Embedded Plate Travel Path Damage

Models Affected: All Operator Aboard Battery Extractors

Tech Tip
TT–930

Subject:
Embedded steel plates are often installed along the travel path of an Operator Aboard Battery Extractor (BE) to compensate for an uneven or unlevel floor. This method is a temporary solution that is more costly in the long run than addressing the travel path issues at the time of installation.

Description:
When steel plates are installed on top of, or embedded into concrete (where concrete is poured around and up to the plate), there is no way to completely seal the edges of the plate where it meets the floor. Even if epoxy floor coating is applied to the concrete up to the plate, a seam or crack will form over time between the coating and the plate. Any acidic water, whether it be from an acid spill or simply routine battery room wash down, can find its way between, around, and under the plates, causing erosion. As the concrete is compromised by the acid corrosion, soft spots or even voids will form under the steel plate. When the BE travels over the compromised areas, the plate will begin to flex. As the BE repeatedly travels back and forth over these areas, the repeated stress of the plate flexing in combination with the continuous deterioration of the concrete will cause the problem area to grow larger, thus worsening the travel path. Eventually the travel path becomes wavy and uneven, making the travel path of the steel plates worse than the original concrete floor. The plates and damaged concrete must be removed, and new concrete must be poured. The entire deterioration process will begin again if steel plates are reinstalled.

Floor damage from steel plates

Recommendation:

Properly finished travel path

BHS recommends a floor profile of the BE travel path to determine floor flatness and levelness. Corrective grinding must be performed if the floor is not within BHS recommended specifications. After a floor profile and corrective grinding (if required) are complete, a suitable self-leveling non-porous epoxy or similar floor coating may be applied for protection. Visit BHS1.com for additional information on Battery Room Floors.

For more information call: 1.877.BHS.4YOU
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