SAFE WORK PRACTICE 2 – BOOSTING BATTERIES

SWP Purpose

Improper battery boosting can lead to serious injury if done improperly. Batteries commonly explode when improperly boosted, leading to risks to workers through possible acid burns and injuries from flying objects. Boosting batteries properly is important to prevent injuries.

This safe work practice (SWP) is intended to help workers in assessing the hazards of boosting batteries.

Scope

This SWP applies to any worker who conducts the following:

- Boosting battery in vehicle

Responsibilities

Responsibilities apply to the **Trip Manager**/Volunteer Lead, all workers, and the Health and Safety Committee.

It is the responsibility of the **Trip Manager**/Volunteer Lead to

- Be familiar with the task process.
- Communicate to workers the possible hazards when/if done incorrectly.
- Consider the option to seek assistance if unfamiliar with the process.
- Reinforce to workers that any recommended controls must be applied consistently
- Ensure that workers are trained in the requirements of this practice
- Require that this SWP be implemented for all applicable job tasks

It is the responsibility of the Workers to

- Be aware of potential hazards that may be encountered while boosting a battery
- Know the proper use and limitations of the equipment (e.g. booster cables, chargers)
- Be aware of and comply with requirements communicated in this SWP
- Be familiar with manufacturer's instructions.
- Inspect equipment and work areas regularly for hazards
- Ensure recommended controls are implemented and used appropriately.
- Immediately report any incident, near miss, or hazard identification associated with battery boosting to the Crew Lead.

It is the responsibility of the Safety Committee to

- Maintain this Safe Work Practice
- Perform periodic audits to assess that these requirements/SWP are being acted upon.
- Reinforce that recommended controls are to be implemented and used appropriately.

Hazards

Hazards relative to battery boosting include explosions due to improper process, which can expose worker(s) to risk of acid burns and injuries from flying objects.

The task itself may introduce hazards due to exposure to battery acid and electrical current. Sparks from clamps touching one another can introduce a fire hazard.

The environment may introduce hazards due to extreme cold, reducing dexterity, or darkness if conducted at night.

The worker may introduce hazards due to lack of familiarity with the task, psychological factors such as stress.

Controls

Controls may include elimination/substitution, engineering, warnings, administrative, and/or PPE.

- Always wear safety glasses when boosting a battery.
- Always wear gloves when boosting a battery.
- Drive the running vehicle with the active battery up close to the vehicle with the dead battery; this can be done with the vehicles side-to-side or hood-to-hood.
- Make sure the vehicles are close enough to one another so that the cables will reach easily.
- Make sure that the hoods are propped open properly.
- Set the parking brake on both vehicles**. Turn off both cars while making cable connections.**
- Examine the cables to ensure that they are complete and in good repair. Identify the red clamp and the black clamp.
- Never touch the ends to each other at any time.
- Take one end of the cables and attach them to the battery which is usually up front near the corner of the car when the hood is popped up.
- Be sure to correctly observe and identify the positive and negative posts on each of the two batteries: the positive post is usually bigger, has more wires going to it, is frequently red, and has a + sign beside the post.
- Clamp the red end of the cable to the positive post on the battery of the running vehicle.
- Next clamp the black end of the booster cable to the negative post on the battery of the running vehicle.
- Follow the exact same procedure as above on the “dead” battery, attaching first the red positive clamp to the positive post, and the black negative clamp attach to a grounded piece of sheet metal of the vehicle (read comments below). Always ensure that the red positive clamp is attached first, then the black negative clamp.
- Turn on the ‘working’ vehicle to provide the charge, then try starting the ‘dead battery’ vehicle. If it doesn’t start right away, you may need to let the running vehicle run for a minute or two to charge the dead battery, then try starting the dead vehicle again.

- If the "dead" battery does not charge and start the vehicle, double check that the clamps are correctly and firmly positioned.
- Once the "dead" vehicle has started and is running, be sure to keep it running so it recharges the battery adequately.
- When certain that the "dead" battery vehicle has received an adequate charge to keep it running, carefully remove the cables from each vehicle, one vehicle at a time.
- First remove the black negative clamp, then the red positive clamp.
- Hold the detached clamps in one hand away from the other end while removing the second booster cable end from the second vehicle. Again, do not allow the clamps to touch one another.
- Once the cables have been removed from both vehicles, wind them up and put them away neatly.

Training

Workers who are involved in boosting batteries should be made familiar with the process of doing this safely. "On the job" training and demos are an excellent way of training.

Resources, References, Definitions

Revision History

Revision	Date	Description of Change	Personnel Involved
REV 0	Feb -2020	New SWP	D Yanchula
REV 1	Apr 2020	Turn off both cars while connecting cables	D Hockey, D Borthwick, D Yanchula, J Gruttz, J Bateson
Rev 2	Feb 2023	Reviewed – Updated typos in "Purpose"	D Yanchula