

DFL7362 Tier 1

(Rev. 1.00)

Trainee (受講者)	
Company (会社名)	

Period (期間)	
Trainer (トレーナー)	

Module (モジュール)	Page (ページ)	Machine Manual (装置マニュアル)			Sign-off (サインオフ欄)		
		Type (種別)	Chapter (章)	Section (セクション)	Date (日付)	Trainee (受講者)	Trainer (トレーナー)
Day 1							
1. Machine Overview							
1.1. Interpret Machine Components		SAF	Intro	SECTIONAL COMPOSITION			
1.2. Interpret Touch Panel Operation		OPE	A	1. Screen Structure			
		OPE	A	2. Software Keyboard			
		OPE	A	2-1. Direct Operation Keyboard			
		OPE	A	2-2. Axis Control Keyboard			
		OPE	A	2-3. Numeric Keyboard			
		OPE	A	2-4. Text Keyboard			
2. Important Safety Information							
2.1. Interpret All Safety Labels on the Machine		SAF	Safety	6. Safety Labels			
2.2. Interpret Safety Precautions to be Observed during Operation		SAF	Safety	1-1. Precautions on Safe Use of This Machine			
		SAF	Safety	1-3. Precautions on Safe Operation and Maintenance of This machine			
2.3. Interpret Dangerous Areas and Ways to Avoid Dangers		SAF	Safety	2-1. Inherently Hazardous Areas for Operation and Ways to Avoid Hazards			
2.4. Interpret EMO Switch		SAF	Safety	3. EMO Switch			
2.5. Interpret Power Circuit Breaker		SAF	Safety	4. Power Circuit Breaker			
2.6. Interpret Interlock Mechanism for Operation		SAF	Safety	5. Interlock Mechanism			
3. Startup and Shutdown							
3.1. Start Up the Machine		OPE	B	1. Starting Up the Machine			
		OPE	B	1-1. Opening Stopcocks of Air, Clean Air and Duct and Turning ON the Power of the Plant Facility			
		OPE	B	1-2. Turning the Power ON			
		OPE	B	1-3. Checking Supply Pressure of Air and Clean Air			
		OPE	B	1-4. Executing System Initialization			
3.2. Warm Up the Machine		OPE	B	1-5. Executing Laser Idling			
		OPE	B	1-6. Executing Full Power Check			
3.3. Execute Power Setup		OPE	B	2-3. Executing Power Setup			
3.4. Terminate the Machine		OPE	B	8. Terminating the Machine			
		OPE	B	8-1. Stopping Laser Oscillation			
		OPE	B	8-2. Verification of System Initialization			
		OPE	B	8-3. Turning the Power OFF			
		OPE	B	8-4. Stopping Facility Supply of Air, Clean Air, Water and Closing the Duct			
4. Full Automation Operation							
4.1. Perform Full Automation Operation		OPE	B	2-5. Executing Full Automation			
		OPE	B	2-5-1. Single Device Full Automation			
4.2. Correct Parameters during Cutting		OPE	B	2-6. Making Corrections during Full Automation			
		OPE	B	2-6-1. Suspending Full Automation			
		OPE	B	2-6-2. Adjusting Light Intensity and Focus			
		OPE	B	2-6-3. Correcting Hairline			
		OPE	B	2-6-4. Correcting Cut Position			

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4.3. Resume the Cutting Operation after Aborting Full Automation		OPE	B	2-7-1. Resuming the Cutting Operation after Aborting Full Automation			
		OPE	B	2-7-2. Factors That Make It Impossible to Resume the Cutting Operation			
5. Manual Operation							
5.1. Perform Manual Workpiece Transfer		OPE	B	3-3-1. Executing Loading			
		OPE	B	3-3-6. Executing Unloading			
		OPE	B	3-3-5. Executing Loading to Pre-alignment Table			
		OPE	B	3-3-7. Executing Unloading All Workpiece			
5.2. Execute Alignment		OPE	B	4. Alignment			
		OPE	B	4-1. Automatic Alignment			
		OPE	B	4-2. Manual Alignment			
5.3. Execute Automatic Cutting		OPE	B	3-3-3. Executing Automatic Cutting			
5.4. Execute Semi-automatic Cutting		OPE	B	3-3-4. Executing Semi-automatic Cutting			
6. Hairline Alignment							
6.1. Perform Hairline Alignment		OPE	B	5. Hairline Alignment (Using a Dummy Workpiece)			
		OPE	B	5-1. Setting a Dummy Workpiece			
		OPE	B	5-2. Adjusting Light Intensity			
		OPE	B	5-3. Adjusting Microscope Focus			
		OPE	B	5-4. Executing θ Alignment			
		OPE	B	5-5. Executing Laser Focus Adjustment			
		OPE	B	5-6. Executing Hairline Alignment			
		OPE	B	5-7. What to Do after Hairline Alignment			
7. Error Recovery							
7.1. Execute Remedies for Errors during Transport		OPE	C	1. Errors during Transport			
		OPE	C	1-1. Remedies for Errors during Transport (3)			
		OPE	C	1-2. Remedies for Errors during Transport (4)			
		OPE	C	1-3. Remedies for Errors during Transport (5)			
		OPE	C	1-4. Remedies for Errors during Transport (6)			
7.2. Execute Remedies for Errors during Cutting		OPE	C	2. Errors during Cutting			
		OPE	C	2-1. Remedies for Water Leakage Errors			
7.3. Execute Remedies for Errors during Alignment		OPE	C	5. Errors during Alignment			
		OPE	C	5-1. Remedies for Alignment Errors			
		OPE	C	5-2 Remedies for Workpiece Edge Alignment Errors			

Course composition, intended trainees and course objective

Course Name	Intended Trainees	Course Objective
Tier 1	who operates the machine to process products	→ To enable trainees to understand the terms necessary for operating the machine and to process products by calling up the data set in the machine
Tier 2	- who has already completed the "Tier 1" course (or has equivalent operation skills) - who conducts data and function settings of the machine - who conducts periodic maintenance of the machine	→ - To enable trainees to create the data and set the data and functions for operating the machine - To enable trainees to safely and precisely perform the periodic maintenance and consumable parts replacement described in the Maintenance Manual of the machine
Tier 3	- who has already completed the "Tier 2" course (or has equivalent operation skills) - who conducts maintenance works which are not described in the Maintenance Manual of the machine	→ To enable trainees to conduct maintenance works which are not described in the machine Maintenance Manual (only the items that can be executed without any special tools or access to the internal Maker Data)