



A Guide to Equipment Breakdown Insurance

The Boiler Inspection and Insurance Company of Canada



HSB BI&I

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EQUIPMENT BREAKDOWN INSURANCE

This booklet will help you increase your equipment breakdown insurance business. At \$402¹ million, it is still a big, underserved market: more than half² of all commercial property policies written do not carry equipment breakdown coverage – insurance you could be placing.

Much of the business comes from large risks, such as public utilities, petrochemical plants, and national industrial accounts. But more than 90 percent of equipment breakdown business is generated by commercial, industrial, agricultural and residential risks, in and around your own community.

While equipment breakdown insurance often covers complex equipment, systems and processes, understanding and writing equipment breakdown insurance isn't complex. This guide covers what you need to know, keeping it brief, factual and easy-to-understand, with lots of quick-reference exhibits that make it easy to recognize and respond to real-world equipment breakdown insurance needs.

The Boiler Inspection and Insurance Company of Canada (BI&I), a member of HSB Group and part of Munich Re's Risk Solutions family, is the Canadian leader in equipment breakdown insurance, loss prevention, and inspection services. We set the standard for excellence, with unmatched engineering-based expertise, a long-term view of industry requirements, and commitment to service excellence in client relationships. We provide packaged products that can be adapted easily to your customers' needs and seamlessly integrated with your way of doing business.

Partnering with BI&I will strengthen your competitive position, increase your profitability, and enhance your customer relationships with comprehensive equipment breakdown insurance solutions.

What's It All About?

Equipment breakdown insurance is a form of property coverage. Its purpose is to insure against the financial losses – property damage, business interruption and spoilage – that result from a defined Accident (often referred to as a breakdown), or Electronic Circuitry Impairment (ECI), to specified kinds of mechanical, electrical, and pressure equipment, referred to as Objects.

¹ OSFI Consolidated Premiums, 2016. ² BI&I Estimate

Insured equipment may include such things as steam boilers, hot water tanks, pressure vessels, refrigeration and air conditioning systems, motors, generators, compressors, pumps, engines, fans, blowers, gear sets, turbines, transformers, electrical switchgears, electronic equipment, and a wide range of production and processing equipment.

Why the Need?

There are three main reasons why equipment breakdown insurance is important:

- 1) It covers exposures that are normally excluded in other property insurance policies.
- 2) Insurance company inspections (which are not obligatory) may help reduce the likelihood of breakdowns to insured equipment.
- 3) Insurance company inspections of boilers and pressure vessels satisfy the provincial inspection requirements in several provinces.

Commercial Property Insurance Policy Exclusions

With few exceptions, the kinds of breakdowns that happen to boilers, pressure vessels, machinery, and electrical equipment are not covered by most property policies.

Property policies specifically assume liability for the explosion of accumulated gases or unconsumed fuel in the combustion chamber or flues of a boiler or other fired pressure vessels. This hazard is generally referred to as a combustion explosion.

There is another boiler explosion hazard, however, that is usually much more violent than a furnace explosion. That's an explosion caused by steam or water pressure within the boiler, and its results can be devastating.

In this regard, the explosion provisions of most property policies specifically exclude loss from the explosion of all boilers generating steam, and piping or other equipment connected to these boilers.

Apart from boiler explosions, there are other kinds of breakdowns that more frequently happen to this equipment, yet are not covered by most commercial property policies, such as:

- burning (overheating) of boilers or fired vessels due to a lack of water
- cracking of sections of cast iron boilers, due to a variety of causes
- bulging or bagging, usually the result of the build-up of scale or sediment

Pressure vessels such as air tanks, jacketed steam kettles, and propane storage tanks are objects that can also be subject to explosion. Property policy wordings normally exclude vessels and apparatus under pressure which have a maximum normal internal pressure exceeding 103 kilopascals (15 p.s.i.) with the exception of small hot water tanks under 610 millimetre diameter (24 inches) and manually portable gas cylinders.

In addition, electric arcing is excluded under most commercial property policies. This means that the electrical burnout of motors, generators, circuit breakers, electrical distribution boards, cables, and transformers – from such causes as short circuits and line surges – is not covered. An exception is damage caused directly by lightning.

And finally, you'll note that the commercial property policy specifically excludes mechanical breakdown and explosion of equipment due to centrifugal force. These are the very types of breakdowns that happen to a wide range of machinery.

It's important, therefore, when you review your clients' needs for coverage on their heating, cooling, processing, or manufacturing equipment, to bear in mind the very limited protection that is offered under property insurance with respect to the most common equipment and machinery hazards.

Inspection Services

Ever since equipment breakdown insurance was introduced in Canada, inspections of insured equipment have played an important role in helping to reduce the likelihood of breakdowns.

It should be pointed out that an equipment breakdown policy does not guarantee that inspections will be made.

They are made by the insurance company in order to help reduce the frequency and severity of equipment failures. Policyholders benefit from improved equipment reliability and fewer unexpected breakdowns. The insurance company benefits from a reduction in the number and size of claims.

The insurance company inspector serves three basic functions:

1. Risk Assessment

The inspector is the 'eyes' through which the underwriter sees the risk. This is accomplished not only by the inspector's analysis of

the types and the condition of equipment in service, but also by their reports on such things as plant maintenance philosophy, operator training, production flow, and exposure to business interruption or spoilage losses.

2. Loss Prevention

The inspector physically inspects the equipment in an effort to help detect dangerous conditions before trouble occurs, such as making sure the equipment is suited for the job, overseeing the testing of controls and safety devices, checking equipment maintenance, and reviewing operators' logs. In many instances, the inspector may also be able to offer suggestions to help reduce operating costs or lengthen the usable life of equipment.

3. Accident Investigation and Assistance in the Resumption of Business

If a breakdown does happen, the inspector is called upon to investigate the occurrence, and determine the extent of damage and probable cause of failure. The latter step is particularly important to help prevent similar failure of other equipment at the location. And the inspector is often able to assist the policyholder in taking the necessary action to return the equipment or plant to normal operation with minimum delay.

Note: Brokers are asked not to report claims to independent adjusters. BI&I employs a staff of in-house adjusters who are specialized in handling equipment breakdown claims.

Mandatory Inspections

In the interest of public safety, the provinces have enacted laws requiring the periodic inspection of boilers and pressure vessels.

Under these laws – which vary from province to province – the equipment must be inspected by commissioned inspectors at specified intervals and approved for continued operation. Although the provinces maintain their own inspection staff, several of them accept inspections made by insurance company inspectors in lieu of those made by their own personnel. Some provinces actually encourage insurance company involvement, because of their own budgetary constraints.

Where insurance company inspections are accepted, the policyholder does not have to pay the local inspection fee. This, in essence, reduces the cost of the insurance.

Evolving Equipment Risks

Equipment exposures have changed considerably in recent years due to the advancement of technology:

Technology continues to get smaller. Microelectronics have become the brains that drive equipment, with components so tiny that 10 million transistors could fit on the period at the end of this sentence. Microcircuits are extremely fragile and sensitive to electrical injury, shock, vibration, and heat. This combination of minute size and high sensitivity means equipment may simply stop working, without showing any evidence of visible damage.

Cloud computing is now an integral part of business operations, providing critical services such as data storage, software, payroll, accounting, marketing, point-of-sale, and customer relationship management.

As the result of the miniaturization of technology, **business equipment has become more portable and more frequently used off-premises,** where it is exposed to greater risk of damage.

Equipment Hazards

Electrical System Hazards. A building's electrical system is a significant source of risk to high-tech equipment. Many people presume that air conditioning units have a higher potential for failure because they have moving parts – pumps, belts, and fans – that wear down and break. They also believe that stationary wires and electrical components do not have the same failure potential. The truth is, after boiler and air conditioner breakdowns, electrical system failures are the most common.

Most electrical failures are not caused by a major event such as lightning, but by loose connections, moisture, dirt, overloads, and other common causes. Thirty-five percent of all electrical system failures can be traced to human error – from carelessness and improperly trained personnel, to inadequate maintenance, and delayed service. Even modern buildings designed just 10 or 15 years ago are vulnerable to electrical system failures.

Phones at Risk. The increased risk of advanced technology is not confined to specialized equipment. Consider the telephone, the lifeline of day-to-day business operations. For most companies, a PBX system, or private branch exchange, is required to manage the phone lines that funnel incoming and outgoing calls.

PBX systems are complex digital equipment, replete with sensitive circuitry and electronics. And like all computers, they are extremely vulnerable to electrical disturbance. One of the biggest problems in PBX systems – and virtually any microprocessor-controlled equipment – is harmonic distortion. This is electrical ‘noise’ created by nonlinear power loads. The result is heat that burns out sensitive circuitry.

Boilers and Fired Pressure Vessels are subject to several different hazards;

- explosion, due to internal pressure of steam or water
- burning (overheating), caused by continued firing after the water drops below a safe level
- cracking of cast iron sections, due to such things as expansion and contraction stresses, rust growth between sections, porous castings, and tie rods that are too tight
- bulging or bagging, usually caused by improper heat transfer due to build-up of scale or sediment
- collapse (of the cylindrical furnace of a scotch marine boiler), generally due to ‘low water’

Unfired Pressure Vessels, such as air tanks, electric water heaters, steam cookers, hydro-pneumatic tanks, and process vessels, are subject to the hazards of explosion, bulging, cracking, and collapse (implosion).

The vessels, coils and piping that form part of refrigerating systems can explode, collapse or crack. The most common type of failure is cracking, which is often caused, oddly enough, by freezing due to control failure.

An additional hazard is encountered in the operation of ammonia refrigerating systems. Ammonia that is released by a breakdown, such as a broken pipe, can cause heavy contamination losses, especially in food products.

Mechanical Equipment – compressors, pumps, blowers, fans, engines, turbines and the like – are subject to a variety of hazards. Among the more common causes of failure are: metal fatigue, loss of lubrication, over-speed, mechanical stress, and shock loads. A more detailed listing appears in the separate exhibit entitled Insurable Equipment on page 21.

Why Do Breakdowns Happen?

Many breakdowns – not all of them – can be prevented. The preventable ones, which nevertheless occur, can nearly always be attributed to human failure in one form or another.

Safe operation always requires proper maintenance of equipment. But many operators or owners of equipment don't know how – or don't take the time – to care for their equipment properly.

Consider, for example, a low-pressure steam boiler in an apartment building, office building or manufacturing plant. Good maintenance requires the periodic testing of controls, particularly the low-water fuel cut-off. If a float-type cut-off isn't drained periodically to flush out the accumulation of sediment in the float chamber, chances are high that the cut-off will fail to shut off the burner when the water in the boiler drops below a safe level, resulting in a badly burned boiler or perhaps even an explosion.

Here are a few other breakdown causes that can be blamed on human failure:

- Operating equipment beyond its rated capacity
- Misapplication of equipment
- Permitting dust or dirt to build up on electrical equipment
- Failure to protect equipment against vehicle impact
- Deliberately bypassing safety devices
- Relying too heavily on automatic devices
- Failure to test auxiliary equipment (for example, to ensure proper lubrication of a large machine)
- Improper lay-up or start-up procedures for seasonal equipment

The list goes on and on. No wonder breakdowns happen!

POLICY COVERAGE

There are several forms under which BI&I can provide Equipment Breakdown insurance.

- **TechAdvantage® Equipment Breakdown Coverage**, our standard policy
- **All Systems Go Plus®**
- **Equipment Breakdown Rider**, which forms part of many property & casualty insurance company package policies

However, because the above are all derived from TechAdvantage® Equipment Breakdown Coverage, we will use this form in the following discussion and explanation.

Remember, we stated at the start that equipment breakdown insurance covers losses from defined Accidents or Electronic Circuitry Impairment (ECI) to specified equipment, or Objects. For the insurance to apply, there must be an Accident or ECI to one or more Objects.

Accident

In layman's terms, an Accident means **a sudden and accidental breakdown of an Object resulting in physical damage to the Object, that requires that the Object be either repaired or replaced** (except as is amended for more restrictive forms of coverage applied to some boiler or turbine risks).

Because the insurance is not intended to cover certain occurrences, especially those of a maintenance nature, the following occurrences are not considered Accidents:

- depletion, deterioration, corrosion or erosion of material
- wear and tear
- leakage at any valve, fitting, shaft seal, or gland packing
- cracking of any part of a gas turbine exposed to the products of combustion
- breakdown of any structure or foundation supporting the Object
- operation of any protective device or safety device (which would merely be doing what it is supposed to do)

However, if an excluded occurrence or condition (such as wear and tear) **caused** a defined Accident (e.g. a broken shaft in a motor), the latter occurrence **would** be considered an Accident.

One other exclusion applies to boilers and fired vessels – combustion explosion. That hazard, as you will recall, is specifically covered by the 'explosion' provisions of most fire insurance policies.

Electronic Circuitry Impairment (ECI)

BI&I's TechAdvantage® Equipment Breakdown Coverage adds a second cause of loss: Electronic Circuitry Impairment (ECI). Electronic Circuitry means microelectronic components, including circuit boards, integrated circuits, computer chips, and disk drives. An ECI causes equipment to suddenly lose its ability to function as it had immediately before it stopped working. If the remedy is to replace one or more electronic circuitry components, then ECI is triggered, regardless of whether or not physical damage is detected.

Electronic Circuitry Impairment does not mean:

- Conditions that can be remedied by normal maintenance, rebooting, reloading or updating software or firmware
- Incompatibility of software or equipment installed
- Insufficient size and capacity of the equipment
- ECI does not apply to equipment that is not in the insured's care, custody or control

Electronic Circuitry Impairment does not extend to Service Interruption, Contingent Business Interruption, Anchor Location or Civil Authority coverages.

Object

Objects can be described in a number of ways. The Simple Seven categories of insurable objects are:

1. Electrical: Electrical equipment or apparatus used for the generation, transmission or utilization of electrical power, such as electrical panels, switchboards, transformers, generators, cables and motors

2. Air Conditioning and Refrigeration: These systems contain a variety of equipment components, such as Pressure Vessel (compressors), Mechanical (fans), Electrical (cables) and Electronic (controls)

3. Boiler and Pressure Vessels: Boilers, fired or unfired pressure vessels, and piping normally subject to vacuum or internal pressure other than static pressure of contents

4. Computer and Communications: Equipment used for the generation, control, transmission, reception, recording, reproduction, playback, or other use of television, radio, or telephone signals; any electronic equipment used for research, diagnostic, treatment, experimental, or other medical or scientific purposes; any electronic equipment used for computing, data processing, duplicating, inventory control, monitoring, scanning, or other electronic office equipment including associated fibre optic cable

5. Mechanical: Equipment used for the generation, transmission, or utilization of mechanical power, such as gear boxes, generators, fans, pumps, motors, and engines

6. Renewable and Alternative Energy: A wide range of equipment used for alternative power generation, including solar, wind, geothermal, and bio-fuel

7. Production Machines: Machines which process, form, cut, shape, grind, or convey a product, or raw materials, or materials in process, such as CNC machines, robots, machining tools, printing presses, hydraulic presses, extruders, lathes, mills, and equipment used in food processing

COMPREHENSIVE COVERAGE OVERVIEW

Optional Extensions to Coverage

PRESSURE EQUIPMENT

Group: Boilers, unfired pressure vessels, piping

Examples: Cast iron boilers, fired coil water heaters, autoclaves, air receivers, refrigeration systems, etc.

MECHANICAL EQUIPMENT

Group: Equipment used to generate, transmit, or utilize mechanical power

Examples: Compressors, pumps, gears, turbines, fans, blowers, internal combustion engines, etc.

PRODUCTION MACHINES

Group: Machines or apparatus which process, form, cut, shape, grind, or convey product, and maintenance machines

Examples: Hydraulic presses, extruders, paper machines, lathes, mills, etc.

ELECTRICAL EQUIPMENT

Group: Equipment used to generate, transmit, or utilize electric power

Examples: Electric motors, generators, transformers, miscellaneous electrical apparatus (switchboards, cables, circuit breakers)

ELECTRONIC EQUIPMENT

Group: Television, radio or telephone equipment; medical or scientific equipment; data processing, computing, duplicating, or office equipment

Examples: Television transmitters, x-ray machines, computers, bar code scanners etc.

PROPERTY DAMAGE COVERAGE

In the event of an Accident or ECI to a defined Object, while the Object is in use or connected ready for use, the insurance company agrees to pay for:

- (a) loss to the Object
- (b) loss to other Insured Property directly damaged by the Accident

Other Insured Property is defined as property owned by the insured, and property of others in the care, custody or control of the insured for which the Insured is legally liable.

Loss settlement is made on the basis of the lesser of the cost to repair damaged property or replace damaged property with property of similar kind, capacity, size, quality, and function. If damaged property is replaced with something bigger or better, the cost of betterment is borne by the insured. However, if an Object requires replacement, up to 150% will be paid for equipment that is better for the environment, or more efficient than the equipment being replaced.

This insurance is subject to a Property Damage Limit (also called Limit per Accident or Limit of Liability) stipulated in the policy declarations for the location where the Accident or ECI occurs.

INDIRECT DAMAGE COVERAGE

There are several forms of indirect damage coverage available under equipment breakdown policies. All forms are optional and may be added to the basic policy by endorsement. Business interruption coverages on equipment breakdown policies are similar to the property business interruption coverages.

Property damage coverage is required before the insured can purchase indirect coverage. Some of the indirect damage coverages available on equipment breakdown policies are:

1. Business Interruption - Actual Loss Sustained - This form is intended to reimburse the insured for loss of profits and/or continuing expenses as a result of an Accident or Electronic Circuitry Impairment (ECI), on a proof of loss basis, until business, as specified in the form (production, sales, rents or income) can be resumed; subject to the limit of loss specified.

2. Rent or Rental Value - This form is intended to reimburse the insured for the loss of rents on:

- a. the portion of the premises rented out
- b. the fair rental value for the portion occupied by the insured, and
- c. the rental value of the unoccupied portion of the premises, resulting from an Accident or ECI

3. Loss of Profits - Loss of profits coverage is provided to reimburse the insured for loss of gross profits (the difference between the cost price and the selling price of the insured's merchandise) resulting from an Accident or ECI, until the gross profits are back to the level immediately before the Accident or ECI occurred but not exceeding the sum insured and indemnity period specified.

4. Gross Earnings - Gross earnings coverage is provided to reimburse the insured for loss due to the necessary interruption of business as a result of an Accident or ECI until the damaged property of the insured is rebuilt, repaired or replaced, but not exceeding the amount of insurance specified.

5. Extra Expense Coverage – Extra expense coverage can be provided to offset the additional cost of conducting business during the period of restoration over and above the cost that normally would have been incurred to conduct business during the same period, had no Accident or ECI occurred. Such businesses as newspapers, hospitals, schools, colleges and nursing homes may have a need for this coverage.

6. Spares Mitigation Clause – All business interruption forms have a spares mitigation clause included. This provides insureds, who have taken the steps of carrying a spare, a deductible waiver in the event the spare fails while operating to mitigate a potential loss.

7. Spoilage – Broad Form – This coverage provides indemnity for loss or expense due to spoilage resulting from an Accident or ECI. Loss from lack of power, light, heat, steam, or refrigeration is expanded to cover either too much of these elements or too little of these elements. This coverage is designed for food processing risks where too much heat or cold may spoil the insured's product.

8. Spoilage – Enhanced Coverage – For an additional premium, enhanced spoilage coverage is offered that will provide coverage for spoilage resulting from the normal operation or failure of safety or protective devices. These devices can include fuses, electrical breakers etc.

OTHER COVERAGES AND LIMITS

The following additional coverages are provided for in the policy, in most cases to a specific sublimit. The limit provided for each coverage will vary depending upon the individual needs of each insured and the insurer or reinsurer's desire to limit the amount of exposure in specific areas.

Automatic Coverage – provides insurance at newly acquired locations for a period up to 90 days on equipment similar to that insured at existing locations. Coverage applies to both direct damage and business interruption, or other indirect coverages if insured at existing locations. The coverage territory includes those countries where one or more insured location already exists.

By-Laws, Demolition and Increased Cost of Construction – provides insurance to cover the extra costs associated with demolishing, repairing, or replacing insured property as a result of current by-laws or regulations. Liability is limited to the cost to replace property on the same site with property of such kind, capacity, size, quality, and function required to satisfy the minimum requirements of regulations.

Errors and Omissions – provides coverage to insured's locations that have been omitted or cancelled from the policy due to an error or unintentional omission by the insured in the areas such as reporting or describing the location.

Hazardous Substances – coverage provides insurance for the increased cost to repair, replace, clean up, or dispose of affected insured property and for any increase in loss under any indirect damage coverage as a result of the involvement of a substance which has been declared by the government to be hazardous. A hazardous substance is (a) any pollutant, contaminant, or other substance declared by a governmental authority to be hazardous to health or the environment, or (b) any mould, yeast, fungus, or mildew including any spores or toxins created or produced by, or emanating from such mould, yeast, fungus or mildew, whether or not allergenic, pathogenic or toxigenic.

Water Damage – where not covered under the property policy, provides coverage for loss to insured property which is damaged by water as a result of an Accident or ECI.

Ammonia Contamination – provides coverage from damage caused by ammonia contacting or permeating insured property as a result of an Accident or ECI.

Professional Fees – provides insurance for reasonable and necessary fees payable to auditors, accountants, lawyers, architects, engineers, or other professionals, for producing and certifying to establish the amount of liability in the event of an Accident or ECI. The insured's own employees are not included.

Expediting Expenses – are those reasonable extra costs to make temporary repairs, speed up permanent repairs, or to speed up permanent replacement. Overtime labour and express transportation are two examples.

Data Restoration – provides coverage for the additional costs of repairing or replacing data as a result of an Accident. Coverage is also provided for data lost as a result of an Accident, but not ECI, at an insured's cloud computing service provider. The cost of gathering or assembling the information is also included. Damage caused by programming errors is not covered.

Civil Authority or Denial of Access – provides business interruption or extra expense coverage, if any, in the event access to an insured location is denied, due to an Accident, but not ECI, to an Object located on or within 1000 metres of the insured's premises.

Service Interruption – provides coverage where equipment not owned or operated by the insured causes loss to the insured as a result of an Accident but not ECI. The coverage is for business interruption and other indirect coverages provided these coverages are included in the policy. The Accident, but not ECI, must be to an Object located on or within 1000 metres of the insured's premises. The Object may be owned by the building owner at the location, or by a public utility or other company, and used to supply steam, gas, water, refrigeration, electricity, or telephone services to the insured. Cloud computing services are included in service interruption coverage, paying for lost business income and extra expense, when an insured's cloud provider experiences an outage due to an Accident.

Anchor Location – provides contingent income coverage for loss resulting from an Accident, but not ECI, to equipment not owned by the insured, which is located at a nearby location that draws clients to an insured location.

Brands and Labels – pays for the cost of removing labels or stamping of salvaged merchandise, damaged as a direct result of an Accident or ECI.

Green Coverage – pays additional costs to help restore recognized environmental standards to equipment and property.

Off Premises Transportable Objects – covers transportable insured equipment against loss from an Accident or ECI for property damage, business income, extra expense, and data restoration, anywhere in Canada and USA.

Public Relations – pays for professional public relations services to help manage the insured's business reputation, which may be at risk when a breakdown causes a business interruption loss.

Contingent Business Interruption – provides business interruption coverage for an Accident, but not ECI, to equipment owned by a customer or supplier of the insured.

POLICY CONDITIONS

The following brief explanations are those which are somewhat unusual or unique to equipment breakdown insurance. We have not included those which are clearly stated and found to be common to most types of insurance policies.

Inspection

Since engineering and loss prevention are most important, the insurance company is permitted, but is not obligated, to inspect the insured's equipment at any reasonable time.

Suspension

This condition allows any representative of the insurance company to suspend coverage on loss from a breakdown to any insured Object immediately upon discovery of a dangerous condition.

Mortgagee Interest

If there is a mortgagee named in the policy, in the event of loss, the cheque will be made payable to both the insured and the mortgagee. The mortgagee must be given 15 days written notice if the policy is cancelled. The insurance company also agrees to notify any mortgagee shown in the policy if coverage is suspended.

Notice of Loss

When a breakdown occurs, the insured must notify the insurance company immediately. Written confirmation by email, letter or facsimile is required as soon as possible.

Duties in the Event of Loss or Damage

After a loss, the insured is required to protect property from further damage and allow the insurance company reasonable time and opportunity to examine damaged property. Also, the insured must assist the company in the process of investigating and adjusting the claim including making records and employees available for questioning on any matter relating to the claim. The insured is required to send the insurance company a signed statement of loss containing the information the company needs to settle the claim.

Subrogation

The insurance company has the right to take over the insured's right to collect from a third party. The insured must not do anything after the breakdown to harm such rights.

Other Insurance

This is the standard joint loss provision regarding the sharing of loss where more than one carrier is liable for payment for damage to the insured's property.

Insurer's Agreement

This is the Disputed Loss Agreement. If there is a dispute between the equipment breakdown insurer and the property insurer over which insurer is liable or the proportion of each company's liability, this condition comes into effect. The insured in such a case may write requesting that the loss be settled in accordance with the Insurance Bureau of Canada's Disputed Loss Agreement.

Action Against the Company

Legal action must be commenced by the insured within 14 months from the date of the breakdown, or per local requirements.

POLICY EXCLUSIONS

Several standard exclusions apply to equipment breakdown policies. They are grouped into eight general categories as follows:

- The Nuclear Exclusion – Nuclear reaction, nuclear radiation, or radioactive contamination etc.
- The War Exclusion – War, bombardment, invasion, insurrection, rebellion, revolution, operations of armed forces while engaged in hostilities, sabotage etc.
- The Terrorism Exclusion – Terrorism including any act to combat terrorism.
- The Demolition and Increased Cost of Construction Exclusion – It should be noted that coverage for this exclusion may be added as an additional Other Coverage up to a specific sublimit as specified in the policy. The exclusion applies to any increase in loss necessitated by any ordinance, law, or regulation. It also excludes increased costs due to contamination by a substance declared to be a contaminant, as well as increased costs of cleanup or disposal of contaminated or polluted property.
- The exclusions that avoid or prevent duplication of coverage by the equipment breakdown policy and the property insurance policy – Earthquake, Wind, Fire and Smoke, Water, or other means to extinguish Fire, Lightning, Flood and Escape of Water.
- The Indirect Losses or Causes of Losses – Business Interruption, Spoilage, etc. Indirect coverage for Business Interruption, Spoilage and Extra Expense are of course available as additional coverages that may be added by endorsement to the policy.
- The Cyber Exclusions – Data erasure, errors in creating data, inability to transmit data, impact of virus etc.

Note: These explanations of policy exclusions are intended as a guide to understanding. Please refer to the policy itself for an exact description of what is excluded.

INSURABLE EQUIPMENT

| Type of Equipment | Typical Failures | Some of the Causes |
|---|---|--|
| Boiler and fired pressure vessels | Explosion Burning Bulging Cracking | Overpressure; inadequate or inoperative relief valves; structural weakness Control failure; low water due to leakage or feed pump failure; flame impingement Scale or sediment buildup; flame impingement Thermal stresses; rust buildup; overtightened tierods; porous castings; vandalism |
| Unfired pressure vessels (hot water tanks, air tanks, cookers, process vessels) | Explosion Bulging Implosion Cracking | Overpressure; chemical reaction; inoperative or inadequate relief devices; structural flaws Thinning of metal due to erosion, corrosion Sudden loss of pressure; control failure Vibration; structural flaws; poor welding |
| Centrifugal compressors, pumps | Explosion (centrifugal) Burned bearings Shaft, blading, impeller breakage | Loss of load; control failure; metal fatigue infans, blowers element Misalignment; loss of lubrication Misalignment; metal fatigue; foreign material; overload; progressive crack |
| Refrigerating and air conditioning vessels, piping | Cracking (piping) Cracking (vessels) Explosion | Vibration; support failure; vehicle impact (forklift trucks); chipping ice off piping Failure of flow switch; improper lay-up; freeze up Overpressure; control failure; corrosion |
| Piping (steam, air, etc.) | Explosion Cracking | Vibration; support failure; vehicle impact Support failure; freeze-up; vibration |
| Electric motors, generators and other rotating electrical equipment | Electrical burnout Burned bearings Shaft, frame or rotor breakage | Arcing; line surge; excessive moisture; dirty windings; brittle insulation; vermin; lightning Misalignment; inadequate lubrication Overspeed; metal fatigue; foreign material; overload; progressive crack |
| Reciprocating compressors, pumps, internal combustion engines | Cylinder damage Shaft, rod breakage Jacket, frame, engine block damage | Liquid slugging; contaminated oil; seizing or coring due to inadequate lubrication Misalignment; shock load; progressive crack; loosening of parts Freeze-up; loosening of bolts; progressive crack; loss of cooling medium |
| Gears, gear sets | Broken teeth Burned bearings | Vibration; misalignment; misapplication; progressive crack; metal fatigue Misalignment; inadequate lubrication |

INSURABLE EQUIPMENT (CONT'D)

| Type of Equipment | Typical Failures | Some of the Causes |
|--|--|--|
| Production machines (paper machines, presses, extruders, etc.) | Breaking of moving parts Frame or column damage | Metal fatigue; thinning of parts under pressure; loosening of bearings; foreign material Misalignment; shock load; progressive crack; metal fatigue |
| Transformers | Electrical burnout | Lightning; line surge; excessive moisture; deterioration of insulation; overload; contaminated insulating liquid |
| Miscellaneous electrical apparatus (switchboards, cables, bus ducts, circuit breakers) | Electrical burnout | Lightning; line surge; excessive moisture; poor maintenance of relays and contactors; loose connection; overload; carelessness |
| Air conditioning units, small refrigerating and compressing units | | (refer to comments relating to particular components of the units; motors, compressors, vessels, etc.) |
| Electronic equipment (personal telephone systems, computers, x-ray machines, transmitters, photocopiers, etc.) | Electronic breakdown | Power spikes or surges; dust or dirt; moisture; extreme temperatures |

TYPICAL OCCUPANCIES

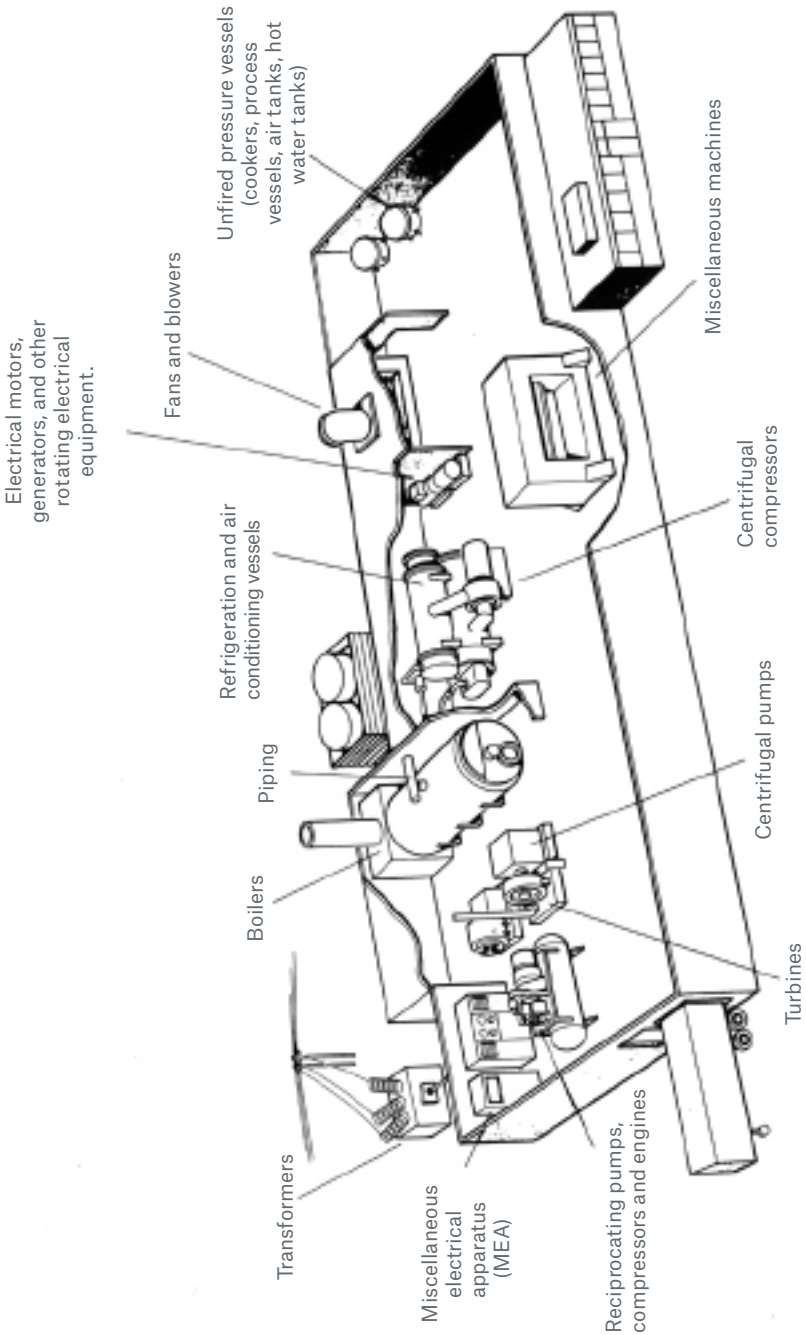
| | Heating boilers | Pressure Vessels (non-process) | Air conditioning units, systems | High pressure boilers | Process vessels | Refrigeration | Motors, generators | Emergency generators | Pumps, compressors | Production machines | Transformers | Steam, Gas Turbines | Switchboards, cables, etc. | Electronic equipment and Electronic Circuitry |
|------------------------|-----------------|--------------------------------|---------------------------------|-----------------------|-----------------|---------------|--------------------|----------------------|--------------------|---------------------|--------------|---------------------|----------------------------|---|
| Apartment buildings | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Auto sales | ● | ● | ● | | | | ● | | ● | | ● | ● | ● | ● |
| Bakeries | ● | ● | ● | | | ● | | | ● | | ● | ● | ● | ● |
| Banks | ● | ● | ● | | | | | | | | ● | ● | ● | ● |
| Bottling plants | ● | ● | ● | ● | | | ● | | ● | ● | ● | ● | ● | ● |
| Bowling alleys | ● | ● | ● | | | ● | | | | | ● | ● | ● | ● |
| Breweries | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Canneries | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Car washes | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Chemical plants | | ● | | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Churches | ● | ● | ● | | | | | | ● | | ● | ● | ● | ● |
| Clubs | ● | ● | ● | | | ● | | | | | ● | ● | ● | ● |
| Cocktail lounges | ● | ● | ● | | | ● | ● | | | | ● | ● | ● | ● |
| Cold storage plants | | ● | | ● | | ● | ● | | ● | | ● | ● | ● | ● |
| Colleges | ● | ● | ● | ● | | ● | ● | | ● | | ● | ● | ● | ● |
| Condominiums | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Convalescent homes | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Country clubs | ● | ● | ● | | | ● | ● | | ● | | ● | ● | ● | ● |
| Dairies | | ● | ● | ● | ● | ● | ● | | ● | | ● | ● | ● | ● |
| Dry cleaners | | ● | ● | ● | ● | ● | ● | | ● | | ● | ● | ● | ● |
| Food processing | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Foundries | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Funeral homes | ● | ● | ● | | | | | | ● | ● | ● | ● | ● | ● |
| Garages | ● | ● | ● | | | | ● | | ● | | ● | ● | ● | ● |
| Greenhouses | ● | ● | ● | | | ● | ● | | ● | | ● | ● | ● | ● |
| Hospitals | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hotels | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Laundries | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Manufacturing, heavy | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Manufacturing, light | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Motels | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Municipal buildings | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Office buildings | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Paper mills | | ● | ● | ● | ● | | ● | | ● | ● | ● | ● | ● | ● |
| Printing, publishing | ● | ● | ● | | | | ● | | ● | ● | ● | ● | ● | ● |
| Professional buildings | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | ● |
| Public buildings | ● | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Pumping stations | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● |
| Refineries (oil) | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Restaurants | ● | ● | ● | | | | ● | | ● | | ● | ● | ● | ● |
| Schools | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | ● |
| Service stations | | ● | ● | | | | ● | ● | ● | | ● | ● | ● | ● |
| Stores | ● | ● | ● | | | ● | ● | ● | ● | | ● | ● | ● | ● |
| Textile plants | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | ● | ● |
| Theatres | | ● | ● | | | ● | ● | | ● | | ● | ● | ● | ● |
| Utilities (electric) | | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● |
| Warehouses | | ● | ● | | | ● | ● | | ● | | ● | ● | ● | ● |

QUICK REFERENCE CHART

Equipment Insurance vs. Warranties and Contracts

| Type of Occurrence or Service | Typical Manufacturer's Warranty | "Full" Maintenance Contract | Equipment Insurance |
|--|---------------------------------------|-----------------------------------|------------------------|
| Pay for breakdown caused by faulty materials or workmanship | YES | NO | YES |
| Pay for Business Income Losses | NO | NO | YES (optional) |
| Pay for extra expense of rental equipment, rental facilities and temporary repairs | NO | NO | YES (optional) |
| Pay for spoilage of perishables | NO | NO (optional) | YES (optional) |
| Pay for direct damage to surrounding property | NO | NO | YES |
| Provide required jurisdictional inspection service | NO | NO | YES |
| Oil, clean, adjust, change filters, etc. | NO | YES | NO |
| Repair and replace worn parts | NO | YES | NO |
| Pay for lost refrigerant from breakdown | NO | NO | YES |
| Pay for labour cost to repair/replace parts | NO | Sometimes | YES |
| Pay for accidental breakdown (see exclusions) | NO | YES | YES |
| Pay for Ammonia Contamination of product | NO | NO | YES |
| Pay for operator error or misuse of equipment | NO | NO | YES |
| Pay for full replacement cost of parts and property | NO | NO | YES |
| Pay for refrigerant lost through leakage | NO | NO | NO |
| Pay for expediting expenses of overtime, labour, fast freight, etc. | NO | NO | YES |

EQUIPMENT EXPOSURES FOUND IN A TYPICAL FACTORY



A CHOICE OF POLICIES

TechAdvantage® Equipment Breakdown Coverage

This policy provides coverage on larger risks, particularly those engaged in processing or manufacturing. This standard form is adaptable to a wide range of exposures. Property damage, business interruption, and other coverages can be tailored to suit the specific needs of each insured.

All Systems Go Plus® - broad, unlimited* coverage with Data Compromise and Identity Recovery

This unique insurance policy was created to specifically address the needs of the modern non-manufacturing and non-processing small business with insurable values not exceeding \$15,000,000 for building owners and \$1,500,000 for tenants. It combines broad, unlimited* equipment breakdown coverage with optional Data Compromise and Identity Recovery. Premiums are based on property values rather than actual objects so as to permit brokers to provide quotes to their clients without having to wait for a company survey. Fast rating, binding, and issuing can be done through biiconnect.com. If you are a broker requiring access, please contact your BI&I Marketing Representative.

*There is no limit of insurance applicable to direct damage, spoilage, business interruption / extra expense, service interruption and anchor location, for qualified risks.

Equipment Breakdown Rider

BI&I makes this product available exclusively through its reinsurance arrangements with property and casualty insurers in Canada.

Equipment Breakdown Rider has the added flexibility of three coverage options, from Basic to Comprehensive Plus.

Course of Construction Equipment Breakdown Coverage

Course of Construction Equipment Breakdown coverage provides coverage for the breakdown of permanently installed equipment during construction. It can also be extended to include coverage during commissioning and testing.

Note: It should be understood that the comments in this guide are merely an effort to summarize policy coverage, exclusions and conditions. Please refer to the policy itself for exact details of coverage. For further information or assistance contact your local BI&I Office.

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