

RSI-281-1321

Print Operations Safety Review



REAL SIMPLE IDEAS

Safety IS Important

- Responsibility breakdown
- A quick review of the safety protocols already established
- Notification Paths



REAL SIMPLE IDEAS

Responsibility Breakdown

- Engineering Controls, Procedural Controls, Administrative Controls
- Engineering Controls: Control the hazard at its source by designing the work environment itself to reduce exposure to hazards (physical barriers or distance, electronic barriers)
- Procedural Controls: Safe Work Practices including development of company rules and protocols, use and providing PPE.
- Administrative Controls: relief workers, breaks, rotation of work, training programs and refresher courses, notification paths, documentation.



Engineering Controls

- Guards, Barriers, Physical Stops
- Hood on Printer, Rope Gates, Valve on Ink Bottle



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Procedural Controls

- Goggles and Gloves Shall Be Worn



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Procedural Controls

- Fluids, including Fresh and Waste Ink shall be disposed of properly and handled with care.



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Procedural Controls

- Workspace shall be kept clean and organized at all times, with provided Engineering Controls in place.



Procedural Controls

- Hair tied back, no loose jewelery or clothing.



Administrative Controls

- MSDS/SDS
 - “Material Safety Data Sheets” / “Safety Data Sheets”
 - Available at RSI Office sites in bright yellow binders
 - Removal or modification of pages is subject to disciplinary action.
 - Official copy available through HR department
 - Online copy available at <http://www.rsiwork.com/sds>
 - Park sites may have additional documentation



REAL SIMPLE IDEAS

Safety Lists

If a safety-designated issue should arise, that issue shall be resolved in its entirety, to the satisfaction of all involved personnel and published documentation, before any production or maintenance activity is resumed.

Only operators trained and qualified under the RSI Training Program shall operate or supervise operation of Direct Jet printers.

Personnel and General Public not trained under the RSI Training Program shall be required to maintain a safe distance from Direct Jet Printers and associated equipment at all times.

Operators shall not participate in “personal experimental procedures” on equipment at any time. Any acquired knowledge, interest or experience shall be communicated to the RSI Engineering Department for evaluation and inclusion where deemed appropriate.

Any information observed to be in conflict with on-site operations by any personnel shall be immediately communicated to the RSI Engineering Department for corrective measures.



REAL SIMPLE IDEAS

Safety Lists

Operators observing any personnel performing tasks in conflict with these designated procedures shall encourage that the task be immediately discontinued and immediately inform supervisory personnel of the event as well as the RSI Engineering Department of event specifics for corrective measures.

Keep all inks, solvents and lubricants out of the reach of children and the general public.

Use only approved cleaning agents and solvents and then only for the purposes specified in this document.

Keep inks, raw print substrates, packaging and cleaning materials in a cool, dark and dry and secured location.



REAL SIMPLE IDEAS

Safety Lists

This printer produces potentially harmful UV light when covers are open or printer internals are exposed. Protect eyes and skin from exposure.

This printer is a commercial motion platform and when connected to a power source may automatically begin motion at any time. Avoid physical contact with the printer's table and print head while the printer is in operation.

Avoid dropping items or spilling liquids in or on the printer.

All hair, jewelry, lanyards or loose clothing away from the moving parts of the printer.

Lanyards and ID badge holders shall be either fully pocketed or on breakaway safety devices while in the vicinity of any Direct Jet printer or associated equipment.



REAL SIMPLE IDEAS

Safety Lists

Lifting this printer by hand requires a minimum of two people. Hydraulic or wheeled cartage is preferred and must maintain true-flat or at least 4 points of standoff contact at all times. Movement of the printer on a mobile cart shall require at least one person as guidance that is NOT involved with actual cart movement, where that person shall maintain physical contact to the printer during movement.

Lifting this printer by crane or sling systems shall first be evaluated by the RSI Engineering Department and only approved protocol and rigging technique by authorized personnel shall be utilized for this task.

An operator may not attempt to repair this machine without prior authorization from RSI Engineering Department, where any repair exceeds the scope of recovery procedures outlined in this document.



REAL SIMPLE IDEAS

Safety Lists

Safety Glasses and gloves shall be used whenever filling or draining ink tanks, or manually cleaning the print head or dispensing lubricants.

The Adhesion Promoter shall be applied and used only in the approved ventilation area and full PPE (personal protective equipment) for this operation shall be utilized. Refer to the RSI Specialty Materials Knowledgebase for application information and handling.

The printer shall be connected to provided permanent power distribution systems, which may include wall-outlets or drop-cables. Where provided, ensure the power-estop cable and the Furman(TM) power conditioner are connected and operational.

In the event the printer is to be connected to temporary power systems, these systems shall be evaluated by the RSI Engineering Department prior to any connection and prior to any modification to the power systems.



REAL SIMPLE IDEAS

Safety Lists

Only approved accessory devices may be connected to a DirectJet Printer and associated equipment, including PCs and support computers.

Cellular telephones, tablets and personal usb storage devices shall not be connected to PCs or printers at any time. Specifically, cellular telephones may be charged only at approved charging stations.

Support equipment designated to control DirectJet printers shall be used only for that specific task, and use of browsing, streaming media services, email or file transfer services not specifically directed by the assigned printing task is strictly prohibited.



REAL SIMPLE IDEAS

Emergency Protocols

- Spills/Splash onto equipment
 - Clean up, alcohol wipe afterwards
 - Notify in report
 - If large spill, escalate immediately
 - Utilize site spill kit




Electrical / Mechanical

- Smoke / Spark / Fire / Collision / FirstAid
 - Remove power from system
 - Remove person from injury location IF SAFE TO DO SO
 - Notify immediately
 - Fire Extinguishers: Pull/Aim/Squeeze/Sweep
 - Evaluate, Notify, Extinguish or Escape



Eye Emergencies

Safety First Aid  HypaClens Sterile Eyewash Bottles
250ml
E403



For irrigating eyes contaminated
with particles or liquids



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Communications Pathway

- Group Discussion



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