

C H A L L E N G E 

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Product guide 2011



The latest technology, intelligent design, outstanding comfort. At Challenge in the Netherlands we build these into every bike across our range.

Large wheeled 'high racers' for longer, extreme tours. Compact designs for everyday riding. Super Light designs for sport and competition. The SL-series, for example, is one of the lightest and most innovative designs on the market. The hardtail Fujin SL-II can weigh less than 8kg - lighter than many upright road bikes. The Mistral SL equipped with full suspension and a front disc brake weighs around 11kg.

The secret to building a lighter bike is Challenge's expertise in the use of aluminium alloys, carbon fibre and titanium. The Mistral SL and several other Challenge designs use an injection-moulded carbon-fibre rear swing arm that is quite unique.

Innovation at Challenge is not new though. Back in 1990 Challenge started a trend with the construction of a high racer - a recumbent with a high seating position. Since then the range has been consistently updated and refined. Through the use of sophisticated CAD and CAE programs Challenge has continued to keep one step ahead. Customer feedback has been taken into account to ensure our designs are as well designed and produced as possible.

Many components are designed and manufactured specifically for us. This ensures the quality of our bikes. Our frames are produced in the Netherlands, close to our headquarters and are guaranteed for 10 years. Assembly is done directly by Challenge to give optimal quality control. A specialist dealer network is in place to give you advice, check the web for details .

**Whatever you're looking for,
there's a Challenge to suit!**





Ventisit and Challenge Seat.

All Challenge aluminium seats feature an exclusive spinal relief zone, and an array of ventilation holes not found on other shell seat designs. The aluminum material draws heat away from your body when used with a seat pad that allows thorough ventilation.

The Ventisit pad does this through its open weave design loaded with venturi to bring ultimate airflow to your ride.

The perfect finishing touch to your Challenge.



Challenge Rear Suspension.

Placing the central shock absorber below the frame retains the beautiful Challenge lines, the pass through link to the ultra rigid seat spine and properly placed swing arm pivot delivers a plush ride while maintaining excellent power delivery.

Challenge CNC Stem System.

The bike's controls are a critical system. Challenge have developed an all-new system of precision components to create a very strong, light yet versatile stem and handlebar support.

The base of the system is a block which clamps to the top of the fork shaft, to fit all of Challenge's forks. Attaching to this with a smooth, play-free pivot system is the riser, which is CNC machined in a single piece. This is a highly stressed part and welds might compromise its strength.

There are two alternative stems which slide into the riser and are clamped into position, so setting the handlebar height. The first is another one-piece CNC unit with a handlebar clamp at the top, used for narrow handlebars. For an 'open cockpit' with wide, swept-back bars, a 'T' adaptor fits into the riser, with width adjustment clamps on each side.





Voyager Rack means super capacity to last a 19 month tour from Anchorage, Alaska USA to Ushuaia, Argentina. For the full story on this extraordinary voyage, go to www.panamerica.ch

For the Panamerica voyage, Pius Kolber and Stefan Dudli chose the Rohloff Speedhub for their Seirans. Completely concealed from the crusty environment you see here, the Seiran / Rohloff combination endures where a derailleur system would have a hard time surviving.





Electric assist: an approved option on almost all of our bikes. Your dealer can install the system according to your personal requirements.



BOULANGERIE

BOULANGERIE



Most of our bikes and trikes are able to take a trailer. Most trailers offer several types of couplings, making it possible to fit a wide range of designs.



Touring Bikes

Challenge Touring Bikes feature a more level crank position, more upright adjustable angle seating, friendlier urban dynamics, ease in frequent start/stop situations, rear suspension, and the ultra flexless “spine” seat support incorporating rack mounting infrastructure for the Challenge Day and Challenge Voyager rack systems.

Combined, these features create great touring platforms balancing well with a load.



Mid Racers

A concept introduced by the Challenge Hurricane and carried on through the addition of the Fujin Tour and Furai.

The Mid Racer blends the Low Racer’s ultimate aerodynamics with a more day-to-day friendly seat elevation and a more upright seat angle.

Better maneuverability, visibility, and climbing power are the result. Fast in the city, fast in the country.

Low Racers

Low racers originate from Holland. It’s all about reducing wind resistance. With the shoulders laid back and the cranks high, you present very little surface. Low profile to side winds also helps keep you on track when a gust comes.

They look fast standing still, and feel fast when you’re rolling down your favorite road.

Challenge bikes have optimum front end geometry in any category they offer bikes in. The Fujin series has become known as the finest handling low racer available.



Trikes

Trikes are a big surprise for most people. Once you’ve ridden one, it is very hard not to add one to your cycling palate.

Challenge Trikes are of the “tadpole” genre, meaning two wheels out front, one in back. They are fun, feeling like a human powered sports car!

With no balancing required, you feel secure in all types of terrain and circumstances, including Winter commuting. Need to take a break, or look out over some great vistas? You can do that, or visit with your riding companion from your comfortable recumbent seat, then move on when you’re ready to go again.

Challenge Trikes have the beautiful frame designs that say “Challenge”, plus some innovations not found elsewhere including the “wings” out front that make it the easiest tadpole trike to step in and out of.



Seiran



Seiran's big wheels roll fast and easy on smooth roads and in the rough. Weight distribution is perfect for optimum traction, and steering dynamics that are just right. Challenge's curved frame design keep the seat height reasonable, and temper the crank elevation for easy acceptance. Seirans can be built for extreme touring in the rough of the world, or with light SL type components for the fast club ride with the added bonus of rear suspension smoothness.

Wheel size (F + R)	24" ETRTO 507	26" ETRTO 559
Seat height	57 cm / 22,4"	62 cm / 24,4"
Bottom bracket height	ca. 78 cm / 30,7"	ca. 83 cm / 32,7"
Wheelbase	117 cm / 46"	121 cm / 47,6"
Seat angle adjustable	29° - 35°	
Average weight	ca. 17 kg / 37,4 lbs	
Light version weight	around 11,8 kg / 26 lbs	
Total weight limit	125 kg / 275 lbs rider and luggage	
Frame and rear stays	aluminium Challenge SL-tube	
Baggage capacity	max 25 kg / 55 lbs	
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)	
Voyager rack	aluminium, for four large sizes bags	
Steering options	open cockpit / folding tiller / USS	
Seat systems	Challenge aluminium vented or hard shell euro style (optional carbon)	
Rear suspension	yes, DNM-DV22, Hydraulic, length = 165 mm	
Front suspension	optional, Challenge system only	
Warranty	10 years on frame, 4 years on coating (for the first owner)	

Plenty of clearance thanks to a 20" front wheel is ideal for easy urban riding. Dual suspension helps you maintain control even if the road surface throws up surprises. The Voyager rack and 26" rear wheel combine to give great load capacity.



Fujin sport



The Fujin-sport combines the comfort of a suspended recumbent with the pedegree of a low-racer. With its 26" rear wheel, 35cm seat height and 123cm wheelbase, the Fujin is perfect for going, really far, really fast. For riders seeking the ultimate comfort racer, we offer the Fujin with the Challenge front suspension system. For the greyhounds out there we offer a hardtail racing version.

Wheel size (F / R)	20" / 26" (ETRTO 406 / 559)
Seat height	35 cm / 13,8"
Bottom bracket height	ca. 58 cm / 22,8"
Wheelbase	123 cm / 48,4"
Seat angle adjustable	23° / 26° / 29°
Average weight	ca. 17 kg / 37,4 lbs
Light version weight	around 11,8 kg / 26 lbs
Total weight limit	125 kg / 275 lbs rider and luggage
Frame & rear stays	aluminium Challenge SL-tube
Baggage capacity	max 25 kg / 55 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	not available. Use special recumbent side bags, see dealer
Steering options	open cockpit / folding tiller/ rigid-small
Seat systems	Challenge aluminium vented (optional carbon)
Rear suspension	yes, DNM-DV22, Hydraulic, length = 165 mm
Front suspension	optional, Challenge system only
Warranty	10 years on frame, 4 years on coating (for the first owner)

The heart of the Challenge front suspension lies in the gas/oil cartridge unit. Depending on your weight you can choose to have a hard or soft set up giving a progressively smooth travel. Because we have used the finest hard wearing materials and high tolerance engineering the Challenge suspension will give many years of reliable service in all climates.



Fujin Tour



The brief: take the original Fujin low-racer design and make it an even more versatile mid-racer. The result: the Fujin Tour, a bike that is fast, comfortable and easy to handle.

Choose from all steering systems including underseat steering with bar-end shifters. Finish off the comfort with a full range of ventilated aluminium and composite seat choices and headrest.

Wheel size (F / R)	20" / 26" (ETRTO 406 / 559)
Seat height	38 cm / 15"
Bottom bracket height	ca. 59 cm / 23,2"
Wheelbase	121 cm / 47,6"
Seat angle adjustable	26° / 29° / 32°
Average weight	ca. 17 kg / 37,4 lbs
Light version weight	around 11,8 kg / 26 lbs
Total weight limit	125 kg / 275 lbs rider and luggage
Frame & rear stays	aluminium Challenge SL-tube
Baggage capacity	max 25 kg / 55 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	not available. Use special recumbent side bags, see dealer
Steering options	open cockpit / folding tiller / rigid-small / USS
Seat systems	Challenge aluminium vented or hard shell euro style (optional carbon)
Rear suspension	yes, DNM-DV22, Hydraulic, length = 165 mm
Front suspension	optional, Challenge system only
Warranty	10 years on frame, 4 years on coating (for the first owner)

Recumbent sidebags, ideal for touring. The weight of the bags is transferred through the seat, this keeps the unsuspended weight low and is essential for maintaining good handling characteristic when riding a heavily loaded bike.



Furai



The Challenge Furai brings ultimate aerodynamics of the low racer position elevated to traffic friendly height. The fast acceleration and centered steering of 24" make a quality commuter recumbent with weekend touring and speed capabilities.

Wheel size (F + R)	24" ETRTO 507 (optional 520 and dual 26")
Seat height	48 cm / 18,9"
Bottom bracket height	ca. 72 cm / 28,3"
Wheelbase	120 cm / 47,2"
Seat angle adjustable	27° / 30° / 33°
Average weight	ca. 15,5 kg / 34 lbs
Light version weight	around 12 kg / 26,4 lbs
Total weight limit	125 kg / 275 lbs rider and luggage
Frame and rear stays	aluminium Challenge SL-tube
Baggage capacity	max 25 kg / 55 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	not available. Use special recumbent side bags, see dealer.
Steering options	open cockpit / folding tiller / rigid-small / USS
Seat systems	Challenge aluminium vented or hard shell euro style (optional carbon)
Rear suspension	yes, DNM-DV22, Hydraulic, length = 165 mm
Front suspension	optional, Challenge system only
Warranty	10 years on frame, 4 years on coating (for the first owner)

For those who prefer a more compact machine, or who value having both wheels the same size, all of our formats are available with dual 20" wheels.



Split Tube

A proven Challenge frame technology. Clean lines, aerodynamic form, and higher strength. One piece construction from the front all the way to the rear drop outs.

When Challenge came out with our award winning SL range, we heralded a new era in modern design and manufacturing process and introduced revolutionary material techniques.

The skills that have been mastered along the way have been applied across our entire range. With the combined use of aluminium alloy, carbon and titanium frame parts, and our much envied design excellence, we offer SL's that regularly weigh under 11 kg (24 lbs) and often around 8 kg (18 lbs).

It is relatively easy to build a light bike by using high-end components and a correspondingly high-end price tag, but we've managed it using enthusiast level components. When you want design that sets you streets ahead of the game, when you want to lead from the front, there is design and build excellence you can only expect from Challenge.

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needs your vision

Seiran SL

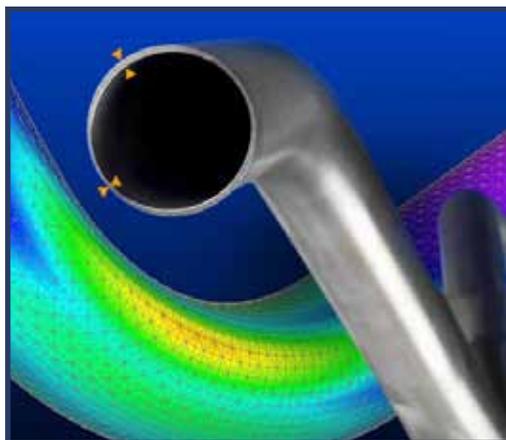
The most modern high racer, the Seiran SL looks right in its proportions, and the translation into performance is real. Known as the bike that loves a good climb, rolls out the high cruising speeds, it will be the bike to keep you in the fast riding pack.

The 125 cm wheelbase with fixed seat position and adjustable boom keep handling dynamics consistent, with more sure contact with the ground than other high racer ultra lights.

Wheel size (F + R)	26" (ETRTO 559 or 571)
Seat height	57 cm / 22,4"
Bottom bracket height	ca. 80 cm / 31,5"
Wheelbase	125 cm / 49,2"
Seat angle adjustable	28° / 30° / 32°
Average weight	ca. 10,5 kg / 23,1 lbs
Light version weight	around 9 kg / 19,8 lbs
Total weight limit	105 kg / 230 lbs rider and luggage
Frame rear stays	aluminium Challenge SL-tube
Front fork	carbon (optional aluminium U6 for diskbrake)
Bottom bracket tube	aluminium (optional carbon)
Baggage capacity	not allowed
Steering options	open cockpit / folding tiller / underseat steering
Seat systems	carbon
Rear suspension	no
Warranty	10 years on frame, 4 years on coating (for the first owner)

Challenge SL-tubes

Butted aluminium alloy tubes, unparalleled stiffness and rigidity at low weight, strength where it matters, air where it doesn't. Not as simple as it sounds, but, you get the picture. It took a great deal of work to achieve such outstanding results.

*Fujin SL-II*

It's not what you get, but what you don't get that makes this bike the ultimate speed machine!

Weighing just over 8 kg, the Fujin SL II is one of lightest, fastest and most loved low-racers on the market. People really love their Fujin SL's. Hands down the best handling low racer on the market.

Wheel size (F / R)	20" / 26" (ETRTO 406 / 559 or 571)
Seat height	33 cm / 13,0"
Bottom bracket height	ca. 56 cm / 22,0"
Wheelbase	123 cm / 48,4"
Seat angle adjustable	23° to 30°
Average weight	ca. 8,7 kg / 21 lbs
Light version weight	around 8,2 kg / 18 lbs
Total weight limit	105 kg / 230 lbs rider and luggage
Frame rear stays	aluminium Challenge SL-tube
Front fork	carbon (optional aluminium U6 for diskbrake)
Bottom bracket tube	carbon
Baggage capacity	not allowed
Steering options	rigid-small / open cockpit / folding tiller
Seat systems	carbon
Rear suspension	no
Warranty	10 years on frame, 4 years on coating (for the first owner)

Carbon Boom

A special weight reduction item. This oval Challenge design fits perfectly in our SL-tube. Tapered at the front to reduce weight to the max.



Furai 700c

Traditional racing cyclists want 700C racing wheels, and as athletes looking for ultimate performance they also want a compact design.

Just as on a racing bike, where athletes often have to use their skill to avoid touching the front wheel with a toe, or grounding the pedals in corners, so on this bike, part of the experience is to ensure that feet don't interfere with the front wheel.

It's a high racer without compromise but with extra comfort, thanks to cleverly concealed rear wheel suspension.

Wheel size (F + R)	28" (ETRTO 700c)
Seat height	60 cm / 23,6"
Bottom bracket height	ca. 77 cm / 30,3"
Wheelbase	119 cm / 46,9"
Seat angle adjustable	26° / 30° / 34°
Average weight	ca. 11,7 kg / 25.8 lbs
Light version weight	around 10.8 kg / 23.8lbs
Total weight limit	105 kg / 230 lbs rider and luggage
Frame rear stays	aluminium Challenge SL-tube
Front fork	Aluminium U6 (optional Carbon)
Bottom bracket tube	aluminium (optional carbon)
Baggage capacity	not allowed
Steering options	rigid-small / open cockpit / folding tiller
Seat systems	carbon
Rear suspension	no
Warranty	10 years on frame, 4 years on coating (for the first owner)

Challenge Chain Idlers

Challenge's new idlers are made of injection-moulded carbon, and just like carbon in graphite form, the material has its own self-lubricating anti-friction properties built in. The idlers run on sealed bearings which can slide easily along their axles, allowing the idlers to adapt to the chain position as you change gear, minimising side loads. This reduces noise and friction even further.

*Mistral SL*

The Mistral SL brings the easy to adapt level crank position and more upright seating to the Challenge SL selection.

Featuring the Challenge butted aluminium main frame and carbon rear swing arm rear suspension, the Mistral SL combines ultra light weight with the surprise of a silky smooth suspension ride.

Finally, the rapid acceleration only a 20" wheel format can deliver.

Wheel size (F + R)	20" ETRTO 406
Seat height	49 cm / 19,3"
Bottom bracket height	ca. 61 cm / 24"
Wheelbase	110 cm / 43,3"
Seat angle adjustable	31° / 35° (42° with additional bracket)
Average weight	ca. 11,5 kg / 25,3 lbs
Light version weight	around 8,8 kg / 19,4 lbs
Total weight limit	105 kg / 230 lbs rider and luggage
Frame / Rear stays	aluminium Challenge SL-tube / carbon
Front fork	aluminium U6 (optional carbon)
Bottom bracket tube	aluminium (optional carbon)
Baggage capacity	max 18kg / 40 lbs
Steering options	folding tiller/ open cockpit / USS
Seat systems	Challenge aluminium vented SL-version
Rear suspension	yes, air-shock adjustable, length = 165 mm
Warranty	10 years on frame, 4 years on coating (for the first owner)

Carbon Rear End

An exclusive Challenge creation, we have designed our carbon rear fork to be injection molded by using advanced aerospace production techniques. This brings together consistent quality, strength, and stiffness into a very lightweight component like no other.



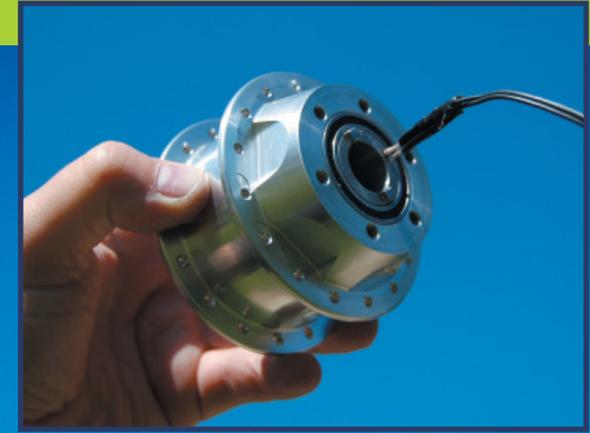
Challenge Trikes draw your attention with their shape that is recognizably Challenge without looking for the frame decal.

Challenge DNA is evident in the tri-bend frame form with "split tube" rear stays. The down and away wings add to the feeling of freedom as you move forward, gliding through your new unobstructed world.

Challenge has designed many of its own components seen throughout the front end systems, refining the excellent handling dynamics of the chassis. Ergonomics and comfort are first rate and a full range of options place your Trike precisely into any application.

From the Concept Trike, Challenge has continued development with the addition of the Alizé. The Alizé brings rear suspension and a fold in half feature that is quick, easy, and compact.

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Challenge hub dynamo

Trikes are great for long-distance travel - so it's great to be self-sufficient. The Challenge dynamo hub provides a built-in power supply not just for lights but also to charge your mobile phone, GPS or other devices as you travel. Never run out of charge again.

This hub was designed in-house to fit Challenge's unique oversized tapered front axles, and optimized for the 20" front wheels used on our trikes. It's based on the high-efficiency SRAM D7 dynamo and employs advanced rare earth magnets.



Wheel size (F / R)	20" / 26" (ETRTO 406 / 559)
Seat height	26 cm / 10,2"
Bottom bracket height	ca. 40 cm / 15,7"
Wheelbase	117 cm / 46"
Ground clearance	14 cm / 5,5"
Total width	83 cm / 32,6"
Seat angle adjustable	31° - 38°
Average weight	ca. 16,5 kg / 36,3 lbs
Foldable	no



Total weight limit	130 kg / 285 lbs rider and luggage
Frame	aluminium 7005 & 7020
Baggage capacity	max 30 kg / 66 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	aluminium, for four large panniers
Seat	hardshell GF or mesh seat
Rear suspension	no
Warranty	lifetime on frame, 4 years on coating (for the first owner)

Wheel size (F + R)	20" /24" (ETRTO 406 - 507)
Seat height	26 cm / 10,2"
Bottom bracket height	ca. 40 cm / 15,7"
Wheelbase	117 cm / 46"
Ground clearance	14 cm / 5,5"
Total width	83 cm / 32,6"
Seat angle adjustable	31° - 38°
Average weight	ca. 17,5 kg / 38,5 lbs
Foldable	yes
Total weight limit	130 kg / 285 lbs rider and luggage
Frame	aluminium 7005 & 7020
Baggage capacity	max 30 kg / 66 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	aluminium, for two large panniers or special recumbent bags
Seat	hardshell GF or mesh seat
Rear suspension	yes, DNM DV22 Hydraulic, lenght = 165mm
Warranty	lifetime on frame, 4 years on coating (for the first owner)





The Challenge Alizé is a folding trike. Fits behind the seats of a Smart car without removing the boom. Disassembled, the trike takes even less space.

Wheel size (F + R)	20" (ETRTO 406)
Seat height	26 cm / 10,2"
Bottom bracket height	ca. 40 cm / 15,7"
Wheelbase	109 cm / 43"
Ground clearance	14 cm / 5,5"
Total width	83 cm / 32,6"
Seat angle adjustable	31° - 38°
Average weight	ca. 17,5 kg / 38,5 lbs
Foldable	yes
Total weight limit	130 kg / 285 lbs rider and luggage
Frame	aluminium 7005 & 7020
Baggage capacity	max 30 kg / 66 lbs
Day rack	aluminium, for two small sized bags (12 kg / 26 lbs max.)
Voyager rack	aluminium, for two large panniers or special recumbent bags
Seat	hardshell GF or mesh seat
Rear suspension	yes, DNM DV22 Hydraulic, lenght = 165mm
Warranty	lifetime on frame, 4 years on coating (for the first owner)



The Challenge kingpin system innovates with a multiple bearing stack, the main being an oversize industrial angular contact ball bearing for smooth steering action and vertical force absorption. A cast stainless steel housing pillar enhances structural integrity while attractively concealing the engineering in a compact space. Wheels mount on 17mm axles. Removing a wheel is easy, as the disc brake mounting plate comes off with the wheel.



The front wings of Challenge trikes are more than just visually stunning. The forward-angled design allows you to stand close to the seat, letting you sit down easily rather than having to 'fall' in.

They are also critical for comfort. Alloy frames can be too rigid, transmitting vibrations harshly; thinner steel tubes are often more comfortable. Our trike wings combine the best of both worlds; the aerodynamic wing profile has proven itself to provide plenty of strength even in the harshest use but with enough vertical flexibility to offer effective vibration-absorbing passive suspension. Not obvious to the eye, but clear as you ride.

Photos : Velovision.com

For a full review off the trike Alizé see:
Velo Vision issue 33, March 2009

Velo Vision is a high quality English-language magazine covering recumbents and many other interesting bikes in print and online. Read more and subscribe at www.velovision.com

Recumbent bikes are awesome pieces of engineering providing the ultimate in comfort and intelligence in design. Check out these bikes, all original Challenge designs, all geared towards someone in particular. You!

Whether you're touring the globe or country, blasting the daily commute or racetrack, we've got your bike. Whether you're a recumbent virgin or a doyen of the down and low, Challenge builds a bike for you and your ride.

How to find out which will suit you? Read up on them and make note of your requirements. This brochure can help you with that. The final choice should be made after a visit to one of our dealers, where you can experience for yourself the difference of seat and pedal height; angle of seat; suspended or not. Our dealers have the skills and knowledge to help you choose.

Whatever you choose,
choose the Challenge of a lifetime.

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