

# The Orphaned Stepchild

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Â The Orphaned Stepchild Article by Darrel Spinozi. Darrel has a respectable collection of ZÃ¼ndapp twins and one four.Â

This is a new column devoted to boxers and singles which share engineering similarities with BMW motorcycles. Dale Monson provided the following information about the origins of the Ratier motorcycles.Â

â€œShortly after World War II, the French government received permission from the allies to assemble motorcycles from a parts warehouse in Paris.Â The first company to be formed was CMR.Â They took different BMW parts and assembled motorcycles from R12 motors and transmissions and R51-61 frames.Â They were able to assemble 192 machines before they ran out of some parts.Â Motor cases were the biggest shortage.Â The company quit assembly at that time.Â Â Â Â Â Â

Next the CEMEC company was formed.Â They started manufacturing the needed parts and continued to use additional parts from the warehouse until into the 1950'sÂ Â Â Â Â Â

In 1954 the company was sold to Ratier, a French aircraft and aviation firm.Â They continued to manufacture a similar motorcycle using R12 based drive trains and R51-71 frames.Â In total, around 5000 R12 based bikes were made.Â In 1960 they designed and built an entirely new drive train with overhead valves.Â They continued to manufacture the C6S until they quit making them in 1962.Â A total of 1047 machines were produced.â€•

My Quest for the RatierÂ Â Â Â Â

â€œIn 1994, I started a quest for a motorcycle that I had neverÂ seen, and most people in the U.S.A. had never heard of.Â A Ratier or Cemec L-7.Â Â Â Â Â Â

While attending the BMWMOA National rally in Durango, Colorado, I met a man that ownedÂ an L-7.Â It seemed that the Gods were with me.Â Jim Schmidtgall had a 1955 Ratier L-7 that had burned in a garage fire in the early 1990's. (See Photo below)Â After a year of negotiation, Jim and I met in Ohio and traded a BMW motorcycle for the Ratier.Â Questions were raised as to my sanity.Â Â Â Â Â

I returned home with the bike and in two days, I got the bike running and drove it up and down the block until the rear fender flap fell off.Â It did actually run though.Â Over the next few years I completely disassembled the motorcycle and started the restoration.Â Â Â Many parts were sent out for chrome plating.Â Â Â Â Â Â

I then joined the Ratier/Cemec Club of France.Â There are still a few hundred running in France.Â I traveled to France, where I met Michel, Sylvia & Almandine Broquet.Â Michel was a great help in getting technical information for my L-7.Â I also traveled to Mannheim, Germany , to Veterama, the largest swap meet I have seen and found many BMW R-12 and R61 parts that fit the motorcycle.Â The cables, wiring and carburetion came fromÂ BMW's made in the 1950's and 60's.Â Â Â Â Â

With the exception of the lower end motor work , the transmission (done by Vech) and the paint stripes, I did the entire restoration.Â I painted it Dover White as I saw a Ratier in some photos in the materials I received from the club.Â Most were painted black.Â (Sound familiar?)Â Â Â Â Â Â

At the Midland, Michigan BMWMOA rally, it debuted. I displayed it in the Vintage Motorcycle display along with a later Ratier C6S export that found me that spring.Â The C6S USA is a 1962.Â I did not restore the C6S, only cleaned and minor painted it.Â It is faster than any R69S I have owned, but the ride is very firm.Â Over the years I have driven the C6S 3500 miles.Â It is a lot of fun to drive and is nice as no one ever comes toward me driving one.Â The C6S was shown in a photo in the Vintage BMW Bulletin in Mar.-Apr.Â 1977.Â Currently it is down with a bad crank.Â Â Â Â Â Â

I am not sure, but I think there are fewer than 10 Ratier/Cemec's in the United States.Â Â Â

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In spring 2002, my wife and I traveled to France and attended Coupes Du Moto Legends, an antique motorcycle event held near Paris at a big race track along with 35,000 of my close friends.Â There I met with Michel De Thomason, one of the last administrators of the Ratier Motorcycle Division.Â I also met several Ratier/Cemec Club members.Â Â Â Â Â Â Â Â

Any individuals aware of any other Ratiers/Cemecâ€™sÂ in the U.S.A. or Europe, I would love to hear from you.Â I haveÂ e-mail and would answer any letters or posts.Â Â Â Â Â Â Â Â

I also displayed the 1955 L-7 at the Airheads/Vintage BMW Rally a few summers ago in Rhinebeck,Â NY.Â The rally was

real nice as were the people my wife and I met there. Being the self crowned King of Ratiers in the U.S. is good. Small kingdom though. Dale Monson Big Rapids, MI

Here's a little on the KS 601 engine oiling system. This is the later configuration typical of engines after 1952.

The 601 uses a wet sump type system with 2&1/2 liters of oil in the oil pan. The oil level actually extends above the point where the oil pan bolts to the engine case. This means we have to be especially careful to get a good seal when installing the oil pan.

The oil pump is the common gear type. It's located at the front of the engine case below the crankshaft and is driven by a straight cut gear off the crankshaft.

The pump draws it's oil through a fine mesh metal screen filter in the sump. The pressurized oil is forced in two directions. The first passes up a vertical drilling in the front of the engine housing to the forward camshaft bearing. Part of the way up this passage there is a tiny hole drilled (about 1/2 mm) through the inside wall of the engine case. This allows oil to be squirted against the side of the front crankshaft counter weight. The 360 degree counter weight has a large recess at the connecting rod journal. This recess or pocket accumulates oil and then passes it to the connecting rod bearings by centrifugal force through the drilling in the journal. From there the oil is thrown off and disperses as a vapor which lubricates the roller bearings on the front of the crankshaft.

The second output from the oil pump runs through a horizontal tube to the back of the engine. A vertical drilling in the engine case passes oil to the steel bearing carrier flange which holds the rear crankshaft main bearing. This flange has a horizontal drilling that causes oil to be squirted onto the side of the rear crankshaft counter weight. The rear counter weight has a pocket at the rod journal which accumulates oil and passes it to the rod bearings the same as the front. Oil leaving the rod bearings becomes atomized and lubricates the rear main bearing.

The oil thrown off the crankshaft also serves the camshaft rear bearing, the cam lobes and tappets. The tappets are hollow and have small holes drilled in the sides which allow oil to accumulate inside them. This oil is passed by inertial force to the hollow push rods to the rockers and overhead valve parts at the cylinder heads. The oil then drains back to the crankcase through a passage at the bottom of the cylinders. At least that is what it's supposed to do. It's more likely to drain out past the rocker cover seals onto the garage floor or onto your shoes.

I am amazed at how well the oil vapor system works. I have a 601 motor apart on my workbench now with the front horizontal drilling plugged. This would prevent oil being squirted to the front con rod. The drilling appears to be plugged with a broken drill bit, which suggests that it happened at the factory. The front con rod bearings and journal were damaged but the amazing part is the speedometer shows over 22,000 miles! It ran 22,000 miles without its intended oil supply. The only oil available would be from the vapor in the case.

Best Regards,  
Darrel Spinosi

Dale Monson's magnificent 1955 L-7 Ratier as seen at an Ohio Fall meet in 2003

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