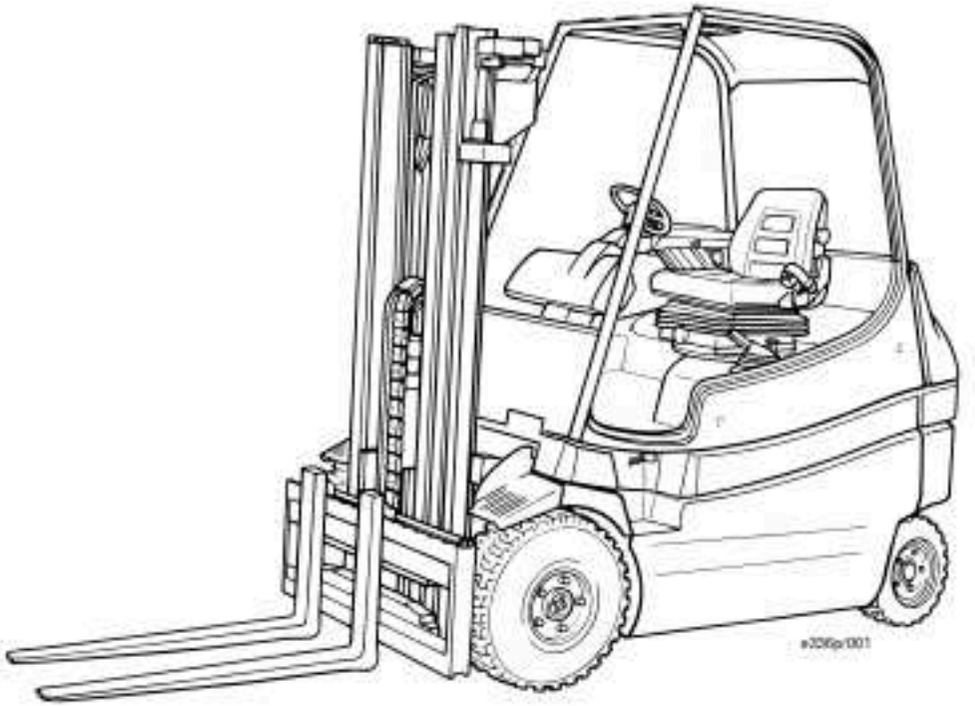
MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual |...



Operating Instructions

Linde Panorama Fork Lift Truck

E 25 - 02 / E 30 - 02

With Electric Motors

336 804 3011 GB

0702

Order the manual at mid-west-tech.com >

Page

Description ... 2
Approved applications ... 2
Technical note ... 3
Truck takeover ... 3
Type plate ... 5
Technical data ... 10
Technical description ... 12
Drive ... 12
Steering ... 12
Hydraulic system ... 12
Operation ... 12
Brakes ... 12
Handbrake ... 12
Brush monitor ... 12
Electrical system ... 12
General view of truck ... 13
Controls and indicators ... 14
Composite instrument ... 15
Hour meter ... 16
Battery discharge indicator ... 16

Before operation ... 17
Safety rules ... 17
Safety information ... 17
Handling fluids and lubricants ... 17
Accident prevention check ... 18
Operation of industrial trucks in the plant area ... 18
Running-in instructions ... 18
Checks and services prior to initial operation of the truck 18
Daily checks ... 18
Daily checks and servicing before operation ... 19
Check the tyre inflation pressure ... 19
Check the tightness of the wheel nuts ... 19
Push, pull the emergency isolator button ... 19
Opening the overhead guard ... 20
First lock-in position: Servicing position ... 20
Second lock-in position: Battery change ... 20
Closing the overhead guard ... 21
Check the battery charge ... 22
Charging the battery ... 22
Connecting the battery to a suitable external charger ... 23
Check the condition, electrolyte level and specific gravity of the battery ... 23
Battery change ... 24

Page

Battery removal with a crane ... 24
Adjusting armrest of the driver's seat ... 24
Adjusting the driver's seat ... 25
Applying the seat belt, opening the seat belt ... 25
Driving with seat pivoted (to 45° position) ... 26
Driving with seat not pivoted ... 26

Operation ... 27
Driving ... 27
Travel in the forward direction (seat not pivoted) ... 27
Travel in the forward direction (seat pivoted) ... 27
Travel in the reverse direction (seat not pivoted) ... 27
Travel in the reverse direction (seat pivoted) ... 27
Reversing direction ... 28
Reversing the direction of travel ... 28
Malfunctions during operation ... 28
Steering system ... 29
Steering ... 29
Braking system ... 30
Service brake, regenerative brake ... 30
Foot brake ... 30
Operating the electric motor brake (LBC) ... 30
Handbrake ... 30
Engaging the handbrake ... 30
Releasing the handbrake ... 30
Central control lever (joystick) operation of mast and attachments ... 31
Tilting the mast forward ... 31
Tilting the mast back ... 31
Raising the fork carriage ... 31
Lowering the fork carriage ... 31
Operating the attachments ... 31
Operating the sideshift ... 31
Operating the clamp ... 31
Installation of additional equipment ... 32
Turning on the front working lights ... 32
Turning on the rear working lights ... 32
Turning on the front windscreen wiper and washer ... 32
Turning on the rear windscreen wiper ... 32
Turning on the lighting ... 32
Turning on the hazard warning light ... 32
Turning on the directional indicator lights ... 32
Electric heater ... 33
Data Logger ... 33

Page

Operating the horn ... 34
Opening, closing the electrical compartment cover ... 34
Fuses ... 35
Checking, renewing the fuses ... 35
Automotive fuses ... 35
Main circuit fuses ... 35
Fuses (options) ... 36
Before loading ... 37
Positioning the forks ... 38
Loading ... 38
Transporting the load ... 39
Unloading ... 39
Before leaving the lift truck unattended ... 39
Tow coupling ... 40
Transport, Slinging the truck ... 41
Transporting the truck on a lorry or low-bed trailer ... 41
Slinging the truck with a crane ... 41
Wheel change ... 42
Jack locations: Changing the rear, front wheels ... 42
Mast removal ... 43
Towing instructions ... 43
Towing procedure ... 43
Forced opening of overhead guard ... 44
Forced opening of overhead guard without Bowden cable ... 44
Tilting the mast manually ... 45
Lowering the forks manually ... 45

Maintenance ... 47
Taking the truck out of operation ... 47
Measures before taking the truck out of operation ... 47
Putting the truck back into operation ... 47
General information ... 47
Work on the mast and on the front part of the truck ... 48
Securing the mast against tilting back ... 48
Mast versions ... 48
Standard mast ... 48
Securing the raised standard mast ... 48
Duplex mast ... 48
Securing the raised duplex mast ... 49
Triplex mast ... 49
Securing the raised triplex mast ... 49
Services after the first 50 hours of operation ... 49
Inspection and maintenance chart ... 50

336 804 3011.0702

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publication 336-804-3011

Order the manual at mid-west-tech.com >

Page

Inspection and maintenance as required 52
Check seat belt for condition and operation 52
Clean the lift truck 53
Clean and spray the lift chain 53
Renew the carbon brushes 54
Tighten the wheel nuts 54
Check the tyres for damage and foreign objects 54
Check the security of the hydraulic oil tank 55
Lubricate the steer axle, mast and tilt cylinder bearings .. 55
Other cleaning and greasing work 55

Inspection and maintenance every 500 or 1000 hours or annually 56
Clean the steering axle 56
Lubricate the steering axle 56
Inspect the joystick boot 56
Clean the left and right wheel traction, power steering and working hydraulics pump motors 57
Clean the traction motor and tractor compartment fans ... 57
Clean the digital control 57
Lubricate the mast and tilt cylinder pivots 58
Retighten the mast fastening bolts 58
Sideshift: Clean, grease and check the mounting 59
Check the braking system 59
Check the brake linings, lubricate the brake lever pivot ... 59
Visual check of the motor brushes 60
Check the working and steering hydraulics for leaks 60
Check the counterweight, electric motors, chassis, wheel drives, overhead guard and steering axle for security .. 60
Mast, lift chain and end stops: Check condition, mounting and function 61
Adjust the lift chain length, lubricate the lift chain with chain spray 61
Check the fork quick-releases and fork stops 62

Page

Check the pretension of double hoses if attachments are fitted 62
Check the hydraulic oil level 62
Check and oil the pedal and travel control linkage pivots and overhead guard lock 63
Grease the overhead guard pivots 63
Check and lubricate other pivots and joints 63
Check the contactor 64
Change the wheel drive oil 64
Check the electric cables, cable connectors and connections for condition and tightness 65
Renew the hydraulic breather, suction and pressure filter 66
Check the wheel drives for oil leaks 67

Inspection and maintenance every 3000 hours or every 2 years 68
Renew the hydraulic oil 68
Change the oil in wheel drive 69

Inspection and maintenance specifications 70

Lubricants recommendations 71
Hydraulic oil 71
Bio hydraulic oil 71
Gear oil 71
Lubricating grease 71
Battery grease 71
Chain spray 71
Troubleshooting guide 73
Wiring diagram - LDC controller 74
Wiring diagram (options) 80
Hydraulic schematic for working and steering hydraulics 82
Index 84

336 804 3011.0702

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publication 336-804-3011

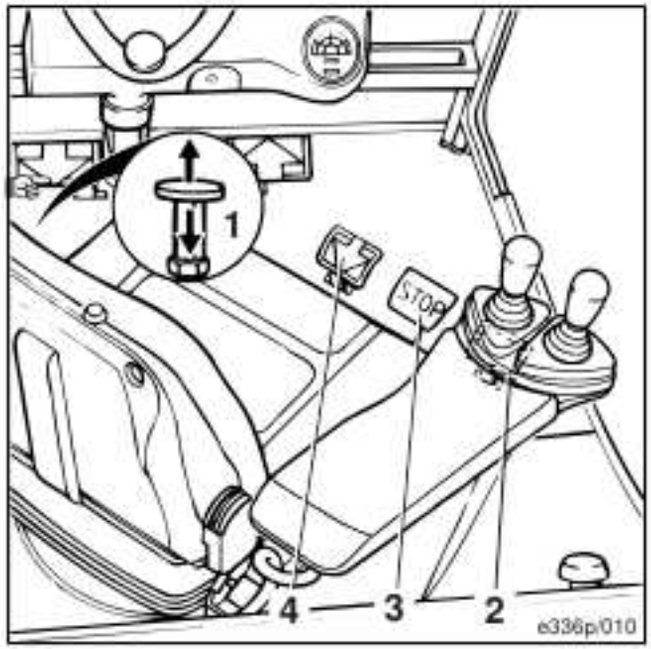
Order the manual at mid-west-tech.com >

Driving with seat pivoted (to 45° position)

☞ **NOTE**

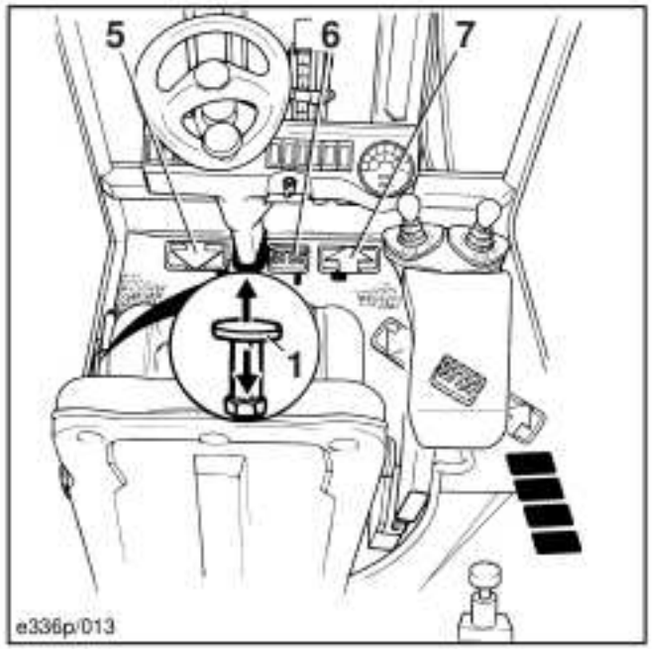
The accelerator pedals and the brake pedal are only operational if the driver's seat is pivoted as far as the stop and locked in its respective position.

- Sit down on the driver's seat.
- Lift the locking pin (1), hold it and pivot the seat as far as the stop (clockwise).
- Release the locking pin (1) and secure the seat (locking pin must engage).
- The right forward accelerator pedal (2) or the left reversing accelerator pedal (4) or the brake pedal (3) are operational in this seat position.



Driving with seat not pivoted

- Raise the locking pin (1), hold it and pivot the seat as far as the stop (anti-clockwise).
- Release the locking pin (1) and secure the seat (locking pin must engage).
- The right forward accelerator pedal (7) or the left reversing accelerator pedal (5) or the brake pedal (6) are operational in this seat position.



336 804 3011.0702

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publication 336-804-3011

Order the manual at mid-west-tech.com >

Check the load capacity diagram (1) before picking up a load. If attachments are fitted, first check the respective load capacity plate (2).

DANGER

The weights given in the load capacity diagram and plate are only applicable to compact and homogeneous loads. Never exceed the load capacity of the lift truck. Overloading will reduce truck stability and the strength of forks and mast.

The maximum load capacity is governed by the height of lift and the load centre distance.

NOTE

- **Before transporting off-centre or swinging loads,**
- **before transporting loads with the mast tilted forward or the load not near the ground,**
- **loads with a large load centre distance,**
- **before operating attachments,**
- **with wind force 6**

check the load limits and contact your authorised distributor.

Example

Load centre distance: ..... 700 mm

Height of lift: ..... 6500 mm

- Follow the vertical line for a load centre distance of 700 mm to the point where it intersects the line for a lift height of 6500 mm.
- Follow the horizontal line at the point of intersection to the left to read the maximum load capacity.
- In this case the maximum load is ..... 1300 kg

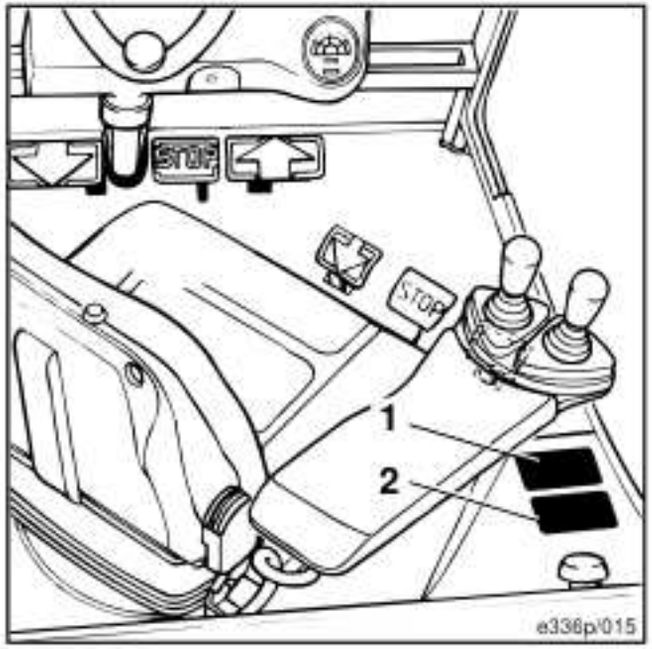
Proceed in the same manner for other heights and load centre distances. The values in the diagram apply to both forks and even distribution of loads.

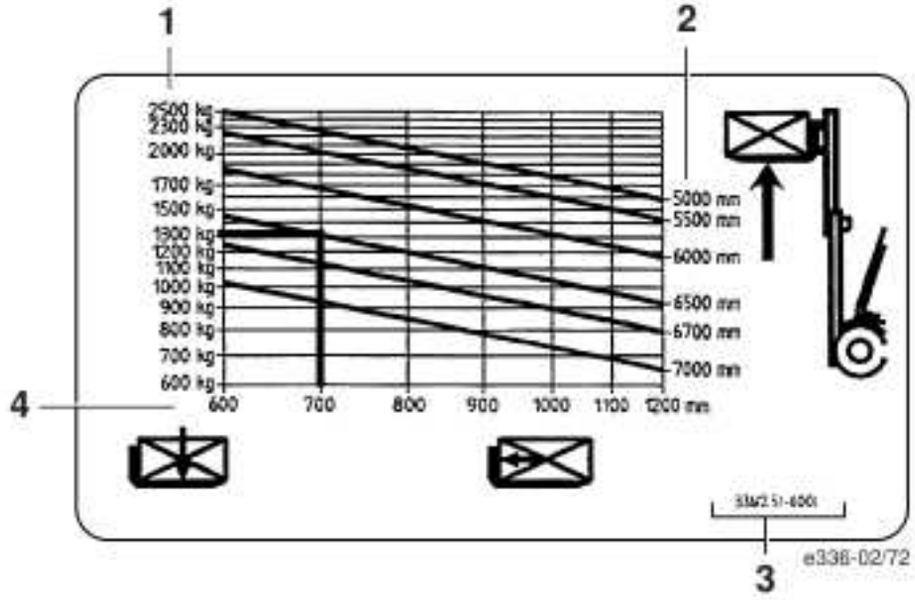
1 Maximum load capacity in kg

2 Height of lift in mm

3 Fork truck model with maximum load capacity

4 Load centre distance from fork-face in mm





336 804 3011.0702

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publication 336-804-3011 Order the manual at mid-west-tech.com >

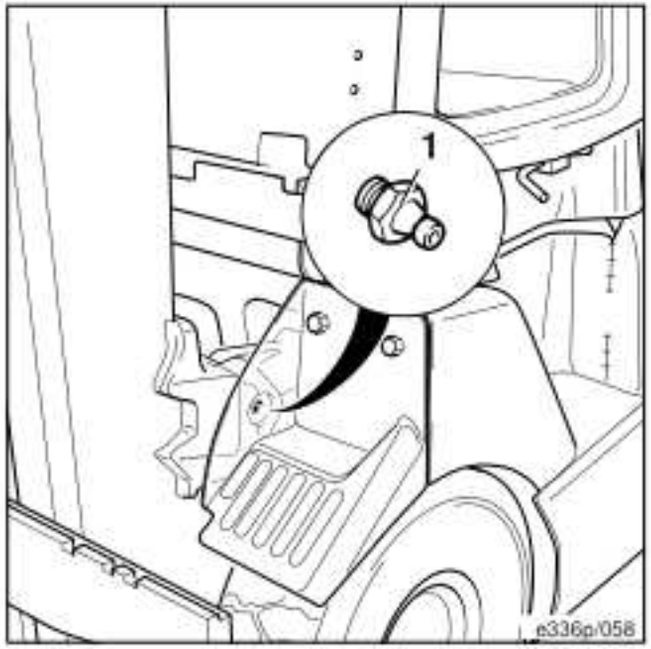
Lubricate the mast and tilt cylinder pivots

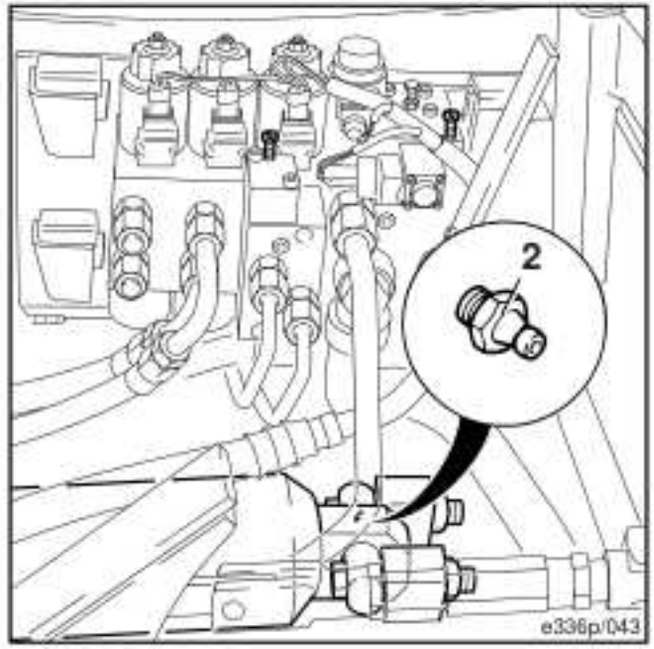
☞ **NOTE**
Use a lubricating grease.

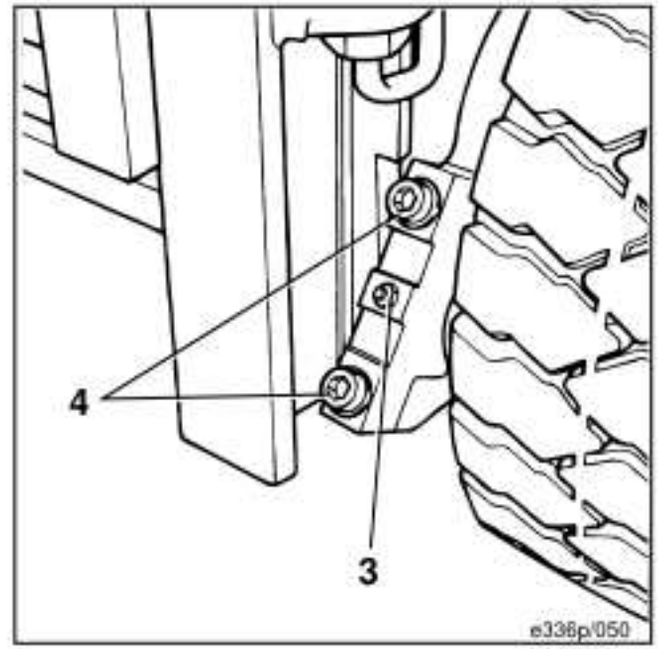
- Open the overhead guard to the second lock-in position.
- Lubricate the left and right grease nipples (1 and 2) of the tilt cylinder at the mast and chassis with grease.
- Lubricate with a grease gun until new grease emerges at the pivots.
- Close the overhead guard.
- Raise the fork carriage and secure it against inadvertent lowering with a chain.
- Lubricate the left and right mast pivot grease nipples (3).
- Lubricate with a grease gun until some fresh grease emerges at the pivots.
- Remove the securing chain and fully lower the fork carriage.

Retighten the mast fastening bolts

- Elevate the fork carriage and secure against inadvertent lowering.
- Check the fastening bolts (4) (2 on each side) of the mast pivot bearing shells for tightness.
  Torque: ..... 275 Nm







336 804 3011.0702

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publication 336-804-3011 Order the manual at mid-west-tech.com >

OPERATOR WARNING AND SAFETY DECALS *(continued)*

Operator Warnings Decal

Read and understand the following before operating the truck:



⚠ WARNING

SIT-DOWN RIDER TRUCK OPERATOR WARNINGS

1. CHECK YOUR TRUCK - The truck should be checked daily before being placed in service. If found to be in need of repair, defective, or in any way unsafe it should be reported immediately to the proper authority and removed from service until restored to a safe operating condition.

2. KNOW YOUR TRUCK - Do not operate this truck unless you have been trained and authorized to do so. Read all warnings and instructions in the Operator's manual on this truck; or obtain them from plant Safety Director or the local Linde representative.

3. KEEP INSIDE - Operate truck only from designated operating position. Operate the truck only when you are in the normal operating position and seated in the Operator's seat. Never place any part of your body into the mast structure, between the mast and the truck, or outside the truck. Do not carry passengers.

4. PROTECT YOURSELF - Do not operate truck without overhead guard.

5. SEAT BELT - MAKE SURE YOUR SEAT BELT IS FASTENED BEFORE OPERATING THE TRUCK.

6. LATERAL TIPOVER - Can occur loaded or unloaded by a combination of speed and sharpness of turn. SLOW DOWN BEFORE TURNING. With the mast raised, lateral tipover also can occur by turning and/or braking when moving rearward, turning and/or accelerating forward or turning on an incline or ramp. TRAVEL WITH THE MAST LOWERED. The potential for lateral tipover will be further increased by overloading, excessive rearward tilt or off-center positioning of the load. Don't risk injury or death. Drive smart.

7. LONGITUDINAL TIPOVER - Can occur by driving with the load down slope on an incline or ramp, overloading, excessive forward tilt or aggressive braking when moving forward or accelerating rearward with the mast elevated. TRAVEL WITH THE MAST LOWERED. Don't risk injury or death. Drive smart.

8. LATERAL OR LONGITUDINAL TIPOVER - Can occur if the truck is driven over objects on the floor or ground, off the edge of improved surfaces, or into potholes, or by impacting overhead obstacles or collision with other objects. Don't risk injury or death. Drive smart.

9. DON'T JUMP OFF - If your truck begins to tip over, DON'T JUMP. Hold the steering wheel tightly, brace feet, and lean away from tip. Stay in the seat to avoid being trapped between the truck and the ground.

10. HIGH LOADS - Do not handle loads which are higher than the load backrest or load backrest extension unless load is secured so that no part of it could fall backward.

11. STABILIZE YOUR LOAD - Do not handle unstable or loosely stacked loads. Use special care when handling long, high, or wide loads to avoid losing the load, striking bystanders, or tipping truck.

12. CENTER YOUR LOAD - When using forks, space forks as far apart as load will permit. Before lifting, be sure load is centered and forks are completely under load.

13. NEVER OVERLOAD - Do not overload truck. Check capacity plate for load weight and load center information.

14. AVOID SUDDEN MOVEMENTS - Start, stop, travel, steer, and brake smoothly. Sudden movements can endanger yourself and others.

15. LOOK OVERHEAD - Elevate forks or other lifting mechanism only to pick up or stack a load. Lift and lower with mast vertical or slightly back. - NEVER FORWARD. Watch out for obstructions, especially overhead.

16. MINIMUM TILT - Operate tilting mechanism slowly and smoothly. Do not tilt forward when elevated except to pick up or deposit a load. When stacking use only enough backward tilt to stabilize load.

17. EYES AHEAD - Travel with load or lifting mechanism as low as possible and tilted back. Always look in direction of travel. Keep a clear view, and when load interferes with visibility, travel with lifting mechanism trailing (except when climbing ramps).

18. CARE ON RAMPS - Use special care when operating on ramps - travel slowly, and do not angle or turn. When truck is loaded, travel with load uphill. When truck is empty, travel with lifting mechanism downhill.

19. SLOW DOWN - Observe applicable traffic regulations. Yield right-of-way to pedestrians. Slow down & sound horn at cross aisles and wherever vision is obstructed.

20. WATCH PEOPLE - Do not allow anyone to stand or pass under lifting mechanism, directly behind truck or within rear swing area when turning.

21. WORK PLATFORMS - DO NOT LIFT OR CARRY PERSONNEL USING THE FORKS OF THE TRUCK, not even with a work platform. The truck is designed for transporting, warehousing and stacking of material, not personnel.

22. SHUT DOWN COMPLETELY - Before getting off truck, neutralize travel control, fully lower lifting mechanism and set the parking brake. Also shut off power when leaving truck unattended. Block wheels if truck is parked on an incline.

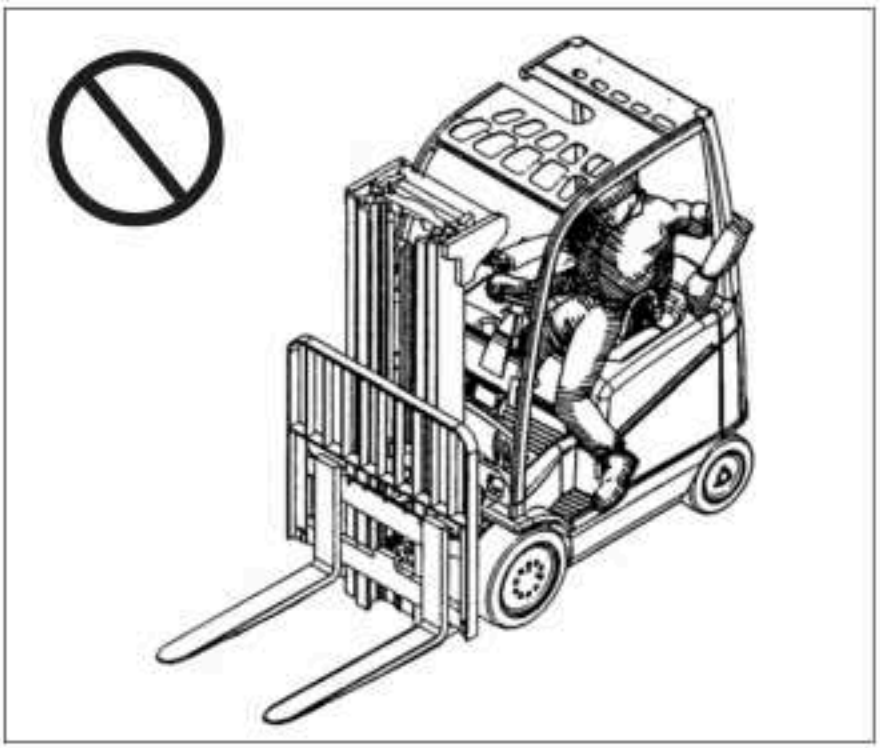
Linde

Failure to comply with these warnings will create an unreasonable risk of injury to yourself and others.

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publi... Order the manual at mid-west-tech.com >

OPERATING POSITION

Face the truck when mounting and dismounting. Maintain a three-point contact, one foot and two hands with the truck when mounting or dismounting. Never exit a moving truck. Never jump on or off the truck.



⚠ WARNING:

Operate the truck only when you are in the normal operating position. Keep hands and feet inside the Operator's Compartment.



⚠ WARNING:

Keep hands, feet and legs out of the upright

MidWestTech | Linde Panorama E 25-02, E 30-02 Electric Forklift Operator's Manual | Publi... Order the manual at mid-west-tech.com >