

Work Process Schedule

WORK PROCESS SCHEDULE		ONET Code: 51-4111.00
Tool and Die Maker		RAPIDS Code: 0586CB
Job Title: Tool and Die Maker		
Level:	Specialization:	
Stackable Program: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Base Occupation Name:		
Company Contact:		
Address:	Phone:	Email:
Apprenticeship Type: <input checked="" type="checkbox"/> Competency Based <input type="checkbox"/> Time Based <input type="checkbox"/> Hybrid		Prerequisites:

Job Function 1: Inspects materials, die components, features, and details			
Competencies	Core or Optional	RTI	OJT
A. Measures size of raw materials	Core		
B. Checks surface finish for detects and flaws	Core		
C. Identifies material by type	Core		
D. Verifies calibration of measurement devices	Core		
E. Converts measurements	Core		
F. Locates center lines, checks fit and form using gaging, and measures threads	Core		

Job Function 2: Plans job and sets up workstation			
Competencies	Core or Optional	RTI	OJT
A. Reviews and verifies prints and drawings	Core		
B. Obtains and stages raw materials and verifies bill of materials	Core		
C. Prioritizes and schedules workflow/progression	Core		
D. Determines availability of materials and equipment	Core		
E. Obtains and stages die premanufactured components	Core		
F. Determines grinding and heat-treating allowances	Core		
G. Sketches/highlights critical processing information and specs	Core		
H. Determines machining requirements and processes	Core		
I. Verifies/assesses shut height specifications, tonnage requirements, and feedline	Core		
J. Checks safety devices for function	Core		
K. Identifies and determines availability of perishable tooling	Core		
L. Verifies availability of tryout material	Core		
M. Determines resources to adhere to die-building and tryout times	Core		
N. Determines lubrication requirements and plumbing standards	Core		
O. Assesses part and scrap-ejection methods	Core		

Job Function 3: Sets up equipment and machine components and details			
Competencies	Core or Optional	RTI	OJT
A. Moves and stages material and parts for machining (CNC/non-CNC) and polishes parts	Core		
B. Inspects machined work pieces for quality and compliance and removes burr from machined parts	Core		

Job Function 4: Assembles tools and die			
Competencies	Core or Optional	RTI	OJT
A. Ensures punch is at die clearance	Core		
B. Mounts and checks details for fit and function, punching tools, and forming tools and components	Core		
C. Installs and fits cutting and drawing tools and components	Core		
D. Installs and sets pressure devices or systems and stripping and holding devices	Core		
E. Establishes and sets die timing and mounts/adjusts CAMs or sliding components	Core		
F. Verifies/adjusts slug clearance and grinds/deburrs and mount parallels	Core		
G. Mounts/aligns in-die assembly and hardware and tapping heads	Core		
H. Installs and sets quick die-change components, scrap removal, and part-ejection devices	Core		
I. Installs quality control (QC) sensors and electronics and die-protection sensors and devices	Core		
J. Aligns upper and lower die assembly and checks/adjusts material feed and level on the bench	Core		
K. Installs/makes guide components and checks for sharp edges on noncutting tools	Core		
L. Verifies presence of or installs balances and levelers and sets blocks	Core		

Job Function 5: Conducts tryouts and develops tools and die			
Competencies	Core or Optional	RTI	OJT
A. Sets up and conducts press for dry run and/or tryouts	Core		
B. Develops blank/trim profiles	Core		
C. Checks/adjusts shut height and sets blocks	Core		
D. Analyzes, solves, and corrects formability problems and runs at proper rate	Core		
E. Inspects and submits tryout parts for quality and conformance	Core		

Job Function 6: Troubleshoots tool and die problems			
Competencies	Core or Optional	RTI	OJT
A. Understands how to read strip	Core		
B. Isolates the cause of why strip is not feeding straight into or through die	Core		
C. Determines why tool steel is chipping or showing premature wear	Core		
D. Determines why die components are breaking	Core		
E. Finds out why scrap or materials are accumulating in the die	Core		
F. Isolates the cause of why a sensor has shut down the press	Core		

Job Function 7: Manages and coordinates projects			
Competencies	Core or Optional	RTI	OJT
A. Reliably follows the instructions of others	Core		
B. Willingly asks questions about things not fully understood	Core		
C. Works with due regard for the safety of others	Core		
D. Establishes a system of maintaining appropriate notes and reminders and completes any required logs, calibration records, etc.	Core		
E. Ensures proper communications between previous and next shifts, with both operations and supervision	Core		
F. Identifies problems and changes that could lead to problems by exchanging information with operators, supervisors, and others	Core		
G. Establishes trust and rapport with operators, supervisors, and others	Core		