

A GUIDE

To Equipment Breakdown Insurance





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EQUIPMENT BREAKDOWN INSURANCE

This booklet will help you increase your equipment breakdown insurance business. It's a big, underserved market - more than \$300 million in premiums are written in Canada annually. And yet there are thousands of uninsured risks and countless incomplete insurance programs lacking this one vital form of insurance coverage... Insurance *you* could place.

Much of the business comes from large risks, such as public utilities, petrochemical plants and national industrial accounts. But more than 90 per cent of equipment breakdown policies - and perhaps half of all commission dollars - are 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.


HSB BI&I, a designated Risk Solutions unit within the Munich Re 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 easy-to-use packaged products that can be adapted easily to your customers' needs and seamlessly integrated with your way of doing business.

Partnering with HSB 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 insurance. Its purpose is to insure against the financial losses - property damage, business interruption and spoilage losses - that result from defined "accidents" to specified kinds of mechanical, electrical and pressure equipment (called "objects" in the policy).

Insured equipment may include such things as steam boilers, hot water boilers, pressure vessels, refrigerating 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 accidents 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 accidents that happen to boilers, pressure vessels, machinery and electrical equipment are *not* covered by most All Risk policies.

All Risk 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 “furnace explosion.”


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

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

To this point we’ve discussed boiler *explosions*. But what about the kinds of accidents that *more frequently* happen to this equipment:

- *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

They’re not covered by most commercial property insurance policies either!



Pressure vessels such as air tanks, jacketed steam kettles and propane storage tanks are objects that also can be subject to explosion. All Risk 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 millimeter diameter (24 inches) and manually portable gas cylinders.

In addition, *electric arcing* is excluded under most commercial property policies. That 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 – isn't covered, either. 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 accidents 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 as respects the most common equipment and machinery hazards.


Inspection Service

Ever since Boiler and Machinery Insurance was introduced in Canada, inspections of insured equipment have played an important role in helping to reduce the likelihood of accidents.

It should be pointed out here 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; (2) physical inspection of insured equipment; and (3) accident investigation and assistance in the resumption of business.

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

The inspector's second function is that of physically inspecting the equipment in an effort to help detect dangerous conditions *before* trouble occurs. In this activity, the inspectors may do such things as make sure the equipment is suited for the job, oversee the testing of controls and safety devices, check equipment maintenance and review operators' "logs." In many instances, the inspector may also be able to offer suggestions that can help reduce operating costs or lengthen the usable life of equipment.

If an "accident" 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 a *minimum* of delay.

Note: Brokers are asked not to report claims to independent adjusters. HSB 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 staffs, 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.



Equipment Hazards

Equipment exposures have changed considerably in recent years because the equipment itself has changed. The microprocessors and circuitry that control these modern devices are fragile and more susceptible to electrical injury, shock, vibration, and heat. Another factor that contributes to higher risk is the extent to which microprocessors are embedded in machinery and equipment.

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 high 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 failures, 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. Seventy-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 high technology is not confined to specialized equipment. Consider the telephone, the lifeline of the 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, hydropneumatic 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 an “accident,” 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, overspeed, mechanical stress and shock loads. A more detailed listing appears in the separate exhibit captioned “Insurable Equipment” on page 19.


Why Do Accidents Happen?

Many accidents – 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 good that the cut-off will fail to shut off the burner when the water in the boiler drops below a safe level.

Result: a badly burned boiler or perhaps even an explosion!



Here are a few other “accident” 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 accidents happen!

POLICY COVERAGE

There are several forms under which HSB BI&I can provide Equipment Breakdown Insurance. The Equipment Breakdown Broad Form Policy and the All Systems Go Policy are two. The Equipment Breakdown Rider which forms part of many property casualty insurance company package policies is another. However, because they are all derived from the Equipment Breakdown Broad Form Policy, we will use this form in the following discussion and explanation.

Remember, we stated at the start that Equipment Breakdown Insurance insures against losses from defined “accidents” to specified equipment, or “objects.” For the insurance to apply, there *must* be an “accident” 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 it 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 to be “accidents”:

- depletion, deterioration, corrosion or erosion of material
- wear and tear
- leakage at any valve, fitting, shaft seal, gland packing, joint or connection
- vibration or misalignment

- the 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 - furnace explosion. That hazard, as you will recall, is specifically covered by the "explosion" provisions of most fire insurance policies.

"Object"

Boiler and machinery "objects" can be described and insured in a number of ways. The variety of options available permits the insured to select those kinds of objects upon which coverage is desired. The categories are:



Pressure Objects: Boilers, fired or unfired pressure vessels, refrigeration systems, piping and pressure vessels normally subject to vacuum or internal pressure other than static pressure of contents



Mechanical Objects: Mechanical machines used for the generation, transmission or utilization of mechanical power



Electrical Objects: Electrical equipment or apparatus used for the generation, transmission or utilization of electrical power

Production Machines: Machines which process, form, cut, shape, grind or convey a product or raw materials or materials in process





Electronic Equipment: 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

Comprehensive Coverage

This term has grown popular as the description used to cover all pressure, mechanical and electrical equipment. Another term which is used by many insurers is "Pressure, Mechanical and Electrical Coverage."

Comprehensive coverage provides insurance under a single, broad definition of "object" and a single definition of "accident." A sufficient property damage deductible is required to eliminate payment of smaller losses that should normally be assumed by the policyholder. The amount of the deductible directly affects the policy premium, in that the insurance company does not charge for those "objects" that would not likely cause a loss in excess of the deductible.

Production Machines and Electronic Equipment Extensions of Coverage

Comprehensive coverage may be modified to include or exclude two distinctive sub-groups of objects within the scope of mechanical and electrical equipment.

The first is **Production Machines**, which are distinctive in that they are used in applications involving the insured's products as opposed to machines that are used in applications involving power or energy. Production Machines are specifically designed to cut, shape, convey or mould a product or raw material or material in process.

The second sub-group is **Electronic Equipment**, which are distinctive in that they are made of a technically sophisticated selection of electronic condensers, transistors and integrated circuits. Electronic Equipment is commonly known for containing microprocessors and today they are used in a wide variety of commercial and institutional applications (i.e. office equipment, retail store equipment, research equipment and telecommunications equipment.)



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 INSURANCE

In the event of an “accident” 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 cost to repair damaged property or cost to 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 the “betterment” is borne by the Insured.

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” 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 Equipment Breakdown accident, 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:
 - i) the portion of the premises rented out,
 - ii) the fair rental value for the portion occupied by the Insured, and
 - iii) the rental value of the unoccupied portion of the premises, resulting from an Equipment Breakdown accident.
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 Equipment Breakdown accident, until the gross profits are back to the level which they were at immediately before the accident occurred but not exceeding the Sum Insured and Indemnity Period specified.

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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 Equipment Breakdown accident, 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 occurred. Such businesses as newspapers, hospitals, schools, colleges and nursing homes may have 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. 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, an 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 would 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.


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 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 required by the regulations.

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” to an “object”, of a type that would be covered, at the Insured location or an adjacent location.

Hazardous Substances – coverage provides insurance for the increased cost to repair, replace, clean up or dispose of affected insured property 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.”

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



Professional Fees – provides insurance for reasonable and necessary fees payable to auditors, accountants, lawyers, architects, engineers or other professionals for producing and certifying information to establish the amount of liability in the event of an “accident.” 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. Coverage is provided to an amount equal to that which is payable for the direct damage under the policy.

Service Interruption – provides coverage where equipment not owned or operated by the insured causes loss to the insured as a result of an “accident.” The coverage is for business interruption and other indirect coverages provided these coverages are included in the policy. The “accident” must be to an object located on or within 1000 meters 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.

Data Restoration – provides coverage for the additional costs of repairing or replacing data as a result of an “accident.” The cost of gathering or assembling the information is also included. Damage caused by programming errors is not covered.

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.



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 an accident 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 an accident 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 accident 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 accident, or per local requirements.



POLICY EXCLUSIONS

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

1. The Nuclear Exclusion – Nuclear reaction, nuclear radiation or radioactive contamination etc.
2. The War Exclusion – War, bombardment, invasion, insurrection, rebellion, revolution, operations of armed forces while engaged in hostilities, sabotage etc.
3. 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.

- 4&5. 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.
6. 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.
7. The Cyber Exclusions – Data erasure, errors in creating data, inability to transmit data, impact of virus etc.
8. The Terrorism Exclusion – Terrorism including any act to combat terrorism.

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 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)

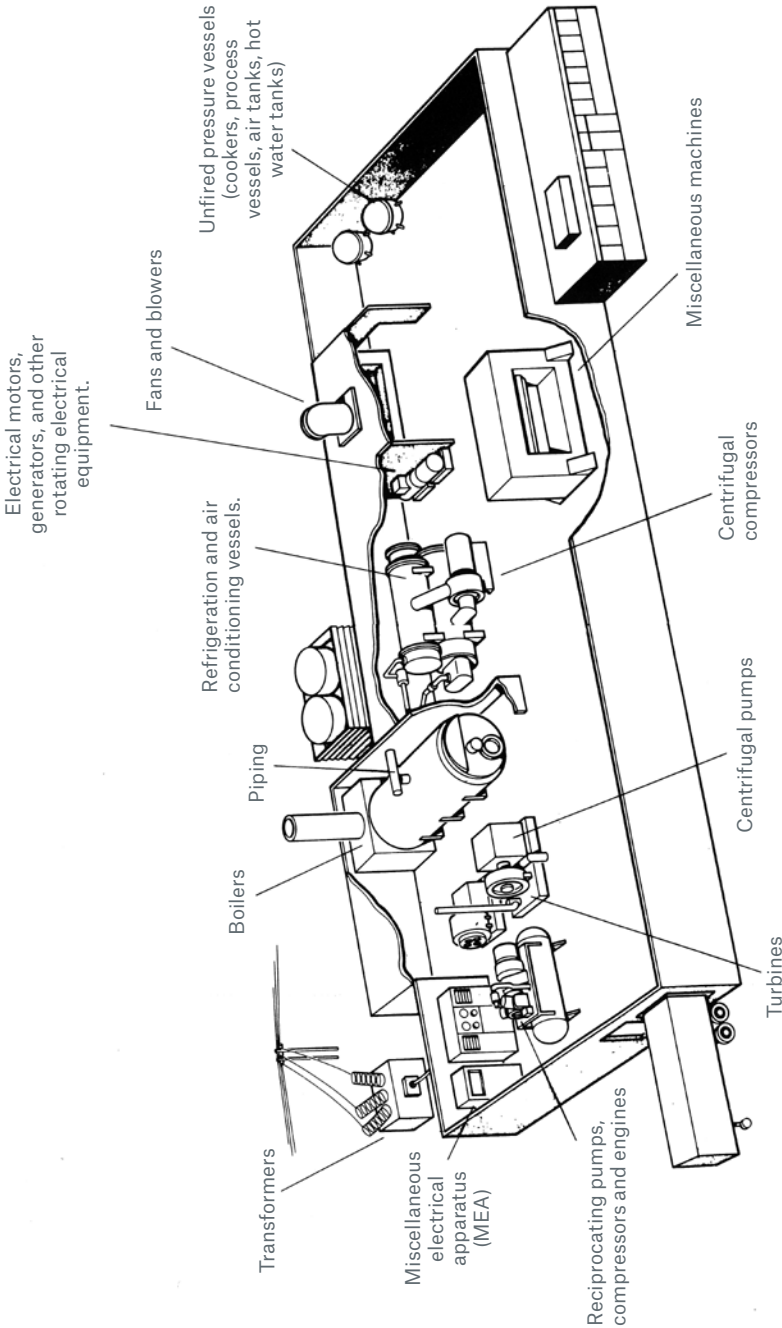
Type of Equipment	Typical Failures	Some of the Causes
Production machines (paper machines, presses, extruders, etc.)	Breaking of moving parts Frame or column damage	Metal fatigue; thinning of parts under pressure; loosening of bearings; foreign material Misalignment; shock load; progressive crack; metal 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

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

Equipment Breakdown Broad Form

The Equipment Breakdown Broad Form is the policy generally used on a direct basis to provide coverage on larger risks, particularly those engaged in processing or manufacturing. The 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™ Equipment Breakdown Insurance

This unique policy is designed for small businesses that are non-manufacturing and non-processing accounts having insurable values not exceeding \$15,000,000 for building owners and \$1,500,000 for tenants. It combines the broadest coverage with ease of handling. Premiums are based on property values rather than actual objects so as to permit brokers to quote rates to their clients without having to wait for a company survey.

The Equipment Breakdown Rider

HSB BI&I makes this product available exclusively through its reinsurance arrangements with 150 property casualty insurers within 40 insurance groups in Canada. The rider is similar to All Systems Go in both eligibility and coverage

The Equipment Breakdown Rider has the added flexibility of three coverage options from which to choose.

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 HSB BI&I Office.



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