



## A HISTORY OF HIGH PERFORMANCE

### INSPIRED BEGINNINGS: UNPRECEDENTED PARTNERSHIPS

Ilmor got its start in 1983 when two engineers, Swiss-born Mario Illien and British native Paul Morgan living in a small village 70 miles north of London, England, sent a hand-written letter to American businessman and racing team owner Roger Penske. They proposed a new company to design and build turbocharged engines for the American-based Indy Car series. Within three months, with Penske's backing, Ilmor Engineering was born.

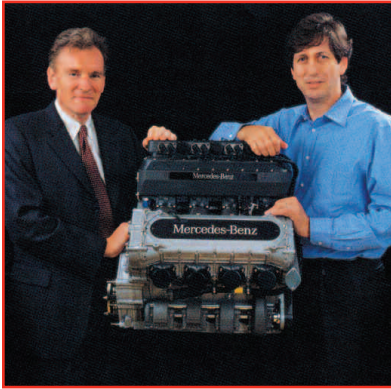


Photo Courtesy: Photoprint

Illien, Morgan and Penske were a near-perfect combination: brilliant and imaginative men with skills that complimented one another. While Illien was considered the design wizard, Morgan made certain those designs were manufactured to the infinitesimal tolerances required for reliable, winning engines. Penske secured the necessary start-up capital but also gave the fledgling company access to his highly successful Indy Car race team.

Several months after work had begun on the design of the engine, Roger Penske was able to convince General Motors to fund the completion of the all-new eight-cylinder turbocharged 'Chevrolet' engine. In 1986, four-time Indy winner Al Unser became the first to race with the Ilmor-designed engine and soon after, at Long Beach in April 1987, Mario Andretti was the first to win a race for the company. The Ilmor Chevrolet engine rapidly became the dominant engine in Indy racing, winning multiple championships and Indy 500s with stunning performance and reliability.

In 1993, Chevrolet opted to withdraw from open-wheel racing, but Ilmor soon found a new partner: Mercedes-Benz. The Ilmor-Mercedes partnership made a huge initial splash with the introduction of a very special 'push-rod' engine built specifically for the Indy 500. The MB-500I was perhaps the most powerful and innovative engine in the nearly 100-year history of the historic race. Al Unser Jr. drove it to victory in 1994. Following the event, the rules were revised and the technical advantages of the engine were lost.

Riding high on our Indy success, Ilmor partnered with Mercedes-Benz to design and develop a Formula One engine that went on to win the F1 World Championship with McLaren in '98 and '99.

### A GROWING COMPANY RETURNS TO ITS ROOTS

In 1998, the decision was made to broaden the business base and a separate offshoot, Ilmor Special Projects Group (SPG), began to grow. SPG's initial project was a Nascar development program with DaimlerChrysler to develop new technology for the Dodge engines used by Roger Penske's team. This was followed by two successful motorcycle projects for Triumph and Harley Davidson and the design and manufacture of a small 'target-drone' engine.

After Mercedes withdrawal from Indy Car racing at the end of the 2000 season, Ilmor entered the Indy Racing League and began development of the General Motors designed Indy Racing League engine. The outstanding success of this program, winning the Indy 500 in both 2001 & 2002 led Ilmor to create a speculative engine design for the new 2003 IRL rules. 2002 also saw the beginning of new relationship with Honda Performance Development (HPD).

The design, manufacture and joint development of the new Indy Car engine resulted in significant expansion of SPG, forming a discrete business with its own dedicated resources, within the rest of the company. Working in partnership with California based HPD, Ilmor and Honda created an engine that totally dominated racing in the IRL and remains as the sole engine supplied to the Indy Car series today.

After the tragic death of Paul Morgan in May, 2001, the difficult decision was made to sell Ilmor's UK division to its long term F1 partner Mercedes-Benz. In late 2005, M-B began a phased buyout of Ilmor's UK operations. With their primary focus on the Formula One program, opportunities for the Special Projects Group became limited and a deal was brokered to allow Penske and Illien to re-purchase SPG, including the all-important rights to the Ilmor name. This was completed by the end of June 2005 and a new chapter in the life of Ilmor began.

### EXPANSION TO THE U.S.

A new US based division, Ilmor Engineering Inc., was incorporated in 1990 with the primary goal of providing engineering support to the growing list of customers using the Ilmor Ltd. manufactured Chevrolet 265A Indy Car engine. In 1998, the headquarters moved from its old facility in Redford, Michigan into a custom built 28,000 sq. ft. facility in Plymouth, Michigan. The new facility housed all of the necessary disciplines to support the growing Indy Car program offering design, engineering, engine build, dyno and development capabilities.

Today, the expanded facility (now over 44,000 sq. ft.) houses more than 80 people with increased manufacturing, design and development tools including emissions compliance test facilities being available. In addition to our multiple racing programs, Ilmor, Inc. provides engineering and support services to major customers for high-performance passenger cars.



## MAKING WAVES: MARINE DIVISION LAUNCHED

Ilmor, Inc. entered the high-performance marine world in 2002 building race engines for the "SuperCat" Offshore Racing Series of the American Power Boat Association (APBA). Recognizing the business potential, Ilmor approached then co-owner DaimlerChrysler about the potential 'marinization' of the unique V-10 Dodge Viper engine.

In late 2002, the first two prototype engines were installed in a new 32-foot Skater Cat. The engines underwent extensive endurance testing in close collaboration with Pete Hledin of Douglas Marine (parent company of Skater) and Bob Morgan of Big Thunder Marine. Ilmor's V-10 Viper engines passed with flying colors and the manufacturing process began.

Since its inception in 2004, Ilmor's marine division has seen substantial growth and has become a well-established supplier to the US and European high performance boat market. Ilmor Marine Engines LLC is a wholly owned subsidiary of Ilmor Engineering Inc. and shares its headquarters in Plymouth, Michigan.

Since the 2004 introduction of the MV-550 V-10 engine, Ilmor's team has incorporated a series of engineering refinements and advancements, resulting in two additional high-performance packages. The MV-625 was introduced in late 2005 and, in 2006; Ilmor introduced the MV7-10. The 700 horsepower, naturally-aspirated marine engine was developed with significantly improved fuel efficiency and a light weight package.

In 2009 Ilmor had to use all of its engineering expertise to create a whole new generation of MV-10 marine product. Emissions legislation by both California EPA and Federal EPA meant that all high-performance marine engines had to meet tough new exhaust emissions standards. The MV-650 and MV-725 along with state-of-the-art Ilmor electronics and the all-new INDY® high-performance stern-drive were created to not only meet but exceed every requirement of the new regulations.

## PROVEN PERFORMANCE: 2007 & 2008 POWERBOAT P1 WORLD CHAMPIONS

In their first year of competition, a pair of Ilmor Marine MV-10 625 engines powered the #99 Fountain Powerboat King of Shaves to win the coveted 2007 Powerboat P1 Evolution Class World Championship. The successful 1st year of competition was backed up in 2008 with World Championship wins in both the largely European based Powerboat P1 series and the US based APBA P1 race series.

## CONTINUED EVOLUTION: MIDGET, OFF-ROAD DESERT TRUCK, AND KART RACING

2007 also saw further expansion of our high-performance racing programs with the introduction of our Mopar-based 4-cylinder Midget engine. This was the first time Ilmor had entered the world of dirt oval racing, and it was quickly followed with heat wins in several top line events. Ilmor also entered the world of Off-Road Racing, where, in a first attempt completed the arduous Baja 1000 event. In addition, the production of leading-edge components for the increasingly popular Karting circuit began.

## TODAY AND BEYOND

Today's Ilmor still follows the same principles put in place by our founders: innovative solutions, precision engineering and manufacturing, high quality, reliable products, and a high level of customer service and support. Advances in technology, continued field testing, and more championship wins promise an exciting future for Ilmor and their Engineering, Racing, Marine, and UAV clients.

www.ilmor.com



## T I M E L I N E

**1984:** Mario Illien, Paul Morgan, Roger Penske and General Motors form Ilmor Engineering, Ltd. in Northampton England, to design and build turbocharged Chevrolet engines for Indy Cars

**1986:** 4-time Indy winner Al Unser is first to race with Ilmor-designed Chevrolet 265A engine

**1987:** Mario Andretti wins the Long beach GP, the first win for an Ilmor engine

**1988:** Rick Mears driving a Penske PC17 gives Ilmor its first Indy 500 win

**1990:** Ilmor Engineering, Inc. incorporated in U.S. and opens its headquarters in Redford, Michigan

**1990:** Ilmor designs its first Formula One V-10 engine and enters an agreement to race the engine, starting in 1991, with a team owned by Japanese real estate company Leyton House

**1993:** Chevrolet makes the decision to quit Indy Car racing at the end of the season

**1994:** Ilmor partners with Mercedes-Benz to race the MB5001 'push-rod' engine. M-B would become a full-partner of Ilmor at the end of 1994 to race both Indy Cars and Formula One

**1998:** Ilmor begins a relationship with Penske Racing South to develop new engine technology for their NASCAR race team

**1998:** Ilmor Inc. moves into its custom designed headquarters in Plymouth, MI

**1998-99:** Ilmor-designed Mercedes-Benz engine wins Formula One World Championship with driver Mika Hakkinen and the McLaren Formula One team

**2000:** Mercedes-Benz leaves Indy Car racing to focus its efforts on Formula One. Ilmor Special Projects Group is formed to handle all non-Formula One Ilmor programs

**2000-2001:** Ilmor enters the Indy Racing League competing with an Ilmor version of the Oldsmobile Indy engine

**2001:** Ilmor founding partner Paul Morgan tragically dies while flying one of his beloved military fighter aircraft

**2002:** Ilmor enters the High-Performance marine sector by building V-8 race engines for APBA "SuperCat" Series

**2002:** Ilmor and Honda Performance Development (HPD) form a partnership to design, develop and race Honda Indy engines in the Indy Racing League series starting in the 2003 season

**2002 - 2005:** Mercedes-Benz is handed control of Ilmor's UK company through a phased buy-out program

**2004:** Debut of the 550 hp MV-10 550 marine engine at the Miami Boat Show

**2005:** Roger Penske and Mario Illien re-purchase Special Projects Group, along with rights to Ilmor name

**2005 - 2006:** Ilmor introduces the MV-625 and the hand-built MV7-10 marine engines

**2007:** MV-625 engines power the winner of the 2007 Powerboat P1 Evolution Class World Championship

**2007:** Ilmor enters USAC Midget, ARCA Stock Car and Baja desert race series

**2008:** MV-625 engines win the 2008 Powerboat P1 Evolution Class World Championship and the APBA P1 Class World Championship in Key West, Florida

**2009:** Ilmor introduces the new INDY® marine stern-drive high-performance marine propulsion system