FORK MAINTENANCE INSPECTION FORM

USN:	
MANUFACTURER:	MODEL:
YEAR:	SERIAL #:
CONTRACT NUMBER:	

REQUIREMENT

Each fork shall be inspected and documented in the MHE history file at intervals of not more than 12 months or whenever any defect or permanent deformation is detected. Any defect shall be a cause for rejection. MHE shall be removed from service until the fork is repaired or replaced.

DESCRIPTION	LEFT FORK		RIGHT FORK		
	SAT	UNSAT	SAT	UNSAT	N/A
1. Manufacturer's SWL Markings	☐	☐	☐	☐	☐
2. Surface Cracks	☐	☐	☐	☐	☐
3. Straightness of Blade and Shank: (a) Upper Face of Blade (b) Front Face of Shank	☐	☐	☐	☐	☐
4. Fork Angle: (original specification =	☐	☐	☐	☐	☐
5. Difference in Height of Fork Tips (Length of blade = in x 0.03 = in	☐	☐	☐	☐	☐
6. Fork Blades Left Fork Original Thickness = in x 0.10 = in Current Thickness = in Right Fork: Original Thickness = in x 0.10 = in Current Thickness = in	☐	☐	☐	☐	☐
7. Positioning Locks/Latches and Stops (where applicable)	☐	☐	☐	☐	☐
8. Fork Hooks (where applicable)	☐	☐	☐	☐	☐
9. Plated Fork (Type EX only)	☐	☐	☐	☐	☐

INSPECTION RESULTS: BASED ON THE ABOVE INSPECTIONS, THE OVERALL CONDITION OF EACH FORK IS:

Left Fork : SAT ☐	Left Fork : UNSAT ☐	Right Fork: SAT ☐	Right Fork: UNSAT ☐
Inspector:		Date:	Next Due Date:
Print Name/Rate:		Inspection Activity:	

Reset Form

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FORK MAINTENANCE INSPECTION FORM - CRITERIA

1. Manufacturer's SWL Markings. Verify the manufacturer's SWL marking is present, legible and clearly visible on each fork. The SWL of each fork shall be at least half of the manufacturer's SWL at the rated load as shown on the MHE data plate. Older forks may not have the manufacturer's SWL markings and there is no requirement to mark them.

2. Surface Cracks. The forks shall be thoroughly inspected for cracks and, if necessary, be subjected to a non-destructive crack detection process with special emphasis on the heel and welds attaching all mounting components to the fork.

NOTE

A T-square, flashlight and a feeler gauge, is required to perform inspection steps 3, 4, and 5.

3. Straightness of Blade and Shank. The straightness of the upper face of the blade and the front face of the shank shall be checked. The deviation from the straightness shall not exceed 0.5 percent of the length of the blade and/or height of the shank, respectively. [Example: The length of the blade is 36 inches and the length of the shank is 18 inches. The maximum allowable deviation for the blade is 0.18 inches (36" x 0.005 = 0.18 inches), and for the shank is 0.09 inches (18" x 0.005 =0.09 inches)]. Reset as required by the fork manufacturer or their designated representative.

4. Fork Angle (upper face of the blade to load face of shank). Any fork that has a deviation of greater than 3 degrees from the original specification (normally 90 degrees).

5. Difference in Height of Fork Tips. The difference in height of one set of forks when mounted on the fork carrier shall be checked. The difference in tip height shall not exceed 3% of the length of the blade. [Example: A 42-inch fork would be allowed a maximum variation of 1.26 inches in height (42 inches x 0.03 = 1.26 inches)]. Reset as required.

6. Fork Blades. The fork blades shall be thoroughly inspected for wear with emphasis on the high wear area of the heel. Additionally, the thickness of the fork blades shall be inspected to ensure that they have not been reduced below 10% of the original thickness. For non-folding forks, the shank is not subject to wear so it may serve as a reference for the fork's original cross-section (thickness). For folding forks, the shank is always thicker than the blade. Therefore, do not use the shank thickness for calculating the required fork blade thickness measurement. Refer to the actual fork manufacturer's markings, which normally is stamped on the side of the shank. Use an appropriate measuring device such as a micrometer, vernier caliper, or fork wear caliper when determining fork wear limits. Examples are provided below:

(I) If using a micrometer or vernier caliper, take a minimum of three measurements along each fork at the beginning, the middle, and the end up to where the taper begins. If the fork is worn below 10% at any of these locations, then the fork must be replaced. [Example: The blade shank thickness measures 2.000 inches. The maximum allowable wear of the fork blades is 10% or 0.10, which is 2.00 x 0.10 (10%) = 0.20 inches. Therefore, if the lowest of the three location readings is less than 1.80 inches (2.00 - 0.20), then the fork has been worn beyond 10% of its original thickness and it must be replaced.]

(2) If using a fork wear caliper, figure 8-15, the outer caliper's points are set by gauging the shank's thickness, figure -15, view A. The caliper is then transferred to each blade at any point between the heel to a point where the taper begins (not the taper itself). If the inner measuring points clear any blade, figure 8-15, view b, the thickness has been worn by 10% or more from its original thickness, and the fork must be replaced. Refer to table 8-1 for suggested sources of supply.

7. Positioning Locks/Latches and Stops (when originally provided). Verify that the positioning lock/latches and stops are in good condition and operate properly. Stops shall prevent the forks from becoming disengaged from the carriage during fork adjustment. Replace parts as required.

8. Fork Hooks (when original~v provided). The support face of the top hook and the retaining face of both hooks shall be inspected for wear, crushing and other deformations. The clearance between the forks and the fork carrier shall not exceed the manufacturer's tolerances.

9. Plated Hooks (Tvpe EX Only). The plated forks on EX type MHE shall be inspected and maintained in accordance with manufacturer's instructions. These forks contain plating (cladding) material (usually bronze) which is applied to an average depth of 3/32 inches (0.090 inches). Reject forks if the plating (cladding) is completely worn exposing the metal fork. Forks can usually be re-plated.

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