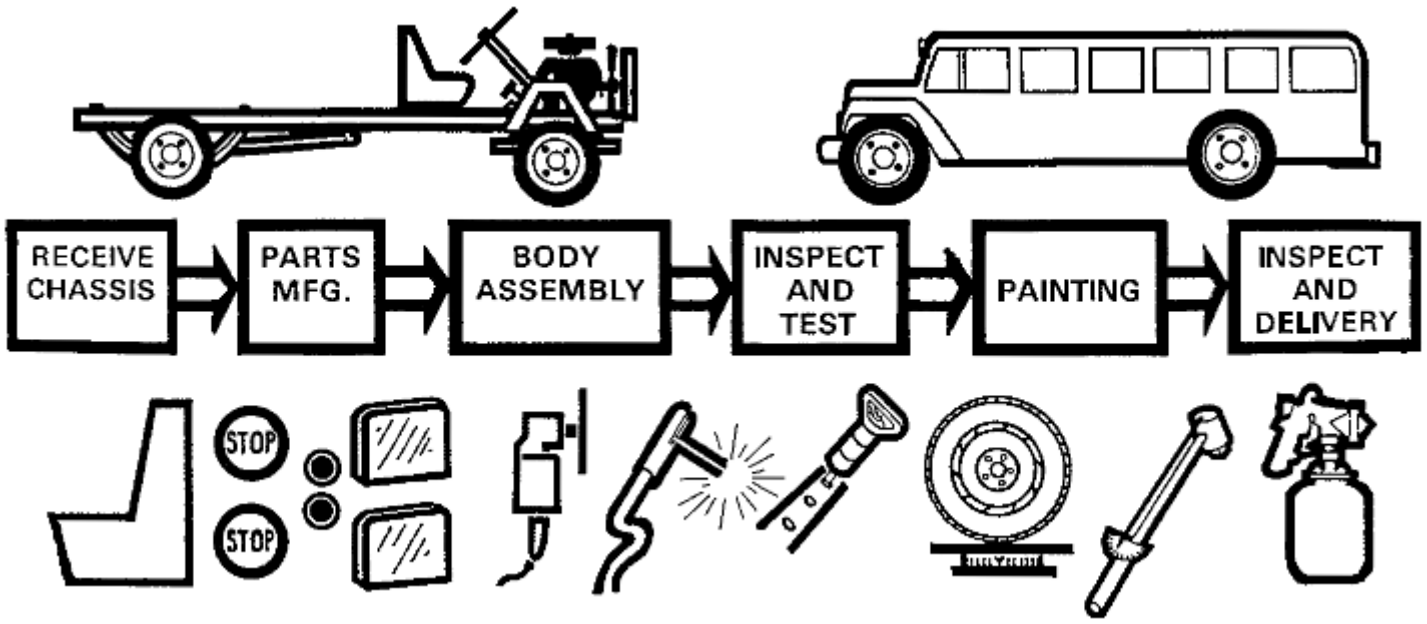
	NORTH CAROLINA DEPARTMENT OF LABOR	**No. 37-1**
	OSH DIVISION	**Date: 10/2009**
	OSHNC INDUSTRIAL DATA REPORT	**Pages: 3**

Industry: **Transportation Equipment**	Sub-Group: **Truck and Bus Bodies**
SIC: **3713**	NAICS: **336211**

PROCESS DESCRIPTION: Truck or bus chassis with wheels, engines and frame completely assembled are received from suppliers. These chassis may be driven from storage yards with driver sitting on temporarily attached seats to the start of a U shaped or straight assembly line. Depending on the desired product, parts are welded, bolted or riveted to the chassis frame. Many of the parts used may have been formed or assembled in other sections of the plant and some parts such as lights, glass hinges, etc. may be purchased from outside suppliers. After testing and assembly the unit is usually painted to meet the customers' specifications and special order equipment may be added. Units may be driven to customers' location or delivered by truck or railway.

PROCESS FLOW:



Hazards Analysis

Major Hazards			Other Hazards		
Location	**Item**	**Hazard**	**Location**	**Item**	**Hazard**
Receiving	Moving vehicles	Employee falls and vehicles injuries	Throughout	Housekeeping	Falls, struck by or against objects

				Hand tools Materials handling	Eye injuries, cuts, electrical hazards Strains, cuts, falls
Parts manufacturing	Points of operation on punch presses, shears, spot welders, press brakes, noise	Amputations, eye injuries, strains, hearing loss	Shipping	Powered industrial trucks	Accidents, carbon monoxide
Assembly	Hand tools, welding, riveting, grinders	Cuts, burns, eye injuries, employee falls, strains, electrical shock, struck by objects			
Painting	Solvents, cleaners, paints	Fire, explosion, inhalation			
Inspection and delivery	Moving vehicles	Employee falls and vehicle injuries			

Key OSHNC Standards

Reference	29 CFR 1910 — General Industry Standards
ANSI B30.6	Overhead underhung hoists
Subpart D	Walking and working surfaces
Subpart E	Means of egress
Subpart I	Personal protective equipment
Subpart O	Machinery and machine guarding
Subpart Q	Welding, cutting and brazing
Subpart S	Electrical
1910.94	Ventilation
1910.95	Occupational Hearing Loss
1910.106	Flammable and combustible liquids handling and storage
1910.107	Spray finishing with flammable and combustible liquids
1910.122 - .126	Dipping and coating operations
1910.146	Permit required confined space entry
1910.147	Control of hazardous energy - (lock-out/tag-out)
1910.151	Eyewash and emergency showers

1910.176	Handling materials
1910.178	Powered industrial trucks
1910.179	Overhead and gantry cranes
1910.1000	Air contaminants
1910.1200	Hazard communication

Inspection Analysis

The inspection should begin with the chassis storage yard. Method of fastening drivers' temporary seat to chassis must be checked along with speed of drivers and route for chassis delivery. Next parts manufacturing operations must be thoroughly examined as hazards may vary greatly from upholstery of seats to forming, cutting and punching, and welding body parts (from sheet metal to I-beams or angle iron as required). After parts are fabricated or received from the manufacturers they are delivered to the chassis as it moves down the line. These lines may be powered or the chassis may be pushed by employees from station to station.

After the vehicle is fully assembled and the unit is inspected, rough spots are ground off or filled. The unit is then masked off for painting. Many solvent and paint hazards are usually present. Eye hazards must be closely checked.

All areas must be checked for housekeeping, clear aisles and use of personal protective equipment such as eye, foot and head protection. Also many metal forming or working machines are often used and these must be checked for point of operation and power transmission guarding.

Fork truck operations must be observed.

Other Pertinent Comments: The plants in this industry have a broad spread of injury frequency and severity. Those plants with good layout, housekeeping, use of protective equipment, employee training programs etc. can and do produce good safety records. Due to frequent drilling or grinding in closed areas the use of proper eye protection is extremely important.