
HITEC-TURN
15SII, 20SII
CNC LATHE
INSTRUCTION MANUAL
SEIKI MULTI

(L8804E-2) Edition 1 8-1989

SEIKI *Hitachi Seiki Co., Ltd.*

C O N T E N T S

INTRODUCTION

Operation Procedure Flow Chart

1. SAFETY PRECAUTIONS	1 - 1
1-1 General Precautions	1 - 1
1-2 Precaution When Operating the Machine	1 - 2
1-3 Precautions for Electric Equipment and NC Unit	1 - 4
2. SPECIFICATIONS	2 - 1
2-1 Machine Outline	2 - 1
2-2 Machine Proper Specifications	2 - 3
2-3 NC-system Specifications	2 - 8
2-4 Component Units	2 - 11
2-5 Major Dimensions	2 - 12
3. INSTALLATION	3 - 1
3-1 Machine Installation	3 - 1
3-2 Lubrication and Oil Supply	3 - 18
3-3 Coolant	3 - 21
3-4 Check Prior to Test Run	3 - 22
4. OPERATION	4 - 1
4-1 Operation Panel	4 - 1
4-1-1 Outline for Operation Panel	4 - 1
4-1-2 Outline Explanation of NC Operation Panel	4 - 2
4-1-3 Outline Explanation of Machine Operation Panel	4 - 4
4-1-4 Function Key and State Display Item	4 - 9
4-2 Preparation for Machining	4 - 13
4-2-1 Tool Traveling Ranges	4 - 13
4-2-2 Tool Interference Drawing	4 - 18
4-2-3 How to Obtain Tool Center Height	4 - 22
4-3 Operation Preparation	4 - 23
4-3-1 Starting Operation	4 - 23
4-3-2 Emergency Stop and Restart of Operation	4 - 27
4-3-3 When Ending Daily Operation	4 - 27

4-4	Operation Screen	4 - 28
4-4-1	Position Display	4 - 28
	(TIMER)	
	⇒ Setting of Coordinate System (Tool Nose Position)	
4-4-2	Program (Operation, Edition and MDI Operation)	4 - 33
4-4-3	Tool Layout	4 - 41
	⇒ Preparation of Tool-layout	
4-4-4	Machine Reference Setting	4 - 54
4-4-5	NC Screen	4 - 56
4-5	Editing Operation	4 - 62
4-5-1	NC Program Punch Out	4 - 62
4-5-2	NC Program Reading	4 - 67
4-5-3	Auto-program Data Reading	4 - 71
4-5-4	List of Registration Program	4 - 73
4-5-5	Background Edition	4 - 79
4-6	Operation Guide	4 - 82
4-6-1	Preparation for Operation	4 - 83
4-6-2	Mounting of Tool	4 - 85
4-6-3	Handling of Q-setter	4 - 87
	⇒ How to obtain the mounting dimension of tool not to be applied to Q-setter.	
4-6-4	Soft Jaw Cutting	4 - 95
4-6-5	Machining Reference point	4 - 99
	⇒ Relation between machining reference point and set-up information	
4-6-6	Setting of Tail Stock	4 - 107
4-6-7	Program Check	4 - 114
4-6-8	Program Edition	4 - 117
4-6-9	Trial Cutting	4 - 147
4-6-10	Continuous Operation	4 - 153
	⇒ Dimension-adjusting method	
	⇒ Continuous machining for 1, 2-process	
4-7	Others	4 - 160
4-7-1	List of G Functions	4 - 160
4-7-2	List of M Functions	4 - 163
4-7-3	List for English Word Program	4 - 167
4-7-4	Display and Setting of Setting Data	4 - 170

4-7-5	Display and Setting of Parameter	4 - 173
4-7-6	Output of Various Data	4 - 175
4-7-7	Explanation for Various Data on Input/Output Instruments	4 - 178
4-7-8	Summary Storage and Editing Operation	4 - 182
5.	MAINTENANCE AND ADJUSTMENT	5 - 1
5-1	Periodic Check List	5 - 1
5-2	Adjusting Method for X, Z-axis Backlash	5 - 4
5-3	Confirmation of Lubrication Oil Delivery	5 - 8
5-4	Hydraulic System	5 - 10
5-5	Hydraulic Chuck	5 - 14
5-6	Wiring Diagram of Electric Devices	5 - 19
5-7	Diagnostic Function	5 - 20
5-8	Maintenance Guide	5 - 26
5-8-1	X-axis, Z-axis Clutch Engaging	5 - 27
5-8-2	Confirmation Adjustment of Zero Point	5 - 32
5-8-3	Adjustment of Q-setter Position	5 - 42
5-8-4	Engaging of Turret Index Fault	5 - 43
5-8-5	Adjustment of Z-setter Position (Option)	5 - 44
6.	ALARM	6 - 1
6-1	Alarm of English Words	6 - 1
6-2	Instruction for Alarm-message on NC-screen	6 - 27