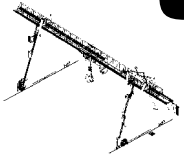


# UPDATE



Spring, 1993

## Dynamic Storm Brake System II

The latest installation of the P&H Hillmar Dynamic Storm Brake System was recently commissioned at the Georgia Pacific, Ashdown, Arkansas, P&H Portal Crane. The installation by P&H ProCare services went smoothly and now GP's crane is protected from possible wind damage.

The experience gained from the past year of operation on the first Storm Brake System led to several important design improvements that have made the present system easier to operate and maintain. The most notable change was the use of four (4) separate hydraulic power packs - one for each brake. This way, each brake can be operated and tested separately.

The GP installation also provided a heavy steel plate log guard that can now be purchased as an option on new Storm Brake Systems. The guards will deflect falling logs and prevent damage to the power packs.

Another important part of a complete installation is proper training of your operators and

and maintenance personnel. Harnischfeger provides this through the training services of Chuck Stoneman. Chuck has been thoroughly trained in both the operation and maintenance of the system. Mr. Stoneman's services can be purchased by contacting Chuck directly at 604-294-5551.

Operational tests of the storm brakes have clearly demonstrated their outstanding stopping capability and ease of operation. As of this publication date, six P&H Hillmar Dynamic Storm Brake Systems have been purchased and many more are close to finding approvals. This system can prevent costly downtime and be used as a jacking device to assist your maintenance personnel with wheel maintenance.

Contact Harnischfeger for a quotation on a storm Brake system for your crane. A videotape of the latest installation is also available to further demonstrate the system performance. Brakes are available to fit non P&H log cranes as well as for the large gantry type chip reclaimers. Can you afford to operate your crane without this level of protection?

## Gantry Brake Service Bulletin

If you are operating P&H disc brakes with Smartorque gantry controls, you may be interested in the following information:

As reported in the last UPDATE issue, we first recommend replacement of the BR contactor with the larger 4 pole device. The three contacts in series on the DC side have proven to greatly extend the life of the BR contactor. It is very important to maintain these contacts since if they fail in a welded shut position: then the single AC side contacts will shut off and set the brakes.

Without a break in the DC circuit, high instantaneous voltage can damage your brake coils, possibly causing massive failure.

In order to further extend the life of the DC side contacts, we now also recommend placing a MOV (P&H P/N 80Q35D10) across the output of the BR (DC side) contactor. This will add an approximate 1/2 second brake set delay, which should not cause any concern since a brake set delay is already standard equipment.

## Trolley and Wheel Alignment

*By Frank Kemp, Portal Crane Specialist*

As mentioned in a previous issue, trolley wheel alignment can be carried out by the "toeing" in or out of the trolley leg, either by adjustment in the case of the newer design of trolley leg, or shimming between the pipe spreader and trolley leg pipe spreader flange.

A further consideration should be the actual tread diameter of the wheels, both drivers and idlers. When receiving new wheels, the diameter should be measured and noted on the wheel for future reference. Wheels, particularly drivers, should be within 10 thousandths of each other, this is most important for the trolley application.

Gantry wheels should also be paired up so that fixed leg and idler legs are effectively running at the same linear speed. The overall wheel diameters on the idler trucks are not so critical as the driven wheels on the drive trucks.

Electrical checks on the drive motors should be carried out before undertaking any extensive mechanical work or adjustment. Suggested procedure as follows:

- Take running currents of drive motors on all three phases, these should be within a few amps of each other, allow time for the readings to settle down from peak starting loads.
- If these compare favorably, then, in the case of the gantry drives with static stepless controls, stall the drives out by removing brake fuses, place master controller in first point (this should produce some 5 to 6 amps of reactor current), and take measurements of rotor currents on all three phases on all motors. These should read fairly evenly: if you have a large variation then this could be caused by a bad rotor winding, brushes, resistor or reactor. This would of course give uneven driving forces, which would skew the crane and produce wheel flange wear.
- Proceed as above for the trolley drives: however, a further electrical check should be done in taking the voltage readings across the frequency detector and plugging reference, #3 Common, #4 Frequency, #5 Plugging. Readings should be Rotor volts for 3-4 and approximately 10-20 volts for 3-5.

## Loose Connections

Our service department reports that a very high percentage of crane downtime is caused by loose connections. On Smartorque controlled cranes, a simple loose connection to the DB resistor grid can cause the DB module to fail. Using Belleville washers on the resistor lug bolts can keep the connections tight. Let us know what works well for you. Basic inspection is your best bet and some users utilize infrared scanners to look for hot spots.