

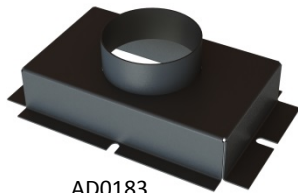
## RESPA<sup>®</sup>-CF Installation Kit for Caterpillar D11R all applications.



Sy-Klone part numbers: REV3K4, REV0003, REV0004

**Purpose:** RESPA-CF provides precleaned and filtered air through integrated Gideon power precleaning technology. Filtration is provided by a MERV 16/EU P2\* filter. The RESPA-CF powered precleaner system provides a positive airflow without adding resistance to the air conditioning system.

The Sy-Klone Pressure Monitor System has been included to alert the operator when it is time for the RESPA filter to be changed. **RESPA IS NOT CERTIFIED FOR USE IN EXPLOSION RISK ENVIRONMENTS.**



AD0183



AD0073



AD0078



AD0075



AD0074

### Replaceable Parts:

| Stock code | Description                       | Quantity |
|------------|-----------------------------------|----------|
| AD0073     | D11R RESPA MOUNTING BRACKET       | 1        |
| AD0074     | RECIRC MOUNTING PLATE             | 1        |
| AD0075     | FRESH AIR INTAKE COVER            | 1        |
| AD0078     | D11R RESPA MOUNTING PLATE         | 1        |
| AD0079     | 4" X 6" PIPE                      | 2        |
| AD0183     | RECIRC INTAKE MANIFOLD            | 1        |
| REV0003    | REVOLUTION 24V CF KIT W/PRESS MON | 1        |
| REV0004    | REVOLUTION 24V CFX KIT            | 1        |
| 90CB40     | 90 DEGREE COBRA HEAD 4 INCH       | 1        |
| 90L40      | 90 DEGREE ELBOW 4 INCH            | 4        |

### Also included in kit:

| Description                         | Quantity |
|-------------------------------------|----------|
| RTV SEALANT                         | 3        |
| 4.75-INCH WORM GEAR CLAMP           | 10       |
| 3.00-INCH WORM GEAR CLAMP           | 4        |
| #10 X 3/4-INCH - SELF-TAPPING SCREW | 15       |
| #12 X 1-INCH SELF-TAPPING SCREW     | 15       |
| 1/4-20 X 1-IN CAP SCREW             | 4        |
| 1/4-20 LOCKNUT                      | 4        |
| 3/8-16 x 1 1/4-INCH BOLT            | 24       |
| 3/8-16 LOCKNUT                      | 24       |
| 3/8 SPLIT WASHER                    | 24       |
| 3/8 FLAT WASHER                     | 48       |
| BLUE 2" FLEX HOSE X 48" LONG        | 2        |

**Installation Time:** 1 to 2 hours

## Technical Support

www.sy-klone.com  
 support@sy-klone.com  
 (904) 448-6563 ext. 1310

# RESPA®-CF- CFX Installation Kit for Caterpillar D11R all applications.

## CAB PRESSURE MONITOR SYSTEM:

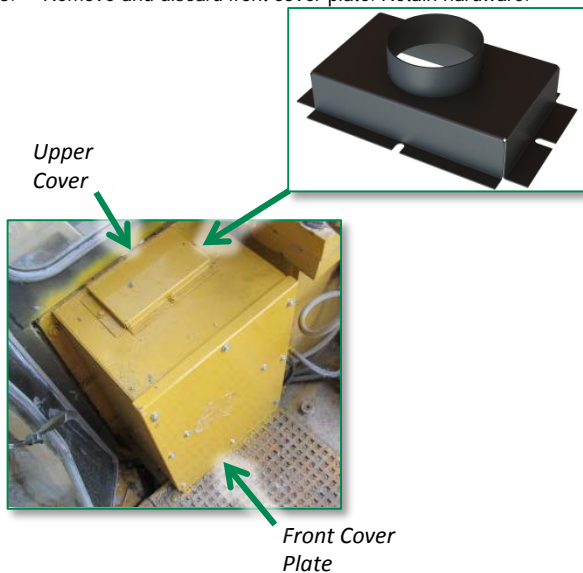
Use the Sy-Klone Pressure Monitor to verify cab pressure.

1. Install the Sy-Klone Cab Pressure Monitor per the installation instructions.
2. Start the machine.
3. Set the HVAC system to its lowest fan setting.

4. Set the HVAC system to fresh air by turning off the recirculation feature.
5. Increase HVAC system fan speed. Cabin pressure should increase as fan speed increases.
6. If cabin pressure never increases there may be leaks in cab that need to be sealed.

## HVAC Housing:

1. Remove and discard the upper cover box from the HVAC housing. Retain hardware.
2. Replace upper cover with AD0183 recirculation intake manifold.
3. Remove and discard front cover plate. Retain hardware.



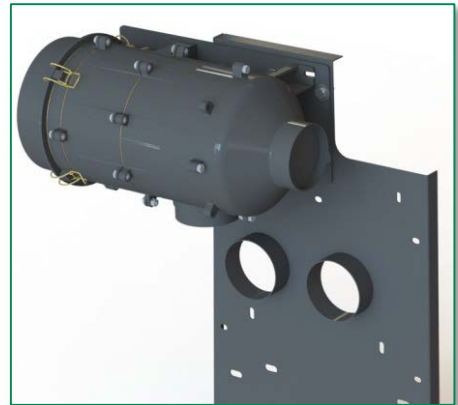
## Precleaner Installation:

1. Mount AD0074 plate to the main mounting plate AD0078 with the 3/8" bolts, washers and lock nuts.

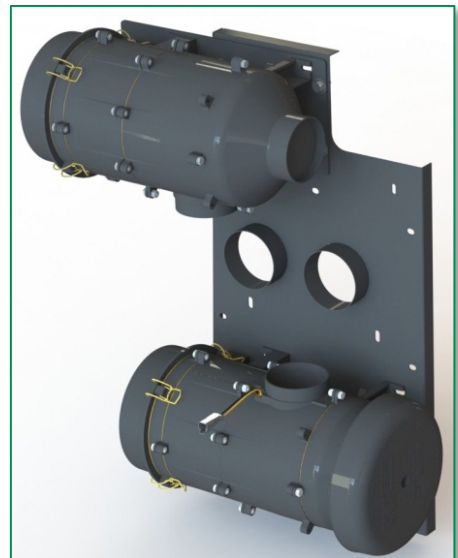


## Precleaner Installation(cont):

2. Install the RESPA-CFX recirculation unit to AD0074 with the 3/8" bolts, washers and lock nuts.



3. Install the RESPA-CF unit to AD0078 with 3/8" bolts, washers and lock nuts.

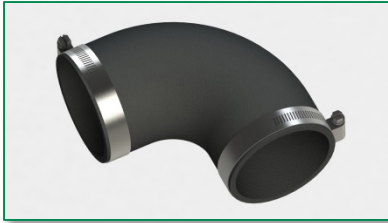


4. Replace the HVAC front cover plate with the precleaner assembly. Mount assembly to A/C box using the hardware retained previously. Seal with RTV silicone.

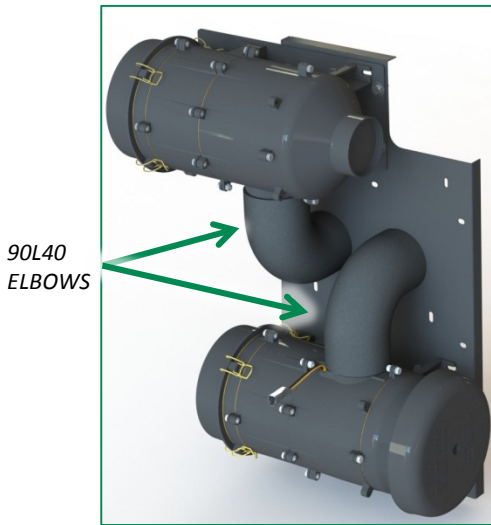
# RESPA®-CF- CFX Installation Kit for Caterpillar D11R all applications.

## Plumbing Installation:

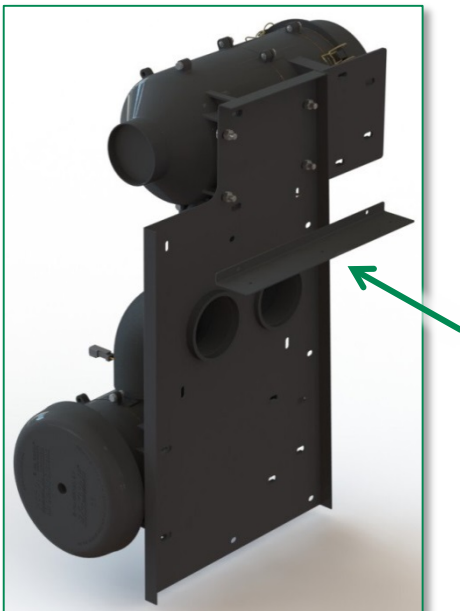
1. Preinstall two worm gear clamps on all 90L40 elbows (4).



2. Attach and clamp 90L40 rubber elbows to RESPA unit outlets and plate assembly as shown. **Note:** These two elbows maybe trimmed for a better fit.



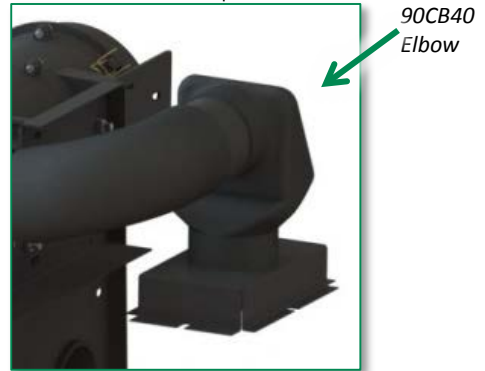
3. Attach AD0073 to the back of the mounted plate and RTV seal around all edges. Use self-tapping screws to secure plate to A/C box.



4. Preinstall two worm gear clamps on the 90CB40 elbow.



5. Attach and clamp the 90CB40 elbow on the AD0183 recirculation intake manifold port.



3. Connect the RESPA-CFX inlet to the 90CB40 elbow as shown using two 90L40 elbows and 4-inch diameter pipes.



4. RESPA mounting plate installation completed

# RESPA® -CF- CFX Installation Kit for Caterpillar D11R all applications.

## SEAL THE ORIGINAL FRESH AIR INTAKE

1. Remove the fresh air filter cover behind the rear cab window and remove the fresh air filter.



2. Install AD0075 plate and use the self-tapping screws to attach the plate and use RTV around the edges for sealing



AD0075 plate

## WIRING:

1. The machine should be off.
2. Finding proper power is critical for system performance.
  - a. The unit must always 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. A master system relay or main fuse box can be a good source of constant power when the ignition key is in the ON position.
  - e. The current requirement for the 24 volt system is 12 amps maximum initial draw with 6 amps constant.
  - f. An appropriate relay can be used to provide suitable power from a non-terminating constant source.
3. Ensure the input voltage is 24 volts.
4. The RESPA-CF system must be fused inline to at least twice the constant current requirements.  
**Note:** A fuse holder and 15 amp fuse is included.
5. 16 GA or larger wire should be used for the system **Note:** A wiring harness is included.
  - a. System black wire = negative (ground)
  - b. System red or orange wire = positive
  - c. Incorrect electrical connection will reverse the fan direction causing the RESPA to function improperly.
6. Finding a good ground is also critical to system 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.
7. The master power switch should be set to the OFF position after appropriate power is located and ignition key removed.
8. Make connections and route the wiring:
  - a. Avoid high heat areas, routing across walkways, and reducing operator visibility.
9. Use wire loom and grommets as necessary to protect wiring.  
**Note:** Seal any holes for wiring with RTV silicon.

# RESPA®-CF- CFX Installation Kit for Caterpillar D11R all applications.

## PLACING AND CONNECTING THE PRESSURE MONITOR



1. Place the monitor in the place pointed in the picture, use 4 self bolting screws.



2. Route the pressure monitor hose on the right side of the operator and put the hose through the back side of the cab.

## INSPECTING RESPA-CF UNIT:

1. Turn the master power switch ON to inspect the RESPA 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 RESPA-CF ejection slots is strong. If not:
    - a. Check proper wiring polarity.
    - b. Check that the power source is not variable voltage.

## VERIFY CAB PRESSURE:

1. With HVAC system to OFF and RESPA-CF operating, cabin pressure should be greater than 0.00 inches of water column (0 pascal).
2. Increase HVAC system fan speed. Cabin pressure should increase as fan speed increases.
3. If cabin pressure never reaches 0.20 inches of water column (49 pascal), check for leaks, improve sealing of cabin, and test again. **Note:** Ideal pressure, with new filters and a sealed cab, is 0.50 inches of water column (125 pascal).

## WHEN TO REPLACE FILTER:

Replace the filter when the cab pressure drops below the minimum pressure threshold when cab is sealed. (Refer to Pressure Monitor Installation Manual)

\*Change the RESPA filter after every 1000 hours of operation time, even if the pressure is within tolerance and there are no noticeable performance changes.