

Request to Perform Periodic Maintenance on Models That Use Protective Film Solution

Introduction

Accumulated material (debris or dried protective film solution residue) in the processing point nozzle causes trouble if it is ignited by the laser beam. In the worst cases, there is a risk that the ignited flame will spread via the accumulated material inside the machine, leading to a fire.

We request that you make sure to perform the periodic maintenance described in this document.

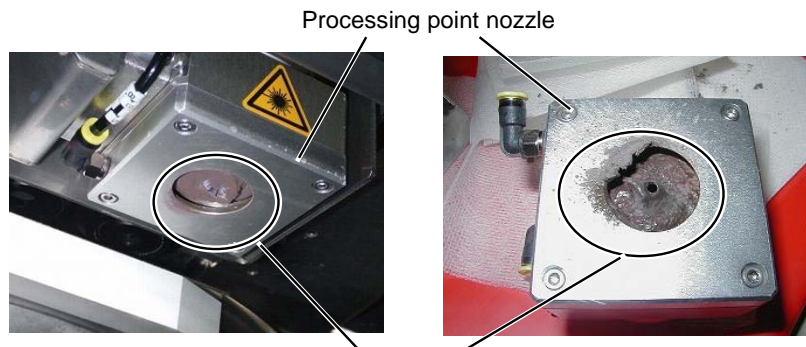
* Genuine DISCO protective film solution is HogoMax.

Applicable models

Fully Automatic Laser Saw DFL7000 series machines using protective film solution

Main cause of trouble: accumulated material in processing point nozzle

Depending on the machine's usage conditions, there are cases where debris or protective film solution accumulates inside the processing point nozzle. If processing point nozzle cleaning is not performed routinely, the accumulated material will gradually increase. If this situation is allowed to continue, there is a risk that the laser beam will ignite the accumulated material.



Accumulated material incidence locations

Note: DFL7160 example—shape varies depending on specification.

Besides igniting a fire, there is a risk that accumulated material will have other negative effects, such as the following:

- It will contact and scratch the workpiece.
- Accumulated material in the processing point nozzle will fall onto the XY-axes or power meter, causing machine malfunction or abnormal operation.

In order to prevent trouble in advance, please be sure to routinely perform cleaning of the processing point nozzle.

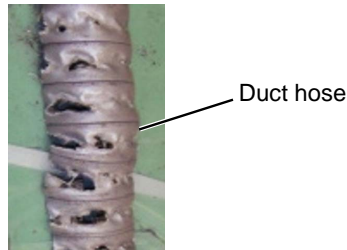
The processing point nozzle cleaning procedure is described in the maintenance manual or operation guide.

→For details, see <Reference documents> on p. 3.

Other factors leading to trouble

If processing point nozzle accumulated material is ignited by the laser beam, there is a risk that fire could spread not just in the vicinity of the processing point but also to the exhaust system and facility equipment, based on the factors below.

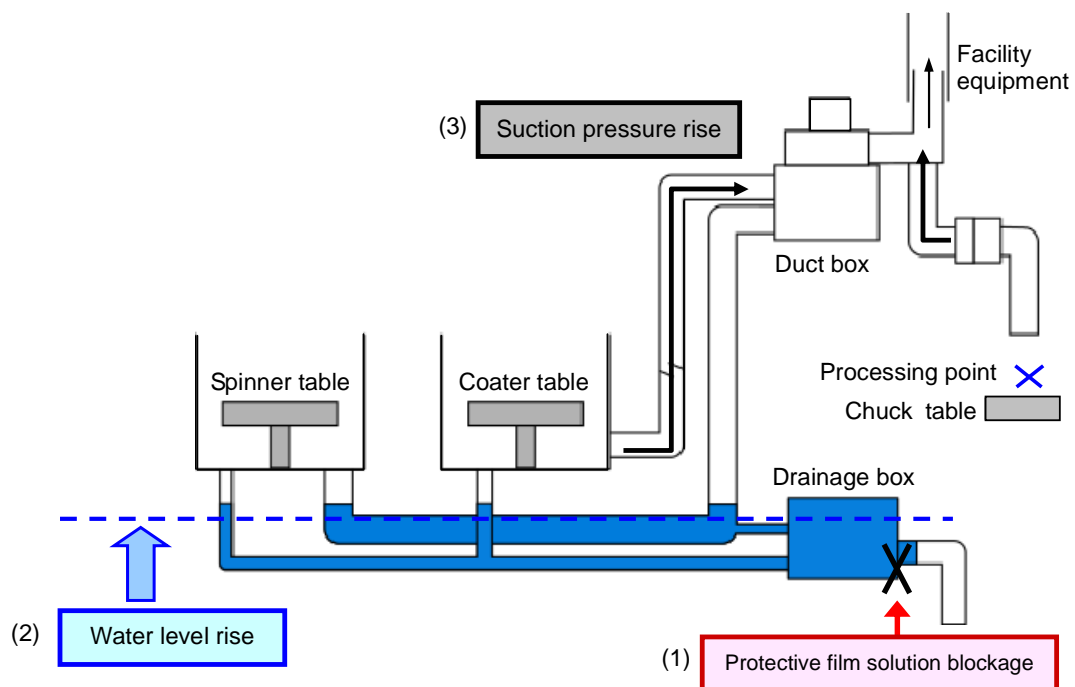
- ① If protective film solution accumulates in the processing point nozzle, debris or protective film solution will also accumulate inside the duct hose. Unless cleaning is performed routinely, if the material in the processing point nozzle ignites, there is a risk that the fire will spread via the accumulated material inside the duct hose and the damage will increase.



- ② If the duct exhaust quantity is too large, accumulated debris or protective film solution will spread to the exhaust duct or facility equipment, and if the material in the processing point nozzle is ignited, there is a risk that the damage will increase. In addition, if, conversely, the duct exhaust quantity is too small, it will not be possible to discharge material sufficiently, and it will be easier for accumulated material to build up in the processing point nozzle.

Please adhere to the duct exhaust quantity upper limit and lower limit in the standard specification sheet.

- ③ [DFL7161 only] If the drainage box drain is blocked by protective film solution (1), the water level inside the piping will rise (2), causing the duct suction pressure to increase (3). As a result of this, there is a risk that the damage will increase if debris or protective film solution accumulated material spreads to the exhaust duct or facility equipment and the material in the processing point nozzle ignites.



Technical Newsletter

#tnl2016-0031e

3 / 3



Request for periodic maintenance

Please perform the following periodic maintenance.

Maintenance item	Operation performed by	Recommended interval
Processing point nozzle cleaning	Customer	Every 7 days
Drainage box cleaning	Customer	Every 180 days
Duct hose cleaning	DISCO	Varies depending on machine usage conditions

- The maintenance method varies depending on the model, optical system, and processing point nozzle specifications. For details, please contact a DISCO sales representative or customer engineer.
- It is recommended to set the items on the MAINTENANCE SCHEDULER screen so that it will remind you of the periodic maintenance.

<Reference documents>

Document	Included items	Applicable model/ specification
Maintenance manual for the model	<ul style="list-style-type: none">• Processing point nozzle cleaning• Protective glass cleaning• Maintenance scheduler setting	—
Operation guide (GKA13-0041-00)	<ul style="list-style-type: none">• Processing point nozzle cleaning• Protective glass cleaning• Processing point duct cleaning	DFL7160 BSS6: B03
Operation guide (GPA16-0023-00)	<ul style="list-style-type: none">• Dust pod cleaning (cyclone dust eliminator)• Processing point nozzle cleaning	DFL7161 BSS6: J05 BSS6: B03

Inquiries

For inquiries regarding this matter, please contact a DISCO sales representative or customer engineer.
