

April 6, 1966

Design Specification #1

8-1/2" Type S Brake

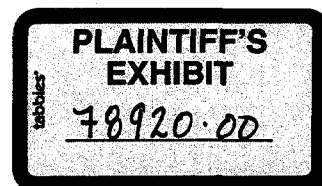
I. General.

1. This brake is for General Purpose Applications.
2. The basic construction will be similar to that for the present 4", 5-1/2", and 7" Brakes.
3. Mechanical life on 100% volts will be 3,000,000 minimum except for solenoid. Life of solenoid will be determined on test, but we expect 1,000,000 life.
4. Brakes will be AC and DC and shunt wound only.
5. Standard brake will be floor mounted and not enclosed.
6. Mounting height, base to centerline of wheel, will be 5-7/8" for both AC and DC brakes.
7. Options on Engineering-Order basis.
 - NEMA II-III Enclosures for Horizontal Mounting only.
 - NEMA IV-V " " " "
 - Manual Release when enclosed and when not enclosed.
 - Commercial Non-Corrosible fittings.
 - Vertical Base Wall Mounting with solenoid below wheel.
 - Wall Mounting for vertical shaft.
 - We will investigate possibility of Ceiling Mounting.

II. Features.

1. Lining wear allowance between adjustments .008" at the center of each shoe. (This is double that on the 4", 5-1/2", and 7" S Brakes.)
2. Solenoid spring pressure is adjustable by means of a screw to simplify assembly of the brake and to permit ready adjustment for optional brake mountings.
3. Linings will be attached to the shoes with Groov-pins. Groov-pin holes in shoes will be accurately located so pre-drilled linings can be used.

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III. Details.

1. Torque Ratings

- 85 #' Continuous Duty.
- 110#' One Hour Duty.

2. Wheel -- 8.5" diameter.

- 4.25" wide rim face.
- Cast Ductile Iron.
- Bores -- 1 wheel with 1" Pilot Bore.
- 17 wheels with bore range of 1.125" to 2.750".
- Maximum Speed - 4750 RPM.

3. Shoes -- Cast Iron.

- Accurate location of Groov-pin holes.

4. Lining -- .25" thick, 4" wide.

- Johns-Manville #600 or equivalent.
- Holes for Groov-pins will be pre-drilled.

5. Base -- Cast Ductile Iron.

- 3 or 4 mounting feet as determined by accessibility of mounting screws.

6. Solenoid.

AC -- National Acme Co. Size "N-GL-X".

-- Encapsulated coil with leads.

-- Coil volts and cycles

120/60 - - 110/50

208/60

240/60 - - 220/50

480/60 - - 380/50

600/60 - - 440/50

550/50

-- (Possible alternate GE Size C102.)

-- A conduit box must be designed and tools set up.

DC -- Same basic solenoid as for AC and same features.

-- NAMCO does not furnish DC solenoids. A dual coil similar to that on our size D Bul. 10360 solenoid would be desirable, but this means development of new dual coils by either NAMCO or Cutler-Hammer, or both. We will check whether possible to use a single winding coil with a protecting resistor inserted after the brake releases. We would have to find a place to mount the resistor.

-- Coils 120, 240, and 550 volts.

-- A conduit box will be required.

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IV. Options.

1. NEMA II-III Enclosures.

-- Construction similar to that on TIP511 page 5 for the 4", 5-1/2", and 7" brakes.

2. NEMA IV-V Enclosures.

-- Box type construction similar to that on TIP511 page 6 for the 4", 5-1/2" and 7" brakes.

3. Manual Release similar to those on drawings:

-- A88-2011 for open brake.
-- A88-1578 for NEMA II-III enclosures.
-- C88-1304 for NEMA IV-V enclosures.

4. Non-Corrodible Fittings.

-- Some pivot pins will have to be made of stainless steel. Other pins and fittings to have plating suitable for commercial non-corrodible fittings.
-- Plating will be zinc.

5. Vertical Base and Vertical Shaft Wall Mounting.

-- Solenoid spring pressure can be changed by means of an adjusting screw to meet the requirements of these non-standard mountings.

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