



Matt White

Diecast Report

AutoArt Model Manufacturing in China

An interesting insight into Asian model manufacturing

With much speculation as to whether diecast model manufacturing will shift from China due to rising production costs, I posed the question to Jimmy Yee, the president of AutoArt, while attending the 2011 Toy Fair in Germany. The answer was very interesting and was not expected, but it is actually due to the cultural differences between China and other parts of the world. AutoArt then took it one step further and produced an article answering this question in greater detail. I am privileged to share this



Applying leather upholstery to a 1/18 seat is one of the areas where “fingercraft” has a very specific use.

with you in Hobby Merchandiser and would like to sincerely thank the president of AutoArt for permission to reproduce this article for Hobby Merchandiser readers. It is an informative insight into one of the many skills that go into producing an AutoArt diecast model and answering this important question.

Despite labor wages in China increasing almost five times in the past decade, model cars are still manufactured almost exclusively in China. Nowadays, the basic income of a Chinese worker is more than double that of counterparts in developing nations such as Pakistan, Bangladesh, Indonesia, Vietnam, and India; many factories in China, particularly in the garment industry, have moved production to these countries to reduce costs and remain competitive.



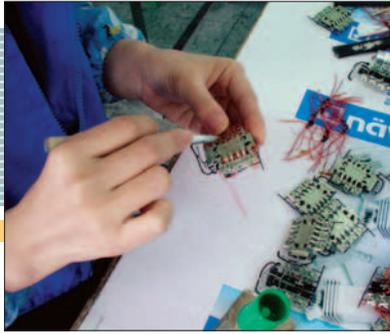
Using a hobby knife and cotton swab in the same manner as chop sticks, Chinese workers can apply the finest of decals.

But a principal reason for the model car industry remaining in China—despite the increased wages—is that the work requires much skill and fingertip maneuvering, otherwise known as “fingercraft” (finger dexterity). This manual dexterity is endemic to countries that use Kanji characters for writing and reading, as well as chopsticks for eating: i.e. China, Japan, Korea, Taiwan, and Hong Kong. Children in these countries learn to write Kanji as toddlers, while at the same time learning how to use chopsticks. Kanji characters train the student to “see” or visualize a character and its meaning through the subtle and complex strokes that comprise each one. The brain commands the movement of the fingertips to replicate the contours of the characters on paper using a writing tool repeatedly, hundreds of times. Throughout primary education, a child must learn more than 1000 characters, so this process of replicating is repeated daily. Because calligraphy has so much importance in



Writing Kanji since childhood gives a Chinese worker the skill necessary to hand-paint a variety of decorative features.

Chinese culture, many children progress to brush pen calligraphy, which is even more sophisticated. The soft-tipped brush pen is not only about movement of the pen, but also about the delicate pressure applied on the tip to regulate the



width of the strokes.

The fingertip skills and hand-eye coordination thus acquired is reinforced through mastery of chopsticks for picking up food. Indeed, eating with chopsticks also requires the maneuvering of a tool with the fingertips. For example, picking up a peanut—a good test of chopsticks proficiency—requires application of delicate pressure: too much pressure and the peanut will slip; too little and it will fall.

With chopsticks in common use in China and other South-East Asian countries for more than 3,000 years, it is not hard to see why workers in those countries—especially China—are gifted with excellent fingercraft skills. This is especially useful in the diecast model car industry for such repetitive and challenging tasks as assembly and fitting of hundreds of delicate components, precise application of decals (especially minuscule ones) and the hand-painting of delicate components and decorative features. Patience and good eyesight are also prerequisites for this demanding

Left: Mass produced models in China still involve a large amount of hand assembly. Right: Final paint detailing of all models is done by hand.

work. Thus, not surprisingly, female workers with their innate patience and flair for sewing, garment manufacture, manicuring, etc.—tend to dominate in Chinese diecast model factories.

While workers in Japan, Taiwan, Korea, and Hong Kong are also culturally gifted with fingercraft skills, China has the lowest labor costs. The present hourly rate in China is still around \$1.40. In more developed countries, workers—whose average age is greater than those in China—would have to be paid at least 10 times more for similar “fiddly” assembly work. In fact, many so-called Swiss-made watches selling for thousands of dollars have their cases and bands fabricated in China and then shipped to Switzerland for fitting of locally made movements so the watch can be certified as an authentic Swiss product.

Even though labor costs keep rising, diecast model production is likely to remain almost totally in China, largely driven by its people's exquisite fingercraft skills. **HM**

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