Soil Mixer and Dispenser

User’s Manual

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Assembly and Subassemblies
F1 - Steel Angle (2x2x69 inches)
F2 - Steel Angle (2x2x10 inches)
F3 - Steel Angle (2x2x33 inches)
F4 - Steel Angle (2x2x16 inches)
F5 - Steel Angle (2x2x22 inches)
F6 - Steel Angle (2x2x21 inches)
F7 - Steel Angle (2x2x21 inches)
W1 - 8 inch pneumatic tires
W2 - 8 inch pneumatic tires with casters
R1 - Rear axel
H1 – Hopper
A1 – Auger Shaft with 8 paddles
P1 – Auger Shaft Pulley
P2 – Auger Shaft Pulley (1/2 of P1)
VB1 – Linked V-Belt
G1 – Gearbox, 40 to 1 ratio
AC1 – AC motor (located behind gearbox)
M1 – Motor mount
Safety and Precautions

During Operation

- Do not reach inside the machine while it is running for any reason. Ensure that the machine comes to a full stop before placing body parts or other equipment in the machine.
- Do not wear loose clothing or let loose hair dangle near the machine while performing work. Loose objects can easily become caught.
- Ensure hopper is clear of all foreign objects or debris prior to operation.
- Ensure that all items are removed from the grate prior to opening or shutting the grate. Failure to do so could cause equipment to be caught in machine.
- Use only specified soil, using other mixtures such as gravel could form dangerous projectiles during operation.
- Ensure that weight placed on grate does not exceed tolerance specified. Exceeding the weight limit could cause grate bending and catastrophic failure.
- Ensure that wheel brakes are locked during operation. Failure to do so could cause machine to move in operation.
- Ensure that cord is outside the work area to avoid tripping hazard.
- It is advisable to wear safety glasses while operating the machine to prevent dust and debris from entering eyes.
- Do not lean or otherwise place large amounts of pressure against the side of the machine. Bending/Tipping over will cause catastrophic failure.
- If grinding, rattling or shaking of machine occurs outside normal parameters, SHUT MACHINE DOWN IMMEDIATELY.

Storage

- Always store machine on level surface and lock wheels. Failure to do so could cause machine to move unexpectedly.
- Ensure that sharp corners are placed outside walk path to keep them from hurting people or damaging equipment that may bump into it.
- Do not place anywhere machine can be hit or knocked over by the movement of other equipment.
- Properly wind and store cord to avoid tripping hazard.
- Do not store equipment on top of grate.
- Keep small equipment capable of falling into machine clear of area. Small parts in machine can damage it.
Movement

- Make sure that you have clear line of site prior to moving machine. Machine is heavy and can cause harm to individuals hit with it.
- Do not let children or weak persons to move machine. Machine could potentially harm user if not properly controlled.
- Do not move over grade with at least two people to control machine. Machine could potentially roll out of control.
- Only push or pull using the specified handles. Pushing at improper places can cause machine to tip over.
- Ensure machine is unplugged prior to movement and cord is properly wound in order to remove tripping hazard.

Operation Instructions

Before operation a set of checks should be performed to ensure a safe start-up. A list of the checks is shown below.

a) Make sure there is nothing but soil in the hopper. Rocks, sticks, or other foreign objects could cause a jam and damage the auger or lift system.

b) Position the casters to reduce the chance of tripping (i.e. so they are not pointing straight out) and lock both wheels. This prevents the machine from shifting during operation.

c) Make sure the grate is properly positioned in the lip. Improper seating will cause the safety switch to cut power to the motor.

After performing the pre-operation checks the machine is then ready for use. The following is a list of steps to take for start-up and operation.

1.) Plug the cord into the nearest available outlet. Extension cords can be used but it is recommended to use heavy duty extension cords to deal with the current drawn by the motor.
2.) Fill the hopper with the desired amount of soil and water. When finished replace the top grate.

3.) Press START button.

4.) Soil should begin to come out of the lift system and the user can now fill containers.

**Maintenance**

<table>
<thead>
<tr>
<th>Component</th>
<th>Required Service/Inspection</th>
<th>Maintenance Schedule</th>
<th>Possible Required Maintenance</th>
<th>Refer to section</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-belt</td>
<td>check tension of belt, signs of wear</td>
<td>monthly</td>
<td>tighten/replace v-belt/adjust transmission pulleys</td>
<td>XX</td>
</tr>
<tr>
<td>Lift Belt</td>
<td>inspect tension, alignment, check for signs of wear</td>
<td>bi-weekly</td>
<td>tighten/align lift belt</td>
<td></td>
</tr>
<tr>
<td>Bolts</td>
<td>Check bolts for tightness</td>
<td>monthly</td>
<td>tighten bolts</td>
<td></td>
</tr>
<tr>
<td>Rust/Corrosion</td>
<td>empty machine/inspect machine for signs of corrosion</td>
<td>monthly</td>
<td>remove rust/apply rust preventative material</td>
<td></td>
</tr>
<tr>
<td>Tires</td>
<td>check wear and tire pressure</td>
<td>monthly</td>
<td>inflate to correct psi/replace tires</td>
<td></td>
</tr>
<tr>
<td>Bearings</td>
<td>inspect, clean + regrease bearings, inspect set screws</td>
<td>quarterly</td>
<td>tighten set screws/replace bearings</td>
<td></td>
</tr>
<tr>
<td>Motor/Power Transmission</td>
<td>See motor manual</td>
<td>See Motor Manual</td>
<td>change motor brushes, etc</td>
<td></td>
</tr>
<tr>
<td>motor housing</td>
<td>remove motor housing to vacuum motor, power transmission system</td>
<td>monthly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>buckets</td>
<td>check bolts for tightness/buckets for signs of wear</td>
<td>quarterly</td>
<td>tighten bolts/replace bucket</td>
<td></td>
</tr>
</tbody>
</table>

*Caution: turn off and unplug device before performing any maintenance tasks such as cleaning*
## Troubleshooting

**CAUTION:** When troubleshooting, turn off the power and unplug the power cord.

<table>
<thead>
<tr>
<th>Problems</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motor Not Running</strong></td>
<td>Check if power cord is plugged in</td>
</tr>
<tr>
<td></td>
<td>Check if the power cord leads are connected to motor</td>
</tr>
<tr>
<td></td>
<td>Check if the hopper cover is on the kill switch</td>
</tr>
<tr>
<td><strong>Auger is Not Moving, When Motor is Running</strong></td>
<td>Check the power transmission belt.</td>
</tr>
<tr>
<td></td>
<td>It could be off the pulleys</td>
</tr>
<tr>
<td></td>
<td>It could be broken</td>
</tr>
<tr>
<td></td>
<td>Check the tension of the belt</td>
</tr>
<tr>
<td></td>
<td>Check if the motor shaft is inserted into the gearbox correctly</td>
</tr>
<tr>
<td></td>
<td>Hopper may be overfilled. After checking the power transmission belt and gearbox, remove some soil from the hopper.</td>
</tr>
<tr>
<td><strong>Soil Not Dispensing When Auger is Moving</strong></td>
<td>Check the lift system belt</td>
</tr>
<tr>
<td></td>
<td>Check if buckets are broken</td>
</tr>
<tr>
<td></td>
<td>Hopper may be overfilled. Overfilled hopper may be causing the lift system to be running at a slower speed than required. Remove some soil from the hopper.</td>
</tr>
<tr>
<td><strong>Hopper Cover Kill Switch Not Working</strong></td>
<td>Check if the wire leads are connected properly</td>
</tr>
<tr>
<td></td>
<td>Check if the hopper cover is on the kill switch</td>
</tr>
</tbody>
</table>
## Replacement Parts Chart and Details

### PART NAME:                  DESCRIPTION:                                                                                                 QTY.
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Motor Gearbox                GEARBOX,40.50:1,56C INPUT,1.25"OUTPUT SHAFT DIA. 1750 RPM INPUT=43.21 OUTPUT RPM  1
Moror Base Mount            BASE MOUNT/FEET FOR ABOVE UNIT REMOVE C-FLANGE ON GEARBOX AND MOUNT NEW BASE  1
Electric Motor               LEESON MOTOR,1.5HP,1750 RPM,56C FRAME, MAN.O/L 1/60/115-208-230 VAC,TEFC, FOOTLESS  1
Belt for Motor Pulley        B POWERTWIST BELTING, 2M (6.6FT.) SLEEVE                                                                 1
Pulley for Gearbox           2 GROOVE PULLEY, 6.95" O.D. TAPER LOCK TAPER LOCK BUSHING,1-1/4", For Gearbox  1
Pulley for Auger Shaft       2 GROOVE PULLEY, 3.75" O.D. TAPER LOCK TAPER LOCK BUSHING, 3/4", For Auger  1
Buckets for Elevator Lift System 3" x 2" CC-HD Poly Blue Elevator Buckets (Standard Drilling)  TBD
Bolts for Elevator Buckets   ¼" x 1-1/2" Zinc Plated Fanged Elevator Bolts                                                                 TBD
Washers for Elevator Buckets Zinc Plated Flat Washer                                                                               TBD
Nuts for Elevator Buckets    Zinc Plated Nylock Nuts                                                                                                                                   TBD
Start/Stop Switch            A-B 100-C09D10 MCS-C CNTCTR IEC 9A 110V 50HZ/                                                                 1
Power Box for On/Off Switch  A-B 800S-2SA STATION ASSMBLD P/B 600VAC MAX 5                                                                 1
Pillow Block Bearings for Auger Shaft  Stamped Steel Base Mounted Ball Bearing, Double Sealed, 3/4" Diameter Shaft and 1" Center Height  2
Stationary Pneumatic Wheels  8" Pneumatic Wheel Only, Zinc Plated, with Black Inflatable Tire                                                                 2
Swivel Caster Pneumatic Wheels 8" Pneumatic Swivel Caster with TB Brake, Zinc Plated, with Black Inflatable Tire  2
Kill Switch for Hopper Grate                                                                                                              1
Belt for Elevator Lift System                                                                                                             1