BARTELL GLOBAL | OWNER'S MANUAL | PARTS BOOK

Predator Series Grinder

P800PRO

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ORIGINAL LANGUAGE OPERATING MANUAL FOR BARTELL GRINDERS

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REV.	DATE	DESCRIPTION	APPROVED BY:
A	1/5/2023	Initial Release	JHL
C	6/17/2026	All parts pages updated and 800E pages removed	JHL

SAFETY PRECAUTIONS

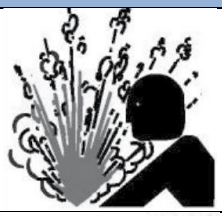
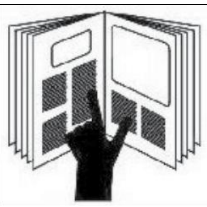
	**DANGER** **EXPLOSION HAZARD** Never operate the machine in an explosive atmosphere, near combustible materials, or where ventilation does not clear exhaust fumes.
	**WARNING** **BURN HAZARD** Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur.
	**WARNING** **ROTATING HAZARD** Never place hands or feet inside safety guard rings. Serious injury will result from contact with rotating blades.
	**CAUTION** **MOVING PARTS** Before starting the machine, ensure that all guards and safety devices are in place and functioning properly.
	**ATTENTION** **READ OWNER'S MANUAL** Read and understand owner's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.

TABLE OF CONTENTS

INTRODUCTION

The Predator Series Planetary Diamond Grinders are designed for wet and dry grinding of Concrete, marble, terrazzo, and granite. Their applications range from rough grinding and coating removal through a polished finish.

This Manual contains the information and procedures to assist you to operate and maintain the P800PRO floor grinder safely and correctly.

- P800PRO – 800mm Wide, Propane Powered Planetary Grinder

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

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

WARRANTY INFORMATION

All grinders sold by Bartell Morrison Inc. are warranted against defects in materials and/or workmanship; excluding normal wear on wearing components and components covered by a separate original manufacturer's warranty, for a period of 12 months from the date of sale to the original end user purchaser provided that certain conditions have been met.

Conditions:

1. The equipment serial number has been registered with Bartell Morrison Inc. or its approved dealers, distributors, representatives, or agents.
2. The equipment has been operated in an appropriate manner by qualified individuals.
3. The equipment has been properly maintained as per the instructions included in the Owner's Manual.
4. All claims for warranty must be filed on proper forms and include the serial number of the equipment along with proof of purchase.

Any evidence of failure to meet these conditions may result in a denial of the warranty claim. Consideration of warranty claims will be at the sole discretion of Bartell Morrison Inc., or its authorized dealers, distributors, representatives, or agents. Bartell Morrison Inc. may, at its discretion, request that the equipment to be considered for warranty be returned at the owner's expense to an authorized repair facility for inspection. Under this warranty we may, at our discretion, repair or replace a part or the whole of the defective component or equipment. Our Warranty coverage is limited to the cost to repair or replace the defective portion of the equipment and a reasonable (as determined by Bartell Morrison Inc.) amount of labor to conduct the repair or replacement. Under no circumstances shall Bartell Morrison Inc. be liable for any additional or exceptional costs beyond the cost to repair or replace the defective portion of the equipment. Bartell Morrison Inc. shall not be held accountable for; costs associated with travel to inspect or repair defective equipment, costs for transporting defective equipment to or from an authorized repair facility, costs incurred to repair or replace the defective equipment at any facility other than one authorized by Bartell Morrison Inc., or ancillary damage caused by or because of the defective equipment. Under no circumstances shall equipment be returned to Bartell Morrison Inc. or its authorized dealers, distributors, representatives, or agents without the approval of Bartell Morrison Inc. as evidenced by a Returned Goods Number. To obtain a Returned Goods Number contact the factory or your authorized dealer, distributor, representative or agent. This warranty is for the sole benefit of the original end user purchaser and is not transferable to any other company or person.

SPECIFICATIONS

	P500E	P500Pro	P650E	P650Pro	P800E	P800Pro
Source	Electric	Propane	Electric	Propane	Electric	Propane
Power	230V, 60 Hz, 1 Phase	479cc Briggs & Stratton	230V, 60 Hz, 1 Phase 230V, 60 Hz, 3 Phase 460V, 60 Hz, 3 Phase	993 cc Briggs and Stratton Commercial	230V, 60 Hz, 3 Phase 460V, 60 Hz, 3 Phase	993 cc Briggs and Stratton Vanguard
Output - HP (kW)	7.5 HP (3.7 kW) – 230V	16 HP (11.9 kW)	10 HP (7.5 kW) – 460V 7.5 HP (5.6 kW) – 230V	27 HP (14.1 kW)	20 HP (15 kW)	35 HP (26 kW)
Variable Head Speed - RPM	850-2000 rpm	850-2000 rpm	1012	1012	890	890
Grinding Heads	3	3	3	3	3	3
Head Diameter	7" (178mm)	7" (178mm)	9" (228.6mm)	9" (228.6mm)	11" (279.4 mm)	11" (279.4 mm)
Grinding Width	20" (508mm)	20" (508mm)	25" (625mm)	25" (625mm)	30" (762 mm)	30" (762 mm)
Water Tank Capacity	4 gal (15 L)	4 gal (15 L)	7.5 gal (28 L)	7.5 gal (28 L)	12.5 gal (47 L)	12.5 gal (47 L)
Vacuum Port	2" (51mm)	2" (51mm)	3" (75.6mm)	3" (75.6mm)	3" (75.6mm)	3" (75.6mm)
Machine Weight (lbs)	445 lbs (202 kg)	490 lbs (222 kg)	873 lbs (395 kg)	775 lbs (351 kg)	1254 lbs (568 kg)	1309 lbs (593 kg)
Grinding Force (lbs)	260 lbs (118 kg)	300 lbs (136 kg)	639 lbs (289 kg)	565 lbs (256 kg)	877 lbs (397 kg)	916 lbs (415 kg)
Max Height (Handle Up)	68.5" (1741 mm)	68.5" (1741 mm)	76" (1930 mm)	76" (1930 mm)	82.3" (2092 mm)	82.3" (2092 mm)
Min Height (Handle Down)	42" (1067 mm)	42" (1067 mm)	44" (1118 mm)	44" (1118 mm)	51.5" (1310 mm)	51.5" (1310 mm)
Min Length - in (mm) (Handle and Weights forward)	44" (1118 mm)	44" (1118 mm)	52" (1321 mm)	52" (1321 mm)	68.5" (1740 mm)	68.5" (1740 mm)
Max Length - in (mm) (Handle and weights Back)	67.5" (1714 mm)	67.5" (1714 mm)	83" (2108 mm)	83" (2108 mm)	92.3" (2345 mm)	92.3" (2345 mm)
Width - in (mm)	23.5" (597 mm)	23.5" (597 mm)	26" (660 mm)	26" (660 mm)	31.6" (800 mm)	31.6" (800 mm)

SAFETY PRECAUTIONS

It is important that the following be read carefully in order that the operational performance of the Bartell Grinder be fully understood. Proper maintenance procedures will ensure long life and top performance of the unit.

SAFETY PRECAUTIONS

- Always keep unauthorized, inexperienced, untrained people away from this machine.
- Rotating and moving parts will cause injury if contacted. Make sure guards are in place. Keep hands and feet away from moving parts.
- Fuel the machine only when the engine is stopped, using all necessary safety precautions.
- The engine must always be stopped (Propane models) before attempting any repair or adjustments. Ignition key should be off.

Danger: Never operate the machine in an explosive atmosphere, near combustible materials or where ventilation does not clear exhaust fumes. Repair fuel leaks immediately. Refer to your engine owner's manual for more safety instructions.

- Be careful not to come in contact with the muffler when the engine is hot, serious burns may result!
- Always maintain control of the machine while it is in operation. Never let go of the machine while drum is rotating.
- When starting the grinder, maintain throttle in closed position as recommended.
- Be sure that the RPM's do not exceed 2000 when starting and stopping the drum rotation.
- Be careful with the grinder around stub pipes or other obstructions on the floor. Should the machine catch, or hit such an obstruction, serious damage may result to the machine, or operator to be injured.
- At no time should lifting of machinery be attempted without mechanical means such as a hoist or a forklift.
- When lifting the grinder, only use specified connection points.
- When securing the grinder for transport, only use specified connection points.
- Disconnect battery before attempting any electrical maintenance.
- 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.

- 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.

Propane Tank Safety

Using propane tanks to power grinders can be an efficient and reliable energy source. However, it is crucial to follow certain safety guidelines to ensure the proper handling and usage of propane tanks. This operation manual provides essential instructions to promote safe practices when using propane tanks to power grinders.

1. Storage:

    a. Select an appropriate storage area: Choose a well-ventilated, dry, and secure location for storing propane tanks. The storage area should be away from ignition sources, such as open flames, electrical equipment, or direct sunlight.

    b. Position the tanks upright: Always keep the propane tanks in an upright position to prevent any leaks or damage to the valves.

    c. Store tanks at a safe distance: Maintain a minimum of 10 feet distance between propane tanks and any flammable materials or combustible substances.

    d. Secure tanks properly: Ensure propane tanks are properly secured in an upright position, either by using a tank stand, rack, or restraining straps designed for this purpose.

    e. Ensure compliance with local, state, and federal regulations.

2. Tank Handling:

    a. Inspect tanks regularly: Before using a propane tank, conduct visual inspections for signs of damage, such as dents, rust, or oil residue. If any damage is observed, do not use the tank, and arrange for professional inspection or replacement.

    b. Avoid dropping or mishandling tanks: Propane tanks may rupture or leak when dropped or mishandled. Always handle them with care, avoid dropping or banging them against hard surfaces.

    c. Do not overfill tanks: It is vital to fill the propane tanks only up to their designated fill line. Overfilling tanks can lead to gas leakage or even a rupture.

    d. Use protective gloves and goggles: When handling propane tanks, wear protective gloves and safety goggles to protect yourself from any potential leaks or hazards.

3. Connecting and Disconnecting:

    a. Check for leaks: Before connecting a propane tank to a grinder, perform a leak check using a solution of soapy water. Apply the solution to all connections and observe for bubbles that indicate a leak. If a leak is detected, refrain from using the tank and tighten the connections or seek professional assistance.

    b. Follow proper connection procedures: When connecting the propane tank to the grinder, ensure that the hose and fittings are compatible with the tank and grinder. Follow the manufacturer's instructions for proper connection and secure all fittings tightly.

    c. Turn off the grinder and disconnect: Before disconnecting the propane tank from the grinder, turn off the grinder and close the valve on the tank. Allow any residual gas pressure to dissipate before disconnecting the hose.

4. Operating Precautions:

    a. Use grinders in well-ventilated areas: When operating grinders powered by propane tanks, ensure that the area is adequately ventilated to prevent the accumulation of propane gas. Carbon monoxide detectors should also be installed in enclosed spaces to monitor gas levels.

    b. Keep tanks away from heat sources: Avoid exposing propane tanks to excessive heat or direct sources of flame, as this can cause the tank to overheat or potentially explode.

    c. Store and transport tanks upright: Always store and transport propane tanks in an upright position, either secured in a vehicle or using appropriate storage measures.

    d. Never tamper with valves: Do not attempt to repair or modify any components of the propane tank or its valves. Only trained professionals should handle repairs or maintenance.

5. Additional Notes:

    a. 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.
        i. Pressure relief is highly flammable!
        ii. Never store the propane tank on the grinder.
        iii. Follow local and national regulation when using, storing and filling propane.

b. 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

c. All propane grinders include 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.

Conclusion:
Following these safety guidelines will help maintain a secure working environment when using propane tanks to power machines. Remember, safety should always be a top priority. If you have any questions or concerns, consult the manufacturer's guidelines or seek professional assistance.

Transportation

The Predator Series Grinders are equipped with 3rd Transport wheel.

To use 3rd Transport Wheel.

1. Rotate swing weights to rear position by pulling ball handle to release pin.



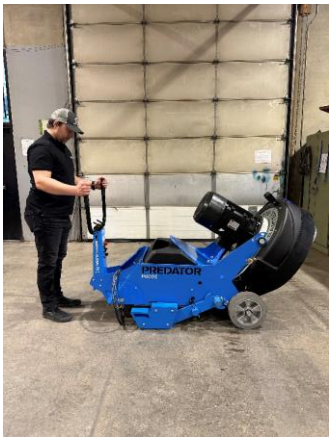
2. Rotate handle in most vertical position.
3. Place one foot on swing weight and pull machine back until 3rd wheel is contacting ground.



4. Rotate handle to new vertical position

5. Pull swing weights up to the first locking position.

6. Grinder is now ready to roll.



Note: If greater ground clearance is required, (Example: A ramp) remove propane tank before tilting machine back.

To return the grinder back to grinding position.

1. Release swing weights to the ground.

2. Rotate Handle to horizontal position.

3. Confirm no people or objects are under the grinder.
4. Pick up handle while placing one foot on the swing weights at the grinder rotates up.

5. Rotate Handle to comfortable operating position.

6. Rotate swing weights to desired grinding position.

To lift grinder with a hoist.

1. Grinder should be in grinding position.
2. Swing weights should be rotated down nearest to the drum.
3. Rotate Handle in horizontal position.

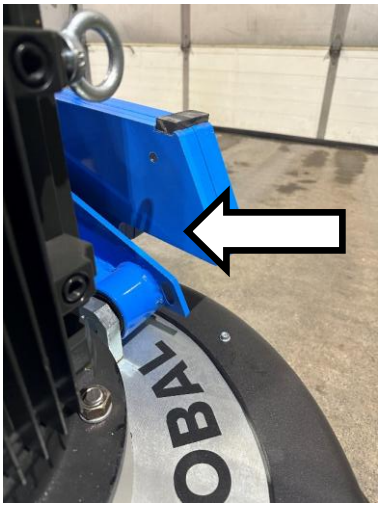
4. Locate marked single Lifting point behind motor/engine.
    a. Do not use any other points of lifting.

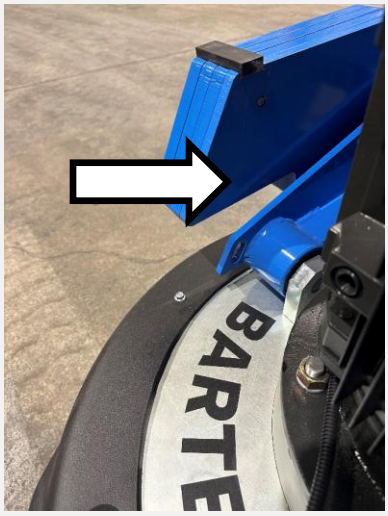
5. Only use OSHA/non-damaged certified lifting equipment

To secure machine for transport

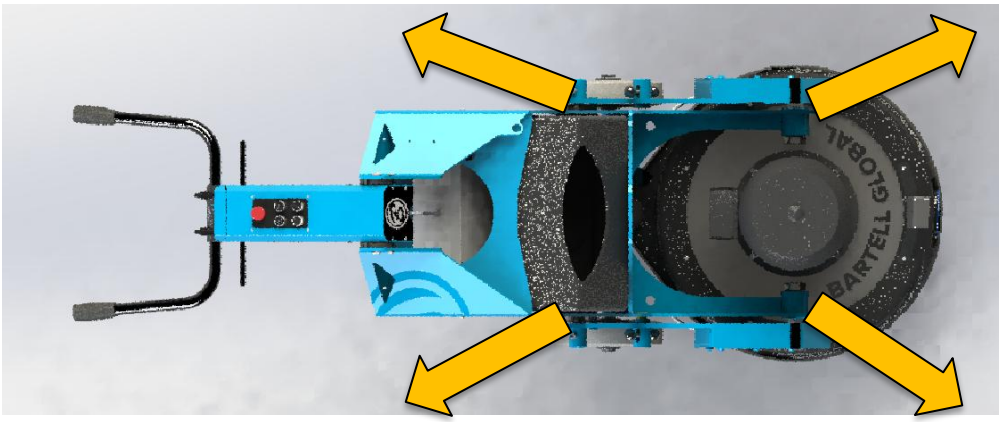
1. Grinder should be in grinding position.
2. Swing weights should be rotated down nearest to the drum.
3. Rotate Handle in a horizontal position.

4. Locate 4 marked tie down points
    a. Do not use any other tie down points.





5. Only use DOT certified ratcheting straps based on the weight of the grinder.
    a. Do not use chains for securing machine



Tooling Installation

The Predator Series Grinders come equipped with quick change tooling system. This allows operators to quickly change grits or types of diamond tooling.

To install/change tooling plates on machine.

1. Rotate swing weights to rear position by pulling ball handle to release pin.



2. Rotate handle in most vertical position.
3. Place one foot on swing weight and pull machine back until 3rd wheel is contacting ground.



1. Install/change tooling plates by rotating the triangle in the center of each head.
    a. 3 optional screws can be used to fix the tooling plates to the grinder.
    b. Caution Tooling and tooling plates can be hot. Always use correct PPE.

a. Same method for metal or resin plates

b. 3 optional screws can be used to fix the tooling plates to the grinder.
c. Caution Tooling and tooling plates can be hot. Always use correct PPE.
d. Resin Tooling is in

2. Install/slide Mag by sliding tooling into grooves.
    a. Use rubber mallet to tap tooling in and out of place.

Note: It is recommended not to transport machines with tooling plates installed, unless using optional transport screws.

3. Install resin tooling by attaching with Velcro

Propane Tank Use

The Predator Series Propane grinders come equipped with a quick-change propane tank system to get you running quicker.

Before operating a propane grinder, read and understand the propane safety check list in this manual.

The predator series propane grinders only run on vapor style tanks. Attempt to run a liquid style tank will result in damage to the regulator and engine.

Always confirm the propane tank is not overfilled before bringing it inside a building or installing to the grinder.

To Install a Propane Tank

1. Confirm Grinder is in grinding position with handle raised to vertical position.

2. Place lower portion of propane tank onto brackets



3. Rotate the top of propane tank toward machine until quick release handle catches top of propane tank.



4. Install optional safety strap behind propane tank.
    a. This strap can also be used if the tank is not of standard size.

5. Connect propane hose to propane tank and confirm a tight connection.

6. Fully Open valve on propane tank.

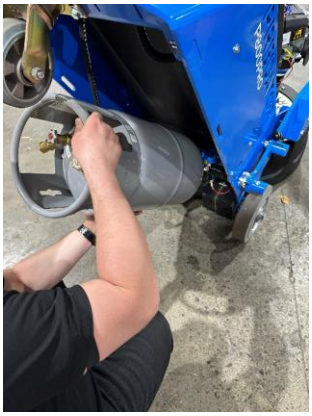
To Remove Propane Tank

1. Confirm Grinder is in grinding position with handle raised to vertical position.
2. Fully Close valve on propane tank
3. Disconnect propane hose from propane tank.

4. While supporting the propane tank with one hand. Use the other hand to pull up on the latch holding the propane tank in place.

5. Rotate the tank down clear of the latch.

6. Release the propane latch with one hand and use two hands to lift and remove the propane tank from the grinder.



** Follow all Propane handling safety guidelines.**

OPERATING INSTRUCTIONS

STARTING PROCEDURES - WARM TEMPERATURES

a) Prior to starting the grinder, check the engine oil levels. (Propane only) Be sure the fuel tank is full. Fuel is not shipped with the unit. **WARRANTY IS VOID IF RUN WITHOUT OIL.**
Fill tank with safety approved fuel containers. **DO NOT MIX OIL WITH FUEL.**
b) Confirm PTO switch is in off position.
c) Confirm throttle is in closed position.
d) Maintain contact with the safety switch. Engine will disengage and stop if safety switch is released. Do not tape, tie-down, or otherwise attempt to bypass safety device.
e) Turn ignition key all the way. Allow engine to warm up before proceeding to full speed operation.
f) Engage PTO below 2000rpms.

STARTING PROCEDURES - COLD TEMPERATURES

Follow same procedure as above but allow for a longer warm up period of 3-5 min. (In cold weather, oil is much heavier to move. Extra time is required to heat the oil.)

STOPPING PROCEDURE

a) Bring throttle to low idle (below 2000 RPM) and wait a few seconds.
b) Disengage PTO
c) Turn off ignition key.

PREVENTATIVE MAINTENANCE AND ROUTINE SERVICE PLAN

This Bartell Predator Grinder has been assembled with care and will provide years of service. Preventative maintenance and routine service are essential to the long life of your Bartell Grinder. Your dealer is interested in your new Grinder and has the desire to help you get the most value from it. After reading through this manual thoroughly you will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service, be sure to see your Bartell dealer. For your convenience we have provided this space to record relevant data about your Grinder. When in need of parts or service be prepared to provide your Grinder serial number. Locate the serial number now and record in the space below.

Date Purchased:		**Type of Machine:**	
Dealer Name:		Model:	
Dealer Phone:		Serial Number:	

Replacement Parts Used				**Maintenance Log:**	
Part No.	Quantity	Cost	Date	Date	Operation

ROUTINE SERVICE SCHEDULE

Routine Service Intervals		Each Use	After 1.5 months or 50 hrs	Each 3 months or 100 hrs	Each 6 months or 200 hrs	Each 9 months or 300 hrs	Each 12 months or 400 hrs
General Inspection							
Operation of lights	Check		O	O	O	O	O
Battery	Check and clean			O	O	O	O
	Recharge			O	O	O	O
	Replace						2 yrs
Guards	Check	O	O	O	O	O	O
Warning Stickers	Check		O	O	O	O	O
Swing Weight Function	Check	O	O	O	O	O	O
Test Run	Check Operation		O	O	O	O	O
Controls							
Throttle (Propane Only)	Check	O	O	O	O	O	O
Engine (Propane Models Only)							
Fuel Lines & Clamps	Check		O	O	O	O	O
	Replace						2 yrs
Engine oil	Check level	O	O	O	O	O	O
	Change		O		O		O
Engine oil filter	Replace				O		O
Oil Cooler	Clean			O	O	O	O
Cooling fins	Clean		O	O	O	O	O
Air Cleaner	Check-clean	O	O	O	O	O	O
	Replace						O
Air Intake Line	Check				O		
	Replace						2 yrs
Valve Clearance	Check-adjust				O		O
Fuel Filter	Check and clean			O	O	O	O
	Replace				O		
Fuel Tank	Clean						500 hrs
Fuel Injection Nozzles	Check pressure						500 hrs
Fuel Injection Timer	Check						500 hrs
Injection Pump	Check						500 hrs
Engine Wiring	Check						O
Coolant	Check	0					
	Change						O

Routine Service Intervals		Each Use	After 1.5 months or 50 hrs	Each 3 months or 100 hrs	Each 6 months or 200 hrs	Each 9 months or 300 hrs	Each 12 months or 400 hrs
Drive Train:							
Bearings	Lubricate		O	O	O	O	O
Universal Couplings	Lubricate			O	O	O	O
Belt Tension/ Condition	Check	O	O	O	O	O	O
Clutch/ Pulley Operation	Check	O	O	O	O	O	O

ROUTINE SERVICE INTERVALS

Due to the nature and environment of use, grinders are exposed to severe operating conditions.

Some general maintenance guidelines will extend the useful life of your grinder:

- The initial service for your grinder should be performed after 50 hours of use, at which time your mechanic (or authorized repair shop) should complete all of the recommended checks in the schedule above. The previous chart is handy for keeping a record of the maintenance performed and the parts used for servicing your grinder.
- Regular service according to the schedule above will prolong the life of the grinder and prevent expensive repairs.
- After each use, your grinder should be cleaned to remove any concrete residue from the drum, flex heads and surrounding components. Use of a power washer will make clean up quick and easy, especially if a release agent was applied prior to use. Use caution to not wet any electrical components. Refer to engine supplier manual on pressure washing guidelines.
- In the Service Schedule above, items that should be checked, replaced or adjusted are indicated by "o" in the appropriate column. Not all grinder models include the same features and options and as such not all service operations may have to be performed. For ease of recording, place a checkmark (√) through the "o" when the item is complete. If an item is not required or not completed place an "x" through the "o" in the box.
- Failure to have your grinder regularly serviced and properly maintained in accordance with the manufacturer's instructions will lead to premature failure and void the warranty.

MAINTENANCE INSTRUCTIONS

GENERAL MAINTENANCE

Remember, safety is paramount when performing routine maintenance checks. Always disconnect the grinder from the power source before conducting any inspections or maintenance tasks.

- Visual Inspection: Regularly examine the grinder for any signs of damage, loose parts, or frayed wires. Ensure that all components are in good condition and properly connected.

- Fasteners: Check all screws, nuts, and bolts on the grinder for proper tightness. If any are loose, tighten them securely to prevent accidents during operation.

- Safety Mechanisms: Test the grinder's safety mechanisms, such as the E-Stop, to ensure they are functioning effectively. These mechanisms are designed to protect the user from potential accidents or injuries.

- Electrical Connections: Inspect the grinder's electrical connections, such as switches and plugs, for any signs of damage or loose connections. Ensure that all connections are secure and properly insulated.

- Cleanliness: Regularly clean the grinder's external surfaces and remove any debris or residue from the grinding area. This prevents build-up that can affect the grinder's performance and poses a safety hazard. Hard concrete is very difficult to remove, greatly increases weight, and reduces efficient subsequent operation of unit.

MAINTENANCE FOR PROPANE POWERED GRINDERS

- Check the propane tank: Ensure that the propane tank is securely fastened and in good condition. Check for any leaks or damage to the tank.

- Inspect fuel lines and connections: Inspect the fuel lines and connections for any signs of wear, cracks, or leaks. Tighten any loose connections and replace any damaged fuel lines.

- Clean the air filter: Regularly clean or replace the air filter to prevent dirt and debris from clogging the engine. A clogged air filter can lead to decreased engine performance.

- Check the spark plug: Inspect the spark plug for any buildup or damage. Clean or replace the spark plug as needed. A clean spark plug ensures proper ignition and efficient combustion.

- Change the engine oil: Regularly change the engine oil to maintain optimal engine performance. Follow the manufacturer's recommendations for the correct oil type and interval for oil changes.

- Check and adjust the throttle and idle speed: Inspect the throttle and idle speed settings and adjust them according to the manufacturer's recommendations. Proper throttle and idle settings help maintain efficient and smooth engine performance.

- Inspect the exhaust system: Check the exhaust system for any leaks, damage, or clogs. A properly functioning exhaust system is essential for safe operation and optimal engine performance.

- Clean the engine exterior: Regularly clean the exterior of the engine to remove dirt, debris, and any flammable materials. A clean engine is less likely to overheat and will last longer.

- Lubricate Swing Weight Locking Pin: It is recommended to spray the swing weight locking pin with a graphite based lubricate to allow pin to move freely. The spring inside the swing weight should engage the holes automatically.

TROUBLESHOOTING

800PRO and 650PRO

WON'T START • Throttle fully open • Hand lever wire broken • Propane Tank overfilled • Propane Tank Empty • Propane Tank is not Vapor Style • Propane Tank valve turned off • Electrical Source is not working • Gas filter plugged • Gas line plugged • Hole in gas line • Safety Switch is engaged • Safety switch wire or connectors not making good contact **STARTS BUT NO HIGH SPEED** • Engine problems • Throttle cable broken or seized • Throttle lever and connectors loose or out of adjustment • Other engine problems (Refer to engine manual)	**BELT WEARING RAPIDLY** • Belt adjusted improperly • Pulley out of alignment • Wrong belt/defective belt • Clutch sticking • Belt rubbing **DRIVE SHAFT WILL NOT TURN** • Universal joint(s) seized • Spline stripped • Key(s) sheared

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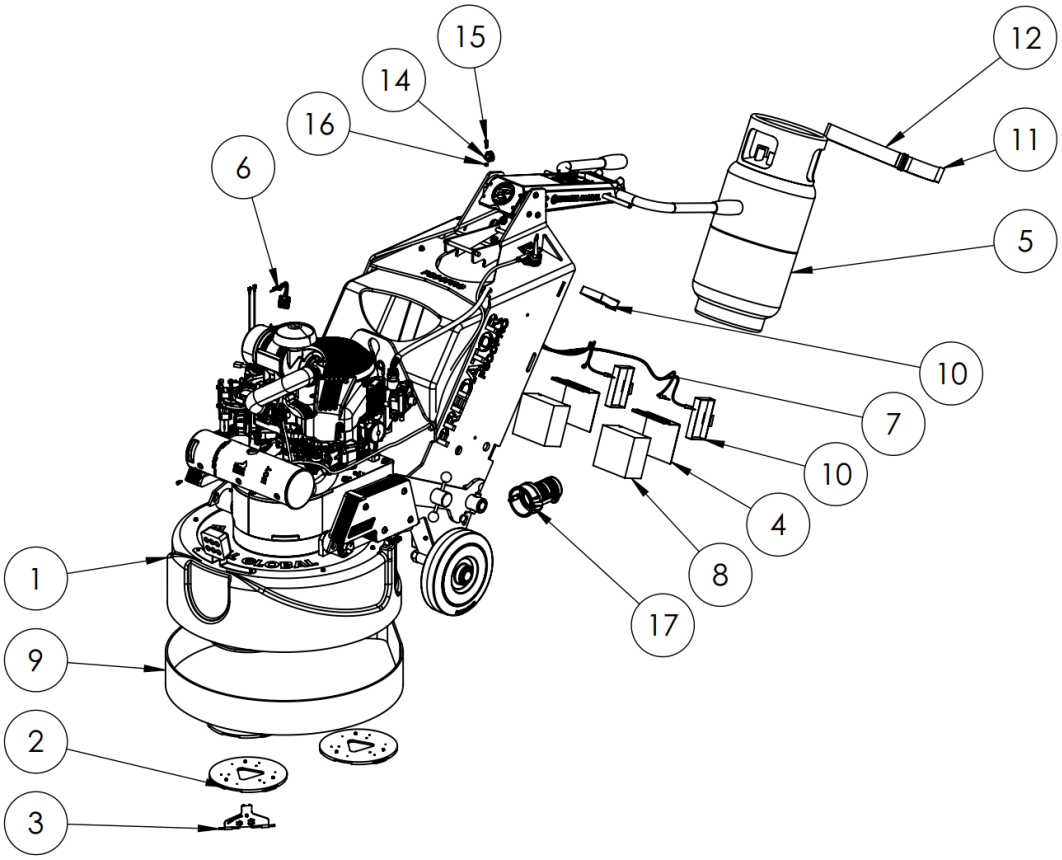
PARTS

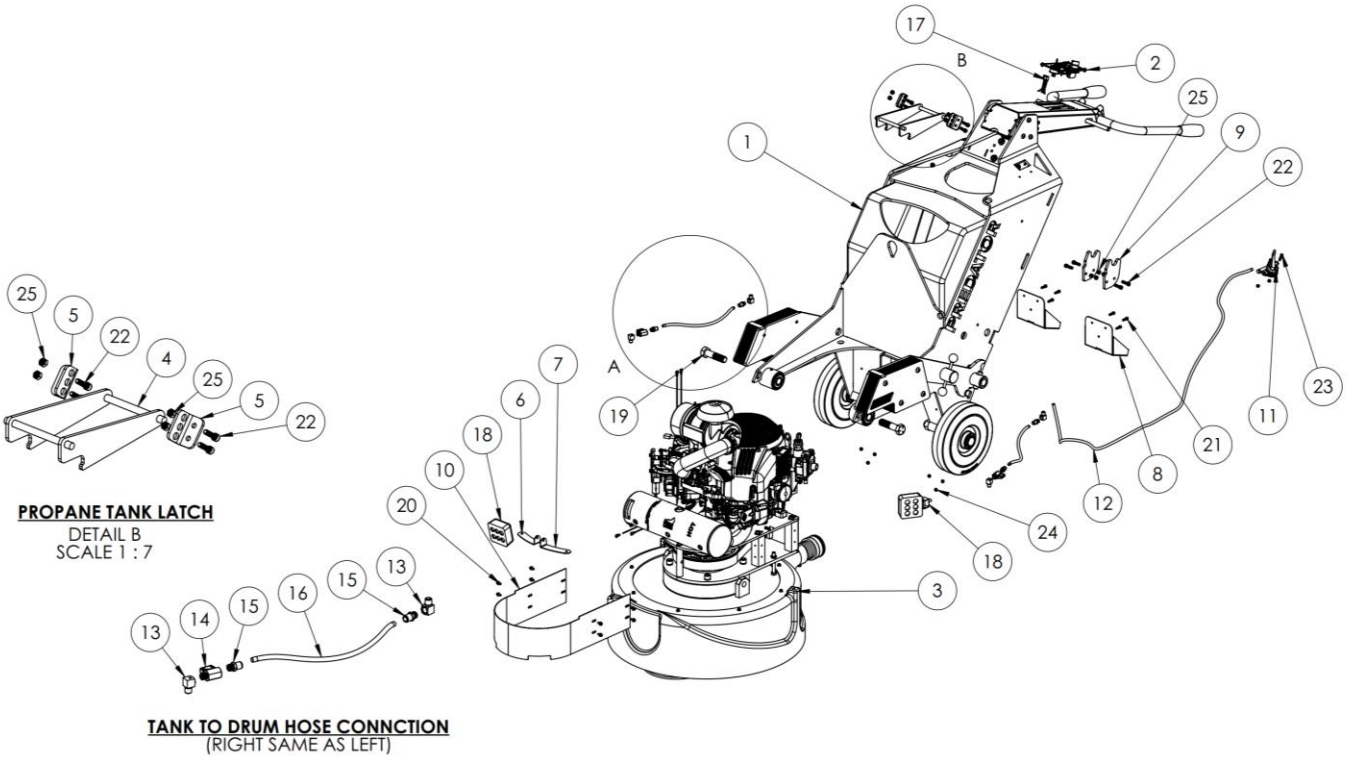
98-0053 - PREDATOR P800PRO GRINDER - E

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	96-0755	PREDATOR P800PRO GRINDER ASSEMBLY	1
2	96-0781	METAL TOOLING KIT 800	3
3	96-0456	TOOLING WRENCH	1
4	96-0807	BATTERY BOX COVER ASSEMBLY	2
5	44-0059	33LB PROPANE TANK VAPOR	1
6	24-0309	BATTERY CABLE ENGINE SIDE 650PRO & 800PRO	1
7	24-0308	BATTERY CABLE 2X BATTERY 800PRO	1
8	23-0235	BATTERY, 12V	2
9	13-0619	DUST COVER - 800	1
10	13-0618	BATTERY STRAP 1"X24"	3
11	13-3326	PROPANE TANK STRAP 2X VELCRO	1
12	13-3327	PROPANE TANK STRAP RING+ VELCRO	1
13	61-0075	PREDATOR DECAL KIT 800PRO	1
14	13-0285-05	1 INCH P-CLAMP	1
15	12-0600-20	SOCKET HEAD CAP SCREW - M6X20 - ZINC	1
16	12-0640	NYLOC NUT - M6 - ZINC	1
17	VAC.10125	CAM LOCK 3IN FEMALE	1



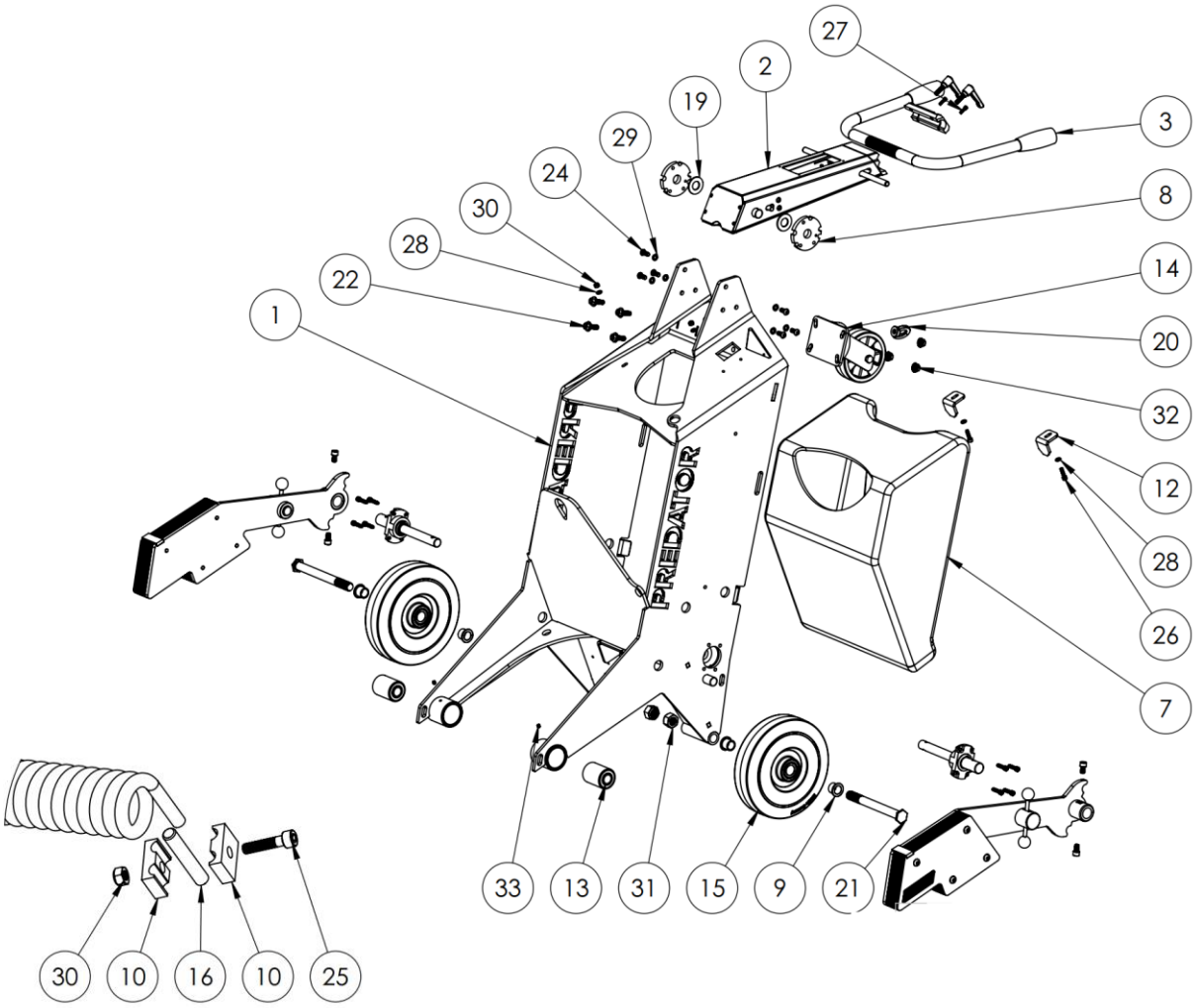
96-0755 - PREDATOR P800PRO GRINDER ASSEMBLY - E

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	96-0750	FRAME ASSEMBLY - 800	1
2	96-0754	SWITCH PANEL - 800PRO	1
3	96-0811	ENGINE CLUTCH BOX DRUM ASSEMBLY 800PRO	1
4	53-0791	PROPANE TANK LATCH	1
5	52-0601	PROPANE TANK LATCH MOUNT	2
6	52-0602	FRONT LIGHT BRACKET RIGHT - 800	1
7	52-0603	FRONT LIGHT BRACKET LEFT - 800	1
8	52-0605	BATTERY BOX	2
9	52-0606	PROPANE TANK BOTTOM SUPPORT	2
10	51-3404	CLUTCH BOX COVER 800PRO	1
11	43-0405	THROTTLE HANDLE 650 AND 800PRO	1
12	43-0406	THROTTLE CABLE 650 AND 800PRO	1
13	41-0057	FITTING 0.25 NPT MALE TO 0.25 NPT FEMALE 90 DEG BRASS	4
14	41-0051	BALL VALVE MALE 0.25 NPT FEMALE 0.25 NPT	2
15	41-0052	PUSH-TO-CONNECT 0.25 NPT 0.38 TUBE	4
16	41-0053	WATER TUBE CLEAR 0.38 OD	1
17	24-0306	WIRING HARNESS 800PRO	1
18	23-0240	LIGHT 12V FLOOD	2
19	11-0371	HEX HEAD SCREW - 1"X4" - ZINC	2
20	12-0660-12	SERRATED - M6X12 - ZINC	8
21	12-0600-20	SOCKET HEAD CAP SCREW - M6X20 - ZINC	6
22	12-0800-30	SOCKET HEAD CAP SCREW - M8X30 - ZINC	8
23	12-0610-30	BUTTON HEAD CAP SCREW - M6X30 - ZINC	2
24	12-0640	NYLOC NUT - M6 - ZINC	8
25	12-0840	LOCKNUT - M8 - ZINC	8

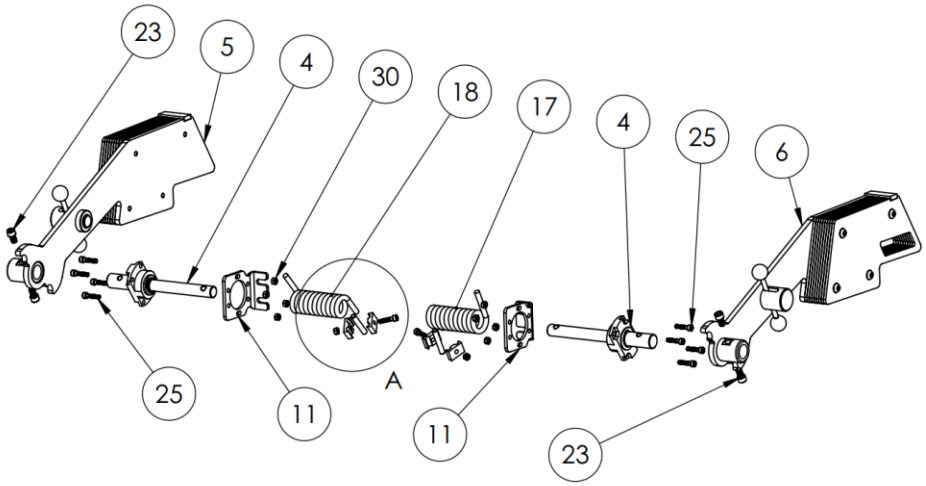


96-0750 - FRAME ASSEMBLY – 800 - D

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	53-0790	FRAME WELDMENT - 800	1
2	96-0725	HANDLE ASSEMBLY	1
3	96-0720	BG HANDLE	1
4	96-0469	SWING WEIGHT BUSHING ASSEM	2
5	96-0740	SWING WEIGHT ASSEMBLY LEFT - 800	1
6	96-0745	SWING WEIGHT ASSEMBLY RIGHT - 800	1
7	54-0045	WATER TANK - 800	1
8	51-3358	HANDLE CLOCK	2
9	51-3355	AXLE BUSHING	4
10	51-3309	CLAMP	4
11	52-0359	SPRING FLANGE	2
12	52-0633	TANK MOUNTING BRACKET	2
13	13-0612	DRUM MOUNTING BUSHING - 800	2
14	13-0611	CASTER WHEEL	1
15	13-0610	WHEEL 12IN	2
16	13-0609	TORSION SPRING PIN	2
17	13-0608	TORSION SPRING RIGHT	1
18	13-0602	TORSION SPRING LEFT	1
19	13-0556	THRUST BEARING 1"	2
20	13-3329	EYE NUT - M12 - GALV	1
21	12-2420-250	HEX HEAD SCREW - M24X250 - ZINC	2
22	12-1260-35	HEX HEAD SERRATED - M12X35 - ZINC	4
23	12-1200-20	SOCKET HEAD CAP SCREW - M12X20 - ZINC	4
24	12-1010-25	BUTTON HEAD CAP SCREW - M10X25 - ZINC	6
25	12-0800-35	SOCKET HEAD CAP SCREW - M8X35 - ZINC	10
26	12-0800-30	SOCKET HEAD CAP SCREW - M8X30 - ZINC	2
27	12-0600-20	SOCKET HEAD CAP SCREW - M6X20 - ZINC	2
28	12-0850	WASHER - M8 - ZINC	4
29	12-1070	LOCK WASHER - M10 - ZINC	6
30	12-0840	LOCKNUT - M8 - ZINC	12
31	12-2440	LOCKNUT - M24 - ZINC	2
32	12-1260	HEX NUT SURRATED - M12 - ZINC	3
33	13-0804	SET SCREW CONE - MX10 - ZINC	2



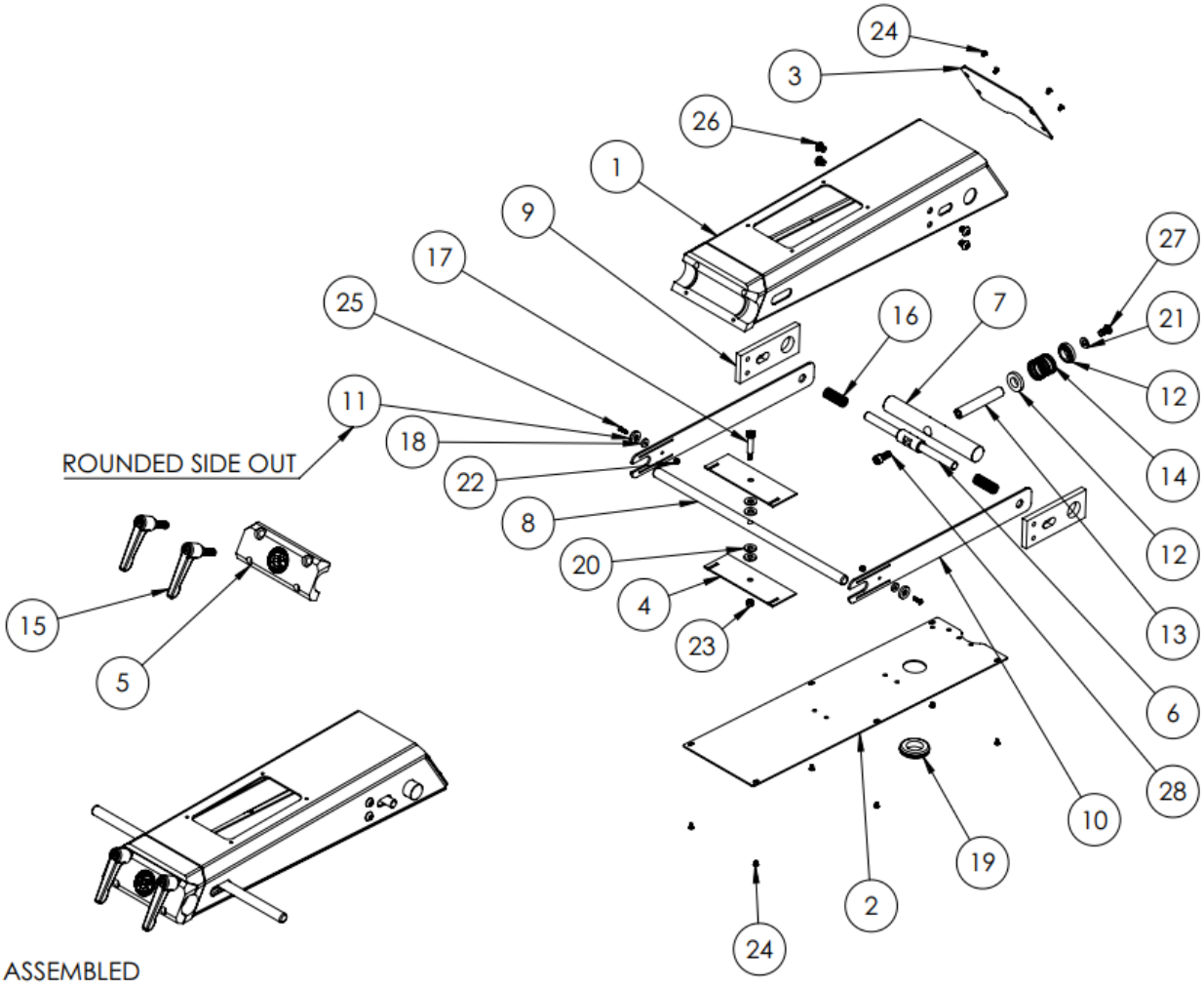
DETAIL A
SCALE 1 : 4



SWING WEIGTHS FROM REAR OF MACHINE

96-0725 - HANDLE ASSEMBLY – 650 AND 800 - G

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	53-0750	HANDLE STEM WELDMENT	1
2	52-0350	BOTTOM COVER PANEL	1
3	52-0351	FRONT COVER PANEL	1
4	52-0354	PREP PLATES	2
5	51-3200	HANDLE CAP PLATE	1
6	51-3201	LATCH PIN	1
7	51-3203	PIVOT PIN	1
8	51-3303	PULL HANDLE	1
9	51-3304	REINFORCEMENT PLATE	2
10	51-3305	PULL PLATE	2
11	13-0551	TEFLON SLIDER 3/4"	2
12	13-0552	SPRING LOCATOR	2
13	13-0553	TAPPED SHAFT M8	1
14	13-0575	COMPRESSION SPRING	1
15	13-0554	LOW-PROFILE ADJUSTABLE HANDLE	2
16	13-3330	SPRING 2IN X 0.6IN - 4.8 SR	2
17	13-0557	SHOULDER BOLT 8X30 M6	1
18	13-0558	SPACER 1/2" X 1/8"	2
19	25-0182	GROMET 1IN	1
20	12-2852	WASHER - M8 - PTFE	4
21	12-0850	WASHER - M8 - ZINC	1
22	12-0440	NYLOC NUT - M4 - ZINC	2
23	12-0640	NYLOC NUT - M6 - ZINC	1
24	12-0410-06	BUTTON HEAD CAP SCREW - M4X6 - ZINC	10
25	12-0410-16	BUTTON HEAD CAP SCREW - M4X16 - ZINC	2
26	12-0810-10	BUTTON HEAD CAP SCREW - M8X10 - ZINC	4
27	12-0810-16	BUTTON HEAD CAP SCREW - M8X16 - ZINC	1
28	12-0800-20	SOCKET HEAD CAP SCREW - M8X20 - ZINC	1


24
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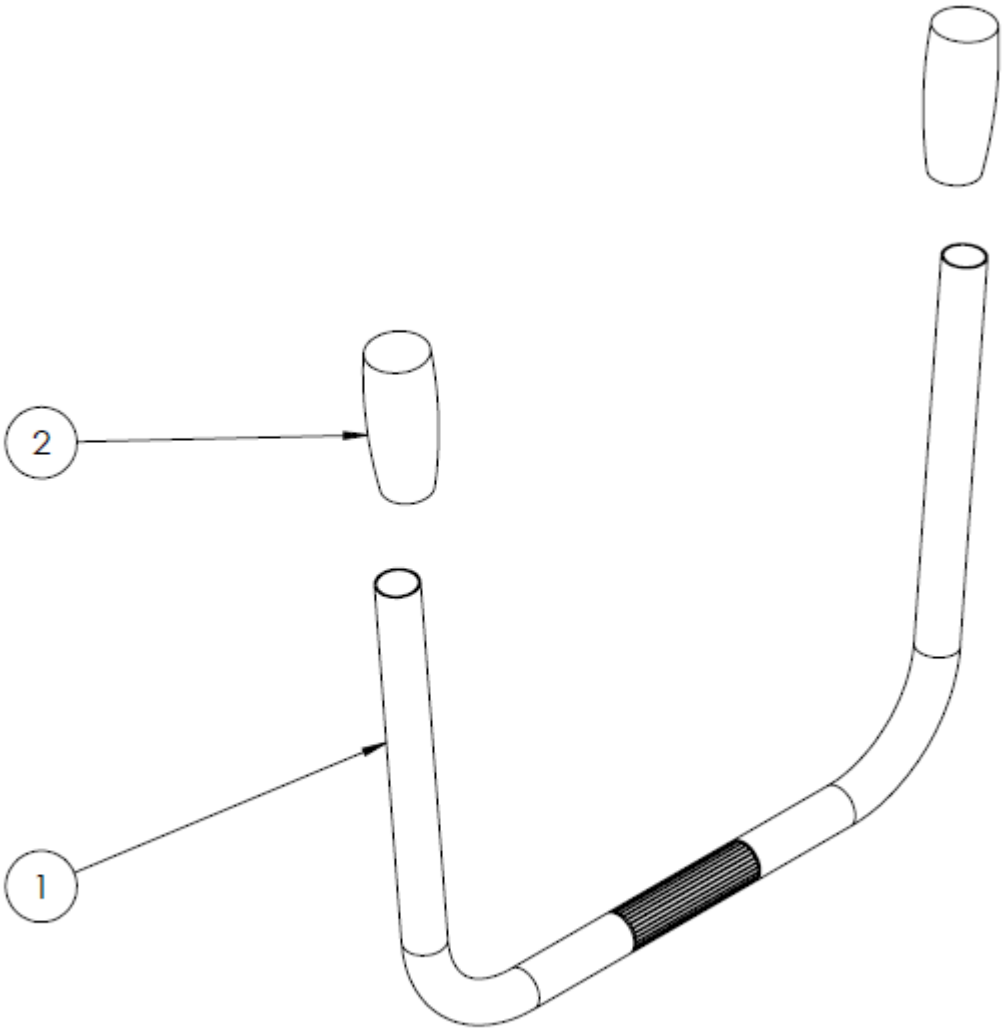
ROUNDED SIDE OUT
15
5
ASSEMBLED

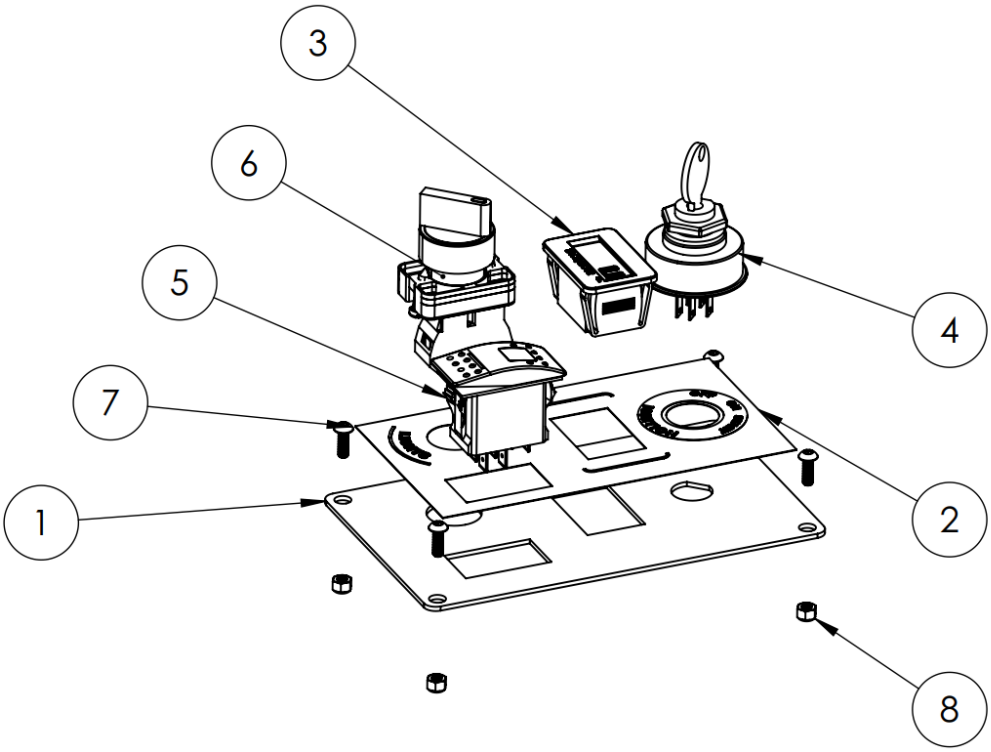
96-0720 - BG HANDLE – 650 AND 800 - C

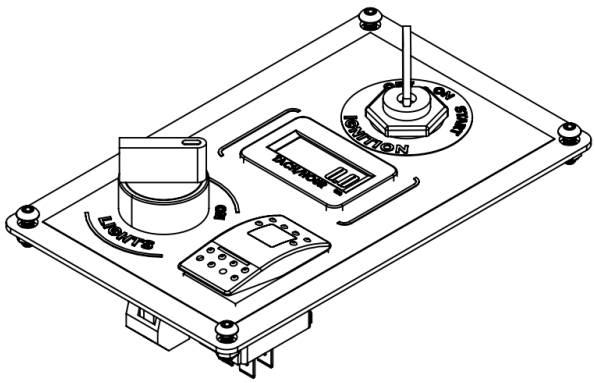
ITEM NO.	Part Number	DESCRIPTION	QTY.
1	53-0797	BG HANDLEBAR WELDMENT	1
2	13-0560	BG HANDLE END GRIP	2



96-0754 - SWITCH PANEL – 800PRO - G

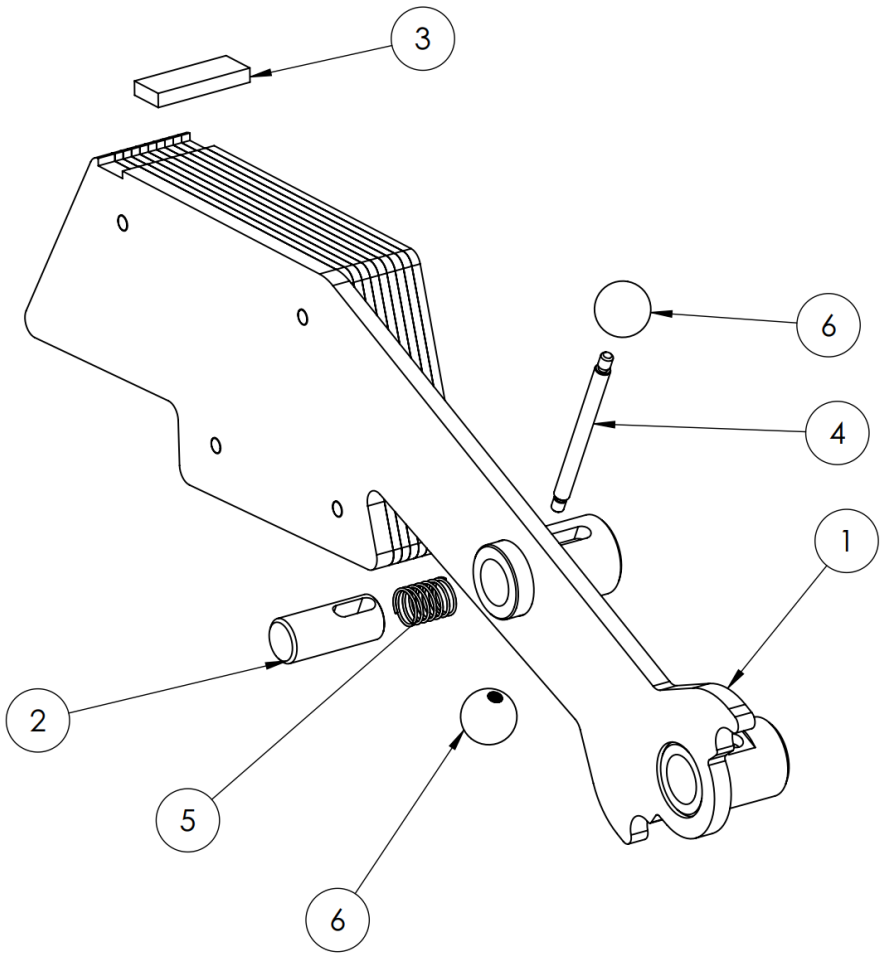
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	52-0607	SWITCH PLATE DECAL	1
2	61-0079	SWITCH PLATE DECAL	1
3	22-0101	HOUR/TACH DIGITAL METER	1
4	22-0102	IGNITION SWITCH 800PRO	1
5	22-0103	SWITCH LIGHTED 4 PIN	1
6	22-0104	SWITCH TWO POSITION	1
7	12-0410-12	BUTTON HEAD CAP SCREW - M4X12 - ZINC	4
8	12-0440	NYLOC NUT – M4 - ZINC	4





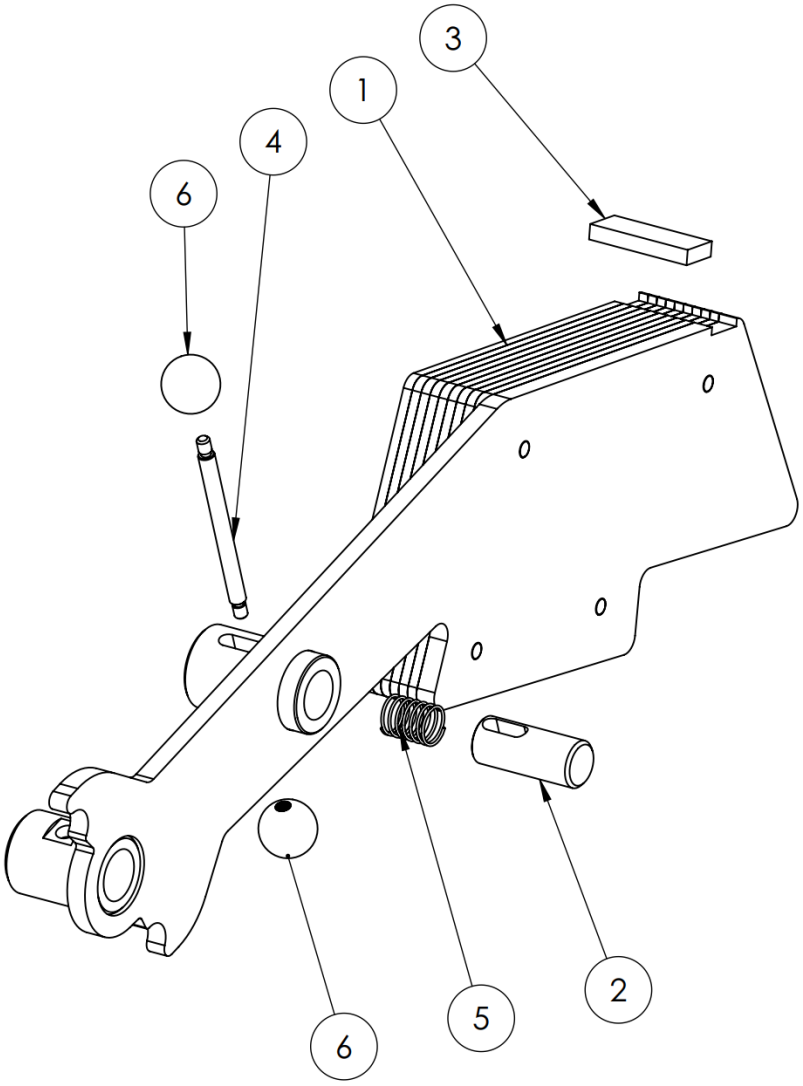
96-0745 - SWING WEIGHT ASSEMBLY RIGHT – 800 - E

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	53-0759	WEIGHT ARM WELDMENT RIGHT - 800	1
2	51-3310	WEIGHT PIN	1
3	51-3370	SWING WEIGHT PAD - 650	1
4	13-0600	LEVERAGE PIN	1
5	13-0603	PIN LOCK SPRING	1
6	13-0604	KNOB	2



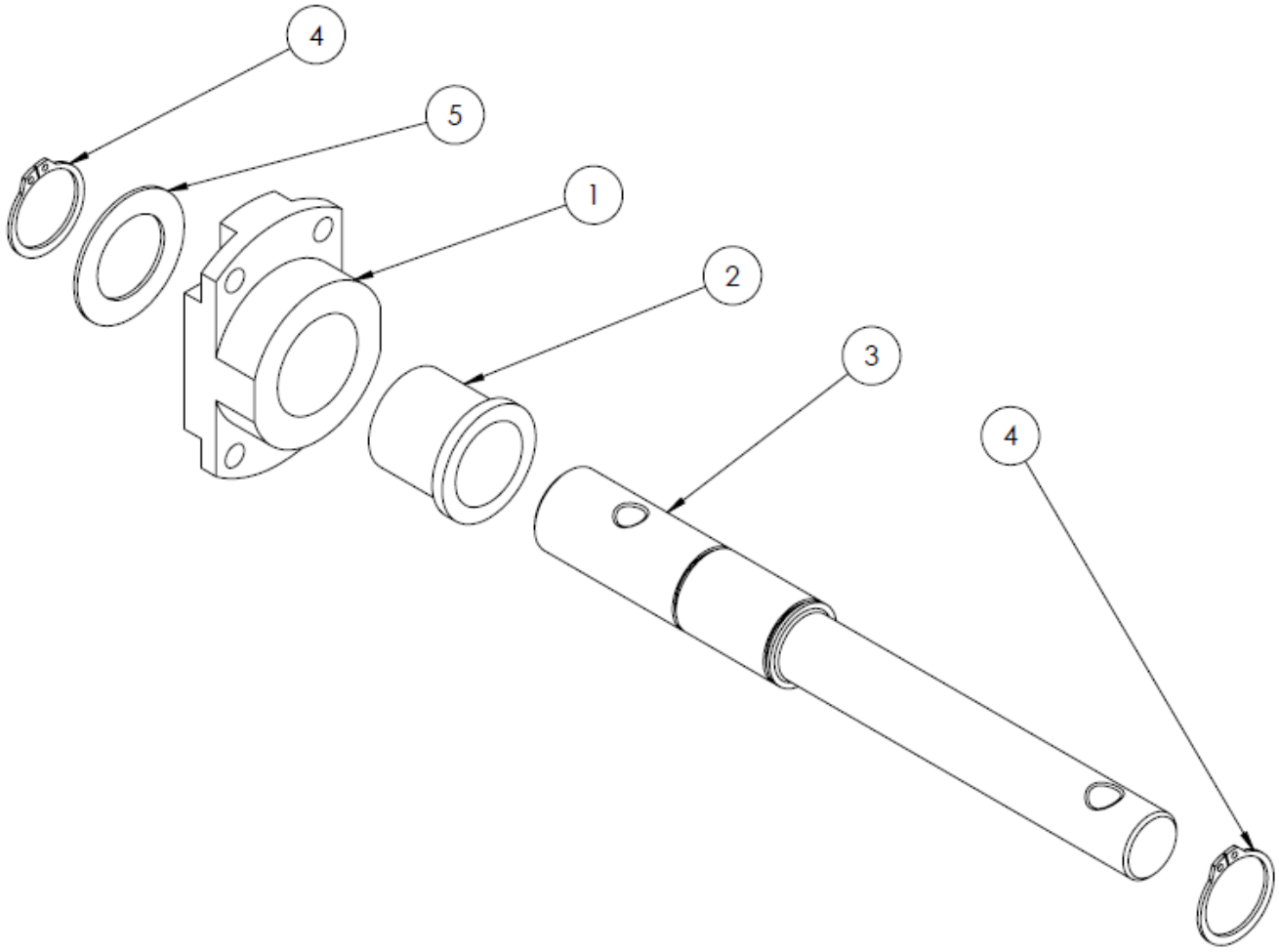
96-0740 - SWING WEIGHT ASSEMBLY LEFT – 800 - E

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	53-0757	WEIGHT ARM WELDMENT LEFT - 800	1
2	51-3310	WEIGHT PIN	1
3	51-3370	SWING WEIGHT PAD - 650	1
4	13-0600	LEVERAGE PIN	1
5	13-0603	PIN LOCK SPRING	1
6	13-0604	KNOB	2



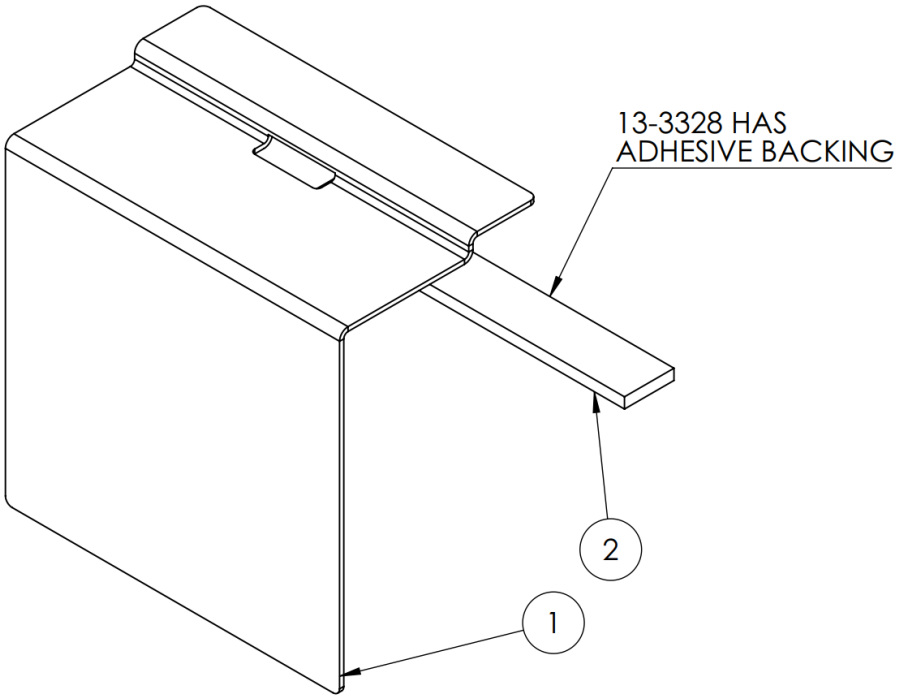
96-0469 - SWING WEIGHT BUSHING ASSEMBLY - B

ITEM NO.	Part Number	DESCRIPTION	QTY.
1	51-3306	BUSHING HOUSING	1
2	13-0601	WEIGHT BUSHING	1
3	51-3308	SPINDLE	1
4	13-0606	RETAINING RING 30MM	2
5	13-0607	THRUST WASHER 30MM	1



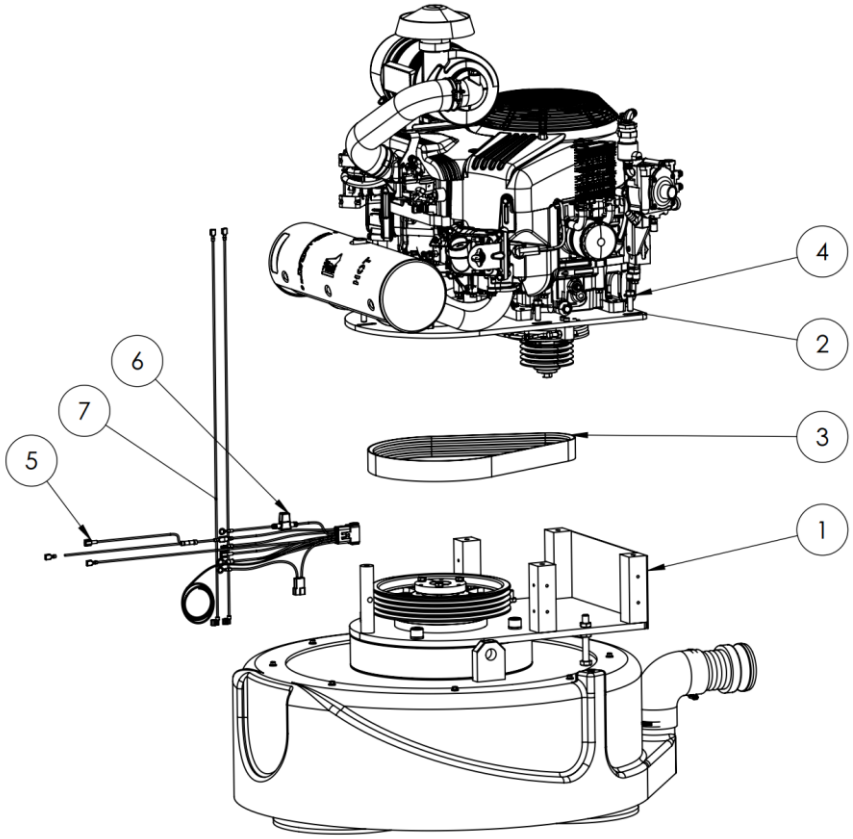
96-0807 - BATTERY BOX COVER ASSEMBLY - B

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	52-0630	BATTERY BOX COVER	1
2	13-3328	BATTERY COVER FOAM	6IN



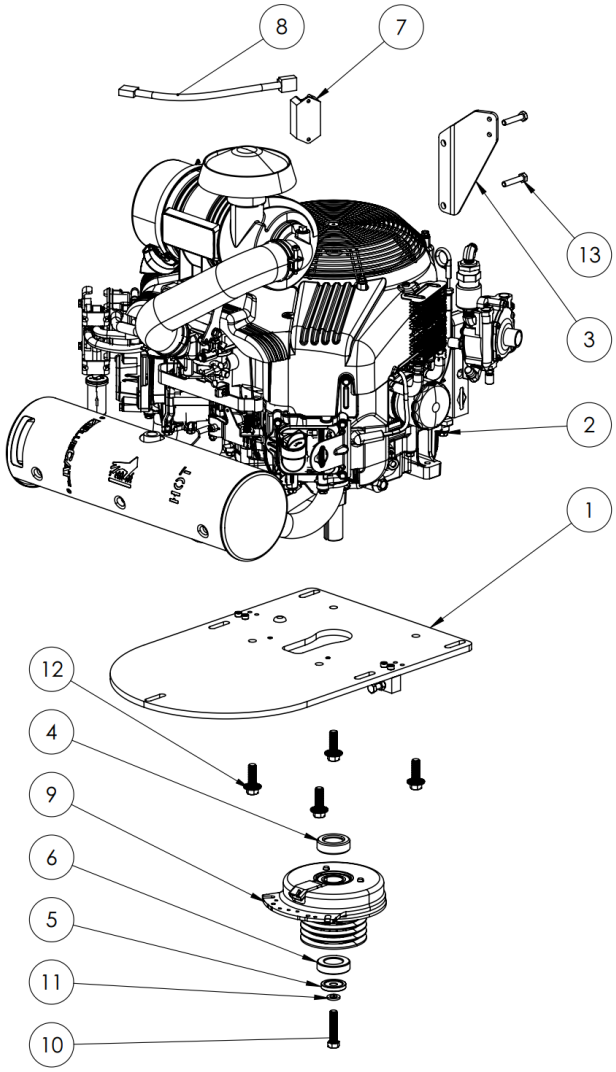
96-0811 - ENGINE CLUTCH BOX DRUM ASSEMBLY 800PRO - B

ITEM NO.	Part Number	DESCRIPTION	QTY.
1	96-0814	DRUM CLUTCH BOX SUB ASSEMBLY 800PRO	1
2	96-0752	DRIVE ASSEMBLY 800PRO	1
3	13-0713	BELT 4/3VX 425 GATES - 800PRO	1
4	12-1060-30	SCREW, FLANGED HEX HEAD CAP SERR M10-1.5 X 30 ZINC	5
5	24-0317	ENGINE SIDE HARNESS 650PRO AND 800PRO	1
6	24-0310	POWER SPLITTER HARNESS 800PRO/650PRO	1
7	24-0311	OIL PRESSURE HARNESS 800PRO/650PRO	1



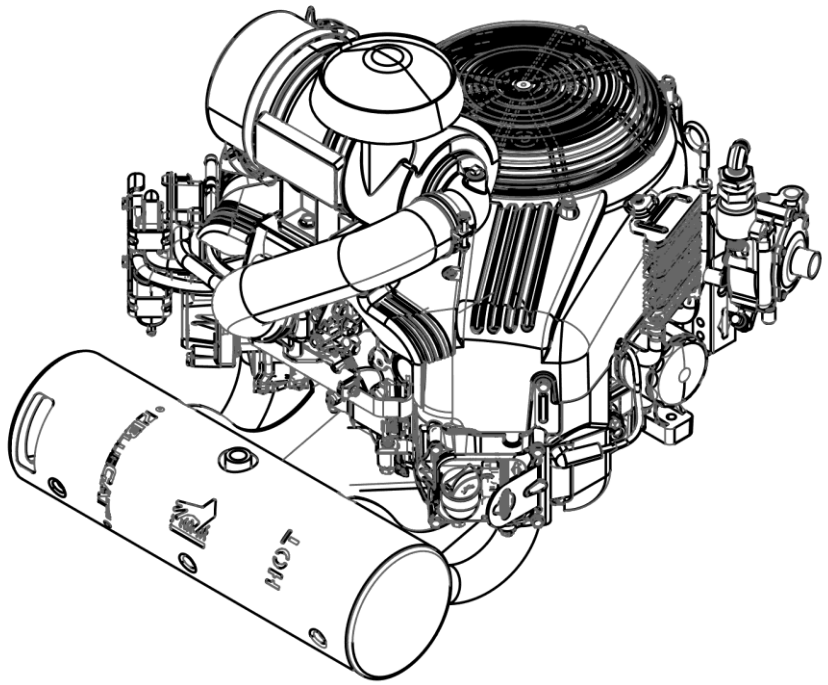
96-0752 - DRIVE ASSEMBLY - 800PRO - E

ITEM NO.	Part Number	DESCRIPTION	QTY.
1	96-0791	ENGINE MOUNT SUB ASSEM 800PRO	1
2	43-0416	ENGINE ASSEMBLY - 800PRO	1
3	52-0604	REGULATOR BRACKET - 800PRO	1
4	51-3411	MOTOR SPACER 800PRO	1
5	51-3414	CLUTCH WASHER 800PRO	1
6	51-3413	CLUTCH SPACER 800PRO	1
7	23-0250	SOFT START, CLUTCH	1
8	23-0252	SOFT START, CABLE - 800PRO	1
9	13-0717	CLUTCH, ELECTRIC 4 GROOVE PULLEY - 800PRO	1
10	11-0397	HHCS 0.43 X 20 X 2.00 ZP FULLY	1
11	11-0378	LOCK WASHER – 7/16" ZINC	1
12	12-1260-35	HEX HEAD SERRATED – M12X35 - ZINC	4
13	12-0820-40	HEX HEAD SERRATED - M12X40 - ZINC	2



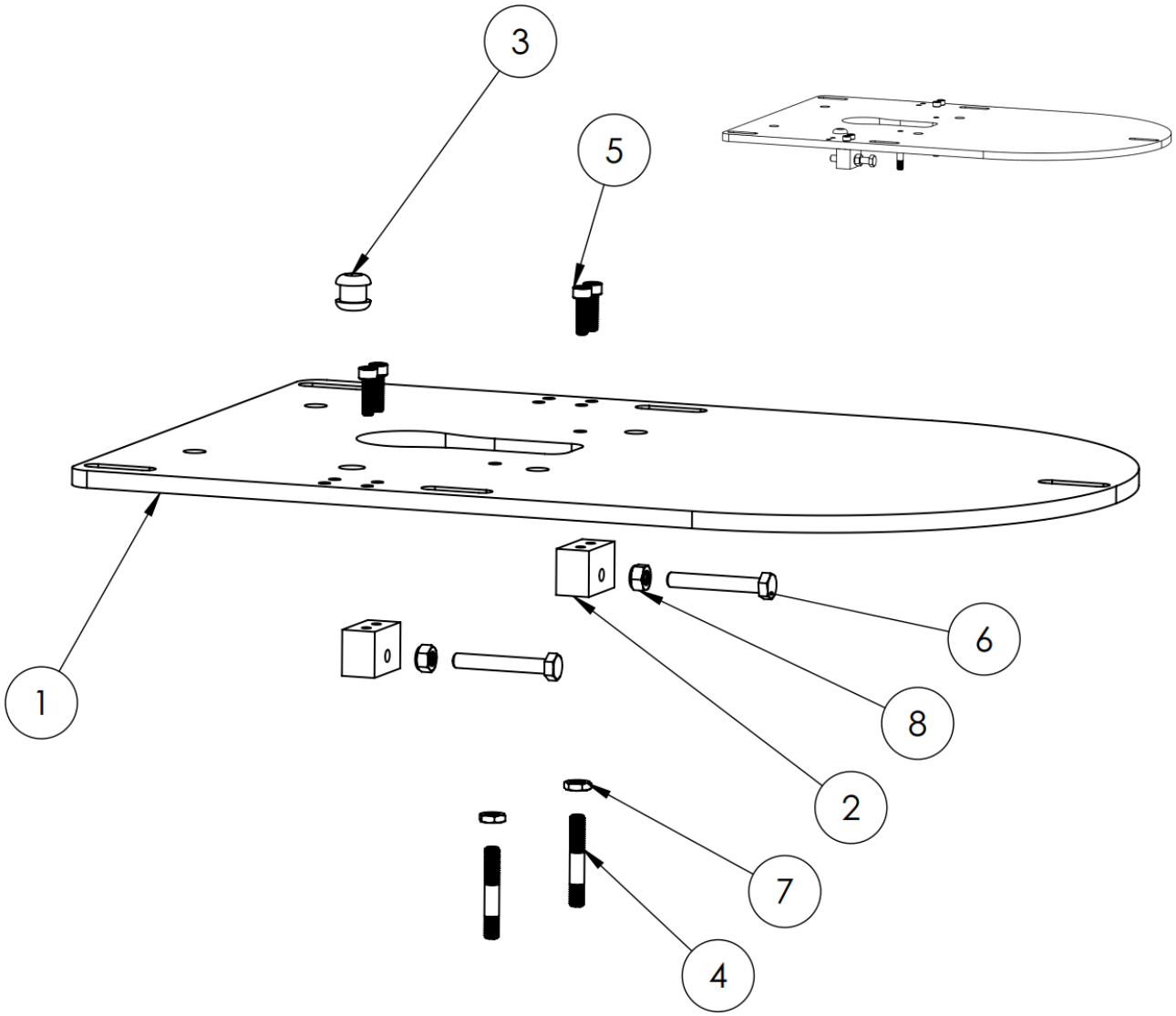
43-0416 - 993CC VANGUARD ENGINE KIT

ITEM NO.	Part Number	DESCRIPTION	QTY.
		PROPANE HOSE - HIGH PRESSURE 68 IN	1
	41-0050	QUICK DISCONNECT - 1 1/4 IN ACME RH X 1/4 NPT	1
		BRASS 45 ELBOW 3/8 SAE X 1/4 NPT	1
	43-0417	PROPANE REGULATOR ASSEMBLY (PRE-SET 810)	1
		PROPANE HOSE - HIGH PRESSURE - 36 IN	1
		PROPANE HOSE - LOW PRESSURE – 5/8 X 62 IN	1
	43-0435	SWITCH - OIL PRESSURE	1
	43-0434	ANALYZER - EMISSION DATA	1
	43-0418	B-S FILTER-OIL	1
	43-0419	CAP-A/C ASSEMBLY B&S 993	1
	43-0469	B-S CLAMP, AIR Cleaner	2
	43-0485	Air cleaner gasket 993	1
	43-0480	Intake gasket 993	1
	43-0439	B-S FILTER - AIR CARTRIDGE INNER	1
	43-0440	B-S FILTER - AIR CARTRIDGE OUTER	1
	43-0430	SPARK PLUG	1
	43-0446	VALVE - INLINE FILTER SHUT-OFF	1
	43-0451	02 SENSOR	1
	43-0427	MUFFLER - CATALYTIC 993 CC BRIGGS	1
	43-0491	LIQUIDNATOR	1
	43-0447	BULK HEAD LIQUIDNATOR	1
	43-0411	OIL DRAIN HOSE	1
	43-0480	DIP STICK 993cc	1
	43-0483	SOLENOID	1
	43-0423	STARTER	1



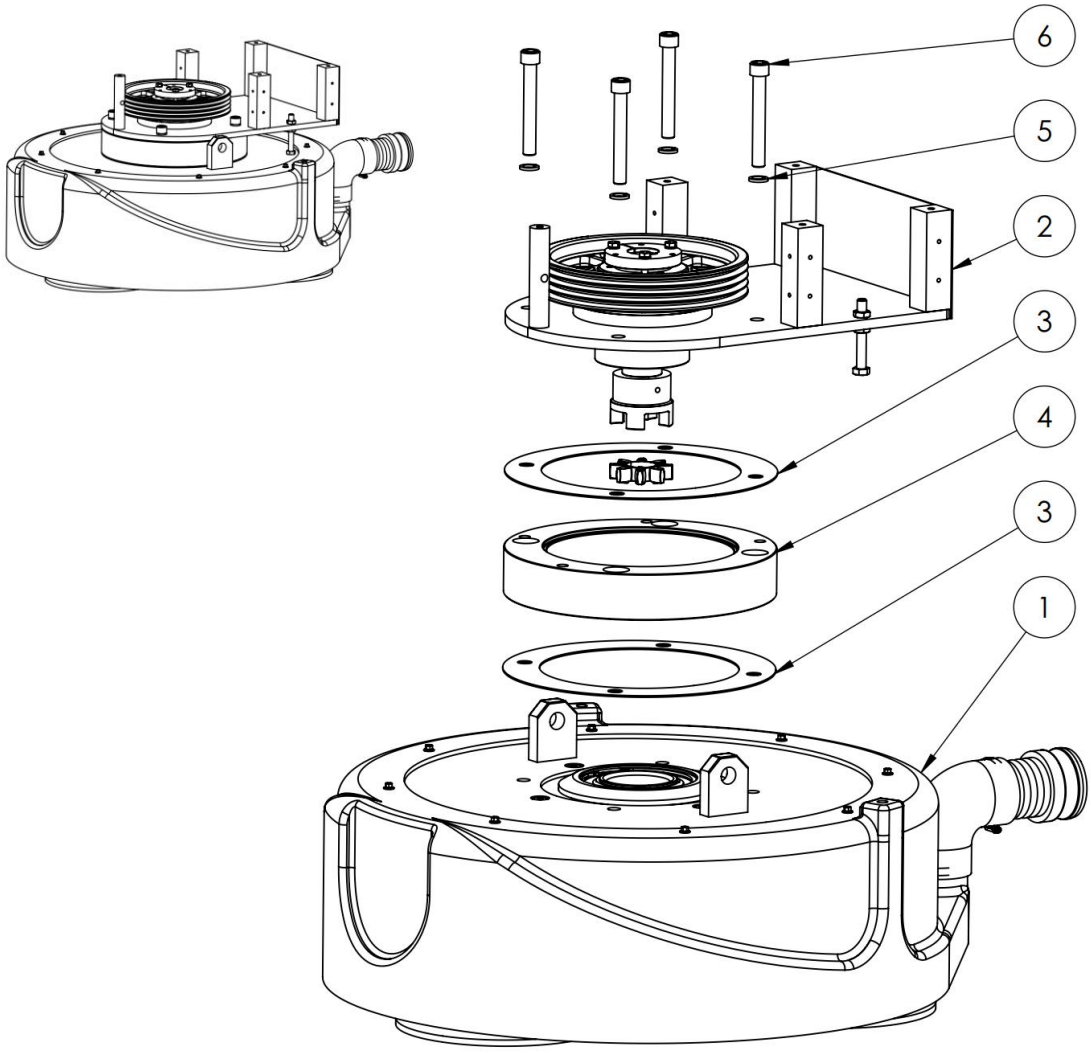
96-0791 - ENGINE MOUNT SUB ASSEM - 800PRO - C

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	51-3410	MOTOR PLATE 800PRO	1
2	51-3412	BELT CLUTCH TENSIONER 800PRO	2
3	13-0716	GROMMET, HIGH-TEMP 9/16"-3/8"-3/8"	1
4	13-0715	STUD DOUBLE END M8X50	2
5	12-0600-20	SOCKET HEAD CAP SCREW - M6X20 - ZINC	4
6	12-0820-55	HEX HEAD CAP SCREW - M8X55 - ZINC	2
7	12-0830-JAM	NUT - M8XJAM - ZINC	2
8	12-0840	LOCKNUT - M8 - ZINC	2



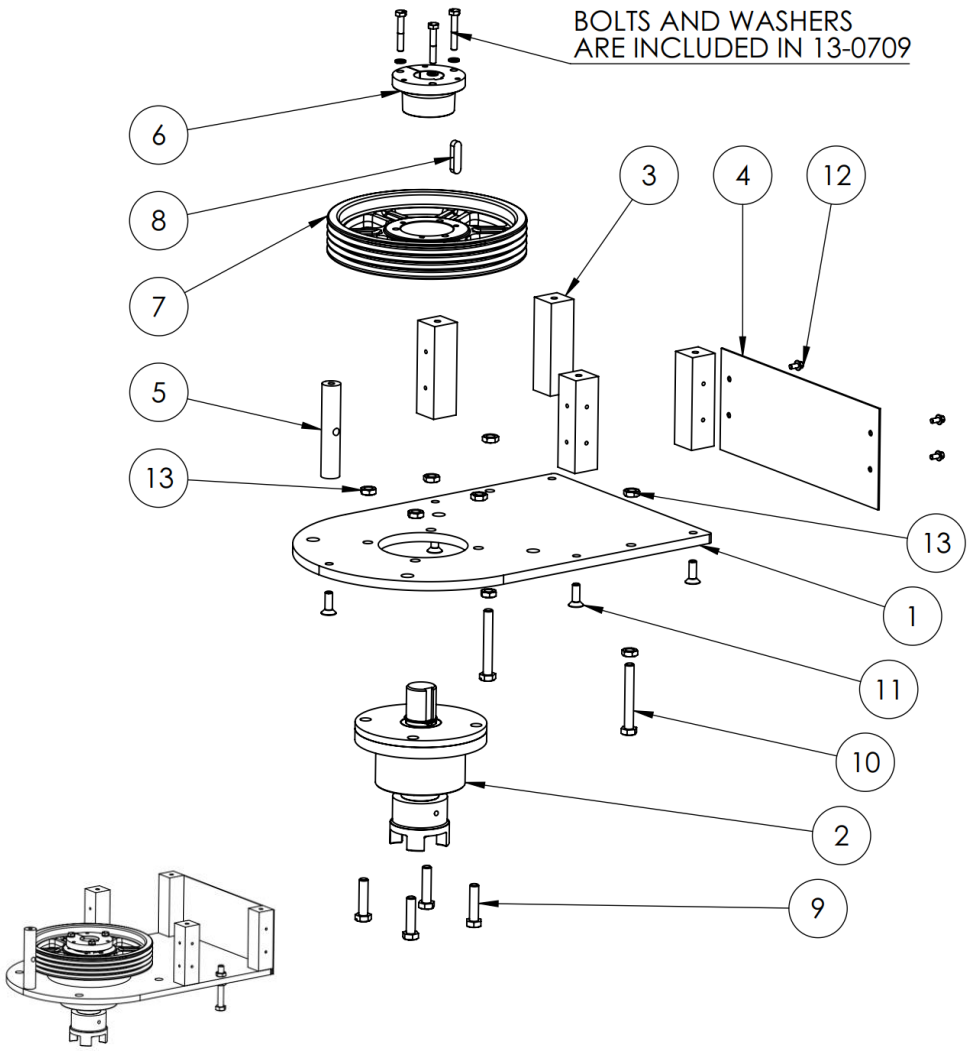
96-0814 - DRUM CLUTCH BOX SUB ASSEMBLY 800PRO - C

ITEM NO.	Part Number	DESCRIPTION	QTY.
1	96-0751	DRUM ASSEMBLY - 800	1
2	96-0753	DRUM MOUNT PLATE ASSEM - 800PRO	1
3	51-3382	DRUM TO SPACER GASKET - 800	2
4	51-3383	DRUM TO DRIVE SPACER - 800	1
5	12-1670	WASHER, LOCK M16 ZINC	4
6	12-1600-120	SOCKET HEAD CAP SCREW - M16X120 - ZINC	4
7	13-0712	SPIDER CJ38-45 LOVEJOY RED - 800	1



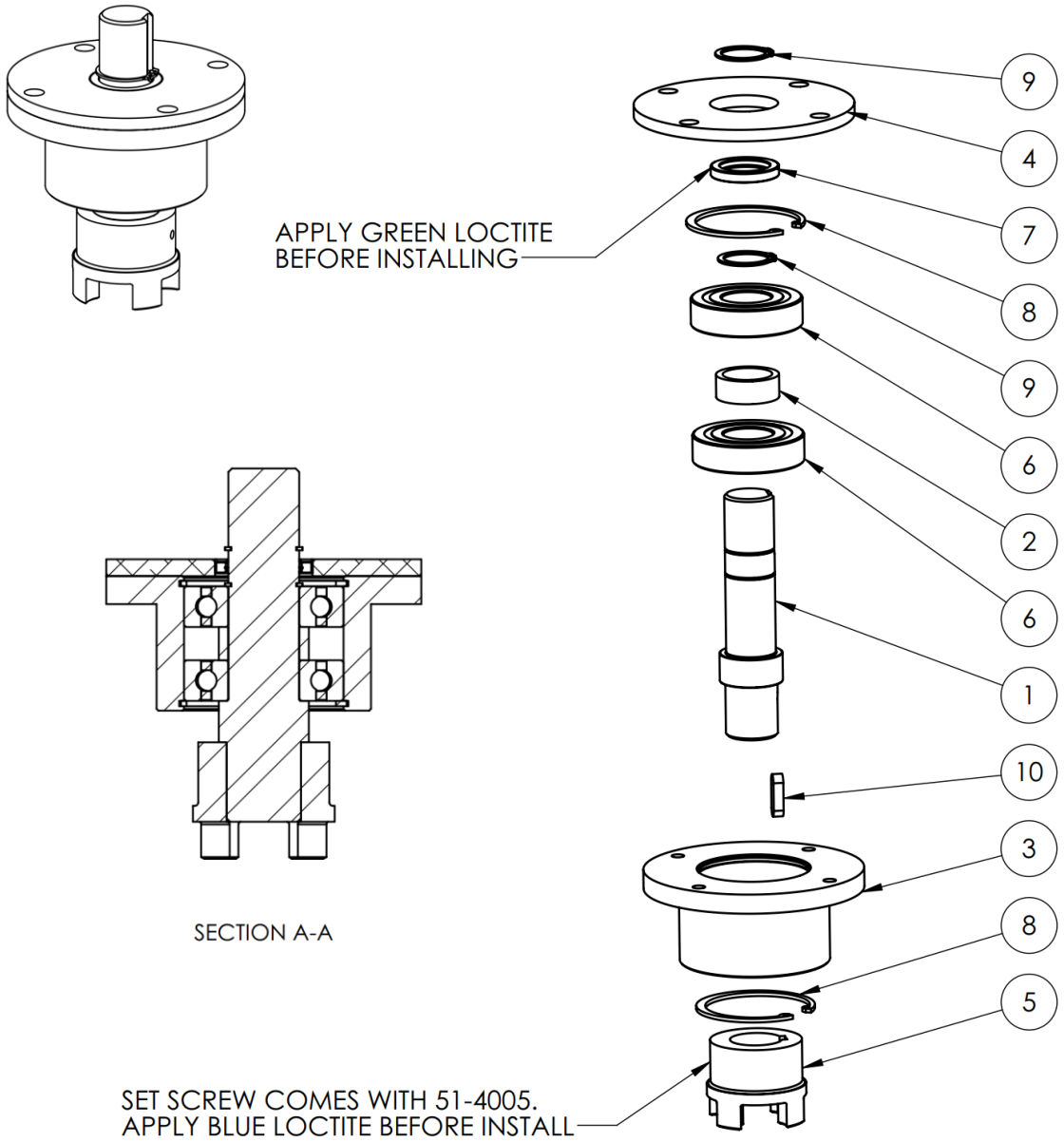
96-0753 - DRUM MOUNT PLATE ASSEM - 800PRO - C

ITEM NO.	Part Number	DESCRIPTION	QTY.
1	51-3406	TRANSFER BASE PLATE 800PRO	1
2	96-0790	TRANSFER SHAFT SUB ASSEMBLY 800PRO	1
3	51-3407	STANCHION CLUTCH BOX 800PRO	4
4	51-3408	CLUTCH BOX REAR COVER 800PRO	1
5	51-3409	STANCHION, FRONT CLUTCH BOX 800PRO	1
6	13-0709	BUSHING 40MM - SK 650PRO AND 800PRO	1
7	13-0718	SHEAVE, 4/3V 1060 800PRO	1
8	13-3331	KEY M12 X 8 X 45	1
9	12-1220-50	HEX HEAD CAP SCREW - M12X50 - ZINC	4
10	12-1220-90	HEX HEAD CAP SCREW - M12X90 - ZINC	2
11	12-1080-30	FLAT HEAD - M10X30 - ZINC	5
12	12-0660-12	SERRATED - M6X12 - ZINC	4
13	12-1230-JAM	NUT JAM M12-1.75	8



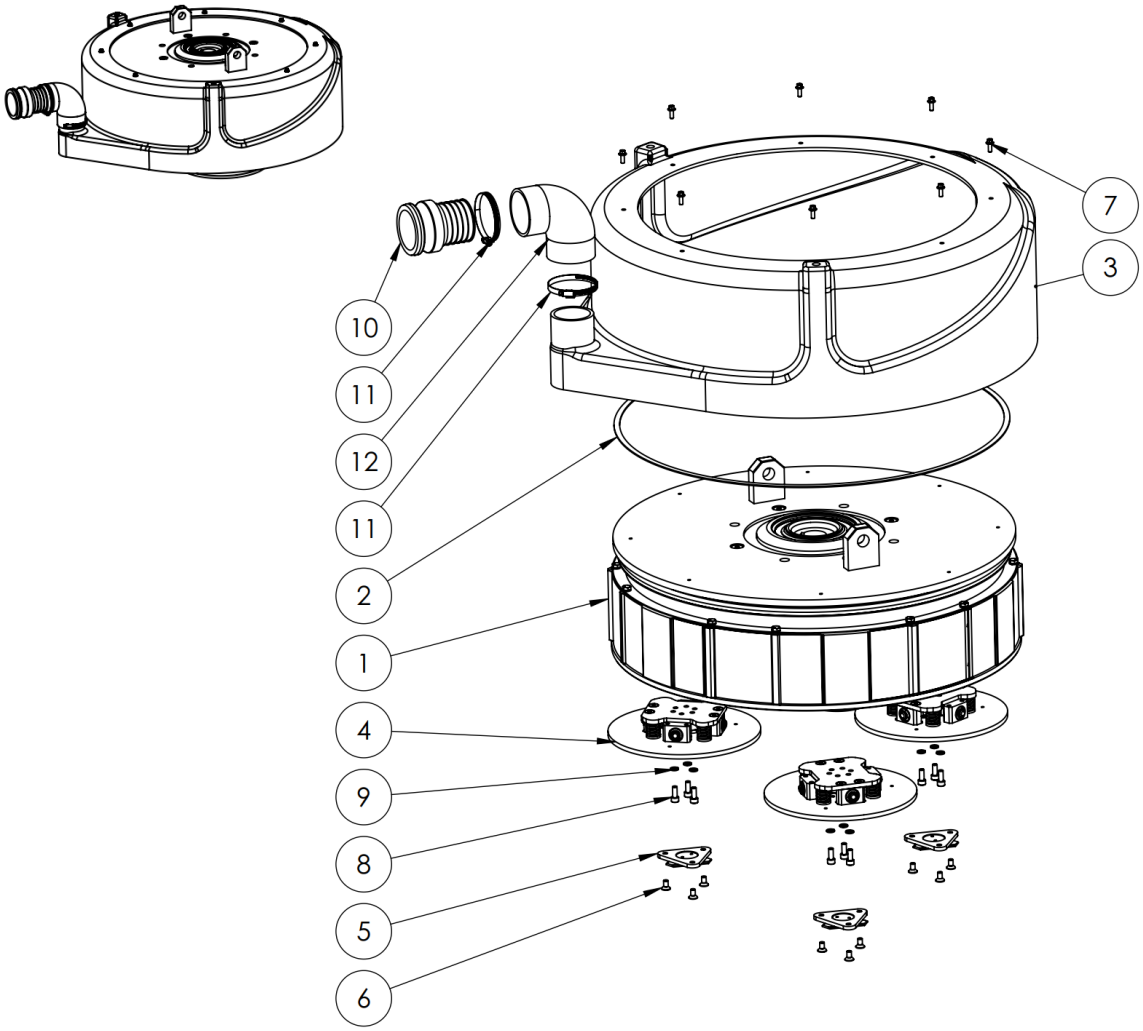
96-0790 - TRANSFER SHAFT SUB ASSEMBLY - 800PRO - C

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	51-3405	TRANSFER SHAFT 800PRO	1
2	51-3401	ID SPACER 650PRO 850PRO	1
3	51-3402	BEARING HOUSING, PRIMARY 650PRO 850PRO	1
4	51-3403	SEAL PLATE 650PRO 850PRO	1
5	51-4005	COUPLER, CJ38/45 LOVEJOY MOD - 800	1
6	13-3321	BEARING, BALL, 6308-2RS 650PRO 850PRO	2
7	13-3322	SEAL, ROTARY SHAFT M40 X M55 650PRO 850PRO	1
8	13-3323	RING, INTERNAL M90 650PRO 850PRO	2
9	13-3324	RING, EXTERNAL M40 650PRO 850PRO	2
10	13-3355	KEY M12-8X35 ROUNDED	1



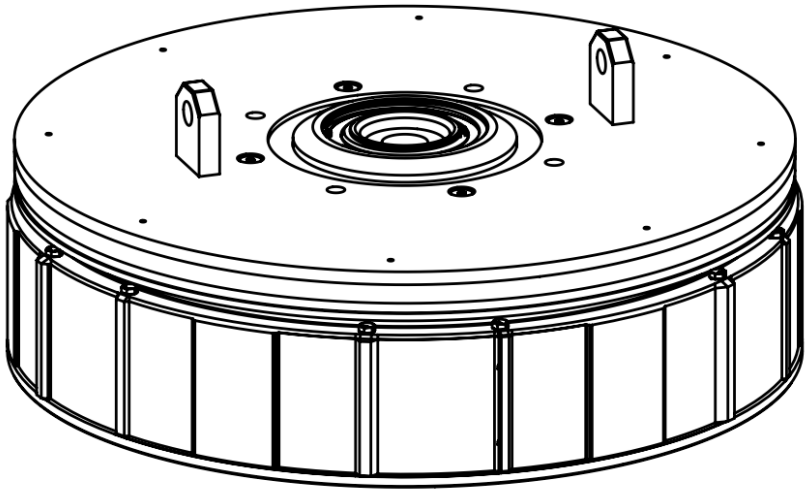
96-0751 - DRUM ASSEMBLY – 800 - C

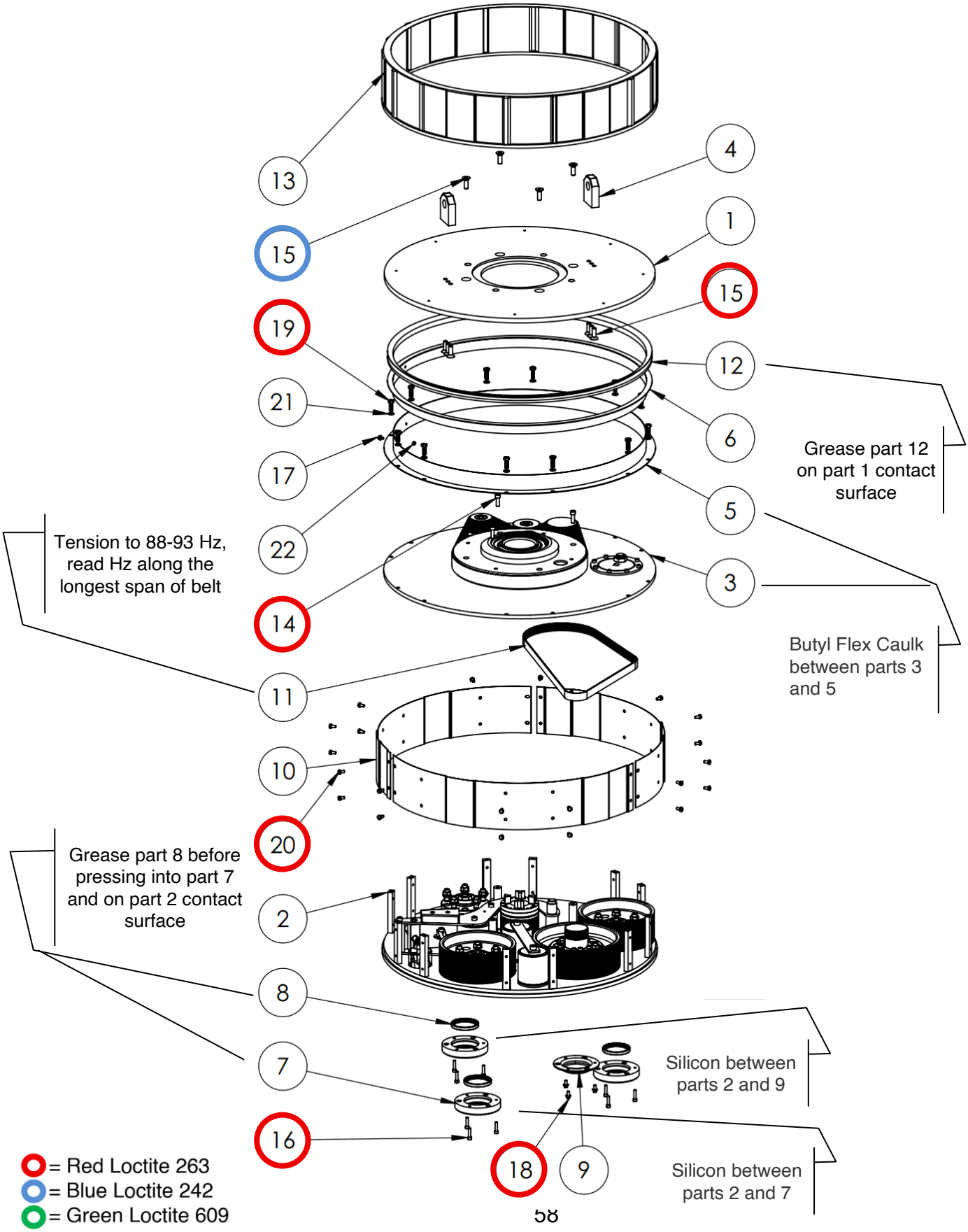
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	BG.80210.01	DRUM ASSEMBLY, BASE /BG8K	1
2	BG.20249.00	RUBBER, EPDM GASKET /BG8K 6K 5K	1
3	BG.80066.00	SHROUD, MOLDED VACUUM /BG8K	1
4	BG.8A010.85	FLEX HEAD, COMPLETE WITH REDSPRING NO CLOVER	3
5	96-0780	TOOLING TRIANGLE ASSEMBLY 800	3
6	12-0880-16	FLAT HEAD SOCKET SCREW - M8X16 - ZINC	9
7	NB.11.108	HEX FLANGE SCREW, M6 X 1.0 X 16	8
8	NB.10.218	SCREW, SOCKET HEAD CAP M8-1.25 X 20	9
9	NB.30.212	WASHER LOCK - ZINC - M8	9
10	13-0613	MALE 3IN CAMLOCK BARBED	1
11	13-0672	HOSE CLAMP 3IN SMOOTH	2
12	13-0616	SHROUD TO VAC ELBOW 3IN	1



BG.80210.01 – DRUM ASSEMBLY, BASE /BG8K

Item No.	Part Number	Description	Qty.
1	BG.80042.01	8K STATIONARY PLATE	1
2	BG.8A020.00	8K BOTTOM DRUM SUB ASSEMBLY	1
3	BG.8A021.00	8K TOP DRUM SUB ASSEMBLY	1
4	BG.80046.00	8K DRUM MOUNTING EAR	2
5	BG.80043.01	TOP BELT DUST SHROUD, V-RING STYLE	1
6	BG.80043.11	SEAL POSITIONER, 8K	1
7	BG.20285.02	SEAL HOLDER FOR SEAL 22817 6K & 8K	3
8	BG.20286.02	SEAL, AXLE NITRILE AL. SLURRY COVER /BG8K BG6K BG5K (WA)	3
9	BG.20284.00	PTO SLURRY SEAL	1
10	BG.80044.02	SHROUD, BOTTOM BELT DUST	3
11	BG.80040.00	PTO BELT	1
12	BG.80072.50	8K V-RING SEAL	1
13	BG.20287.00	TAPE, PRESERVATION HEAT SHRINK 3" WHITE	27 FT
14	NB.12.219	SOCKET HEAD CAP SCREW – ZINC – M8X25	3
15	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	10
16	NB.12.117	SCREW, SOCKET HEAD CAP M6-1.0 X 25	9
17	NB.11.104	HEX FLANGED HEAD SCREW - ZINC - M5 X 8MM	1
18	NB.11.109	SCREW, FLANGED HEX HEAD CAP M6-1.0 X 12 NON-SERRATED ZINC	3
19	NB.10.109	HEX HEAD SCREW - ZINC - M8 X 25MM	12
20	NB.10.200	HEX HEAD SCREW - ZINC - M6 X 12MM	24
21	NB.30.212	WASHER LOCK - ZINC - M8	12
22	NB.20.153	NYLOC NUT - M5 - ZINC	1




13
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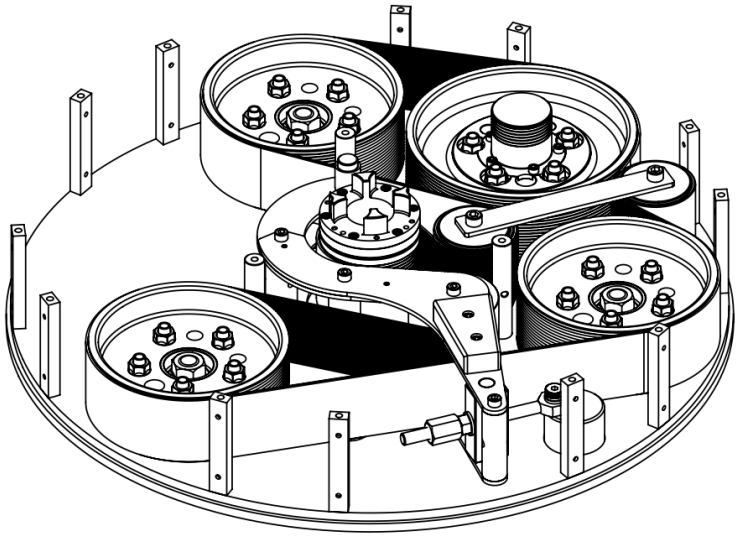
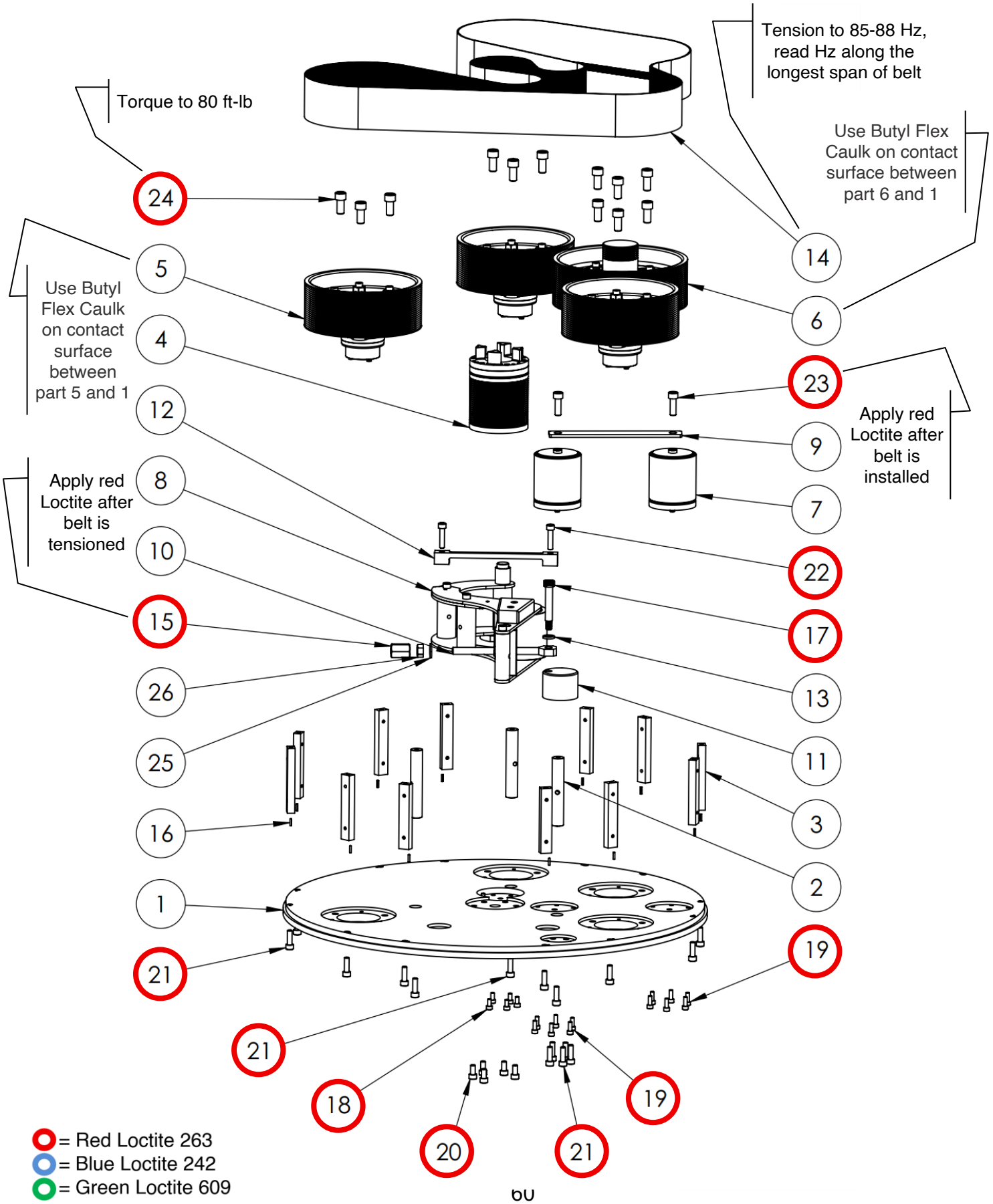
9
Grease part 12 on part 1 contact surface
Tension to 88-93 Hz, read Hz along the longest span of belt
Butyl Flex Caulk between parts 3 and 5
Grease part 8 before pressing into part 7 and on part 2 contact surface
Silicon between parts 2 and 9
Silicon between parts 2 and 7
= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A020.00 – 8K DRUM SUB ASSEMBLY

Item No.	Part Number	Description	Qty.
1	BG.80027.02	BTM DRUM PLATE ALUM	1
2	BG.80025.00	INNER STANCHION	3
3	BG.80026.00	PERIMETER STANCION	12
4	BG.8A007.60	SUBASSEM, MAIN BELT SPINDLE (REV 3)	1
5	BG.8A008.00	SUBASSEM, PLANETARY	3
6	BG.8A009.00	SUBASSEM, PTO	1
7	BG.8A006.12	SUBASSEM, MAIN BELT IDLER 6207	2
8	BG.8A005.11	SUBASSEM, BELT TIGHTENER	1
9	BG.80008.00	IDLER REINFORCING LINK	1
10	BG.20207.02	8K FULL THREAD MAIN BELT TENSIONER ROD	1
11	BG.80019.00	MAIN TENSIONER REACT POST	1
12	BG.20208.00	BAR, TENSIONER CONTROL	1
13	BG.80064.00	SPACER, ROD TIE	1
14	BG.80039.00	MAIN BELT 8K	1
15	NB.20.120	TENSIONER NUT	1
16	NB.50.147	PIN, SPIRAL M3 X 16	12
17	NB.15.251	SCREW, SOCKET HEAD SHOULDER M12 X 60	1
18	NB.12.108	SOCKET HEAD CAP SCREW - ZINC - M6X12	6
19	NB.12.111	SOCKET HEAD CAP SCREW - ZINC - M6X16	12
20	NB.12.213	SOCKET HEAD CAP SCREW - ZINC - M8X16	5
21	NB.12.219	SOCKET HEAD CAP SCREW - ZINC - M8X25	20
22	NB.10.231	SOCKET HEAD CAP SCREW - ZINC - M8X35	2
23	NB.13.252	SOCKET HEAD CAP SCREW - ZINC - M10X30	2
24	NB.12.249	SOCKET HEAD CAP SCREW - ZINC - M12X25	12
25	NB.30.134	WASHER, LOCK M14	1
26	NB.20.113	M12 HEX NUT	1




Tension to 85-88 Hz, read Hz along the longest span of belt
Torque to 80 ft-lb
Use Butyl Flex Caulk on contact surface between part 6 and 1
Use Butyl Flex Caulk on contact surface between part 5 and 1
Apply red Loctite after belt is installed
Apply red Loctite after belt is tensioned
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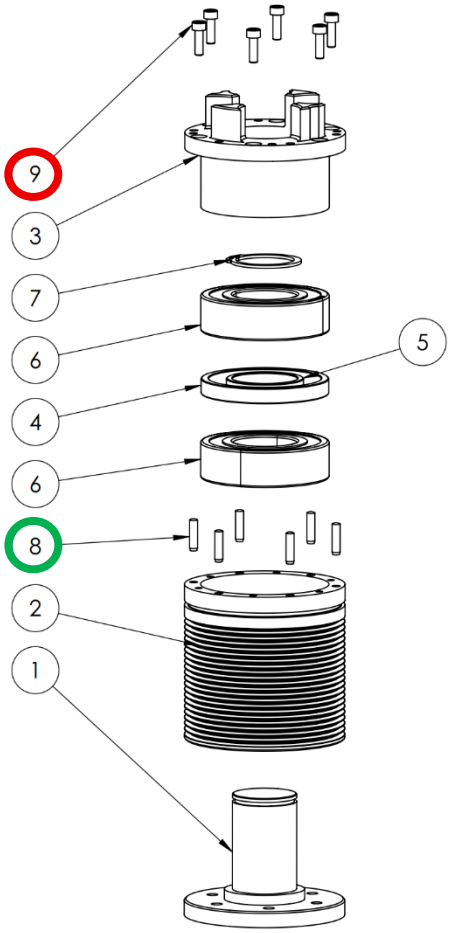
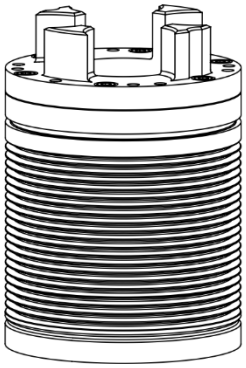
= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

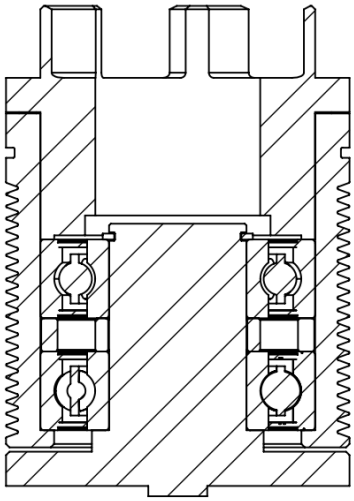
BG.8A007.60 – SUBASSEM, MAIN BELT SPINDLE

Item No.	Part Number	Description	Qty.
1	BG.80005.50	SPINDLE, MAIN BEARING (REV 2)	1
2	BG.80002.50	SHEAVE, MAIN DRIVE (REV 3)	1
3	BG.80002.53	MAIN DRIVE SHEAVE CAP	1
4	BG.80003.00	OUTER MAIN BEARING SPACER	1
5	BG.80004.00	SPACER, INNER MAIN BEARING	1
6	BG.20218.10	BEARING, 62208-2RS	2
7	NB.40.110	RING, EXTERNAL RETAINING M40	1
8	NB.50.138	PIN, CYLINDER M5 X 20	6
9	NB.12.090	SCREW, SOCKET HEAD CAP M5-0.8 X 16	6

Notes: 1. To repalce the main spindle on machines before serial number 0479, order one BG.8A007.50, one BG.80110.00, one BG.80101.00. and one BG.80100.50.
2. Machines before ~1400 use NB.18.140 to plug the center hole. The hole was removed on later versions.





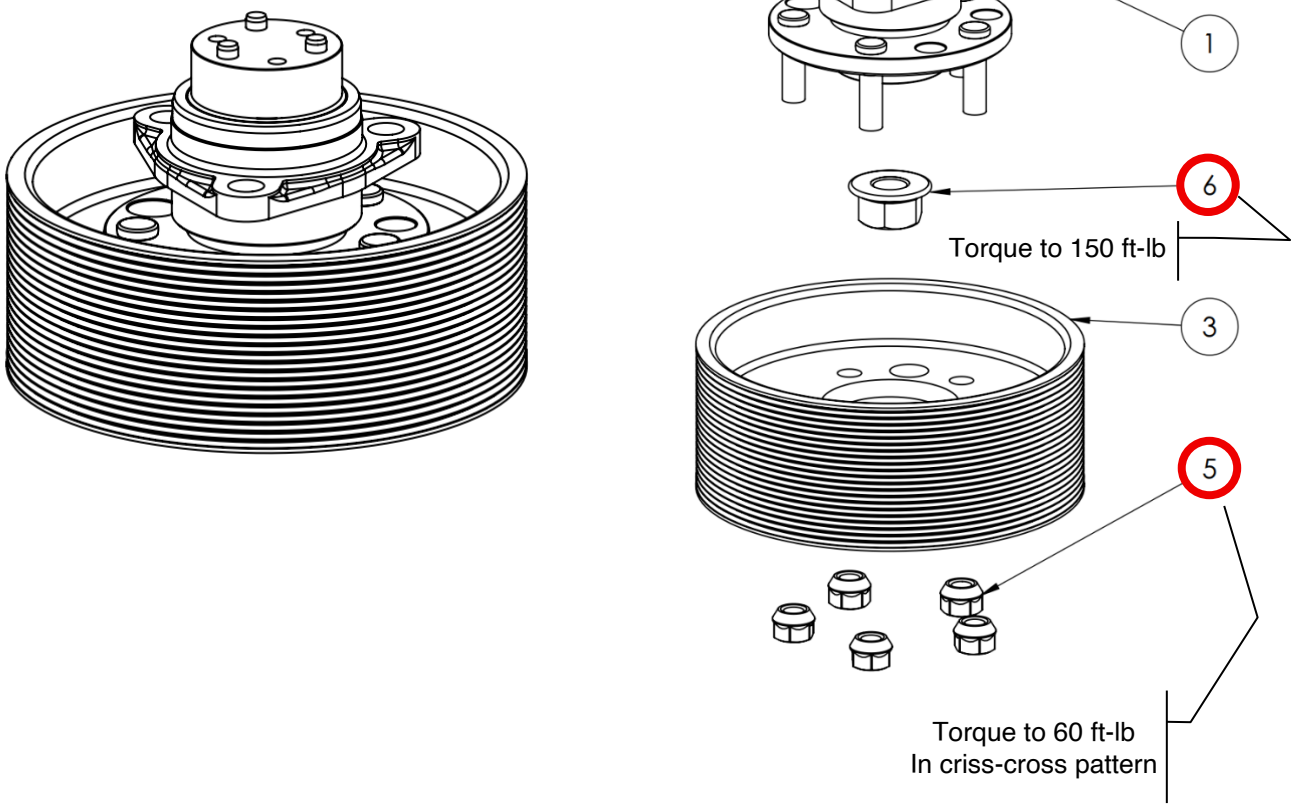


SECTION C-C
SCALE 1 : 2

= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A008.00 – SUBASSEM, PLANETARY

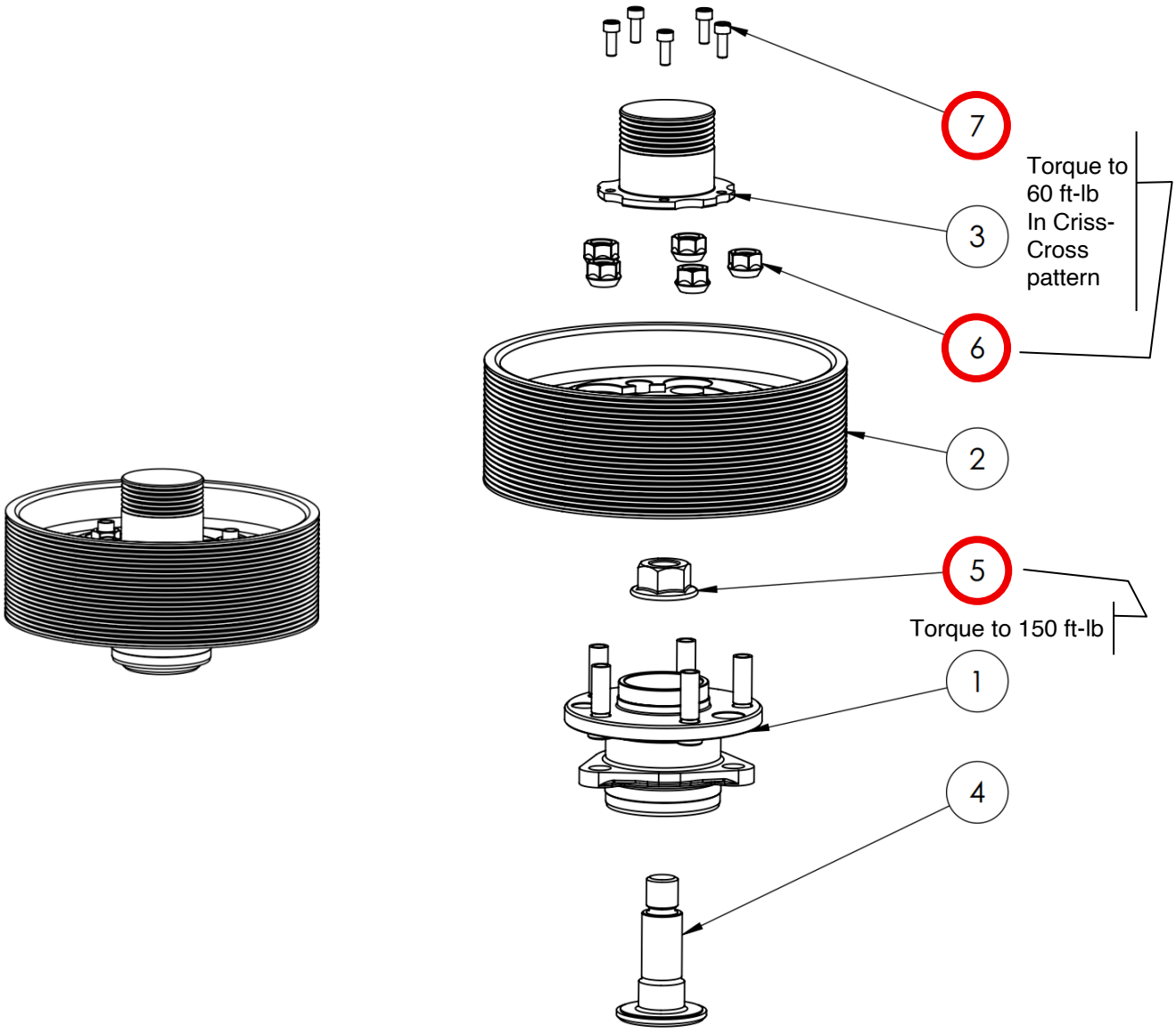
Item No.	Part Number	Description	Qty.
1	BG.20201.00	HUB TIMKIN BEARING	1
2	BG.20200.00	AXLE, PLANETARY, 40MM	1
3	BG.80001.01	SHEAVE, PLANETARY, RED	1
4	NB.50.143	PIN, HARDENED M8 X 26	3
5	NB.20.107	NUT ,LUG M12 X 1.5	5
6	NB.20.108	NUT, HEX FLANGE M20-2.5	1



= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A009.00 – SUBASSEM, PTO

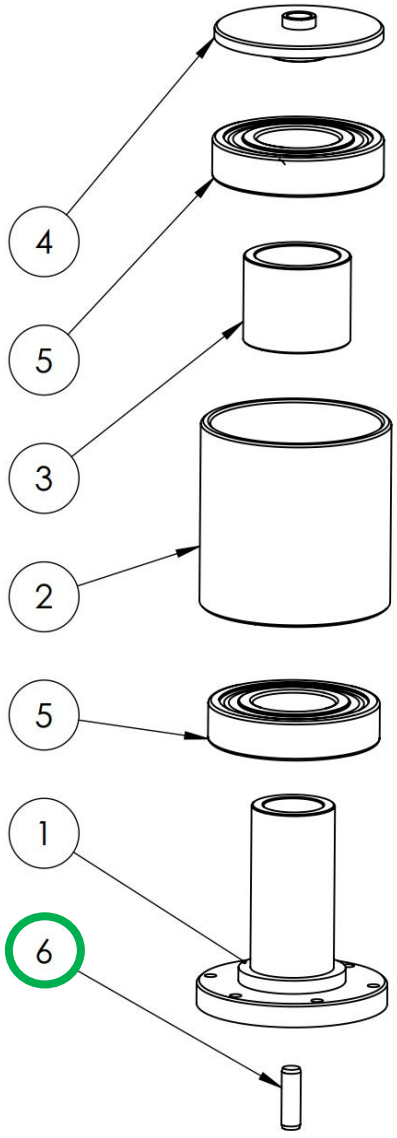
Item No.	Part Number	Description	Qty.
1	BG.20201.00	HUB TIMKIN BEARING	1
2	BG.80007.02	SHEAVE, PTO HUB, RED (V3)	1
3	BG.80006.50	SHEAVE, PTO DRIVE. YELLOW (V2)	1
4	BG.20202.00	AXLE, PTO	1
5	NB.20.108	NUT, HEX FLANGE M20-2.5	1
6	NB.20.107	NUT ,LUG M12 X 1.5	5
7	NB.12.111	SCREW, SOCKET HEAD CAP M6 -1.0 X 16 12.9 ZINC	5

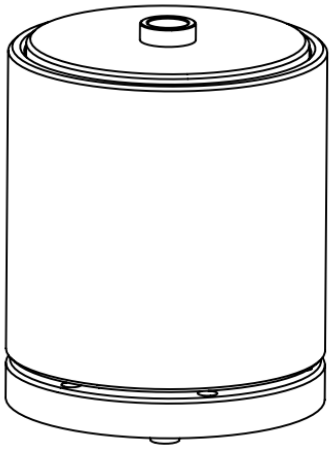


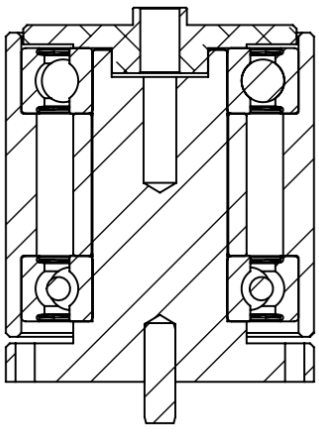
= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A006.12 – SUBASSEM, MAIN BELT IDLER 6207

Item No.	Part Number	Description	Qty.
1	BG.80011.01	88K MAIN BELT IDLER SHAFT 6207	1
2	BG.80010.02	8K MAIN BELT IDLER SHEAVE 6207	1
3	BG.80114.01	8K MAIN BELT IDLER SPACER 6207	1
4	BG.80009.01	8K MAIN BELT IDLER RETAINER 6207	1
5	BG.80047.10	BEARING, NACHI 6207-2NS	2
6	NB.50.143	PIN, HARDENED M8 X 26	1





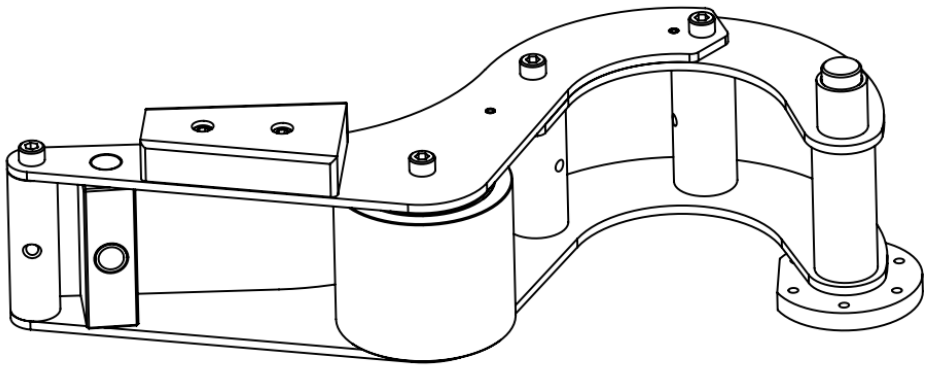


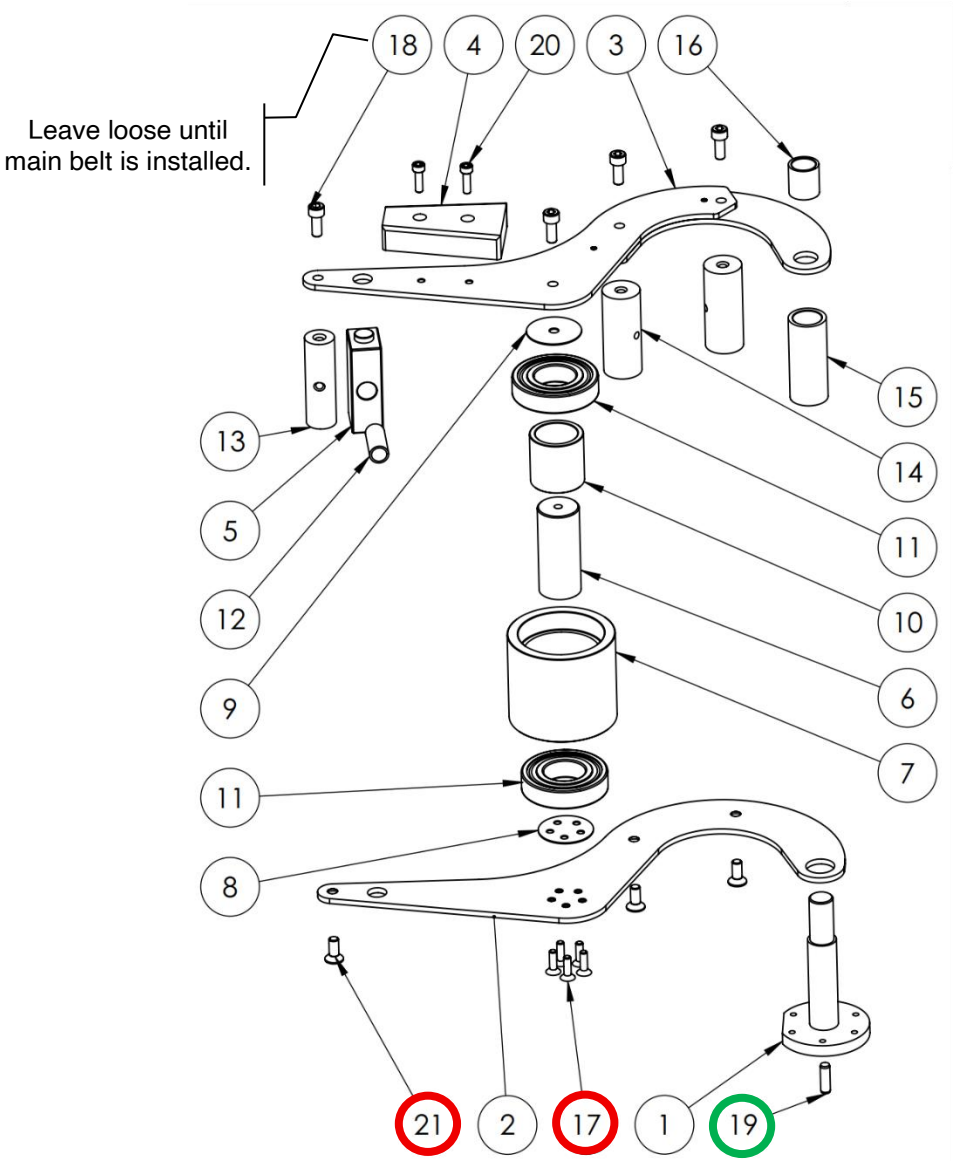
SECTION C-C
SCALE 1 : 2

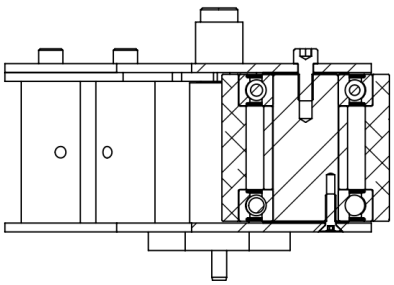
= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A005.11 – SUBASSEM, BELT TIGHTENER

Item No.	Part Number	Description	Qty.
1	BG.80014.02	8K MAIN BELT TENSIONER PIVOT, HIGH STRENGTH	1
2	BG.80012.03	8K MAIN BELT TENSIONER LOWER ARM, HIGH STRENGTH	1
3	BG.80013.03	8K MAIN BELT TENSIONER UPPER ARM WELDMENT	1
4	BG.80511.03	BLOCK, TENSIONER SPACER	1
5	BG.80511.04	GRUDGEON, TENSIONER BG8000 DRUM V2	1
6	BG.80021.02	8K MAIN BELT TENSIONER 6207 SPINDLE	1
7	BG.80020.01	8K MAIN TENSIONER SHEAVE 6207	1
8	BG.80022.01	8K MAIN BELT TENSIONER LWR SPINDLE SPACER 6207	1
9	BG.80023.03	8K MAIN BELT TENSIONER UPR SPINDLE SPACER 6207	1
10	BG.80124.00	8K MAIN BELT TENSIONER 6207 BEARING SPACER	1
11	BG.80047.10	BEARING, NACHI 6207-2NS	2
12	BG.80511.05	SLEEVE BEARING, OIL EMBEDDED ID1/2 X 1-1/2	1
13	BG.80016.00	MAIN TENSIONER SPACER	1
14	BG.80015.02	8K MAIN BELT TENSIONER STANCHION, HIGH STRENGTH	2
15	BG.80105.02	8K MAIN BELT TENSIONER LWR PIVOT SPACER, HIGH STRENGTH	1
16	BG.80105.03	8K MAIN BELT TENSIONER UPR PIVOR SPACER, HIGH STRENGTH	1
17	NB.13.116	SCREW, FLAT HEAD SOCKET, TORX CAP M6 -1.0 X 20	8
18	NB.10.218	SCREW, SOCKET HEAD CAP M8-1.25 X 20	4
19	NB.50.143	PIN, HARDENED M8 X 26	1
20	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	2
21	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X20	3







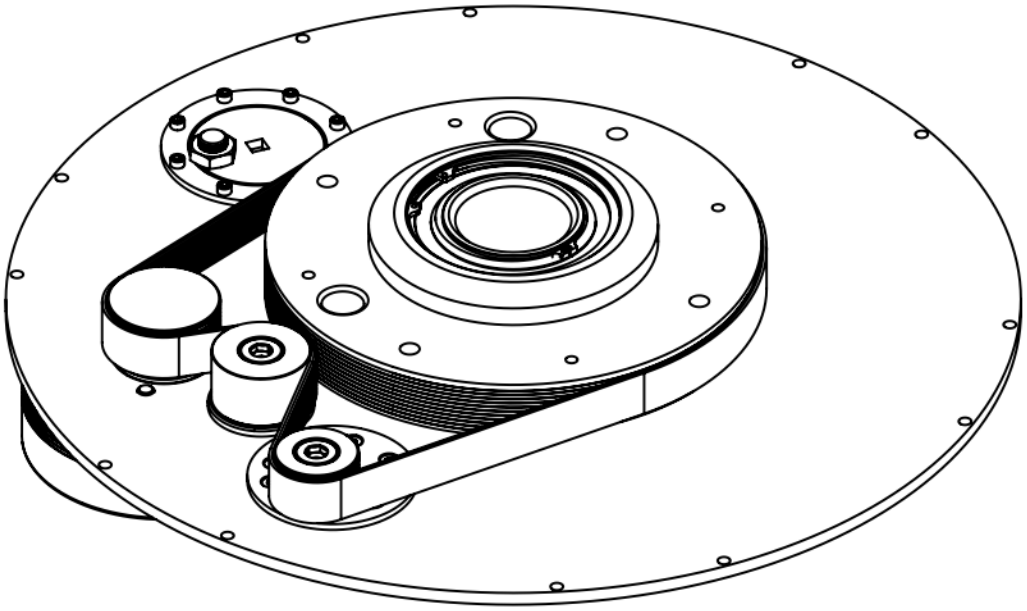
SECTION C-C
SCALE 1 : 3

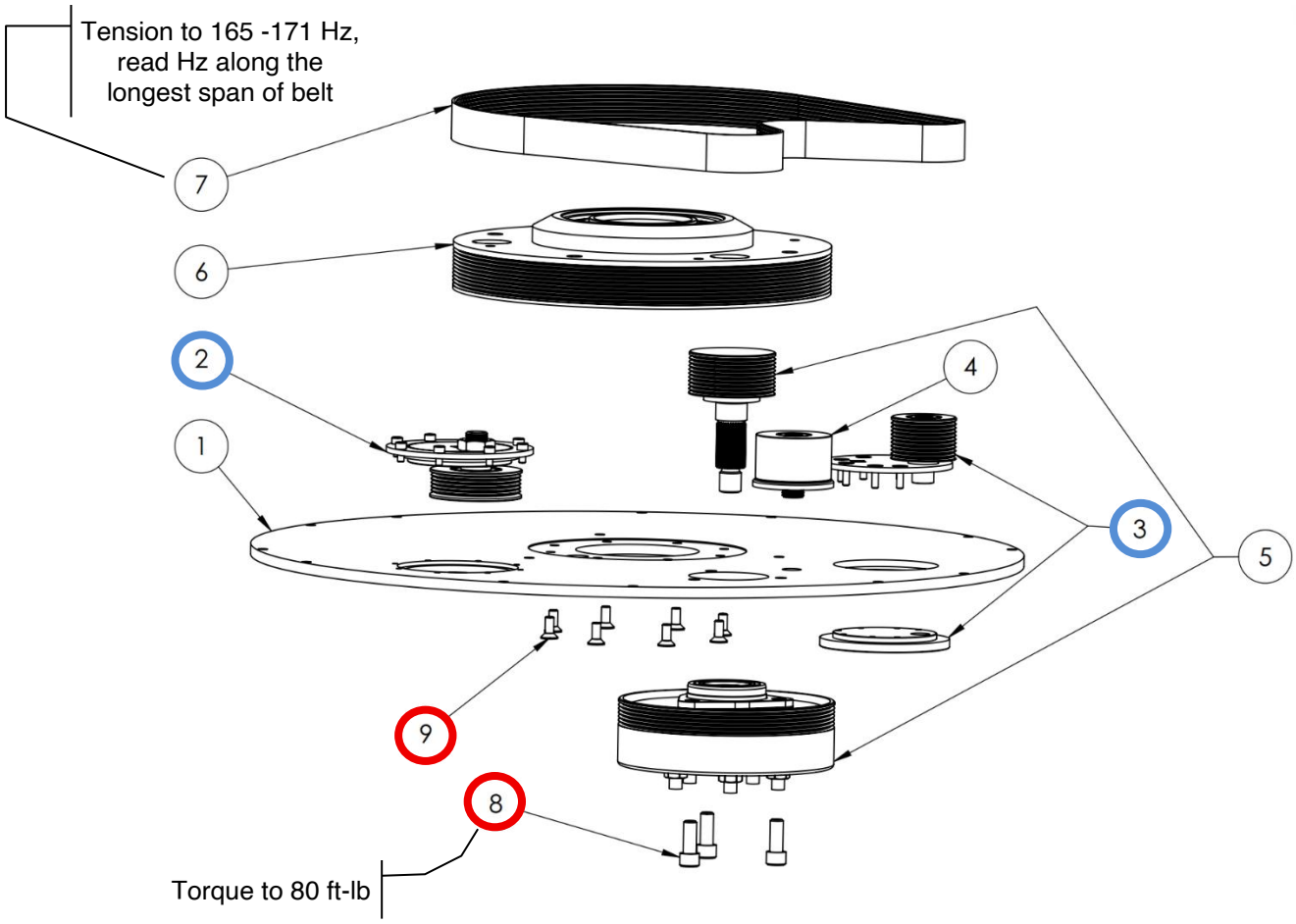
= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A021.00 – 8K TOP DRUM SUB ASSEMBLY

Item No.	Part Number	Description	Qty.
1	BG.80028.00	TOP DRUM PLATE	1
2	BG.2A001.10	PTO TENSIONER SUBASSEMBLY, 6K/8K	1
3	BG.8A004.10	SUBASSEM,TOP TENSIONER	1
4	BG.8A003.10	SUBASSEM, TOP BELT IDLER	1
5	BG.8A002.00	SUBASSEM, INTERMEDIATE SHEAVE	1
6	BG.8A001.10	SUBASSEM, DRUM SHEAVE	1
7	BG.80041.00	TOP BELT	1
8	NB.12.252	SOCKET HEAD CAP SCREW - ZINC - M12X30	3
9	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X 20	8

Notes: 1. When installing BG.8A002.00, place spacer flat on top plate, with chamfer exposed. Install sheave, carefully line up bolt pattern. Now install #8. Insert axle, red LocTite 263, torque NB20108 to 150 ft-lbf

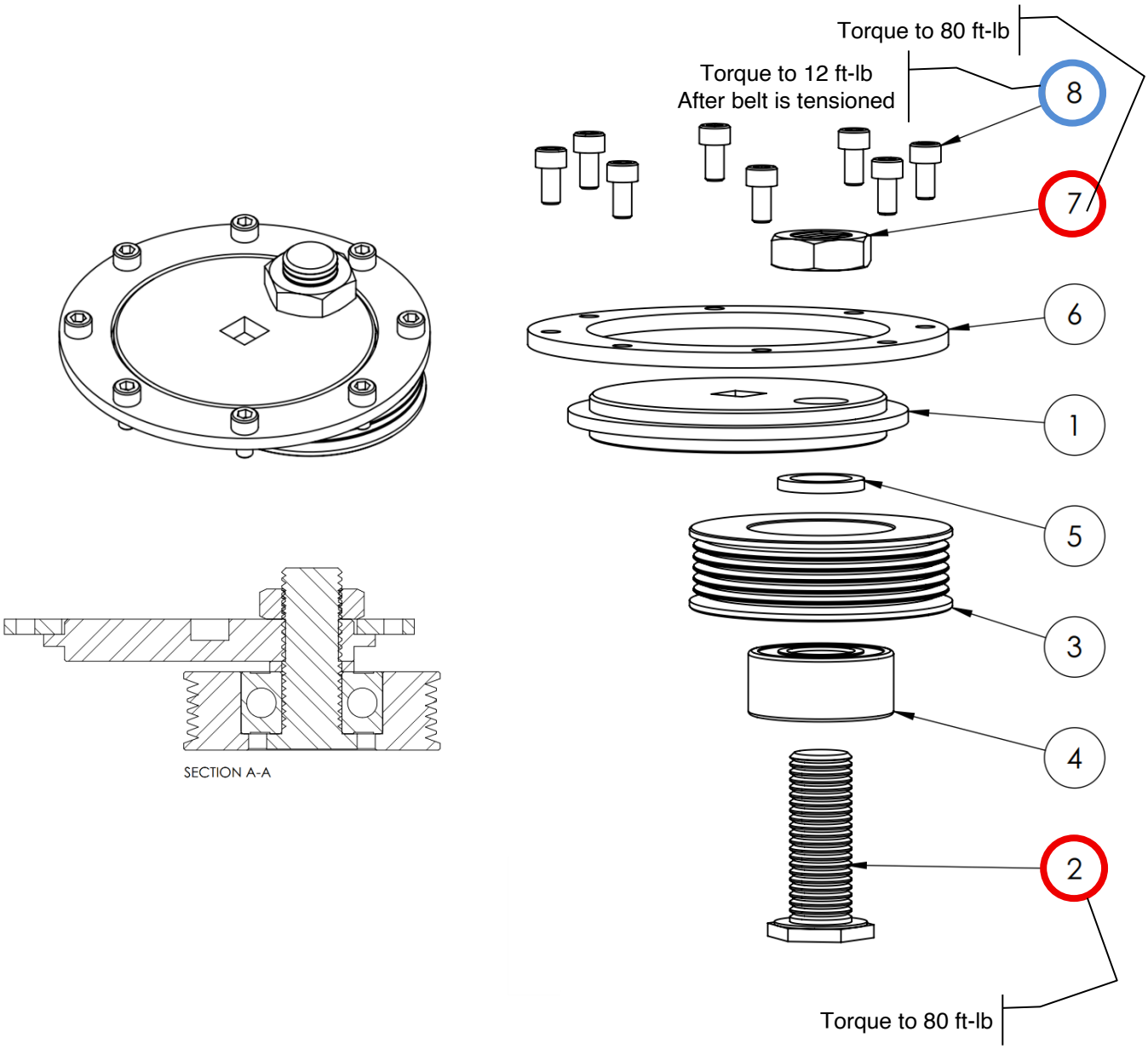




= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.2A001.10 – PTO TENSIONER SUBASSEMBLY, 6K/8K

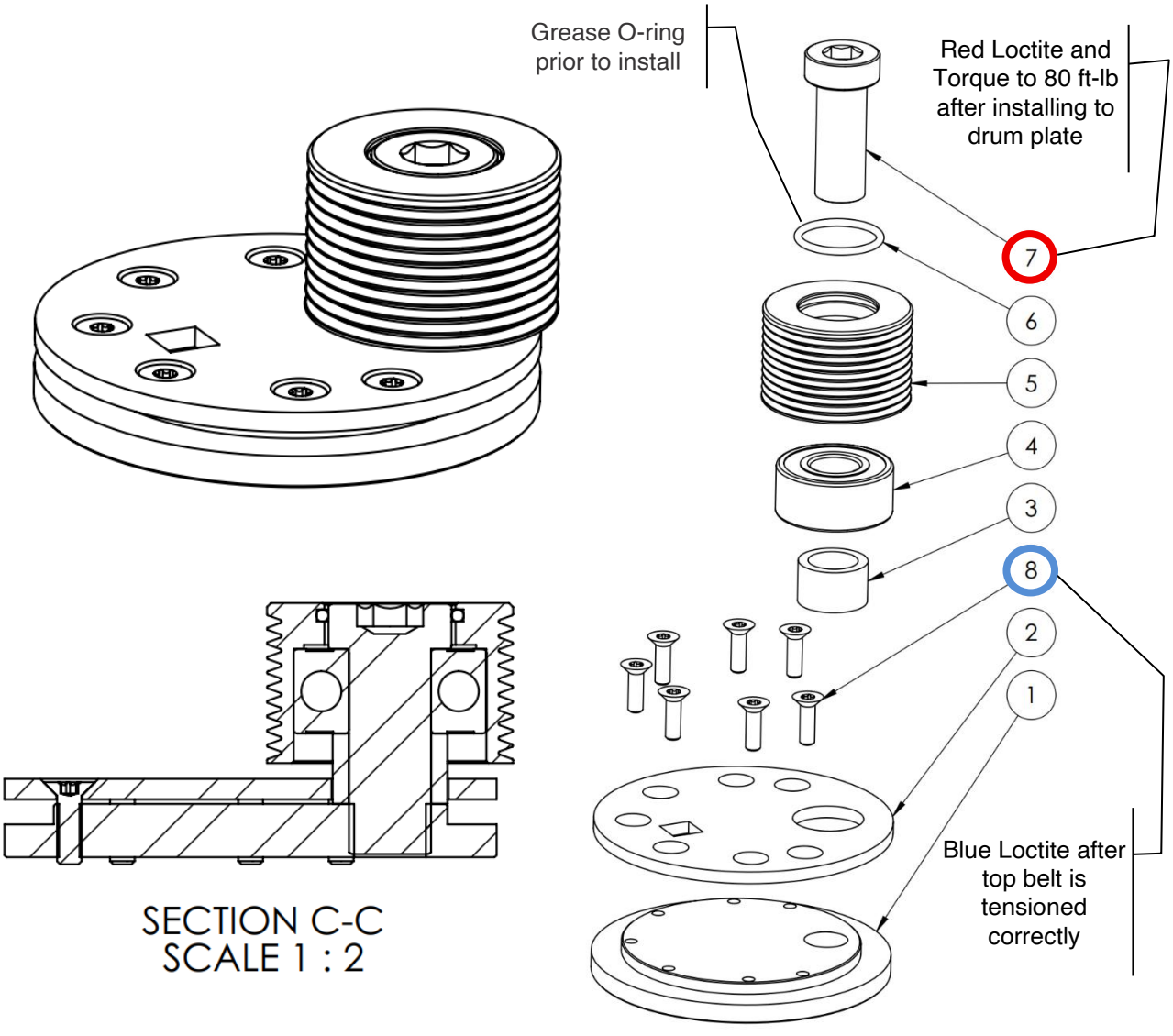
Item No.	Part Number	Description	Qty.
1	BG.20204.00	PLATE, PTO TENSIONER SUBASSEMBLY, 6K/8K	1
2	BG.20214.00	SCREW, HEX HEAD MODIFIED M20-2.5 X 55 /BG6K8K	1
3	BG.20212.00	IDLER, PTO TENSIONER SUBASSEMBLY, 6K/8K	1
4	BG.20220.10	BEARING, 3204-2RS	1
5	BG.20211.00	SPACER, PTO TENSIONER SUBASSEMBLY, 6K/8K	1
6	BG.20203.00	CLAMP, PTO TENSIONER SUBASSEMBLY 6K/8K	1
7	NB.20.110	NUT, JAM M20 - 2.5	1
8	NB.12.108	SOCKET HEAD CAP SCREW – ZINC – M6X12	8



= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A004.10 – SUBASSEM,TOP TENSIONER

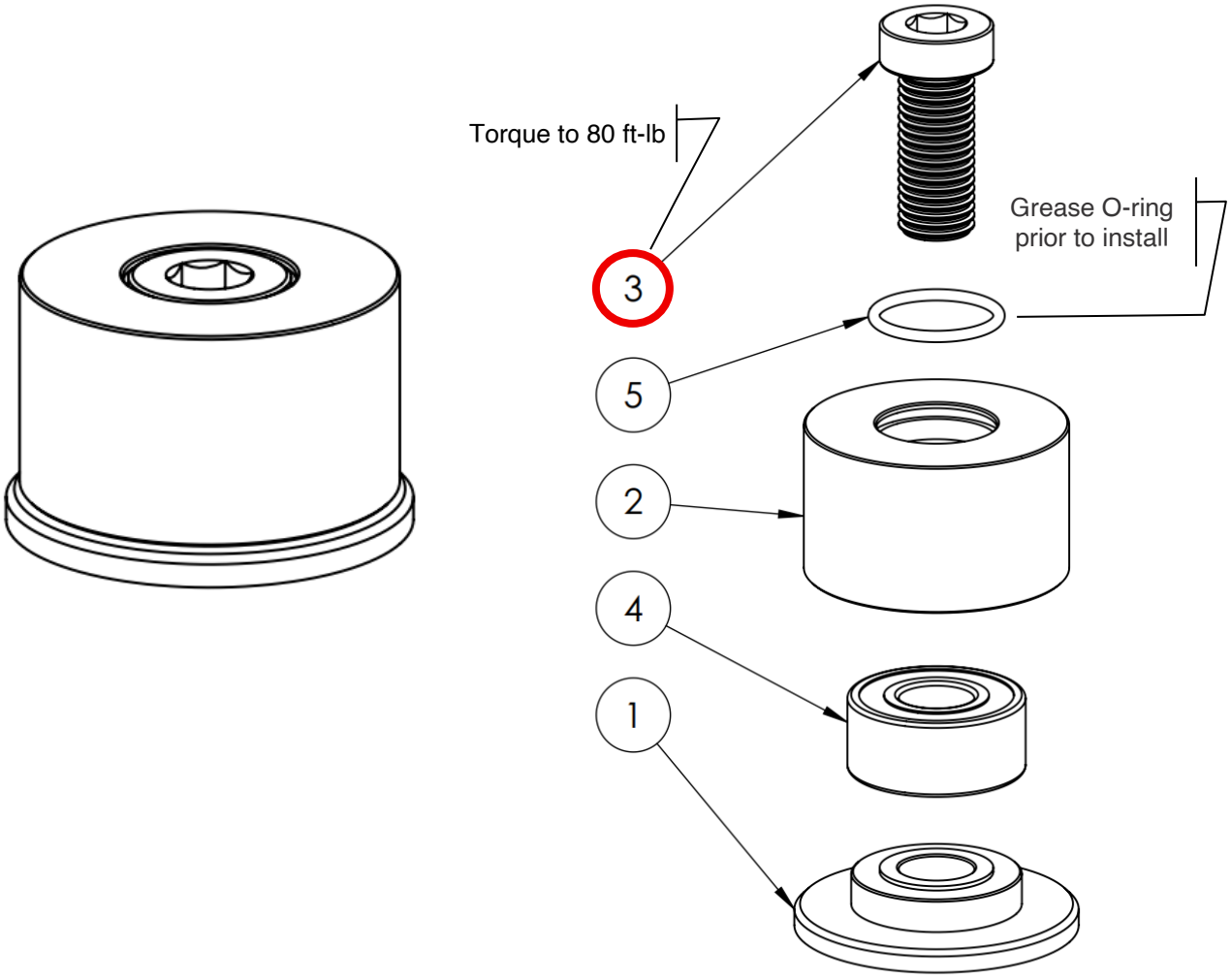
Item No.	Part Number	Description	Qty.
1	BG.20205.50	PLATE, BELT TENSIONER	1
2	BG.20206.50	CLAMP, TOP BELT TENSIONER	1
3	BG.20210.00	TOP BELT TENSION IDLER SPACER	1
4	BG.20220.10	BEARING, 3204-2RS	1
5	BG.80035.00	IDLER, TOP BELT TENSIONER	1
6	BG.20215.00	O-RING, M30	1
7	NB.12.263	SCREW, LOW SOCKET HEAD CAP M20-2.5 X 50	1
8	NB.13.116	SCREW, FLAT HEAD SOCKET, TORX CAP M6 -1.0 X 20	7



= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A003.10 – SUBASSEM, TOP BELT IDLER

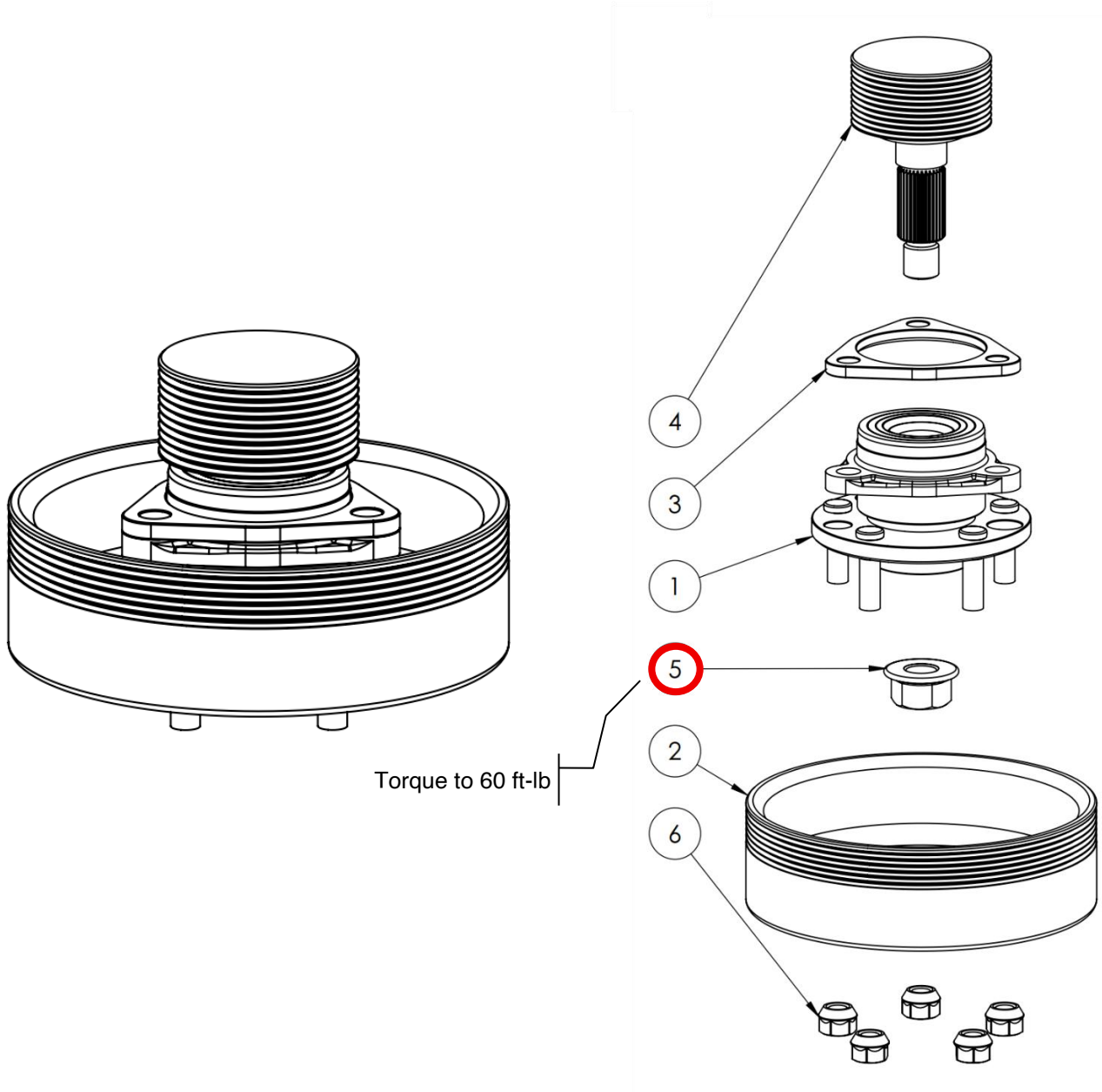
Item No.	Part Number	Description	Qty.
1	BG.80038.00	TOP BELT IDLER BASE	1
2	BG.80037.00	IDLER, TOP BELT	1
3	BG.80078.00	SCREW, MODIFIED SOCKET HEAD M20-2.5 X 46.8 ZINC	1
4	BG.20220.10	BEARING, 3204-2RS	1
5	BG.20215.00	O-RING, M30	1



= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A002.00 – SUBASSEM, INTERMEDIATE SHEAVE

Item No.	Part Number	Description	Qty.
1	BG.20201.00	HUB TIMKIN BEARING	1
2	BG.80034.01	8K INTERMEDIATE SHEAVE	1
3	BG.20209.00	SPACER, PTO HUB	1
4	BG.80033.00	AXLE, INTERMEDIATE	1
5	NB.20.108	NUT, HEX FLANGE M20-2.5	1
6	NB.20.107	NUT ,LUG M12 X 1.5	5

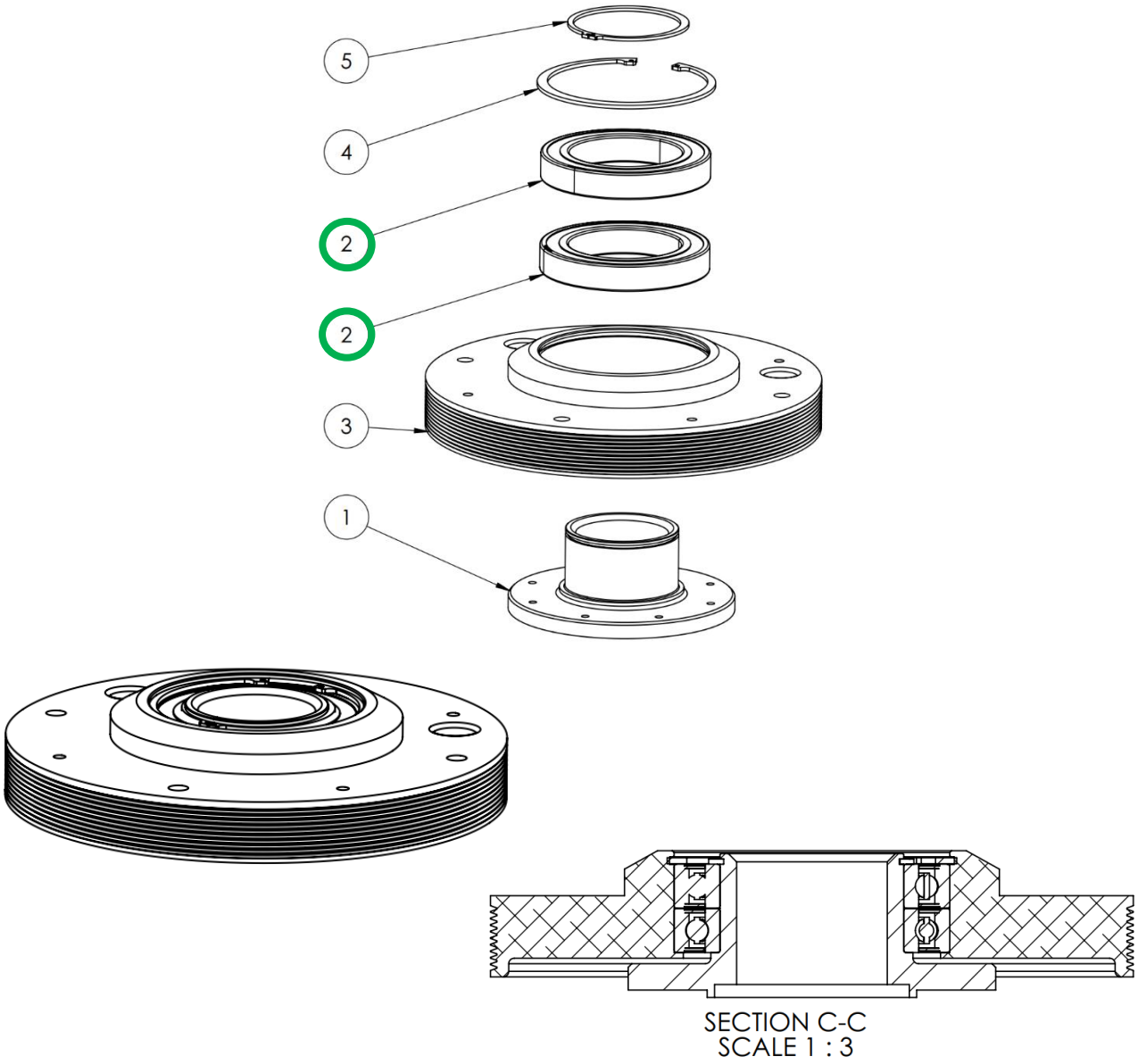


= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

BG.8A001.10 – SUBASSEM, DRUM SHEAVE

Item No.	Part Number	Description	Qty.
1	BG.80032.50	SPINDLE, DRUM	1
2	BG.20250.10	BEARING, 6020-2RS	2
3	BG.80029.50	SHEAVE, STATIONARY DRUM ALUMINUM	1
4	NB.40.131	RING, INTERNAL RETAINING M150	1
5	NB.40.133	RING, EXTERNAL RETAINING M100	1

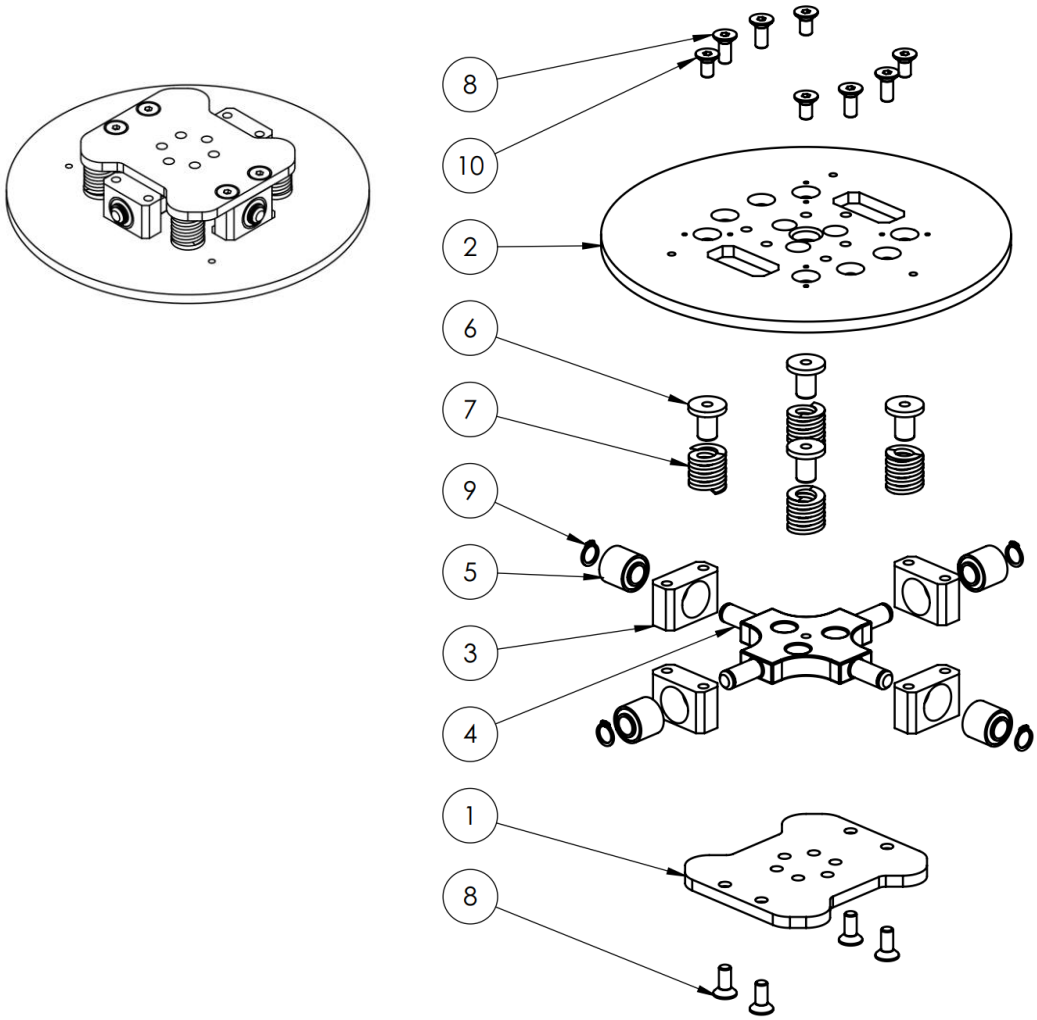
Notes: 1. Apply Green LocTite 609, inner and outer, where contacts spindle/sheave



= Red Loctite 263
= Blue Loctite 242
= Green Loctite 609

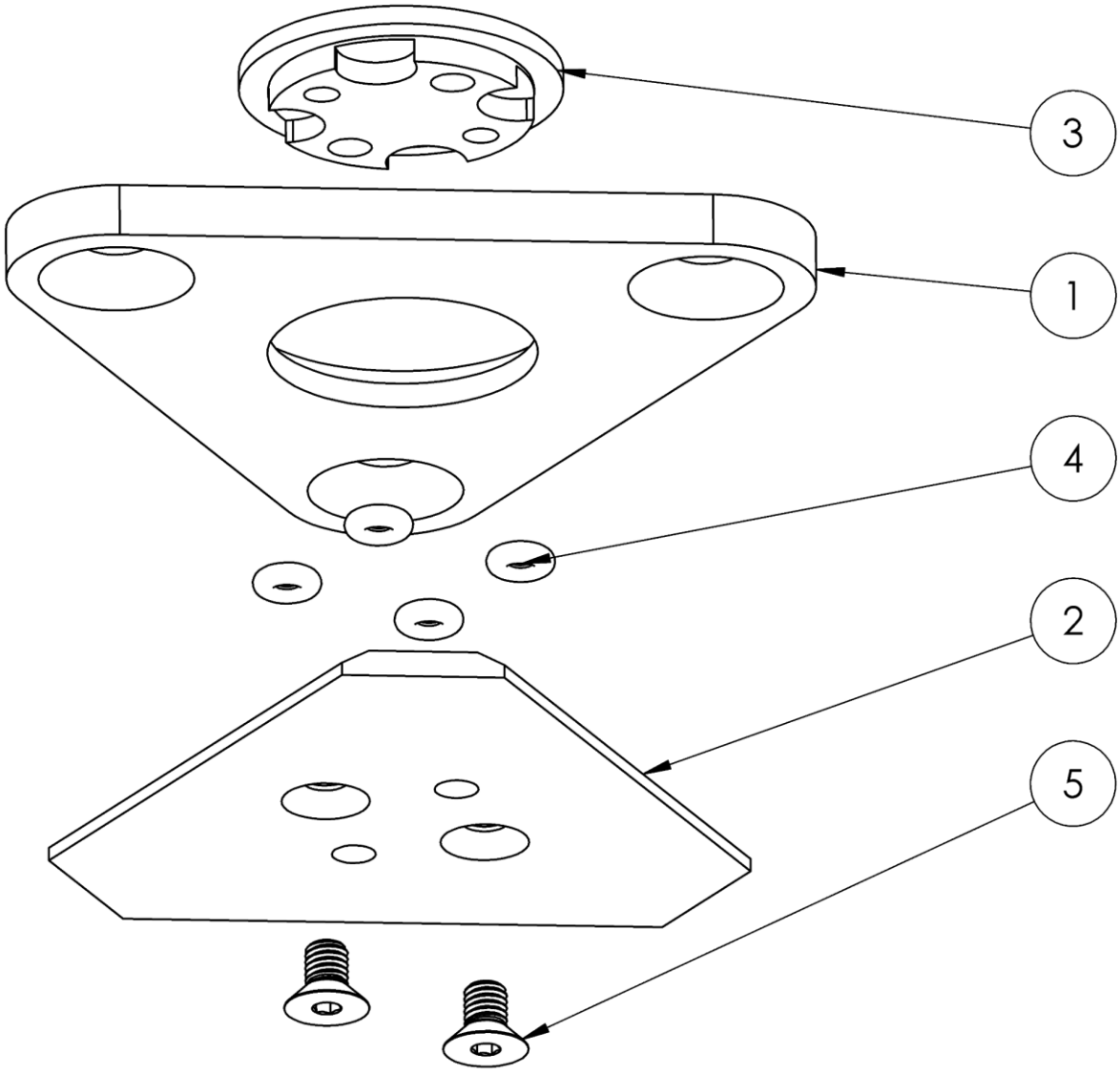
BG.8A010.85 - FLEX HEAD – 800

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	BG.20100.50	PLATE, DRIVING /BG6K BG8K BG5K	1
2	BG.20101.25	PLATE, DRIVEN	1
3	BG.20103.00	YOKE, SUSPENSION /BG6K BG8K	4
4	BG.20102.01	ELEMENT, CENTER STUDDED	1
5	BG.20109.00	BUSHING, YOKE /BG6K BG8K	4
6	BG.20106.25	POST, SPRING /BG6K 8K	4
7	BG.20106.51	SPRING, DIE RED MEDIUM HARD	4
8	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X 20	8
9	NB.40.113	RING, EXTERNAL 1/2"	4
10	NB.13.216	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X 16	4



96-0780 - TOOLING TRIANGLE ASSEMBLY – 800 - A

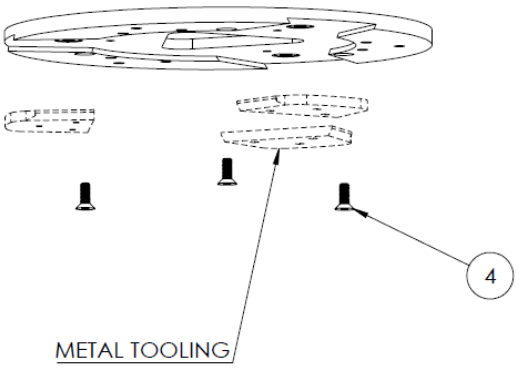
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	51-3352	TRIANGLE BASE 800	1
2	51-3346	TRIANGLE HOLDER 800	1
3	51-0110	TRIANGLE HOLDER CENTER ROTATOR	1
4	13-0142	O-RING (.125 ID X .313 OD X 0.94 W)	4
5	12-0581-10	FLAT HEAD - M5X10 -SS	2



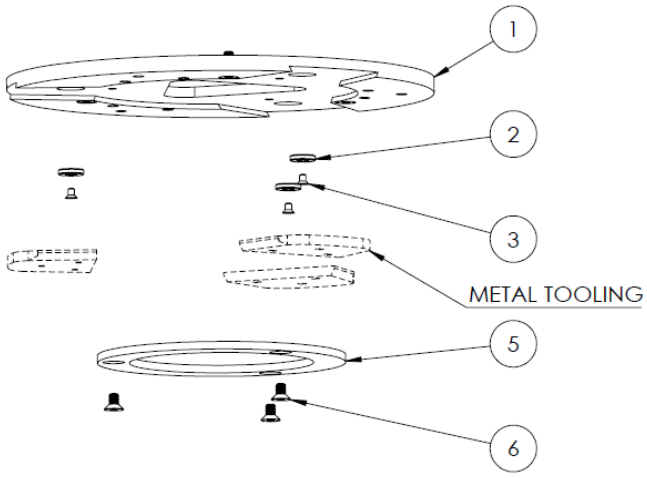
96-0781 - METAL TOOLING KIT – 800 - B

ITEM NO.	PART NUMBER	DESCRIPTION	SLIDE IN QTY.	SLIDE IN WITH RING QTY.	BOLT ON QTY.
1	51-3347	TOOLING PLATE 800	1	1	1
2	13-0650	METAL TOOLING MAGNET	3	3	3
3	12-0481-06	FLAT HEAD PHILLIPS SCREW – M4X6 - SS	3	3	3
4	12-0680-16	FLAT HEAD SOCKET SCREW – M6X16 - ZINC	3	3	12
5	51-3348	METAL TOOLING RING 800		1	
6	12-0680-10	FLAT HEAD SOCKET SCREW – M6X10 - ZINC		3	

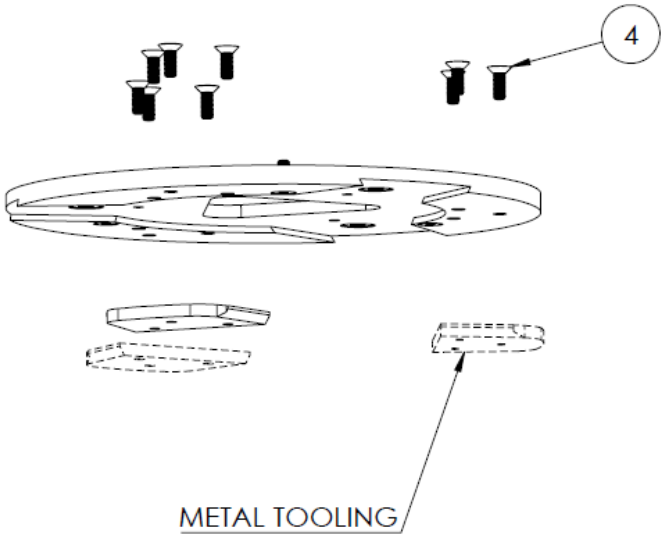
SLIDE IN TOOLING
(WITH TRANSPORT LOCKING SCREWS)



SLIDE IN TOOLING
(WITH LOCKING RING)

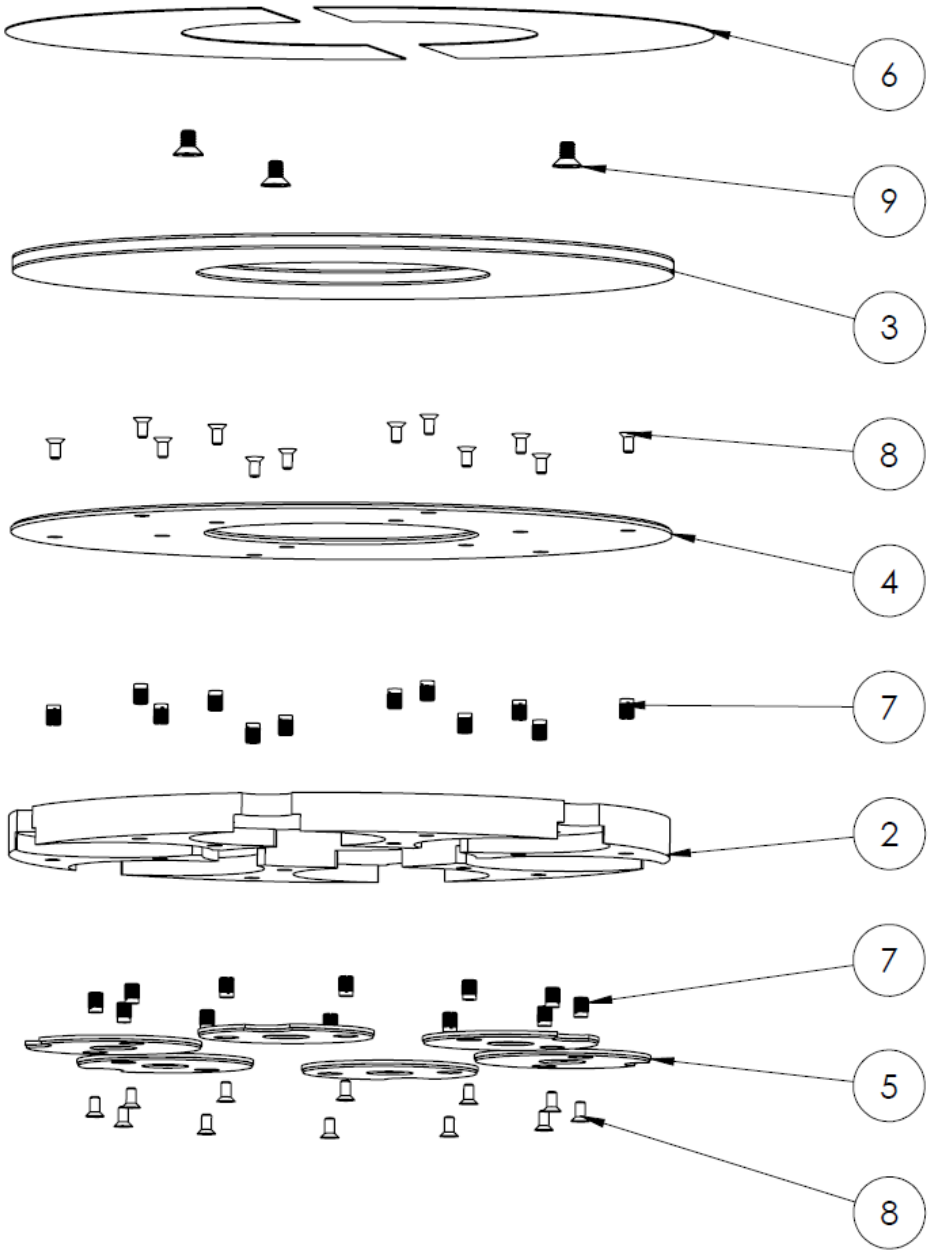


BOLT ON TOOLING



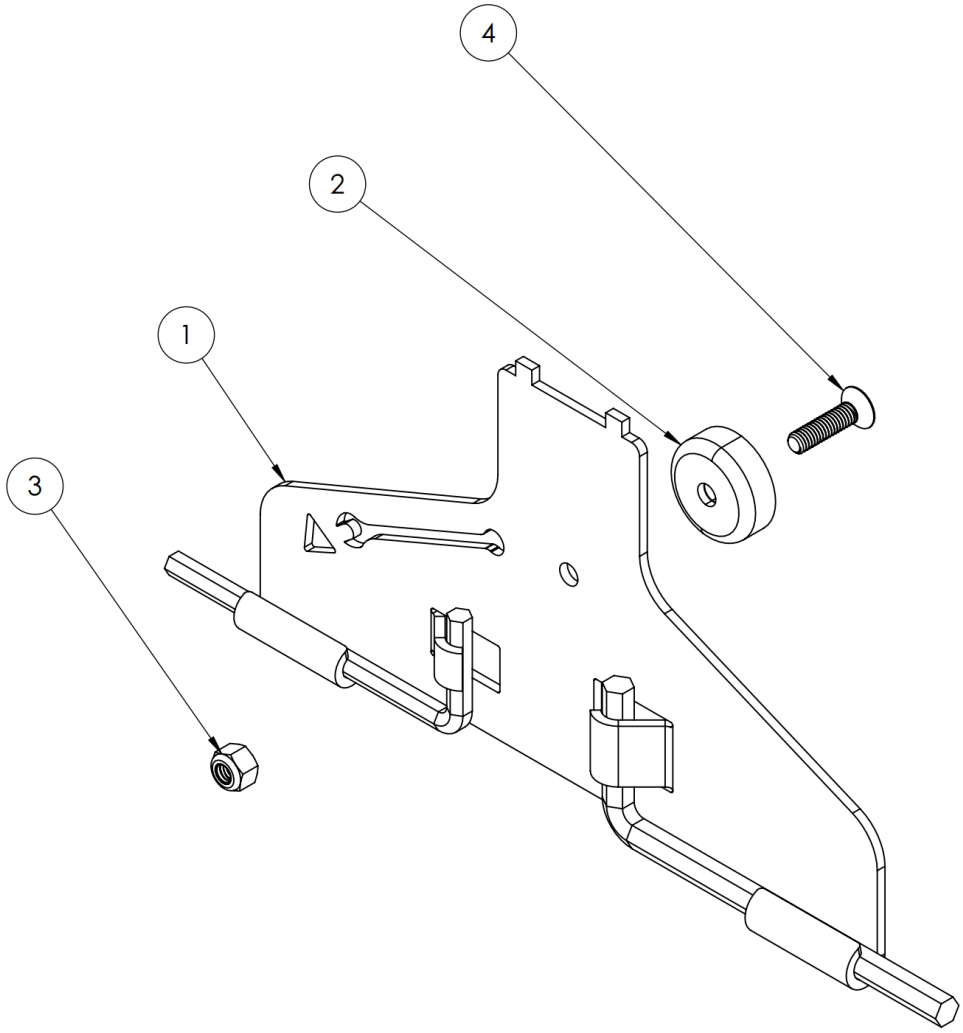
96-0782 - RESIN TOOLING PLATE ASSEMBLY 3IN 800 – A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	51-3349	RESIN TOOLING PLATE 800	1
2	51-3350	RESIN TOOLING HOLDER 800	1
3	13-0655	FOAM RISER ASSEMBLY 800	1
4	13-0662	RESIN TOOLING VELCRO PLATE 800	1
5	13-0653	RESIN TOOLING PLATE VELCRO 3IN	6
6	13-0664	ADHESIVE/VELCRO LOOP HALF 800	2
7	13-0654	PRESS-IN INSERT - M4 - BRASS	24
8	12-0480-08	FLAT HEAD PHILLIPS SCREW - M4X8 - ZINC	24
9	12-0680-10	FLAT HEAD SOCKET SCREW - M6X10 - ZINC	3



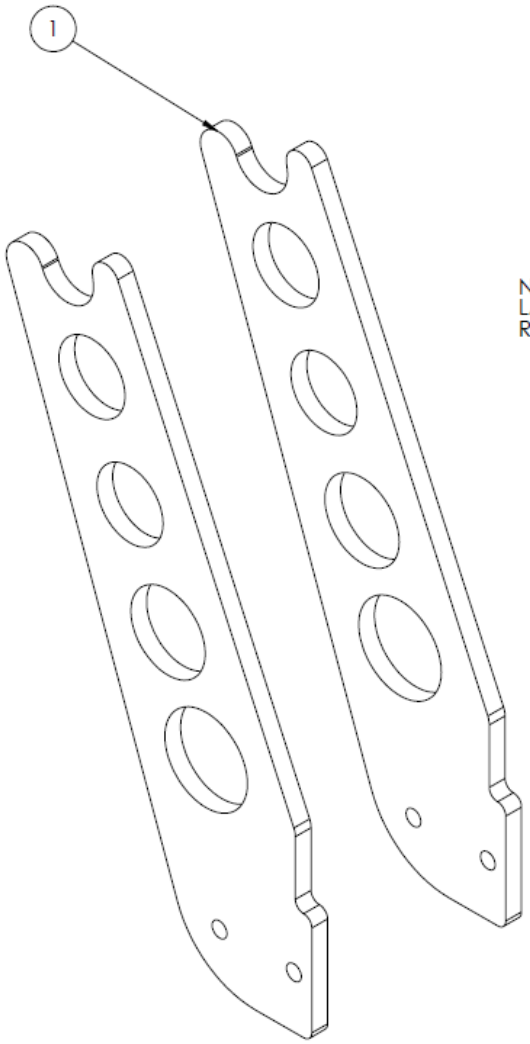
96-0456 – TOOLING WRENCH

ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	52-0628	TOOLING WRENCH FLAT	1
2	13-0115	WRENCH MAGNET	1
3	12-0440	NYLOC NUT – M4 - ZINC	1
4	12-0480-16	FLAT HEAD – M4X16 - ZINC	1



96-0809 – PROPANE TANK BRACKET SUPPORT 20LB 800PRO KIT - A

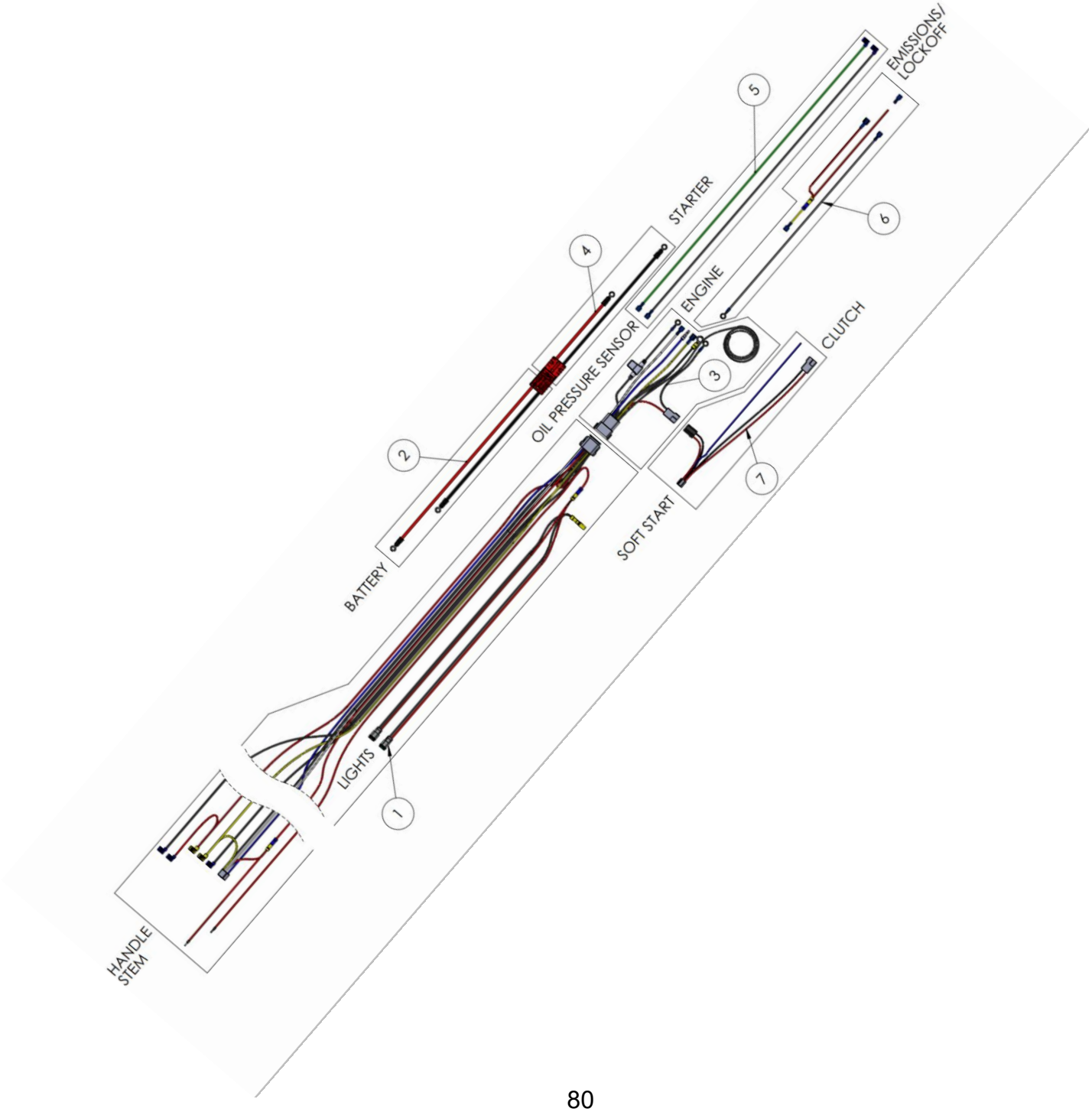
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	52-0629	PROPANE TANK BRACKET SUPPORT 20LB 800PRO	2



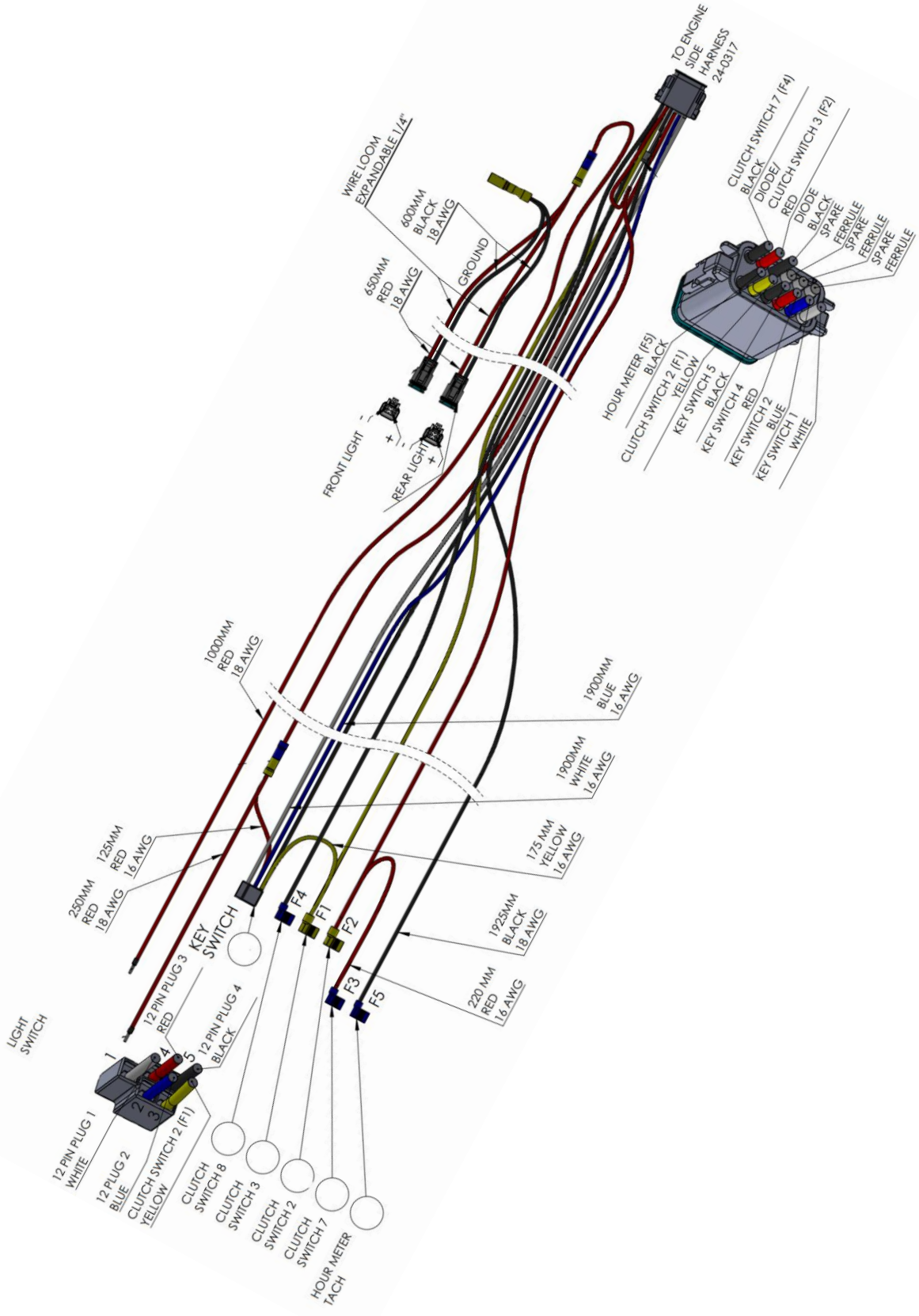
NOTE: REMOVE EXISTING BRACKETS
LARGE TANK BRACKETS AND
REUSE HARDWARE.

WIRING HARNESS 800PRO KIT

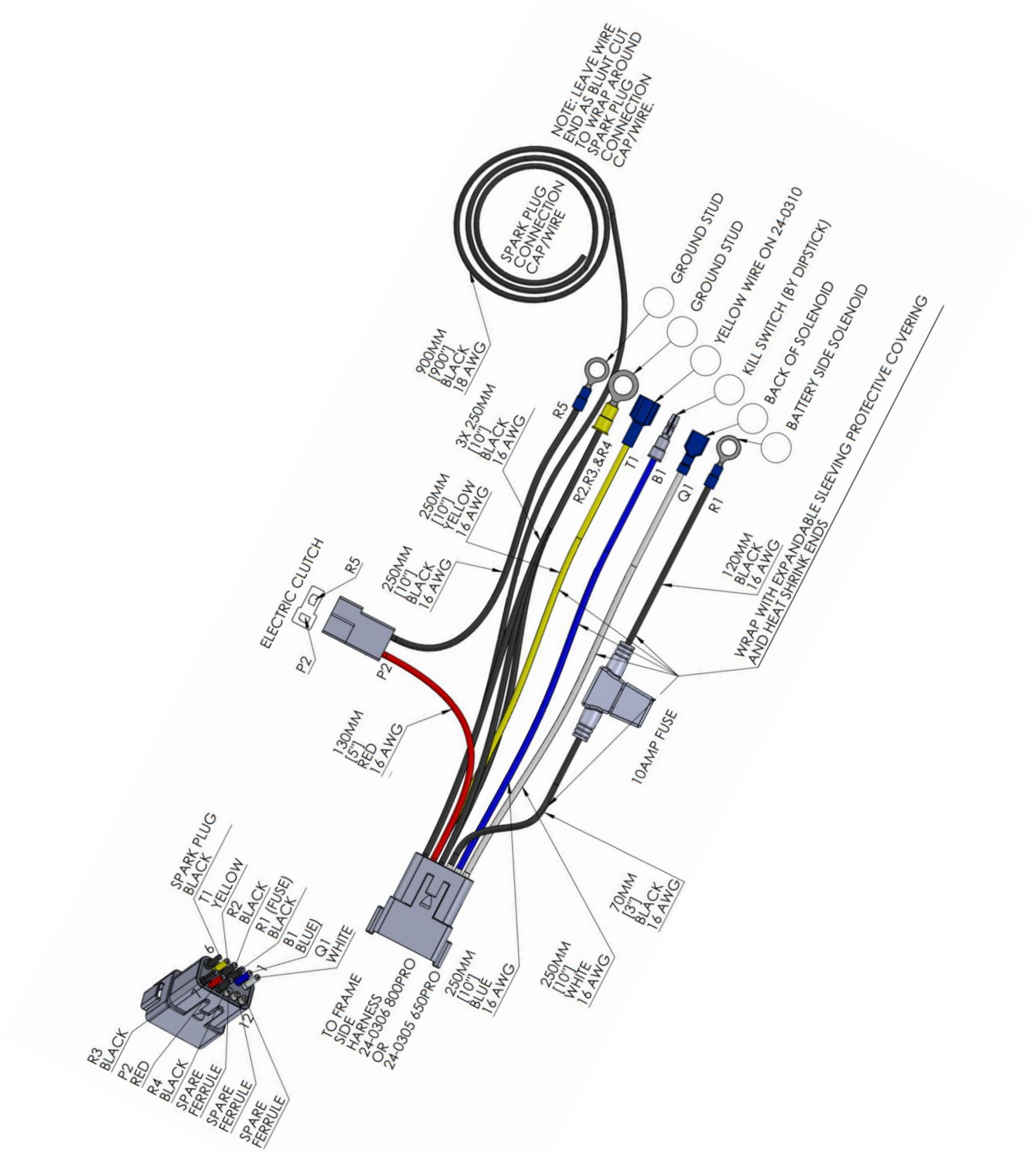
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	24-0306	WIRING HARNESS 800PRO	1
2	24-0307	BATTERY CABLE 1X BATTERY 650PRO	1
3	24-0317	ENGINE SIDE HARNESS 650PRO AND 800PRO	1
4	24-0309	BATTERY CABLE ENGINE SIDE 650PRO & 800PRO	1
5	24-0311	OIL PRESSURE HARNESS 800PRO	1
6	24-0310	POWER SPLITTER HARNESS 800PRO AND 650PRO	1
7	23-0251	SOFT START HARNESS 650PRO	1



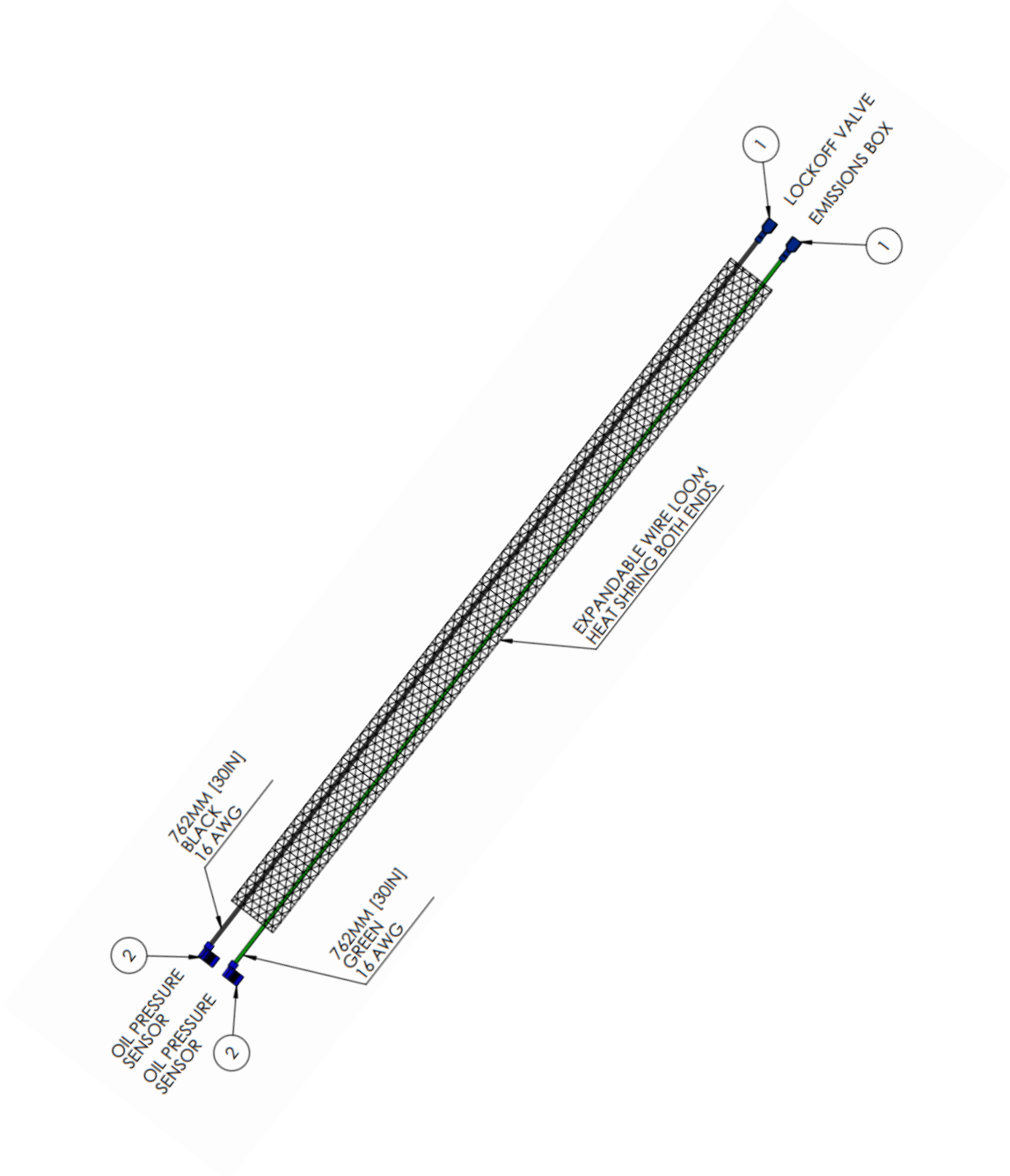
24-0306 – WIRING HARNESS 800PRO



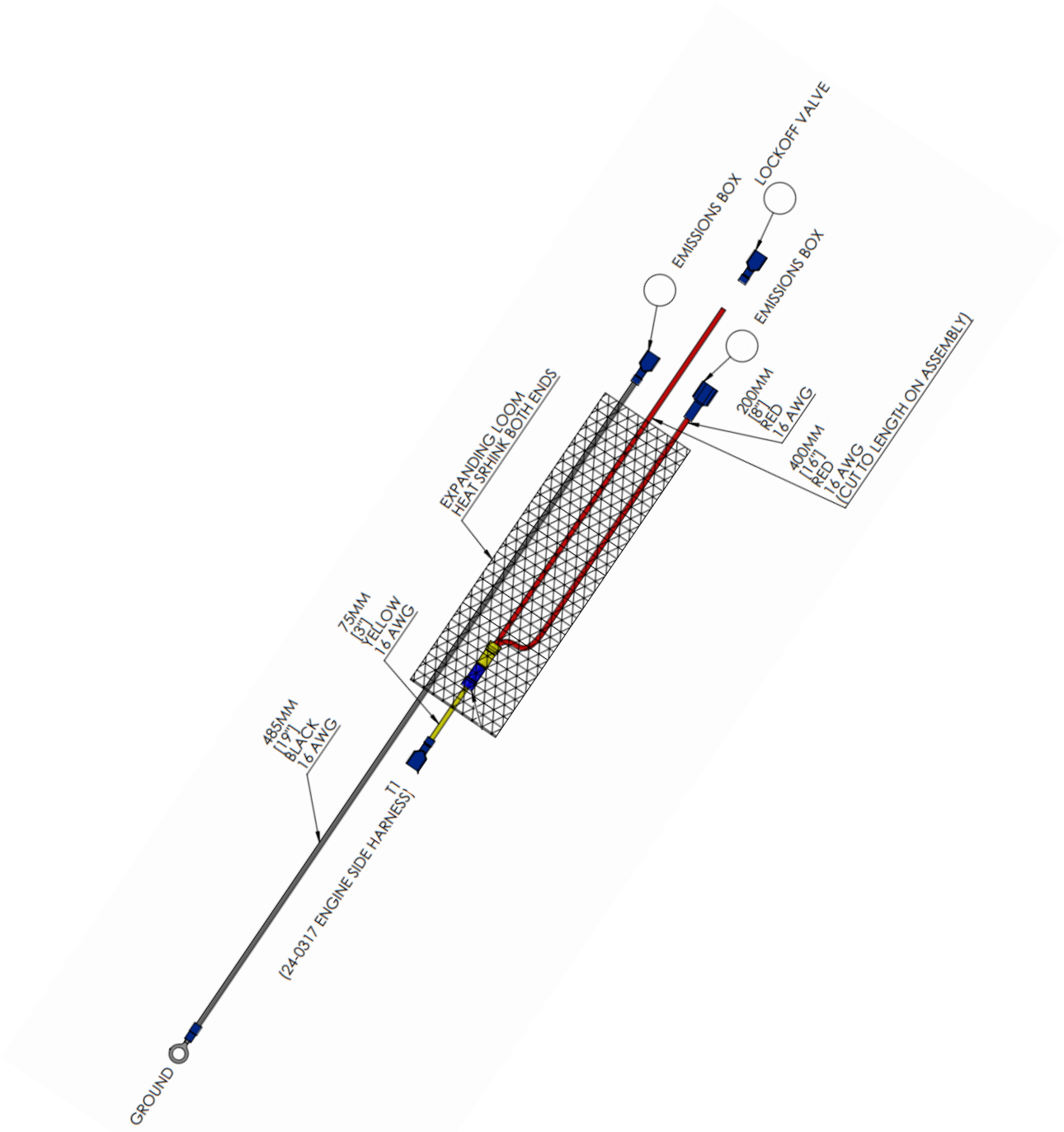
24-0317 – ENGINE SIDE HARNESS 650PRO AND 800PRO/650PRO



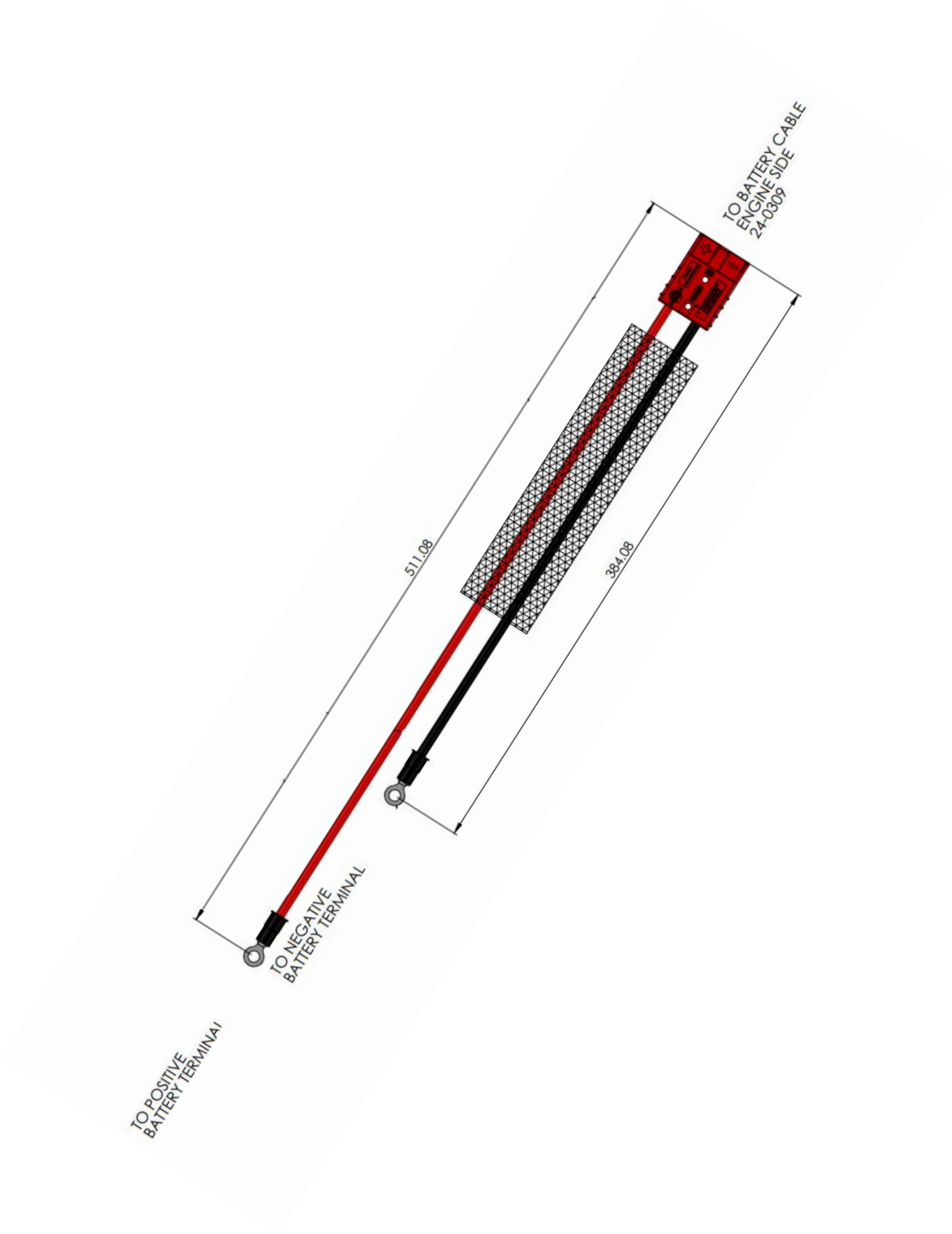
24-0311 – OIL PRESSURE HARNESS 800PRO/650PRO



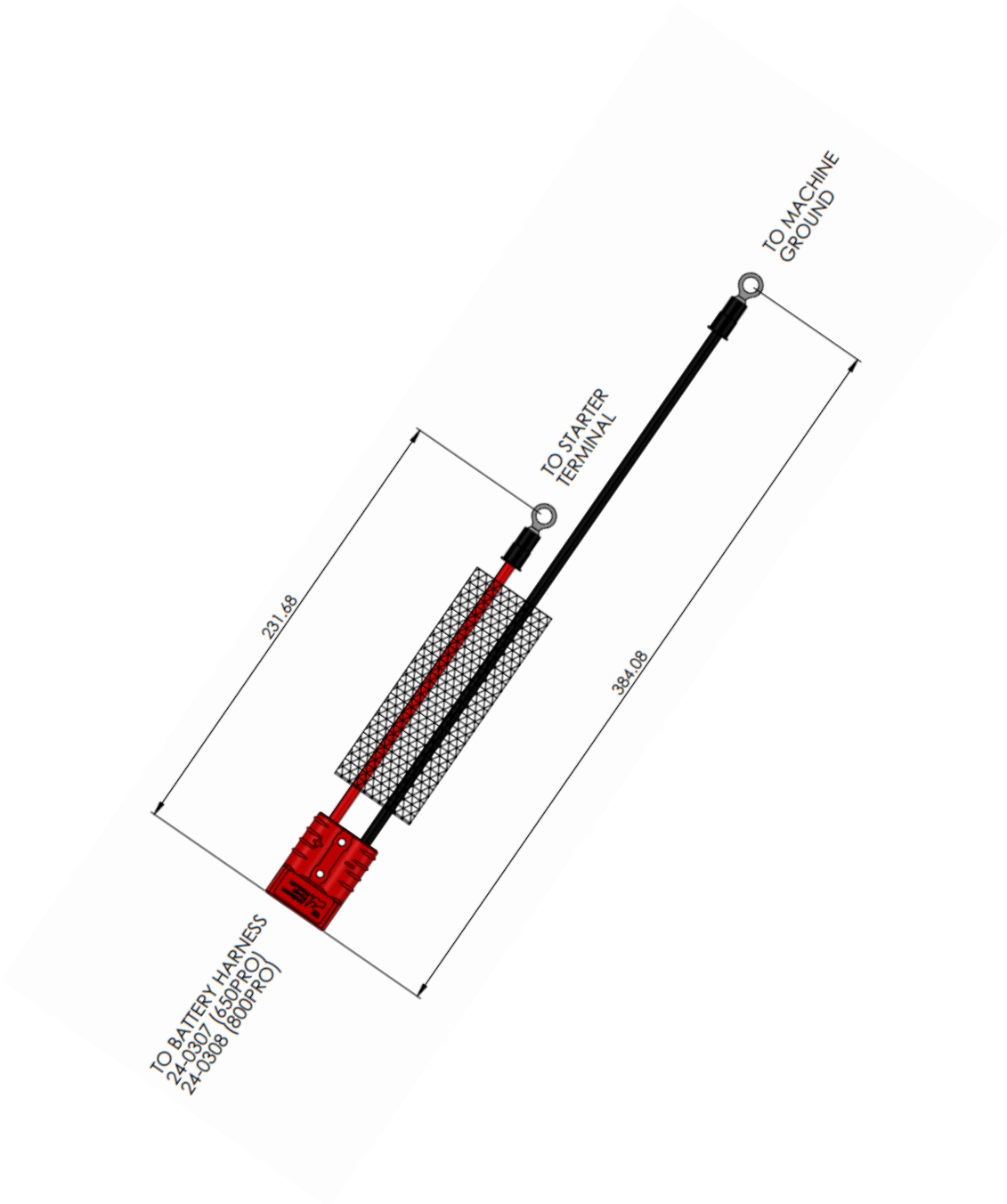
24-0310 – POWER SPLITER HARNESS 800PRO/650PRO



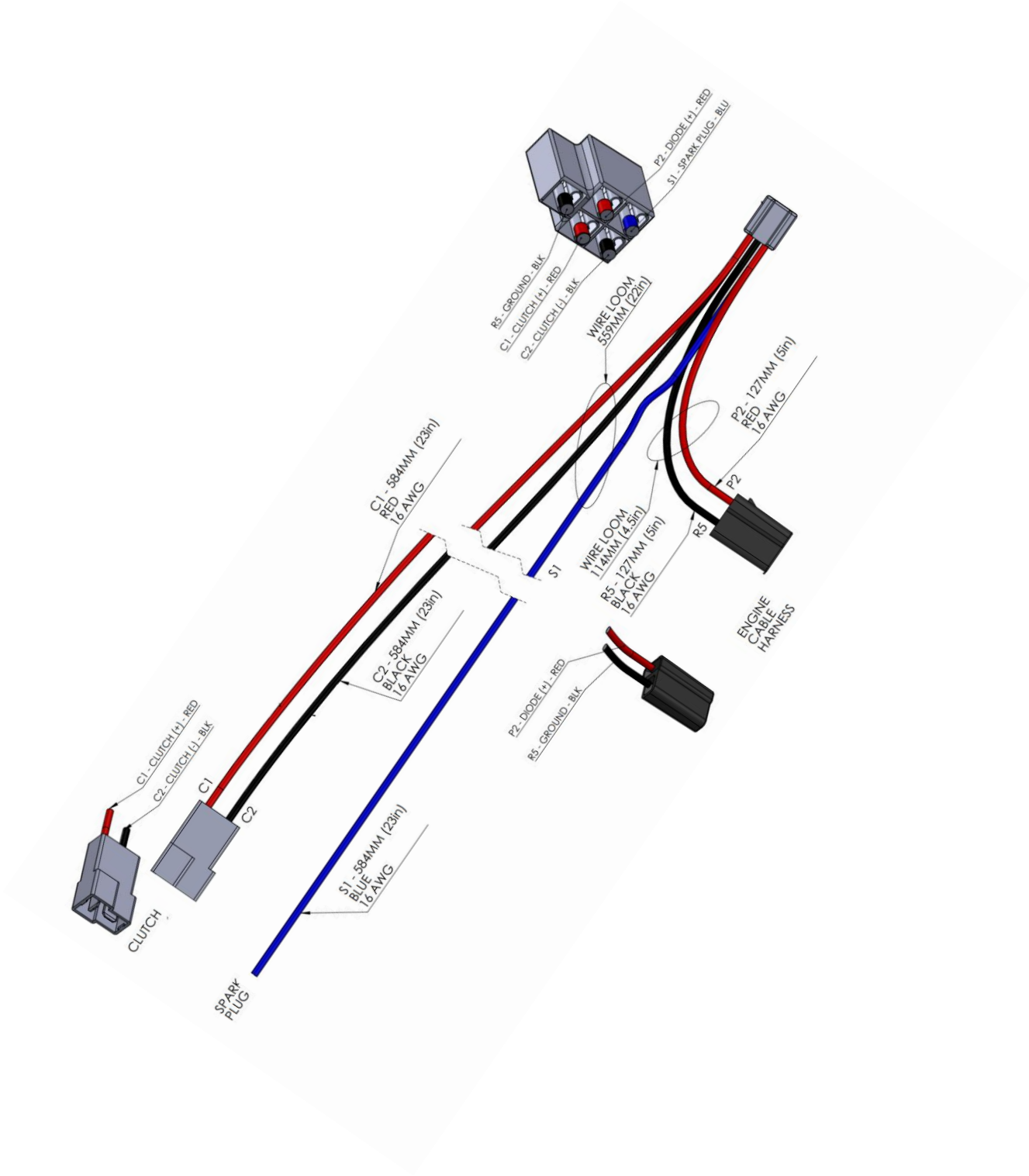
24-0307 – BATTERY CABLE 1X BATTERY 650PRO



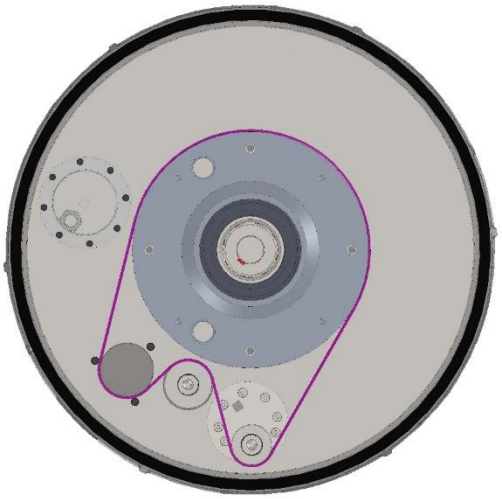
24-0309 – BATTERY CABLE ENGINE SIDE 650PRO & 800PRO



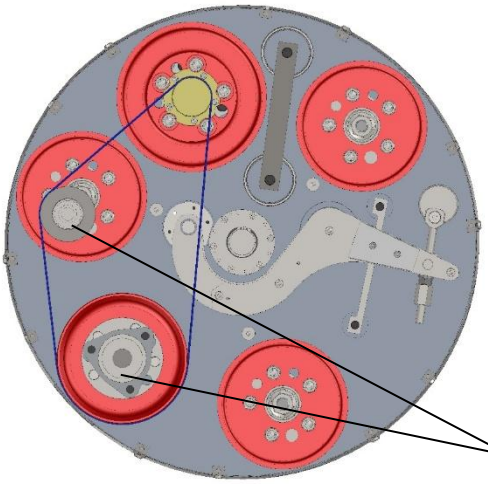
23-0252 - SOFT START HARNESS 800PRO



BELT TENSIONS

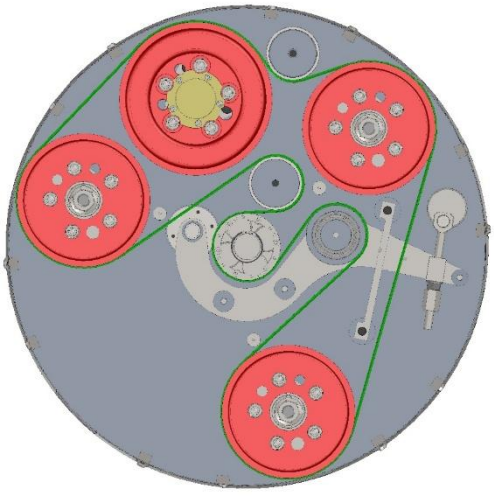


TOP BELT
BG.80041.00
165-171 HZ



PTO BELT
BG.80040.00
88-93 HZ

These sheaves are located on top assembly.



MAIN BELT
BG.80039.00
85-88 HZ

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CONTRACTOR PROVEN EQUIPMENT SINCE 1946

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