



## COURIER TRANSMITTAL

TO: DARCEE

DATE: OCTOBER 27, 2008

ATTN:

PAGE 1 OF: 1

FROM: DAN WILSON

DIRECT TELEPHONE: (604) 893-7264

DIRECT FACSIMILE: (604) 893-7179

RE: 1212 HOWE ST. WARRANTY AND OTHER DOCUMENTS

☐ Via Facsimile

☒ For Your Information

☒ Via Courier

☒ For Your Action

☐ Via Mail

☐ For Your Approval

● **Comments:**

Enclosed are the following documents for 1212 Howe St:

**WARRANTY**

1. Allan Windows – Exterior windows and balcony doors
2. Campbell Sealtech – Exterior waterproofing
3. Richmond Elevator – Residential elevators

**MAINTENANCE MANUALS**

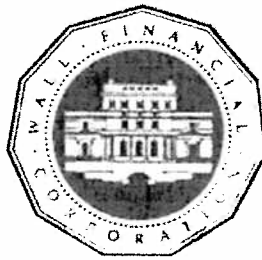
1. Dan-Jen Mechanical – plumbing and mechanical (3 copies)
2. Allan Windows Operating and Maintenance General Instructions

**OTHER DOCUMENTATION**

1. Balancing Report
2. Fire Safety Plan
3. Fire Fighting Operations Manual and Letter of Acceptance by the Fire Department
4. Emergency Generator Inspection Report
5. Roof Anchor Safety System Manual

W A L L • F I N A N C I A L • C O R P O R A T I O N

SUITE #3502 - 1088 BURRARD STREET, VANCOUVER, B.C. V6Z 2R9 PHONE (604) 893-7131 FAX (604) 893-7179



OTHER DOCUMENTATION – CONT'D

6. Electrical Distribution Equipment Heat Scan Report

I have requested the Garage Overhead Door warranty documentation and will forward upon receipt.

Regards,

Dan



**Allan Window  
Technologies  
Inc.**

8555 Greenall Avenue  
Unit #5  
Burnaby, BC  
V5J 3M8  
CANADA  
Telephone: 604.291.8952  
Facsimile: 604.291.8957

## **WARRANTEES**

**Project:** 1212 Howe Street  
**Civic Address:** 1212 Howe Street,  
Vancouver, British Columbia

**Legal description:**

**Strata Lots #3 – 152,  
District Lot 541;  
Group 1 New Westminster District  
Strata Plan VR2282**

***Allan Window Technologies hereby undertakes for consideration the following warrantees for the above noted project:***

Workmanship and defects in materials warranted for a period of **two (2) years**.

The work will be water and weather tight, structurally sound and free from distortion and deformation under load; that materials and finishes will not develop excessive fading or non-uniformity, and will not crack, peel, delaminate or otherwise deteriorate or corrode; that glazing splines, sealants and gaskets will be free from deterioration from sunlight, weather, and oxidation, and will be free from permanent deformation under load.

Insulated glass units warranted for a period of **five (5) years** – free from material obstruction of vision as a result of dust or film formation on the internal glass surfaces by any cause, under normal conditions, other than extrinsic glass breakage, but including breakage due to thermal shock and temperature differential due to inherent glass or glazing faults.

Spandrel glass panels warranted for a period of **five (5) years** – spandrel glass to be free from any visual defects by any cause other, than extrinsic glass breakage, but including breakage due to thermal shock and temperature differential due to inherent glass or glazing faults.

Outswing/Inswing Doors shall be warranted for a period of **two (2) years**.

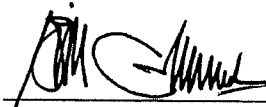
Sliding Glass Doors shall be warranted for a period of **two (2) years**.

Warranties shall include the prompt remedy of defects upon written notice from the Owner that defects exist. Remedy shall include labour, materials, equipment and services required to make good defective areas of the work , and in the case of factory-fabricated components, to supply and install new components, all at no cost to the Owner and at times convenient to the Owner. Warranties shall also include making good other building parts and finishes and other Owner's property damaged or disturbed in the course of remedying defects.

This collective warranty shall become null and void if all monies owed Allan Window Technologies for the above noted project are not paid in full.

Date of warranty commencement: **August 27, 2008**

**Allan Window Technologies Inc.**



~~Dated:~~ **September 30, 2008**

Per Bill Gouweleeuw  
Managing Director, Engineering

The Performance of these components under normal conditions should compliment the expected life span of the Building (advances in material technology are not considered), provided scheduled inspections and routine maintenance are carried out.

The following maintenance recommendations should be carried out on a scheduled six (6) month cycle as a minimum.

1. The exterior surface of the aluminum frames, vision glass, spandrel glass and metal panels should be thoroughly washed with a non-abrasive cleaning solution to remove dirt, grime and other atmospheric deposits that may adhere to the surface from the effects of the wet and dry cycle of the rain and sun.
2. The exterior caulking must be examined for areas where signs of non-adhesion may be visible. Any questionable areas must be repaired.
3. The sill tracks of all operable windows and doors must be cleaned of all debris to prevent blockages so that water can drain freely out of the system.

We recommend that Professional and qualified persons with experience to inspect and perform the work required.

The following precautions must be considered in contracting this work:

1. Swing stages must have bumpers, etc. to prevent damage such as scratches, dents and breakage to windows.
2. Window cleaners must not stand on metal flashings or use shoes or any object that would leave marks on glass or framing or cause any damage to the caulking.
3. All cleaning materials must be compatible with the painted surfaces and caulking material and must not leave staining or streaking on the glass or metal surface or the caulking.
4. Do not drill holes or penetrate or attach anything to the window system under any circumstances.

# SEAL-TECH WATERPROOFING LTD.

## WATERPROOFING SYSTEM WARRANTY

Seal-Tech Waterproofing Ltd. will warranty to 1212 Howe Street Condominium Developments Ltd.  
the waterproofing system installed at 1212 Howe Street, Vancouver, B.C.  
in accordance with the terms and conditions set forth below:

### Job Description

Sonoguard light to medium duty traffic deck coating system to balcony decks on Levels 2-18

Seal-Tech Waterproofing Ltd. agrees to repair any leaks in the traffic deck coating system  
installed at the subject installation for a period of two years commencing on the date of completion of such  
installation, caused by faulty workmanship in the installation of the product. This warranty does not extend to,  
and neither applicator or manufacturer shall be responsible for, leaks or leakage caused by damage to  
the system caused by structural defects, building alterations, new cracks or ruptures in the structural base, or any  
other cause beyond the control of the applicator. The costs of repair under this warranty, if not the responsibility  
of the applicator, shall be borne entirely by the owner, and Seal-Tech Waterproofing Ltd. shall be paid all costs  
incurred plus normal overhead and profit.

The owner agrees to notify Seal-Tech Waterproofing Ltd. of the need for any repairs covered by this warranty  
within 30 days upon discovery of the same. Such repairs shall be commenced within a reasonable  
period of time after receipt of said notice from owner, subject to delays by strikes, acts of God or other causes  
beyond the reasonable control of Seal-Tech Waterproofing Ltd., provided the owner has furnished to the applicator  
release of liability from any building occupants who might be affected by the repair operations and  
has removed, at owners cost all obstructions, additional equipment or structures installed after the date of  
completion which would hinder or interfere with the repairs being made in the most expedient and least expensive  
manner.

Seal-Tech Waterproofing Ltd. responsibility and obligation for repair shall become effective only upon  
full payment by owner for the installation in accordance with the terms of the installation contract and becomes  
null and void if anyone not expressly authorized by Seal-Tech Waterproofing Ltd. performs any of the covered  
repairs during the period of this warranty. This warranty may not be changed except in writing signed  
by officers of Seal-Tech Waterproofing Ltd..

Seal-Tech Waterproofing Ltd.

Client

# SEAL-TECH WATERPROOFING LTD.

## WATERPROOFING SYSTEM WARRANTY

Seal-Tech Waterproofing Ltd. will warranty to 1212 Howe Street Condominium Developments Ltd.  
the waterproofing system installed at 1212 Howe Street, Vancouver, B.C.  
in accordance with the terms and conditions set forth below:

### Job Description

HLM 5000 cold-applied liquid membrane high build fully fabric reinforced waterproofing system to  
terraces on Levels 2 - 18

Seal-Tech Waterproofing Ltd. agrees to repair any leaks in the cold-applied liquid membrane system  
installed at the subject installation for a period of five years commencing on the date of completion of such  
installation, caused by faulty workmanship in the installation of the product. This warranty does not extend to,  
and neither applicator or manufacturer shall be responsible for, leaks or leakage caused by damage to  
the system caused by structural defects, building alterations, new cracks or ruptures in the structural base, or any  
other cause beyond the control of the applicator. The costs of repair under this warranty, if not the responsibility  
of the applicator, shall be borne entirely by the owner, and Seal-Tech Waterproofing Ltd. shall be paid all costs  
incurred plus normal overhead and profit.

The owner agrees to notify Seal-Tech Waterproofing Ltd. of the need for any repairs covered by this warranty  
within 30 days upon discovery of the same. Such repairs shall be commenced within a reasonable  
period of time after receipt of said notice from owner, subject to delays by strikes, acts of God or other causes  
beyond the reasonable control of Seal-Tech Waterproofing Ltd., provided the owner has furnished to the applicator  
release of liability from any building occupants who might be affected by the repair operations and  
has removed, at owners cost all obstructions, additional equipment or structures installed after the date of  
completion which would hinder or interfere with the repairs being made in the most expedient and least expensive  
manner.

Seal-Tech Waterproofing Ltd. responsibility and obligation for repair shall become effective only upon  
full payment by owner for the installation in accordance with the terms of the installation contract and becomes  
null and void if anyone not expressly authorized by Seal-Tech Waterproofing Ltd. performs any of the covered  
repairs during the period of this warranty. This warranty may not be changed except in writing signed  
by officers of Seal-Tech Waterproofing Ltd..

Seal-Tech Waterproofing Ltd.



Client



# SEAL-TECH WATERPROOFING LTD.

## WATERPROOFING SYSTEM WARRANTY

Seal-Tech Waterproofing Ltd. will warranty to 1212 Howe Street Condominium Developments Ltd.  
the waterproofing system installed at 1212 Howe Street, Vancouver, B.C.  
in accordance with the terms and conditions set forth below:

### Job Description

Sonoguard light to medium duty traffic deck coating system to suspended parking slabs

Seal-Tech Waterproofing Ltd. agrees to repair any leaks in the traffic deck coating system  
installed at the subject installation for a period of two years commencing on the date of completion of such  
installation, caused by faulty workmanship in the installation of the product. This warranty does not extend to,  
and neither applicator or manufacturer shall be responsible for, leaks or leakage caused by damage to  
the system caused by structural defects, building alterations, new cracks or ruptures in the structural base, or any  
other cause beyond the control of the applicator. The costs of repair under this warranty, if not the responsibility  
of the applicator, shall be borne entirely by the owner, and Seal-Tech Waterproofing Ltd. shall be paid all costs  
incurred plus normal overhead and profit.

The owner agrees to notify Seal-Tech Waterproofing Ltd. of the need for any repairs covered by this warranty  
within 30 days upon discovery of the same. Such repairs shall be commenced within a reasonable  
period of time after receipt of said notice from owner, subject to delays by strikes, acts of God or other causes  
beyond the reasonable control of Seal-Tech Waterproofing Ltd., provided the owner has furnished to the applicator  
release of liability from any building occupants who might be affected by the repair operations and  
has removed, at owners cost all obstructions, additional equipment or structures installed after the date of  
completion which would hinder or interfere with the repairs being made in the most expedient and least expensive  
manner.

Seal-Tech Waterproofing Ltd. responsibility and obligation for repair shall become effective only upon  
full payment by owner for the installation in accordance with the terms of the installation contract and becomes  
null and void if anyone not expressly authorized by Seal-Tech Waterproofing Ltd. performs any of the covered  
repairs during the period of this warranty. This warranty may not be changed except in writing signed  
by officers of Seal-Tech Waterproofing Ltd..

Seal-Tech Waterproofing Ltd.

Client



# Fax Cover Sheet

Seal-Tech Waterproofing Ltd.  
35819 Regal Park Way  
Abbotsford, BC V3G 2W2  
Phone number: 604-556-3706  
Fax number: 604-556-3701  
sealtechwaterproofing@telus.net

Send to: Wall Financial Corporation	From: Terena H.
Attention: Mr. Dan Wilson	Date: September 30, 2008
Fax number: 1-604-893-7179	Phone number: 1-604-893-7264

☐ Urgent ☐ Reply ASAP ☐ Please comment ☐ Please review ☐ For your information

Total pages, including cover: 4

**Comments:**

Dan,

Following please find our warranties for 1212 Howe Street. I will send the manufacturers warranties as soon as I receive them.

Thank you

Terena

**BUILDING SYSTEMS**  
**Limited Warranty - R005190**  
**Sonoshield® HLM 5000®**

**Coverage : Material**

**Duration : 10 Years**

**Project Site**

**Name :** Pacific Towers

**Address :** 1212 Howe Street

**City :** Vancouver

**State :** British Columbia

**Date of Application :** September 15, 2008

**Applicator Name :** Seal-Tech Waterproofing Ltd.

**Purchaser Name :** Universal Concrete Accessories Ltd

*This is to certify that the above named product has been applied to the area described in the Project site above. This warranty makes no allowance for deviations or omissions from the information provided in the on-line application. Any misrepresentation or fraudulent statement in the application for Limited Warranty renders the Limited Warranty void.*

BASF Construction Chemicals, LLC, (hereinafter BCC) through its Building Systems Division, 889 Valley Park Drive, Shakopee, MN 55379, hereby warrants that, subject to the provisions hereof, the Sonoshield® HLM 5000® (the "Product") as manufactured satisfies the product performance criteria under the terms specified in the current Sonoshield® HLM 5000® product data sheet. The current product data sheet can be obtained at [www.buildingsystems.basf.com](http://www.buildingsystems.basf.com). Any claims brought against BCC relative to the referenced product and project shall constitute full acceptance of all terms and conditions contained herein. The remedies of this warranty shall be considered only when EACH of the following FIVE conditions exists: (i) BCC must have been notified of the unsatisfactory condition during the covered period following the date of application and this notification to BCC shall be in writing within 30 days of the occurrence; (ii) BCC is afforded the opportunity to inspect any such areas, at such time, as may be reasonably requested; (iii) The BCC supplied product has been proven not to satisfy the published product performance criteria; (iv) This product discrepancy must have directly contributed to the unsatisfactory condition in question; and (v) Full payment has been received by BCC for the BCC materials supplied to the referenced project.

**EXCLUSIONS:**

This warranty does not apply, and BCC makes no warranty and disclaims all liability, where any unsatisfactory condition resulting from misuse or abnormal use or conditions such as, but not limited to: structural cracks or defects, faulty construction, design, non BCC materials, settlement or expansion of the structure, accident, fire or other casualty, lack of suitable vapor barrier or excessive wear. This warranty does not cover claims for color-fastness, appearance or offensive or unpleasant odor; disintegration of the substrate; mechanical damage caused by individuals, tools, or other outside agents; or any change in the appearance of the product from accumulated dirt or other contaminants. This warranty does not apply, and BCC makes no warranty and disclaims all liability when an unsatisfactory condition has occurred due to lack of adherence to all applicable care and maintenance recommendations or cautions contained or referenced in the product data sheet. If the owner shall make or permit, without prior written consent of BCC, repairs, alterations, or additions to the structure which affect the product or change the use, function or purpose of the structure, this warranty shall become immediately null and void and of no further force and effect. BCC will respond promptly to any written request for consent to repairs, alterations, or additions. Product performance properties are limited to the material as supplied to the project.

**REMEDIES:**

The holder's sole and exclusive remedy and BCC's liability shall be limited to:

Providing Sonoshield® HLM 5000® in sufficient quantity to replace solely those areas of the installed product proven to meet the terms of the aforementioned warranty. A suitable replacement product may be employed at the sole discretion of BCC. All other costs associated with the replacement of the product are the sole responsibility of the holder. BCC's liability is limited to the purchase price of the BCC product supplied.

Holder and BCC specifically agree that any controversy or claim arising out of this warranty shall be settled by arbitration in the state of Ohio (as exclusive venue) administered by the American Arbitration Association under its Commercial Arbitration Rules, and judgment on any award rendered by the arbitrators may be entered in any court having jurisdiction thereof.

If any part of this Warranty shall be determined to be invalid, then such portion shall be deemed severed from this Warranty and the remaining terms, exclusions and limitations shall apply.

#### GENERAL LIMITATIONS

This information and all further technical advice are based on BCC's present knowledge and experience. However, BCC assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, BCC disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY OR CLAIMS RELATED TO MOLD, MILDEW, AND FUNGI OR ANY AIR QUALITY PROBLEMS. BCC SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BCC does not warrant or guarantee the quality of labor used to prepare the surface and to apply or install the products covered by this limited warranty. BCC reserves the right to make any changes according to technological progress or further developments. It is the holder's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the holder to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.

This warranty supersedes any other warranties, guarantees or representations, written or oral, heretofore made with respect to the above referenced product or project.

**BUILDING SYSTEMS  
Limited Warranty - R005189**

**Sonoguard®**

**Coverage : Material**

**Duration : 5 Years**

**Project Site**

**Name :** Pacific Towers

**Address :** 1212 Howe Street

**City :** Vancouver

**State :** British Columbia

**Date of Application :** September 15, 2008

**Applicator Name :** Seal-Tech Waterproofing Ltd.

**Purchaser Name :** Universal Concrete Accessories Ltd

*This is to certify that the above named product has been applied to the area described in the Project site above. This warranty makes no allowance for deviations or omissions from the information provided in the on-line application. Any misrepresentation or fraudulent statement in the application for Limited Warranty renders the Limited Warranty void.*

BASF Construction Chemicals, LLC, (hereinafter BCC) through its Building Systems Division, 889 Valley Park Drive, Shakopee, MN 55379, hereby warrants that, subject to the provisions hereof, the Sonoguard® (the "Product") as manufactured satisfies the product performance criteria under the terms specified in the current Sonoguard® product data sheet. The current product data sheet can be obtained at [www.buildingsystems.basf.com](http://www.buildingsystems.basf.com). Any claims brought against BCC relative to the referenced product and project shall constitute full acceptance of all terms and conditions contained herein. The remedies of this warranty shall be considered only when EACH of the following FIVE conditions exists: (i) BCC must have been notified of the unsatisfactory condition during the covered period following the date of application and this notification to BCC shall be in writing within 30 days of the occurrence; (ii) BCC is afforded the opportunity to inspect any such areas, at such time, as may be reasonably requested; (iii) The BCC supplied product has been proven not to satisfy the published product performance criteria; (iv) This product discrepancy must have directly contributed to the unsatisfactory condition in question; and (v) Full payment has been received by BCC for the BCC materials supplied to the referenced project.

**EXCLUSIONS:**

This warranty does not apply, and BCC makes no warranty and disclaims all liability, where any unsatisfactory condition resulting from misuse or abnormal use or conditions such as, but not limited to: structural cracks or defects, faulty construction, design, non BCC materials, settlement or expansion of the structure, accident, fire or other casualty, lack of suitable vapor barrier or excessive wear. This warranty does not cover claims for color-fastness, appearance or offensive or unpleasant odor; disintegration of the substrate; mechanical damage caused by individuals, tools, or other outside agents; or any change in the appearance of the product from accumulated dirt or other contaminants. This warranty does not apply, and BCC makes no warranty and disclaims all liability when an unsatisfactory condition has occurred due to lack of adherence to all applicable care and maintenance recommendations or cautions contained or referenced in the product data sheet. If the owner shall make or permit, without prior written consent of BCC, repairs, alterations, or additions to the structure which affect the product or change the use, function or purpose of the structure, this warranty shall become immediately null and void and of no further force and effect. BCC will respond promptly to any written request for consent to repairs, alterations, or additions. Product performance properties are limited to the material as supplied to the project.

**REMEDIES:**

The holder's sole and exclusive remedy and BCC's liability shall be limited to:

Providing Sonoguard® in sufficient quantity to replace solely those areas of the installed product proven to meet the  
October 06, 2008

terms of the aforementioned warranty. A suitable replacement product may be employed at the sole discretion of BCC. All other costs associated with the replacement of the product are the sole responsibility of the holder. BCC's liability is limited to the purchase price of the BCC product supplied.

Holder and BCC specifically agree that any controversy or claim arising out of this warranty shall be settled by arbitration in the state of Ohio (as exclusive venue) administered by the American Arbitration Association under its Commercial Arbitration Rules, and judgment on any award rendered by the arbitrators may be entered in any court having jurisdiction thereof.

If any part of this Warranty shall be determined to be invalid, then such portion shall be deemed severed from this Warranty and the remaining terms, exclusions and limitations shall apply.

#### GENERAL LIMITATIONS

This information and all further technical advice are based on BCC's present knowledge and experience. However, BCC assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights. In particular, BCC disclaims all CONDITIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY OR CLAIMS RELATED TO MOLD, MILDEW, AND FUNGI OR ANY AIR QUALITY PROBLEMS. BCC SHALL NOT BE RESPONSIBLE FOR CONSEQUENTIAL, INDIRECT OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) OF ANY KIND. BCC does not warrant or guarantee the quality of labor used to prepare the surface and to apply or install the products covered by this limited warranty. BCC reserves the right to make any changes according to technological progress or further developments. It is the holder's responsibility and obligation to carefully inspect and test any incoming goods. Performance of the product(s) described herein should be verified by testing and carried out only by qualified experts. It is the sole responsibility of the holder to carry out and arrange for any such testing. Reference to trade names used by other companies is neither a recommendation, nor an endorsement of any product and does not imply that similar products could not be used.

This warranty supersedes any other warranties, guarantees or representations, written or oral, heretofore made with respect to the above referenced product or project.

**THIS IS TO CERTIFY  
THAT**

**RICHMOND ELEVATOR MAINTENANCE LTD.,**

**Guarantees the materials and workmanship of the one elevator at:**

**1212 Howe Street, Vancouver, BC**

**And will make good any defects not due to ordinary wear and tear, or to improper use and care.**

**DATED: August 28, 2008**

**SIGNED:**

*L. Ewaneck*  
L. Ewaneck, Service Manager

One year guarantee and the specified free maintenance period started on the date of issuance of a certificate of substantial completion. The guarantee is conditional upon the equipment being maintained by Richmond Elevator Maintenance Ltd.,

Three (3) months free maintenance is included commencing September 1, 2008.



**Allan Window  
Technologies Inc.**

8555 Greenall Avenue  
Unit #5  
Burnaby, BC  
V5J 3M8  
Tel: 604.291.8952  
Fax: 604.291.8957  
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# **Allan Window Technologies Operating & Maintenance General Instructions**

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## Introduction

Glass Cleaning Procedures includes two Glass Association of North America (GANA) Glass Informational Bulletins and additional glass cleaning tips that are designed to help avoid problems when cleaning glass. They should be included with every project to avoid serious damage to glass that may result from improper cleaning procedures.

1. ***Proper Procedures for Cleaning Architectural Glass Products*** highlights important information on proper glass cleaning procedures, including the following:
  - Advice for cleaning stucco and concrete slurry spots from glass.
  - Best time of day for cleaning glass
  - Avoid glass to metal contact
  - What type of detergent to use
  - Razor scraping is quicker, but it may cause permanent damage
  - A quick reference list of **Do's** and **Do Nots** for cleaning glass.
2. ***Heat-Treated Glass Surfaces Are Different*** highlights important information on the differences, between annealed and heat-treated glass surfaces, that relate to proper cleaning procedures.

## Cleaning Tips

Note the following important glass cleaning tips:

- Commence cleaning as soon as the glass is visibly dirty.
- Avoid cleaning tinted and reflective glasses in direct sunlight as the glass will be excessively hot for optimum cleaning.
- Washing of the glass should be preceded by a thorough cold-water flushing to remove all surface grit.
- Glass should be washed using a soft, clean, grit-free cloth and a mild soap, detergent, or slightly acidic cleaning solution. Glass should be rinsed immediately with clean water, and the excess water should be removed with a clean squeegee, or a clean, lint-free cloth. Do not allow metal squeegee holders to touch the glass surface.
- If paint or glazing compounds have to be removed from the surface, conventional cleaners and solvents should be used. Do not use razor blades or broad knife blades to remove these contaminants.
- Solutions that are strongly alkaline or acidic, fluoride salts or hydrogen fluoride producing compounds, must not be used.
- Fingerprints, grease stains, smears, dirt, scum, sealant residue, scratches and abrasions are more noticeable on coated glass than on uncoated glass. Extra care should be exercised in handling and cleaning to keep such markings off of the glass.
- Abrasive cleaners must not be used on first-surface reflective glass products.





## **Proper Procedures For Cleaning Architectural Glass Products**

Architectural glass products play a major role in the comfort of the living and working environment of today's homes and commercial office spaces. By providing natural daylight, views of the surroundings, thermal comfort and design aesthetics, glass usage and condition often affect our selection of where we live, work, shop, play and seek education.

Since glass products can be permanently damaged if improperly cleaned, glass producers and fabricators recommend strict compliance with the following procedures for properly cleaning glass surfaces.

As dirt and residue appear interior and exterior glass surfaces should be thoroughly cleaned. Concrete or mortar slurry that runs down (or is splashed on) glass can be especially damaging and should be washed off as soon as possible.

Before proceeding with cleaning determine whether the glass is clear, tinted or reflective. Surface damage is more noticeable on reflective glass as compared with other glass products. If the reflective surface is exposed either on the exterior or interior special care must be taken when cleaning, as scratches to the reflective glass surface can result in coating removal and a visible change in light transmittance. Cleaning tinted and reflective glass surfaces in direct sunlight should be avoided since the surface temperature can be excessively hot for optimum cleaning.

Cleaning should begin at the top of the building and continue to the lower levels to reduce the risk of leaving residue and cleaning solutions on glass at the lower levels. Cleaning procedures should also ensure that the wind is not blowing the cleaning solution and residue onto already cleaned glass.

Cleaning activities should begin with soaking the glass surfaces with clean water and soap solution to loosen dirt or debris. Using a mild non-abrasive commercial window washing solution, uniformly apply the solution to the glass surfaces with a brush, strip washer or other non-abrasive applicator. Immediately following the application of the cleaning solution a squeegee should be used to remove all of the cleaning solution from the glass surface. Care should be taken to ensure that no metal parts of the cleaning equipment touch the glass surface and that no abrasive particles are trapped between the glass and the cleaning materials. All water and cleaning solution residue should be dried from window gaskets, sealants and frames to avoid the potential for deterioration of these materials as the result of the cleaning process.



## Allan Window Technologies Inc.

8555 Greenall Avenue  
Unit #5  
Burnaby, BC  
V5J 3M8  
Tel: 604.291.8952  
Fax: 604.291.8957  
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It is strongly recommended that window washers clean a small area or one window then stop and examine the surface for any damage to the glass and/or reflective coating. The ability to detect certain surface damage, i.e. light scratches can vary greatly with the lighting conditions. Direct sunlight is needed to properly evaluate a glass surface for damage. Scratches that are not easily seen with a dark or gray sky may be very noticeable when the sun is at a certain angle in the sky or when the sun is low in the sky.

The glass industry takes extreme care to avoid glass scratches by protecting all glass surfaces during glass manufacturing and fabrication as well as during all shipping and handling required to deliver the glass to the end user.

One of the common mistakes made by non-glass trades' people including glass cleaning contractors is their use of razor blades or other scrappers on a large portion of the glass surface. Using two, three, four, or five inch and larger blades to scrape a window clean carries a large probability of causing irreparable damage to glass.

The entire industry of glass manufacturers, fabricators, distributors, and installers neither condones nor recommends widespread scraping of glass surfaces with metal blades or knives. Such scraping will often permanently damage or scratch the glass surfaces. When paint or other construction materials cannot be removed with normal cleaning procedures a new one-inch razor blade may need to be used only on non-coated glass surfaces. The razor blade should be used on small spots only. Scraping should be done in one direction only. Never scrape in a back and forth motion as this could trap particles under the blade that could scratch the glass. This practice can cause hairline concentrated scratches that are not normally visible when looking through the glass but are be visible under certain lighting conditions.

Members of the Glass Association of North America (GANA) publish information relating to jobsite protection and cleaning of architectural glass products. In order to ensure long-term performance of the glass in a building GANA encourages glazing contractors, general contractors, building management and owners to be aware of conditions that can damage glass and to follow the handling and cleaning guidelines provided by the glass producer and fabricator.

**Consult the Glass Association of North America GANA web site at [www.glasswebsite.com](http://www.glasswebsite.com) for additional information on glass and glazing applications and links to members providing additional technical resources.**

### **The following are things TO DO:**

- **DO** clean glass when dirt and residue appear ;
- **DO** determine if coated glass surfaces are exposed ;
- **DO** exercise special care when cleaning coated glass surfaces;



## Allan Window Technologies Inc.

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Burnaby, BC  
V5J 3M8  
Tel: 604.291.8952  
Fax: 604.291.8957  
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- **DO** avoid cleaning tinted and coated glass surfaces in direct sunlight;
- **DO** start cleaning at the top of the building and continue to lower levels;
- **DO** soak the glass surface with a clean water and soap solution to loosen dirt and debris;
- **DO** use a mild, non-abrasive commercial window cleaning solution;
- **DO** use a squeegee to remove all of the cleaning solution;
- **DO** dry all cleaning solution from window gaskets, sealants and frames;
- **DO** clean one small window and check to see if procedures have caused any damage;
- **DO** be aware of and follow the glass supplier's specific cleaning recommendations;
- **DO** caution other trades against allowing other materials to contact the glass;
- **DO** watch for and prevent conditions that can damage the glass;
- **DO** read the entire GANA bulletin on glass cleaning before starting to clean glass.

### The following are things **DO NOT** do:

- **DO NOT** start cleaning without reading the entire GANA bulletin on glass cleaning;
- **DO NOT** use scrapers of any size or type for cleaning glass;
- **DO NOT** allow dirt and residue to remain on glass for an extended period of time;
- **DO NOT** begin cleaning glass without knowing if a coated surface is exposed;
- **DO NOT** clean tinted or coated glass in direct sunlight;
- **DO NOT** allow water or cleaning residue to remain on the glass or adjacent materials;
- **DO NOT** begin cleaning without rinsing excessive dirt and debris;
- **DO NOT** use abrasive cleaning solutions or materials;
- **DO NOT** allow metal parts of cleaning equipment to contact the glass;
- **DO NOT** trap abrasive particles between the cleaning materials and the glass surface;
- **DO NOT** allow other trades to lean tools or materials against the glass surface;
- **DO NOT** allow splashed materials to dry on the glass surface;
- **WARNING: DO NOT** use scrapers for cleaning glass. Glass scratched by a scraper is not covered under the AWT warranty.



## **Heat-Treated Glass Surfaces Are Different**

### **Industry Cleaning Procedures must be followed to Avoid Glass Damage.**

As the use of glass increased over recent years, issues of strength, safety and thermal performance became increasingly important design considerations. The availability of tinted and coated glasses had a dramatic impact on glass use in building projects. The vastly expanded aesthetic options, combined with the improved energy-conserving and comfort capabilities of tinted and coated glasses, allowed architects to use more glass, as well as larger sizes in their designs. A consequence of this trend was a corresponding increase in the use of tempered and heat-strengthened glass in order to meet both thermal and wind load design requirements. The demand for tempered glass increased further with the passing of safety-glazing legislation in 1977, which mandated its use in certain locations.

Currently, there are two types of heat-treated glass as defined in the American Society for Testing and Materials (ASTM) C1048 - Standard Specification for Heat-Treated Flat Glass – Kind HS, Kind FT Coated and Uncoated Glass. The two types are heat-strengthened (Kind HS) and fully tempered (Kind FT). Both types of glass are produced using the same equipment. A majority of the heat-treated glass produced over the last 30 years has been fabricated in horizontal roller hearth furnaces. The preparation stage for the heat-treatment process requires annealed float glass to be cut to the required final size, the edges to be treated according to the specified finish (commonly seamed or polished) and the glass to be washed. The process then requires the glass to be transported on horizontal rollers through an oven and heated to approximately 1,150°F (621°C). Upon exiting the furnace, the glass is rapidly cooled (quenched) by blowing air uniformly onto both surfaces simultaneously. The cooling process leaves the surfaces of the glass in a state of compression and the central core in compensating tension.

The color, clarity, chemical composition and light transmission characteristics of glass remain essentially unchanged after heat-treating. Likewise, hardness, specific gravity, expansion coefficient, softening point, thermal conductivity, solar optical properties and stiffness remain unchanged by the heat-treating process. The only physical properties that change are improved flexural and tensile strength, and improved resistance to thermal stresses and thermal shock. Under uniform loading, heat-treated glass is stronger than annealed glass of the same size and thickness. The heat-treating process does change the break pattern of the glass—i.e., fully tempered glass disintegrates into relatively small pieces, meeting the safety-glazing requirements and thereby greatly reducing the likelihood of serious cutting or piercing injuries.



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As mentioned, the heat-treating process typically involves the transport of very hot glass on rollers. As a result of this soft glass-to-roller contact, some glass surface changes will occur. Minute glass particles (fines) from the glass cutting and edging process, typical manufacturing plant airborne debris or dust, refractory particles from the tempering oven roof, as well as external airborne dirt and grit carried into the plant by the large volumes of quench air used in the process, may adhere to one or both glass surfaces. Also, the physical contact of the soft glass surface with the rollers may result in a marking or dimpling of the glass surface. Current glass quality specifications contained in ASTM C1036-Standard Specification for Flat Glass-establish the size and number of glass imperfections allowed based on specific visual inspection criteria. The glass surface conditions listed above are not usually visible to the eye under normal visual circumstances. These surfaces do not threaten the visual or structural integrity of the product, and are not reason for rejection of glass under the ASTM consensus standards.

However, despite being invisible, such surface conditions can be detectable to the touch. This difference in "feel," between annealed and heat-treated glass, can lead to issues during cleaning of the glass, as glass cleaning workers attempt to remove microscopic particles. With the best of intentions, they may attempt to scrape particles that can be felt, but not seen, and very often end up scratching and chipping the glass surface.

Additionally, once the glass is delivered to the construction site, construction materials and debris may be deposited on the glass. Paint, stucco, concrete, adhesives and other materials may be splattered on the glass and left there for long periods of time. These materials and the methods for removing them may also damage the glass surface.

It is important to note that the recommended cleaning procedures for heat-treated glass are the same as for annealed glass. The use of scrapers, abrasives, and harsh chemical cleaning agents is not recommended for any glass product because they can cause irreparable damage. With the best of intentions, window cleaners, and other tradesmen, may attempt to remove construction dirt and debris from the glass surface by scraping the surface. This can lead to glass damage, such as scratching and chipping if any microscopic particles have adhered to the surface and are dislodged and transported across the glass in the scraping process.

Acceptable cleaning procedures are available from glass manufacturers and fabricators. In addition, the Glass Association of North America has published a Glass Informational Bulletin entitled, Proper Procedures for Cleaning Architectural Glass Products, which includes industry-recommended cleaning procedures, as well as a list of **TO DO's** and **DO NOT's** – see pages 4 - 5.

Heat-treated glass products are critical components of today's high-performance coated, insulating, laminated, spandrel, safety glazing, bullet-resistant, blast-resistant, and hurricane-resistant fenestration products. Continued use of acceptable cleaning practices, combined with good judgment, will prevent glass damage and enable the glass to maintain



its original attractive appearance for years to come. Used, with permission, from GANA, Glass Informational Bulletin, GANA TD-02-0402, *Heat-Treated Glass Surfaces are Different.*

## **Suggested Procedures For Dealing With Broken Glass**

All types of architectural glass can be hazardous when broken.

Glass can break after installation due to accidental impact, severe weather events, vandalism or improper glazing conditions as well as for other reasons. Regardless of the type of glass, broken glass can pose a risk of injury and property damage.

When glass breakage occurs, safe & protective actions should be taken. When architectural glass breaks the area should be blocked off to prevent glass-related injuries.

If the cause of breakage is not readily apparent, photographs may be required to assist in determining the cause of breakage. Once the area is secured, an immediate cleanup and replacement of the broken glass should be initiated. Workers should use proper protective equipment such as, but not necessarily limited to, gloves and eye protection. Openings created after glass breakage may require boarding up to maintain security. In some cases, the frame may retain or partially retain the broken glass. In order to protect people who may come in contact with the glass, the broken glass should be removed and replaced with new glass. If the cause of breakage is in question, all of the broken glass fragments should be retained for closer examination by glass professionals.

Broken glass still in the opening has reduced strength and poses risks. When glass breaks, it no longer has the integrity to support the loading for which it was designed, and it needs to be replaced.

Certain types of glass are specified for a number of key reasons related to its performance. For example, the building codes require safety glazing in designated hazardous locations to minimize the effects of accidental glass impacts. Impact protection of glazing installed in hurricane-prone areas is also a code requirement in many jurisdictions in order to minimize damage during severe storms.

It is important to note that in all cases broken glass that remains in the frame loses its strength and will not offer the original intended level of performance. Broken glass may also separate and fall from the frame or interlayer, posing a hazard.



## **Care of Window & Door Hardware**

Window and door hardware is expected to give trouble free operation throughout the life of the window or patio door it is mounted on. All of the window vent operators and sliding glass door, and/or out swing or in swing doors hardware installed is protected or enhanced by special coatings and lubricants. These protective coatings and lubricants can be damaged or removed by common household products. If the hardware is properly cared for it will provide you with years of trouble free service.

The following information concerns the proper care of window operator and sliding glass door, and/or out-swing or in-swing doors hardware.

### **Cleaning**

Due to the wide range of environments window operators and sliding glass door, and/or out swing or in swing doors hardware is used in, some cleaning may be required. Windblown dust and dirt can cause the windows and doors to be more difficult to operate, as well as cause the hardware to wear or corrode faster.

AWT recommends the hardware be inspected once a year (more if necessary) and cleared of dirt and/or grime build up. Particular attention should be given to cleaning dirt from slides in window hinges and from the track where the patio door rollers glide. Clean water should be used when possible to flush the hardware clean. A mild (hand wash) dish soap and water mixture can be used to loosen stubborn dirt. Always rinse the hardware with clean water. Allow the hardware to dry completely before lubricating.

### **Cleaners to AVOID**

#### **Do not use the following cleaners:**

- Vinegar Based Cleaners
- Citrus Based Cleaners (Lemon, etc.)
- Industrial Strength Cleaners
- Abrasive Cleaners

These types of cleaners will not only remove the lubricants from the hardware, they can also remove the corrosion resistant coatings.

**Warning:** Glass cleaners and brick/siding washes, with the above ingredients, must not come in contact with the hardware for the reasons listed above.



## **Lubrication**

After the hardware is clean and dried it must be lubricated to restore the smooth operation, and in some cases corrosion resistance. There are a number of commercially available products which can be used. It is recommended that the replacement lubricant be similar to what was removed. (If the gears were coated with grease before you cleaned them, re-lubricate only with grease, not a spray such as WD40, Etc.).

The following list of products will help you know where each should be used:

- Lithium Grease: Use on all gear drives; such as operators and locks. Best choice due to waterproofness.
- WD40 or CD2: Use on all sliding or rotating joints; such as rollers, hinges and chains. Will not last as long as oil.
- Automotive Grease or Petroleum Jelly: Will work in same areas as White Grease, but is not as waterproof and it will attract dust. Be careful when applying grease since it will stain any wood it contacts.
- Light Oil, Such as 3 in 1 Oil: Can be used on sliding or rotating joints. Care must be used when applying due to possible staining of adjacent surfaces and surface finishes.
- Graphite: Can be used on sliding and rotating joints. Also works well on cam locks and hinges.

Warning: Avoid the use of silicone based sprays or lubricants. Silicone can cause some plastic parts to become brittle.

There are many other products which can be used which will give equal results. Care must be used when applying any lubricant to avoid staining and/or damage to window parts. Since lubricants only work if present, periodic checks should be done to ensure the function of the hardware.

If the above steps are followed, the hardware on your window operators and sliding glass door, and/or out-swing or in-swing doors hardware should give years of dependable service.

## **Removing Labels From Glass**

New AWT window wall systems and doors will bear an AWT label. Labels and adhesive residue should be removed from glass as soon as possible after installation. If a label does not release from the glass easily, use the methods described below to remove it.





1. Soak the label thoroughly with isopropyl alcohol (rubbing alcohol). Rub the alcohol into the label with a gentle motion until the adhesive and label are removed.

OR

2. Soak the label thoroughly with acetone (nail polish remover) and peel the label off after a few minutes.

Remember:

- Do not remove labels when exposed to direct sunlight.
- Cleaning agents must not come in contact with weather-strip or finishes, as damage may result.

## **Window Coverings**

Draperies, venetian blinds or' other interior shading devices must not be hung directly from or off of AWT Window Wall systems installation. *Where drapery track or hardware is secured directly to the window frames the AWT warranty becomes null and void.* Attaching these devices to the AWT window wall system(s) negates the purpose of the rain-screen principle designed/incorporated into the window wall.

Draperies, venetian blinds or' other interior shading devices must be hung so as to provide space at the top and bottom or one side and bottom to permit natural air movement over the room side of the glass. The following criteria must be met to avoid formation of a heat trap:

- Minimum 1 1/2" (38 mm) clearance required top and bottom or one side and bottom between shading device and surrounding construction.
- Minimum 2" (50 mm) clearance between glass and shading device.
- Heating/cooling outlets must be to room side of shading device.

If venetian blinds are being used and these clearances cannot be provided, a two-direction positive stop or lock-out that limits the movement of the blinds should be incorporated. For horizontal blinds, the lock-out should limit the rotation of the blinds in both directions so that they are in a position 60 degrees off the horizontal when in the most-closed position.

For vertical blinds, the lock-out should limit movement in both directions so that 1/2" (12 mm) spacing exist between the blinds when in the most-closed position.

Heat-strengthening or fully tempering of the glass may be necessary for some installations to offset the effects of glass size, solar absorption, exterior shading, interior shading,



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climatic conditions, lack of proper clearances noted above or improper placement or directing of air flow.

## **Casement & Awning Windows Maintenance and Care**

### **Casement & Awning Sash Maintenance**

If the sash is not operating properly, please check the following items:

- Clean any dirt or debris in the area of the operating mechanism or on the sill track.
- Operator arm or hinges disengaged. The crank handle must be firmly fastened to the stud and the set screw at the base of the operator handle should be completely seated to avoid damaging or stripping the locator teeth of the mechanism. Lubricate with light oil. The sash will lock even if the window is not completely closed. Simply shut the sash into a snug position and engage the locks. The sash locks will pull the sash tighter against the weather-stripping.

### **Casement & Awning Screen Installation**

Screens are installed from the interior by placing the screen in the screen groove on the bottom of the unit and then tilting the screen into the groove at the top of the window. Once both grooves accept the screen, engage the plungers.

Please note that on a casement unit the screen must be positioned with the plungers to the top of the unit; otherwise the screen will not fit.

Awning screen units have plungers both on the top and the bottom of the screen and are therefore reversible. Screens do not interfere with the operation of the units and can be kept on year-round if desired.



## **Care of Casement/Awning Window Hardware**

Window hardware is expected to give trouble free operation throughout the life of the Window it is mounted on. All of the hardware supplied in casement/awning vent windows is protected or enhanced by special coatings and lubricants. These protective coatings and lubricants can be damaged or removed by common household products. If the hardware is properly cared for it will outlast the window.

The following information concerns the proper care of window hardware.

### Cleaning:

Due to the wide range of environments that casement/awning vent hardware is used in, some cleaning may be required. Windblown dust and dirt can cause the windows to be more difficult to operate, as well as cause the hardware to wear or corrode faster. AWT recommends the window hardware be inspected once a year (more if necessary) and cleared of dirt and grime build up. Particular attention should be given to cleaning dirt from slides in hinges. Clean water should be used when possible to flush the hardware clean. A mild (hand wash) dish soap and water mixture can be used to loosen stubborn dirt. Always rinse the hardware with clean water. Allow the hardware to dry completely before lubricating.

### Cleaners to AVOID

#### DO NOT USE THE FOLLOWING:

Vinegar Based Cleaners  
Citrus Based Cleaners (Lemon, etc.)  
Industrial Strength Cleaners  
Abrasive Cleaners

These types of cleaners will not only remove the lubricants from the hardware, they can also remove the corrosion resistant coatings.

Warning: Glass cleaners and brick/siding washes, with the above ingredients, must **not** come in contact with the hardware for the reasons listed above.

### Lubrication:

After the hardware is clean and dried it must be lubricated to restore the smooth operation, and in some cases corrosion resistance. There are a number of commercially available products which can be used. It is recommended that the replacement lubricant be similar to what was removed. (If the gears were coated with grease before you cleaned them, re-lubricate only with grease, not a spray such as WD40, etc.)



The following list of products will help you know where each should be used:

- Lithium: Grease Use on all gear drivers; such as operators and locks. Best choice due to excellent waterproofing qualities;
- WD40 or CD2: Use on all siding or rotating joints; such as rollers, hinges and chains. Doesn't last as long as oil;
- Automotive Grease or Petroleum Jelly: Will work in the same areas as White Grease, but is not as waterproof and it will attract dust. Be careful when applying grease since it will stain and wood it contacts;
- Light Oil: Such as 3 in 1;
- Oil: Can be used on sliding or rotating joints. Care must be used when applying due to possible staining of aluminum parts.
- Graphite: Can be used on sliding or rotating joints. Also works good on cam locks and hinges.

Warning: Avoid the use of silicone based sprays or lubricants. Silicone can cause some plastic parts to become brittle

There are many other products which can be used which will give equal results. Care must be used when applying any lubricants to avoid staining and/or damage to window parts. Since lubricants only work if present, periodic checks should be done to ensure the function of the hardware.

If the above steps are followed, the hardware on your windows should give years of dependable service.

## **Sliding Glass Door Maintenance Instructions**

Keep sill track free of dirt and debris. Periodically, vacuum track to remove dirt and debris.

Check drainage slots located at exterior of the sill track. Ensure they are not blocked and allow water to flow through freely. Those sill with weep hole covers the covers should open and close freely.

Periodically, clean rollers under the door sash. Spray rollers and track with a mild spray lubricant. Do not use grease or oil as these items tend to attract dirt and dust.

Clean glass with a mild water and vinegar solution or any glass cleaner and a soft cloth.



Clean aluminum and PVC frame and sash components with a mild dish soap and water solution and a soft cloth.

Do not use steel wool, scratch pads, scrapers or any other hard materials to clean glass or frames as they will damage surface finishes.

For adhesive or caulking residue use a mild solvent. Test in an inconspicuous area.

During the lifetime of the sliding door, weather seals may require changing. The weather seals are designed to be easily replaced without special tools.

## **In-swing and Out-swing Glass Door Maintenance Instructions**

Commence cleaning operations at the top of the door and process downward in a continuous operation.

Take care to prevent the use of procedures and harsh chemicals that could damage the finishes of the doors.

Wash down glass surfaces with a solution of mild detergent in warm water, or vinegar and warm water, applied with a soft clean wiping cloth.

Take care to remove dirt from the corners.

Wipe surface till dry to prevent streaks.

Clean aluminum surfaces with clean white, soft rags and a non-abrasive cleaner.

Remove excess dirt by moderate use of solvents then rinse with warm water and dry with soft white cloth until dry.

Clean glass and hardware materials with a non-abrasive cleaner and wipe till dry.

Do not use an acid solution, steel wool or other corrosives or abrasives.

**-End of Operating & Maintenance Instructions-**



**Fire and Rescue  
Services**

900 Heatley Avenue, Vancouver, British Columbia, Canada V6A 3S7 (604) 665-6000

**Ray Holdgate**  
*Fire Chief*

October 22, 2008

Wall Financial Corporation  
5<sup>th</sup> Floor, 1088 Burrard St.  
Vancouver, B.C.  
V6Z 2R9

Attention: Dan Wilson

**SUBJECT: Submission of a "FIRE FIGHTING OPERATION MANUAL",  
for 1212 Howe St. - Pacific Towers**

---

The Fire Fighting Operation Manual, submitted for the building\address listed above, has been accepted in principle for placement at the building. This Manual, dated with the acceptance date, will be installed in an Operation Manual Box at that location by Fire and Rescue personnel.

The requirement for provision of this manual is subject to conditions in the Fire By-Law No. 8191. The building owner or an authorized agent of the owner is responsible for carrying out the provisions of this By-law with respect to the accuracy of the supplied Operation Manual.

**Please note that an updated and revised Fire Fighting Operation Manual must be resubmitted to this office for review whenever any renovation, alteration, or change in occupancy occurs in the building.**

Yours truly,

Wally Goss, Lieutenant  
Pre-Fire Planning (604) 665-6085

cc: National Fire & Safety Planners Inc.,  
22131 Fraserwood Way,  
Richmond, B.C.  
V6W 1J5

## Preventative Maintenance Inspection Form

### Work Order Details

Annual PM

Date: <u>May 15, 2008</u>	Job #: <u>9907</u>	Building Name: _____
Site Contact Name: <u>Daniel</u>		Building Address: <u>1212 Howe St. Van.</u>
Site Contact #: <u>604-835-6233</u>		Mgmt. Company: _____

### Generator Details

Generator Make: <u>115 kW</u>	Model: <u>Marathon</u>	S/N: <u>03045T</u>	Fuel: <u>Diesel</u>
Engine Make: <u>Nissan</u>	Model: <u>PD6T-R</u>	S/N: <u>SP0115D3PPD6T-R</u>	Spec: <u>7580</u>
Transfer Switch: _____	Model: _____	S/N: _____	
Hrs (start): <u>57.0</u>	Hrs (end): <u>58.9</u>		Technician: <u>R.C.</u>

### Comments (to be done when job completed)

REMOVED OLD FUEL TANK & LINES FROM GENERATOR ROOM AND INSTALLED A 900L FUEL TANK IULC APPROVED WITH CONTAINMENT TANK ALSO ALL NEW STEEL FUEL LINES. CHANGED OIL COOLANT & BLOCK HEATER. ALSO REPLACED FAN BELTS BATTERIES ALL FILTERS & AIR CLEANER. PERFORMED A FULL TWO HOUR LOAD TEST ON UNIT AFTER ALL THE WORK AND NO PROBLEMS. UNIT IN GOOD OPERATING CONDITION. ✓

### Preventative Maintenance - Checklist

Items Inspected	Inspected	Recommendations	Parts Replaced Today - to be Invoiced
Log Book Updated	✓		
Lube/Oil Filter(s) Type	✓	Filter # <u>LF-3629</u>	✓
Lube/Oil Type	✓	<u>LF-3441</u> Oil: <u>15W40</u> <u>28</u> Liters	✓
Condensation Trap	✓		
Exhaust System	✓		
Cooling System: Hoses & Pumps	✓	Upper Radiator Hose:	✓
Air <u>(Water)</u> Protection <u>-45</u> C° <u>NEW</u>	✓	Lower Radiator Hose:	
Thermostat	✓	Make & Model #:	
Block Heater & Control	✓	Make & Model #:	
Fan & Accessory Belts	✓	REPLACED # <u>25-9425</u> & <u>25-9410</u> & <u>27378</u> BELTS	✓
Charge Alt./Gen. & Regulator	✓		
Starter	✓		
Battery & Terminals	✓		
Dated: <u>MAY-2008</u> Style: <u>80K</u> Age: <u>NEW</u>	✓		
Battery Load Test	✓		
<u>FD</u> <u>26.2VDC</u> CV Amps	✓		
AC Battery Charger	✓	<u>Bcm 1230-24V</u>	
Manual Charge rate: <u>Hi</u> <u>Low</u> <u>(Auto)</u>	✓		
Air Inlet & Circulation Fan	✓		
Air Outlet & Circulation Fan	✓		
Air Cleaner	✓	Filter # <u>REPLACED NEW</u>	✓
<u>(Dry)</u> Oil Type:	✓		

Fuel Filter & Type Connections	NEW FUEL	Filter #:	
Sample Taken: YES	(NO) N/A	FF-5122	
Fuel Level	FULL		
Injection Pump/Glow Plug			
Nozzles/Injectors			
Governor: Lube - Regulation			
Solenoid - Valve/Vaporizer			
Crank Disconnect			
Cycle Crank Timer			
Carburetor & Adjustments			
Gas Regulator			
Spark Plugs / Ignition Wiring		Style #:	
Protective Guards			
Terminal Junction Box			
AC Alternator Dust & Misc.			
Brush Gear			
Instrumentation			
Transfer Switches & Location			
Generator Main Circuit Breaker & Location		ELE Room ACROSS ENGINE	
Hydro A.T.S. Disc Switch			
Voltage Regulator			
Labels			
Load Test		FULL LOAD-TEST WITH LOAD BANK	

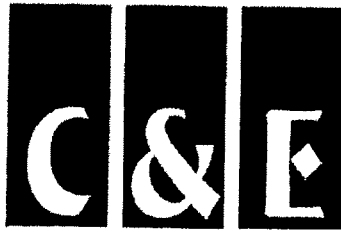
### Load Test Details

Engine				Generator							
Temperature				Volts			Amps				
Time	Oil Pressure	Water	Battery	L1	L2	L3	L1	L2	L3	KW	Hz
2:45	50	188	25.8	208	208	208	314	315	318	112	60
3:15	50	188	25.8	208	208	208	314	315	318	112	60
3:55	50	188	25.8	208	208	208	314	315	318	112	60
4:00	48	190	25.8	208	208	208	314	315	318	112	60
4:40	48	190	25.8	208	208	208	314	315	318	112	60
5:00	48	190	25.8	208	208	208	314	315	318	112	60

### Shutdown Test

Measures	Operate Point	Circuit
Oil P.S.I.		✓
High Temperature		✓
O.C.		✓ 21.5 vdc
H.O.T.		✓
W.U.T.		✓
T.R.T.		✓
C.D.T.		✓





## **C&E BUILDING PRODUCTS INC.**

### **Supplier of:**

Granite and Composite Slab Countertops •  
Kitchen Cabinets • Stainless Steel Sinks • Tiles •  
Faucets • Bathroom Accessories and Fixtures •  
Lighting •

---

## **CABINET WARRANTY**

**(1212 Howe Project)**

All kitchen and bathroom cabinets and countertop installed for the project mentioned above are warranted as follows:

- Wrapped Laminate is warranted for one year against defects in manufacture or installation from the date of substantial completion.
- Moving parts (hinges & slides) carry a one year manufacturer warranty.
- Cabinet boxes are warranted for one year against de-lamination.

The warranty obligation is limited solely to exchanging the defective piece or part or component, including required labor, but will not cover any loss or consequential damages arising from misuse or inability to use or accident, abuse or negligence to use the cabinets.

Please note: Warranty will be null and void in cases where damage is due to standing water or other liquid.

August 15, 2008



## **C&E BUILDING PRODUCTS INC.**

### **Supplier of:**

Granite and Composite Slab Countertops •  
Kitchen Cabinets • Stainless Steel Sinks • Tiles •  
Faucets • Bathroom Accessories and Fixtures •  
Lighting •

---

### **Cabinet Care and Maintenance**

1. To clean all surfaces with only warm soapy water and a soft cloth. Dry immediately with a clean cotton cloth.
2. Never use an abrasive powder or liquid cleaner or an abrasive pad on any Laminate surfaces.
3. Do not use any solvents, thinners, or mineral spirits on Laminate surfaces.
4. Ensure that water and other liquids are not left in contact with cabinet surfaces.
5. Avoid heavy loading in upper wall cabinets, store heavier stuff in base cabinet instead.
6. Open and close doors with care.
7. Avoid any sharp or abrasive material touching or scratching cabinet finishes.
8. Make sure everything is clean and dry before putting into cabinets.
9. Prevent water dripping down to the lower cabinet from countertop.
10. Open all doors and (if possible, remove) all drawers on each side of the range when the self-cleaning cycle is in use. This will prevent excessive heat build-up which may damage the doors and drawer fronts.
11. Heat and steam generating appliances such as toaster ovens, kettles, and portable grills should be used with care and not directly under upper cabinet.

Please call 604-298-9299 for further information or assistance.

Operations Department

August 15, 2008