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Supercedes: None
Completion Date: as desired

NOTIFICATION

Ride Manufacturer: Eli Bridge Company

Affected Production Dates: Any

Ride Names: BIG ELI® Eagle and Aristocrat Hydraulic Rim-Drive Wheels

Affected Serial Nos: Any

Abstract of Issue: The hydraulic rim-drive Wheels were designed around available components of the 70's through 90's which were functional but not necessarily as efficient as modern day hydraulic components. Safety was and still is a primary concern. The present brake and platform circuits create heat, which on a hot day can be excessive for the system to absorb. Too much heat can be detrimental to the long-term function of the hydraulic components. Eli Bridge Company has developed a more energy efficient circuit upgrade for the brake/ platform functions.

Reason For Release: The present circuit design for the hydraulic brakes and platform are inefficient using more parts than necessary and presently creating most of the heat load in the circuit. These systems are very important safety issues of the ride and must function flawlessly. There are several ways of reducing the heat generated in these circuits but brake pressure must be held at all times. Therefore the best circuit revision will be to replace the existing brake gear pump with a pressure compensated pump used for the brake and platform circuit. By limiting the flow to the platform cylinder to less than full pump flow, we maintain constant brake pressure. The heat generated by this circuit is about 1/4 of the present heat load. Another major benefit to this revision is the elimination of the separate power unit for the platform circuit. The new pump is driven off the main 30 HP drive which now will be the only power unit required for the Aristocrat. The Eagle has a separate power unit for setup, which could be eliminated by using oil from the new pump, but because the required pressures are so different, it is advisable to maintain the setup circuit as is and shut this unit off after setup.

Action to be taken: Replace the auxiliary brake gear pump with the new pressure compensated pump, remove the separate platform pump and motor, and tie these two circuits together as proposed by the Eli Bridge Co. circuit upgrade.