



# Plasan Carbon Composites

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## *RTO Malfunction Abatement Plan*

## **1.0 Purpose**

The purpose of the RTO Malfunction Abatement Plan is to prevent, detect, and correct malfunctions or equipment failures before any air emission exceeds any applicable emission limitation. The intent of the RTO Malfunction Abatement Plan is to fully comply with all aspects of R 336.1911 Malfunction Abatement Plans.

## **2.0 RTO preventative maintenance program**

### **2.1 Responsibilities**

The supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices include:

- Maintenance Manager
- Paint Engineer
- VP of Operations

### **2.2 Inspection Frequency and Content**

#### **2.2.1 Daily Inspections**

- Daily visual inspections are performed on the RTO to ensure that the equipment is operating properly.

#### **2.2.2 Monthly Inspections Items**

- Grease all bearings on RTO unit with proper grease
- Inspect UV scanner
- Test interlocks to make sure they are working properly
- Check ignition spark plug for any cracks or sign of damage/wear
- Test flame monitoring control system by manually shutting off the gas to the burner
- Test main fuel gas valves for operation
- Clean or replace the combustion air filter

#### **2.2.3 Semiannual Inspections Items**

- Inspect poppet valve blade
- Inspect poppet valve seat assembly
- Verify proper blade to seat connection
- Test manual gas valves operation
- Check air/gas ratios
- Inspect fan coupling for wear and damage

#### **2.2.4 Annual Inspection Items**

- Test pressure switches
- Check for excessive vibration on main fan and combustion blower
- Verify fan bearing lubrication schedule is up to date
- Check to ensure pressure gauges on gas train are working
- Check for leaks on gas piping/connection
- Drain condensate lines on compressed air tubing
- Check for leaks around access doors on RTO

- Look for “hotspots”, paint discolored or rusting
- Check damper actuator linkages for integrity

Annual inspections by outside contractors are performed when required. Their report is available upon request. Any items found needing repair will be scheduled for as recommended.

### 2.3 Major replacement parts that shall be maintained in inventory for quick replacement include:

Part No	Description	Reserved	Vendor Part No	Vendor Name	Pri Vendor	On Hand	Available
MS01978	AAA SOLENOID VALVE ASS'Y TANN 611V-120W	0	611V-120W	Kundinger Controls	301781	2	2
MS01935	Asco Gas Valve TANN 8214G20	0	8214g20	Process Engineering & Ec	300203	1	1
MS01937	Dwyer Differential Switch TANN 607-8	0	607-8	Process Engineering & Ec	300203	1	1
MS01943	Dwyer Pressure Switch TANN 1638-10 G3219511	0	1638-10	ZORO	302186	1	1
MS01940	Dwyer Pressure Switch TANN 1638-2 G3219520	0	1638-2	ZORO	302186	1	1
MS01936	Eclipse Spark Igniter TANN 23045	0	23045	Process Engineering & Ec	300203	1	1
MS01941	Mercoid Pressure Switch TANN A1F-O-SS-1-3	0	A1F-O-SS-1-3	Process Engineering & Ec	300203	1	1
MS01899	V-BELT GATES 5VX1400 TANN	0	5VX1400	STATE SUPPLY COMPA	300890	6	6

### 3.0 Operating Parameters

3.1 An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure

A temperature monitoring device is used to detect a malfunction or failure.

3.2 Normal operating range of these variables

High Temperature: 1,850F

Low Temperature: Permit value plus 50F

3.3 Description of the method of monitoring or surveillance procedures.

The temperature monitoring device is examined multiple times per shift by paint department employees.

If the RTO goes below it's set point temperature, then:

- A loud alarm will sound
- Paint flow to the robot applicators will stop
- Paint line conveyor will stop (can be manually restarted to remove parts)

4.0 Description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

In the event of an RTO temperature malfunction, the paint flow to the robot applicators will automatically stop. This RTO temperature/paint flow interlock will help to prevent a VOC emission violation.

The paint line conveyor will automatically stop. The conveyor can be manually restarted to remove parts from the line.