

Allen-Bradley AC/DC Drive Performance Incident Report

An incident analysis can be very helpful in correcting a users process, environment, or application. The analysis can also help the manufacture determine a problem in the design, manufacture, or supply of components. Action to review any incident can begin when all the information is available from the incident site. The extent of the analysis will depend on the speed information is collected from the incident site and the quantity of accurate information received. The following is a guide to use when gathering information at the incident site. **If drive has parameters, please attach a copy of the parameter listings to the back of this report.**

Written By: _____

Date: _____

Allen-Bradley Office: _____

CSR No. _____

Installation Site: _____

Contact: _____

Phone: _____

Catalog Number: _____

Serial Number: _____

Machine Number: _____

Describe Problem/Fault That Customer Is Having: (ie: No display/bus voltage or F05)

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Complete all information.

1. Environment

A. Describe the activity at this facility.

B. Describe, in detail, the environment in which the drive was operated, transported and stored. Include levels and rate of change for those following elements that apply: Some examples are listed below:

- Temperature (Heat and cold)
- Mechanical shock
- Liquid splash, spray, mist, residue(water, oil, etc.)
- Welding flash
- Electrical noise (EMI, radiated, thru grounding, etc.)
- Corrosive materials
- Dust, dirt, sand
- Humidity
- Vibration
- Noise levels
- Mishandled process parts

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Input Power Conditions

- Line Voltage _____
- Is drive input power isolated from main distribution? _____
- Line transformer KVA _____
- Delta _____ Wye _____
- Grounded or ungrounded _____
- Are PF correction caps used? _____
- Are PF correction caps switched in while drive is in use? _____
- Distance from drive to power xfmr _____
- Available xfmr short circuit current protection (fuses?) _____
- History of voltage "brown outs" or "spikes", if so, describe:

- List other electrical equipment connected to same input power or in close proximity to drive. Include any of the following:

- : SCR drives and controls
- : Large motor starters
- : Arc welders
- : Arc lamps
- : High voltage supplies
- : Walkie talkies

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Output Power Characteristics:

- Motor _____
: Number of motors drive will run. _____

The following information is required for each motor the drive runs

- Type of motor (Induction, wound rotor, synchronous, etc.) _____
- Vertical or horizontal design _____
- Model _____
- HP _____
- Volts _____
- Age _____
- Phase _____
- Serial # _____
- F.L. Amps _____
- NEMA Design _____
- Frame Size _____
- Type of Construction _____
- Service Factor _____
- Insulation _____
- Base RPM _____
- Ambient Temperature _____
- Base HZ _____
- Temp Rise _____
- Locked Rotor Amps _____
- Standard or High Efficiency _____
- Has motor been rewound _____
- Dual Wound? _____
 - : Multiple voltages _____
 - : Multiple speeds _____
 - : Multiple HP _____
- Does motor have stator thermal switch? _____
If so, what type? _____
- Additional motor information _____

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Application

- Describe, in detail, the type of application
(Belt conveyor, grinder, fan, pump, screw, etc.)

Mechanical

- Describe the mechanical transmission between the motor shaft and the final moving part. (Couplings, speed reduction used and what type: gears, belt) Provide a sketch if possible.

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Wiring:

- Distance between Drive and Motor(s) _____

- Size wire used from motor to drive _____

- Description of the separation of motor wire, power wire to drive, control wire, brake wire, and signal wire.(separate conduit used, separate wire troughs, shielded cable, etc.)

- Is dynamic braking used? _____ Size _____

- Describe brake application and duty cycle

- Is a single wire used from motor frame ground point to drive ground terminal?

If Yes, size of wire? _____

If No, how is motor grounded? _____

- Describe any equipment connected between Drive and Motor(terminals, contactors, overloads, instrumentation, etc.)

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System characteristics

- Describe how the drive is controlled (Start/stop, speed reference, local, remote, handheld terminal, PLC, etc.)

- What electrical control inputs/outputs of the drive are used?

- What Drive options are used?

- What is the control logic from? (PLC, Relay logic, etc.) If possible provide electrical diagrams

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Describe how the drive is mounted

- (Enclosure type, Air conditioned, etc.?)

Length and Hours of Drive Operation

- When was drive started up? _____

- Who started up this drive? (Allen-Bradley, OEM or the customer) _____

- How long has the application been up and running? _____ Months

- Monday - Friday _____ Hours

Describe speed profile (Duty cycle of load)

- Saturday _____ Hours

Describe speed profile (Duty cycle of load)

- Sunday _____ Hours

Describe speed profile (Duty cycle of load)

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Complete the following Incident Description

- Describe, in detail, the drive incident. Include only facts (Avoid speculation, opinions, generalities). Examples are listed below:

- Incident occurred during installation.
- Incident that occurred before ever running motor.
- Incident occurred before applying power.
- Incident occurred when AC power was applied.
- Incident occurred when drive was enabled and started.
- Incident occurred while drive was operating.
- Incident occurred while slowing down or changing speed.
- Incident occurred while stopping drive.
- Incident occurred during process or application change.

- Describe any actions made to contain the incident.

- Describe any incident that occurred that might be related to the present drive incident. (environment, process, application, etc.)

- List any parts that appear to be damaged. Include part numbers and return numbers (PSR, RMA, etc.)
