

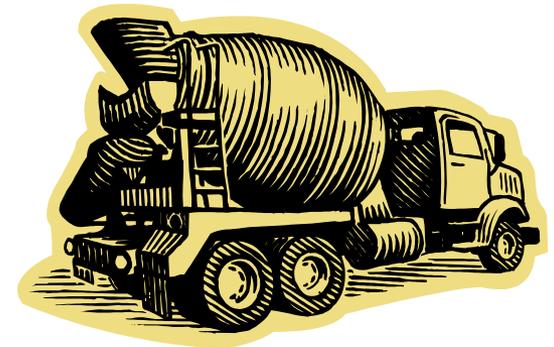
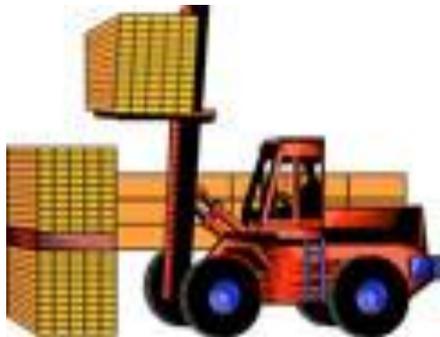
EQUIPMENT SAFETY



EARTHMOVING



MATERIAL HANDLING



COMMON EARTHMOVING EQUIPMENT



**SKID LOADERS
BACKHOE
FRONT END LOADER
GRADERS
SCRAPERS
BULL DOZERS**



**Lots of
stuff Here!**



COMMON MATERIAL HAULING



TRUCKS ALL TYPES



COMMON MATERIAL HANDLING



FORKLIFTS MANY TYPES

Your binder
has all of
the new
training rules



SPECIALITY EQUIPMENT



Batch Plants



**Belt Driven
Conveyors**



**Screw type
Conveyors**

Specialty Equipment Safety

IN ALL CASES, ANY TYPE OF EQUIPMENT THAT IS NOT SPECIFICALLY COVERED IN A KNOWN SAFETY REGULATIONS: REQUIRE MANUFACTURER'S DATA TO FIND INFORMATION TO OPERATE SAFELY!



I need to see the O & M for that paving machine

Ref: 16.A.01



OTHER SPECIALITY EQUIPMENT



Where is the
O&M for this
Mower???

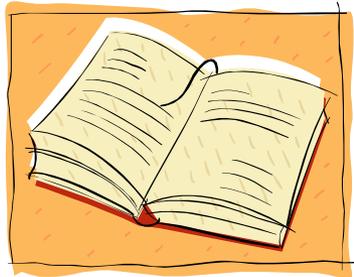


Redneck Riding Lawnmower

COMMON SAFETY RULES FOR EQUIPMENT



- 1. Inspected and tested by a competent person and certified in writing the meet the requirements of this manual. Subsequent re-inspections will be conducted at least annually**
- 2. The Contractor shall keep records of tests and inspections .**
- 3. The Contractor shall provide the GDA ample notice in advance of any equipment entering the site so that he/she may observe the Contractor's inspection process and so that spot checks may be conducted.**
- 4. All machinery and equipment shall be inspected daily (when in use) to ensure safe operating conditions.**



The equipment checklist is here on page #2 & 3



COMMON SAFETY RULES FOR EQUIPMENT



5. Back-Up alarms, audible, distinct over other noises
6. (Falling Object Protection Structures) certified by the manufacturer, if operator exposed to falling objects
7. ROPS (Roll over protective structures)
8. Operated only by designated **qualified** personnel
9. Music headphone prohibited while operating.
10. Getting On/Off any equipment prohibited while moving.
11. No modifications or additions that affect the capacity or safe operation of machinery or equipment shall be made without the manufacturer's written approval (hooks field welded ?)



Yes. I've got my operator's license with me!



COMMON SAFETY RULES FOR EQUIPMENT



- 12. Seats or equal protection must be provided for each person required to ride on equipment.**
- 13. Heavy machinery, equipment, or parts thereof that are suspended, or held apart by slings, hoist, or jacks also shall be substantially blocked or cribbed before personnel are permitted to work underneath or between them**
- 14. Only trained and authorized operators shall be permitted to operate powered industrial trucks. Training must be both classroom and practical operation of the same type of truck the student uses on the job**
- 15. Personnel must not work in, pass under, or ride in the buckets or booms of loaders in operation.**



Yea I have been told of the new rule in Section 16 N



COE "NEW" SECTION 16 N



Using Hydraulic Excavators, wheel loaders, track loaders & backhoes/loaders to transport or hoist loads with rigging.



COE "NEW" SECTION 16 N



SUMMARY:

**SPECIFIC AHA TO TRANSPORT OR HOIST
WRITTEN PROOF OF OPERATOR QUALS
PROPER RIGGING, INCLUDING SAFETY HOOKS
TAG LINES TO CONTROL LOADS
STABLE SURFACE FOR EQUIPMENT
OPERATIONAL TEST
CANNOT USE TEETH OF EQUIPMENT FOR LIFTING
LIFT MINIMUM HEIGHT TO MOVE LOAD
NO LIFTING OVER PERSONNEL
NEVER USED TO HOIST PERSONNEL**

**You got the full new rule right here
on PAGE # 5**



EQUIPMENT FIRE PROTECTION REQUIREMENTS



**At least one dry chemical or carbon-dioxide
Fire extinguisher minimum rating of 5-B:C
For the following types of equipment:**



Bulldozer, scraper, dragline, crane, front-end loader, motor grader, mechanical shovel, backhoe, and other similar equipment 16.A.26



ROLL OVER PROTECTION (ROPS)

All equipment with ROPS requires seats belts

Crawlers, rubber-tire tractors, dozers, graders, push/pull & winch tractors, mowers, off-highway self-propelled pneumatic-tire earth movers such as trucks, pans, scrapers, bottom & end dumps, tank trucks whose cab is higher than cab, & other self propelled construction equipment such as front-end loaders, backhoes, rollers and compactors. 16.B.12 a

Equipment not requiring ROPS see 16.B.12 b



Where is
my ROPS?



ROLL OVER PROTECTION SAFETY



ROPS can only be removed when justified & delineated in the AHA and **accepted in writing by the GDA**

Field welding on ROPS only by certified welders

Operating authority shall furnish written proof of manufacturer or certification from licensed engineer that ROPS complies with SAE standards



ROLL OVER PROTECTION SAFETY

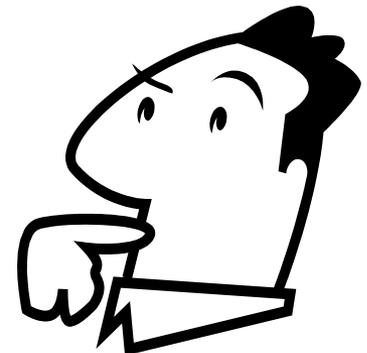


ROPS acceptable if they meet the criteria of any State that has a Department of Labor approved OSHA program or meet Water and Power Resources Service requirements.

OR

Information permanently attached to ROPS is acceptable in lieu of written certification:

- a. Manufacturers or Fabricators name & address;**
- b. ROPS model number, if any and**
- c. Machine make, model or series number**
- d. that the structure is designed to fit.**



LONG BED AND END DUMP TRAILERS USED FOR OFF-ROAD HAULING



If material to be dumped is subject to getting caught in bed of trailer or dump cannot be maintained in a normally level condition (lateral slope less than 1-2 degrees)



ROLL OVER WARNING DEVICE WITH A CONTINUOUS DISPLAY FOR THE OPERATOR & HAVE AN AUDIBLE WARN DEVICE OF AN UNSAFE CONDITION.

16.B.15



POWERED-INDUSTRIAL TRUCK SAFETY



- **RATED CAPACITY POSTED ON VEHICLE CLEARLY VISIBLE TO OPERATOR.**
- **ONLY TRAINED AND AUTHORIZED OPERATORS**
- **TRAINING MUST BE CLASSROOM AND PRACTICAL FOR THE TYPE OF TRUCK STUDENT USES ON THE JOB AND IAW OSHA 29 CFR 1910.178**
- **EMPLOYER MUST CERTIFY OPERATOR HAS BEEN TRAINED**
- **CERTIFICATE TO INCLUDE:**
 - NAME OF OPERATOR**
 - DATE OF TRAINING**
 - DATE OF EVALUATION**
 - IDENTITY OF TRAINER**



Isn't this the same
as a FORKLIFT???



POWERED-INDUSTRIAL TRUCK SAFETY



Federal statistics show there are about 85 forklift fatalities and 35,000 serious injuries per year.

The main causes of forklift fatalities are:

- **tip-over's (42%)**
- **crushed between forklift and a surface (25%)**
- **crushed between forklift and another vehicle (11%)**
- **struck or run over by a forklift (10%)**
- **struck by falling material (8%), and**
- **fall from platform on the forks (4%).**



**OSHA STATS
SHOW REAL PROBLEMS
WITH FORKLIFT!!!**



POWERED-INDUSTRIAL TRUCK SAFETY



- **WHEN UNATTENDED, LOAD SHALL BE FULLY LOWERED**
- **MUST HAVE OVERHEAD GUARD**
- **DOCK BOARDS OR BRIDGE PLATES MUST BE SECURED BEFORE THEY ARE DRIVEN OVER**
- **LOAD MUST BE TILTED BACK AND RAISED ONLY AS FAR AS NECESSARY TO CLEAR THE ROAD SURFACE**
- **PERSONNEL SHALL NOT WORK IN, PASS UNDER, OR RIDE IN THE BUCKETS OR BOOMS OF LOADERS**



Get out of my way!!!



WHY LICENSE FORKLIFT OPERATORS?



Where's the Operator?



WHY LICENSE FORKLIFT OPERATORS?



Here he is!
Taking a
break!!



MORE QUALIFIED OPERATORS?



**Extra!!
Man falls short of
3 forklift record!**

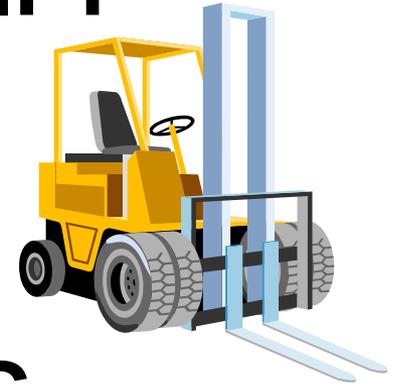
**OSHA writes new
rules for this work!**



FORKLIFT OPERATION



FOR SPECIFIC TYPE OF FORK LIFT
WAREHOUSE
HIGH REACH
ROUGH TERRAIN
CLASS ROOM & FIELD TRAINING
LICENSE GOOD FOR 3 YEARS
REFRESHER TRAINING



**That Accident/near miss
will require that man
to get refresher training!
See Page # 6**

REVERSE SIGNAL (BACK-UP) ALARM



All self-propelled construction and industrial equipment. (Except equipment designed & operated so the operator is always facing the direction of motion).

Audible & distinct sound over other sounds

Not to exceed 3 second intervals

**Required in addition
to signalpersons.**

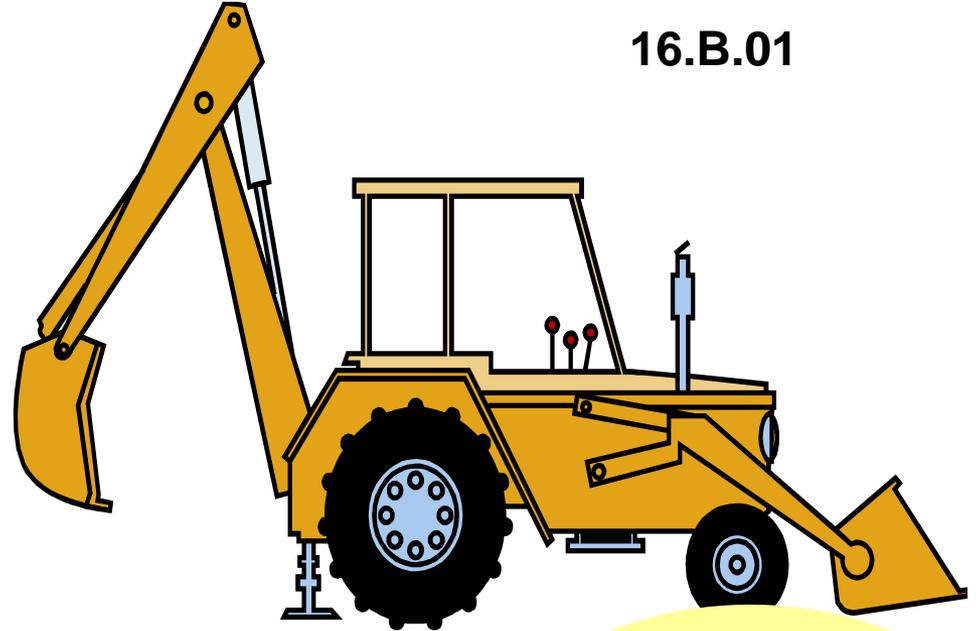


16.B.01

CLASS DISCUSSION QUESTION

The operator of this piece of equipment can turn around and operate either the or the digging end. The seat turns to face the direction he is working. He can drive this backwards while facing the opposite direction!

16.B.01



Does this piece of equipment need a back up alarm?

OVER THE ROAD HIGHWAY EQUIPMENT

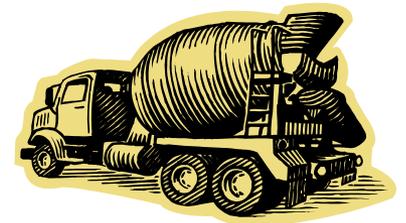


**HEADLIGHTS, TAILLIGHTS, BREAK-LIGHTS,
BACK-UP LIGHTS AND TURN SIGNALS VISIBLE
FROM BOTH FRONT AND REAR OF EQUIPMENT**

**WINDSHIELD ON EQUIPMENT MUST HAVE
WINDSHIELD WIPERS &
DEFOGGING/DEFROSTING DEVICES WHEN
OPERATING IN THESE CONDITIONS**



SERVICE AND PARKING BRAKE SYSTEMS



ENCLOSED SPACES



Equipment with an internal combustion engine are not to be operated in or near an enclosed space without adequate ventilation

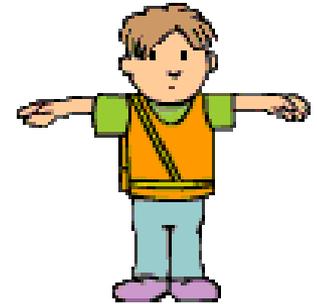


16.A.12

OTHER EQUIPMENT SAFETY



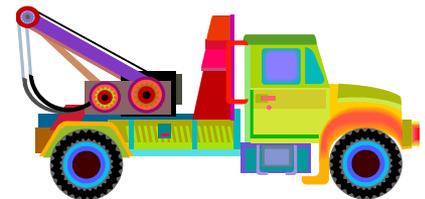
****SIGNAL PERSON** to be provided where there is danger from moving equipment, swinging loads, buckets, booms, etc.



EXCAVATIONS : require stop-logs and/or barricades to protect personnel and equipment



TOWING: No persons allowed between equipment until brakes set and wheels are chocked on **both** vehicles.



**** Note the maximum distance for signals is 100 feet!**

08.B.03

OTHER EQUIPMENT SAFETY



PARKING BREAK SET WHEN PARKED. ON AN INCLINE, WHEELS OR TRACKS TO BE BLOCKED.

EQUIPMENT LEFT UNATTENDED AT NIGHT, ADJACENT TO HIGHWAYS MUST HAVE LIGHTS OR REFLECTORS /BARRICADES EQUIPPED WITH LIGHTS OR REFLECTORS.

NO PERSONS ALLOWED TO WORK, PASS UNDER OR RIDE IN THE BUCKETS OR BOOMS OF LOADERS IN OPERATION.



**GET OUT FROM
UNDER THAT
LOAD!!!**



TAG OUT-LOCK OUTCONSIDERATIONS



MAINTENANCE/REPAIR WORK

Working under raised dump truck bed



ANY QUESTION IN YOUR MIND WHICH ONE OF THESE EXAMPLES WOULD BE SAFER AND MORE EFFECTIVE?