HYDRAULIC EQUIPMENT

Date Revised:	March 2021	Overall Task Risk Rating:	Before Controls	C	After Controls	C
Description:	Operation of hydraulic equipment, including equipment attachments.					
Location(s):	Shop, Asphalt Plant & Construction Sites					
Associated Documents: Manual Material Handling WTS, Housekeeping WTS						

RED FLAGS (HOLD WORK UNTIL CORRECTED):

Note:

- Do not commence work if there are spills of hydraulic fluid - first deal with the spill appropriately
- If you are not familiar with the safe use of any machinery or equipment, ask your foreman / superintendent for assistance prior to starting

PERSONAL PROTECTIVE EQUIPMENT (CSA APPROVED)

Head Protection	Foot Protection	High-Vis Protection	Hearing Protection	Hand Protection	Eye Protection	Respiratory Protection	Skin Protection	Face Protection	Fall Protection
☐	☒	☐	☐	☐	☒	☐	☐	☐	☐

Note:

- When in the Shop one must adhere to the minimum Shop PPE Requirements: Safety Boots
- When onsite one must adhere to the minimum site requirements (i.e. Safety Boots, Hard Hat & High Visibility Protection. Safety Glasses when necessary)
- Additional PPE may be required depending on the situation (including Hand Protection, etc…)

SAFE WORK PRACTICES (SWP)

General Hydraulic Equipment and Attachments Practices:

- If you are not familiar with the safe use of any machinery or equipment, ask your supervisor or foreman for assistance prior to commencing
- Hydraulic fluid can be hot and can cause severe burns, let hydraulic systems cool before changing lines, connections, filters, or fittings
- Never mix low-pressure and high-pressure coupler components (i.e. do not connect a low-pressure component to a high-pressure system) as mismatched components may cause a rupture in a hose or fitting
- Release the hydraulic pressure in an operating system prior to removing or adjusting components of hydraulic equipment or attachments
- Do not attempt to clear jammed machinery without first shutting off the equipment

Maintenance:

- Do not rely only on the hydraulic lift if you must work on hydraulic components with the system raised, set the unit on blocks
- Unless you are bleeding the hydraulic system, do not run the machine engine when you are servicing the system
- Periodically replace filters, and keep hydraulic oil away from contaminants; dirt is the biggest culprit in hydraulic system damage
- Before removing the cylinders from working units, make sure that the unit is resting on the ground or on safety blocks with the engine off

To locate a Leak in a Hydraulic Line:

- Do not use your hand to locate a leak in a hydraulic line, because hydraulic fluid—often oil—is highly pressurized, and when released through a leak can penetrate the skin or eyes, causing severe injury
- Run a piece of paper, wood, cardboard, or Plexiglas along the hydraulic line to determine the location of the leak

Manual Material Handling:

- Use a chain hoist, floor jack, or other type of assistive device if you need to remove heavy hydraulic pumps or control valves
- Refer to Manual Material Handling WTS for more information

Inspections:

- All equipment operators must conduct and record pre-use inspections where required for specific pieces of equipment

- Before starting machines or equipment, ensure guards and safety devices are in place, adjusted and functioning properly
- Prior to using hydraulic equipment, check for fluid leaks, proper hydraulic pressure, damage to hydraulic hoses and damaged hose fittings
- Do not use defective equipment or machinery, inform your foreman / superintendent - they will arrange for the equipment to be serviced

Housekeeping:

- Keep machines and equipment clean and report any leaks or other noticeable defects to the foreman / superintendent

Training:

- Employee Orientations (including roles, responsibilities, applicable workplace task standards, WHMIS, etc.)
- Only trained, authorized personnel are allowed to operate machinery or equipment
- Only trained, authorized personnel are allowed to perform maintenance / repairs

Personal Protective Equipment:

- Workers on construction projects must wear, at a minimum, head, foot and high visibility protection. Eye protection when necessary
- Full face protection is required when completing tasks that may cause debris / objects to dislodge or become airborne
- Wear the appropriate personal protective equipment for the job at hand (i.e. safety glasses, hearing protection, respirator etc...)
- When trying to locate a leak in a hydraulic line, wear eye protection and hand protection

JOB HAZARD AND RISK ANALYSIS

RISK RATING SYSTEM

A	High risk of injury or equipment / property damage.
B	Medium risk of injury or equipment / property damage.
C	Low risk of injury or equipment / property damage.

TASK HAZARDS	RATING BEFORE CONTROLS	TASK CONTROLS	RATING AFTER CONTROLS
• Lack of, or Improper, Training and Education	C	• Machine Operators must be authorized and trained • Only trained and competent personnel are permitted to perform maintenance	C
• Improper Lifting, Lack of Equipment Use	C	• Use proper material handling and mechanical techniques	C
• Lack of Inspection	C	• All equipment operators must conduct and record pre-use inspections where required for specific pieces of equipment • Regularly examine the hydraulic lines for leaks and wear	C
• Lack of Maintenance, Equipment Failure	C	• Equipment shall be maintained as per the manufacturer's instructions and minimum regulatory requirements • Damaged equipment must be taken out of use and reported to the foreman / superintendent	C
• Improper Couplings	C	• Don't mix low-pressure & high-pressure coupler components	C
• Pinhole Leaks	C	• When trying to locate a leak in a hydraulic line, wear eye protection and hand protection • Run a piece of paper, wood, cardboard, or Plexiglas along the hydraulic line to determine the location of the leak	C
• Hazardous Agents	C	• If you must work on hydraulic components with the system raised, set the unit on blocks • Before removing cylinders from units, make sure the unit is resting on the ground or on safety blocks with the engine off	C
• Hot Hydraulic Fluid	C	• Hydraulic fluid can be hot, let hydraulic systems cool before changing lines, connections, filters, or fittings	C
• Lack Of PPE	C	• Wear the appropriate PPE for the job at hand (i.e. safety glasses, hearing protection, respirator etc...) • When trying to locate a leak in a hydraulic line, wear eye protection and hand protection	C