Rotating Parts & Electrical Shock Hazard:

Fans should be installed and serviced by qualified personnel only.

Disconnect electric power before working on unit (prior to removal of guards or entry into access doors).

Follow proper lockout/tagout procedures to ensure the unit cannot be energized while being installed or serviced.

A disconnect switch should be placed near the fan in order that the power can be swiftly cut off, in case of an emergency and in order that maintenance personnel are provided complete control of the power source.

Grounding is required. All field-installed wiring must be completed by qualified personnel. All field installed wiring must comply with National Electric Code (NFPA 70) and all applicable local codes.

Fans and blowers create pressure at the discharge and vacuum at the inlet. This may cause objects to get pulled into the unit and objects to be propelled rapidly from the discharge. The discharge should always be directed in a safe direction and inlets should not be left unguarded. Any object pulled into the inlet will become a projectile capable of causing serious injury or death.

When air is allowed to move through a non-powered fan, the impeller can rotate, which is referred to as windmilling. Windmilling will cause hazardous conditions due to unexpected rotation of components. Impellers should be blocked in position or air passages blocked to prevent draft when working on fans.

Friction and power loss inside rotating components will cause them to be a potential burn hazard. All components should be approached with caution and/or allowed to cool before contacting them for maintenance.

Under certain lighting conditions, rotating components may appear stationary. Components should be verified to be stationary in a safe manner, before they come into contact with personnel, tools or clothing.

Failure to follow these instructions could result in death or serious injury.

The attachment of roof mounted fans to the roof curb as well as the attachment of roof curbs to the building structure must exceed the structural requirements based on the environmental loading derived from the applicable building code for the site. The local code official may require variations from the recognized code based on local data. The licensed engineer of record will be responsible for prescribing the correct attachment based on construction materials, code requirements and environmental effects specific to the installation.
**Handling**

Lift propeller wall fans by attachment to the power assembly.

*NOTICE! Never lift by the shaft, motor or housing.*

**Storage**

If the fan is stored for any length of time prior to installation, coat the shaft with grease or a rust preventative compound. Store it in its original shipping crate and protect it from dust, debris and the weather.

Rotate the wheel several revolutions every three to five days to keep a coating of grease on all internal bearing parts.

**Installation**

Fans mounted to a wall require a different wall opening size than fans mounted in wall collars or wall housings. For specific dimensions, refer to the submittal drawing for the specific fan type.

**Motor Installation**

To prevent damage to the fan during shipping, motors 5 HP and larger, and extremely heavy motors (cast iron or severe duty) are shipped loose and must be field mounted by bolting the motor on the motor mounting plate in the existing slots.

The motor should be mounted in order that the motor plate is between the fan shaft and the motor shaft.

1. Remove the motor plate mounting bolts and motor plate.
2. Remove the motor mounting bolts from the motor plate.
3. Mount the motor to the motor plate aligning the appropriate holes.
4. Place the motor plate on the power assembly and reinstall the mounting bolts.

**Belt and Pulley Installation**

Belt tension is determined by the sound of the belts when the fan is first started. The belts will produce a loud squeal, which dissipates after the fan is operating at full capacity. If belt tension is too tight or too loose, lost efficiency and damage can occur.

**Wiring**

*NOTICE! Correctly label the circuit on the main power box and always identify a closed switch to promote safety (i.e., red tape over a closed switch).*

All wiring should be in accordance with local ordinances and the National Electrical Code, NFPA 70. Ensure the power supply (voltage, frequency, and current carrying capacity of wires) is in accordance with the motor nameplate.

Follow the wiring diagram in the disconnect switch and the wiring diagram provided with the motor.

Leave enough slack in the wiring to allow for motor movement when adjusting belt tension. Some fractional motors have to be removed in order to make the connection with the terminal box at the end of the motor.

**Wall Fans**

1. Extend wires to the fan.
2. Prevent excess wire from entering the shaft and propeller area by restraining the excess wire to a point outside the base.

**Wall Fans with Wire Guard**

1. Remove end panel from the wire guard to gain access to the motor.
2. Extend wires through a side panel of the wire guard to gain access to the motor.
3. Prevent excess wire from entering the shaft and propeller area by restraining the excess wire to a point outside the base.
**Wall Fans with Wall Housing**

1. Remove end guard from the wall housing.
2. Drill a hole through either side panel at a convenient location and pull the wires through. Do not pull wires through wire guard at the back panel.
3. Restrain the incoming wire at the side panel to prevent excess wire from entering the shaft and propeller area.

**Wiring Diagrams**

**Vari-Flow Motors**

For EC or VF see EC Motor Wiring supplement. For VF2 see PM wiring supplement.

**Single Speed, Single Phase Motor**

![Diagram]

When ground is required, attach to ground A or B with No. 6 thread forming screw. To reverse, interchange T-1 and T-4.

**2 Speed, 2 Winding, Single Phase Motor**

![Diagram]

When ground is required, attach to ground A or B with No. 6 thread forming screw. To reverse, interchange T-1 and T-4 leads.

**Single Speed, Single Phase, Dual Voltage**

![Diagram]

When ground is required, attach to ground A or B with No. 6 thread forming screw. To reverse, interchange T-5 and J-10 leads.

**3-Phase, 9 Lead Motor**

**Y-Connection**

<table>
<thead>
<tr>
<th>Low Voltage</th>
<th>High Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>208/230 Volts</td>
<td>460 Volts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 5 6</th>
<th>7 8 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>L2</td>
</tr>
</tbody>
</table>

**Delta-Connection**

<table>
<thead>
<tr>
<th>Low Voltage</th>
<th>High Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>208/230 Volts</td>
<td>460 Volts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5789</th>
<th>123</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>L2</td>
</tr>
</tbody>
</table>

To reverse, interchange any two line leads.

**2 Speed, 1 Winding, 3-Phase Motor**

![Diagram]

To reverse, interchange any two line leads. Motors require magnetic control.

**2 Speed, 2 Winding, 3-Phase**

![Diagram]

To reverse: High Speed: interchange leads T11 and T12; Low Speed: interchange leads T1 and T2; Both Speeds: interchange any two line leads.

**Typical Damper Motor Schematic**

![Diagram]

For 3-Phase, damper motor voltage should be the same between L1 and L2. Damper motors may be available in 115, 230 and 460 volt models. The damper motor nameplate voltage should be verified prior to connection.

**Shutters**

If your fan is supplied with a shutter, follow the direction below. If your fan is not supplied with a shutter, proceed to Final Installation Steps.

1. Place the shutter into the wall opening.
2. Mount the shutter to the supporting surface using Number 12 sheet metal screws on six inch centers around the perimeter.
3. Manually operate the shutter to ensure the blades move freely.

To ensure long-life, make a weather-proof seal by using a good quality silicon caulking under the shutter flange.
Typical Installation
Refer to page 7.

Final Installation Steps
1. Inspect fasteners and setscrews, particularly fan mounting and bearing fasteners, and tighten according to the recommended torque shown in the table below, Recommended Torque for Setscrews/Bolts.
2. Inspect for correct voltage with voltmeter.
3. Ensure all accessories are installed.
4. Test the fan to be sure the rotation is the same as indicated by the arrow marked Rotation.

Operation

Pre-Start Checks
1. Lock out all the primary and secondary power sources.
2. Inspect fasteners and setscrews, particularly those used for mounting the unit, and tighten if necessary.
3. Inspect belt tension and pulley alignment. (Remember, if belt tension is correct, a loud squeal occurs as the fan increases to full power.)
4. Inspect motor wiring.
5. Ensure the belt touches only the pulleys.
6. Rotate the prop to ensure it does not rub against the venturi.
7. Ensure fan and ductwork are clean and free of debris.
8. Test the fan to ensure the rotation of the propeller is the same as indicated by the rotation label.
9. Close and secure all access doors.
10. Restore power to unit.

Start Up
Turn the fan on. In variable speed units, set the fan to its lowest speed. Inspect for the following:
• Direction of rotation
• Excessive vibration
• Unusual noise
• Bearing noise
• Improper belt alignment or tension (listen for a continuous squealing noise)
• Improper motor amperage or voltage

NOTICE! If a problem is discovered, immediately shut off the fan. Lock out all electrical power and check for the cause of the trouble. Refer to Troubleshooting.

Recommended Torque for Setscrews/Bolts (IN-LB)

<table>
<thead>
<tr>
<th>Setscrews</th>
<th>Hold Down Bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Hex Across Flats</td>
<td>Recommended Torque</td>
</tr>
<tr>
<td>#8</td>
<td>5/64&quot;</td>
</tr>
<tr>
<td>#10</td>
<td>3/32&quot;</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>3/32&quot;</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>3/16&quot;</td>
</tr>
<tr>
<td>7/16&quot;</td>
<td>7/32&quot;</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>5/16&quot;</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>7/8&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>1&quot;</td>
<td>9/16&quot;</td>
</tr>
</tbody>
</table>

Inspection
Inspection of the fan should be conducted at the first 30 minute, 8 hour and 24 hour intervals of satisfactory operation. During the inspections, stop the fan and inspect as per the following directions.

30 Minute Interval
Inspect bolts, setscrews, and motor mounting bolts. Adjust and tighten as necessary.

8 Hour Interval
Inspect belt alignment and tension. Adjust and tighten as necessary.

24 Hour Interval
Inspect belt tension. Adjust and tighten as necessary.

Maintenance
Establish a schedule for inspecting all parts of the fan. The frequency of inspection depends on the operating conditions and location of the fan.

Inspect fans exhausting corrosive or contaminated air within the first month of operation. Fans exhausting contaminated air (airborne abrasives) should be inspected every three months. Clean the propeller and air inlets if material build-up is excessive. Excessive build-up can cause imbalance and failure of the propeller. Regular inspections are recommended for fans exhausting non-contaminated air. It is recommended the following inspections be conducted twice per year.
• Inspect bolts and setscrews for tightness. Tighten as necessary
• Inspect belt wear and alignment. Replace worn belts with new belts and adjust alignment as needed. See Belt and Pulley Installation, on page 2
• Bearings should be inspected as recommended in the Conditions Chart, page 5
• Inspect for cleanliness. Clean exterior surfaces only. Removing dust and grease on motor housing assures proper motor cooling

Lubricants
Loren Cook Company uses petroleum lubricant in a lithium base conforming to NLGI grade 2 consistency. Other grades of grease should not be used unless the bearings and lines have been flushed clean. If another grade of grease is used, it should be lithium-based.

An NLGI grade 2 grease is a light viscosity, low-torque, rust-inhibiting lubricant that is water resistant. Its temperature range is from -30°F to +200°F and capable of intermittent highs of +250°F.

Motor Bearings
Motors are provided with prelubricated bearings. Any lubrication instructions shown on the motor nameplate supersede instructions below.

Direct Drive 1050/1075, 1200, 1300 and 1500 RPM units use a prelubricated sleeve bearing that has a oil saturated wicking material surrounding it. The initial factory lubrication is adequate for up to 10 years of operation under normal conditions. However, it is advisable to add lubricant after 3 years. Use only LIGHT grade mineral oil or SAE 10W oil up to 30 drops. If the unit has been stored for a year or more it is advisable to lubricate as directed above. For units in severe conditions, lubrication intervals should be reduced to half.

Motors without sleeve bearings (as described above) will have grease lubricated ball or roller bearings. Motor bearings without provisions for relubrication will operate up to 10 years under normal conditions with no maintenance.
In severe applications, high temperatures or excessive contaminants, it is advisable to have the maintenance department disassemble and lubricate the bearings after 3 years of operation to prevent interruption of service. For motors with provisions for relubrication, follow intervals of the table below.

### Relubrication Intervals

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1800 RPM</td>
<td>213T-365T</td>
<td>404T and Larger</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Including 184T</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Standard</td>
<td>3 yrs. 6 months</td>
<td>2 yrs. 6 months</td>
<td>1 yr. 6 months</td>
<td>1 yr. 6 months</td>
<td>1 yr. 6 months</td>
<td>1 yr. 6 months</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>1 yr. 3 months</td>
<td>1 yr. 3 months</td>
<td>1 yr. 3 months</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Motors are provided with a polyurea mineral oil NLGI #2 grease. All additions to the motor bearings are to be with a compatible grease such as Exxon Mobil Polyrex EM and Chevron SRI.

The above intervals should be reduced to half for vertical shaft installations.

### Fan Bearings

The fan bearings are provided prelubricated. Any specialized lubrication instructions on fan labels supersedes information provided herein. Bearing grease is a petroleum lubricant in a lithium base conforming to an NLGI #2 consistency. If user desires to utilize another type of lubricant, they take responsibility for flushing bearings and lines, and maintaining a lubricant that is compatible with the installation.

An NLGI #2 grease is a light viscosity, low-torque, rust-inhibiting lubricant that is water resistant. Its temperature range is from -30°F to 200°F and capable of intermittent highs of 250°F.

Bearings should be relubricated in accordance with the condition chart below.

For best results, lubricate the bearing while the fan is in operation. Pump grease in slowly until a slight bead forms around the bearing seals. Excessive grease can damage seal and reduce life through excess contamination and/or loss of lubricant.

In the event that the bearing cannot be seen, use no more than three injections with a hand operated grease gun.

### Conditions Chart

<table>
<thead>
<tr>
<th>RPM</th>
<th>Temp °F</th>
<th>Greasing Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1000</td>
<td>-30 to 120</td>
<td>6 months</td>
</tr>
<tr>
<td>1000 to 3000</td>
<td>-30 to 120</td>
<td>3 months</td>
</tr>
<tr>
<td>Over 3000</td>
<td>-30 to 120</td>
<td>1 month</td>
</tr>
<tr>
<td>Any Speed</td>
<td>&lt; -30</td>
<td>Consult Factory</td>
</tr>
<tr>
<td>Any Speed</td>
<td>&gt; 200</td>
<td>1 week</td>
</tr>
</tbody>
</table>

For moist or otherwise contaminated installations; divide the interval by a factor of three. For vertical shaft installations divide the interval by a factor of two.

### Motor Services

Should the motor prove defective within a one-year period, contact your local Loren Cook representative or your nearest authorized electric motor service representative.

### Changing Shaft Speed

All belt driven Propeller Wall fans with motors up to and including SHP are equipped with variable pitch pulleys. To change the fan speed, perform the following:

1. Loosen setscrew on driver (motor) pulley and remove key, if equipped.
2. Turn the pulley rim to open or close the groove facing. If the pulley has multiple grooves, all must be adjusted to the same width.
3. After adjustment, inspect for proper belt tension.

### Speed Reduction

Open the pulley in order that the belt rides deeper in the groove (smaller pitch diameter).

### Speed Increase

Close the pulley in order that the belt rides higher in the groove (larger pitch diameter). Ensure that the RPM limits of the fan and the horsepower limits of the motor are maintained.

### Maximum RPM

<table>
<thead>
<tr>
<th>EWB Size</th>
<th>Maximum RPM</th>
<th>AWB Size</th>
<th>Maximum RPM</th>
<th>APB Size</th>
<th>Maximum RPM</th>
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<tr>
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<td>1310</td>
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<td>990</td>
<td>36</td>
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<td>48</td>
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<tr>
<td>60</td>
<td>880</td>
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<table>
<thead>
<tr>
<th>XMP/XMPS Size</th>
<th>Maximum RPM</th>
<th>XMPH/XMPHS Size</th>
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<table>
<thead>
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<th>XLWH/XLWSH Size</th>
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<td>870</td>
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</tr>
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<tr>
<td>60</td>
<td>320</td>
<td>60</td>
<td>530</td>
</tr>
</tbody>
</table>
**Pulley and Belt Replacement**

1. Clean the motor and fan shafts.
2. Loosen the motor plate mounting bolts to relieve the belt tension. Remove the belt.
3. Loosen the pulley setscrews and remove the pulleys from the shaft.

   **NOTICE! If excessive force is required to remove the pulleys, a three-jaw puller can be used. This tool, however, can easily warp a pulley. If the puller is used, inspect the trueness of the pulley after it is removed from the shaft. The pulley will need replacement if it is more than 0.020 inch out of true.**

4. Clean the bores of the pulleys and place a light coat of oil on the bores.
5. Remove grease, rust and burrs from the shaft.
6. Place fan pulley on the fan shaft and the motor pulley on the motor shaft. Damage to the pulleys can occur when excessive force is used in placing the pulleys on their respective shafts.
7. After the pulleys have been correctly placed back onto their shafts, tighten the pulley setscrews.
8. Install the belts on the pulleys. Align and adjust the belts to the proper tension as described in *Belt and Pulley Installation*, page 2.

**Bearing Replacement**

The fan bearings are pillow block ball bearings.

1. Mark the position of the shaft in reference to both the bearing races and the propeller and pulley. Make a note of the clearance between the propeller and the frame.
2. Remove the pulley.
3. Remove the propeller from the shaft. A two-jaw puller may be needed to remove the propeller from the shaft.
4. Remove the bearing hold-down bolts. Remove the shaft and the bearings as one unit.
5. Remove the anti-corrosion coating from the shaft with a suitable degreaser.
6. Remove the bearing from the shaft using a bearing puller. If a bearing puller is not available, remove the bearing by using a wood block and hammer. An emery cloth or file may be needed to remove imperfections in the shaft left by the setscrews.
7. Clean the shaft and bearing bore thoroughly.
8. Place the bearings into position ensuring they are not on a worn section of the shaft. Tapping the inner ring face with a soft driver may be required. Do not hammer on the housing.
9. The outer ring of the bearing is spherical and swivels in the housing to compensate for misalignment. Slightly tighten the hold down bolts.
10. Align the setscrews on the bearings and tighten one setscrew on each bearing.
11. Rotate the shaft to allow the bearing outer rings to find the center of free movement.
12. Install the propeller on the shaft and adjust the bearing position to center the propeller in the opening.
13. Tighten the hold-down bolts to the proper torque. Refer to the *Torque Chart*, page 4.
14. Turn the shaft by hand. Resistance should be the same as it was before the hold-down bolts were fully tightened.
15. Tighten the bearing setscrews to the specified torque.
16. Install the pulley and adjust the belt tension.
17. After 24 hours of continuous operation, tighten the setscrews to the appropriate torque. This assures the full locking of the inner race to the shaft. Ensure the socket key or driver is in good condition with no rounded corners. The key should be fully engaged in the setscrew and held squarely to prevent the rounding out of the setscrew socket when applying maximum torque.
18. Tighten the bearing setscrews to the specified torque.
19. Install the pulley and adjust the belt tension.
20. After 24 hours of continuous operation, tighten the setscrews to the appropriate torque. This assures the full locking of the inner race to the shaft. Ensure the socket key or driver is in good condition with no rounded corners. The key should be fully engaged in the setscrew and held squarely to prevent the rounding out of the setscrew socket when applying maximum torque.

**Troubleshooting**

<table>
<thead>
<tr>
<th>Problem and Potential Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Capacity or Pressure:</td>
<td>Low capacity or pressure. Make sure the fan rotates in same direction as the arrows on the motor or belt drive assembly.</td>
</tr>
<tr>
<td>Excessive Vibration and Noise:</td>
<td>Damaged or unbalanced wheel. Belts too loose; worn or oily belts. Speed too high. Incorrect direction of rotation. Make sure the fan rotates in same direction as the arrows on the motor or belt drive assembly.</td>
</tr>
<tr>
<td>Overheated Motor:</td>
<td>Motor improperly wired. Incorrect direction of rotation. Make sure the fan rotates in same direction as the arrows on the motor or belt drive assembly.</td>
</tr>
<tr>
<td>Overheated Bearings:</td>
<td>Motor improperly wired. Incorrect direction of rotation. Make sure the fan rotates in same direction as the arrows on the motor or belt drive assembly.</td>
</tr>
</tbody>
</table>
Typical Installations
(Dimensions are in inches)

Exhaust Fan with Osha Wire Guard & Shutter
Illustrated is the typical installation of an exhaust wall fan with an OSHA wire guard and shutter in a masonry wall with a shutter guard. The installer provides suitable fasteners (Hex bolts or Lag screws) to support the fan. It is recommended that 5/16” minimum bolts on 6” to 10” centers be used on the perimeter of the housing. Mounting flange should be caulked to exterior of the wall. Fans with motors in excess of 80 lbs. should be additionally supported by hanging rods or supports placed underneath the fan.

Exhaust Package Fan with Shutter Guard
Illustrated is the typical installation of an exhaust PAC-Fan in a masonry wall with a shutter guard. The installer provides suitable fasteners (Hex bolts or Lag screws) to support the fan. It is recommended that 5/16” minimum bolts on 6” to 10” centers be used on the perimeter of the housing. Mounting flange should be caulked to exterior of the wall. Fans with motors in excess of 80 lbs. should be additionally supported by hanging rods or supports placed underneath the fan.

Supply Fan with Wall Collar, Osha Wire Guard, Motorized Supply Shutter & Weather Hood
Illustrated is the typical installation of a supply wall fan in a masonry wall with a wall collar, OSHA wire guard, motorized supply shutter and weather hood. The installer provides suitable fasteners to support the fan. Fasteners should be placed on 6” to 10 centers on the perimeter of the wall collar. Wall collar should be caulked to the exterior of the wall. The weather hood should be securely fastened and sealed to the wall. Fans with motors in excess of 80 lbs. should be additionally supported by hanging rods or supports placed underneath the fan.
**Parts List**

**XWD & SWD**

**Exhaust**

![Diagram of Exhaust](image1)

**Supply**

![Diagram of Supply](image2)

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motor</td>
<td>5</td>
<td>Stamped Aluminum Propeller</td>
</tr>
<tr>
<td>2</td>
<td>Wire Guard</td>
<td>6</td>
<td>Wall Collar</td>
</tr>
<tr>
<td>3</td>
<td>Wall Base</td>
<td>7</td>
<td>End Wire Guard</td>
</tr>
<tr>
<td>4</td>
<td>Venturi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Since 2012, the venturi and base are one piece.

**XPHD**

**Exhaust**

Size 12-18

![Diagram of Exhaust Size 12-18](image3)

Size 20-24

![Diagram of Exhaust Size 20-24](image4)

**Supply**

Size 12-18

![Diagram of Supply Size 12-18](image5)

Size 20-24

![Diagram of Supply Size 20-24](image6)

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>XPD &amp; SPD</th>
<th>XPHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motor</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Wire Guard</td>
<td>2</td>
<td>Power Assembly</td>
</tr>
<tr>
<td>3</td>
<td>Wall Base</td>
<td>3</td>
<td>Wall Base</td>
</tr>
<tr>
<td>4</td>
<td>Venturi</td>
<td>4</td>
<td>Venturi</td>
</tr>
<tr>
<td>5</td>
<td>Stamped Aluminum Propeller</td>
<td>5</td>
<td>Stamped Aluminum Propeller</td>
</tr>
<tr>
<td>6</td>
<td>Fan Box Panels</td>
<td>6</td>
<td>Fan Box Panels</td>
</tr>
<tr>
<td>7</td>
<td>End Wire Guard</td>
<td>7</td>
<td>End Wire Guard</td>
</tr>
<tr>
<td>8</td>
<td>Motor Plate</td>
<td>8</td>
<td>Motor Plate</td>
</tr>
<tr>
<td>9</td>
<td>Mounting Collar Angles (4)</td>
<td>9</td>
<td>Anchor Angles (2)</td>
</tr>
<tr>
<td>10</td>
<td>Anchor Angles (2)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Shutter Assembly</td>
<td>11</td>
<td>Shutter Assembly</td>
</tr>
</tbody>
</table>

Note: Since 2012, the venturi and base are one piece.
**PROPELLER WALL IO&M**

**XLW / XMW**

**Exhaust**

1. **Rotation**
2. **Supply**

**Air Flow**

**XLWH / XMWH**

**Exhaust**

1. **Rotation**
2. **Supply**

**Air Flow**

**Part** | **Description**
--- | ---
1 | Power Assembly Rail
2 | Base
3 | Prop
4 | Power Assembly Feet (3)
5 | Shaft
6 | Bearings (2)
7 | Venturi
8 | Motor
9 | Motor Plate
10 | Drive Sheave
11 | Motor Plate
12 | Belt
13 | End Wire Guard
14 | Shutters

**Part** | **Description**
--- | ---
1 | Base
2 | Prop
3 | Venturi
4 | Shaft
5 | Bearings (2)
6 | Motor
7 | Motor Plate
8 | Drive Sheave
9 | Drive Sheave
10 | Belt
11 | Mounting Collar Angles (4)
12 | Anchor Angles (2)
13 | End Wire Guard
14 | Shutters

Note: Since 2012, the venturi and base are one piece.
Note: Since 2012, the venturi and base are one piece.
EWD
Exhaust Rotation

Supply Rotation

EWB
Exhaust Rotation

Supply Rotation

EPD
Exhaust

Supply

EPB
Exhaust

Supply

Part Description
1 Power Assembly
2 Prop
3 Base
4 Venturi
5 Motor
6 Motor plate
7 End Wire Guard
8 Bearing
9 Shaft

Weather Hood Size 36 to 60

Part Description
1 Top Panel
2 Top Panel, Piece 2
3 Right Side Panel
4 Left Side Panel
5 Bottom Panel
6 1/2” Mesh Galvanized Bird Screen
7 1/4” X 1/2” Speed Screw
8 5/16 SAE Steel Washer

Weather Hood Size 8 to 30

Part Description
1 Top Panel
2 Right Side Panel
3 Left Side Panel
4 Bottom Panel
5 1/2” Mesh Galvanized Bird Screen
6 1/4” X 1/2” Speed Screw
7 5/16 SAE Steel Washer

Note: Since 2012, the venturi and base are one piece.
Weather Hood EWB 72

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Part</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Top Panel, Piece 1</td>
<td>7</td>
<td>Bottom Panel</td>
</tr>
<tr>
<td>2</td>
<td>Top Panel, Piece 2</td>
<td>8</td>
<td>Bird Screen Support</td>
</tr>
<tr>
<td>3</td>
<td>Right Side Panel Tip</td>
<td>9</td>
<td>1/2&quot; Mesh Galvanized Bird Screen</td>
</tr>
<tr>
<td>4</td>
<td>Right Side Panel</td>
<td>10</td>
<td>1/4&quot; X 1/2&quot; Speed Screw</td>
</tr>
<tr>
<td>5</td>
<td>Left Side Panel Tip</td>
<td>11</td>
<td>5/16 SAE Steel Washer</td>
</tr>
<tr>
<td>6</td>
<td>Left Side Panel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Limited Warranty

Loren Cook Company warrants that your Loren Cook fan was manufactured free of defects in materials and workmanship, to the extent stated herein. For a period of one (1) year after date of shipment, we will replace any parts found to be defective without charge, except for shipping costs which will be paid by you. This warranty is granted only to the original purchaser placing the fan in service. This warranty is void if the fan or any part thereof has been altered or modified from its original design or has been abused, misused, damaged or is in worn condition or if the fan has been used other than for the uses described in the company manual. This warranty does not cover defects resulting from normal wear and tear. To make a warranty claim, notify Loren Cook Company, General Offices, 2015 East Dale Street, Springfield, Missouri 65803-4637, explaining in writing, in detail, your complaint and referring to the specific model and serial numbers of your fan. Upon receipt by Loren Cook Company of your written complaint, you will be notified, within thirty (30) days of our receipt of your complaint, in writing, as to the manner in which your claim will be handled. If you are entitled to warranty relief, a warranty adjustment will be completed within sixty (60) business days of the receipt of your written complaint by Loren Cook Company. This warranty gives only the original purchaser placing the fan in service specifically the right. You may have other legal rights which vary from state to state. For fans provided with motors, the motor manufacturer warrants motors for a designated period stated in the manufacturer’s warranty. Warranty periods vary from manufacturer to manufacturer. Should motors furnished by Loren Cook Company prove defective during the designated period, they should be returned to the nearest authorized motor service station. Loren Cook Company will not be responsible for any removal or installation costs.

LOREN COOK COMPANY

Corporate Offices: 2015 E. Dale St. Springfield, MO 65803
Phone 417-869-6474 | Fax 417-862-3820 | lorencook.com

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