PDG 6000 Manual

SASE Company LLC
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SASECompany.com

Machine: 4600+
From: 4/4/2023

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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.

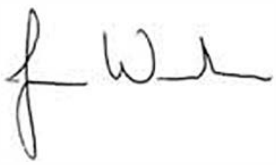
SASE has made great strides in the concrete preparation and polishing industry over the years. With a 40,000 square foot distribution and service facility in Seattle, a 22,000 square foot distribution and service facility in Knoxville, and local sales and technical support representatives throughout 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

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.

1. Chassis/Frame section – This comprises the handle bars, body panels, Propane tank, Steel frame and wheels.
2. 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.

Kill Button

This will stop the drum immediately, in case of an emergency. Do not use the kill switch for every day use. The VFD is taking the brunt of that stopping force.

Reset Button

Whenever the machine has a Fault, the reset button will clear that Fault. If the Kill switch is activated, the machine will have a fault always.

Potentiometer

The potentiometer controls the speed of rotation.
The lowest setting is at 540 RPM.
The highest setting is at 1750 RPM.

Directional Control

Directional control, changes the direction the drum is rotating. The middle selection is similar to an OFF position. Turn the switch to the middle when grinding is complete, or when changing tooling.
Direction changes are also acceptable while grinding.

Light Switch

This switch controls the light system.
This will assist with inspecting the finished concrete as you pass over.

USB charging ports

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

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

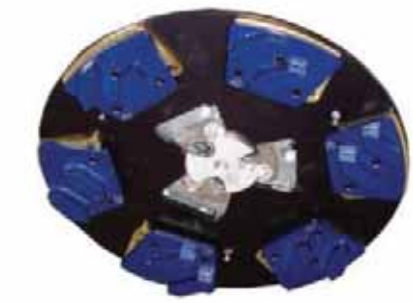
It is highly recommended to have a set of gloves ready, as diamonds can get very hot, especially during dry grinding applications.

Changing

1. Set handle in upright position.
2. Pull back on handle to lift grinding head off the ground (Illustrated middle right).
3. Lay machine back on the ground
4. Put on gloves.
5. Remove grinding disc from flex plate.
6. Check to ensure that all discs are secure.
7. Once new diamonds have been attached, reverse procedure to lower machine to ground.
8. 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

Hearing protection

Dust Mask

Protective goggles

Non-slip boots with steel toe

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

Very soft bond segment for grinding 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

Torque Conversion Chart

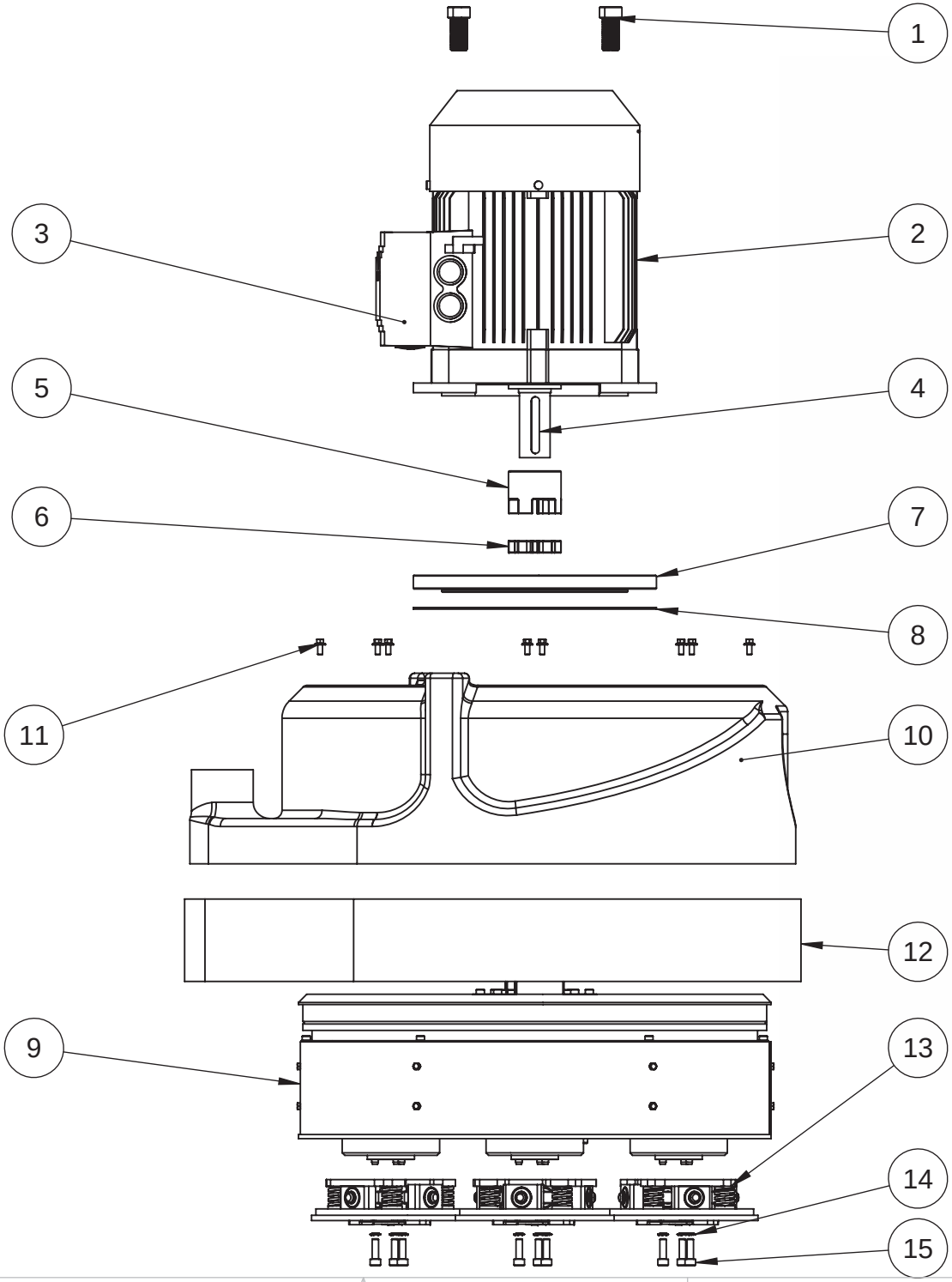
1 ft.-lbs. = 1.3556 N.-m.

35	ft-lb	=	47.5	N-m
40	ft-lb	=	54.2	N-m
60	ft-lb	=	81.3	N-m
80	ft-lb	=	108.5	N-m

Basic Torque Reference

Thread Size	Socket Head Cap	Flat Head Socket Low Head Socket	Hex Head Flanged Hex Head
5 mm	88 in*lb	54 in*lb	76 in*lb
6 mm	12 ft*lb	8 ft*lb	11 ft*lb
8 mm	30 ft*lb	19 ft*lb	26 ft*lb
10mm	60 ft*lb	38 ft*lb	52 ft*lb

The torque reference should be thought of as the guide for the max force on a fastener. Not all cases will require max force. Example, If the fastener is holding a bearing max force should not be applied.



PDG 6000

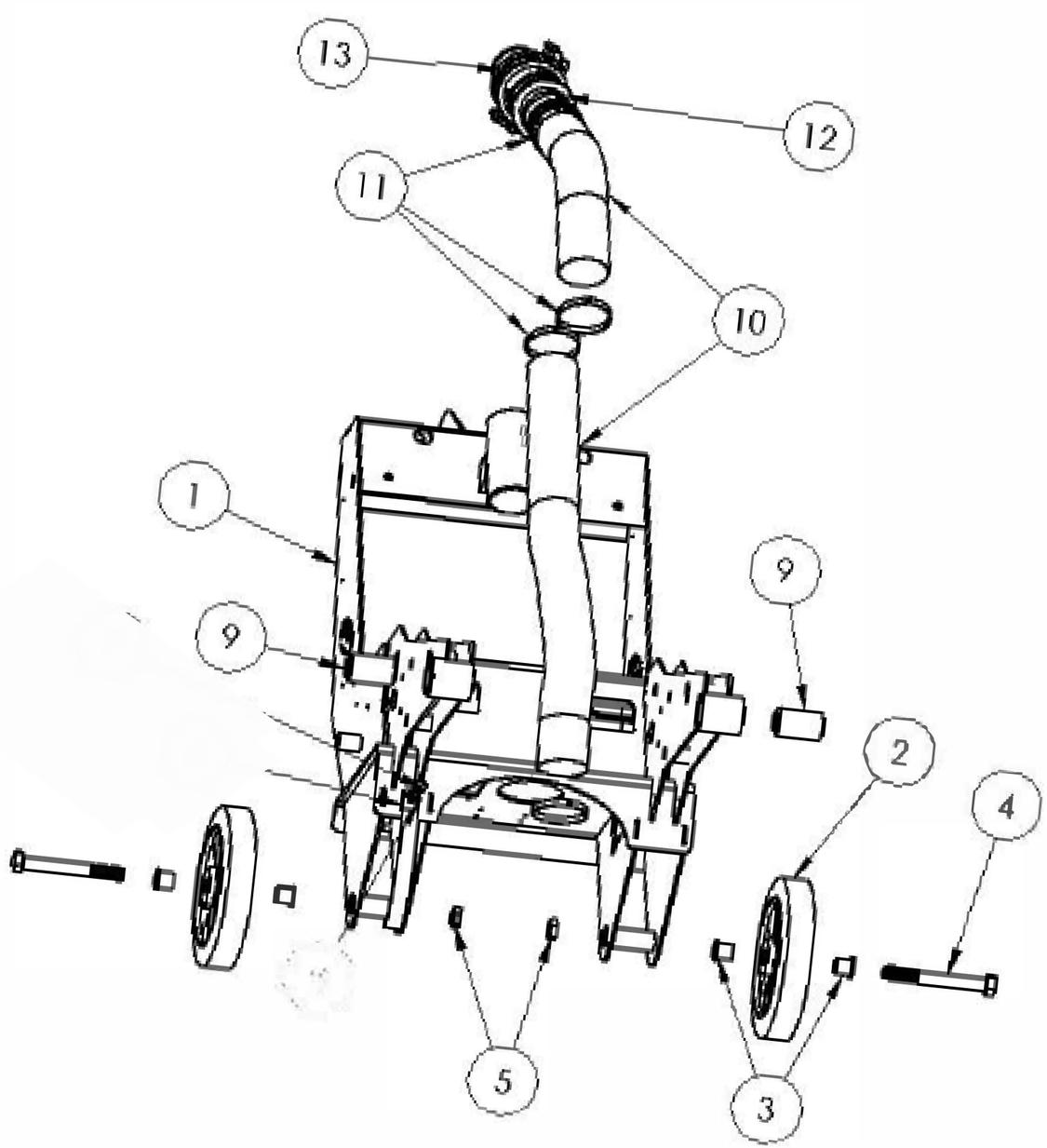
Motor on Drum

SCALE: 1:1	WEIGHT:	SHEET 2 OF 2

Motor on Drum			
Item No.	**Part No.**	**Description**	**Qty.**
1	NB.12.269	SCREW, SOCKET HEAD CAP M14-2.0 X 45 ZINC	4
2	HOL.U11898	MOTOR, 535 230-460V 10KW 50-60HZ	1
3	NB.60.108	LUG, TERMINAL 8 AWG #10 STUD	4
4	NB.70.108	KEY, PARALLEL	1
5	PDG.60063.00	COUPLER, CJ28/38 LOVEJOY	1
6	PDG.60064.00	SPIDER, CJ28/38 GEAR	1
7	PDG.60077.01	SPACER, MOTOR	1
8	PDG.60048.25	GASKET, MOTOR, RUBBER	2
9	PDG.60210.00	DRUM, COMPLETE	1
10	PDG.60038.00	SHROUD, MOLDED VACUUM	1
11	NB.11.108	SCREW, FLANGED SOCKET HEAD CAP M6x16mm	8
12	PDG.60062.00	SHIELD, RUBBER DUST	1
13	PDG.6A010.00	FLEX HEAD, COMPLETE WITH BLUE SPRINGS	3
14	NB.30.212	WASHER, LOCK M8 ZINC	9
15	NB.10.218	SCREW, SOCKET HEAD CAP M8-1.25 X 25 12.9 ZINC	9
16	PDG.60433.00	LIGHT, KIT	1
17	PDG.60314.00	BRACKET, LIGHT MOUNT	1
18	Part of #2	MOUNTING HARDWARE(COMES WITH EACH MOTOR)	x
19	PDG.20099.00	WATER SYSTEM	1

Motor on Drum			
1	NB.12.269	Blue LocTite 243, Torque 50 ft-lbf	4
3	NB.60.108	Add 'Anti-Ox' to motor wire just before crimping.	4
5	PDG.60063.00	Blue LocTite 243, on the set screw.	1
8	PDG.60048.25	Spray adhesive one side, stick to the bottom of #7, be sure to line up the bolt holes	1
9	PDG.60210.00	EPDM seal around #10	1
11	NB.11.108	Butyl Flex	8
15	NB.10.218	Blue LocTite 243	9

#1 updated for new motor swap. Siemens motor will still use NB.12.266.
Single phase 230 V uses NB.12.269 as well.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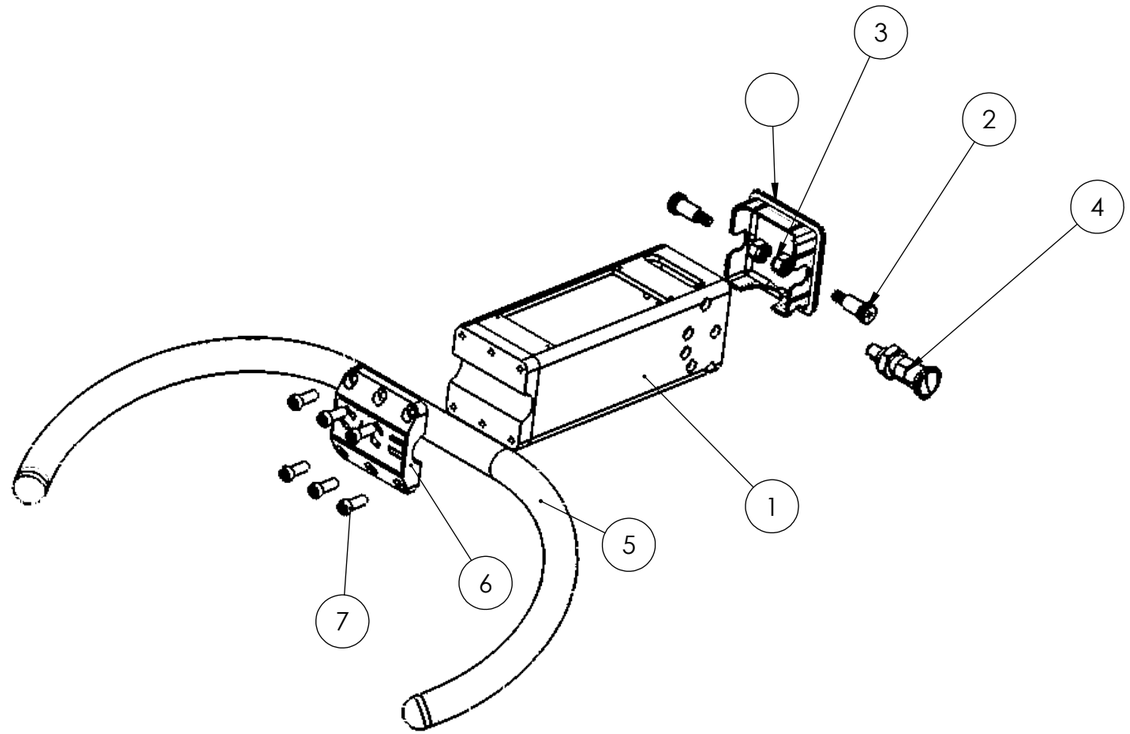
Item #	Part #	Description	Qty.
1	PDG.60300.00	Frame, PDG 6000	1
2	PDG.45077.00	Wheel, PDG5000	2
3	PDG.20255.60	Bushing, 5K Axle	4
4	NB.10.253	Screw, Hex Head Cap M20-2.5 x 160	2
5	NB.20.110	Nut, Jam M20-2.5	2
9	PDG.60330.00	Bushing, OD1.77 x ID.625 x 3	2
10	VAC.HS3.00050	Hose, Black PDG vacuum 3.0” ID	~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

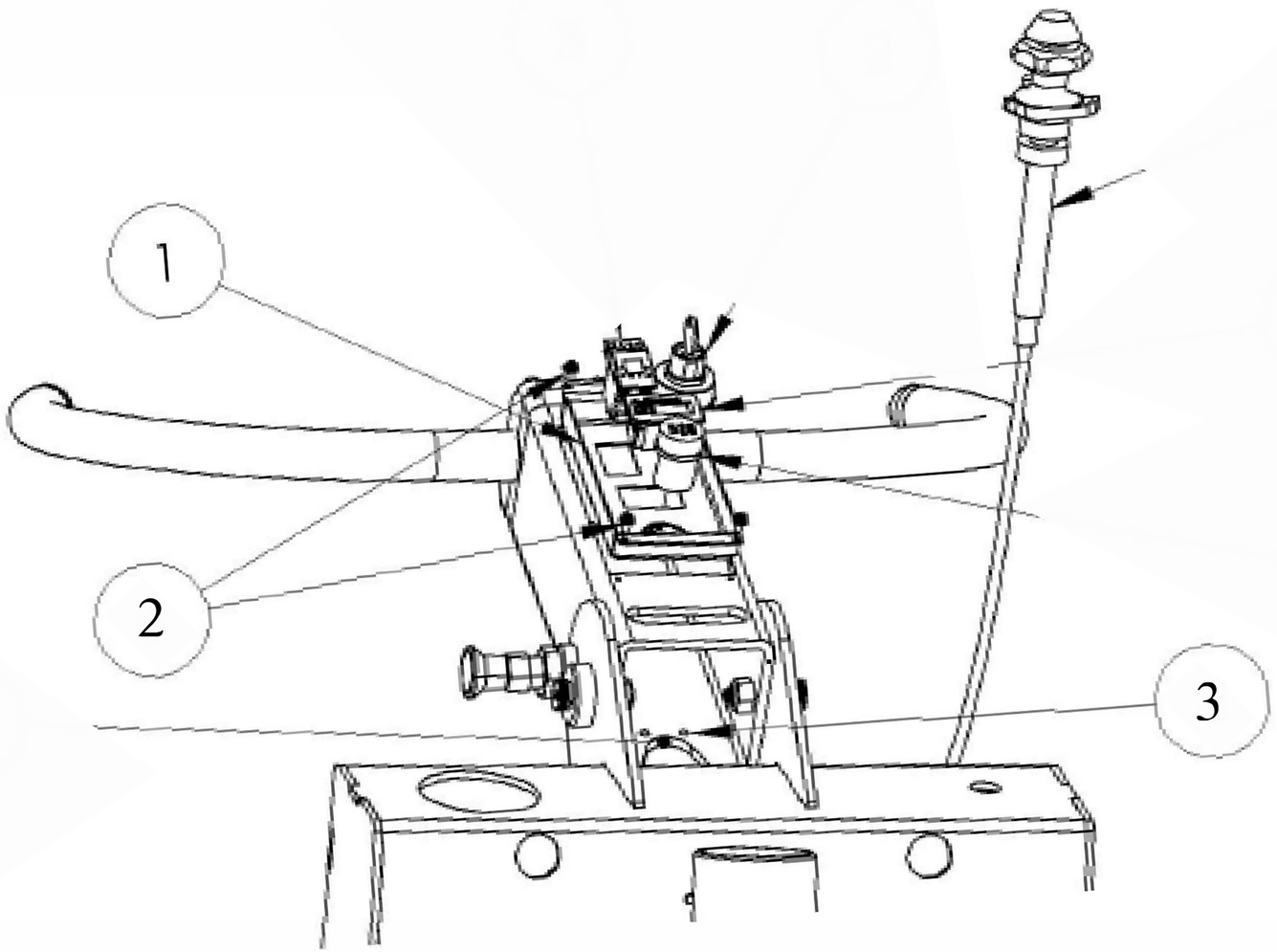
#10 Is split into 2 parts. The upper section is 22 inches, and the lower is 33 inches.



SASE COMPANY, LLC
26423 79TH AVE S, KENT, WA 98032

SCALE: NONE	WEIGHT: lbs	SHEET 1 OF 1

Item #	Part #	Description	Qty.
1	PDG.60303.00	STEM, HANDLE WELDMENT	1
2	NB.15.257	SCREW, SOCKET HEAD SHOULDER M16 X 30 M12-1.75	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	BAR, HANDLE WELDMENT	1
6	PDG.83526.23	CLAMP, HANDLE BAR	1
7	NB.12.219	SCREW, SOCKET HEAD CAP M8-1.25 X 25	6
8	PDG.20110.00	STRAP, VAC	1
9	NB.12.108	SCREW, SOCKET HEAD CAP M6 -1.0 X 12 ZINC	4
10	PDG.20242.00	CORD, GRIP	1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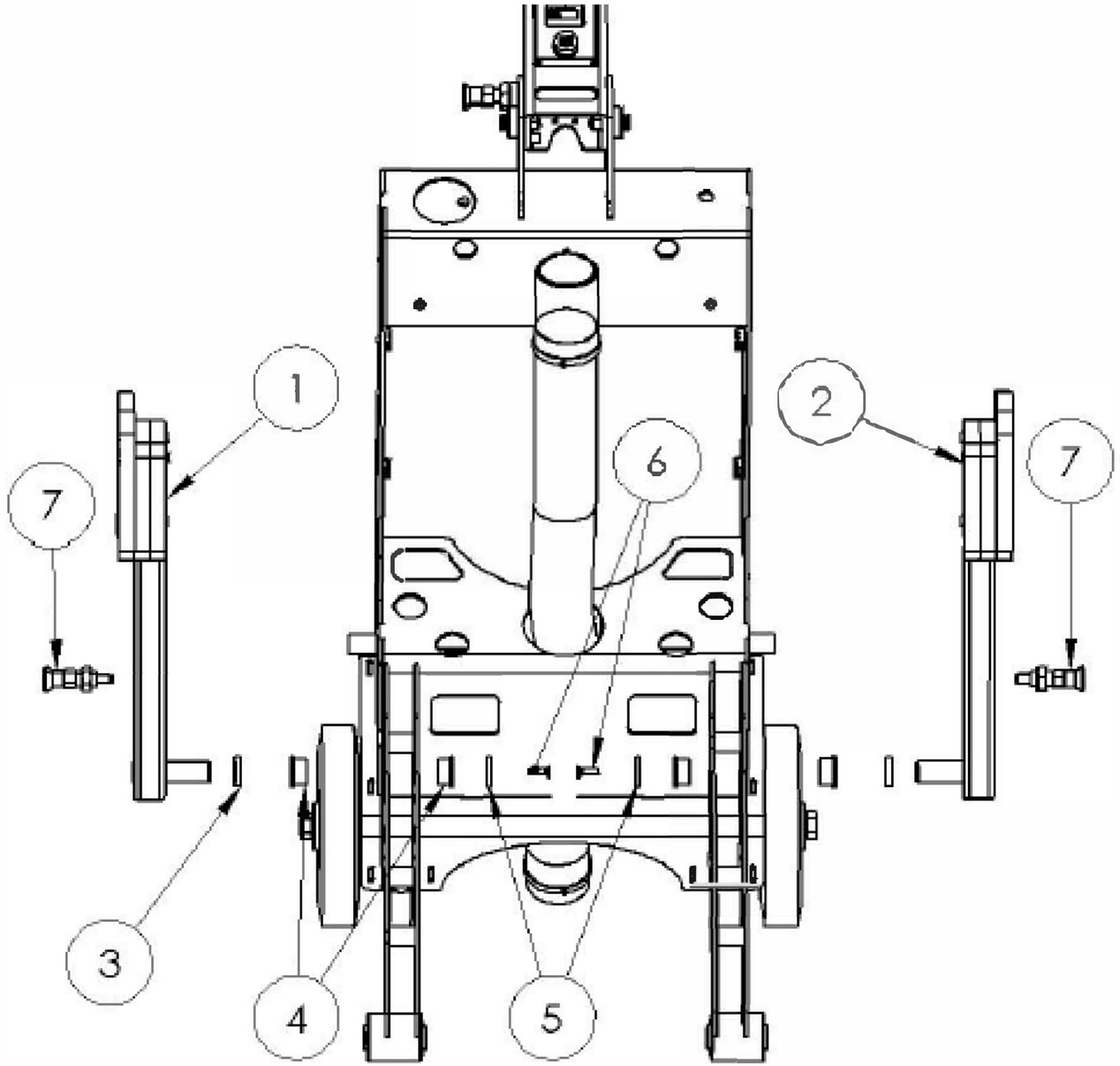
Item #	Part #	Description	Qty.
1	PDG.60304.00	Control Panel, PDG6000 Electric. Complete with harness.	1
2	NB.11.107	Screw, Flanged Socket Head Cap M4-0.7 x 8	4
3	795.00.12	Zip Tie (Not Pictured)	1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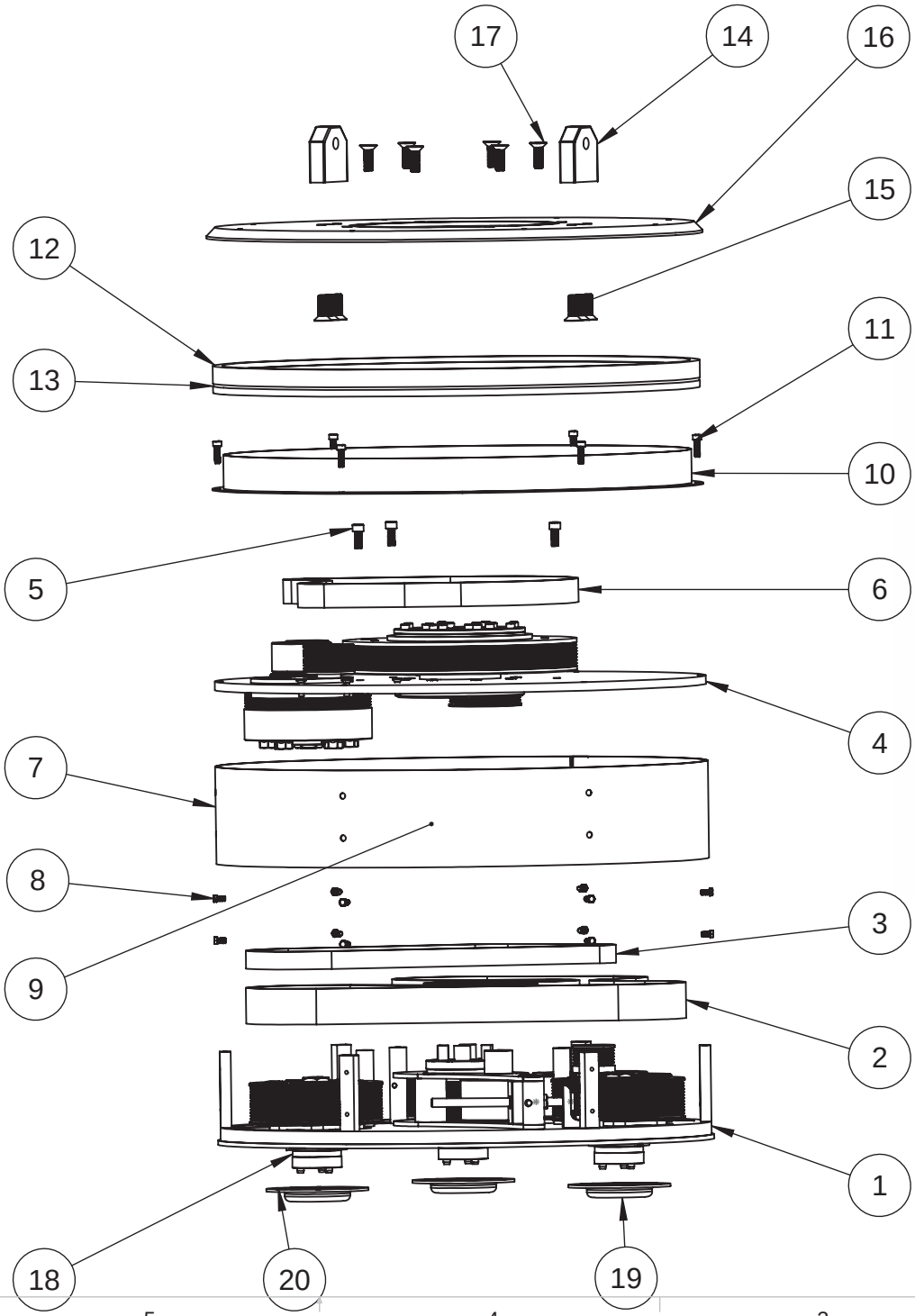
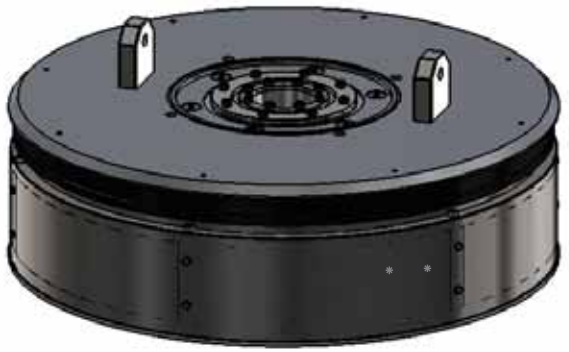
Item #	Part #	Description	Qty.
1	PDG.60301.00	Weldment, Left Swing Weight PDG 6KP	1
2	PDG.60302.00	Weldment, Right Swing Weight PDG 6KP	1
3	PDG.80307.02	Spacer, Wheel Axle Offset Adapter/ PDG8KP	2
4	PDG.60331.00	Bearing, Oil-Embedded Flanged Sleeve ID 1” x OD 1 ¼” x ¾”	4
5	PDG.80224.00	Washer, Retaining	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
8a	PDG.60192.25	VFD 460V-380V INVERTER	1
8b	PDG.60191.25	VFD 230V INVERTER	1
9	PDG.60313.00	COVER, PLASTIC ENCLOSURE	1
10	NB.16.120	SCREW, BUTTON HEAD M8-1.25x10	4
11	PDG.60041.00	TANK, WATER	1
12	PDG.60307.00	BRACKET, 6K WATER TANK	2
13	NB.19.310	SCREW, SELF TAPPING	2
14	PDG.60310.00	BRACKET, INVERTER	2
15	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	4
16	NB.13.116	SCREW, FLAT HEAD TORX M6 -1.0 X 20 ZINC	4





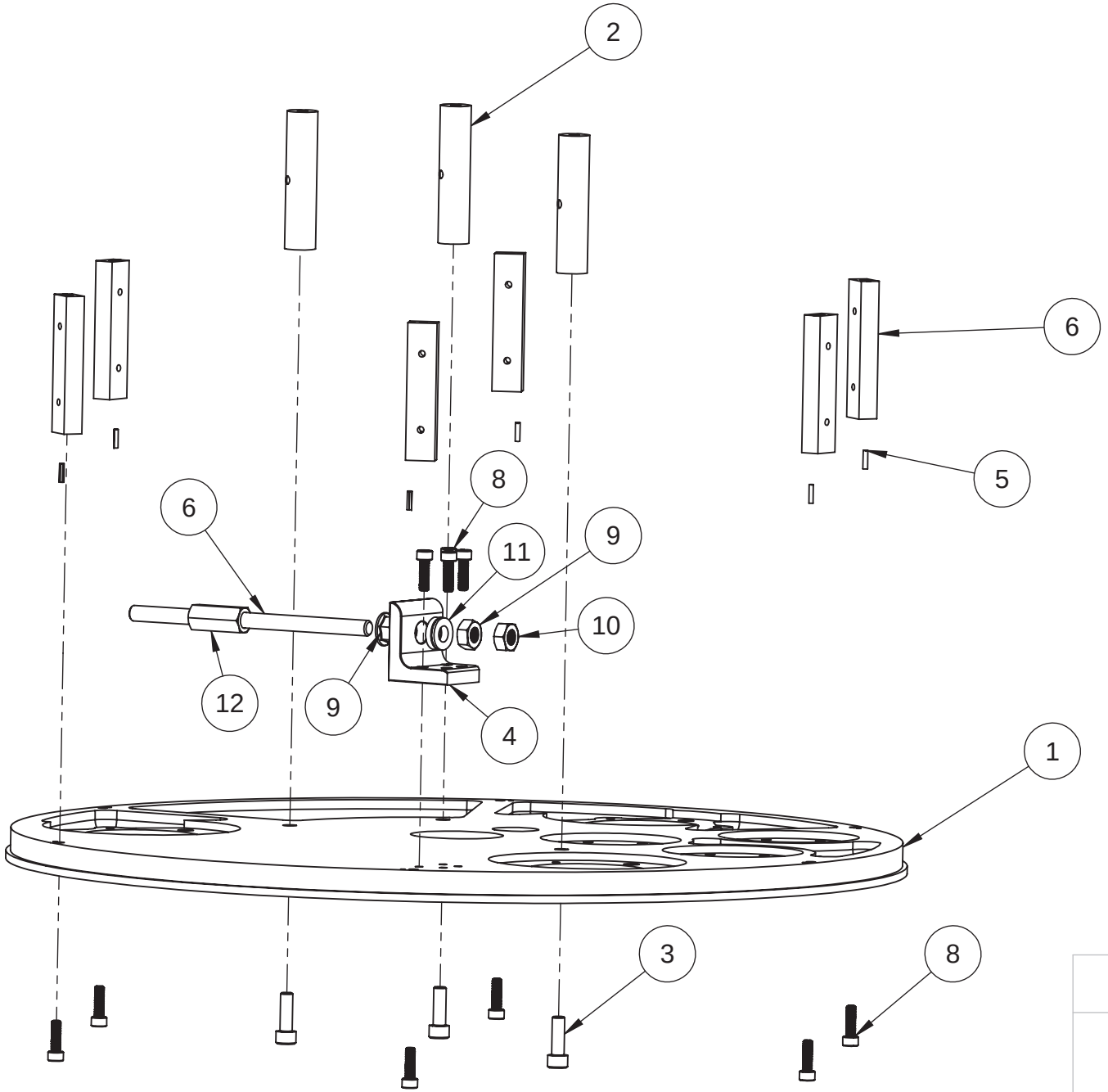
PDG 6000

Complete Drum

SCALE: 1:1	WEIGHT: 97.24	SHEET 1 OF 1

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



PDG 6000

Bottom Drum I

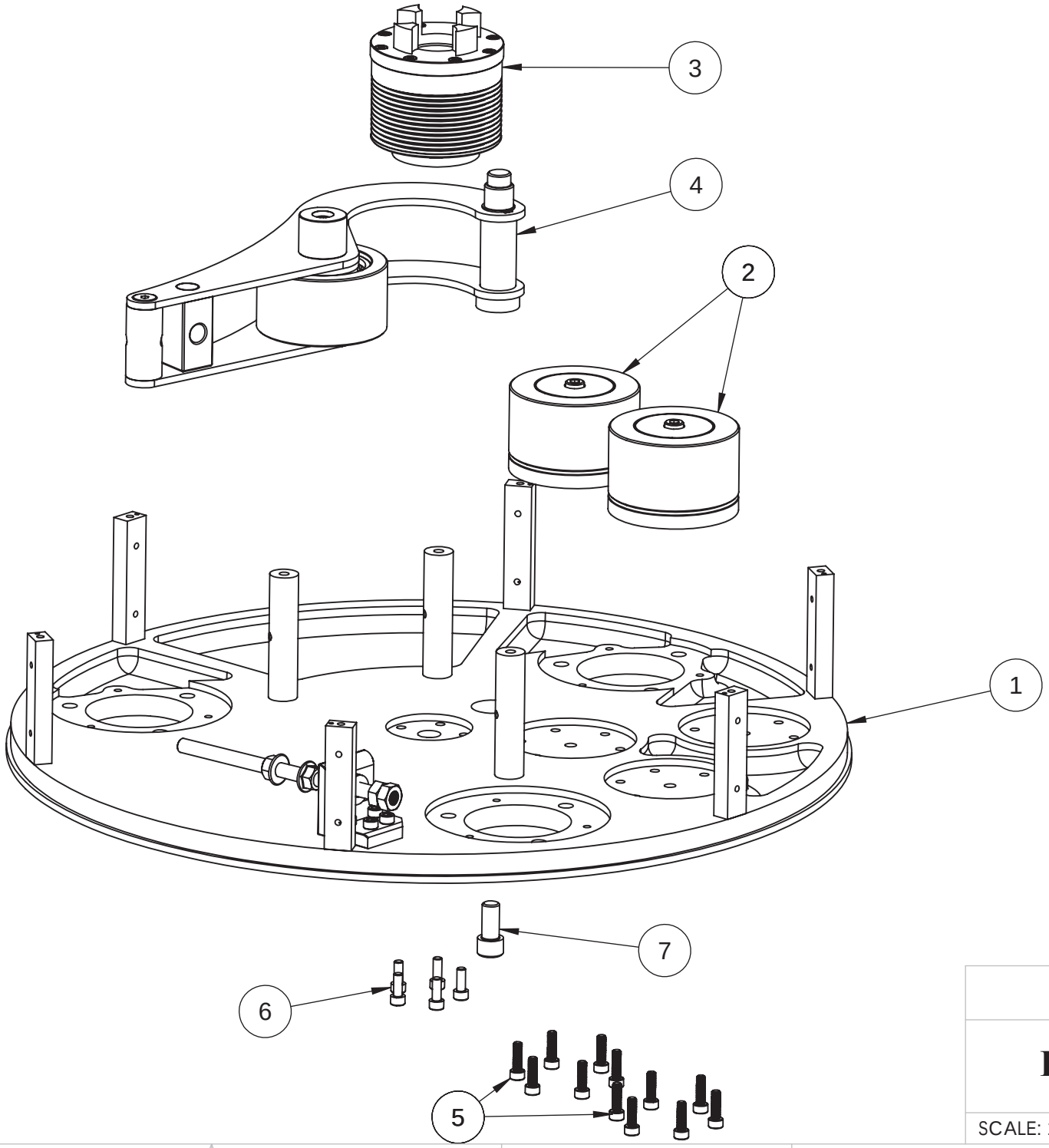
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1

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.12.117	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.



PDG 6000

Bottom Drum II

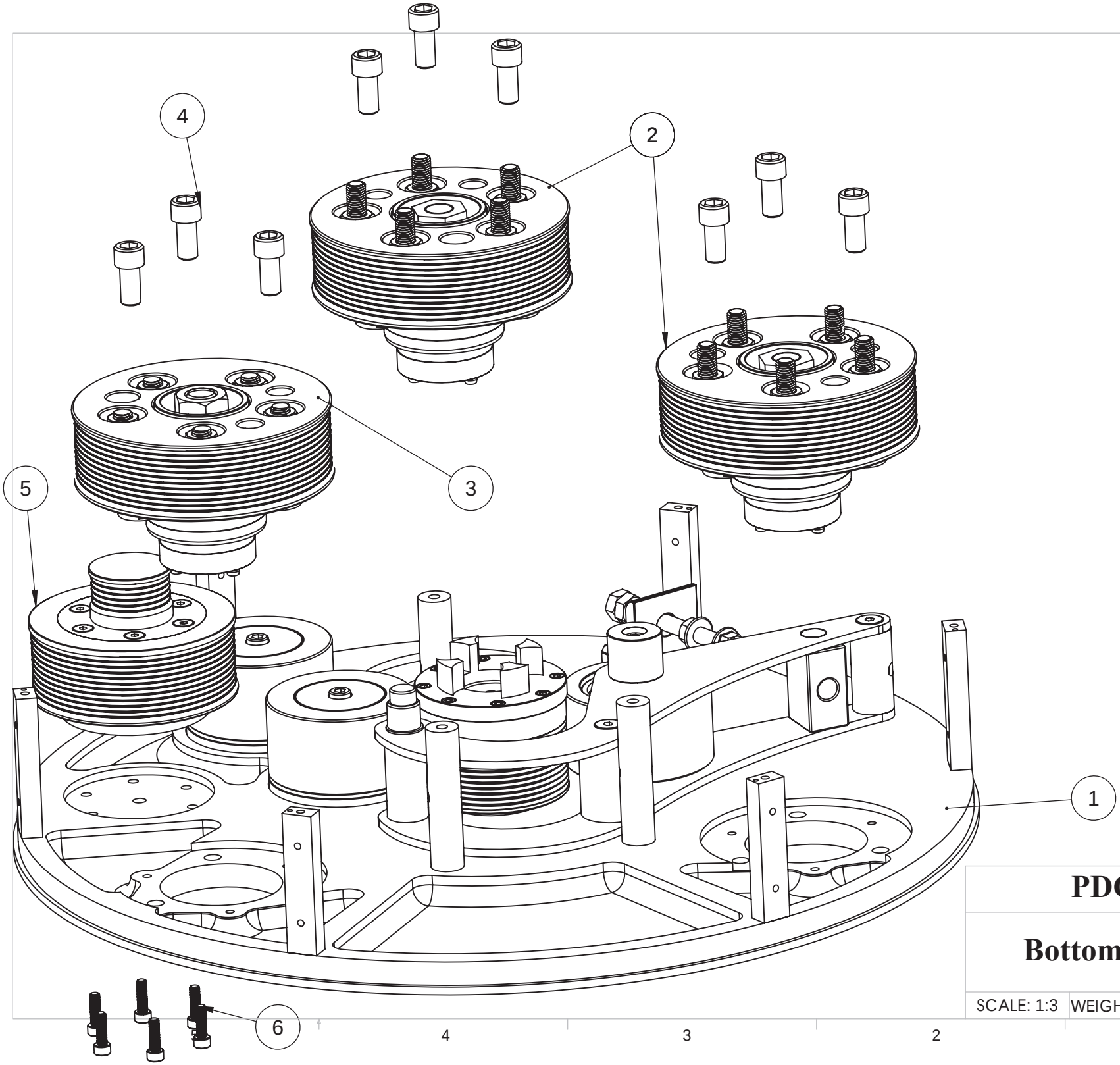
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1

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.12.111	SCREW, SOCKET HEAD CAP M6-1.0 X 16	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.12.111	Red LocTite 262	12
6	NB.12.111	Red LocTite 262	6
7	NB.12.232	Red LocTite 262	1

#1 may be from 20mm thick; up to 23mm thick. With 20mm NB.12.111 is used for #5, if the plate is thicker #5 could be NB.12.116
You need to test fit from the bottom to see if enough or too much thread is exposed.



PDG 6000

Bottom Drum III

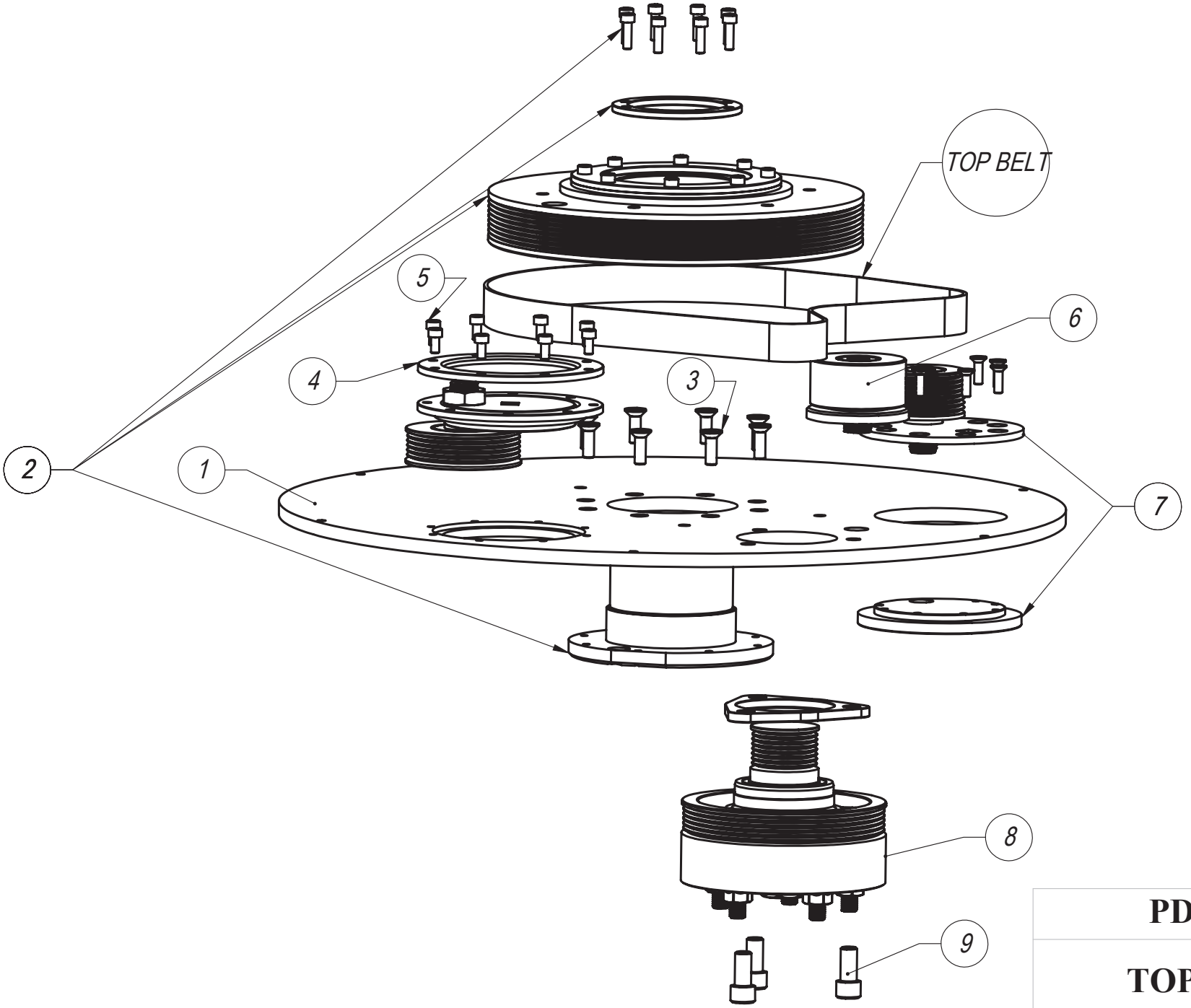
SCALE: 1:3	WEIGHT:	SHEET 1 OF 1

4 3 2 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.12.252	SCREW, SOCKET HEAD CAP M12-1.75 X 30 12.9 ZINC	9
5	PDG.6A009.00	SUBASSEM, PTO	1
6	NB.12.111	SCREW, SOCKET HEAD CAP M6-1.0 X 16 12.9 ZINC	6

Bottom Drum 3 Supplemental			
4	NB.12.25 2	Red LocTite 262, Torque 80 ft-lbf	9
6	NB.12.111	Red LocTite 262	6

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



PDG 6000

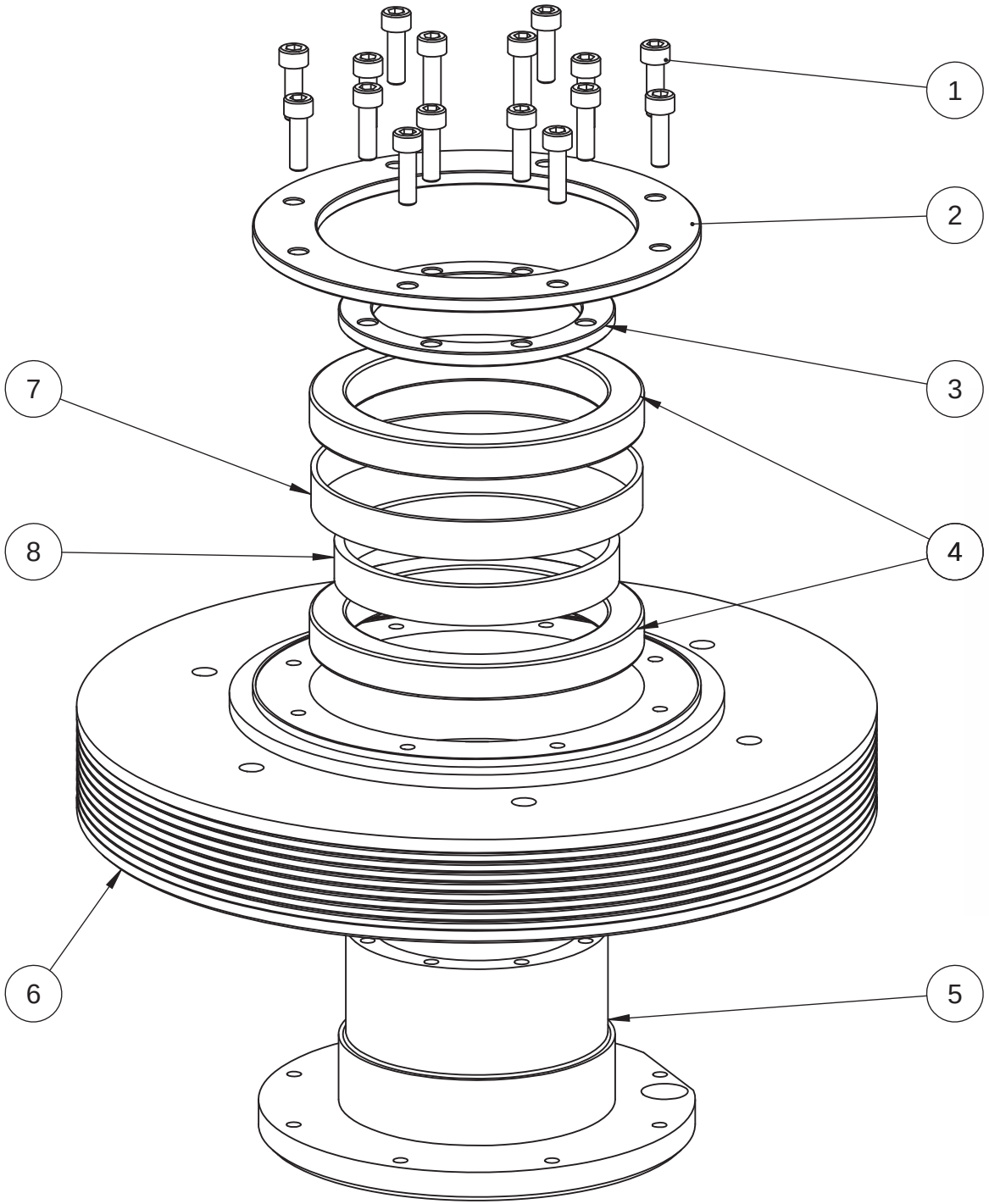
TOP PLATE

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

5 4 3 2 1

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 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



PDG 6000

Drum Sheave

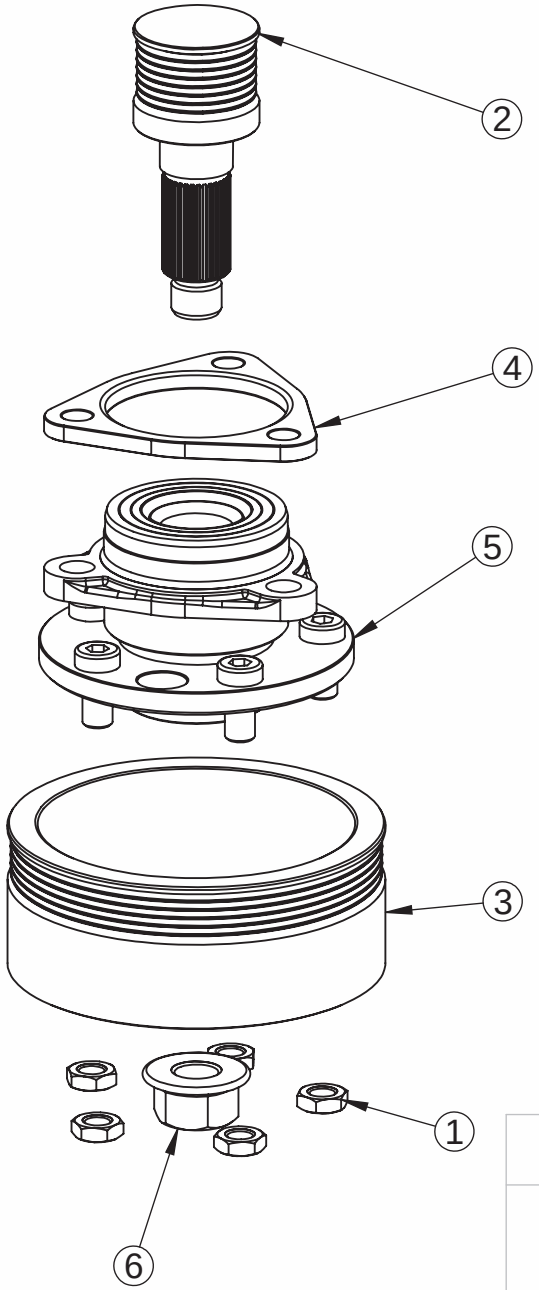
SCALE: 1:4	WEIGHT:	SHEET 2 OF 2

5 4 3 2 1

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'. Shown here for proper stack-up	8
3	PDG.60033.50		1
5	PDG.60030.00		1



PDG 6000

Intermediate Sheave Assembly

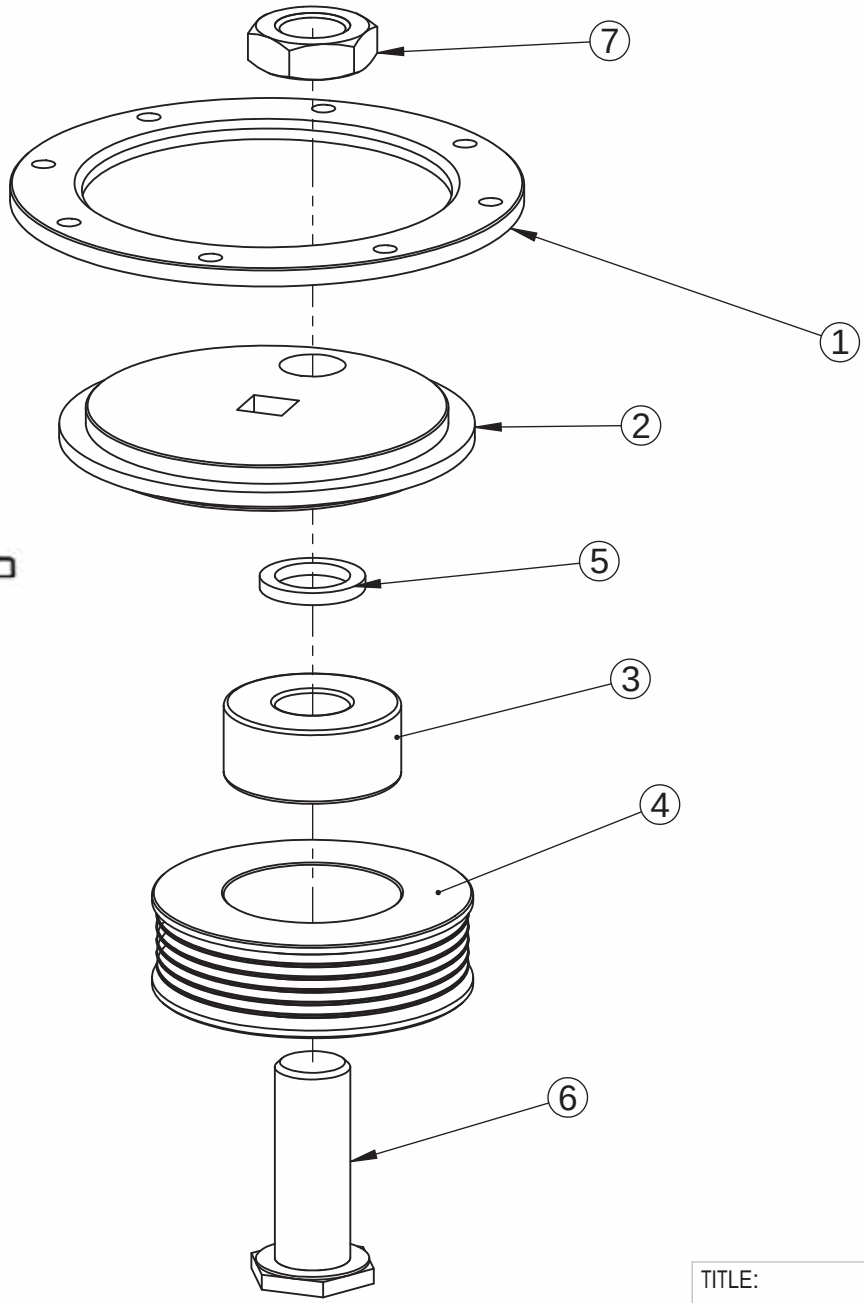
SCALE: 1:3	WEIGHT: 4.47kg	SHEET 1 OF 1

5 4 3 2 1

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**

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



TITLE:

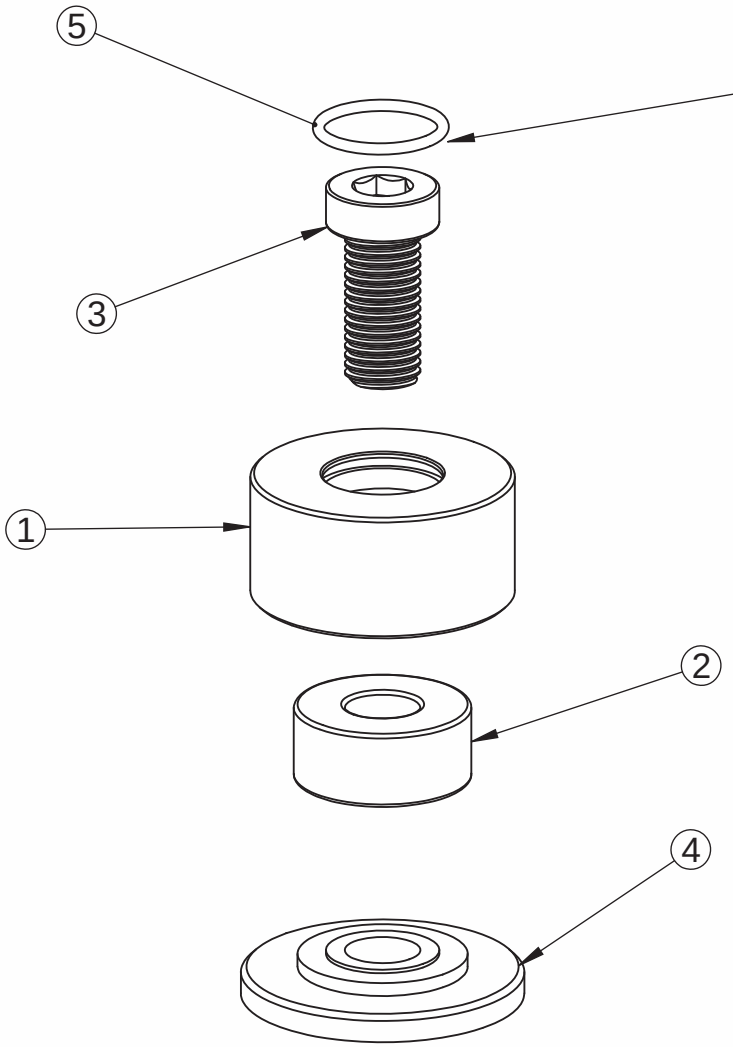
PTO Tensioner Assembly

SCALE: 1:2	WEIGHT: 1.99kg	SHEET 1 OF 1

5 4 3 2 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**

PTO Tensioner Assembly Supplemental			
6	PDG.20214.00	Red LocTite 263 for contact with #2, Torque 80 ft-lbf.	1
7	NB.20.110	Then, Red LocTite 263 on #6 for #7. Capture #6; Torque #7 to 80 ft-lbf.	1



PDG 6000

Top Belt Idler Assembly

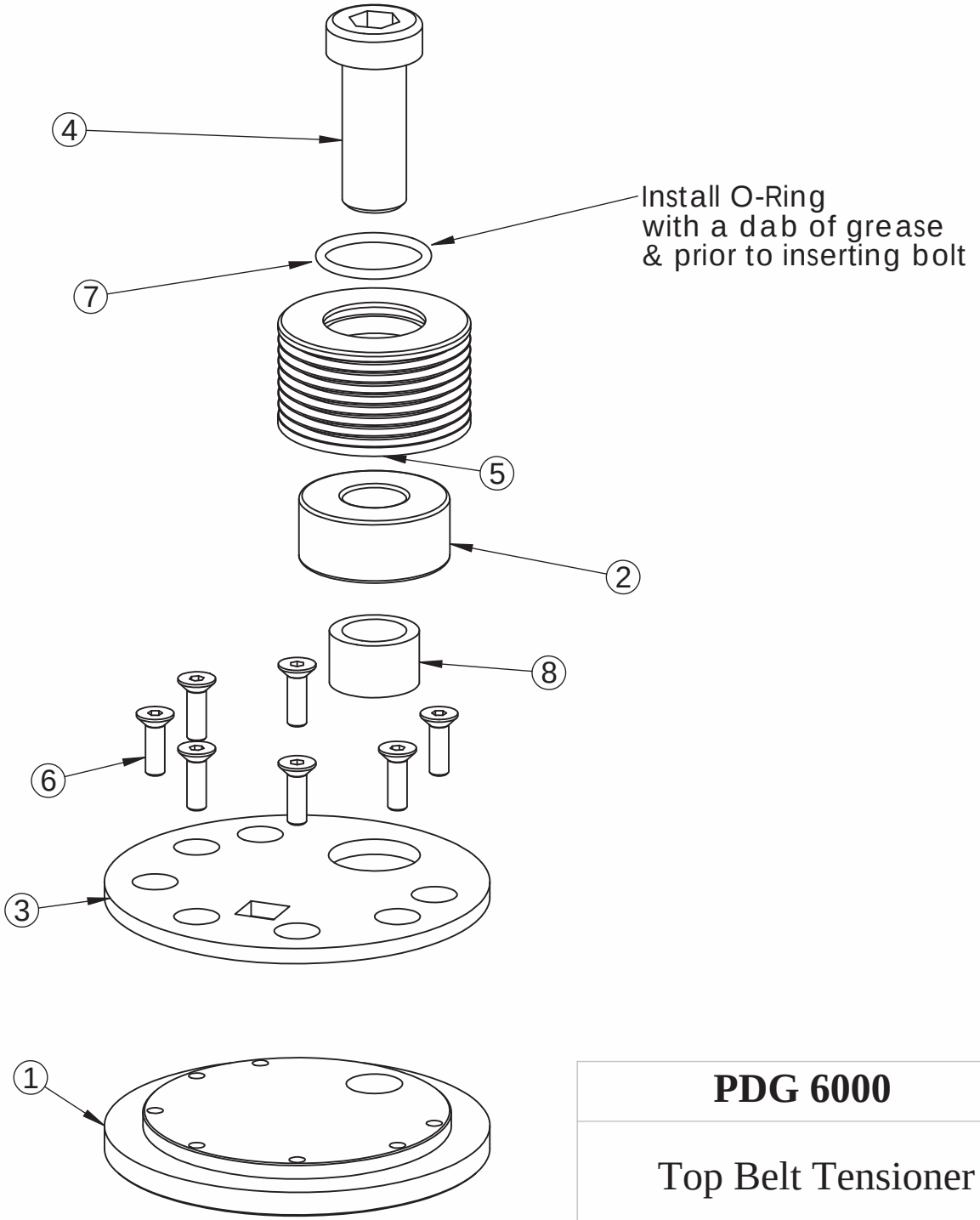
SCALE: 1:2	WEIGHT: .70kg	SHEET 1 OF 1

5 4 3 2 1

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**

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



PDG 6000

Top Belt Tensioner

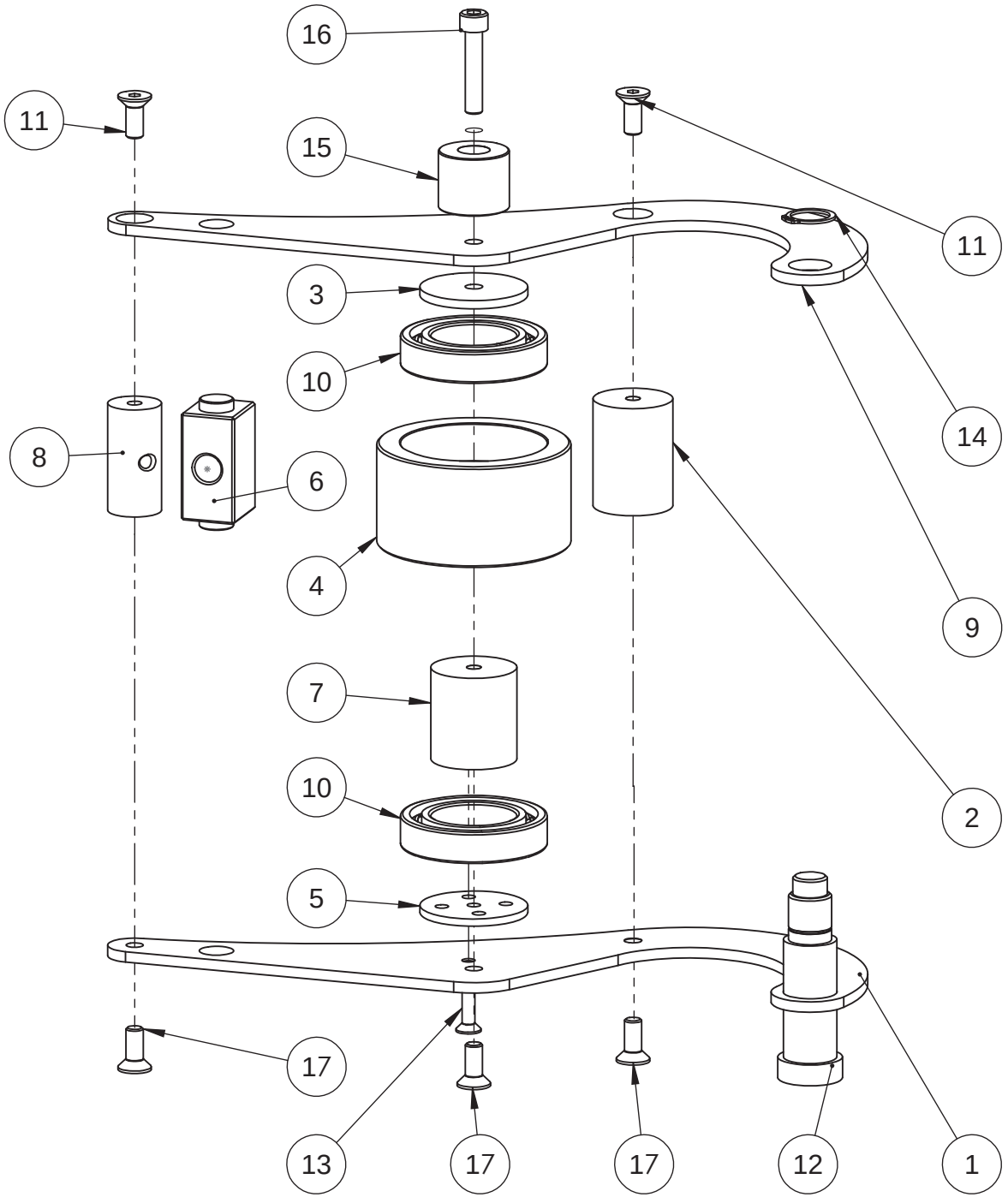
SCALE: 1:2 | WEIGHT: 1.92Kg | SHEET 1 OF 1

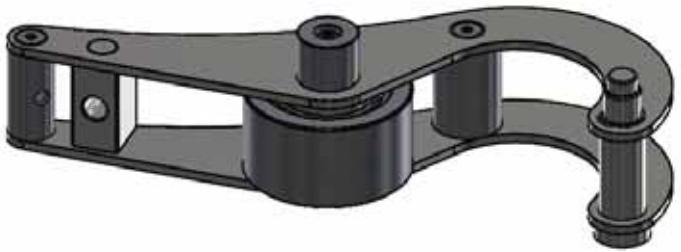
5 4 3 2 1

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

	PDG.6A004.00	**SUBASSEM, TOP BELT TENSIONER**	**1**

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





PDG 6000

Belt Tightener

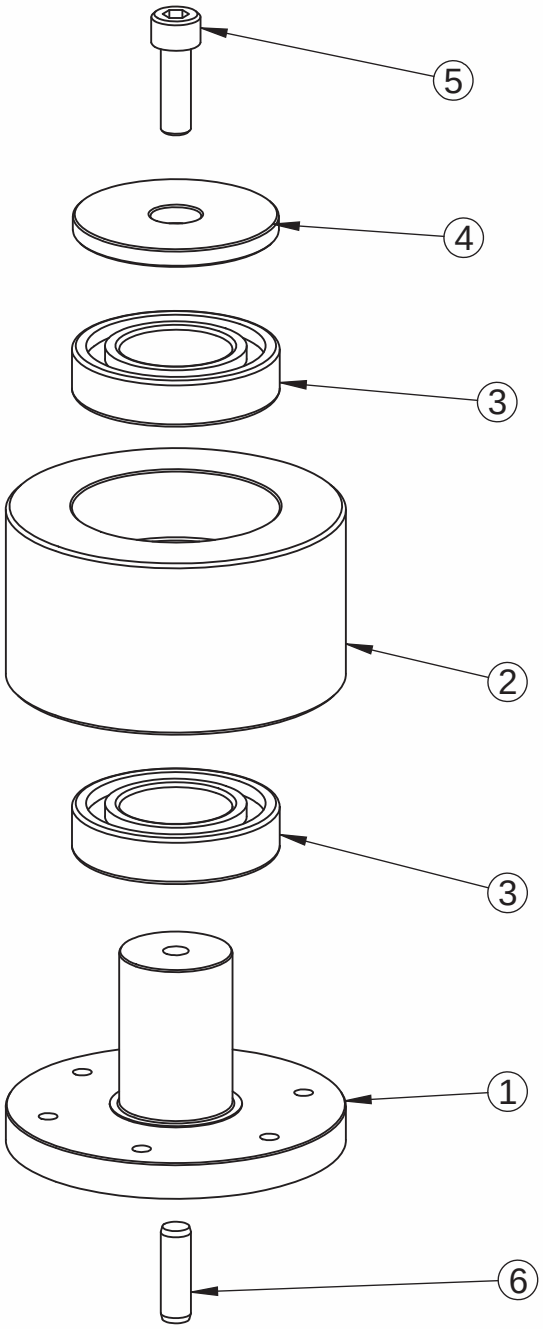
SCALE: 1:10 | WEIGHT: 3.36kg | SHEET 1 OF 1

5 4 3 2 1

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**

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



PDG 6000

Main Belt Idler

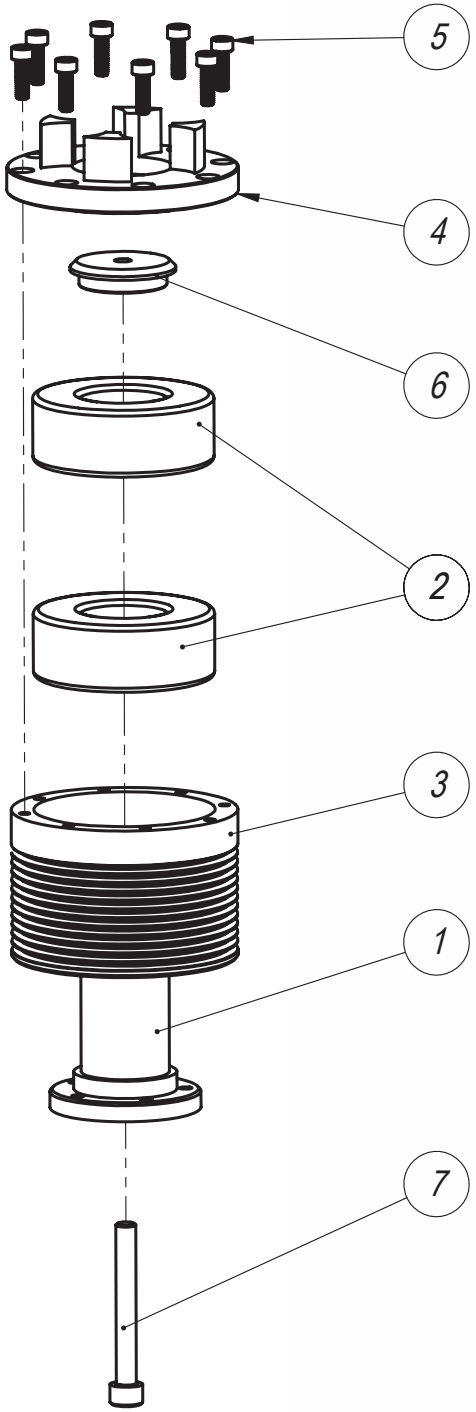
SCALE: 1:2	WEIGHT: 1.39kg	SHEET 1 OF 1

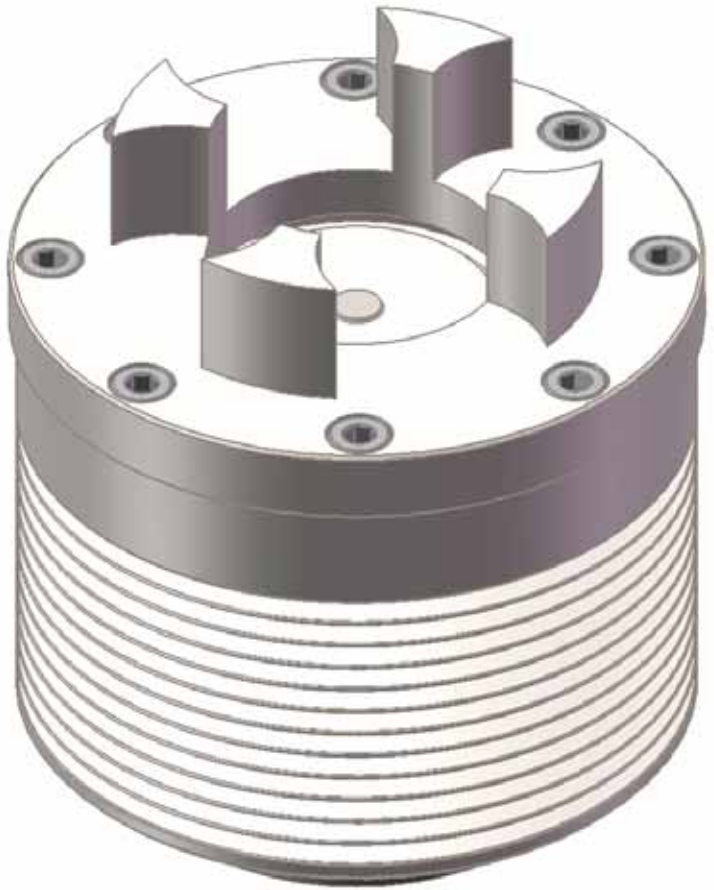
5 4 3 2 1

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.10.218	SCREW, SOCKET HEAD CAP M8-1.25X20	1
6	NB.50.143	PIN, HARDENED M8 X 26	1

	PDG.6A006.00	**SUBASSEM, MAIN BELT IDLER**	**2**

Main Idler Supplemental			
5	NB.10.218	Red LocTite 263	1





PDG 6000

Main Spindle

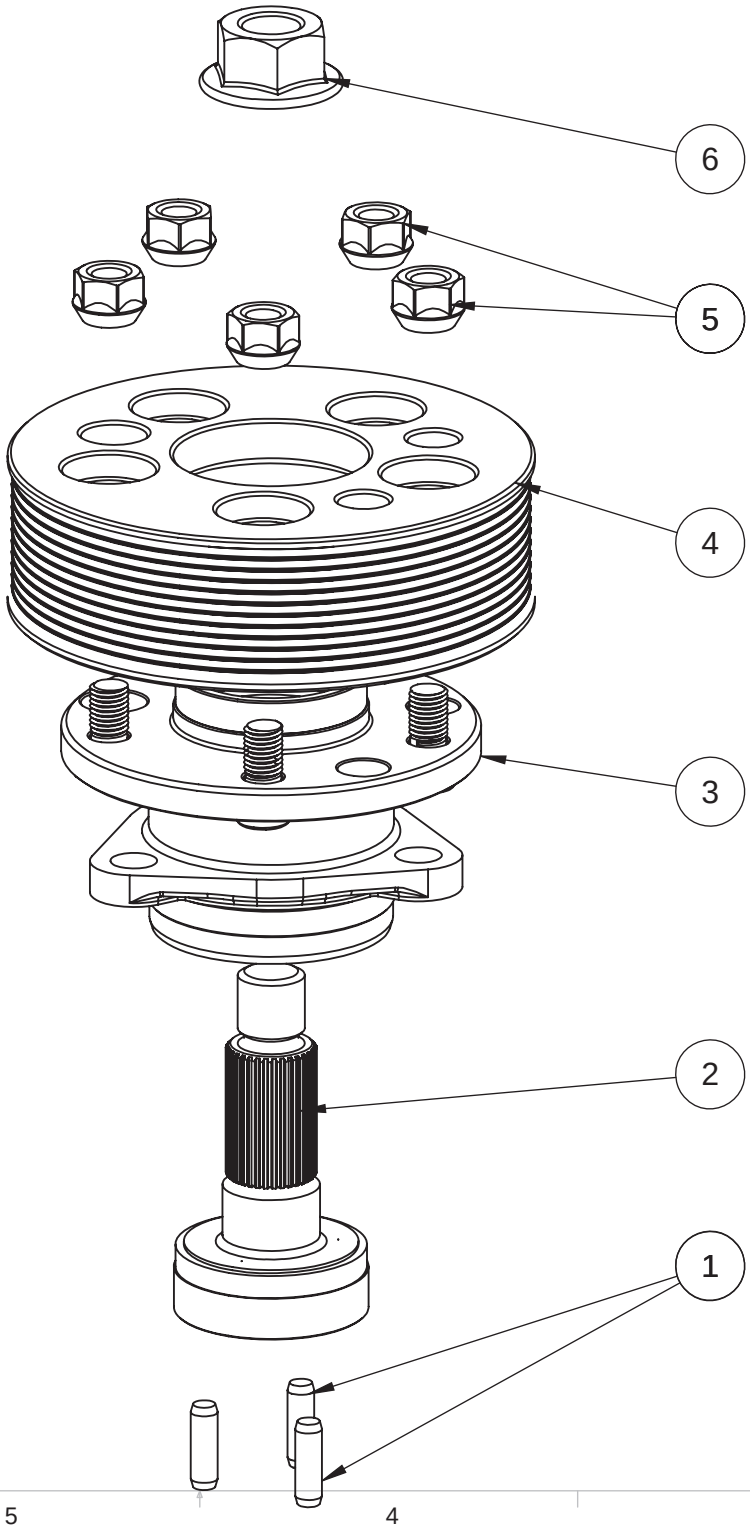
SCALE: 1:3	WEIGHT:	SHEET 1 OF 1

5 4 3 2 1

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**

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	0



PDG 6000

Planetary Assembly

SCALE: 1:10	WEIGHT: 4.36kg	SHEET 1 OF 1

5 4 3 2 1

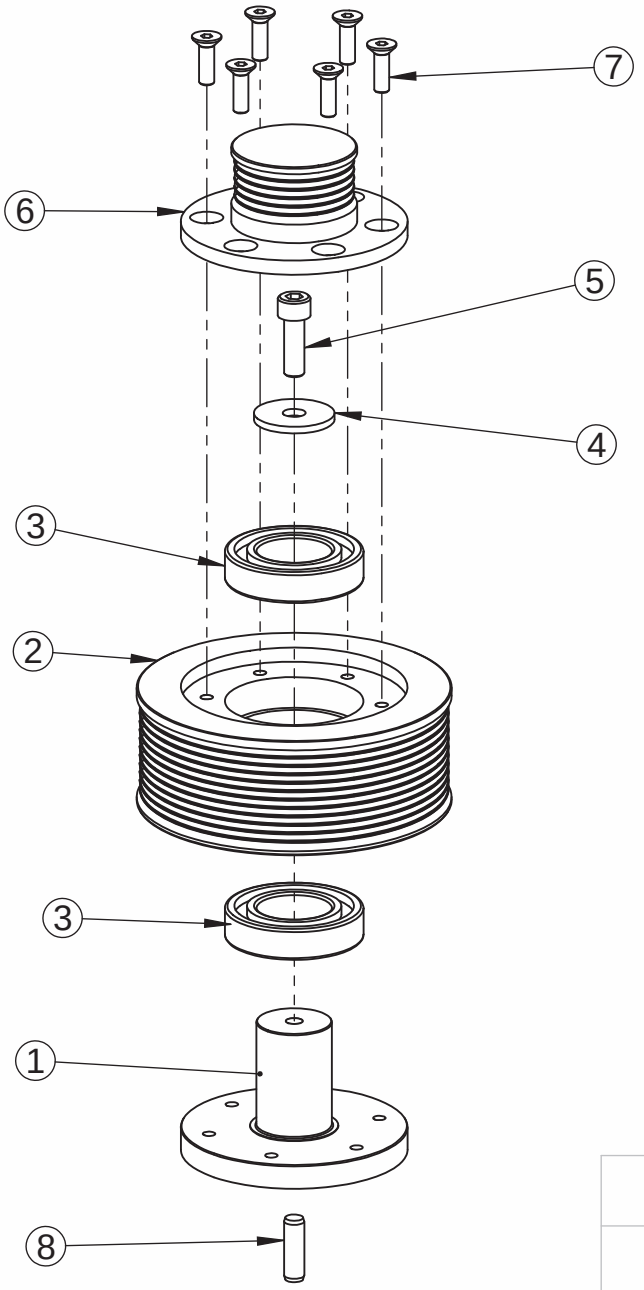
Planetary Assembly (Short)			
Item No.	**Part No.**	**Description**	**Qty.**
1	NB.50.143	PIN, HARDENED M8 X 26	3
2	PDG.60080.00	AXLE, PLANETARY 40MM (MODIFIED)	1
3	PDG.20201.00	HUB	1
3	NB.82.200	SHORTENED STUD	5
4	PDG.60001.00	SHEAVE, PLANETARY	1
5	NB.20.109	NUT, JAM M12-1.5 (Lugnuts displayed are for a 'future' revision)	5
6	NB.20.106	NUT, HEX FLANGE M20-2.5 (MODIFIED)	1

	PDG.6A008.10	**Planetary Assembled Short**	**1**

1	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**

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



PDG 6000

PTO Assembly

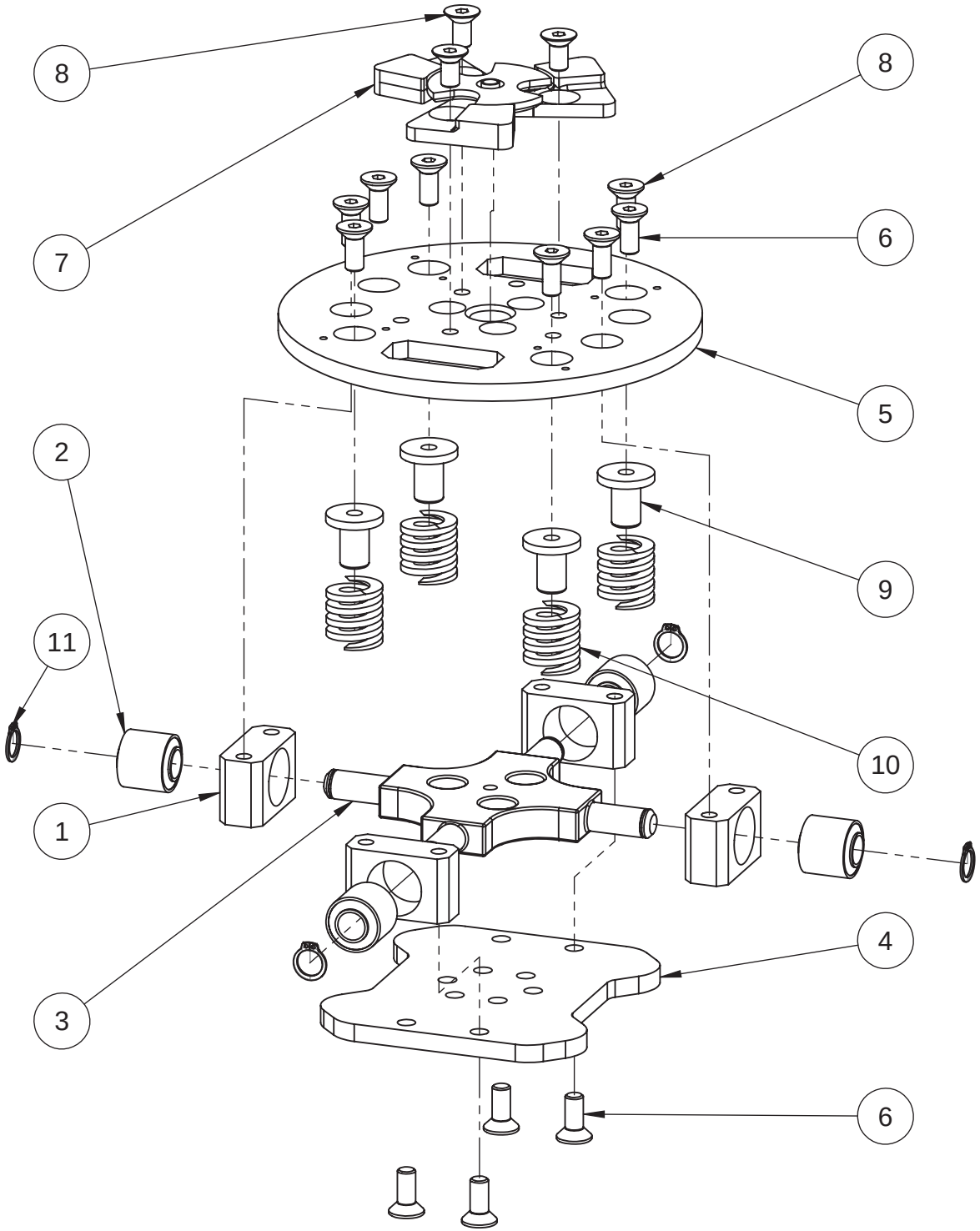
SCALE: 1:3 | WEIGHT: 2.62kg | SHEET 1 OF 1

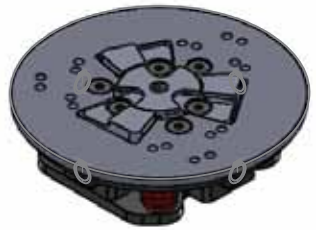
5 4 3 2 1

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**

PTO Assembly Supplemental			
5	NB.12.219	Red LocTite 263	1
7	NB.13.116	Red LocTite 263	6





PDG 6000

Flex Head

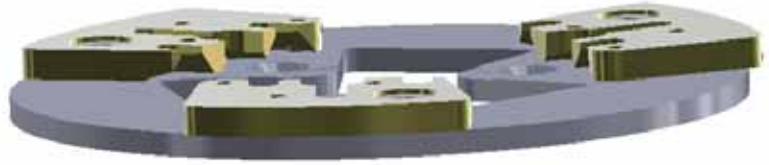
SCALE: 1:10	WEIGHT: 3.81	SHEET 1 OF 1

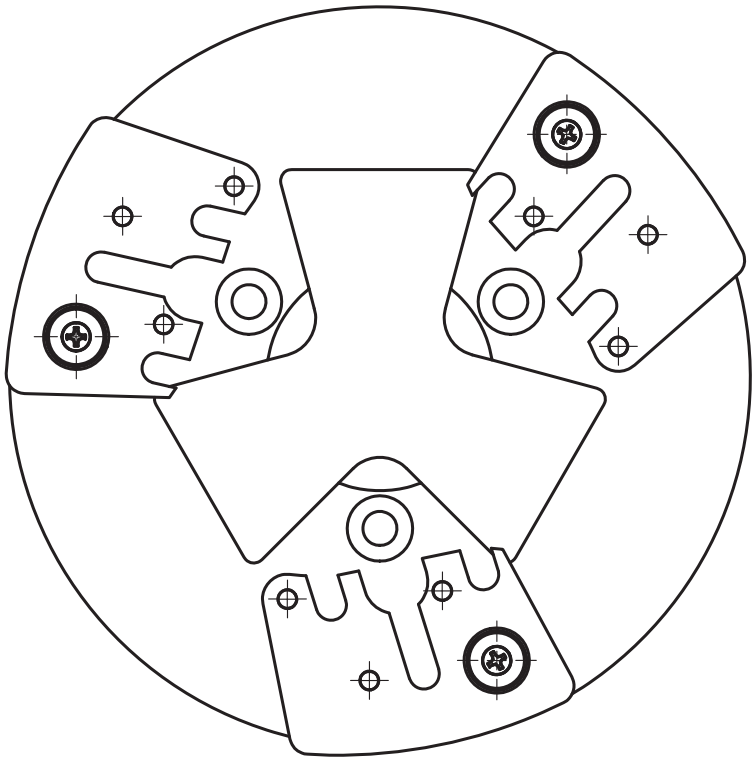
5 4 3 2 1

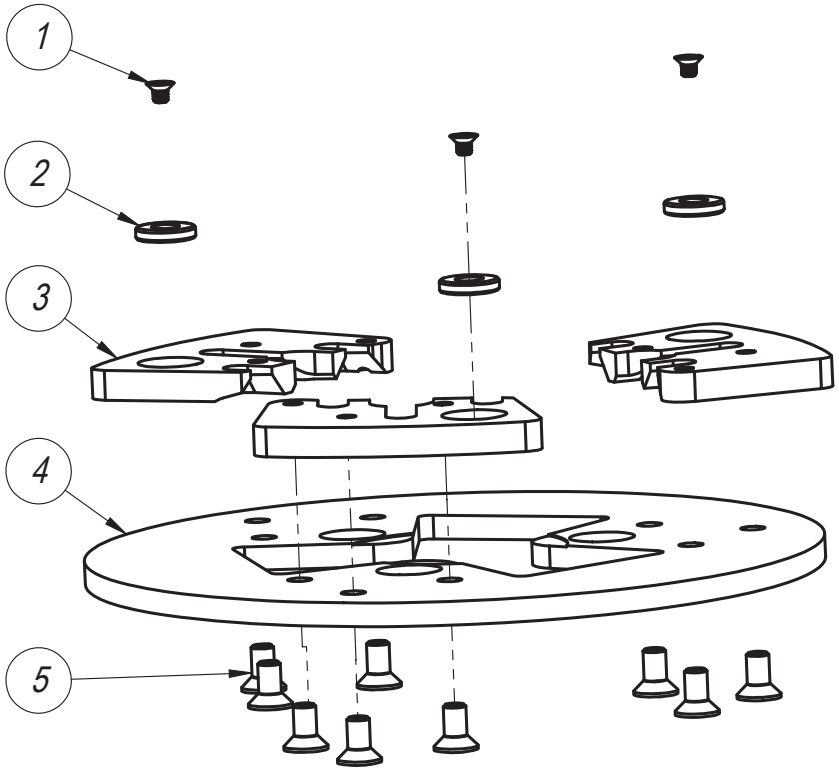
PDG 6000 FLEX HEAD			
Item No.	**Part No.**	**Description**	**Quantity**
1	PDG.20103.00	YOKE, SUSPENSION	4
2	PDG.20109.00	BUSHING, YOKE	4
3	PDG.20102.01	ELEMENT, CENTER STUDDED	1
4	PDG.20100.50	PLATE, DRIVING	1
5	PDG.20101.01	PLATE, DRIVEN	1
6	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8 -1.25 X 20	8
7	PDG.20104.25	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.6A010.00	**FLEX HEAD, WITH BLUE SPRING**	**3**

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







TORQUE @ 95 IN-LB

PDG 6000

Tooling Plate

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

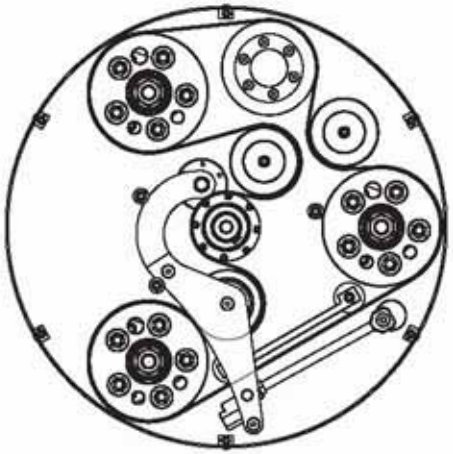
BELT TENSIONS

100±5 Hz

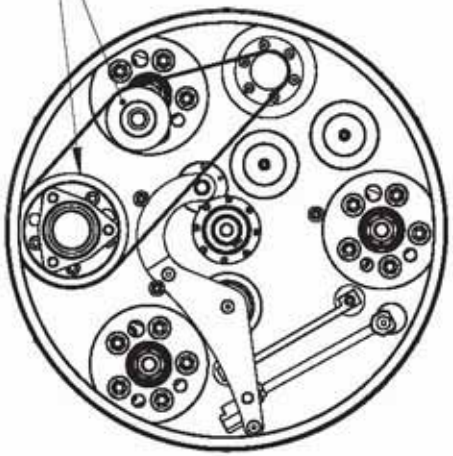
THESE SHEAVES ARE LOCATED ON THE TOP PLATE ASSEMBLY

107±7 Hz

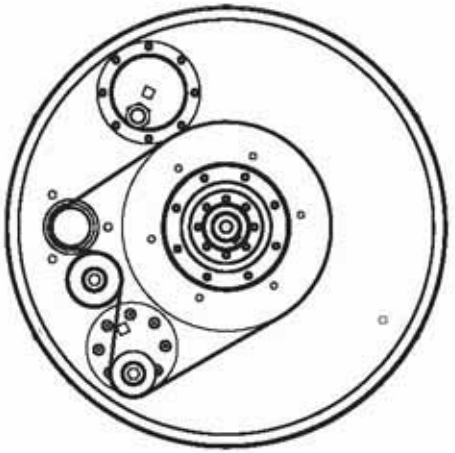
204±8 Hz



Main Belt
PDG.60056.00



PTO Belt
PDG.60057.00



Top Belt
PDG.60058.00

PDG 6000

Belt Paths

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

5 4 3 2 1

TECHNICAL DATA	
Item Number	PDG6000.01 (230 v) PDG6000.03 (460 v) PDG6000.02 (380 v) **European version*
Required Circuit	3Ø, 230 V, 40 Amp 3Ø, 460 V, 30 Amp ***3Ø, 380 V, 30 Amp*** **Only for European machines*
Motor Output	7.5 kw, 10 HP
RPM	Variable Speed 600 - 1750
Grinding Pressure	267 - 330 lbs 122 - 149 kg
Grinding Width	25 in Grinding Path 63.5 cm
Weight	480 lbs 218 kg
Dimensions	53x26x44 in (LxWxH) 134.5x66x11.5 cm

7.2 List of fault or alarm indications

Operation Panel Indication			Name
Error message	E - - -	E--	Faults history
	HOLd	HOLD	Operation panel lock
	Er 1 to Er4	Er1 to 4	Parameter write error
	Err.	Err.	Inverter reset
Warnings	OL	OL	Stall prevention (overcurrent)
	oL	oL	Stall prevention (overvoltage)
	rb	RB	Regenerative brake prealarm
	rH	TH	Electronic thermal relay function prealarm
	PS	PS	PU stop
	MT	MT	Maintenance signal output
	Uu	UV	Undervoltage
Alarm	Fn	FN	Fan fault
Fault	E.OC 1	E.OC1	Overcurrent trip during acceleration
	E.OC2	E.OC2	Overcurrent trip during constant speed
	E.OC3	E.OC3	Overcurrent trip during deceleration or stop
	E.Ou 1	E.OV1	Regenerative overvoltage trip during acceleration
	E.Ou2	E.OV2	Regenerative overvoltage trip during constant speed
	E.Ou3	E.OV3	Regenerative overvoltage trip during deceleration or stop
	E.THT	E.THT	Inverter overload trip (electronic thermal relay function)
	E.THM	E.THM	Motor overload trip(electronic thermal relay function)
	E.FIn	E.FIN	Fin overheat

Operation Panel Indication			Name
Fault	E.ILF	E.ILF *	Input phase loss
	E.OLT	E.OLT	Stall prevention
	E. bE	E. BE	Brake transistor alarm detection
	E. GF	E.GF	Output side earth(ground) fault overcurrent protectionat start
	E. LF	E.LF	Output phase loss
	E.OHT	E.OHT	External thermal relay operation
	E.OP1	E.OP1	Communication option fault
	E. 1	E. 1	Option fault
	E. PE	E.PE	Parameter storage device fault
	E.PE2	E.PE2 *	Parameter storage device fault
	E.PUE	E.PUE	PU disconnection
	E.rET	E.RET	Retry count excess
	E. 6 / E. 7 / E.CPU	E. 6/ E. 7/ E.CPU	CPU fault
	E.IOH	E.IOH *	Inrush current limit circuit fault
	E.AIE	E.AIE *	Analog input fault
	E.USb	E. USB *	USB communication fault
	E.MB4 to E.MB7	E.MB4 to E.MB7	Brake sequence fault
	E. 13	E.13	Internal circuit fault

* If a fault occurs when using with the FR-PU04, "Fault 14" is displayed on the FR-PU04.

Display Screen Error Code Index		
FAULT CODE	**DRIVE DISPLAY**	**DERSCRIPTION**
0	-	No fault
16	E.OC1	Overcurrent trip during acceleration
17	E.OC2	Overcurrent trip during constant speed
18	E.OC3	Overcurrent trip during deceleration or stop
32	E.OV1	Regenerative overvoltage trip during acceleration
33	E.OV2	Regenerative overvoltage trip during constant speed
34	E.OV3	Regenerative overvoltage trip during deceleration or stop
48	E.THT	Inverter overload trip (electronic thermal relay function)
49	E.THM	Motor overload trip (electronic thermal relay function)
64	E.FIN	Fin overheat
82	E.ILF	Input phase loss
96	E.OLT	Stall prevention
112	E.BE	Brake transistor alarm detection
128	E.GF	Output side earth (ground) fault overcurrent at start
129	E.LF	Output phase loss
144	E.OHT	External thermal relay operation
145	E.PTC	PTC thermistor operation
176	E.PE	Parameter storage device fault (control circuit board)
177	E.PUE	PU disconnection
178	E.RET	Retry count excess
192	E.CPU	CPU fault
196	E.CDO	Output current detection value exceeded
197	E.IOH	Inrush current limit circuit fault
199	E.AIE	Analog input fault
201	E.SAF	Safety circuit fault

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

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

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

Problem	Possible cause	Remedy
Motor does not switch on	Missed phase Defective component	Check the main power supply and switch on again Replace defective component
Motor triggers while running	Motor protections switch triggered because of overload Motor has defect	Reduce additional load Check the motor
Screen Goes Blank	Lost Phase	Check for 3 legs power
No voltage reading on Display	Loose connection	Check pin connectors on interface

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 _____ **SERIAL NUMBER** _____

INVOICE NUMBER OF PURCHASE _____

☐ **PDG 8000** ☐ **PDG 6000** ☐ **PDG 5000** ☐ **EDGE PRO 180** ☐ **SC8E**

☐ **SC10E** ☐ **SC12E** ☐ **BULL 1250** ☐ **BULL 300** ☐ **BULL 45**

PLEASE FILL OUT IN FULL AND SUBMIT TO: SASE COMPANY 2475 STOCK CREEK BLVD ROCKFORD TN, 37853 FAX: 865.745.4110 EMAIL: JohnA@SASECompany.com

QUESTIONS? CALL 800.522.2606

Corporate Office
26423 79th Ave South
Kent, WA 98032-7321
1.800.522.2606 (P)
1.877.762.0748 (F)
www.SASECompany.com
sales@SASECompany.com

Certificate of Declaration and Conformity:

(Applies to Europe only)

SASE Planetary Diamond Grinders

PDG 4500	230 volt 50/60 HZ single phase	8464.20.0120
PDG 6000	460 volt 50/60 HZ three phase	8464.20.0120
PDG 6000	380 volt 50/60 HZ three phase	8464.20.0120
PDG 6000	230 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	230 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	380 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	460 volt 50/60 HZ three phase	8464.20.0120

SASE Company hereby certifies that the above listed Planetary Diamond Grinders are classified within the following EU directives of conformity for CE markings:

EU Machinery directive 2006/42/EC
EU Low voltage directive 2006/95/EC
EU Electromagnetic compatibility directive 2004/108/EC

and further conform with the following EU Harmonized Standards:

EN 60745-2-3:2007 EN 60204-1:2006 + A1:2009

EN 6100-6-3:2007 EN 61000-6-1:2007