



TOOLBOX INFORMATION SESSION

USING FALL ARRESTERS

INTRODUCTION

Many of the tasks you perform require you to work at heights or in difficult locations. It is not always practical to work from fixed platforms, scaffolding or elevating work platforms.

The risk of falling and suffering a severe injury while performing these tasks is high. It is a requirement for any job which requires you to work at heights, that you use the appropriate fall arresting system and devices.

To reinforce the necessity for using fall arresting equipment, today we will discuss:

- what is meant by fall arresting equipment;
- situations that could cause a fall;
- selecting the appropriate equipment;
- inspecting fall arrest equipment;
- maintaining fall arrest equipment; and
- correctly fitting and wearing fall arrest equipment.

There are many different brands and styles of fall arresters in use and it is not possible to cover all of them today. We will be focusing on the most common types.

Before we discuss the selection of equipment, we need to understand what we mean by fall arrest equipment and devices.

FALL ARRESTING EQUIPMENT AND DEVICES

The fall arresting system is not just a rope and a harness. There are many components including:

- the belt or harness;
- the belay attachment;
- shock absorbing lanyards;
- retracting lanyard and recoil or rewind device (inertia reels);
- equipment slings;
- attachment brackets;
- rope grab devices;
- auto-stop descenders;

- anti-fall devices;
- ladder cable systems;
- life lines or static lines;
- winches;
- roof anchors;
- ropes; and
- karabiners and other hardware.

It very important to know what equipment makes up the system you may be using. There is a **fundamental rule** we all must know and comply with when a fall arrester has been used.

The rule you must comply with is:

“IF A FALL ARRESTING SYSTEM AND DEVICES HAVE BEEN USED TO ARREST A FALL, ALL ITEMS MUST BE WITHDRAWN FROM SERVICE AND BE INSPECTED BY A QUALIFIED PERSON.”

FACTORS AND SITUATIONS THAT COULD CAUSE A FALL

Some of the factors that could cause a fall are:

- moving from one surface to another at heights;
- uncovered holes and openings;
- open ledges not barricaded;
- uneven surfaces;
- moving surfaces;
- poor lighting;
- unsuitable foot wear;
- slippery surfaces;
- wind or rain;
- being struck by falling objects;
- incorrectly using a ladder; and
- incorrectly using fall arresting equipment.

We must remain alert to the hazards of the workplace. Job Safety Analysis techniques should be used to identify the risks and hazards. If in doubt, ask your supervisor.

SELECTING THE EQUIPMENT

The selection of equipment is driven by the nature of the task and its location.

There are a number of factors to be considered in deciding the equipment to use.

Some of the main factors to consider when choosing your equipment include:

- the height you will be working at;
- if you will be in a confined space;
- the length of time you will need to perform the task;
- the flexibility of movement required to perform the task;
- the proximity of the task to the anchor points; and
- the number of people required to perform the task.

These factors need to be taken into consideration when you are selecting the harness or belt and the type and style of lanyards and ropes you will need.

As you can see, there are many varieties of harnesses and belts.

It is strongly recommended that a safety harness be used rather than a safety belt.

The advantage of a full body harness is that it spreads the shock loading on the body in the event of a fall and therefore reduces the risk of internal injury.

The attachment point for the fall arrest harness is at the top of the back of the harness.

NOTE: A fall arrest device should not be used as a positioning device.

A suitable structural anchor must be selected by a **qualified person**.

INSPECTION OF FALL ARREST EQUIPMENT

When the equipment is in continuous use, it must be inspected by a qualified person at least every week

The manufacturer's inspection information and recommendations must be used as a guide.

During the inspection, particular attention needs to be paid to a number of specific points.

There are four basic components of fall arresting equipment. These are:

1. **Mechanical devices**

- ensure the free movement of all moving parts;
- check the spring tension on any spring device;
- manually check the locking devices;
- clean all dirt, sand, grit, grease etc. from the device. Clean as much as possible, without dismantling the device;
- look for signs of corrosion; and
- look for cracks or any other physical damage.

2. **Flexible anchorage lines** that need to be checked for:

- signs of wear;
- cuts;
- looseness;
- extension;
- corrosion; and
- stiffness.

NOTE: If they have been installed for some time, fibre rope and webbing lines that retract may increase in diameter, due to fluffing of the fibres. If this occurs, **discard the lines immediately.**

3. **Ridge anchorage lines** need to be inspected to ensure:

- the connecting fittings are in good order and not corroded;
- all fittings are tight; and
- the equipment is free from dirt, grease etc.

4. **Fall arrest harness and connectors** need to be inspected for:

- abrasive wear;
- cuts;
- oil or grease damage;
- damage to stitching and built-in connectors; and
- damage to karabiners and other hardware.

NOTE: Equipment that has been in long-term storage must be thoroughly inspected before use. In fact, all equipment must be inspected every 12 months.

MAINTENANCE OF FALL ARREST EQUIPMENT

Maintenance and correct storage of fall arresting equipment is critical. Your life depends upon it.

The maintenance and storage of your equipment must conform to Australian Standard AS 4626.

Maintenance

The majority of maintenance is carried out during the routine inspection of the fall arresting equipment.

The maintenance consists of cleaning and checking the securing equipment.

A service label is essential for each device. The label is used to identify the equipment, by number or name, and to record the last service date.

Storage

Fall arrest devices and anchor lines should be stored in a cool, dry place, preferably, a cabinet with ventilation.

The equipment must be cleaned, inspected and stored away, immediately after use.

If the anchor lines are made of a synthetic material, they must not be subjected to direct sunlight while in storage.

Keep the storage area free of corrosives, dust, water, excessive heat and humidity.

The manufacturer's recommended cleaning instructions **must be followed**.

Record keeping

A record card and history sheet is kept for each device and anchorage line.

The record card and history sheet should have the following information:

- the name and address of the manufacturer or supplier;
- the manufacturer's batch number or serial number;

- the year of manufacture;
- what belts and harnesses are suitable in different kinds of weather (complying with AS 1891);
- details of the recommended connectors for safety belts or safety harnesses, including the maximum length of the connector to be used;
- details as to which line is to be used with the device;
- where applicable, a statement that the device meets the requirements of AS 1891.3 for use in potentially flammable or corrosive atmospheres;
- the date of purchase;
- the date first used; and
- the dates of services and tests.

HOW TO CORRECTLY FIT AND WEAR FALL ARREST EQUIPMENT

Device Rigging

The rigging and setting up of static lines, more permanent anchor points and lines, must be done by a trained person.

Anchor lines should be securely attached to structural members by means of a hook, sling, shackle, eyebolt, permanent fixture or similar device, as stated in the manufacturer's instructions.

Note: A fall arrest device, anchor point or anchorage line, must not be used to secure more than one person.

Fitting and Wearing Fall Arrest Equipment

There are many types of fall arresting harnesses available. It is, therefore, important that the manufacturer's recommendations are followed when fitting and wearing fall arresting equipment.

There are a number of simple rules to follow when fitting and wearing harnesses and belts.

Some of the rules to follow include:

- visually checking the harness to ensure all components are fitted (e.g. cross tabs or standard attachments);
- fitting the harness and tightening the straps and waist belt so they are firm, but comfortable;

- making sure none of the straps are twisted and that they lay flat against your body;
- ensuring the harness attachment for a full body unit sits between your shoulder blades; and
- checking that your movements are not restricted.

SUMMARY

Fall arresting equipment is designed to reduce the risk of injury caused by falling from elevated working positions.

Every job or task you perform at height that requires you to work outside a guarded platform or scaffolding requires the use of fall arresting equipment.

There are a number of situations and factors that could cause a fall:

- moving from one level to another;
- unprotected holes and openings;
- open ledges;
- uneven surfaces;
- moving surfaces;
- being struck by moving objects;
- incorrectly using a ladder;
- wind or rain; and
- incorrectly using fall arrest equipment.

Select the most appropriate type of harness for the task. Follow the manufacturer's recommendations for the most suitable equipment for the task.

Ensure the equipment is regularly inspected and cleaned. Discard any suspect equipment.

Remember, you must remain alert to the hazards of the workplace. Job Safety Analysis techniques should be used to identify the risks and hazards. If in doubt, ask your supervisor.

IF A FALL ARRESTING SYSTEM AND DEVICE HAS BEEN USED TO ARREST A FALL, ALL ITEMS MUST BE WITHDRAWN FROM SERVICE AND BE INSPECTED BY A QUALIFIED PERSON.