

## R24, Saving BMW's Bacon

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Beginning in 1948, and into early 1950 BMW delivered 12,006 Model R24 motorcycles. It is told that the factory drawings for the pre-war R23 were left at the Eisenach Works at war's end and not retrievable (they may even have been destroyed or carted off as souvenirs). In 1945 the four occupying allied nations formed the Allied Military Commission (further shown as AMC) to oversee the occupation and eventual reconstruction of Germany. Because Germany had come back from the previous devastating war, the Allies believed that all instruments of war should be denied the Germans, and this included modes of transportation which could be used to move troops. These modes included motorcycles with engine capacities greater than 110cc. (The Allies had possibly forgotten that the sack of Singapore had been accomplished by tens of thousands of Japanese troops riding bicycles). They Made Post & Pans

While the Allies considered the fates of the firms in German industry, workers remaining and available for employment at the bombed out BMW factory went about their way making aluminum pots, pans and other kitchen utensils from left over aircraft engine parts such as pistons and aluminum castings. During this time, BMW also made aluminum bicycles and worked on the development and testing of a prototype 110cc two stroke opposed twin motorbike designated R10. Many in the Allied sphere wanted to punish Germany by imposing war reparations on the German People and their industry, with whatever of value was left. For example, the AMC through the Joint Chiefs of Staff declaration 1067 intended to dissolve firms like Volkswagen, and in 1947 offered the VW works at Wolfsburg to Ford. Edsel Ford turned his nose up at what he thought was a political flop and fully believed VW would go nowhere. Note: "Too many people here and in England hold the view that the German people as a whole are not responsible for what has taken place" that only a few Nazis are responsible. That unfortunately is not based on fact. The German people must have it driven home to them that the whole nation has been engaged in a lawless conspiracy against the decencies of modern civilization. President F. D. Roosevelt JCS 1067 had directed the U.S. occupation forces to "take no steps looking toward the economic rehabilitation of Germany" (see footnote below), and further allowed the US and British to plunder German intellectual properties (patents, design engineering, etc.) to the value of \$20 Billion in 1945 Dollars. During the first two years of the Allied occupation, the Allies could seize newly developed ideas from the very drafting boards of German engineers. Being nobody's fools, the Germans kept their new developments in their heads. Additionally, the Allied intent was to dissolve all German industry and turn Germany into an agricultural nation. Fortunately, this never happened. For political and ideological reasons, the "Cold War" between the Western Allies and the Soviet Union begun and the Allies were now looking at Germany as a potential "friend" in any possible conflict with the Soviets. An industrial nation has far greater potential for self defense than an agrarian. In July 1947 the Joint Chiefs of Staff rescinded JCS 1067. Energetic and forward thinking Germans saw in 1948 a business miracle remembered as the "Wirtschaftswunder". Overnight, when the currency was changed from the rapidly inflating Reichsmark to the Deutsche Mark, the store fronts became filled with items that were previously unavailable. People now had money to spend. At this time the AMC raised the restriction on engine capacity to 250cc, which now allowed firms such as BMW to manufacture overall larger machines, and in the case of the R24, with four stroke cycle engines. The R10 development was shelved. BMW designers "back engineered" an R23 to come up with a new motorcycle to take its place. The number was moved up one digit to 24. The reverse engineering was done so precisely that many components that appear common between the R23 and R24 will interchange without any special hand fitting. The engine and transmission on the R24 were however fresh designs with little more than an engineering concept in common with the R23. No parts between these two engines or transmissions will match. It might be interesting to note that the gear sets in R24 transmissions (using shafts from the later Earles twins) will drop right into a late R69S transmission case, giving the bike very low side car gearing in 1st through 3rd. 4th is the same in both bikes. Those ratios in comparison are as follows: 6.1/3.0/2.04/1.54 with a rear end of 4.18:1 or 4.25:1. The R69S is 4.17/2.73/1.94/1.54 with a rear end ratio of 1:3.13 or 1:3.375. Anticipating the question: no, the R24 gear sets are not quite the same as the side car gearing found in the early R60 transmissions (here compared): 5.33/3.02/2.04/1.54 with a rear end at 1:2.91. R24 and following singles transmissions were strong enough to handle the torque from much more powerful engines. Although a later R25-25/3 crankshaft can be installed with modification to the crank case, the R24 crankshaft is unique to this engine, given the factory internal designation 224/1. Externally, the R24 and subsequent model R25 engines appear to be the same, however upon close inspection one can see that the mounting studs between the crank case and the transmission are 6mm on the R24 instead of 8mm as found on all subsequently manufactured BMW push rod singles. 6mm studs also mount the carburetor to the cylinder head, again unlike the 8mm studs found on later singles. The R24 frame is nearly identical with the R20 and R23 being laid out of two lower bent tubes, an upper yoke main frame mated at the steering head end by a machined steel casting, and at the rear by two heavy stamped steel plates to hold the aft ends of the tubes fast and secure the rear drive and rear wheel bearing, which is fastened to the left side plate. The R24 is in fact the last production "hard tail" BMW built. R24 frame in assembly jig. BMW Group Archive Image Details of the cast steel steering head. The R24 was the only post war BMW that did not have the wheel bearings contained inside the spindle of the rear brake hub. This was a carry over design from earlier days, as are the wheels, which will interchange with the R23 and R20, but not the later R25. Tire size is 3.00X19, smaller than the R25's 3.25X19. The later 3.25 tire will not fit inside the fenders of the R24. Also, unlike later BMWs, the R24 series

numbers are stamped on the lower right frame atop the engine mount block. The engine numbers are on the right side of the crank case as with all the post war singles through the R27. It appears the earliest R24s used a Hella headlight with an internal mechanical H/L dipper mechanism connected by a cable to a lever adjacent the clutch perch on the handlebar. Later R24s have been found with Bosch headlights with similar internal dipper mechanisms. The clutch and brake lever assemblies are again unlike anything that followed on BMW motorcycles. Speculation: BMW or the firm's supplier Magura might not have been set up with the centrifugal casting moulds for the multi-faceted perches found on following models. The Magura aluminum levers were forged, as were the later levers, but once again, are unique to the R24. The R24 perches were made up of a stamped and formed sheet steel coupon, chrome plated. With two unusual and unmatched shouldered screws, the assembly was fastened to a zinc casting in place on the handlebar, and had to be put together with the levers in place. The lever pivot screw was part of the final assembly. (See Page 3) You can see in photo above how the die cast zinc becomes very brittle and crumbles with age. Note the two different shouldered screws and the stamped steel clamp. Ed. The zinc used in the casting must have had impurities because many that I have seen are "exploding" from the inside out and are sadly not serviceable. The saddles used were Drilastic manufactured by Dunlop in Hanau near Frankfurt a/M. The first R24 to be seen by the public was at the 1948 Paris Auto Show where it caused quite a sensation. Subsequent orders for the bike came from the French Police and the French Military. More orders followed from various German and Austrian police agencies. R24s showed up in BMW dealerships. BMW Group Archive Image BMW Group Archive Image (As far as we know, all coach lining seems to have been done by women. Ed). Let us not overlook the overall circumstances, changing attitudes and beliefs in the Allied leadership, the tenacious fortitude of the German employees and managers, which all contributed to the resurrection of the BMW marquee. If there had been no cold war between the Soviets and the west, if the Allies had decided to proceed with imposing an agrarian system on Germany, if the ban on motorcycle displacement of 110cc had not been lifted, it is less likely that BMW would have survived, and because the same situation would have controlled all industry in Germany, more than likely that the political map of Europe would be far different today. It is safe to say that with sales exceeding 12,000 units of the R24, the revenue brought in contributed toward bringing BMW back from the ashes of war. I have heard people describe various models of BMW motorcycles as "lowly", with such com as, "I went to look at a bike, and it was just a "lowly" R24. Gentle Reader, please accept the premise that nothing "lowly" about a product that went so far as the R24 to save a company and workers' jobs. For that matter, the nothing lowly about any BMW. "Lowly" applied to any BMW is an opinion with little credence. While growing up I heard BMWs described as being the Rolls Royces of motorcycles. I get quite a chuckle out of that. BMWs are the BMWs of motorcycles!

S. Hamfist

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