

# DUCT REPAIR



# aps

SUCCESS WITH DUCT REPAIR

What every contractor needs to know.

## Duct Repair + Sealing Contents

Duct repair and sealing is a challenging and important job. Done right it can bring increased comfort, safety and health to the home's occupant while saving them money on their heating and cooling bills. The purpose of this guide is to assist you, the duct repair and sealing professional, with getting the job done right the first time – every time. Below is a list of provided materials in this section.

Health + Safety .....	4
Duct Sealing Checklist .....	5
Critical Detail: Sealing Ducts .....	8

### **Additional Job Aids**

Critical Detail: Installing Metal Ducts .....	10
Critical Detail: Installing Flex Ducts .....	12
Critical Detail: Installing Duct Support for Flex Ducts .....	14
Critical Detail: Installing Tie Bands.....	16
Information Sheet: Accessing Duct Leakage Sites .....	18
Tech Tips: Accessing Duct Leakage Sites.....	19
Critical Detail: Sealing Small, Medium + Large Holes .....	22
Sealing Framed Returned Platforms .....	27



## Duct Repair + Sealing Contents

Critical Detail: Installing Bar-faced Return Grilles .....	29
Critical Detail: Static Pressure Testing Package .....	31
Critical Detail: Static Pressure Testing, Air Handler in Attic .....	33
Critical Detail: Static Pressure Testing, Platform System .....	35
Critical Detail: Anti-Stick Register Sealing .....	37
Critical Detail: Evaporative Duct Cooler Removal and Sealing . . . . .	39
Critical Detail: Block & Sealing at End of Trunk Line - Mobile Homes . . . . .	41

## Health + Safety Information Sheet

### Health + Safety: Introduction

The introduction to this manual introduced EPA's Healthy Indoor Environment Protocols for Home Energy Upgrades. The document is a useful tool for finding solutions for common issues that arise when completing home energy upgrades. This page will highlight some important details in the document in relation to safety when duct sealing.

### Health + Safety: Worker Safety

As mentioned in the introduction, it is required for all contractors to follow OSHA regulations. By law, employers and supervisors are required to ensure that all workers have the correct personal protective equipment. These items include, but aren't limited to:

- Gloves
- Protective clothing
- Knee pads
- Eye protection
- Respirators: Different types of respirators are required for different jobs. Use the Healthy Indoor Environment Protocols for Home Energy Upgrades to verify that your current respirator is compliant with the job.
- Non-contact voltage detectors

*Tip: It is important to keep your PPE in good condition. Having a bag that stores all of your PPE and supplies for cleaning the items will save you time and keep you safe.*

### Health + Safety: Health Hazards

It is important to look for hazards and create a mitigation plan before beginning work. The list below highlights the most important items to identify and mitigate for all duct repair jobs:

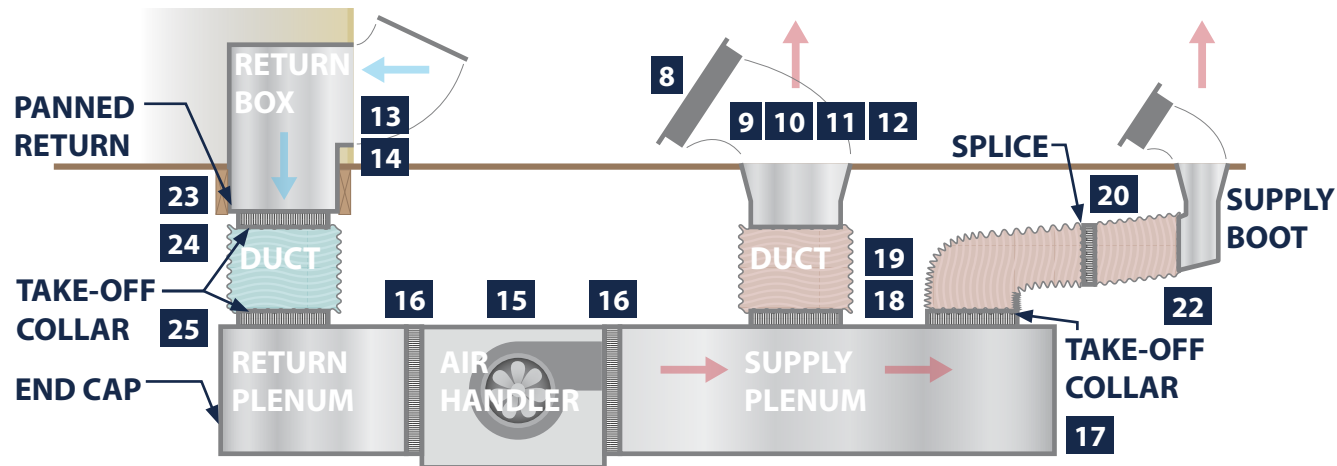
- Sewer gases, fuel oil, chemicals and other pollutants in crawl spaces or attics
- Mold-like growth in attics and crawl spaces
- Presence of pest/rodents in crawl spaces or attics
- Lack of CO alarm in all houses
- Unvented combustion appliances
- Duct tapes and wrappings that are likely to contain asbestos

If any of these conditions exist, follow action items listed in the Healthy Indoor Environment Protocols for Home Energy Upgrades before beginning work.

# CHECKLIST:

## SUCCESS WITH DUCT REPAIR

### DUCT SEALING



N/A

PREP



1. Complete a combustion safety test and record the results.



2. Verify that a ventilation plan is established.



3. Put on all personal protection equipment (PPE).



4. Identify all worker and occupant safety hazards.



5. Identify all potential durability issues.



6. Address all combustion safety, worker safety, occupant safety and durability issues prior to starting work and notify the occupant. **Do not complete work if a life safety hazard is identified.**



N/A

INSIDE THE LIVING SPACE



7. Turn the HVAC fan on and feel for air flowing out of each supply with your hand. Note any supply lines not providing air. Turn the fan off.



8. Remove all supply registers and return grilles.



9. Fasten all supply boots to subfloor with screws.



10. Seal all duct inner liners to each supply boot.



11. Seal all seams of each supply boot.

# CHECKLIST:

# SUCCESS WITH DUCT REPAIR

## DUCT SEALING

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 12. Seal all gaps between the subfloor or ceiling and the supply boot.      |
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Seal all seams of each return box.                                      |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. Seal all gaps between the subfloor, wall or ceiling and the return box. |

### ✓ N/A OUTSIDE THE LIVING SPACE

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 15. Tape the air handler cabinet panels and seal all penetrations.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 16. Mechanically fasten and seal the connection between the air handler and the plenums.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 17. Mechanically fasten and seal all supply plenum seams and end caps.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 18. Mechanically fasten and seal the connection between supply take-off collars and plenums.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 19. Mechanically fasten and seal inner liner of all supply ducts to supply take-off collars.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 20. Inspect all supply ducts for disconnects, tears and/or holes and pay attention to supply lines that were not providing air inside the house. Fix by reconnecting ducts and patching holes. If flex duct, remove section with hole or tear and replace with a sealed spliced collar. |
| <input type="checkbox"/> | <input type="checkbox"/> | 21. Fasten and seal all sectioned metal elbows to supply ducts and take-off collars.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 22. Fasten and seal inner liner of all supply ducts to supply boots. Skip this step if sealed from inside the living space.   |
| <input type="checkbox"/> | <input type="checkbox"/> | 23. Seal all panned returns.  |
| <input type="checkbox"/> | <input type="checkbox"/> | 24. Inspect all return ducts for disconnects, tears and/or holes. Fix by reconnecting, patching or fastening ducts together then sealing the connections. If flex duct, remove section with hole or tear and replace with a sealed spliced collar.                                      |
| <input type="checkbox"/> | <input type="checkbox"/> | 25. Seal the connection between supply take-off collars and plenums.  |

### ✓ N/A CLOSE OUT

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 26. Clean the work area.                                      |
| <input type="checkbox"/> | <input type="checkbox"/> | 27. Complete a combustion safety test and record the results. |
| <input type="checkbox"/> | <input type="checkbox"/> | 28. Educate occupants on the work completed.                  |

## JOB INFORMATION

Name

Initials

## DUCT SEALING

## SUCCESS WITH DUCT REPAIR

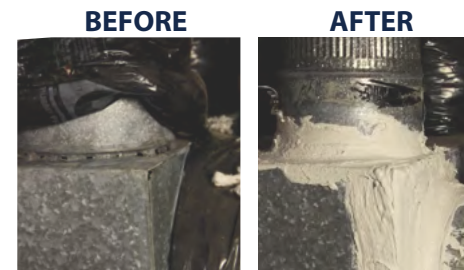
[illegible]

## DUCT SEALING GUIDELINES

For seams, cracks joints, holes and penetrations that are:

### 1/4-inch or less (small)

Seal with mastic.



### 1/4-inch to 3/4-inch (medium)

Install temporary tape. Apply a base coat of mastic. Apply fiberglass mesh tape. Apply mastic atop fiberglass mesh tape.



### 3/4-inch or greater (large)

Mechanically fasten rigid support material that is at least 1 in. larger than the hole. Apply base coat of mastic, fiberglass mesh tape and top coat of mastic.



[illegible]

Gloves, appropriate respirator, safety glasses

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*\* Materials and tools listed are only recommendations and may not include everything needed to complete job.*



## SEALING DUCTS

Seal plenum with mastic.  
Choose the appropriate sealing  
technique based on hole size.

**1 SEAL PLENUM**

Replace outer liner and  
insulation.

**5 REPLACE**

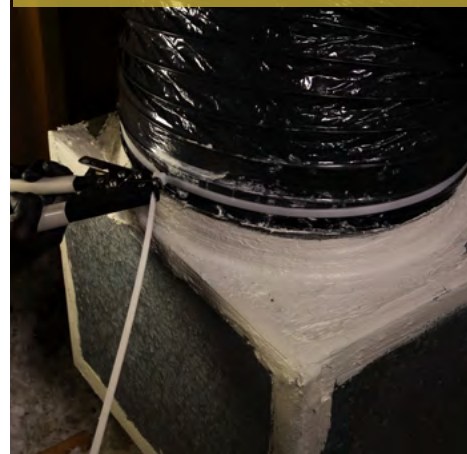
Peel back outer liner and  
insulation.

**2 GAIN ACCESS**

Install nylon tie band around  
inner liner using a tie band  
tensioning tool.

**6 STRAP**

Install nylon tie band around  
inner liner using a tie band  
tensioning tool.

**3 STRAP**

Seal inner liner with mastic.  
Choose the appropriate sealing  
technique based on hole size.

**4 SEAL**

*Notes:*

## INSTALLING METAL DUCTS

DESIRED OUTCOME: Ducts properly installed and sealed to prevent leakage.

This image shows a blank sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Duct not sealed.



Duct sealed and insulated.



Gloves, appropriate respirator, safety glasses

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*\* Materials and tools listed are only recommendations and may not include everything needed to complete job.*



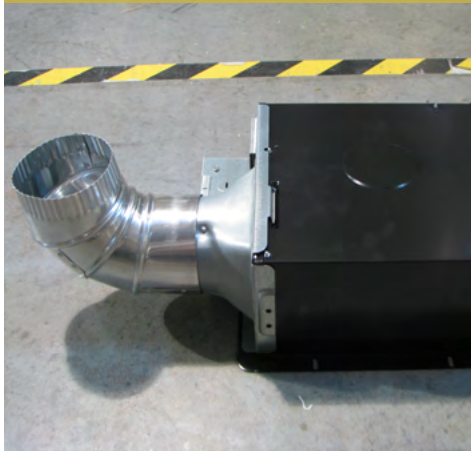
## INSTALLING METAL DUCTS

Roof termination fittings: use 90° fitting first. Wall termination fittings: use a straight fitting.

If a termination is not installed, follow the exhaust fan termination installation critical detail.

Install duct pieces with crimped ends pointed in the direction of air flow. Cut pieces to fit.

For the connection between the duct and the termination, install the termination cap adaptor.

**1 MEASURE + SELECT****2 INSTALL TERMINATION****3 ASSEMBLE DUCT****4 INSTALL ADAPTOR**

Fasten duct connections with a minimum of three equally spaced screws.

Seal all seams and joints.

If installing duct in unconditioned space, wrap the duct with insulation and seal the seams.

**5 INSTALL SCREWS****6 SEAL WITH MASTIC****7 INSTALL INSULATION**

*Notes:*

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## INSTALLING FLEX DUCTS

DESIRED OUTCOME: Ducts properly installed and sealed to prevent leakage.

Duct not sealed.



Duct sealed and insulated.



*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.



## INSTALLING FLEX DUCTS

Measure and cut flex to run between fitting.

**1 MEASURE AND CUT DUCT**

Connect the flex duct at both ends using flex duct ties.

**2 INSTALL ZIP TIES**

Seal each flex duct connection with mastic.

**3 SEAL WITH MASTIC**

Pull flex duct insulation into place and seal with mastic.

**4 SEAL WITH MASTIC**

Support the duct at least every 4 ft.

**5 SUPPORT DUCT**

## INSTALLING DUCT SUPPORT FOR FLEX DUCTS

DESIRED OUTCOME: Ducts properly supported to not kink or reduce interior dimensions.

Flex duct needing support straps.

Flex duct supported every 4' using a minimum of 1 1/2" wide material, creating no crimps or interior dimension reduction.



*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.

## INSTALLING DUCT SUPPORT FOR FLEX DUCTS

Attach support material to framing (i.e., truss, rafter or joist).

**1 ATTACH SUPPORT**

Run support material under flex duct and lift into correct position.

**2 RUN SUPPORT**

Attach support material to framing (i.e., truss, rafter or joist).

**3 ATTACH SUPPORT**

Flex duct supported every 4' having no crimps or interior dimension reduction.

**4 SUPPORT SPACING**

Notes:

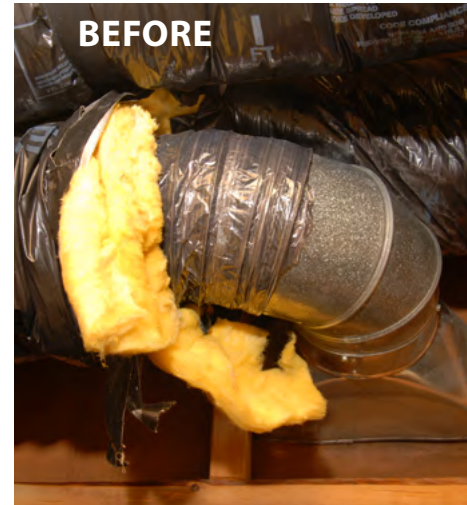


## INSTALLING TIE BANDS OR ZIP TIES

DESIRED OUTCOME: Ducts and plenums properly fastened to prevent leakage.

Flex-to-collar connection needing tie band.

Joints fastened with tie bands using a tie band tensioning tool. Metal ducts will be supported at intervals not exceeding 10 feet.



*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.

INSTALLING TIE BANDS OR ZIP TIES

Place tie band being used around the connection.

**1 PLACE**



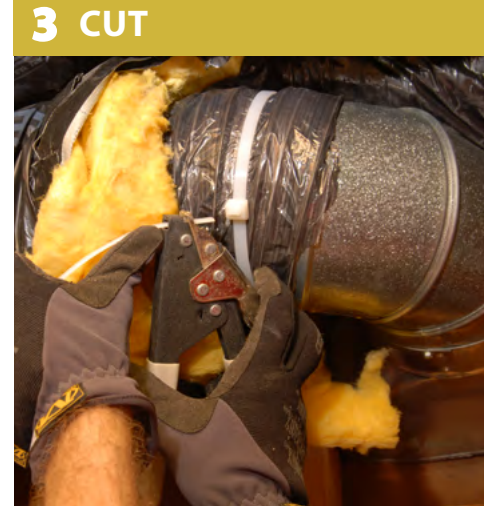
Tighten tie band using tie band tensioning tool.

**2 TIGHTEN**



Cut off tie band tail using tie band tensioning tool.

**3 CUT**



Notes:

## Accessing Duct Leakage Sites

### DUCT LEAKAGE SITES

These tech tips show how to access the areas listed below:

- A. Air Handler to Plenum
- B. S and Drive Connections
- C. Take Off Collar to Plenum
- D. Splices
- E. Return Platform
- F. Metal Plenums
- G. Duct Board Plenums
- H. Panned Returns
- I. Inner Liner to Boot Connections
- J. Package Units

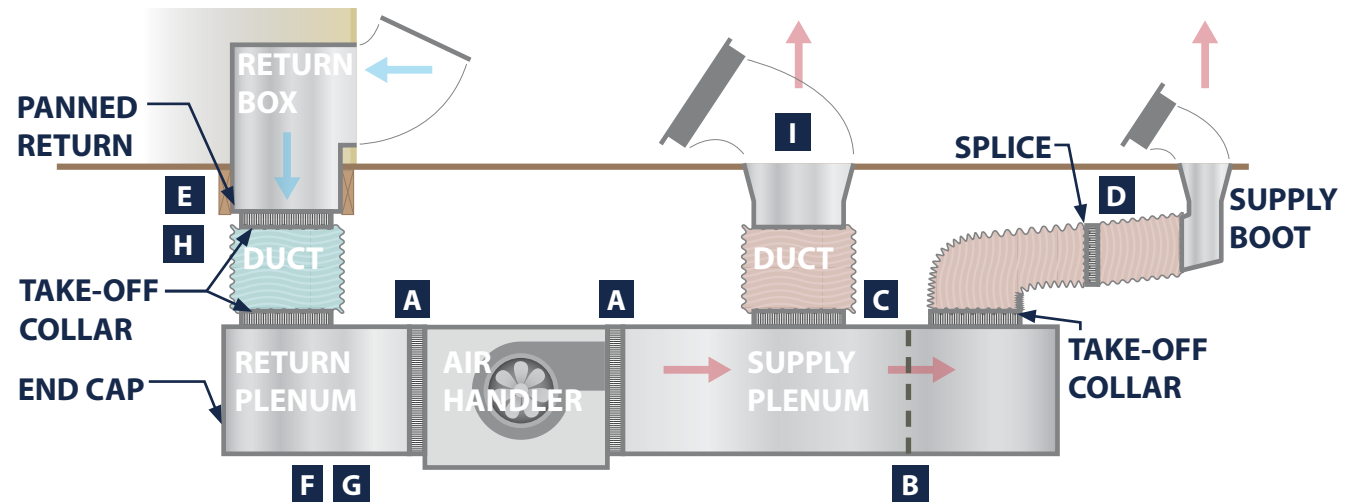
### HEALTH + SAFETY

Put on all PPE before beginning any work. Place duct tape over sharp metal edges during work.

### TOOLS

Be sure to have, at a minimum, these tools:

- Utility knife or Scissors
- Screwdrivers
- Drill
- Flashlight
- Cutter
- Tin snips



### Introduction

One of the first steps to sealing a duct system is gaining access to the leakage site. Reference the following TECH TIPS for before and after illustrations on how and where to gain access at various duct leakage sites. Illustrations are provided for the following sites:

- A. Air Handler to Plenum
- B. S and Drive Connections
- C. Take Off Collar to Plenum
- D. Splices
- E. Return Platform
- F. Metal Plenums
- G. Duct Board Plenums
- H. Panned Returns
- I. Inner Liner to Boot Connections
- J. Package Units

### Health + Safety

Prior to starting work, make sure to have all the necessary PPE equipment (gloves, appropriate respirator, safety glasses, etc.). While accessing these locations, place duct tape over the sharp metal edges where access holes have been cut can help protect the worker from injury.

### Tools

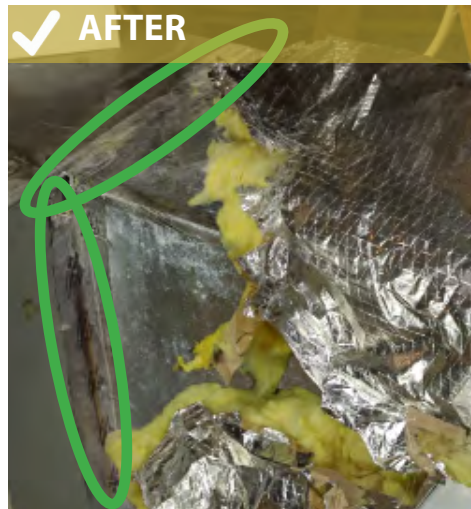
It is important to gather all necessary materials and tools before accessing duct leakage sites. Some necessary tools include utility knives, screwdrivers, a drill, flashlights, sheet metal hole or circle cutter and tin snips.

*For more information about how to seal these locations please reference our Sealing Duct Leakage Sites CRITICAL DETAILS.*



## ACCESSING DUCT LEAKAGE SITES

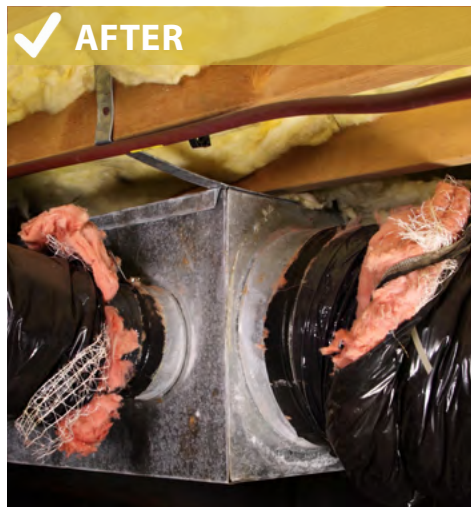
- A. Air Handler to Plenum (Externally insulated metal): Gain access to joint by peeling back plenum insulation.



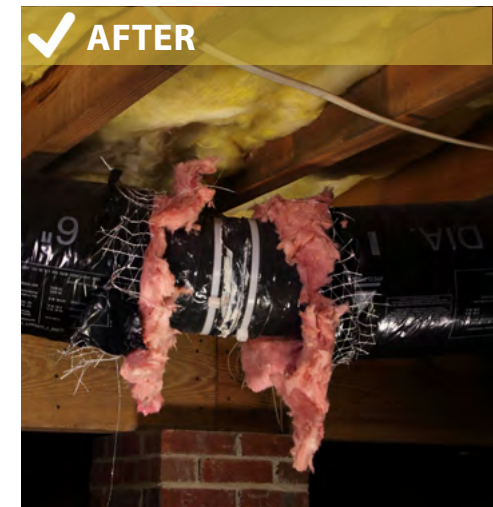
- B. S and Drive Connections in Plenum (Externally insulated metal): Gain access to joint by peeling back plenum insulation.



- C. Take Off Collar to Plenum: Gain access to joint by removing outer nylon tie band or tape and peeling back insulation.



- D. Splices: Gain access to connection by removing outer nylon tie band or tape and peeling back insulation.





## ACCESSING DUCT LEAKAGE SITES

- E. Return Platform: Create temporary access hole by removing or cutting cladding of return platform.

✗ BEFORE



✓ AFTER



- F. Metal Plenums: Create temporary access hole by cutting hole through accessible side of plenum.

✗ BEFORE



✓ AFTER



- G. Duct Board Plenums: Create temporary access hole by cutting hole through accessible side of plenum. Make sure to "pumpkin cut" for ease of patching hole.

✗ BEFORE



✓ AFTER



- H. Panned Returns: Create temporary access hole by cutting hole through accessible area of return.

✗ BEFORE

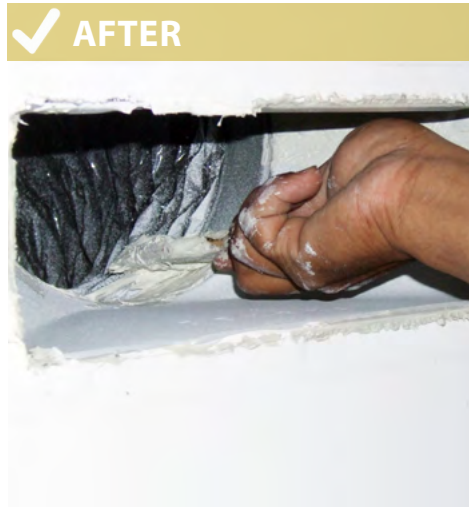


✓ AFTER

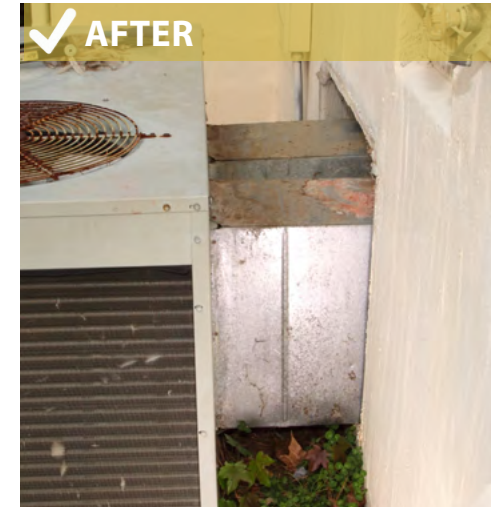


## ACCESSING DUCT LEAKAGE SITES

- I. Inner Liner to Boot: Gain access to connection from inside home by removing supply grill.



- J. Package Units (Ground level): Gain access to connections by removing shroud.



- J. Package Units (Ground level): Gain access to connections by removing shroud and cutting holes in supply and return ducts.



Notes:

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## SEALING SMALL, MEDIUM + LARGE HOLES

After gaining access to the leakage site, choose the appropriate sealing technique from below. Each of these step-by-step groupings illustrate a specific sealing technique based on the hole size. Please reference the vertical gray text boxes and first step of each series to ensure the correct step-by-step process is being followed. There are 3 sets to choose from:

**(SMALL HOLES) - MASTIC ONLY:**

Seams, cracks, joints, holes and penetrations that are 1/4-inch or less.

**(MEDIUM HOLES) - TEMPORARY TAPE + MASTIC + MESH TAPE:**

Seams, cracks joints, holes and penetrations that are 1/4-inch to 3/4-inch.

**(LARGE HOLES) - RIGID SUPPORT + MASTIC + MESH TAPE:**

Seams, cracks, joints, holes and penetrations that are larger than 3/4-inch.

*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.



## SEALING SMALL HOLES

Seams, cracks, joints, holes and penetrations that are 1/4-inch or less.

Seal with mastic.

**1 SMALL HOLE****2 MASTIC**

Notes:

## SEALING MEDIUM HOLES

Seams, cracks, joints, holes and penetrations that are 1/4-inch to 3/4-inch.

Install temporary tape over seams, cracks, joints, holes and penetrations.

Apply a base coat of mastic to completely cover and extend beyond tape.

Apply fiberglass mesh tape to completely cover and extend beyond mastic.

**1 MEDIUM HOLE****2 TEMPORARY TAPE****3 MASTIC****4 MESH TAPE**

Apply a second coat of mastic atop fiberglass mesh tape to completely cover and extend beyond tape.

*Notes:*

- Temporary tape can be a variety of different types of tape. It is used to prevent mastic from falling into the hole and should only be used if also using mesh tape for reinforcement.

**5 MASTIC**

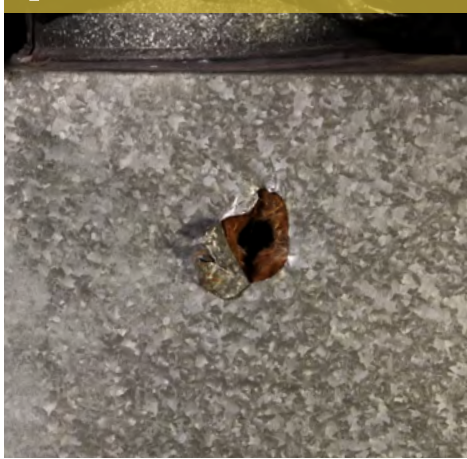
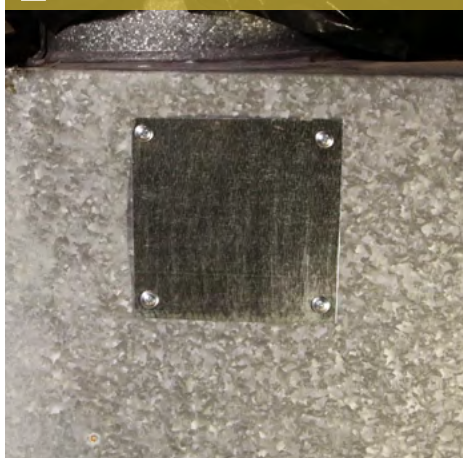
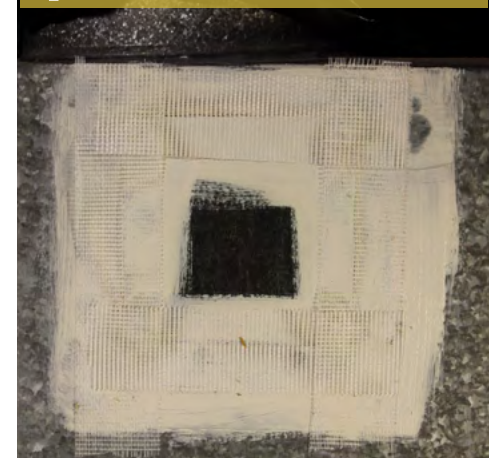
## SEALING LARGE HOLES

Seams, cracks, joints, holes and penetrations that are larger than 3/4-inch.

Install rigid duct support material that is at least 1 inch larger than the hole.

Apply a base coat of mastic to completely cover and extend beyond support material.

Apply fiberglass mesh tape to completely cover and extend beyond mastic.

**1 LARGE HOLE****2 SUPPORT MATERIAL****3 MASTIC****4 MESH TAPE**

Apply a second coat of mastic atop fiberglass mesh tape to completely cover and extend beyond tape.

*Notes:*

**5 MASTIC**



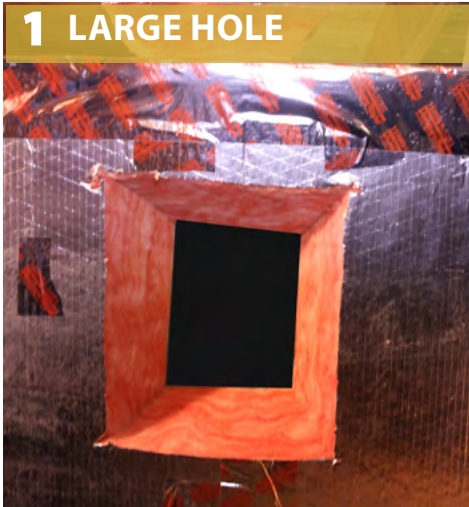
Seams, cracks, joints, holes and penetrations that are larger than 3/4-inch.

Replace cut out. Make sure to "pumpkin cut" for ease of patching hole.

Apply a coat of mastic to completely cover and extend beyond support material.

Apply fiberglass mesh tape to completely cover and extend beyond mastic.

## 1 LARGE HOLE



## 2 REPLACE CUT OUT



## 3 MASTIC



## 4 MESH TAPE



Apply a second coat of mastic atop fiberglass mesh tape to completely cover and extend beyond tape.

Notes:

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## 5 MASTIC







## SEALING FRAMED RETURN PLATFORMS

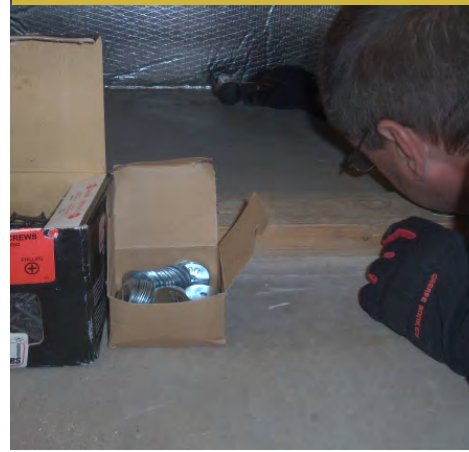
Remove grille or cut access hole into framed platform.

**1 ACCESS RETURN**

Clean out debris and dirt from return platform.

**2 PREP RETURN**

Line plenum with duct board. Mechanically fasten duct board to framing.

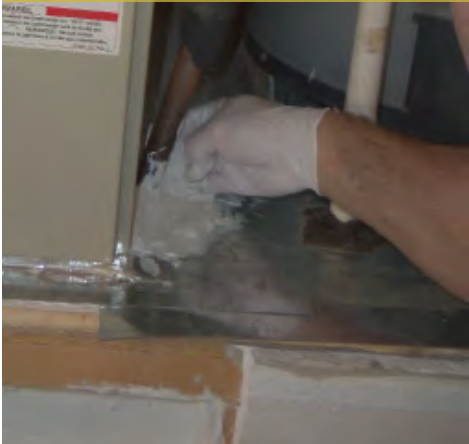
**3 INSTALL DUCT BOARD**

Seal the inside of the return. Choose the appropriate sealing technique based on hole size.

**4 FIBERGLASS**

If refrigerant and condensate lines penetrate the platform return, provide infill and seal as needed.

If refrigerant and condensate lines terminate to the outside, install hardware cloth or equivalent rodent barrier.

**5 SEAL PENETRATIONS****6 SEAL PENETRATIONS**Notes:

*Scrap flashing material can make great washers for use when securing duct board. If using this technique, exercise caution and make sure to wear gloves to protect your hands from the sharp edges.*

## INSTALLING BAR-FACED GRILLES

DESIRED OUTCOME: Increase air flow through the return grille

Stamp-faced return grille.

Bar-faced return grille.



*Gloves, appropriate respirator, safety glasses*

*\* Materials and tools listed are only recommendations and may not include everything needed to complete job.*



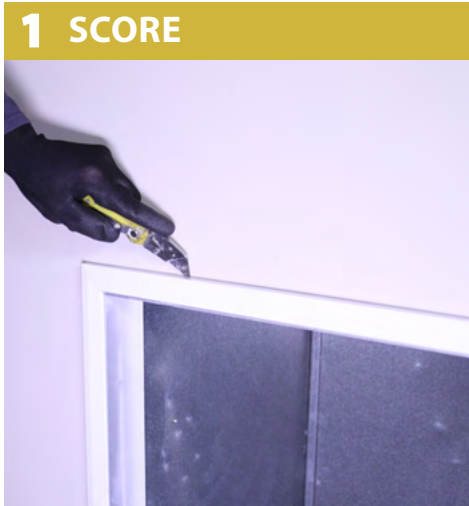
## INSTALLING BAR-FACED GRILLS

If present, score any caulk or paint sealing between return grille and interior surface.

Remove filter and grill.

If present, score any mastic or duct tape sealing between return grill flange and return. Remove screws.

Remove frame.

**1 SCORE****2 REMOVE FILTER****3 REMOVE FASTENERS****4 REMOVE FRAME**

Seal return to sheetrock connection.

Install new grille and filter.

*Notes:*

**5 SEAL****6 INSTALL GRILLE**

# STATIC PRESSURE TESTING #1, (Package Unit)

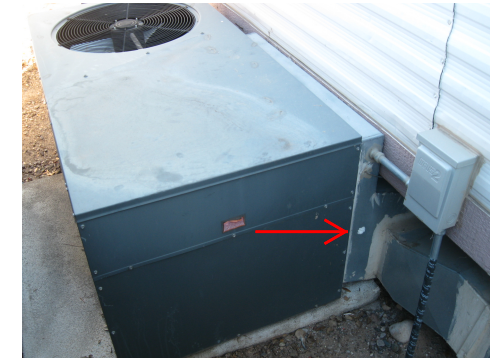
DESIRED OUTCOME: To measure total static pressure.

## TOOLS

Untested system



Tested system



**Per requirements, airflow across the coil, at fan design speed and full operating load, is within 15% of the airflow required per the system design and within the range recommended by the OEM product data. Airflow across the coil is typically between 350 to 450 cfm per ton. (ACCA Standard 5, ANSI/ACCA 5 QI-2007)**

*Gloves, appropriate respirator, safety glasses*

*\* Materials and tools listed are only recommendations and may not include everything needed to complete job.*

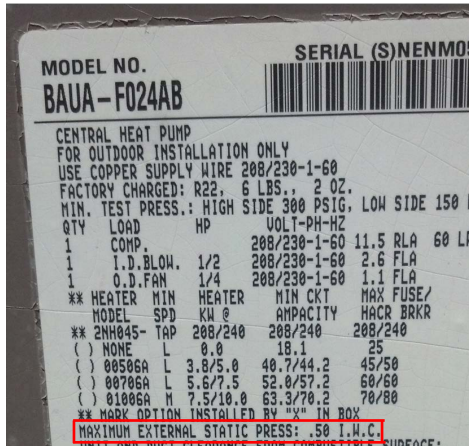


## STATIC PRESSURE TESTING #1, (PACKAGE SYSTEMS)

Prepare home for static pressure testing. Open interior doors. Registers all open.

**1 DOORS & REGISTERS**

Find furnace, heat pump, etc. and search for Data Tag. Find Max. Ext. Static Pressure.

**2 FIND STATIC PRESSURE**

Drill 1/4" dia. hole into ductwork on both sides of the air handler. Point probes into airflow.

**3 DRILL TWO HOLES**

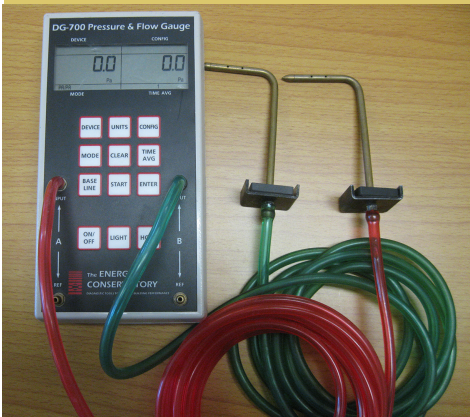
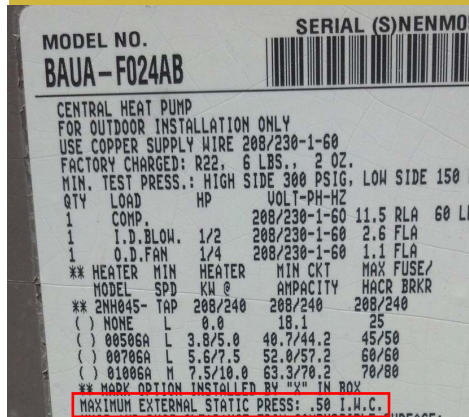
For package systems, drill 1/4" dia. hole both sides of each access panel.

**4 LOCATE ELBOWS**

Attach hoses to manometer inputs. Turn on manometer. Press Units button once. (in w.c.)

Compare reading to Data Plate. Make appropriate recommendations.

**Notes:**

**5 MANOMETER ON****6 READING**

STATIC PRESSURE TESTING #2, (AIR HANDLER IN ATTIC)

DESIRED OUTCOME: To measure total static pressure.

Untested system

Tested system



*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.

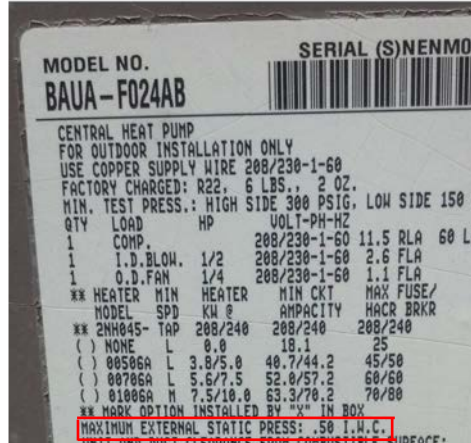


## STATIC PRESSURE TESTING #2, (AIR HANDLER IN ATTIC)

Prepare home for static pressure testing. Open interior doors. Registers all open.

**1 DOORS & REGISTERS**

Find furnace, heat pump, etc. and search for Data Tag. Find Max. Ext. Static Pressure.

**2 FIND STATIC PRESSURE**

Drill 1/4" dia. hole into ductwork on both sides of the air handler. Point probes into airflow.

**3 DRILL TWO HOLES**

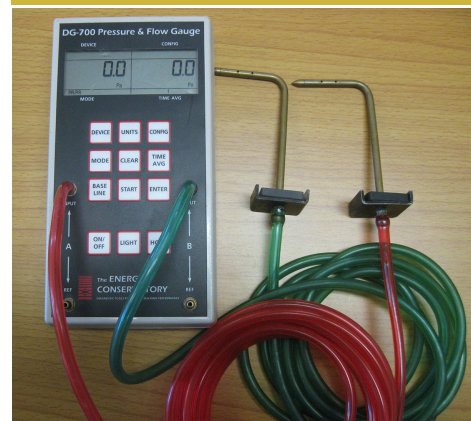
For air handler systems, drill 1/4" dia. hole both sides of air handler unit.

**4 LOCATE AIR HANDLER**

Insert probes facing into the air stream.

**5 INSERT PROBES**

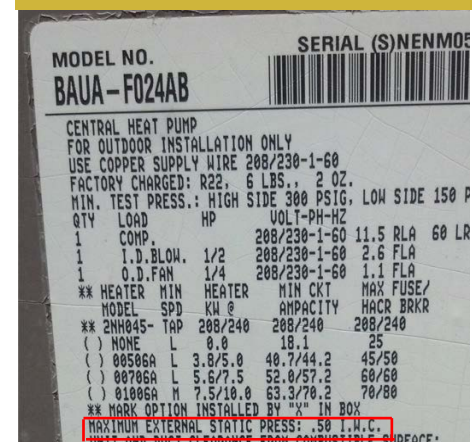
Attach hoses to manometer inputs. Turn on manometer. Press Units button once. (in w.c.)

**6 MANOMETER ON**

Add values together, ignore + and - signs.

**7 READING**

Compare reading to Data Plate. Make appropriate recommendations.

**8 DATA PLATE**



# STATIC PRESSURE TESTING #3, (PLATFORM)

DESIRED OUTCOME: To measure total static pressure.

## MATERIALS

## TOOLS

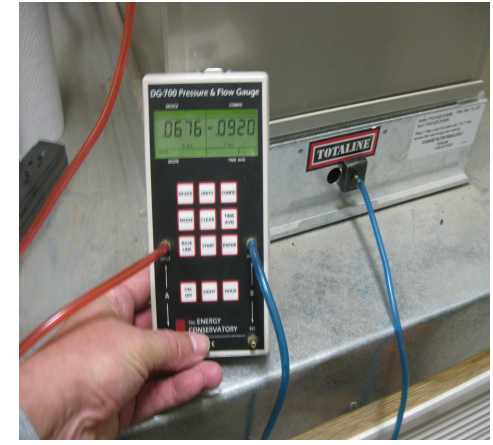
Untested system

✗ BEFORE



Tested system

✓ AFTER



## SAFETY + NOTES

*Gloves, appropriate respirator, safety glasses*

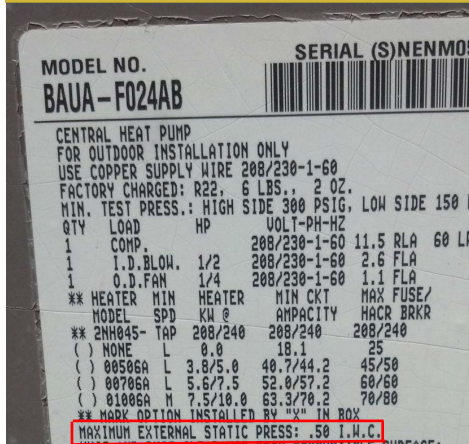
\* Materials and tools listed are only recommendations and may not include everything needed to complete job.

## STATIC PRESSURE TESTING #3, (PLATFORM)

Prepare home for static pressure testing. Open interior doors. Registers all open.

**1 DOORS & REGISTERS**

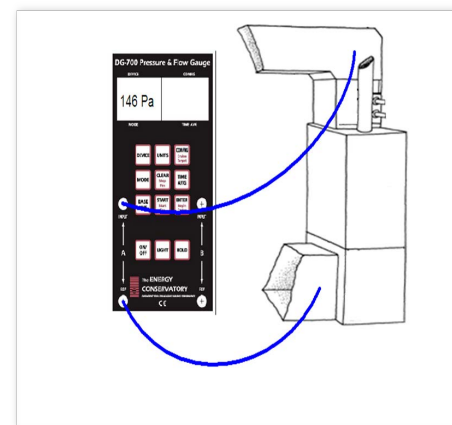
Find furnace, heat pump, etc. and search for Data Tag. Find Max. Ext. Static Pressure.

**2 FIND STATIC PRESSURE**

Drill 1/4" dia.. hole into ductwork on both sides of the air handler. Point probes into airflow.

**3 DRILL TWO HOLES**

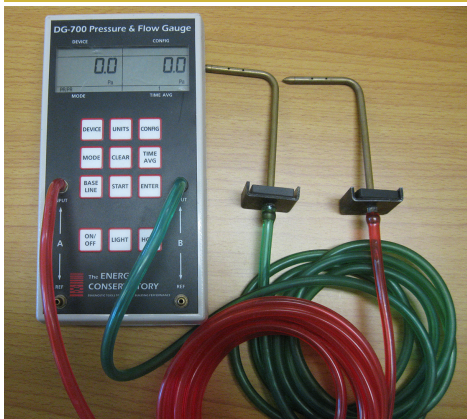
For platform systems, drill 1/4" dia. hole both sides of elbow or one hole in each access panel.

**4 LOCATE ELBOWS**

Attach hoses to manometer inputs. Turn on manometer. Press Units button once. (in w. c.)

For Air Handlers on a platform return, take reading at supply plenum close to cabinet.

Take return reading in platform whenever position allows for probe to align against airflow.

**5 MANOMETER ON****6 SUPPLY READING****7 RETURN READING****SAFETY + NOTES**


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# ANTI-STICK REGISTER SEALING

DESIRED OUTCOME: To prevent registers sticking to mastic while drying.

Removal difficult

Removal easy



*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.



## ANTI-STICK REGISTER SEALING

Remove register.

Seal Register boot to wallboard.

Apply duct sealing tape across the opening that would be covered by the register.

Using a utility knife, cut duct tape around inside of opening as close as possible to duct work, so that it does not come loose or restrict air flow.

**1 REGISTERS****2 APPLY MASTIC****3 APPLY TAPE****4 CUT TAPE**

Fold edges of tape over wet mastic just enough to cover wet mastic.

Inspect

Replace register.

*Notes:***5 FOLD EDGES IN****6 INSPECT****7 REPLACE REGISTER**



# EVAPORATIVE COOLER DUCT REMOVAL & SEALING

DESIRED OUTCOME: To seal main trunk line from leaking.

Evaporative cooler/air conditioning duct connections.

Evaporative cooler capped and sealed.



*Gloves, appropriate respirator, safety glasses*

*\* Materials and tools listed are only recommendations and may not include everything needed to complete job.*

## EVAPORATIVE COOLER DUCT REMOVAL &amp; SEALING

Remove evaporative cooler from main trunk line.

**1 REMOVE DUCT**

Prep opening from abandoned evaporative cooler duct.

**2 PREP HOLE**

Install rigid duct support material that is at least 1 inch larger than the hole.

**3 SUPPORT MATERIAL**

Apply a coat of mastic to completely cover and extend beyond support material.

**4 MASTIC**

Apply a second coat of mastic atop fiberglass mesh tape to completely cover and extend beyond tape.

**5 MASTIC & MESH TAPE**

Cover with insulation when finished

**6 INSULATE**

*Notes:*

## END OF TRUNK LINE BLOCK &amp; SEALING, (MOBILE HOME)

DESIRED OUTCOME: Trunk line sealed to prevent leakage at ends.

## MATERIALS

## TOOLS

Open duct run.

✗ BEFORE



Blocked and sealed duct run.

✓ AFTER



## SAFETY + NOTES

*Gloves, appropriate respirator, safety glasses*

\* Materials and tools listed are only recommendations and may not include everything needed to complete job.



## BLOCK AND SEALING AT END OF TRUNK LINE - MOBILE HOME

Remove register

**1 REMOVE REGISTER**

Confirm no additional registers exist further along the duct run.

**2 INSPECT**

Measure/cut duct board to snugly fit in duct run.

**3 MEASURE & CUT**

To facilitate better air flow, insert duct board a minimum of 6" past last register on run.

**4 POSITION BOARD**

Seal the duct board with mastic &amp; mesh on all sides.

**5 MASTIC & MESH**

Re-inspect and replace register.

**6 RE-INSPECT****7 REPLACE REGISTER***Notes:*