



JMIA KIT RACER



JAPAN MOTOR-RACING INDUSTRY ASSOCIATION

What is the **JMIA KIT RACER**

The JMIA Kit Racer is a revolutionary racing-car sales system. It enables customers to purchase an extremely durable, high-performance racing car at a significantly low cost, maintain it relatively inexpensively, select the most preferred specifications, and upgrade it according to their preferences whenever necessary.

Line-up of basic components



Complete Cars

No.1-4 cars are supplied as complete car or KIT RACER. No.5-6 are prototype.



No.1 ZAP F108(F4)



No.2 TOKYO R&D RD10W(F4)



No.3 MOON CRAFT MC-090(F4)



No.4 DOME F20



No.5 TOKYO R&D F20



No.6 MOON CRAFT F20

Advantages of the **JMIA KIT RACER**

1 A custom racing car to your reference

JMIA member companies supply a wide variety of components. By combining those components, users can custom-build a racing car to their own preferences.

2 A low-cost and safe carbon monocoque by an epoch-making production method

The JMIA Kit Racer uses a carbon composite monocoque developed by JMIA. This low-cost monocoque results from an epoch-making production method. While its price is similar to that of an aluminum monocoque, the carbon composite monocoque is superior to an aluminum monocoque in rigidity, safety and durability.

3 Base components are the same as those used in Japan's successful F4 races

The F4 races were started in 1993 in Japan to provide a venue where racing-car constructors could demonstrate their expertise. All the components used in F4 racing cars have successful records and are robust and secure.

4 Wide range of engines

A wide range of engines is available, including standard engines of 1000cc to 2000cc, and original engines.

5 Custom development of engines and ECUs

Many JMIA member companies specialize in engine development and tuning. They can serve all your needs-modify your favorite commercially available car engine into a racing engine, develop a completely original engine, or custom-build electric components such as ECUs, to name a few possibilities.

6 Aerodynamic testing and body cowl development

JMIA member companies own a total of four wind tunnels for racing-car development, including one 50% wind tunnel and three 25% wind tunnels. Having excellent experience and successful records as developers, JMIA members can develop and produce carbon-composite body cowls while ensuring aerodynamic excellence.

7 Running-cost reduction

It is often the case that a one-make racing car is reasonably priced but spare parts are expensive. On the other hand JMIA Kit Racer components are reasonably priced. You can also supply yourself the components that can be made. You can save cost greatly.

8 Easy upgrading

JMIA Kit Racer components cover a wide variety of uses and you can upgrade the car according to your preferences by replacing them. For example, you can replace a 1000cc engine with a 1500cc one, or change the tire size, thus keeping the car up with the improvement of the driver's skills.

9 Custom styling

JMIA member companies include car constructors who are highly experienced in car design. They can offer sophisticated designs for formula cars and grand-touring cars.


10 JMIA can coordinate everything

The JMIA serves as your service desk in racing-car production. We will assist you in all the production processes. Please call or write to the JMIA. You can also directly contact a JMIA member company.

Major components of **JMIA KIT RACER**




What is the JMIA Monocoque

In spite of its high safety performance, a carbon monocoque is generally expensive and has not been commonly used as a component of junior formula cars, which are low-priced. The JMIA believes that a high-safety carbon monocoque is best-suited to junior formula cars, because the drivers in junior formula races are beginners. The JMIA has been committed to developing a carbon monocoque that would be as inexpensive as an aluminum monocoque (an aluminum monocoque used in the cars for F4 races, which are Japan's national races, costs about 1.3 million yen). However, reducing the cost of a carbon monocoque of normal structure is impossible. We therefore developed a brand-new, a solid carbon monocoque, , which is reasonably priced and high in rigidity and durability.

Advantages


● Exceptional structure produced by special production process

The  monocoque has a very simple structure. Its exterior surface, which is produced on the reverse side of the mold in the conventional method, is smoothly finished at high precision by means of a special technology, acquired from experience in aircraft component development.

● Low production cost


The structure and production processes of the monocoque are simple; the production man-hours can be half those required conventionally. However, because the amounts of materials are increased, the total cost reduction is approximately 25%.

● High durability

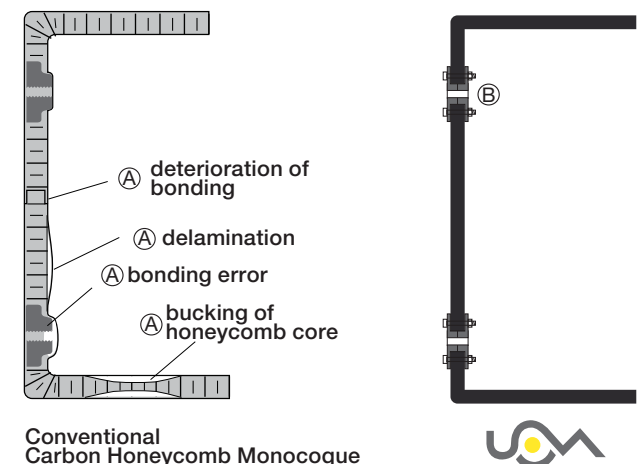
The major causes of fatigue in carbon monocoques are deterioration in adhesion between CFRP boards and honeycomb structure, separation between the upper and lower parts, and the exfoliation of inserted metal components such as brackets. The 's solid structure means there is no possibility of these failures. ①

● High compatibility

 uses a solid structure and metal parts, such as brackets, which pinch the board that constitutes the solid structure. Accordingly, installation positions can be determined flexibly, enabling easy modification. ②

Formula 3 monocoque	3,500,000	Formula Renault monocoque	2,000,000
	1,000,000 1,400,000	Small formula monocoque	1,350,000

* price(JPY)



● High safety

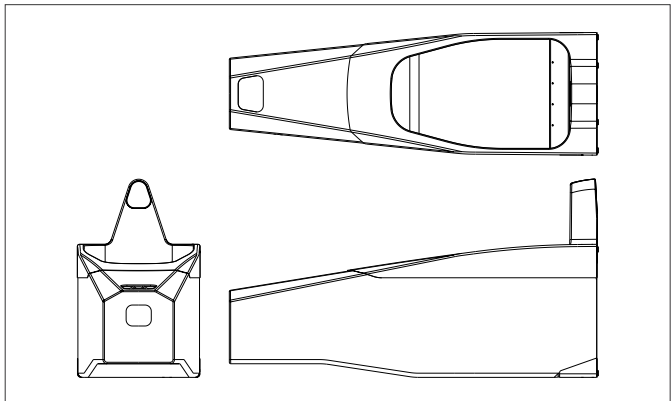
Driving a racing car is never 100% safe, and if you pursue ultimate safety, you should not participate in auto racing.

In an accident, small impact absorption through aluminum honeycomb breakdown might save your life. In another case, the solid wall thickness might prevent another car's nose or a bent suspension arm from entering the car cabin.

The honeycomb structure is basically used to ensure high rigidity and low weight; it does not increase safety. If safety should take priority over low weight for beginners' formula race cars, the  may be the best option.

UOVA 20

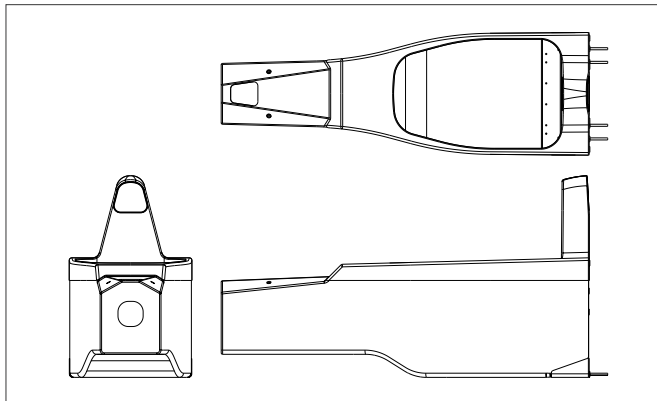
JPY 1,220,000



Low-cost model of simple structure, suitable for an engine of about 1000cc

UOVA 4

JPY 1,400,000




Standard model of increased safety and rigidity, suitable for an engine of about 2000cc

Optional Components

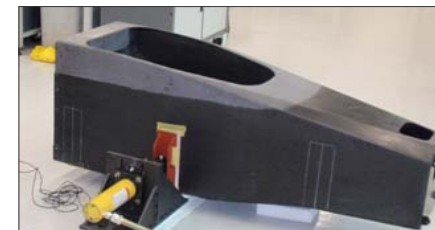
● Front crushable structure



To ensure sufficient safety of the carbon composite monocoque, a special structure is necessary to absorb shock before it reaches the body.

● Fuel tank

Bladder safety tank only for ; 34-litter capacity. These optional components are produced to order. As for the lead time, price and other specifications, please specify when ordering .

	UOVA 20	UOVA 4
W e i g h t	43kg	46kg
Dimensions (Length x Width x Height)	1,758x585x962	1,758x585x962
Thickness of side face	4.9mm	6.7mm
Supposed fuel tank capacity	35~40ℓ	35~40ℓ




The conventional monocoque safety standards are based on the condition that the monocoque has a honeycomb structure. It might not be appropriate to evaluate solid-structure  based on these standards, but because there are no other applicable standards, we examine the safety of the  based on the F3 safety standards of the FIA (Federation Internationale de l'Automobile).

JMIA Racing Engines

The member companies of the Japan Motor-racing Industry Association (JMIA) include leading companies specializing in racing-engine development and tuning. They can satisfy the needs of every user, by producing JMIA Kit Racer catalog-model engines, developing a completely new engine, modifying the engine of a ready-made car into a racing-car engine, or tuning up existing racing engines.

JMIA member companies can develop engine components such as pistons, connecting rods and camshafts as well as electrical instruments such as ECUs, and perform maintenance and overhauls, satisfying a wide variety of needs. The companies will be pleased to hear from you.



TODA RACING TR-FX01 ORIGINAL ENGINE

Recently, most of the racing engines are customized from normal engines for commercial available cars in order to minimize costs. But, the fact remains that many people are attracted by the specialized racing engines because of its revving way and special sounds. TODA RACING has been developing and manufacturing the specialized engines consisting of originally designed components, and continuously carrying out test runs.

SPEC

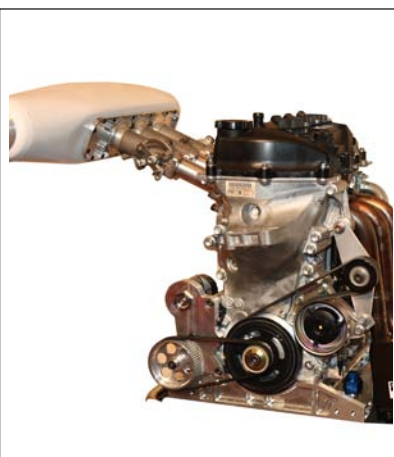
Capacity :	1,998.2cc / Inline 4
Bore / Stroke :	86mm×86mm
Oil Sump System :	Dry
Power :	270hp / 8,500rpm ~
Weight :	87kg
Price :	TBA

Formula 2 エンジン YAMAHA OX66 (1985-86)
KEN MATSUURA RACING

F4 ECU
R&Sports Development Ltd.

JMIA KIT RACER Engine Catalog

This catalog lists JMIA-recommended high-cost-performance engines applicable to the JMIA Kit Racer. The list includes Toda engines and TOM's engines, both of which feature exceptional reliability, achieved by longtime experience, excellent expertise and participation in many races. These engines are optimal for entry-level racing cars.



TOM'S 1KR
SMALLER FORMULA RACING ENGINE

Capacity	996cc / Inline 3
Bore / Stroke	71mm×83.9mm
Oil Sump System	Dry
Power	120Hp / 6,500rpm
Weight	60kg
Base Engine	TOYOTA 1KR
Price	1,980,000 JPY

TOM'S 1KR is a racing engine suitable for smaller formula cars of beginners.



TODA RACING L15A
SUPER FJ RACING ENGINE

Capacity	1,496cc / Inline 4
Bore / Stroke	73.00mm (STD)×89.4mm
Oil Sump System	Wet
Power	130hp / 7,000rpm
Weight	83Kg
Base Engine	HONDA L15A
Price	760,000 JPY

TODA RACING L15A is a reasonably priced racing engine for super FJ, formula racing for beginners in Japan. Many drivers started his racing with this engine.



TOM'S 3ZR
F4 Racing Engine

Capacity	1,982cc / Inline 4
Bore / Stroke	80.5mm×97.4mm
Oil Sump System	Dry
Power	190Hp
Weight	90kg
Base Engine	TOYOTA 3ZR
Price	2,100,000 JPY

TOM'S 3ZR is a racing engine for F4 racing.



TODA RACING K20A
F4 RACING ENGINE

Capacity	1,998.2cc / Inline 4
Bore / Stroke	86.00mm (STD)×86.0mm
Oil Sump System	Dry
Power	170hp / 5,700rpm
Weight	-
Base Engine	HONDA K20A
Price	2,100,000 JPY

TODA RACING K20A is a racing engine for F4 racing.

Japan Motor-racing Industry (JMIA)

The Japan Motor-racing Industry Association (JMIA) is the only auto-racing association in Japan. It includes about 60 companies engaged in the development and production of racing cars.

Member companies include Dome, which has participated in the Le Mans 16 times, using an original racing car; TOM'S, which is well-known as a Toyota-affiliated racing team and engine tuner; and NISMO, which is involved in Nissan racing activities. Concerning engine development, the Japanese racing industry's major companies participate in the JMIA: TOM'S, Toda Racing, and KEN Matsuura Racing. Your needs concerning racing cars are sure to be satisfied.



DOMO CO., LTD.



TOM'S CO., LTD.



NISSAN MOTORSPORTS INTERNATIONAL CO., LTD.



TODA RACING CO., LTD.



KEN MATSUURA RACING SERVICE CO., LTD.



MOONCRAFT CO., LTD.



TOKYO R&D CO., LTD.



TRD

JMIA member companies

	COMPANY NAME	BUSINESS	CONTACT
1	TAKATA CORP.	Seat belt, Airbag, Child car seat	www.takata.com 03-3582-3222
2	KYOEI CAST	Aluminum alloy casting, Stainless casting	0463-54-5660
3	KEN MATSUURA RACING SERVICE CO., LTD.	Development and manufacturing of racing engines and various machined parts.	089-992-0706
4	TODA RACING CO., LTD.	Development and manufacturing of racing engines, gear boxes, suspension dampers and various machined parts.	www.toda-racing.co.jp 0866-83-1202
5	R.H.K. CO., LTD.	Electric components, Wiring harness for racing cars	0774-46-4009
6	NISSIN SANGYO CO., LTD.	Prototype manufacturing of metal and plastic parts	www.nissinsangyo.jp 077-553-2293
7	OKAYAMA INTERNATIONAL CIRCUIT	Circuit	www.okayama-international-circuit.jp 08687-4-3311
8	I.A.TEC INC.	Racing car part design, Production race car maintenance, Car racing management	www.iatec.net 076-240-8884
9	NUTEC JAPAN CO.LTD.	Lubrication oil	nutec.jp 026-282-7231
10	WORK COMPANY LIMITED.	Aluminum alloy wheels	www.work-wheels.net 06-6746-1133
11	KTK MAGNESIUM CASTING	Casting, Prototype manufacturing	045-573-7805
12	TAMACHI INDUSTRIES CO., LTD.	Design and manufacture of automobile parts and saving devices/equipments. Camshaft. Cylindr-head and etc.	www.tamachi.jp 03-3762-5591
13	PANKL JAPAN INC.	Develops and manufacturers engine and drivetrain components for racing cars.	www.pankl.com 03-5715-3877
14	TOM'S CO., LTD.	Automotive components, Product planning, Research & Development, Race team management	www.tomsracing.co.jp 03-3704-6801
15	DOME CO., LTD.	Development and Design of Racing cars. Aerodynamics Design. CFRP products. Styling Design.	www.dome.co.jp 0749-54-1414
16	RAYS CORPORATION	Aluminum wheels, Magnesium wheels	rayswheels.co.jp 06-6787-1104
17	CHALLENGE CO., LTD.	CARBON CONPOSITE PRODUCTS	www.vollstrom.co.jp 042-900-2111
18	TORIGOE PLASTIC INDUSTRY CO., LTD.	Plastic/resin products design and manufacturing	www.torigoejyushi.co.jp 0586-77-9191
19	TECHNOIL JAPON K.K.	MOTUL oil	www.motul.co.jp 045-592-9629
20	CRAFTSQUARE INC.	Design and manufacture of automobile parts	www.craftsquare.co.jp 045-592-9629
21	KETEL CORPORATION	Wind-Noise-Canceling microphones, Wireless communication system	www.ktel.co.jp 03-3603-8889
22	UCHINO CO.,LTD.	Gear development and manufacturing	www.uchino-ss.co.jp 0742-642-6210
23	SUZUKI ENGINEERING INC.	Design and manufacture of racing cars	0463-75-6335
24	CRAFT M INC.	Racing car, Special automobile manufacturing	059-345-9289
25	SEKIGUCHI CARS	Racing engine, Parts design and manufacturing	0566-89-0480

	COMPANY NAME	BUSINESS	CONTACT
26	SHIBA LINING CO., LTD.	Brake, Clutch, Air-filter, Racing car parts distributor	www.shiba-lining.co.jp 03-3582-9761
27	HORIBA, LTD.	Emissions testing system	www.horiba.com 072-361-0881
28	OTSUKA GIKEN INC.	Exhaust manifold, Pipe frame, Tank	0545-51-5022
29	NISSAN MOTORSPORTS INTERNATIONAL CO., LTD.	Race car, Rally car design and development	www.nismo.co.jp 03-3763-2331
30	BOSCH ENGINEERING K.K.	Supply and Development of electronics & fuel injection systems for race cars.	www.bosch-engineering.co.jp 045-410-1650
31	TEAM GOH INTERNATIONAL	Racing Team	03-6230-0518
32	PROSIT GmbH	BBS racing wheels	www.garagestash.net 042-478-6050
33	TOYOTA TECHNOCRAFT CO., LTD.	Customize for specialized cars, Produce for motor sports cars and parts, wear and goods sales	www.toyota-ttc.co.jp 03-3453-2531
34	R&SPORTS DEVELOPMENT LTD.	Engine management system, Wiring harness	www.rsport.co.jp 076-493-0369
35	DAIWA.MT CO., LTD.	Design data creation, CFRP products, Design models	daiwa-mt.com 0545-35-0350
36	TOKYO R&D CO., LTD.	Automotive R&D	www.r-d.co.jp 0462-27-1101
37	A.D.T. CORPORATION.	Prototype manufacturing, Machining for CFRP and metal parts	www.a-d-t.co.jp 0857-28-2032
38	NICOLE RACING JAPAN	Sole agent for imported various high quality racing parts Brake, Clutch, Pistons	www.nicole-racing.jp 044-511-2000
39	PERFORMANCE FRICTION CORPORATION JAPAN	Brake pad, Brake rotor	www.pfcjapan.com 048-836-4412
40	KATANO RACING SCIENCE	Development and manufacture of racing cars racing engines	www4.ocn.ne.jp/~katanosc 03-3757-5840
41	MOONCRAFT CO., LTD.	Development and Design of Racing cars. Aerodynamics Design. CFRP products. Styling Design.	www.mooncraft.jp 0550-89-7010
42	YAJIMA INDUSTRY CO., LTD.	Design and manufacture of sheet-metal parts Specialized cars, Racing car engines	www.syms.co.jp 0276-31-1311
43	MMP CO., LTD.	Miniature model car	www.ebbro.co.jp 054-272-4797
44	MYZ CO., LTD.	Development and manufacture of racing car parts	0550-76-9033
45	APR CO., LTD.	Design and development of racing cars, Maintenance Race team management, Parts for road cars	www.apr-jp.com 046-226-8988
46	FUJII ENGINEERING	Development and design of hobby racing cars. CFRP and GFRP products. Restoration of old racing cars.	www.fujii-engineering.com 059-397-3130
47	RACING TEAM GETWIN	Racing Team	080-3554-7989
48	JIMGAINER CO., LTD.	Racing car maintenance, Design and manufacture of automobile parts	jim-gainer.com 059-370-7351
49	ZAP SPEED CO., LTD.	Racing Car Rental	www.zap-speed.com 03-3989-8890
50	Aichi University of Technology Automotive Junior College	University	www.aut.ac.jp 0533-68-1135

You can customize your original racing car to suit your preferences by combining your selected components. Based on the JMIA Kit Racer components, you can add originally developed components to produce an original racing car. The JMIA Kit Racer components have great potential. The list shows an example. New components are being launched one after another. Please visit the JMIA web site at <http://www.jmia.jp>.

	PART NAME / NUMBER	DISTRIBUTOR
1	ENGINE ASSY (K20A)	
2	ENGINE ASSY (3ZR)	
3	CLUTCH ASSY	
4	MOTOR ASSY,STARTER	
5	BOX ASSY,INDUCTION	
6	TANK COMP,OIL	
7	FUEL TANK COMP	
8	PUMP ASSY,FUEL	
9	PIPE COMP EXHAUST K20A	
10	PIPE COMP EXHAUST 3ZR	
11	SILENCER,MUFFLER	
12	RADIATOR COMP	
13	T/M ASSY	
14	CYLINDER ASSY,CLUTCH RELEASE	
15	HOUSING,CLUTCH	
16	BATTERY(27Ah)	
17	ECU	
18	METER ASSY(PERCUL)	
19	METER ASSY(AIM)	
20	ARM COMP,R FR LWR SUSP	
21	ARM COMP,FR UPR SUSP	
22	ROD COMP,FR PUSH	
23	ROD COMP,FR TIE	
24	UPRIGHT,FR	

	PART NAME / NUMBER	DISTRIBUTOR
25	DAMPER ASSY,FR SUSP	
26	ARM COMP,R RR LWR SUSP	
27	ARM COMP,RR UPR SUSP	
28	ROD COMP,RR PUSH	
29	ARM COMP, FR ROCKER	
30	LINK,STABILIZER	
31	BRKT,RR SUSPENSION OUTER	
32	UPRIGHT,RR	
33	DAMPER ASSY,RR SUSP	
34	ARM COMP R,RR ROCKER	
35	WHEEL,8.5J-13 OFF+4	
36	WHEEL,10.5J-13 OFF+12	
37	BELL,BRAKE ROTOR	
38	DISK,R BRAKE	
39	CALIPER,R BRAKE	
40	CALIPER,L BRAKE	
41	FILLER COMP,FUEL	
42	DUCT,R FRONT BRAKE	
43	BELL,BRAKE ROTOR	
44	DISK,R BRAKE	
45	CALIPER,R BRAKE	
46	PEDAL,ACCEL	
47	PEDAL,BRAKE	
48	PEDAL,CLUTCH	

	PART NAME / NUMBER	DISTRIBUTOR
49	MASTER CYLINDER	
50	MONOCOQUE	
51	COWL COMP,FR NOSE	
52	COWL COMP,FR	
53	BONNET COMP,FRONT	
54	SUBFRAME ASSY,FR	
55	PONTOON,R FR	
56	PONTOON,R RR	
57	COVER,R AIR OUTLET RR	
58	COVER COMP,ENG	
59	PLATE,FUEL REGULATOR	
60	PANEL,FLOOR MAIN	
61	PANEL,FLOOR FRONT	
62	PAD,HEAD REST	
63	COVER,HEAD REST	
64	SEAT COMP	
65	BELT,SEAT(TAKATA)	
66	MIRROR,R BACK	
67	WING COMP,FRONT	
68	PLATE,R FR WING	
69	PLATE, FR WING END	
70	WING COMP,REAR	
71	PLATE,R RR WING	
72	PLATE,RR WING END	

Quote and purchase of **JMIA KIT RACER**

Purchase of a completed car

Please visit the JMIA web site for detailed information of a completed car, which is produced to order. Referring to the list of companies on the next page, please call or write to a constructor directly, or contact the JMIA.

Purchase of components

The JMIA web site has product brochures. Please check the model number of the component you need and call or write to the constructor directly, or contact the JMIA. Please check the compatibility table to ensure that the old component and new one are interchangeable.

Ordering an original car

Semi-order racing cars are available, by using the JMIA Kit Racer components as the base and by introducing original design to all parts. Of course entirely original cars are also available. Please contact the JMIA.

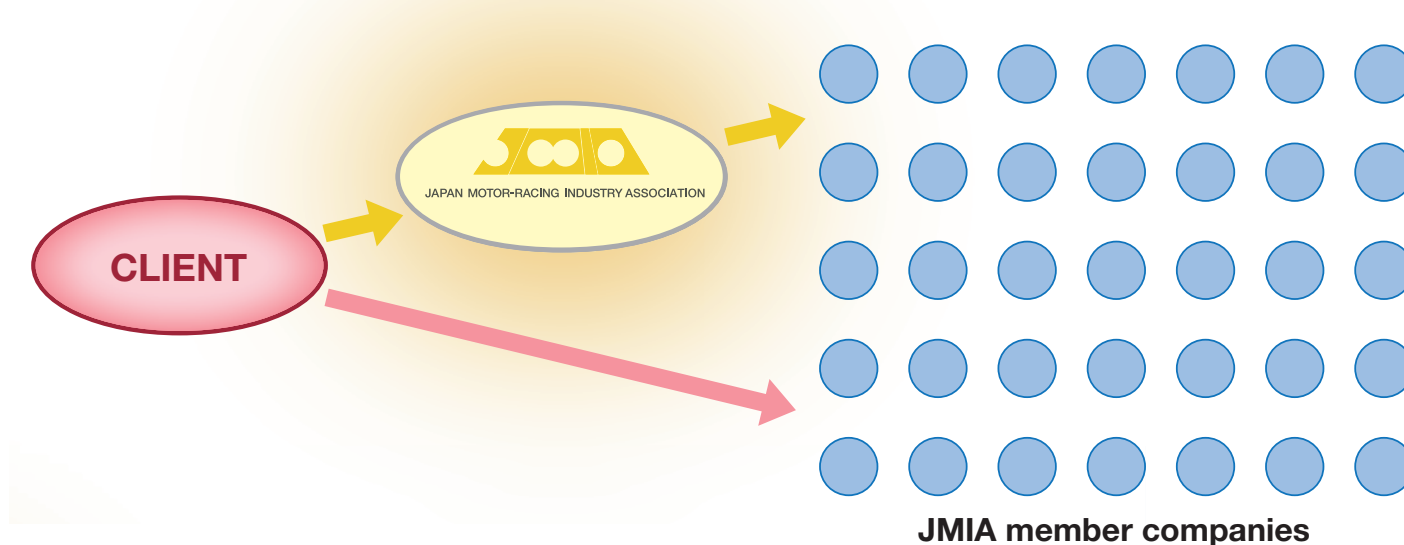
Ordering original components

At the JMIA, almost all components required for a racing car can be developed and produced. In addition, the JMIA can assist development in many respects, such as wind tunnel testing and strength calculation. Please contact a member company directly or contact the JMIA.

Points of contact

To inquire or purchase a completed car, engine or components, please contact directly the JMIA member company that produces and sells them.

When you purchase a variety of products or a great amount of products, the JMIA will assist your purchase. Please contact the JMIA.



Japan Motor-Racing Industry Association

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CONTACT PERSON

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Takehiko Tsukamoto tsukamoto@jmia.jp

JMIA member companies

For details regarding the businesses of member companies, please visit their web sites, via the JMIA web site's hyperlinks to them. If you are not sure which company would be your best selection, the JMIA will be pleased to assist you. Please contact the JMIA.



JMIA MONOCOQUE UOVA 4



JAPAN MOTOR-RACING INDUSTRY ASSOCIATION

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