VORTEX® MAX POWERED ENGINE PRECLEANER

FILTER CHANGE INSTRUCTIONS

MINIMIZE
DUST

MAXIMIZE
PROTECTION

SY-KLONE®
INTERNATIONAL

When to change the Vortex MAX filter

- Replace the Vortex MAX filter when the restriction reaches the manufacturer's suggested limit.

- Change the Vortex MAX filter element every 1000 hours of operating time, even if the restriction limit is not reached and there are no noticeable performance changes.

- Replace factory-installed engine filter(s) per the manufacturer's suggested maintenance cycle.

Important Notes / Warnings

- **Replace filter only; do not clean or re-use filters. Re-using filters can cause filter failure. Replace with genuine Sy-Klone filters only.**

- **When cleaning equipment, care should be taken to prevent high-pressure water or high-pressure air from entering the Vortex MAX ejection port.**

- **When replacing the filter, do not point ejection port at a solid surface in close proximity to the port, as ejected debris exits at high velocity and may damage glass, paint, or other surface area.**
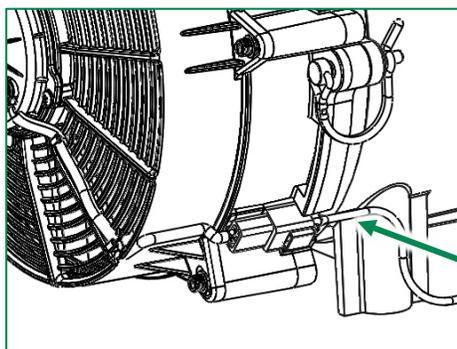
Replacing the Vortex MAX Filter

1. Work in a clean, covered area to reduce intake exposure to harmful particles.

2. Wear appropriate personal protection equipment, such as gloves, mask, and coverall to protect against contaminants.

3. The machine should be off.

4. Inspect the Vortex MAX system for any damage.

5. Remove the filter, noting the orientation of the ejection port.

6. Bag and seal the used filter element and dispose of according to local regulation.

7. Inspect and remove any loose debris using a clean rag.
   Note: Never use compressed air.

8. Install new filter, ensuring the ejection port orientation is correct.

9. Install the motor assembly, ensuring it is properly locked in position.

10. After installing the new filter, inspect the Vortex MAX system for proper operation:
    a. System is running.
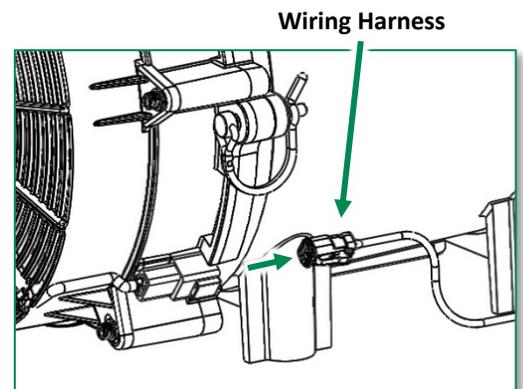   b. Air flow out of Vortex MAX system ejection port is strong.

Filter Handle for easy removal

Ejection Port

Filter Removal

1. The machine should be off.

2. Unplug wiring harness from motor assembly.
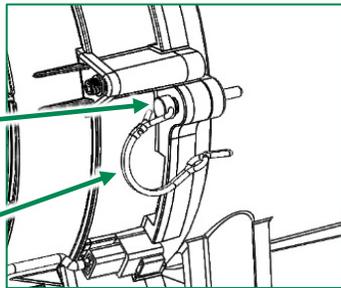
Wiring Harness

Wiring Harness

Filter Removal, continued
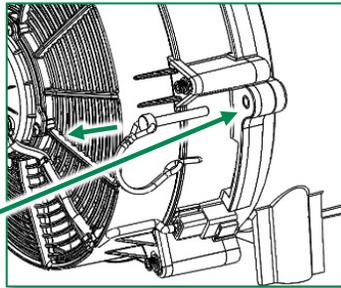
3. Release wire lock from clevis pin.

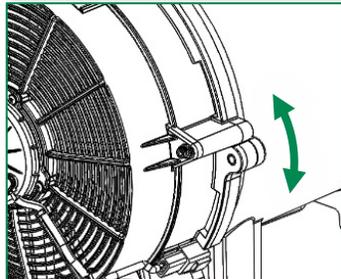   **Clevis Pin**

    Wire Lock

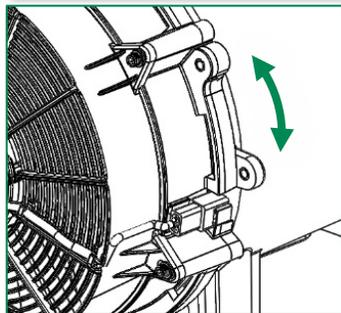4. Remove clevis pin from locking tab.
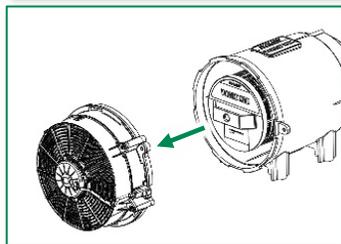
    Locking Tab

5. Rotate motor assembly, approximately 20 degrees, until motor mount tabs disengage.
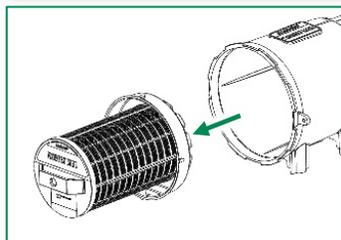
    Note: Motor assembly can be rotated clockwise or counter-clockwise to disengage motor mount tabs.
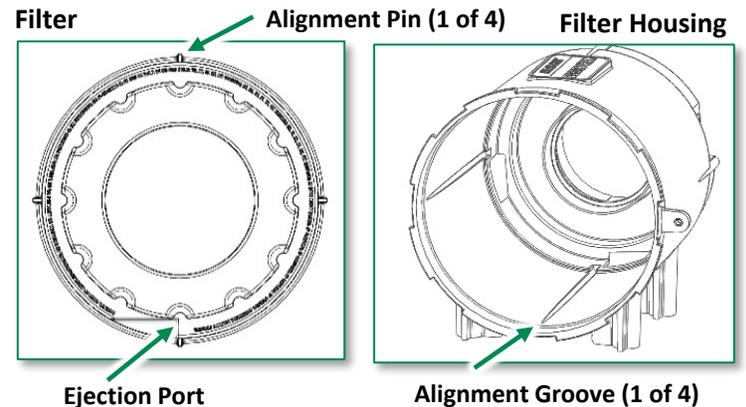
6. Pull motor assembly forward to remove and set aside.

7. Pull filter straight out of housing, noting the orientation of the ejection port.
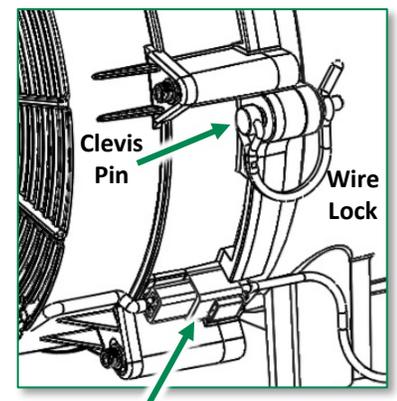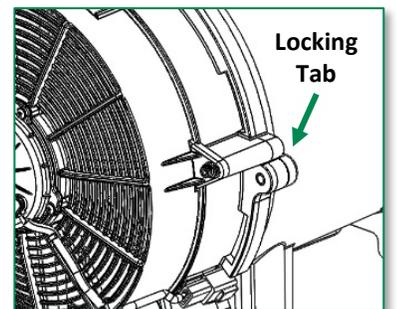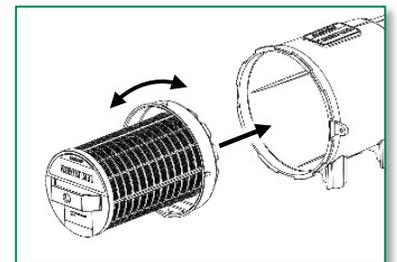
Filter Orientation / Reinstallation

The Vortex MAX **filter** has four alignment pins and one ejection port. The ejection port can be oriented in four different positions, every 90°, in the filter housing.

The filter **housing** has four alignment grooves for orienting the filter ejection port.

Filter   **Alignment Pin (1 of 4)**   **Filter Housing**

Ejection Port   **Alignment Groove (1 of 4)**

Install Filter

1. Orient filter ejection port in desired position.

2. Align filter pins with filter housing alignment grooves.

3. Insert filter until fully seated in outlet port.

4. Reinstall motor assembly on filter housing.

5. Align locking tab.

6. Insert clevis pin and secure with wire lock.

7. Plug in wire harness.

Locking Tab

Clevis Pin

Wire Lock

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Service Part Numbers

Part Number	Description
EF800	Vortex MAX: Replacement Filter
VMAX0701	Vortex MAX: Vertical Mounting Plate
VMAX0702	Vortex MAX: Horizontal Mounting Plate
VMAX0901	Vortex MAX: Rain Cap
VMAX0902	Vortex MAX: Motor Mount
VMAX0903	Vortex MAX: 24V Motor
VMAX0904	Vortex MAX: 12V Motor
VMAX0905	Vortex MAX: Clevis Pin Assembly
VMAX0906	Vortex MAX: Filter Housing Section
VMAX0907	Vortex MAX: Heavy Debris Screen
VMAX0908	Vortex MAX: Wiring Kit

System Part Numbers

With Rain Cap:
VMAX0001 (12-volt)
VMAX0002 (24-volt)

With Heavy-Debris Screen:
VMAX0005 (12-volt)
VMAX0006 (24-volt)

Technical Support

Contact your dealer for Sy-Klone filters, parts and technical support, or contact Sy-Klone.

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