





LOLA T70 MKII

First Victory:

On February 2nd 1969 at 3pm the Daytona 24hour race, the first of the 1969 Manufacturer's Championship races, came to an end. The winner was the privately entered Lola T70MkIIB, driven by Mark Donohue and Chuck Parsons. This result was completely unpredicted, particularly as the works Porsche team had entered no less than five 908s. Two Ford GT 40s were also entered and these seven cars were clear favourites for at least the first six places; the Fords more so, in view of their having been the top car the year before.

As for the Lola, it was questionable whether it would even finish, let alone win. The Lola MkIII, although extremely fast, had shown poor staying power in races, particularly over long distances. In short races, however, it had achieved many victories since its introduction in 1967, but generally speaking it was a disapointment. The Mark IIIB, developed from the MarkIII, had its first race at Daytona and naturally astounded everybody by its victory.

The race was a really tough battle. Out of 62 starters, only 28 finished. The favourites, the



Fords and the Porsches all dropped out due to accidents and breakdowns. Even the winning Lola had 31 pit stops and a lot of time was wasted on running repairs. However this win was highly significant after the Lola's previous unfortunate record.

Erick Broadley and the Lola:

Lola is a small company making racing cars in England. The founder and designer is Eric



Lola T70MkIIIB

Broadley. It is located in Slough, some forty kilometers west of London where other prominent companies in car racing are to be found. These include the John Wire Automotive Engineering Co., who have contributed to the successes of Ford, Porsche and Team Surtees in both Formula 1 and Can Am racing. Also Honda had their headquarters there whilst participating in F1 racing in Europe.

ing in F1 racing in Europe. England is the hub of the motor racing world and there one finds some of the most famous drivers and racing car constructors. The main reasons are the great popularity of car racing amongst the public and the very large amount of amateur racing, which is also eagerly followed. These amateur meetings are 'very frequent and well supported all around the country. They have in the past provided the talent for professional racing, and have helped the development of many small car constructors. From these beginnings Lola emerged.

beginnings Lola emerged. Eric Broadley built his first car in 1956 for 1170cc formula racing. Later in 1958 he built a new car and used the Coventry Climax SOHC 1.1 Litre engine. This car was very successful and gave him considerable publicity. As a result he started to produce cars which he sold to amateur racing enthusiasts under the name of Lola.

Lola. But Eric Broadley wanted a still more powerful, but cheaper engine, and he found this in America, a new V8. So in 1963 the famous Lola GT appeared, powered by the Ford Fairline V8 4.7 litre engine, which although not quite up to the performance of European engines, made up in



Erick Broadley

John Surtees

power and torque through its large capacity. It was situated between the rear axle and the cockpit. The chassis consisted of twin tubes with a box like cross section, situated at both sides whilst connected by front and rear bulkheads In short it was a twin tube of semimonocoque construction, the first of its type produced in the world and developed by Eric Broadley himself.

The Lola GT was a sensation when it made its debut at the London Racing Car Show in 1963 mainly due to its advanced chassis design. However, it was the Ford Motor Company who were most attracted by this machine. At that time Ford, who had a keen eye on the motor sports field, had been trying hard to buy ferrari one of the most famous firms in this field in Italy. Reportedly, Fords had about 2 million dollars to spend on the purchase, but this came to nothing when Entsuo Ferrari, president of the Italian company, stubbornly refused their offer. Ford, therefore, offered to buy the development project of the Lola GT as a whole and to develop it as a Ford machine. Lola Cars because of their expensive development costs on the Lola GT, were only too glad to accept Ford's proposal. Broadley himself joined Ford's on a one year contract. The result was the Ford GT and in 1966, it defeated the Ferraris

The Lola T70 Series

In 1964, Broadley, then back in England, immediately started construction of a new model and completed the Lola T70. The car made its debut in 1965 at the London Racing-Car Show. The new machine was basically an improved version of the Lola GT but differed from the latter in that it had an open-top body. Its chassis was a twin-tube monocoque constru-

Its chassis was a twin-tube monocoque constrution while the engine was either the Ford V8 4.8 Litre or the larger Chevrolet V8 6 Litre engine. The T70 immediately participated in various races all over England. Powered by the large 6 Litre engine it was highly successful in view of its extremely high speed and the excellent driving of John Surtees. 1966 was also a good year for Lola. They won the U.S. Indianapolis 500-mile race in a Lola 90 using a Ford V8 4.2 Litre engine with Graham Hill at the wheel. 1966 also saw the beginning of Canam racing, a great festival of monster machines, group 7 cars, held at various circuits located in the U.S.A. and Canada. Lola entered the T70 mkHIB, an improved version of the T70 and won five out of six races in this event. Victory at any famous race assures the maker of a substantial increase in sales of their cars. Thus, more than half the participating cars at the following year's Canam Series' races turned out to be Lolas.

In January, 1967, Lola introduced a prototype sports-car, the T70MkIII, at the London Racingcar Show. Lola planned to win the Manufacturers' Championship with this new machine. Needless to say, the machine was an improved version of the Lola T70MkIIB. The body was

changed from an open-top to the closed-top type with a half-circle roof in compliance with FIA regulations. Lola's solid twin-tube monocoque chassis was used. A light metal tube of a boxlike cross-section with a built-in fuel tank was fixed on both sides of cockpit. The twin-tube itself was connected to and fastened by four bulkheads situated respectively at the front suspension, the Dashboard, the rear of the cockpit and at the rear suspension sections. It also had all round independent suspension. The front suspension was a double wishbone type using a coil-spring with a built-in damper with a torsion-bar stabilizer. Rear suspension was a so-called formula type which supported the upright with both upper Larms and lower reverse-A arms. From there, two upper and lower trailing arms were extended forward and fixed at their respective ends to the chassis in order to hold down lengthwise the movement of the wheels. Girling ventilated disc-brakes were fitted to each wheel.

Disc-brakes are commonplace equipment in present-day racing-cars but at the time these brakes were a real innovation. The disc-brake was originaly developed for use on aeroplanes. It radiates little heat as compared with the drum-type brake currently used at that time. The latter loses efficiency as it radiates more and more heat. Thus, the high anti-fade feature of the disc-brake is its strong point. BRM were the first to use disc-brakes in 1951 in their F-1 car. In 1952, the Jaguar-Ctype cars followed suit. Since then disc-brakes rapidly spread into other racing cars. However, demand for new and better brakes with far less heat radiation and which could stand much harder use were soon required as the speed of racing cars became faster. It was ventilated disc-brakes that appeared to meet the problem. The new brake

<image>

Rear Suspension

Courtesy by: Nigensha (Car Graphic), Publisher Taki Racing Organization



as follows.

consisted of two thin disc-boards with many small pieces inserted in between in a revolving direction just like a water mill. As the disc revolves, air is drawn into the gap between the two boards to cool the whole braking mechanism. Brake cooling is an ever present problem for the car designer. In the Lola a unique way to solve the problem was adopted: The disc was kept at just enough distance from the wheel to have a constant air-flow in between. To improve the cooling effect still further, an airduct to blow air was added. Standard engine was the Chevrolet or Ford V8. Thus any team which purchased a T70MkIII had the choice of engine best suited to its needs, which could be tuned to increase performance capabilities as required. At the same London Racing car Show as the T70 MkIII made its debut, a V8 5 Litre DOHC engine made by Aston Martin, famous for high-class sports-cars, was also on display. The engine using four double-choke-down draught Webber engine. carburettors was credited with 420 horsepower. Lola's Factory team planned to have this engine mounted in its car for the Manufacturers' Championship. John Surtees was to be the number one driver for this event. Lola on this occasion, therefore, was a true British team: The machine was British-made, its engine was made by the British "Aston Martin" company and lastly, its driver, John Surtees was also British. Naturally, British racing fans pinned their hopes on this Lola trio for the Manufacturers' Championship.

The Lola T70 MkIII on the Race Course

The first race for the T70MkIII was the Belgian Spa Grand Prix race held on May 1, 1967. This event was also called the "Spa Francorchamps 1,000km" race. The cars race around a 14.09 km circuit 71 times to complete the race. The T70MkIII equipped with a Chevrolet engine and driven by the Private team of P. Hawkins and J. Epstein made an auspicious start, by coming 4th. Despite this good beginning, however, the Lola was to have its difficulties. The Works team, then participated in the German "Nurburgring" 1,000km race. The Aston Martin engine's performance was improved by replacing the Webber carburettors with a Lucas fuel injection device. Although during practice, the Lola team came second, in the final, the car's rear suspension broke down, forcing its retirement after 8 circuits. The unfortunate Work team then entered the French Le Mans 24-hour and the British BOAC 500 mile race but failed in both, being forced to retire early in each event. That year Private teams also showed poor results. One retirement after another of both Works and Private teams at various races soon gave the Lolas a poor reputation for staying power.

For the 1968 season, the T70MkIII, was reclassified for Group 4 sports-car racing instead of the former Group 6 prototype sports-car class. With this re-classification, however, the Works Lola had to give up the idea of participating in later racing events. According to Group 4 rules, an engine capacity of over 5 Litres was not allowed. The capacity of the Works Lola's Aston Martin engine was slightly over 5 Litres. All later entries were therefore left to Private teams. Results during this year were worse than in the previous year. Some Private teams entered the Manufacturers' Championship, participating in ten races, but, in only one did the Lola manage to win a place. This was in the British BOAC. 500-mile race where J. Bonnier and S. Axelson came in 6th.

For the 1969 season, the T70MkIII was remodelled into the T70MkIIIB. This was a much improved car, even its outward appearance being better styled. This new T70MkIIIB achieved its first real success at its debut in the Daytona 24-hour race. It won 6th place at its next appearance in the Sebring 12-hour race and in the Italian Monza, 1,000km race, it came 5th. Later in the Belgian Spa Grand, Prix, it again came into 5th place, and in the final Australian GP event it came in second. Its overall points added up to 20, giving it third place to Porsche and Ford in the Manufacturers' championship. This result was most impressive, considering that private teams alone, working at great disadvantage against the powerful works teams, had achieved this third position and particularly forcing Ferrari into fourth place.

During the 1970 season however, the Lola Mark IIIB has not appeared so often. Five years old now, it has been outdated by more advanced designs and is no longer really competitive. Now Lola are concentrating on developing a new Canam car. But it is to be hoped that Lolas will again in the future compete for the Manufacturers' Championship.

About the Manufactures' Championship:

This championship was established for top level sports car racing similar to F-1 racing, which also has a points system covering a fixed program of races. However the Manufacturers' Championship is for the manufacturer whose car performs best over the season, while in F-1 racing the driver competes for the championship. This championship was first started in 1953 but has since undergone many changes. Its rules, too, are rather complicated. The so-called "Manufacturers Championship" races are held in conformity to Appendix J of the International Sport Code, drawn up by the CSI of the FIA (Federation of International Automobils) as the international constitution of regulations governing sports-car racing throughout the world. Appendix J covers an enormous number of detailed rules for vehicles participating in all kinds of motor-sports races. These rules were made to do away with the handicap system, while ensuring safety and practicality. As of 1970, two championships exist under the Manufacturers Championship.

The International Championship

This championship is for vehicles which come under the following denominations as defined in Appendix J: The Group 6 Sports Prototype Cars (SP); the Group 5 Sports Cars (S) and the Group 3/4 Grand Touring Cars (GT). The Grand Touring Car Cup

This championship is for Grand Touring (GT) cars. All races to be held under these two championships are authorized each year by the CSI and required to have either a minimum 1,000km course a minimum 6 consecutive or hours of driving. For 1970, the following 11 races have been approved by the CSI.

1. Jan. 31~Feb. 1:	The Daytona 24-hour race
	(to be held in the U.S.)
2. Mar. 20~21 :	The Sebring 12-hour race
	(in the U.S.)
3. Apr. 12 :	The BOAC, 1,000km race
	(in England)
4. Arp. 25 :	The Monza 1.000km race
	(in Italy)
5. May 3 :	The Talga Florio race
	(in Sicily, Italy)
6. May 17 :	The Spa 1.000km race
	(in Belgium)
7. May 31 :	The Nurburgring 1.000km
	race (in West Germany)
8. Jun. 13~14 :	The Le Mans 24-hour race
	(in France)
9. Jul. 11~12 :	The Watkins Glen 6-hour
	race (in the U.S.)
0. Ang 8~9 .	The CASC 6-hour race
	(in Canada)
1 Oct 11 .	The Austrian 1 000km race
	(in Austria)
	(in mustina)

The first six cars at each of the above races will be credited with points as follows: First place, 9; second, 6; third, 4; fourth, 3; fifth, 2; sixth, 1. The championship is won by the car

accumulating the highest number of points over the eleven races. A brief summary of the appendix J grouping is

Manufacturers Race	Matra SP Porsche (917) Ferrari (312P)SP Lola (T70MkIIIB)S Ford (GT40)S Porsche (908)SP
The Daytona 24-hour Feb.1~2	4 - 9
The Sebring 12-hour Mar.22	4916
The BOAC 500 mile Apr.13	92-3
The Monza 1000km Apr.25	932
The Talga Florio May.4	9
The Spa 1000km May.11	9 - 2 6
The Nurburgring 1000km Jun.1	91
The Le Mans 24-hour Jun. 14~15	6 9 3
The Watokins Glen 6-hour Jul.11~12	923
The Austrian G.P Aug.10	3 - 6 - 9 -
Total	71 26 20 15 9 6
Effective Point (Best 5 races)	45 25 20 15 9 6

Any team with more than car in the first six in any race is allotted points only for the car with the higest racing.

The Group 3/4 GT

Cars as defined under this denomination are those which have been "manufactured in small numbers to meet the customers' demand for the highest performance and comfort regardless of cost and economic evaluation". It is required that at least over 500 should be manufactured during a consecutive 12-month period (for Group 3, this number will be increased to over 1,000 from 1971) and each car must have more than two seats. In this Group, the Ferrari 275 GTB the 7 litre Chevrolet Corvette, the Honda S800 of Japan and the Fairlady Z are included. Actually it appears that this race will be for cars that are also used for private motoring on ordinary roads.

The Group 5S

The participating machine "should be a high-performance car fitted with equipment with which a car running on a public road is usually equipped and required to do so by law". The engine capacity is required to be below 5,000cc. It is also stipulated that over 25 should be produced during a consecutive 12-month periode, each being equipped with two seats minimum. Racing-cars such as the Ford GT 40, the Porsche 917, the Ferrari 512S and the Lola T70MkIIIB are included in this Group.

The Group 6 SP:

Cars in this Group should be those "trial-manufactured racing-cars which have been especially produced for speed-and dura bility-races held on a circuit". Engine capacity is limited to 3,000 cc. But no other particulary stringent requirements are specified except one involing the safety of the participating car itself. Cars in this grouping include the Porsche 908, the Ferrari 312P and the Alfa Romeo T33.

Main Specifications of th	ne Lola T70MkIII
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Overall length:	4200 mm
Overall width:	1800 mm
Overall height:	1010 mm
Wheel-base:	2410 mm
Fread:	1470 mm (front & rear)
Weight:	855 kg
Engine:	Chevrolet V8 OHV 5461 cc.
Carburettor:	Webber down-draught, double-
	choke in quadruple equipment
Maximum power:	460 HP/6300 rpm.
Maximum speed:	310 km/h+a
Transmission:	Hewland 5-speed
Brake:	Girling ventilated disc-brake.



CAUTIONS

before commencing assembly. A supervising adult should also read the instructions if a child assembles the model.

When assembling this kit, tools including knives are used. Extra care should be taken to avoid personal injury. Read and follow the instructions supplied with paints

Read carefully and fully understand the instructions and/or cement (not included in kit). Use plastic cement and paint only. Use them sparingly and ventilate room while constructing.

Keep out of reach of small children. Children must not be allowed to suck any part, or pull vinyl bag over the head.

Remove plating from areas to be cemented.



(READ BEFORE ASSEMBLY) Study the instructions thoroughly before

commencing assembly. ★Detail painting and some decal application are called out during construction and should be done at that time. *Portions printed blue requires cement.

Use cement sparingly and ventilate room while constructing. This mark denotes colors to

This mark denotes colors to be applied. Paint small parts while they are still on the part tree.



(Construction of cylinder block)

1

Make sure to attach B25 to H12 and H13 prior to assembling them. Assemble F9, H10 and H20 accordingly.



Assemble parts H2, H8, H25, H26 and H27 carefully referring to the illustration.

3 «Construction of diff housing»

First attach parts H9, H23, H24 and H19 to cylinder block, and then attach the assembled transmission. Add B29 lastly.

4 (Construction of Engine)

Construct the engine front part first.



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5 (Fixing of Plug Cord)

Cut Plug Cord into four 135mm-long pieces. Bend these pieces as shown in the diagram right, and fix them to F4. Insert the other end of the plug cords into the cylinder block as shown at ⁽³⁾. H16 & H17 look alike. Make sure of their shape.



6 (Construction of Rocker Covers)

Cement B32 & B33 to the engine. Attach 70mm long medium vinyl pipe to B46 and cement this in position.



7 (Fixing of Carburettors)

First construct four sets of Carburettors and cement them onto the engine. Next cement Exhaust Pipes onto the engine and cement each set of four to G13.

Cut Vinyl Pipe to the length as shown in the figure below, and fix each pipe with connecting parts to Carburettors.

(Wiring of Fuel Pipe)









Fix the pre-assembled Bulkhead to the body.



(Fixing of Stabilizer)

Pass B8 through K15 & K16 and cement to K7. Cement B15 to D13, and D11 & D13 to the places as shown in the figure. Pass B8 through C23.

(Fixing of Lead Arm)

Fit K14 to the pins of Upper Wishbone and cement K14 to the body. Fix F8 to H14.

(Fixing of Radiator)

Attach Pipes referring to the following figures. Cement B34 to K11, and cement them to the body.

Cement F25 to Radiator F26, and cement them to K11.

Also cement B4 & B5 to the round groove in the lower body.

(Fixing of Pipe)



(Construction of Cockpit Bulkhead)





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12015 LOLA T-70

(Construction of Doors)

First assemble right and left Doors. Make sure that Inner Door Handles operate well. After cementing Hinges B10 & B9 to

Doors, cement E6 and A2 together putting pins of Hinges in between. Take enough time to dry the cement on Hinges.

(Fixing of Doors)

Cement A2 to Central Body and Bulkhead AJ. Note the shape of both ends.



21 (Construction of Rear Bulkhead)

First construct Rear Damper. Next fix C15 of Rear Damper to the pins of J10 and cement to the body with K20. Attach Vinyl Pipe to center pin of A7. Be careful not to cloud Transparent Part L10 with cement. Take care in assembling.

(Construction of Wheels)

Make sure of numbers of wheels, front and rear. Assemble three front wheels and two rear wheels.





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Note the numbers

of parts.

F18 F19

F24





Construct Transmission Oil Cooler and attach thin vinyl pipe cut to the specified lengths.

And construct Oil Tank D8, D9, and D10 together and cement Cap B45. Next attach Oil Cooler and Spare Tyre Trunk as shown in the right figure.



Engine can be removed. Install it without cement.

Attach Fuel Pipe to the pins on Bulkhead. Pass Vinyl Pipe for Oil Cooler as shown in the figure.





Insert Drive Shaft and fix B2 & C20 in position as shown in the figure. Attach the pipe from Oil Cooler to the pin on B29 fixed to Transmission. Cement B38 & B26 to Oil Tank B37, and cement this to Bulkhead. Make sure that Stabilizer B3 is fixed in position.





31 (Construction of Jack)

Put K1 in K9 first. Pass K4 through K2 and hold K9 with K6 as shown in the figure.

Cement K3 & K5 to Jack, and fix K8 without cement.

33 (Construction of Front Parts)

Cement Wire Cloth to F14 and cement this assembly to A10. Fix Small Light Lens L4 to B17 without using cement.

124





36 (Fixing of Tail Pipes)

Connect C23 to Stabilizer B3. Cement Tail Pipes to G12(G13). After inserting G5 & G7 to Tail Pipes, turn inside and fix also to J1. Make sure of fixing parts right or left.



37 (Fixing of Tyres)

Fix Front tyres to the upright by using a washer and 2x6mm screw. Cement Spinner C25 to Wheel.

Fix Rear Tyres to Wheels with care to prevent other assembly from breaking. Cement Spinners C24 to the holes of Wheels. Mount the same tyre with Front Tyre inside of J1. Insert Pipes to the holes of Central Body.

38 (Completion of Lola T-70MkIII)

Rear Body can be movable, open or closed through Hinges fixed to the pins. When you prefer to fix this, insert the claws of Rear Body into the grooves of Bulkhead A7. Front Body can be removed.

Use J6 in opening and closing Doors (prepared two, right and left). Cement Body Knock Pin B27, but do not cement B28 as it works to prevent Rear Body from swelling.

Cement Wiper in position.





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The model illustrated on the box top represents the machine driven by John Surtees at the Nurburgring 1,000 km race on 28th May 1967. The letter "P" stands for the word "PROTOTYPE". The car had to retire on the 8th lap whilst in 8th position due to rear suspension trouble.

(Painting of Lola T70MkIII)

Body colour: Royal Blue and White arrow stripe. This white arrow is the symbol of cars Team Surtees, and all team cars are painted this way.

Chassis: Chrome Silver or Light Grey. The monocoque chassis is made out of aluminum alloy.

Colours of each part are indicated in parts diagrams and assembly figure.

(Paints to be used)

White	X-2
Royal Blue	X-3
Red	X-7
Lemon Yellow	X-7
Chrome Silver	X-11
Clear Orange	X-26
Clear Red	X-27
Flat Black	
Flat White	
Metallic Grev	XE-56

Small parts and internal parts should be painted while still on the sprue.

(Marking of Lola T70MkIII)

Apply Decals in position as shown in the figure.

Applying Decals

Please refer to the illustration. "LOLA" letters on bonnet may be flied down flush before applying decal ①. Decal parts ⑥ and ⑦ should be folded inside the body. When applying decal ①, lay it from the front of the car, taking care to fit it at the correct angle. Cut the decals carefully from the sheet. Decals ① and ② indicate the car number and that the car is a group 6 sports prototype, as specified by the FIA rules. Decal of the Marchal company, a

French manufacturer making lights, sparking plugs etc. This decal to be applied to the

fire extinguisher.

Autolite company decal

Champion company decal

STP decal. Please note the last three decals should not be applied to the Team Surtees Lola.





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15

