

Design Issue Software Improvement



Published date	2003/12/11	Quality record No.	EA734EF021S00
----------------	------------	--------------------	---------------

Machine model	734	Machine model name	MAZATROL FUSION 640T/MT/TE		Area Spec	ALL
Unit group		Unit name			NC Unit	M640MT
Summary	MAZATROL FUSION 640T/MT/TE 出図完了報告書 < D 4 版 > MAZATROL FUSION 640T/MT/TE Drawing release completion report <version D4>					
Computer		Operating System		Software Name	M640T/MT/TE	D4
Machine S/N		Customer name			Adaptation Time	

Content

1. [Outline]
This is a report that drawings of MAZATROL FUSION 640T/MT/TE Software version D4 are released.
For the details, refer to the attached "Version D4 drawing release".

2. [Revisions]
(1) Improvements: 3 items For the details of the function, see "2. Function improvement description".
-Re-threading function - Memorizing the tool nose function on the tool offset screen -Additional storage of the hard disk and floppy disk input/output program
(2) Modification of failure: 33 items For each content, see "5.3 Version D4 software modifications' table".

3. [Solution after release]
<Yet-to-be-shipped machines> With version D4 for new delivery from MITSUBISHI
Replace the software with version D4 according to the directive by Customers Satisfaction.
<Shipped machines> Claim correspondence

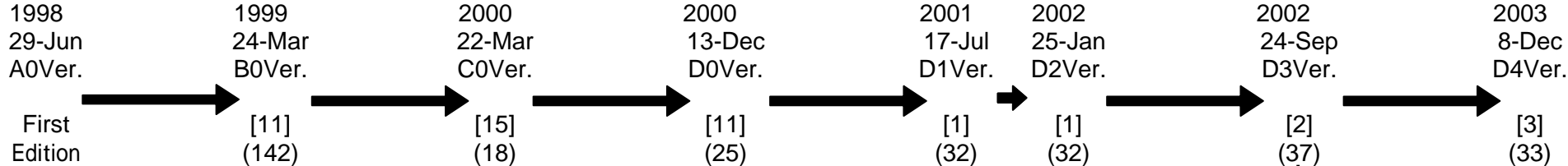
Check item number		Check sheet division		Matrix List	
How Sheet divis	Necessary Availabl	Know-how Sheet		SpecialSpecNumber	Claim DB number
Related Notice				Service Guide	Necessary

Document name	ecessar	sentation deliv	Document name	ecessar	sentation deliv	Document name	ecessar	sentation deliv
ROM Cassette	nec.							
CD-ROM	unec.							
FD	nec.							
Communication	unec.							
Other	unec.							

	設計部長・次長		
	Approval	Inspect	Create
	2003/12/09	2003/12/09	2003/12/08
	大橋 肇	大島克史	三浦千恵子

1.The Process of development

[] New function / Improvement
 () Number of corrected problem items



- <New function>
 - Machining navigation – prediction, results
 - Alarm navigation
 - Face machining
 - 3D solid model
 - EIA 1/100000 inch disp.
 - Hard disk operation by big memory
 - Mazak tapping tornado
 - Cutting load detection
 - automatic pecking cycle
 - Planet tap cycle
 - Synchronized tap cycle
 - Variable depth of cut drill pecking cycle

- <New function>
 - 0.001 degree index on 2nd spindle
 - Visual tool manager
 - Y-axis Interference check
 - The communication by TEXT format

- <Improvement>
 - EIA/ISO feed-per-revolution of milling
 - Transfer using with C-axis
 - Tool life forecast
 - The inputting tool length in TOOL DATA display
 - 60 degree selection as angle of cutter edge for the Centering drill
 - The improvement of MACRO VARIALBE display
 - New MACRO variables
 - Comment input function on SETUP display
 - Customization of Automatic Decision value for TAP UNIT
 - Increase of support languages (Korea / Turkish / Polish)
 - Addition of editing function on LADDER MONITOR display

- <New function>
 - Multi Tool Holder support
 - Turning with positioning B-axis
 - Geometry Compensation Function(MAZACC-2D)
 - HOB cutting

- <Improvement>
 - Arbitrary form of POCKET milling
 - Increase of support languages (Czech / Rumanian)
 - Radial command of X-axis for EIA/ISO
 - HARD DISK/FLOPPY/CARD DATA I/O overwrite loading programs support
 - Increasing maximum rotate speed of C-axis on INCH system
 - Expanding of GL PATTERN memory size
 - R-Parameter (R81-R160) display for PLC ladder

- <Improvement>
 - FLASH-TOOL support

- <Improvement>
 - Bidirectional pitch error compensation

- <Improvement>
 - Thread Start Point Compensation
 - The second spindle side EIA function improvement

- <Improvement>
 - Re-threading
 - TEACH function in the TOOL OFFSET display
 - Additional save of programs in Hard disk/Floppy disk data input/output

2. Explanation about Improvement

4

STANDARD : STD / OPTION : OPT

NO.	Function Name	Program		Note
		MAZ	EIA	
1	Re-threading	OPT	OPT	In M4,M5,PM,ST machine, please order the spindle orientation function together. Please refer to <Correspondence except NC software> about the details.
2	TEACH function in the TOOL OFFSET display	STD	STD	
3	Additional save of programs in Hard disk/Floppy disk data input/output	STD	STD	

<Correspondence except NC software>

To use the Re-threading function in M4,M5,PM,ST machine, wiring work of the spindle orientation function and correspondence of PLC are necessary. In other models of machines, correspondence of PLC is necessary. Please ask Minokamo or Oguchi plant about correspondence except NC software.

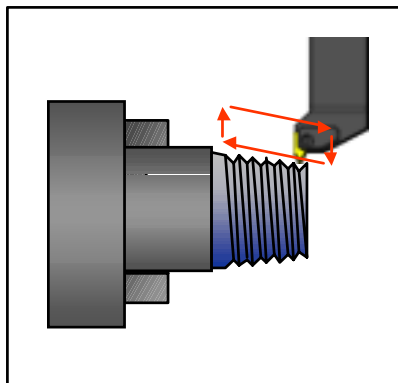
	The spindle orientation OPT/STD	Wiring work of the spindle orientation Necessary/Unnecessary	Correspondence of PLC Necessary/Unnecessary
M4,M5,PM,ST	OPT	Necessary	Necessary
QTN,IVS (2-axis)	OPT	Unnecessary	Necessary
QTN-M,IVS-M, QTN-MS,SQT, MP,INTE,SQR	STD	Unnecessary	Necessary

Re-threading

After the workpiece has been removed from the chuck and remounted for re-threading, it is possible to store the re-threading position and then engaging the tool nose of the threading tool with the groove of the thread, and the threading tool runs through the stored position and works it. Up to now, when a workpiece that has been removed from the chuck is remounted, the starting position of re-threading is changed and this requires test cutting. The use of this option, however, makes machining tests unnecessary, allowing easy re-threading.

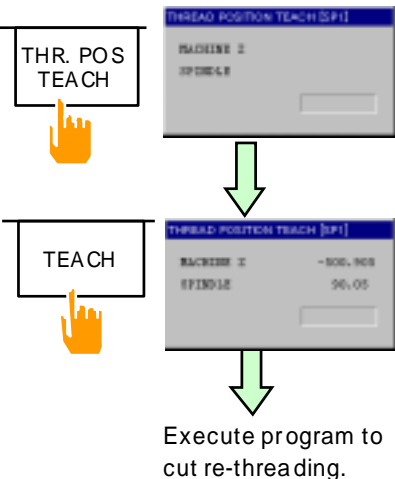
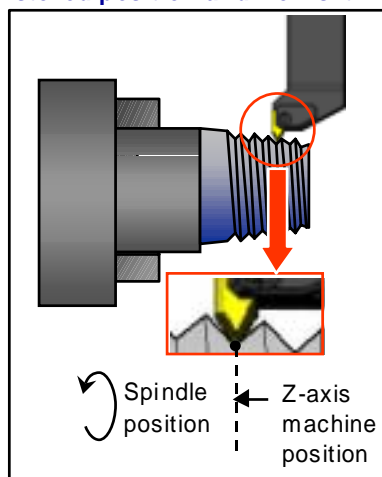
< Before >

The worker adjusted the phase gap of spindle by test cutting repeatedly.



< Re-threading function >

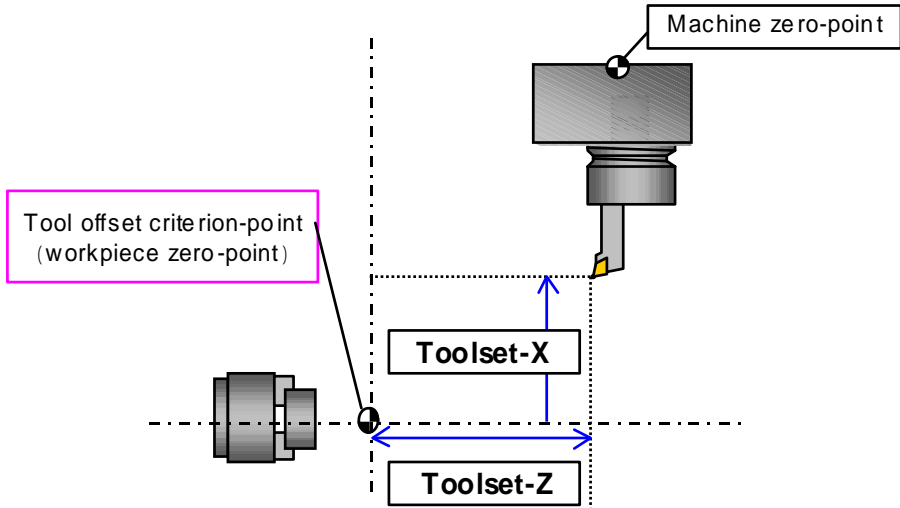
After engaging the tool nose of the threading tool with the groove of the thread, and store the re-threading position (Spindle position and Z-axis machine position) When execute a program, the threading tool runs through the stored position and works it.



TEACH function in the TOOL OFFSET display

The TEACH function was added in the TOOL OFFSET display. In this function, it is possible to set up distance from the tool nose to the tool offset criterion point as toolset value automatically.

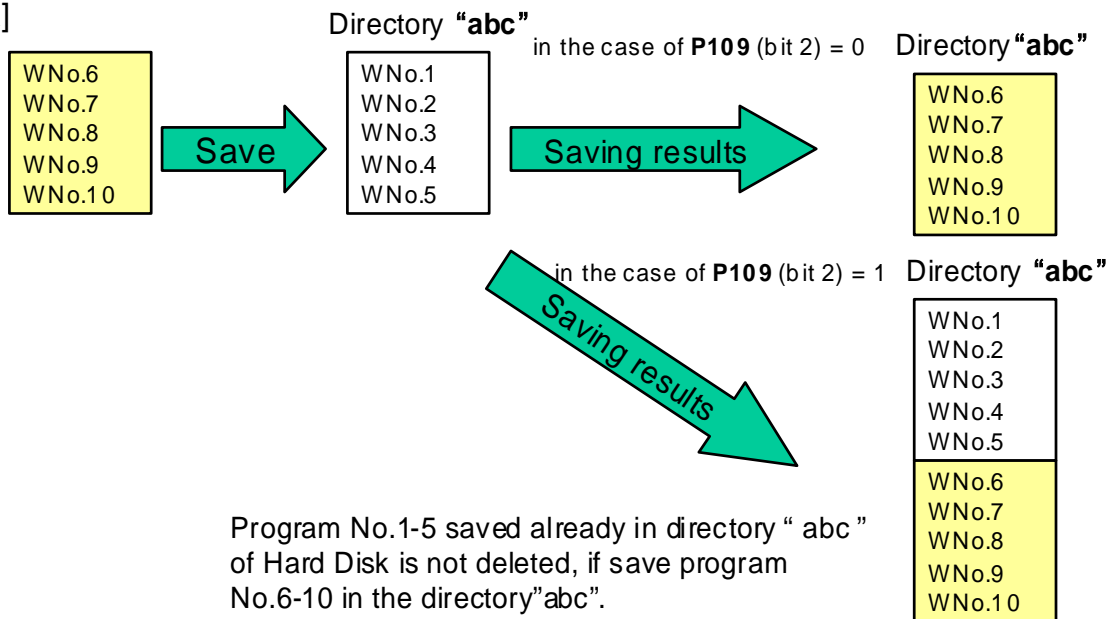
When the parameter P8 bit3 is "1", this function becomes valid.



Additional save of programs in Hard disk/Floppy disk data input/output

It is possible to additional save of programs in Hard disk/Floppy disk data input/output by setting of parameter.

[ex]



Note) If the same program No. and data except program already exists, this data (Tool data and tool file etc.) will be overwritten.

3. The career of version

No.	System	System No.	K58	Release data					
				2000	2001	2002	2002	2003	
				Dec. 13th	Jul. 17th	Jan. 25th	Sep 24th	Dec 8th	
1	MAIN-A	365/369W000		D0	D1	D2	D3	D4	
2	MAIN-B	369W001		D0	D1	D2	D3	D4	
3	LG-JPN	Japanese	369W010	1	D0	D1	D2	D3	D4
4	LG-ENG	English	369W011	0	D0	D1	D2	D3	D4
5	LG-GER	German	369W012	2	D0	D1	D2	D3	D4
6	LG-FRE	French	369W013	3	D0	D1	D2	D3	D4
7	LG-ITA	Italian	369W014	4	D0	D1	D2	D3	D4
8	LG-SPA	Spanish	369W015	5	D0	D1	D2	D3	D4
9	LG-NOR	Norwegian	369W016	6	D0	D1	D2	D3	D4
10	LG-SWE	Swedish	369W017	7	D0	D1	D2	D3	D4
11	LG-FIN	Finnish	369W018	8	D0	D1	D2	D3	D4
12	LG-CHI	Chinese	369W019	9	D0	D1	D2	D3	D4
13	LG-DUT	Dutch	369W020	10	D0	D1	D2	D3	D4
14	LG-ROK	Korean	369W021	11	D0	D1	D2	D3	D4
15	LG-DAN	Danish	369W022	13	D0	D1	D2	D3	D4
16	LG-POR	Portuguese	369W023	12	D0	D1	D2	D3	D4
17	LG-TUR	Turkish	369W024	15	D0	D1	D2	D3	D4
18	LG-CZE	Czech	369W025	14	D0	D1	D2	D3	D4
19	LG-PLI	Polish	369W026	16	D0	D1	D2	D3	D4
20	LG-RUM	Rumanian	369W027	17	D0	D1	D2	D3	D4

- The M640 language environment is able to be changed by using the parameter,"K58". The setting value is above.
- There are NC division 3 kinds. Please use a software of system number for each machines.

NC Classification	System No.	
	BND-369W000	BND-365W000
MAZATROL FUSION 640 T	MP, DT series SQT100/200 sub spindle supplied (2nd spindle 0.001 degree index type)	QT, ST, M4, M5, PM, MT SQT series except the left machine
MAZATROL FUSION 640 MT	INTE-SY	INTE series except for INTE-SY
MAZATROL FUSION 640 TE	SQR series	-

Please refer the following about the available language combination of Windows95 and M640.

Windows95 language	M640 language
Japanese	Japanese
English	English / German / French / Italian / Spanish / Swedish / Dutch / Norwegian / Finnish / Portuguese / Danish / Turkish / Polish / Czech / Rumanian
Chinese	Chinese
Korean	Korean

4. Precautions of version up to D4 version

1. PLC ladder of D3 version is compatible with D4 version.
2. Various data of NC are compatible with it.
3. There is addition parameter.
About the details of addition parameter, please refer to "5.1 Added Parameter in version D4".

< Re-thread >

Address	Meaning		Description
O21 (bit 7)	Re-thread option		When Re-thread option was put on, this parameter becomes "1". If O21 (bit 7) = 0: The option is not included. If O21 (bit 7) = 1: The option is included.
	Unit		
	Effective	Power OFF → ON	
	program	M, E	

< TEACH function in the TOOL OFFSET display >

Address	Meaning		Description
P8 (bit 3)	TEACH function in the TOOL OFFSET display		Specify whether the TEACH function on the TOOL OFFSET display is to be made valid or invalid. If P8 (bit 3) = 0: TEACH function is invalid. If P8 (bit 3) = 1: TEACH function is valid.
	Unit	—	
	Effective	Instant	
	program	M, E	

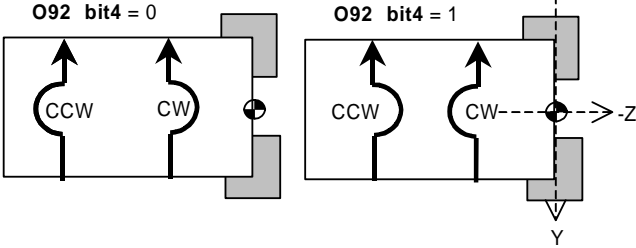
< Additional save of programs in Hard disk/Floppy disk data input/output >

Address	Meaning		Description
P109 (bit 2)	Whether to save the data as an additionalone during hard disk/floppy diskinput/output		Specify whether the data is to be saved as an additional one during hard disk/floppy disk input/output. If P109 (bit 2) = 0 : The data is saved in overwritten form. If P109 (bit 2) = 1 : The data is saved as an additional one. Example: Data is saved in an existing "FILE" folder. <div style="display: flex; align-items: center; gap: 20px;"> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> Program 100 User parameter Tool data </div> <div style="font-size: 2em;">←</div> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> Program 200 User parameter </div> </div> Saving results in the case of P109 (bit 2) = 0 <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-right: 10px;"> Program 200 User parameter </div> The old data existing before saving was executed is overwritten with the newly saved data. Saving results in the case of P109 (bit 2) = 1 <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-right: 10px;"> Program 100,200 User parameter Tool data </div> Newly saved data is added. If the same data already exists, this data will be overwritten. (User parameter)
	Unit		
	Effective condition	Instant	
	Applicable program	M·E	

< Addition parameter for corresponding to "TY0803" >

Address	Meaning		Description
P3 (ビット7)	Selection of G1 or G0 as the axial relief feed mode for linear machining		Select G0 or G1 as the axial relief feed mode for linear machining under the following conditions: - In the case of M640MT, when G1 is selected using the AFD item of the tool sequence of the linear machining unit (ZY, Y, XT mode) - In the case of M640T, when parameter K41 is not 0 if P3 (bit 7) = 0: The axial relief feed mode becomes equal to G1. If P3 (bit 7) = 1: The axial relief feed mode becomes equal to G0.
	Unit	—	
	Effective	Instant	
	program	M	

< Addition parameter for corresponding to "TY0835" >

Address	Meaning	Description
O92 (bit 4)	Selection of rotatory direction of arc figures in Mill-line machining unit. (For MULTIPLEX)	Selections of rotatory direction of arc figure in Mill-line machining unit. 
	Unit	0.001 mm/0.0001 inch (ATTN) 0.0001 mm/0.00001 inch
	Effective	Instant
	program	M·E
		Note 1 : This parameter is for MULTIPLEX. Note 2 : This parameter is valid in case of composite program and the second spindle side and the expanded Facilities with Y-axis control program (LCT out). This parameter is invalid in single programs.

< Addition parameter for corresponding to "TY0864" >

Address	Meaning	Description
TAP26 (bit 7)	Selection of RTS/CTS control when "DC control" is selected	Specifies whether RTS/CTS control is to be conducted when "DC control" is selected in the TAPE hand-shaking scheme. If TAP26 (bit 7) = 0: Yes (Conducting both DC control and RTS/CTS control) if TAP26 (bit 7) = 1: No (Conducting only DC control)
	Unit	
	Effective	IO start
	program	M·E
		Note: For connection to a microdisk unit, set up "0" at bit 7.

< The visual tool ID/data management functions >

Address	Meaning	Description															
O82 (bit 6)	The visual tool ID/data management functions	Specify whether The visual tool ID/data management Option is to be made valid or invalid															
	Unit																
	Effective	Power OFF → ON															
	program	M, E															
P110 (bit 2)	When the visual tool ID/data management functions are valid — Stored tools registration function on the VISUAL TOOL MANAGER display valid/invalid	Specify whether the stored tools registration function on the VISUAL TOOL MANAGER display is to be made valid or invalid when the visual tool ID/data management functions are valid. If P110 (bit 2) = 0 :The stored tools registration function is invalid. If P110 (bit 2) = 1 :The stored tools registration function is valid.															
	Unit	—															
	Effective	Instant															
	program	M, E															
P6 (bit 5)	Name/ID No. selection on the TOOL DATA display	P6 (bit 5) = 0 : A name can be selected. P6 (bit 5) = 1 : An ID number can be selected. Note: Set "1" in P6 (bit 5) when use the visual tool ID/data management functions.															
	Unit	—															
	Effective	Instant															
	program	M, E															
K60 (bit 0) (bit 1)	Data entry for communication with the magazine-side display unit (Serial port)	Specify the serial port number of the NC unit that is to be used for communication with the magazine-side display unit. <table border="1" data-bbox="774 1803 1268 1937"> <thead> <tr> <th>Bit 1</th> <th>Bit 0</th> <th>Serial port</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>COM1</td> </tr> <tr> <td>0</td> <td>1</td> <td>COM2</td> </tr> <tr> <td>1</td> <td>0</td> <td>COM3</td> </tr> <tr> <td>1</td> <td>1</td> <td>COM4</td> </tr> </tbody> </table>	Bit 1	Bit 0	Serial port	0	0	COM1	0	1	COM2	1	0	COM3	1	1	COM4
	Bit 1	Bit 0	Serial port														
	0	0	COM1														
	0	1	COM2														
1	0	COM3															
1	1	COM4															
Unit																	
Effective	Power OFF → ON																
program	M, E																
K60 (bit 4) (bit 5)	Data entry for communication with the magazine-side display unit (Type of ID amplifier)	Specify the type of ID amplifier. <table border="1" data-bbox="774 2004 1268 2139"> <thead> <tr> <th>Bit 5</th> <th>Bit 4</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>Mazak ID</td> </tr> <tr> <td>0</td> <td>1</td> <td>Invalid</td> </tr> <tr> <td>1</td> <td>0</td> <td>Invalid</td> </tr> <tr> <td>1</td> <td>1</td> <td>Invalid</td> </tr> </tbody> </table>	Bit 5	Bit 4	Type	0	0	Mazak ID	0	1	Invalid	1	0	Invalid	1	1	Invalid
	Bit 5	Bit 4	Type														
	0	0	Mazak ID														
	0	1	Invalid														
1	0	Invalid															
1	1	Invalid															
Unit																	
Effective	Power OFF → ON																
program	M, E																

<Standard setting of added parameter >

Address		Meaning	Standard setting		
			T	MT	TE
O21 bit7	Addition	Re-threading option	0 Note1		
SP38 bit2	Modification	Selection of the output of spindle encoder signal to NC	It is decided in plant. Note2		
P8 bit3	Addition	TEACH function in the TOOL OFFSET display	0		
P109 bit2	Addition	Whether to save the data as an additionalone during hard disk/floppy diskinput/output	0		
P3 bit7	Addition	Selection of G1 or G0 as the axial relief feed mode for linear machining	0	0	-
O92 bit4	Addition	Selection of rotatory direction of arc figures in Mill-line machining unit.	0	-	-
TAP26 bit7	Addition	Selection of RTS/CTS control when "DCcontrol" is selected	0		
O82 bit6	Addition	The visual tool ID/data management functions	-	0 Note3	-
P110 bit2	Addition	When the visual tool ID/data management functions are valid —Stored tools registration function on the VISUAL TOOL MANAGER display valid/invalid	-	0	-
P6 bit5	Modification	Name/ID No. selection on the TOOL DATA display	-	0 Note3	-
K60 bit0 ~ 7	Addition	Data entry for communication with the magazine-side display unit	-	01000001 Note4	-

Note1: When Re-threading option was put on, parameter O21 bit 7 becomes 1 automatically.

Note2: To use the Re-threading option, please set 1 into parameter SP38 bit2.

Note3: To use the visual tool ID/data management function, please set 1 into parameter O82 bit6 and parameter P6 bit5.

Note4: COM2 of serial port is used in the visual tool ID/data management function.

But in case of machine that both of the visual tool ID/data management function and the tool runout detection system function are included.

Please use COM1 in the former, and please use COM2 in the latter.

5.2 Revised manual list

The following manuals are revised. Please refer the below list about manual number of D4 version.

TITLE	M640T			M640MT	M640TE
	2 Head MP·DT	1 Head 3 Axis SQT	1Head 2 Axis QT·M4·M5	INTEGREX	SQR
OPERATING MANUAL (OPERATING NC UNIT)	H734S30070	H734S30080	H734S30090	H734S30060	H734S30100
OPERATING MANUAL (AUTOMATIC	H734S40070	H734S40080		H734S40060	H734S40100
PROGRAMMING MANUAL (MAZATROL)	H734PA0070	H734PA0080	H734PA0090	H734PA0060	-
PROGRAMMING MANUAL (EIA/ISO)	H734PB0030				
PARAMETER LIST	H734SA0033				
ALARM LIST	H734SA0042				

5.3 The table of corrected software version D4

No.	Report No.	Before Improvement	After Improvement	T	MT	TE
1	TY0761	The program was deleted when changed parameter P109 after having edited program number 8000/9000. [SANDEN]	A program is not deleted even if change parameter P109.			
2	TY0803	When G01 is set in "AFD" which is an item in tool sequence of Line machining (ZY, /Y, XY mode), a tool is back at G01 (cutting feed) from a bottom. In ZC and XC mode, a tool is back at G00 (Rapid feed). [Mogi Seisakusyo]	When G01 is set in "AFD" which is an item in tool sequence of Line machining (ZY, /Y, XY mode), It is possible to change G00 at return speed with a parameter (P3 bit 7).	-		-
3	TY0827	In command "T" of EIA program of INTE50/70., the alarm "774 DESIGNATED TOOL NOT FOUND" occurred when a next tool "B" without a direction and a suffix was commanded . [TOSOH]	Even if the next tool "B" was commands without a direction and a suffix, alarm does not occur.		-	-
4	TY0829	Alarm 551 occurred when changed it to tool data display while TOOLDATA were loaded via tape I/O. Then tool numbers of TOOLDATA display were replaced. [Linvatec]	Even if a display is changed while TOOLDATA are loaded via tape I/O, TOOLDATA are loaded rightly.			
5	TY0830 TY0840	In Manual Program Machining (MNP) unit of MAZATROL program when a blank line is included, a commands after the blank line are not executed. [YMC] [Halliburton Far East Pte.]	Even if a blank line is included in Manual Program Machining (MNP) unit of MAZATROL program, a commands after the blank line are executed.			-
6	TY0831	In roughing of BAR IN and CPY IN, when Inside diameter clearance(U4) is 0 and final point X of figure is 0, a toolpath goes over an amount of nose-R from X0. There is not a problem in finishing.	In roughing of BAR IN and CPY IN, when Inside diameter clearance(U4) is 0 and final point X of figure is 0, a toolpath goes over an amount of nose-R from X0.			-
7	TY0832	In BAR-OUT, after having set up 0.2 in RGH of "LIN" figure, when "LIN" of figure was changed to "TPR", 0.2 of RGT changed to 0.004. [Doi tekkousyo]	Even if "LIN" of figure was changed to "TPR", RGT does not change.			-
8	TY0834	When measurement movement of measurement (MES) unit is skipped over and there is an machining unit of oblique plane (/C, /Y) before measurement (MES) unit, a tool moves to the mistook approach position in machining unit after measurement unit. [Sanki kikai]	Even if measurement movement is skipped over and there is an machining unit of oblique plane, a tool moves to right approach position.	-		-

No.	Report No.	Before Improvement	After Improvement	T	MT	TE
9	TY0835	When using line machining (LFT out: : Expanded Machining Facilities with Y-Axis Control) on Head 2, if a CW or CCW arc is programmed, the tool path is opposite of what was programmed. (MULTIPLEX only) [Steen and Sons]	Arc figure of line machining unit (LFT out: : Expanded Machining Facilities with Y-Axis Control) agrees with toolpath. And it is possible to select rotatory direction of arc figure using the parameter O92 bit4.		-	-
10	TY0836	After I selected menu "TOOLSET MEASURE" in the TOOL DATA display, When I turned a turret by manual operation in the Position display, and executed TOOLSET MEASURE, a measurement result was set to wrong tool number. [Seiko seiki]	Measurement result is set up to toolset of measurement tool even if execute a measurement in the following method.		-	-
11	TY0837	In solid mode of LINE OUT unit on XC mode, machine does not follow shape correctly when a tool moves from the approach point to the cutting start point. [LOCKHEED MARTIN]	In solid mode of LINE OUT unit on XC mode, a tool moves from the approach point to the cutting start point rightly.	-		-
12	TY0838	If the helix angle, entered in the G114.3-code, had a value behind the decimal point, this value didn't work. [GTA]	Even if the data of helix angle had a value behind the decimal point, this value does work rightly.	-		-
13	TY0839	When Actual diameter of the Chamfering cutter is bigger than "PRE-DIA" and it is short than "PRE-DEP" in Circular milling unit, alarm 909 occurs on the TOOLPATH display. [Yamazaki tekkosyo]	Even Circular milling unit of the following condition is executed rightly, and the alarm does not occur on the TOOLPATH display.	-		-
14	TY0842	When the amount of shift is set in END unit, and continuous machining is done, the amount of shift is not valid from point shape of the second Point Machining Unit (/Y mode). [Topukon yamagata]	Even if there is a point machining unit of oblique plane (/Y mode) in Mazatrol program, an amount of shift in the end unit is valid.	-		-
15	TY0843	In EIA program, when include a circular interpolation commands (G02) before a wating command (M95*), the arc is drawn as a full circle. [Schroeder Enter.]	In toolpath of EIA program, even if there is a circular interpolation commands (G02) before a block without movement as M code, the arc is not drawn as a full circle.	-	-	
16	TY0844	After I inserted only tool sequence of miling unit in editing on the MAZ program display, When I edit in the TOOL LAYOUT display and execute the program, the edited machining unit is skipped. [DG kougyo]	After I inserted only tool sequence of miling unit in editing on the MAZ program display, When I edit in the TOOL LAYOUT display and execute the program, the edited machining unit is executed rightly.	-		-

No.	Report No.	Before Improvement	After Improvement	T	MT	TE
17	TY0846	In a punch of TAPE I/O, DC2 of a signal of communication should be output in the top of data and DC4 should be output in the end of data, data transfer has been completed quickly because DC2 and DC4 are output in succession in the top of data. [Toyota kouki]	In a punch of TAPE I/O, DC2 and DC4 are not output in succession in the top of data.			
18	TY0850	When I executed toolpath in Face machining unit of specification condition (Width of tool, Wide-R, Clearance), though an alarm should have occurred, a screen was frozen. [Fuso seiko]	Alarm 808 occurs when toolpath was executed in face machining unit of unjust condition.	-		-
19	TY0851	When I set a EIA macro program in Subprogram unit, a machine measures every time it even if set a measurement interval by an argument. [MST corpration]	A machine measures it at the set measurement interval in argument.			-
20	TY0854	When I use an argument of Subprogram unit and appoint "T" command that a suffix was included and the next tool, the tool which ignored a suffix is not considered is selected. [Komatsu]	A tool appointed by an argument of Subprogram unit is selected.			-
21	TY0856	In the the synchronous tapping (G84.2) in Polar coordinate interpolation mode (G12.1 G17), alarm "24 OVERLOAD" occurs, when the movement pattern that a tool returns to the initial point is appointed in a program. (Parameter P10 bit7=0) [PAVAN]	In the the synchronous tapping (G84.2) in Polar coordinate interpolation mode (G12.1 G17), Alarm does not occurs, even if the movement pattern that a tool returns to the initial-point.			-
22	TY0857	Alarm "707 ILLEGAL FORMAT" occurs on the HardDisk operation when a operation instructions(SIN, COS, TAN) is used in a program. [Tokuta kougyo]	It is possible to execute the program that operation instructions (SIN, COS, TAN) is included on the HardDisk operation. But the alarm "790 MACRO EXECUTION ERROR" occrred when uses "Branching" or "Looping" or "External Output Commands".			
23	TY0862	When Point Machining Unit of /Y-mode and /C-mode (oblique surface), A value established in "WEAR COMP-Z" of TOOL DATA display becomes 2 times. [Hino jidousya]	When Point Machining Unit of /Y-mode and /C-mode (oblique plane), "WEAR COMP-Z" of TOOLDATA display does not become 2 times.	-		-
24	TY0863	When the sequence of Materials Shape unit (MTR) is appointed more than 16 lines, an final path of Face milling unit and End milling-top unit and Pocket milling unit is changes. [Toyota kouki]	Even if the sequence of Materials Shape unit (MTR) is appointed more than 16 lines, an final path of Face milling unit and End milling-top unit and Pocket milling unit does not changes.	-		-

No.	Report No.	Before Improvement	After Improvement	T	MT	TE
25	TY0864	When I used only DC control by tape I/O and loaded a data, a communication is stopped. [Linvatec]	By setting of parameter (TAP26 bit 7), it is possible to communicate only DC control by tape I/O.			
26	TY3001	After I set the point of contact of TPR figure and arc figure of BAR-FCE automatically, the figure that set it up automatically is drawn to a wrong position when I execute SHAPE CONTINUE with the program. [Syutou tekkousyo]	The figure is drawn rightly even if set up the point of contact automatically.			-
27	TY3002	A machine moved to wrong position at abnormal speed, and an alarm occurred when executed machimimng with special operation method. While executing G1, I stopped it by Feed-Hold, and changed it into manual operation mode, and I moved Z-axis using manual pulse handle. then I change it into Auto operation mode again and push cycle start key. [Braun]	Alarm occurs when executes machining with this special operation method again, and a machine stops.			
28	TY3004	After having edited five digits or more programs, the display is frozen when executes CHECK CONTINUE of TOOLPATH display by the program that alarm "LAYOUT NOT COMPLETE" occurs. [Maejima kougyo]	Alarm occurs when executes CHECK CONTINUE of TOOLPATH display by the program that alarm "LAYOUT NOT COMPLETE" occurs.			-
29	TY5039 TY5040	When the operation to change Maz-program display and TOOLPATH display is repeated for one day, windows error (M737ATmain or M737Graph) occurs. [Sakuratekku]	Even if the operation to change Maz-program display and TOOLPATH display is repeated for one day, windows error does not occur.			
30	TH0791	Because a Tool length offset is not canceled when X axis moves to tool change position, soft limit alarm occurs. (Parameter P111bit7=1) [Nakanihon TH]	A Tool length offset is canceled when X axis moves to tool change position, and alarm does not occur.A			-
31	TJ2811	In the synchronous tapping on XC mode, when a tool moves to the machining start point, the counter of X-axis comes off 0.001-0.002 mm. [Sanki kikai]	In the synchronous tapping on XC mode, when a tool moves to the machining start point, the counter of X-axis does not come off 0.001-0.002 mm.	-		-
32	TH1252	"HEIGHT" of Cut-feeder is not indicated rightly. [Kosumekku]	"HEIGHT" of Cut-feeder is indicated rightly.			-
33	Improvem tent	It is possible to use the visual tool ID/data management functions.		-		-