



Do your truck's forks meet safe operational standards?

We make checking simple.

 **JUNGHEINRICH**

Reduce “Workload”.

Check your truck’s forks regularly.

There is a lot resting on the safe operation of your forklift truck forks. The forks are the main load carrier and it is a pre-requisite that they are given a full inspection on a regular basis to ensure availability for day to day operation.

Our simple check procedure will confirm the forks meets all safety parameters prior to operation.

Good Practice

“Employees must immediately report to their employer or responsible supervisor any significant concerns that may affect health and safety issues discovered during inspections.”

Employers’ Liability

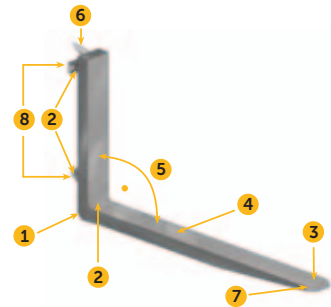
“The operator must ensure that defects which impair safety are remedied before continuing operation.”

Who performs the inspections?

They may only be performed by competent engineers.

ISO standard 5057:

Inspections must be performed regularly. At least every 12 months or at least every 1,500 operating hours. Fork truck operators / owners are also required to conduct regular visual inspections.



Our wear measuring card will make it easy for you to check fork wear.

General instructions for safe operation of forks

1. Always lift the load with both forks, never a single fork (either partial or full load).
2. Conduct regular visual inspections. If damage is discovered, take the forks out of operation immediately.
3. Note the capacity and load centre distance. Using the forks up to the tipping point of the truck is not permitted and is dangerous.
4. Forks are not designed for lateral forces. Avoid entering at an angle or pushing from the side.
5. Due to the danger of breakage, never use the forks as reverse forks with the blade pointing up. Reverse forks are available as specially designed units.
6. Do not allow any loads to fall on the forks.
7. Do not transport any molten materials.
8. Do not carry people.
9. When the truck is in operation the fork locks must always be engaged to prevent the forks moving to the side. Otherwise there is the potential of fork slide.
10. Do not lift loads with only the fork tip or with the tilt cylinder. Danger of overload!
11. Have the required statutory accident prevention inspections (including crack check) performed regularly (by our safety service, for example).
12. Forks with a longer length must generally be of a higher specification, as there is a danger of overload. Ask our Area Sales Manager for advice.
13. Do not make any changes or modifications yourself.
14. Welding and heat treatment can destroy the material structure, resulting in breakage.
15. Do not weld worn forks (ISO 5057).

16. Drilled holes can weaken the fork, the result is the forming of cracks.

17. Do not straighten bent forks yourself.

18. Even if only one fork is damaged, you should still examine both forks for possible damage and if necessary replace both to ensure uniformity.

19. Measure wear regularly. When 10 % of the original nominal thickness has worn off, the forks must be replaced (ISO 5057). Just 10 % wear reduces capacity by about 20 %.



1. Determine the nominal thickness "N" of the fork with a scale (in the rear part of the fork, as illustrated.).



2. Place the opening assigned to nominal fork thickness "N" (for example "N 40" for a nominal thickness of 40 mm) in the area of the greatest wear (often in the formed area).



Measuring card
Order no.
51073378



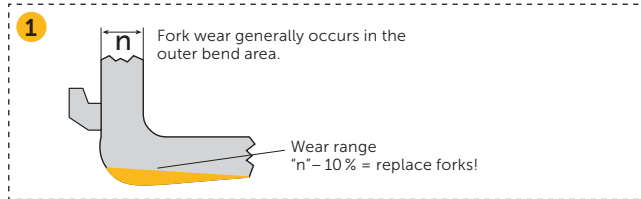
3. If the opening of the relevant measuring card can be pushed onto the fork, the fork must be replaced. The wear has already exceeded 10 % of the nominal thickness.

All illustrations and graphics in this brochure are schematic diagrams. Subject to technical modifications as part of technological progress and product optimisation. The illustrations in this brochure are not part of any contract. Errors excepted.

The measuring tool for checking angles and measuring wear is merely an aid. It is not certified legal for trade, it cannot be calibrated and it is not a precision measuring instrument. Using it does not relieve the user of his obligation to exercise due care.

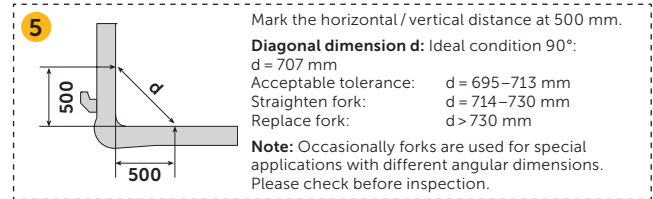
Checklist.

Visual inspection and intensive check in accordance with ISO standard.



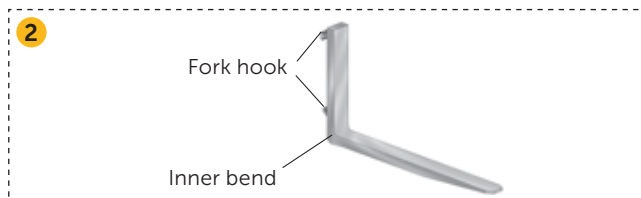
1 Wear

Just 10 % wear of the fork means that capacity has been reduced by about 20 %. The original nominal thickness (N) of the fork is the starting point for the wear measurement. With a nominal thickness of 40 mm, for example, the wear limit is 36 mm. ISO standard 5057 prescribes that a fork must be replaced if the wear of the fork exceeds 10 %.



5 Angular dimension

Forks are at an angle of 90° as supplied. They are designed so that no permanent bending will occur even if three times the normal load is applied. Overload or misuse can result in permanent bending.



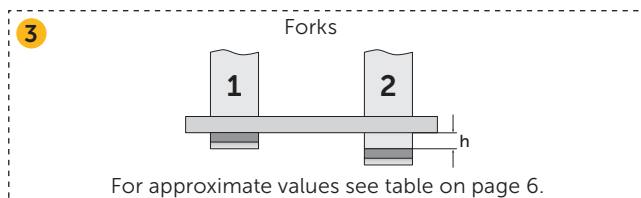
2 Surface cracks

Critical areas: Fork inner edge and welding on carriers – test procedures: Magnetic powder crack inspection / dye penetration method.



6 Locks

The locks prevent unwanted slipping on the fork carriage. Use of the truck with damaged or missing locks is not permitted.



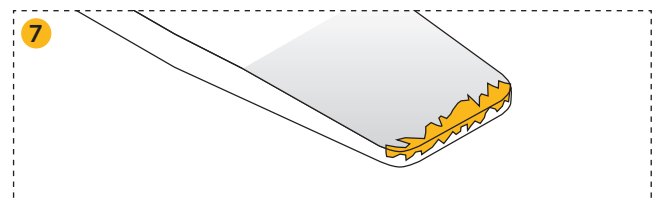
3 Differences in height

The difference in height between the forks on the tip must not be more than 1.5 % of the blade length.

Acceptable: $h = \max. \frac{L^*}{66}$

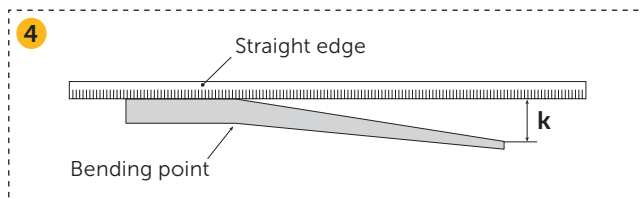
Straighten fork: $h = \frac{L^*}{66} \text{ to } \frac{L^*}{33}$

Replace fork: $h = \text{more than } \frac{L^*}{33}$



7 Damage / wear on the tip

Forks that are worn or too thin pose a risk of injuries and could damage goods. Replace or shorten fork!

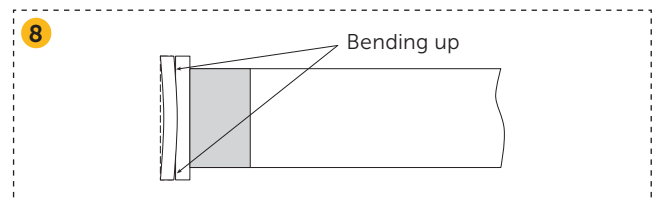


4 Deflection of the blade

Acceptable: $k = \max. \frac{L^*}{66}$

Straighten fork: $k = \frac{L^*}{66} \text{ to } \frac{L^*}{33}$

Replace fork: $k = \text{more than } \frac{L^*}{33}$



8 Bending up of the fork hook

Lateral forces and extended operating time can cause fork hooks to bend laterally. This results in limited directional stability. If fork hooks are significantly bent or worn they must be reformed or replaced.

* L = blade length (mm)



Your reference values for items 3 and 4 in the checklist.

Fork length (mm)	Acceptable value (mm)	Straighten fork (mm)	Fork Alignment (mm)
800	to 12	12 to 24	24
900	to 14	14 to 27	27
1,000	to 15	15 to 30	30
1,100	to 17	17 to 33	33
1,200	to 18	18 to 36	36
1,300	to 20	20 to 39	39
1,400	to 21	21 to 42	42
1,500	to 23	23 to 45	45
1,600	to 24	24 to 48	48
1,700	to 26	26 to 52	52
1,800	to 27	27 to 55	55
1,900	to 29	29 to 58	58
2,000	to 30	30 to 61	61
2,100	to 32	32 to 64	64
2,200	to 33	33 to 67	67
2,300	to 35	35 to 70	70
2,400	to 36	36 to 73	73

Inspection record.

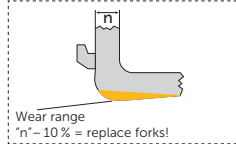
Forks for trucks and construction machines.

Condition

Findings

1 Wear

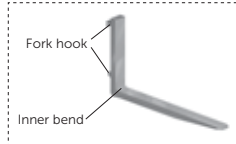
Nominal thickness "N" – 10 % → Replace



- In good condition
 - Not in good condition
- Comments:

2 Surface cracks

Signs of cracks → Replace



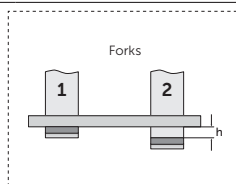
- In good condition
 - Not in good condition
- Comments:

3 Differences in height at fork tip

Acceptable: $h = \max. \frac{L^*}{66}$

Straighten fork: $h = \frac{L^*}{66}$ to $\frac{L^*}{33}$

Replace fork: $h = \text{more than } \frac{L^*}{33}$



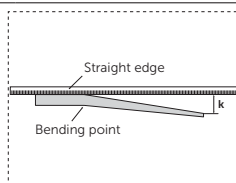
- In good condition
 - Not in good condition
- Comments:

4 Deflection of the blade

Acceptable: $k = \max. \frac{L^*}{66}$

Straighten fork: $k = \frac{L^*}{66}$ to $\frac{L^*}{33}$

Replace fork: $k = \text{more than } \frac{L^*}{33}$



- In good condition
 - Not in good condition
- Comments:

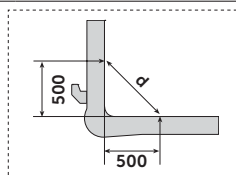
5 Angular dimension

Ideal condition 90°: $d = 707 \text{ mm}$

Acceptable tolerance: $d = 695 - 713 \text{ mm}$

Straighten fork: $d = 714 - 730 \text{ mm}$

Align fork: $d > 730 \text{ mm}$



- In good condition
 - Not in good condition
- Comments:

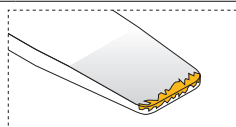
Occasionally forks are used for special applications with different angular dimensions. Please check before inspection.

6 Locks



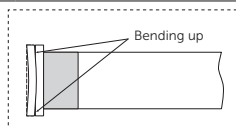
- In good condition
 - Not in good condition
- Comments:

7 Damage / wear on the tip



- In good condition
 - Not in good condition
- Comments:

8 Bending up of the fork hook



- In good condition
 - Not in good condition
- Comments:

* L = blade length (mm)

Findings

- Fork in good condition
- Fork not in good condition
 - ☐ Scrap / replace
 - ☐ Repairs

Forks should always be replaced in pairs. This is because if one fork is damaged it may be assumed that its counterpart will exhibit similar damage.

Fork dimensions:

Width (mm) _____ Blade length (mm) _____

Thickness (mm) _____ Suspension _____

Type of fork lift truck _____

Serial no. _____

Inspected by _____

Date _____

Signature _____



Jungheinrich
Plants, Sales and
Services Europe
ISO 9001/ISO14001



Jungheinrich
Vertrieb Deutschland AG & Co. KG

Am Stadtrand 35
22047 Hamburg
Germany
Telephone +49 40 6948-0
Telefax +49 40 6948-1777

info@jungheinrich.com
www.jungheinrich.com

 **JUNGHEINRICH**