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## **Biker Article — Guggenheim Museum, New York City**

### **Exhibition “The Art of The Motorcycle”, June 26 – September 20, 1998**

The defining elements for inclusion of motorcycles in this exhibition were aesthetics, technological innovation, design excellence, historic importance and social impact. All of the motorcycles in the exhibition were a product of more than one of these criteria. Read on to find out about the Harley-Davidson motorcycle with the boxer engine and also find out which motorcycle has sold more than 100 million units and is still in production!

But, before talking about the exhibition, I firstly need to familiarise you with the Guggenheim Museum and its significance.



**Image 1** – The Solomon R Guggenheim Museum seen at centre foreground (round building) is situated overlooking Central Park in New York City. It is one of the most recognisable buildings in the world and is now a landmark of New York City.

Often referred to as just “The Guggenheim”, its address is 1071 Fifth Avenue on the corner of East 89<sup>th</sup> Street in the Upper East Side neighbourhood of Manhattan, New York City.



**Image 2** – The Guggenheim is considered a landmark work of 20<sup>th</sup> Century architecture and was designed by renowned and celebrated American architect Frank Lloyd Wright, America’s most famous architect.

Let’s digress for a moment and check out Frank Lloyd Wright!



**Image 3** - Frank Lloyd Wright (June 8, 1867 – April 9, 1959, 91 years) was an American architect, interior designer, writer, and educator, whose creative period spanned more than 70 years, designing more than 1,000 structures, of which 532 were completed. Wright believed in designing structures that were in harmony with humanity and its environment, a philosophy he called organic architecture. This philosophy was best exemplified by his work ***Fallingwater*** (1935), which has been called "the best all-time work of American architecture." As a founder of organic architecture, Wright played a key role in the architectural movements of the twentieth century, influencing three generations of architects worldwide through his works.

Let’s see what that building ***Fallingwater*** is all about!



**Image 4** - This house called "**Fallingwater**" is one of Wright's most famous works and is located in rural southwestern Pennsylvania. Designed in 1935 and constructed between 1936 and 1939, it is built partly over a 30-foot waterfall and was meant to be a family getaway weekender rather than a live-in home. The home was built for Edgar J. Kaufmann (of Kaufmann Department Store fame), then inherited by his son Edgar Jnr in 1955. Edgar Jnr then donated the house and its surrounding 1,750 acres of land to a non-profit trust called 'The Western Pennsylvania Conservancy'. It was then opened to the public as a museum in 1964 and since then has received more than 5 million visitors. Let's have a closer look at **Fallingwater**!



**Image 5** - You can see that Fallingwater is a series of cantilevered balconies and terraces integrated with the actual waterfall. This exemplified Wright's theories on organic architecture which sought to integrate humans, architecture, and nature together so that each one would be improved by the relationship. This house was meant to complement its site while still competing with the drama of the falls and the endless sounds of crashing water which can be heard throughout the entire house.

**Fallingwater** is considered a treasure of American architecture.

Now back to the Guggenheim Museum which is probably Wright's most recognized masterpiece.



**Image 6** – The Guggenheim first opened its doors on October 21, 1959 with critics panning its design likening it to a washing machine, an inverted oatmeal bowl and an oversized indigestible hot cross bun among other things. Today however, it has become one of New York City's most beloved architectural icons.



**Image 7** – This cylindrical building, wider at the top than the bottom, was conceived as a “temple of the spirit”.



**Image 8** – From the street, the building looks like a white ribbon curled into a cylindrical stack, displaying nearly all curved surfaces. Its appearance is in sharp contrast to the typically rectangular Manhattan buildings that surround it.



**Image 9** – The goal of this museum is to collect, preserve and display art objects and to make them accessible to visitors through exhibitions and programs. The museum is housed in a structure whose reputation often precedes the art found within it!

This museum is now the permanent home of a continuously expanding collection of Impressionist, Post-Impressionist, Early Modern, and Contemporary art but also features special exhibitions from time to time.



**Image 10** - The museum was founded in 1939 by American businessman, art collector and philanthropist Solomon R Guggenheim (2 Feb 1861 – 3 Nov 1949, 88 years) and named in his honour in 1952. Previously, their art works were housed in a rented space but a permanent location and home was preferred. Thus, architect Frank Lloyd Wright was commissioned to design the proposed new museum building in 1943. The design stipulation was that “the building should be unlike any other museum in the world”.

Speaking of museums, did you know that there are over 100 museums among the 5 boroughs of New York City, 32 of which are in Manhattan alone! And New York City is second to Amsterdam as a city with the most museums.

Hey, just for fun, let’s check out the top 5 most visited museums in Manhattan which are as follows:

(patience, we will get to the bikes soon!)

- The Metropolitan Museum of Art (“The Met”). This is the biggest museum in the U.S. and gets over 6 million visitors per year.
- The American Museum of Natural History. Over 5 million visitors per year.
- The Museum of Modern Art – over 3 million visitors per year.
- The Solomon R. Guggenheim Museum – over 1 million visitors per year.
- The Intrepid Sea, Air and Space Museum – up to 1 million visitors per year.

So, you can see that the Guggenheim is a top rank museum.

Just for more fun, I will show you a picture of the other museums mentioned above!



**Image 11** - The Metropolitan Museum of Art, located at 1,000 Fifth Avenue, here we see the entrance facade of the main building. This is one of the world's largest and finest art museums and its collection includes more than 2 million works of art spanning over 5,000 years of art from all around the world.



**Image 12** - The American Museum of Natural History.

The American Museum of Natural History (abbreviated as AMNH), located on the Upper West Side of Manhattan, New York City, is one of the largest natural history museums in the world. Located in Theodore Roosevelt Park across the street from Central Park, the museum complex comprises 26 interconnected buildings housing 45 permanent exhibition halls, in addition to a planetarium and a library.



**Image 13** - The Museum of Modern Art (MoMA) is an art museum located in Midtown Manhattan, New York City, on 53rd Street between Fifth and Sixth Avenues. It plays a major role in developing and collecting modern art, and is often identified as one of the largest and most influential museums of modern art in the world.



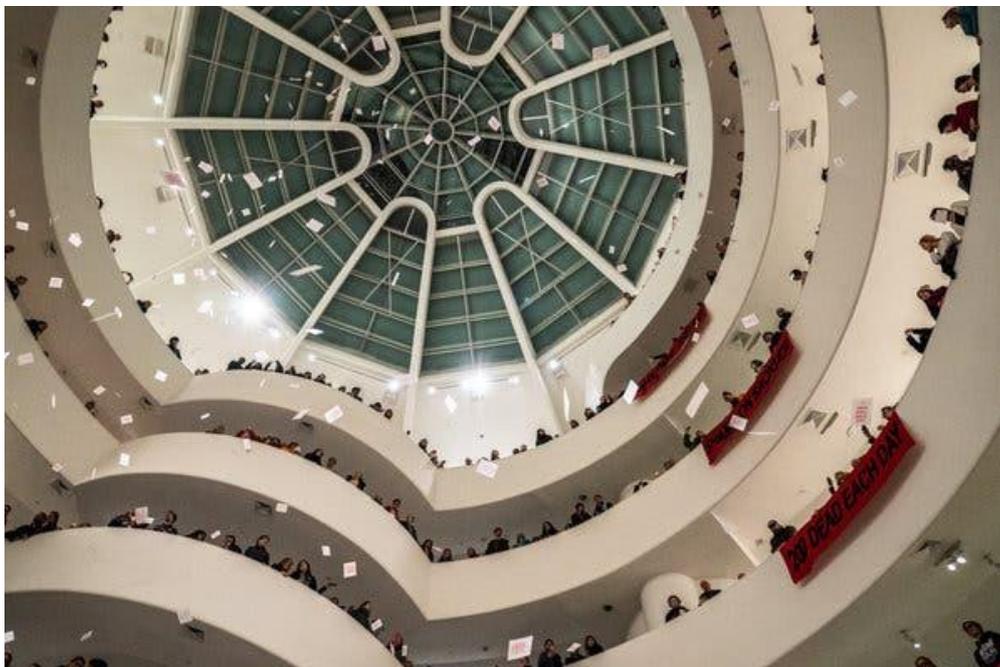
**Image 14** - The *Intrepid* Sea, Air and Space Museum has the name *Intrepid* because the museum is on a real-life aircraft carrier that is called '*The Intrepid*'. This carrier saw service in World War Two and the Viet Nam war but is now permanently moored along the Hudson River in New York City. Amongst its collection is a Concorde supersonic jet and the Space Shuttle Enterprise. Coooooool!

So as the design stipulation required, the Guggenheim is in fact unlike any other museum in the world.

OK! Now let's focus back on the Guggenheim!



**Image 15** - The dazzling “oculus” or skylight of the Guggenheim.



**Image 16** – This skylight is said to “evoke awe and highlight the human ingenuity”. It’s pretty impressive!

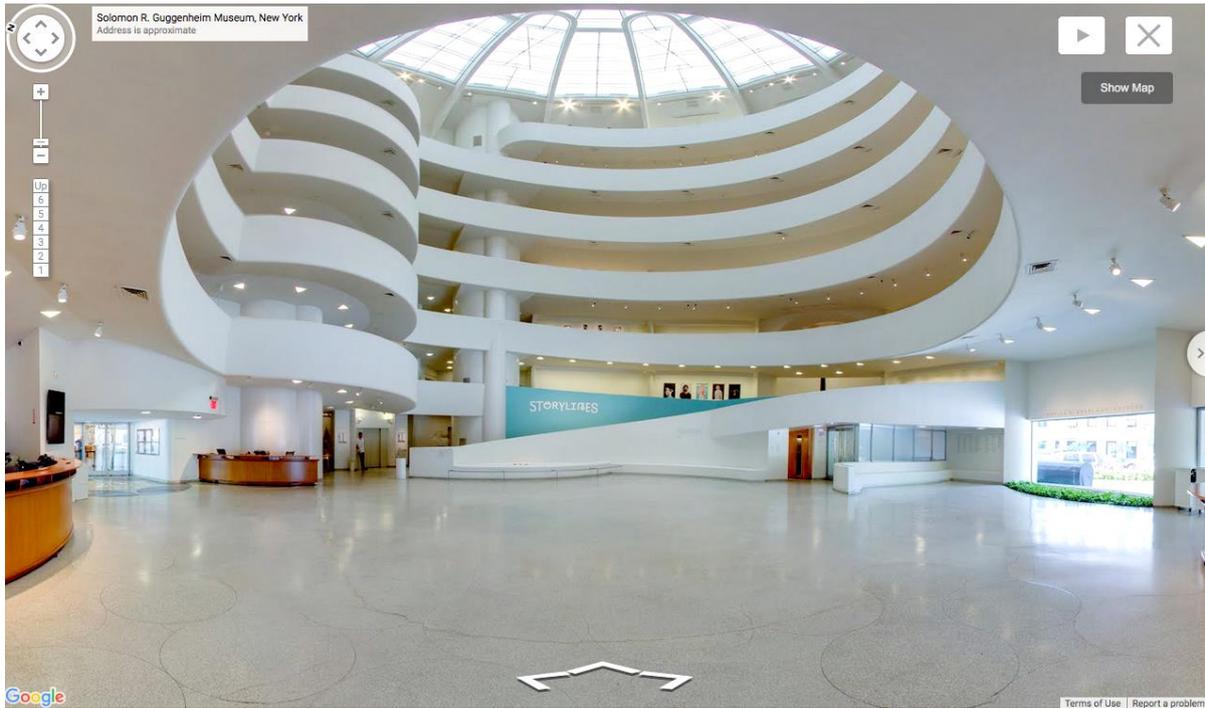


**Image 17** – The Guggenheim has a unique ramped gallery extending up from ground level in a long, continuous spiral along the outer edges of the building to end just under the ceiling skylight. Wright’s plan was for the museum guests to ride to the top of the building by elevator, and to then descend at a leisurely pace along the gentle slope of the continuous spiral ramp which is 1,416 feet long with an inclination of just 18 degrees.

Yes, we will talk about the bikes soon! You need to zone in on the museum first!



**Image 18** - A view of the continuous ramp of the Guggenheim looking from the top and downwards.



**Image 19** – Street level inside the Guggenheim.



**Image 20** – Now to the bike exhibition! “The Art of the Motorcycle” was an exhibition of motorcycles at the Guggenheim Museum in New York City in 1998 which ran from June 26 to September 20. The “Art of the Motorcycle” exhibit broke all previous attendance records for The Guggenheim. It attracted the largest crowds ever seen at this museum and received mostly positive reviews in the art world. Average attendance was 45% higher than normal, with over 4,000 visitors daily, and more than 5,000 people a day on weekends. Total attendance was over 300,000 people, the largest in the history of the Guggenheim. This exhibition was the beginning of a new trend in profitable, blockbuster museum exhibits.

The year 1998 also coincided with the 50<sup>th</sup> anniversary of Honda motorcycles, the 75<sup>th</sup> of BMW motorcycles, and the 95<sup>th</sup> of Harley-Davidson. It was a huge undertaking that was well executed and it included many great bikes of the 20<sup>th</sup> Century. It was sponsored by BMW Motorcycles.

This exhibition was condemned outright by some art critics and social commentators who rejected the very essence of an exhibition of motorcycles at the Guggenheim. They saw a great cultural institution renting itself out as an exhibition hall for a mere trade show. But American art museums have always shown objects of design, and motorcycles better than many things, illustrate technology as they have evolved over the past 150 years.

The art museum has since continued to evolve, responding to new directions in artistic creativity. Motorcycles have also had an enormous impact throughout the world and The Guggenheim has now legitimized the motorcycle as art! More than just a means of transport, the motorcycle is a design object, with forms and styles that reflect innumerable cultural and societal influences. Over its 150-year history, the motorcycle has undergone extraordinary reinvention, from steam power, to petrol-fuelled internal combustion engines, to battery, and from humble backyard creations to custom-made, high-tech chrome speed machines.

The defining elements for inclusion in this exhibition were aesthetics, technological innovation, design excellence, historic importance and social impact. All of the motorcycles in the exhibition were a product of more than one of these criteria.

The bikes at the exhibition were on loan from museums and private collections. The greatest number were on loan from the ***Barber Vintage Motorsports Museum*** and the ***Chandler Vintage Museum of Transportation and Wildlife***. A brief mention of these museums follows.



**Image 21** - the ***Barber Vintage Motorsports Museum*** seen here is located in Birmingham, Alabama.

The Barber Vintage Motorsports Museum gets more than a quarter million visitors each year. With its creative architecture and great attention to detail, the museum is home to over 1,600 motorcycles that span over 100 years of production. More than 950 bikes can be seen on any given day, and 200 different manufacturers from 20 countries are represented in the collection

A call from New York's Guggenheim Museum in 1998 was a defining moment for the Barber Museum. It sent 21 bikes to exhibit at the Guggenheim.

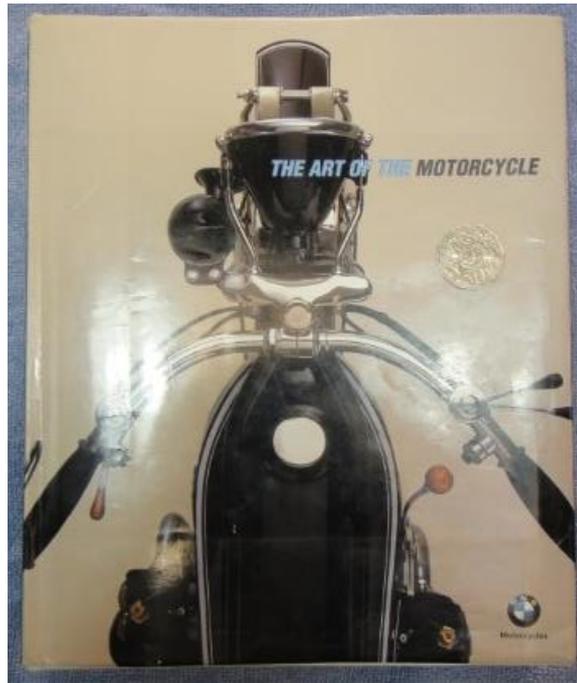
The ***Chandler Vintage Museum of Transportation and Wildlife***, more commonly referred to as the Vintage Museum, was the primary showcase for the collections of Otis Chandler since its foundation in 1987. The museum was located in Oxnard, California, and home to Otis Chandler's extensive collection of vintage and rare automobiles, motorcycles, and trains as well as fine art and wildlife game. After its founder died, the collection was auctioned off in late 2006. The museum's sizeable motorcycle collection covered two floors of the museum. Over 50 marques were represented including Ace, Crocker, Iver-Johnson, Indian, Vincent and Brough and over 80 years of the most important Harley-Davidson models ever built. On 21 October 2006, the collection was auctioned off by Gooding & Company. The auction fetched over \$36 million, and set a record for a single day automotive auction.

Now back to the Guggenheim!



**Image 22** - An actual image of the motorcycle exhibition at the Guggenheim. Note the use of reflective stainless-steel sheeting for effect.

I couldn't find enough information on the web to do a story on the exhibition justice but I did find out about a publication/catalogue by the Guggenheim Museum entitled "The Art of the Motorcycle". This was done for BMW Motorcycles who were the sponsors of the exhibition. I managed to track down a copy in the United States which I promptly ordered.



**Image 23** - This is my copy of the book “The Art of the Motorcycle” which is a very nice coffee-table type book. It’s hard covered with nice thick pages and has beautiful, large glossy colour photos of the bikes in it. However, this also meant that the book is very heavy and priority freight is based on weight so the freight to Australia cost me more than the price of the book!

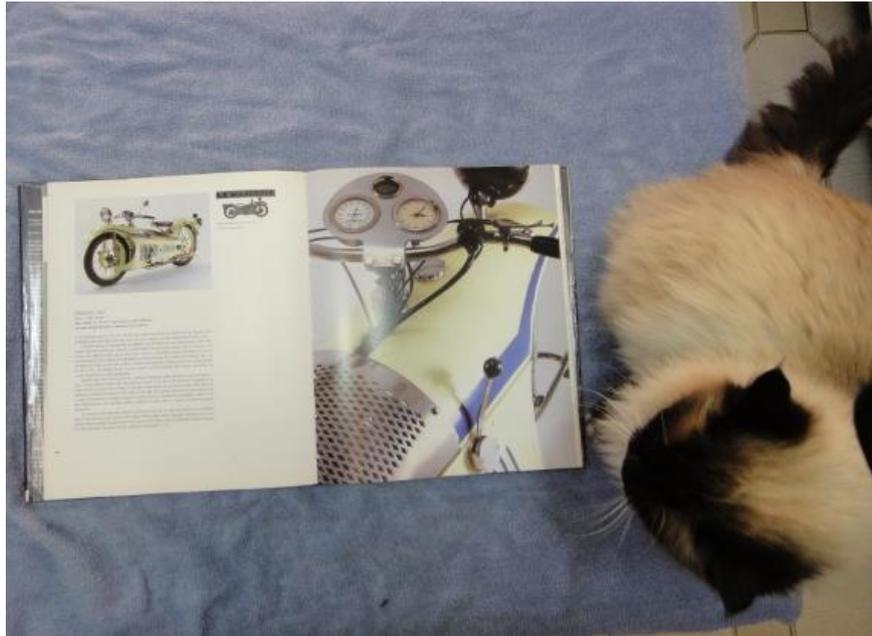
The exhibition's official catalogue lists 95 motorcycles, plus some pre-20th century models which were listed separately bringing the total number of bikes at the exhibition to 114.

For the complete list of motorcycles at the exhibition, copy and paste the following link to your browser:

[https://en.wikipedia.org/wiki/List\\_of\\_motorcycles\\_in\\_The\\_Art\\_of\\_the\\_Motorcycle\\_exhibition](https://en.wikipedia.org/wiki/List_of_motorcycles_in_The_Art_of_the_Motorcycle_exhibition)



**Image 24** - The book contains detailed descriptions as well as scholarly and technical information on each of the bikes listed. I also supplemented this information with interesting facts found on Google for this blog.



**Image 25** - This 447-page book is a hefty compendium of motorcycle history, culture, design, and science. Above all it is a meticulous catalogue of the 95 motorcycles included in the catalogue. The book is a good read if you enjoy motorcycle history and innovation, and the excitement and desire it evokes.

All 95 motorcycles in this catalogue are numbered from 1 to 95 in chronological order from the oldest to the youngest and as per the layout along the museum ramp from the top of the ramp to the bottom. I will stick to that numbering as I show you some of the bikes below so you know where they fitted in at the exhibition.

From the book, lets summarise by country, the motorcycles exhibited:

- USA – 22
- Italy – 18
- UK – 17
- Germany & West Germany – 13
- Japan – 12
- France – 8
- Spain – 2
- Belgium – 1
- Czechoslovakia – 1
- New Zealand – 1

Now, in terms of marques, the most represented were:

- Harley-Davidson - 10
- Honda - 7
- BMW - 6
- Indian - 4
- Ducati - 3

The 10 Harley-Davidsons at the exhibition were as follows:

- 1911 Model 7D
- 1919 Model W
- 1923 8-valve Board Track Racer
- 1944 U.S. Military Model U
- 1957 Model KR
- 1957 Sportster XL
- 1969 Easy Rider Chopper
- 1971 Super Glide Night Train
- 1972 XR750
- 1977 XLCR

With this exhibition the Guggenheim Museum chronicles the most compelling moments in the evolution of motorcycle technology and design and places these moments in their cultural and historical contexts. It covers all types of motorcycles and there are many I've never heard of such as the Monet & Goyon Moto Legere from France and the Bohmerland from Czechoslovakia. I can't show all the bikes from the exhibition in this blog, it will be too long a read, so how about I just pick 15 to give you an idea of what was there and how interesting the bikes are.

***Let's check out the 15 bikes I have selected for you which I found to be very interesting:***

#### **Museum Exhibition #5 – 1910 Pierce Four – United States. Production 1909 – 1914.**

A century ago, in the fledgling days of the motorcycle industry, American-made motorcycles led the world in sophistication of design, with several companies producing 4-cylinder models. Two manufacturers stood out among the array of early American 4-cylinder bikes, Pierce and Henderson.

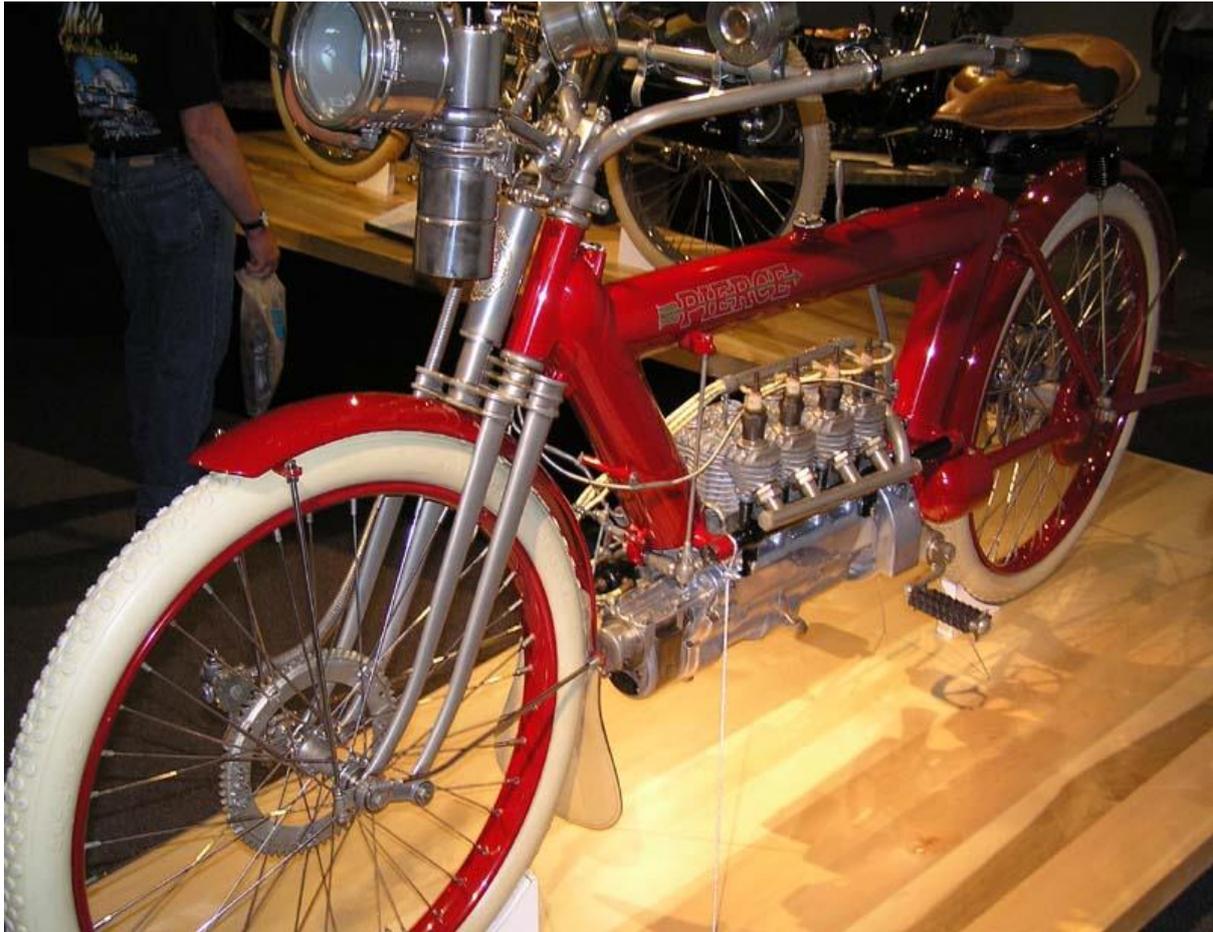
The Pierce is a rare but important motorcycle in American two-wheeled history as it was the first four-cylinder motorcycle produced in the United States. This new Pierce was innovative, with the engine being a stressed member of the frame (the engine is part of the bikes frame) and it had a shaft final drive.

In 1910, few machines could leave an impression like the Pierce Four. After all, most other motorcycles of the time still showed their spindly bicycle roots, with skinny tube frames and diminutive, single-cylinder motors or, occasionally, twins. Not the Pierce. With a massive frame and a beefy, four-cylinder engine, it commanded respect in the fledgling motorcycle world. It's easy to imagine Pierce owners taking pride in motoring past lesser machines on the crude roads of the day.

Fast and well made, the Pierce Four was capable of speeds up to 60 mph (100 km/hr), and soon had a string of city-to-city endurance race wins to its credit, many of them achieved by Percy Pierce himself (the founder of Pierce Cycle Company).



**Image 26** - This is indeed a very interesting looking bike, especially for 1910. It has a 43-ci (700 cc), 4-cylinder, 4-stroke motor and what immediately sets it apart from its rivals is its massive tubular frame. This very large-diameter 3 ½ inch tubular steel frame both hid the control cables and held oil and gasoline internally. The hollow frame held fuel in the copper-coated upper sections, and oil in the front downtube. It also stood out for the comparative smoothness of its four-cylinder engine that led to it being dubbed the 'Vibrationless Motorcycle'.



**Image 27** - The “vibrationless” engine put power to the road with a shaft final drive, a significant engineering advancement over the leather belt typically employed in 1909 by most other manufacturers.

As a Pierce advert declared, “Pierce motorcycles are not made to compete in price, but to surpass in quality. It is a deluxe motorcycle for discriminating riders.” But it was an expensive machine whose sales were limited and it was rumoured that each bike cost more than its retail price to build thanks to so many quality parts being included. Losing money on every motorcycle it manufactured brought inevitable financial travails which eventually bankrupted the Pierce Cycle Company forcing it to declare bankruptcy and close its doors in 1914.

It is estimated that approximately 3,500 4-cylinder machines were built in the 5 years that they were produced.

Pierce fours are very rare and highly sought after by collectors nowadays.

## **Museum Exhibition # 12 – 1919 Harley Davidson Model W Sport Twin - United States**

Engine: 36 ci (584 cc), 4-stroke, opposed-twin, air-cooled with top speed of 50 mph (80 km/hr).

The bike that Harley-Davidson introduced to dealers in mid-1919 was definitely innovative. The Model W also known as the Sport Twin, was most unusual for a Harley-Davidson motorcycle in that it had a flat-twin engine. Harley-Davidson's intention in introducing a new middleweight model was to increase the size of the motorcycle market by appealing to new riders with what they considered an entry-level product. It was easy to start and was smooth-running because of the inherently good balance of the opposed twin cylinder design (smoother than a typical Harley-Davidson V-Twin), and its lower centre of gravity made for a machine that was easier to control.



**Image 28** – You can see here that the engine was a stressed member of the frame.

**Transmission:** 3-speed manual hand shift, chain final drive.

**Brakes:** front – none; rear – contracting band.

**Suspension:** front – trailing link with single coil spring; rear – none, rigid.

**Lighting:** acetylene gas lighting as standard, electric lighting optional.



**Image 29** - The Sport Twin also incorporated innovative features that were designed to keep both rider and motorcycle cleaner than had been possible in the past. The transmission and clutch assembly were integral with the engine crankcase, thus reducing the number of oil compartments thus providing fewer ways for the oil to leak, and the optional fully enclosed dust-proof case made of sheet metal completely enclosed the drive chain, eliminating the potential for excess chain oil to find its way to the exterior of the machine or onto the rider's clothing. This was the first and only time this concept was adapted by Harley-Davidson.



**Image 30** - In this image you can see the cylinders are in line with the frame, one forward of the crankcase and one aft. This design was a departure from the V-Twin which Americans developed an affinity for and the Model W struggled to catch on and never sold well in the United States. Also, the expected crowd of new riders taking up motorcycling on Sport Twins did not eventuate. The Model W was thus discontinued in 1923 after approximately 6,000 machines were built, the majority of which were exported to overseas markets where the opposed twin cylinder design was better accepted (the Model W sold well in Europe).

### Museum Exhibition # 16 – 1923 BMW R32 - Germany

The BMW R32 of 1923 was the first motorcycle produced by BMW under the BMW name. BMW was an aircraft engine manufacturer during World War 1 but was forced to diversify after the Treaty of Versailles banned the German air force and German aircraft manufacture. BMW initially turned to industrial engine design and manufacturing and then moved on to motorcycle manufacturing.



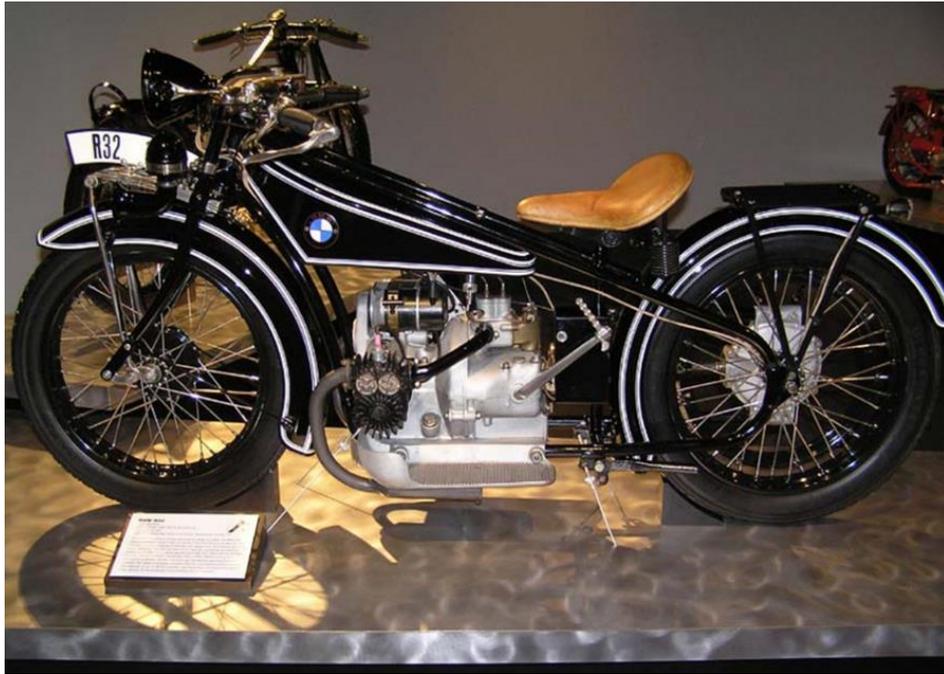
**Image 31** - The R32 was unveiled at the Paris Motorcycle Salon in 1923, and it proved to be the sensation of the event.

The R32 was sort of an amalgamation of the best practices in motorcycle building at the time. Its Bauhaus-calibre design combined practicality and efficiency with sleek forms. It is widely considered to be an elegant masterpiece of motorcycle design.

**Engine:** 494 cc side-valve, air-cooled, boxer flat twin.

**Brakes:** front – none (first series), then later drum; Rear – block

**Top speed:** 60 mph (100 km/hr)



**Image 32** - This R32 established the boxer-twin engine, shaft-drive powertrain layout that BMW would use until the present. BMW used shaft drives in all of its motorcycles until the introduction of the F650 in 1994 and continues to use it on their boxer-twin motorcycles. BMW continued to advance the boxer-twin/shaft-driven designs for the next 85 years, and today at least half of the new motorcycles available from BMW still use that basic architecture.

BMW R32's are the most highly sought-after collectibles because of their rarity and their legacy.



**Image 33** - Lets digress for a moment and check out the just released 2021 model BMW R18 seen in this image with its forebear, the R32 (R18 means that it's an 1800 cc motor, the biggest boxer engine BMW have ever made). This modern bike gets its design cues directly from the classic old timeless design of the R32.



(c) 2019 - www.lerepairedesmotards.com - crédit photo : BMW Motorrad

**Image 34** - The 2021 BMW R 18 “Big Boxer” cruiser has a massive 1,802cc OHV air/oil-cooled 4-valve opposed twin, the largest “boxer” engine BMW has ever produced for a motorcycle. It also incorporates the famous colour identity of those first motorcycles: signature black paint with white pin striping and chrome details.



**Image 35** - The R18 retains the exposed shaft final drive of its predecessor.

## Museum Exhibition #20 – 1926 Brough Superior SS100 Alpine Grand Sport – United Kingdom

The Brough Superior SS100 is a motorcycle that needs no introduction to anyone with even a passing interest in motorcycling history.

The years between the end of World War 1 and The Great Depression constituted the golden age of British motorcycling. Production was high and innovation constant.

Brough Superior was a British marque famous for two things: speed and luxury.

Beginning in 1919, George Brough's Nottingham firm assembled large, capable motorcycles for the relatively affluent.

Few, if any, motorcycles can rival the legendary status accorded to Brough Superior. Produced in limited numbers between 1919 and 1940, there was no other motorcycle that could compare with the Brough's combination of quality, performance, and aesthetic appeal (the company switched over to war manufacturing in 1940 and never again resumed production of motorcycles).

George Brough was not only an accomplished rider, talented engineer, and designer, but also an astute marketer who, with the agreement of Rolls Royce, was able to describe his machines as "the Rolls-Royce of motorcycles".

The 1926 Brough Superior SS100 is widely considered to be among the most beautiful motorcycles ever made, a masterpiece of design from the hand of an acknowledged master in his field, George Brough. The Alpine Grand Sports had improved handling via a lower centre of gravity and was in full touring trim. With this, George Brough was able to create a machine that satisfied the most experienced rider, and the Brough Superior represented the pinnacle of motorcycle technology from that era.

Every SS100 model from the very first in 1924 came from the factory with a certificate stating that it had been timed circulating the Brooklands speed bowl at more than 100 MPH, which made it the fastest road-going motorcycle in the world at that time.



**Image 36** - The production version of the Alpine Grand Sports model came with a lower compression ratio (making it better suited to touring), a small fly-screen and a pair of fully equipped tool boxes mounted to either side of the rear luggage rack.

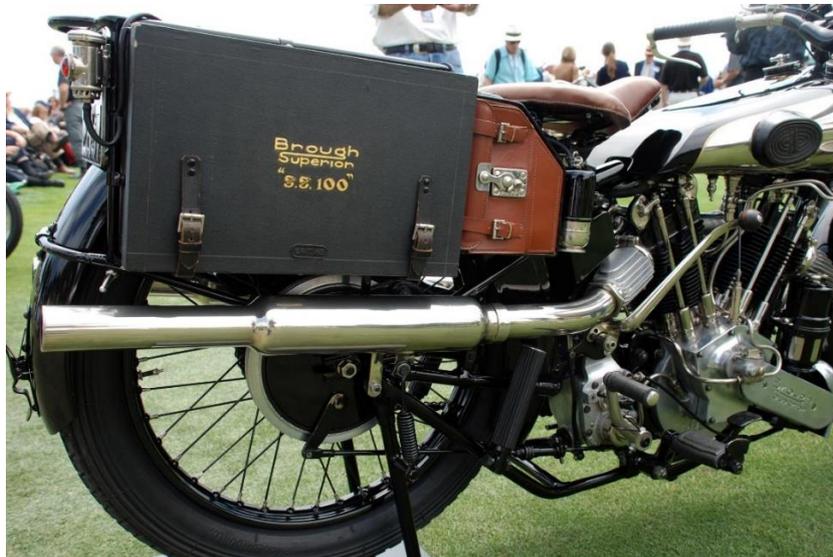
Those bikes with swept aluminium exhaust coolers and high-level exhausts on each side are the most desirable and attractive of all Brough Superior models. Very few survive and they rarely change hands.

Brough Superiors always used racing engines in the road bikes, which were carefully tuned in the factory to make them the fastest motorcycles on the road.

It's thought that just over 3,000 Brough Superiors were ever made over the 21 years of production and it's likely that only about 1,000 still exist in varying states of preservation and originality. All of them are very collectible.



**Image 37** - Vintage Brough Superior's continue to capture the imaginations of enthusiasts and always command very high prices at auctions.



**Image 38** - The Brough Superior's that have survived to the modern day are now amongst the most valuable motorcycles in the world.

The reputation of these early SS100s is peerless, and they have never ceased to be coveted, hence their remarkable survival rate.

**For more information on Brough Superior Motorcycles, check out my previous HOG Blog entitled "Biker Article – March 2020, Brough Superior Motorcycles – A Brief History".**

**Museum Exhibition #36 – 1948 Velosolex moped – France**



**Image 39** – The Velosolex logo. Made in France!

VeloSoleX is a moped, or motorised bicycle, usually just referred to as a 'Solex', and was originally produced by the French manufacturer VeloSoleX based in Courbevoie near Paris, France.

Originally created during World War 2 and mass-produced between 1946 and 1988, it came in various iterations, whilst keeping the same concept of a motor with a roller resting on the front wheel of a bicycle.



**Image 40** - note the larger tyres than typical bicycles of the day. This was to accommodate the friction roller above the front wheel which propelled the bike via the 50-cc engine.

8 million Solex bikes were sold between 1946 and 1988 in France and internationally, having been marketed in some 70 countries.



**Image 41** - Trailing smoke from its 2-stroke 50-cc engine and dripping unburnt oil onto the pavement, the Solex was for decades a ubiquitous feature of the streets of Paris and other French cities. The rider pedalled the machine to life and then let the tiny engine push him on his way. The front fork-mounted engine drove the front wheel by friction roller.



**Image 42** – A later version of the Solex moped. It became extremely popular with school children, students or plant workers because it was light and extremely economical.



**Image 43** - Production ceased in France in 1988.

### Museum Exhibition #38 – 1949 Jackson-Rotrax Speedway Bike – United Kingdom



500-cc single-cylinder, air-cooled, 4-stroke, single speed with no brakes.

**Image 44** - Racing on un-surfaced, or 'dirt' tracks originated in the USA in the early 1900's and by the 1920s had established itself in Australia, where the cinder track surface – still in use today – became the norm.

Travelling enthusiasts brought word of this exciting form of motorcycle sport to the UK and in 1928 a series of demonstration events was held in Britain featuring the cream of American and Australian riders.

Immensely popular following WW2, Speedway Racing required a specialised machine, such as this Jackson-Rotrax.

The introduction of dirt-track, or speedway racing into Britain in the late 1920's prompted many manufacturers to jump on the bandwagon with purpose-built machines. The arrival of the 'Speedway JAP' engine in 1930 ushered in a period of dominance that would last until the 1960's. Jackson-Rotrax was a motorcycle produced from 1946 to approximately 1976.

This was a Speedway machine that appeared after the end of the second world war. Fitted with a 500 cc JAP engine running on alcohol fuel, and a countershaft carrying the clutch mounted in a rigid frame (no suspension), the machine was well finished and well made.

It was most successful in its task for many years, and although various engines were used, it was the JAP that predominated for many years.

Bikes for Speedway have to be lightweight, and they have to accelerate hard. Speedway engines burn alcohol, whose refrigerating effect as it enters the engine is such that little cooling fin area is necessary. This gives alcohol burners their short-finned, "crew-cut" look. Alcohol fuel tolerates a high compression ratio, which allows for rapid acceleration. Because race follows race in quick succession, engines must be strong – they have to survive with little moment-to-moment maintenance.



**Image 45** - Speedway racing is a short, loud, intense affair that consists of sliding sideways around tight oval tracks of dirt or grass. An import into Britain from Australia, Speedway racing flourished because of its combination of close competition and a rapid succession of short, decisive, spectacular races.

### Museum Exhibition #41 – 1954 Vincent Black Shadow Series C – United Kingdom

Introduced in 1948 as a sportier version of the Vincent Rapide, the Black Shadow became a legend almost instantaneously. The most serious characteristic of the hand-built Black Shadow was its speed, and it was advertised as: "The World's Fastest Standard Motorcycle. This is a Fact Not a Slogan."



**Image 46** - There are many books written about the Vincent Black Shadow as they have become one of the ultimate collectible bikes by both fans and investors. They are widely considered one of the most beautiful bikes of all time.



**Image 47** - Vincent motorcycles do indeed have an aura of greatness about them and they never made very many of them making them even more sought after.



**Image 48** – Signature look. A beautiful large black Smith's speedometer helps define the Shadow's signature look. This speedometer goes all the way up to 150 mph (241 km/hr).

The Vincent V-twin has been synonymous with design innovation, engineering excellence and superlative high performance, with the formidable Black Shadow representing the dream bike of great numbers of enthusiasts, but remaining unattainable for most.

These machines bristled with innovative features, offering adjustment of brake pedal, footrests, seat height and gear-change lever. The finish was to a very high standard commensurate with the cost of the machine, which was virtually double that of any of its contemporaries.

But above all else it was the V-twin's stupendous performance that captivated motorcyclists, whether they could afford one or not. The appeal of the Vincent, and the Black Shadow in particular, lay in its ability to out-perform just about every other vehicle on the road, and in the early post-war years there was nothing to compare with it.

Aside from being the iconic British bike of the post-war period, the Black Shadow is also considered the world's first superbike. The impressive top speed of 125 mph (and bettering it in the Black Shadow's model) for the production version was not matched by any other production motorcycle until long after its production ended. In fact, until the 1973 introduction of the Kawasaki Z1, Vincent's claim as the fastest thing on two wheels still held true.

The Stevenage manufacturer stopped building motorcycles in 1955 due to insurmountable financial woes and turned to general engineering instead, but the Black Shadow's reputation has assured the company's and especially the Black Shadow's place among the all-time greats. As such, the Vincent Black Shadow is highly collectible and has been for some time.

***For more information on Vincent Motorcycles, check out my previous HOG Blog entitled "Biker Article – February 2020, Vincent Motorcycles – A Brief History".***

## Museum Exhibition #55 – 1962 Vespa GS - Italy



**Image 49** - The Vespa GS had an air-cooled 2-stroke, single cylinder 150-cc engine with 4-speed transmission and had a top speed of 100 km/hr.

This motorcycle using a small, 150-cc 2-stroke auxiliary engine put Italy back on wheels after WW2 and is still being manufactured today using the same general design concept. In April 1946, this amazing new, functional and innovative mode of transport was presented to the general public for the first time in Rome. The Vespa was an immediate success and gained extensive media interest. Production began in 1946 with a 98-cc engine, this being replaced by a 150-cc GS engine in 1948. By the early 1950's, the Vespa was a familiar sight not only in Italy, but around the world. By the mid-1990's, Piaggio had built over 10 million scooters and Vespa played a huge part in post-war youth culture.

The GS 150 was a milestone in the history of the scooter, not only for Vespa but for the market as a whole. It's remembered as the most beautiful scooter ever produced in the world and is now highly sought after by today's collectors of vintage Vespa's. From the curved tail to the curved leg shields, there was hardly a straight line anywhere on the scooter. Even the floorboards were concave. The elongated seat and the 10-inch wheels fundamentally altered the Vespa line. A pre-series version of this model is now on display at the Piaggio Museum.

## Museum Exhibition # 56 – The Honda Cub - Japan



**Image 50** - This cheerful Japanese bike with its red-and-white styling turns out to be the most-produced motor vehicle of all time with well over 100 million units made for the world market since 1962. These production figures are then followed by the Volkswagen Beetle with approximately 20 million units, and then the Model-T Ford with about 15 to 16 million units.

Just briefly on the Model T, it was produced between 1908 and 1927 and remained the longest production run of any automobile model in history until the Volkswagen Beetle surpassed it in 1972.

The Beetle remains the longest-running and most-manufactured car of a single platform ever made. The 10,000,000<sup>th</sup> VW Beetle was produced in 1967 and over 21 million would be produced by the time production stopped in 2019 after three generations spanning a total of seven decades.

However, it's the Honda Cub that took the world by storm with its 50-cc, 1-cylinder, 4-horsepower engine. A distinctive design feature was the step-thru frame and side leg shield fenders providing some weather protection to the rider. These bikes proved to be absolutely reliable, never leaked oil, never broke down, and returned well over 100 mpg! Other design features were a centrifugal clutch (meaning you don't need to work the clutch), an enclosed final-drive chain (which runs in an oil bath) driving the rear wheel, drum brakes, and a 3-speed gearbox with a top speed of 50 mph (80 km/hr).

This bike was a massive hit in the U.S. for high school and college students as it was so easy to ride and was relatively inexpensive, and, back in the 1960's, you didn't even need a motorcycle license to ride a 50-cc bike. In fact, it was targeted to the new rider.

This bike is still in production albeit in a more refined package now sporting disc brakes, fuel injection, ABS, magnesium rims, 12-volt electrics, and engine sizes up to 125-cc with a 4-speed gearbox.

## Museum Exhibition # 58 – 1965 Bultaco Sherpa T - Spain



**Image 51** – The Bultaco thumbs-up logo. Made in Spain!

Bultaco came into being in the late 1950's and were involved in all forms of racing and had always been at the forefront of moto-cross trials. Bultaco already possessed enormous experience of building competition 2-strokes but when they introduced their Sherpa T (trials) model they started to dominate in the dirt.

Prior to the Sherpa, trials bikes were heavy 4-strokes from the English manufacturers. All that changed practically overnight when the Spanish manufacturer had the foresight to recruit the world's greatest trials rider, Sammy Miller to spearhead their development. He then went on in the mid-1960's to win every championship available multiple times in national and international trials on a Bultaco. They had clinched no less than 4 European titles, 5 world, 11 Spanish national championships and 11 UK titles.



**Image 52** - Engine – single cylinder, air-cooled, piston ported 2-stroke, capacity 237.55cc.

Bultaco didn't make it very far into the 80s. Bultaco had been in financial difficulties since the late 70s and it was only a matter of time before the doors closed for the final time in 1982. Spain's political turmoil and the industrial action suffered by the country as a whole saw the company struggling to put machines out into the market place.

The original Bultaco Sherpa T was the most successful trials motorcycle of all time and dominated the sport for 15 years from 1965.

### Museum Exhibition #61 – Harley-Davidson Easy Rider Chopper – United States

The movie “Easy Rider” (1969) is a "road film" tale of a search for freedom (or the illusion of freedom) in a conformist and corrupt America, in the midst of paranoia, bigotry and violence.

It’s basically an anti-establishment cult classic .....Wyatt (Peter Fonda) and Billy (Dennis Hopper), two Harley-riding hippies, complete a drug deal in Southern California and decide to travel cross-country in search of spiritual truth. On their journey, they experience bigotry and hatred from the inhabitants of small-town America and also meet with other travellers seeking alternative lifestyles. After a terrifying drug experience in New Orleans, the two travellers wonder if they will ever find a way to live peacefully in America.



**Image 53** - For the movie, ex-Los Angeles Police Department 1962 Harley-Davidsons Panheads were bought at auction, which were subsequently heavily modified. The bike seen here is a replica of the one in the movie which was dubbed “Captain America”, which is probably the world’s most famous Harley-Davidson and the bike best remembered from the movie. Some consider it to be the most famous motorcycle in the world.

The "Captain America" bike is a legendary chopper, which has made an enormous impact on the world of motorcycling. The image of this bike was to become an icon for a way of life representing the fantasy of freedom.

This wild machine became an instant icon when Peter Fonda rode on it in the big screen.

"The bikes in Easy Rider", says motorcycle author Paul d'Orleans, "did more to popularise choppers around the world than any other film or any other motorcycle. I mean, suddenly people were building choppers in Czechoslovakia, or Russia, or China, or Japan." He adds "Choppers are a type of customized motorcycle usually defined by a stretched-out wheel-base, and pulled back handlebars, and a sissy bar, and a wild paint job, It's a quintessentially American folk-art form."

Visitors to the Harley-Davidson Museum in Milwaukee can also see a similar replica displayed.

The last supposed authenticated 'Captain America' bike from the movie sold in 2014 for US\$1.35 million.



**Image 54** – An image from the movie "Easy Rider".

Easy Rider director Dennis Hopper also spoke at this Guggenheim exhibition.

Museum Exhibition #66 – 1970 Honda CB750 Four - Japan



**Image 55** - The Honda CB750 stands as one of the pivotal motorcycles of the past 50 years. It is an air-cooled, transverse, in-line four-cylinder engine motorcycle made by Honda over several generations for year models 1969–2003 as well as 2007 with an upright or standard riding posture. It is often called the original Universal Japanese Motorcycle. This engine design is still being manufactured today and is still the most popular engine layout in use today. The CB750 was a prime example of the innovative construction techniques at which the Japanese excelled. The CB750's popularity and performance dealt the final blow to the vertical twin, and ushered in a new era of motorcycling.

Though other manufacturers had marketed the transverse, overhead camshaft, inline four-cylinder engine configuration and the layout had been used in racing engines prior to World War II, Honda popularized the configuration with the CB750, and it subsequently became the dominant sport bike engine layout.

### Museum Exhibition #88 – 1994 Ducati 916 – Italy

The Ducati 916 is frequently cited as one of the most beautiful motorcycle designs ever produced.



**Image 56** - The Ducati 916 has one of the most distinctive styling jobs ever seen on two wheels. It is a fully faired sport bike built from 1994 to 1998 featuring a 916 cc (56 cu in) fuel injected, 4-valve, desmo, liquid-cooled, 90° V-twin engine in a trellis frame with a single-sided swingarm and USD forks.

Making its debut in 1994, the Ducati 916 was admired because of its new design and outstanding technical features. At the time of its introduction, the 916 was recognized by the world's most prestigious bike magazines by winning "every magazine's Bike of the Year award for 1994" and many other well-deserved compliments. Ducati sold out its entire first year's production run in the United States before any had actually arrived there.



**Image 57** - Here you clearly see the single-sided rear swingarm much preferred by Ducati. A single-sided swingarm is a type of swingarm which lies along only one side of the rear wheel, allowing the rear wheel to be mounted like a car wheel (unlike the conventional motorcycle double-sided swingarm). This is a huge advantage in competition, especially in endurance events, but besides good looks this swingarm offers easier chain maintenance and wheel removal. With a traditional swingarm, you have to remove the axle, get your hands greasy putting the chain aside, and deal with the sprocket, spacers, and rear calliper just to remove the wheel. With a single-sided swingarm the axle, sprocket, and chain, all stay where they are, while the wheel just slides off the axle. The stylish single-sided swingarm was designed to make wheel changes faster during races.



**Image 58** - Another feature introduced on the 916 included an exhaust system with twin mufflers exiting just underneath the seat. This improved aerodynamic performance, and gave very clean stylistic lines.



**Image 59** – The dashboard of the Ducati 916.



**Image 60** - The design of the Ducati 916 was a synthesis of form and function. Check out the huge Brembo twin disc brakes on the front wheel.

To many enthusiasts around the world, the 916 was not simply the latest superbike, but the best there had ever been. It set new standards of performance, handling, and braking, but also style and charisma. The 916 changed the face of sports bikes in a way that only the original Suzuki GSX-R750 had managed a decade earlier.

Ever since the 916 was introduced, Ducati had not been able to produce the bike in large enough quantities to satisfy the enormous demand for it.

The 916 was later replaced by the 996 and 998 with similar design but revised engines and more power.

## Museum Exhibition # 91 - 1997 Beta Techno - Italy



**Image 61** - Trials bikes are very highly specialized. They're light, have torquey two-stroke engines and low gearing. Steering geometry is very quick and suspension travel is shorter than normal dirt bikes at six to seven inches front and rear. Seat heights are very low -- trials sections are ridden standing on the pegs for maximum control, and riders need to be able to crouch low on the bike to help it spring over obstacles. Tires are trials (block) tread but use low pressures and incredibly grippy rubber. The rear tires are radials and most riders run 3.5 to 4 psi.

Everything on the Beta is designed to be crash-worthy -- the frame "down tubes" (really bolt-on aluminium extrusions) surround and protect the tiny radiator. The rear brake pedal is small and tucked in to the frame and has a folding tip, and the rear brake master cylinder is stuffed inside the frame. The kickstand tucks along the swing arm and protects the rear brake disc and rear axle nut from damage. The sturdy skid plate protects the bottom of the bolt-on clutch cover and is mounted flush to the frame at the rear, so that riders can park the bike on its skid plate on an obstacle and then use a little body roll to slide off.

*Observed Trials* is the somewhat arcane motorcycle sport that involves riding motorcycles over incredibly daunting obstacles with the basic idea being that the rider must get himself and his machine over obstacles without ever putting a foot to ground, or "dabbing", as this is known. Sections are set up along a loop, and at each section one or more observers watch as each rider in turn attempts the section. Sections consist of whatever the devious and perverted mind of the trials master can think of -- huge boulders, logs, deep water, tight turns, loose rocks. All obstacles should be negotiated without the rider putting his feet down. A dab costs a point, crashing or riding outside the section markers costs five points. Low score wins.

The rider does not sit on this motorcycle -- he stands, and his foot-peg placement is of utmost importance. There is no comfort in this machine, nor is there meant to be.

Trials riding is a very particular sport, and the motorcycle that wins a world competition is perhaps the most narrowly defined instrument in the world of motorized two-wheelers. In 1997 the Englishman Dougie Lampkin won the number-one spot in the World Trials Championship on an Italian-made Beta Techno 250.

### Museum Exhibition #93 – 1997 Morbidelli V8 - Italy



**Image 62** - Morbidelli was an Italian motorcycle manufacturer founded by Giancarlo Morbidelli in Pesaro, Italy. During the 1970s, the company was particularly successful in Grand Prix motorcycle racing having won 7 world titles in two categories (125-cc and 250-cc).

In 1994, Morbidelli constructed a V8 engined luxury gentleman's sport touring machine aimed squarely at a wealthy clientele. This 32-valve, 847-cc 90° V8 liquid-cooled engine was teamed with a five-speed gearbox and innovative shaft final drive. But its high production price meant it would not be economically feasible to produce. The Guinness Book of World Records listed it in 2001 as the world's most expensive motorcycle.

Only 4 prototypes were completed before the project was shelved. By all accounts, the V8 engine was smooth and delightful to ride with a sonorous exhaust note that only a V8 engine can provide. Though the jewel-like qualities of the Morbidelli V8 engine impressed enthusiasts when unveiled in 1994, the bodywork failed to impart the bike's importance or sophistication. The bodywork, designed and created by Pininfarina, (chosen for its reputation as an excellent car designer) was perceived almost universally as an ugly duckling.

Giancarlo kept one, the Barber Motorsports Museum bought one, and the remaining two ended up in the hands of private collectors.

The bike fulfilled its mission as a gentlemanly sport touring machine of unparalleled exclusivity!

It would be immortalized by its inclusion in the Guggenheim's Art of the Motorcycle exhibit and its place in the permanent display of the Barber Motorsports Museum.



**Image 63** - The expensive 8-cylinder motorcycle proved to be unlike anything seen before.

While the Morbidelli V8 was overpriced for its era and did not develop the audience needed to become a production motorcycle, it was innovatively engineered.

The death of the dream V8 also ended the history of Morbidelli road motorcycles.

It was an ambitious attempt to break into what has traditionally been the black hole of motorcycle genres: the boutique luxury motorcycle.

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Over the century of the motorcycle's existence, it had ridden the high and low points of history, reflecting society and the diverse directions it has taken. Thus, one must acknowledge the enormous impact that the motorcycle, a seemingly modest vehicle, has had on the world, capturing the spirit and the passion it has aroused in film, literature, television, and the greater popular imagination. Embodying the more abstract themes of speed, rebellion, progress, freedom, sex and danger, the motorcycle has been immortalized as a cultural icon that has been transformed with the times.

Logic and physics suggest the motorcycle has reached the end of its evolutionary potential, but somehow, we know that cannot be completely true. For all the science that goes into motorcycle design, there is that emotional element which is never lost – the relationship between the man and his machine. Yet for much of society, the motorcycle remains a forbidden indulgence, an object of fascination, fantasy, and danger.

So now you realise you have a piece of art in your garage, one that gives you pleasure not just in its aesthetics but something you can ride and enjoy with your friends and go to fun locations with it! So, tell your friends when you get home, you'll park your piece of art in its own art gallery!

Ride Safe

Sergio, Editor / Historian, NSW Chapter