

# Job Hazard Analysis

JHA Name: Automotive Structural Repair



Assessment Date: 06-28-14

Revision Date: 04-12-17

Building or Location: North Mankato Campus

Department or Program: Auto Collision

Description of Individual Tasks or Assignments: Automotive structural repair used to straighten frames and structures of motor vehicles

Tools, Equipment, or Machinery Used when Performing Task: Automotive Frame Straightener, straightener slings, sling attachments, welders, oxyfuel torchs, plasma cutters, grinders

Hazard Type(s) Associated with Task or Assignment:		Check for Exposure:	Specific Hazard Exposure:	Check if Exposure Recommends or Requires a Style of PPE?
1	<b>Impact</b> <u>Example:</u> Person(s) can strike an object, or be struck by a moving or flying/falling object (e.g., fragments, chips, particles, sand, dirt/debris).	X	Potential exposure to impact hazards during pulling process from slings snapping or accidental release (e.g., whole body injuries)	
2	<b>Penetration or Cut</b> <u>Example:</u> Person(s) can strike an object, be struck by an object, or fall upon an object or tool that would cut or otherwise break the skin.	X	Potential exposure to cuts and abrasions when handling metal pieces with rough or sharp edges (e.g., hand and finger injuries)	X
3	<b>Crush or Pinch</b> <u>Example:</u> An object(s) or equipment/machine may crush or pinch a body or body part	X	Potential exposure to crushing and pinching hazard if the load shifts (e.g., whole body injuries)	
4	<b>Chemical or Harmful Dust</b> <u>Example:</u> Exposure to chemicals (i.e., hazardous substances and harmful physical agents), infectious agents from spills, splashing, physical contact, and/ or exposure to dusts, vapors, fumes, or gases that could cause illness, irritation, burns, asphyxiation, breathing/vision difficulty, sensitization, infection, or other toxic health effects (i.e., acute or chronic). Note: "May also have or create ignition potential."	X	Potential exposure to surfaces, or equipment contaminated with infectious materials from vehicle accidents (e.g., illness from Bloodborne Pathogens)	
5	<b>Heat</b> <u>Example:</u> Exposure to radiant heat sources, sparks, and splashes or spills of hot material			
6	<b>Light (optical) Radiation</b> <u>Example:</u> Exposure to strong light sources, glare, or intense light exposure which is a byproduct or a process. Note: "This category may also include hazards presented from lack of light (e.g., working in dark spaces/areas)."			
7	<b>Electrical Contact</b> <u>Example:</u> Exposure, contact, or proximity to live or potentially live electrical objects.	X	Possible exposure to electric shock hazards when working on Hybrid vehicles (e.g., shock and electrocution)	
8	<b>Ergonomic/ Human Factors</b> <u>Example:</u> Working in cramped spaces, repetitive movements, awkward postures, vibration, heavy lifting, etc... Note: "This category may also include unique hazards presented from tasks that require demanding or challenging degrees of mental and/or physical effort to be exerted by an individual. See <i>Physical Effort Definition/Examples</i> category for further explanation of physical effort."			
9	<b>Environmental</b> <u>Example:</u> Exposure to noisy environments, hot or cold work environments, poor weather conditions, working at a height, and any other conditions in the workplace that could cause danger, discomfort, and/or negative health effects.			

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**Personal Protective Equipment Requirements:**

<b>Eyes &amp; Face:</b>	Safety Glasses with Side Shields (Required when performing automotive structural repair )
<b>Head &amp; Ears:</b>	
<b>Whole Body:</b>	
<b>Feet:</b>	Safety Shoes (Required when performing automotive structural repair)
<b>Hands:</b>	Leather Gloves (Required when handling metal pieces with rough or sharp edges)
<b>Respiratory:</b>	
<b>Other:</b>	"Note: Personnel must change from loose clothing, tie back long hair, and take off jewelry that could become entangled or snagged in moving parts."

**Other Control Measures or Requirements (Engineering & Administrative Controls):**

**#1) Impact:** Use slings rated for maximum pulling tension expected; check pulling angles and measurements continually during process. Never exceed the rated capacity of the slings or other components. Ensure that slings and attachments are fully & securely seated before applying tension to vehicle structures. Warn others to stay clear during straightening operations, and avoid standing in close proximity of slings in case of mechanical failure or breakage. **RECOMMEND:** Installing Operator Pressure Mat as a form of machine guarding. Monitor for signs of pulls loosing (e.g., welds breaking, metal popping). Consider placing a heavy blanket over slings prior to pulling to minimize fly-back in case of mechanical failure or breakage. **#3) Crush or Pinch:** Use slings rated for maximum pulling tension expected; check pulling angles and measurements continually during process. Never exceed the rated capacity of the slings or other components. Prevent vehicle shifting by removing slack or twists from slings. Retighten sling and component anchors after initial pulls. **#4) Chemical or Harmful Dust Hazards:** Prior to commencing structural repair personnel should inspect vehicles for signs of bodily fluids (from accidents). Contact authorized personnel to disinfect vehicle components contaminated with bodily fluids. **Miscellaneous Considerations:** Only authorized persons shall perform structural repair operations. When personnel are finished working with structural repair equipment (and before leaving the frame straightening machine for any reason) the power must be shut off and the straightener shall never be left unattended with pulling pressure applied. Stop and de-energize the frame straightening machine before beginning any maintenance or service. Note: only "authorized" employees who are trained in the requirements of the College's Lockout/Tag out Plan will perform lockout/tag out procedures and/or the related maintenance or service work. Persons performing welding, oxy-cutting, plasma cutting, or grinding during structural repair operations shall follow the appropriate JHA guides. Operators of tools, equipment, and machinery should read and follow all Manufacturers' recommendations/requirements (e.g., inspections, servicing/maintenance, safe usage, etc...). Any tools, equipment, or machinery found damaged, defective, or otherwise unsafe should immediately be removed from service and not used until repaired or replaced. Personnel should always consult their Supervisors on the selection and use of PPE for the tasks being performed.

**Physical Effort Definition/Examples**

**1.) Physical Mobility-** Movement from place to place on the job, considering distance and speed **2.) Physical Agility-** ability to maneuver body while in place or in static position **3.) Physical Strength (Light to Moderate)-** Ability to handle routine office materials and tools **4.) Physical Strength (Moderate to Heavy)-** Ability to handle 50lbs+ objects, considering frequency **5.) Dexterity-** skill and ability in using hands, fingers, and feet **6.) Physical Balance-** ability to maintain balance and physical control **7.) Coordination-** harmonious functioning of body parts (e.g., eye/hand, hand/foot, etc...) **8.) Endurance-** ability to sustain a prolonged stressful effort or activity with limited opportunity to rest

Note: "This JHA provides only the minimum PPE/safety requirements necessary to safely complete the task or assignment, and the JHA only covers the hazards or exposures that are most likely to be encountered. Nothing within this JHA bars or restricts personnel from requesting higher degrees of PPE or control to mitigate workplace hazards. In addition, South Central College personnel (e.g., employees and students) are required to complete any applicable safety or on-the-job trainings required prior to performing their positions or participating in their programs of study. Finally, South Central College personnel should consult their supervisors/instructors, the college's written safety programs/policies, and/or the Security & Safety Director whenever they have questions or concerns."

**Certification: This document certifies a hazard assessment was conducted meeting the provisions specified under 29 CFR 1910.132 (d) and South Central College's related safety programs and policies.**

Name: Al Kluever

Date: 04-12-17