

National Institute for Metalworking Skills, Inc.

Credentialing Achievement Record

Stamping Level III Set Up Single Hit Tooling

National Institute for Metalworking Skills 3251 Old Lee Highway, Suite 205 Fairfax, VA 22030 <u>http://nims-skills.org</u>



METAL STAMPING CREDENTIALING PROGRAM

LEVEL III CREDENTIALING ACHIEVEMENT RECORD (CAR)

and

Official Performance CHECKLISTs (Skill Checks)

Se Please print		
NAME:	Reg. No.	Job Title:
	•	

Site Name:

Site No.

STATUS:	Non-Completer	Candidate has Successfully Completed all NIMS Performance Requirements in the Following Credentialing Area:
	Reason:	Duty Cluster Name:
		Date Completed:

Directions

This *Credentialing Achievement Record* (*CAR*) is the official training and performance document for the above named NIMS credentialing candidate. The CAR is used by the trainer/supervisor and candidate as a record (or log book) of individual on-the-job performance. The CAR is the *vehicle* that will allow eligible candidates to take the NIMS written credentialing examination(s). Supervisors, trainers, and candidates should take care of this record and be sure that it is accurate, kept up to date, filled out correctly, and properly stored. All information recorded in the *CAR* should be considered **CONFIDENTIAL**.

Candidates may select as many credentialing Duty Clusters as applicable to the facility or appropriate to the job. There are separate CAR booklets for each credentialing Duty Cluster. The CAR opens with a list Critical Work Activities (or experience statements) that must be acknowledged and documented. However, actual performance is assessed two ways: 1) by fulfilling these general experience and historical statements and 2) by an examiner administering *Skill Checks* (or performance assessments). Skill Checks required for credentialing are clearly marked with the title - CAR SKILL CHECK. With the exception of the Opportunity Observations required for troubleshooting and maintenance, each Skill Check must be successfully completed five times. Candidate performance is documented by a \Box on each Examiner's *CHECKLIST*. All successful Skill Check attempts must be co-<u>signed</u> and dated by the trainer/supervisor and candidate. Work Activity (experiential) statements must be co-<u>initialed</u> by the trainer/supervisor or manager and the candidate then dated. If a particular Skill Check step or standard does not apply at your facility, check-off the applicable *NA* box and continue. Skill Checks may require the candidate to perform work a bit differently than your normal procedure or learn how to do something that may not be part of their typical day-to-day responsibilities. However, you may <u>only</u> check-off a *NA* box if the process-standard does not apply because the equipment or tooling is not available or the stamping process itself does not require this activity.

For additional information about administering *CAR* Skill Checks, see the <u>Guide to Administering Credentialing Achievement</u> <u>Records</u> or consult with your facility Credentialing Coordinator.



METAL STAMPING CREDENTIALING PROGRAM LEVEL III CREDENTIALING ACHIEVEMENT RECORD (CAR)

CAR WORK ACTIVITY SIGN-OFFS AND SKILL CHECKS

Setup Equipment with Single-Hit Tooling - Level III

DUTY CLUSTER - 2.3

Duty Cluster and Critical Work Activities	Date Completed	Supervisor Initials	Trainer Initials	Trainee Initials
Setup Equipment with Single-Hit Tooling				
Candidate has met the attendance policy of the facility for the last 12 consecutive months.				
Candidate has no company documented safety violations within the last 12 consecutive months.				
Candidate has demonstrated the ability to maintain a safe, clean and orderly work area in compliance with facility housekeeping policies and has no reported violations for a period of three (3) consecutive months.				
Candidate has demonstrated expert knowledge of material/part conformance standards and working knowledge of SPC recording requirements.				
Candidate has demonstrated leadership qualities and communication skills consistent with the position and level of responsibility.				
Candidate has demonstrated competency when directing the work of others and has provided workable advice and modest training to co-workers that has fostered an environment of continuous learning and process improvement.				
Candidate understands basic principles of machining, electricity/electronics, mechanical technology, metallurgy, material handling, and/or fluid power systems.				
Candidate has demonstrated the ability to use prints, charts, technical drawings, and/or schematics to troubleshoot running processes, conduct part inspections, and perform basic corrective or preventive maintenance.				



SKILL CHECK #1

Candidate: Registration No.:	Date:	199
Examiner: Examiner No.:	(For official use only) Results (check one): Pass	🛛 Yes 🔲 No

Work Activity2.3 - Setup, Operate, and Maintain Equipment with Single-Hit
Tooling

Performance Conditions Setting: OJT Observations. Given a set-up plan or work order, candidate will setup, activate, adjust, test/verify, and monitor all safety systems, lubrication devices, auxiliaries (if applicable), and single-hit stamping machine. Candidate will produce (operate equipment) and inspect parts (verify product quality) in the manner prescribed by the Process/Quality Plan. Given an appropriate process monitoring plan and opportunity, candidate will troubleshoot problems during production runs and perform appropriate corrective or preventive maintenance.

(First of five required Skill Checks)

Safety		
Equipment:	Tools, Equipment and Materials:	Measuring Instruments:
♦ PPE/PPC	Assorted/Common Hand ToolsPart Placement Equipment (tongs,	Rules/Tape Measure
 Protective Devices (hoods, guards, dust 	suction cups, magnets, etc.)Mirror and Flashlight	CalipersMicrometersVerniers
mask, signs, locks/tags, etc.)	 Pen/Pencils Calculator (optional) Process/Quality Plan 	SquaresSpecialty Gages
	 Process/Quality Plan Operating Instructions (if needed) Lubricants/Coolants (as needed) 	 Protractor Sight Gages Directicles
	Lubricant Delivery DevicesStock and Package Containers	DipsticksAttribute and Fixture Gages
	Scrap Removal Tools and Containers	

Attainment Standards

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100% of all procedural steps and standards, without assistance, within company-specific time limit, following all safety and plant procedures.
 100% conformance with all product standards and Process Plan criteria.

Trainee Directions	The above referenced tools, equipment, materials and supplies will be used to <u>Setup, Operate, Troubleshoot, and Maintain Single-Hit Stamping Equipment and Tooling</u> . All safety and plant procedures must be followed. Both the process and final result of the process will be evaluated. Steps should be performed in the sequence, and all steps must meet the standards for successful completion.
Examiner Instructions	 For successful completion of this Skill Check, the candidate must demonstrate the ability to complete the work activity under controlled assessment conditions. All work must be completed to standard. Before administering the Skill Check: Read/review the <i>Guide to Administering Credentialing Achievement Records</i> developed for the program. Ensure that you have a copy of this Skill Check for the candidate to use while he/she is working. Be sure all applicable equipment and supplies are available. Do not provide assistance during the Skill Check. Monitor work in-progress and evaluate for <i>process</i>. Assess the completed work for conformance with product

criteria. Mark NA if a process/product is not appropriate.

Stop the Skill Check immediately if the candidate violates a safety regulation or procedure or if there is any possibility of personal injury or damage to equipment.

Before testing, the examiner may discuss appropriate safety requirements and loss potential issues (*i.e., Lockout/Tagout/ HAZCOM/HAZMAT, pinch points, personal protection equipment, confined space entry, compressed air, high voltage*).

EXAMINER: Read aloud the *Skill Check Script* from the *Guide to Administering Credentialing Achievement Records* (verbatim).

When the candidate indicates that he/she has completed the Skill Check or when maximum time allowed has run out, assess final product and follow the closing procedures outlined in the *Guide to Administering Credentialing Achievement Records*.

ChecklistScoring Procedures: Observe the candidate's performance for each Process Element and mark the *CHECKLIST* whether or not the standards were attained (*Do not rely on your memory*). Steps on the process side are to be marked as they are initiated. Standards are to be marked after each step has been competed.

- **(C)** *Critical*. Failure to meet the standard will result in Skill Check termination.
 - **Note:** The evaluator will terminate the assessment and schedule the individual for further training.



Examiner's CHECKLIST – CAR SKILL CHECK #1 Setup, Operate, and Maintain Equipment with Single-Hit Tooling

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
$\Rightarrow PRESS AND \\ TOOLING$	Yes	No		Yes	No	NA
1. Stage Work Site and Prepare Press for Setup			 PPE/PPC appropriate for the job. (C) Work station clean and orderly (no debris, slippery floor areas, unmanaged scrap, etc.) 			
			 Obtained and set up applicable tools, calibrated gages, safety equipment, supplies, and documents. Read and understood Setup Plan, Standard 			
			Operating Procedures, and/or equipment manufacturer instructions.			
			 Setup package/part and scrap containers. Verified availability of raw material/stock as 			
			specified in Process/Quality Plan.			
2. Prepare Die for Installation			 Correct die was obtained as per Process/Quality Plan or as cross referenced to work order. (C) Die and die cavity is clean based on visual 			
			 Die and die eavily is clean based on visual inspection (no dirt, rust, nicks, burrs, etc.). Die/die assembly is not damaged based on visual inspection (no cracks, dents, holes, etc no loose bolts, 			
			 wires/cables, or parallels, etc no missing features). (C) Unique tooling successfully installed as needed. 			
			 Die staged for installation. 			
3. Setup Press and Install Die			 Ram/slide, bolster, and die/die assembly clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (C) Accessories removed as needed. Followed safety procedures/used safety devices. (C) Die/die assembly properly installed, 			
			 centered/squared, and clamped @ BDC (includes installation of any knockouts, bolts, etc.). (C) Performed necessary lubrication and/or counter 			
			balancing activities while inspecting die.			
			• Ram/slide manipulation .performed safely and correctly to shut height requirements (no damage to press, shoe, die/assembly, casting, ram, clamps, no loose bolts, etc.). (C)			
Process steps continued on			 Demonstrated proficiency while estimating, adjusting, and setting final shut height. 			
next page			 Verified clearances (stroke + minimum height) 			

		allowance) to ensure smoothness of operation.		

 Press will maintain a smooth operation and meet clearance requirements even after any knockout, 		
material, feeder, or sensor adjustments. (C)		
• Counters reset and functional (if applicable).		
 Press activated and inspected for service 		
items/maintenance (needed lubrication, repairs,		
alignment, calibration, etc.).	_	_
Identified and responded to/corrected problems (see		
troubleshooting and maintenance sections).		
Material/stock lubricated and/or advanced to		
starting position (see setup auxiliaries section).		
• Setup inspection gages and quality control equipment for production or hand-off.		
 Work station organized, press/press area clean, and 		
• Work station organized, press/press area clean, and all safety devices, alarms, sensors, and guards set		
(or installed) and verified for function.		
(or instance) and vertified for function.		

					Part 2	
SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
$\Rightarrow AUXILIARIES \\ AND PRESS$						
1. Request and Verify Material			 Followed Process/Quality Plan and/or Standard Operating Procedures. (C) Material matched process specification criteria (ID) 			
			 code, type, SO number, width, thickness, etc.) (C) Raw material visually inspected for adverse 			
			conditions (rust, surface lamination, etc.).Sufficient material/blanks staged for production.			
			Surreient material stands suged for production.			
2. Prepare and Load Magazine			 Magazine positioned and loaded with blanks; payouts adjusted and readied for production. (C) Safety systems verified for function. (C) Material advanced or hand-fed to next operation. 			
			Obtained correct feed speed and set brake tension (if applicable).Demonstrated ability and safety during loading			
			 (rigging, crane operations, load capacity, etc.). (C) Demonstrated proficiency using controls (Mode of 			
			 Operation). (C) Setup performed according to Standard Operating Procedure(s) and/or Process/Quality Plan. (C) 			
			 Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 			



Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
3. Make a Quality Piece Part (Inch/Jog Mode)			 Press started/re-started and adjusted/re-adjusted for production inch/jog mode. First-run piece part stamped according to 			
			Process/Quality Plan (validated shut height).Material/stock passed smoothly through die			
			assembly (material or piece part no longer in die).			
			 Part safely removed from guarded area. (C) Part attributes conformed to quality characteristics based visual inspections (includes no missing or 			
			 incomplete features). (C) Part variables checked and achieved conformance to specified (+/-) dimensional tolerances, control limits 			
			and SPC standards (instrument or hand-held gages inspections required). (C)			
			 Scrap exited smoothly and properly segregated, managed and contained (no scrap/slugs present in die, shoe or part containers). Identified and responded to problems (see 			
			 Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using/setting controls.(C) Demonstrated accuracy when using hand-held 			
			measuring instruments and gages.Equipment production ready and verified for safety.			
6. Produce Parts (Operate equipment for at least 15 minutes)			 Attentively monitored process (pressures, lubricants/coolants, inputs, workholders, tooling, outputs, etc.). Identified and responded to problems (see troubleshooting and maintenance sections). Identified defective or non-compliance parts without contaminating quality parts discharged or packaged. 			٦
			(c)Equipment functioning properly and parts			
			manufactured within % productivity expectations.Quality parts produced on an on-going, successive,			
			and continuous basis until end of stock.Handoff or shut down successfully completed.			



FINAL PRODUCT STANDARDS

"Work	k is De	one As Expected When:"
a.		Jobs were performed proficiently according to Process/Quality Plan, Setup Plan, SOP and/or
		Work Order instructions.
b.		All systems and components functioning properly and press continuously making good parts
		within (%) productivity standards.
C.		Accurate and legible information/data has been recorded on forms, information sheets, reports,
		work orders, labels, and /or in log books.
d .		Candidate demonstrated ability to deal with problems pro-actively and decisively.
е.		Candidate demonstrated ability to link cause and effect to isolate and correct simple problems or
		make process improvements.
f.		All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Exa	miner:	
Signatures: _		Date:
	(Examiner)	
		Date:
-	(Monitor)	
		Date:
-	(Candidate)	



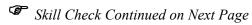
Examiner's CHECKLIST – CAR SKILL CHECK #2 Setup, Operate, and Maintain Equipment with Single-Hit Tooling

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
$\Rightarrow PRESS AND \\ TOOLING$	Yes	No		Yes	No	NA
1. Stage Work Site and Prepare Press for Setup			 PPE/PPC appropriate for the job. (C) Work station clean and orderly (no debris, slippery floor areas, unmanaged scrap, etc.) 			
			 Obtained and set up applicable tools, calibrated gages, safety equipment, supplies, and documents. Read and understood Setup Plan, Standard Operating Procedures, and/or equipment 			
			manufacturer instructions.			
			 Setup package/part and scrap containers. Verified availability of raw material/stock as specified in Process/Quality Plan. 			
			specified in Flocess/Quanty Flair.			
2. Prepare Die for Installation			 Correct die was obtained as per Process/Quality Plan or as cross referenced to work order. (C) Die and die cavity is clean based on visual 			
			 Die and die eavily is clean based on visual inspection (no dirt, rust, nicks, burrs, etc.). Die/die assembly is not damaged based on visual inspection (no cracks, dents, holes, etc no loose bolts, 			
			 wires/cables, or parallels, etc no missing features). (C) Unique tooling successfully installed as needed. 			
			Die staged for installation.			
3. Setup Press and Install Die			 Ram/slide, bolster, and die/die assembly clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (C) Accessories removed as needed. Followed safety procedures/used safety devices. (C) Die/die assembly properly installed, 			
			 centered/squared, and clamped @ BDC (includes installation of any knockouts, bolts, etc.). (C) Performed necessary lubrication and/or counter 			
			balancing activities while inspecting die.Ram/slide manipulation performed safely and			
			• Ram/side manipulation performed safety and correctly to shut height requirements (no damage to press, shoe, die/assembly, casting, ram, clamps, no loose bolts, etc.). (C)			
Process steps continued on			 Demonstrated proficiency while estimating, adjusting, and setting final shut height. 			
next page			 Verified clearances (stroke + minimum height) 			

		allowance) to ensure smoothness of operation.			
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Press will maintain a smooth operation and meet			
clearance requirements even after any knockout, material, feeder, or sensor adjustments. (C)			
• Counters reset and functional (if applicable).			
Press activated and inspected for service			
items/maintenance (needed lubrication, repairs, alignment, calibration, etc.).			
 Identified and responded to/corrected problems (see 			
troubleshooting and maintenance sections).			
 Material/stock lubricated and/or advanced to starting position (see setup auxiliaries section). 	L		
 Setup inspection gages and quality control 			
equipment for production or hand-off.	_	_	
• Work station organized, press/press area clean, and			
all safety devices, alarms, sensors, and guards set (or installed) and verified for function.			
(or instance) and verified for function.			

					Part 2	
SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	Νο	NA
$\Rightarrow AUXILIARIES \\ AND PRESS$						
1. Request and Verify Material			 Followed Process/Quality Plan and/or Standard Operating Procedures. (C) Material matched process specification criteria (ID) 			
			 code, type, SO number, width, thickness, etc.) (C) Raw material visually inspected for adverse 			
			conditions (rust, surface lamination, etc.).Sufficient material/blanks staged for production.			
			Sufferent material oraliks suged for production.			
2. Prepare and Load Magazine			 Magazine positioned and loaded with blanks; payouts adjusted and readied for production. (C) Safety systems verified for function. (C) Material advanced or hand-fed to next operation. 			
			 Obtained correct feed speed and set brake tension (if applicable). Demonstrated ability and safety during loading 			
			 Demonstrated upinty and surely during rotating (rigging, crane operations, load capacity, etc.). (C) Demonstrated proficiency using controls (Mode of 			
			Operation). (C)			
			• Setup performed according to Standard Operating Procedure(s) and/or Process/Quality Plan. (c)			
			 Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 			





Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
3. Make a Quality Piece Part (Inch/Jog Mode)			 Press started/re-started and adjusted/re-adjusted for production inch/jog mode. First-run piece part stamped according to 			
			Process/Quality Plan (validated shut height).Material/stock passed smoothly through die			
			assembly (material or piece part no longer in die).			
			 Part safely removed from guarded area. (C) Part attributes conformed to quality characteristics based visual inspections (includes no missing or 			
			 incomplete features). (C) Part variables checked and achieved conformance to specified (+/-) dimensional tolerances, control limits 			
			and SPC standards (instrument or hand-held gages inspections required). (C)			
			 Scrap exited smoothly and properly segregated, managed and contained (no scrap/slugs present in die, shoe or part containers). Identified and responded to problems (see 			
			 Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using/setting controls.(C) Demonstrated accuracy when using hand-held 			
			measuring instruments and gages.Equipment production ready and verified for safety.			
6. Produce Parts (Operate equipment for at least 15 minutes)			 Attentively monitored process (pressures, lubricants/coolants, inputs, workholders, tooling, outputs, etc.). Identified and responded to problems (see troubleshooting and maintenance sections). Identified defective or non-compliance parts without contaminating quality parts discharged or packaged. 			٦
			(c)Equipment functioning properly and parts			
			manufactured within % productivity expectations.Quality parts produced on an on-going, successive,			
			and continuous basis until end of stock.Handoff or shut down successfully completed.			



FINAL PRODUCT STANDARDS

"Work	is Do	one As Expected When:"
a.		Jobs were performed proficiently according to Process/Quality Plan, Setup Plan, SOP and/or
		Work Order instructions.
b.		All systems and components functioning properly and press continuously making good parts
		within (%) productivity standards.
C.		Accurate and legible information/data has been recorded on forms, information sheets, reports,
		work orders, labels, and /or in log books.
d.		Candidate demonstrated ability to deal with problems pro-actively and decisively.
е.		Candidate demonstrated ability to link cause and effect to isolate and correct simple problems or
		make process improvements.
f.		All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Exa	miner:	
Signatures: _		Date:
	(Examiner)	
		Date:
-	(Monitor)	
		Date:
-	(Candidate)	



Examiner's CHECKLIST – CAR SKILL CHECK #3 Setup, Operate, and Maintain Equipment with Single-Hit Tooling

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
$\Rightarrow PRESS AND \\ TOOLING$	Yes	No		Yes	No	NA
1. Stage Work Site and Prepare Press for Setup			 PPE/PPC appropriate for the job. (C) Work station clean and orderly (no debris, slippery floor areas, unmanaged scrap, etc.) 			
			 Obtained and set up applicable tools, calibrated gages, safety equipment, supplies, and documents. Read and understood Setup Plan, Standard Operating Procedures, and/or equipment 			
			manufacturer instructions.			
			 Setup package/part and scrap containers. Verified availability of raw material/stock as specified in Process/Quality Plan. 			
2. Prepare Die for Installation			 Correct die was obtained as per Process/Quality Plan or as cross referenced to work order. (C) Die and die cavity is clean based on visual 			
			 Die die die euvry is erean based on visual inspection (no dirt, rust, nicks, burrs, etc.). Die/die assembly is not damaged based on visual inspection (no cracks, dents, holes, etc no loose bolts, 			
			 wires/cables, or parallels, etc no missing features). (C) Unique tooling successfully installed as needed. 			
			Die staged for installation.			
3. Setup Press and Install Die			 Ram/slide, bolster, and die/die assembly clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (C) Accessories removed as needed. Followed safety procedures/used safety devices. (C) Die/die assembly properly installed, and clowned of DDC (includes) 			
			 centered/squared, and clamped @ BDC (includes installation of any knockouts, bolts, etc.). (C) Performed necessary lubrication and/or counter 			
			balancing activities while inspecting die.Ram/slide manipulation performed safely and			
			correctly to shut height requirements (no damage to press, shoe, die/assembly, casting, ram, clamps, no loose bolts, etc.). (C)			
Process steps continued on			• Demonstrated proficiency while estimating, adjusting, and setting final shut height.			
next page			 Verified clearances (stroke + minimum height) 			

		allowance) to ensure smoothness of operation.			
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			_
 Press will maintain a smooth operation and meet clearance requirements even after any knockout, 			
material, feeder, or sensor adjustments. (C)			
• Counters reset and functional (if applicable).			
 Press activated and inspected for service 			
items/maintenance (needed lubrication, repairs,			
alignment, calibration, etc.).		_	_
Identified and responded to/corrected problems (see			
troubleshooting and maintenance sections).	Ľ	_	_
Material/stock lubricated and/or advanced to			
starting position (see setup auxiliaries section).			
Setup inspection gages and quality control			
equipment for production or hand-off.			
• Work station organized, press/press area clean, and	L		
all safety devices, alarms, sensors, and guards set			
(or installed) and verified for function.			
	J	J	J

					Part 2	
SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
$\Rightarrow AUXILIARIES \\ AND PRESS$						
1. Request and Verify Material			 Followed Process/Quality Plan and/or Standard Operating Procedures. (C) Material matched process specification criteria (ID) 			
			 code, type, SO number, width, thickness, etc.) (C) Raw material visually inspected for adverse 			
			conditions (rust, surface lamination, etc.).Sufficient material/blanks staged for production.			
			Surreien material chains suged for production.			
2. Prepare and Load Magazine			 Magazine positioned and loaded with blanks; payouts adjusted and readied for production. (C) Safety systems verified for function. (C) Material advanced or hand-fed to next operation. Obtained correct feed speed and act hereis thread for function. 			
			Obtained correct feed speed and set brake tension (if applicable).Demonstrated ability and safety during loading			
			 (rigging, crane operations, load capacity, etc.). (C) Demonstrated proficiency using controls (Mode of Operation). (C) 			
			• Setup performed according to Standard Operating Procedure(s) and/or Process/Quality Plan. (C)			
			 Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 			





Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
3. Make a Quality Piece Part (Inch/Jog Mode)			 Press started/re-started and adjusted/re-adjusted for production inch/jog mode. First-run piece part stamped according to Process/Quality Plan (validated shut height). Material/stock passed smoothly through die 			
			 Wraterial stock passed shooting through the assembly (material or piece part no longer in die). Part safely removed from guarded area. (C) Part attributes conformed to quality characteristics based visual inspections (includes no missing or 			
			 Part variables checked and achieved conformance to specified (+/-) dimensional tolerances, control limits 			
			and SPC standards (instrument or hand-held gages inspections required). (C)			
			 Scrap exited smoothly and properly segregated, managed and contained (no scrap/slugs present in die, shoe or part containers). Identified and responded to problems (see 			
			 troubleshooting and maintenance sections). Demonstrated proficiency using/setting controls.(C) Demonstrated accuracy when using hand-held 			
			measuring instruments and gages.Equipment production ready and verified for safety.			
6. Produce Parts (Operate equipment for at least 15 minutes)			 Attentively monitored process (pressures, lubricants/coolants, inputs, workholders, tooling, outputs, etc.). Identified and responded to problems (see troubleshooting and maintenance sections). Identified defective or non-compliance parts without contaminating quality parts discharged or packaged. 			
			(c)Equipment functioning properly and parts			
			manufactured within % productivity expectations.Quality parts produced on an on-going, successive,			
			and continuous basis until end of stock.Handoff or shut down successfully completed.			



FINAL PRODUCT STANDARDS

"Worl	k is D	one As Expected When:"
a.		Jobs were performed proficiently according to Process/Quality Plan, Setup Plan, SOP and/or
		Work Order instructions.
b.		All systems and components functioning properly and press continuously making good parts
		within (%) productivity standards.
C.		Accurate and legible information/data has been recorded on forms, information sheets, reports,
		work orders, labels, and /or in log books.
d.		Candidate demonstrated ability to deal with problems pro-actively and decisively.
e.		Candidate demonstrated ability to link cause and effect to isolate and correct simple problems or
		make process improvements.
f.		All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Exa	miner:	
Signatures: _		Date:
	(Examiner)	
		Date:
-	(Monitor)	
		Date:
-	(Candidate)	



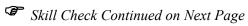
Examiner's CHECKLIST – CAR SKILL CHECK #4 Setup, Operate, and Maintain Equipment with Single-Hit Tooling

SETUP PROCESS			PROCESS-PRODUCT STANDARDS							
$\Rightarrow PRESS AND TOOLING$	Yes	No		Yes	No	NA				
1. Stage Work Site and Prepare Press for Setup			 PPE/PPC appropriate for the job. (C) Work station clean and orderly (no debris, slippery floor areas, unmanaged scrap, etc.) 							
			 Obtained and set up applicable tools, calibrated gages, safety equipment, supplies, and documents. Read and understood Setup Plan, Standard On aroting Presedures and/or equipment. 							
			Operating Procedures, and/or equipment manufacturer instructions.							
			 Setup package/part and scrap containers. Verified availability of raw material/stock as specified in Process/Quality Plan. 							
2. Prepare Die for Installation			 Correct die was obtained as per Process/Quality Plan or as cross referenced to work order. (C) Die and die cavity is clean based on visual 							
							 Die/die assembly is not damaged based on visual inspection (no cracks, dents, holes, etc no loose bolts, 			
			 wires/cables, or parallels, etc no missing features). (C) Unique tooling successfully installed as needed. 							
			 Die staged for installation. 							
3. Setup Press and Install Die			 Ram/slide, bolster, and die/die assembly clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (C) Accessories removed as needed. Followed safety procedures/used safety devices. (C) Die/die assembly properly installed, 							
			 centered/squared, and clamped @ BDC (includes installation of any knockouts, bolts, etc.). (C) Performed necessary lubrication and/or counter 							
			balancing activities while inspecting die.							
			• Ram/slide manipulation performed safely and correctly to shut height requirements (no damage to press, shoe, die/assembly, casting, ram, clamps, no loose bolts, etc.). (C)							
Process steps continued on			 Demonstrated proficiency while estimating, adjusting, and setting final shut height. 							
next page			 Verified clearances (stroke + minimum height) 							

		allowance) to ensure smoothness of operation.			
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	<u> </u>

					Part 2	
SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
$\Rightarrow AUXILIARIES \\ AND PRESS$						
1. Request and Verify Material			 Followed Process/Quality Plan and/or Standard Operating Procedures. (C) Material matched process specification criteria (ID) 			٦
			 code, type, SO number, width, thickness, etc.) (C) Raw material visually inspected for adverse 			
			conditions (rust, surface lamination, etc.).Sufficient material/blanks staged for production.			
			Sufferent material oraliks suged for production.			
2. Prepare and Load Magazine			 Magazine positioned and loaded with blanks; payouts adjusted and readied for production. (C) Safety systems verified for function. (C) Material advanced or hand-fed to next operation. 			
			 Obtained correct feed speed and set brake tension (if applicable). Demonstrated ability and safety during loading 			
			 (rigging, crane operations, load capacity, etc.). (C) Demonstrated proficiency using controls (Mode of 			
			Operation). (C)			
			• Setup performed according to Standard Operating Procedure(s) and/or Process/Quality Plan. (c)			
			 Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 			





Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
3. Make a Quality Piece Part (Inch/Jog Mode)			 Press started/re-started and adjusted/re-adjusted for production inch/jog mode. First-run piece part stamped according to Process/Quality Plan (validated shut height). Material/stock passed smoothly through die 			
			 Wraterial stock passed shooting through the assembly (material or piece part no longer in die). Part safely removed from guarded area. (C) Part attributes conformed to quality characteristics based visual inspections (includes no missing or 			
			 Part variables checked and achieved conformance to specified (+/-) dimensional tolerances, control limits 			
			and SPC standards (instrument or hand-held gages inspections required). (C)			
			 Scrap exited smoothly and properly segregated, managed and contained (no scrap/slugs present in die, shoe or part containers). Identified and responded to problems (see 			
			 troubleshooting and maintenance sections). Demonstrated proficiency using/setting controls.(C) Demonstrated accuracy when using hand-held 			
			measuring instruments and gages.Equipment production ready and verified for safety.			
6. Produce Parts (Operate equipment for at least 15 minutes)			 Attentively monitored process (pressures, lubricants/coolants, inputs, workholders, tooling, outputs, etc.). Identified and responded to problems (see troubleshooting and maintenance sections). Identified defective or non-compliance parts without contaminating quality parts discharged or packaged. 			
			(c)Equipment functioning properly and parts			
			manufactured within % productivity expectations.Quality parts produced on an on-going, successive,			
			and continuous basis until end of stock.Handoff or shut down successfully completed.			



FINAL PRODUCT STANDARDS

"Work	k is Do	one As Expected When:"
а.		Jobs were performed proficiently according to Process/Quality Plan, Setup Plan, SOP and/or
		Work Order instructions.
b.		All systems and components functioning properly and press continuously making good parts
		within (%) productivity standards.
С.		Accurate and legible information/data has been recorded on forms, information sheets, reports,
		work orders, labels, and /or in log books.
d .		Candidate demonstrated ability to deal with problems pro-actively and decisively.
е.		Candidate demonstrated ability to link cause and effect to isolate and correct simple problems or
		make process improvements.
f.		All safety and plant procedures have been followed and work area was left clean.
t.		All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Exa	miner:	
Signatures: _		Date:
	(Examiner)	
		Date:
-	(Monitor)	
		Date:
-	(Candidate)	



Examiner's CHECKLIST – CAR SKILL CHECK #5 Setup, Operate, and Maintain Equipment with Single-Hit Tooling

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
$\Rightarrow PRESS AND \\ TOOLING$	Yes	No		Yes	No	NA
1. Stage Work Site and Prepare Press for Setup			 PPE/PPC appropriate for the job. (C) Work station clean and orderly (no debris, slippery floor areas, unmanaged scrap, etc.) 			
			 Obtained and set up applicable tools, calibrated gages, safety equipment, supplies, and documents. Read and understood Setup Plan, Standard Operating Procedures, and/or equipment 			
			manufacturer instructions.			
			 Setup package/part and scrap containers. Verified availability of raw material/stock as specified in Process/Quality Plan. 			
			specified in Flocess/Quanty Flair.			
2. Prepare Die for Installation			 Correct die was obtained as per Process/Quality Plan or as cross referenced to work order. (C) Die and die cavity is clean based on visual 			
			 Die die die euvry is crean based on visual inspection (no dirt, rust, nicks, burrs, etc.). Die/die assembly is not damaged based on visual inspection (no cracks, dents, holes, etc no loose bolts, 			
			 wires/cables, or parallels, etc no missing features). (C) Unique tooling successfully installed as needed. 			
			 Die staged for installation. 			
3. Setup Press and Install Die			 Ram/slide, bolster, and die/die assembly clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (C) Accessories removed as needed. Followed safety procedures/used safety devices. (C) Die/die assembly properly installed, 			
			 centered/squared, and clamped @ BDC (includes installation of any knockouts, bolts, etc.). (C) Performed necessary lubrication and/or counter 			
			balancing activities while inspecting die.			
			• Ram/slide manipulation performed safely and correctly to shut height requirements (no damage to press, shoe, die/assembly, casting, ram, clamps, no loose bolts, etc.). (C)			
Process steps continued on			 Demonstrated proficiency while estimating, adjusting, and setting final shut height. 			
next page			 Verified clearances (stroke + minimum height) 			

		allowance) to ensure smoothness of operation.			
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 Press will maintain a smooth operation and meet clearance requirements even after any knockout, 		
material, feeder, or sensor adjustments. (C)		
• Counters reset and functional (if applicable).		
 Press activated and inspected for service 		
items/maintenance (needed lubrication, repairs,		
alignment, calibration, etc.).	_	_
Identified and responded to/corrected problems (see		
troubleshooting and maintenance sections).		
Material/stock lubricated and/or advanced to		
starting position (see setup auxiliaries section).		
• Setup inspection gages and quality control equipment for production or hand-off.		
 Work station organized, press/press area clean, and 		
• Work station organized, press/press area clean, and all safety devices, alarms, sensors, and guards set		
(or installed) and verified for function.		
(or instance) and vertified for function.		

				Part 2		
SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
$\Rightarrow AUXILIARIES \\ AND PRESS$						
1. Request and Verify Material			 Followed Process/Quality Plan and/or Standard Operating Procedures. (C) Material matched process specification criteria (ID) 			٦
			 code, type, SO number, width, thickness, etc.) (C) Raw material visually inspected for adverse 			
			conditions (rust, surface lamination, etc.).Sufficient material/blanks staged for production.			
			Sufferent material oraliks suged for production.			
2. Prepare and Load Magazine			 Magazine positioned and loaded with blanks; payouts adjusted and readied for production. (C) Safety systems verified for function. (C) Material advanced or hand-fed to next operation. 			
			 Obtained correct feed speed and set brake tension (if applicable). Demonstrated ability and safety during loading 			
			 (rigging, crane operations, load capacity, etc.). (C) Demonstrated proficiency using controls (Mode of 			
			Operation). (C)			
			• Setup performed according to Standard Operating Procedure(s) and/or Process/Quality Plan. (c)			
			 Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 			



Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
3. Make a Quality Piece Part (Inch/Jog Mode)			 Press started/re-started and adjusted/re-adjusted for production inch/jog mode. First-run piece part stamped according to 			
			Process/Quality Plan (validated shut height).Material/stock passed smoothly through die			
			assembly (material or piece part no longer in die).			
			 Part safely removed from guarded area. (C) Part attributes conformed to quality characteristics based visual inspections (includes no missing or 			
			 incomplete features). (C) Part variables checked and achieved conformance to specified (+/-) dimensional tolerances, control limits 			
			and SPC standards (instrument or hand-held gages inspections required). (C)			
			 Scrap exited smoothly and properly segregated, managed and contained (no scrap/slugs present in die, shoe or part containers). Identified and responded to problems (see 			
			 Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using/setting controls.(C) Demonstrated accuracy when using hand-held 			
			measuring instruments and gages.Equipment production ready and verified for safety.			
6. Produce Parts (Operate equipment for at least 15 minutes)			 Attentively monitored process (pressures, lubricants/coolants, inputs, workholders, tooling, outputs, etc.). Identified and responded to problems (see troubleshooting and maintenance sections). Identified defective or non-compliance parts without contaminating quality parts discharged or packaged. 			٦
			(c)Equipment functioning properly and parts			
			manufactured within % productivity expectations.Quality parts produced on an on-going, successive,			
			and continuous basis until end of stock.Handoff or shut down successfully completed.			



FINAL PRODUCT STANDARDS

"Work	is Do	one As Expected When:"
а.		Jobs were performed proficiently according to Process/Quality Plan, Setup Plan, SOP and/or
		Work Order instructions.
b.		All systems and components functioning properly and press continuously making good parts
		within (%) productivity standards.
C.		Accurate and legible information/data has been recorded on forms, information sheets, reports,
		work orders, labels, and /or in log books.
d .		Candidate demonstrated ability to deal with problems pro-actively and decisively.
е.		Candidate demonstrated ability to link cause and effect to isolate and correct simple problems or
		make process improvements.
f.		All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Exa	miner:	
Signatures:		Date:
• _	(Examiner)	
		Date:
_	(Monitor)	
		Date:
_	(Candidate)	

2.3 - CAR SKILL CHECK SUMMARY

Critical Work Activities and Skill Checks Completed	Date Completed
Setup Equipment with Single-Hit Tooling	
Successful Skill Check Attempt #1	
Successful Skill Check Attempt #2	
Successful Skill Check Attempt #3	
Successful Skill Check Attempt #4	
Successful Skill Check Attempt #5	

Opportunity Obser	rvations		
		Successful	Not Successful
⇒ TROUBLESHOOT PRESS, TOOLING AND	Candidate must successfully react to/demonstrate at least <u>five</u> (5) of the following troubleshooting situations to be credentialed in this Duty Cluster	Yes	¢,
AUXILIARIES	•		
Troubleshoot Running Process	 Responded to a double hit or mis-hit situation and successfully isolated the cause of the problem. Responded to broken tooling and correctly determined the 	1. 🗖	1. 🗖
Kunning Trocess	cause of breakage.3. Identified defects in raw material/stock, located defective	2. 🗖	2. 🗖
	area(s), and implemented corrective actions.4. Responded to non-conforming part dimensions during a production run and successfully isolated the cause of the	3. 🗖	3. 🗖
	problem.5. Responded to damaged parts or quality non-conformance conditions during a production run and successfully isolated	4. 🗖	4. 🗖
	the potential cause(s) of the problem.Detected variations in material thickness, isolated areas of non-conformance, and correctly diagnosed the cause of the	5. 🗖	5. 🗖
	problem.7. Responded to double thickness conditions, identified problem area(s), and successfully isolated the cause of the	6. 🗖	6. 🗳
	problem.8. Responded to a press overload situation, analyzed potential problem areas, and successfully determined cause of the	7. 🗖	7. 🗖
	overload.9. Detected a material alignment problem, isolated the cause of	8. 🗖	8. 🗖
	the mis-alignment, and performed corrective actions. 10. Identified mis-alignment or jam of magazine, evaluated	9. 🗖	9. 🗖
	problem areas, and successfully isolated the cause of the problem.	10. 🗖	10. 🗖
	 Detected speed variations on feeders, uncoilers, or straighteners; determined problem area; and successfully isolated the cause of the problem. Responded to loop sensor faults or E-Stopping and 	11. 🗖	11. 🗖
	successfully isolated the cause of the problem. 13. Responded to a conveyor, part handler, or payout failure and	12. 🗖	12. 🖵
	 correctly determined cause of the problem. 14. Identified irregular (<i>high/low</i>) pressure/temperature/flow variations, isolated the cause of the problem, and performed 	13. 🗖	13. 🗖
	corrective actions.	14. 🗖	14. 🗖

Skill Check continued	OPPORTUNITY OBSERVATIONS	Successful	Not Successful
⇒ MAINTAIN PRESS, TOOLING, OR AUXILIARIES	Candidate must successfully demonstrate at least <u>10</u> of the following maintenance activities to be credentialed in this Duty Cluster	Yes	Ş
Perform Corrective	 Removed taps and installed new or replacement taps. Bleed lines and valves. Changed and adjusted shut height (in-process adjustment). 	1. □ 2. □ 3. □	1. □ 2. □ 3. □
or Preventive	4. Dressed or replaced electrodes on a welder.	4. 🗖	4. 🗖
Maintenance on	5. Cleaned scrap from tee slots, holes, etc.	5. 🗖	5. 🗖
Equipment	 Re-cleaned a bolster or ram/slide. Pulled, cleaned and re-installed/mounted a die/assembly. Replaced damaged/defective pins or key. Locked and tagged-out equipment (Zero energy on mechanical 	6.	6.
	 and electrical). Removed, cleaned, and re-installed a filter. Replaced a hose or tube. Removed, cleaned or unplugged, and re-installed a valve. Removed a damaged or non-functioning valve and replaced 	10. □ 11. □ 12. □ 13. □	10. □ 11. □ 12. □ 13. □
	 it with a new or rebuilt valve. 14. Corrected and adjusted/re-set timing (in-process adjustment). 15. Corrected, adjusted/re-set, and controlled feeds, speeds and/or flow rates (in-process adjustment). Or, Unjammed a Magazine and put back in service. 	14. 🗖 15. 🗖	14. 🗖 15. 🗖
	 Polished or cleaned rollers. Repositioned stock/raw material (in-process adjustment). Changed/replaced a low-voltage fuse or breaker. Tightened strippers. Tightened parallels. Replaced a defective workholding device and it verified for safety. 	16. 🗆 17. 📮 18. 📮 19. 📮 20. 📮 21. 📮	16. 17. 18. 19. 20. 21. 16. 17. 17. 18. 19. 19. 19. 19. 19. 19. 10.
	 Verified calibration of sensors, monitors or switches. Changed/replaced a limit or proximity switch. Replaced and set a conveyor or material handling belt. Changed and adjusted a drive belt or chain. Adjusted a pressure/temperature regulator (in-process 	22. □ 23. □ 24. □ 25. □ 26. □	22. □ 23. □ 24. □ 25. □ 26. □
	 adjustment). 27. Filled/refilled lubrication or cooling devices/reservoirs. 28. Lubricated/greased equipment manually (PM). 29. Replaced a control panel light or LED. 30. Successfully conducted a titration test. 31. Successfully performed a refractometer (viscosity) analysis. 	27. □ 28. □ 29. □ 30. □ 31. □	27. 28. 29. 30. 31.



1. Succ	essfully tested material for hardness (e.g., Rockwell test)	1.	1.	
	cessfully tested tensile of raw material or a part (e.g., test")	2.	2.	
3. Succ	essfully conducted continuity tests on sensors/probes.	3.	3.	
	cessfully performed a magnaflux or container pressure (deep drawing process only).	4.	4.	
5. Veri	fied press diagnostics.	5.	5.	



NIMS Credentialing Program

Affidavit of Successful Completion NIMS Level III Metal Stamping Credentialing Program

Credentialing Achievement Record Second S

Reg. No.	Date Completed		
8	•		
irements for NIMS <u>Level II</u>	U OJT recognition.		
	Reg. No. irements for NIMS Level II Site No.		

Indicate in the number of Skill Checks completed and dates of successful performance for each Skill Check

Duty Cluster Name SETUP EQUIPMENT WITH SINGLE-HIT TOOLING	Required Skill Checks	Number of Skill Checks Completed	
	5		
Successful Skill Check Attempt #1	Date:		
Successful Skill Check Attempt #2	Date:		
Successful Skill Check Attempt #3	Date:		
Successful Skill Check Attempt #4	Date:		
Successful Skill Check Attempt #5	Date:		
Experience-eligibility statements have been completed, dated, and co-initialed.	Yes 🗖	No 🗖	

Manual Feed OYES O NO Other:_____

Opportunity Observations Troubleshooting & Corrective/Preventive Maintenance		
Successfully demonstrated at least five troubleshooting situations.	OYES	O NO
Successfully demonstrated at least 10 maintenance activities.	OYES	O NO
Site Coordinator Signature		19 Date
		19
Supervisor Signature		

COMMENTS:

	Make a copy of the completed Affidavit of Successful Completion for your records and send the original to:
$\boldsymbol{\times}$	
0	— — — —
	The National Institute for Metalworking Skills

The National Institute for Metalworking Skills 3251 Old Lee Highway, Suite 205 Fairfax, Virginia, 22030 <u>http://nims-skills.org</u>