

Railcar dumper system upgrades

Drive unit and hydraulic systems

Relocating drive to grade

Relocating drive units to upper floor (track level) avoids dirt and grime from the dumper pit area. This helps minimize material accumulation on the drives and promotes easier maintenance and service.

Conversion to dual drive

By converting to a dual drive, the material load is dispersed approximately in half which can help extend drive life. The second drive also holds the cage during drive failures thus preventing a cage runaway, and can be used to continue dumping until the train is completed.

Upgrades differ depending on your machine's configuration: If driven from one end only, a second drive is added on the opposite end to eliminate the large torsional forces in the dumper cage. This lengthens cage life by minimizing shear stresses in front and rear girders and bolted connections.

If driven by a single drive with two pinions, the single drive is replaced adding drives at either end. This removes the requirement need for an extended cardan shafts and delivers a safer system and easier maintenance.

Off board HPU unit

One single main HPU unit designed to replace individual units per clamp cylinder. The unit is installed external from the dumper, away from the material being handled. This helps improve fluid cleanliness and eliminates leakage from rotary breathers. The upgraded unit also offers enhanced troubleshooting, better system reliability, and simplified maintenance. A standby pump is recommended to ensure availability.

Spindle operated dumper latch

A positive mechanical latch that is spindle operated to engage the rack. This allows the dumper to be secured during maintenance of the dumper and dumper drives. It can also be interlocked with the dumper control system to prevent accidental start up of the dumper.

Hydraulic manifolds & check valves

Manifolds are relocated to the rear side of the dumper to keep clear of dust from the dump side. Check valves are installed on the cylinders to protect the cylinder in case a hose breaks.

Dual hydraulic relief valve for car clamps

Enables clamping at low pressure and raising of clamps at high pressure. The valve also reduces the clamping load on the sill of the railcar and helps prevent damage.



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