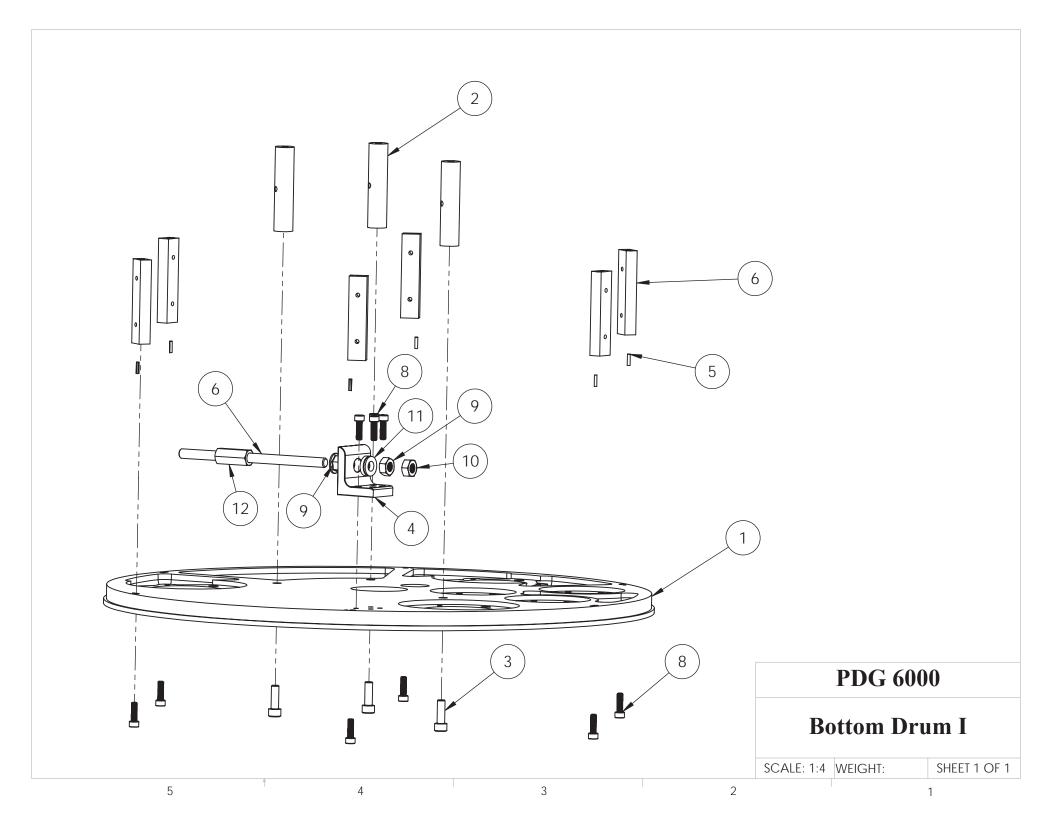


Item #	Part #	Description	Qty.
1	PDG.60301.00	Weldment, Left Swing Weight PDG 6KP	1
2	PDG.60302.00	Weldment, Right Swing Weight PDG 6KP	1
3	PDG.80307.02	Spacer, Wheel Axle Offset Adapter/ PDG8KP	2
4	PDG.60331.00	Bearing, Oil-Embedded Flanged Sleeve ID 1" x OD 1 ¼" x ¾"	4
5	PDG.80224.00	Washer, Retaining	2
6	NB.13.222	Screw, Flat Head Socket Cap M8-1.25 x 25	2
7	PDG.80150.70	Plunger, Pull Knob HD	2



	Complete Drum			
Item No.	Part No.	Description	Qty.	
1	SEE PAGE 30	PLATE, BOTTOM DRUM	1	
2	PDG.60056.00	BELT, MAIN PK12 M42 X 2381.4 OC BOTTOM	1	
3	PDG.60057.00	BELT, PTO PK6 M20 X 1043 OC MIDDLE	1	
4	SEE PAGE 32	PLATE, TOP DRUM	1	
5	NB.10.219	SCREW, SOCKET LOW HEAD CAP M8-1.25 X 20 ZINC	3	
6	PDG.60058.00	BELT, TOP PK8 M28 X 1122.4 OC	1	
7	PDG.60036.00	SHROUD, BOTTOM BELT DUST	1	
8	NB.16.113	SCREW, HEX HEAD CAP M5-0.8 X 10 ZINC 8.8	12	
9	PDG.20287.00	TAPE, PRESERVATION HEAT SHRINK 3" WHITE(3-3 2/3 revolutions)	40 ft	
10	PDG.60037.00	SHROUD, TOP BELT DUST	1	
11	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	6	
11b	NB.30.215	WASHER, M6 INTERNAL LOCK ZINC	6	
12	PDG.60047.00	SEAL, FOAM/FELT	1	
13	PDG.20269.00	ZIP TIE, 48"	2	
14	PDG.60046.00	EARS, DRUM MOUNTING	2	
15	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	6	
16	PDG.60034.00	PLATE, STATIONARY	1	
17	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	6	
18	PDG.20286.02	SEAL, AXLE NITRILE AL. SLURRY COVERS	3	
19	PDG.20285 02	COVER, PLANETARY SLURRY ALUMINUM	3	
20	NB.12.117	SCREW, SOCKET HEAD CAP M6-1.0 X 25 12.9 ZINC	9	

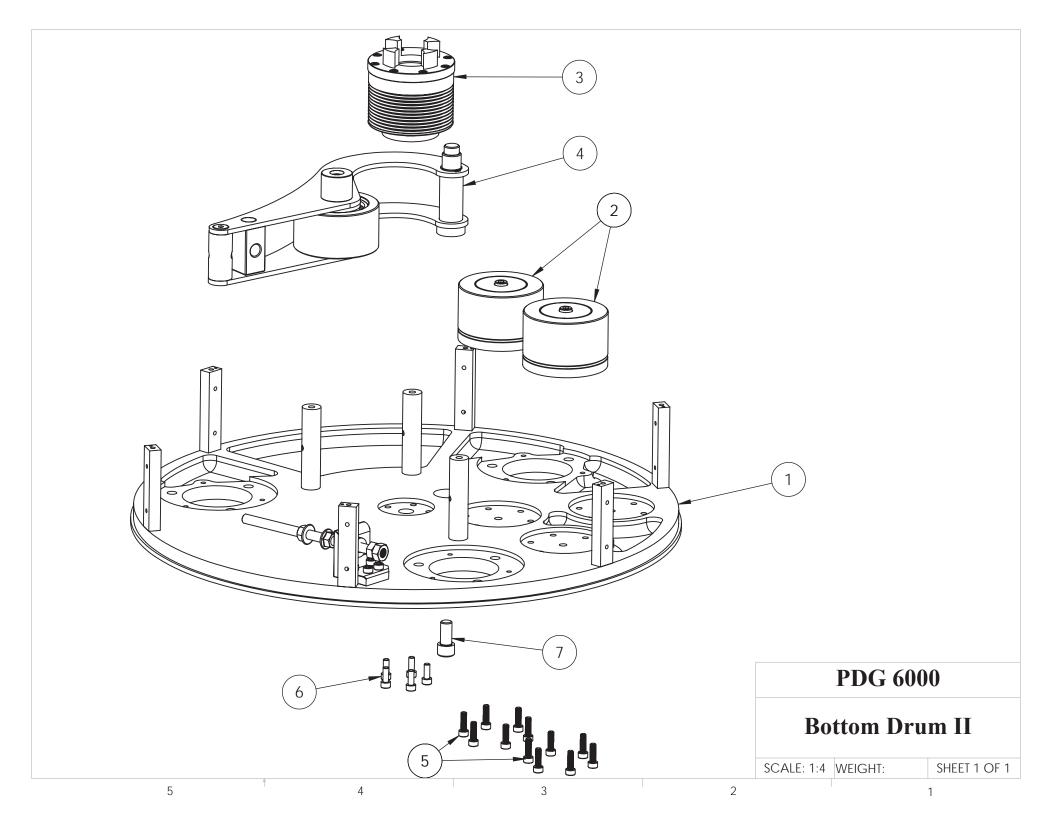
		Complete Drum Supplemental	
2	PDG.60056.00	Tension across longest span 96-100 Hz	1
3	PDG.60057.00	Tighten #5 before tensioning. Tension across longest span 101-106 Hz	1
5	NB.10.219	Red LocTite 263	3
6	PDG.60058.00	Tighten #5 before tensioning. Tension across longest span 196-212 Hz	1
7	PDG.60036.00	Butyl Flex along top and bottom lip after belts are tight, and everything is set.	1
8	NB.16.113	Red LocTite 263	12
11	NB.12.116	Red LocTite 263	6
12	PDG.60047.00	Grease on inside edge of felt. Chemrex on top edge of foam.	1
15	NB.13.252	Red LocTite 263, Torque 40 ft-lbf	6
17	NB.13.252	Red LocTite 263, Anti-Seize added to countersink	6
19	PDG.20285 02	Silicone added to sealing edge.	3
20	NB.12.117	Red LocTite 263	9



	Bottom Drum 1		
Item No.	Part No.	Description	Qty.
1	PDG.60023.00	PLATE, BOTTOM	1
2	PDG.60011.00	STANCION, INNER	3
3	NB.12.219	SCREW, SOCKET HEAD M8-1.25 X 25	3
4	PDG.45017.25	POST, REACTION	1
5	NB.50.147	PIN, SPIRAL M3x16	6
6	PDG.60079.00	ROD, TIGHTENER	1
7	PDG.60010.00	STANCION, PERIMETER	6
8	NB.12.116	SCREW, SOCKET HEAD M6-1.0x25	10
9	NB.20.137	NUT, JAM M10	2
10	NB.20.131	NUT, NYLOC M10	1
11	NB.32.101	WASHER, SPHERICAL M10	1
12	NB.20.119	NUT, TENSIONER M10	1

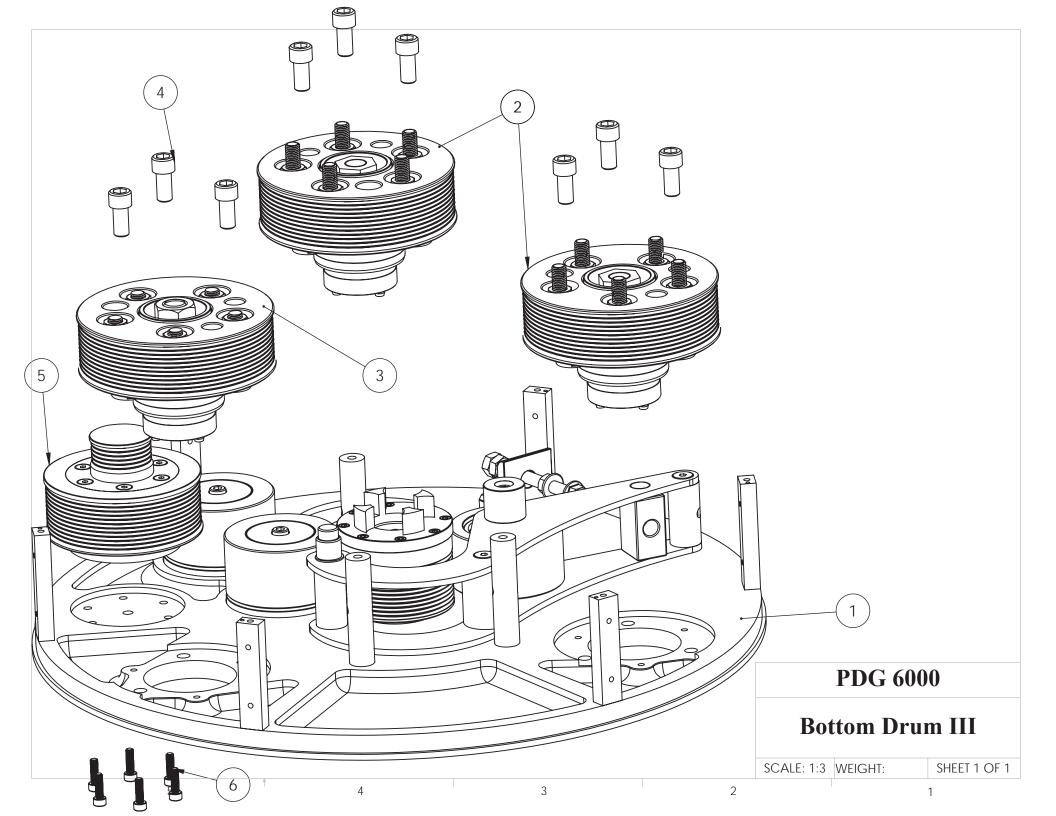
Bottom Drum I Supplemental			
3	NB.12.219	Red LocTite 262	3
8	NB.12.116	Red LocTite 262	10
9	NB.20.137	Red LocTite 262. Use LocTite after belt is added, not at this step.	1
12	NB.20.119	Red LocTite 262. Use LocTite after belt is added, not at this step.	1

#1 may be from 20mm thick; up to 23mm thick. With 20mm NB.12.116 is used for #8, if the plate is thicker #8 should be NB.12.117.



	Bottom Drum II		
Item No.	Part No.	Description	Qty.
1	See Page 26	BOTTOM DRUM I	1
2	PDG.6A006.10	SUBASSEM, MAIN BELT IDLER	2
3	PDG.6A007.00	SUBASSEM, MAIN BELT SPINDLE	1
4	PDG.6A005.10	SUBASSEM, BELT TIGHTENER	1
5	NB.12.116	SCREW, SOCKET HEAD CAP M6 -1.0 X 20	12
6	NB.12.111	SCREW, SOCKET HEAD CAP M6-1.0 X 16	6
7	NB.12.232	SCREW, SOCKET HEAD M12-1.75 X 20 LOW HEAD	1

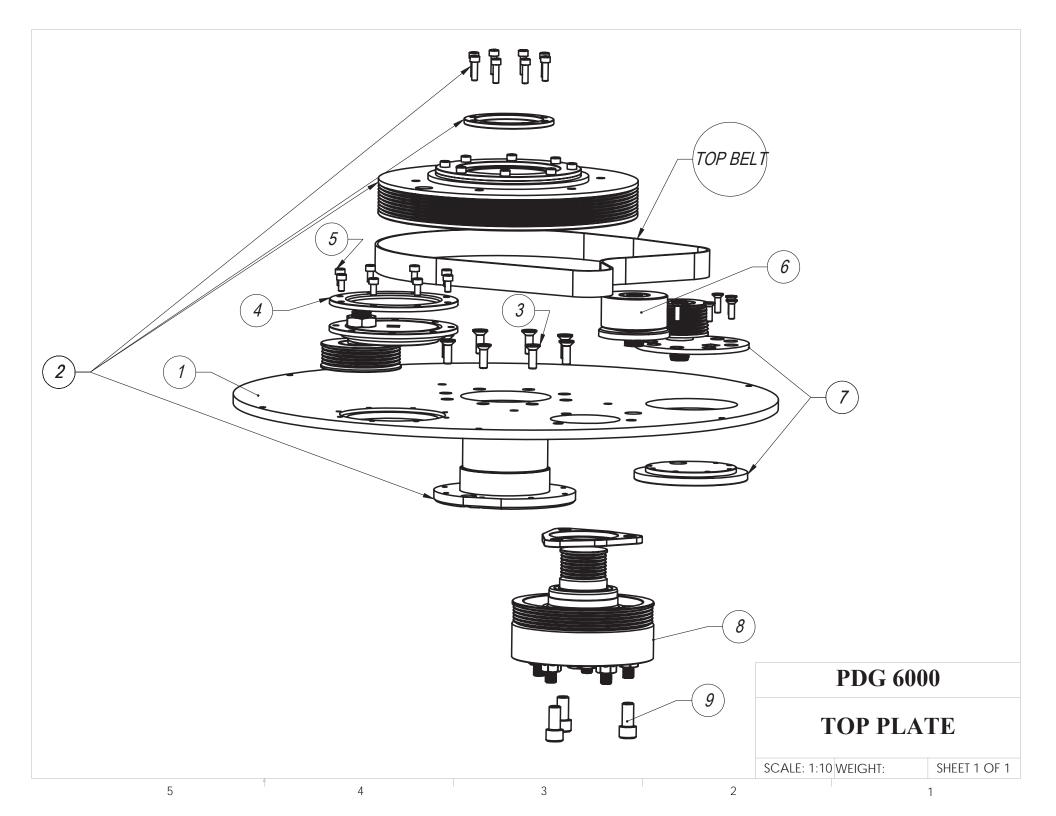
		Bottom Drum II	
5	NB.12.116	Red LocTite 262	12
6	NB.12.111	Red LocTite 262	6
7	NB.12.232	Red LocTite 262	1



	Bottom Drum 3		
Item No.	Part No.	Description	Qty.
1	SEE PAGE 29-30	BOTTOM DRUM II	1
2	PDG.6A008.00	SUBASSEM, PLANETARY	2
3	PDG.6A008.10	SUBASSEM, PLANETARY, SHORTENED	1
4	NB.12.249	SCREW, SOCKET HEAD CAP M12-1.75 X 25 12.9 ZINC	9
5	PDG.6A009.00	SUBASSEM, PTO	1
6	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	6

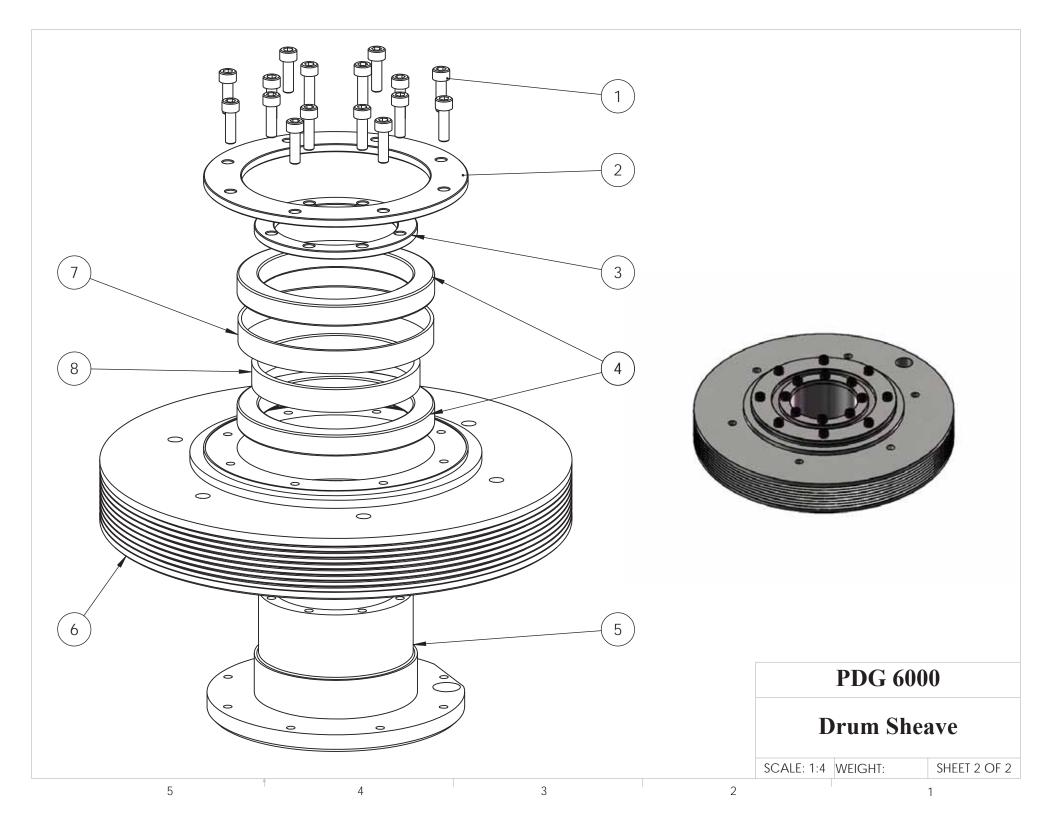
	Bottom Drum 3 Supplemental		
4	NB.12.249	Red LocTite 262, Torque 80 ft-lbf	9
6	NB.12.116	Red LocTite 262	6

Be sure to install the 'short planetary' into the hole with a cut-out on either side.



	Top Drum		
Item No.	Part No.	Description	Qty.
1	PDG.60024.00	PLATE, TOP DRUM	1
2	PDG.6A001.00	SUBASSEM, DRUM SHEAVE	1
3	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 20	8
4	PDG.2A001.00	SUBASSEM, PTO TENSIONER	1
5	NB.12.108	SCREW, SOCKET HEAD CAP M6 -1.0 X 12 ZINC	8
6	PDG.6A003.00	SUBASSEM,TOP BELT IDLER	1
7	PDG.6A004.00	SUBASSEM, TOP BELT TENSIONER	1
8	PDG.6A002.00	SUBASSEM, INTERMEDIATE SHEAVE	1
9	NB.12.249	SCREW, SOCKET HEAD CAP M12-1.75 X 25 12.9	3

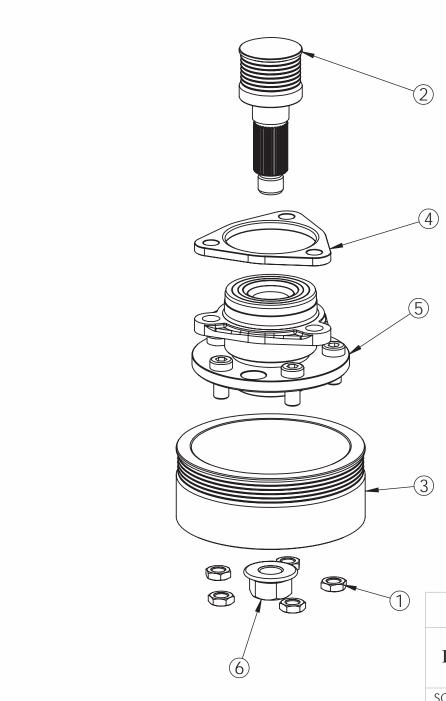
	Top Drum Supplemental		
2	PDG.6A001.00	Rotate spindle so it lines up as in the picture. Fasten #2 with #3 first, then assemble	1
3	NB.13.116	Red LocTite 263, Torque to 35 ft/lb sq	8
5	NB.12.108	AFTER PTO BELT IS TENSIONED PROPPERLY, Blue LocTite 243	8
7	PDG.6A004.00	Large(M20) Bolt: Red LocTite 263, Torque 80 ft-lbf	
/	PDG.0A004.00	Small bolts: leave loose, until Top belt is tensioned, then use Blue LocTite 242	
8	PDG.6A002.00	Install with spacer in the correct position.	1
9	NB.12.249	Red LocTite 263, Torque to 80 ft/lb sq	3



	Drum Sheave		
Item No.	Part No.	Description	Qty.
1	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	16
2	PDG.60032.50	RETAINER, OUTER SUSPENSION DUAL BEARING	1
3	PDG.60033.50	RETAINER, INNER SUSPENSION BEARING DUAL	1
4	PDG.20224.00	BEARING, 61818-2RS	2
5	PDG.60030.00	SPINDLE, STATIONARY DRUM	1
6	PDG.60035.00	SHEAVE, STATIONARY DRUM	1
7	PDG.60060.00	SPACER, INNER SUSPENSION BEARING	1
8	PDG.60059.00	SPACER, INNER DRUM SPINDLE BEARING	1

		-
PDG.6A001.00	SUBASSEM, DRUM SHEAVE	1

Drum Sheave Supplemental				
1	NB.12.116	Red LocTite 263	8	
1	NB.12.116	These parts are installed at the top plate 'upper level'.	8	
3	PDG.60033.50	Shown here for proper stack-up	1	
5	PDG.60030.00	Showithere for proper stack-up	1	



PDG 6000

Intermediate Sheave Assembly

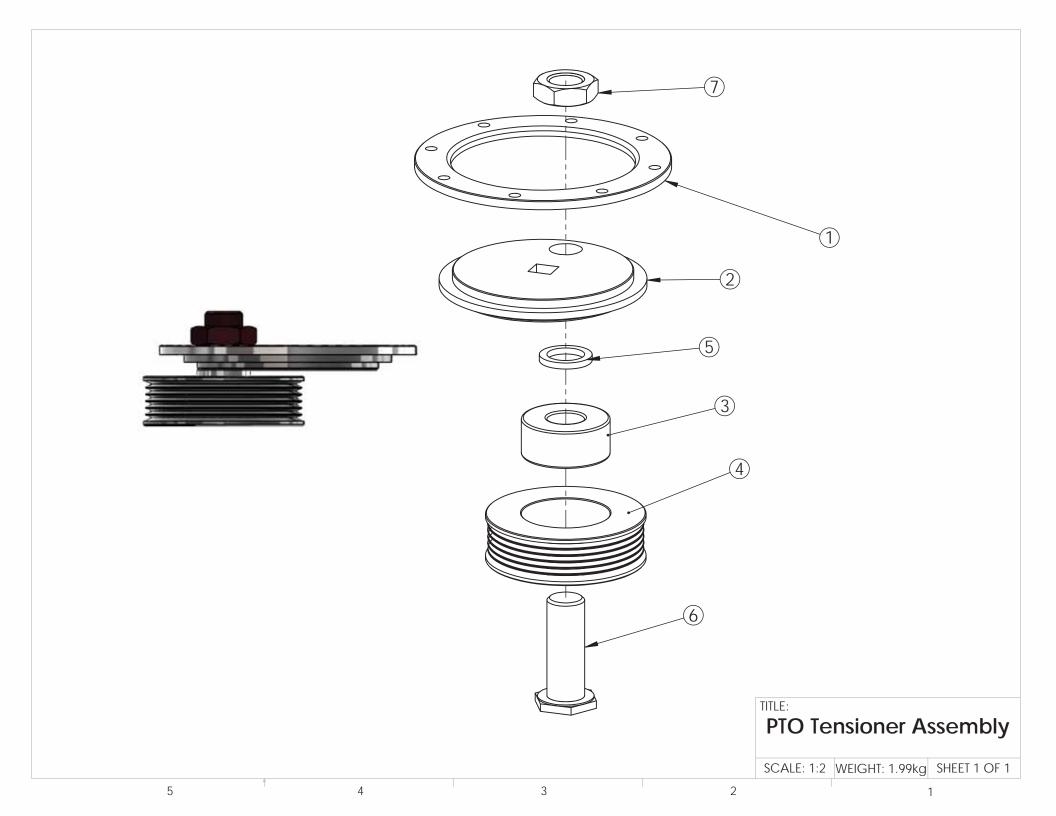
SCALE: 1:3 WEIGHT: 4.47kg SHEET 1 OF 1

5 4 3 2

	Intermediate Sheave				
Item No.	Part No.	Description	Qty.		
1	NB.20.107	LUGNUT, M12-1.5	5		
2	PDG.60026.00	AXLE, INTERMEDIATE	1		
3	PDG.60025.00	SHEAVE, INTERMEDIATE	1		
4	PDG.20209.00	SPACER, PTO HUB	1		
5	PDG.20201.00	HUB	1		
6	NB.20.108	NUT, HEX FLANGE M20-2.5	1		

PDG.6A002.00 SUBASSEM, INTERMEDIATE SHEAVE 1
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		Intermediate Sheave Supplemental	
1	NB.20.107	Red LocTite 263, Torque 60 ft-lbf	5
6	NB.20.108	Red LocTite 263, Torque 150 ft-lbf	1



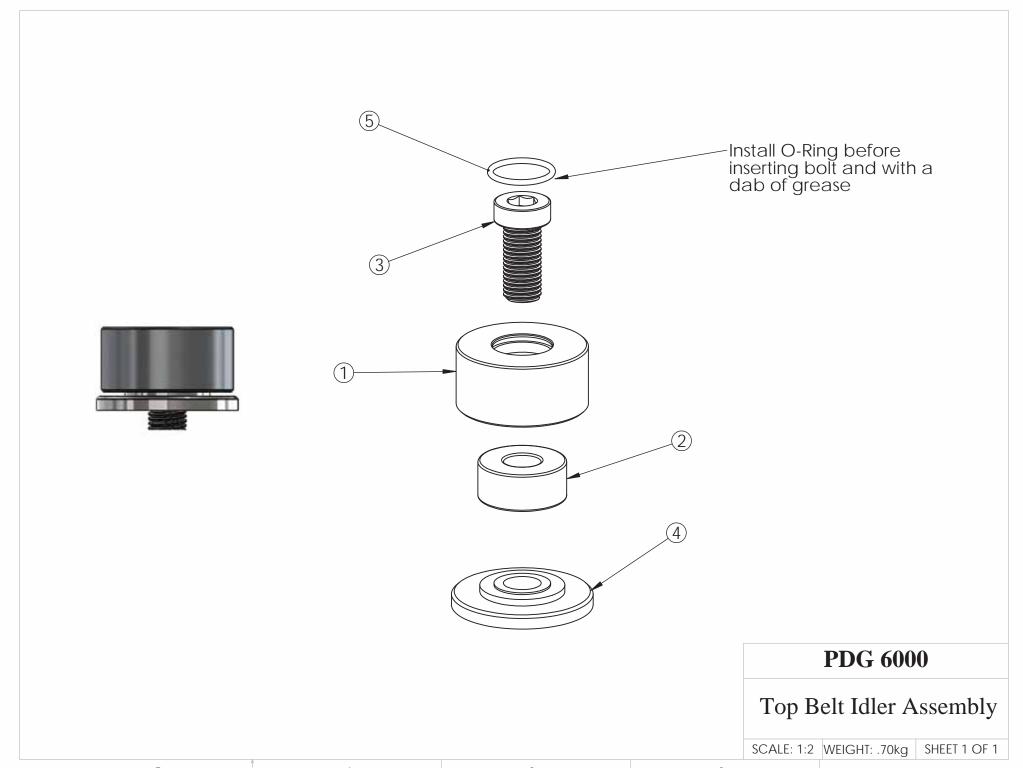
	PTO Tensioner Assembly			
Item No.	Part No.	Description	Qty.	
1	PDG.20203.00	CLAMP, PTO TENSIONER	1	
2	PDG.20204.00	PLATE, PTO TENSIONER	1	
3	PDG.20220.00	BEARING, 3204-2RS	1	
4	PDG.20212.00	IDLER, PTO TENSIONER	1	
5	PDG.20211.00	SPACER, PTO TENSIONER IDLER	1	
6	PDG.20214.00	SCREW, HEX HEAD MODIFIED M20-2.5 X 55	1	
7	NB.20.110	NUT, JAM M20 - 2.5	1	
•	· 			
	PDG.2A001.00	SUBASSEM, PTO TENSIONER	1	

PDG.20214.00

NB.20.110

6

PTO Tensioner Assembly Supplemental
Red LocTite 263 for contact with #2, Torque 80 ft-lbf.
Then, Red LocTite 263 on #6 for #7. Capture #6; Torque #7 to 80 ft-lbf.

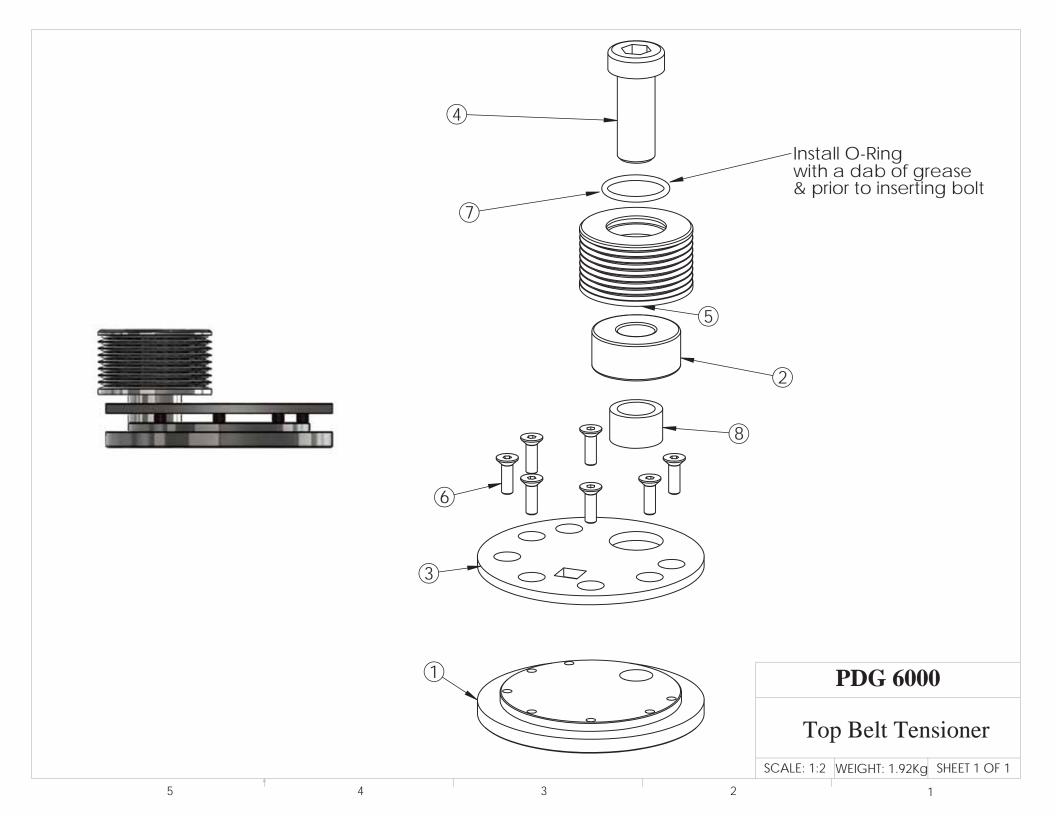


5 4 3 2

	Top Idler				
Item No.	Part No.	Description	Quantity		
1	PDG.60028.00	IDLER, TOP BELT	1		
2	PDG.20220.00	BEARING, 3204-2RS	1		
3	PDG.60073.00	SCREW, MODIFIED SOCKET HEAD M20-2.5	1		
4	PDG.60027.00	BASE, TOP BELT IDLER	1		
5	PDG.20215.00	O-RING, M30	1		

PDG.6A003.00	SUBASSEM, TOP BELT IDLER	1
PDG.0A003.00	SUBASSEIVI, TOP BELT IDEEK	

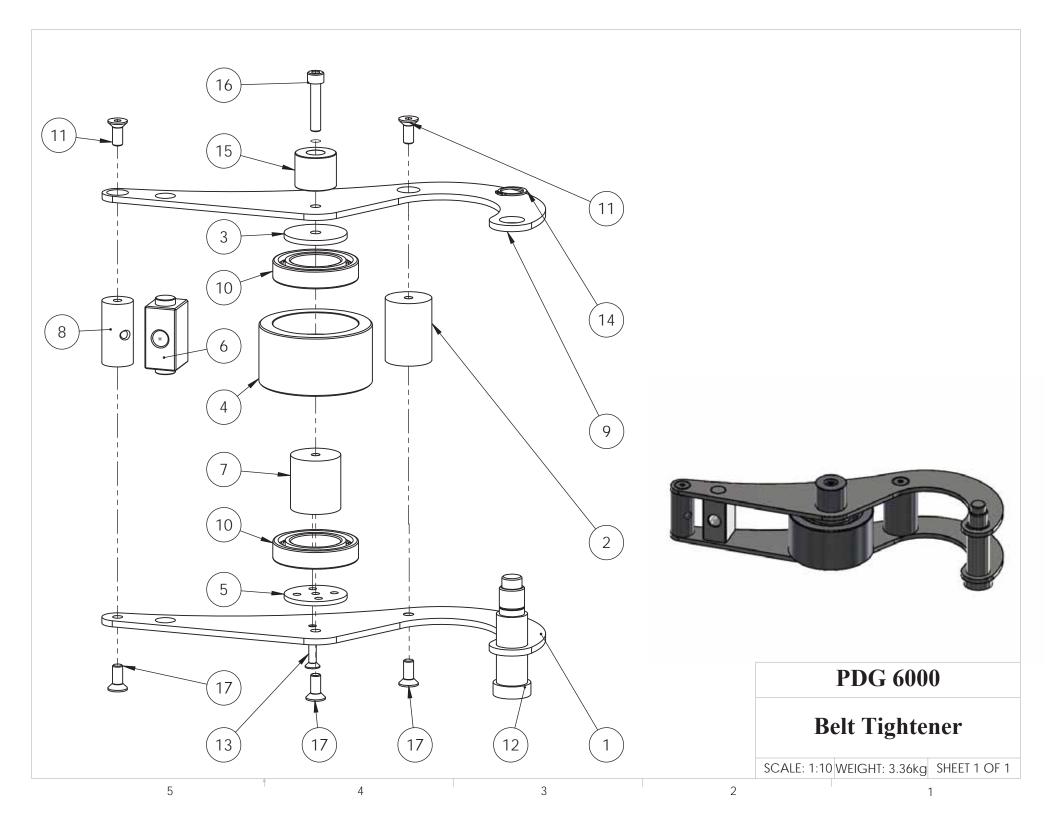
	Top Idler Supplemental			
3	PDG.60073.00	Red LocTite 263, Torque 80 ft-lbf into the top plate.	1	



Top Tensioner			
Item No.	Part No.	Description	Quantity
1	PDG.20205.50	PLATE, BELT TENSIONER	1
2	PDG.20220.00	BEARING 3204-2RS	1
3	PDG.20206.50	CLAMP, TOP BELT TENSIONER	1
4	NB.12.263	SCREW, LOW SOCKET HEAD CAP M20-2.5	1
5	PDG.60031.00	IDLER, TOP BELT TENSIONER	1
6	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 - 1.0	7
7	PDG.20215.00	O-RING, M30	1
8	PDG.20210.00	SPACER, TOP BELT TENSIONER IDLER	1

- 1			
	PDG.6A004.00	SUBASSEM, TOP BELT TENSIONER	1 1
	1 00.07007.00	JODAJSEIVI, TOT BEET TENSIONER	

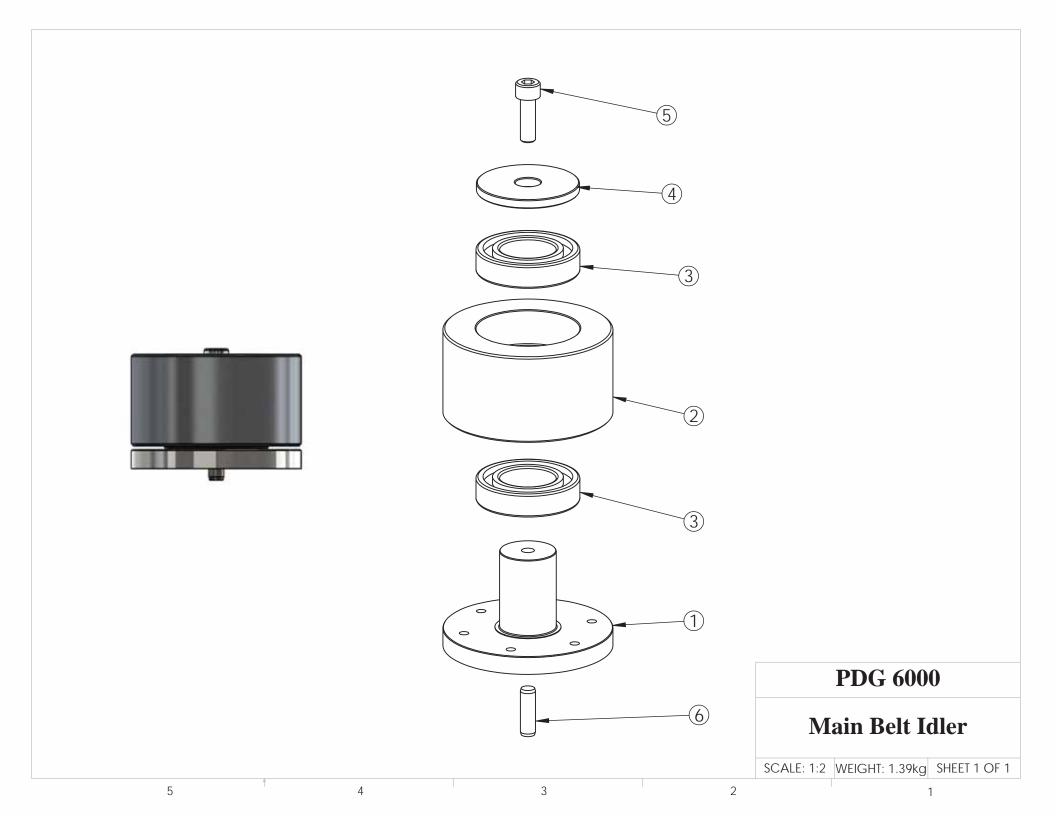
	Top Tensioner Supplemental				
4	NB.12.263	Red LocTite 263, Torque 80 ft-lbf after installed on top plate.	1		
6	NB.13.116	Blue LocTite 243, After belts are tensioned.	7		



	Belt Tensioner .10			
Item No.	Part No.	Description	Qty.	
1	PDG.60013.10	ARM, LOWER TENSION	1	
2	PDG.60015.10	STANCION, HEAVY MAIN TENSIONER	1	
3	PDG.60016.00	SPACER, UPPER TENSIONER SPINDLE	1	
4	PDG.60017.00	IDLER, MAIN TENSIONER	1	
5	PDG.60020.00	SPACER, LOWER TENSIONER SPINDLE	1	
6	PDG.60022.00	GRUDGEON, MAIN TENSIONER	1	
7	PDG.60018.10	SPINDLE, MAIN TENSIONER IDLER	1	
8	PDG.60019.00	STANCION, MAIN TENSIONER LIGHT	1	
9	PDG.60014.10	ARM, UPPER TENSION	1	
10	PDG.20217.00	Bearing 6008-2RS	2	
11	NB.10.218	SCREW, SOCKET HEAD CAP M8 -1.25 X 20	5	
12	PDG.60012.10	SPINDLE, MAIN TENSIONER	1	
13	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 20	1	
14	NB.40.104	M20 RETAINER	1	
15	PDG.60016.01	Upper Tensioner Upper Spacer	1	
16	NB.10.231	SCREW, SOCKET HEAD CAP M8x1.25x35	1	
17	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8x1.25x20	1	

PDG.6A005.00	SUBASSEM, BELT TIGHTENER	1
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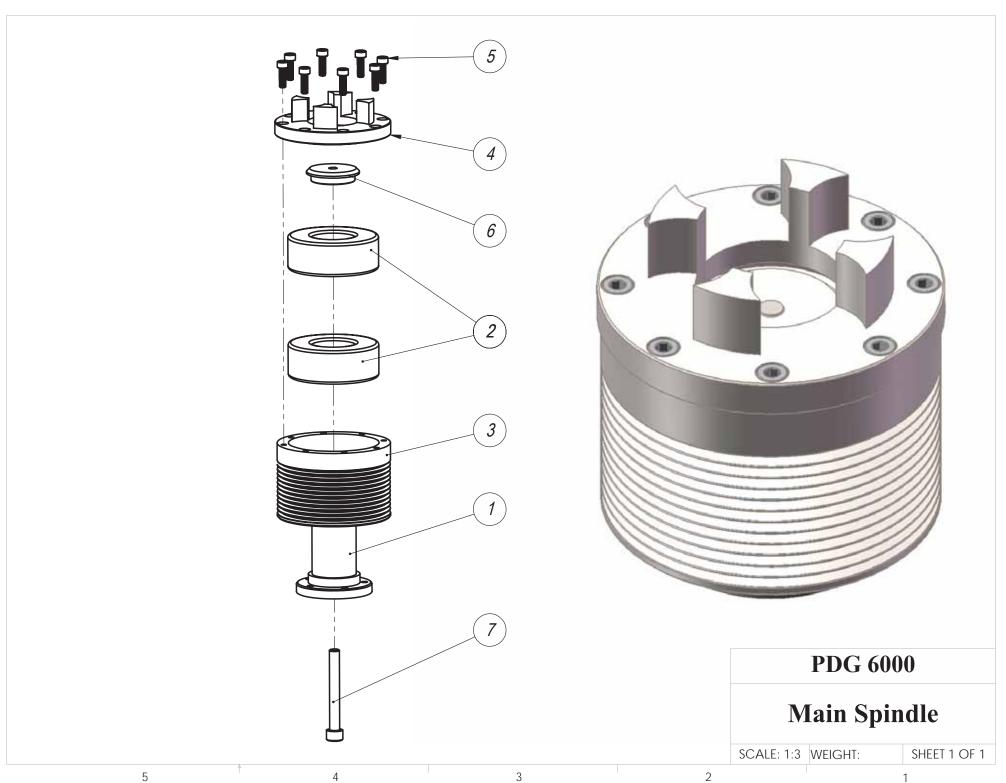
	Belt Tensioner .10 Supplemental			
11	NB.10.218	Red LocTite 262, Do not LocTite the top bolts, until bottom belt is installed	5	
13	NB.13.116	Red LocTite 262	1	
16	NB.12.223	Red LocTite 262, Do not LocTite the top bolts, until bottom belt is installed	1	
17	NB.12.223	Red LocTite 262, Do not LocTite the top bolts, until bottom belt is installed	1	



	Main Idler		
Item No.	Part No.	Description	Quantity
1	PDG.60008.00	SPINDLE, MAIN BELT IDLER	1
2	PDG.60007.00	IDLER, MAIN BELT	1
3	PDG.20221.00	BEARING 6006-2RS	2
4	PDG.60009.00	RETAINER, IDLER BEARING Be Careful this does not rub one side.	1
5	NB.12.219	SCREW, SOCKET HEAD CAP M8-1.25X25	1
6	NB.50.143	PIN, HARDENED M8 X 26	1

- 1			
ı	PDG.6A006.00	SUBASSEM, MAIN BELT IDLER	2

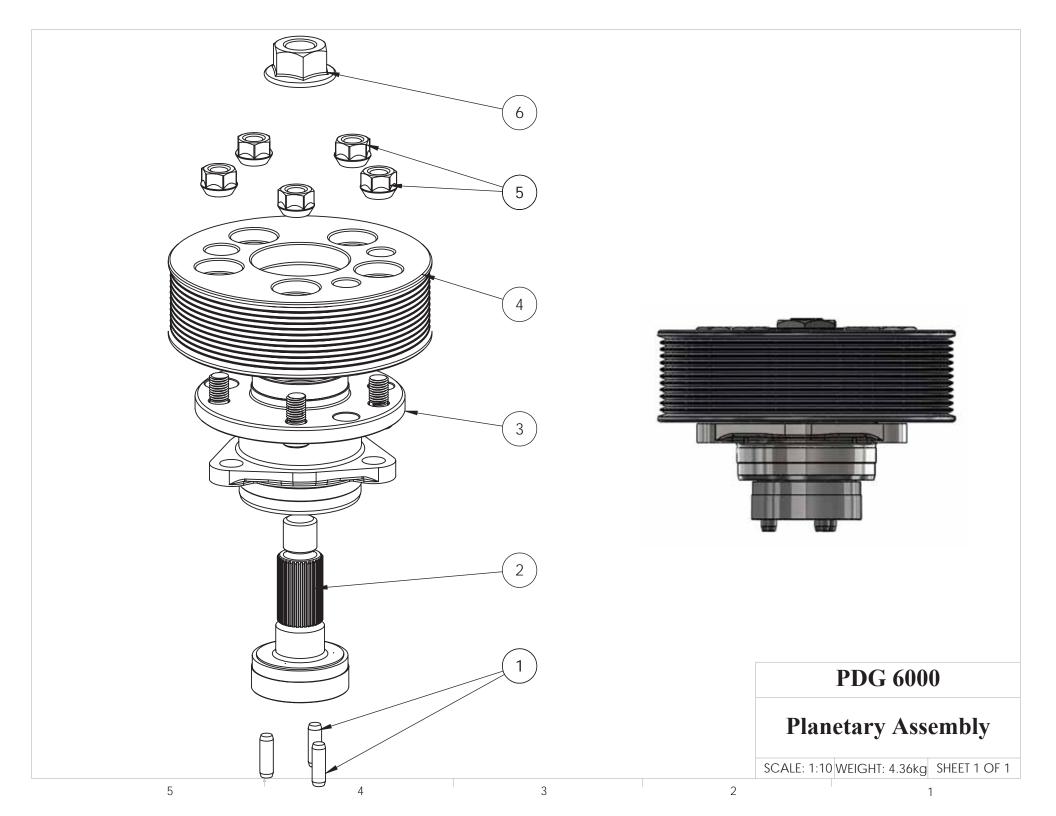
			Main Idler Supplemental	
	5	NB.12.219	Red LocTite 263	1
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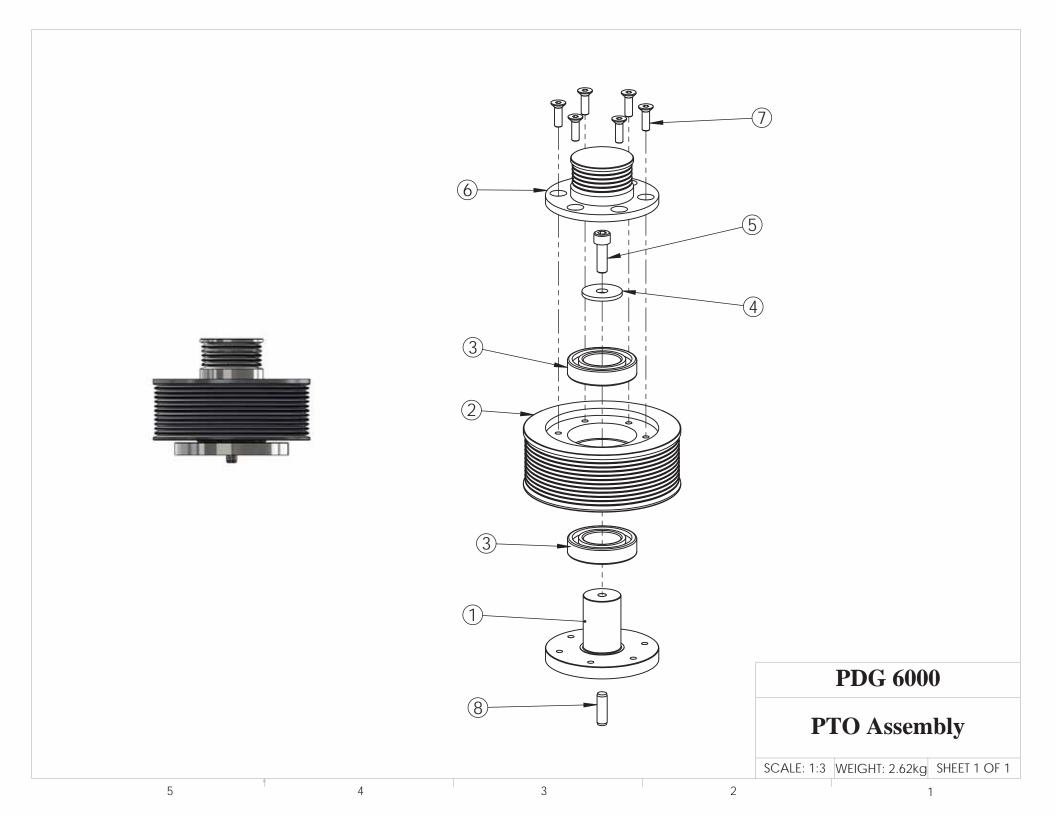
	Main Spindle V2		
Item No.	Part No.	Description	Qty.
1	PDG.60005.10	SPINDLE, MAIN DRIVE SHEAVE	1
2	PDG.20216.00	BEARING, 5207-2RS	2
3	PDG.60004.60	SHEAVE, MAIN DRIVE	1
4	PDG.60039.60	CAP, MAIN SHEAVE	1
5	NB.12.090	SCREW, SOCKET HEAD CAP M5 -0.8 X 16	8
6	PDG.60005.11	Retainer, Bearing	1
7	NB.12.222	M8x1.25x65 SHCS	1

PDG.6A007.00	Main Spindle	1
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	Main Spindle V2 Supplemental			
5	NB.12.090	Red LocTite 263	8	
7	NB.12.222	Red LocTite 263	1	
	TOOL			
X DG.1499 WRENCH, SPINDLE EDGER				



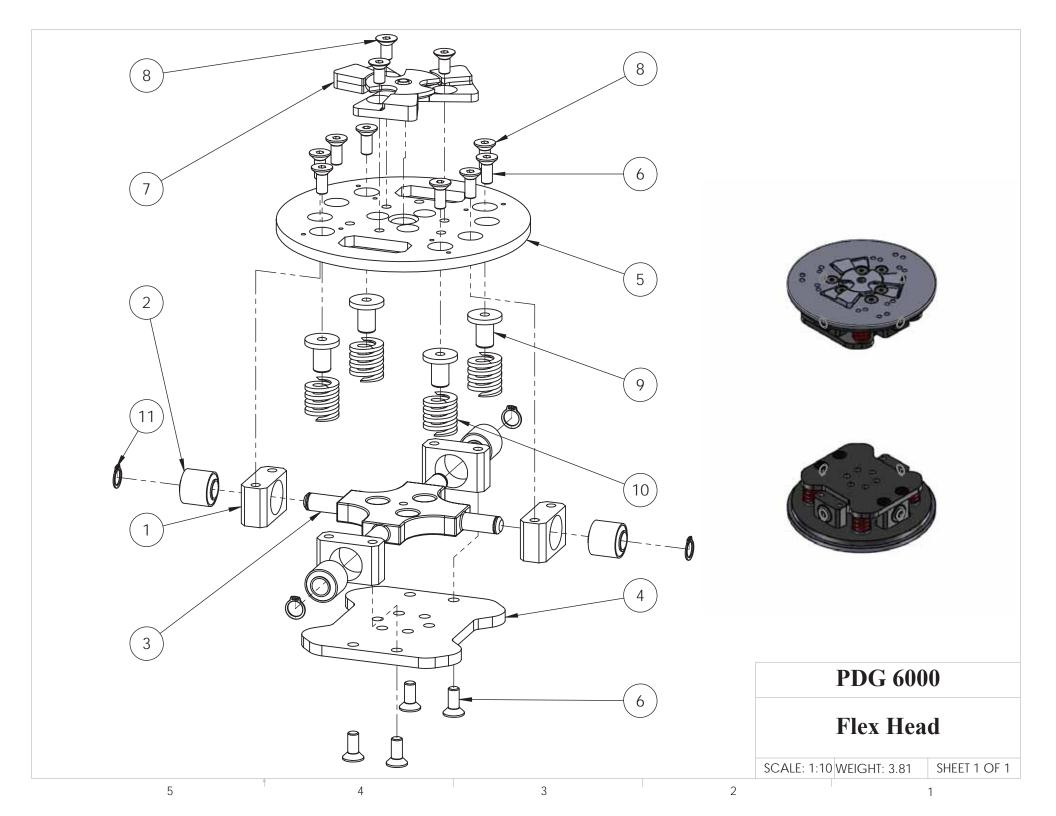
		Planetary Assembly (Short)	
Item No.	Part No.	Description	Qty.
1	NB.50.143	PIN, HARDENED M8 X 26	3
2	PDG.60080.00	AXLE, PLANETARY 40MM (MODIFIED)	1
3	PDG.20201.00	HUB	1
3	NB.82.200	SHORTENED STUD	5
4	PDG.60001.00	SHEAVE, PLANETARY	1
5	NB.20.109	NUT, JAM M12-1.5 (Lugnuts displayed are for a 'future' revision)	5
6	NB.20.106	NUT, HEX FLANGE M20-2.5 (MODIFIED)	1
	PDG.6A008.10	Planetary Assembled Short	1
	1 DG.0A000.10	i falletally Assembled Short	'
1	NB.50.143	PIN, HARDENED M8 X 26	3
2	PDG.20200.00	AXLE, PLANETARY 40MM	1
3	PDG.20201.00	HUB	1
4	PDG.60001.00	SHEAVE, PLANETARY	1
5	NB.20.109	NUT, JAM M12-1.5 (Lugnuts displayed are for a 'future' revision)	5
6	NB.20.108	NUT, HEX FLANGE M20-2.5	1
	PDG.6A008.00	Planetary Assembled	2
			<u> </u>
		Planetary Assembly Supplemental	
3	NB.82.200	Studs removed from hub, shortened, reinserted.	5
5	NB.20.109	Red LocTite 263, Torque 60 ft-lbf	5
6	NB.20.106	Red LocTite 263, Torque 150 ft-lbf	1



	PTO Assembly		
Item No.	Part No.	Description	Qty.
1	PDG.60006.00	PTO Sheave Spindle	1
2	PDG.60002.00	PTO Hub Sheave	1
3	PDG.20221.00	Bearing 6006-2RS	2
4	NB.30.112	M8X35X2.5 Fender Washer	1
5	NB.12.219	M8-1.25x25 Socket Head Cap Screw	1
6	PDG.60003.00	PTO Drive Sheave	1
7	NB.13.116	M6-1.0x20 Socket Flat Head Cap Screw	6
8	NB.50.143	Hardened Pin M8x26	1

	PDG.6A009.00	PTO Assembled	1	٦
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	PTO Assembly Supplemental			
	5	NB.12.219	Red LocTite 263	1
Ī	7	NB.13.116	Red LocTite 263	6



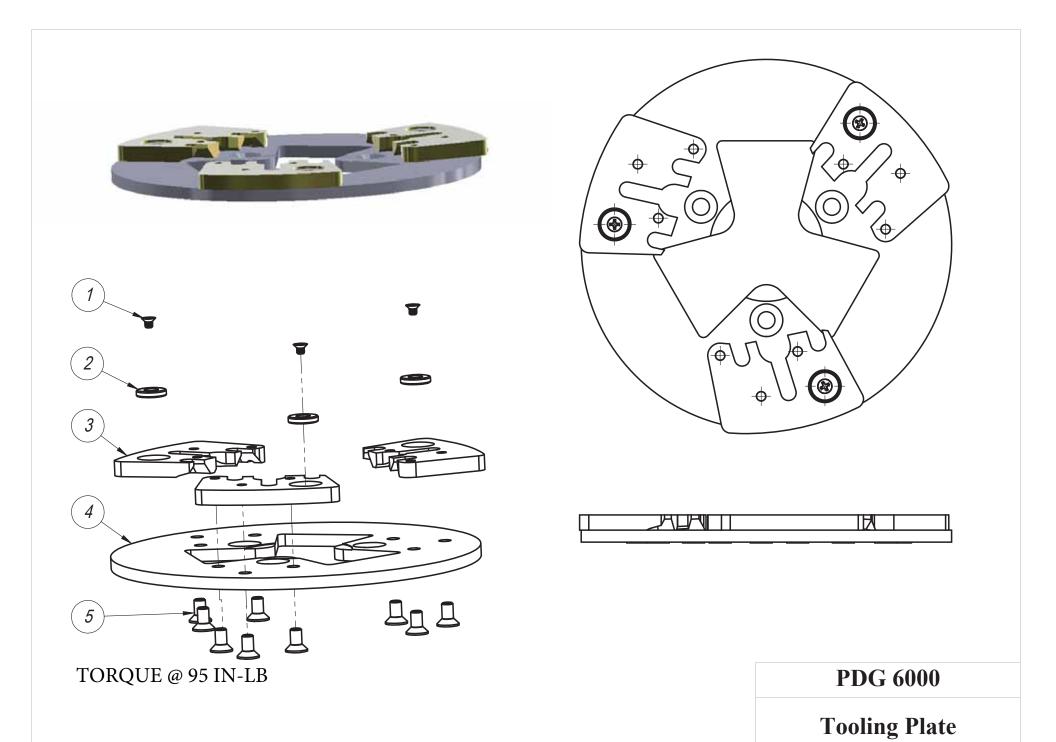
PDG 6000 FLEX HEAD			
Item No.	Part No.	Description	Quantity
1	PDG.20103.00	YOKE, SUSPENSION	4
2	PDG.20109.00	BUSHING, YOKE	4
3	PDG.20102.01	ELEMENT, CENTER STUDDED	1
4	PDG.20100.50	PLATE, DRIVING	1
5	PDG.20101.01	PLATE, DRIVEN	1
6	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8 -1.25 X 20	8
7	PDG.20104.25	LOCK, SHAMROCK PLATE ASSEM	1
8	NB.13.216	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X 16	7
9	PDG.20106.25	POST, SPRING	4
10	PDG.20106.52	SPRING, DIE BLUE MEDIUM	4
11	NB.40.113	RING, EXTERNAL 1/2"	4

		PDG 6000 FLEX HEAD SUPPLEMENTAL	
		Insert bushing first. One side will be flush on the outter edge of metal sheath, one side	
1	PDG.20103.00	will protrude out on the outter edge of metal. The flush side faces the inward in the	4
		assembly.	
6	NB.13.218	Red LocTite 263	8
8	NB.13.216	Red LocTite 263	7

3

FLEX HEAD, WITH BLUE SPRING

PDG.6A010.00



SCALE: 1:2 | WEIGHT: | SHEET 1 OF 1

Tooling Plate			
Item No.	Part No.	Description	Quantity
1	NB.13.110	SCREW, M4 X 6 FLAT HEAD PHILLIPS S/S	3
2	PDG.20295.00	MAGNET, 5/8" OD X 1/8" THICK WITH CS HOLE NORTH	3
3	WHOL.904132	QCS METAL BOND ADAPTERS FOR MAGNET	3
4	PDG.60071.00	PLATE, TOOLING 6000 /PDG6K	1
5	NB.13.118	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 12 ZINC	9

Tooling Plate			
1	NB.13.110	Green LocTite 609	3
5	NB.13.118	Red LocTite 263	9

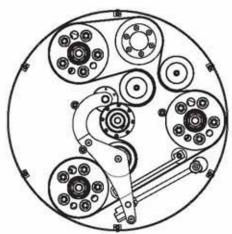
BELT TENSIONS

100±5 Hz

THESE SHEAVES ARE LOCATED ON THE TOP PLATE ASSEMBLY 7

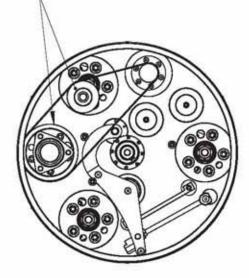
107±7 Hz

204±8 Hz

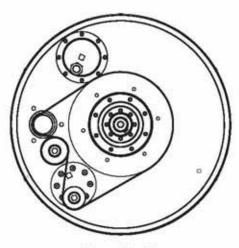




5



PTO Belt PDG.60057.00



Top Belt PDG.60058.00

PDG 6000

Belt Paths

SCALE: 1:10 WEIGHT: 90kg | SHEET 1 OF 1

3 2



Prior to any repair work on the machine and its drives, secure the machine against unintentional powering on.

Problem	Possible cause	Remedy	
Excessive	Imbalance due to worn or broken grinding tools.	Replace all worn or broken parts.	
Vibration	Screws worked loose on the grinding disc.		
		Tighten the countersunk head screws on the grinding disc.	
Unusual noises	Defective bearing. Wrong tension of the V- belt.	Check the bearing on the axle drive shaft and replace if neces-	
	Defective motor bearing.	sary.	
	Debris deposit on the cou-	Check the tension of the V-	
	pling.	belt; replace the V-belt if necessary.	
		j	
		Change the motor. Clean the coupling.	
Reduced or no	Grinding tools have reached the maximum permissible	Replace the worn parts.	
grinding per- formance	wear. Inappropriate grinding		
	tool for the application.	Replace the grinding tools with	
	Not enough tension on the	appropriate tools for the surface to be treated.	
	V-belt.		
		Re-tension the V-belt.	

Work on electrical equipment may only be undertaken by a skilled electrician or by a trained person under the supervision of an electrician, as well as in accordance with the local electrical engineering regulations.





Propane Safety Checklist

Applies to: Propane PDG8000, Propane Bull1250, Tri-Force, Burnisher, Hurricane, Lightning, and Twister

Start and Operation

- O Gas on/ off
- O Power on/ off
- O Choke on/off, if applicable
- O Throttle on/ off
- Emergency stop
- O Check oil level and air filter before starting
- O Keep nuts and bolts tightened and hose connections snug as applicable
- O Proper tilting of machine, if applicable

Maintenance

- O Air filter cleaning/ replacement
- O Oil filling/ changing
- O Owner's manual

Safety of Propane Cylinders

- O Owner's manual
- O Do not smoke or use any device with an open flame when handling, filling or transporting propane cylinders.
- O 20-lb. propane outdoor grill cylinders are not legal for use on propane floor care equipment.
- O Vapor powered machines do not have an evaporating system and will freeze up if liquid propane is introduced.
- O Always wear gloves when filling a propane cylinder. Propane boils at -44 degrees F (-42 degrees C).
- O Store cylinders outside in an upright position in a secure, tamper-proof, steel mesh storage cabinet.
- O There must be at least 5 ft (1.5 m) of space between the cabinet and the nearest building opening, like a door or window.
- O Do not store cylinders inside a building or vehicle.
- O Avoid dropping or banding cylinders against sharp objects.
- O Any cylinder that has ever been filled is always considered full. The only time that a cylinder is considered empty is when it is new, before it is filled with propane.
- O When transporting a propane powered machine, the propane cylinder may be strapped onto the machine as long as the machine itself is firmly secured in the vehicle.
- O When transporting, the cylinders, if not strapped onto the machine, should be securely fastened and standing in an upright position with the service valve closed.



- O Always install propane cylinders onto machinery in a well-ventilated area with no source of ignition within 10 ft (3 m).
- O Use only UL, CTC/ DOT listed cylinders, like the EnviroGard Safe-Fill cylinder.
- O Never leave the machine running unattended.
- O Operate in a well-ventilated area.
- O If you smell gas:
 - O Do not operate appliances, telephones, or cell phones. Do not turn lights or flashlights on or off. Flames or sparks from these sources can trigger a fire or explosion.
 - o Evacuate the area immediately.
 - Shut off the gas if it is safe to do so.
 - o Report the leak from a safe location.
 - o Do not return to the building until you are told it is safe to do so.

Emissions Awareness

SAFETY WARNING!

Carbon Monoxide can cause severe nausea, fainting, or death. Do NOT operate engine in closed or confined area without proper ventilation.

- O Carbon Monoxide (CO) poisoning can be caused by excessive exhaust emissions. The symptoms include headache, dizziness and nausea. Causes include:
 - o Engines with poor preventative maintenance practices, usually those with dirty air filters.
 - o Machines operated in confined areas without adequate ventilation.
 - Substandard machines with no emissions control technology and improperly set carburetion.
- O CO is an invisible, odorless, colorless gas.
- O CO can be lethal within as little as 30 minutes exposure at 3,000 part per million (ppm).
- O The Canadian Gas Association (CGA) has set a limit of 1,500 ppm CO in exhaust flow.
- O The Occupational Safety and Health Administration (OSHA) has established a limit of 35 ppm CO for an 8-hour time weighted average in ambient air and is considering a limit of 800 ppm CO in exhaust flow.

PPM	Risk	
9	CO Max prolonged exposure (ASHRAW standard)	
	CO Max exposure for 8 hour work day (OSHA	
35	standard)	
800	CO Death within 2 to 3 hours	
1,500	CO limit in exhaust flow per CSA standard (Canada)	
12,800	CO Death within 1 to 3 minutes	



Acknowledgement

on behalf of			
(Print Name)			
(Company Name)	and future operators, hereby acknowledge that I	have been	
trained on the proper operation of the	(Equipment Purchased)	as per the	
checklist above. In addition, I have care	fully read and have been instructed on the safety	and hazards of	
operating a propane powered machine.			
Signature	Date		

PLEASE FILL OUT IN FULL AND SUBMIT TO: SASE COMPANY, INC. 2475 STOCK CREEK BLVD. ROCKFORD TN, 37853

FAX: 865.745.4110 OR EMAIL: JohnA@SASECompany.com



MANUFACTURER'S WARRANTY POLICY

Included in this warranty are the following pieces of equipment:

Planetary Diamond Grinders: PDG 8000, PDG 6000, PDG 5000, Edge Pro 180

Dust Extractors: Bull 1250, Bull 300, Bull 45

Scarifiers: SC12E, SC10E, SC8E

Our Commitment to our customer:

SASE Company ("SASE") equipment is warranted to be free of defects in workmanship and materials for a period of one (1) year from original date of purchase. In the event that you should have a claim SASE shall repair, replace or remedy the defective parts resulting from the faulty design, materials or workmanship. Note: This warranty is only valid for equipment either sold by SASE or by an authorized wholesaler or distributor.

Limitations:

- Warranty does not apply to cosmetic damage, damage due to lightning, electrical surges, fire, flood, or other acts of God, accident, misuse, abuse, repair or alteration by other than factory service (unless service center was approved in writing by SASE), negligence, or improper or neglected maintenance as recommended by SASE.
- Common wear parts, such as belts, bearings, seals, filters, dust skirts, wheels, etc., are exempt from warranty.
- SASE is not responsible for loss of income or down time as a result faulty design, materials or workmanship.
- Warranty coverage is valid once a warranty registration card is filled out and returned to SASE.
- A \$100 labor charge may be assessed on the items returned for warranty repair in which no fault is found. Freight charges and associated fees will then become the responsibility of the customer in such an instance.
- Damages which are caused during transportation are not covered under warranty. Such damage claims should be filed with the freight carrier

Claims:

In the unlikely event that you should experience a defect please contact your SASE representative or a SASE service technician by calling 1.800.522.2606. Please have all pertinent information readily available such as, invoice with date of purchase, model and serial number, and an explanation of the issue. SASE will respond immediately with a corrective action.

Freight responsibility for approved warranty claims:

If the piece of equipment was purchased within 90 days of warranty claim, SASE will arrange for ground freight and will assume all ground freight charges to send the customer the parts required or to send the equipment to an authorized SASE repair center. This includes inbound and outbound ground freight and all fees (duties, fuel surcharges) associated with the shipment.

If the piece of equipment was purchased beyond 90 days and prior to one (1) year of warranty claim, SASE will cover 50% of all ground freight charges, including inbound and outbound freight and all fees (duties, fuel surcharges) associated with the shipment.



PRODUCT & WARRANTY REGISTRATION

WARRANTY IS VOID IF NOT RETURNED AND REGISTERED WITH SASE WITHIN 30 DAYS OF PURCHASE

COMPANY					
NAME AND TITLE					
STREET ADDRESS					
CITY	STATE	ZIP	COUNTRY		
PHONE EMAIL					
DATE OF PURCHASE	PATE OF PURCHASE SERIAL NUMBER				
INVOICE NUMBER OF PURCHASE					
PDG 8000 PDG 6000 PDG 5000 EDGE PRO 180 SC8E					
SC10E	SC12E BULL	1250 BULL 300	BULL 45		

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QUESTIONS? CALL 800.522.2606