POWER SUPPLY • FUEL • EVENT OPERATIONS

Risk Assessment - Generator

RI-RA-004 | Version 2.2 | APPROVED

Document Ref	Version	Status	Issue Date	Review	Owner
RI-RA-004	2.2	APPROVED	02 October 2026	By 02 October 2027*	Rugby Inflatables

Purpose and scope

Delivery, positioning, connection, operation, refuelling, shutdown and removal of a hired fuel-powered generator supplying inflatable blowers at events, under trained Rugby Inflatables staff control. Generator operates outdoors only, even when serving an indoor activity. People at risk: staff, inflatable users, event visitors, neighbouring occupants and contractors.

Operating boundaries and responsibilities

Use the actual supplier instructions and an agreed site/electrical arrangement. RI staff operate only within their training; electrical design, configuration and fault repair require appropriate competence. No unattended customer operation, connection to building wiring, improvised changeover, parallel generators or unauthorised extra loads. LPG systems, permanent installations and other power technologies require separate review.

Risk scoring

Scale	1	3	5
Likelihood	Unlikely	Possible	Likely / expected
Severity	Minor injury / first aid	Serious injury / hospital treatment	Fatality / permanent disabling injury

Scores 1-3: maintain controls. Score 5: verify every critical control for a potentially fatal hazard. Scores 9-15: do not start; reduce risk and reassess. Score 25: unacceptable - stop. These are RI planning action bands, not statutory thresholds. Initial ratings precede controls; residual L / S / score apply only after verification. A missing critical control overrides any score. Records: Use existing online handover/site records and generator operating records: generator ID/manual, approved load and electrical protection, site layout, exclusion/fuel areas, checks, named operator and emergency arrangements. The online customer handover does not replace competent electrical verification. No additional paper handover form is included. *Review annually or sooner after an incident, fault, changed equipment/layout or new guidance. Revision 2.2 expands supplied v2.1; approved 02 October 2026. Owner verified supplier requirements, staff competence and actual arrangements for controlled issue; update the master register.

Assessment table

Selection, electrical protection and connection | RI staff to verify controls for the actual generator and event.

Hazard	Potential harm / at risk	Required controls	Initial	L	S	Score	Responsibility / action
01 / Unsuitable generator or unclear instructions	Shock, overload, power loss or unsafe intervention. Staff, users and public.	Hire from a competent supplier and identify the model, serial number, fuel and operating instructions. Obtain evidence of maintenance and appropriate inspection/testing, plus clear start/stop, protection and fault procedures. Confirm supplier contact and competence for the proposed event use. Reject missing guards, leaks, damaged outlets or uncertain condition.	3 x 5 = 15	1	5	5	RI lead verifies documents and condition before acceptance. A hire label or PAT sticker alone does not prove that the complete arrangement is suitable.
02 / Earthing, bonding or RCD mismatch	Exposed metal becomes live; fatal electric shock. Staff and public.	Supplier/competent electrical person must confirm the generator earthing/neutral arrangement, protective-conductor continuity and suitable fault/RCD protection for the intended blowers and distribution. Provide appropriate 30 mA additional protection for final circuits where required by that design. Do not assume a plug-in RCD works correctly with every generator.	3 x 5 = 15	1	5	5	Record the verified configuration. Test buttons do not establish the whole system is safe. No DIY neutral-earth links or assumed earth rod; stop until the arrangement is confirmed.
03 / Wrong capacity or starting demand	Overheating, fire, voltage drop or blower shutdown. Staff and inflatable users.	Confirm continuous output, voltage/frequency and socket/circuit ratings against all intended blowers, including motor starting demand and cable losses. Do not size from peak advertising figures alone. Have the supplier confirm suitability; keep the agreed load list. Start loads in the approved sequence with inflatables empty and observe stable operation.	3 x 5 = 15	1	5	5	RI lead prevents additional connections. Stop for overload, abnormal output or unstable blower operation; reassess rather than repeatedly resetting or changing fuses.
04 / Unsafe connections or damaged leads	Electric shock, burns, arcing or power interruption. Staff, users and public.	Inspect plugs, sockets, leads and distribution for damage, heat marks and moisture. Use compatible, correctly rated outdoor equipment with suitable ingress protection; no taped repairs or improvised adaptors. Isolate output before connecting/disconnecting, following supplier instructions. Never backfeed a building socket or connect generators together.	3 x 5 = 15	1	5	5	Only briefed competent staff make approved plug connections. Repairs or wiring changes go to the supplier/electrician; exclude defective equipment from use.

Residual ratings apply only when every listed control is in place. Stop for any missing critical control, regardless of the score.

Assessment table

Siting, exhaust and public separation | RI staff to verify controls for the actual generator and event.

Hazard	Potential harm / at risk	Required controls	Initial	L	S	Score	Responsibility / action
05 / Carbon monoxide and exhaust accumulation	Poisoning, unconsciousness or fatal exposure. Staff, public and nearby occupants.	Operate only in open outdoor air: never in a building, garage, van, tent, enclosed trailer or partly enclosed shelter. Site well clear of doors, windows and air intakes using supplier guidance and site assessment. CO cannot be detected by smell; an open door or fan is not a safe substitute for proper siting.	5 x 5 = 25	1	5	5	RI lead records location and clearances. No suitable outdoor position means no generator use. A CO alarm, if provided, is additional protection and does not justify unsafe positioning.
06 / Exhaust drawn towards users or blowers	Fumes enter buildings or inflatable air supply; poisoning or respiratory irritation.	Direct exhaust away from blower intakes, castles, queues, staff posts and neighbouring occupied areas. Assess recirculation around walls, fences and courtyards. Agree location with the organiser and reassess wind direction, newly opened doors and changes to layout. Do not add an improvised exhaust hose or enclosure.	3 x 5 = 15	1	5	5	Operator monitors surroundings. Clear affected areas and stop safely if fumes could reach people or intakes. Relocate only after shutdown, cooling and a fresh site check.
07 / Unstable ground or poor clearance	Movement, fuel spill, contact with hot parts or restricted escape. All persons.	Position level on firm ground that supports the unit and any approved tray/base. Avoid depressions, drains, vehicle routes and combustible vegetation. Maintain manufacturer ventilation, cooling and service clearances. Keep emergency access and the stop control accessible from a safe approach; do not obstruct exits.	3 x 5 = 15	1	5	5	RI lead confirms location before starting and after ground/weather changes. No improvised stacking or unstable levelling; arrange a suitable position with the supplier.
08 / Tampering, children or impact	Burns, shock, fuel release or power loss. Children, staff and public.	Provide stable barriers and clear warning signs around generator and associated distribution; separation must prevent reaching hot or live parts while allowing cooling. Protect against vehicle strikes. Keep fuel and keys/controls under staff control. A named trained operator must remain available; no public adjustment or refuelling.	3 x 5 = 15	1	5	5	RI operator checks barriers throughout the event. Pause operation if separation fails or trained cover is unavailable. Coordinate with inflatable supervisors before planned shutdown.

Residual ratings apply only when every listed control is in place. Stop for any missing critical control, regardless of the score.

Assessment table

Fuel, fire and hot machinery | RI staff to verify controls for the actual generator and event.

Hazard	Potential harm / at risk	Required controls	Initial	L	S	Score	Responsibility / action
09 / Refuelling a running or hot unit	Fuel ignition, severe burns or fire. Staff and public.	Plan sufficient fuel and a scheduled safe refuelling break. Stop admissions and clear every connected inflatable before planned power loss. Isolate/shut down in the manufacturer sequence and let the engine/exhaust cool as instructed. Refuel outdoors away from public and ignition sources using the correct fuel and suitable spout/container.	5 x 5 = 25	1	5	5	Operator confirms cooling and spill-free condition before restart. Never refuel while running, hot or while inflatables remain occupied; no assumed universal cooling time.
10 / Unsafe fuel storage or handling	Vapour ignition, fire spread, skin/eye exposure or contamination. Staff and public.	Keep only the quantity needed, in approved closed labelled containers, upright and secured in a designated controlled location away from heat, electrics, public routes and drains. Follow supplier and fuel safety-data instructions; no drink bottles, smoking, vaping or decanting near ignition sources. Use suitable gloves/eye protection for splash risk.	3 x 5 = 15	1	5	5	RI lead agrees fuel arrangements with organiser and checks applicable storage/transport requirements for the fuel and quantity. Staff wash after handling; no fuel stored beside the hot generator.
11 / Fuel/oil leak or spill	Fire, slips, exposure and pollution. Staff, public and environment.	Inspect tank, cap, hoses and ground before starting and during checks. Have suitable spill materials and appropriate containment that does not obstruct cooling. Stop safely if a leak develops; keep people and ignition sources away. Prevent liquid entering drains/watercourses where safe. Do not hose spills away.	3 x 5 = 15	1	5	5	Operator contains only when safe and within training. Notify organiser/supplier; obtain specialist help for significant spills. No restart until the fault and contaminated area are made safe.
12 / Hot exhaust, moving parts or fire	Burns, entanglement or fire spread. Staff and public.	Keep guards fitted, loose clothing away and access restricted. Do not touch exhaust/engine or move a running unit. Separate from fuel, inflatables and combustibles using supplier/site requirements. Provide suitable maintained fire equipment with the event fire plan; staff know evacuation and alarm arrangements. Do not attempt live servicing.	3 x 5 = 15	1	5	5	Stop for smoke, sparks, overheating or unusual vibration. Raise alarm and evacuate; call 999 as needed. Only trained staff tackle a small fire if safe with a clear escape route; no water on live electrics.

Residual ratings apply only when every listed control is in place. Stop for any missing critical control, regardless of the score.

Assessment table

Cables, weather and ongoing monitoring | RI staff to verify controls for the actual generator and event.

Hazard	Potential harm / at risk	Required controls	Initial	L	S	Score	Responsibility / action
13 / Cable trips or mechanical damage	Falls, crushed cable, shock or sudden loss of supply. Staff and public.	Route leads away from queues, entrance mats, anchors and vehicle movements. Protect unavoidable crossings with suitable cable ramps, preserving accessible routes. Select cable size/length for load and voltage drop; fully unwind reels. Prevent connector strain, trapped cables and contact with hot exhaust or sharp edges.	3 x 5 = 15	1	5	5	RI setup lead verifies routes with organiser. Operator checks after traffic/layout changes; damaged or hot cables require safe shutdown and replacement.
14 / Rain, floodwater or unsuitable shelter	Electric shock, failure, overheating or trapped fumes. Staff, users and public.	Use only weather protection approved for the generator and electrical system, retaining open-air exhaust dispersal and cooling. Keep connectors protected and above likely pooling. Monitor heavy rain, flooding, lightning and strong wind. No tarpaulin wrapped around the running unit or relocation into a tent, vehicle or building.	3 x 5 = 15	1	5	5	Operator clears inflatables and shuts down before conditions become unsafe where practicable. Never approach energised equipment in floodwater; isolate remotely only if safe and summon competent help.
15 / Noise and missed communication	Hearing damage, distress or delayed response to emergency. Staff, users and public.	Assess generator noise and exposure duration using supplier data and actual working positions; choose a quieter suitable unit and separation where possible. Do not enclose it to reduce noise. Provide hearing protection/control zones where assessment requires, while retaining a reliable way to communicate warnings and stop instructions.	3 x 5 = 15	1	5	5	RI lead considers staff exposure and nearby activities. Operator and inflatable supervisors test communication; revise positions or stop if warnings cannot be understood.
16 / Deterioration or inadequate supervision	Developing leak, overheating or failure missed. Staff, users and public.	Nominate trained operator and relief cover; agree recorded check intervals for fuel, leaks, output indications, abnormal sound, barriers, cables, weather and exhaust direction. Check oil only as instructed with the unit safely stopped/cooled. Keep generator monitoring from distracting anyone assigned to continuous inflatable supervision.	3 x 5 = 15	1	5	5	Operator acts immediately on abnormal conditions. Record checks/faults and stop if competent cover or necessary checks cannot be maintained; never bypass protective shutdown devices.

Residual ratings apply only when every listed control is in place. Stop for any missing critical control, regardless of the score.

Assessment table

Loss of power, emergencies and removal | RI staff to verify controls for the actual generator and event.

Hazard	Potential harm / at risk	Required controls	Initial	L	S	Score	Responsibility / action
17 / Generator trip, fuel exhaustion or failure	Sudden inflatable deflation, falls or entrapment. Inflatable users.	Explain loss-of-power response to every inflatable supervisor. On pressure loss, stop play and assist users out immediately under RI-EP-001; keep others away from collapsing fabric. A shared generator can stop several units at once, so provide sufficient supervisors and clear escape routes. Do not assume a spare generator makes evacuation unnecessary.	3 x 5 = 15	1	5	5	Inflatable supervisors account for users; operator investigates only within training. Call emergency services for serious injury/trapping. No repeated resets while users remain inside.
18 / Uncontrolled restart or supply change	Unexpected energisation or reopening an unsafe inflatable. Staff and users.	Keep affected units closed after a fault or refuelling. Confirm cause resolved and generator, connections and barriers safe; supplier/electrician clears electrical faults. Restart loads as instructed, then fully reinflate and check each castle, blower and operating pressure before reopening. Any supply swap requires empty inflatables and safe isolation.	3 x 5 = 15	1	5	5	RI lead authorises reopening with each supervisor. No improvised live changeover, automatic restart reliance or reconnecting unknown extra equipment.
19 / Suspected CO exposure or electric shock	Secondary casualties, delayed treatment or fatal injury. Staff and public.	For suspected fumes/CO, move people to fresh air without entering a dangerous atmosphere; stop the source only if safe. Call 999 for serious symptoms, collapse or breathing difficulty. For electric shock, do not touch a person still in contact with supply; isolate safely and summon help. Follow emergency-service/first-aid instructions.	3 x 5 = 15	1	5	5	Operator alerts organiser and RI lead. Prevent re-entry/restart until competent assessment resolves the hazard; do not attempt an unprotected rescue or assume symptoms are harmless.
20 / Shutdown, handling and transport	Burns, strain/crush injury, spill or defective next hire. Staff and road users.	Clear connected inflatables before planned shutdown; follow supplier unloading/cool-down sequence. Isolate, prevent inadvertent start and allow cooling before moving. Use rated handles/aids and sufficient help; never lift by cables or fuel fittings. Keep upright, secure in transport and follow fuel-valve/tank instructions. Record damage before return to supplier.	3 x 5 = 15	1	5	5	RI team follows RI-HS-002 and RI-RA-005. Separate leaking/defective equipment from service, inform supplier and retain incident records; no enclosed-space test running during loading.

Residual ratings apply only when every listed control is in place. Stop for any missing critical control, regardless of the score.