Subrogation Issues - An Engineer's Perspective

Ron Koerth - Giffin Koerth Forensic Engineering and Science
416 368 1700 rkoerth@giffinkoerth.com

In our role as forensic engineers, we are most often asked to provide assistance in subrogation matters where a loss is believed to have been caused by either:

1. **A failure of a product, system or piece of machinery; or,**
2. **By the actions or omissions of a third party.**

In both cases, all of the information that is germane to the specific item or action is important to us in being able to arrive at an accurate, fair and reasonable opinion. We typically must be able to consider all of the plausible failure mechanisms or scenarios and be able to eliminate all but one, to a reasonable degree of certainty. Exceptions would be those situations where there are a number of failure scenarios which are attributable to only one party and no one else. In those cases, simply eliminating the other scenarios may be sufficient to prove your case.

In either case some of the typical data that would be relevant can include:

- **What are the item or process characteristics?** Usually this is best obtained by our first-hand examination of the item in question in its normal surroundings. Sometimes we no longer have that opportunity, but we may still be able to arrive at some conclusions if the item has been well documented by others (photographs, sketches, written notes, etc.). Information such as manufacturer, serial number, model number, size, weight, any identifying features, any specific damage noted, etc. are important.

- **What are the characteristics of the overall failure site?** Again this is usually best obtained first-hand. A common example that most people are familiar with is a fire that is alleged to have been caused by some failure of an appliance or device. Once that device is removed from the fire scene it may be difficult to determine if the damage to the appliance or device was caused by the fire or if it was the cause of the fire. This is why we would prefer to have other interested parties inspect the fire scene BEFORE it is altered, if we suspect a device may have caused the fire. When this is not possible, we will document the conditions thoroughly and other interested parties would have to rely on our photographs, diagrams and notes.

- **What were the circumstances leading up to the incident at issue?** Using the fire scenario again, it is important to obtain a broad perspective of the events occurring around the time of the fire. We have seen situations where a number of witness statements point to a different cause. If these statements are not investigated, the true cause may not be found until these witnesses are in the witness box - your case may fall apart at that point. Be very careful of the "slam dunk" cases. It is most often those cases where, because the initial investigator jumped to a conclusion, critical data is overlooked or ignored. It is important to consider all of the information and maintain an "open mind".

- **What was the intended purpose of the product, system or piece of machinery?** This may be relevant because the item may not have been appropriate for the application that the insured was using it in or for. An example would be a situation where

property damage was caused by a piece of equipment that was intended only for home use and was used in a more rigorous commercial setting. However, even in those situations, there may be some recovery possible if the manufacturer did not adequately label the equipment. We may not be provided with all of that information (sales brochures, owner's manuals, etc.) and may be asked only to opine on the suitability of the equipment for the application. In that circumstance, our conclusions may be subject to alteration upon the production of that additional information.

- **What was the maintenance history?** For example, if we are asked to look at a machine which has been damaged during its failure, it would be important to determine if the machine was properly maintained, as some or all of the damage present after the loss may be due to abuse or poor maintenance. If the pre-loss condition of the machine cannot be accurately determined and if no maintenance records are available, recovery against the machine builder may not be possible.

- **What activities were being performed at the time of the loss?** Also, what occurred in the days, weeks or months before? For example, often times in vehicle fires, it may have been the last maintenance activity that caused a fault or failure within one of the vehicle systems or components.

- **What were the contractual responsibilities of involved parties?** A simple example bringing together many of the pieces of information listed above would be a scenario where a steel beam in a building fails. In that case, the failure could be the result of either the steel beam, or it could be the result of the design or installation of the steel beam, environmental factors, change of use (e.g. the Owner decides to put additional load onto the steel beam), etc. Thus a very broad investigation is required. If the investigation narrowly focuses on the steel beam alone, it is highly unlikely that it would be successful, as many other possible causes were not considered and eliminated.

Much of the above information is best obtained as soon as possible after the loss occurs. In some situations it may not be possible to get certain information once various parties become fully aware of the implications of providing that information. A simple example would be statement information from the person who last finished working on the piece of equipment that just blew up. Once the "dust settles", that person may not be as forthcoming with the actual circumstances that precipitated the failure.

Above all else immediate scene documentation is always a good idea. The adjuster may be one of the first persons on the scene and valuable scene information can quickly "disappear", intentionally or otherwise. Snapping a few photographs is never a bad idea (the more the better). When taking photographs, it is always wise to work from a broad area inward to the failure site. This can provide a subsequent investigator with valuable information about peripheral issues that the adjuster is not familiar with and which may in fact be central to the cause of the failure (e.g. - valve or switch positions, locations of other equipment, the presence or absence of important components or materials, etc.).

In summary, the best possibility for recovery, if an avenue exists, is one in which as many details about the item or people involved in the loss are collected. Otherwise, alternate theories about the cause of the loss may not be able to be disproven.