

The Stranger-Than-Fiction Saga of Rikuo, Harley-Davidson and the Birth of the Japanese Motorcycle by C.D. Bohon

f there can be irony in industrial history, then there is irony in Harley-Davidson's recent appeal for protection from the Japanese motorcycle industry. For it was Harley-Davidson that founded the Japanese motorcycle industry. And for a quarter of a century Harley-Davidsons and descendents of Harley-Davidsons, called Rikuos, were built in Japan in a factory equipped with Harley-Davidson tooling and run by people who had been trained by Harley-Davidson or former Harley-Davidson personnel.

For years, even before they were built in Japan, Harley-Davidsons were the most popular motorcycles in Japan. They were used by the police, the Imperial Guards. the army, and just about everybody else who wanted a rugged, dependable motorcycle. Harley-Davidson motors proved so successful that Japan's first mass motor vehicle industry was founded by companies emulating the servi-car. Such giants as Mitsubishi, Mazda, and Daihatsu all got their start in the automotive field following Harley-Davidson's trail-blazing success. The story of Harley-Davidson in Japan goes back to 1912 when the Imperial Army imported an evaluation model. By 1916 Nihon Jidosha (today's Yanase, the major

importer of foreign cars into Japan), had acquired distribution rights for Harley-Davidson in Japan. That year they imported five 1917 models; three Twins and two Singles. Two years later they imported a Harley sidecar rig for the army. Over the next several years Nihon Jidosha imported small numbers of machines but curiously, never any spares.

Perhaps taking advantage of Nihon Jidosha's lethargic attitude, Kotoboeki, a small sister company of a giant pharmaceutical firm, obtained Harleys intended for distribution in Inner and Outer Mongolia, other places where Milwaukee Muscle was appreciated. They could see a market in Japan which was not being exploited. So, evidently could Harley-Davidson. In 1924 Alfred R. Child, H-D's export sales representative, on a trip to the Far East, stopped in Japan to see just what the situation was. It was a bad time for an American to visit Japan. The U.S. Congress had just passed acts excluding Japanese immigrants. The expansionistminded Japanese government, which had looked upon large-scale emigration as a handy means of ridding the country of excess citizens and gaining political clout overseas, was outraged. Anti-American riots erupted throughout Japan. Arthur Davidson, Sales Manager and Vice-President, considered the situation so grave that he urged Child to by-pass Japan and go directly to Shanghai.

Perhaps in the light of Harley-Davidson's present plight, Child should have taken the advice. Instead he checked in at Frank Lloyd Wright's old Imperial Hotel in Tokyo and got down to business.

Child discovered that at least some and probably all of the machines destined for Mongolia had been diverted to Japan and sold under Nihon Jidosha's nose without the latter ever catching on. A nasty squabble ensued, with Nihon Jidosha president Baron Okura, a gentleman of some consequence, demanding his company remain sole distributor for Harley-Davidson and Child saying not unless he set up a decent dealership. The idea was not to push the occasional motorcycle out the door but to establish a business selling, servicing, and maintaining motorcycles.

The brouhaha ended with the enterprising and determined Kotoboeki, fully backed by Sankyo, getting the plum. And a plum it was. The 1923 earthquake had left the streets of Tokyo and Yokohama in shambles, passable only by jinrikishas and



Young Alfred Child, the man behind Harley's success in Japan, with his Tokyo staff in 1925.

hand trucks . . . and motorcycles. There was a small catch for Kotoboeki: Child was to stick around and be the actual holder of the agency, looking after Harley's interests in the light of the Mongolian hanky-panky. Apparently Kotoboeki didn't mind, for Child sailed for the U.S. 40 days after his arrival in Japan, with orders for 350 1000cc Harley-Davidsons, each equipped with sidecar; \$20,000 worth of "factory genuine" replacement parts, and \$3000 worth of factory dealer repair tools. Child also had an agreement making him managing director of sales of the newly established concern, Harley-Davidson Sales Company of Japan. It was a landmark achievement.

While this was going on, the Japanese Army had been developing an increasing interest in the motorcycle. They had bought a number of Indians, but began to favor the Harley-Davidson. Army engineers were particularly impressed with the much ballyhooed fact that the first Harley ever built was still running strong in 1912, nine years and 83,000 miles after it was built.

In 1924, backed by Count Katsu, the Murata Iron Works began building a copy of the 1922 pocket-valve Harley for the army. The company called their machine the "Giant-go." Nobuji Murata took one of the first examples to the army for testing. The army, after a brief examination. rejected the machine, citing its shoddy construction and more importantly the lack of any facilities or know-how by which Murata could mass produce the machine. The venture, probably the first time a major factory had sallied into the motorcycles.

out at its rented shop at Kyobashi crossing, just off Ginza in Tokyo, Matasaku Shiohara, president of Sankyo, introduced Child to army brass, who were quite taken with him and his no-nonsense attitude. In short order the Harley-Davidson became the standard motorcycle for the Japanese Imperial Army.

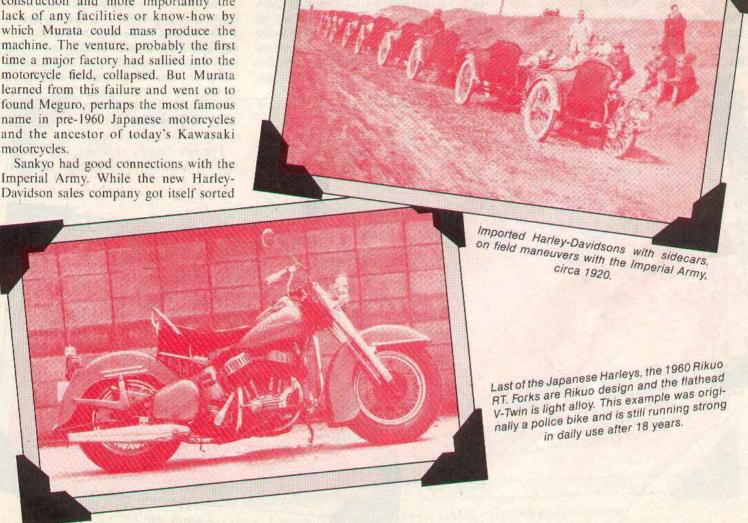
In the civilian arena the Harley had to contend with arch-rival Indian, which equipped the national police, who liked the Indian's lower seating position. When the Scout came out it was their particular favorite. A number of British machines were imported but their lightweight construction made them unsuitable for commercial work, which was where the Harley, with its rugged, carefully engineered construction, found its greatest success.

The stamina of the Harley machines was such that, although they could carry a great deal of cargo as sidecar outfits, they could carry a great deal more as threewheelers with a rear freight bin. Morikichi Sakurai, one of Child's first employees, was given the task of designing lightweight

and heavy-duty rear cars for the new 350cc Harley and the 1000cc V-Twin. Numbers of these were imported into Japan without rear wheels, then fitted with Sakurai's rear car. These machines became extremely popular and were used by everyone from the post office to the rice store on the corner.

By the early 1930s Daihatsu, Matsuda (Mazda)—after an earlier abortive attempt at making motorcycles-and Mitsubishi had all established themselves as threewheeler makers, both Matsuda and Diahatsu making their own engines. Some thousands of these Japanese machines were turned out each year and the system of repair shops, parts makers, and trained mechanics which developed to service them gave the Japanese their first large scale experience with motors and complex mechanical devices.

Sakurai, who built the first three-wheelers, had been hired away from Nihon Jidosha (where he had been working since 1916) by Alfred Child when he started Japan Harley-Davidson. Child offered Sakurai the handsome sum of 200 yen per month to lure him into joining the new>



company. Considering Sakurai's contributions to the development of Japan Harley-Davidson and later Rikuo, the money was well spent. Besides his engineering duties, Sakurai became involved in racing Harleys and helped establish the first professional gambling match races in Japan. They are still held today.

Harley-Davidson motorcycles were enjoying phenomenal success in Japan, no little thanks for this going to Child's sales efforts. Child earned five percent on each Harley sold and apparently worked hard to earn it. Within a few years of his arrival in Japan, the army, the navy, all prefectural and city governments and the post office were using Harley-Davidsons.

Perhaps the greatest sales coup, one that assured the reputation of the Harley-Davidson in Japan, was the sale of 30 sidecar outfits to the elite Imperial Guards who accompanied the emperor on his travels. Fifteen of the sidecars were righthanders and 15 were left-handers. Each sidecar had special low sides for easy entry and exit. Wherever the emperor went he was surrounded by Harleys, a fact not unnoted by citizens planning a motor vehicle purchase.

Harleys also gained attention by their participation in various races throughout the country. Motorcycle racing started in Japan before World War I and entered a sort of golden age in the late Twenties and early Thirties. British and even homemade Japanese machines participated, but much of the credit for the boom in cycle racing at this time must go to Harley-Davidson.

Harleys were expensive then, as today.

In the late Twenties the yen was worth not quite half a U.S. dollar. The average university graduate in Japan earned about 70 ven a month. The Harley-Davidson 750 cost 1638 yen. The big Harley would set you back 1890 yen. Indians were a bit cheaper, the Scout going for 1550 yen, the Chief for 1750, but dealer and servicing arrangements were pitiful. Japan Harley-Davidson soon left Indian far behind.

Within five years the Harley-Davidson Sales Company of Japan had opened branches in Osaka and Fukuoka in Japan and in Dairen, Manchuria. In addition. with generous financial support from Sankyo, a large, modern four-story and basement ferro-concrete building was built at Tameike. Tokyo, to hold the parent branch. The new building housed large spare parts and service departments.

Spare parts were essential for the development of motorcycle sales. Distribution was controlled from the Tokyo office, which maintained large stocks of spares. Weekly reports received from the branch offices enabled Tokyo to ship parts to them to maintain their stocks in advance of demand.

Early in 1925, Joe Ryan, Harley's Milwaukee Service Manager, arrived to give service instructions to Japanese employees.

Child recalls that before Harley-Davidson, the idea of workshop cleanliness was unknown in Japan. Automobile and motorcycle engine repairs were done on dirty floors. Until Japan Harley built them in their own workshops, such things as work benches, kerosene cleaning tubs for washing spares before assembly, and the like were nonexistent.

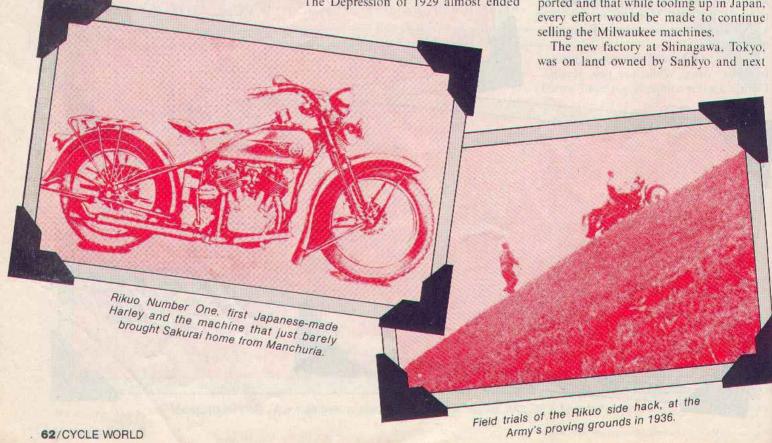
The Depression of 1929 almost ended

the brief saga of Japan Harley-Davidson, and led directly to the construction of Japan's first modern automotive manufacturing plant. Toward the end of that year the yen-dollar exchange rate began to sag. From 49.5 cents the yen dropped to 30 cents, then 26 cents, and finally for a time 20 cents. This meant the price of Harleys sold in Japan had suddenly doubled, a crippling blow. The company faced the prospect of either folding or getting rights to manufacture Harleys in Japan.

Child suggested to Shiohara that they try to buy manufacturing rights from Harley. Harley-Davidson had never before granted anyone manufacturing rights. which would entail turning over to a potential competitor essential blueprints, material qualities, formulas, and heat treating techniques. Shiohara and his company eagerly backed Child and he sailed for America.

Arriving in Milwaukee, Child met with the four founders, William S. Harley. Chief Design Engineer; William A. Davidson, Works Manager: Walter Davidson, President and Financial Manager; and Arthur Davidson, Sales Manager. All were skeptical of the ability of the Japanese to produce workable copies of Harley-Davidson motorcycles. Child recalls they were astounded at the "temerity" of the suggestion.

But after much negotiation, and in the light of the depression, the four agreed to grant the Japanese exclusive manufacturing rights and all information necessary to begin production, the only stipulation being that no Harley-Davidson designed motorcycles or parts would ever be exported and that while tooling up in Japan.



door to their pharmaceutical plant. Capital was provided by Sankyo. Aside from Child and Barr it was an all Japanese affair. Despite some dubious prior claims, it seems certain Sankyo's Shinagawa factory was the first complete motorcycle factory built in Japan. According to Child, some production got going as early as 1929. By 1935 complete motorcycles, made entirely of Japanese materials by Japanese, were rolling out the factory doors.

Alfred Child, noting this, says it is "fair to state" that Fred Barr (Chief Engineer), Harley-Davidson, and Sankyo are the founders of the Japanese motorcycle industry. Morikichi Sakurai agrees: The Harley-Davidson and the Shinagawa factory are the true ancestors of every Japanese motorcycle made today. While the factory was not much by U.S. standards, when it was finished it was proclaimed a model factory by the Japanese government and groups of manufacturers were shown round it to learn the latest Western assembly line techniques.

During these years the military gained ascendency in the Japanese government and set the nation's course for war. In 1930 the Japanese army designated the Harley-Davidson Model "V" 1200cc side-valve, introduced in August, 1929, as the official army motorcycle.

The Japanese army had settled finally on the Harley-Davidson after extensive testing of the BMW revealed serious faults in the German machine. The BeeEm vibrated badly, and the horizontal cylinder layout caused premature and uneven wear on the pistons, because of gravity. Power

and durability, when compared with the Harley, were poor. In addition, the Harley was easier to service and maintain.

The Dairen, Manchuria branch of Japan Harley had been doing solid business with various Chinese war lords, including Chiang Kai-shek, who bought 200 sidecar outfits, when the Japanese army seized the territory in 1931. Thereafter Japan Harley sold to the Kanto-gun, the Japanese Manchurian Army—sometimes called the Kwantung Army, an attempt to lessen its connection with Japan. It was in fact a separate branch of the Imperial Japanese Army.

The Kanto-gun had special motorcycle needs, and Japan Harley's Dairen branch attended to them, selling special sidecar rigs with pullout axles on all three wheels.

These were good machines, but still foreign made. In 1934 with the Shinagawa factory a reality, the army began pressuring Sankyo to sever its relations with Harley-Davidson. In 1935 Harley was ready to unveil a replacement for the venerable side-valver, a 1000cc overhead-valve machine of substantially improved performance.

The new Harley was a good machine, aside from a few oil leaks, but it was not really suitable for squat-and-grunt commercial and military rear- and sidecar work, which was where the money and demand were in Japan. After heated negotiations in Tokyo and Milwaukee during which Sankyo told Harley they had no interest in producing the overhead-valve machine but would continue to manufacture the side-valve model at Shinagawa,

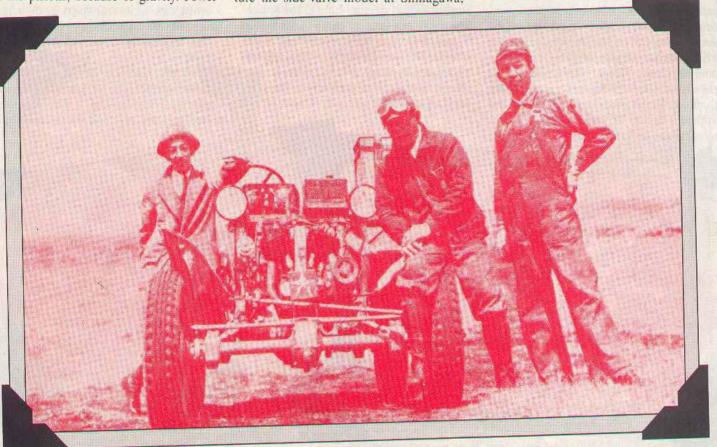
calling it "Rikuo," Milwaukee decided to sever all connections with the Harley-Davidson Sales Company of Japan, Sankyo, and the Shinagawa factory, which became incorporated as Rikuo Nainenki.

Alfred Child was reappointed as Harley's solo sales agent in Japan. He set about establishing a completely new sales organization from the ground up. Perhaps illustrating Harley-Davidson's chagrin over the outcome of the negotiations, the company agreed for the first time in its history to ship motorcycles and parts on open account, with payment 90 days after delivery, in order to help Child get started.

The first Rikuo was completed in 1935. This was not a knock-down, but a completely "made in Japan" motorcycle, the very first for which every part and sub-assembly, from the transmission to the handlebar grips was manufactured in Japan. It was a proud and in hindsight, a historic moment when Chief Engineer Sakurai tromped down on the kickstarter and brought the machine to life.

The name Rikuo in Japanese means Continent King, and although named by Shiobara's daughter after a line in a Keio University song, the name indicated the main purpose for which the Rikuo was destined: Imperial Army transport on the Asian continent.

But all was not to be smooth sailing for the new Rikuo. Although army brass had pushed for the domestic manufacture of Harley-Davidsons, lower echelons were dubious of the value of this Japanesemade machine. In February, 1936, Sakurai >



Designer Sakurai, center, poses with his four-wheel-drive vehicle, built three years before the U.S. Jeep. Note the V-Twin engine. Vehicle was designed for work in rice paddy terrain, but when war broke out in dry northern China, the Japanese Army lost interest.

was dispatched to Manchuria with Rikuo Number One for demonstration trials with the Kanto-gun.

It was 36 deg, below zero Centigrade when Sakurai and his sidecar equipped Rikuo were ordered to tag along on army maneuvers near Mukden. Sakurai knew that if the Rikuo failed him and he were left behind he would fall prey to Chinese guerilla forces active in the area. All day Sakurai flogged the Rikuo, following in the wake of scores of tanks and fourwheel-drive trucks.

When nightfall finally came and camp was made, a desperately tired Sakurai was still part of the column. The worst was yet to come. The night was bitterly cold. Truck and tank engines were kept from freezing by small heaters which kept the crankcase oil warm. Sakurai had no such device for the Rikuo. In the morning as the column prepared to pull out, Sakurai tried to start his machine. The kickstarter would scarcely budge, so cold was the oil. Sakurai was afraid he would snap the crankshaftsomething which happened often with cold engines in those days-if he tried to force the engine to turn over. But the tanks and trucks were leaving, ignoring his plight. He had to get the bike started. He prodded the starter gently, then harder and harder, trying to bring the motor to life. Pouring sweat despite the cold, he finally had to stop and rest. The column was gone. He was alone on the vast Manchurian plain, a single exclamation mark of humanity puffing steam in the frozen whiteness. Though half a very long lifetime has passed since that day, Sakurai vividly recalls his feelings of abandonment and despair. The only other living thing in sight was a scrawny Manchurian pony galloping briskly across the horizon, intent on some animal journey. "Is that pitiful pony better then my Rikuo?" Sakurai remembers thinking. Embittered and angry over the apparent failure of his machine, Sakurai roared to life, the crankshaft didn't snap, and Sakurai thundered off in pursuit of the Kanto-gun.

But the Manchurian army was not impressed with the Rikuo and sent Sakurai home, telling him to come back when he had something they could use. On the ship back to Japan Sakurai didn't sleep, but lay awake thinking how he could make the Rikuo acceptable for use in Manchuria. Traction. That was the real problem. The motorcycle shouldn't be able just to keep up with tanks and four-wheel-drive trucks. It should be able to outperform them, so riders could act as scouts for columns and ignore roads when they had to.

Thinking along these lines it didn't take Sakurai long to decide some form of power drive to the sidecar wheel was the answer. But it had to be something simple, for Sakurai already had enough experience with the army to know most officers still distrusted mechanical contraptions. The more complex the machine, the less they liked it.

Sakurai got to work on a scratch pad and soon had a workable sidecar drive sketched out. It was nothing fancy. Universal joints and a shaft connected the sidecar wheel and the rear wheel of the motorcycle. A sliding dog clutch engaged and disengaged the drive. The driver could operate the clutch by pulling a lever mounted on the left rear of the motorcycle.

Simple, almost unbreakable, the design worked outstandingly well. In army tests at the proving grounds near Gotemba at the foot of Mt. Fuji, the outfit astounded even the most doubtful army horse soldiers. Sand and mud were nothing to the Rikuo. The final test was a climb halfway up Mount Fuji that gave even light tanks trouble. The average angle of the slope was 30 degrees. In places it was 45 degrees. One officer, looking from the slope to the sidehack, then to Sakurai, said, "I'll cut off my

head and give it to you if your contraption can climb that." It did. Easily. And one sheepish officer apologized.

Further field tests in Manchuria confirmed the excellence of Sakurai's design, and in 1937 it was adopted as the official motorcycle not only of the Kanto-gun, but of the entire Japanese army. It was no longer a Harley-Davidson, nor any longer a Rikuo: It was the Army Type 97.

The Type 97 may not have been as sophisticated as such machines as the Belgian Sarolea, Gellet, and FN with their lockable differentials and subtransmissions, machines which the Germans patterned their BMW and Zundapp on from 1940, but it worked, it was cheap, and it

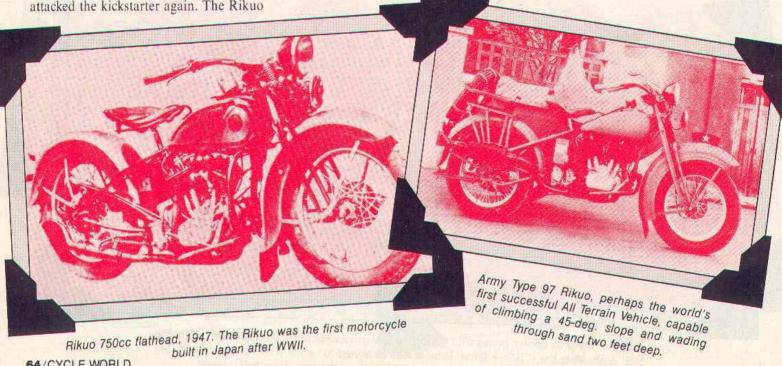
was probably first.

In 1937 war broke out between China and Japan. Almost immediately large orders for the Type 97 were placed with Rikuo. The factory was too small to meet the demand and orders were farmed out to a subsidary company of Nihon Jidosha. Their cycle was slightly different fron the Type 97, being a 1300cc machine based on the 1935 Harley-Davidson "VH80" model. In short order Matsuda was also building Type 97s.

From 1935 to 1940 the Shinagawa factory built 1479 Rikuos, each selling for 1600 ven. Some of these got into civilian hands, but most went to the police, and, of course, the military. By the end of World War II in 1945, more than 18,000 Type 97s had been built by all manufacturers.

The Type 97 saw extensive service in China from 1937. It was used much as the Jeep was in the American army, serving as a scout car, light transport and, when equipped with a Hotchkiss/Nambu 6.6 or 7.7mm machine gun, an infantry support

After the Japanese defeat, substantial numbers of the Type 97 fell into Chinese Communist hands, and it has been reported that the machine was at one time



put into at least limited local production and served with the Peoples' Liberation Army. If this is true we have one of the more remarkable occurrences in motorcycle history: A Chinese copy of a Japanese version of an American motorcycle.

An interesting sidelight of the Rikuo story is the development of what we would now call an all terrain vehicle, using the Harley engine and transmission, just about the time the sidecar drive was invented. The army, which was developing plans for conquest in Southeast Asia, wanted a lightweight machine capable of negotiating rice paddies. Sakurai came up with a four-wheel-drive vehicle with independent suspension all around, powered by the Harley flathead motor.

Five test models were built and proved to the army's satisfaction. Sakurai was again decorated by the Department of the Army. But then the China war errupted and the army forgot about Southeast Asia, rice paddies, and the Rikuo jeep.

What had happened to Alfred Child, the man who started it all? He had established his new company, Nishiman Harley-Davidson Sales, in Shimbashi, Tokyo, and done remarkably well. He remained on good terms with Shinagawa and sold several hundred new Harleys to his "rival" during 1936.

But as Child sat at breakfast on Christmas Day 1936, disaster struck. He picked up a translation of the day's Japanese papers. The news was bad. On January 20th the Diet (the Japanese legislature) would convene at the government's request to consider increasing import tariffs. The duty on motorcycles was to be raised from 76 yen to 560 yen. The new tariff would jump the price of his Harleys some-

thing like a third. No way could be compete with Rikuo. Which, of course, was the whole idea.

As Child recalls it, the jump in import tariff, plus a visit and "quiet talk" he had had a few days earlier with a Col. Fujii, his principal military contact, decided him to give up his company and quit Japan. Col. Fujii urged Child to dispose of his Japanese assets as soon as possible and return to America. The colonel went on further to say that Sankyo was willing to buy all Nishiman stocks of motorcycles, spare parts, etc. on hand and aboard ship-and pay for them in gold. Child had turned Col. Fujii down, explaining that he loved Japan (he was also making a lot of money there) and didn't want to leave. But the good colonel had been right. After seeing the headlines Child reluctantly had to agree. He sold out to Sankyo in April, 1937, and returned to the USA in June, cutting the final link between Milwaukee and Japan.

The end of the war saw the Type 97 slide into history, but Rikuo and the Shinagawa factory soldiered on. In 1945 Rikuo Nainenki was registered with the Automobile Division of the Office of Commerce and Industry in Tokyo as a motorcycle manufacturer. The company started civilian production in 1946, and by 1947 was the largest Japanese motorcycle maker, for whatever value that claim may have had. In that year Rikuo built 252 sidecar and 74 solo motorcycles. There were only 120 other Japanese motorcycles made that year, all solos.

The 1947 Rikuo was a 750cc side-valve Twin based on the 1935 Harley-Davidson Baby Twin. The wheelbase was 1460mm. A bore and stroke of 69.85 x 96.85mm gave an actual displacement of 746.6cc. The wet

sump engine was equipped with a hand operated oil pump, requiring the rider to give the engine a squirt of oil now and again. The 3-speed transmission was still shifted by hand, and a reverse gear was fitted on sidecar models. The engine produced 14.8 bhp at 3700 rpm.

The bike proved popular in postwar Japan, especially with the police, and Rikuo went to work improving the design. A telescopic oil damper fork was fitted, a substantial inprovement over the original Harley bottom link arrangement.

Production climbed throughout the years of the American occupation, peaking in 1953, when 1983 machines were turned out, including 79 sidecar rigs. By that year the 750, called the RQ, sported aluminum heads, a compression ratio of 5.8:1, and 22 bhp at 4250 rpm. Top speed was rated at 110 kph.

The substantially Japanized Harley proved a valuable and reliable mount.

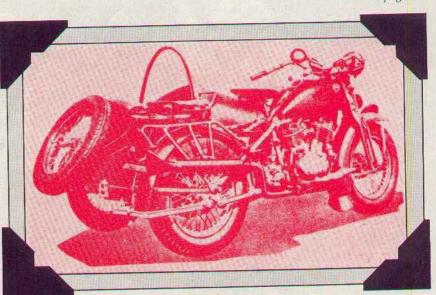
A contemporary road tester described the Rikuo as "95 percent perfect," only complaining about the hand-operated oil pump. The machine was remarkable for its low speed pulling power, and police liked its tractable handling on unimproved roads—which meant most roads in Japan then. The road tester noted that the machine could run in top gear even on steep mountain grades, slowing down to 20 kph and still accelerating smoothly for passing without downshifting. This was accomplished by manipulating the handlebar mounted spark advance.

In later years the Rikuo was further improved, and the final model, the alloy engined RT, had horsepower boosted to 27 at 5000 rpm. Compression was boosted to 7.0:1 to help achieve the power increase, weight was up at 238 kgs, but so was top speed at 137 kph. The hand-operated oil pump had disappeared, as had the RQ's wet sump. The RT had a dry sump and sported a 4-speed rotary foot-shift gearbox.

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Rikuo RQ was comfortable, reliable and handled well on unimproved Japanese roads of the forties. Note left-hand shift and marked resemblance of the RQ's gas tank to that of the Harley Low Rider.



The Kurogano-go, based on Harley's VH80, was built for the army with Rikuo's help and blueprints. It also had power to the third wheel.