

# DIAGNOSING SEAL FAILURES

**An insulating glass (IG) unit consists of two or more sheets of glass separated by a spacer and sealant system creating a sealed airspace. A break in this seal anywhere along the edge can allow moisture between the glass panes. The actual point of failure is not usually visible because the seal is hidden inside the sash or frame.**

## INDICATIONS OF A SEAL FAILURE

Any of the following conditions **between** glass panes may indicate seal failure:

- Condensation, haze or fog
- Standing water
- Rust-colored flaking may be an indication of Low-E coating break down due to seal failure. Low-E is a protective glass coating that reduces both radiant heat transfer and the passage of ultraviolet rays.
- Specks of dirt

## COMMON CAUSES

- Cleaning windows with a pressure washer or regular garden hose can flood the seal and cause failure.
- High wind loads cause glass to flex, which can weaken the seal and lead to failure.
- Dramatic temperature changes expand and contract the seal and can weaken the bond.
- Structural movement (e.g. settling, earthquakes) can create pressure that could cause the seal to fail.
- Sunlight can degrade exposed sealant, eventually leading to seal failure.
- Repeated exposure of the sealant to water can cause a chemical degradation of the seal.
- Water exposure can be caused by excessive condensation or clogged weep holes (the visible exit or entry part of a water drainage system used to drain water to the exterior).
- Manufacturing errors can also lead to seal failure. Consult warranty for coverage terms.

## SOLUTIONS

New technologies in sash/panel design, sealants and spacers continue to improve performance, lowering the likelihood of seal failure occurrences.

Care and maintenance is a necessary means of avoiding seal failure. Although some causes of seal failure cannot be controlled, take the following precautions:

- Keep weep holes clean and clear of debris; make sure there is no caulk over weep holes
- Consult a air-conditioning and heating professional for condensation problems found on the outside of the glass panes.

The solution to seal failure is replacement of the glass or sash/panel.

For assistance, call a service representative at Alpine Glass 250-785-6409 or see us at 9708 – 108 Street Fort St. John, BC