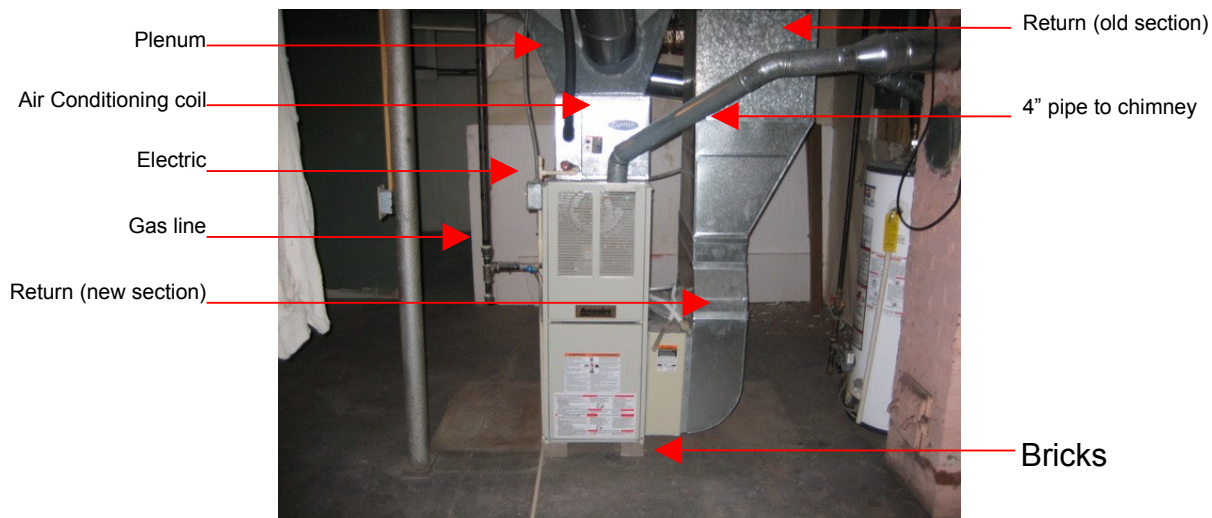


CHAPTER 3

ASSESSING YOUR HOMES HEATING AND COOLING SYSTEM

Now that we know the heating system your home needs, it is time to inspect your existing system and duct-work. We will include photos in this section to help you along with your inspection. The objective here is to get a list of materials that you are going to need. *NOTE: If you used a local contractor or home improvement company to give you an estimate you should be able to skip this section, and move along to ordering and removing the old equipment.*



Here is a picture of an 80% efficient furnace. How do I know? The 4" pipe going into the chimney. If we are going to replace this furnace we have to take note of a few things.

DUCTWORK: I always start with the duct-work. Note the return. It looks like it's in very good shape. In fact, in this photo someone has already replaced the return. How do we know? Look at the different color metals, and the added Reducer Transition (added to reduce the size of the duct-work going into the furnace). The duct-work is in good shape so we should not have to replace it.

Now note the plenum. An air conditioning coil has been attached to the furnace. Looking at the photo, the air conditioning box is the exact size of the furnace. We want to get an exact size furnace to slip right into the space this one occupies. Or very close. My main concern on this job was to make sure that the new furnace will let the boxed coil sit on top of it with a fairly decent fit. So I took measurements on the coil before I went looking for a furnace

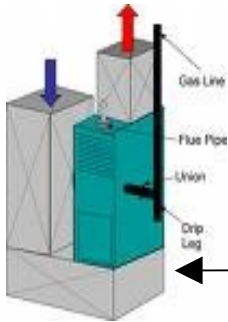
NOTE: When removing this unit, you are going to want to make sure the ductwork does not fall. This will require that you install some cleats (explained in more detail when you reach that point in the job). The worse thing that could happen is the ductwork falling to the ground when you remove the old furnace. Ask me how I know this.

Also note that the furnace is on bricks, so we have a little room to work with.

GAS LINE: looks to be in good shape.

ELECTRIC: also looks to be in good shape, and close to where we would need for a new unit.

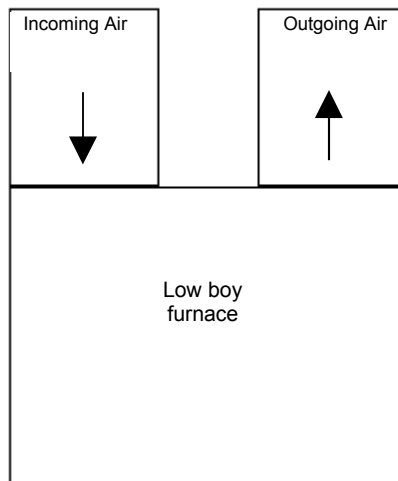
Okay, good. We're getting somewhere.



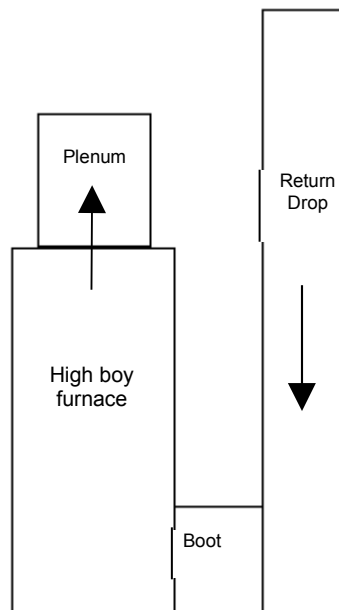
In this photo the same rules apply. The only difference is that the furnace has a return feed from the bottom. These are usually easy to replace. The trick is to get a furnace close to, or exactly, the same size. Any difference in height can be fixed by adjusting the size of the plenum, where the air leaves the top of the furnace.

NOTE: Furnaces today come in all shapes and sizes. They are now much more compact than they were years ago, so you will probably end up with a smaller unit, if not the exact size. Smaller is usually much easier to work with than larger. Moving on...

LOW BOY



USUAL SETUP



The photo above shows the difference between what is called a *low boy*, and a normal furnace setup. Low boys were used in basements that were low, and had very limited room for ductwork. If you have one of these, you will want to replace with a low boy. You can make it work for a standard furnace (like the one pictured above), however, it is much more work.

Same rules apply here. Look over the electric, the gas line, and the ductwork to determine how much you will need for the job.



This photo is a furnace we ended up replacing. Notice the return on the left of the photo. It is just a piece of ductwork with a hole cut in the side, and attached to the furnace. We usually would move this whole return a few inches to the left so we could install a pre-made return (we'll talk about that in more detail with later chapters), then patch the hole we left in the return.

The inspection is the same. The plenum on top of the furnace looks to be in good shape. The electric and gas line are also in a good spot for attachment to our new furnace.

I will stress here again that THIS ASSESSMENT CAN BE DONE BY YOUR LOCAL CONTRACTOR OR HOME IMPROVEMENT CENTER(free). Each home is going to have a different configuration. It is impossible to cover all scenarios, so the point we want to get out of chapter 3 is that all assessments are the same: ductwork, electric, gas line.

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