



National Institute for Metalworking Skills, Inc.

Credentialing Achievement Record

Stamping Level III Set Up with Progressive Dies

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



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

CAR WORK ACTIVITY SIGN-OFFS AND SKILL CHECKS

Setup Equipment with Progressive Dies - Level III

DUTY CLUSTER: 2.5 - 2.6

Duty Cluster and Critical Work Activities	Date Completed	Supervisor Initials	Trainer Initials	Trainee Initials
Setup Equipment with Progressive Dies				
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, and die processes.				
Candidate has demonstrated the ability to use prints, charts, technical drawings, and/or schematics to troubleshoot running processes, conduct quality control/perform (first and intermediate) part inspections, and perform basic corrective or preventive maintenance on progressive die equipment.				



SKILL CHECK #1

Candidate: Registration No.:	Date: 199
Examiner: Examiner No.:	(For official use only) Results (check one): Pass <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>

Work Activity **2.5/2.6 - Setup, Operate and Maintain Auxiliaries and Machines with Progressive Dies**

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, and progressive die equipment (sensored or non-sensored). Candidate will produce parts (operate equipment) and inspect a part (verify product quality) in the manner prescribed by the Process/Quality Plan. Given an appropriate process monitoring plan, candidate will troubleshoot problems during production runs and perform appropriate corrective or preventive maintenance.

(First of five Skill Checks)

Safety

Equipment:

- ◇ PPE/PPC
- ◇ Protective Devices (hoods, guards, dust mask, signs, locks/tags, etc.)

Tools, Equipment and Materials:

- Assorted/Common Hand Tools
- Part Placement Equipment (tongs, suction cups, magnets, etc.)
- Mirror and Flashlight
- Pen/Pencils
- Calculator (optional)
- Process/Quality Plan
- Operating Instructions (if needed)
- Lubricants/Coolants (as needed)
- Lubricant Delivery Devices
- Stock/Coil and Package Containers
- Scrap Removal Tools and Containers

Measuring Instruments:

- Rules/Tape Measure
- Calipers
- Micrometers
- Verniers
- Squares
- Specialty Gages
- Protractor
- Sight Gages
- Dipsticks
- Attribute and Fixture Gages

Attainment Standards

1. 100% of all procedural steps and standards, without assistance, within company-specific time limit, following all safety and plant procedures.
2. 100% conformance with all product standards and Process Plan criteria.

**Trainee
Directions**

The above referenced tools, equipment, materials and supplies will be used to Setup, Operate, Troubleshoot, and Maintain a Progressive Die System and Tooling. 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 *Guide to Administering Credentialing Achievement Records* 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 **process**. 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 and HAZCOM/HAZMAT, 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).

Checklist

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*.

Scoring 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 Progressive Dies

Steps

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
	Yes	No		Yes	No	NA
⇒ PRESS AND TOOLING						
1. Stage Work Site and Prepare Press for Setup	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> PPE/PPC appropriate for the job. (c) Work area clean and orderly (no debris, unguarded obstructions, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare Die(s) for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Correct dies obtained as per Process/Setup Plan or as cross referenced to work order. (c) Dies and die cavities are clean based on visual inspections (no dirt, rust, burrs, etc.). Dies/die assemblies are not damaged based on visual inspections (no cracks, nicks, dents, holes, etc. - no loose bolts, wires, parallels, or cables, etc. - no missing features). (c) Unique tooling successfully installed. Die(s) staged for installation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Setup Press and Install Die(s)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Ram/slides, bolsters, and dies/die stations clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (c) Accessories removed as needed. Ram/slide manipulations were performed safely and correctly to shut height requirements (no damage to press, shoe, die/station, casting, ram, clamps - no loose bolts, etc.). (c) Demonstrated proficiency when estimating, adjusting, then setting final shut height. Set feed, feed release, feed height, and stroke. Followed safety procedures/used safety devices. (c) Dies/die assemblies properly installed, aligned, centered/squared, and clamped (includes installation of any components i.e., knockouts, bolts, etc.). (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Process steps continued on next page</i>						
			<ul style="list-style-type: none"> Performed necessary lubrication and/or counter 			

			<p>balancing activities while inspecting die progression.</p> <ul style="list-style-type: none"> • Verified clearances (stroke + minimum height allowance) to ensure smoothness of operations. (c) • Press will maintain a smooth operation and meet clearance requirements even after any knockout, feeder, or sensor adjustments. • Counters reset and functional (if applicable). • Press inspected for service items/maintenance (lubrication, repair, calibration, etc.). • Identified and responded to/corrected problems (see troubleshooting and maintenance sections). • Material/stock loaded, lubricated and/or advanced to starting position (see setup auxiliaries section). • Setup inspection gages and quality control equipment for production or hand-off. • Work cells organized, press/press area clean, and all safety devices, alarms, sensors, and guards set (or installed) and verified for function. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Skill Check Continued on Next Page



Steps

SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
⇒ AUXILIARIES AND PRESS						
1. Request and Verify Material/Stock	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Followed Process/Quality Plan and/or Standard Operating Procedures. (c) Material matched process specification criteria (ID code, type, SO number, width, thickness, etc.) (c) Material visually inspected for adverse conditions (rust, surface lamination, coil break, etc.). (c) Sufficient coil/strip staged for production. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and Adjust Uncoiler	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Coil secured/loaded and containing bands safely removed. Stock correctly aligned and mandrels/keepers or cradle accept ID/OD or width of coil. (c) Verified uncoiler safety devices for function. (c) Material advanced to next operation. Obtained correct feed speed ratio/set brake tension. Adjusted loop control. Demonstrated ability and safety during loading (rigging, crane operations, load capacity, etc.). (c) Demonstrated ability when using threading tables. Demonstrated proficiency using controls (Modes of Operation). (c) Setup performed according to Standard Operating Procedure(s) and/or Process/Setup Plan. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Prepare and Adjust Straightener	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Straightener accepts coil. Material properly aligned and secured (adjusted pinchroll(s), entrance guide(s), loop controls, etc.). (c) Set parameters of straightener. Obtained correct speed for smooth, efficient, and continuous production. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using controls (Modes of Operation). (c) Straightener set up according to Standard Operating procedure and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
4. Prepare, Load, and Adjust Feeder	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Feed parameters set (material thickness/width, length, timing, pass-line, pilot/feed release/height, etc.). • Speed of feed matches press speed. (c) • Material/stock loaded and aligned with die(s). (c) • Feeder set up, activated, and verified for safety. • Equipment checked for service items/maintenance. • Coil/strip advanced smoothly into dies/die assembly (material did not bind, buckle, wrinkle, slip, stretch, etc.). • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using controls. (c) • Feeder set up according to Standard Operating Procedure(s) and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Make a Quality Piece Part (Inch/jog Mode)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • System started/re-started and adjusted/re-adjusted for inch/jog mode operation. • First-run piece part stamped according to Process/Quality Plan (Validated shut height). • Coil/strip passed smoothly through each die station to payout area (material or part no longer in die). • Part safely removed from a guarded area. (c) • Part attributes conform to quality characteristic standards based visual inspections (includes no missing or incomplete features). (c) • Part variables conform to specified +/- dimensional tolerances, SPC control limits and measurement standards (gage or instrument inspections required). (c) • Scrap exited smoothly and was properly segregated, stored or contained (no scrap/slugs present in dies, shoes or part containers). Minimized scrap. • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using/setting controls. • Demonstrated accuracy when using measuring instruments and gages. • System production ready and verified for safety. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Produce Parts <i>(Operate equipment for at least 15 minutes)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Attentively monitored process (pressures, lubricants/coolants, inputs, sensors, tooling stations, payouts, etc.) and identified and responded to problems (see troubleshooting and maintenance sections). • Identified defective or non-compliance parts without contaminating quality parts discharged. (c) • System functioning properly and quality parts manufactured within % productivity expectations. • Equipment shut off or prepared for handoff. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



FINAL PRODUCT STANDARDS

“Work is Done 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 problems or make process improvements.
- f. Candidate objectively evaluated multi-dimensional situations to correct systematic problems.
- g. All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Examiner: _____

Signatures: _____ Date: _____
(Examiner)

_____ Date: _____
(Monitor)

_____ Date: _____
(Candidate)



Examiner's CHECKLIST — CAR SKILL CHECK #2
Setup, Operate, and Maintain Equipment
with Progressive Dies

Steps

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
	Yes	No		Yes	No	NA
⇒ PRESS AND TOOLING						
1. Stage Work Site and Prepare Press for Setup	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> PPE/PPC appropriate for the job. (c) Work area clean and orderly (no debris, unguarded obstructions, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare Die(s) for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Correct dies obtained as per Process/Setup Plan or as cross referenced to work order. (c) Dies and die cavities are clean based on visual inspections (no dirt, rust, burrs, etc.). Dies/die assemblies are not damaged based on visual inspections (no cracks, nicks, dents, holes, etc.- no loose bolts, wires, parallels, or cables, etc. - no missing features). (c) Unique tooling successfully installed. Die(s) staged for installation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Setup Press and Install Die(s)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Ram/slides, bolsters, and dies/die stations clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (c) Accessories removed as needed. Ram/slide manipulations were performed safely and correctly to shut height requirements (no damage to press, shoe, die/station, casting, ram, clamps - no loose bolts, etc.). (c) Demonstrated proficiency when estimating, adjusting, then setting final shut height. Set feed, feed release, feed height, and stroke. Followed safety procedures/used safety devices. (c) Dies/die assemblies properly installed, aligned, centered/squared, and clamped (includes installation of any components i.e., knockouts, bolts, etc.). (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Process steps continued on next page</i>						
			<ul style="list-style-type: none"> Performed necessary lubrication and/or counter 			

			<p>balancing activities while inspecting die progression.</p> <ul style="list-style-type: none"> • Verified clearances (stroke + minimum height allowance) to ensure smoothness of operations. (c) • Press will maintain a smooth operation and meet clearance requirements even after any knockout, feeder, or sensor adjustments. • Counters reset and functional (if applicable). • Press inspected for service items/maintenance (lubrication, repair, calibration, etc.). • Identified and responded to/corrected problems (see troubleshooting and maintenance sections). • Material/stock loaded, lubricated and/or advanced to starting position (see setup auxiliaries section). • Setup inspection gages and quality control equipment for production or hand-off. • Work cells organized, press/press area clean, and all safety devices, alarms, sensors, and guards set (or installed) and verified for function. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Skill Check Continued on Next Page



Steps

SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
⇒ AUXILIARIES AND PRESS						
1. Request and Verify Material/Stock	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Followed Process/Quality Plan and/or Standard Operating Procedures. (c) Material matched process specification criteria (ID code, type, SO number, width, thickness, etc.) (c) Material visually inspected for adverse conditions (rust, surface lamination, coil break, etc.). (c) Sufficient coil/strip staged for production. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and Adjust Uncoiler	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Coil secured/loaded and containing bands safely removed. Stock correctly aligned and mandrels/keepers or cradle accept ID/OD or width of coil. (c) Verified uncoiler safety devices for function. (c) Material advanced to next operation. Obtained correct feed speed ratio/set brake tension. Adjusted loop control. Demonstrated ability and safety during loading (rigging, crane operations, load capacity, etc.). (c) Demonstrated ability when using threading tables. Demonstrated proficiency using controls (Modes of Operation). (c) Setup performed according to Standard Operating Procedure(s) and/or Process/Setup Plan. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Prepare and Adjust Straightener	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Straightener accepts coil. Material properly aligned and secured (adjusted pinchroll(s), entrance guide(s), loop controls, etc.). (c) Set parameters of straightener. Obtained correct speed for smooth, efficient, and continuous production. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using controls (Modes of Operation). (c) Straightener set up according to Standard Operating procedure and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
4. Prepare, Load, and Adjust Feeder	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Feed parameters set (material thickness/width, length, timing, pass-line, pilot/feed release/height, etc.). • Speed of feed matches press speed. (c) • Material/stock loaded and aligned with die(s). (c) • Feeder set up, activated, and verified for safety. • Equipment checked for service items/maintenance. • Coil/strip advanced smoothly into dies/die assembly (material did not bind, buckle, wrinkle, slip, stretch, etc.). • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using controls. (c) • Feeder set up according to Standard Operating Procedure(s) and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Make a Quality Piece Part (Inch/jog Mode)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • System started/re-started and adjusted/re-adjusted for inch/jog mode operation. • First-run piece part stamped according to Process/Quality Plan (Validated shut height). • Coil/strip passed smoothly through each die station to payout area (material or part no longer in die). • Part safely removed from a guarded area. (c) • Part attributes conform to quality characteristic standards based visual inspections (includes no missing or incomplete features). (c) • Part variables conform to specified +/- dimensional tolerances, SPC control limits and measurement standards (gage or instrument inspections required). (c) • Scrap exited smoothly and was properly segregated, stored or contained (no scrap/slugs present in dies, shoes or part containers). Minimized scrap. • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using/setting controls. • Demonstrated accuracy when using measuring instruments and gages. • System production ready and verified for safety. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Produce Parts (Operate equipment for at least 15 minutes)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Attentively monitored process (pressures, lubricants/coolants, inputs, sensors, tooling stations, payouts, etc.) and identified and responded to problems (see troubleshooting and maintenance sections). • Identified defective or non-compliance parts without contaminating quality parts discharged. (c) • System functioning properly and quality parts manufactured within % productivity expectations. • Equipment shut off or prepared for handoff. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



FINAL PRODUCT STANDARDS

“Work is Done 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 problems or make process improvements.
- f. Candidate objectively evaluated multi-dimensional situations to correct systematic problems.
- g. All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Examiner: _____

Signatures: _____ Date: _____
(Examiner)

_____ Date: _____
(Monitor)

_____ Date: _____
(Candidate)



Examiner's CHECKLIST — CAR SKILL CHECK #3
Setup, Operate, and Maintain Equipment
with Progressive Dies

Steps

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
	Yes	No		Yes	No	NA
⇒ PRESS AND TOOLING						
1. Stage Work Site and Prepare Press for Setup	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> PPE/PPC appropriate for the job. (c) Work area clean and orderly (no debris, unguarded obstructions, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare Die(s) for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Correct dies obtained as per Process/Setup Plan or as cross referenced to work order. (c) Dies and die cavities are clean based on visual inspections (no dirt, rust, burrs, etc.). Dies/die assemblies are not damaged based on visual inspections (no cracks, nicks, dents, holes, etc. - no loose bolts, wires, parallels, or cables, etc. - no missing features). (c) Unique tooling successfully installed. Die(s) staged for installation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Setup Press and Install Die(s)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Ram/slides, bolsters, and dies/die stations clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (c) Accessories removed as needed. Ram/slide manipulations were performed safely and correctly to shut height requirements (no damage to press, shoe, die/station, casting, ram, clamps - no loose bolts, etc.). (c) Demonstrated proficiency when estimating, adjusting, then setting final shut height. Set feed, feed release, feed height, and stroke. Followed safety procedures/used safety devices. (c) Dies/die assemblies properly installed, aligned, centered/squared, and clamped (includes installation of any components i.e., knockouts, bolts, etc.). (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Process steps continued on next page</i>						
			<ul style="list-style-type: none"> Performed necessary lubrication and/or counter 			

			balancing activities while inspecting die progression. • Verified clearances (stroke + minimum height allowance) to ensure smoothness of operations. (c) • Press will maintain a smooth operation and meet clearance requirements even after any knockout, feeder, or sensor adjustments. • Counters reset and functional (if applicable). • Press inspected for service items/maintenance (lubrication, repair, calibration, etc.). • Identified and responded to/corrected problems (see troubleshooting and maintenance sections). • Material/stock loaded, lubricated and/or advanced to starting position (see setup auxiliaries section). • Setup inspection gages and quality control equipment for production or hand-off. • Work cells organized, press/press area clean, and all safety devices, alarms, sensors, and guards set (or installed) and verified for function. (c)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--	--	--	--	--	--	--

 Skill Check Continued on Next Page



Steps

SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
⇒ AUXILIARIES AND PRESS						
1. Request and Verify Material/Stock	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Followed Process/Quality Plan and/or Standard Operating Procedures. (c) Material matched process specification criteria (ID code, type, SO number, width, thickness, etc.) (c) Material visually inspected for adverse conditions (rust, surface lamination, coil break, etc.). (c) Sufficient coil/strip staged for production. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and Adjust Uncoiler	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Coil secured/loaded and containing bands safely removed. Stock correctly aligned and mandrels/keepers or cradle accept ID/OD or width of coil. (c) Verified uncoiler safety devices for function. (c) Material advanced to next operation. Obtained correct feed speed ratio/set brake tension. Adjusted loop control. Demonstrated ability and safety during loading (rigging, crane operations, load capacity, etc.). (c) Demonstrated ability when using threading tables. Demonstrated proficiency using controls (Modes of Operation). (c) Setup performed according to Standard Operating Procedure(s) and/or Process/Setup Plan. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Prepare and Adjust Straightener	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Straightener accepts coil. Material properly aligned and secured (adjusted pinchroll(s), entrance guide(s), loop controls, etc.). (c) Set parameters of straightener. Obtained correct speed for smooth, efficient, and continuous production. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using controls (Modes of Operation). (c) Straightener set up according to Standard Operating procedure and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
4. Prepare, Load, and Adjust Feeder	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Feed parameters set (material thickness/width, length, timing, pass-line, pilot/feed release/height, etc.). • Speed of feed matches press speed. (c) • Material/stock loaded and aligned with die(s). (c) • Feeder set up, activated, and verified for safety. • Equipment checked for service items/maintenance. • Coil/strip advanced smoothly into dies/die assembly (material did not bind, buckle, wrinkle, slip, stretch, etc.). • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using controls. (c) • Feeder set up according to Standard Operating Procedure(s) and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Make a Quality Piece Part (Inch/jog Mode)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • System started/re-started and adjusted/re-adjusted for inch/jog mode operation. • First-run piece part stamped according to Process/Quality Plan (Validated shut height). • Coil/strip passed smoothly through each die station to payout area (material or part no longer in die). • Part safely removed from a guarded area. (c) • Part attributes conform to quality characteristic standards based visual inspections (includes no missing or incomplete features). (c) • Part variables conform to specified +/- dimensional tolerances, SPC control limits and measurement standards (gage or instrument inspections required). (c) • Scrap exited smoothly and was properly segregated, stored or contained (no scrap/slugs present in dies, shoes or part containers). Minimized scrap. • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using/setting controls. • Demonstrated accuracy when using measuring instruments and gages. • System production ready and verified for safety. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Produce Parts <i>(Operate equipment for at least 15 minutes)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Attentively monitored process (pressures, lubricants/coolants, inputs, sensors, tooling stations, payouts, etc.) and identified and responded to problems (see troubleshooting and maintenance sections). • Identified defective or non-compliance parts without contaminating quality parts discharged. (c) • System functioning properly and quality parts manufactured within % productivity expectations. • Equipment shut off or prepared for handoff. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



FINAL PRODUCT STANDARDS

“Work is Done 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 problems or make process improvements.
- f. Candidate objectively evaluated multi-dimensional situations to correct systematic problems.
- g. All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Examiner: _____

Signatures: _____ Date: _____
(Examiner)

_____ Date: _____
(Monitor)

_____ Date: _____
(Candidate)



Examiner's CHECKLIST — CAR SKILL CHECK #4
Setup, Operate, and Maintain Equipment
with Progressive Dies

Steps

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
⇒ PRESS AND TOOLING	Yes	No		Yes	No	NA
1. Stage Work Site and Prepare Press for Setup	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • PPE/PPC appropriate for the job. (c) • Work area clean and orderly (no debris, unguarded obstructions, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare Die(s) for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Correct dies obtained as per Process/Setup Plan or as cross referenced to work order. (c) • Dies and die cavities are clean based on visual inspections (no dirt, rust, burrs, etc.). • Dies/die assemblies are not damaged based on visual inspections (no cracks, nicks, dents, holes, etc.- no loose bolts, wires, parallels, or cables, etc. - no missing features). (c) • Unique tooling successfully installed. • Die(s) staged for installation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Setup Press and Install Die(s)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Ram/slides, bolsters, and dies/die stations clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (c) • Accessories removed as needed. • Ram/slide manipulations were performed safely and correctly to shut height requirements (no damage to press, shoe, die/station, casting, ram, clamps - no loose bolts, etc.). (c) • Demonstrated proficiency when estimating, adjusting, then setting final shut height. • Set feed, feed release, feed height, and stroke. • Followed safety procedures/used safety devices. (c) • Dies/die assemblies properly installed, aligned, centered/squared, and clamped (includes installation of any components i.e., knockouts, bolts, etc.). (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Process steps continued on next page</i>						
			<ul style="list-style-type: none"> • Performed necessary lubrication and/or counter 			

			<p>balancing activities while inspecting die progression.</p> <ul style="list-style-type: none"> • Verified clearances (stroke + minimum height allowance) to ensure smoothness of operations. (c) • Press will maintain a smooth operation and meet clearance requirements even after any knockout, feeder, or sensor adjustments. • Counters reset and functional (if applicable). • Press inspected for service items/maintenance (lubrication, repair, calibration, etc.). • Identified and responded to/corrected problems (see troubleshooting and maintenance sections). • Material/stock loaded, lubricated and/or advanced to starting position (see setup auxiliaries section). • Setup inspection gages and quality control equipment for production or hand-off. • Work cells organized, press/press area clean, and all safety devices, alarms, sensors, and guards set (or installed) and verified for function. (c) 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
--	--	--	--	--	--	--

Skill Check Continued on Next Page



Steps

SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
⇒ AUXILIARIES AND PRESS						
1. Request and Verify Material/Stock	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Followed Process/Quality Plan and/or Standard Operating Procedures. (c) Material matched process specification criteria (ID code, type, SO number, width, thickness, etc.) (c) Material visually inspected for adverse conditions (rust, surface lamination, coil break, etc.). (c) Sufficient coil/strip staged for production. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and Adjust Uncoiler	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Coil secured/loaded and containing bands safely removed. Stock correctly aligned and mandrels/keepers or cradle accept ID/OD or width of coil. (c) Verified uncoiler safety devices for function. (c) Material advanced to next operation. Obtained correct feed speed ratio/set brake tension. Adjusted loop control. Demonstrated ability and safety during loading (rigging, crane operations, load capacity, etc.). (c) Demonstrated ability when using threading tables. Demonstrated proficiency using controls (Modes of Operation). (c) Setup performed according to Standard Operating Procedure(s) and/or Process/Setup Plan. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Prepare and Adjust Straightener	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Straightener accepts coil. Material properly aligned and secured (adjusted pinchroll(s), entrance guide(s), loop controls, etc.). (c) Set parameters of straightener. Obtained correct speed for smooth, efficient, and continuous production. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using controls (Modes of Operation). (c) Straightener set up according to Standard Operating procedure and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
4. Prepare, Load, and Adjust Feeder	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Feed parameters set (material thickness/width, length, timing, pass-line, pilot/feed release/height, etc.). • Speed of feed matches press speed. (c) • Material/stock loaded and aligned with die(s). (c) • Feeder set up, activated, and verified for safety. • Equipment checked for service items/maintenance. • Coil/strip advanced smoothly into dies/die assembly (material did not bind, buckle, wrinkle, slip, stretch, etc.). • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using controls. (c) • Feeder set up according to Standard Operating Procedure(s) and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Make a Quality Piece Part (Inch/jog Mode)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • System started/re-started and adjusted/re-adjusted for inch/jog mode operation. • First-run piece part stamped according to Process/Quality Plan (Validated shut height). • Coil/strip passed smoothly through each die station to payout area (material or part no longer in die). • Part safely removed from a guarded area. (c) • Part attributes conform to quality characteristic standards based visual inspections (includes no missing or incomplete features). (c) • Part variables conform to specified +/- dimensional tolerances, SPC control limits and measurement standards (gage or instrument inspections required). (c) • Scrap exited smoothly and was properly segregated, stored or contained (no scrap/slugs present in dies, shoes or part containers). Minimized scrap. • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using/setting controls. • Demonstrated accuracy when using measuring instruments and gages. • System production ready and verified for safety. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Produce Parts <i>(Operate equipment for at least 15 minutes)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Attentively monitored process (pressures, lubricants/coolants, inputs, sensors, tooling stations, payouts, etc.) and identified and responded to problems (see troubleshooting and maintenance sections). • Identified defective or non-compliance parts without contaminating quality parts discharged. (c) • System functioning properly and quality parts manufactured within % productivity expectations. • Equipment shut off or prepared for handoff. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



FINAL PRODUCT STANDARDS

“Work is Done 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 problems or make process improvements.
- f. Candidate objectively evaluated multi-dimensional situations to correct systematic problems.
- g. All safety and plant procedures have been followed and work area was left clean.

COMMENTS

Candidate/Examiner: _____

Signatures: _____ Date: _____
(Examiner)

_____ Date: _____
(Monitor)

_____ Date: _____
(Candidate)



Examiner's CHECKLIST — CAR SKILL CHECK #5
Setup, Operate, and Maintain Equipment
with Progressive Dies

Steps

SETUP PROCESS			PROCESS-PRODUCT STANDARDS			
	Yes	No		Yes	No	NA
⇒ PRESS AND TOOLING						
1. Stage Work Site and Prepare Press for Setup	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> PPE/PPC appropriate for the job. (c) Work area clean and orderly (no debris, unguarded obstructions, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare Die(s) for Installation	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Correct dies obtained as per Process/Setup Plan or as cross referenced to work order. (c) Dies and die cavities are clean based on visual inspections (no dirt, rust, burrs, etc.). Dies/die assemblies are not damaged based on visual inspections (no cracks, nicks, dents, holes, etc. - no loose bolts, wires, parallels, or cables, etc. - no missing features). (c) Unique tooling successfully installed. Die(s) staged for installation. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Setup Press and Install Die(s)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Ram/slides, bolsters, and dies/die stations clean, deburred, clear of scrap, and showing no damage (include knockouts, if applicable). (c) Accessories removed as needed. Ram/slide manipulations were performed safely and correctly to shut height requirements (no damage to press, shoe, die/station, casting, ram, clamps - no loose bolts, etc.). (c) Demonstrated proficiency when estimating, adjusting, then setting final shut height. Set feed, feed release, feed height, and stroke. Followed safety procedures/used safety devices. (c) Dies/die assemblies properly installed, aligned, centered/squared, and clamped (includes installation of any components i.e., knockouts, bolts, etc.). (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Process steps continued on next page</i>						
			<ul style="list-style-type: none"> Performed necessary lubrication and/or counter 			

			<p>balancing activities while inspecting die progression.</p> <ul style="list-style-type: none"> • Verified clearances (stroke + minimum height allowance) to ensure smoothness of operations. (c) • Press will maintain a smooth operation and meet clearance requirements even after any knockout, feeder, or sensor adjustments. • Counters reset and functional (if applicable). • Press inspected for service items/maintenance (lubrication, repair, calibration, etc.). • Identified and responded to/corrected problems (see troubleshooting and maintenance sections). • Material/stock loaded, lubricated and/or advanced to starting position (see setup auxiliaries section). • Setup inspection gages and quality control equipment for production or hand-off. • Work cells organized, press/press area clean, and all safety devices, alarms, sensors, and guards set (or installed) and verified for function. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 Skill Check Continued on Next Page



Steps

SETUP and OPERATION PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
⇒ AUXILIARIES AND PRESS						
1. Request and Verify Material/Stock	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Followed Process/Quality Plan and/or Standard Operating Procedures. (c) Material matched process specification criteria (ID code, type, SO number, width, thickness, etc.) (c) Material visually inspected for adverse conditions (rust, surface lamination, coil break, etc.). (c) Sufficient coil/strip staged for production. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and Adjust Uncoiler	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Coil secured/loaded and containing bands safely removed. Stock correctly aligned and mandrels/keepers or cradle accept ID/OD or width of coil. (c) Verified uncoiler safety devices for function. (c) Material advanced to next operation. Obtained correct feed speed ratio/set brake tension. Adjusted loop control. Demonstrated ability and safety during loading (rigging, crane operations, load capacity, etc.). (c) Demonstrated ability when using threading tables. Demonstrated proficiency using controls (Modes of Operation). (c) Setup performed according to Standard Operating Procedure(s) and/or Process/Setup Plan. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Prepare and Adjust Straightener	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> Straightener accepts coil. Material properly aligned and secured (adjusted pinchroll(s), entrance guide(s), loop controls, etc.). (c) Set parameters of straightener. Obtained correct speed for smooth, efficient, and continuous production. (c) Equipment checked for service items/maintenance. Identified and responded to problems (see troubleshooting and maintenance sections). Demonstrated proficiency using controls (Modes of Operation). (c) Straightener set up according to Standard Operating procedure and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Skill Check continued

PROCESS	Yes	No	PROCESS-PRODUCT STANDARDS	Yes	No	NA
4. Prepare, Load, and Adjust Feeder	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Feed parameters set (material thickness/width, length, timing, pass-line, pilot/feed release/height, etc.). • Speed of feed matches press speed. (c) • Material/stock loaded and aligned with die(s). (c) • Feeder set up, activated, and verified for safety. • Equipment checked for service items/maintenance. • Coil/strip advanced smoothly into dies/die assembly (material did not bind, buckle, wrinkle, slip, stretch, etc.). • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using controls. (c) • Feeder set up according to Standard Operating Procedure(s) and/or Setup Plan. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Make a Quality Piece Part (Inch/jog Mode)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • System started/re-started and adjusted/re-adjusted for inch/jog mode operation. • First-run piece part stamped according to Process/Quality Plan (Validated shut height). • Coil/strip passed smoothly through each die station to payout area (material or part no longer in die). • Part safely removed from a guarded area. (c) • Part attributes conform to quality characteristic standards based visual inspections (includes no missing or incomplete features). (c) • Part variables conform to specified +/- dimensional tolerances, SPC control limits and measurement standards (gage or instrument inspections required). (c) • Scrap exited smoothly and was properly segregated, stored or contained (no scrap/slugs present in dies, shoes or part containers). Minimized scrap. • Identified and responded to problems (see troubleshooting and maintenance sections). • Demonstrated proficiency using/setting controls. • Demonstrated accuracy when using measuring instruments and gages. • System production ready and verified for safety. (c) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Produce Parts (Operate equipment for at least 15 minutes)	<input type="checkbox"/>	<input type="checkbox"/>	<ul style="list-style-type: none"> • Attentively monitored process (pressures, lubricants/coolants, inputs, sensors, tooling stations, payouts, etc.) and identified and responded to problems (see troubleshooting and maintenance sections). • Identified defective or non-compliance parts without contaminating quality parts discharged. (c) • System functioning properly and quality parts manufactured within % productivity expectations. • Equipment shut off or prepared for handoff. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



FINAL PRODUCT STANDARDS

“Work is Done 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 problems or make process improvements.
- f. Candidate objectively evaluated multi-dimensional situations to correct systematic problems.
- g. All safety and plant procedures have been followed and work area was left clean.



COMMENTS

Candidate/Examiner: _____



Signatures: _____ **Date:** _____
 (Examiner)
 _____ **Date:** _____
 (Monitor)
 _____ **Date:** _____
 (Candidate)

2.5/2.6 - CAR SKILL CHECK SUMMARY

Critical Work Activities and Skill Checks Completed	Date Completed
Setup Equipment with Progressive Dies	
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 Observations		Successful	Not Successful
⇒ TROUBLESHOOT PRESS, TOOLING AND AUXILIARIES	<i>Candidate must successfully react to/demonstrate at least <u>five</u> (5) of the following troubleshooting situations to be credentialed in the Duty Cluster</i>	Yes 	
<i>Troubleshoot Running Process</i>	<ol style="list-style-type: none"> 1. Responded to a double-hit situation and successfully isolated the cause of the problem. 2. Responded to broken tooling and correctly determined the cause of breakage. 3. Identified defects in raw material/stock, located defective area(s), and implemented corrective actions. 4. Responded to non-conforming part dimensions during a production run and successfully isolated the cause of the problem. 5. Responded to damaged parts or quality non-conformance conditions during a production run and successfully isolated the potential cause(s) of the problem. 6. Detected variations in material thickness, isolated areas of non-conformance, and correctly diagnosed the cause of the problem. 7. Responded to double thickness conditions, identified problem area(s), and successfully isolated the cause of the problem. 8. Responded to a press overload situation or E-Stop, analyzed potential problem areas, and successfully determined cause of the overload or stoppage. 9. Detected a material alignment problem, isolated the cause of the mis-alignment, and performed corrective actions. 10. Identified mis-alignment of straighteners, evaluated problem areas, and successfully isolated the cause of the problem. 11. Detected speed variations on feeders, uncoilers, or straighteners; determined problem area; and successfully isolated the cause of the problem. 12. Responded to loop sensor faults and successfully isolated the problem. 13. Responded to a conveyor, part handler, or transfer device failure and 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 corrective actions. 	<ol style="list-style-type: none"> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/> 11. <input type="checkbox"/> 12. <input type="checkbox"/> 13. <input type="checkbox"/> 14. <input type="checkbox"/> 	<ol style="list-style-type: none"> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/> 11. <input type="checkbox"/> 12. <input type="checkbox"/> 13. <input type="checkbox"/> 14. <input type="checkbox"/>



<i>Opportunity observations continued</i>	Opportunity Observations	Successful	Not Successful
⇒ MAINTAIN PRESS, TOOLING, OR AUXILIARIES	<i>Candidate must successfully demonstrate at least 10 of the following maintenance activities to be credentialed in the Duty Cluster</i>	Yes 	
<i>Perform Corrective or Preventive Maintenance on Equipment</i>	<ol style="list-style-type: none"> 1. Removed taps and installed new or replacement taps. 2. Bleed lines and valves. 3. Changed and adjusted shut height (in-process adjustment). 4. Dressed or replaced electrodes on a welder. 5. Cleaned scrap from tee slots, holes, etc. 6. Cleaned a bolster or ram/slide. 7. Pulled, cleaned and re-installed/mounted a die/assembly. 8. Replaced damaged/defective pins or key. 9. Locked and tagged-out equipment (Zero energy on mechanical and electrical). 10. Removed, cleaned, and re-installed a filter. 11. Replaced a hose or tubing. 12. Removed, cleaned or unplugged, and re-installed a valve. 13. Removed a damaged or non-functioning valve and replaced 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 adjustments). 16. Polished or cleaned rollers. 17. Repositioned stock/raw material (in-process adjustment). 18. Changed/replaced a low-voltage fuse or breaker. 19. Tightened strippers. 20. Tightened parallels. 21. Replaced a defective workholding device and verified it for safety. 22. Verified calibration of sensors, monitors or switches. 23. Changed/replaced a limit or proximity switch. 24. Replaced and set a conveyor or material handling belt. 25. Changed and adjusted a drive belt or chain. 26. Adjusted pressure/temperature regulator (in-process 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. 	<ol style="list-style-type: none"> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/> 11. <input type="checkbox"/> 12. <input type="checkbox"/> 13. <input type="checkbox"/> 14. <input type="checkbox"/> 15. <input type="checkbox"/> 16. <input type="checkbox"/> 17. <input type="checkbox"/> 18. <input type="checkbox"/> 19. <input type="checkbox"/> 20. <input type="checkbox"/> 21. <input type="checkbox"/> 22. <input type="checkbox"/> 23. <input type="checkbox"/> 24. <input type="checkbox"/> 25. <input type="checkbox"/> 26. <input type="checkbox"/> 27. <input type="checkbox"/> 28. <input type="checkbox"/> 29. <input type="checkbox"/> 30. <input type="checkbox"/> 	<ol style="list-style-type: none"> 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/> 11. <input type="checkbox"/> 12. <input type="checkbox"/> 13. <input type="checkbox"/> 14. <input type="checkbox"/> 15. <input type="checkbox"/> 16. <input type="checkbox"/> 17. <input type="checkbox"/> 18. <input type="checkbox"/> 19. <input type="checkbox"/> 20. <input type="checkbox"/> 21. <input type="checkbox"/> 22. <input type="checkbox"/> 23. <input type="checkbox"/> 24. <input type="checkbox"/> 25. <input type="checkbox"/> 26. <input type="checkbox"/> 27. <input type="checkbox"/> 28. <input type="checkbox"/> 29. <input type="checkbox"/> 30. <input type="checkbox"/>



	31. Successfully performed a refractometer (viscosity) analysis.	31. <input type="checkbox"/>	31. <input type="checkbox"/>
	32. Successfully tested material for hardness (e.g., Rockwell test)	32. <input type="checkbox"/>	32. <input type="checkbox"/>
	33. Successfully tested tensile of raw material or a part (e.g., “pull test”)	33. <input type="checkbox"/>	33. <input type="checkbox"/>
	34. Successfully conducted continuity tests on sensors/probes.	34. <input type="checkbox"/>	34. <input type="checkbox"/>
	35. Successfully performed a magnaflux or container pressure test (deep drawing process only).	35. <input type="checkbox"/>	35. <input type="checkbox"/>
	36. Verified press diagnostics.	36. <input type="checkbox"/>	36. <input type="checkbox"/>



Affidavit of Successful Completion
NIMS Level III Metal Stamping Credentialing Program
☞ Credentialing Achievement Record ☞

✎ Please print

Candidate Name	Reg. No.	Date Completed
-----------------------	-----------------	-----------------------

The credentialing candidate named above has completed all necessary CAR requirements for NIMS Level III OJT recognition.

Site Name and Address:	Site No.
-------------------------------	-----------------

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

Duty Cluster Name <i>SETUP EQUIPMENT WITH PROGRESSIVE DIES</i>	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 <input type="checkbox"/>	No <input type="checkbox"/>

Manual Feed YES NO
 Coil Fed YES NO
 Other: _____

Specify

Opportunity Observations Troubleshooting & Corrective/Preventive Maintenance		
Successfully demonstrated at least five troubleshooting situations.	<input type="radio"/> YES	<input type="radio"/> NO
Successfully demonstrated at least 10 maintenance activities.	<input type="radio"/> YES	<input type="radio"/> NO

_____	_____ 19__
Site Coordinator Signature	Date
_____	_____ 19__
Supervisor Signature	Date
_____	_____ 19__
Candidate Signature	Date

