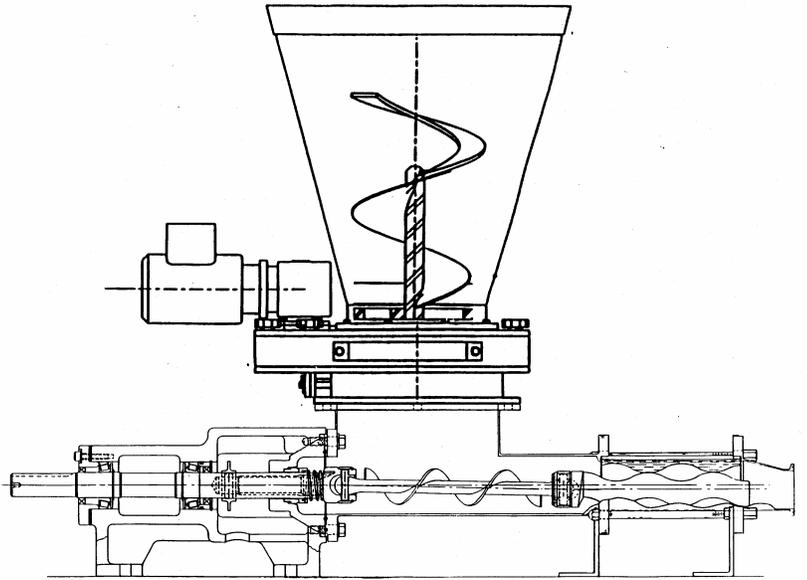


Service Manual



**Moyno
AugMentor[®]**



Always the Right Solution™



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SERVICE MANUAL

Moyno® AugMentor

1-1. INTRODUCTION

1-2. GENERAL

The Moyno AugMentor® is an accessory item designed specifically for use with Moyno progressing cavity pumps to improve the product feeding capabilities of an open throat pump conveyor. The AugMentor utilizes a vertical hopper containing a rotational auger to force the product to be pumped into the open throat hopper of the pump.

A right angle gear motor controlled by a variable frequency AC drive controller drives the auger in a counterclockwise rotation (from the top view). The pump operator adjusts the rotational speed of the auger as required to provide for the best feed rate of the pump. Generally the motors should be wired such that the pump motor and the auger motor will start and stop simultaneously.

A minimum level of 6 to 8 inches of product should be maintained in the hopper during operation. This will help ensure that the pump remains full of product and air is not introduced into the product.

The power must be turned OFF and DISCONNECTED before cleaning or disassembling the unit. Always use CAUTION and keep HANDS and OTHER OBJECTS out of the hopper when power is connected to the unit.

2-1. OPERATION

After any disassembly and/or cleaning operation, and before reconnecting power to the unit, check to ensure that the AugMentor is properly assembled and that the auger is properly attached to the ring gear.

Reference Pump Manual for additional operating instructions

Before the unit is operated, add product to the hopper. Start the pump and AugMentor and adjust the auger speed as necessary to provide the optimum feed rate of the product into the pump. Depending upon the application and control setup, the AugMentor may be started first to ensure that the pump suction housing is full of product and applying feed pressure to the

pumping elements. It should be noted that increasing the speed of the auger will not necessarily increase the pump capacity.

CAUTION: Keep hands and other objects out of the hopper when in operation.

3-1. DISASSEMBLY

3-2. NOTE: Turn the power OFF and DISCONNECT the power to the AugMentor before disassembly.

3-3. Remove the four clamp knobs (290) from the corners of the top plate (100). This will allow you to tilt the hopper (150) to the side, resting on the hopper leg (350).

CAUTION: Clear area of any debris and keep unauthorized personnel away from the unit while tilting the hopper.

Operator must be physically capable of lifting fairly heavy objects. As with any lifting activity, operator must have secure footing.

An initial pull force will be required to get the unit to start tilting with an immediate push force as the center of gravity shifts.

3-4. Remove the O-Ring (250) from the bottom of the spacer plate (230), clean, and inspect for damage. Replace as necessary.

3-5. To remove the auger (220) from the assembly for cleaning rotate the auger clockwise, disengaging the auger dowel pins (210) from the auger. Lift the auger from the hopper through the top.

Care should be taken in removing the auger. It is fairly heavy and can be awkward to handle. While removing in a horizontal position, auger



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is unsupported after it has been disengaged from the dowel pins (210).

3-6. Carefully remove the last two clamp knobs (300) holding the spacer plate (230) to the top plate (100). Remove and clean the spacer plate.

The spacer plate holds several parts to the top plate including the metal ring gear (200). The ring gear is supported by the ring gear guide (190). Care must be taken while removing the spacer plate so the ring gear is not pulled off the ring gear guide, which could cause the ring gear to fall. Internal parts are lubricated and may be slippery to handle.

3-7. Remove the O-ring (240) from the top of the spacer plate (230), clean and inspect for damage.

3-8. Remove and clean the large ring gear (200) by lifting it from the ring gear guide (190).

3-9. Remove and clean the drive pinion (110) along with the seal bushing (120) and thrust plate (140).

3-10. Remove the seal bushing (120) and O-ring (130) from the center of the drive pinion (110), inspect and clean. Replace the O-ring as necessary.

4-1. ASSEMBLY

4-2. **NOTE: Ensure the power is OFF and DISCONNECTED before assembling the unit.**

4-3. At this point, all parts should be clean and in good condition. Install the seal bushing (120) with O-ring (130) in the drive pinion (110) and locate the thrust plate (140) on the top of the drive pinion. Grease the splined gear motor pinion shaft (10) to allow for easy assembly. Install the drive pinion on the gear motor pinion shaft. Grease the teeth of the drive pinion and the bottom of the seal bushing where it will ride on the nylon spacer plate (230).

NOTE: Utilize an appropriate Food Grade grease for lubrication

OPERATOR SHOULD TAKE CARE IN HANDLING HEAVY LUBRICATED PARTS.

4-2. Liberally grease the ring gear (200) on the gear teeth, top groove for the ring gear guide (190), and the bottom flat section that rides on the nylon

spacer plate (230).

4-3. Fit the large ring gear (200) onto the ring gear guide (190) meshing the gear teeth with the drive pinion (110).

4-4. Install two O-rings (240 and 250) in the spacer plate (230). Install the spacer plate to the top plate (100) using the two smaller clamp knobs (300).

Note: Apply a small amount of Food grade grease on the large O-rings in several locations. The cohesive force of the grease will keep the O-ring in its groove on the spacer plate while assembling.

4-5. Fit the auger (220) into the hopper (150). Locate the pins (210) in the holes in the ring gear, turn counterclockwise locking the auger in place in the ring gear.

4-6. Rotate the hopper vertically and secure it evenly with the remaining four clamp knobs (290).

CAUTION: Clear area of any debris and keep unauthorized personnel away from the unit while tilting the hopper.

OPERATOR MUST BE PHYSICALLY CAPABLE OF LIFTING FAIRLY HEAVY OBJECTS. AS WITH ANY LIFTING ACTIVITY, OPERATOR MUST HAVE SECURE FOOTING.

AN INITIAL LIFTING FORCE WILL BE REQUIRED TO GET THE UNIT TO START TILTING UP WITH AN IMMEDIATE PULL FORCE TO KEEP THE UNIT FROM FALLING ONTO THE PUMP WHEN THE CENTER OF GRAVITY SHIFTS.

Item	Part Number	Description	Qty.
10	4240892001	Pinion Shaft	1
20	6191552320	Hex Screw	1
30	6230012430	LockWasher	1
40	4240890001	Adapter Flange	1
50	6191824160	Socket Screw	4
60	4220536000	Grease Seal	1
70	3207902158	O-Ring	1
80	6191734250	Hex Screw	4
90	6230704100	LockWasher	4
100	4250597001	Top Plate	1
110	4250595001	Drive Pinion	1
120	4220537001	Seal Bushing -SS Metal	1
130	3207902152	O-Ring	1
140	4220538001	Thrust plate	1
150	3651859000	Hopper - 70 Gallon No Fins	1
	4250583002	Hopper - 70 Gallon	
160	4220534101	Hopper Gasket	1
170	6191724400	Hex Screw	8
180	6230704080	LockWasher	8
190	4241103001	Ring Gear Guide	1
200	4250678001	Ring Gear	1
210	6160182410	Dowel Pin	4
220	4250598001	Auger Assembly - Full Auger	1
	3651860000	Auger Assembly - Scraper	
230	4250596001	Spacer Plate - Nylon	1
240	3207903390	O-Ring, Spacer Plate	1
250	3207903387	O-Ring, Spacer Plate	1
260	4230537001	Spacer Handle Bracket	1
270	6191734250	Hex Screws	2
280	6230704100	LockWasher	2
290	4220552001	Clamp Knob - Long	4
300	4220552002	Clamp Knob - Short	2
310	4240889001	Hinge Bracket	1
320	6191734200	Hex Screw	2
330	6230704100	LockWasher	2
340	4220530001	Hinge Pin	1
350	AS225221B	Hopper Leg	1
360	6160042600	Clevis Pin	1
370	4220529000	Hair Pin	3

Item Numbers Shown in Pump Manual

Pump Suction Housing - AugMentor			
Item	Part Number	Description	Qty.
1100	4250866001	Pump Suction Hsg.- E	1
	4250755001	Pump Suction Hsg.- F	
	4250784001	Pump Suction Hsg.- G	
	4250671001	Pump Suction Hsg.- H, J, K,	

Pump Conrod Assembly - AugMentor			
Item	Part Number	Description	Qty.
6200	4250663017	E Conrod Assembly - Single Flight	1
	4250664017	F Conrod Assembly - Single Flight	
	4250665017	G Conrod Assembly - Single Flight	
	4250463017	H Conrod Assembly - Single Flight	
	4250464017	J Conrod Assembly - Single Flight	
	4250465017	K Conrod Assembly - Single Flight	

Pump Suction Housing / Stator Gasket - AugMentor			
Item	Part Number	Description	Qty.
1200	See Pump Manual	Suction Hsg / Stator - "E" flat gasket.	1
	See Pump Manual	Suction Hsg / Stator - "F" flat gasket.	
	See Pump Manual	Suction Hsg / Stator - "G" flat gasket.	
	3207903361	Suction Hsg / Stator- H, J, K O-Ring	

