

P-307 Reference Para. 12.2.1	Topic Component Failures as Accidents	Reference # NONE
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**Question:** What is the intent and/or the limitations of the statement in P-307 paragraph 12.2.1, “A component failure (e.g., motor burnout, gear tooth failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.)”? This statement has been used in the following events to conclude that they were not reportable WHE accidents:

A bridge crane’s auxiliary hoist drive shaft failed in fatigue while a load was suspended. Upon hearing the noise, the operator immediately stopped the crane by applying the brake (which was downstream from the broken shaft). The operator then lowered the load to the ground through release/application of the brake.

A screw holding down a deck plate on a mobile crane worked loose allowing the plate to rise up. As the crane was being rotated, the spud lock housing contacted the plate causing slight damage to the plate.

While lowering a boom on a portal crane, the boom dog unexpectedly engaged the drum ratchet. The impact caused the failure of hold-down bolts at the opposite end of the drum, but the drum pawl and the pinion gearing prevented a catastrophic free-fall of the boom.

**Answer:** Although the statement is open to interpretation, the intent of this statement is to cover components that fail to operate or perform properly where there is no damage to other components as a result. That is, the damage is confined to the component that failed. Examples are: a travel brake that fails to open during travel causing damage to the brake; a motor burn out that merely results in setting the brakes and stopping the load movement; and a gearbox that is discovered to have damaged internal components but where there is no consequent damage to other components outside of the gearbox. Although the examples of consequences noted in the statement are catastrophic, the amount of consequent damage is irrelevant for reporting purposes.

In the first case noted in your question, the “component failure” exception would apply if there were, in fact, no uncontrolled lowering (i.e., dropping) of the load as a result of the broken shaft. The second case should be treated as a reportable WHE accident. The screw worked loose (i.e., failed to perform correctly) which resulted in consequent damage to the deck plate. The third case should also be treated as a reportable WHE accident. The unexpected setting of the boom pawl (either through failure of a control component or inadvertent setting by the operator or inspector) resulted in consequential damage to other components (i.e., the drum bearing bolts).