

Check the forkarm for blade reduction in the vicinity of the heel

Forkarm Failures

The most common cause of forkarm failures fitted to “Powered Industrial Trucks” is blade reduction. The critical area of blade reduction is at the heel.

By continuing to use the forkarm, when worn and at its specified lifting capacity, stresses in the forkarms are substantially increased which accelerates the development of fatigue cracks in their heels leading to premature and often unexpected failure.

Checking Blade Reduction

The measuring jaws of the regular size calipers check best those forkarms with a thickness \leq to 65mm (2.5”).

- 1) **Each time** before testing set the Caliper with the top jaws.
- 2) **Set the Caliper** with the top jaws, Figure 2, by measuring the thickness of the shank where there is no contact with the carriage rail. This location receives almost no wear.

When the design thickness of the blade differs from the shank it should be found stamped next to the rated lifting capacity on the shank. The top jaws can then be “set” to this thickness by using the rule.

- 3) **Check the blade** at the heel of the forkarm by passing the “set” Caliper over the flanks of the blade, Figure 3 or Figure 4.

Mistakes can arise by accidentally altering the “set” angle of the jaws when laying them down or when testing the blade.

- 4) **Check the Caliper setting** after testing the blade to ensure there was no Caliper angle movement during testing.

The “set” has not changed if the top jaws fit neatly across the shank, Figure 2, or if the gap between the top jaws equals the design thickness. If the “set” differs, then repeat the process.

The forkarm is accepted when the lower jaws of the Caliper are restricted from passing over the flank of the blade, Figure 3. This means the blade has worn less than 10% of the original thickness.

The forkarm is rejected when the lower jaws of the Caliper pass over the flank of the blade, Figure 4. This means, the blade has worn at least 10% and the loss to lifting capacity is at least 19%.

The rejected forkarm must be withdrawn from service and replaced.

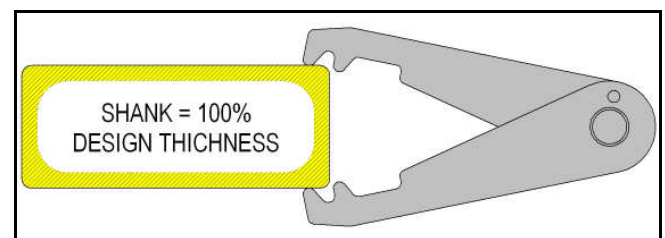


Fig. 2 Set the “top Jaws” to the design thickness

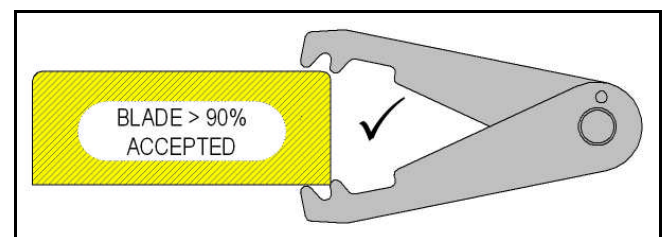


Fig. 3 Accepted when the lower jaws restrict the blade flank

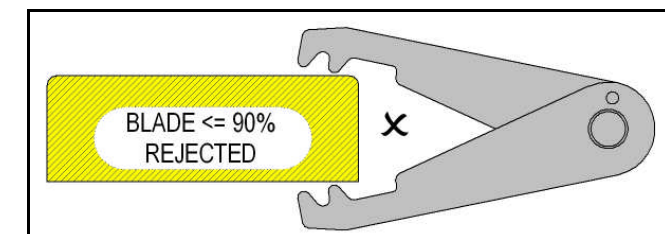
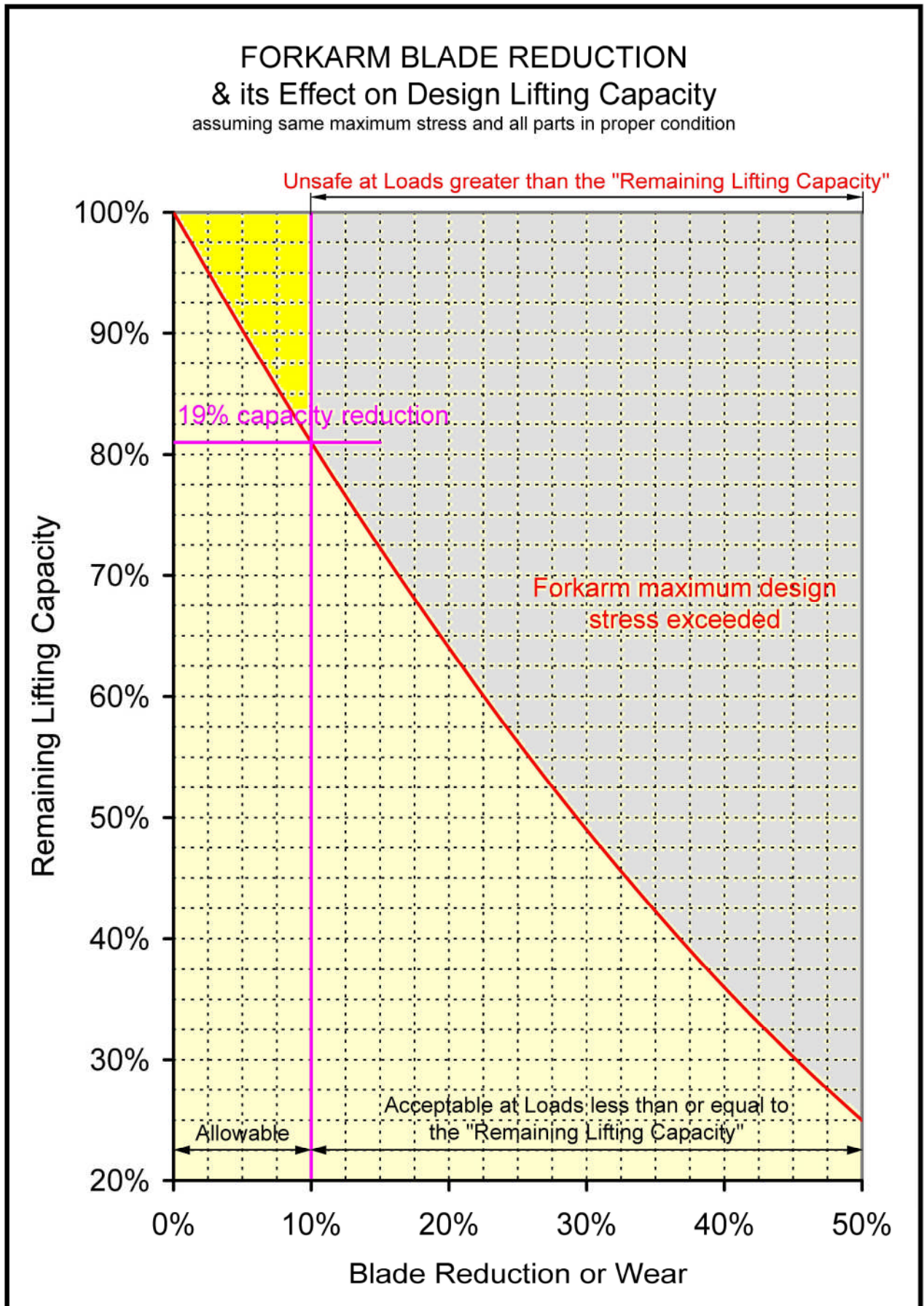


Fig. 4 Rejected when the “lower jaws” pass over the blade flanks



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