



NORTH CAROLINA DEPARTMENT OF LABOR

No. 55-2

OSH DIVISION

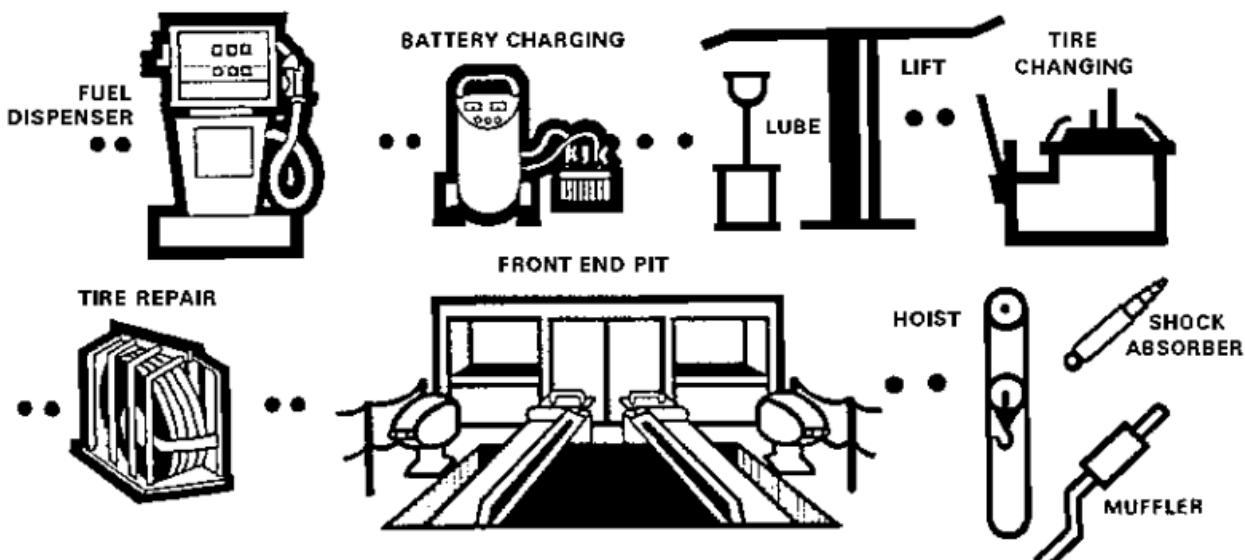
Date: 10/2009

OSHNC INDUSTRIAL DATA REPORT

Pages: 3

Industry: Automotive Dealers and Gasoline Service StationsSub-Group: Gasoline Service StationsSIC: 5541NAICS: 447110 and 447190

PROCESS DESCRIPTION: Gasoline service stations dispense gasoline and oil products into customers' automobiles. Services available depend upon size of station and can vary from lubrication and oil changing to major repair work. Most all stations install tires, batteries and some accessories. Gasoline is dispensed from pump islands and lubrication is performed with vehicle on lift devices. To install or replace tires, the vehicle is placed on a lift or raised with the aid of a jack, the wheels are removed, the oil tire is separated from the rim and the new tire is installed with a special pneumatic changing device. When the wheel is replaced on the vehicle the lugs are secured with either a hand or air wrench. Service may include balancing and front end alignment. Truck tire service requires additional operations such as the removal and replacement of lock rings and special lug devices and the use of heavy hoisting equipment. Equipment used includes: gas pumps, display racks, hydraulic, pneumatic or electric jacks or hoists, hydraulic or pneumatic tire changing machines, manual tire changing stand, air compressors, hoses, couplings, pressure gauges, balancing machines, bench grinders, front end alignment pit and equipment, various hand irons, tools and power hand tools. Heavy truck tire service would involve use of heavier hand tools, restraining cages, chains, slings, carriages, power hoists and fork lift truck. Batteries must have acid electrolyte added before installing. Service stations usually furnish recharge services in which batteries are hooked up to a charging unit for a specific time. Accessories such as mufflers, shock absorbers and numerous other items (depending on size of station) are installed on vehicles, usually by hand or power tools and lift or jack. Some additional tools may be needed. (Auto repair will be explained in detail in automobile repair shops, 80-1.)

PROCESS FLOW:



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Hazards Analysis

Major Hazards			Other Hazards		
Location	Item	Hazard	Location	Item	Hazard
Shop area or grease rack	Lifting and installing tires, batteries, accessories and repairs, use of tools and equipment	Sprains, strains, hernia, cuts, abrasions, pinching or possible amputations, foreign objects in eye.	Gasoline pump area	Gasoline vapors	Explosion and fire
	Tire Inflation	Exploding tire, various body injuries.			
Throughout	Housekeeping	Slips, trips and falls	Shop area	Compressed gas, welding, cutting and brazing	Eye injuries, burns and explosions, fume inhalation
Battery charging and storage area	Hydrogen gas and sulfuric acid electrolyte	Explosion and burns to skin and eyes, highly toxic strong skin irritant	Pit	Hazardous locations	Unapproved electrical, chemical exposure
Throughout	Electrical hand tools and similar equipment	Shock or electrocution			

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
ANSI B30.6	Overhead underhung hoists
Subpart D	Walking and working surfaces
Subpart I	Personal protective equipment
Subpart O	Machinery and machine guarding
Subpart Q	Welding, cutting and brazing
Subpart S	Electrical
1910.101	Compressed gases
1910.106	Flammables and combustibles liquids handling and storage
1910.147	Control of hazardous energy – (lock-out/tag-out)



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1910.151	Eyewash and emergency showers
1910.169	Compressed air receivers
1910.176	Handling Materials
1910.1000	Air contaminants
1910.1200	Hazard Communication

Inspection Analysis

Due to the many different sizes and services provided by gas stations, the inspection could begin at any point. The inspection must cover walking-working surfaces, the stacking of tires, batteries and accessories, and tanks and "No Smoking" signs. Suitable facilities for flushing eyes and body, and eye, face and hand protection must be provided in the battery charging and handling area. V-belts on air compressors and bench grinders must be guarded and the work rest properly adjusted. Welding cables must be in good condition, and oxygen and gas cylinders stored and handled properly. Tools used for repair work, mounting tires and installing batteries and accessories must be in good working condition. These must be grounded when electrically operated with all wiring and cases in good condition. In any hazardous areas (Class I, Division 1 or 2) assure that wiring, receptacles, switches and lights are approved for that location. Eye protection must be provided for and used where bench grinders or pedestal grinders or welders are used and when working under vehicles.

Other Pertinent Comments: Hand tools and working surfaces are the principal causes of accidents for tire, battery and accessory dealers. Working surfaces must be kept clean. Hand tools must be kept in good working condition. Training must be provided in the operation of powered tools.