



## **Gilbert Heating and Air Conditioning Guide For Efficient AC / Heat Pump Maintenance**

### Getting the Most Out of Your Air Conditioning System

In the early 1920s, American homeowners had no concept of mechanical home air conditioning equipment. But by the late 1920s, a new beginning was in motion: manufactured cooling became a home reality. Yet from the perspective of a tired and sweaty household, HVAC progress moved extremely slowly. In fact, widespread household availability to efficient A/C equipment dates back a mere thirty years.

Tough isn't it, and difficult to imagine. How did the old folks endure the hot and humid Gilbert summers without the comfort of indoor cooling systems?

But times change. Today, central air conditioning condensing units and/or air-source heat pumps provide daily relief throughout the world, including those homes that undergo the ever-increasing temperatures of the American mid-west.

### Proper A/C and Heat Pump Maintenance Reduces Cooling Costs

Many factors affect the cost of home cooling. From components that decrease the cooling load on your house to the introduction of alternative cooling processes such as installed fans and natural ventilation every change can induce new savings. But if you have an older home with an older air conditioning system, investing in a new energy-efficient heat pump may be your best option for reducing energy consumption.

In this paper we will talk about achieving maximum system efficiency via rightly applied A/C maintenance, upkeep, and performance tune-ups.

In the following pages, you will learn:

- About the factors affecting maintenance of residential Gilbert HVAC systems
- Distinctions in types of cooling system maintenance services
- Process that require professional help
- Responsibilities of the homeowner.

## INTRODUCTION

All mechanical equipment requires monitoring, routine cleaning, occasional adjustments, and eventual repair or replacement of individual and/or group components. The best assurance that HVAC equipment will endure for the expected life cycle is simple:

- Schedule regular inspections
- Calendar for yearly system tune-ups
- Perform routine maintenance
- Follow the original equipment manufacturer's specifications.

Along with defining the above services, this text examines the following three primary components associated with heating and cooling maintenance services:

- 1) The essential HVAC service requirements for maintaining a comfortable and healthy indoor environment
- 2) Service factors that help keep your Gilbert home heating and cooling equipment functioning efficiently throughout the expected lifecycle
- 3) AND the specifics of A/C and Heat Pump service and upkeep unique to the residential community of Gilbert, Arizona.

Herein you will find various inspection checklists and recommended corrective actions essential to reasonable residential HVAC maintenance issues. Some of the processes, such as performance tests and airflow measurements, typically require professional A/C and Heat Pump service techs. Others inspections can be accomplished with a minimum of visual attention to common factors, and can be performed by an unassisted Gilbert homeowner.

## SCOPE of Content

The basic approach herein assumes generic guidance, and must be treated as such. However, following these basic checklists can help you get your home HVAC equipment up to a standard for reasonable and reliable service.

The enclosed checklists, testing procedures, recommended corrective processes, and

This paper also assumes that your Gilbert home HVAC equipment was designed, sized and installed according to industry standards, applicable legal codes, and the associated original equipment manufacturers specifications.

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### ***1.0) PURPOSE – Define basic air conditioning and heat pump service procedures***

Performing regularly scheduled HVAC system assessments, maintenance, and corrective repairs extends component and system efficiency, advances national efforts to ensure healthy clean air, promotes reduced utility expenses, helps reduce the occurrence of unexpected failures, and promotes longer a longer system life cycle. Furthermore, efficient home air conditioning benefits both the environment and the local homeowner.

### ***2.0) FACTORS – That Affect Maintenance of Residential HVAC Systems***

Although all HVAC contractors approach equipment maintenance and service with some degree of customized exceptions, they must all weigh in with a balance between service types and service intensity. Furthermore, they must also strive to operate within the established standards for reasonable A/C and Heat Pump inspection and maintenance requirements.

Factors that affect the approach and processes associated with servicing air conditioning equipment include:

#### **2.1) Type of Service**

- Clean and Check
- Seasonal Tune-Up
- Full Maintenance Services

#### **2.2) Condition of Existing Equipment**

#### **2.3) Efficiency and Accuracy of the Original System Installation**

#### **2.4) Regional Locations**

### ***3.0) IMPLEMENTATION – System deficiencies, detect and correct***

Whether performing your own maintenance inspection or working with an HVAC contractor, implementation of the inspection seeks to detect system deficiencies that do or can impair the performance of the system. Once deficiencies are discovered, you must define the actions necessary for correcting the revealed problems.

Typically, you work with a appropriately licensed Gilbert HVAC contractor. As such, some of the following responsibilities and components of an A/C maintenance inspection fall upon the contractor and some fall upon the homeowner. Thus we assume that your situation falls within the following normal perimeters:

#### **3.1) Responsibilities specific to the HVAC contractor:**

- ❑ Inspect and evaluate your existing A/C or Heat Pump system according to basic occupant health and safety issues, local Gilbert HVAC building codes, manufacturer specifications and warranty regulations, national and local environmental regulations and building codes, and all applicable and reasonable industry service standards
- ❑ Provide the homeowner with documented findings concerning faulty performance issues, a recommendation of corrective requirements, and a fixed cost for completing the recommended repairs.

### **3.2) Responsibilities Specific to the Homeowner:**

- ❑ Talk. Listen. Understand.
- ❑ This is your home. You alone must make certain that reasonable HVAC service and maintenance is performed on schedule
- ❑ Use an appropriately bonded, certified, insured and licensed Gilbert HVAC contractor
- ❑ Get estimates in writing
- ❑ Follow up to ensure that all discussed corrective services were performed as defined

### **3.3) Regional Considerations**

You live in Gilbert, Arizona, a region with unique weather characteristics. In some ways, regional A/C and Heat Pump service guidance differs from other parts of the nation. The inspection must allow for applicable Gilbert codes, manufacturer equipment accessories, municipal ordinances, and the distinctive characteristics of your home.

### **3.4) Choose the Right Gilbert Contractor**

Legitimate HVAC contractors are bonded, insured and licensed to perform air conditioning maintenance, installation and repair within their chosen region of service. Other points to consider:

- ❑ Is the contractor certified by a legitimate HVAC resource?
- ❑ Are the technicians trained and reliable?
- ❑ Do they have experience with your specific brand of heating and cooling equipment?
- ❑ Do they have ready access to system and subsystem components?
- ❑ Can they demonstrate a reliable service record?

## MAINTENANCE AND PERFORMANCE CHECKLIST

### 1.0) Air Distribution Components Checklist

Task	Recommended Correction
<input type="checkbox"/> Air Filter Particulate Accumulation	Clean or replace filters
<input type="checkbox"/> Integrity - Air Filter Housing	Repair or replace as necessary
<input type="checkbox"/> Diffusers, Grilles and Registers	Clean as needed
<input type="checkbox"/> Accessible Ductwork Clean.	Install additional access doors as needed
-	
<input type="checkbox"/> Accumulated moisture	Eliminate leakage. Open drains
<input type="checkbox"/> Biological Growth	Clean. Replace as needed. Contract for professional removal
-	
<input type="checkbox"/> Ductwork, including straps, mastics, insulation, joints and seams.	Repair ductwork, associated insulation, and exterior vapor retarders.
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### 2.0) Temperature Management Checklist

Even the best of the best heating and cooling equipment can be overworked.

- Set thermostats between 77-79 degrees
- Consider installing a programmable thermostat
- Increase nighttime cooling to 78-80 degrees
- Health conditions or certain equipment may require different settings

### 3.0) System Freeze Up Checklist

- Check fuses to confirm that the unit is receiving power
- Set blower fan to manual to confirm blower functionality
- Ensure that registers are functional
- Remove obstructions (furniture, draperies, pets) that block the return vent
- Trip the fuses and wait several hours for the system to thaw out.

For proper A/C or Heat Pump System maintenance or if a problem persists, contact American Cooling And Heating for all of your Gilbert A/C Services at: (480) 699-2516 or visit: <http://www.americancoolingandheating.com/ac-service-gilbert-az>

Disclaimer:

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