

## XLR™ Powered Precleaner™ Installation Kit for Caterpillar 836K Compactors



Sy-Klone part number: IN0113  
Installation Time: 2 to 3 hours

### Purpose:

The XLR™ Powered Precleaner™ offers maximum precleaning with the lowest possible restriction to protect your engine in impossible environments. This unit has been designed to perform well in extreme debris conditions such as landfill environments, providing dramatically extended filter life. The XLR Powered Precleaner uses Sy-Klone's patented technology to provide precleaned and filtered air to the factory intake. **The XLR system is a precleaner. The primary factory engine filter MUST remain installed. The secondary element MAY be removed to reduce initial restriction and extend the primary engine filter life. HOWEVER, removal of the secondary element may void the factory warranty and the user assumes all risk of loss if they elect to remove the secondary element.**

While routine cleaning and maintenance is not required, it is recommended that you perform periodic inspections to ensure the landfill screen does not become blocked. **Care should be taken to prevent high pressure water or high pressure air from entering the XLR ejection slots.**

See the Video Library on [www.sy-klone.com](http://www.sy-klone.com) for a demonstration.

### KIT CONTENTS:

#### Replaceable Parts:

Stock code	Description	Quantity
RIC0038	XLR PRECLEANER, EXTENDED LENGTH, 4-INCH OUTLET, 24 VOLT, HEAVY DEBRIS SCREEN	3
FEFF117	XLR HIGH EFFICIENCY PREFILTER – EXTENDED LENGTH	3
AD0211	XLR TRIPLE INSTALL PLENUM	1
AD0214	XLR TRIPLE INSTALL MOUNTING BRACKET	3
AD0215	XLR TRIPLE INSTALL MOUNTING SPACER FULL	4
AD0216	XLR TRIPLE INSTALL MOUNTING SPACER HALF	2
AD0217	XLR TRIPLE INSTALL SCAVENGER COVER	1
RIC0915	WIRING KIT	3
4H4	4-INCH TO 4-INCH HUMP HOSE	3

#### Also included in kit:

Description	Quantity
4.75-INCH WORM GEAR CLAMP	6
2-INCH VACUATOR PLUG	1
INSULATION CLIP	6
7.5" CABLE TIES	20
#10 X 3/4-INCH SELF TAPPING SCREW	12
#12 X 1-INCH SELF TAPPING SCREW	12
M10 WASHER	64
M10 X 1.5 X 30MM BOLT	2
M10 X 1.5 X 40MM BOLT	30
M10 X 1.5 LOCKNUT	32

### Technical Support

[www.sy-klone.com](http://www.sy-klone.com)

[support@sy-klone.com](mailto:support@sy-klone.com)

(904) 448-6563 ext. 1310



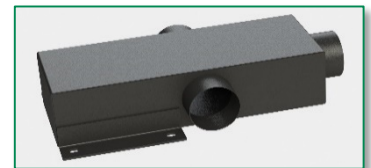
RIC0038 – XLR Powered Precleaner (3)



AD0217 – SCAVENGER COVER (1)



4H4 – 4-INCH HUMP HOSE (3)



AD0211 – PLENUM (1)



AD0214 – XLR MOUNTING BRACKET (3)



AD0216 – MOUNTING SPACER, HALF (2)



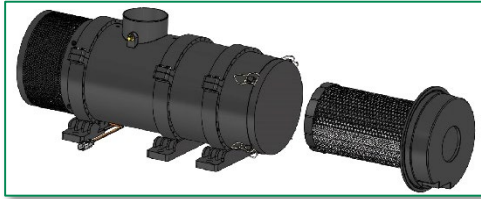
AD0215 – MOUNTING SPACER, FULL (4)

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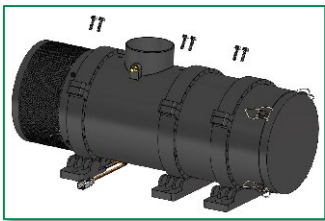
## OUTLET PORT ORIENTATION:

The XLR units must have the outlet ports repositioned. Use the following steps to position two of the XLR outlet port arrows to position #3 per the body clamp. Position the third XLR outlet port arrow to position #21 per the body clamp.

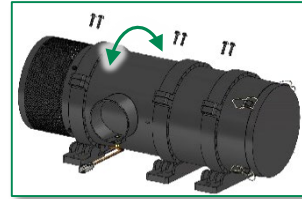
1. Release the filter latches, see filter removal page 5, and remove the filter.



2. Loosen or remove two 10mm bolts from one side of each body clamp.



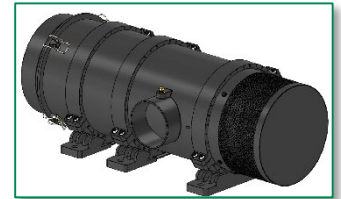
3. Rotate outlet of two units to position #3 and one unit to position #21. **Note.** Align arrow with body clamp alignment marks.



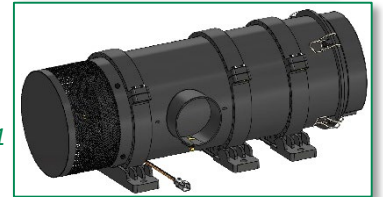
4. Reinstall and tighten body clamp bolts to 17.7 to 35.4 in.lbs (2 to 4 Nm).

5. Reinstall filter.

**2 x**  
Outlet at  
position #3

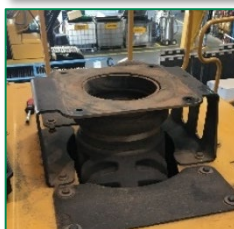


**1 x**  
Outlet at  
position #21

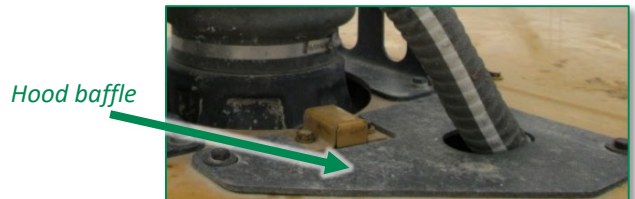


## OPTIMAX REMOVAL:

1. Turn off master power switch.
2. Remove scavenger hose from OPTIMAX precleaner. Retain clamp.
3. Loosen the upper worm gear clamp securing the hump hose to the OPTIMAX outlet.
4. Remove the OPTIMAX precleaner from hood mounting bracket. Retain 2 bolts and 2 washers from the mounting hardware.



5. Remove rubber scavenger hood baffle. Retain baffle and hardware.



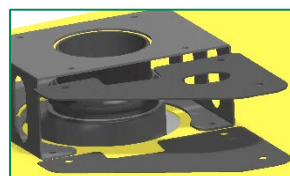
6. Plug scavenger hose with 2-inch vacuator plug and tighten bolt. Secure with retained clamp.



7. Relocate scavenger hose underneath hood and secure with cable ties.

8. Place the AD0217 cover on hood.

9. Reinstall hood baffle and secure with retained hardware.



AD0217 Cover

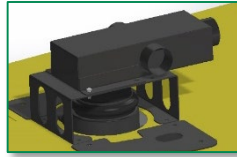


Hood baffle

# XLR™ Powered Precleaner™ Installation Kit for Caterpillar 836K Compactors

## XLR INSTALLATION:

1. Mount AD0211 plenum on OPTIMAX bracket as shown with ports towards rear of the machine. Secure with 2 bolts retained from OPTIMAX removal.

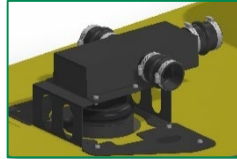


2. Mark rear plenum mounting holes.



3. Remove AD0211 plenum.

4. Drill two ½-inch holes in OPTIMAX mounting bracket as marked.



5. Reinstall AD0211 plenum on OPTIMAX bracket. Secure plenum with retained hardware (2), M10 x 30mm bolts (2), and M10 hardware.

6. Adjust the engine intake hump hose and secure to plenum outlet with worm gear clamp.



7. Install the 4H4 hump hoses on the AD0211 plenum and secure with worm gear clamps.

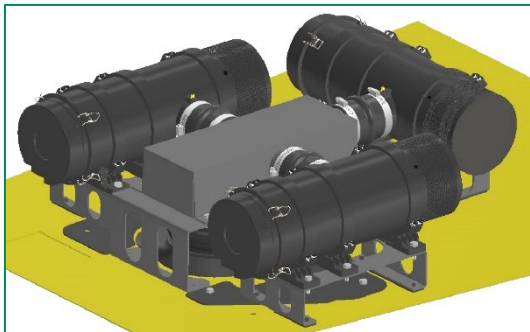


Ejection Ports

8. Verify that the XLR ejection ports are in the lowest position. **Note:** See page 4 for filter removal and reinstallation instructions.



9. Install the XLR precleaners on the AD0214 mounting plates and secure with M10 x 40mm bolts (6 each) and M10 hardware.



11. Place the AD0215 and AD2016 spacers under the AD0214 brackets to improve port alignment.



12. Mark the XLR/AD0214 mounting holes. **Note:** Verify clearance of the coolant fill door. Adjust right side XLR/AD0214 position as necessary.

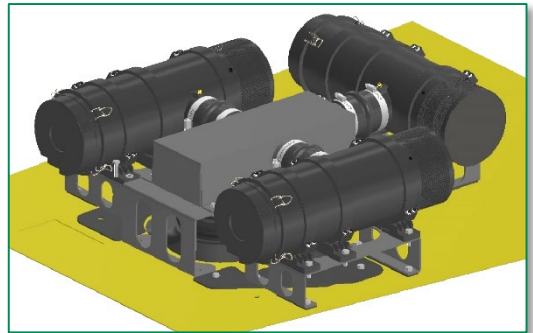


13. Remove all three XLR/AD0214 assemblies.

14. Remove the coolant tank front cover. Retain hardware.

15. Drill twelve ½-inch holes in the hood as marked.

16. Reinstall XLR/AD0214 assemblies with AD0215 and AD0216 spacers. Secure XLR outlets to 4H4 hump hoses with worm gear clamps. Secure AD0214 mounting bracket with M10 x 40mm bolts (4 each), and M10 hardware.



17. Reinstall the coolant tank front cover.

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## WIRING:

**Note:** Three individual wire harnesses have been included in this installation kit. Wire each XLR precleaner independently.

1. The machine should be off.
2. Finding proper power is critical for system performance.
  - a. The units 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 units 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 amps per unit at 24 volts).
3. Install a 7.5 amp blade fuse into each harness fuse holder.
4. XLR precleaner connector: Pin 1 = positive (orange); Pin 2 = negative (black). **Note:** Incorrect electrical connection will reverse motor polarity and the XLR will not function correctly.
5. 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.
6. Route the wiring, avoiding high heat areas, routing across walkways, and reducing operator visibility. **Note:** The wire harness can be routed through the air cleaner opening in hood to gain access to the precleaners.
7. Secure wiring as routed.

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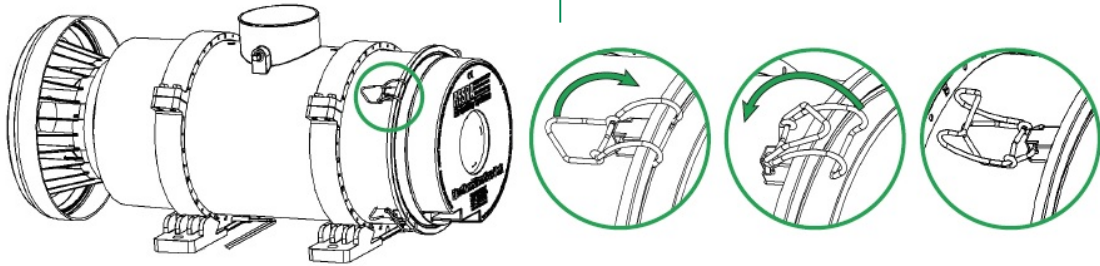
## COMPLETE THE INSTALLATION:

**Note:** It is recommended to install a new primary factory engine filter element at this time. With the installation of the XLR Powered Precleaners, the secondary element MAY be removed to reduce initial restriction and extend the primary engine filter life. **HOWEVER**, removal of the secondary element may void the factory warranty and the user assumes all risk of loss if they elect to remove the secondary element.

1. Turn the master power switch ON to inspect the XLR system. **Note:** If the system powers on while the ignition key is off, an alternate power source for the blue relay wire 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 ejection slots is strong. If not, check system voltage is 24 volts.

## 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 all XLR filters when the restriction warning light turns on.
- Change the XLR filter elements 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 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 elements, do not point ejection slots at a solid surface in close proximity to the slots.