

General Motor Knowledge  
Part 20

Motor Nameplate  
(The Model Number, Continued)

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May 17, 1994  
GMK20.wp5

Last month we discussed our model numbering system. A shaded pole or permanent split capacitor, SP or PSC motor type. The number of poles, a dash (-) or 4, or maybe a 2, this number must always be even. This is followed by the frame size, B=3.3 inches in diameter. The frame size is followed by another letter designating the stack length but this is usually omitted in the SP motors. Next in the series is the rated watts output.

746 watts output is equal to one horse power. So our SP-B203 with a rated output of 2.3 watts has an output of 2.3 divided by 746 or 0.003 horse power. Our PSC4BR50 (R=2 inch stack) has 50 watts output and this is the equivalent of 1/15 horse power. Our motors are considered subfractional horse power.

Getting back on track, we have defined the basic motor model number. SP-B5 is a 4 pole ,shaded pole motor, it is in a 1/2 inch stack because 5 watt output and less has always been in a half inch stack, and as already noted, 5 watts output. We know that this motor will develop a torque of between 6 and 8 ounce inches at a speed of 1450 rpm (revolutions per minute). Normally this torque will be 7 ounce inches. The power input required to produce this output will be between 27.7 and 32.7 watts normally around 31 watts. This input is for the shaded pole motor, the PSC4BC5 will have exactly the same torque, but the watts input will be in the range of 18 to 21 watts. We know all of this from the basic model number and the data collected from our final electrical test.

The basic model number may be followed by a letter or letters that indicate what endbell is to be used. The absence of an endbell designator indicates the standard cast iron bossed endbell. This may also be designated by "C". "H" designates the aluminum version. The letter "B" indicates bossless, "U" indicates unpainted. SP-B4 is a 4-watt output shaded pole motor, 1/2 inch stack, in a cast iron bossed endbell, SP-B4B is the same except cast iron bossless. SPGC6H is a shaded pole, the "G" was the initial designator for our current 4-pole, 3.3 inch diameter stator lamination, 1/2 inch stack, 6 watt output motor in an aluminum bossed painted endbell. SP-B203HUB is in an aluminum unpainted bossless endbell.

Model numbers sometimes seem confusing and there are exceptions created because of this confusion. Our model number does not attempt to list every possible combination. Instead our model number points out the areas of construction that are different from standard. Our motors run so long that as we improve our standards our old model numbers may lose

some of their significance. We will continue next month.