	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 1 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

## 1.0 INTRODUCTION

This procedure outlines the basic personal protective equipment (PPE) requirements to be followed by all persons working for COMTRAC Services, Inc. (COMTRAC.) It is the responsibility of each employee to maintain their PPE in a clean, and serviceable condition, at all times. PPE that has been damaged, has excessive wear, or contaminated, shall be repaired and thoroughly cleaned before reused. PPE in unserviceable condition shall be reported to your supervisor. The required PPE may vary depending on the work to be performed and specific requirements of the job. COMTRAC provides all required PPE to employees at no cost.

## 2.0 REQUIREMENTS

OSHA requires employers to ensure the safety of all employees in the work environment. Eye and face protection must be provided whenever necessary to protect against chemical, environmental, and radiological hazards or mechanical irritants. It is company policy that employees wear eye protection anytime they are on a job. The use of face protection is required based on the specific job they are performing, i.e. saw cutting, jack hammering. When COMTRAC employees get out of the truck on a job, the following PPE requirements are noted:

- Hard Hat
- Safety Glasses
- Safety vest (type per job requirement)
- ANSI approved boots - steel/composite toe at least 6-8" (Note: The company is currently transitioning to lace ups, but pull ons are still allowed. Pull ons will continue as primary for welding activities.)
- Gloves based on the job needs
- Hearing protection when needed

**Design.** All personal protective equipment shall be of safe design and construction for the work to be performed.

**Hazard assessment and equipment selection.** Hazard analysis procedures shall be used to assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). If such hazards are present, or likely to be present, the following actions will be taken:

- Select, and have each affected Employee use, the proper PPE
- Communicate selection decisions to each affected Employee
- Select PPE that properly fits each affected employee.

Ensuring worker safety includes conducting a workplace hazard assessment and providing adequate training for all workers who require PPE. When employees are trained to work safely, they should be able to anticipate and avoid injury from job related hazards. The hazard assessment must include the certifier's name, signature, date(s), and the identification of the assessment documents.

**Defective and damaged equipment.** Defective or damaged personal protective equipment shall not be used.


**Handling Emergencies.** If an injury occurs, quick action might prevent a permanent disability. For this reason:

- Someone trained to provide emergency first-aid must be readily available. (See Section 25, First-Aid CPR).
- First-aid instructions should be posted close to potential danger spots.
- Emergency eyewashes should be placed in all hazardous areas.
- Employees must know where the closest eyewash station is and how to get there with restricted vision.

## 3.0 TRAINING

All employees who are required to use PPE shall be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, remove, adjust, and wear PPE;
- The limitations of the PPE
- The proper care, maintenance, useful life and disposal of the PPE.

	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 2 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

All required training should be conducted by a knowledgeable designated person. It should be presented in a manner that the employee can understand. Each employee must demonstrate an understanding of the training specified and the ability to use PPE properly, before being allowed to perform work requiring the use of PPE.

Certification of training for PPE is required by OSHA showing that the employee has received and understood the required PPE training. The certification must include the employee name, the dates of training, and the certification subject.

Retraining of the employee is required when the workplace changes, making the earlier training obsolete, the type of PPE changes or when the employee demonstrates lack of use, improper use, or insufficient skill or understanding.

#### 4.0 SELECTION OF PERSONAL PROTECTIVE EQUIPMENT

The following minimum requirements must be met by all protective devices. Protectors shall:

- Provide adequate protection against the particular hazards for which they are designed.
- Be of safe design and construction for the work to be performed.
- Be reasonably comfortable when worn under the designated conditions.
- Fit snugly and not unduly interfere with the movements of the wearer.
- Be durable.
- Be capable of being disinfected.
- Be easily cleanable.
- Be distinctly marked to facilitate identification of the manufacturer.

**Controlling hazards.** PPE devices alone should not be relied on to provide protection against hazards, but should be used in conjunction with guards, engineering controls, and sound manufacturing practices.

**Selection guidelines.** The general procedure for selection of protective equipment is to:

- become familiar with the potential hazards and the type of protective equipment that is available, and what it can do; i.e., splash protection, impact protection, etc.;
- compare the hazards associated with the environment; i.e., impact velocities, masses, projectile shape, radiation intensities, with the capabilities of the available protective equipment;
- select the protective equipment which ensures a level of protection greater than the minimum required to protect employees from the hazards
- fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users be made aware of all warning labels for and limitations of their PPE.

**Fitting the Device.** Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes. Care should be taken to ensure that the right size is selected.


**Devices with adjustable features.** Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective device in the proper position. Particular care should be taken in fitting devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face. In addition, proper fitting of helmets is important to ensure that it will not fall off during work operations. In some cases a chin strap may be necessary to keep the helmet on an employee's head. (Chin straps should break at a reasonably low force, however, so as to prevent a strangulation hazard). Where manufacturer's instructions are available, they should be followed carefully.

#### 5.0 PERSONAL PROTECTIVE EQUIPMENT

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contacts.

If employee-owned equipment is used, COMTRAC will assure its adequacy, maintenance & sanitation. This equipment must be maintained in good condition by the employee or it will not be allowed to be used by the employee.

Selected PPE must be fitted to each affected employee.

	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 3 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

### 5.1 Safety Hard Hats.

All head protection is designed to provide protection from impact and penetration hazards caused by falling objects. Head protection is also available which provides protection from electric shock and burn. When selecting head protection, knowledge of potential electrical hazards is important. Class A hard hats, in addition to impact and penetration resistance, provide electrical protection from low-voltage conductors (they are proof tested to 2,200 volts). Class B hard hats, in addition to impact and penetration resistance, provide electrical protection from high-voltage conductors (they are proof tested to 20,000 volts). Class C hard hats provide impact and penetration resistance (they are usually made of aluminum which conducts electricity), and should not be used around electrical hazards.

- Class B hard hats are required and shall be worn where overhead hazards exist or are a part of regular jobsite policy. Only ANSI Z-89.1 approved hard hats shall be worn.
- Excessive long hair must be maintained and worn in a manner that it does not present a hazard when working around rotating equipment or machinery.
- Never alter the suspension or punch/drill holes in hard hats.
- Hard hats shall not be worn in the reverse direction.

### 5.2 Eye & Face Protection:


- ANSI Z-87 eye protection is required and shall be worn in all work areas, and whenever the potential for eye injury exists.
- The wearing of contact lenses is prohibited where eye protection is required.
- Glasses with dark tinted lens shall not be worn at night or in dark locations during the day.
- Impact type goggles shall be required and worn when grinding, chipping, sawing, scraping, buffing, hammering, overhead drilling, or engaged in any activity involving hazards to the unprotected eye by flying or falling particles or objects.
- Splash-proof goggles shall be required and worn when handling liquids, powders or vapors, cleaning materials with solvents, molten sulphur, etc.,
- Complete coverage eye protection shall be required and worn where dust hazards exist.
- A face shield may not be worn instead of goggles, but may be worn with goggles to protect the face.
- Face shields shall be required, and worn with goggles, when grinding and/or handling hot or corrosive liquids.
- Employees working near others performing work requiring special eye protection must also wear similar eye protection, (i.e., welders helpers).
- Special type eye protection shall be required for those around or helping in welding operations.

The following two tables provide information on:

- Filter lenses for protection against radiant energy
- Selection chart guidelines for eye and face protection

<b><i>Filter Lenses for Protection Against Radiant Energy</i></b>			
<b>Operations</b>	<b>Electrode Size 1/32 in</b>	<b>Arc Current</b>	<b>Protective Shade</b>
Shielded metal arc welding	Less than 3	Less than 60	7
	3-5	60-160	8
	5-8	160-250	10
	More than 8	250-550	11
Torch brazing			3
Torch soldering			2
<p>Note: as a rule of thumb, start with a shade that is too dark to see the weld zone. Then go to a lighter shade which gives sufficient view of the weld zone without going below the minimum. In oxyfuel gas welding or cutting where the torch produces a high yellow light, it is desirable to use a filter lens that absorbs the yellow or sodium line in the visible light of the (spectrum) operation.</p>			



	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 4 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>



	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 5 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

### ***Selection chart guidelines for eye and face protection***

The following chart provides general guidance for the proper selection of eye and face protection to protect against hazards associated with the listed hazard "source" operations.

<b>Source</b>	<b>Hazard</b>	<b>Protection</b>
IMPACT - Chipping, grinding machining, masonry work, woodworking, sawing, drilling, chiseling, powered fastening, riveting, and sanding	Flying fragments, objects, large chips, particles, sand, dirt, etc.	Spectacles with side protection, goggles, face shield For severe exposure, use face shield
HEAT-Furnace operation and arc welding	Hot sparks	Faceshields,, spectacles with side. For severe exposure use faceshield.
CHEMICALS-Acid and chemical handling, degreasing, plating	Splash	Goggles, eyecup and cover types. For severe exposure, use face shield.
DUST - Woodworking, buffing, general, buffing, general dusty conditions.	Nuisance dust	Goggles, eye cup and cover type

Personal protective equipment (PPE) for the eyes and face is designed to prevent or lessen the severity of injuries to workers. The employer must assess the workplace and determine if hazards that necessitate the use of eye and face protection are present or are likely to be present before assigning PPE to workers.

Employers who allow their employees to wear PPE on a voluntary basis when not required by OSHA, must implement limited provisions of a PPE program. For example, additional written eye and face protection instructions covering proper maintenance procedures must be implemented. Also, for voluntary respiratory usage, the employee must receive training as prescribed by Appendix D of OSHA's Respiratory Protection regulation.

#### 5.2.1 Fitting of Personal Protective Equipment

- Consideration should be given to comfort and fit. Poorly fitting eye and face protection will not offer the necessary protection.
- Fitting of goggles and safety spectacles should be done by someone skilled in the procedure.
- Prescription safety spectacles should be fitted only by qualified optical personnel.
- Devices with adjustable features should be fitted on an individual basis to provide a comfortable fit that maintains the device in the proper position.
- Eye protection from dust and chemical splash should form a protective seal when fitted properly.
- Welding helmets and face shields must be properly fitted to ensure that they will not fall off during work operations.

#### 5.2.2 Maintenance and Care of Personal Protective Equipment

Employees must be trained in the proper care, maintenance, useful life, and disposal of personal protective equipment (PPE).


##### Maintenance:

- PPE must be used and maintained in a sanitary and reliable condition.
- The use of equipment with structural or optical defects is prohibited.
- Pitted lenses, like dirty lenses, can be a source of reduced vision. They should be replaced. Deeply scratched or excessively potted lenses are apt to break.
- Slack, worn-out, sweat-soaked, or twisted headbands do not hold the eye protector in proper position. Visual inspection can determine when the headband elasticity is reduced to a point below proper function.

##### Cleaning:

Whenever PPE is shared by employees, proper cleaning between employee use becomes critical:

- Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing may be necessary.
- Eye and face protection equipment that has been previously used should be disinfected before being issued to another employee.

	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 6 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

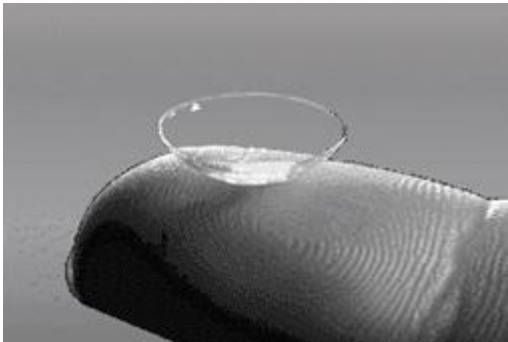
- When employees are assigned protective equipment for extended periods, the equipment should be cleaned and disinfected regularly.
- Several methods for disinfecting eye-protective equipment are acceptable. The most effective method is to disassemble the goggles or spectacles and thoroughly clean all parts with soap and warm water.
- Carefully rinse all traces of soap and replace defective parts with new ones.
- Swab thoroughly or completely and immerse all parts for 10 minutes in a solution of germicidal deodorant fungicide.
- Remove parts from solution and suspend in a clean place for air drying at room temperature or with heated air.
- Do not rinse after removing parts from the solution because this will remove the germicidal residue that retains its effectiveness after drying.

**Storage:**

- Goggles should be kept in a case when not in use. Spectacles, in particular, should be given the same care as one's own glasses, since the frame, nose pads, and temples can be damaged by rough usage.
- Items should be placed in a clean, dust-proof container, such as a box, bag, or plastic envelope, to protect them until reissue.

**Contacts and Prescription (Rx) Lenses:**

- Employers must ensure that employees who wear prescription (Rx) lenses or contacts use personal protective equipment (PPE) that incorporates the prescription or use eye protection that can be worn over prescription lenses.
- Workers who wear prescription glasses must also wear required eye protection.
- Eye and face protection that fits comfortably over glasses is available.
- Safety goggles and spectacles may incorporate prescription lenses.
- Dust and chemicals present additional hazards to contacts wearers. OSHA recommends that workers have an extra pair of contacts or eyeglasses in case of contact failure or loss.
- The employer shall ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. To select PPE for the workplace, see the Hazard Assessment module, below.



A hazard assessment should determine the risk of exposure to eye and face hazards, including those which may be encountered in an emergency. Employers should be aware of the possibility of multiple and simultaneous hazard exposures and be prepared to protect against the highest level of each hazard.


Hazard Assessment		
Hazard type	Examples of Hazard	Common Related Tasks
Impact	Flying objects such as large chips, fragments, particles, sand, and dirt	Chipping, grinding, machining, masonry work, wood working, sawing, drilling, chiseling, powered fastening, riveting, and sanding
Heat	Anything emitting extreme heat	Furnace operations, pouring, casting, hot dipping, and welding
Chemicals	Splash, fumes, vapors, and irritating mists	Acid and chemical handling, degreasing, plating, and working with blood
Dust	Harmful dust	Woodworking, buffing, and general dusty conditions
Optical Radiation	Radiant energy, glare, and intense light	Welding, torch-cutting, brazing, soldering, and laser work

**5.3 Footwear:**

ANSI-Z41 high top steel/composite toe safety boots as indicated above shall be worn by all employees working in, or entering, the jobsite. Safety footwear shall also be worn in the COMTRAC yard, storage areas, warehouse areas, tool room, and maintenance shop. Canvas shoes, tennis shoes, open toe shoes, or sandals are not allowed.

**5.4 Gloves:**

- Gloves must be worn whenever a job involves the potential for injury to the hands or exposure to hot or hazardous chemicals.

	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 7 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

- Gloves should not be worn when drilling or other operations which may present a hazard of their being caught in the rotating equipment.
- When working with hazardous chemicals, special protective gloves shall be required. Consult your supervisor or the Safety Data Sheet (SDS) for that specific chemical.
- Hydrocarbon or special chemical resistant gloves may be worn when handling acids, caustic soda, soda ash, or other substances that can irritate the skin.
- Leather gloves should be worn when handling rough materials. Cloth gloves can afford adequate protection when handling valves, pipes, pumps, and engine parts.
- Insulated or heat resistant gloves shall be worn when performing duties in which regular gloves do not afford adequate protection.
- Special electrical gloves shall be worn when working with energized electrical circuitry.

#### 5.5 Hearing Protection:

- Approved hearing protectors shall be worn in all areas designated as high noise areas, and while working with or around high noise producing equipment.
- An adequate supply of hearing protectors shall be maintained on all jobsites. Hearing protectors are available from the tool room.
- The Hearing Conservation Program provides additional supporting information.

#### 5.6 Respiratory Protection:

Respiratory protection shall be furnished in compliance with OSHA 29 CFR 1910. 134. Dust respirators are available for employee use. Information that must be provided to employees that voluntarily use respirators when not required to is provided in the appendices of the Respiratory Protection Program. A signed copy of the form is to be maintained on file showing the employee has received the required information.

No employee shall be required to wear respiratory protection without having been certified by the Company physician as physically capable to wear such equipment. All employees required to wear respiratory protection shall be thoroughly trained and instructed in the use and limitations of such equipment. Employees required to wear such equipment shall receive fit testing and training prior to assignment where respiratory protection is required, and at least annually thereafter.

There are two basic categories of respiratory protection:


- Air Purifying – Not to be used in confined spaces
  - Half mask respirator
  - Full face cartridge respirator
- Air Supplied
  - Airline respirator
  - Airline respirator with escape cylinder
  - Self-contained breathing apparatus (SCBA)

Respirator selection should be made based on the potential hazards which may be encountered. These hazards may include but are not necessarily limited to:

- Oxygen deficient atmosphere
- Temperature extremes
- Chemical contaminants
- Dusts

The following types of respirators must be worn when working in an atmosphere contaminated with harmful dusts, fogs, mists, gases, smoke, sprays, vapors, and fumes:

- Single use disposable dust mask - For use in nuisance dust only, with no chemical contamination.
- Half-mask cartridge respirator - For use in dusts, sprays, mists, vapors, and fumes, where the potential for eye injury or irritation does not exist.
- Full-face cartridge respirator - For use in dusts, sprays, mists, vapors, and fumes where the potential for eye injury or irritation exists.

	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 8 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

- Self-contained breathing equipment - This equipment must be used in atmospheres that are, or may be, "Immediately Dangerous To Life or Health" (IDLH). Self contained breathing equipment shall be used under strict supervision ONLY.

If in doubt about the use and selection of respiratory protection, ask your supervisor. Additional information on respiratory protection is provided in the Respiratory Protection Program.


## 6.0 REFERENCES

29 CFR 1910.120, 132, 133, 136, 138  
 29 CFR 1926.95-107

## 7.0 APPENDICES

Appendix A - Personal Protective Equipment (PPE) Hazard Assessment Certification



	Manual:	Policy Section #:	39
	<b>Safety Policy &amp; Procedures</b>	Page:	Page 9 of 9
	Subject:	Revision:	<b>08/2018</b>
	<b>Personal Protective Equipment (PPE)</b>	Issue Date:	<b>03/2013</b>

**Appendix A**

**Personal Protective Equipment (PPE) Hazard Assessment Certification**

This location has been evaluated to identify workplace hazards and the personal protective equipment necessary (above and beyond engineering and administrative controls) to protect employees from these recognized hazards.

Certification of Hazard Assessment:

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Date Completed: \_\_\_\_\_

**Hazard Assessment for Personal Protective Equipment (PPE)**

Location: \_\_\_\_\_

Date: \_\_\_\_\_

Assessment Conducted by: \_\_\_\_\_

Job Title: \_\_\_\_\_