



PRODUCT INFORMATION BULLETIN



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Model / Series Impact: Hyster S/H80-120FT (G004/P005) series

To: Hyster Dealer Principals, Sales Managers and Sales Representatives
From: J.B. Mayes, Manager, Product Strategy – ICE Products

SUBJ: Wet Brakes

Many of the lift truck models manufactured by Hyster Company utilize heavy duty drum brakes with a large shoe surface area to provide excellent stopping power with long life and reduced pedal effort. On certain models, we also offer premium oil-cooled wet disc brakes either as an option or as standard equipment to provide the best solution for heavier, more aggressive applications that require high stopping power with long service life.

Regardless of drum or wet-disc brake systems, keeping brake temperatures within normal range extends the life of the brake system which includes: oil seals, wheel cylinders, differential lube oil, and even the drive tires.

Hyster premium, oil-cooled wet disc brakes feature forced oil cooling where the oil constantly flows through the brakes to dissipate heat. The oil is externally cooled and filtered to ensure brake temperatures maintain normal levels with clean oil. The anticipated life of the low-maintenance premium, oil cooled wet disc brake system far exceeds that of a traditional drum brake system. In many cases, premium oil-cooled wet disc brake systems last the life of the truck. When specifying either drum or oil cooled wet disc brakes, it is critical to adequately match the brake performance with the truck application.

If any of the following attributes exist in the application, it is **strongly recommended** that premium, oil-cooled wet disc brakes be specified on the truck:

- 1) High speed travel with aggressive stops
- 2) Frequent brake usage exceeding 85 full travel stop events per hour.
 - a. A brake event represents stopping the truck from a high travel speed to zero travel speed in a single brake pedal application.
 - b. High travel speed is identified as 75% to 100% of published travel speed
 - c. A short hard stop is equal in energy to a softer, longer stop and is counted the same
 - d. Multiple applications with light brake pressures can be combined into a single event.
 - e. Brake pedal applications while inching or maneuvering slowly in tight areas, are not considered brake events (i.e. entering or exiting a load)
- 3) Customer applications with previous history of issues with drum brakes

If any three (3) of the conditions listed below exist in the application, it is **strongly recommended** that premium, oil-cooled wet disc brakes be specified on the truck:

- 1) Operating environments with high ambient temperatures:
 - a. Geographical areas where ambient temperatures can regularly exceed 90 degrees Fahrenheit
 - b. Applications where extreme heat is encountered (i.e. near furnaces, in paper manufacturing or other application-heated areas)
- 2) Continuous brake application to maintain truck speed while traveling on long downhill grades

- 3) Poor yard or floor conditions:
 - a. Extremely dirty
 - b. Wet or standing water
 - c. Corrosive environments such as those with road salt or brine solutions present
 - d. Work areas with poor housekeeping and the potential for shrink wrap or banding to wrap around the drive axle
- 4) Truck is equipped with attachments capable of restraining the load (i.e. roll or bale clamps)
- 5) High productivity operations:
 - a. Truck in-motion more than 50% of the time
 - b. Truck used in either 2 or 3 shift operations

When quoting a new lift truck, it is always recommended to specify premium, oil-cooled wet disc brakes if the given application includes any of the above attributes. Premium, oil-cooled wet disc brakes provide the best service life and will usually be the most cost-effective solution for the entire life of the truck. In the event that the application does not include any of the above attributes, the standard brake offering, in most cases, should provide a sufficient service life.

Truck brake requirements can vary significantly, even within the walls of a single customer facility. As a result, it is imperative that a comprehensive review of the entire application be made to ensure the truck meets the customer's needs.

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