Unit 205: Cold water systems

Outcome 6
Basic maintenance requirements of domestic cold water systems

Maintenance

Worn or broken washers

- In a tap or FOV
- Dripping from outlet
- Replace washer correctly

Take care not to scratch the finish.
If chrome or gold, use soft jaw pliers.

Maintenance

Defective tap seating

- In a tap
- Dripping from outlet or overflow

Use a re-seating tool on the tap or replace the whole tap, if badly damaged.

Maintenance

Jammed headgear

- Try to release
- Take care not to round the nut

Sometimes replace whole unit.
Always use silicon grease to lubricate.

Maintenance

Dripping from body

If a tap is dripping from the body rather than the outlet, it means the fibre or rubber washer joining the body together is damaged.

This is identified by undoing The cover.

Maintenance

Dripping from the head
This is generally caused by the packing glands in rising spindle taps, or O rings in non-rising spindle taps. They either need re-packing or replacing.

This fault can be mistaken for the body washer fault on the previous slide.

Maintenance

Letting by
A term used for a valve that is letting some water by, even when it is shut off.

This can happen to:

- A tap – damaged washer/dripping
- FOV – damaged washer/warning pipe dripping
- Gate valve – water still coming past
- Stop valve – water still coming past

Maintenance

Ceramic disc failure
Quarter turn tap which is dripping from the outlet.

The discs need replacing or, more commonly, the body can be replaced.

Maintenance

Insecure pipework
Creates high and low spots (air locks and debris).
Plastic pipe – copper – LCS.

Water hammer: surges of pressure in a high pressure system, causing a knocking noise.

Water murmur: surges of pressure in a high pressure system, causing an FOV to open and close quickly.

Maintenance

Air in system

Creates additional system noise as the air moves around the pipework or gets trapped in a pump and aerates.

In severe situations, air locks can occur in pipework, particularly in low pressure systems (high spots).

Maintenance

Loose components
Will cause leaks or – if internal – will create additional system noise.

If an appliance is loose, it could come away from the wall and damage the pipework connected to it, creating a leak.

If a component is constantly vibrating due to the flow of water, this in turn could loosen connecting nuts.

Broken clips should be replaced.

Maintenance

Underground bursts
Major bursts can cause disruption. Domestic bursts can be major as well. If inside the property, this can cause damage; if outside, will show in areas of green.

Isolate at incoming stop valve, so the whole house is isolated, and look at the meter outside.

Maintenance

Blockages

These can be due to debris left in the pipework not having been fully flushed through. This gets caught in a component and partly blocks the pipe (FOVs).

- Limescale can block pipework and components (shower rose)
- Over-soldering or hemp can cause blockages
- A valve not fully open

The customer generally notices a downturn in the flow of water. It takes longer to fill the kettle.

Maintenance

Incorrectly sized components

Wrong sized pipework will effect the flow rate to an appliance (too small).

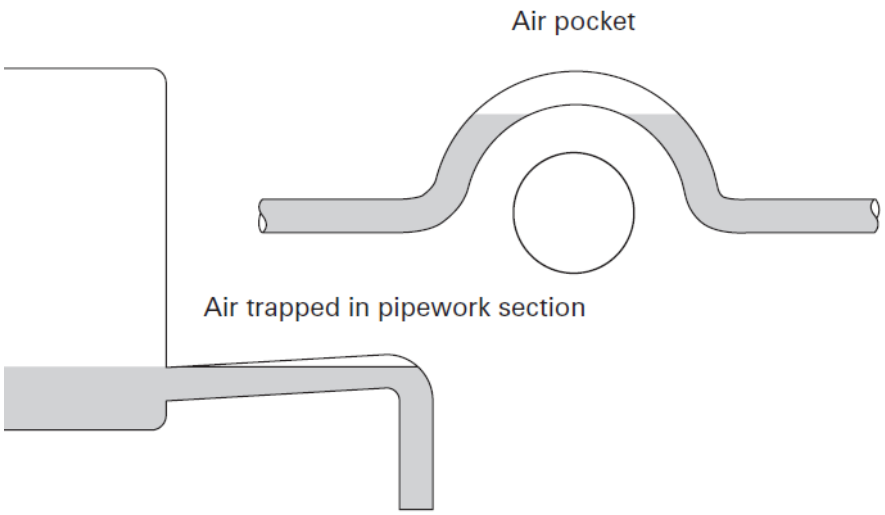
- Fullway or HP spherical plug valve
- Incorrect orifice in FOV
- Taps produced for HP systems only

In level 3, pipework sizing is undertaken to make sure the correct flow rate and pressure is at every outlet.

Maintenance

Air locks

Occur on low pressure systems. Do not leave high spots in pipework or an air lock could occur. The customer will either get a spluttering of water, or no water at all, at the outlet.



Maintenance

Low incoming pressure

If the incoming pressure is too low, not all appliances will work correctly (combination boiler 1bar).

Before installing any appliances always test the pressure and flow rates as near to the incoming main as possible, then at the appliance location.

Maintenance

Planned Preventative Maintenance: PPM
Used on larger/commercial systems so that pre-arranged maintenance schedules can be planned.

May mean out of hours working.

Designed to stop problems occurring:

- Leaks
- Re-washering
- Inspecting terminals and valves
- Inspecting and cleaning cisterns
- Cleaning filters and strainers
- Inspecting water softeners
- Inspecting water levels

Maintenance

Planned Preventative Maintenance: PPM

- Label if isolating the system **System off – do not turn valve on.**
- Maintain records of pressure/flow rate/temperatures/ work carried out
- Always consult the MIs for servicing
- Keep the householder/customer/company informed at all times

Maintenance

Unplanned emergencies

- Burst pipes
- Running overflows
- Dripping taps
- Low pressure in systems
- CWSCs drying up
- Poor installations