



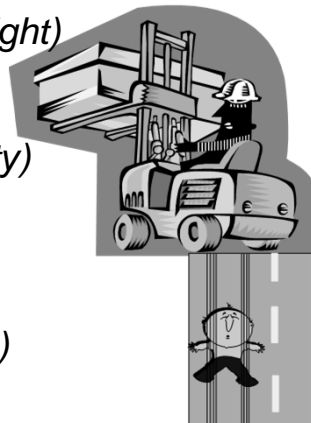
Bahaya Peralatan Konstruksi

- Kontak dengan bagian yang bergerak
- Terkena objek kegagalan operasi mesin/peralatan
- Terbentur, benda-benda logam/peralatan kerja,
- Terjepit, akibat komponen yang tidak berfungsi baik/kegagalan fungsi komponen karena mengalami kerusakan
- Terpapar sumber energi ekstrem
- Terpotong,
- Kegagalan gerakan fungsi tubuh, pengaruh ergonomi (sindrom)
- Tersetrum, akibat kontrak listrik Kondisi lantai (floors)
- Pencahayaan (lighting)
- Perilaku tidak aman dalam bekerja

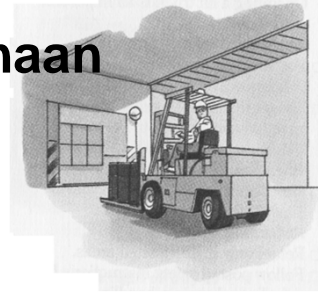


Bahaya Peralatan Konstruksi (Forklift)

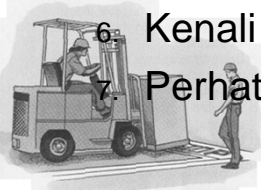
- Spesifikasi khusus kendaraan (*unique to vehicle*)
- Tinggi pengangkatan (*lift height*)
- Kecepatan (*speed*)
- Stabilitas Kendaraan (*stability*)
- Pengemudian (*steering*)
- Jarak penglihatan (*visibility*)
- Jalan dan gang-gang (*aisles*)
- Pandangan (*view*)
- Jalur pejalan kaki (*pedestrians*)



Keselamatan penggunaan Peralatan konstruksi

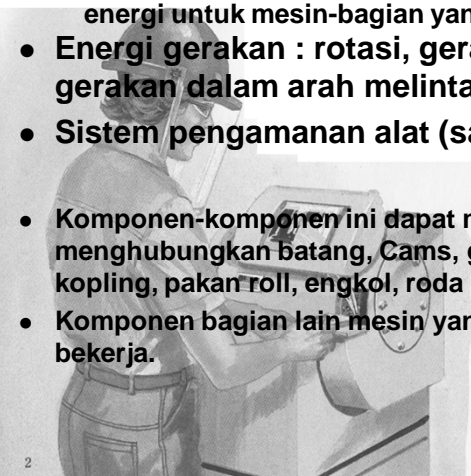


1. Identifikasi bahaya
2. Kelayakan alat
3. Kesiapan operasi
4. Persyaratan keselamatan alat
5. Persyaratan keselamatan operator
6. Kenali situasi dan kondisi khusus
7. Perhatian Peringatan dan larangan



Kenali Bahaya

- Titik kontak/pusat kontak operasi, di mana kontak mesin material, seperti melakukan operasi pemotongan, memukul, menggiling, merakit, yang bersinggungan dengan komponen transmisi daya-bagian dari sistem mekanis yang membawa energi untuk mesin-bagian yang melakukan pekerjaan.
- Energi gerakan : rotasi, gerak reciprocating atau gerakan dalam arah melintang. Pemasukan material,
- Sistem pengamanan alat (safety device)
- Komponen-komponen ini dapat mencakup roda gaya, puli, sabuk, menghubungkan batang, Cams, gelondongan, rantai, sprocket, kopling, pakan roll, engkol, roda gigi dan as.
- Komponen bagian lain mesin yang bergerak sementara mesin bekerja.



Peringatan Keselamatan Perhatikan :



- Kondisi bongkar - muat (loading-unloading material),
- Atur Sistem pengunci gerakan (rem/lock)
- Kestabilan beban saat bongkar/muat dan/atau memindahkan
- Gerakan mesin (manuver)
- Gerakan tangan pekerja/operator
- Pengangkatan beban jangan terlalu tinggi dari lantai (maximum 4inch dari lantai untuk yang menggunakan forklift)

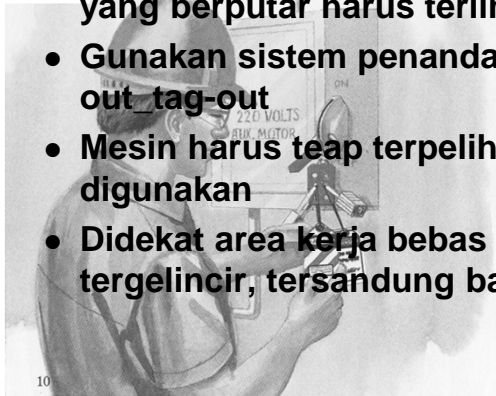
Sisi Pengamanan Keselamatan



- ❑ Gunakan Pakaian yang sesuai, tidak memancing tarikan pada benda-benda berputar
- ❑ Jaga jarak dengan benda-benda berputar
- ❑ Jangan menggunakan cincin, gelang, rantai leher dan arloji,
- ❑ Gunakan APD sesuai dengan tingkat risiko bahaya
- ❑ Hindari gerakan putaran mesin
- ❑ Gunakan peralatan yang sesuai
- ❑ Laporan segera jika dijumpai kerusakan peralatan/mesin yang dioperasikan

Ikuti Prosedur/Petunjuk Kerja

- **Baca prosedur/petunjuk kerja sebelum bekerja** (dilatihkan ke karyawan/operator terkait pekerjaannya)
- **Untuk semua bagian – bagian mesin / peralatan yang berputar harus terlindungi**
- **Gunakan sistem penandaan, prosedur lock-out tag-out**
- **Mesin harus tetap terpelihara dan layak digunakan**
- **Didekat area kerja bebas dari tergelincir tergelincir, tersandung bahaya**



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Ambil waktu untuk keselamatan (**Safety takes time**)

- Bekerja secara aman dengan mesin berarti mengambil waktu untuk melakukannya dengan benar.
- Siapkan secara hati-hati untuk setiap langkah dari pekerjaan yang akan dilaksanakan
- Memastikan semuanya di tempat sebelum bekerja. Dilarang / jangan mengambil jalan pintas yang dapat berbahaya.
- Setiap tenaga kerja harus benar-benar terlatih sebelum menggunakan mesin baru atau prosedur. baru.
- Siapkan hati-hati untuk setiap berhenti dari pekerjaan Anda.



Dasar keselamatan (Safety Basic) Peralatan Konstruksi

- Machine memiliki peralatan keselamatan (safety device)
- Memiliki prosedur keselamatan
- Memiliki pencegahan keselamatan ganda atau bertingkat, atau kombinasi keduanya yakni prosedur keselamatan dan safety device
- Memiliki tingkat kebisingan yang rendah
- Melakukan pekerjaan dengan dasar keselamatan yang benar atau lindungi diri anda dari mesin
- Lakukan pengawasan secara terus menerus

oCall for help immediately in case of accidents and

Pengendalian Administratif

- Hanya karyawan yang punya surat ijin mengemudi
- Identifikasi jumlah pengemudi / operator
Keluarkan surat ijin mengemudi (internal) perusahaan
- Lakukan program inspeksi kendaraan
- Pantau *performance* pengemudi
- Lakukan pelatihan kompetensi operator

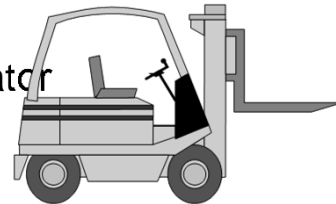


Steps pelaksanaan



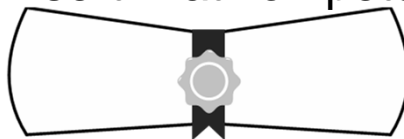
Pelatihan ulang (Re-training)

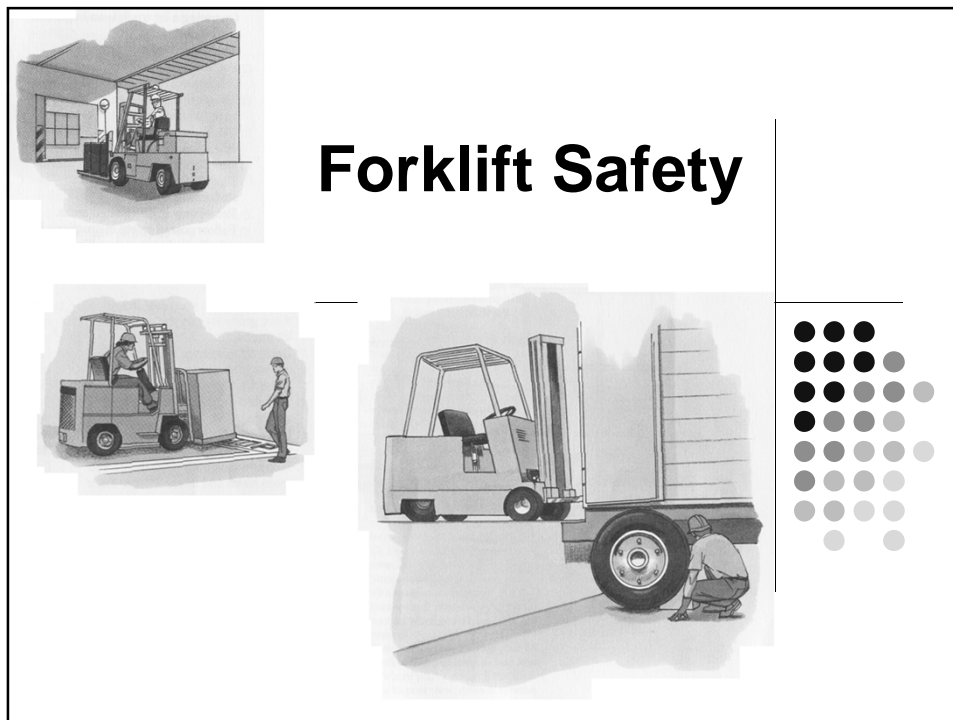
- Cara mengemudi yang aman
- Kecelakaan dan/atau near-miss
- Kondisi-kondisi yang berubah di tempat kerja
- Penugasan karyawan untuk mengoperasikan jenis forklift yang berbeda
- Evaluasi prestasi kerja operator setiap 3 tahun sekali



Sertifikasi

- Setiap karyawan yang sudah di latih pengoperasian alat / kendaraan sesuai standar dan dinilai telah memenuhi persyaratan dan peraturan harus diberi sertifikat kompetensi





Halliburton Company Global Standard

- Category 4 - Standard 6: Powered Industrial Trucks
 - This standard establishes the minimum criteria for the use, inspection, and maintenance of powered industrial trucks commonly used within our company operations. A powered industrial truck can be a fork truck, tractor, lift truck, motorized hand trucks or other specialized truck powered by electric motor or internal combustion engine.



Powered Industrial Truck



- A mobile, power propelled truck used to carry, push, pull, lift, stack, or tier material.

Powered Industrial Trucks



- | | |
|---|----------------------------|
| • Forklift | • Rider |
| • High lift | • High lift platform |
| • Low lift | • Low lift platform |
| • Motorized hand | • Pallet |
| • Narrow aisle rider | • Straddle |
| • Reach rider | • Single side loader rider |
| • High lift order picker rider | • Motorized hand / rider |
| • Counter balanced front/side loader lift | |

Equipment not covered



- Earth moving equipment
- Over-the-road hauling equipment
- Manlifts, people movers and cranes

How forklifts differ from cars



- Forklifts steer with the rear wheels and are powered by the front wheels
- Their ability to move loads up, down, forward, and backward can dramatically affect their center of gravity
- They can change their dynamic stability
- They have the capacity to raise, lower and tilt loads
- They have limited forward visibility when carrying a large load

Training Requirements



- All operators must be properly trained
- Training and evaluation must be done by knowledgeable/experienced person
- Training shall consist of both classroom instruction and practical application
- Topics must include
 - Pre-use inspections
 - Truck related topics
 - Workplace-related topics

Refresher Training



- Each operator's performance must be evaluated *at least* every three years
- When any of the following occur
 - Unsafe operation
 - An accident or near-miss
 - An operator who was shown in evaluation to not be capable of performing assigned duties

Inspect ...



- Before operating
- Before starting engine

Inspection before operating



- Oil level
- Battery water level
- Coolant in radiator
- Tire condition
- Loose nuts and bolts
- Leaks
- Fuel
- Condition of forks
- Fire extinguisher

Inspect after starting engine



- Gauges
- Horn
- Steering
- Service Brakes
- Parking Brakes
- Hydraulic Lift
- Back-up alarm
- Warning light

Hazards of Operation



- Hazards associated with the type of truck
- Hazards of the workplace
- General hazards that apply to all or most powered industrial trucks

Hazards associated with Powered Industrial Trucks



- How the vehicle is operated
- How the vehicle is maintained
- Age of the vehicle

Workplace Hazards



- Pedestrian traffic
- Using trucks on rough, uneven or unlevelled surfaces
- Carrying unusual loads
- Areas that are classified as hazardous locations
- Narrow aisles
- Employees working in or adjacent to the travel path of the truck

Common Causes of Accidents



- Falling loads caused by overloading or improper loading
- Vehicles falling from elevated platforms, curbs, trailers or other surfaces
- Driving with an obstructed view or without full attention
- Traveling at excessive speeds
- Using a truck to carry riders when it is not designated
- Potholes and other surface hazards
- Blind corners

Avoid Tipping Over ...



- Don't drive with tall loads
- Make sharp turns slowly
- Keep your load up grade
- Slowly cross uneven surfaces at an angle

Operators ...



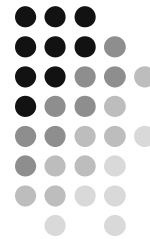
- must be trained, certified, and authorized before operating a truck
- should use the same safe practices that apply to highway traffic
- must follow all safety rules related to speed, parking, fueling, loading and moving loads

Trucks used for lifting personnel must ...



- Use a safety platform firmly secured to the lifting carriage or forks
- provide a means so the person on the platform can shut off power to truck
- provide any necessary protection from falling objects

**Only approved trucks
may be used in
hazardous locations.**



Guidelines for Traveling



- Always keep your eyes on the path of travel and maintain clear visibility
- Travel at a speed that allows for safe turning and stopping of the vehicle
- Maintain safe following distance
- Yield right-of-way to emergency vehicles and pedestrians
- Slow down and sound horn at cross aisles
- Drive with forks as close to the ground as possible when empty

Operating on Ramps



- NEVER travel in reverse when going up a ramp
- Always keep load up grade

Loading



- Handle only stable, safely arranged loads
- Don't overload
- Operate trucks with attachments as if they are partially loaded, even if empty
- Place load engaging means as far possible under load to be lifted
- Use extreme caution when tilting a load

Refueling LP gas trucks



- Prepare the power unit
- Refuel the power unit
- Prepare forklift for operation

Must be done by AUTHORIZED personnel only.

Refueling LP gas trucks



- Prepare the power unit
 - 1. Park on level ground
 - 2. Apply the parking brake
 - 3. Put the transmission in neutral
 - 4. Lower the forks
 - 5. Run engine at low idle
 - 6. Close valve and run the engine until it stops
 - 7. Turn off the switch

Refueling LP gas trucks



- Refuel the power unit
- 1. Loosen the retaining straps
- 2. Disconnect the fuel lines
- 3. Remove and properly store the empty cylinder
- 4. Replace cylinder with full container

Refueling LP gas trucks



- Prepare the forklift for operation
- 1. Put locating pin in place
- 2. Reconnect fuel line
- 3. Re-secure the retaining straps
- 4. Turn on the valve
- 5. Check for leaks

Refueling diesel trucks

- *No smoking is permitted within 50 feet of the fuel island.*
- 1. Position forklift by fuel pump, lower forks, and turn off the engine.
- 2. Ensure that a fire extinguisher is located within 25 feet of the fuel island.
- 3. Open fuel cap slowly and remove.
- 4. Begin fueling with diesel fuel.
- 5. Always have control of the fill nozzle. Do not lock in open position.
- 6. Do not overfill. Should overfill occur, clean area with speedy dry and dispose of according to job site safety plan.
- 7. Replace fuel cap.



Recharging Batteries

- Due to the variances in the styles and types of batteries and recharging equipment, refer to local procedures for recharging instructions.



A forklift is unattended when



...

- the operator is 25 feet or more away from it
- the operator can't see the unit
- Before leaving a forklift unattended
 - Lower the forks
 - Put controls in neutral
 - Turn off power
 - Set parking brake

Maintenance and Repairs



- Any truck not in safe operating condition should be removed from service
- Repairs can only be made by authorized personnel

Equipped for safety



- your supervisor which of the following personal protective equipment is required for the equipment, operation or process you work with.
Eye Protection Wear industry-rated eye protection. Get medical help as soon as possible if your eye is injured. Contact lenses alone won't protect your eyes. Add safety goggles or safety glasses. Don't wear contact lenses if you're exposed to chemicals, vapors, splashes, radiant or intensive heat or suspended particles.
Head Protection Wear a safety hard hat and add other head protection as needed, such as a face shield, goggles or hood. Make sure your hard hat fits securely. Check the hat for gouges and cracks. Look for straps or sweatbands that are frayed or broken. Clean the shell of your hard hat to remove oil, grease and chemicals.
Foot Protection Make sure your foot protection fits right feels comfortable and is right for your work. Sandals, gym shoes, slippers, platform shoes and elevated heels are not appropriate.
Hearing Protection Wear hearing protection that fits comfortably. Make sure it works with the other equipment you wear, such as head, eye and breathing protection. Ask your supervisor or safety professional for the proper ear plugs or ear muffs for your work environment.

