



FERRARI

312 T4

THE LEGENDARY 1970s F1 FERRARI

PACK **03**
STAGES 16-24



SCALE
1:8



FERRARI

312 T4

SCALE
1:8

Contents

STAGE 16 FUEL LINES AND THEIR CONNECTORS.....	1
STAGE 17 OPENING ROD, ELBOW, AND VALVE BODY	5
STAGE 18 OIL FILTER, LINES, AND CONNECTORS	9
STAGE 19 FIRST ELEMENTS OF THE COOLING SYSTEM.....	13
STAGE 20 DETAILS FOR THE ENGINE LUBRICATION SYSTEM.....	17
STAGE 21 SEPARATOR FILTER AND ITS PIPEWORK.....	21
STAGE 22 FIREPROOF BULKHEAD AND OIL TANK	25
STAGE 23 BATTERY AND ITS FIXING BRACKET	29
STAGE 24 COCKPIT CRADLE	33

© Agora Models

AGORA
MODELS.

WARNING: NOT SUITABLE
FOR CHILDREN UNDER THE
AGE OF 14. THIS PRODUCT IS
NOT A TOY AND IS NOT
DESIGNED OR INTENDED
FOR USE IN PLAY.
ITEMS MAY VARY FROM
THOSE SHOWN.

Produced under license of Ferrari S.p.A.
The name FERRARI, the PRANCING HORSE
device, all associated logos and distinctive
designs are property of FERRARI S.p.A.
The body designs of the Ferrari cars are
protected as Ferrari S.p.A. property under
design, trademark and trade dress regulations.

FUEL LINES AND THEIR CONNECTORS

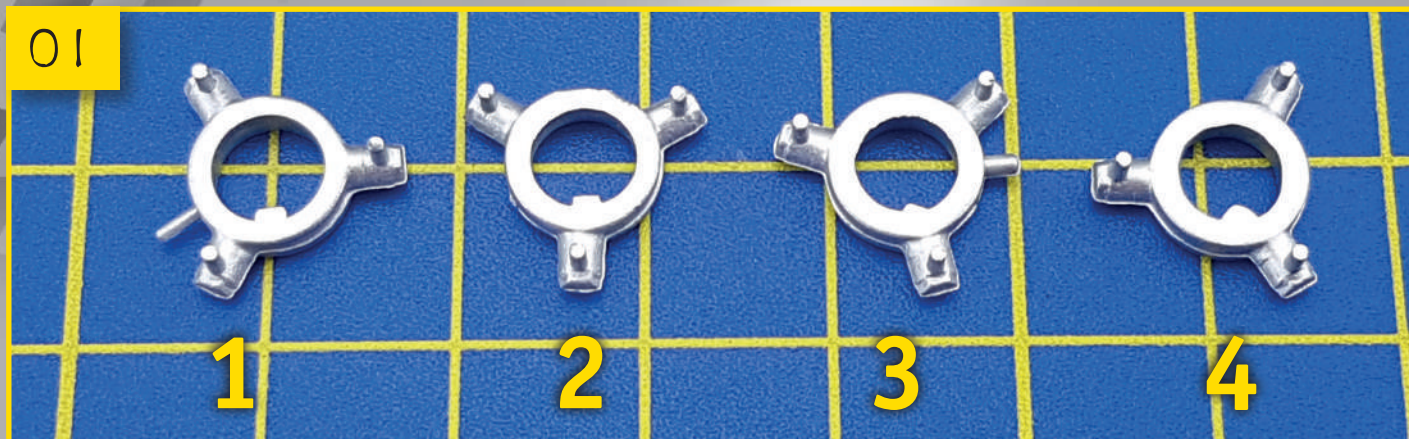
USING THE PARTS SUPPLIED IN THIS STAGE YOU CAN NOW CONTINUE CONSTRUCTING THE FUEL SYSTEM AND CONNECTING THE FIRST FUEL LINES TO THE ENGINE.



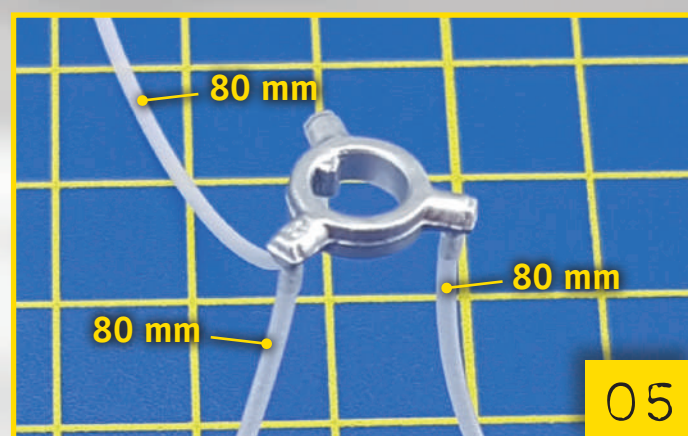
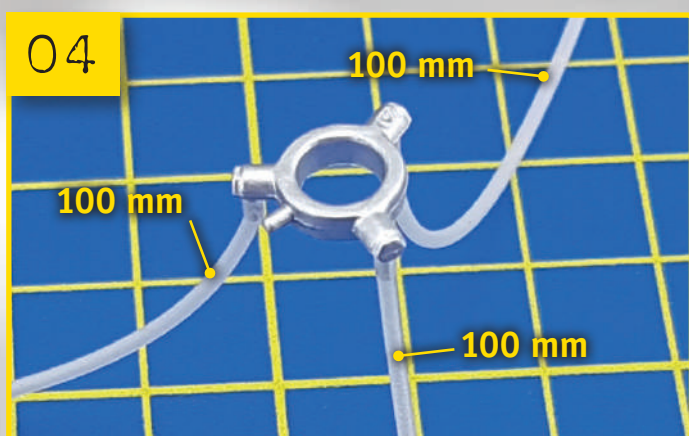
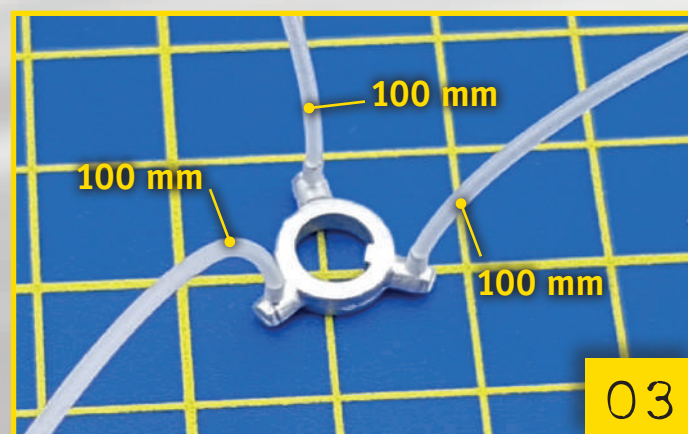
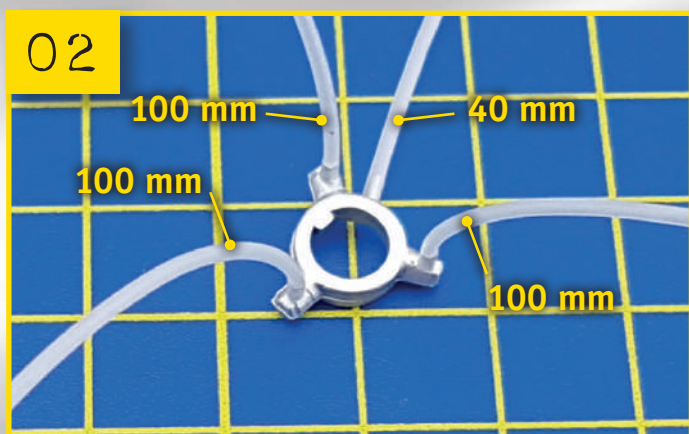
LIST OF PARTS

- 1 Nine fuel lines (100 mm)
- 2 Fuel line (40 mm)
- 3 Three fuel lines (80 mm)
- 4 Connectors





16-01 The connectors are all different from one another. Connector 1 has four pins: three vertical pins and one thin side pin. Connector 2 has three vertical pins and a centering tab that aligns with a nozzle. Connector 3 has four pins: three vertical and one thick side pin. Connector 4 has three vertical pins and a centering tab placed to the left of one of the pins.



16-02 Check that the fuel lines (nine x 100, three x 80, and one x 40 mm) are of the correct length; if necessary, shorten them with a sharp knife. Take Connector 1 and fit the 40 mm line on to the side pin. Fit three 100 mm lines on the three vertical pins.

16-03 Also prepare Connector 2 by fitting a 100 mm fuel line to each of the three vertical pins.

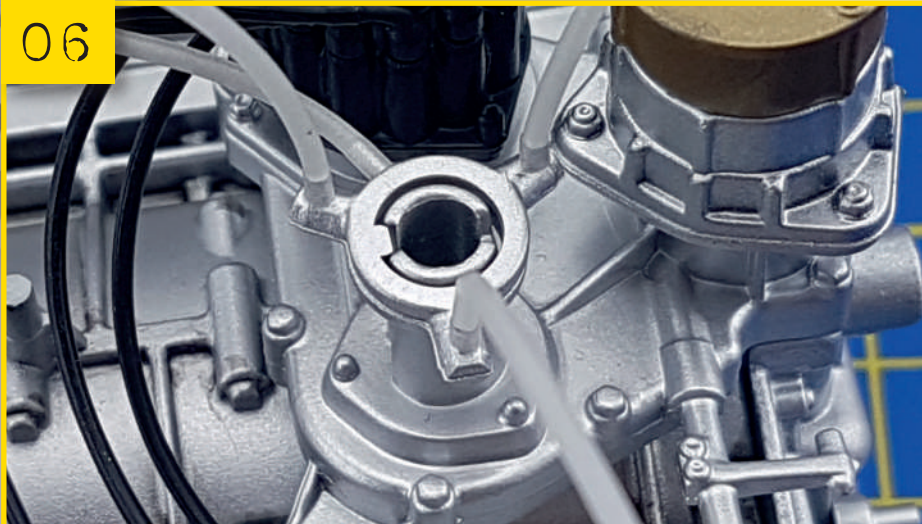
16-04 Fit a 100 mm line on to each of the three vertical pins of Connector 3.

A fuel line (provided at a later stage) will also be fitted to the side pin.

16-05 Lastly, prepare Connector 4 by fitting an 80 mm fuel line to each of the three vertical pins.

Set aside Connectors 3 and 4, which will not be used in this assembly session.

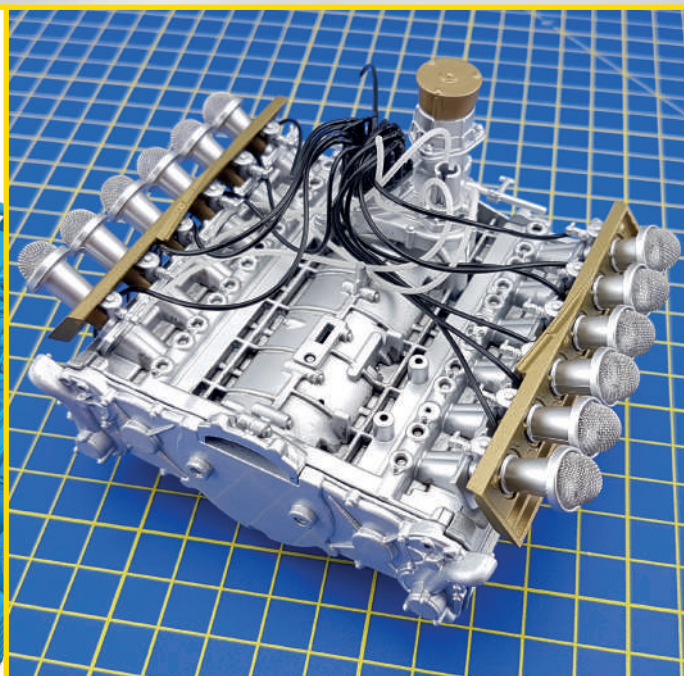
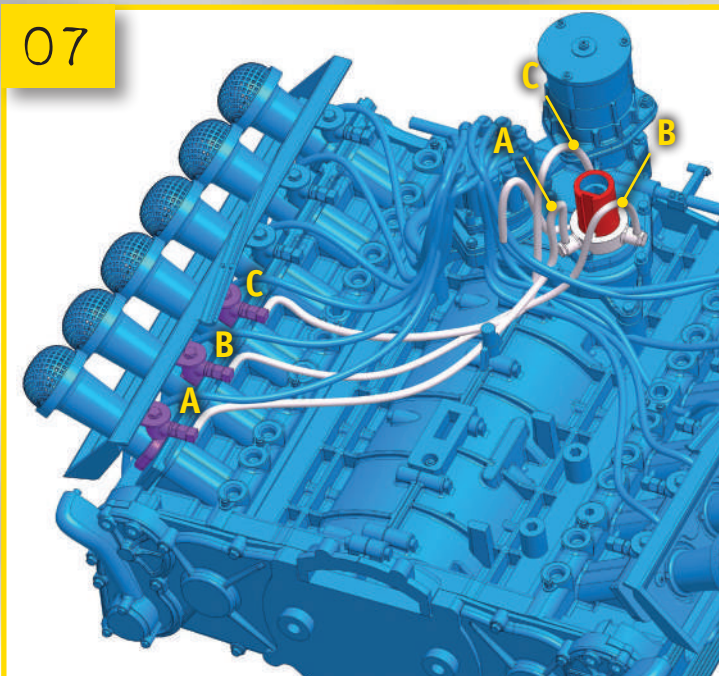
06



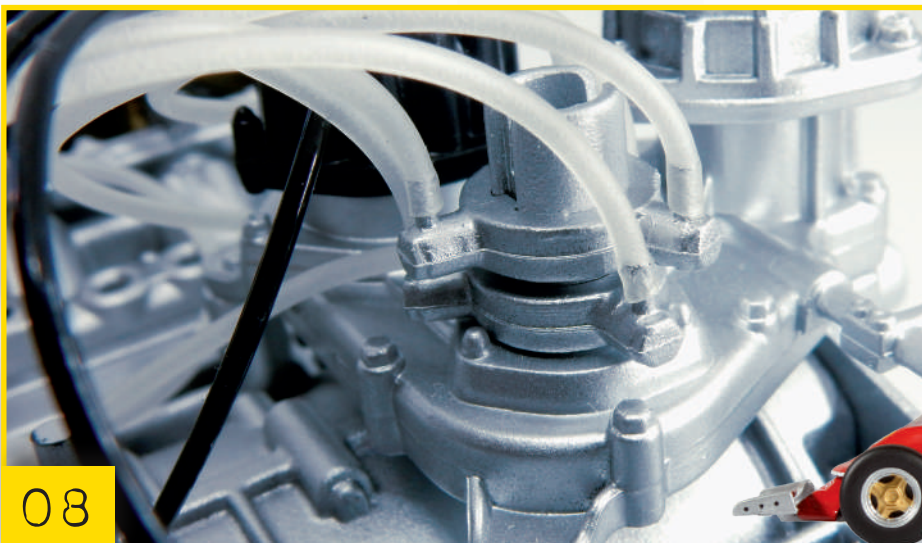
16-06 Place Connector 1 on the distributor cover, orientating it exactly as in the i photograph.

16-07 Now attach the fuel lines to the injectors, taking the routes shown in the drawing and the photograph.

07



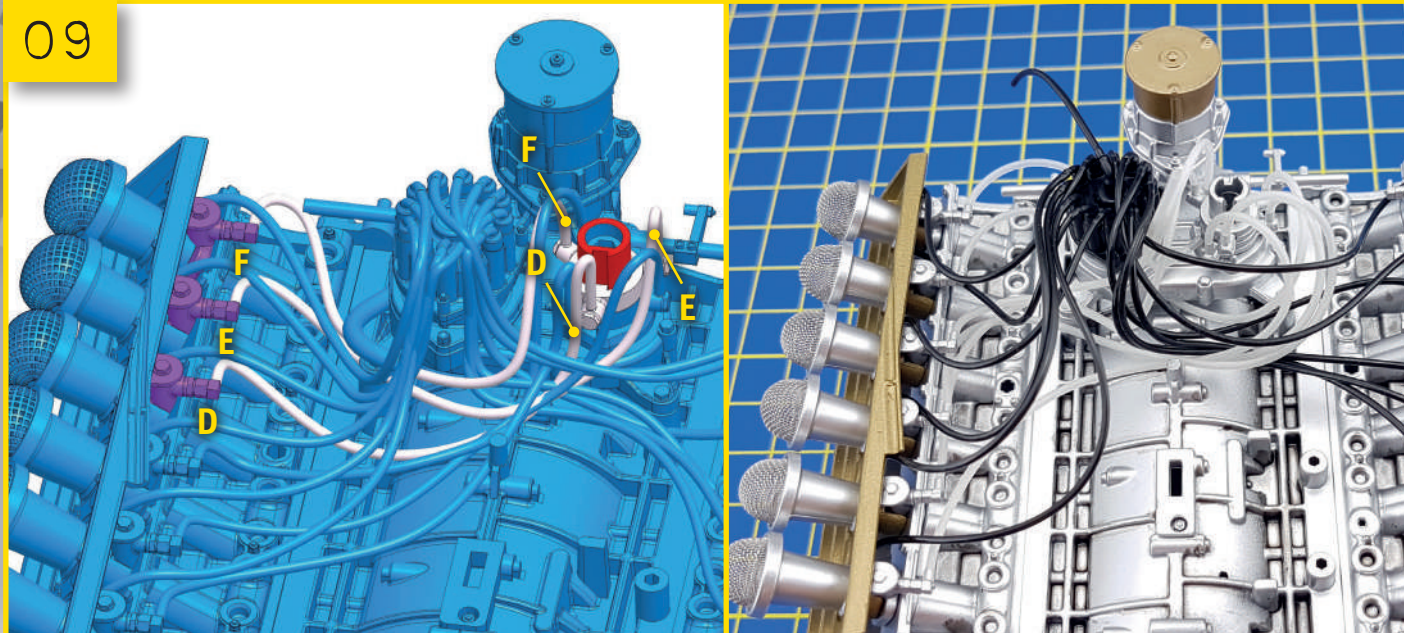
08



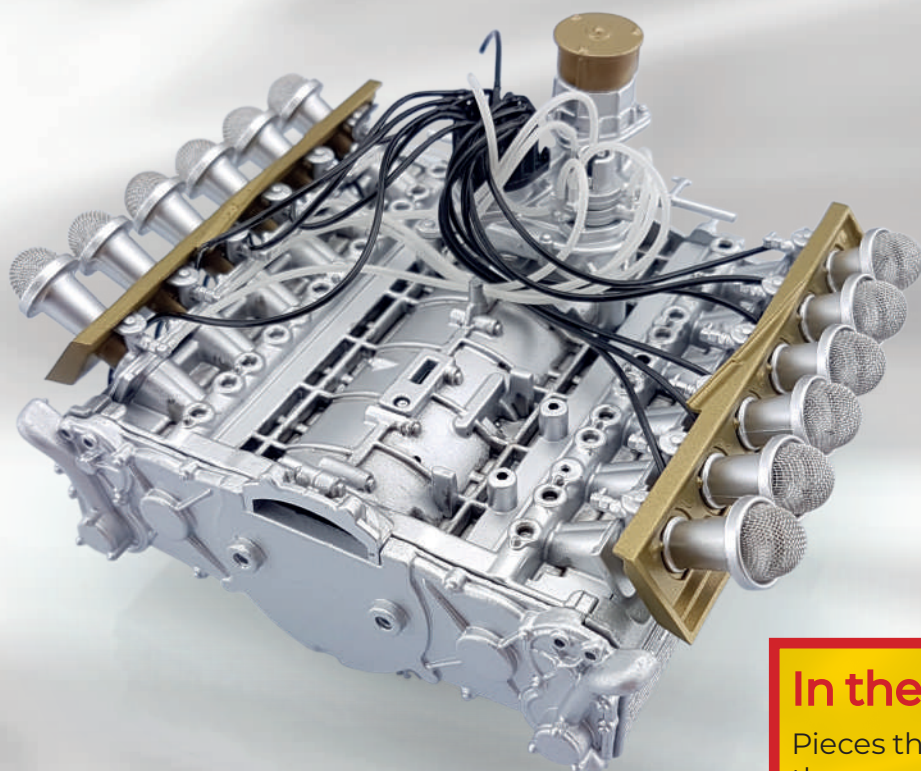
16-08 Place Connector 2 on top of Connector 1, orientating it exactly as shown in the photograph opposite.



09



16-09 Now attach the fuel lines of Connector 2 to the injectors, following the routes shown in the illustration and photograph above.



FINAL RESULT

You have now completed assembling part of the engine fuel system.

In the next stage

Pieces that complete the fuel system: the opening rod, elbow, and valve body.



OPENING ROD, ELBOW, AND VALVE BODY

USING THE PARTS SUPPLIED WITH THIS STAGE YOU CAN NOW COMPLETE THE FUEL INJECTION SYSTEM OF YOUR 1:8 SCALE FERRARI 312 T4.



1



2



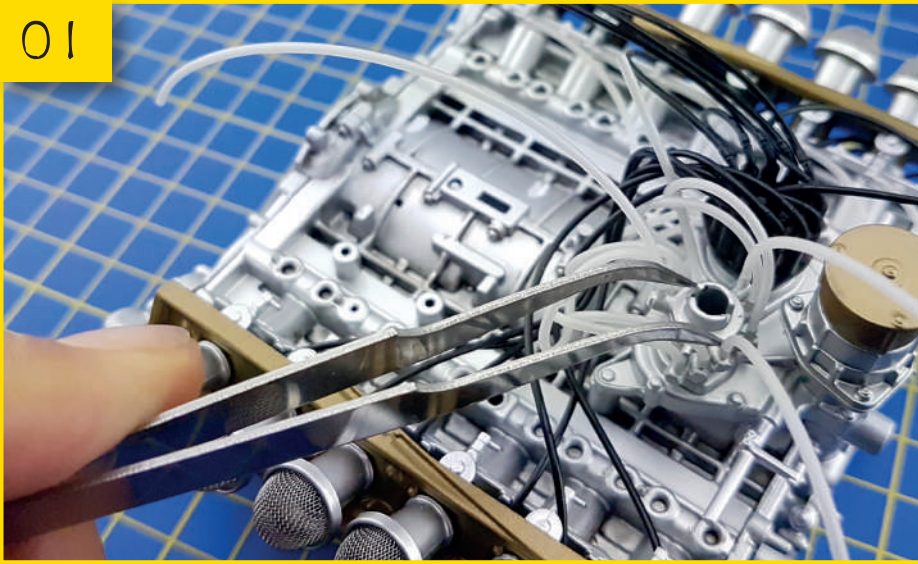
3

LIST OF PARTS

- 1 Valve body
- 2 Valve elbow
- 3 Valve opening rod

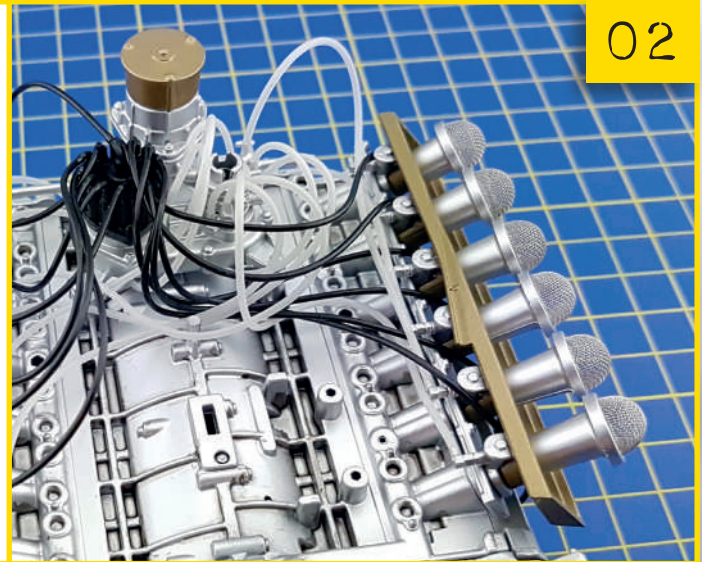
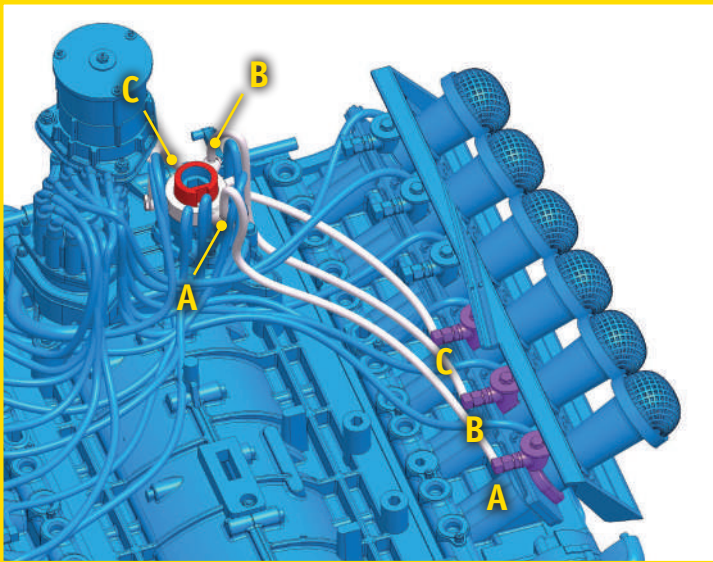


01

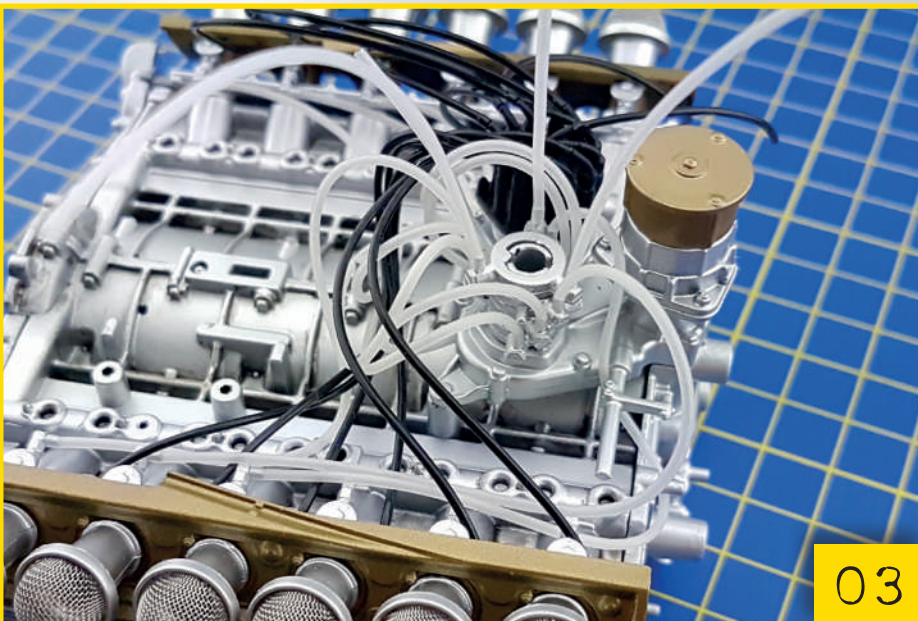


17-01 Retrieve Connector 3, which you prepared during the last assembly session. Place it onto Connector 2 as shown.

17-02 Connect the fuel lines to the injectors, following the routes shown in the illustration and photograph below.

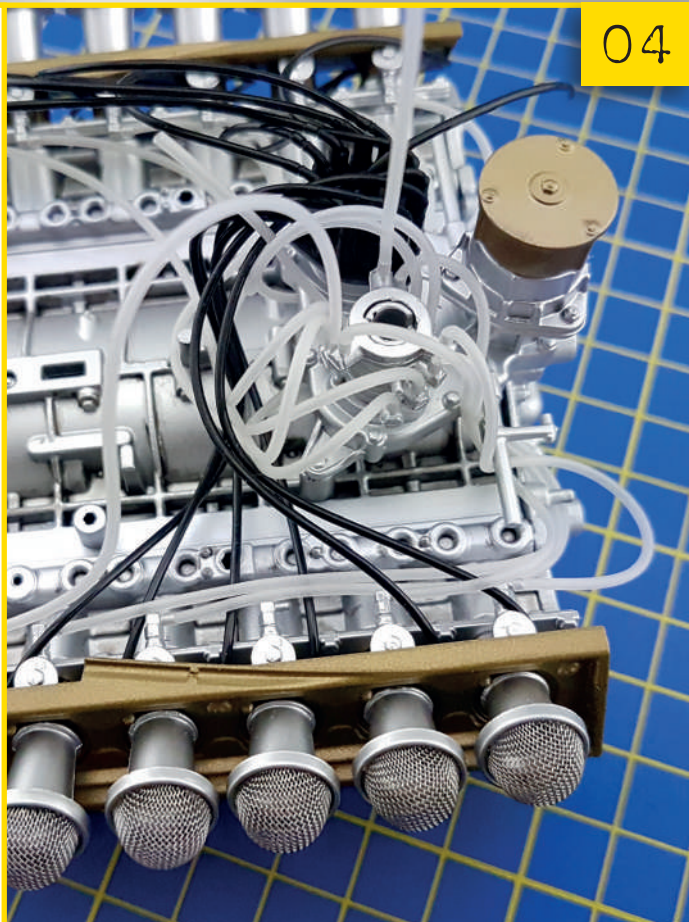
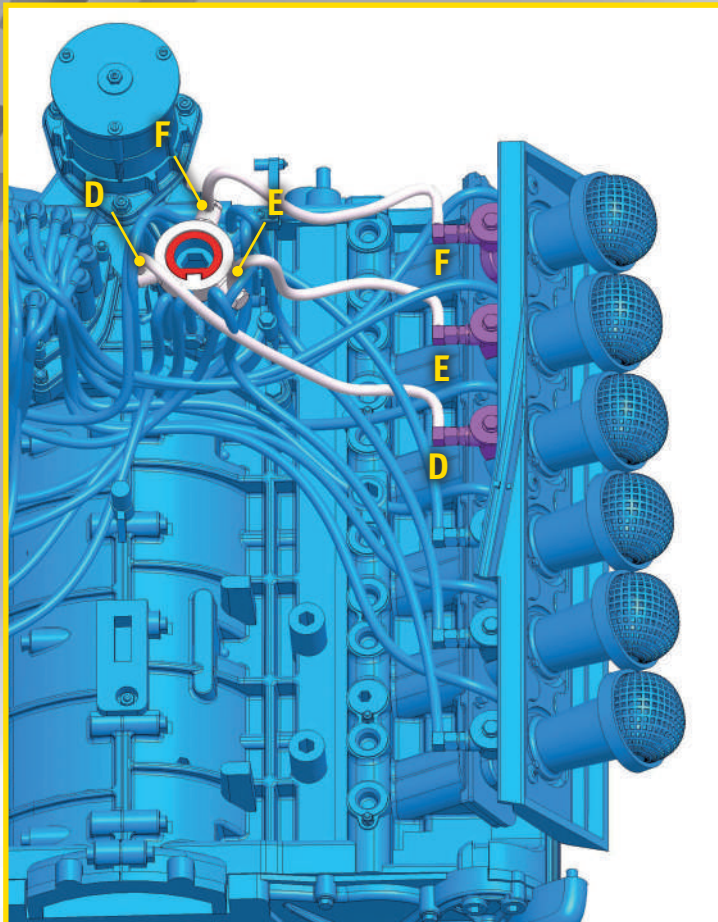


02

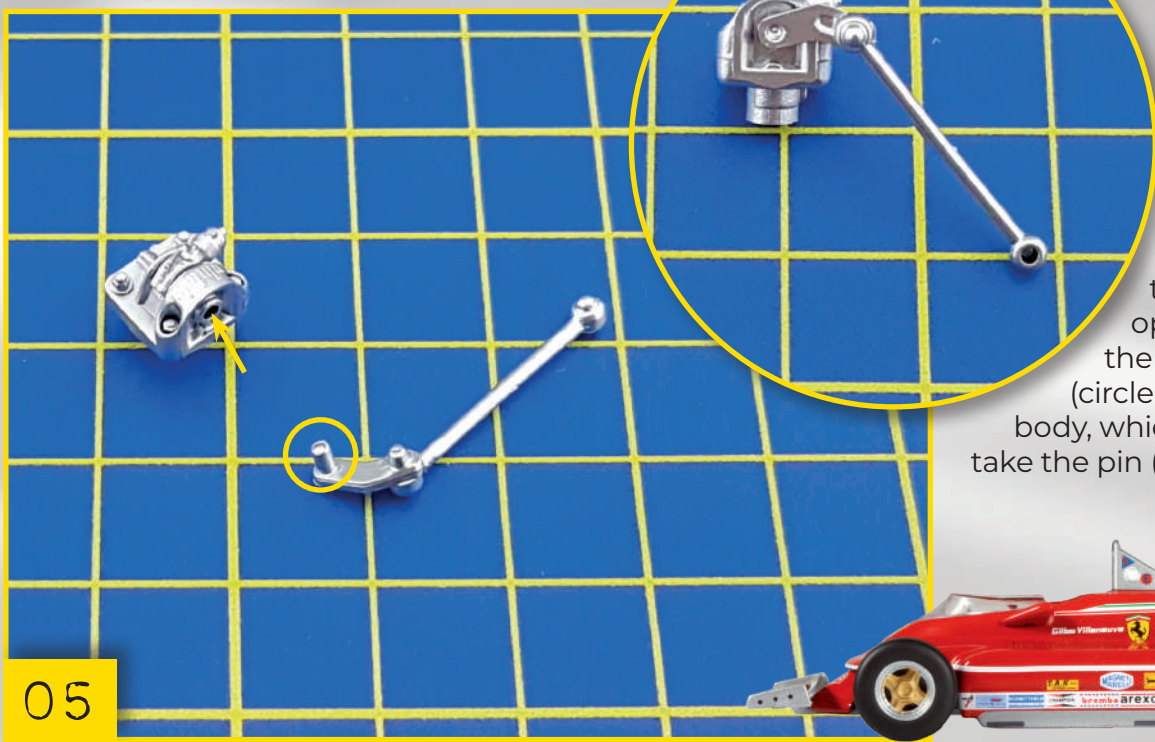


03

17-03 Now all that remains is to install Connector 4 on top of Connector 3.



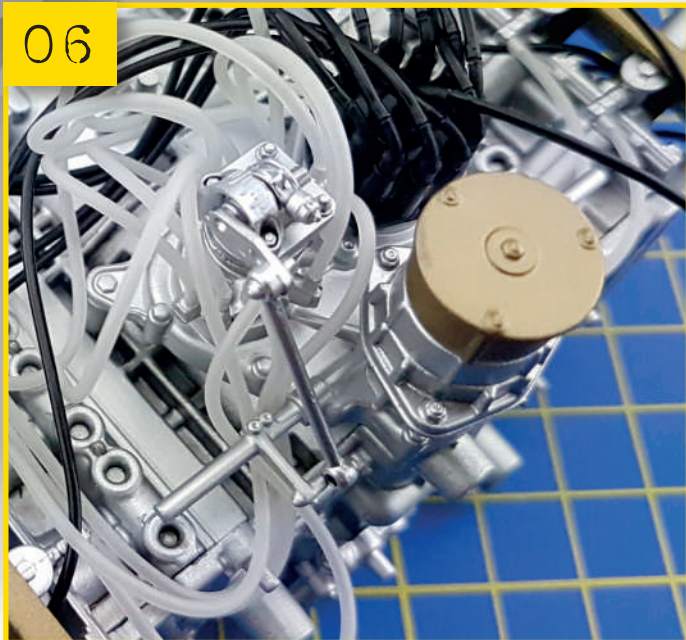
17-04 Now connect the last three fuel lines to the injectors, following the routes shown in the drawing and photograph.



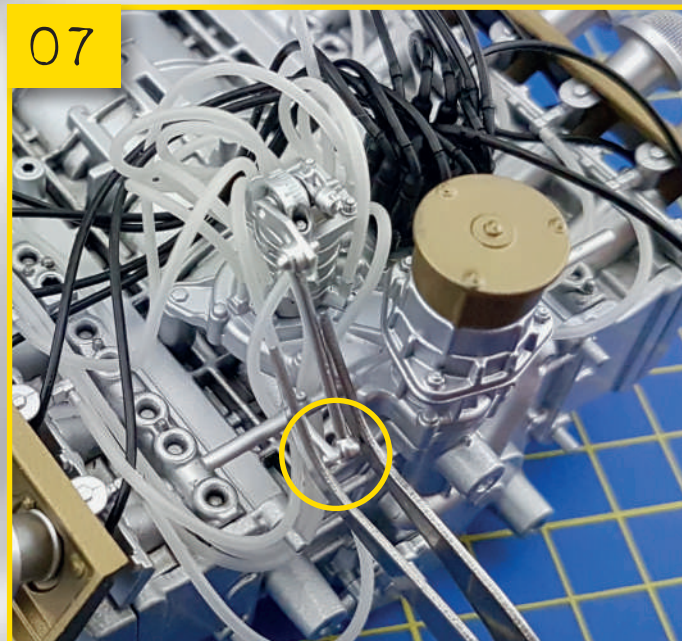
05

17-05 Join together the opening rod using the opening rod using the mounting pin (circled) and the valve body, which has a hole to take the pin (arrow).

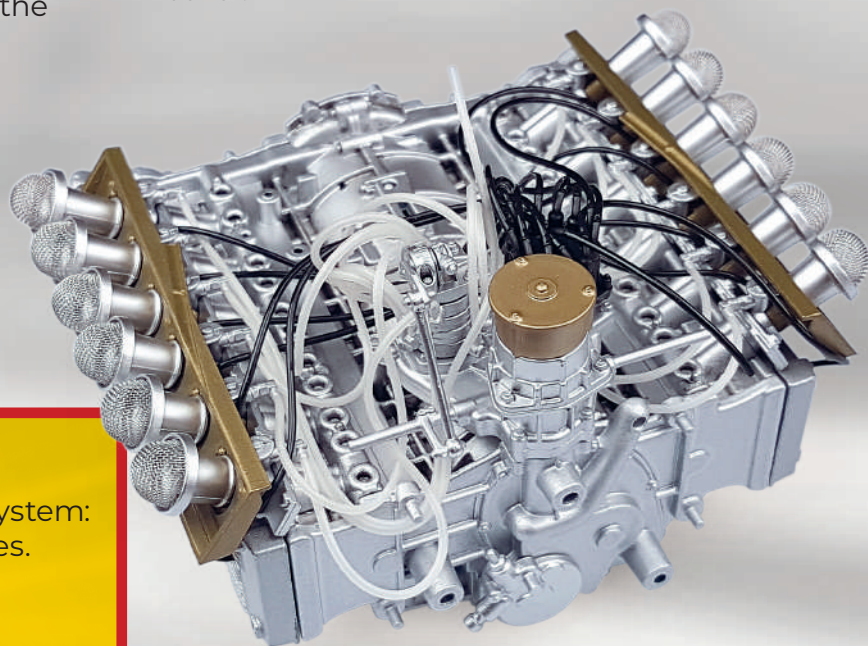




17-06 Applying slight pressure, mount the valve body on top of the connectors.



17-07 Fit the slot at the end of the lever on to its particular pin on the main fuel rod bracket that is connected to the distributor cover.



FINAL RESULT

The engine fuel system of your model is finally complete.

In the next stage

First components of the lubrication system: cartridge, base of the oil filter, and lines.



OIL FILTER, LINES, AND CONNECTORS

USING THE PARTS SUPPLIED WITH THIS STAGE, YOU CAN NOW CONTINUE ASSEMBLING THE ENGINE OF YOUR 1:8 SCALE FERRARI 312 T4 BY WORKING ON THE LUBRICATION SYSTEM.



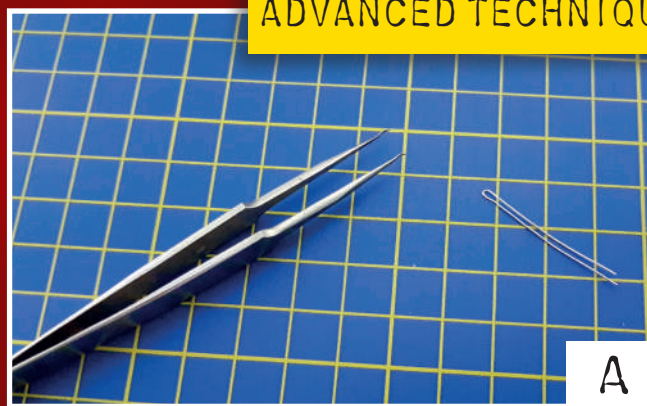
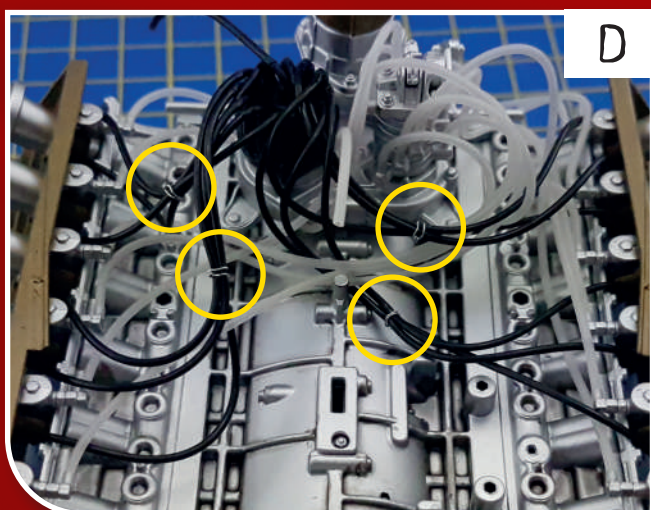
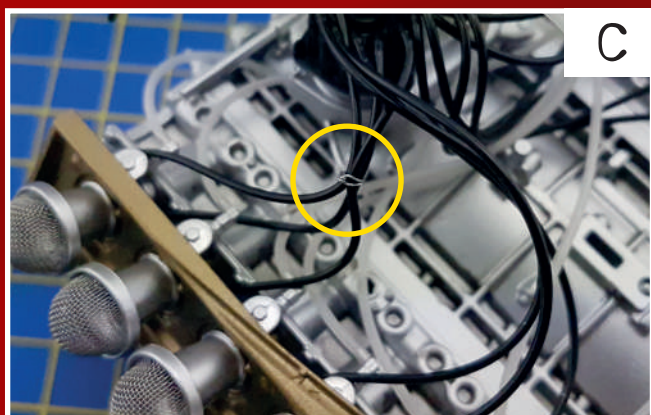
LIST OF PARTS

- 1 Fuel line (315 mm)
- 2 Fuel line connector
- 3 Fuel line (245 mm)
- 4 Line connector for butterfly valve opening lever
- 5 Oil filter base with connectors
- 6 Oil filter cartridge
- 7 Engine oil line



THE ENGINE, ONE STEP AT A TIME

We now offer you an optional yet simple procedure for grouping the engine lines and cables. You will need to procure some 0.10 or 0.20 mm diameter steel wire, which you can find in a fishing gear shop or a model shop.



ADVANCED TECHNIQUE

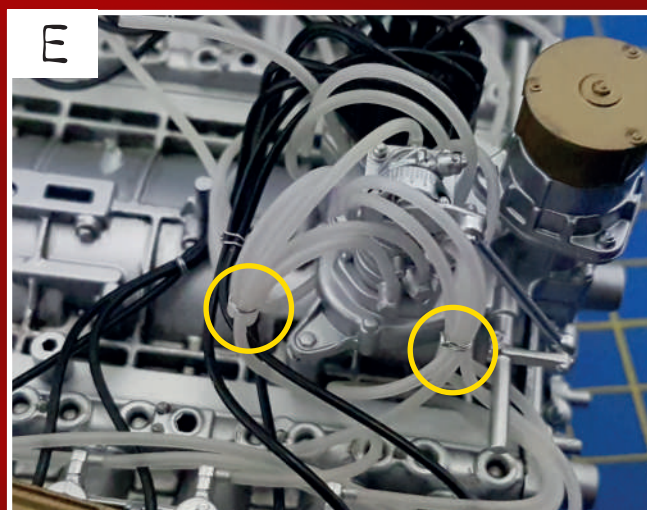
A. Take a piece of the steel wire, about 6 cm long, and bend it in half using a pair of tweezers.

B. Bind together the first three ignition leads on the left-hand spark plug bank, as in the photograph, to simulate a bunch.

C. Cut both ends of the wire, leaving a section of about 2 mm, which you will fold round the cables.

D. Following the same procedure, bunch the remaining ignition leads three by three.

E. In the same way, bunch the fuel line in two groups of five each.





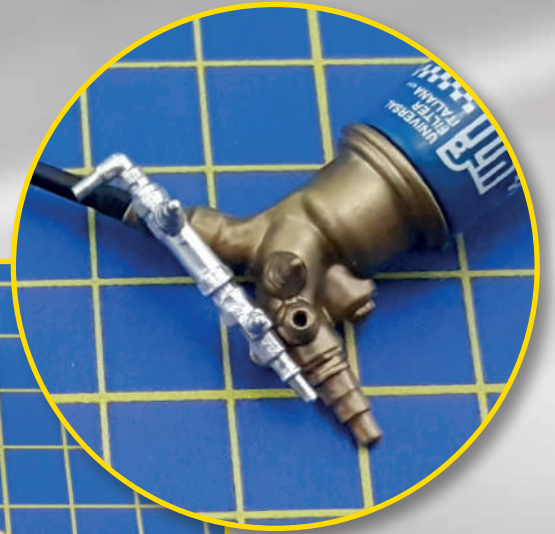
01

18-01 Attach the oil filter cartridge to its base. These two components can only be joined in one way, thanks to the semicircular connection.



02

18-02 Fit the engine oil line to the connector as shown in the image (circled).



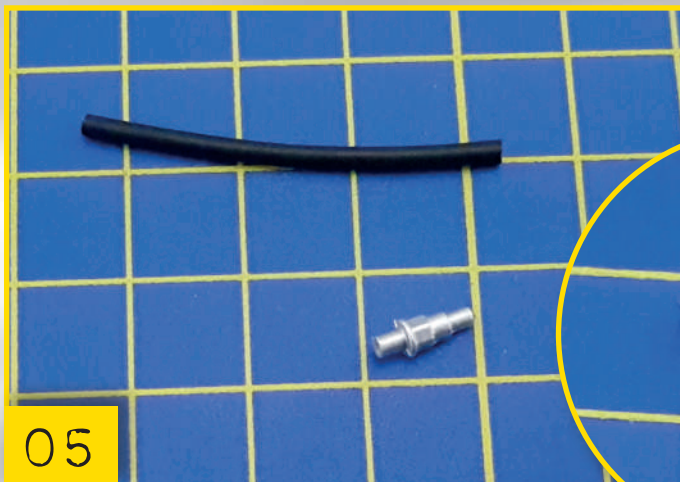
03

18-03 Using the pin and hole highlighted in the image, join the fuel line connector to the base of the oil filter.



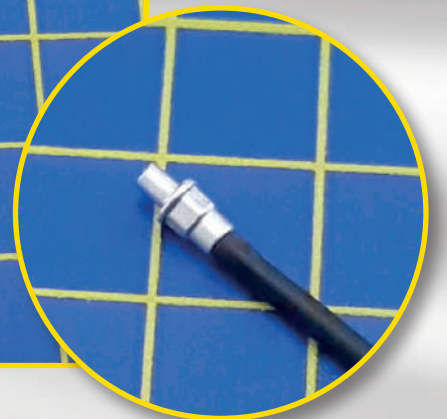
04

18-04 Fit the connection line for the opening lever on to the curved connector.



05

18-05 Recover the small black pipe along with its fitting from stage 14. Fit these two parts together.

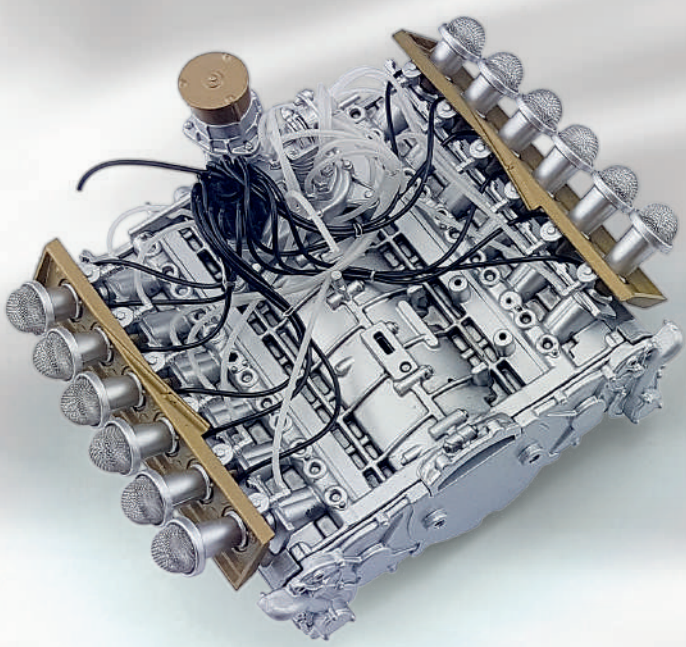




18-06 Fit the black pipe you've just assembled on to the connector on the right-hand side of the base of the oil filter.



18-07 Join the two white pipes to the fuel line connector. The small circle in the photo shows the connection for the short pipe, the arrow shows the connection point for the longer pipe.

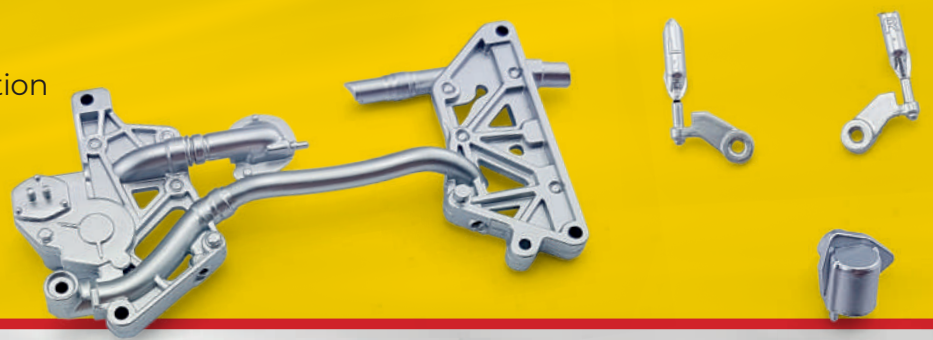


FINAL RESULT

You have now prepared the oil filter assembly and tied the cables and pipes to the engine.

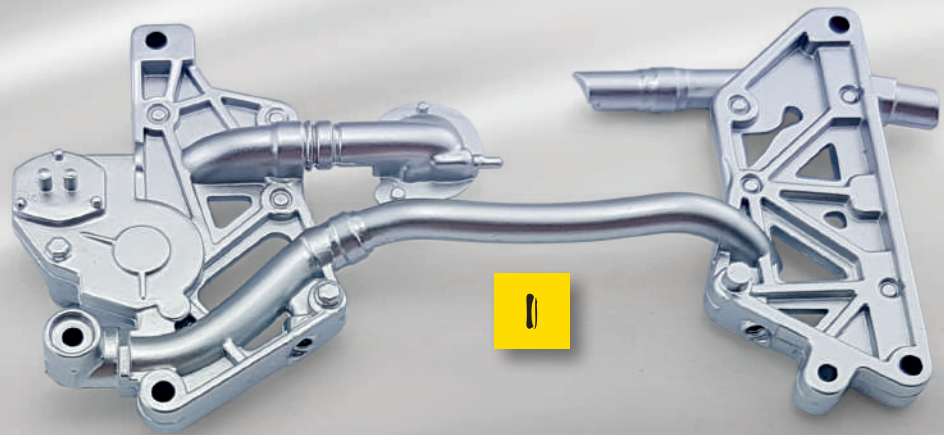
In the next stage

Engine cooling and lubrication pipe system.



FIRST ELEMENTS OF THE COOLING SYSTEM

USING THE PARTS SUPPLIED FOR THIS STAGE YOU WILL RETURN TO WORKING ON THE ENGINE OF YOUR 1:8 SCALE FERRARI 312 T4 BY BEGINNING ASSEMBLY OF THE COOLING SYSTEM.

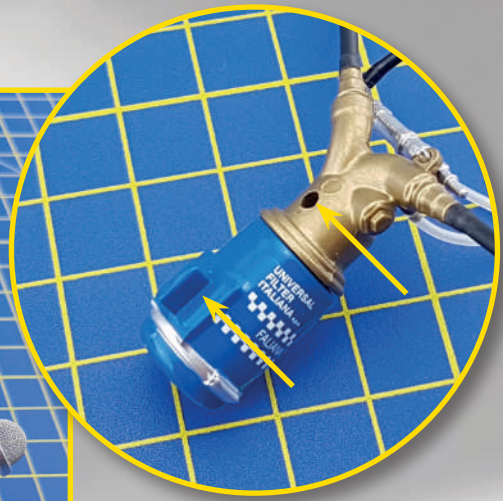
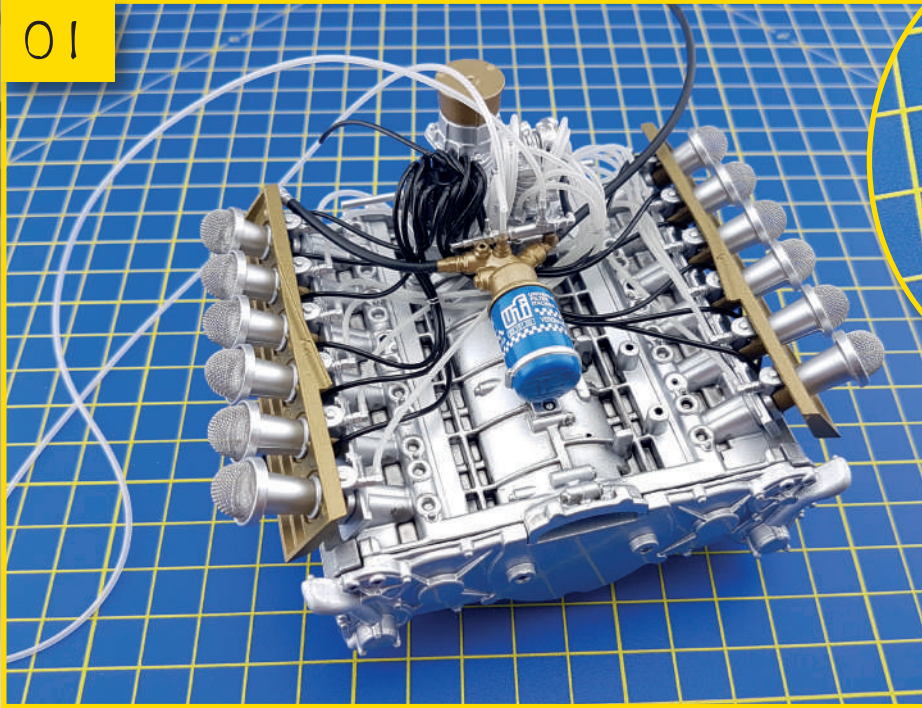


LIST OF PARTS

- 1 Cooling and lubrication pipe system
- 2 Left-hand support
- 3 Right-hand support
- 4 Filter base

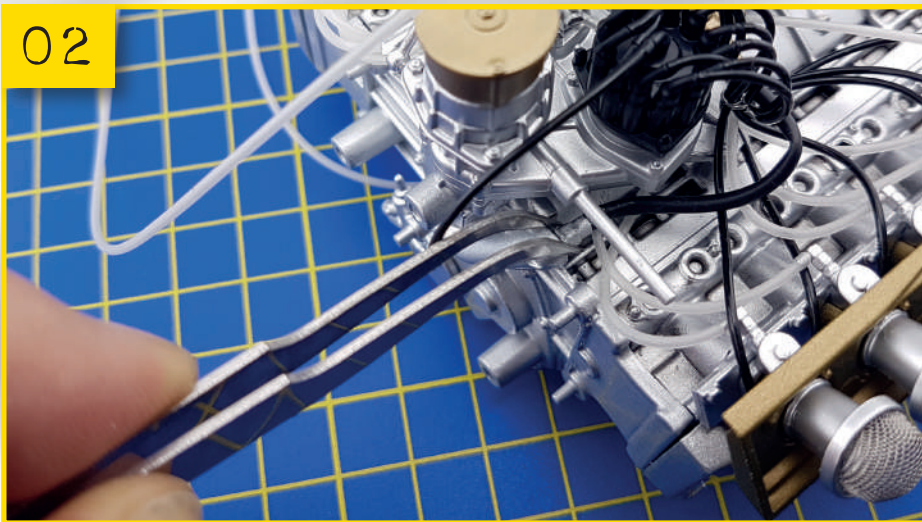


01



19-01 The oil filter base has a pin, whilst the cartridge is rectangular. Thanks to these connecting points, this assembly can be easily and correctly fixed to the engine assembly.

02



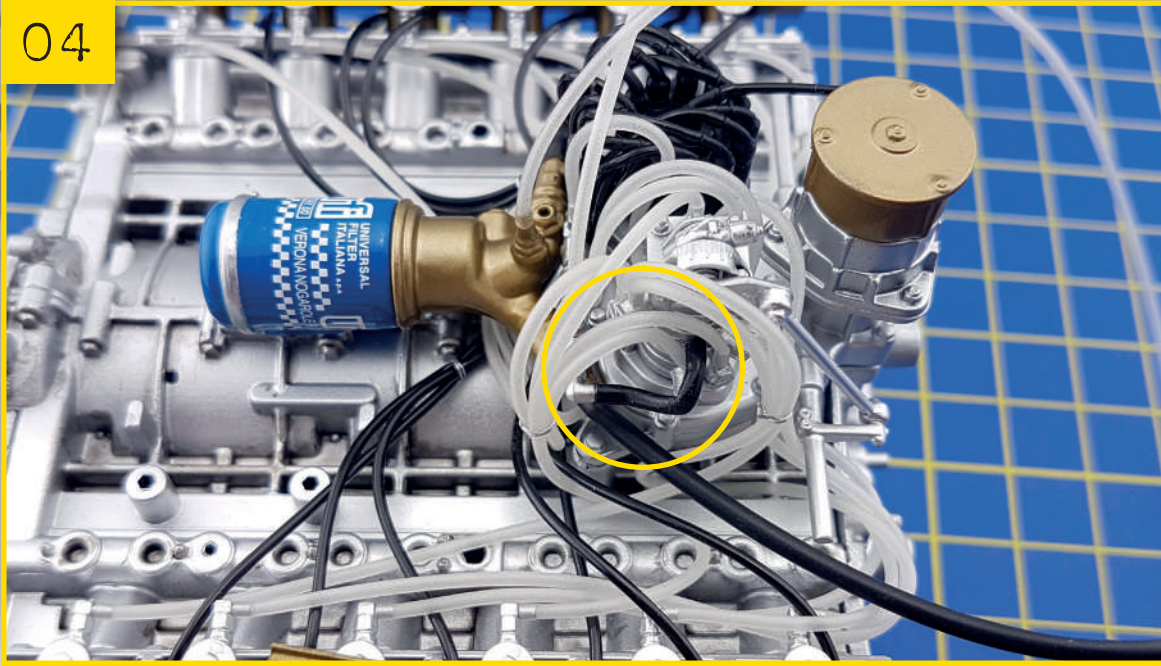
19-02 With the help of curved tweezers, fit the pipe connector into the hole located near the base of the distributor. If you have any difficulty inserting it, you can remove the paint from the interlocking pin, or slightly enlarge the hole.

19-03 Fit the pipe that comes from the fuel distribution system on to the vertical connector on the grey pipe that is mounted above the base of the oil filter.



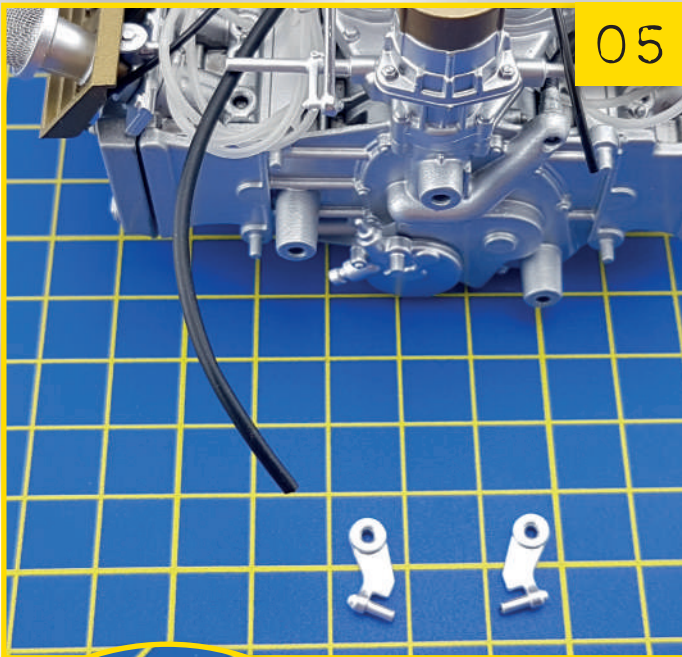
03

04



19-04
 Insert the short pipe that comes from the L connector on to the pin on the third assembly of fuel lines.

05

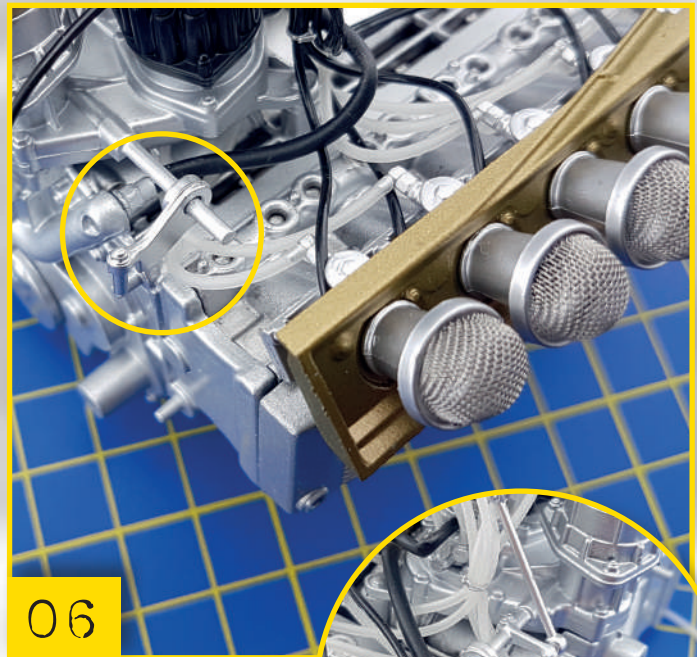


19-05

The two support parts are indicated with the letters "R" (right) and "L" (left). Use a well-sharpened cutting knife or a modelling scalpel to remove these indicators.

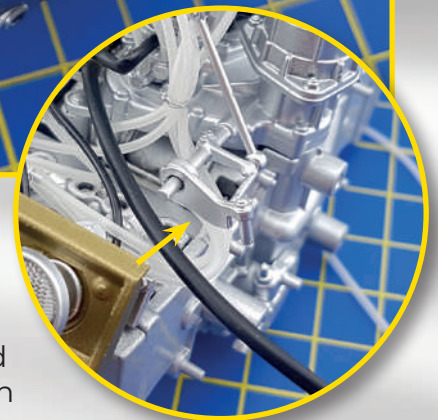


06

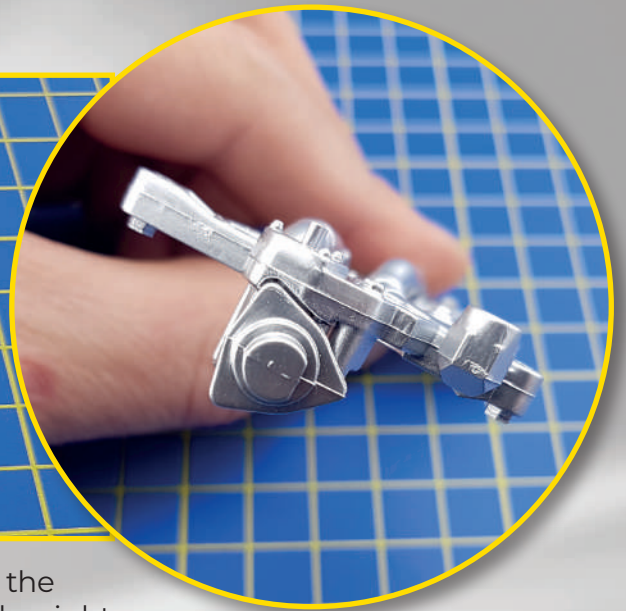
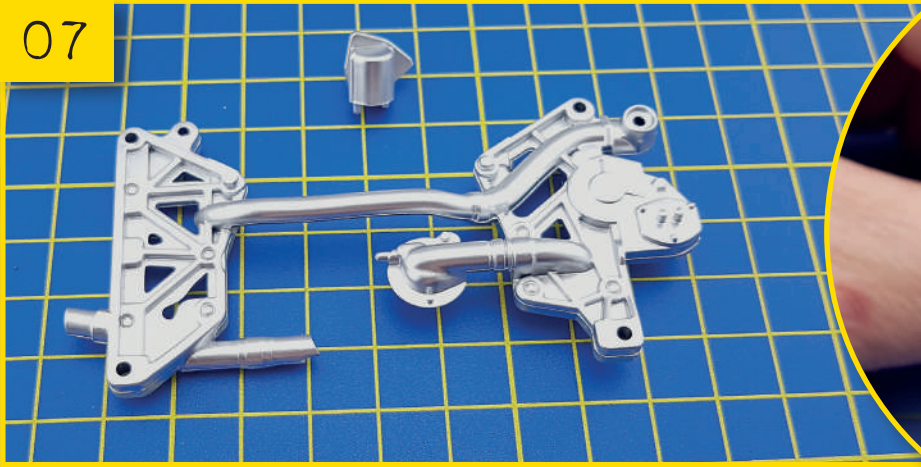


19-06

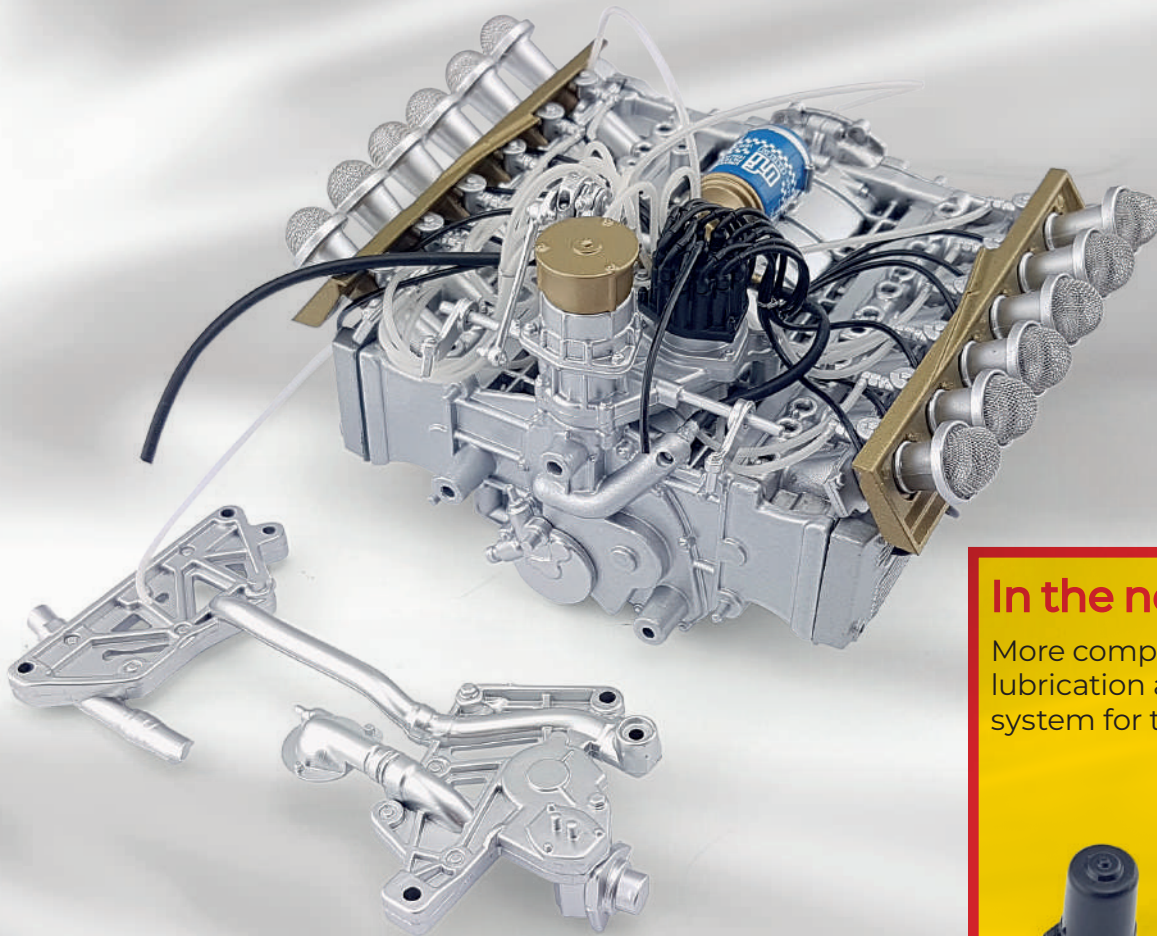
Ensuring the correct orientation, mount the left-hand and right-hand supports as shown in the photographs.



07



19-07 Place the cooling and lubrication pipe system and the filter base on your work surface. There are two holes on the right-hand edge of the pipe system, and there are two pins on the base of the filter. Join both components using these connection points.



In the next stage

More components of the lubrication and cooling system for the cylinder banks.



FINAL RESULT

This is what the engine looks like at the end of this stage once the oil filter and its pipelines have been assembled. You have also begun on the details for the engine cooling system.

DETAILS FOR THE ENGINE LUBRICATION SYSTEM

USING THE PARTS YOU RECEIVED FOR THIS STAGE, YOU WILL CONTINUE TO ASSEMBLE THE LUBRICATION SYSTEM FOR THE ENGINE.

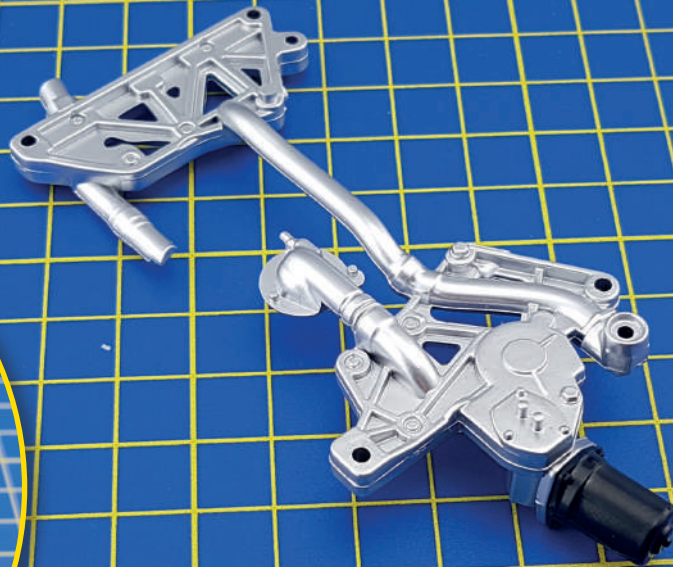
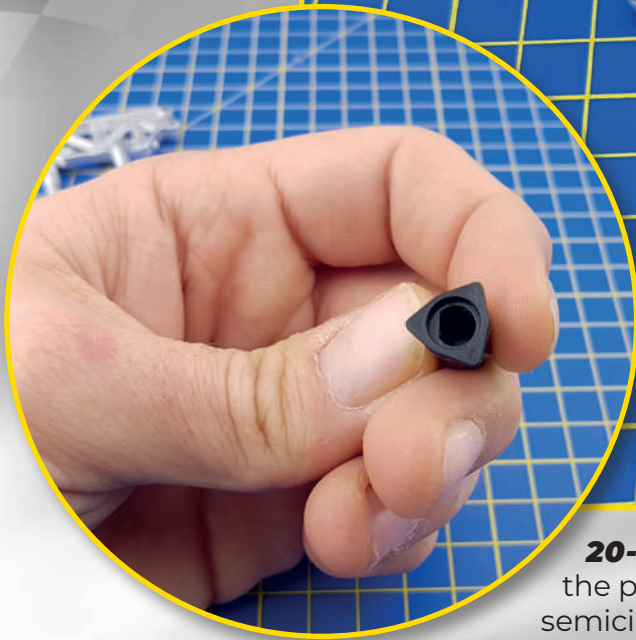


LIST OF PARTS

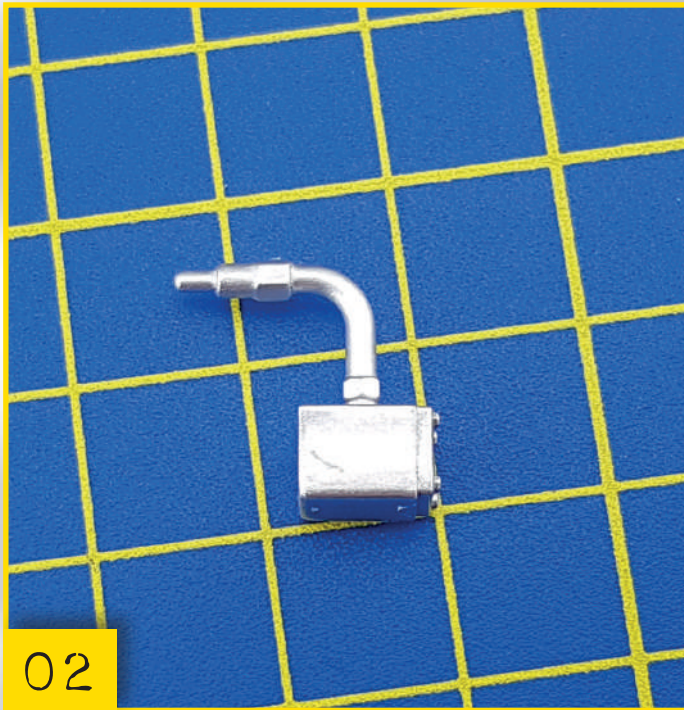
- 1 Oil filter
- 2 Oil intake
- 3 L connector
- 4 Pipe



01



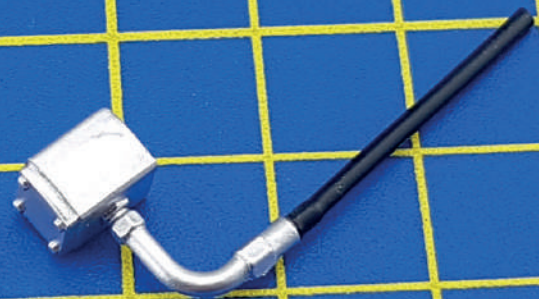
20-01 Retrieve the cooling and lubrication system from the previous stage and connect the oil filter to it, using the semicircular interlock.



02

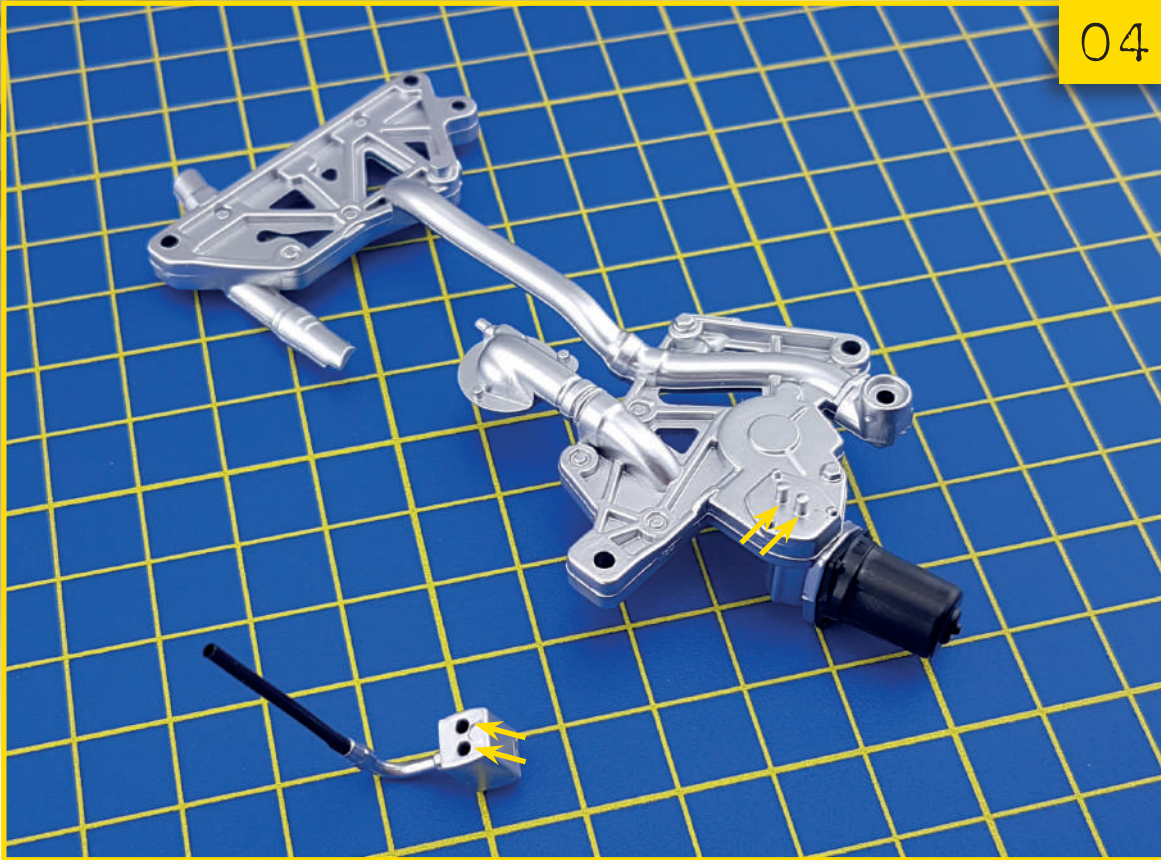
20-02 Join the L connector to the intake. Again, the semicircular shape of the interlocking connections will help you to centre the coupling correctly and firmly.

03



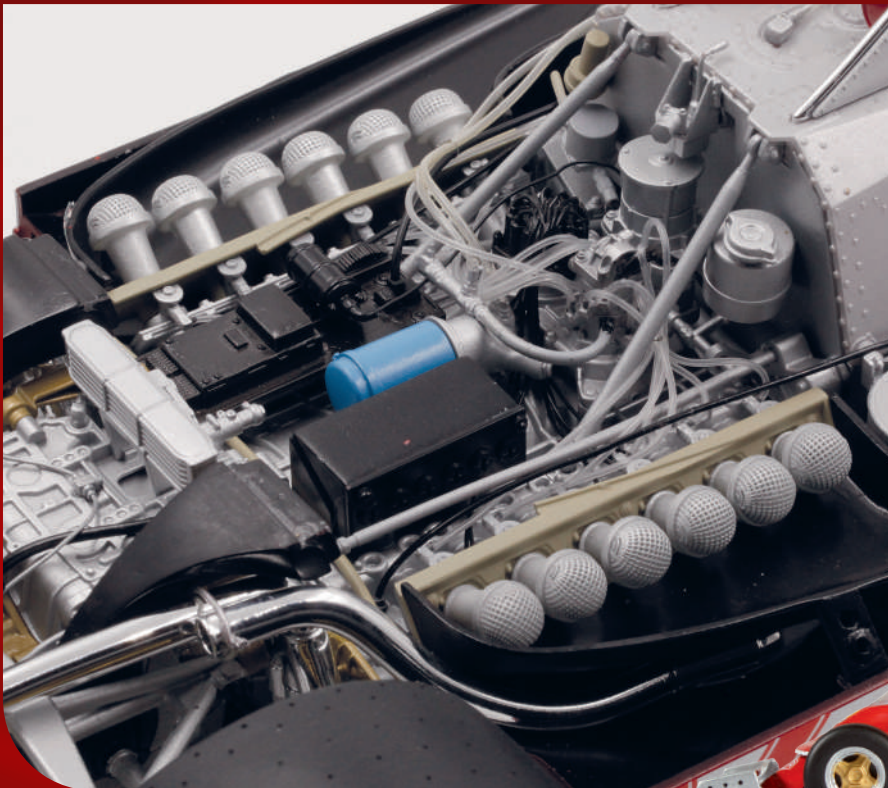
20-03 Fit the pipe on to the free end of the L connector. If necessary, use tweezers to push the pipe until it reaches the base of the connector.

04



20-04

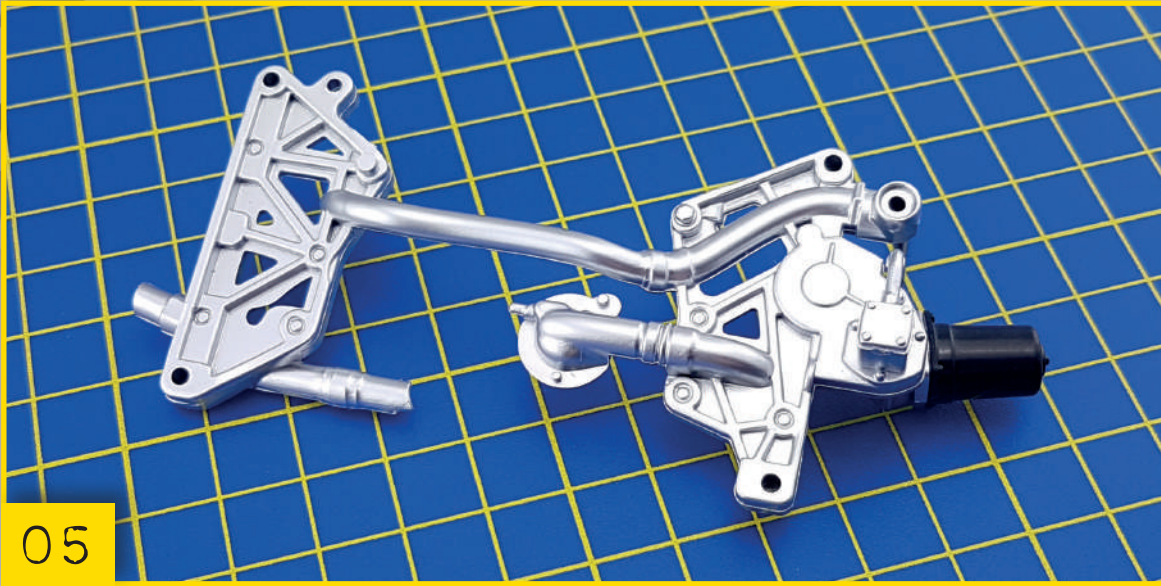
As you can see, adjacent to the filter there are two pins close to each other. These correspond with the two holes in the base of the intake (arrows).



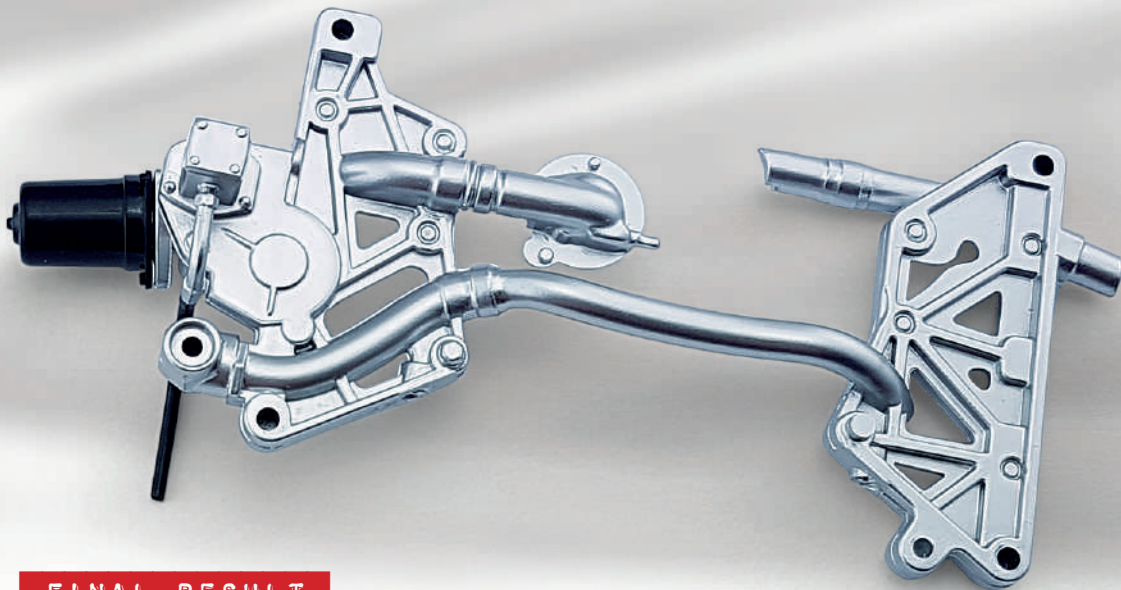
A PERFECT REPRODUCTION

Your 1:8 scale replica of the Ferrari 312 T4 is perfect in every detail, above all in the accurate reproduction of the powerful V12 engine that was installed in Villeneuve's car.





20-05
Using the pins and holes highlighted in the previous step, install the oil intake on the lubrication system.



FINAL RESULT

You have completed another stage in the assembly of the engine lubrication system.

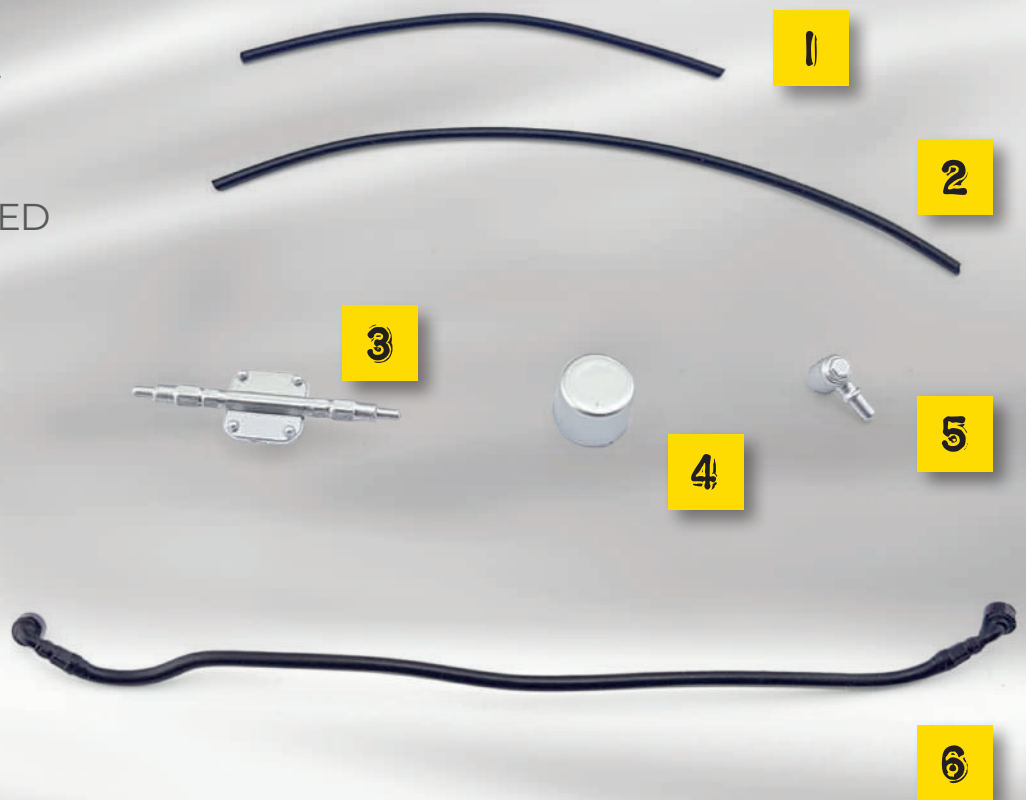
In the next stage

New details of the 1:8 scale Ferrari 312 T4 engine.



SEPARATOR FILTER AND ITS PIPEWORK

USING THE COMPONENTS IN THIS STAGE, YOU CAN NOW START ON A MORE COMPLEX PROJECT THAT HAS BEEN DIVIDED BETWEEN THIS STAGE AND THE NEXT ONE.

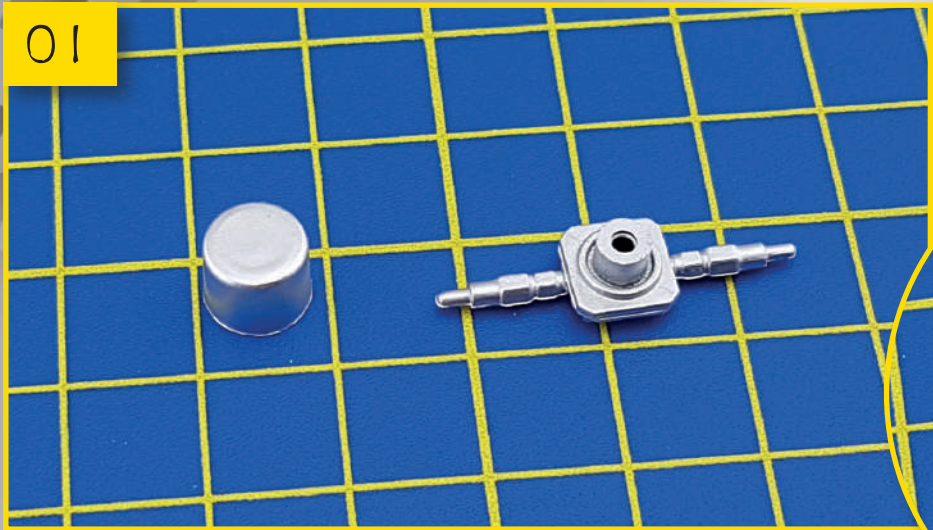


LIST OF PARTS

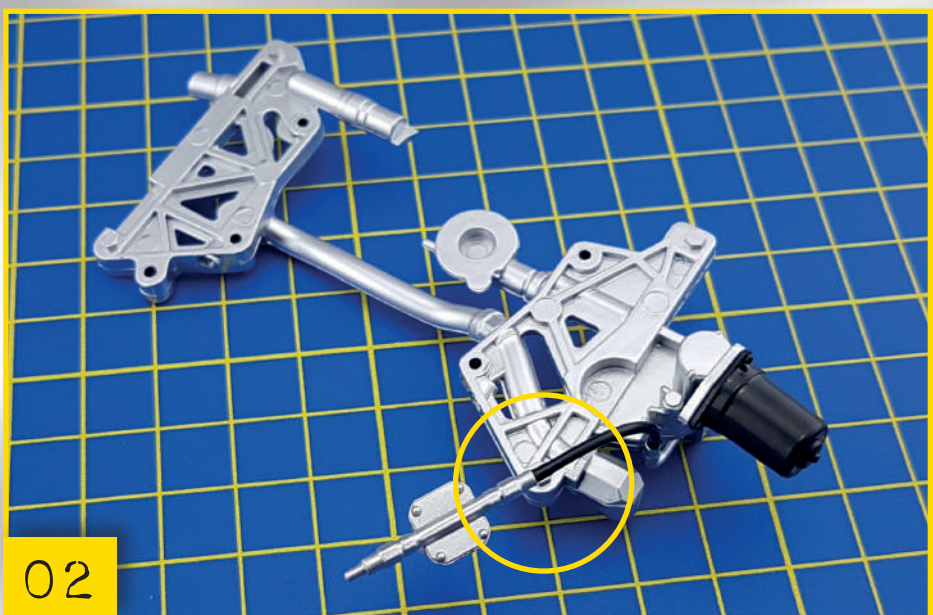
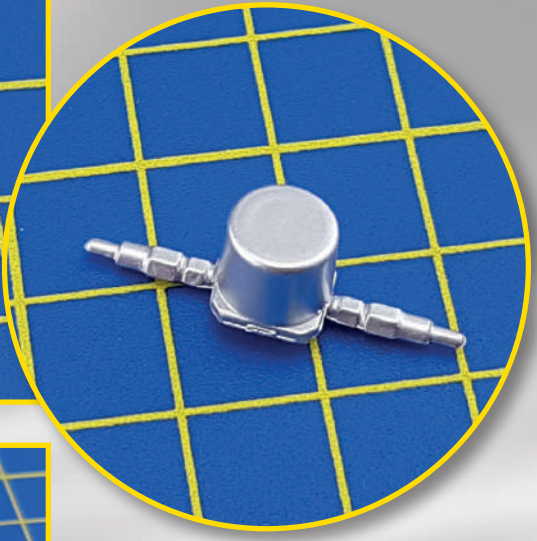
- 1 Separator filter pipe
- 2 Return water pipe
- 3 Separator base and connectors
- 4 Separator filter
- 5 Oil pipe connector
- 6 Cylinder banks compensation pipe



01

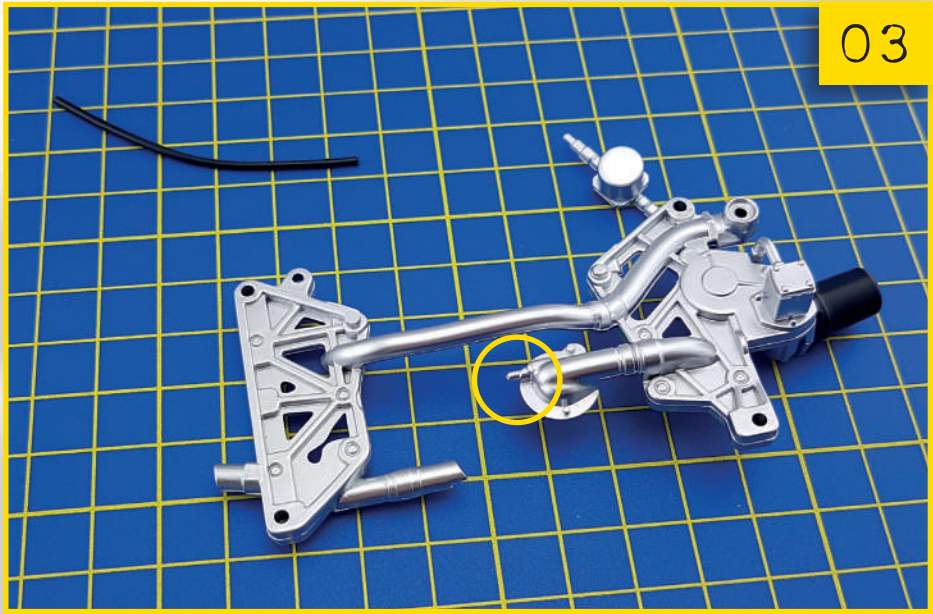


21-01 Press the separator filter on to its base, which has the connectors fitted.



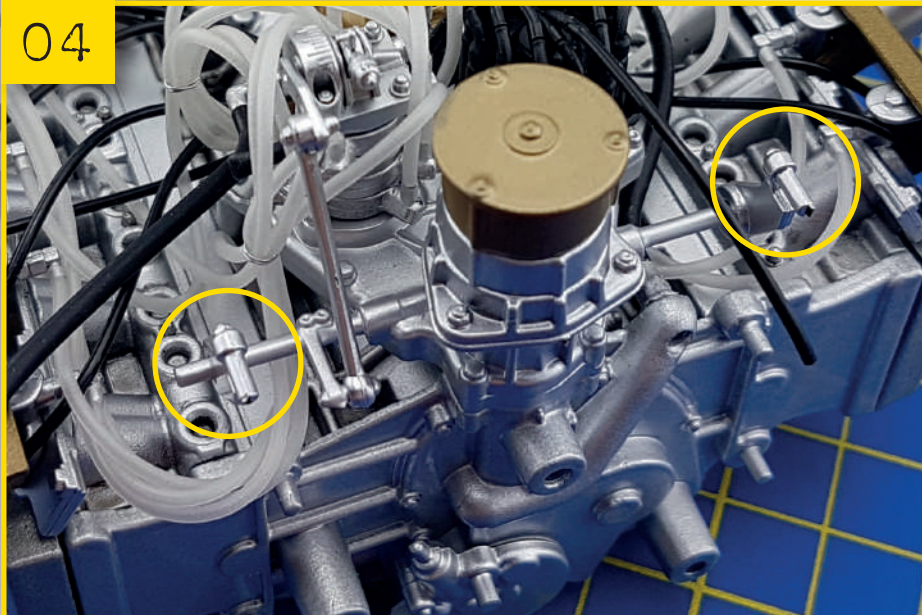
02

21-02 Retrieve the lubrication and cooling assembly that you assembled in the previous stages. Join one of the separator filter connectors to the pipe that comes out of the L connector.



03

21-03 Take the water return pipe and fit it to the nozzle highlighted in the image.

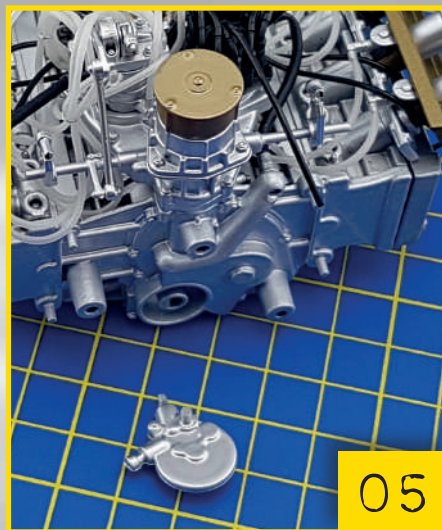


04

21-04

Pick up the engine. Rotate and lift up the two support brackets that are fixed to the rods protruding from the base of the distributor.

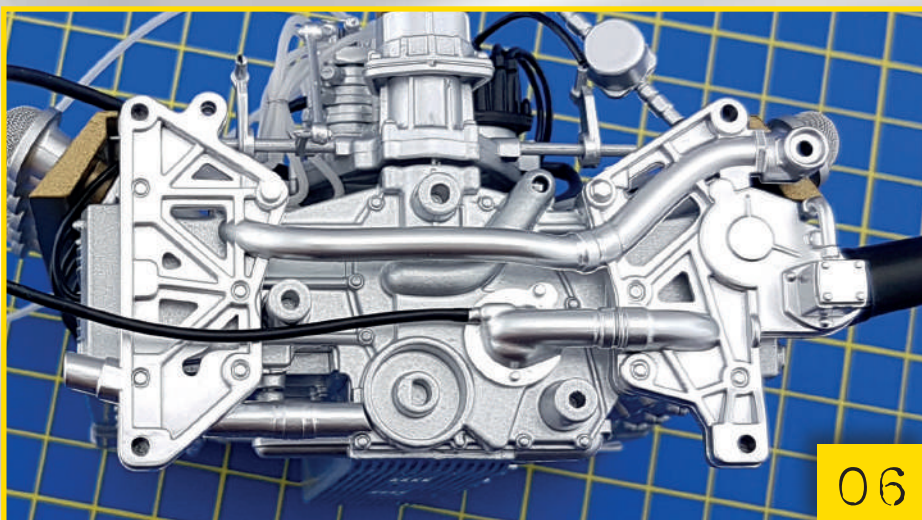
21-05 Temporarily remove the oil pump flange.



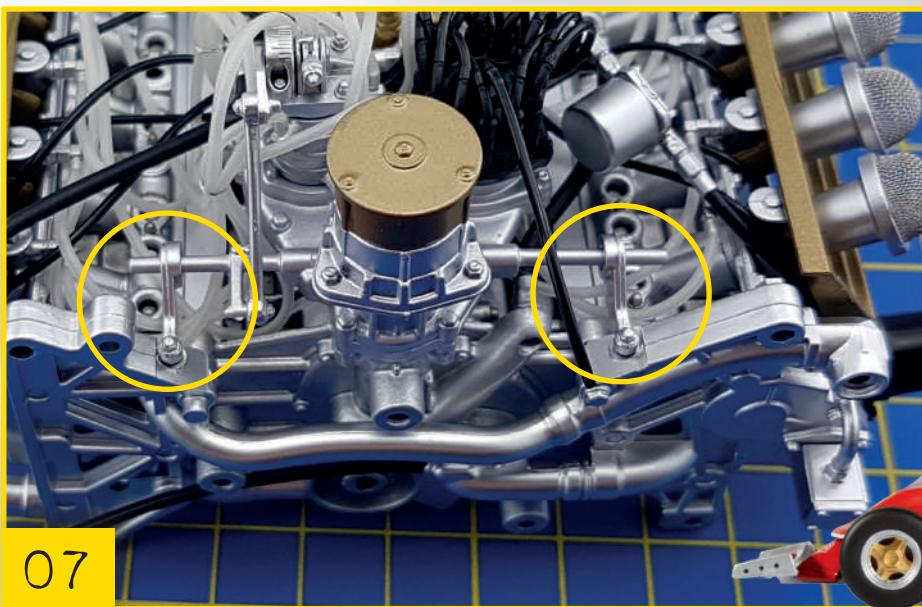
05

21-06

Join the lubrication and cooling assembly to the engine, taking care to match the four mounting pins with their holes. Also check that none of the pipes interfere with the assembly.

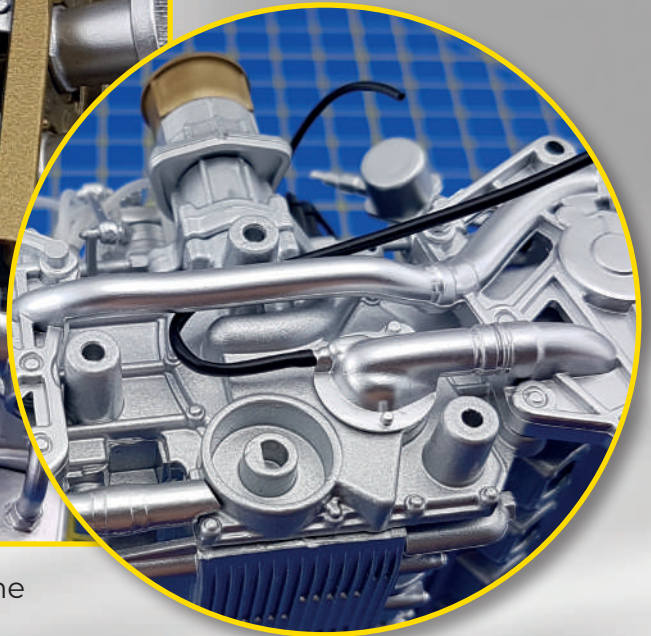
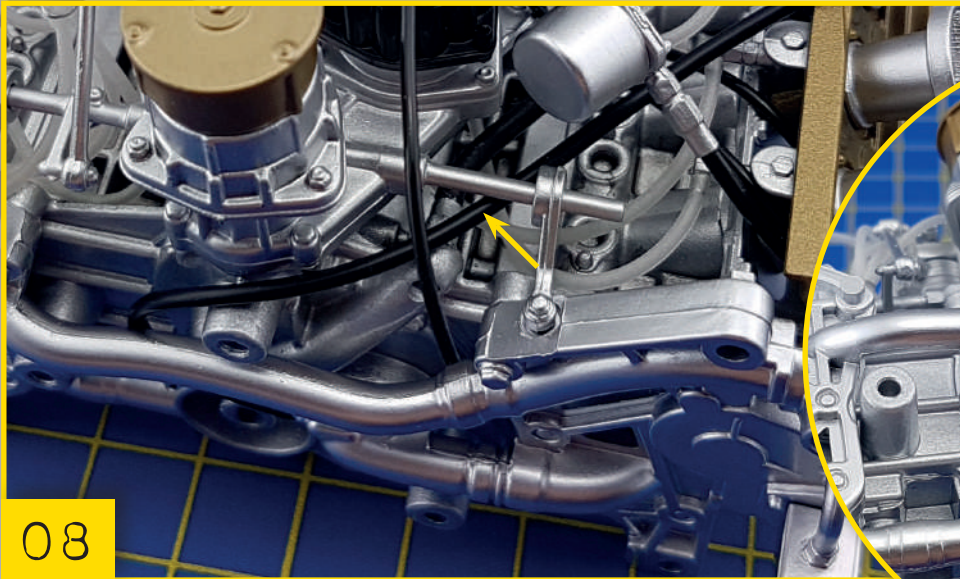


06



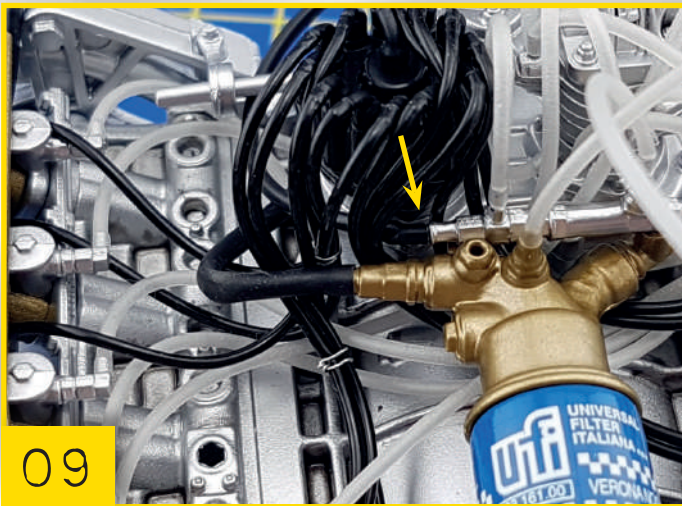
07





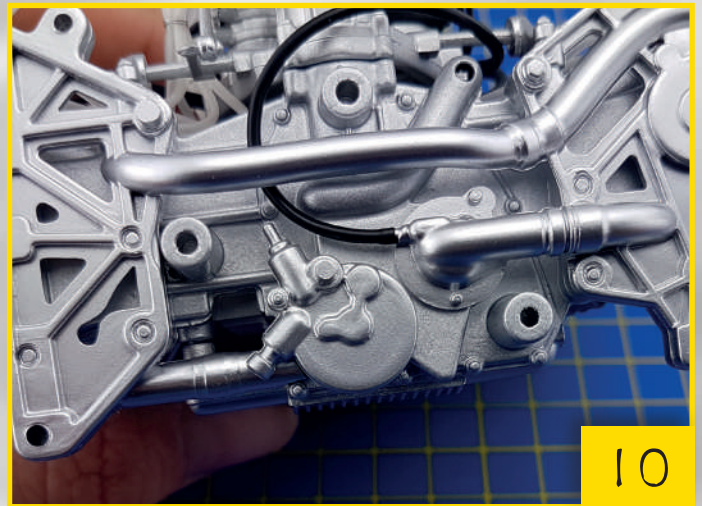
08

21-08 The rubber pipe of the flange must pass under the main cooling pipe and under the right-hand rod.



09

21-09 Connect the rubber hose to the chromed fitting located at the base of the oil filter, passing it under the distributor cables.



10

21-10 Now you only need to reinstall the oil pump flange. Put aside what you have done, along with the components you have not used and move on to the next stage.

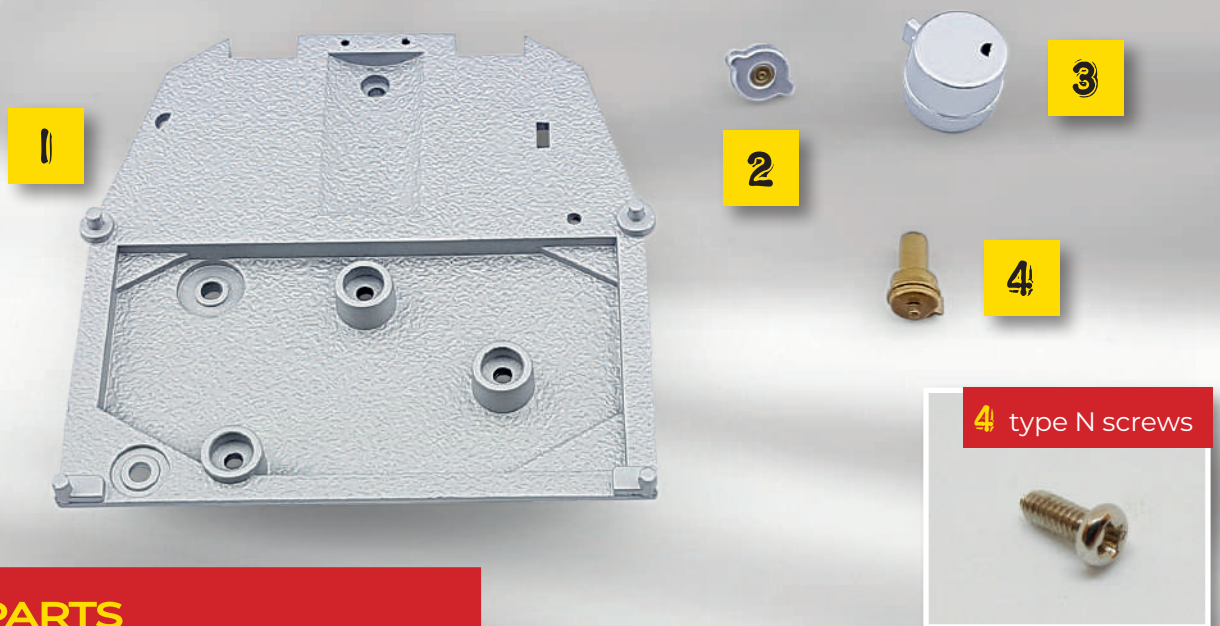


In the next stage

The fireproof bulkhead, oil tank with its cap, fuel valve, and a set of screws.

FIREPROOF BULKHEAD AND OIL TANK

IN THIS NEXT STAGE YOU WILL CONTINUE TO ASSEMBLE THE ENGINE OF YOUR 1:8 SCALE FERRARI 312 T4.



LIST OF PARTS

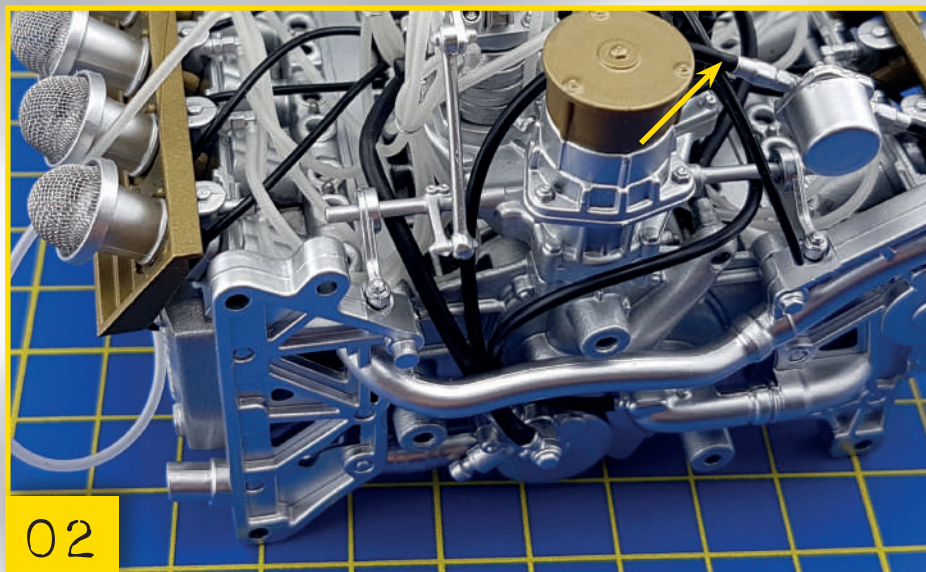
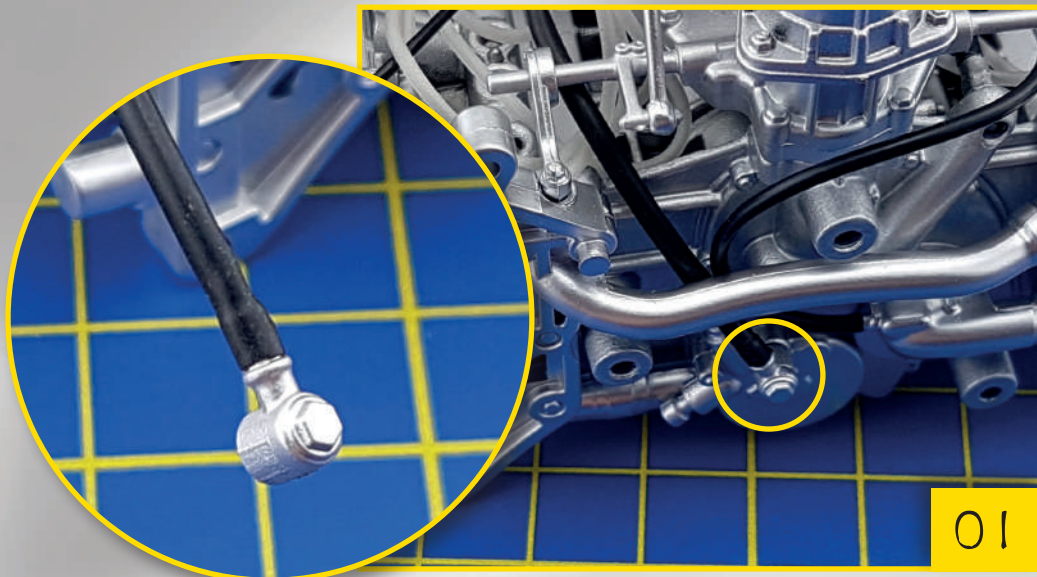
- 1 Fireproof bulkhead
- 2 Oil tank cap
- 3 Oil tank
- 4 Fuel valve

SCREWS

Four type N screws

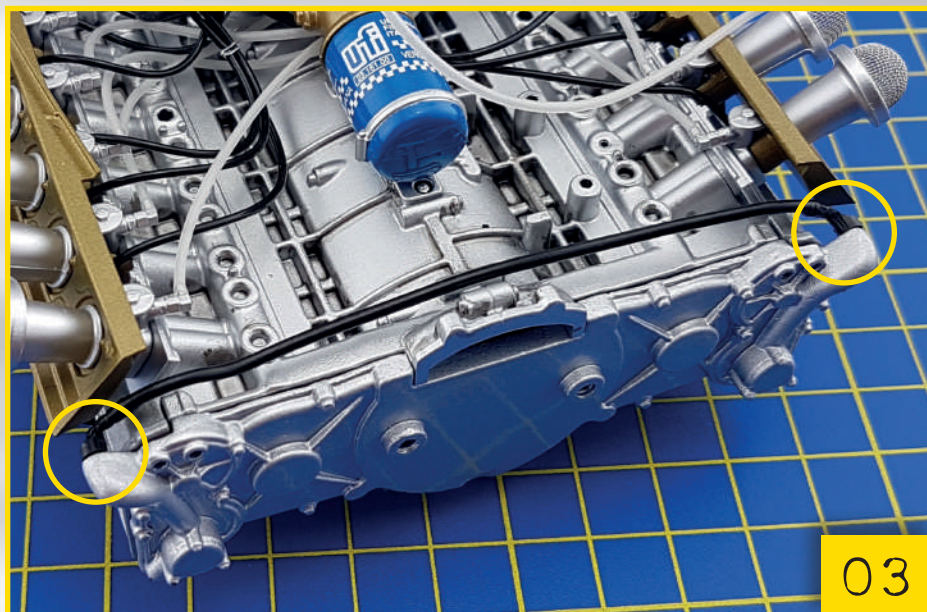


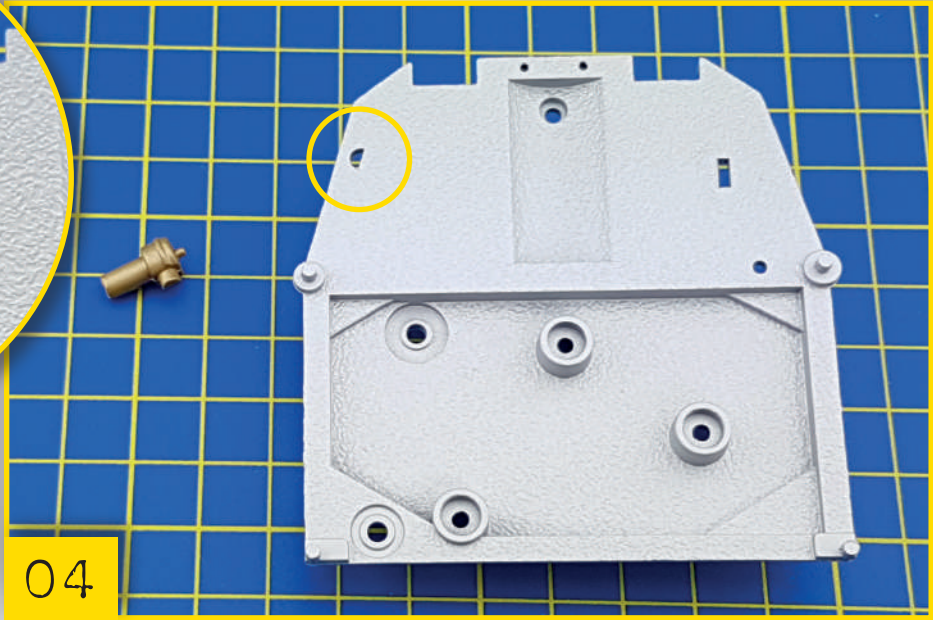
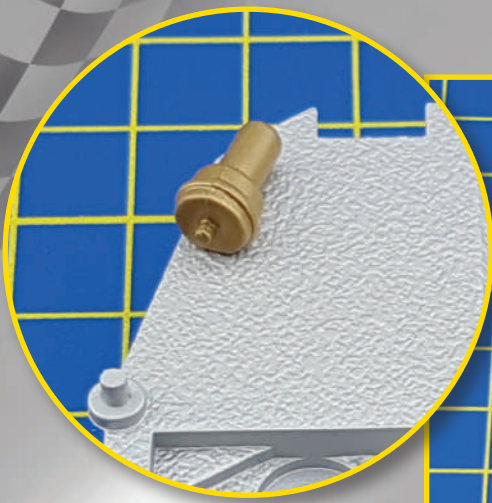
22-01 Using a well-sharpened cutting knife, shorten the pipe that comes from the oil filter by about 25mm. Then join that pipe to the connector you attached in stage 21, and join the connector to the oil pump flange. The pathway of this pipe must be as shown in the photograph.



22-02 Take the separator pipe, which is the shortest of those supplied in stage 21; attach it to the free connector of the separator and to the rear connection on the oil pump flange. Again, carefully check the pathway of the pipe.

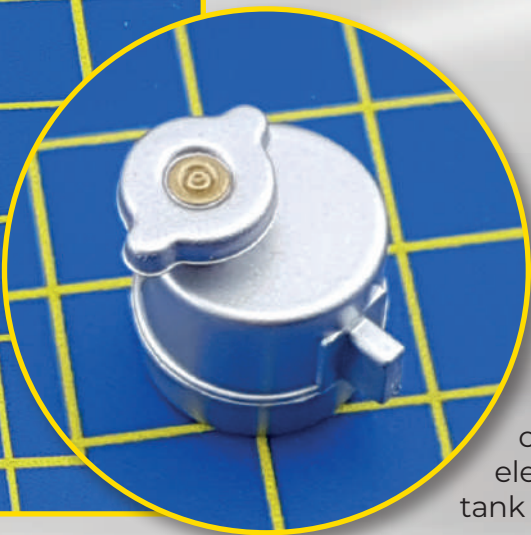
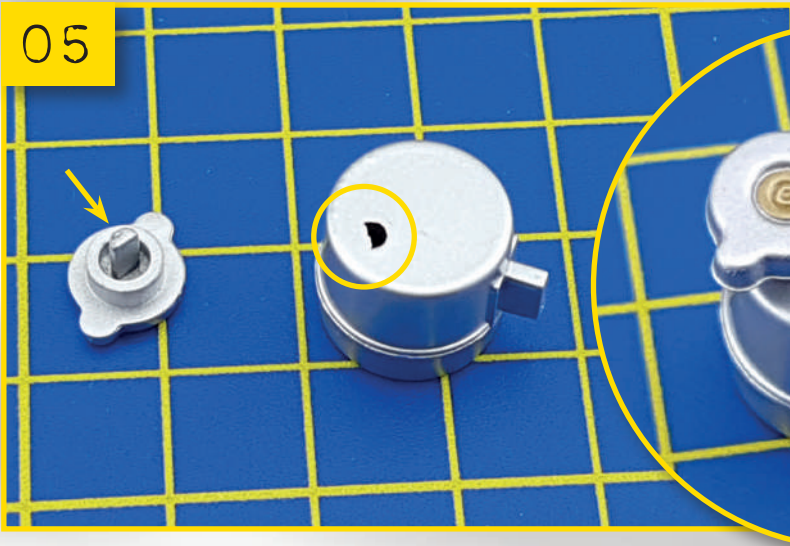
22-03 Then recover the cylinder banks compensation pipe supplied in stage 21 and install it on the engine, as in the photograph, using their particular connections.



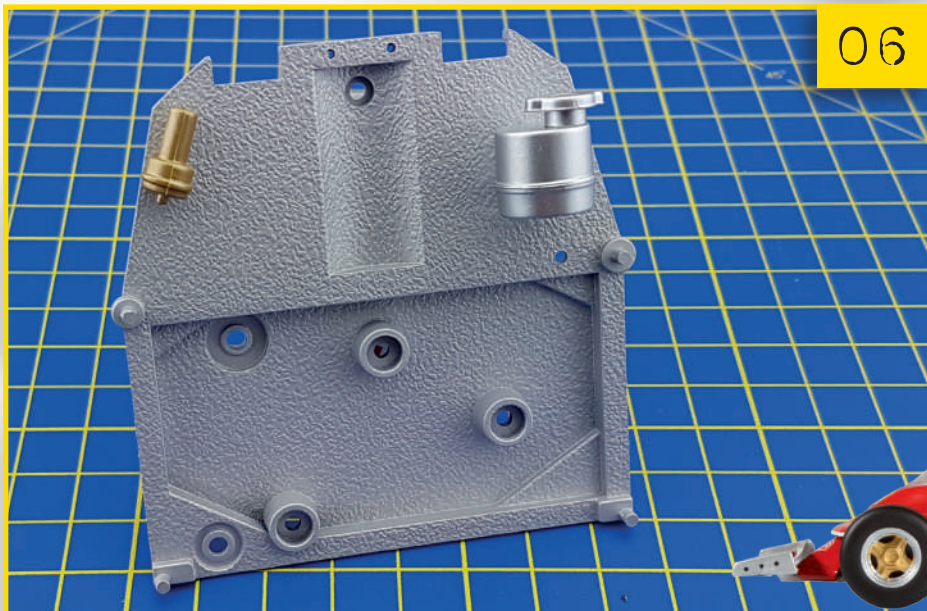


22-04

Mount the fuel valve on the fireproof bulkhead, using the half-round connection points. This is a push fit.



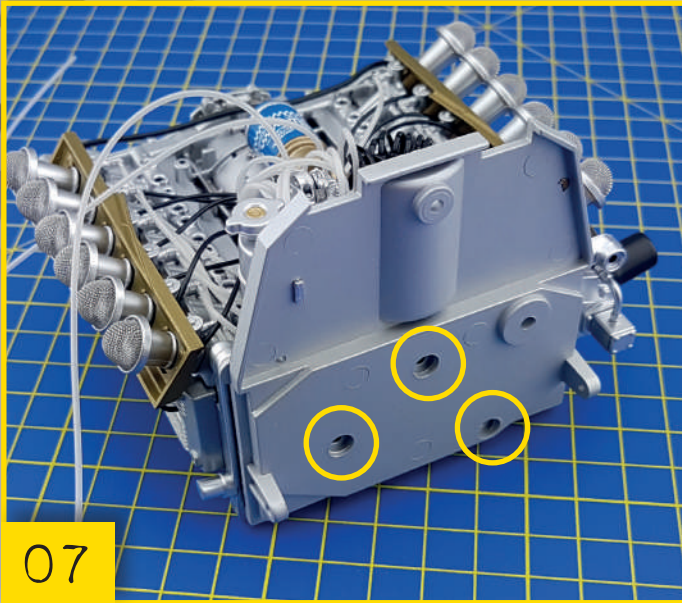
22-05 Again using the half-round centering and fixing elements, join the oil tank cap to the oil tank.



22-06

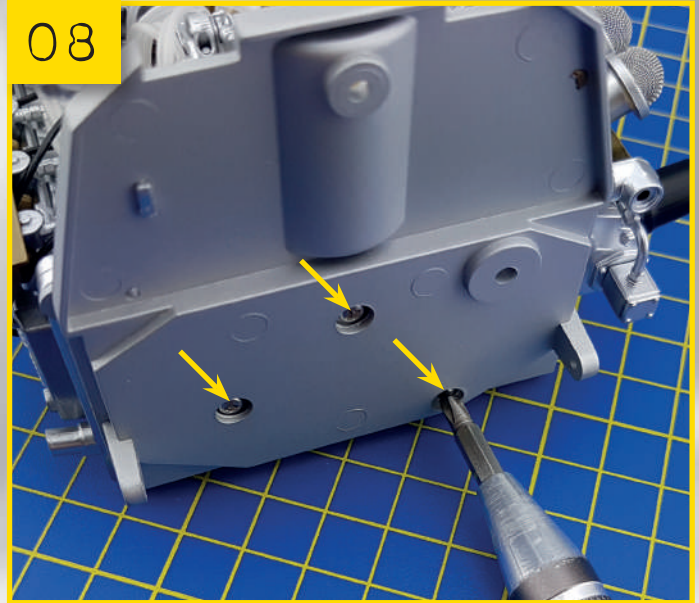
Now you can install the oil tank on the fireproof bulkhead, using the rectangular pin.





07

22-07 Press the bulkhead on to the engine, matching up the three mounting holes.

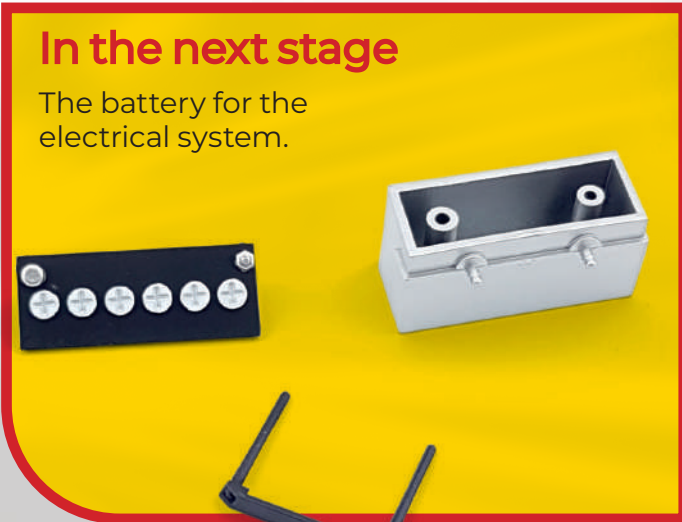
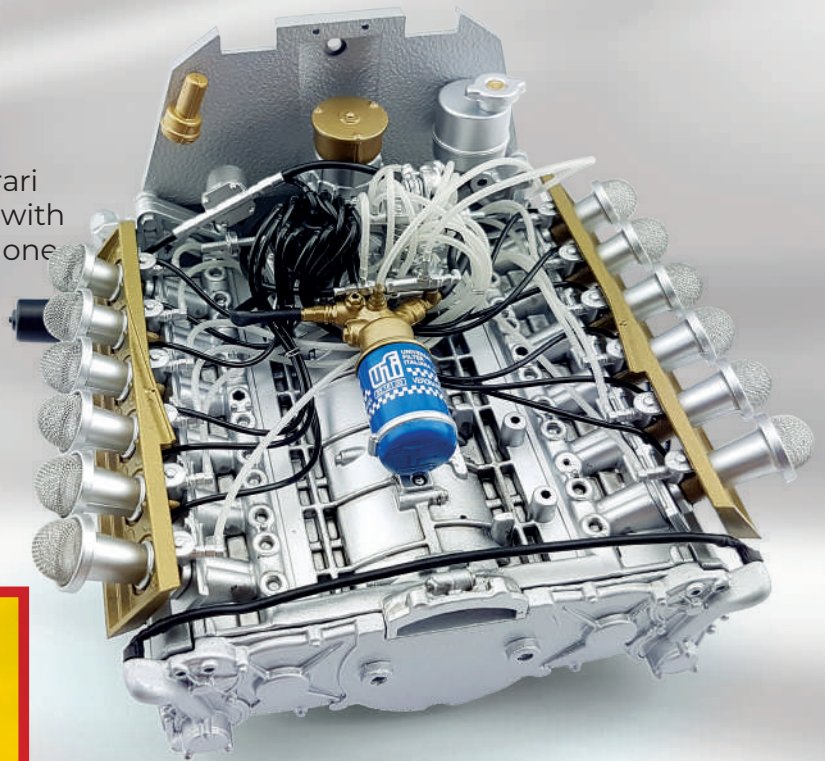


08

22-08 Insert a type N screw into each of these holes. Tighten the three screws as required.

FINAL RESULT

The engine of your 1:8 scale Ferrari 312 T4 has now been enhanced with numerous new details. Put it to one side with the utmost care; you will be working on it again in the next stage.



In the next stage

The battery for the electrical system.

BATTERY AND ITS FIXING BRACKET

USING THE COMPONENTS SUPPLIED WITH THIS STAGE, YOU WILL NOW FIT THE ENGINE OF YOUR MODEL WITH THE BATTERY FOR THE ELECTRICAL SYSTEM AND THE BRACKET REQUIRED TO HOLD IT IN PLACE.

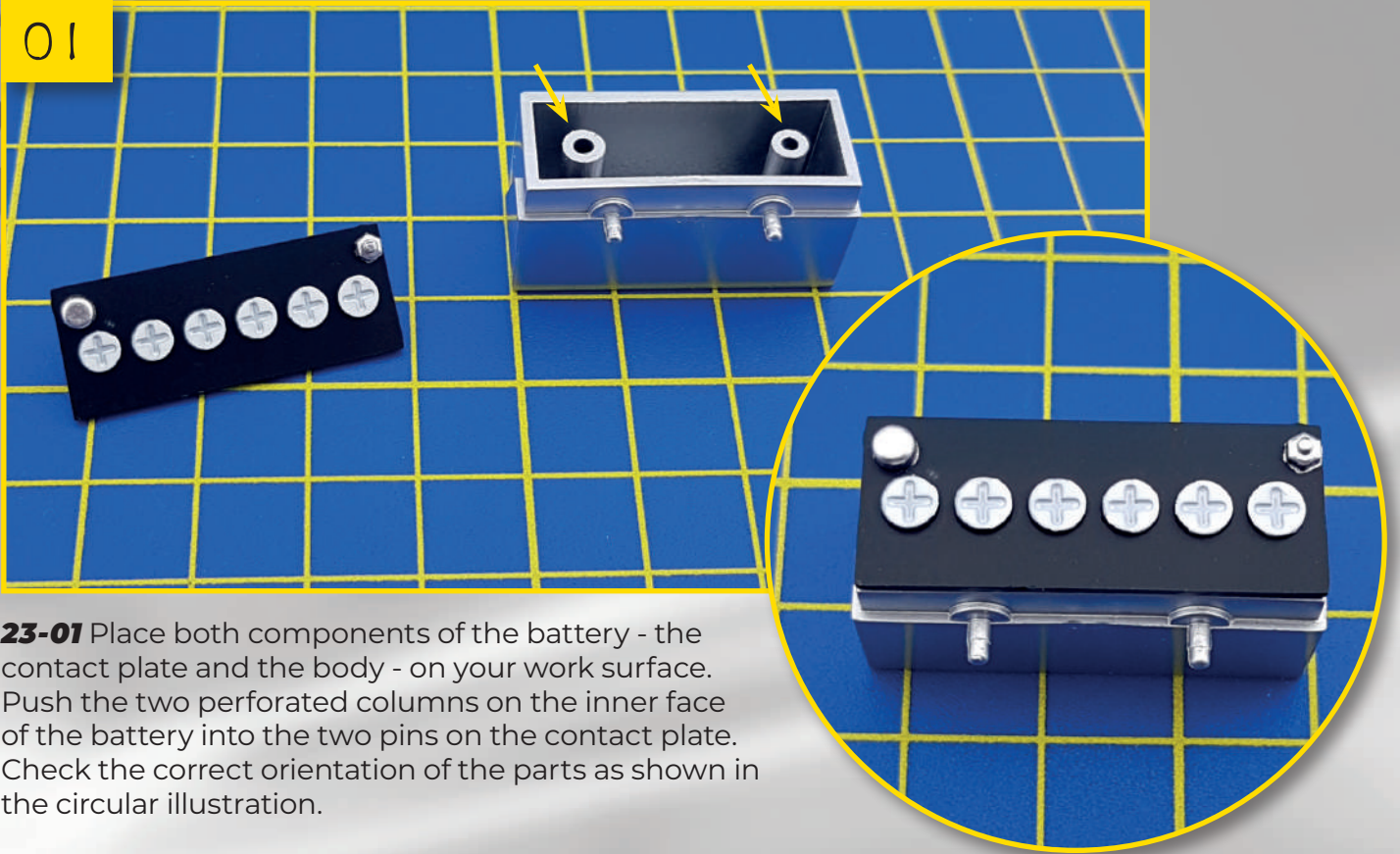


LIST OF PARTS

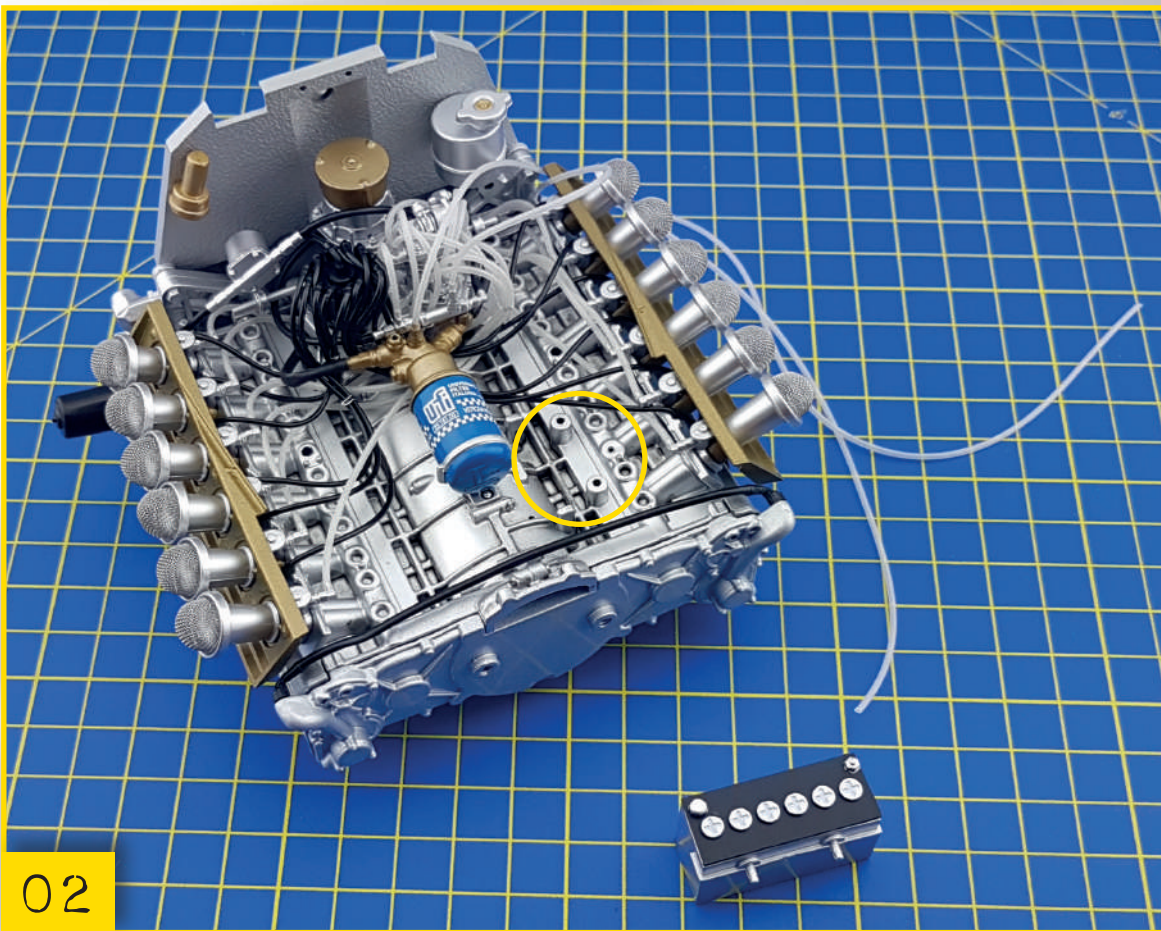
- 1 Contact plate
- 2 Battery body
- 3 Battery fixing bracket



01

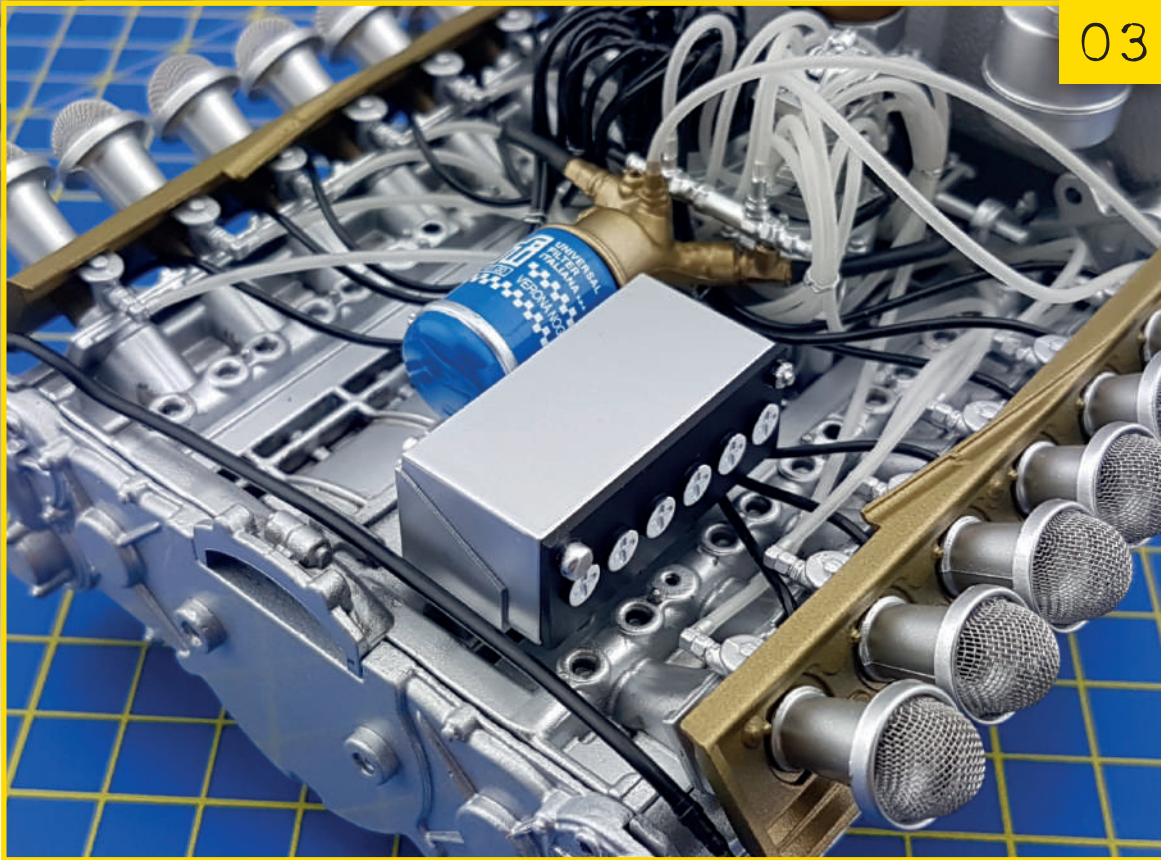


23-01 Place both components of the battery - the contact plate and the body - on your work surface. Push the two perforated columns on the inner face of the battery into the two pins on the contact plate. Check the correct orientation of the parts as shown in the circular illustration.

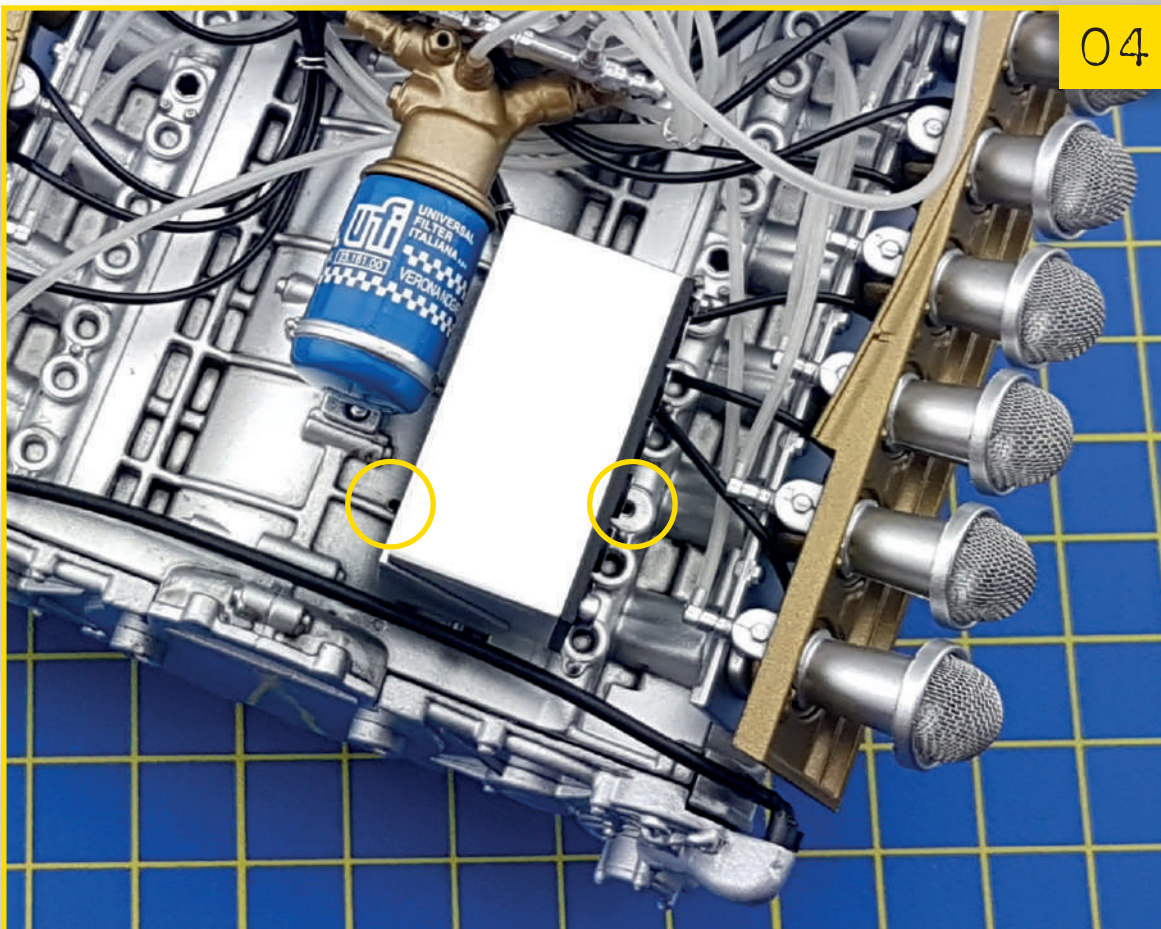


02

23-02 Retrieve the engine assembly that you assembled in the previous stages. The photograph shows the two perforated columns used for mounting the battery.

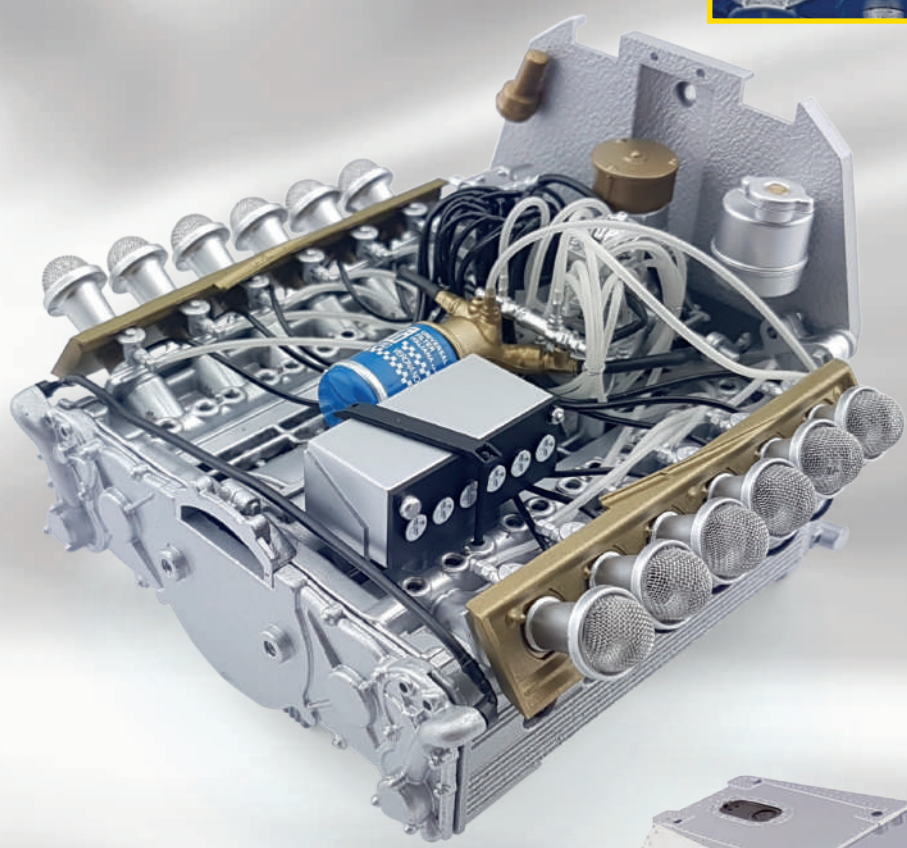
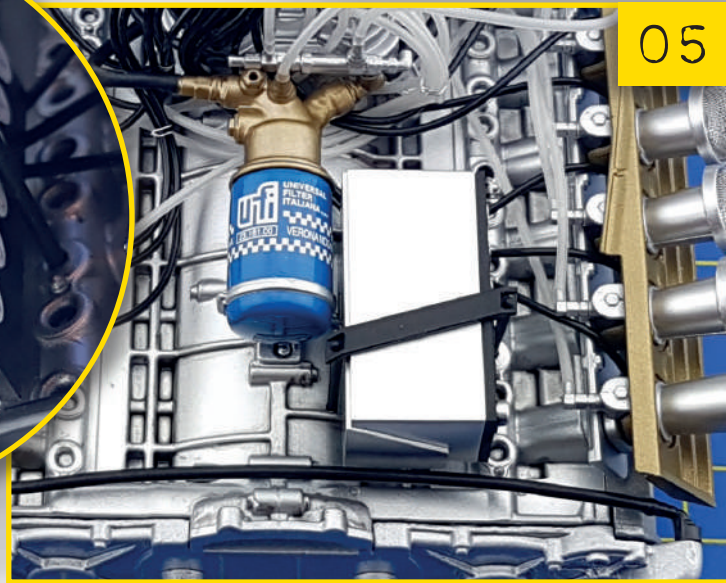


23-03 Now install the battery on the engine. The contact plate must face outwards.



23-04 The photograph identifies the fixing holes for the battery bracket.

23-05 Install the bracket. If necessary, you can slightly widen the fixing holes using a round file.

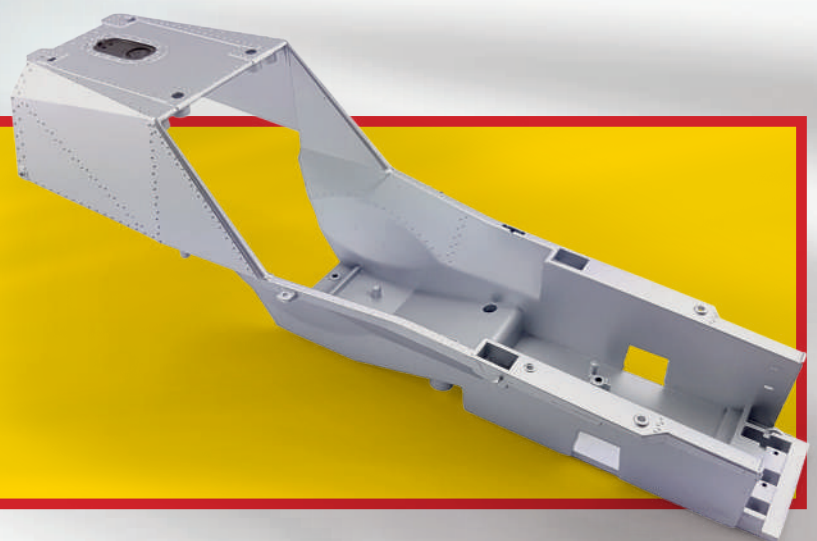


FINAL RESULT

In this stage you have installed the battery for the electrical system on the engine of your 1:8 scale Ferrari 312 T4.

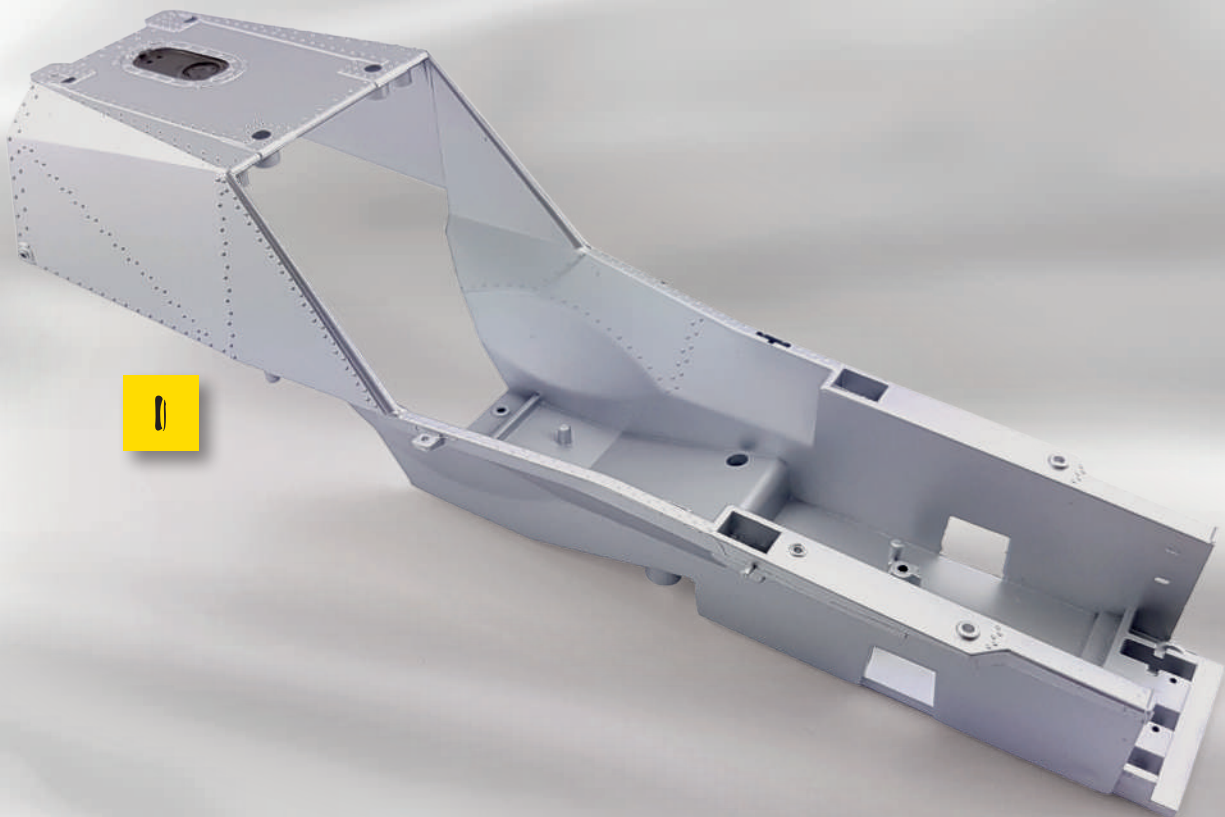
In the next stage

The cockpit cradle of your 1:8 scale Ferrari 312 T4.



COCKPIT CRADLE

IN THIS STAGE YOU'LL RECEIVE A LARGE COMPONENT THAT WILL ENABLE YOU TO GET A BETTER IDEA OF THE ACTUAL SIZE OF THE MODEL YOU ARE BUILDING. FOR THE MOMENT YOU WILL ONLY BE ABLE TO MAKE A TEMPORARY ASSEMBLY WITH THE COCKPIT CRADLE.

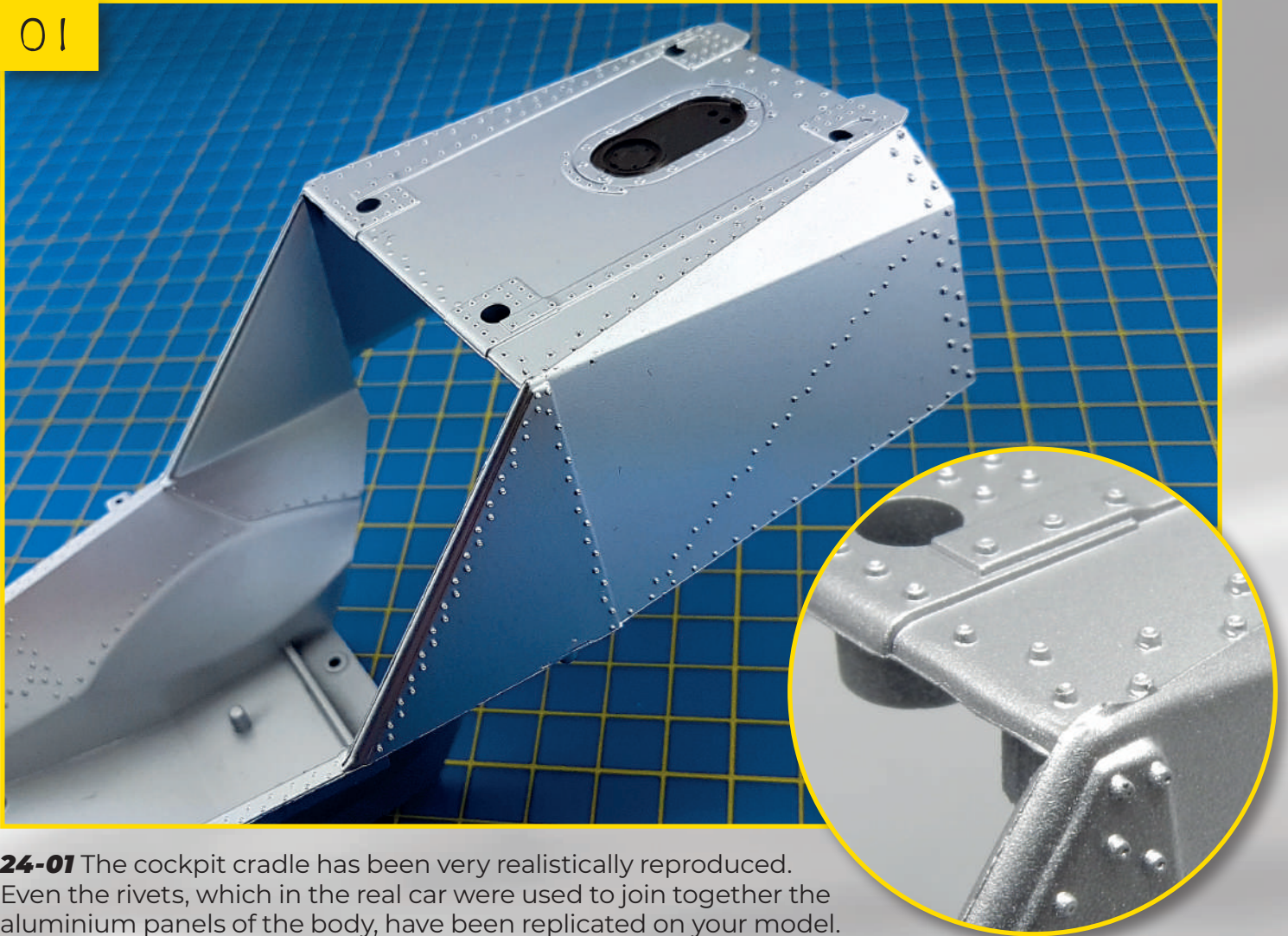


LIST OF PARTS

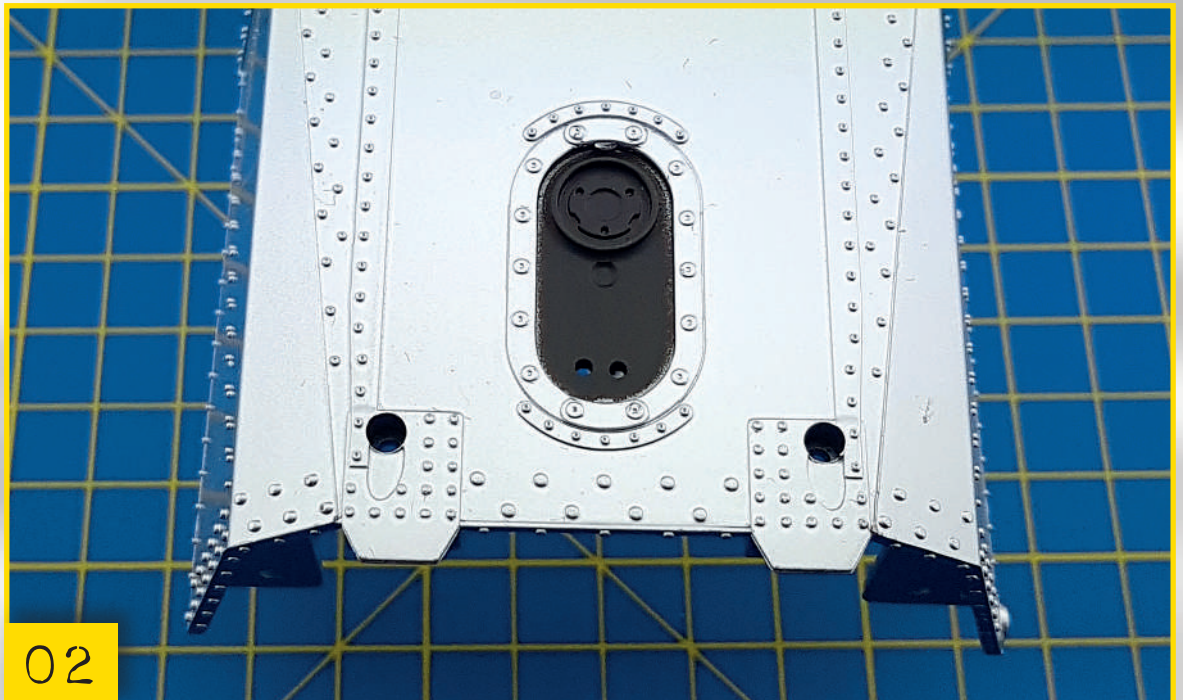
- I Cockpit cradle



01

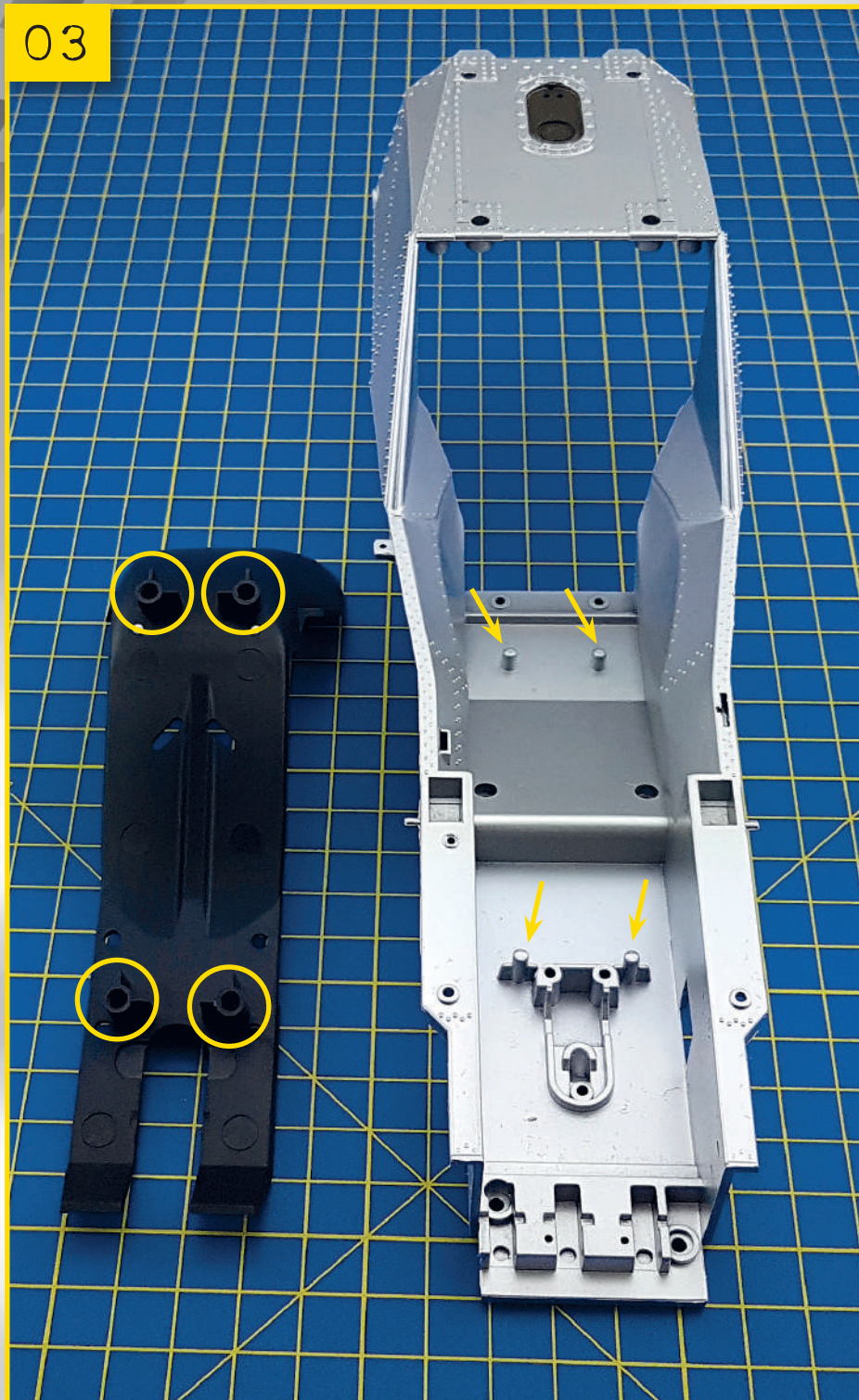


24-01 The cockpit cradle has been very realistically reproduced. Even the rivets, which in the real car were used to join together the aluminium panels of the body, have been replicated on your model.



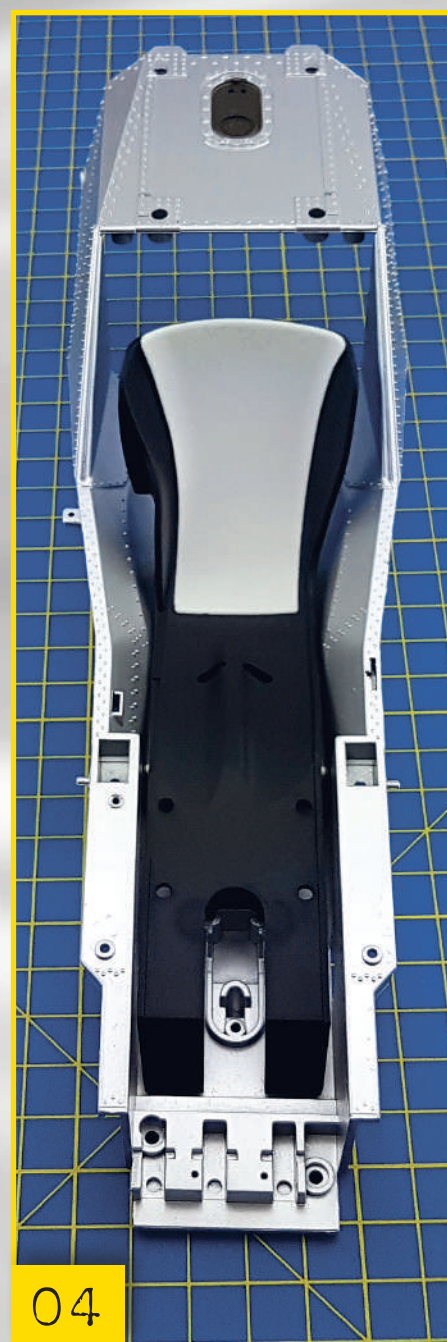
24-02 The filler hole has also been very accurately reproduced.

03



24-03 Take the seat, which you have already assembled and place it upside down next to the cradle so that you can carefully observe the four fixing points that will enable you to anchor it to the cradle.

24-04 Join the cradle to the seat by fitting all the pins on the cradle into the corresponding columns on the seat. Do not press the two components against each other, because you'll be separating them again in the next stages.



04

FINAL RESULT

The photograph shows the result of this assembly stage.

In the next stage

The four-point seat belts and rear cradle locking plate in the cockpit.

