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## V80 Belt Matching PA NOTE

Gates continues to receive questions from the field regarding the significance of Gates V80 Belt Matching Program. This PA Note will discuss the V80 program along with some basics of belt matching.

There exists with all industrial V-belts a normal length tolerance associated with the manufacturing process. In order to assure that each belt on a multiple belt set acts together as a "team", belt matching standards are required. These standards are set by the members of the Rubber Manufacturers Association (RMA) and are covered in the appropriate RMA Narrow (IP-22) and Classical (IP-20) V-Belt Engineering Standards.

Prior to the introduction of the Gates V80 program, all Gates heavy-duty V-belts were measured and marked with a match number, which identified the belt to a specific grouping much narrower than the total manufacturing tolerance. A 50 match number designated a belt centering around the ideal length for that particular size. Numbers less than 50 (i.e., 49, 48, 47) designated a specific length grouping short of ideal; numbers greater than 50 (i.e., 51, 52, 53) designated a specific length grouping on the long side of ideal. Each group number represented a maximum length spread of 0.15".

Under the RMA standards, the acceptable length spread for a matched set of belts increases with increasing belt length. It ranges from a single match number (0.15" maximum length spread) on belts under 63" in length up to six consecutive match numbers (0.90" maximum length spread) on belts over 500" in length. Prior to actually instituting the V80 program, Gates invested a significant amount of money in new and remachined molds for banded belts, and for new production tooling and equipment for bandless belts. The implementation of this program also required a complete review and tightening up of our production and quality control procedures. These changes made possible a reduction in manufacturing length tolerances such that Gates belts can consistently be produced within the RMA matching limits.

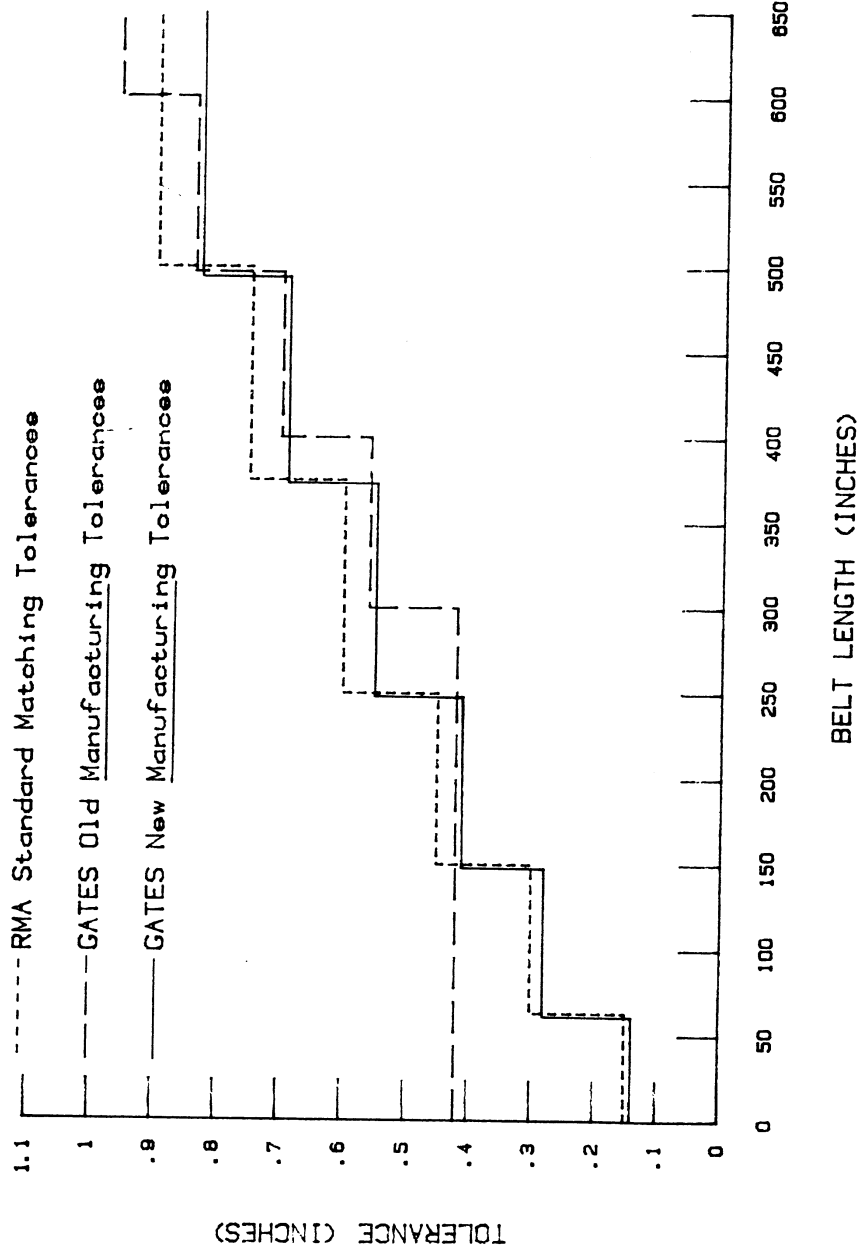
The V80 program affects only our Super HC®, Super HC Molded Notch, Hi-Power® II, and Tri-Power® belt lines. All other heavy-duty V-belts will continue to carry conventional match numbers in accordance with RMA standards.

Remember one more item. The old .15" value for a single match group is NOT the matching limit for all V-belt lengths. As belt length increases, so does the allowable number of match numbers (matching limits) constituting a matched set.

In several years of operation with the Gates V80 program, we have not encountered any more problems than existed with the conventional match number system for the above-named belt lines.



# MATCHING TOLERANCE



Gates