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www.Eberbachlabtools.com

E6000.00 Shaker Power Unit
Variable Speed, 115 V, 60 Hz

USE AND CARE FOR CATALOG NUMBER:

- **E6000.00 Shaker Power Unit, Variable Speed,
115 V, 60 Hz**

INITIAL PREPARATION:

This shaker power unit is furnished without carriers and prior to installation of any carrier the unit should be run. With the 2-speed switch on the front panel in the center-off position, plug the line cord into a 115 Volt, 60 Hz source (*230 Volt, 50/60 Hz source for E6000.25). Turn shaker on by moving switch to the Slow position. Proceed to carrier installation.

NOTE: Speed adjustments should be made only when the shaker is operating. Use slowest speed necessary to produce required shaking action.

OPERATION:

Because an oscillating mechanism such as a shaker tends to “walk”, caution must be exercised when installing it for use.

Shaking apparatus must be placed on rigid bench or table, or directly on the floor. Suction type rubber feet are provided; therefore, the surface must be free of cracks or voids and must be clean, especially free of dust, oil or wax.

If it is necessary to cement the shaker to mounting surface, we suggest the use of a rubber bonding cement that can be purchased from your local hardware store or automotive parts supplier. Apply a thin coat to the rubber feet, allow time to become tacky, then set the shaker in place and press down firmly. Allow to dry to manufacturers specifications.

To move the shaker after it has been cemented to a surface, it is necessary to free the feet with a sharp knife or razor blade to keep from injuring the thin rubber edges.

SPEED CONTROL:

The small hand wheel, located at the right side of the front panel is used to adjust the speed with the shaker running, the large hand wheel clamps the setting obtained.

1. Turn small hand wheel counter-clockwise initially to loosen the limit spacer and clamp hand wheel.
2. Loosen clamp hand wheel by turning counter-clockwise.
3. Turn small speed change hand wheel clockwise to reduce speed, counter-clockwise to increase speed of the shaker platform. (It will be necessary to

manipulate the clamping hand wheel to keep it from binding and thus preventing the operator from getting full adjustment.)

4. When the desired speed is reached, hold the small hand wheel and tighten the clamping hand wheel to hold the adjustment. Minimum speed is reached when the belt rides on the bottom of the automatic idler pulley and at the rim of the variable pitch crankshaft pulley. Maximum speed is reached when the belt is riding at the rim of the automatic idler pulley and deep in the groove of the variable pitch crankshaft pulley.
5. This shaking apparatus is equipped with a 2-speed motor and a 2-speed switch with center-off position. When the switch is set on Slow, the speed range is approximately 60 to 160 excursions per minute. When the switch is set on High, the speed range is approximately 90 to 260 excursions per minute. Always operate on high motor speed if desired shaker speed is above 90 excursions per minute.

Example:

To operate the shaker at 75 excursions per minute, the operator should set the switch on the Slow speed setting and adjust the variable pitch pulley controls to get the speed required.

Example:

To operate the shaker at 100 excursions per minute, the operator should set the switch on the High speed setting and adjust the variable pitch pulley controls to get the speed required.

BELT INSPECTION:

Inspect both belts at each oiling period and replace if actually broken or if the cords are exposed and frayed.

BELT REPLACEMENT:

1. The motor belt driving the large idler pulley is changed easily after removing the Top Carrier and the Front Panel. To change the motor belt (# 4284.5), turn off the shaker and prop up shaker so bottom fasteners are accessible. Then remove the front panel. Below the motor on the bottom of the base will be four hex head cap screws that hold the motor. Loosen the four hex head cap screws holding the motor. Replace the motor belt with the new and adjust the motor belt to proper tightness. Tighten the motor screws, but do not tighten either belt to the point where the bearings will be overloaded. When a

belt is tight, the operator should be able to press lightly on the middle of the belt and cause it to bow in an amount equal to the width of the belt.

2. To replace the speed changing belt (# 4292) the operator will first have to turn on the shaker and set the speed of the unit to high (CCW on the speed control knob). Turn off and disconnect power to the shaker. Remove the front panel and speed change plate (EP6000.534A) and bushing. To remove the front panel and speed change plate proceed as follows: First, loosen the socket set screw, use a 3/32" hex key (Allen) wrench (available at hardware or automotive stores) in the hub of the small speed change hand wheel (EP6000.096) just enough to allow the hand wheel to slip off the end of the speed adjustment screw (EP6000.028). Next, remove the limit spacer (EP6000.069). The large clamping wheel (EP6000.100) can now be removed by turning it on the speed adjusting screw. Do not remove the speed adjusting screw or the tubular metal spacer that projects through the hole in the panel. The 12 screws holding the panel can now be removed, permitting removal of the panel.

To remove the speed change plate (EP6000.534A), remove the two hex head cap screws (#8518) indicated on the exploded view. (Early models use flat head hex screws, so a 5/32" hex key (Allen) wrench is needed.) With the speed change plate removed, the belt can be removed and a new one installed. At this time it is well advised that you oil the automatic idler pulley side bearing by placing a small amount of oil on the exposed end of the bearing in the sliding pulley segment. Also, pull out the outer portion of the crankshaft pulley sufficiently to permit oiling of the sliding shaft. Clean and oil the thrust bearing on the end of the speed adjusting screw. Use SAE No. 30 Oil. To re-assemble the shaker, replace all parts in reverse order of disassembly.

BELT ADJUSTMENT:

The motor belt driving the 9" idler pulley may stretch and become loose after a short time in operation, or the replacement belt may be a slightly different length. To adjust the belts, turn off the shaker and prop up shaker so bottom fasteners are accessible. Then remove the front panel. Below the motor on the bottom of the base will be four hex head cap screws that hold the motor. Loosen the four hex head cap screws holding the motor and adjust the motor belt to proper tightness. Tighten the motor screws, but do not tighten either belt to the point where the bearings will be overloaded. When a belt is tight, the operator should be able to press lightly on the middle of the belt and cause it to bow in an amount equal to the width of the belt.

Contact Eberbach Tech Support **(800) 422-2558** for instructions on replacement of belt between idler assembly and crankshaft assembly.

MOTOR PROTECTION:

The motor is equipped with a circuit breaker to prevent motor overload. Some possible causes for a tripped breaker are as follows:

1. Overloading the shaker with excess weight and speed.
2. Neglecting to oil the bearings at stated intervals.
3. Damage to the wiring resulting in a short circuit.
4. Variable pitch pulley surfaces are dirty due to belt wear, making them sticky.
5. Belts are too tight.
6. Belts are stiff after prolonged storage.

LUBRICATION:

See exploded view of shaker power unit for points of lubrication. Use a good grade SAE No. 30 oil.

Lubrication when shaker is used in continuous duty applications of 100 hours or more:

- A. *Oil the idler bearing bracket through the hole in the top of the bearing block every 3 months.
- B. Oil crank bearings through hole in center of bearing housing every 3 months.
- C. *Oil the 8 bearing located at the top and bottom of each of the 4 rocker arms every 3 months. Place the oil on the shaft to the bearing.
- D. *Oil the connecting rod bearings every 3 months. Place oil on the shaft next to the bearing at the upper end and at the crank end of the connecting rod.
- E. *A few drops of oil on the thrust bearing on the end of the speed adjusting screw.

Lubrication when shaker is used for intermittent duty:

- A. *Oil the idler bearing bracket once every 6 months through the hole in the top of the bearing block.
- B. Oil crank bearing through hole in bearing housing every 6 months.

- C. *Oil the 8 rocker arm bearings every 6 months. Place oil on the shaft next to the bearing.
- D. *Oil the 2 connecting rod bearings every 6 months. Place oil on the shaft next to the bearing.
- E. *Put a few drops of oil on the thrust bearing on the end of the speed adjusting screw.

***CARRIER RACK MUST BE REMOVED.**

MOUNTING AND DISMOUNTING CARRIERS:

Four machine screws are provided with each utility box carrier, (Cat. No. 6040). The utility box carrier is mounted directly on the shaker platform. The flask carriers (Cat. No. 6060, 6070 & 6080) are provided with four machine screws and four 1" spacers to hold the carrier off the shaker platform.

Contact your supplier or ***Eberbach Corporation*** technical support with any inquiries concerning replacement parts and installation.

REPLACEMENT PARTS LIST FOR E6000.00

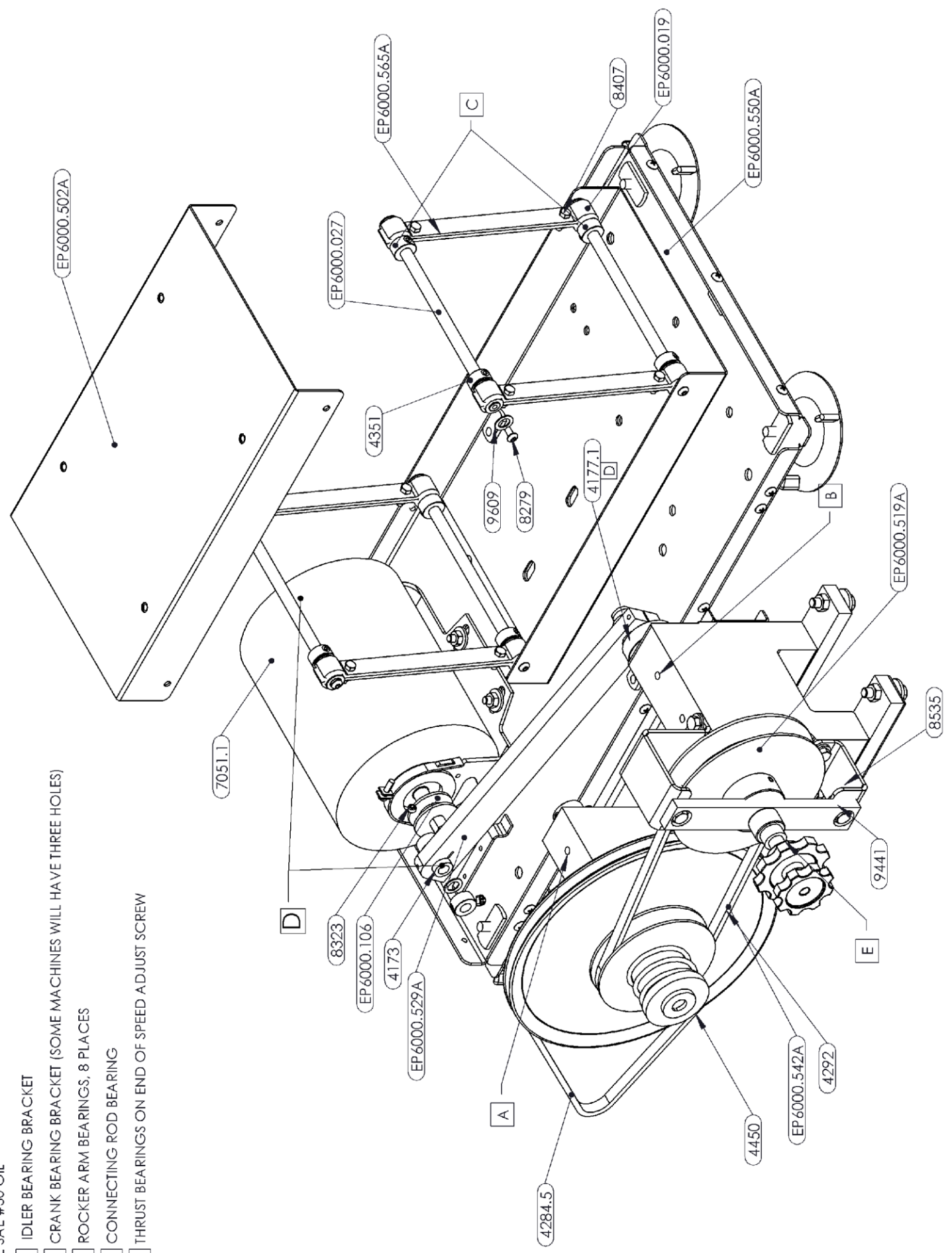
PartNo	DESCRIPTION	QTY.
3283	BRASS TUBING, 3/4" OD X 1/8" WALL SEAMLESS	0.6in
4284.5	3L330R V-BELT (MOTOR TO IDLER)	1
4351	COLLAR	2
5528	3.75" SUCTION CUP W/ 5/16-18 THREADED POST	4
6063.1	CABLE TIE MOUNT	3
6063.2	CABLE TIE	3
6120.7	5A CIRCUIT BREAKER 250VAC	1
6272	AC POWER INLET	1
6518	SWITCH	1
6649	CORD AND PLUG	1
6800.5	LOGO PLATE	1
7051.1	MOTOR 1/6HP 1725/1140RPM	1
7568	#4-40 X 1/4" S/S PAN HD. MACHINE SCREW	2
7617	#6-32 X 1/2" S/S ROUND HD. MACHINE SCREW	2
8279	#10-32 X 3/8" SELF LOCKING BOTTEN HD. SOCKET SCREW	8
8285	#8-32 X 1/4" S/S TRUST HD. SCREW	48
8323	1/4"-20 X 3/16" SET SCREW	1
8518	1/4"-28 X 3/4" HEX HEAD SCREW	4
8528.4	5/16"-24 X 1/2" HEX HEAD SCREW	4
8535	5/16"-24 X 1-1/4" HEX HEAD SCREW	8
9175	#4X 1/8" PAN HD. SHEET METAL SCREW	2
9206	#6-32 S/S NYLON LOCK NUT	2
9217	#4-40 S/S NYLOCK NUT	2
9235	#8-32 S/S MACHINE SCREW NUT	1
9271	1/4"-28 GRADE 5 HEX NUT	4
9277	>#10-32 X 3/8" SELF LOCK BUTTON HD SOCKET CAP SCREW	8
9437	#4. X 1/4" PAN HEAD SLOTTED SHEET METAL SCREW	12
9441	5/16" USS WASHER	8
9609	FIBER WASHER, 0.391 X 0.625 X 0.032	10
EP6000.037	SWITCH ESCUTCHEON	1
EP6000.042	BACK PANEL	1
EP6000.044	FRONT CENTER PANEL	1
EP6000.053	TOP COVER	1
EP6000.106	OK-12 PULLEY	1
EP6000.300	SPEED ADJUSTING STICKER	1

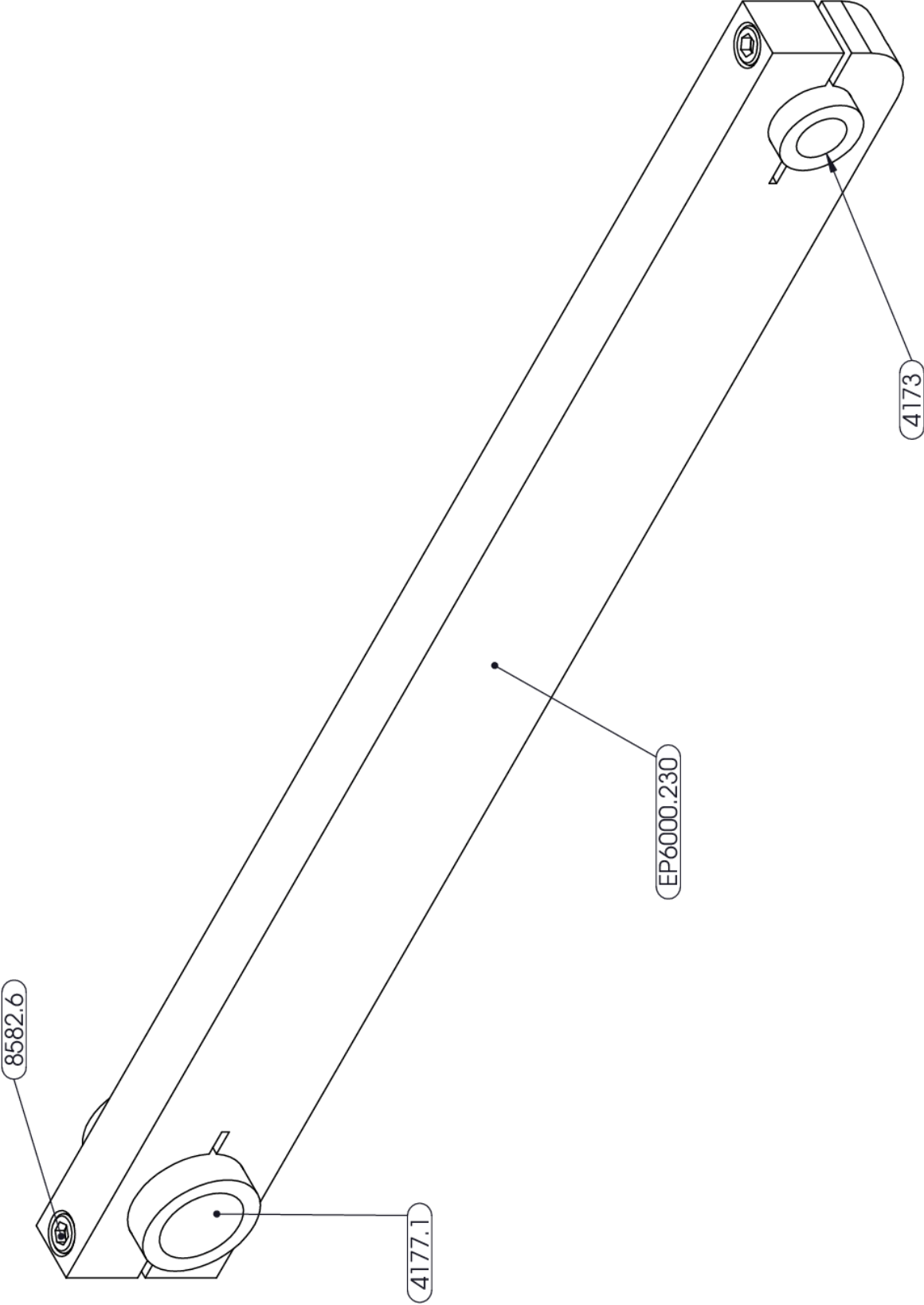
EP6000.502A	TOP PLATE ASSEMBLY	1
EP6000.519A	DRIVE ASSEMBLY	1
EP6000.522A	RIGHT END PANEL ASSEMBLY	1
EP6000.525A	LEFT END ASSEMBLY	1
EP6000.529A	CONNECTING ROD ASSEMBLY	1
EP6000.542A	IDLER JACKSHAFT ASSEMBLY	1
EP6000.550A	BASE ASSEMBLY	1
EP6000.565A	ROCKER ARM AND SPACER ROD ASSEMBLY	2
EP6000.652A	WIRING HARNESS	1
EP6000.SS.054	LEVELING SHIM	1
EP6000.SS.058	STIFFENER SPACER	1

Contact your supplier or **Eberbach Corporation** technical support with any inquiries concerning replacement parts and installation.

LUBRICATION POINTS
USE SAE #30 OIL

- A IDLER BEARING BRACKET
- B CRANK BEARING BRACKET (SOME MACHINES WILL HAVE THREE HOLES)
- C ROCKER ARM BEARINGS, 8 PLACES
- D CONNECTING ROD BEARING
- E THRUST BEARINGS ON END OF SPEED ADJUST SCREW





PartNo	DESCRIPTION	QTY.
4173	OILITE BRONZE BEARING	1
4177.1	OILITE BEARING #AA-880-1	1
8582.6	#8-32 X 7/8" SOCKET HD. CAP SCREW	2
EP6000.230	CONNECTING ROD	1

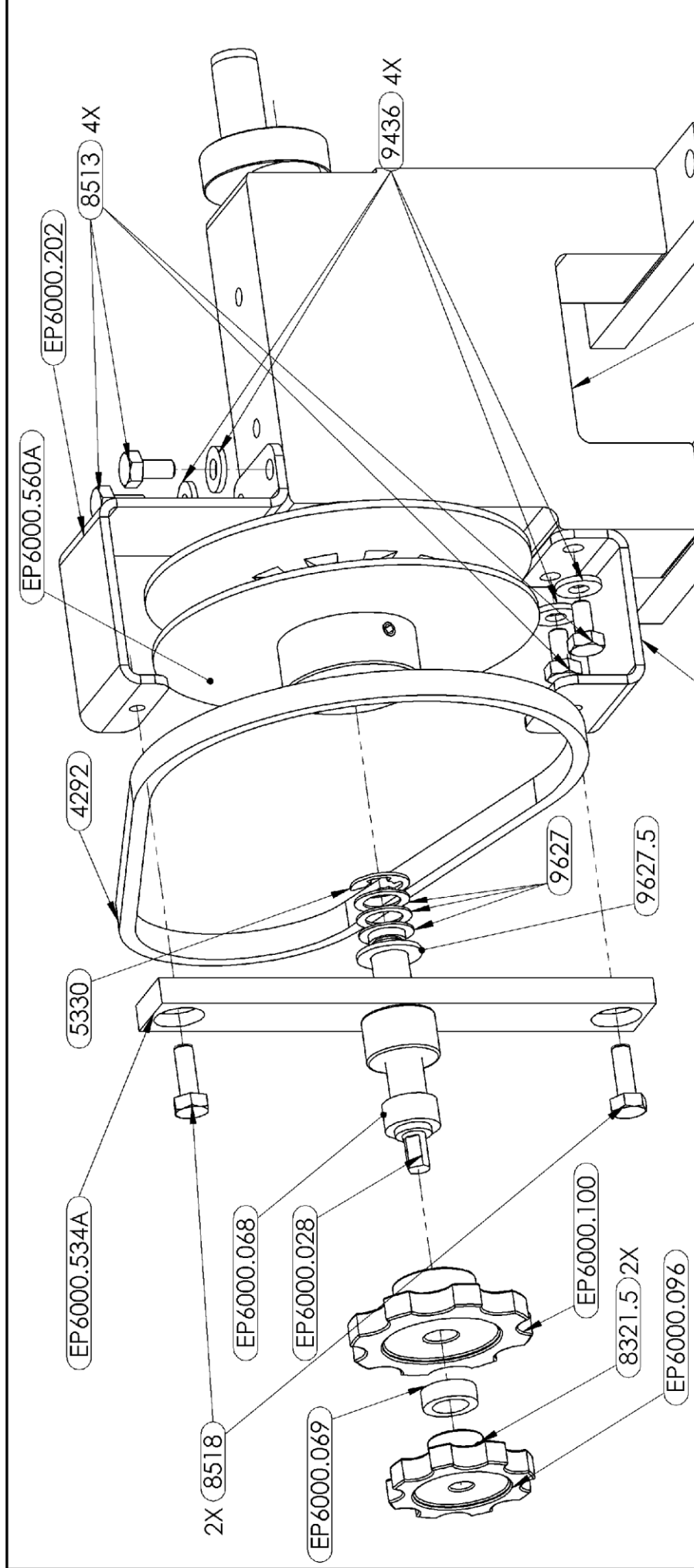
EBERBACH CORPORATION U.S.A.

CONNECTING ROD ASSEMBLY

EP6000.529A

Drawing Name

PART NO.



PartNo	DESCRIPTION	QTY.	UoM
4292	V-BELT, 4L280	1	EA
5330	E-STYLE EXTERNAL RETAINING RING	1	EA
8321.5	#10-32 X 1/4" SET SCREW	2	EA
8513	1/4"-28 X 1/2" HEX HEAD SCREW	4	EA
8518	1/4"-28 X 3/4" HEX HEAD SCREW	2	EA
9436	1/4" S/S SAE WASHER	4	EA
9627	FIBER WASHER, 33/64 X 3/4 X 1/32	3	EA
9627.5	DELTRIN WASHER, 0.515 X 0.885 X 0.067	1	EA
EP6000.028	SPEED ADJUSTING SCREW	1	EA
EP6000.068	CLAMPING WHEEL SPACER	1	EA
EP6000.069	LIMIT SPACER	1	EA
EP6000.096	SPEED ADJUSTING HAND WHEEL	1	EA
EP6000.100	CLAMPING HAND WHEEL	1	EA
EP6000.202	DRIVE FRAME UPPER BRACKET	1	EA
EP6000.203	DRIVE FRAME LOWER BRACKET	1	EA
EP6000.534A	SPEED CHANGE PLATE & BUSHING ASSEMBLY	1	EA
EP6000.560A	CRANK SHAFT ASSEMBLY WITH THREADED SPINDLE AND CRANK ASSEMBLY	1	EA
EP6003.517A	DRIVE FRAME ASSEMBLY	1	EA

EBERBACH CORPORATION

MATERIAL

PART NAME: DRIVE ASSEMBLY

PART NO.: EP6000.519A

SCALE: 1:2

DATE: 06-11-21

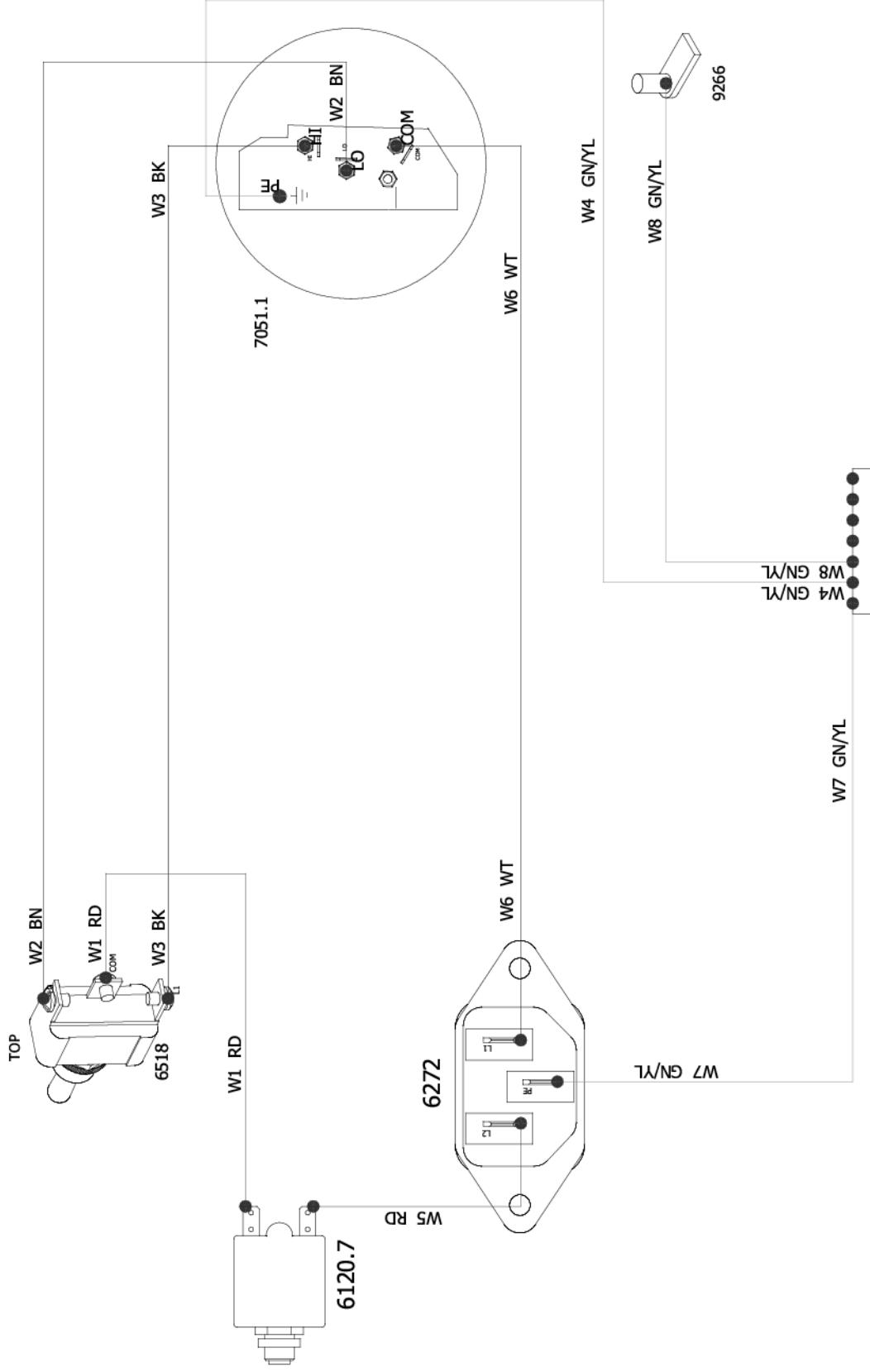
DEPT.: A.M. ENG.

DRAWING GROUP: 18.051LB

PRODUCTION

REV: A-01

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES AND DECIMALS THEREOF.
 FINISHES ARE AS SHOWN OR OTHERWISE SPECIFIED.
 TOLERANCES:
 FRACTIONS: ±.001
 DECIMALS: ±.001
 ANGLES: ±.5°



JM 5900 Schooner Street Belleville, MI 48111 U.S.A.		Eberbach Corp.		1 3/15/2022 eberjm 0 7/13/2021 eberjb REV. DATE NAME		UPDATED MOTOR TO 7051.1 CHANGES		REVISION 1
CONTRACT:		LOCATION: L1		E6000.605A		Main electrical closet		eberjm 3/15/2022
6120.7		6272		7051.1		9266		01