

Introduction to Carpet Cleaning (Daily Maintenance) – course notes

Course Overview

This introductory carpet cleaning course covers the carpet cleaning tasks involved in routine or regular maintenance of carpeted floors; and in particular vacuuming and simple stain removal. It requires the ability to assess the extent of cleaning required to meet client requirements. Selecting the appropriate equipment, chemicals and methods is essential to performing the task safely and efficiently.

In this course you will learn the following:

Section 1 - Carpet construction and fibres

Section 2 - Identify soils and condition of carpet

Section 3 - Equipment selection - vacuum cleaners

Section 4 - Safe and efficient vacuuming techniques

Section 5 - Stain Removal

Section 6 - Restore work, clean and store equipment

This course covers all required knowledge content for the following competency units:

CPPCLO2004A Maintain carpeted floors

CPPCCL2007A Perform basic stain removal

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Section 1- Carpet construction and fibres

When you finish this section you will have an understanding of the following concepts and ideas:

- Introduction – a brief history of carpet
- Carpet construction
- Carpet styles
- Carpet fibres

1.2 Introduction - a brief history of carpets

Carpet and rugs have been around for thousands of years.

However, the modern carpet industry started in the industrial revolution in the late 1700's and early 1800's with the invention of the steam engine and industrial manufacturing.

The manufacture of carpets evolved from the first woven carpets in the early 1800's to the first tufted carpets in the early 1900's.

Until about 1954, cotton and wool were virtually the only fibre used in tufted products.

Manmade fibres including polyester, nylon, rayon, and acrylics were developed during the latter part of the 1900's after World War II.

Nylon was first introduced in the United States in 1947 and grew quickly to become the number one carpet fibre in that country.

Most manufacturers will agree that the single most important development in the industry was the introduction of bulk continuous filament nylon yarns. These yarns provided a luxurious quality, durable carpet, similar to wool, which was more economical to produce. Therefore, a durable, luxury product was offered to the consumer for less money.

In Australia, the three major fibres used in carpets are nylon, wool and polypropylene (polyolefin). Some carpets are made of blends e.g. 80% wool with 20% nylon is a common blend.

Despite the competing claims of fibre suppliers, no one fibre necessarily makes a better carpet. Good carpets are made from good raw materials and components.

1.3 Carpet construction

There are three main types of carpet made in Australia. These are woven carpet, tufted carpet, modular carpet tiles and flocked carpet (Flotex). We will take a brief look at the key characteristics for each of these types of carpets.

Woven Carpet: This is the traditional method of making carpet and the process dates back over 200 years. Woven carpet is sometimes referred to Axminster or Wilton.

The manufacture of woven carpet is slow and labour intensive. As a result they are expensive to purchase.

Weaving involves threading continuous filament into various patterns and designs onto a support structure which provide stability to the weave. The process of weaving rugs, cane baskets and thatched roofs for houses has been around for thousands of years.

Tufted Carpet: The tufting process is similar to the action of a regular sewing machine. A cloth (called primary backing) is passed underneath a long bar containing hundreds of individual needles carrying the carpet yarn through the eye of those needles.

The needles insert yarn into the backing cloth. The result is loop pile carpet.

When cut pile carpet is required, a blade cuts the loop, which forms two legs of yarn, or a cut pile surface.

The tufted cloth then has glue applied to the back of the carpet and a second fabric backing glued to the back of the carpet.

Tufted carpet is the most common carpet found in both commercial and residential markets due to its lower cost of manufacturer. Tufted carpet represents over 90% of carpet manufactured around the world.

Modular Carpet (Tiles): Modular carpet or carpet tiles are produced by inserting tufts into a PVC or bitumen compound which has been coated onto a backing fabric. Modular carpet is produced mainly for the contract market.

Flocked Carpet: Flocked carpets are a type of bonded carpet where individual fibres are embedded end-on into an adhesive coated backing cloth by applying an electrostatic charge. The length of the fibre is generally limited to 2-3 mm.

1.4 Carpet styles

There are two basic carpet style cut pile and loop pile. They can also be combined in one surface design to create a cut and loop style. These styles can also produce a vast range of different surface effects that are known as styles:

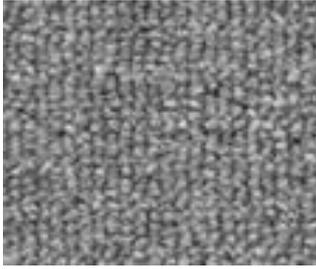
Cut pile styles

The table below contains information on the most common types of "Cut Pile Styles".

1.5 Carpet Styles - Cut pile styles

Carpet Styles - Cut pile styles		
Cut pile		There are different classifications of cut pile carpets, and these refer mainly to the twist level of the pile yarn and description of the pile length.
Saxony		Another popular cut-pile style, a Saxony has a relatively high pile and the end of the tuft flairs slightly to produce a luxurious smooth surface. 'Plush' or 'velvet' cut pile constructions are similar to the Saxony but have a lower pile height and tighter tuft definition (with little to no 'tip flair')
Plush		Plush is also a level-cut pile. The yarn has a little more twist than a velvet pile carpet, and is usually set to retain this twist (water, steam, dye or chemical setting are used to set wool yarns).
Cut and Loop		Also known as carved or sculptured pile, it is basically a cut pile carpet with areas of loop pile designed into it.
Hard Twist		The hard twist style is also known as Frieze (pronounced 'freezay') or curled pile. A cut pile style with a 'textured' finish made up of highly twisted tufts that curl slightly at the pile surface. The yarn is tightly twisted then heat set to give textured look to the pile surface. The pile appears to lay randomly.
Shag		The pile tufts are very long and create a low density construction, because the spacing of the tufts is more open than other carpet constructions.

1.6 Carpet Styles - Loop pile styles

Carpet Styles - Loop pile styles		
Level Loop		A simple loop pile with tufts of equal height normally in a 'tight' construction using fairly fine yarn.
Berber, Heather, Tweed		Normally made of thicker yarns tufted into chunky loop tufts and usually of earth tones with a flecked or mottled appearance. Berbers can also be produced in a cut pile construction.
Sisal / Cord		These names are used inter-changeably but they generally refer to a heavily textured loop pile carpet. A sisal/cord carpet has a similar look to the traditional mat floor coverings made from plant fibres, but in carpet, it is a much more stylish and comfortable alternative. The loop lines can be either uniform height or a sequence of alternating low and high lines.
Multi-Level Loop		This is also referred to as high-low loop or sculptured loop. As these names imply, this carpet is made up of different pile heights, two or three heights being the most common. The difference in height creates a surface that can be described as sculptured, with the pattern appearing to have been carved from the carpet.

1.7 Carpet fibres

This page provides information about the five most commonly used carpet fibres.

Each type of fibre has its own characteristics.

Wool is a very good material for carpet fibre.

Wool naturally resists general soiling, crushing and most stains.

Another benefit of wool is that it is naturally resistant to fire (fire-retardant).

The soft look and the rich feel of wool is still unmatched by any artificial fibre. Wool carpets are used for their long-lasting qualities.

The main problem with wool is that it is very expensive.

Nylon is the most commonly used fibre in carpet production because it is long lasting and much cheaper than wool. Further, it is one of the easiest carpets to clean and maintain.

Nylon is also easily dyed and can be designed for any type of use and traffic. It can also be recycled.

Wool Nylon Blends generally consist of 80% wool and 20% nylon.

The result of combining these two fibres is carpet with the softness of wool along with the durability of nylon.

The main benefit of wool nylon blends is the extension to the wear life of the carpet.

This carpet fibre blend is the most commonly used carpeting in commercial buildings/offices due to its all round performance properties and natural fire resistance.

Polyester fibres have natural and permanent stain resistance including relatively good wear resistance making it suitable for commercial offices.

Polyester is a cheaper fibre and is therefore used in lower priced carpets.

Polypropylene (Olefin) carpet does not colour fade making it suitable for outdoor carpets.

Polypropylene carpet does not wear as well as wool or nylon, however it is popular because it is used to make cheap carpets.

Section 2 - Identify soils and condition of carpet

When you finish this section you will have an understanding of the following concepts and ideas:

- How carpet soils
- Types of soils
- Planning an effective carpet maintenance program
- Why develop a Carpet maintenance program
- Developing a Carpet Maintenance Program
- Preventative maintenance - Entrance Matting

2.1 How Carpet Soils

Soiling is an on-going process. Any material, which is foreign to the carpet, is called soil. There are (3) three major factors that cause all floor coverings to become dirty:

Tracked-in Soils: Soil is tracked in and transferred to floor coverings from dirty shoes and wheels on trolleys and wheelchairs. Soils build-up near the entranceways and is gradually tracked into the main walkways.

Airborne soils: Airborne soils include fine dust, smoke and vaporised oils from cooking and pollutants that settle on carpet.

Spills: Spills happen every day. Spills like food and beverage spills, medicines, human and animal excretions, deposit wet, oily and dry soils onto floor coverings.

2.2 Types of soils

There are many different types of soils in the indoor environment. In order to remove soiling, you will need to learn how to identify the different types.

The most common types of soils are **Dry soils** and **In-ground (oily) soils**:

Dry soils are mostly removed by vacuuming carpets on a regular basis and include:

Dust (tiny, powder-like particles).

Fine particulate matter (less than 7 micro metres) which includes dust mite faeces (droppings), tobacco smoke and other environment hazards.

Dirt (larger soil particles, walked in on people's shoes).

Grit (even larger pieces of dirt, like very small stones).

Litter (larger objects like paper, discarded wrappers, paperclips).

In-ground (oily) soils are generally sticky and require a detergent and agitation to remove from the carpet.

Gum & Tar (such as chewing gum, glue, asphalt or sealants).

Stains and spots.

Spillages (marks on the floor where liquid has spilled).

Cigarette burns.

Oily Soils are removed from carpet using detergents to break down oily films and release these films from the carpet fibres (pile).

The oily substances are sticky and hold dirt to the carpet fibres, preventing their removal during vacuuming.

Oily soils are mostly comprised of oils from cooking, oils tracked in on people's feet from road grime and spillages on carpets.

Oily soils can only be effectively removed using a wet cleaning method and carpet detergent to emulsify (break down) the oily films for removal from the carpet pile.

2.3 Planning an effective carpet maintenance program

The appearance and performance of a carpet depends upon how well it is cleaned and in particular how well it is vacuumed. A correctly cleaned carpet will look better and last longer.

Most commercial carpets are made of darker colours to hide soils and stains.

When we look at a carpet maintenance program we need to understand there is a big difference between routine cleaning and periodic (project) cleaning.

Routine cleaning involves an effective vacuuming and stain removal schedule. Effective routine cleaning, particularly in high traffic areas such as hallways and corridors is the single most important process in maintaining a carpet.

Soil is introduced to the carpet every day and if you do not have an effective program to remove the soil it will build up in the carpet pile, which can lead to damage and permanent staining.

Over a period of time oily soils will be walked onto the carpet; mostly from people's shoes. This oily soil holds dirt and other soils in the carpet. These oily soils are not removed by vacuuming alone.

The only way to remove the oily soils is to perform a project cleaning process such as steam cleaning (hot water extraction) or shampooing.

Maintenance Plan and Schedule – the five elements

A quality carpet care program consists of five cleaning elements:

- (1) **Keep soil out** –using entrance matting.
- (2) **Regular vacuuming** – to remove dry soil
- (3) **Regular stain removal** - using professional spot removal techniques.
- (4) **Interim cleaning** – using a pile lifter – a very powerful vacuum cleaner which lifts the pile to remove dry soil and improve carpet appearance.
- (5) **Project (restorative) cleaning** – using hot water extraction or shampooing.

2.4 Why develop a Carpet maintenance program

Asset Management means protecting the life of the asset which is the carpet. Maximising carpet life means the carpet will look good for longer and present a better working environment for the people working in and visiting the building.

Appearance Management: We all like to have our buildings and homes looking their best at all times. A well planned carpet cleaning program will keep the carpet looking like new for longer.

Healthier Indoor Environment: An effective carpet cleaning program will keep soils out of the building and contribute to improved indoor air quality.

Reduce Restorative Maintenance: Over a period of time oily soils will build up, hold more soils in the carpet and reduce carpet appearance. Performing project cleaning (steam cleaning and shampooing) will help maintain a high quality appearance.

Understand the traffic loads: Traffic loads are the number of people who walk on a floor each day. For the purposes of this example we classify the traffic loads as Light, Medium and Heavy as follows: Areas of higher foot traffic will obviously attract more soil and require more frequent vacuuming.

1. Light: Under 200 foot traffics per day.
2. Medium: 201-600 foot traffics per day.
3. Heavy: 600+ foot traffics per day.

Understand the use and importance of the area: When cleaning a building it is also necessary to understand the importance of the area and take this into consideration in our cleaning schedule. Areas of higher importance should be cleaned more regularly and more thoroughly. Some examples include:

1. High Profile: Lobby's, reception, customer service and sales areas.
2. Low Profile: Employee usage only.

2.5 Developing a Carpet Maintenance Program

When we look at developing a carpet maintenance program for a building we should think about the number of people walking on the carpet, the amount of soiling and staining. When we understand foot traffic and staining we can then design a carpet cleaning program to suit the building.

The four different vacuuming techniques are:

Full Vacuuming – means vacuuming the entire area from wall to wall. This is obviously very time consuming and should only be completed on a daily basis in high traffic areas.

Traffic vacuuming – means only vacuuming the areas of carpet where people walk

Detail vacuuming – means vacuuming edges, under tables and furniture. Generally these are areas that are not walked on.

Spot Vacuuming – means only vacuuming areas where there is visible soil, litter etc.

The type of vacuuming technique should depend upon the area as outlined below.

High profile, high traffic: Full Vacuum every day in high traffic areas such as entrances, lobbies and reception areas.

High profile, low-medium traffic: Traffic Vacuum every day in high traffic areas such as corridors and meeting rooms.

Low profile, low traffic: Spot Vacuum every day low traffic areas such as office and administration areas.

2.6 Preventive maintenance - Entrance Matting

The first step in any cleaning program should be to stop dirt entering the building. This is called preventative maintenance.

Cleaning outside entrances and using the correct size floor mats will stop 80% of soils entering a building.

For entrance mats to work properly (collect dirt on people's shoes) they need to 2-5 metres in length. Longer mats will trap more dirt. Ideally mats should be long enough for a person to walk 4 to 5 steps.

Dirt and soils walked into a building damage floors. You can see when you look at the entrance to an older building you will often see the floor is heavily worn at the entrance.

Outside entrance mats should have a coarse texture to brush soil from shoes and to hold large amounts of soil.

Inside entrance mats are designed to absorb (soak up) water and dirt from people's shoes.

Cleaning Entrance Matting

Mats must be cleaned every day. If the mats fill up with soil they will no longer trap dirt.

There are many different varieties of entrance matting. You will need to refer to the manufacturer's guidelines for specific cleaning instructions.

Did You know?

According to industry studies, up to 11 kilos of dirt can be tracked in by just 1,000 people coming through an entrance over a 20-day work period. The true costs of floor coverings over a monitored period of 8 years are represented by:

Floor covering installation 10 %

Floor covering Repair 4%

Floor covering Maintenance 86%

Entrance matting can reduce cleaning costs by up to 65%.

Section 3 - Equipment selection - vacuum cleaners

When you finish this section you will have an understanding of the following concepts and ideas:

- History of the vacuum cleaner
- Effective vacuuming
- Modern vacuum cleaner configurations
- Understanding vacuum filtration

Click "next" to continue.

3.1 History of the vacuum cleaner

In 1907, James Murray Spangler, a cleaner from Canton, Ohio, invented the first practical, portable vacuum cleaner.

Unable to produce the design himself due to lack of money, he sold the patent in 1908 to his cousin's husband William Henry Hoover who had Spangler's machine redesigned with a steel casing, casters and attachments. Subsequent innovations included the first disposal filter bags in the 1920s and the first upright vacuum cleaner in 1926.

In the United States and other countries, the Hoover Company remains one of the leading manufacturers of household goods, including vacuum cleaners.

In 1910, P.A. Fisker patented a vacuum cleaner. The name Nilfisk came from the companies telegram address.

The Nilfisk vacuum cleaner was the first electric vacuum cleaner in Europe. It weighed 17.5 kg and could be operated by a single person. Today the Nilfisk vacuums are manufactured by Nilfisk-Advance.

3.2 Selecting a vacuum cleaner

When selecting a vacuum cleaner look for quality to reduce the long-term cost of maintaining or replacing the equipment.

Poor quality vacuum cleaners may continue to operate, but cleaning efficiency can deteriorate quickly, and equipment repair or replacement costs are high.

Consider efficient filtration. A vacuum cleaner that has an extremely high air flow (suction) has very little value if dust and other contaminants pass through the vacuum bag and are then pump back into the building.

Most vacuum cleaners are supplied with numerous specialised attachments, such as tools, brushes and extension wands, which allow them to reach otherwise inaccessible places or to be used for cleaning a variety of surfaces. The most common of these tools are:

- Hard floor brush (for non-upright designs)
- Powered floor nozzle (for canister designs)
- Dusting brush
- Crevice tool
- Upholstery nozzle

3.3 Types of commercial vacuum cleaners

The three most popular commercial (professional) vacuum cleaners are:

- Backpack
- Upright
- Canister

Backpack vacuum cleaners are the most commonly used vacuum for commercial cleaning because they allow the user to move more quickly around desks and chairs.

Statistics from one of the industry's independent cleaning bodies, prove back pack vacuums are almost twice as quick as a canister vacuum or upright vacuum.

The main disadvantage of a backpack is they are noisy for the user because the motor is close to the operator's ear and they can be very hot in summer with the vacuum strapped on the user's back.

Upright vacuum cleaners are popular in healthcare, aged care and hotels.

The upright vacuum uses a rotating brush, which is sometimes referred to as a power head. The combination of vacuum and rotating brush offer a much deeper clean when compared to backpack or canister vacuums.

The vacuum also contains a multi-stage HEPA filter system which captures more dust than other types of vacuums.

Canister vacuums are very popular in the hospitality industry due to their small size and portability (easy to move).

Their main advantage is flexibility, as the user can attach different cleaning heads for different tasks.

They are also easy to move around to clean under furniture.

Other types of common vacuum cleaners include:

Drum or shop vacuums are heavy-duty industrial versions of canister vacuum cleaners.

Wet or **wet/dry** vacuum cleaners can be used to clean up wet or liquid spills. They are generally designed to be used both indoors and outdoors.

Cyclonic are portable vacuum cleaners working on the cyclonic separation principle and became popular in the 1990s with the Dyson vacuum. Cyclonic vacuums are mostly used in domestic cleaning and are rarely used in commercial cleaning operations.

Central vacuum cleaners, also known as built-in or ducted, have the vacuum located in a central area of a building which is connected by pipes to vacuum inlets installed throughout the building.

3.4 Understanding vacuum filtration

Vacuum cleaners work by sucking dust from the floor using a vacuum (airflow) which is then collected in a vacuum box, bag or cyclone.

Stirring up the dust can cause health problems. Vacuums that do not have the correct filters can disperse (move) dust into the air. We know this happens when we (or other people) start to sneeze when someone is vacuuming. Dust from a vacuum can cause allergies and make some people have asthma attacks. This dust can also contain dangerous bacteria such as MRSA (MRSA or Golden staff is a common bacterial infection found in most hospitals) which can kill people, especially those in hospitals and aged care homes.

To properly capture very fine dust the vacuum cleaner needs a special filter. After dirt is collected in a vacuum bag the air should then pass through a second fine filter to capture all the very fine dust particles. These fine filters are called HEPA (High Efficiency Particulate Air) filters.

Most manufacturers claim that their vacuums are HEPA filtered.

However a real HEPA filter, which captures most of the fine dust will have a special serial number. These filters capture 99.97% of dust particles of more than 0.3 microns (smaller than you can see).

Section 4 - Safe and efficient vacuuming techniques

When you finish this section you will have an understanding of the following concepts and ideas:

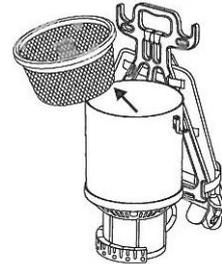
- Using a backpack vacuum
- How to wear a back pack vacuum
- How to vacuum an office efficiently

4.1 Using a backpack vacuum

As already discussed, the commercial cleaning industry mostly uses back-pack vacuums because they are faster (more productive) than the other types of vacuum cleaners. Backpacks are more efficient due to their ease of use, ability to vacuum in all areas and minimise the movement of office furniture.

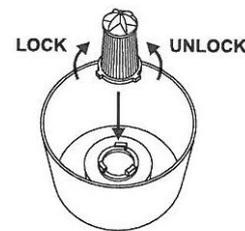
Before using your vacuum cleaner you should always perform some basic safety and maintenance checks. These include:

Remove and clean the dust bag. Make sure you clean the dust bag outside the building. If you clean the dust bag inside you will be adding more dust back into the building you are trying to clean.



If your vacuum is fitted with secondary filters such as HEPA filters remove and clean these filters according to manufacturer's instruction.

The filter may require periodic replacement and specialised cleaning. Consult your manufacturer's instructions.



Always check electrical cords for damage before use.

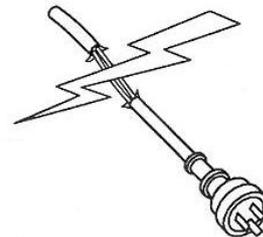
Check the plug and make sure the electrical lead is not exposed at the plug.

Check the connection to the vacuum and make sure the electrical lead is not exposed at the machine connection.

Check the entire length of the cord for cuts, abrasion and exposed wiring.

Unwind ALL the lead. Do not leave any sections of the cord wound up because this can create heat and damage the cord.

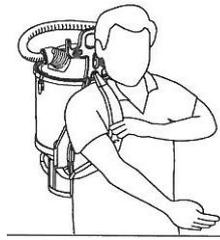
Make sure the lead is clear of the machine.



4.2 How to wear a backpack vacuum

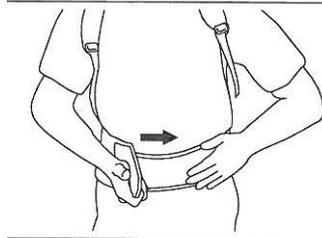
Step 1:

- Rotate the dome lid to suit left or right handed vacuuming.
- Loosen the shoulder straps.
- Adjust the length at top of shoulder strap (if required).
- Lift the backpack by one shoulder strap.
- Then slide your free arm into the other strap.



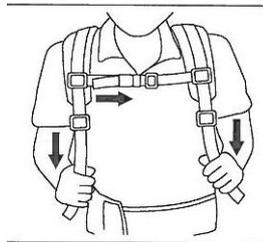
Step 2:

- Tighten the hip-band so the machine rests comfortably on your hips.



Step 3:

- Pull down on shoulder straps for a comfortable fit.
- Do up chest strap to secure backpack.

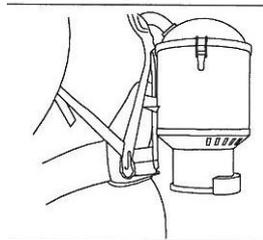


Step 4:

- Make sure the harness is resting on your hips to support the weight of the machine evenly across your back.

IMPORTANT TIP:

If the backpack feels heavy or uncomfortable, it is likely you are not wearing it correctly.



4.3 How to vacuum an office efficiently

Look at the Layout (refer to the Fishbone diagram opposite).

Find the most easily located power point. This is your starting location at the fishes head. Your turnaround is the 'tail'.

Check the room layout (position of desks, tables, chairs, fittings etc,)

Check the condition of the floor - how dirty it is on scale of 1 to 10 to determine which areas need full vacuuming (detailed) and which areas only require spot vacuuming.

Plan the Process

See in your mind the fishbone method over the entire area or room to be cleaned.

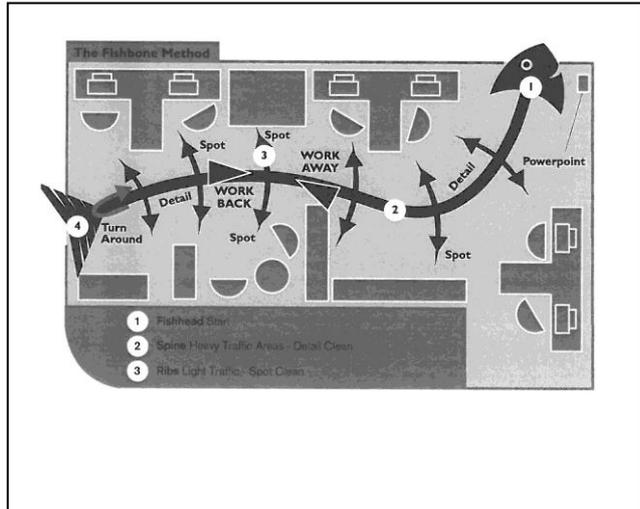
Decide which areas are to be detail cleaned (the spine), or spot cleaned (the ribs).

Clean Smarter

Work away from the power point.

Work one side of the fishbone towards tail. Then back the other side towards head.

Work to the plan - long strokes for the detail clean area and short strokes for the spot clean areas.



4.4 Operate right and protect your back

1. Stand upright, with the bent hand piece section parallel to the floor.
2. Hold the bent hand piece with one hand at a comfortable arm's length.
3. Move forward and away from the power point.
4. Use an easy underarm swinging motion when detail cleaning and short strokes when spot cleaning, always standing upright.



5. Once the end of the power cord has been reached return to the power point along the cord line and disconnect the power cord from the power point.
6. If work is not completed move to the next area, connect power cord to the nearest power point and repeat steps 1 through 6.
7. Remove backpack by sliding one of the straps off the shoulder, while raising the other arm/shoulder to hold strap in place. Slowly lower the shoulder and lower the backpack to the floor; do not drop the vacuum.
8. If work is completed disconnect the power cord from the power point, then wind up the cord from the backpack towards the end of the power cord to reduce the likelihood of twisted cables. In the process check for nicks, cuts, fractures, and knots on the cord.

[Watch the video](#)

Section 5 - Stain Removal

When you finish this section you will have an understanding of the following concepts and ideas:

- Stain removal variables
- Spills and accidents on carpets
- Stain Identification – LFS
- General guidelines for preparing chemicals & PPE
- Removing stains from carpets
- Evaluate and report results

5.1 Spills and accidents on carpets

As a professional cleaner you will often come across stains on carpets left behind by people working in the office. Common stains include spills, coffee, beverages, food, mud, oil, tar, etc.

To effectively remove these stains they should be addressed as soon as possible. If the stain is left for too long it may permanently stain the carpet.

The procedure for cleaning spills:

1. Act Quickly! The longer the delay, the higher the probability a spill will become a permanent stain.
2. Gently scrape up solids that typically do not cause stains with a rounded spoon and vacuum.
3. Liquid spills should be blotted with a dry, white, absorbent cloth or white (no printing) paper towels. Do NOT scrub the area – scrubbing will damage the surface of the carpet! Continue to blot until the area is completely dry, if a stain remains, follow the procedures in section 5.6 Removing Stains from Carpets.

5.2 Stain Identification – LFS

Before taking action to remove a stain it is important to firstly try to identify the type of stain because different types of stains may require different chemicals.

You can identify stains by looking, feeling and smelling the stain.

Look - simply looking at the stain can identify many stains.

Feel - rubbing the stain with your fingers is a good way to determine if it is a grease based stain.

Smell - sometimes stains can be identified by their characteristic odour.

Many common stains such as coffee, beverages and foods can be easily identified.

Water based stain such a foods and beverages are normally removed with a water based detergent.

Other stains such as lip-stick and make-up do not dissolve in water; they require a solvent to dissolve the staining materials from the carpet.

Some drinks such as coffee and coloured drinks can leave coloured marks on the carpet if left for too long. These coloured stains can only be removed with specialised stain removal solutions.

Removing coloured stains requires a lot of experience and should only be carried out by a professional carpet cleaner.

Additional information (not for assessment)

An important term to remember in stain removal "like dissolves like". This means water based stains such as foods and beverages can be removed with a "like" water based detergent. Solvent based staining materials such as lip-stick, ink and oil etc., require a "like" solvent to dissolve and remove the staining material. Many modern detergents contain a combination of ingredients to remove water based stain and some solvent based stains; however, our "like dissolves like" theory always remains a sound basis for stain removal.

5.3 Stain Removal Variables

Stain removal is the process of removing a mark or spot left on carpet or upholstery (chairs). A detergent or solvent is normally used to remove the stain.

If a stain has "set" meaning it has been there for some time it can be difficult and sometime impossible to remove without damaging the carpet.

Removing stains from carpets involves four processes to work together.

Temperature: Increasing the temperature of the cleaning solution will assist in dissolving oily soils.

Agitation: Agitating a stain will assist in breaking-up the staining material for removal.

Never scrub a stain, as this will permanently distort (damage) the carpet.

Chemicals: Chemicals are used to breakdown stains. It is important to use a detergent designed for carpet stain removal. Other chemicals can damage carpet.

Time: For some stains you need to allow the chemical time to work. Increasing time for the chemical to break down the staining material improves stain removal.

5.4 General guidelines for preparing chemicals & PPE

Before we select our chemicals we should firstly review important workplace health and safety requirements for the safe use of chemicals.

- Only use detergents specifically designed for removing stains from carpets and upholstery.
- Always read the Safety Data Sheet (SDS) for the chemical you are using. It will give you information about: What protective clothing to wear; correct and safe use of the chemical; properties of the chemical; and health hazards when using the chemical.
- Read the container, colour-coded wall chart or SDS for information on preparing the chemical.
- Use chemicals in a well-ventilated area so that you do not breathe in a build-up of chemical fumes.

5.5 Removing Stains from Carpets

The following guide provides step by step instructions for the removal of stains from carpets.

1. Apply water to the spill first. Especially if the spot is fresh, water may be all that is needed to remove the spill. If water doesn't remove the spill, proceed as follows.
2. Identify the stain by using the Look-Feel-Smell stain identification method.
3. If you are unsure how to proceed with stain removal refer to the stain removal chart on the next page for the recommended chemical treatment.
4. **Pre-test** any chemical before applying to a carpet for the first time. Never apply a stain remover for the first time without testing it to make sure it does not damage the carpet.

Can you imagine treating 20 or more coffee stains in a commercial building and coming in the next day to find the carpet has changed colour from grey to pink! A true story - the cleaning company had to replace \$30,000 of commercial carpeting.

To test a carpet detergent applying several drops to the testing area, hold a white cloth on the wet area for ten seconds. Examine the carpet and cloth for colour transfer, colour change, or damage to the carpet. If a colour change occurs in the carpet, another cleaning solution must be selected. Remember to test in an inconspicuous area such as behind a cabinet next to a wall.

5. **To remove the stain:** Apply a small amount of the selected cleaning solution to a white cloth and blot or dab the stain. Work from the edges of the spill to the centre to prevent the spill from spreading. Do not scrub! Blot, absorbing as much of the stain as possible, and repeat, if necessary until the stain has been completely removed.

WARNING: Scrubbing a wet carpet can permanently distort the carpet pile. When the carpet dries you may have removed the stain however your scrubbing may have created a visible fuzzy patch where the stain was.

6. Continue using the first cleaning solution as long as there is a transfer of the stain to the cloth. Be patient! Complete removal of the spill or stain may require repeating the same step several times.
7. **Rinse the stain** with clean water after the spill has been removed. Blot with a dry cloth until all of the solution has been removed.
8. **Remove as much water as possible:** Place white paper towels over the affected area to absorb all the moisture and weigh down with a flat, heavy object that will not transfer colour. Changing paper towels as needed until the paper towels do not absorb any more water from the carpet.
9. **Spot Removal Residue Precautions!** Your detergent selection is important, and it is important to remove all the detergent you put into the carpet.

Using additional detergent above the recommended amount does not increase cleaning performance.

A small, portable carpet extractor is recommended for efficient rinsing and spot removal if you are removing a lot of stains.

A solution of one cup white vinegar to one cup water can be used to help remove detergent residues.

10. **Avoid Over-wetting** the carpet. Over-wetting cause's prolonged dampness may cause browning and discoloration, and promote the growth of mould and bacteria (causing stales odours), or in extreme circumstances cause separation of the carpet backing.

[Watch the video](#)

5.6 Stain removal guide

The stain removal guide below recommends the type of detergent you should use based on the type of staining materials. Always read the detergent manufacturer's recommendations and directions for use before using a carpet detergent for the first time.

STAIN REMOVAL GUIDE	
<p>Remember - Like Dissolves Like</p> <p>Use water based chemical on water based stains</p> <p>Use solvent based chemicals on solvent based stains</p>	
	<p>Water Based Stains</p> <p>Use a professional water based carpet-spotting detergent specifically designed for carpet stain removal.</p> <ul style="list-style-type: none"> ○ Food Stains ○ Blood ○ Body fluids ○ Some cosmetics ○ Beverages (coffee, tea, wine, soft drinks)
	<p>Oil Based Stains</p> <p>Remember we discussed "like dissolves like". These stains below are solvent based stains and therefore require a solvent based stain remover.</p> <p>Solvents – (Chlorinated Dry cleaning solvent).</p> <ul style="list-style-type: none"> ○ Oil, grease & Tar ○ Chewing gum ○ Ink ○ Carbon – copier toner ○ Fresh paint ○ Lipstick & cosmetics
	<p>Dye Stains</p> <p>Many liquids contain food colourings that can dye the carpet fibre. Removing these types of stains requires the use of an oxidising agent to remove the colour from the fibre.</p> <p>WARNING: Carefully pre-test carpet before use.</p> <ul style="list-style-type: none"> ○ Food colourings & Juices ○ Beetroot & coloured vegetables ○ Some gravies and sauces ○ Red Wine

5.7 Evaluate and report results

Once all spots and spillages have been cleaned and allowed to dry, compare these cleaned surfaces with the surrounding surfaces and determine whether further action is required.

If unsure, seek a second opinion. Ask your supervisor for their opinion as to whether the job is complete or whether the area needs further treatment.

Make sure the client is informed of any stains or spillages that have resulted in permanent damage.

Section 6 - Restore work, clean and store equipment

When you finish this section you will have an understanding of the following concepts and ideas:

- Restore work area to its original layout
- Clean and store equipment
- Vacuum cleaners
- Dispose of chemicals
- Prepare for the next shift

6.1 Restore work area to its original layout

Restore area to its original condition:

Once you have completed cleaning an area it is important to restore the area to its original condition. Restoring a room to its original condition is also called dressing a room. It means placing furniture such as chairs under desks and making the room look both clean and tidy. Dressing a room after cleaning is an expectation of all cleaning jobs.

If you have moved any furniture such as chairs, place these back where they belong. Do not drag, pull or push furniture across a carpet floor.

Ask for help to move heavy furniture.

6.2 Clean and store equipment

When you have finished cleaning, you must clean the equipment and store it and any chemicals used in a safe, organised, accessible (easy to reach) manner.

Not only will items be easier to find, but you will also reduce the risk of injury to yourself or others because of poorly stored or unhygienic equipment.

Clean your equipment in the cleaner's room or an area with a sink and running water which is away from public areas. Before you start, wash your hands and put on gloves.

6.3 Vacuum cleaners

Some vacuum cleaners have disposable paper dust bags and others have non-disposable cloth bags. When you have finished using the vacuum cleaner, empty the dust bag. This ensures that the machine will work to its peak efficiency for the next job. **MAKE SURE** you empty any re-usable vacuum bags **OUTSIDE**. If you empty re-usable bags inside you will re-introduce much of the fine dust back into the building you are supposed to be cleaning!

Usually you will know when a bag is full because the motor sounds like it is racing or under pressure. Some vacuum cleaners also have an indicator, such as a light, which shows when the bag is full.

After you finish vacuuming for your shift you should always clean your equipment and perform some basic maintenance checks. These include:

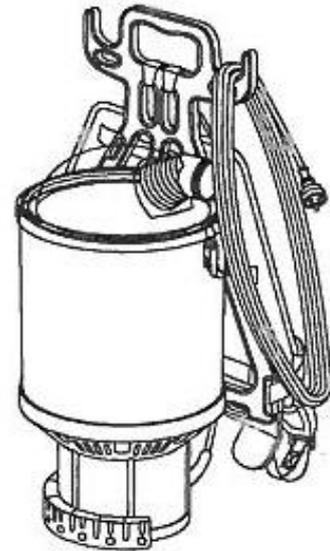
Wipe the outside of the vacuum cleaner with a damp cloth to remove loose dust and soil.

Check the electrical cord for damage, cuts and abrasion. Check the connections at the plug and vacuum for exposed wiring.

Wind up the power cord and store the vacuum off the floor. If you do not wind up the cord it may be a trip hazard in the cleaner's store room.

Winding up the cord will also protect the vacuum from damage during storage and keep it working properly.

Check the wand and floor tool for blockages after each use. Any blockages will reduce the performance of the vacuum and may lead to damage.



6.4 Dispose of chemicals

Store all chemicals in your cleaner's storage area in a designated location.

- Never pour an unused chemical back into its original container. If you do this you may transfer soil and bacteria to the clean, concentrated chemical.
- Dispose of waste chemicals, waste water and solid waste safely and according to company policy.
- Some chemicals, such as dirty mop and bucket water can be poured down a sluice sink or toilet. Others, which may be harmful to the environment, such as solvents and paints may need special disposal and be sent to an approved waste facility.
- Always read the Safety Data Sheet (SDS) or the manufacturer's instructions before disposing of chemicals.

6.5 Prepare for the next shift

Prepare all your equipment so that it is ready for the next shift. It should be clean and in working order so that there is no risk of safety or hygiene problems to yourself or others.

Make sure you do the following:

- Check cleaning equipment and report any faults;
- Check equipment is cleaned and stored properly;
- Check chemical containers for cracks or leaks; make sure they are closed properly and that you can easily read chemical labels;
- Always wash gloves in warm water and detergent, and rinse thoroughly before removing them. Take them off and place them where they can dry easily; and
- Always wash your hands well with detergent and warm water; rinse them in clean water and dry with a hand towel or hand dryer.