

ENGINE PRECLEANER - INSTALLATION & SERVICE GUIDELINES

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Standard Length with Rain Cap



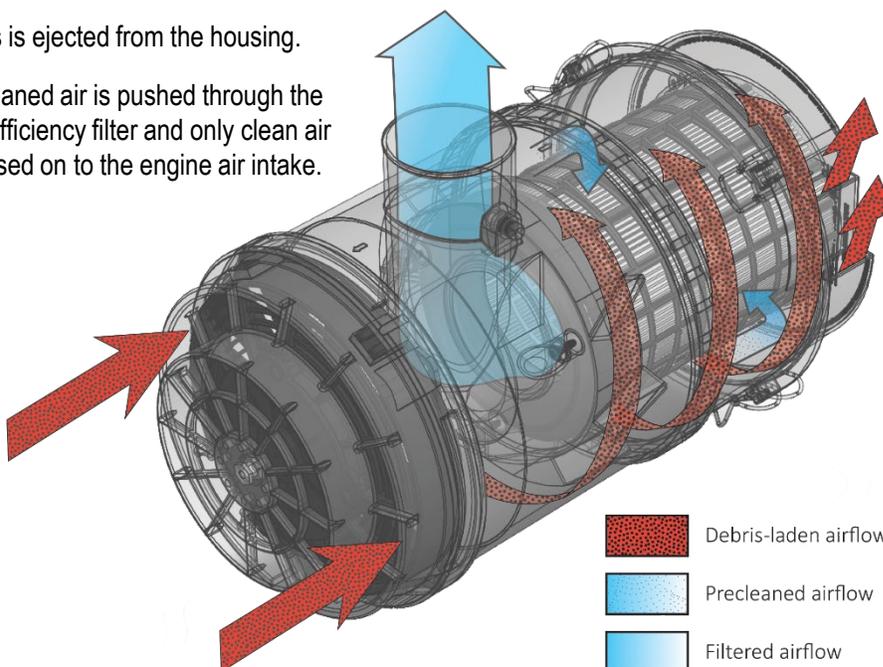
Extended Length with Rain Cap



Extended Length with Heavy-Debris Screen

HOW IT WORKS:

1. Air and particulate debris are pulled into the unit.
2. Debris is thrown to the outside walls in a vortex pattern.
3. Debris is ejected from the housing.
4. Precleaned air is pushed through the high-efficiency filter and only clean air is passed on to the engine air intake.



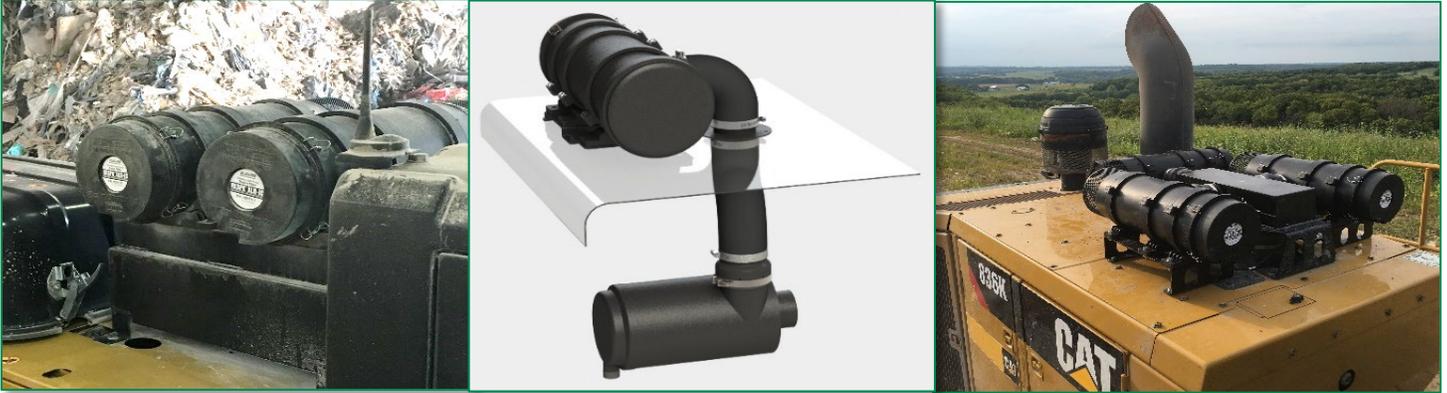
High-efficiency powered precleaner removes more than 90+% of the dust BEFORE it reaches the integrated filter.

High-efficiency radial seal filter removes 99.99% of ISO fine test dust.

Patented self-cleaning filter drops dirt continuously, which is then ejected from the filter housing.

Keep your oil samples clean with XLR!

IMPORTANT MOUNTING CONSIDERATIONS



Read before installing!

The XLR is a powered precleaner and **must be installed prior to the engine filter housing.**

The XLR should be mounted **externally to the engine compartment.**

Under hood installations are not recommended. Fresh air to the XLR inlet is necessary and ejected debris can fill engine compartment.

Avoid mounting the unit in high heat areas.

When XLR is mounted on a different vibration plane than the engine filter housing, **a soft connection** must be used.

When using flex hose, take care to **protect the flex hose** from potential wear points.

When plumbing with rigid piping, you must use a soft connection such as a flex hose or rubber adaptation between the XLR unit and the rigid piping to prevent mechanical stress of the XLR outlet tube.

The mounting location should be selected to require the **shortest amount of plumbing with as few bends as possible.**

Filter clearance: Leave adequate room to release filter latches and remove filter from the precleaner housing. The standard-length unit requires approximately 6.25 Inches (159mm) of clearance to service the filter. The extended-length unit requires approximately 12.25 Inches (311mm) of clearance to service the filter.

The XLR outlet can be rotated every 10 degrees.

The XLR ejection ports can be rotated 360 degrees. Release filter latches prior to rotation then re-secure.

Use a single XLR system for airflows up to 350 CFM (9.9 m³/min).

For higher engine air flows multiple units can be combined. Use two XLR systems for airflows up to 700 CFM (19.8 m³/min). Use three XLR systems for airflows up to 1050 CFM (29.7 m³/min), or consider the Vortex MAX powered precleaner.

The XLR system can be mounted in a variety of locations and orientations, as long as the **ejection slots are oriented in a fashion that water can NOT fall/run into the filter housing.** It is not recommended to mount the XLR vertically with the inlet (rain cap end) down, as debris can enter outlet when filter is removed. Should this orientation be the only option, the rain cap should not be used as it could retain debris and moisture.

The XLR unit **ejects debris at a high rate.** Make sure the ejection slots are pointed away from any surface and away from the operator's field of vision.

Consider **operator visibility** when choosing the XLR system mounting location.

Care should be taken to **prevent high pressure water or air from entering the XLR ejection slots** during cleaning.

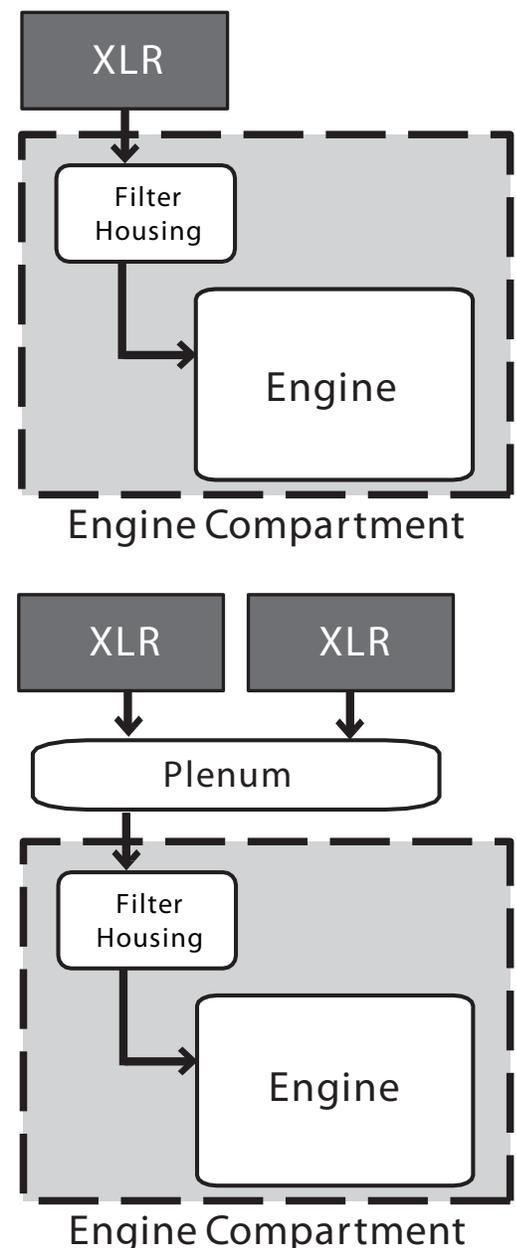
INSTALLATION GUIDELINES

MOUNTING:

1. Turn off master power switch.
2. Consider the routing and destination of the plumbing when determining the mounting location for the XLR system. (See Plumbing The XLR)
3. The XLR system can be mounted in a variety of locations and orientations. (See Important Mounting Considerations)
4. A mounting plate is available through Sy-Klone. Universal mounting plate: REC0157.
5. The standard XLR system has 4 mounting holes. The extended XLR system has 6 mounting holes. The mounts will accommodate up to ½-inch (up to 12mm) mounting hardware. **Note:** Torque 36.9 to 40.6 ft-lbs (50 to 55 Nm).

PLUMBING THE XLR:

1. Turn off master power switch.
2. Clean the factory intake and engine filter housing following the manufacturer's approved methods after installing the XLR system.
3. Replace engine primary filter, and safety filter as necessary.
4. Route the clean filtered air provided by the XLR system into the engine filter housing. **Note: Do not remove the factory installed filters.**
5. XLR installation kits are available and provide a universal flange adapter that can be used to create a port into the engine compartment.
6. If using the universal flange adapter, the port hole should be slightly larger than the adapter's tubing.
7. "T" adapters, "Y" adapters, or plenums can be used to combine multiple XLR systems.
8. Routing the hose or tubing:
 - a. 3" or 4" plumbing should be used for single system installations.
 - b. Use 6" or larger hose for dual installations.
 - c. Use 7" or larger hose for triple installations.
 - d. Excessive length and bends in the routing adds restriction; keeps length and bends to a minimum. **Note:** Maximum plumbing length 6ft (1.8m).
 - e. **Avoid high heat areas, routing across walkways, tight bends, and reducing operator visibility.**
 - f. Secure plumbing as routed.
9. Use metal band clamps on all connections.

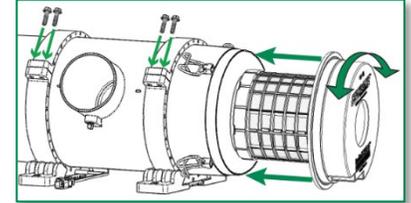
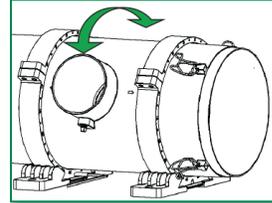
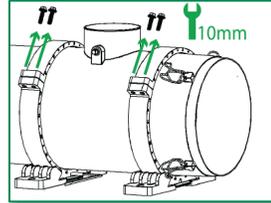
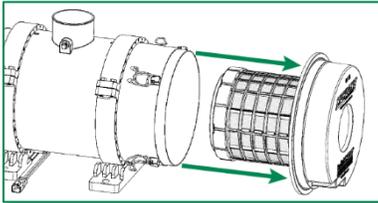
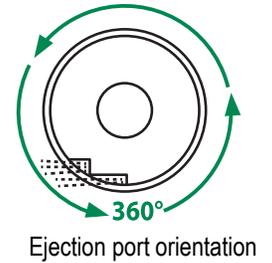


OUTLET ORIENTATION:

The XLR outlet can be rotated every 10 degrees identified with location marks on body clamps.

1. Release prefilter latches, see prefilter removal page 5.
2. Remove XLR prefilter.
3. Loosen or remove two 10mm bolts from one side of each body clamp.
4. Rotate outlet every 10 degrees. **Note.** Align arrow with body clamp alignment marks.

4. Reinstall and tighten body clamp bolts to 17.7 to 35.4 in.lbs (2 to 4 Nm).
5. Reinstall filter, adjusting ejection orientation as needed to safely direct debris.



XLR RESTRICTION GAUGE PORT:

The engine restriction gauge can be left in the factory location. The XLR outlet has a 1/8 NPT port that can be used for restriction gauge installation. The XLR gauge port must be plugged when not in use.

WIRING:

1. The machine should be off.
2. Finding proper power is critical for system performance.
 - a. The unit must receive power when the ignition key is in the on position.
 - b. The power must terminate when the ignition key is in the off position.
 - c. Do not wire the unit to a variable voltage source.
 - d. An appropriate relay can be used to provide suitable power from a non-terminating constant source.
 - e. A master system relay or ignition switch can be a good source of constant power.
 - f. The source power must provide sufficient current.
3. The current requirement for the 12 volt unit is 5.5 amps constant.
4. The current requirement for the 24 volt unit is 3 amps constant.
5. The XLR system must be fused inline. Use a 15 amp blade fuse for 12 volt units. Use a 7.5 amp blade fuse for 24 volt units.
6. Ensure the input voltage correlates to the 12 or 24 volt unit being installed.
7. Use 16 GA or larger wire for the system.
 - a. Black wire = neutral (negative) and red wire OR white wire with red trace = (positive)
 - b. Incorrect electrical connection will reverse motor polarity and the XLR will not function correctly.
8. Finding a good ground is also critical to the units performance. Use an existing grounding point if possible. If not, grind a small area to bare metal and use a self-tapping screw to ground the system.
9. Route the wiring, avoiding high heat areas, routing across walkways, and reducing operator visibility.
10. Use wire loom and grommets as necessary to protect wiring.
11. Secure wiring as routed.

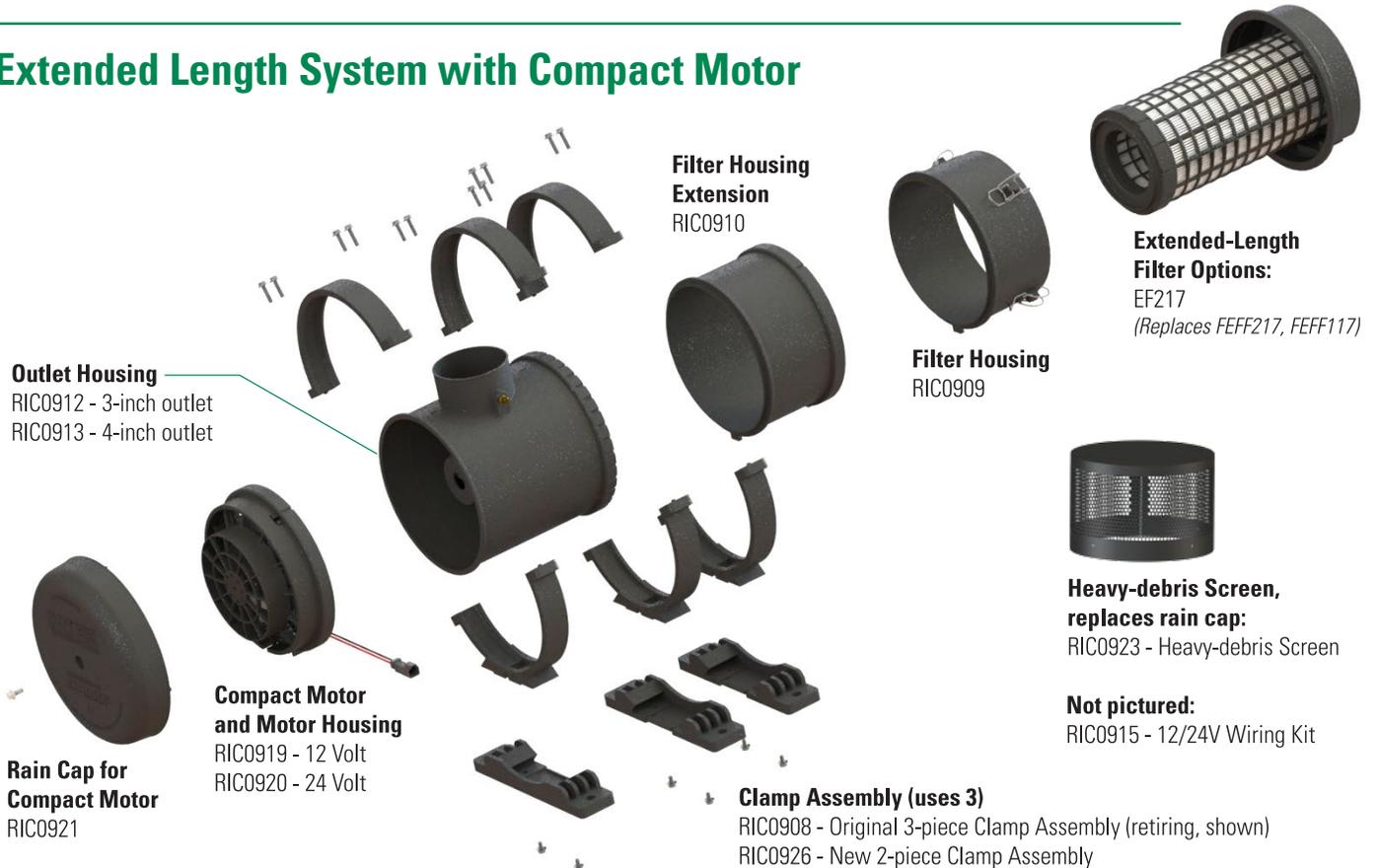
INSPECTING THE XLR INSTALLATION:

1. Turn the master power switch ON to inspect the system. **Note:** If the system powers on while the ignition key is off, an alternate power source must be located.
2. Turn the ignition key to the ON position and inspect the following:
 - a. System is running. If not, an alternate power source must be located.
 - b. Airflow out of XLR system ejection ports is strong.
 - c. Fan rotation is counter clockwise when viewed through the inlet.

Standard Length System with Compact Motor



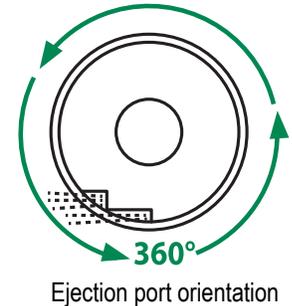
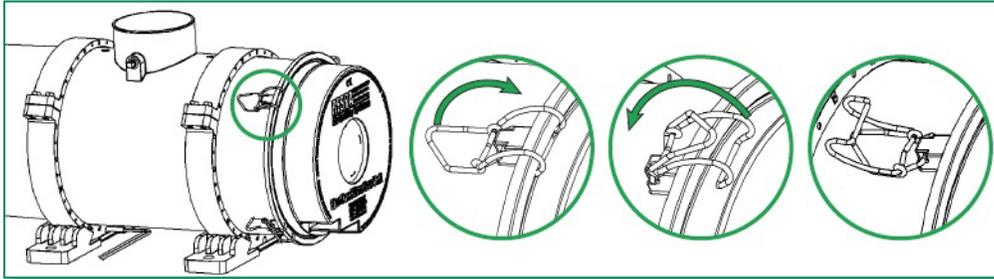
Extended Length System with Compact Motor



FILTER REMOVAL/REINSTALLATION:

1. Turn off XLR system.
2. Release the 4 filter latches that retain the filter element , as shown below, noting the orientation of the ejection ports.
3. Remove filter element.

4. Install new filter element ensuring the ejection port orientation is correct and that the filter element end cap seats properly on the filter housing.
5. Restrain the filter element by reattaching the 4 filter latches.



REPLACING FILTERS:

WHEN TO REPLACE FILTERS:

- Replace XLR filter when the restriction reaches manufacturer's suggested limit.
- Change the XLR filter element every 1000 hours of operation 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.

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 XLR system for any damage.
5. Release the 4 prefilter latches that retain the prefilter element noting the orientation of the ejection ports.
6. Remove the XLR prefilter element .
7. Bag and seal used prefilter element and dispose of according to local regulation.
8. Inspect and remove any loose debris using a clean rag – never use compressed air.
9. Before installing the new prefilter, inspect the XLR system for proper operation.
 - a. Turn on the XLR staying clear of the open end of filter housing.
 - b. Ensure that air is blowing out of the empty filter housing cavity.
 - c. Turn off the XLR system.
10. Install new filter element ensuring the ejection port orientation is correct and that the filter element end cap seats properly on the filter housing.
11. Restrain the filter element by reattaching the 4 filter latches.

Replace filter only!
Do not clean or re-use filters.
 Re-using filters can cause filter failure!
Replace with genuine SY-KLONE® filters only.
 Order from your dealer or from Sy-Klone.

WARNING:

When cleaning equipment, care should be taken to prevent high pressure water or high-pressure air from entering the XLR ejection slots.

When replacing the filter element, do not point ejection slots at a solid surface in close proximity to the slots.

TECHNICAL SUPPORT:

Sy-Klone International
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 Tel: +1 (904) 448-6563
 email: support@sy-klone.com
www.sy-klone.com

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

Your Dealer:
