

# Electrical System

## DESCRIPTION OF ELECTRICAL SYSTEM

<b>Size of Electrical Service:</b>	•150 Amps, 120/240 Volt Main Service
<b>Service Entrance Wires:</b>	•Overhead •Copper
<b>Main Disconnect:</b>	•Breakers •Located On The Exterior Wall •Main Service Rating 150 Amps
<b>Service Ground:</b>	•Copper •Ground Connection Not Visible
<b>Main Distribution Panel:</b>	•Breakers •Located On The Exterior Wall
<b>Branch/Auxiliary Panel(s):</b>	•Breakers •Located Near The Air Conditioning System
<b>Distribution Wiring:</b>	•Copper
<b>Receptacles:</b>	•Grounded
<b>Ground Fault Circuit Interrupters:</b>	•Garage •Bathroom(s) •Kitchen

## ELECTRICAL OBSERVATIONS

The size of the electrical service is sufficient for typical single family needs. All 3-prong outlets that were tested were appropriately grounded.

Ground fault circuit interrupter (GFCI) devices have been provided in some areas of the home. These devices are extremely valuable, as they offer an extra level of shock protection. However, because they are mechanical they should be tested every 30 days to insure that they are functioning properly.

Dedicated 220 volt circuits have been provided for all 220 volt appliances within the home. All visible wiring within the home is copper. This is a good quality electrical conductor.

Inspection of the electrical system revealed the need for improvements. They should be considered high priority for corrective action. *Unsafe electrical conditions can represent a shock or fire hazard.* A licensed electrician should be consulted to undertake the improvements recommended below along with any other defects that may be found.

### RECOMMENDATIONS / OBSERVATIONS

- The installation of a ground fault circuit interrupter (GFCI) outlet is recommended at all exterior locations. A ground fault circuit interrupter (GFCI) offers protection from shock or electrocution.
- An outlet in the front bedroom east wall has reversed polarity (i.e. it is wired backwards). This wiring of this outlet should be corrected.
- Extension cords, such as those found in the garage, should not be used as permanent wiring. Extension cords are reported to be the number one cause for fires in homes.
- There appears to be an oversized breaker in the main panel which supplies over current protection for the electrical system. It is important that it (they) be properly sized to reduce the possibility of overheating and the potential for fire.
- The "back fed" main service disconnect breaker should be secured in place by an additional fastener "lock down". After this fastener has been installed this wiring method is considered safe.
- According to the manufactures recommendations on the data plate the breaker serving the air conditioner is oversized. It should have a 30 amp breaker instead of a 40 amp breaker.

### DISCRETIONARY IMPROVEMENTS

Additional outlets in some areas of the home may be desirable.

## LIMITATIONS OF ELECTRICAL INSPECTION

As prescribed in the pre-inspection contract, this is a visual inspection only. The inspection does not include low voltage systems, telephone wiring, intercoms, alarm systems, TV cable, timers or smoke detectors. The inspection of the electrical system was limited by (but not restricted to) the following conditions:

- Electrical components concealed behind finished surfaces or covered with insulation are not inspected.
- Only a representative sampling of outlets and light fixtures were tested.
- The ground connection for the electrical service was not visible at the time of the inspection.

Refer to the pre-inspection contract for a further explanation of the scope of this inspection.