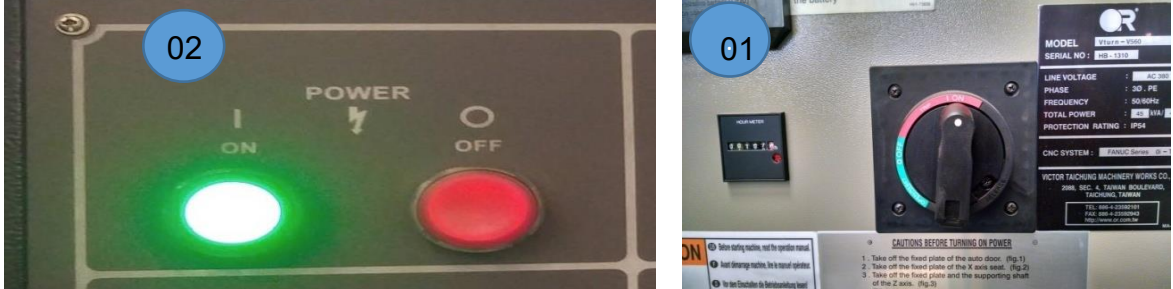
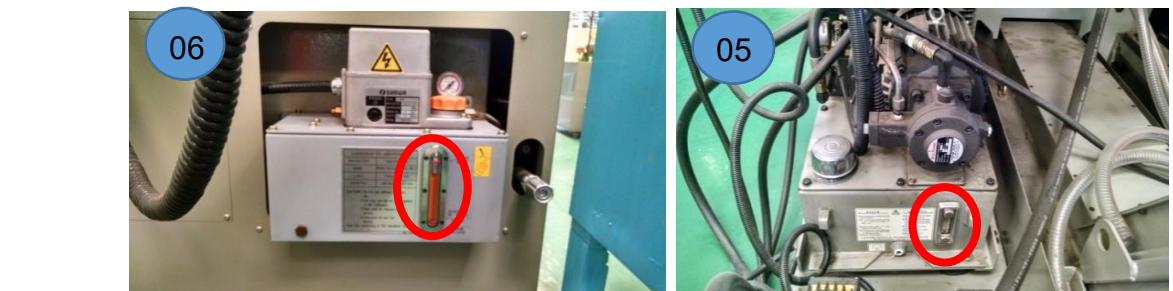
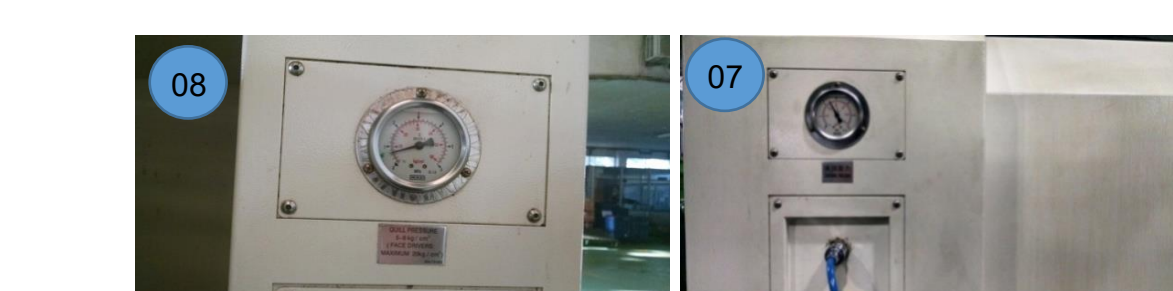
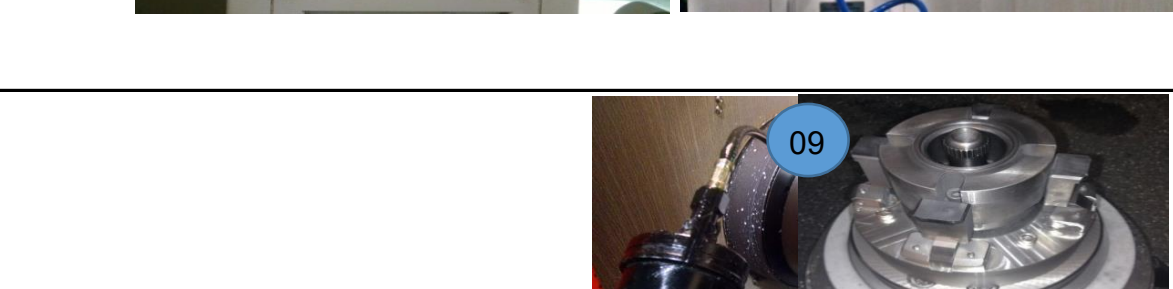
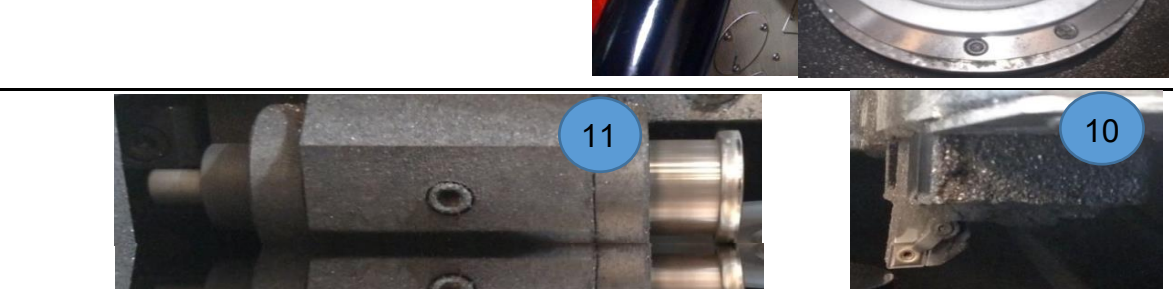
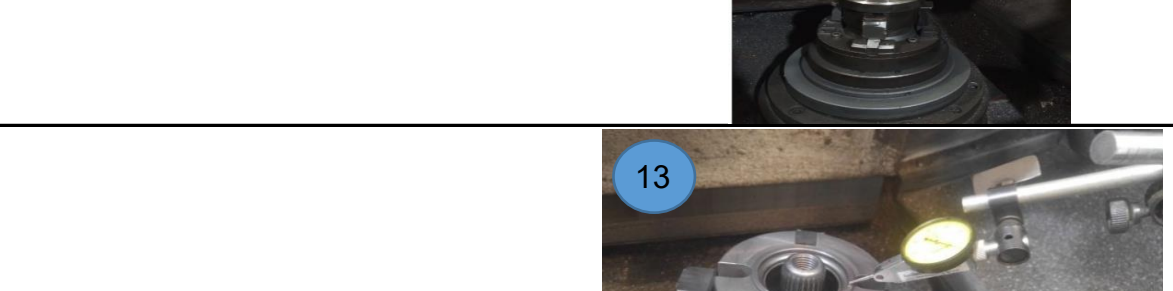
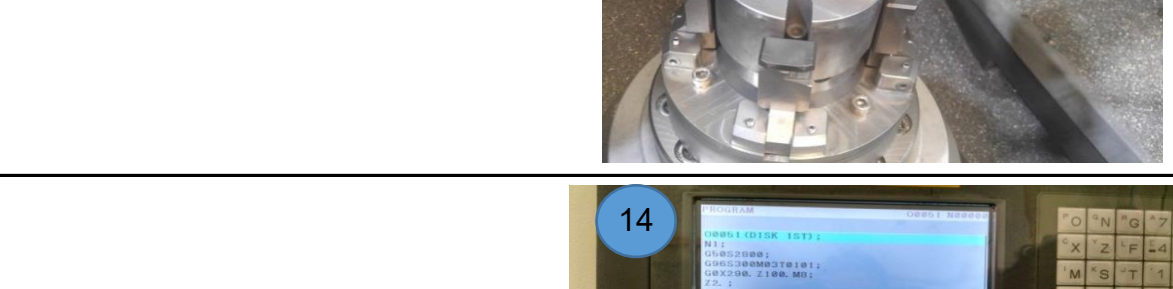
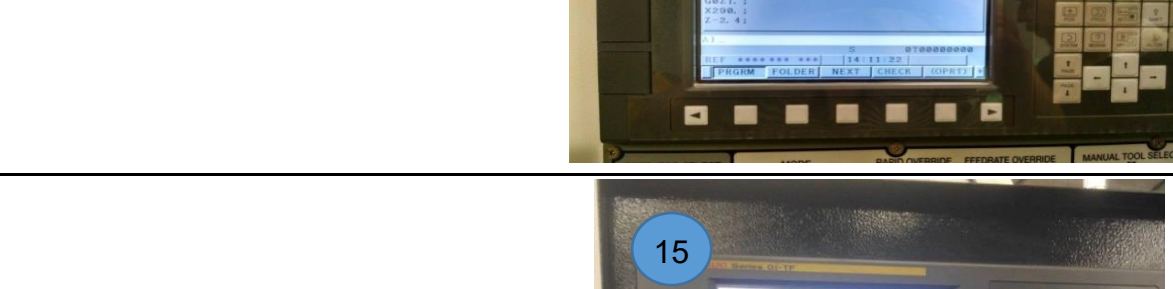


Manufacturing Operation Standard

Model	2YN	Process / Operation Name	Facing & Burnishing with Hub
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Preparing Department			Control No. PP\FM\025 ISSUE 01 PAGE 16of19
Confirmed by	Checked by	Prepared by	

Job Setting

PICTORIAL VIEW	No.	OPERATION	QUALITY STANDARD	WORKING POINT	TOOL & MATERIAL	COMMENTS	SAFETY POINTS
	1	Main breaker ON & machine power on.	-	1- Rotate selector Red mark to Green mark. 2- Press Switch ON Button.	Selector & Button	If operator doesn't press button or move selector to its position then machine will no start.	Shoes, Gloves
	2	Machine Reference	Before starting machine make sure your axis in reference point.	Press Both X & Z axis button	X & Z Axis button & Selector	If operator starts machine without sending reference point then it can cause accidents of machine.	Shoes, Gloves
	3	Checking of Oil levels.	Check level gauge every day before starting machine.	Check oil level on level gauge.	Level Gauge.	If level gauge is below than its standard level then machine will be alarming & it can effect on your production.	Shoes, Gloves
	4	Set clamping Pressure.	Chuck Clamping pressure should be 15~20 Kg/cm2 Tail Stock clamping pressure should be 08~10 Kg/cm2	Clamping Jaws.	Pressure gauge	Always set Chuck Clamping pressure should be 15~20 Kg/cm2 Tail Stock clamping pressure should be 08~10 Kg/cm2 clamping on can cause rejection & accident on machine.	Shoes, Gloves
	5	Greasing	-	Grease with the help of greasing Gun	Greasing Gun	-	Shoes, Gloves
	6	Checking of Tools & Inserts	Make sure all tools mount on Turret & don't damaged.	Mount all tools in turret with respect to Facing & Burnishing with DISK machining.	Tools ,Roller & Inserts.	-	Shoes, Gloves
	7	Clamp the mandrel	Make sure jaws & mandrel should be free from Bur.	Before clamping jaws on mandrel Clean jaws & mandrel with the help of Air Gun then place the mandrel in jaws pressing the pedal. And Tight With L-NKEY Bolt	Mandrel & L-N KEY Bolt	If bur found on Jaws then mandrel is not properly clamp.	Shoes, Gloves
	8	Dialing	1- Dialing should be with in 0.005 mm. 2- Before dialing make sure lever stand should be on clean surface & dial gauge nib touch inside mandrel profile.	Dialing with the help of lever gauge	Lever Gauge	1- If dialing is above then 0.005mm then make cut on it.	Shoes, Gloves
	9	Call program	Before start machining make sure program #0002 & Name '2YN Disk Burnishing' call on screen	Type program #0002 & press Program search Button on screen.	Button	If operator call wrong program # then it can cause accidents in machine	Shoes, Gloves
	10	Mode Setting	Make sure mode set on X1 & Single block and optional block ON	set selector position on X1 & optional block & Single block ON then On cycle start button when tool is near to part then press free hold button to hold process & then press reset button & after pressing reset button manually touch tool with part with the help of Handle then go to offset & select geometry option, in geometry option select whose tool which is working in process then give '0' offset value in X & Z axis.	Selector & Button	If this process will not proper follow then it can cause accident in machine. If you press dry run button, So Machine running rapidly its Cause of Part NG after process	Shoes, Gloves
	11	(1) Clamp the disk on mandrel & Check appearance of Disk	Make sure mandrel should be free from Bur & also Disk should be free from Bur.	(1) Before clamping DISK & disk on mandrel . clean a mandrel with the help of Air gun then place disk & tight spacer & Nut with the help of spanner.	Air Gun Spanner Button L-NKEY BOLT	If bur found on mandrel & then DISK/Disk will not properly clamp & Run out found on disk.	Shoes, Gloves
	12	N1 Finishing X ,Y Faces.	After completing N1 process Inspect the part & check the thickness.	Cycle start baton Press & Inspect the part with the help of Micro Meter.	Instrument (Micro Meter)	If sizes don't according to tolerance then repeat process & give offset value & check again .	Shoes, Gloves
	13	N2 Finishing X & Y Face.	After completing N2 process Inspect the part & check the thickness	Cycle start baton Press & Inspect the part with the help of Micro Meter.	Instrument (Micro Meter)	If sizes don't according to tolerance then repeat process & give offset value & check again .	Shoes, Gloves

Job Setting							
	14	Inspection in Machine	Before Unclamping the part Thickness must be checked. PP\FM\024 ISSUE 01 PAGE 15of17	Check Dimension with the help of Micro meter Check the disk in 3 equal Space i-e Approx. 120 °	Micro meter	Without gloves don't touch disk	Gloves / Shoes
	15	Unclamp the disk	Before unclamping the disk make sure all work done on disk. PP\FM\024 ISSUE 01 PAGE 15of17	(1) Before Unclamp disk on mandrel. Lose a spacer & Nut with the help of spanner	L-N KEY	Note: Without gloves don't touch a disk	Shoes, Gloves
	16	Inspection	1) Every 12 Pieces of Disk so Change Insert 2) After Change Insert Must be check 1st Disk Roughness and Roughness Should As per OPS Standard 3) every 12th number of Disk Roughness should be checked Reference Documents is PP\FM\024 ISSUE 01 PAGE 15of17	1) Insert Change after every 12 Disk processed. 2)After Change insert , check the roughness of the 1st Disk. 3)The roughness must meet OPS standard requirements. 4)Check the roughness of every 12th Disk to ensure consistency in quality (Roughness). Note: If the roughness of the 12th Disk is not within the standard, then the roughness of each Disk produced in that batch must be checked individually until an OK Roughness piece is found. & Checking Sequence Example (12,11,10)	Insert , Tool & Disk	If sizes don't according to tolerance then repeat process & give offset value & check again .Without gloves don't touch disk	Shoes, Gloves
	16	Inspection	Inspect the part with using all instruments. PP\FM\024 ISSUE 01 PAGE 15of17	Check Dimension with the help of Instruments.	Instruments	Note: Without gloves don't touch a disk	Shoes, Gloves
	17	QC inspection	Before starting production go to QC window and check 1st part & receive OK slip .	Go to QC Window	QC Slip	If part is NG then go and come until QC didn't give you OK slip. Note: Without gloves don't touch a disk	Shoes, Gloves
	18	Storage & Handling Of Finish Part	Finish Disk Properly set in Storage Location	Place the Disk properly in the Disk Racks, so it doesn't hit or collide with Other Disk.	Finish Disk , Storage Racks	If Disk needs to repair then place into Repairing rack if reject then place into Rejection rack. And follow the OK ,Rej. & REPAIRING Treatment Flow as Mention Below	Shoes, Gloves

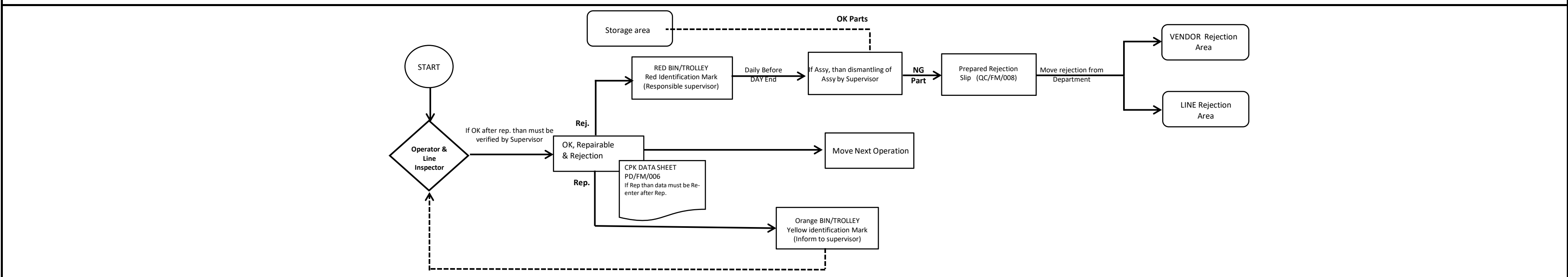
Day First Part Manufacturing									
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* For first part manufacturing Operator must follow these process: 1,2,3,4,5,6,9,10,11,12,13,14,15,16,17 & in Process # operator should follow these Quality standards: Give offset X Face 0.2 Z Value Then -0.2 In Y Face offset in wear option not try to insert in the Geometry option.

Routine Part Manufacturing	
1	1.00
2	2.00
3	3.00
4	4.00
5	5.00
6	6.00
7	7.00
8	8.00
9	9.00
10	10.00
11	11.00
12	12.00
13	13.00
14	14.00
15	15.00
16	16.00
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95	95.00
96	96.00
97	97.00
98	98.00
99	99.00
100	100.00

* For Routine part manufacturing Operator must follow these process: 11,12,13,14,15 & 16.

OK ,Rej. & REPAIRING PART RULES & ROUTE	
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[illegible][illegible]

Job Setting																								
After 7 DAYS/M																								
TRAINEE NP#																								
Date																								
Associate Confirmation Signature After 7 DAYS/M																								