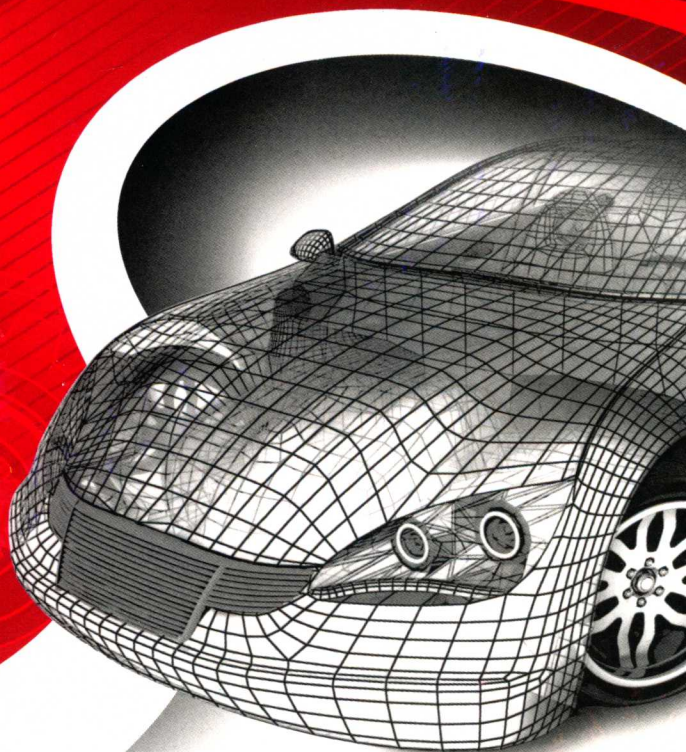




CAR 高职高专汽车类专业“十二五”课改规划教材



汽车

专业英语

朱建柳 编著



西安电子科技大学出版社
<http://www.xduph.com>

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内 容 简 介

本书以汽车专业学生所必须掌握的汽车知识为出发点, 选编了汽车构造、汽车商务、汽车保险等方面的内容。全书分 6 个部分, 包括汽车发展史、汽车介绍、汽车商务、汽车保险、汽车保养、汽车评估等内容, 共 31 篇课文, 每篇课文后安排有生词、注释、练习和阅读材料。本书内容体现了汽车专业英语知识的系统性、完整性, 也体现了极其鲜明的现代汽车行业的新发展、新概念和新技术。

本书适合高职高专汽车运用与维修、汽车运用技术、汽车技术服务与营销、汽车保险等专业的学生学习, 也可作为相关企业岗位的培训教材。

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前 言

当前中国汽车工业迅猛发展，汽车后市场急需大批具备国际化视野的技术服务与营销人才，其职业核心能力尤为重要。本书以改革传统的汽车专业英语教材体系为出发点，使教材内容更新、更实用，旨在使学生掌握汽车技术、汽车商务、汽车保险等相关词汇，熟悉购车、保险合同等相关文体。本书在汽车英语原文的选择上，一方面考虑汽车知识的系统性，另一方面也体现了极其鲜明的现代汽车行业的新发展。

书中内容涉及汽车发展史、汽车介绍、汽车商务、汽车保险、汽车保养、汽车评估等六个部分，共 31 篇课文，尽量照顾到汽车知识的系统性、趣味性和时代特色。本书在结构上安排有课文、生词、注释和阅读材料及练习。课文选自目前美英流行的汽车知识教育网站、汽车售后服务企业培训资料，力求做到文字准确、简练、流畅。

本书由上海交通职业技术学院朱建柳主编，在编写过程中，得到了上海通用、丰田等售后服务企业的鼎力支持，在此表示感谢！

编 者

2012 年 9 月

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PART I Automobile History

1.1 The Birth of Automobiles

The history of the automobile actually began about 4,000 years ago when the first wheel was used for transportation in India. Several Italians recorded designs for wind-driven vehicles. The first was Guido da Vigevano in 1335. It was a windmill-type drive to gears and thus to wheels. Later Leonardo da Vinci designed clockwork-driven tricycle with tiller steering and a differential mechanism between the rear wheels.

In the early 15th century, the Portuguese arrived in China and the interaction of the two cultures led to a variety of new technologies, including the creation of a wheel that turned under its own power. By the 1600s, small steam-powered engine models were developed.

A Catholic priest named Father Ferdinand Verbiest is credited to have built a steam-powered vehicle for the Chinese Emperor Chien Lung in about 1678. There is no information about the vehicle, only the event. James Watt didn't invent the steam engine until 1705.

Although by the mid-15th century the idea of a self-propelled vehicle had been put into practice with the development of experimental vehicles powered by means of springs, clockworks, and the wind, Nicolas-Joseph Cugnot of France is considered to have built the first true automobile in 1769. Designed by Cugnot and constructed by M. Brezin, it is also the first vehicle to move under its own power for which there is a record. Cugnot's three-wheeled steam-powered vehicle carried four persons. It had a top speed of a little more than 3.2 km/h (2 mph).

Evans was the first American who obtained a patent for "a self-propelled carriage." He, in fact, attempted to create a two-in-one combination of a steam wagon and a flat-bottomed boat, which didn't receive any attention in those days. During the 1830's, the steam vehicle had made great advances. But stiff competition from railway companies and legislations in Britain forced the poor steam vehicle gradually out of use on roads. The early steam-powered vehicles were so heavy that they were only practical on a perfectly flat surface as strong as iron. A road thus made out of iron rails became the norm for the next hundred and twenty-five years. The vehicles got bigger and heavier and more powerful and as such they were eventually capable of pulling a train of many cars filled with freight and passengers.

Carl Benz and Gottlieb Daimler, both Germans, share the credit of changing the transport habits of the world, for their efforts laid the foundation of the great motor industry as we know it today. First, Carl Benz invented the petrol engine in 1885 and a year later Daimler made a car driven by motor of his own design.

Daimler's engine proved to be a great success because of its less weight that could deliver 1000 rpm and needed only very small and light vehicles to carry them.

France too had joined the motoring scenario by 1890 when two Frenchmen Panhard and Levassor began producing vehicles powered by Daimler engine, and Daimler himself, possessed by the automobile spirit, went on adding new features to his engine. He built the first V-Twin engine with a glowing platinum tube to explode the cylinder gas—the very earliest form of sparking plug.

For many years after the introduction of automobiles, three kinds of power sources were in common use: steam engines, gasoline or petrol engines, and electric motors. In 1900, over 2,300 automobiles were registered in New York, Boston, Massachusetts, and Chicago. Of these, 1,170 were steam cars, 800 were electric cars, and only 400 were gasoline cars.

In ten years from the invention of the petrol engine, the motorcar had evolved itself into amazing designs and shapes. By 1898, there were 50 automobile-manufacturing companies in the United States, a number that rose to 241 by 1908. In that year, Henry Ford revolutionized the manufacture of automobiles with his assembly-line style of production and brought out the Model T, a car that was inexpensive, versatile, and easy to maintain. The introduction of the Model T transformed the automobile from a plaything of the rich to an item that even people of modest income could afford; by the late 1920s the car was commonplace in modern industrial nations.

Automobile manufacturers in the 1930s and 1940s refined and improved on the principles of Ford and other pioneers. Cars were generally large, and many were still extremely expensive and luxurious; many of the most collectible cars date from this time. The increased affluence of the United States after World War II led to the development of large, while most companies in Europe made smaller, more fuel-efficient cars. Since the mid-1970s, the rising cost of fuel has increased the demand for these smaller cars, many of which have been produced in Japan as well as in Europe and the United States.



Technical Words

windmill	n.	风车
	v.	使旋转，作风车般旋转
mechanism	n.	机械装置
	vi.	机构；机制
interaction	n.	交互作用，交流
propel	vt.	推进；驱使
practice	n.	实行；实践
experimental	adj.	实验的；根据实验的
norm	n.	标准；规范
freight	n	货物；货运
	vt.	装货；使充满；运送

petrol	n.	<英>汽油
possessed	adj.	着魔的; 疯狂的
amazing	adj.	令人惊异的
maintain	vt.	维持; 维修
refine	vt.	精制; 精炼
collectible	adj.	可收集的; 可代收的



Phrases and Expressions

differential mechanism	差速器
sparkling plug	火花塞



Notes on the Text

1. Later Leonardo da Vinci designed clockwork-driven tricycle with tiller steering and a differential mechanism between the rear wheels.

后来, 利奥纳多·达芬奇(Leonardo da Vinci)设计了时钟机构驱动机器三轮车, 带有舵柄转向装置和后轮之间的差速器。

2. Daimler's engine proved to be a great success because of its less weight that could deliver 1000 rpm and needed only very small and light vehicles to carry them.

戴姆勒的发动机被证实是一项伟大的成就, 因为它重量更轻, 能输出每分钟 1000 转的转速, 而只需非常小而轻的车辆来承载它们。

3. He built the first V-Twin engine with a glowing platinum tube to explode the cylinder gas — the very earliest form of sparking plug.

他造出了第一台 V 型双列发动机, 装有用以使气缸气体爆发的白金管——早期的火花塞型式。

4. For many years after the introduction of automobiles, three kinds of power sources were in common use: steam engines, gasoline or petrol engines, and electric motors.

在汽车进入人们生活之后很多年, 三种动力源被普遍应用: 蒸汽发动机、汽油发动机以及电动发动机。

5. Since the mid-1970s, the rising cost of fuel has increased the demand for these smaller cars, many of which have been produced in Japan as well as in Europe and the United States.

20 世纪 70 年代中期, 燃油价格的上涨增加了这些小型汽车的需求量, 许多日本生产的汽车也出现在欧洲和美国市场上了。



Exercises

I. Answer the following questions in English.

1. When did the history of the automobile actually begin?
2. Who is considered to have built the first true automobile in 1769?

3. Why the early steam-powered vehicles were only practical on a perfectly flat surface as strong as iron?

4. Who built the first V-Twin engine with a glowing platinum tube to explode the cylinder gas—the very earliest form of sparking plug?

5. Why has the demand for these smaller cars increased since the mid-1970s?

II. Translate following expressions into English.

1. 差速器

2. 火花塞

3. 自动驱动汽车

4. V 型双列发动机

5. 汽油发动机

6. 现代工业国家

III. Translate following sentences into English.

1. 17 世纪初, 小型蒸汽动力发动机出现了。

2. 1885 年卡尔·奔驰发明了汽油发动机。

3. 戴姆勒为汽车的活力而着迷, 想要为他的发动机注入新的特色。

4. 汽车是便宜的, 多功能的, 易于维修的。

5. 20 世纪 20 年代, 汽车在现代工业国家成为平常事物。

6. 二战之后美国的新富使发展更为迅速。

IV. Study the following list and name.

1. two-door sedan, four-door sedan, fixed head coupe, hard-top sedan, limousine, station wagon, drop head coupe, convertible, sports car, minicar, jeep, field vehicle.

2. bus, omnibus, service vehicle, coach, luxury coach, touring bus, articulated bus, double-deck bus, passenger-trailer, minibus, microbus, articulated trolleybus.

3. lorry, truck, high-way vehicle, board truck, canvas top, box-van truck, van, delivery van, pick-up, cargo-bus, general-purpose truck, multipurpose vehicle short-wheelbase truck.

4. rear dump, side tipper, container carrier, tank-truck, bulk truck, thermos van, refrigerated vehicle, furniture van.



Reading Material

2013 JAGUAR XJ Ultimate Luxury Sedan

FACTS

Only 30 Jaguar XJ Ultimate models will be available in the United States Priced at \$155,000. Available in late 2012.

The XJ Ultimate represents the pinnacle of the luxurious, innovative XJ experience with heightened levels of opulence for rear-seat passengers.

The exclusive color for this vehicle in the United States will be Black Amethyst. Discreet external detailing and badging differentiates the Ultimate from other XJ variants.

Two individually tailored rear seats are trimmed in semi-aniline premium leather with power adjustment and recline, lumbar support, massage function and climate controls.

A rear business table, machined from solid aluminum with piano black trim, powers into position at the touch of a button.

A pair of bespoke champagne flutes resides in a dedicated storage area beneath the powered table.

A champagne chiller between the rear seats cools the bottle to the perfect temperature and automatically presents it when the cabinet is opened.

A full-length, leather-trimmed center console features phosphor blue accent lighting and stowage areas to extend the car's business usability.

Each rear-seat passenger is provided with an iPad® and keyboard, housed and charged in dedicated leather-trimmed docks in the rear of the front seats.

A 15-channel, 20-speaker surround sound system engineered specifically for the XJ by British audio specialists Meridian® gives an unparalleled audiophile listening experience.

Rear-seat entertainment package with twin headrest-mounted screens and wireless headphones.

Exclusive interior finishes including Herringbone veneer, machined aluminum and bespoke LED lighting.

To underline its purpose in ensuring that passengers remain cosseted at all times, the XJ Ultimate features revisions to the suspension to optimize rear ride comfort.

Unique 20-inch 'Maroa' forged alloy wheels feature both technical grey and highly polished finishes.

The XJ Ultimate is equipped with Jaguar's 5.0-liter V8 supercharged 510 hp engine fitted with a new automatic eight-speed transmission.

OVERVIEW

The flagship Jaguar XJ ushered in a new interpretation of the company's established reputation for dramatic design and—with its lightweight aluminum architecture—responsible performance. Now, the XJ Ultimate focuses on two further Jaguar hallmarks: innovation and luxury, extending the model's emotive appeal.

Based exclusively on the long-wheelbase XJ, the interior changes applied to the Ultimate focus on the rear accommodation, extending the car's appeal to provide a fully-appointed luxury business class experience for the most discerning customers. The XJ Ultimate offers the appointments of a private jet in a package to suit a wide range of requirements.

A full-length, leather-trimmed center console separates the two individually tailored rear seats which feature power adjustment, ventilation, massage and lumbar functions. A table, machined from solid aluminum with piano-black and chrome detailing, rises up from the center

console at the touch of a button to provide a working area, its role supplemented by the provision of two third-generation iPads® with wireless keyboards that are housed in leather-trimmed docks in the rear of the front seats.

Switching the focus from business to pleasure is the champagne chiller mounted between the two rear seats. This cools the bottle to what experts agree is the perfect temperature before ‘presenting’ it forward when the chiller is opened. Two specially commissioned champagne flutes reside in a purpose made cabinet beneath the center table.

A full rear seat entertainment package with twin headrest screens and wireless headphones completes the experience in combination with a new 20-speaker surround sound in-car entertainment system developed by British audio experts Meridian®.

To underline its purpose in ensuring that passengers remain cosseted at all times, the XJ Ultimate features revisions to the suspension to optimize rear ride comfort, with no compromise to dynamic ability.

The exterior detailing of the XJ Ultimate offers discreet clues to the high status of this model with sculpted lower air intakes chromed to match the grille, polished stainless steel oval exhaust pipe finishers, unique dual-surfaced alloy wheels and subtle ‘Ultimate’ badging.

TECHNOLOGY

Rear-seat passengers are also provided with a range of entertainment options to enjoy while sipping their champagne. The XJ Ultimate is fitted as standard with Jaguar’s Rear Seat Entertainment package which comprises two eight-inch high-resolution screens mounted on the back of the front seat headrests.

These can display inputs from a number of sources; the DVD player, digital TV tuner or an external media player that can be synced through the Rear Media Interface, which provides USB and RCA®-type connections. Sound can be provided through the wireless headphones, allowing each passenger to watch separate entertainment sources.

The rear seat environment, including the entertainment, is managed by a wireless controller housed in the center console which also allows passengers to alter their individual climate zones and seat heating and cooling functions.

The XJ Ultimate is fitted as standard with the latest generation of in-car audio systems. Specifically developed for the XJ by British ultra-premium audio experts Meridian®, marking a new partnership for Jaguar, the Meridian® Surround Sound System fitted to the XJ Ultimate uses the latest technological developments to deliver music reproduction that is second to none.

Meridian® designs and manufactures audio systems that combine innovative technology with the most natural of approaches: comparing their musical reproduction to the sound of the original musical performance. The 15-channel amplifier, 20-loudspeaker system features Meridian’s® unique digital sound processing technology that allows every person travelling in the XJ Ultimate to enjoy a musical experience that places them in the center of the sound field. Meridian® achieves this through its Trifield™ technology which creates an all-enveloping sound

field that makes each listener feel that the music is exclusively focused on him or her.

Meridian® technology achieves a level of natural detail, realism and performance usually associated with speakers eight times the physical volume. Meridian® Cabin Correction and Dynamic Volume Control precisely and effortlessly minimize resonances and monitor extraneous noise levels to allow the audio to be unobtrusively maintained at a constant volume in order for it to be perfectly heard whatever the circumstances.

In addition to the entertainment on offer, the XJ Ultimate also provides a pair of third-generation iPad® devices with a wireless keyboard. The iPad® devices are housed within specially designed leather-trimmed docks in the rear of the front seats and hidden behind roller doors, also finished in tailored leather. The units are automatically charged whenever the ignition is on. Also included in the cabinets is the wireless keyboard to allow the tablets to be used without being removed from their docks.

PERFORMANCE AND DYNAMICS

To underline its purpose in ensuring that passengers remain cosseted at all times, the XJ Ultimate features revisions to the air-sprung rear suspension for optimized ride comfort. While this provides a truly relaxing experience for rear seat passengers, the XJ Ultimate loses none of the model's core dynamic abilities and so is as rewarding to drive as it is to be driven in. The XJ's lightweight aluminum construction means a weight saving over its rivals of as much as 330 lbs. This offers great advantages in terms of agility, acceleration, braking and driver feedback and involvement. The aluminum architecture also provides benefits in terms of emissions and fuel consumption, allowing the XJ to provide astonishing performance with respectable fuel efficiency.

1.2 The History of Toyota Corolla

The rear wheel drive Toyota Corolla(Fig 1.1) was first introduced in Japan in model year 1966. Two years later, it was brought to the United States, replacing the unpopular and barely-noticed Crown.

It lasted only two years with its original 1.1 liter engine, when a larger 1970 model appeared, powered by a "much larger" 1.2 liter engine. This new model(Fig 2.2)



Fig 1.1



Fig 1.2

actually became the second best selling import car in 1970. The next year, 1971, brought a 1.6 liter engine, more in tune with American tastes.

1974 saw the third generation, and the Corolla's strongest popularity—including the inexpensive Corolla Tercel model, it was the best-selling vehicle in the world

from 1974 to 1977. Five years later, in 1979, a fourth generation appeared, still with rear wheel drive. This was to last until 1984, when the fifth generation Corolla came with front wheel drive and a coupe version, the GT-S, with a 16 valve engine. The GT-S remained in production through 1991.

Faced with increasing sales, Toyota entered a joint venture with General Motors to create NUMMI(Fig 1.3). NUMMI took over a rather atrocious General Motors plant in California and turned it into one of the highest quality plants in North America. The NUMMI plant built both the Corolla and the General Motors version, the Nova (later to be renamed Prizm).



Fig 1.3

The sporty FX was introduced in 1987, followed by the sixth generation in 1988. With sales still rising, Toyota opened a new facility in Canada which also produced Corollas.

In 1993, the Corolla moved to its current compact size, garnering many awards. The Tercel was split off as a separate subcompact model to attract those who could no longer afford the increasingly upscale Corolla. A 1.6 liter engine was standard, with an optional 1.8 liter engine. A driver's side airbag was standard, and a passenger airbag was added in 1994.

By 1997, all Corollas sold in the United States were built in North America. The wagon was discontinued, but side-impact protection was increased.



Fig 1.4

In 1998, the current generation(Fig 1.4) was created. Its distinguishing feature was a new 1.8 liter engine which produced about 120 hp. This engine, even before it received variable valve timing, was peppy enough to feel more powerful in everyday driving than the 132 hp Dodge Neon engine. Yet, it achieved very good gas mileage and was quite quiet.

In 2000, the 1.8 liter engine was given variable valve timing for better gas mileage and more power. It also reduced emissions, so that the Corolla could be certified by the EPA as a low emission vehicle.

2001 saw a minor face-lift of the sheet metal, making the Corolla(Fig 1.5) look even more like a Camry.

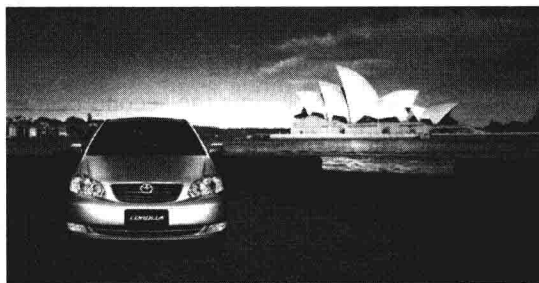


Fig 1.5

In the thirty years since its introduction, Corolla has sold more cars worldwide than any other nameplate!



Technical Words

original	adj.; n.	原始的; 独创的; 最初的; 新颖的 原文; 原型; 原件; 怪人
import	n.; v.	进口, 进口商品; 输入; 重要性; 意义 输入, 进口
atrocious	adj.	恶毒的, 残暴的; 糟透的; 狠戾; 穷凶极恶
facility	n.	设备; 容易; 能力; 灵巧
subcompact	n.	微型小客车, 微型汽车
optional	adj.	可选择的; 随意的, 任意的; 非强制的; 选修科目
standard	n.; adj.	标准, 规格; 旗, 军旗; 度量衡标准; 直立支柱 标准的, 合格的; 普遍的, 一般的; 公认为优秀的
distinguishing	adj.; v.	有区别的 辨别, 区别(distinguish 的现在分词); 使出众; (凭任何感觉器官)识别出; 看清
peppy	adj.	精神充沛的, 活泼的
mileage	n.	英里数, 里程; 好处, 利润;
emission	n.	排放, 辐射; 排放物, 散发物(尤指气体); (书刊) 发行, 发布(通知)
worldwide	adj.; ad.	全世界的; 遍及全球地
nameplate	n.	姓名牌, 名称牌



Phrases and Expressions

rear wheel drive	后轮驱动
in tune with	与……协调, 与……一致
a coupe version	跑车版
a joint venture	合资公司
a low emission vehicle	低排量车



Notes on the Text

1. Two years later, it was brought to the United States, replacing the unpopular and barely-noticed Crown.

两年后, 此车型进入美国, 代替了不流行的、几乎不被注意到的皇冠汽车。

2. Faced with increasing sales, Toyota entered a joint venture with General Motors to create

NUMMI. NUMMI took over a rather atrocious General Motors plant in California and turned it into one of the highest quality plants in North America.

面对不断增加的销售量, 丰田公司进入通用汽车公司合资创建新联合发动机制造公司, 该公司掌管了加利福尼亚相当多的通用工厂, 在北美变成了最好质量的工厂。

3. It also reduced emissions, so that the Corolla could be certified by the EPA as a low emission vehicle.

卡罗拉降低了污染排放, 后来该车型由 EPA 认证为低排放车。



Exercises

I. Answer the following questions in English.

1. When was Toyota Corolla brought to the United States?
2. What's the function of The NUMMI plant?
3. What's the distinguishing feature of current generation?
4. Why could the Corolla be certified by the EPA as a low emission vehicle?

II. Please translate the following passage.

Nelson Jackson was the first to motor coast-to-coast in 1903. Two dozen other pioneers matched his feat over the next five years, but none was a woman. This honor fell to Alice Huyler Ramsey a 22-year-old housewife and mother from Hackensack, New Jersey. On June 9, 1909, Alice, and three women companions (none of whom drove), left Manhattan. Fifty-nine days and 3,800 miles later they arrived in San Francisco.

III. Please introduce a kind of Toyota automobile.



Reading Material

Formula One History



Fig 1.6

The modern era of Formula One Grand Prix racing began in 1950, but the roots of F1(Fig 1.6) are far earlier, including such pre-World War II legends as Italian Tazio Nuvolari and the great German teams, Auto Union and Mercedes Benz.

The modern era of Formula One Grand Prix racing began in 1950, but the roots of F1 are far earlier, tracing to the pioneering road races in France in the 1890s, through the Edwardian years, the bleak twenties, the German domination of the 1930s and the early post-war years of Italian supremacy.

At the birth of racing, cars were upright and heavy, roads were tarred sand or wood, reliability was problematic, drivers were accompanied by mechanics, and races usually on public roads from town to town were impossibly long by modern standards(Fig 1.7). Regarded as the first motor race proper was a 1,200 km road race from Paris to Bordeaux and back in 1895, won by Émile Levassor with his Panhard et Levassor in 48 hours. One of the most successful drivers of the early years was Fernand Charron, who won the Paris-Bordeaux race in 1899, also in a Panhard, at the blazing average speed of 29.9 mph.

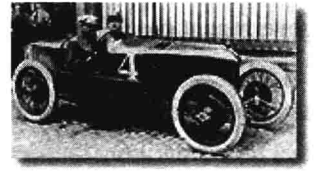


Fig 1.7

The first race using the appellation “Grand Prix” was 1901’s French Grand Prix at Le Mans, won by Ferencz Szisz with a Renault, who covered the 700 miles at 63.0 mph. In 1908 the Targa Florio in Sicily saw the appearance of “pits,” shallow emplacements dug by the side of the track where mechanics could labor with the detachable rims on early GP car tires — themselves a major technical improvement over the earlier technique of permanently attached wheels and spokes. But even so, racing cars of the early years were too heavy and fast for their tires; Christian Lauteschalnger’s winning Mercedes shredded 10 tires in the 1908 French Grand Prix at Dieppe!

In 1914, the massive 4 1/2 litre Mercedes of Daimler-Benz dominated the French Grand Prix at Lyons 20 laps of a 23.3 mile circuit taking the first three places and introducing control of drivers by signal from the pits. During World War I, racing was halted in Europe, and many drivers participated in the U.S. Indianapolis 500. Enzo Ferrari who’s real fame was to follow as a team manager and manufacturer with Scuderia Ferrari, formed in 1929 to race Alfa Romeo P2s finished second in the 1920 Voiturette race at Le Mans, the first international road race in France in six years.

“By tradition the Italian racing driver in action is an excitable character given to shouting, gesticulating, waving his fists, baring his teeth and in general giving way to his emotions. Tazio Nuvolari filled this role splendidly.”

The first (and, until Dan Gurney’s Eagle-Weslake at Spa-Francorchamps in 1967, the only) Grand Prix victory by an American-built car was by Jimmy Murphy in the 1921 French Grand Prix at Le Mans, driving a Duesenberg. Among the best of the 1920s manufacturers were Bugatti, whose straight-eight Type 35Bs won the French and Spanish GPs in 1929 and the Monaco, French and Belgian GPs in 1930, and Fiat, which introduced the supercharger for the first time in 1923.

The Great Depression of the early 1930s led to a lack of money and interest in Grand Prix racing, but saw the emergence of the legendary Tazio Nuvolari, whose wins in the Alfa Romeo P3 “Monza” in the Mille Miglia, at Monaco and the Italian GP at Monza were stunning. His victory in the 1933 Monaco GP was the first in which starting grid positions were determined by qualifying times. But in 1934, the balance of power in racing would begin to shift from Italy to Germany, with the emergence of factory teams from Auto Union (now Audi) and Mercedes-Benz,