

## **A. Occupation Health & safety**

### **A1 Electric Shock**

Electric shock is most unpleasant and can be fatal. It is important to adopt safety rules to avoid making contact with live parts. See section C6 for more details.

#### **A1.1 Safety Rules**

1. Turn off and pull out the plug when making repairs to electrical appliances  
The reason for turning off and pulling out the plug is because the power point may be wired incorrectly and the switch may not turn off the power. The machine still has 240V on the neutral. I have come across many incorrect wired power points indicated by the tester describe in appendix 1.(A1.2). Another reason is the switch contacts may weld together and the switch does not disconnect the power.
2. Only test appliances when plugged into a portable safety switch (RCD) and an ammeter as described in appendix A
3. Only work when you are not tired, affected by alcohol or drugs.
4. Wear rubber soled shoes or boots. If your socks get damp when you stand in a puddle of water it is time to buy a new pair. Rubber sole will develop cracks when they become old, allowing water to enter. This lowers the insulation of the boot!
5. When making repairs it is often necessary to touch or put tools on possible live wires or terminals. Before touching them check to make sure that the lead is unplugged. Make it a habit, even if has been unplugged..
6. Use insulated screw drivers, but use other safety work practices as the first line of defense.
7. Be aware of charges in capacitors, they can give an electric shock. See section F7.4 and D6 for more details.

#### **A1.2 Testing Live Equipment**

Sometimes it is necessary to test live equipment to make voltage measurements or to power up an individual component to test it. This should be done with great care!

1. Power up using a safety switch. Rule 1.1.2 above.
2. Turn off the power and unplug as soon as you have finished. the test. You can forget to do this, think about something else and later touch live wire or terminals.
3. Before power up make sure that you can put the voltmeter probe on the required location, keeping safe distances from live components and moving parts.
4. Keep other people a safe distance away.
5. When working on live equipment use only one hand and it is best to keeping the other hand in a pocket. See section C7 for the reason.

### **A2 Cuts**

White goods are made from sheet metal, and when cut by shears; a sharp edge is often present. This can cause cuts. Be careful. Always keep a supply of band aids to put on your cuts. Gloves are not always a practical to wear.

### **A3 Infection**

Contact with wash water in washing machines can be a source of infections. Avoid contact. Wash hands if contact is made.

## A4 Manual Handling

Washing machines and refrigerators are heavy and can cause lower back problems. Correct manual handling techniques are essential!

1. Make sure the path is clear of obstacles.
2. Size up the load.(weight,size,shape). Consider your physical ability. Consider lifting aids (trolleys, block & tackle etc). Consider team lifting such as using two people.
3. Place your feet close to the object to be lifted, with your feet shoulder width apart.
4. Bend your knees. Grip the load firmly and hold it close to your body.
5. Use the strong leg muscles to lift the load. Lift smoothly avoiding sudden accelerations. Keep your back as straight as possible and breath out.
6. Carry the load with the arms fully extend with the load resting on your body. Move your feet in the direction of travel. Avoid twisting of your hips or shoulders.
7. Setting down is just as important. Lower the load with your leg muscles in the same manner as lifting.

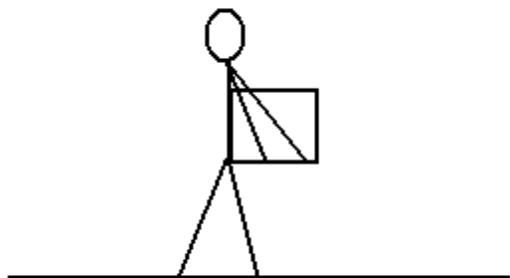
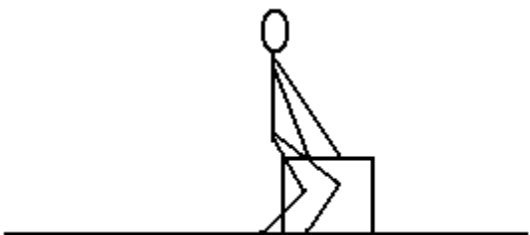
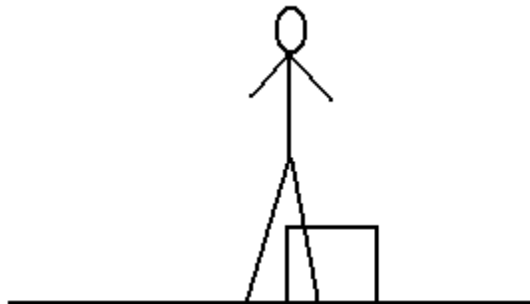
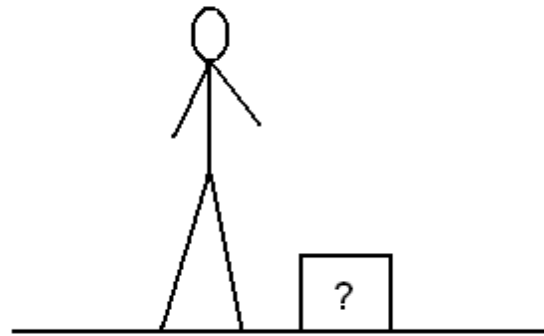
### Hints on manual handling

To minimize lifting store heavier and frequent used items at waist height.

Lifting objects that are at head heights or above can be hazardous. You may start to lift and then discover it is too heavy and it may fall. Also if the box contains loose objects they may fall out during the lifting.

It is best to push a trolley on smooth surfaces but pull it on rough surfaces as it help to move over the rises.

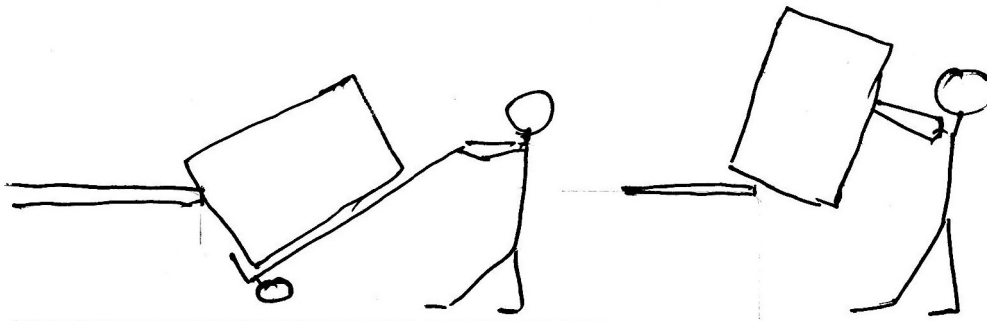
A large proportion of your body weight is above your hips. This needs to be supported if you bend over. Instead of bending back, kneel down and keep your back vertical. I find this technique helpful when repairing dryer laying on there front. Also when repairing washing machines with parts close to the floor it is easier to lay on the floor than to bend. These techniques are easier on the lower back.



*Illustration 1: Correct Lifting*

**Lifting a Machine onto a Ute or Trailer etc.**

Wheel the trolley to the edge of the trailer, place the front of the machine on the trailer. Push the machine forward letting the trolley drop. Push or walk the machine forward until it is on the trailer. This way not all the the machine is lifted at once.



*Illustration 2: Lifting onto a Trailer*