

Job Hazard Analysis

JHA Name: Automotive, Major Maintenance



Assessment Date: 09-26-16

Revision Date: 04-12-17

Building or Location: North Mankato Campus

Department or Program: Auto Mechanics

Description of Individual Tasks or Assignments:

Exhaust System, Brake System, Cooling System, Exhaust System, Transmission, Drive Train, Engine Block, Engine Management Systems (e.g., Computers, Alternators, Electrical Systems), Power Steering Systems, Fuel Systems, or other Potential Energy Sources

Tools, Equipment, or Machinery Used when Performing Task:

(e.g., Consumer Personal Transportation), Hand Tools, Power Tools, Diagnostic and Testing Equipment, Service Manuals, Automotive Hoists, Lifting Jacks, Welding & Cutting Equipment,

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	Impact <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 hazards depends on: the specific tasks performed; the duration of assignment; the location or environment of the task; the tools, equipment, machines, and systems involved/used; the energy sources present, the fluid and contact services, etc.	X
2	Penetration or Cut <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	Same as "Impact Hazard Exposure."	X
3	Crush or Pinch <u>Example:</u> An object(s) or equipment/machine may crush or pinch a body or body part	X	Same as "Impact Hazard Exposure."	X
4	Chemical or Harmful Dust <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	Same as "Impact Hazard Exposure."	X
5	Heat <u>Example:</u> Exposure to radiant heat sources, sparks, and splashes or spills of hot material	X	Same as "Impact Hazard Exposure."	X
6	Light (optical) Radiation <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)."	X	Same as "Impact Hazard Exposure."	X
7	Electrical Contact <u>Example:</u> Exposure, contact, or proximity to live or potentially live electrical objects.	X	Same as "Impact Hazard Exposure."	X
8	Ergonomic/ Human Factors <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."	X	Same as "Impact Hazard Exposure."	
9	Environmental <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.	X	Same as "Impact Hazard Exposure."	X

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Personal Protective Equipment Requirements:

Eyes & Face:	Safety Glasses with Side Shields or Goggles (Required whenever flying/blowing dirt, debris, etc.); Face-shield worn over Safety Glasses with Side Shields, or Chemical Goggles (Required whenever chance of chemical splash/spray)
Head & Ears:	Hearing Protection Devices (Required when exposed to a TWA of 90dB); Hearing Protection Devices (Recommended whenever using loud tools or working in loud environments)
Whole Body:	Coveralls/Apron/Sleeves (e.g., Chemical, Insulated, Heat Resistant, Cut Resistant, Fire Retardant, Leather, Tyvek, etc.) providing adequate whole body protection must be selected/used depending on the hazard (Required)
Feet:	Boots/Footwear providing adequate traction for walking/working on slippery surfaces (Required); Safety Shoes (Required whenever working with heavy objects that could be dropped)
Hands:	Gloves (e.g., Chemical, Insulated, Heat Resistant, Anti-Vibration, Cut Resistant, Mechanic, Neoprene, Fire Retardant, Leather, etc.) providing adequate hand protection must be selected/used depending on the hazard (Required)
Respiratory:	N95 Particulate Masks (Optional/Available when working around nonhazardous dusts/particulates)
Other:	Personnel should select appropriate clothing consistent with weather conditions and seasonal operations (e.g., winter months vs. summer months). "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):

#4) Chemical of Dust Hazard: Personnel should receive Right-to-Know training (e.g., regarding chemical & physical hazards). SDS should be provided/available for all hazardous chemicals. **#8) Ergonomic Hazards:** Personnel should receive Ergonomics training (including warning signs and conditions of ergonomic/human factors hazards). When possible set up workstation or immediate job site to help minimize reaching, excessive repetition, and/or sitting or working in awkward positions to prevent strains, soreness, and other discomfort. Tools and equipment should be selected in anticipation of the operator's need and physiological stature (e.g., ergonomic/human factors considerations). Material handling equipment should be used to reduce lifting and carrying materials. **#6 Light (optical) Radiation:** Personnel should select and use appropriate lighting to adequately illuminate the area or task being performed. **#9 Environmental Hazards:** Personnel should be trained in the basic understanding of heat stress and recognizing warning signs. Personnel should take more frequent short breaks on hot days in shaded or air-conditioned areas. Personnel should drink plenty of cool beverages (water), and avoid drinks with caffeine (coffee, tea, or pop). When possible schedule or perform work during the coolest part of the day. Personnel should be trained in the basic understanding of cold/thermal stress and recognizing warning signs. Personnel should take more frequent short breaks in warm dry shelters to allow the body to warm up. Personnel should drink warm/sweet beverages (sugar water, sports-type drinks), and avoid drinks with caffeine (coffee, tea, or hot chocolate). Personnel should receive Hearing Conservation training (e.g., regarding noise hazards), and be included in the Hearing Conservation Program when potentially exposed to a TWA of 85dB. **Miscellaneous Considerations:** Personnel should receive training on the intended tasks or services to be performed (including applicable safety training). Personnel must adhere to all applicable safety rules, programs, procedures, and policies. Personnel must use Lockout/Tagout procedures whenever the unexpected release or energization of machinery/equipment could result in injury or property damage. A buddy system should be implemented for hands on training and for general safety precaution when working on potentially hazardous tasks or shared. Personnel should consult their supervisor and technical experts when necessary (e.g., when they are uncertain of proper course of action, or the task exceeds their level of training/expertise). Personnel must follow the minimum PPE requirements of all departments, programs, and/or tasks being performed. 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