



THORNLEY  
KELHAM

## LANCIA AURELIA B20GT OUTLAW



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## INTRODUCTION

### ABOUT THORNLEY KELHAM

Founded in 2008, Thornley Kelham Ltd is a specialist in concours restoration, maintenance, rally preparation and support of iconic vintage and classic cars. From its Cotswold headquarters, the team of 36 manage, restore and prepare examples of sporting greats for global concours and motorsport events from a state-of-the-art 32,000 sq/ft facility.

With in-house bodywork, paint, engine building and engineering shops, Thornley Kelham is widely regarded for the quality of its restorations of historically significant, sometimes unique vehicles across a variety of leading marques. Its prize-winning restorations are regularly shown at concours events including Pebble Beach, the 'Royal Concours' at Hampton Court Palace, Chantilly and Salon Privé, while a dedicated motorsport team supports clients at rally events worldwide including the Mille Miglia, Tour Auto and Targa Florio.

Thornley Kelham is also internationally recognised for its creation of the limited-edition, bespoke 'Outlaw' Lancia Aurelia B20GT project, details of which can also be found at [www.fuorilegge.co.uk](http://www.fuorilegge.co.uk). This has led to the development of an in-house division dedicated to the design, development and construction of bespoke car commissions, with Jaguar XK, early 911 and Porsche 356A rebuilds all in the works.







## THE HERITAGE

### GIOVANNI BRACCO'S B20GT

Lancia's ground-breaking B20GT was launched in 1951 and was full of engineering innovation, including the world's first production V6 engine; later being dubbed the world's first 'Gran Turismo'.

Within weeks of launch, several wealthy and well known Italian privateers purchased early examples of the Series I – including Giovanni Bracco. He immediately entered chassis 1010 into the 1951 Mille Miglia – virtually undeveloped. The car was a resounding success, coming second overall. It went on to show its prowess on the toughest competitive events such as Le Mans (1st in class), the Pescara 6-hour (1st), Caracalla Night Race (1st) and the 1951 Carrera Panamericana. Here the car crashed out on Day 4 whilst amongst the leaders, but it was re-entered the following year by a Mexican (Peredo) who rebuilt the car and finished 9th in class.

In 2011 the car was 'discovered' in the USA and Thornley Kelham was given the task of returning it to the exact specification of Bracco's last race – the 1951 Carrera Panamericana. The 3-year restoration became a pilgrimage culminating on the lawns of Pebble Beach in 2014.

Over the following 7 years, Lancia developed 6 series of the B20GT, Series I & II being 2 litre cars and Series III-VI 2.5 litres - a total of 3861 examples were built.

## INDIVIDUALITY IN METAL

### THE BODY

Building on the body construction innovations begun at Lancia in the 1920s with the Lambda, the B20GT is an all-steel monocoque clothed in an all-steel body (early cars had aluminium opening panels).

One of the key moments in the restoration of 1010 was the discovery of an article in 'Auto Italiana' magazine about the Pescara 6-hour race held in the summer of 1951. The text – and a tiny photo – confirmed that Lancia and Bracco had lowered the roof of Chassis 1010 in the quest for aerodynamic improvement – particularly as the 2-litre engine gave little scope for increased power. When Thornley Kelham was commissioned to develop the first Outlaw, that lowered roof was our first inspiration. Working with the timeless original design of the B20GT, we have worked hard to develop each Outlaw to be true to its Lancia DNA whilst creating a unique car combining beauty, grace, contemporary engineering and exquisite attention to detail. Put simply:

The Design, The Details and The Drive.





Given the derelict nature of each Outlaw donor car, the full programme of reconstructing, strengthening and modifying each example takes between 1800 and 2200 hours (see below).

### KEY MODIFICATIONS INCLUDE:

- Internal body stiffening to rear arches, B-post, seat bulkheads and parcel shelf
- Front and rear wings widened
- 'Nardi' bonnet scoop
- Roof line lowered c. 3 inches
- Bespoke narrower front windscreen
- Roof 'deguttered'
- Front indicators eliminated (incorporated into headlamps)
- External Monza style fuel filler cap (FIA approved)
- Rear lamps B20GT Series 2 style, incorporating indicators
- OPTIONAL early art deco style headlamps

### OPTIONS - THE FINAL 3 OUTLAWS

As we pursue lightness as one of the key parameters of the last 3 Outlaws, clients have the option of either:

- Strengthened all-steel bodyshell and panels
- Steel bodyshell with aluminium door skins, bonnet and boot lid
- Fully handcrafted aluminium bodyshell and opening panels





## **THE EXTERIOR**

### BEAUTY IN THE DETAIL

Once the bodywork is complete, we go to work to create the perfect mirror-finish paintwork, plating and cool details that make the car so visually arresting. Over 800 hours goes into panel preparation and paintwork, including seam sealing, underbody protective coatings and successive rounds of priming and rubbing down with finer and finer abrasives.

This is where the personalisation really begins. You can choose from an infinite range of paint colours from correct period Lancia colours to more modern metallics. You can add details such as two tone, stripes, different wheel finishes and a variety of external details including mirrors, door handles, spot lamps, hub caps and so on. The one promise we have made to all Outlaw owners so far is that no two cars will be exactly the same colour....

What we guarantee is a final fit and finish which is second to none.



### MODIFICATIONS AND ACCESSORIES INCLUDE:

- All previously chromed fittings including door handles, lamp surrounds and radiator grille, plated in a bright nickel finish
- Bespoke side windows and rear quarter lights
- Bespoke rear view mirrors
- Elimination of aluminium side mouldings, bumpers, bonnet bright work
- Jaguar D Type style 15 inch alloy wheels with Avon radials – a variety of finishes available
- Choice of exterior door handles
- Marchal headlamps and fog lamps
- Ferrari style bonnet catches





## HANDLING

# CHASSIS, SUSPENSION, STEERING & BRAKES

Relentless development was at the core of the Lancia philosophy – every part of the car had engineering drawings – even the gear knob! Over the lifetime of the B20GT there were numerous key specification changes from an increase in engine capacity, adoption of a De Dion rear end from the 4th series (replacing the IRS) to a completely revised transaxle from the 5th series, allowing a larger clutch and revised gear ratios, bigger front brakes and a beefier front cross member. At Thornley Kelham we have looked back – and ahead – to combine that philosophy with modern upgrades all focussed on improving The Drive.





#### KEY UPGRADES INCLUDE:

- Front and rear axles altered to gain negative camber for better handling
- Sliding pillar front suspension modified to incorporate fully adjustable gas -filled struts
- Disc brake conversion all round (inboard at rear) - billet callipers and vented discs
- Left hand drive conversion (optional)
- Rack + pinion steering conversion – various ratios available
- Underslung bespoke 'Tilton' pedal assembly
- Modified pedal box
- Hydraulic clutch conversion with full hydraulic clutch release bearing
- Lowered suspension
- Revised damping
- Overdrive

#### OPTIONS - THE FINAL 3 OUTLAWS

- Limited Slip Differential
- Modern 5-speed transaxle with a choice of ratios
- Fully uprated independent rear suspension with revised damping
- Uprated front suspension with revised damping
- Power steering



## **PERFORMANCE TO SUIT YOUR NEEDS**

### THE POWERTRAIN

At the heart of any car lies the engine; in the case of the Aurelia, the world's first production V6. Thornley Kelham has again embraced this DNA and to date has re-applied it using the next generation Flaminia V6. This enabled us to develop the car's power to around 220bhp and 160 ft/lbs of torque whilst remaining true to the B20GT's original configuration, including mating the V6 to a Flaminia transaxle.

However, as it was with Lancia, it is in Thornley Kelham's DNA to seek continuous improvement. For our final three B20GT Outlaws we are therefore offering a significant upgrade in power and torque. By replacing the Flaminia engine with a 3.0 litre V6 'Busso' powerplant we are confident of achieving around 300bhp and 250 ft/lbs or so of torque. This will be mated to a purpose - built modern 5-speed transaxle. We will continue our improvements to the suspension and damping to handle the extra power.



## KEY MODIFICATIONS HAVE INCLUDED:

- Lancia Flaminia 2.5 3C engine and transaxle
- Engine enlarged to 2.8 litres + fuel injection conversion
- Cylinder heads ported and polished, lightly skimmed
- Hotter camshaft
- Bespoke design free-flowing exhaust manifolds and exhaust system with Lambda sensors
- Bespoke aluminium air box
- Bespoke aluminium radiator incorporating oil cooler
- Bespoke aluminium competition fuel tank with fuel injection pumps
- Electric water pump
- Custom made 'sleeve in sleeve' propshaft

## MORE POWER - THE FINAL 3 OUTLAWS

Our ultimate aim with the European Aurelia programme? To build a car true to the DNA and vision of Jano and De Virgilio but reengineered and equipped to provide the 21st century driver with an ownership and driving experience that is rewarding, reliable, engaging – and fun. And so, for the last three B20GT Outlaw commissions, we have added the following option:

- 3.0 litre V6 'Busso' engine with:
  - Fully mapped fuel injection
  - Blueprinted, balanced, ported and polished
  - Power over 300bhp and torque over 250 ft/lbs.



## THE INTERIOR

### 1950s ROAD AND RALLY HERITAGE

The Aurelia B20GT was a rally sensation in the 1950s, but also the chosen road car of wealthy industrialists, Italian gentry – and racing drivers, including Fangio, Hawthorn and Behra. The interior was simple, clean and uncluttered reflecting the marque's obsession with both form and function.

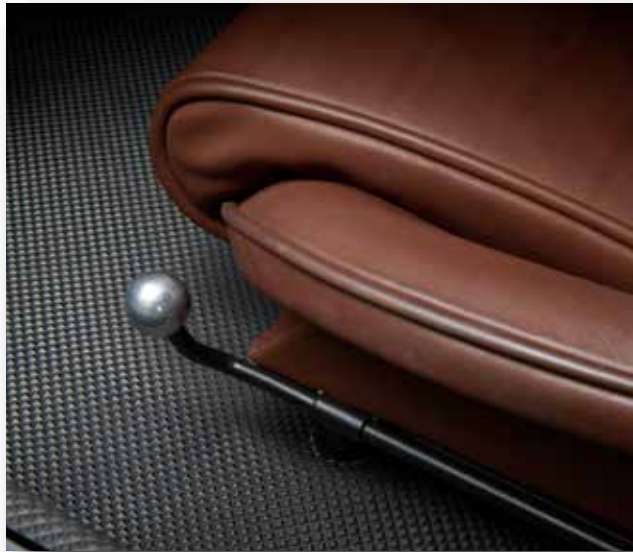
The European Lancia B20GT Outlaw interiors combine the best of Lancia's original design whilst utilising Connolly leathers, Alcantara, and a choice of other finishes throughout the cockpit - 1950s racing heritage married to contemporary functionality, comfort and driver usability.

The Thornley Kelham team will work with you to create your unique interior from the many options available for your European Lancia B20GT Outlaw: be it a customised dashboard, seat choice, leather-clad rollbar, elegant rear storage area, air-conditioning or a communication management system.

- A variety of front seat styles including period Porsche, Ferrari or Lancia
- Air conditioning
- Full Connolly leather interior with optional two tone and bespoke quilting
- Alcantara headlining
- Extensive sound deadening throughout
- Wood rimmed competition steering wheel
- Ancillary dashboard instruments
- Fully built in bespoke roll cage
- FIA approved four point safety harnesses
- Wilton carpeting









## THE FINAL THREE COMMISSIONS

# ONE OF A KIND, OUTLAW BY OUTLAW

To ensure the individuality of each Outlaw Commission, Thornley Kelham will only create 9 Lancia Aurelia B20GT Outlaws. Each of our Outlaw Commissions is therefore unique from the outset, based on a very tired B20GT donor car. We have therefore created 'The European' programme to encapsulate the different levels of option available on the remaining 3 cars.

### The Classic GT

The European Gran Turismo (GT) specification means exactly that – a Grand Tourer in the traditional sense, continuing the specification of the first 6 Outlaws built – steel body, Flaminia drivetrain and the various modifications described above.

### Da Corsa GTS

With a nod to the B20GT second series Da Corsa rally cars, we have created a more powerful variant – focussed on real world performance and driver engagement. Offering an additional 100bhp and c. 100 ft/lbs of extra torque, the Da Corsa's performance more than lives up to the Outlaw's sensational (some have said sinister) appearance. A 3.0 litre V6, modern transaxle, LSD and uprated suspension will deliver a drive to satisfy the most demanding driver.

### The European CSL

Offering Da Corsa mechanical specification and power but clothed in a handcrafted all-aluminium body, the Outlaw CSL is the ultimate expression of the Thornley Kelham Aurelia Outlaw programme. Looks, power, performance and lightness - all built to your unique specification.

We leave the last word to Giovanni De Virgilio, son of Francesco, who in designing and realising the Aurelia V6 was at the heart of both the Lancia family and the Aurelia programme:

*'In summary it's a very purposeful and realistic car that Gianni Lancia could have built for a friend'*





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