



Driving fun for over 35 years

Products

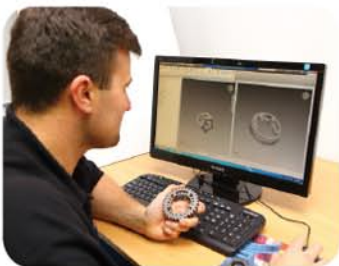
Services



# About us



Founder Graham Liddle  
Kart racing for a World Championship in 1968



To a modern design and manufacturing facility



Formula-K based in North Wales since 1980



Formula-K International is an established, privately owned company based in the United Kingdom. The company specialises in the manufacture and support of leisure vehicles to the recreation industry. Our key product range include :-

***Coin-operated 24v mini-cars, together with a complete installation solution***  
***Go-karts in both Petrol and electric***  
***Track design and operator products***  
***Full factory supported backup service***

Founded by Graham Liddle former 4 x World Go-kart racing champion in the 1960's and 1970's. Today he heads a highly experienced team, in a modern manufacturing facility which ensures that Formula-K provides a complete service.

From the supply and service of the most innovative and reliable vehicles available, to full facility design and creation, Formula-K will guide even the most inexperienced operator through all the stages of installing a safe, attractive and profitable go kart or mini-car facility.

Over the past 30 years Formula-K has continued to supply their domestic and international customers in over 50 countries world-wide, with a total service that is second to none.



# Mini-cars



The Formula K mini-car range is a product of many years research and development with the primary goal of designing and manufacturing a safe yet highly appealing driving experience for the youngest age ranges equally at home in an indoor or outdoor environment.

All built around a power efficient maintenance free motor and transaxle unit whose power is delivered by a 24 Volt AGM battery system ensuring a full operational day per charge cycle.

The ride cycle is fully automated by a purpose built central on board ECU that manages vehicle functions as well as auto start stop to time presets, input reactive engine noise simulations, ride cycle counting and vehicle systems status, amongst many more operator functions.

All Mini-cars are coin-op ready utilising versatile and reliable electronic coin validators or can be manually or radio controlled by an operator. These systems can work seamlessly together and can also feature a zoned stopping area system optimising operation for each individual operators needs.

All mini-cars are also capable of seating an assisting adult for less confident children.

A mini-car operation can also be extremely space efficient with smaller operations using as little as 25 M2 of floor space.

Programmable custom ECU



24 Volt AGM Battery power



Remote control options



Assistance seating for all models





hugely popular rugged all-rounder perfectly at home indoor and outdoor



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



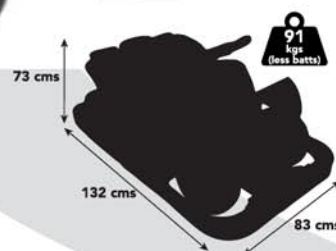
Engine noise



1 pedal operation with auto brake



Standard body colours



The Formula K MINI-QUAD harnesses all of Formula K's engineering and design expertise to create a highly attractive and safe battery operated childrens vehicle for the 4-12 year age group.

<b>Age Groups</b>	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
<b>Speed</b>	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
<b>Motor</b>	24V Electric motor with Direct drive via transaxle and built in differential
<b>Range</b>	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
<b>Control</b>	ECU purpose designed and built in the UK, featuring full ride management functionality
<b>Activation</b>	Coin-op, Free Play, Button, Remote or Manual start
<b>Remote system</b>	Optional
<b>Zone Stop system</b>	Built in as standard





Mini-cars

# Compact Quad



centre wheel steering system optimises the compact for smaller track areas



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



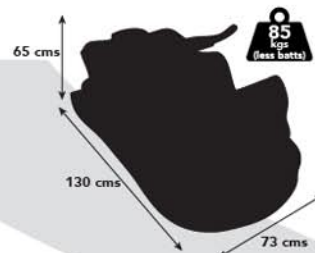
Engine noise



1 pedal operation with auto brake



Standard body colours



The COMPACT quad is designed to be used in areas where available space is at a premium. Steering is by a single hidden wheel positioned within the car, decreasing the turning radius by 50%.

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
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Zone Stop system	Built in as standard





Mini-cars

# Toro



thrilling race kart styling brought to the youngest drivers



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



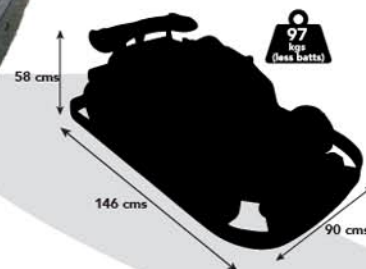
Engine noise



1 pedal operation  
with auto brake



Standard body colours



Toro is a UK manufactured childrens mini car with race kart styling, bringing together Formula-K's design expertise with the most reliable and dependable construction and systems available.

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
Range	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
Control	ECU purpose designed and built in the UK, featuring full ride management functionality
Activation	Coin-op, Free Play, Button, Remote or Manual start
Remote system	Optional
Zone Stop system	Built in as standard





Mini-cars

# Compact Toro



classic toro styling in a compact form for anywhere space is at a premium



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



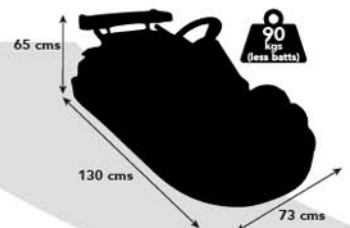
Engine noise



1 pedal operation with auto brake



Standard body colours



The COMPACT Toro carries all the appearance and appeal of the conventional Toro but utilising the innovative hidden centre wheel steering geometry to make operation in small areas a reality

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
Range	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
Control	ECU purpose designed and built in the UK, featuring full ride management functionality
Activation	Coin-op, Free Play, Button, Remote or Manual start
Remote system	Optional
Zone Stop system	Built in as standard





Mini-cars

# Tractor



traditional styling brings farmyard fun to your attraction



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



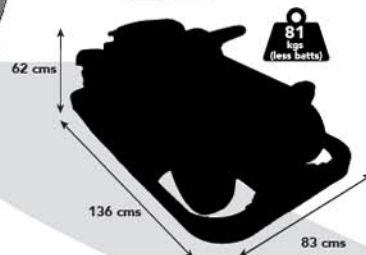
Engine noise



1 pedal operation with auto brake



Standard body colours



The Tractor children's mini car has authentic farmyard styling and is an ideal vehicle to be used as a compact stand-alone attraction or a profitable addition to existing amusement and farm parks.

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
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Remote system	Optional
Zone Stop system	Built in as standard





modern grand prix styling for the youngest race fans



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



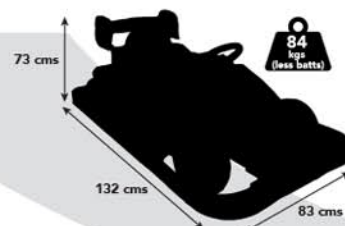
Engine noise



1 pedal operation with auto brake



Standard body colours



F1 is a highly popular vehicle in the range of our battery powered coin operated mini cars. With realistic race car sound simulation and replica F1 graphics kids can be in pole position every ride

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
Range	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
Control	ECU purpose designed and built in the UK, featuring full ride management functionality
Activation	Coin-op, Free Play, Button, Remote or Manual start
Remote system	Optional
Zone Stop system	Built in as standard





# Driving school



In addition to the range of children's coin operated vehicles Formula K manufactures a range of mini cars which have features and appearance perfectly blended for use in a driving school attraction.

## ***So what is a driving school attraction ?***

"Driving school" describes a popular mini-car attraction that normally will allow a greater freedom of travel route and multi-directional roadways simulating a real world urban driving experience.

Driving school tracks will generally occupy a larger footprint area to allow for multi lane driving and to encourage interaction between junior road users.

Tracks are often enhanced with roundabouts, stop signs, pedestrian crossings and traffic signals.

Road systems that are encountered every day in a normal driving conditions, creating a sensation of freedom for the child and an interactive and educational element to the ride experience, that assures the ongoing popularity of the attraction.

## ***What's the difference between a driving school mini-car and a regular mini-car ?***

Any Mini-car can be used within a driving school attraction, all mini-cars share the same functionality and hardware. Driving school cars often operate without coin mechanisms and are remotely triggered using an operator handheld control system, a system which Formula K can supply with any mini-car in the range.

A driving school will typically have more cars per square metre than a conventional mini car track travelling in different directions, so to maintain the fluidity of operation in this situation cars can be fitted by a remote safety cut-out and also an optional module that automatically reverses the car for a short duration to free it from any immovable obstruction

We manufacture a range of cars that replicate the profile and styling of typically found vehicles on modern roads today which compliment and enhance any driving school operation with safety and reliability.





iconic styling bringing street cool to your driving school attraction



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



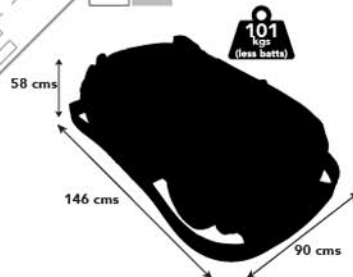
Engine noise



1 pedal operation with auto brake



Standard body colours



The Cabrio mini-car styled on an open-top street car. Two seat capability, robust chassis design and 24V power delivery system the Cabrio provides versatility & proven reliability with timeless styling.

Age Groups	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
Speed	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
Motor	24V Electric motor with Direct drive via transaxle and built in differential
Range	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
Control	ECU purpose designed and built in the UK, featuring full ride management functionality
Activation	Coin-op, Free Play, Button, Remote or Manual start
Remote system	Optional
Zone Stop system	Built in as standard





ready for any adventure with its rugged and tough action styling



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



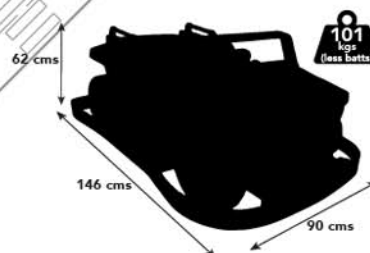
Engine noise



1 pedal operation with auto brake



Standard body colours



The Jeep is a highly popular mini-car at home in a driving school or a conventional mini-car track. LED lights, and striking styling ensure kids experience an unforgettable real world driving experience.

<b>Age Groups</b>	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
<b>Speed</b>	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
<b>Motor</b>	24V Electric motor with Direct drive via transaxle and built in differential
<b>Range</b>	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
<b>Control</b>	ECU purpose designed and built in the UK, featuring full ride management functionality
<b>Activation</b>	Coin-op, Free Play, Button, Remote or Manual start
<b>Remote system</b>	Optional
<b>Zone Stop system</b>	Built in as standard





# Driving school cars **Roadster**



urban chic for the youngest king or queen of the road



Power source



Assistance seat



Turning circle



Coin-op ready



Lighting



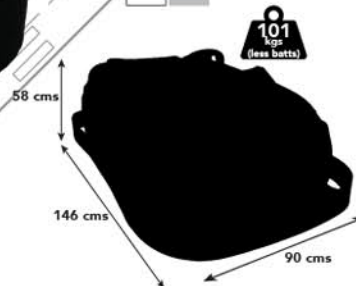
Engine noise



1 pedal operation with auto brake



Standard body colours



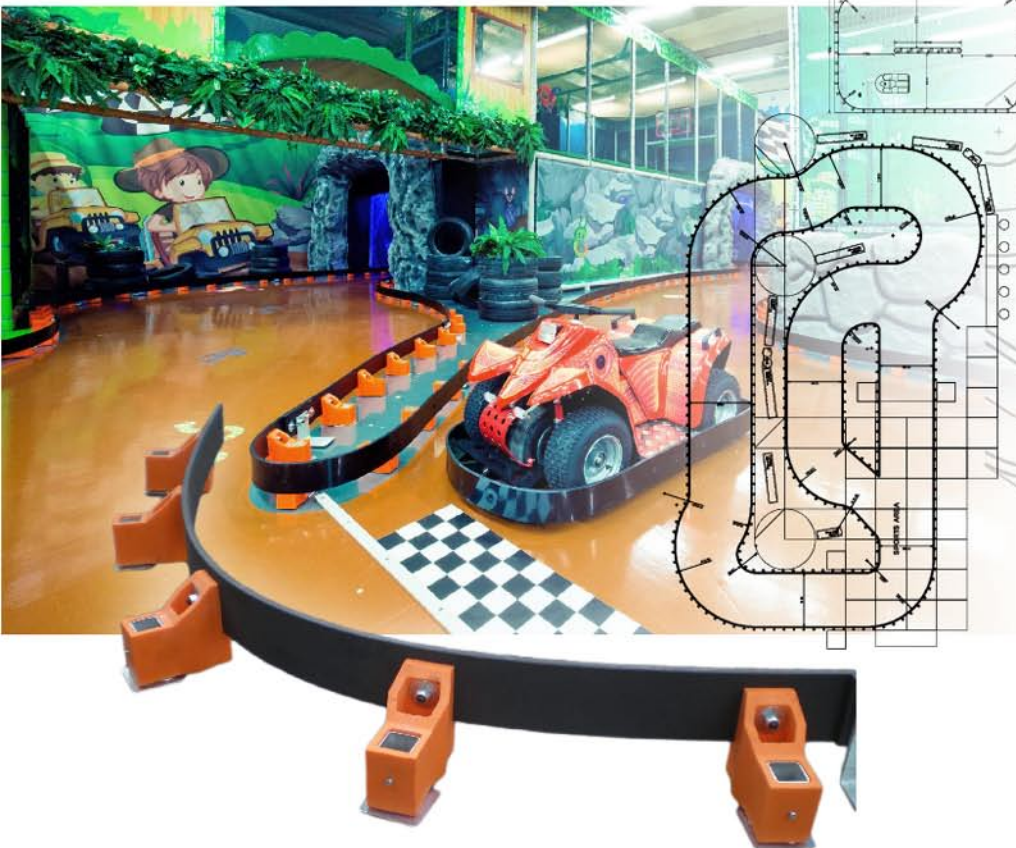
The roadster brings the most lifelike street car to your driving school, styled like a contemporary modern soft-top the roadster has many options for alternative theming from race car to town car.

<b>Age Groups</b>	4-12 years old, with a secondary seat at the rear should an adult wish to assist a child
<b>Speed</b>	Adjustable up to 10 kmh (approx) average advisable operating speed 4-6 kmh
<b>Motor</b>	24V Electric motor with Direct drive via transaxle and built in differential
<b>Range</b>	6 hrs motor running time, equating to an average 8-9 hour operation day with smart charge system
<b>Control</b>	ECU purpose designed and built in the UK, featuring full ride management functionality
<b>Activation</b>	Coin-op, Free Play, Button, Remote or Manual start
<b>Remote system</b>	Optional
<b>Zone Stop system</b>	Built in as standard





# a complete service



## Track design and barriers

Formula K has over 30 years experience of designing track layouts and supplying barrier systems to compliment any existing facility and streamline the operation of a driving attraction.

Over these years we have assisted site owners of both compact mini-car operations to major theme park designers in developing site areas to create a safe, attractive and operationally efficient driving attraction layout for either mini-cars or a major go-kart installation.

## Mini car barrier

Our mini-car barrier system is a safe attractive and robust containment solution which is cost effective, long lasting and can be made to fit any track shape.

## Bespoke projects

When required Formula K can custom design and manufacture mini-cars to fit a theme requirement or a body design that is specific to a site operators plan for the attraction. We have experience in working hand in hand with licencing agencies supplying 3D modelling, visuals as well as prototypes to meet any required standards.

*Let Formula K allow your imagination to run wild !*



## Custom branding

As part of the Formula K service, our experienced in-house designers can customise the graphic work on any car to incorporate your facilities corporate branding or ride theme to ensure perfect integration into an existing location.



# Go-karts



For over 30 years Formula K have been designing, manufacturing and assembling world leading go-karts for the leisure market.

The history and heritage in the manufacture of this product is synonymous with build quality, innovation, simplicity of operation and above all exemplary safety measures, making them the prime choice for any operator considering a viable commercial driving attraction for the 10+ age groups.

When used in conjunction with a operator remote controlled safety system, and a specifically designed track layout a go-kart operation can offer a unique ride experience that conventional fixed action rides can rarely achieve.

Traditionally leisure go-karts worldwide have been powered by efficient 4 stroke gasoline engines and to this day that option still offers an effective and reliable power source that provides an exhilarating driving experience for the user and an inexpensive manageable element for the operator.

However in today's world there is a constant demand for more ecological and cleaner options for vehicles and in response to this Formula K has made its key go-kart products available with a modern electrical powered drive.

Electric go-karts are driven by a series of specialist fast recharge batteries that supply a 48V delivery system to the car, the power is managed by an on-board ECU system that combines power management with the same remote safety systems available on conventionally powered karts.

Whichever option suits your operation better, all Formula K go karts are manufactured to the same exacting standards.



## All Formula K go karts feature

- Choice of Petrol or electrical drive systems
- Full belt drive transmission
- Twin hydraulic disc brakes
- Self coloured GRP bodywork
- Fully enclosing bumper system
- All moving components mounted on heavy duty bearings
- Recoil 3 point safety belts
- Fully compatible with safety remote system





Go-karts

# Bandit



a formula k classic, the Bandit a benchmark for any single seat leisure go-kart



Petrol engine  
Honda 5.5 or 6.5hp



Electric power  
option



Single seat



3 point recoil  
Safety belt



Clean efficient  
belt driven



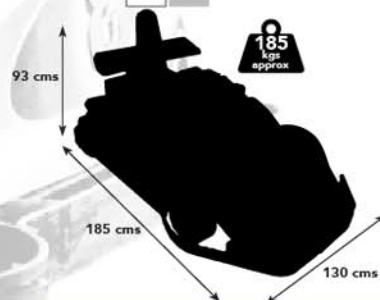
Twin hydraulic  
brakes



2 pedal operation  
Accelerator and brake



Standard body colours



The Bandit, designed with operational simplicity and efficiency without compromising driver appeal and stringent safety. Beautifully styled bodywork encloses all moving parts yet can be removed in seconds.

## Age Groups

Height dependent, from 150cm or 9 years

## Speed

Adjustable operator controlled, recommended maximum 30 kmh

## Motor

Honda 5.5 or 6.5hp 4 stroke with 2:1 reduced automatic wet clutch

## Electric option

Eco battery powered option using 48V power supplied by 4 x specialist batteries, full ECU control

## Bodywork

Maintenance friendly quick release GRP bodywork, fitted with full colour laminated graphic set

## Protection

Fully enclosing rubber mounted spring steel bumper system protects both car and user

## Chassis

CAD designed laser cut steel chassis assembly components for precision construction and strength

## Remote control

All petrol and electric karts are safety remote ready, system sold separately, or as factory fitted





Go-karts

# Le Mans



twice the fun in the iconic two seat formula-k le mans go-kart



Petrol engine  
Honda 5.5 or 6.5hp



Electric power  
option



Two seats



3 point recoil  
Safety belts



Clean efficient  
belt driven



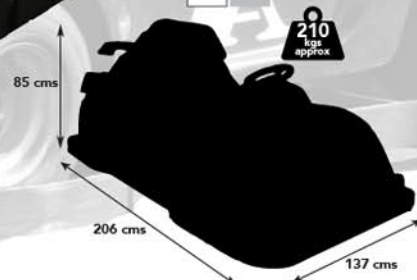
Twin hydraulic  
brakes



2 pedal operation  
Accelerator and brake



Standard body colours



The Le Mans 2 seater has been produced to maximise customer potential by combining all the usual requirements of a pay and ride go-kart track with the constant demand for an all inclusive family ride

<b>Age Groups</b>	Height dependent, from 150cm (driver) 105cms (non driving passenger)
<b>Speed</b>	Adjustable operator controlled, recommended maximum 30 kmh
<b>Motor</b>	Honda 5.5 or 6.5hp 4 stroke with 2:1 reduced automatic wet clutch
<b>Electric option</b>	Eco battery powered option using 48V power supplied by 4 x specialist batteries, full ECU control
<b>Bodywork</b>	Maintenance friendly quick release GRP bodywork, fitted with full colour laminated graphic set
<b>Protection</b>	Fully enclosing rubber mounted spring steel bumper system protects both car and user
<b>Chassis</b>	CAD designed laser cut steel chassis assembly components for precision construction and strength
<b>Remote control</b>	All petrol and electric karts are safety remote ready, system sold separately, or as factory fitted





Go-karts

# Delta



our original full body single kart, a timeless, dependable all rounder



Petrol engine  
Honda 5.5 or 6.5hp



Electric power  
option



Single seat



3 point recoil  
Safety belt



Clean efficient  
belt driven



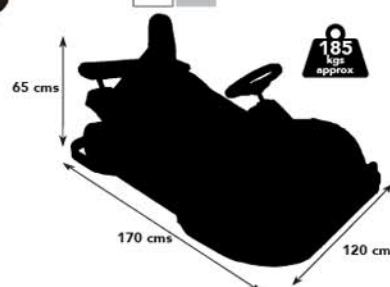
Twin hydraulic  
brakes



2 pedal operation  
Accelerator and brake



Standard body colours



The Delta is a highly popular full bodied go-kart mounted on our dependable, robust chassis platform Easy, fun and safe to drive for a wide range of driver abilities and age groups, a true all rounder.

#### Age Groups

Height dependent, from 150cm or 9 years

#### Speed

Adjustable operator controlled, recommended maximum 30 kmh

#### Motor

Honda 5.5 or 6.5hp 4 stroke with 2:1 reduced automatic wet clutch

#### Electric option

Eco battery powered option using 48V power supplied by 4 x specialist batteries, full ECU control

#### Bodywork

GRP bodywork, fitted with full colour laminated graphic set

#### Protection

Fully enclosing rubber mounted spring steel bumper system protects both car and user

#### Chassis

CAD designed laser cut steel chassis assembly components for precision construction and strength

#### Remote control

All petrol and electric karts are safety remote ready, system sold separately, or as factory fitted







## Key contacts

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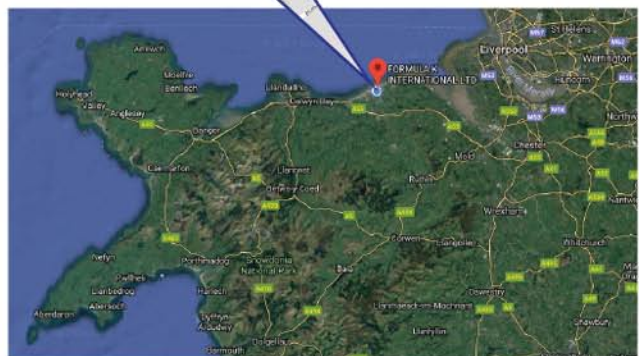
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