INSTRUCTION SHEET
For Type GH505 10" DC Magnetic Shoe Brake

DESCRIPTION OF OPERATION

On this brake, the magnet coil is a separately enclosed unit mounted between an inner and outer armature. When the coil is properly energized, the armatures are attracted to each other until their outer poles seal. The action of the armatures moves the shoes away from the wheel. The inner armature moves the inner shoe and the outer armature moves the outer shoe. When the coil is de-energized, the compression spring forces the armatures apart and presses the shoes against the wheel.
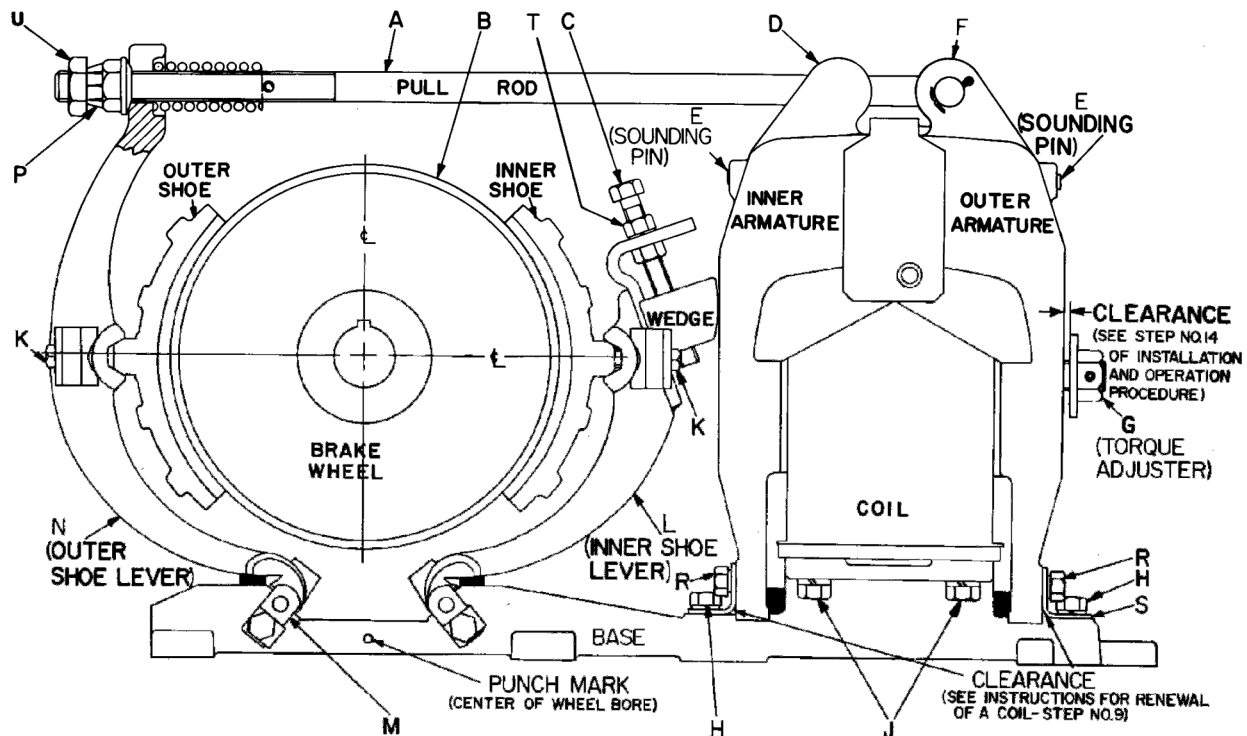

Figure 1

PROCEDURE FOR INSTALLATION AND OPERATION
(Refer To Dimension Drawing For Mounting Dimensions)

1. Assemble brake wheel "B" on motor shaft
2. Back off lock nut "U" and pull rod nut "P" about one inch.
3. Back off lock nut "T". Turn screw "C" clockwise to lift the wedge at the top of the inner shoe lever "L".
4. Slide the brake into place around the brake wheel "B" and start bolts into the base mounting surface.
5. Loosen the holding screws "K" on both shoe levers leaving only a light grip.
6. Push the shoe levers "N" and "L" against the brake wheel "B" and check to insure shoes fit evenly across the wheel face.

7. Bump the base into the best position to get the most favorable fit of the shoes against the wheel "B". C/L of the wheel must be aligned with the punch mark of base to obtain proper horizontal positioning of the brake, and with C/L of shoe pivot sockets to obtain the proper vertical positioning of the brake.
8. If the mounting surface is not flat or is not parallel to the shaft axis, shimming may be necessary. Tighten the holding bolts to hold the base firmly in place.

PROCEDURE FOR INSTALLATION AND OPERATION – (Continued)

9. Be sure there is some spring pressure tending to separate the two armatures "D" and "F". This can be tested by turning nut "G" clockwise. If nut "G" cannot be turned, the gland inside is tight against the stop on the screw and a maximum spring pressure is applied.

10. Turn the screw "C" on the top of the inner shoe lever counter-clockwise to move the wedge downward until the inner armature "D" sounding pin "E" is flush when pressed. Tighten locknut "T". Readjust after wheel has reached normal operating temperature to allow for thermal expansion of the brake wheel. Re-inspect and adjust if necessary after several operations.

11. Tighten the pull rod nut "P" until the outer armature "F" sounding pin "E" is flush when pressed. Tighten locknut "U". Readjust after wheel has reached normal operating temperature to allow for thermal expansion of the brake wheel. Re-inspect and adjust if necessary after several operations.

12. Full torque is obtained by turning the torque adjuster "G" until the gland inside is snug against the stop. Less than full torque is obtained by turning the torque adjuster "G" counter-clockwise. Check the nameplate on the brake and the table in paragraph 14 for maximum torque setting for the duty rating of the brake.

13. With the brake set, tighten screws "K" on the shoes.

14. Note that when the brake is correctly adjusted for proper stroke, the torque adjuster washer face stands clear of the armature "F" surface. As the lining wears this clearance decreases. If the adjustment is neglected, the brake operation can become sluggish and when the torque adjuster washer touches the armature, the torque drops rapidly reaching zero when the flexure of the lever is used up. The clearance dimension is not a measurable value but is determined by proper adjustment of individual brakes.

TORQUE ADJUSTMENT

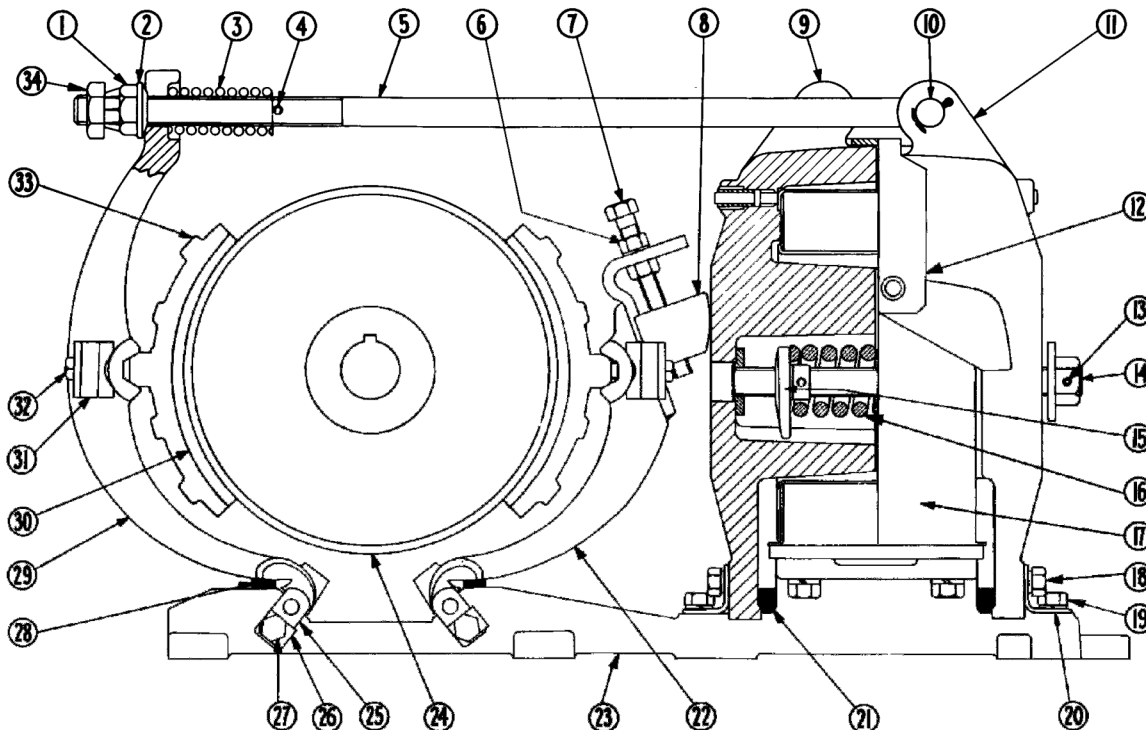| Size Of Brake	Coil Winding	Duty	Rated Torque	Turn "G" Clockwise To Solid	Back Off Turns If "G" From Solid
10"	Shunt	Int.	200	X	0
	Shunt	Int.	150	X	2-5/6
	Series	½ Hour	200	X	0
	Series	1 Hour	130	X	4
Minimum Torque			100	X	5-4/6

RENEWAL PARTS

Figure 2

RENEWAL PARTS
(Refer to Fig. 2, Page 2)

Item No.	Description Of Part	No. Req.	Part No.	Item No.	Description Of Part	No. Req.	Part No.
1	Locknut 5/8-11 …………………….	1	15-670	18	Self-Locking Screw 1/2"-13 X .875	4	11-4640
2	Spherical Washer …………………	1	16-1598		Angle Bracket Bushing (not shown) …………………………..	4	29-5535-2
3	Spring ……………………………..	1	69-2024	19	½-13 X .750 Hex Head Bolt	4	11-3555
4	Spring Pin .187 X 1.50" Long	1	13-3186-7		½" Helical Washer	4	916-199
5	Pull Rod (includes items 3 & 4)	1	61-1006	20	Angle Bracket …………………….	2	79-15572-6
6	Locknut ………………………..……	1	915-1403Z	21	Gasket	2	32-467-7
7	Wedge Adj Screw Assembly…….... (includes item 6)……………………	1	54-11507-2	22	Inner Shoe Lever (includes item 7)	1	24-3288-11
8	Adjusting Wedge ……………..……	1	54-2813	23	Base (includes items 21, 25, 26, 27, 28) ………………………………	1	17-6371-3
9	Inner Armature ……………………..	1	48-627-5	24	Brake Wheel (give complete nameplate data) ……………………	1	…………..
	Sounding Pin ……………………....	1	13-3485				
	Sounding Pin Bushing ……………	1	29-2762	25	Retainer ………………………….…	4	55-1650
10	Pin .625 X 3.625 long ……………..	1	13-506-9	26	Lock Bracket ……………………….	4	79-6783-5
11	Outer Armature ……………………..	1	48-627-9				
	Sounding Pin ……………………....	1	13-3485	27	½-13 X 1.25" Screw ……………...	4	11-2051
	Sounding Pin Bushing ……………	1	29-2762	28	Gasket ………………………………	2	32-467-2
12	Rubber Guard ………………………	1	73-1017-2	29	Outer Shoe Lever ………………….	1	24-3289-4
13	Spring Pin .187 X .875" Long	1	13-3186-5	30	Shoe Lining (for riveted shoe only	2	48-1818-2
14	Torque Adjusting Screw …………. (includes items 13 & 15) ………….	1	11-4625-2		Groov-Pin (rivet) …………………...	16	13-4762
15	Gland ……………………………….	1	49-2194-2	31	Clamp …………………………….…	4	55-1037
16	Torque Spring ……………………..	1	69-1680	32	Self-Locking Bolt 3/8-16 X 1.50" …	4	11-3046-2
17	Coil (Give No. On Coil) …………...	1	…………	33	Shoe (w/ bonded lining) …………..	2	48-1268-4
					Shoe (w/ riveted lining) ……………	2	48-1463-3
				34	Hex Jam Nut 3/8-11 ……………….	1	915-1443Z

RENEWAL OF BRAKE SHOE LININGS
(Linings Fastened with Groov-Pins)

1. After removing the old lining and groov-pins, clamp the new lining so it lies closely in the shoe.
2. Drill through the lining from the rear of the shoe with no. 13 (.185) drill.
3. Counter-bore 9/16" to dimensions shown in the sketch to the right. Bottom of counter-bore to be 135° included angle. (number of holes required per table below)
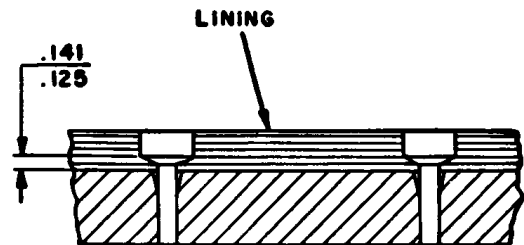
SECTION THROUGH SHOE ASSEMBLY

BRAKE LININGS FASTENED WITH GROOV-PIN

Brake Size	Groov-Pin		Hole In Lining	Hole in Shoe	Counter-Bore Lining
	No. Req'd Per Shoe	Part No.			
10"	8	13-4762	# 13 (.185") drill	3/16" Ream and 20° Cts'k to .210-.220 Diameter	9/16" Diameter Depth Per Above Sketch

PROCEDURE FOR REMOVAL OF A SHOE
(Refer to Fig. 1 page 1)

1. Back off locknut "U" and nut "P" on the pull rod "A". or loosen locknut "T" and turn screw "C" clockwise to lift the wedge to relieve the pressure between the chosen shoe and wheel.
2. Remove screws "K" from the shoe being removed.
3. Slide the shoe out sideways

4. Re-assemble new shoe into groove in shoe lever. Do not tighten screws at this time.
5. Press the shoe against the wheel and tighten screws "K".
6. Readjust brake.

PROCEDURE FOR REMOVAL OF A SHOE LEVER
(Refer to Fig. 1, Page 1)

1. If removal of the outer shoe lever "N" is required, loosen locknut "U" and back off nut "P" until the pull rod "A" may be lifted up around the pivot in the outer armature "F".
2. Refer to shoe retainer "M". Both sides of the shoe lever are equipped with a lock bracket, screw, and retainer plate. Bend back tab of the lock bracket. Remove screw and retainer plate. When re-installing and after tightening the screw, bend the tab of the lock bracket against the flat of the screw.
3. With the retaining plate removed, slide the outer shoe lever "N" to either side of the brake.

4. To remove the inner shoe lever "L", loosen locknut "T" and turn screw "C" clockwise until the pressure of the shoe against the wheel is relieved. Refer to shoe retainer "M". Both sides of the shoe lever are equipped with a lock bracket, screw, and retainer plate. Bend back tab of the lock bracket. Remove screw and retainer plate. When re-installing and after tightening the screw, bend the tab of the lock bracket against the flat of the screw.
5. With the retaining plate removed, slide the outer shoe lever "L" to either side of the brake.

REPLACEMENT OF A COIL
(Refer to Fig. 1, Page 1)

1. Turn torque adjuster "G" counter clockwise until the torque spring is loose.
2. Disconnect thee pull rod end from the outer armature "F".
3. Remove screws "H" from base.
4. Lift the outer armature "F" out of the pocket in the base and pull outward.
5. Remove the screws "J" used to attached the coil to the base pedestal and slide coil from base pedestal.
6. Set the new coil on the pedestal and install mounting screws "J". Do not tighten at this time.

7. Set the armature "F" back into position. The spring gland of the torque adjuster must be centered in the hole of the inner armature "D". Assemble angle bracket and screws "H" and "R" with screws hand tight only.
8. Attach pull rod "A" to armature "F".
9. Pull armatures "F" and "D" together magnetically or by using a clamp. Tighten screws "H" and the base such that a clearance of 0.25 ± 0.015 will be maintained between the armature "F" and bracket "S". The clearance should be uniform. Remove clamp (if used).
10. Adjust the torque spring and shoe positions as described in the installation instructions.

PROCEDURE FOR RE-ADJUSTMENT FOR LINING WEAR
(Refer to Fig. 1, Page 1)

Periodic checks should be made on the installation and when the sounding pins depress more than 1/64" below surface, adjustments should be made to compensate for normal lining wear. This check and the adjustments should be made when the wheel is at normal operating temperature to allow for thermal expansion of the wheel. Re-inspect after several operations.

1. Loosen the locknut "U" and tighten nut "P" on the outer end of pull rod "A" until the sounding pin in the outer armature is flush with the surface when it is pressed.

2. Loosen locknut "T". Turn screw "C" counter-clockwise to move the wedge downward until the inner armature sounding pin is flush when it is pressed inward.
3. Tighten locknuts "U" and "T".

It is recommended the brake shoe linings be replaced when the lining thickness at the center of the shoe has decreased to .125" for riveted construction and .062 for bonded construction. **Use genuine OEM lining material only to insure brake maintains rated torque.**

(See paragraph 14, Page 2)