FERRARI TRANSPORTER



Pack 01

BUILD INSTRUCTIONS

STAGE 01: BUILDING THE FRONT GRILLE AND THE TAILGATE DOOR

STAGE 02: BUILDING THE FRONT BUMPER

STAGE 03: BUILDING THE HEADLIGHTS AND REAR TRAILER PANEL

STAGE 04: FITTING THE INNER REAR PANEL AND LOADING PLATFORM

STAGE 05: BUILDING THE ENGINE (1)

STAGE 06: BUILDING THE ENGINE (2)

STAGE 07: BUILDING THE ENGINE (3)

STAGE 08: BUILDING THE ENGINE AND THE GEARBOX

STAGE 09: BUILDING THE EXHAUST PIPES AND THE TURBOCHARGER

STAGE 10: ATTACHING THE RADIATOR AND THE COOLING SYSTEM

STAGE 11: ATTACHING THE AIR RESERVOIR TO THE LEFT CHASSIS RAIL

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Advice from the experts

Spare screws are included with each part. Occasionally, you may be instructed to keep spare or unused screws for a later stage. Keep these spares in a safe place and label them correctly.

Please make sure you don't mix up the screws. They look quite similar, but the threads do vary slightly. Using the wrong screws may damage the parts. Only use the correct-size screwdriver that fits the screw head securely.

When securing parts together with multiple screws, fit each screw loosely to ensure all parts are correctly aligned, then gently tighten them firmly but not overtight, in the order in which you placed them.

The screwdriver can be magnetised by stroking it with a magnet (e.g. a fridge magnet), enabling it to hold screws and make assembly easier.

If a screw is tight going into a metal part, do not force it, as you may shear the head off. Remove it and apply a tiny smear of Vaseline, soap, or light oil to the thread. That will lubricate it and make it easier to tighten.

Some parts will require a little glue for assembly. Please apply glue sparingly and use a cocktail stick so that you don't use too much nor apply the glue too heavily. We recommend superglue gel or Extra Thin Liquid modelling glue. Where possible, parts should be test-fitted in place before glueing.

Make sure you have good ventilation when using adhesives and to replace caps firmly.

Use a magnet to help find screws that have fallen on the floor.

Use masking tape to hold parts temporarily in place.

Cut parts from a sprue (framework) with side cutters or a craft knife. Side cutters tend to be easiest.

During the course of this build, you will receive many pieces that you will assemble immediately – following the instructions in the corresponding stage – and other pieces that you should store safely to one side, for use in future assembly stages.

Always protect the paint finish on components by placing a cutting mat, a sheet of white paper, or a soft cloth on your work surface.

When plugging wires in, ensure the power is switched off. Tweezers can be used to fit the PVC wires by gripping carefully around 5mm from the end of the wire. If a wire needs to be removed from a socket, do not pull on the wire as this could damage the connection. Grip the plug with tweezers to remove it.

Left and Right! When building your Ferrari Transporter, the left- or right-hand side refers to that side as if you were sitting in the cab.

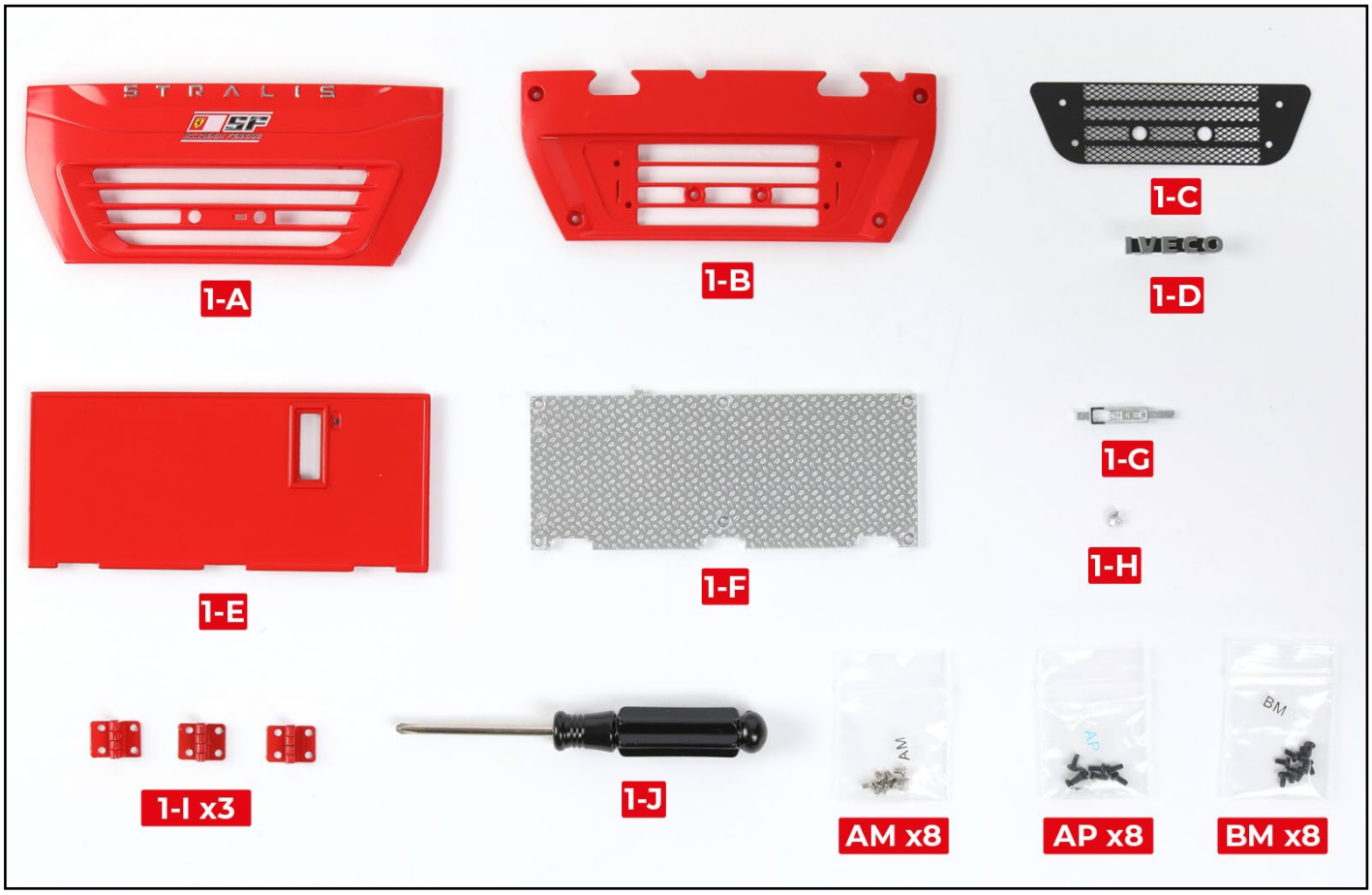
When you see this symbol, pay attention to the instruction text in bold and check the orientation of the parts in the image, as this will be particularly important for assembly in later stages.

This is not a toy. Not suitable for children under 14 years old due to small parts. Adult supervision required.

WARNING: Some parts are assembled using magnets. These magnets can cause serious injury if they are swallowed. Keep away from children. If you suspect a magnet has been swallowed, seek medical help straight away.

Stage 01: Building the front grille and the tailgate door

STAGE 01 PARTS



1-A: Front fascia
1-B: Rear of the front fascia
1-C: Front grille
1-D: IVECO logo
1-E: Rear tailgate panel
1-F: Rear tailgate inner panel
1-G: Latch
1-H Handle
1-I: Tailgate hinges
1-J: Phillips screwdriver
AM: 8 screws
AP: 8 screws
BM: 8 screws

Stage 01: Building the front grille and the tailgate door

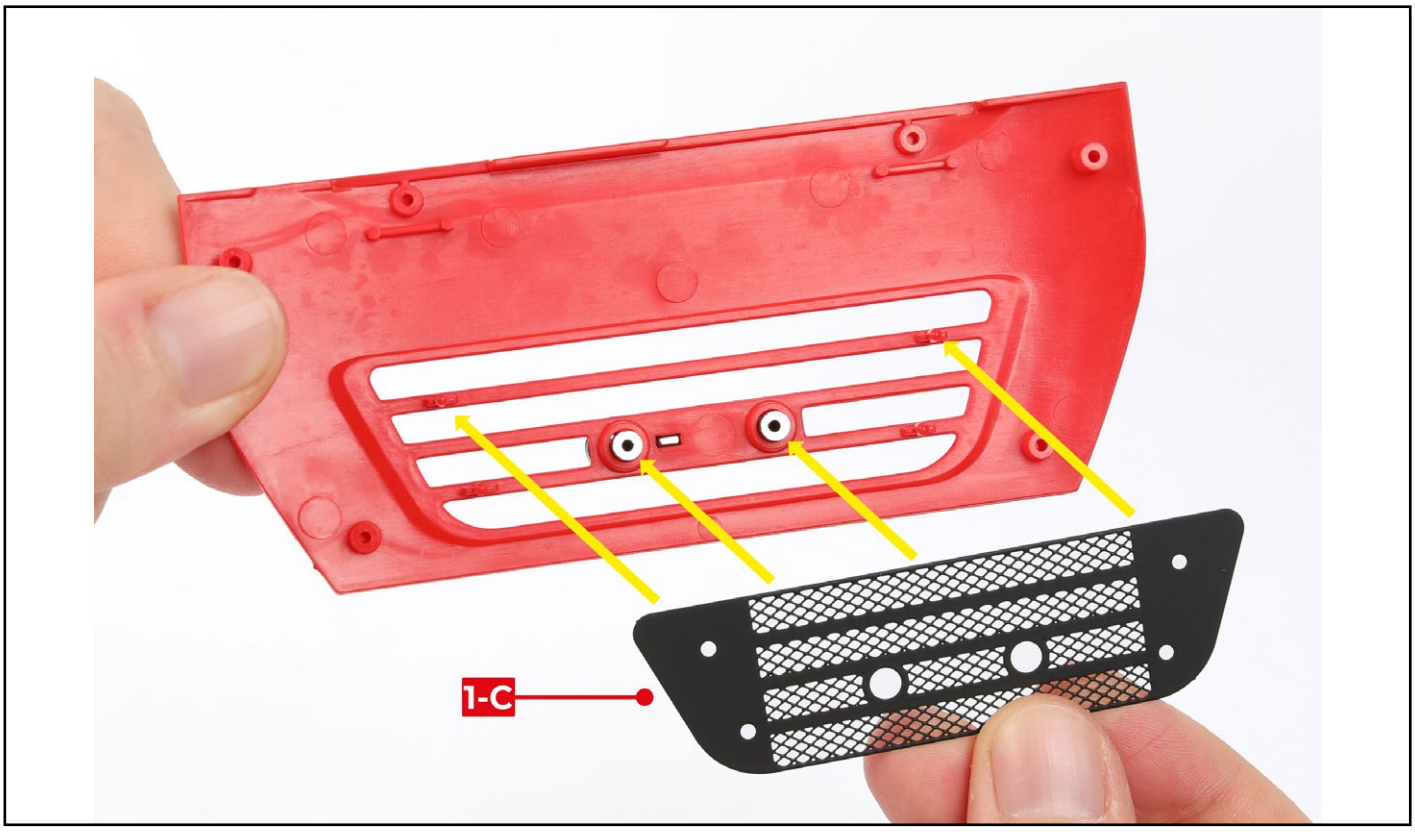




Step 1

Position the IVECO badge 1-D on the front fascia 1-A, aligning the locating pins with the corresponding holes. Press gently to secure it in place.

Stage 01: Building the front grille and the tailgate door

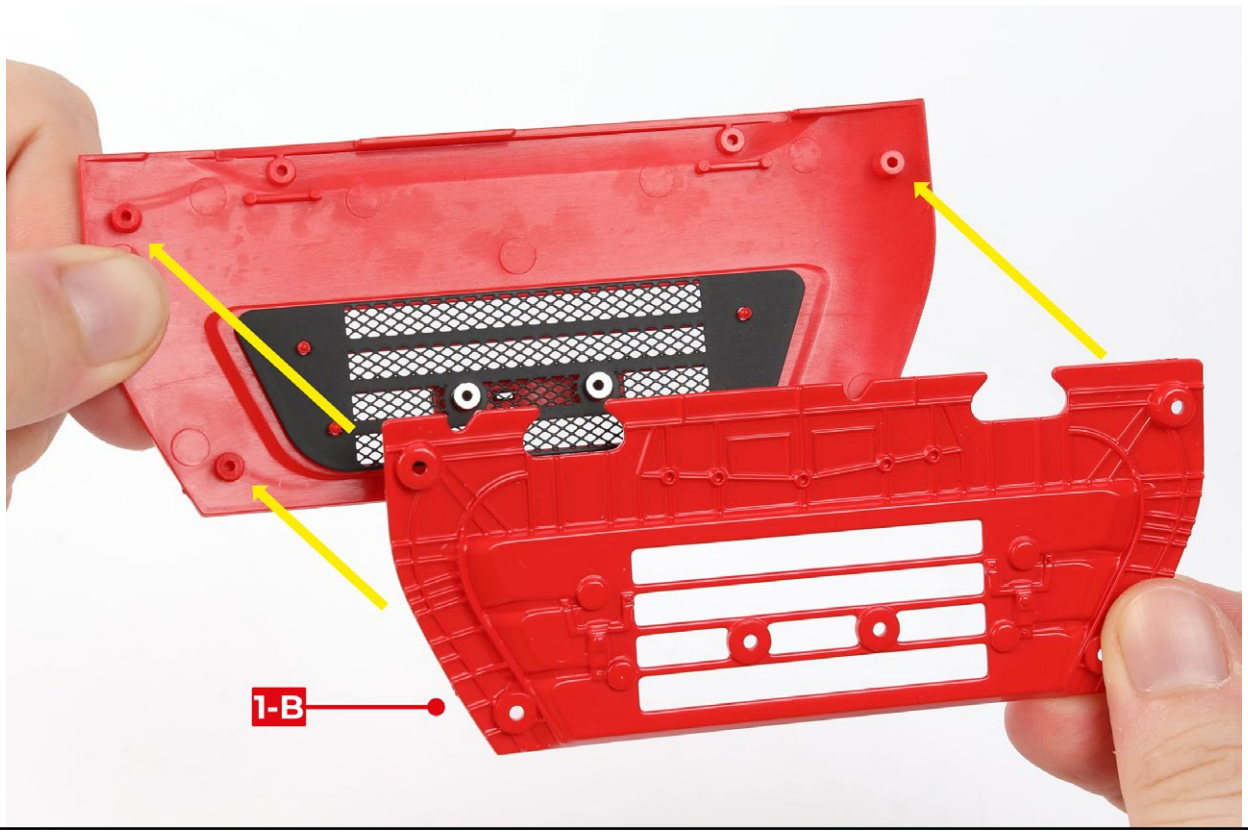


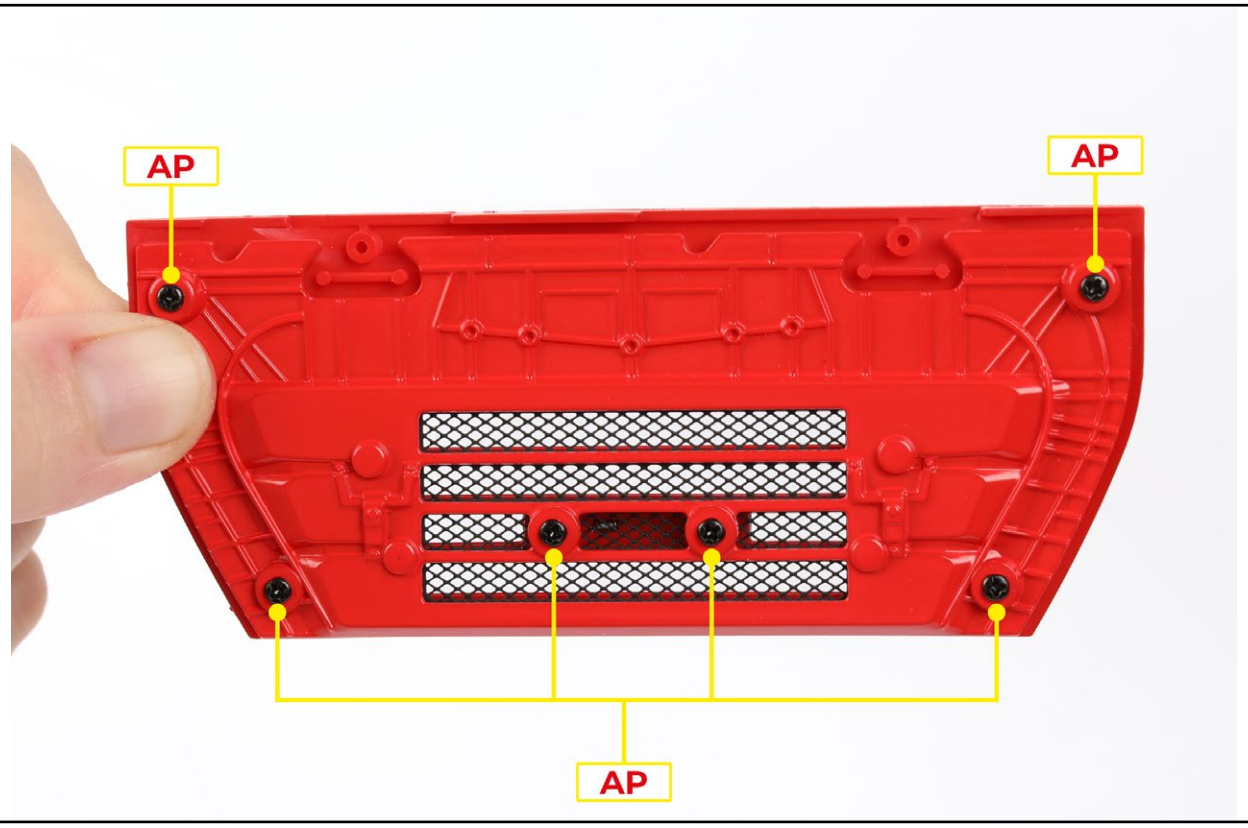


Step 2

Position the front grille 1-C on the inside of the front fascia 1-A, aligning the holes with the locating pins on the IVECO badge and front fascia.

Stage 01: Building the front grille and the tailgate door





Step 3

Position the inner fascia 1-B on the back of the front fascia 1-A, making sure both parts are oriented correctly and follow the same curvature. Secure the parts together with six AP screws using the screwdriver supplied.

Stage 01: Building the front grille and the tailgate door

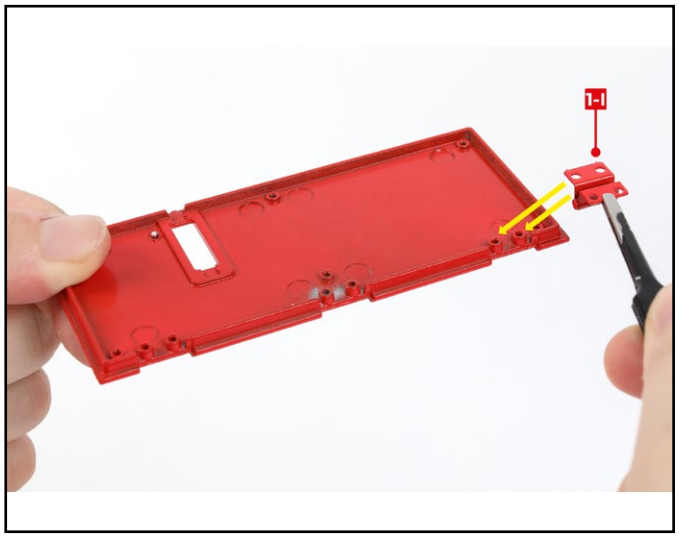


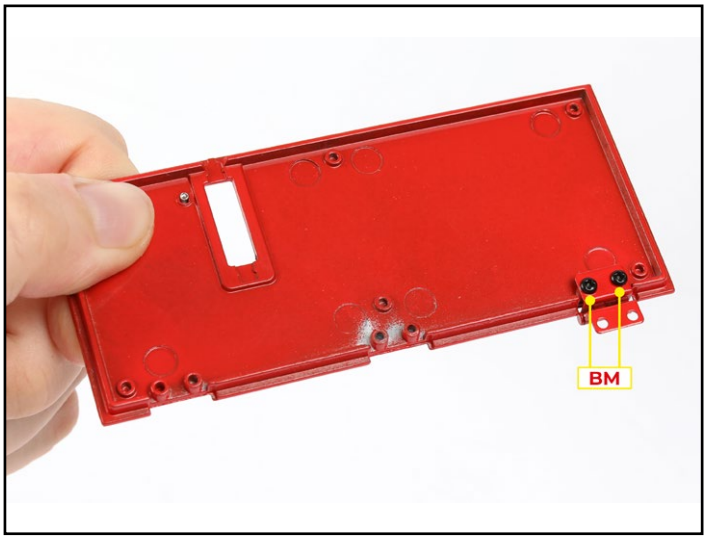


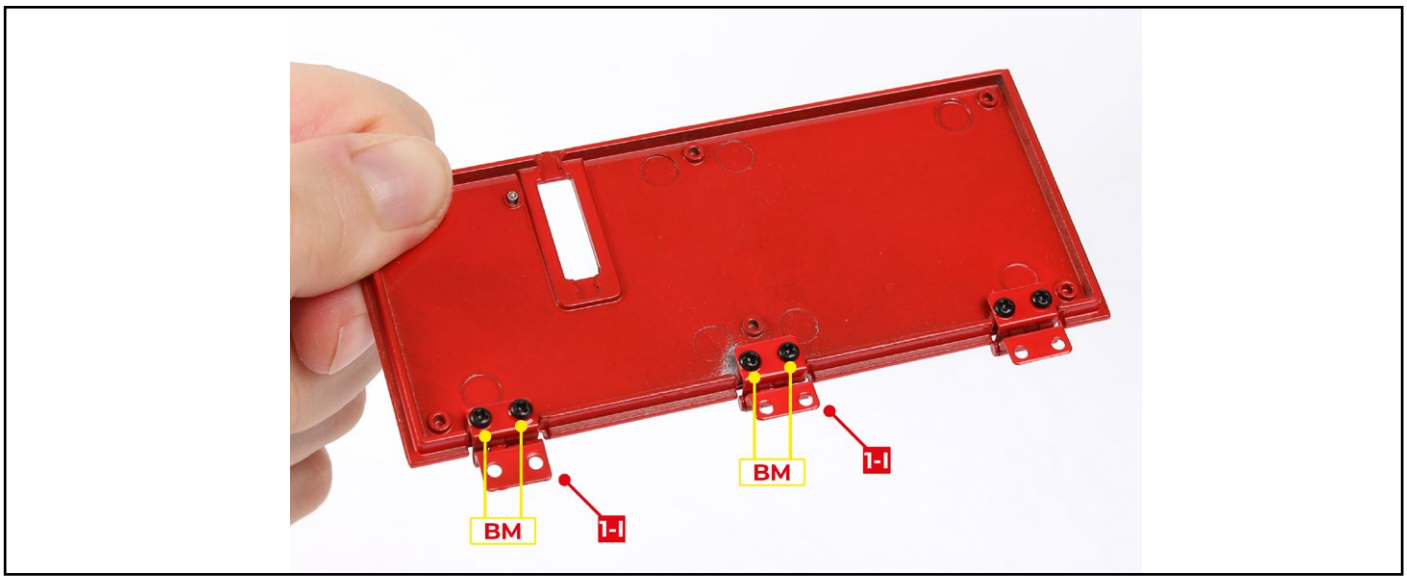
Step 4

Insert the locating pin on the handle 1-H into the hole in the front of the tailgate panel 1-E, then press gently to secure the handle in place.

Stage 01: Building the front grille and the tailgate door



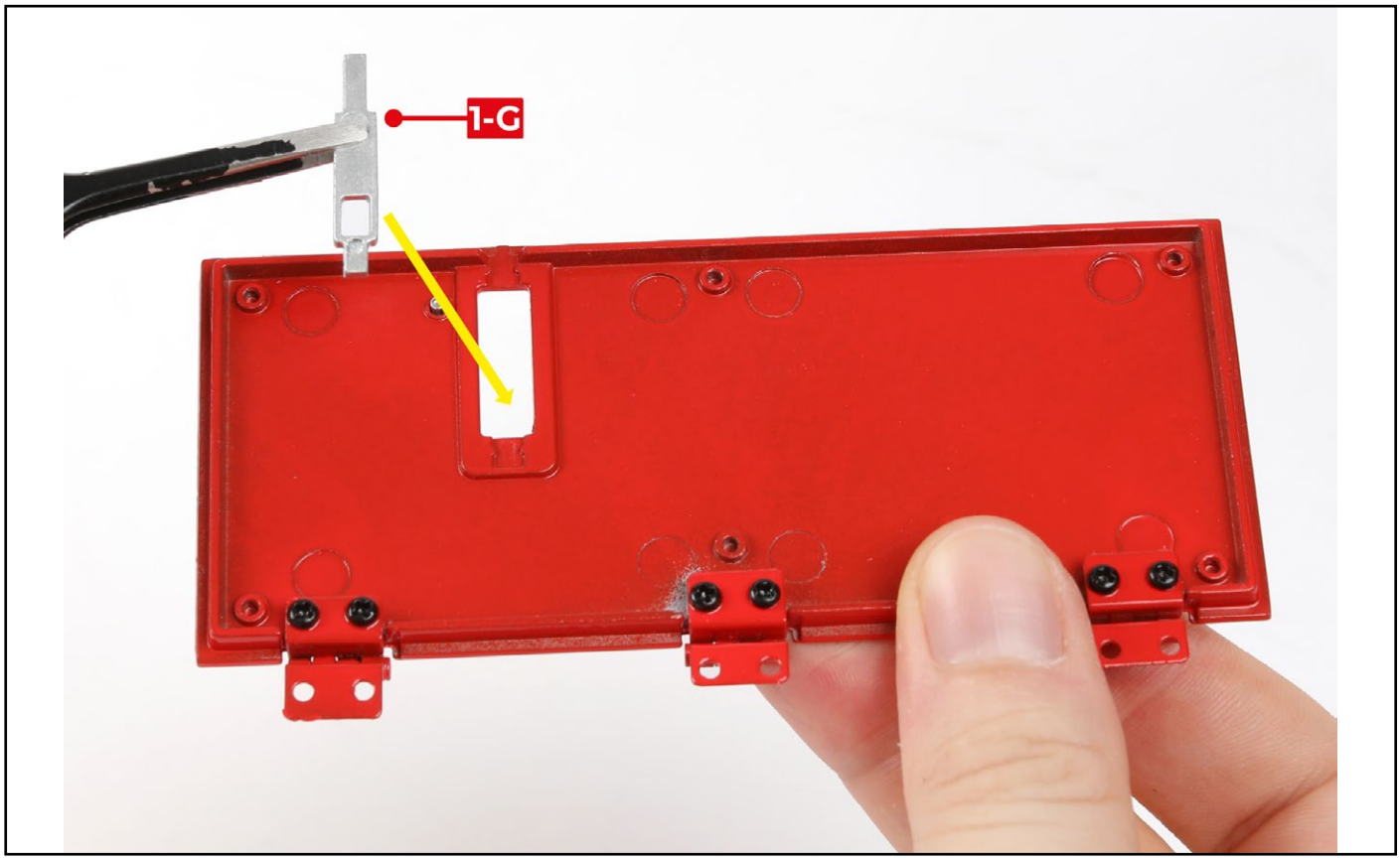


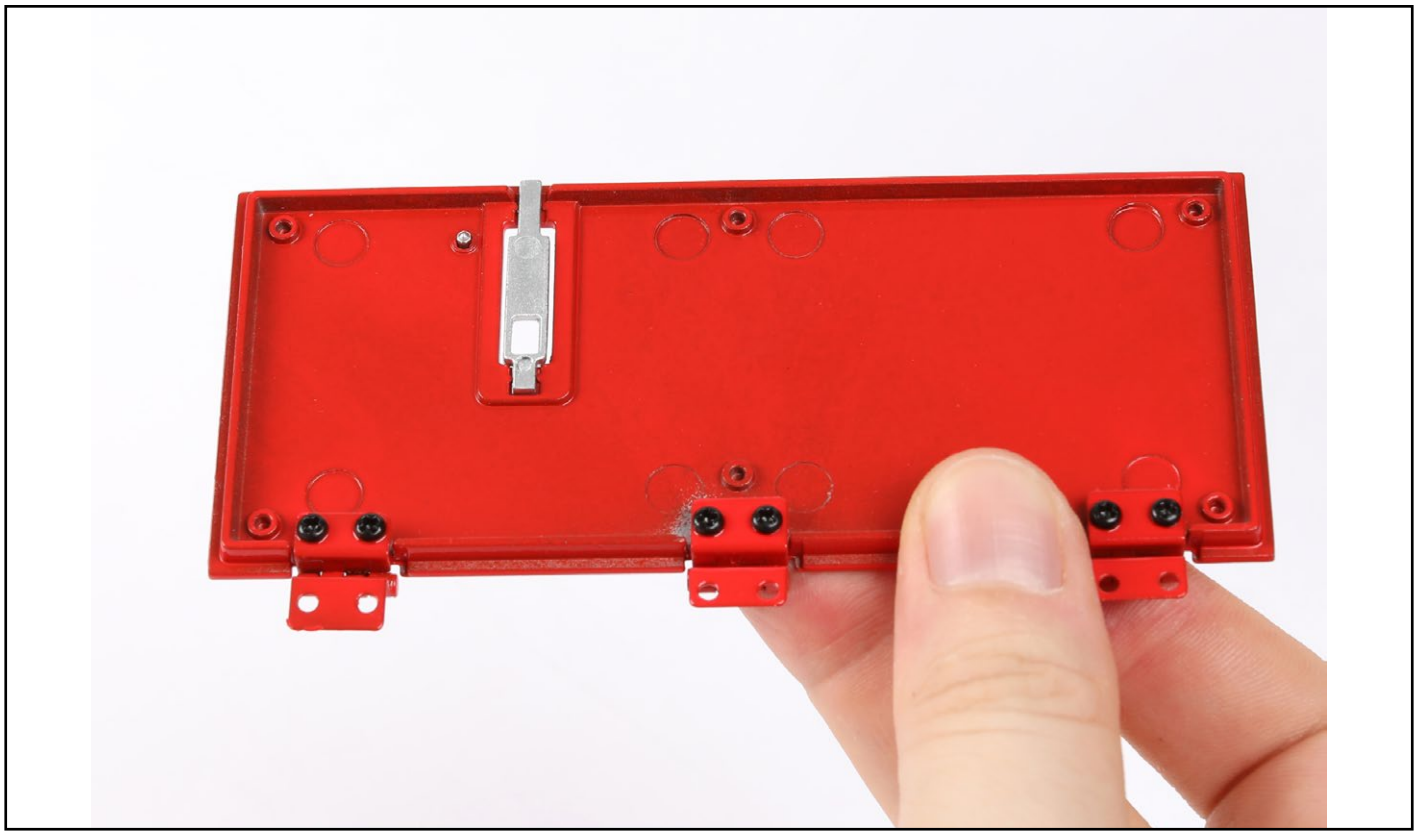


Step 5

Position the first tailgate hinge 1-I on the back of the tailgate panel 1-E as shown. Make sure the hinge pin is at the top and faces towards the front of the tailgate.
Secure the hinge with two BM screws using the screwdriver supplied. Position the remaining two tailgate hinges 1-I in the same way, with the hinge pins at the top and facing outwards. Secure each hinge with two BM screws.

Stage 01: Building the front grille and the tailgate door

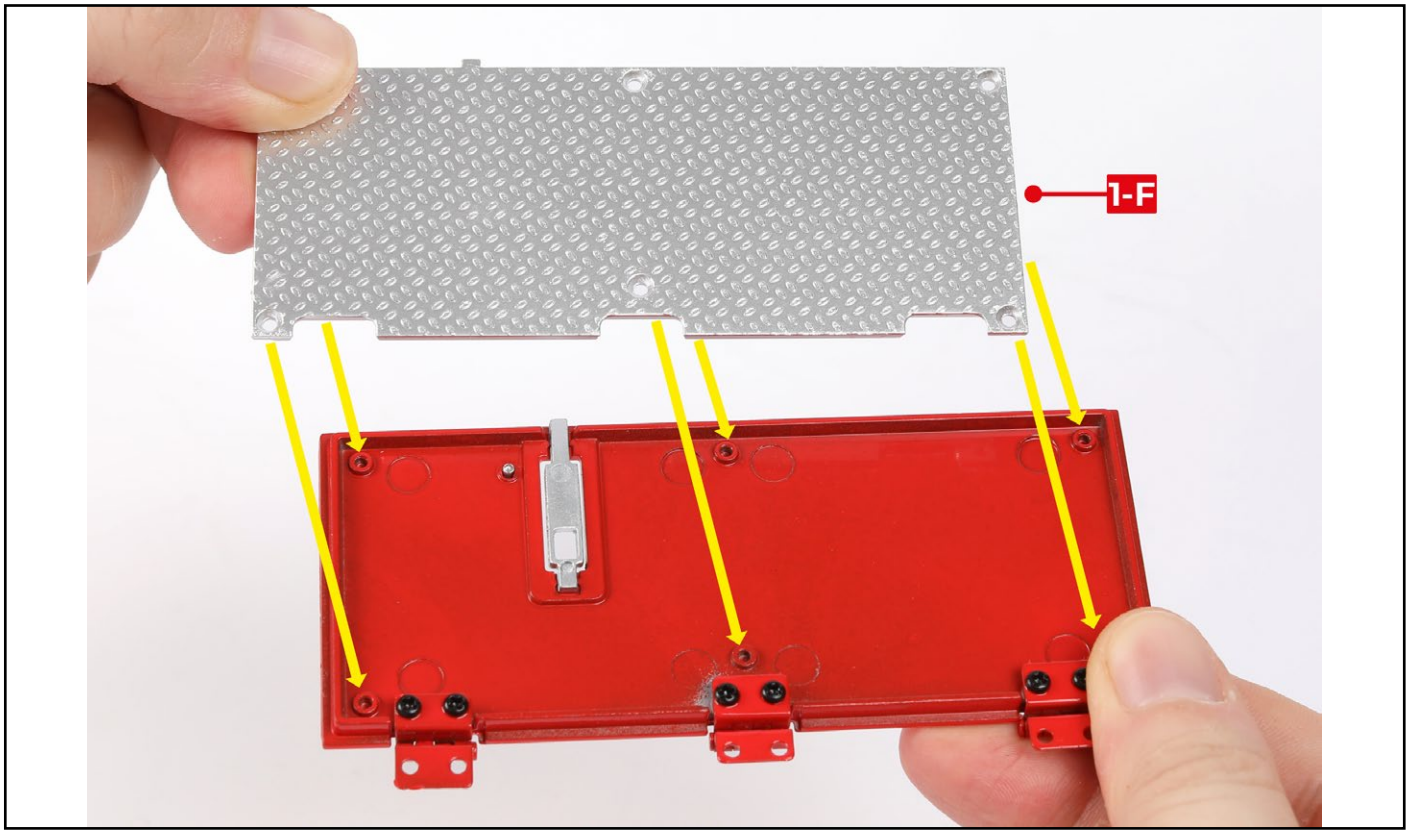


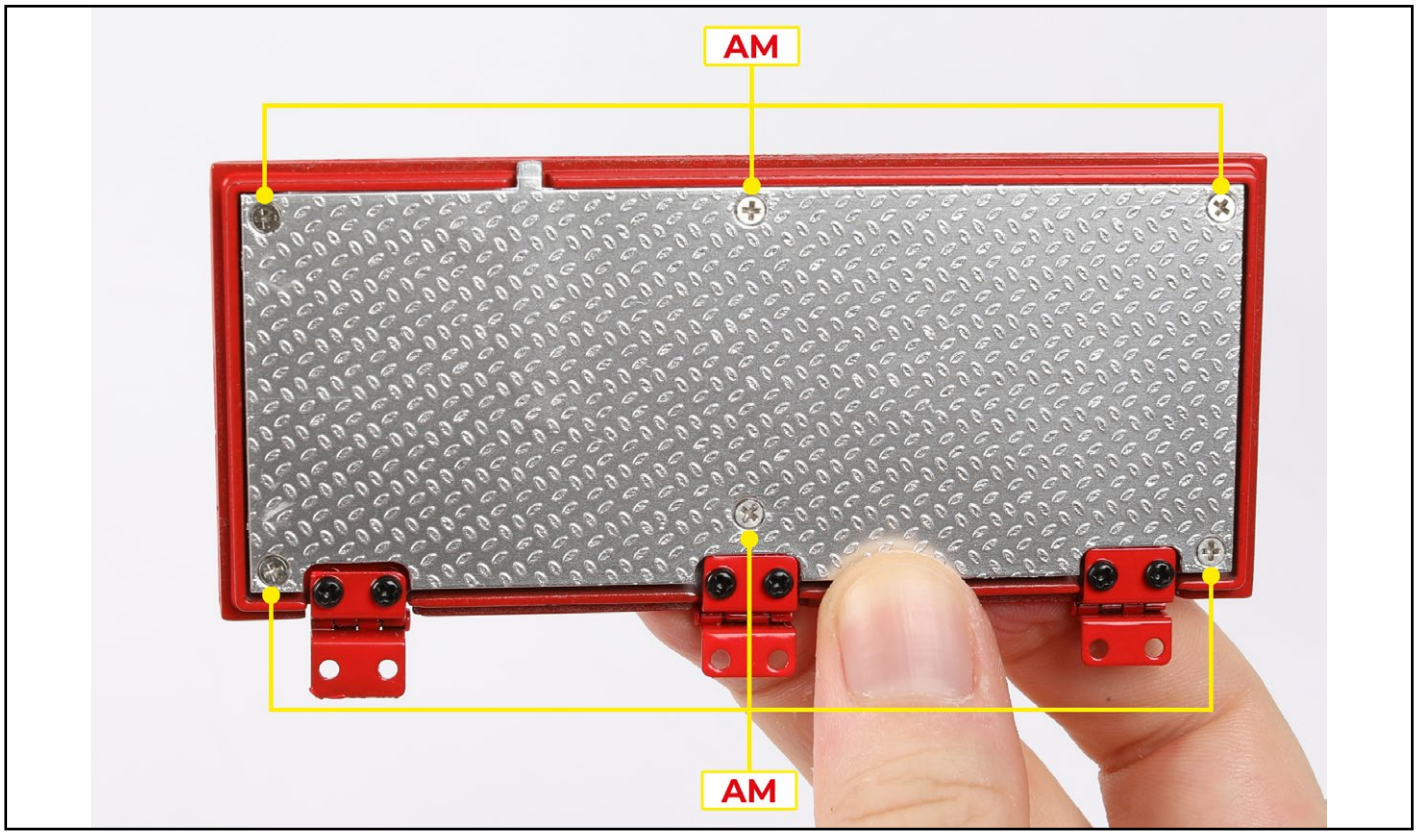


Step 6

Position the latch 1-G in the recesses on either side of the rectangular opening on the back of the tailgate panel 1-E. Press gently to secure it in place.

Stage 01: Building the front grille and the tailgate door





Step 7

Position the tailgate inner panel 1-F on the back of the tailgate panel 1-E, aligning the latch cover and the holes for the AM screws. Secure the tailgate inner panel 1-F with six AM screws.

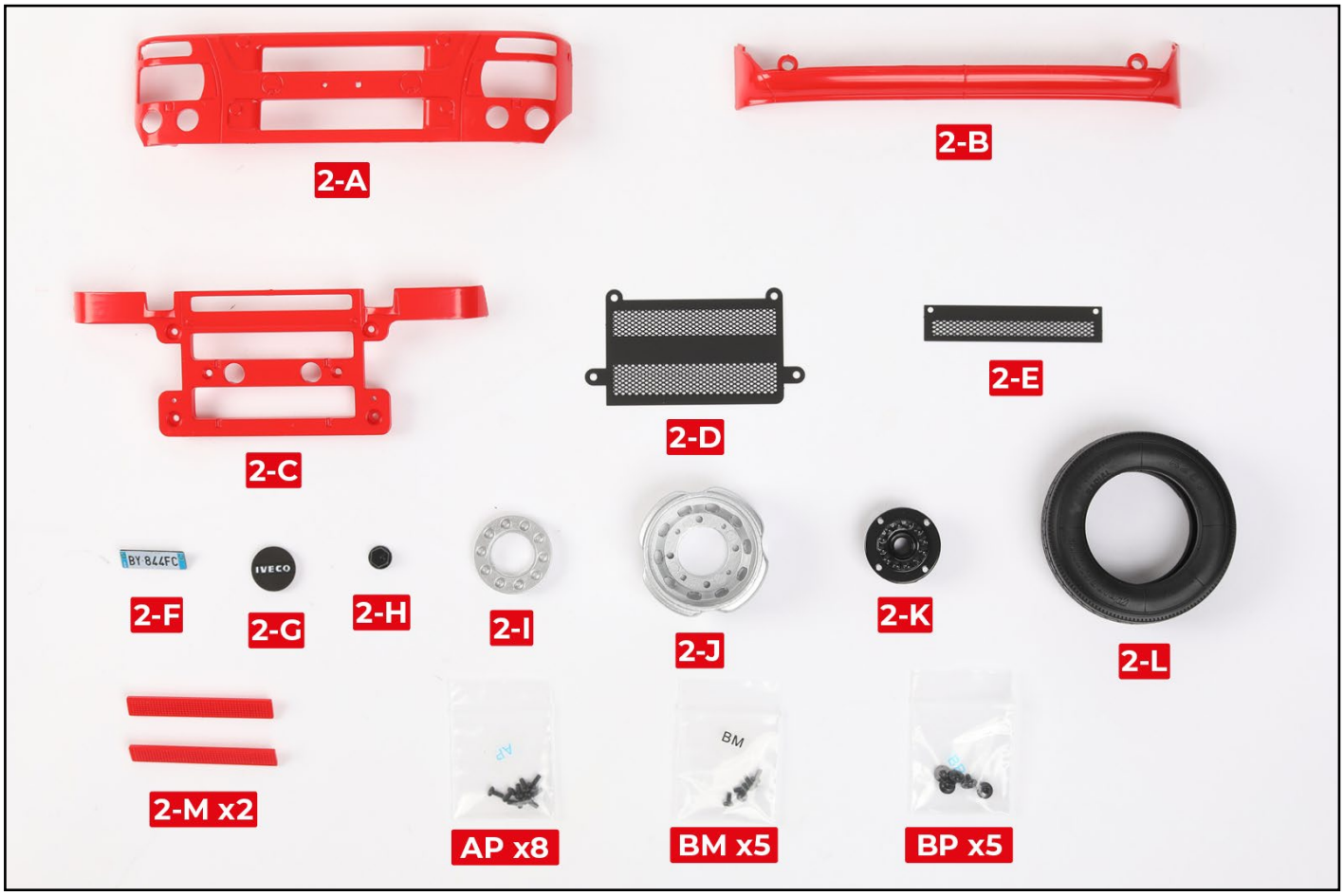
Stage 01: Building the front grille and the tailgate door

STAGE 01 COMPLETE



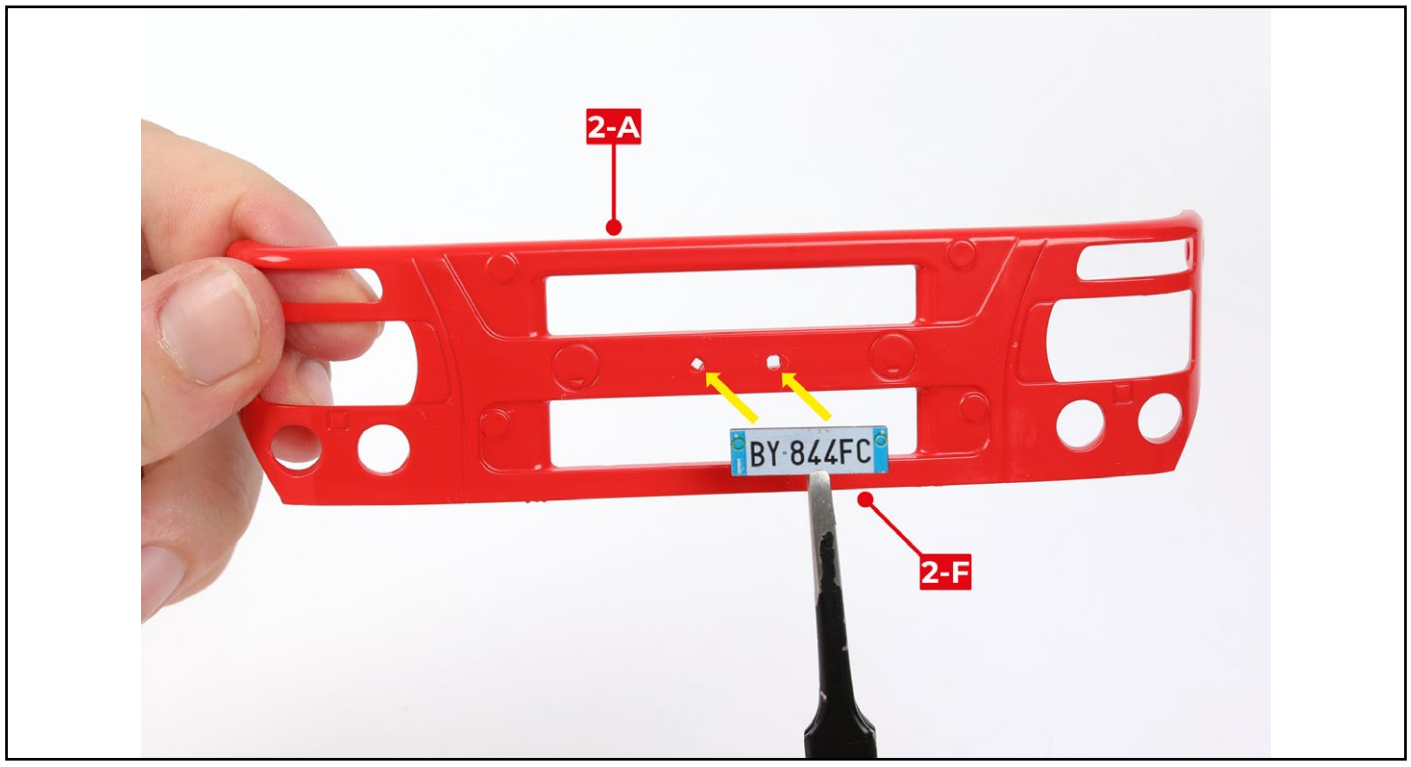
Stage 02: Building the front bumper

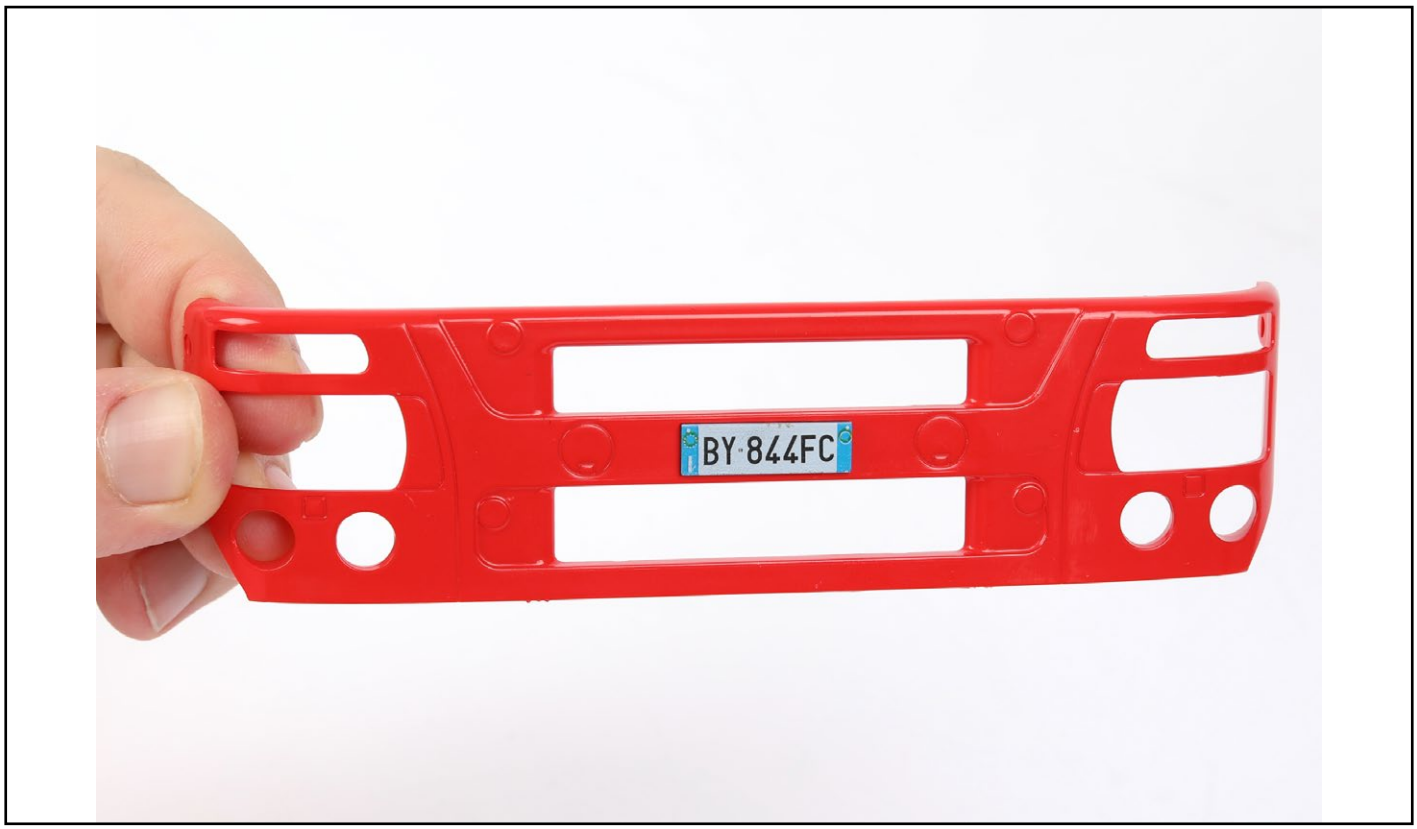
STAGE 02 PARTS



2-A: Front bumper 1
2-B: Front bumper 2
2-C: Front bumper 3
2-D: Bumper grille 1
2-E: Bumper grille 2
2-F: Front number plate
2-G: IVECO hubcap
2-H: Wheel nut
2-I: Wheel cover
2-J: Wheel rim
2-K: Wheel hub
2-L: Tyre
2-M: Front access steps
AP: 8 screws
BM: 5 screws
BP: 5 screws

Stage 02: Building the front bumper

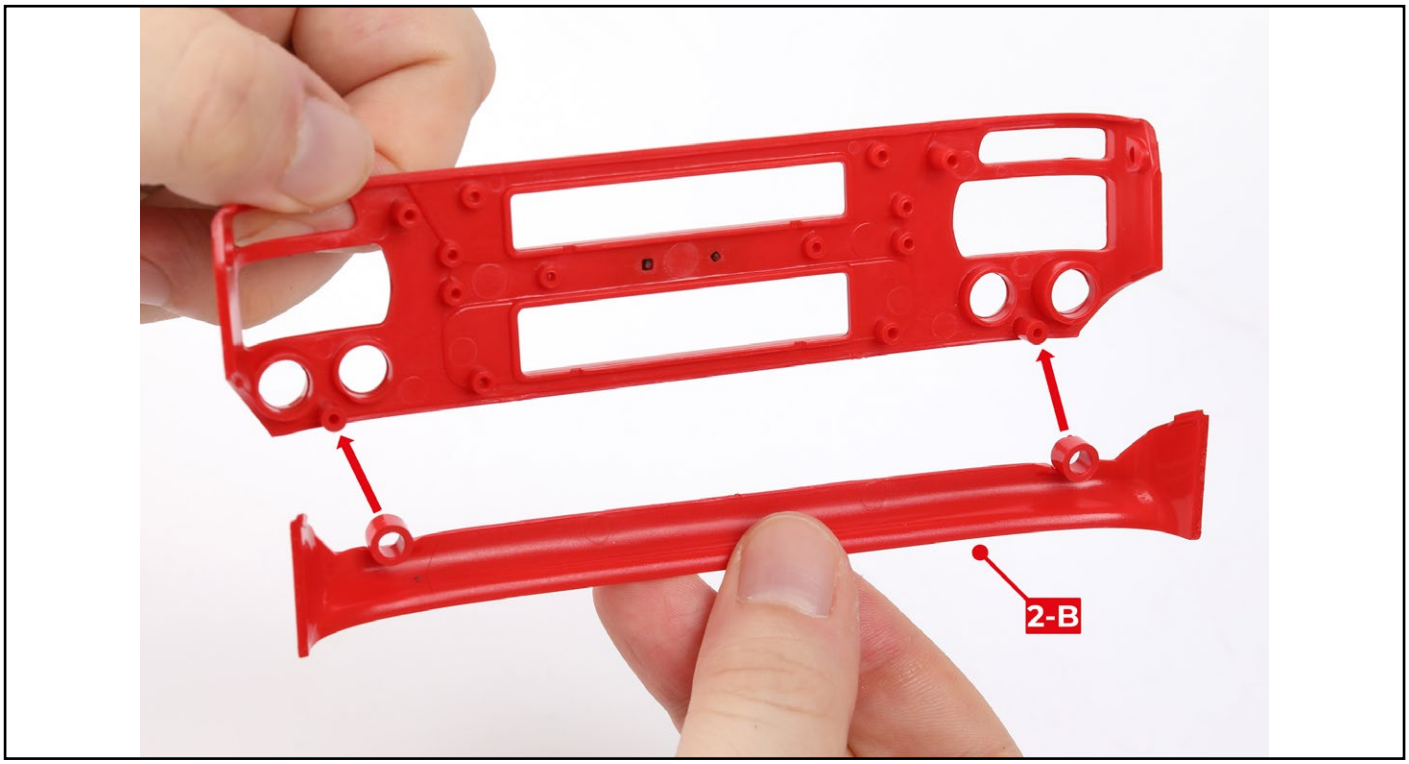


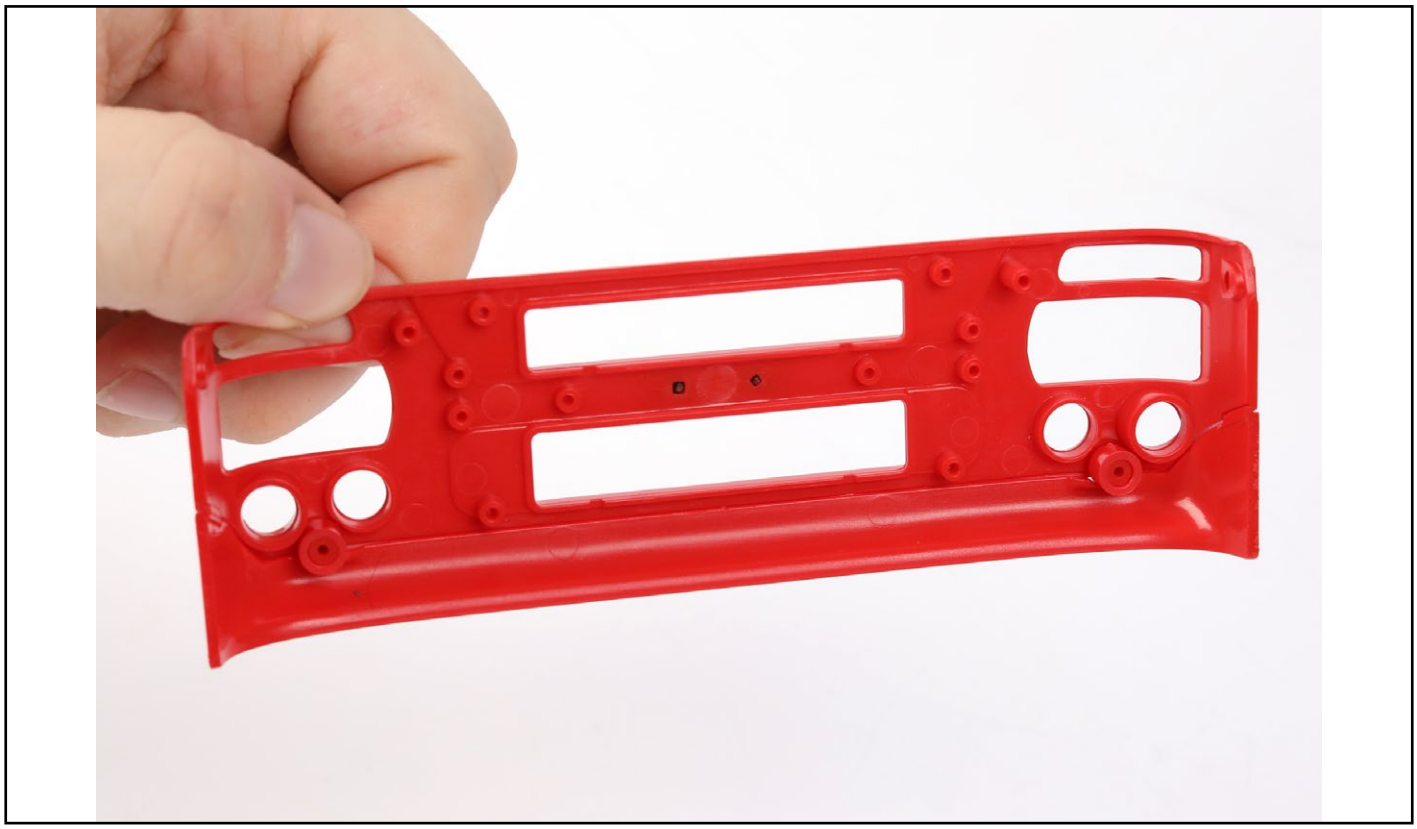


Step 1

Position the front number plate 2-F on front bumper 1 (2-A), aligning the locating pins with the corresponding holes. Press gently to secure it in place.

Stage 02: Building the front bumper

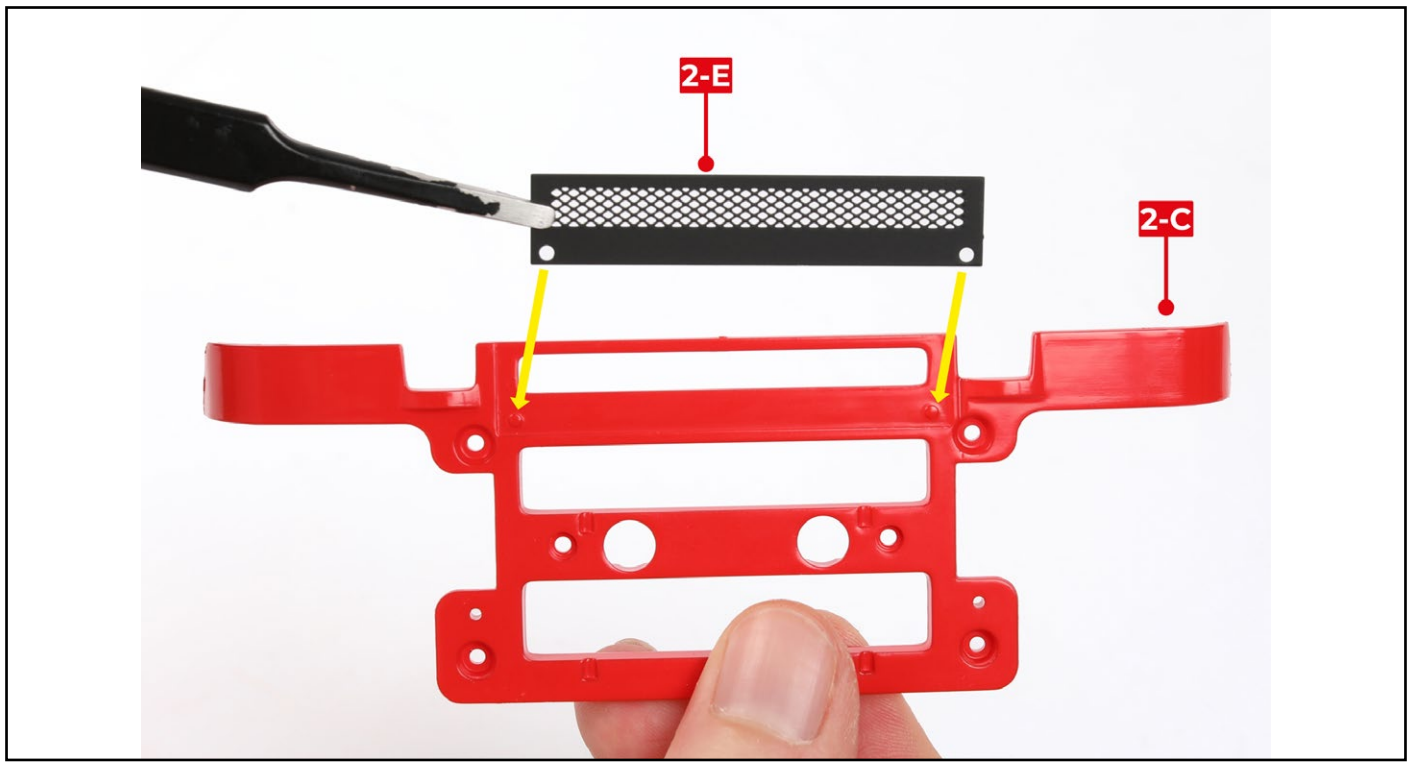


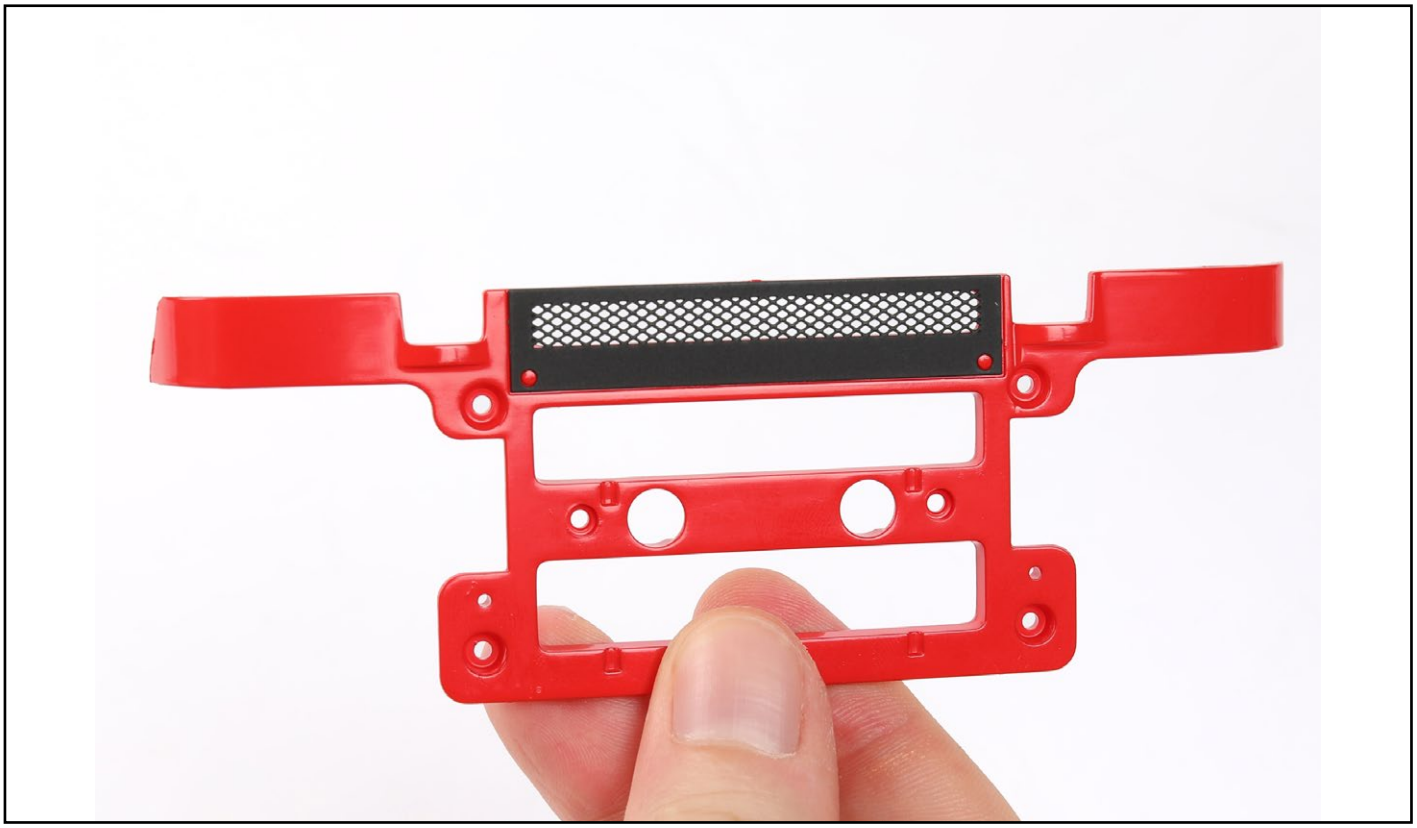


Step 2

Position front bumper 2 (2-B) on the back of front bumper 1 (2-A), aligning the holes with the outer lower locating pins as shown.

Stage 02: Building the front bumper

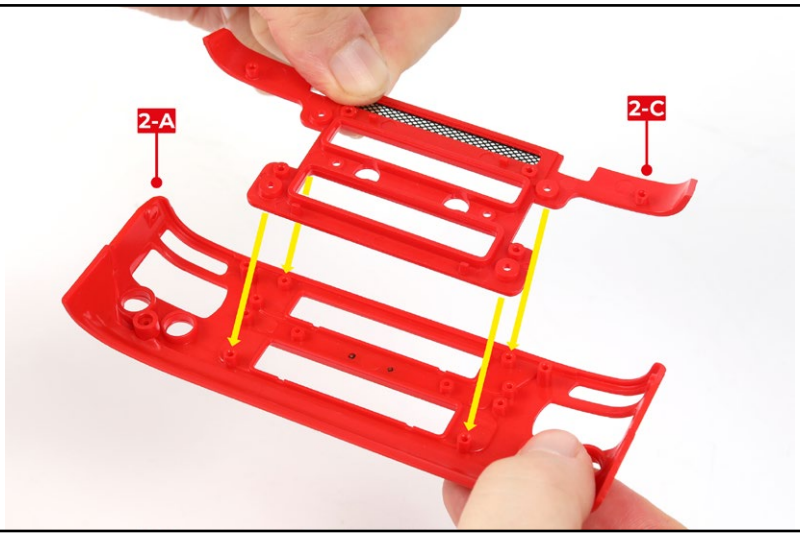


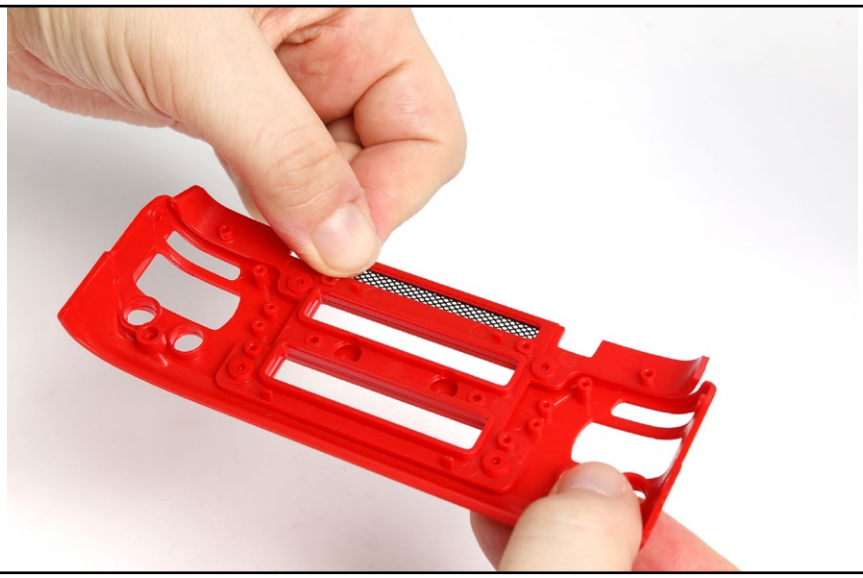


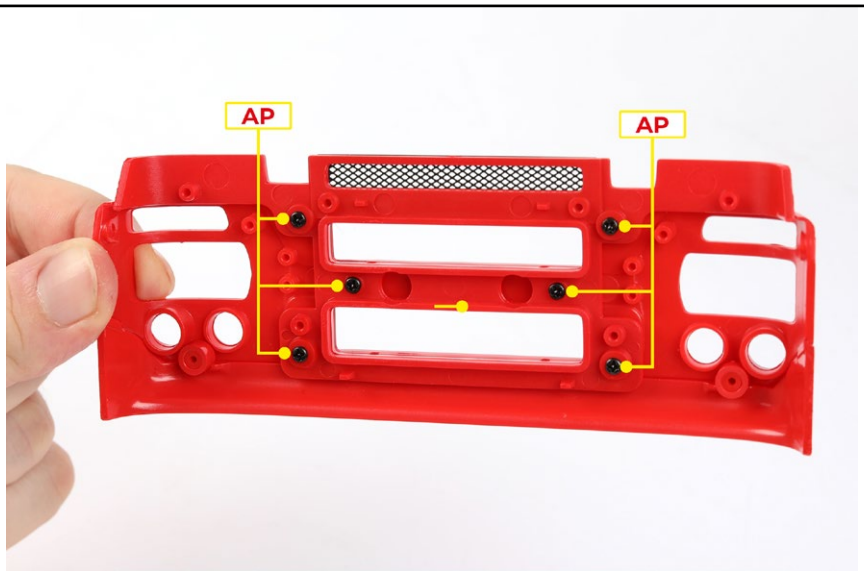
Step 3

Position bumper grille 2 (2-E) on front bumper 3 (2-C), aligning the holes with the corresponding locating pins.

Stage 02: Building the front bumper



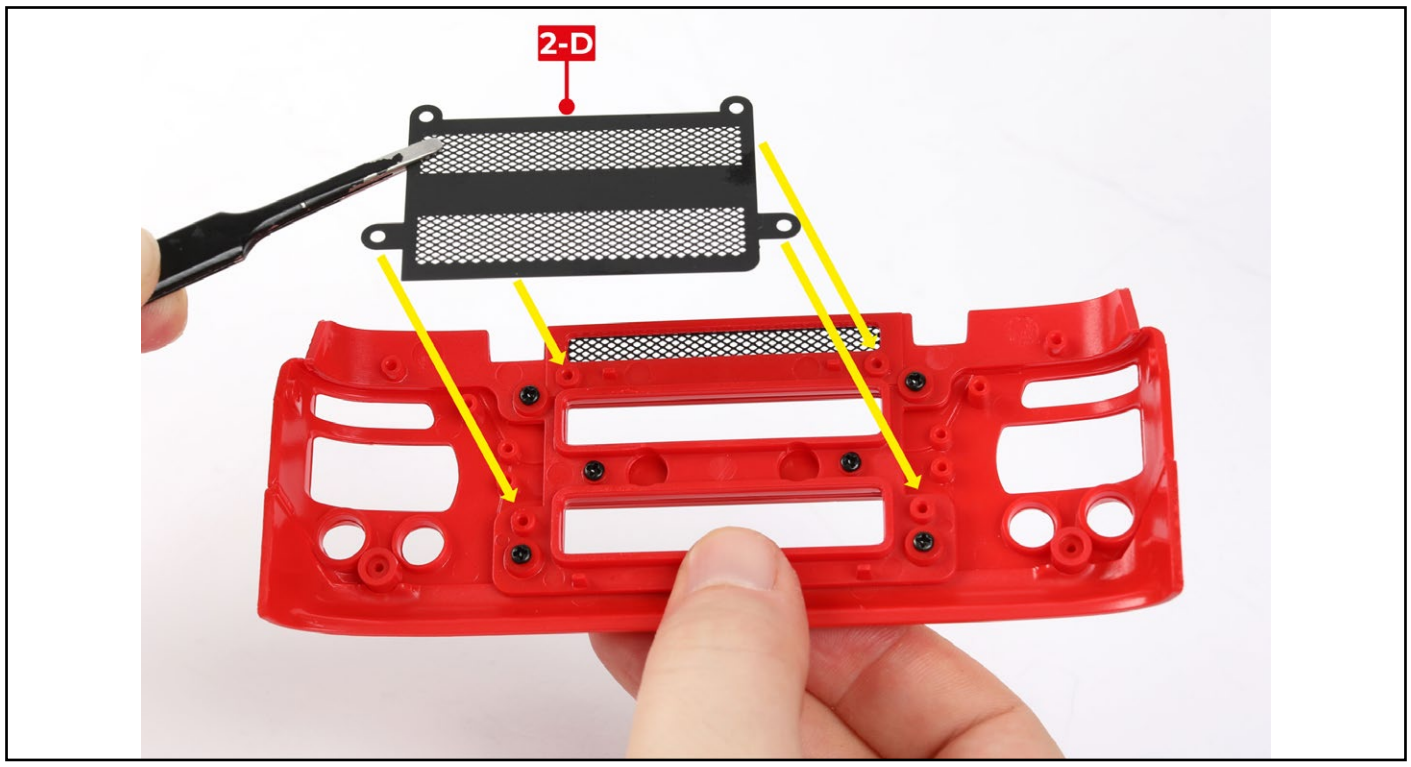


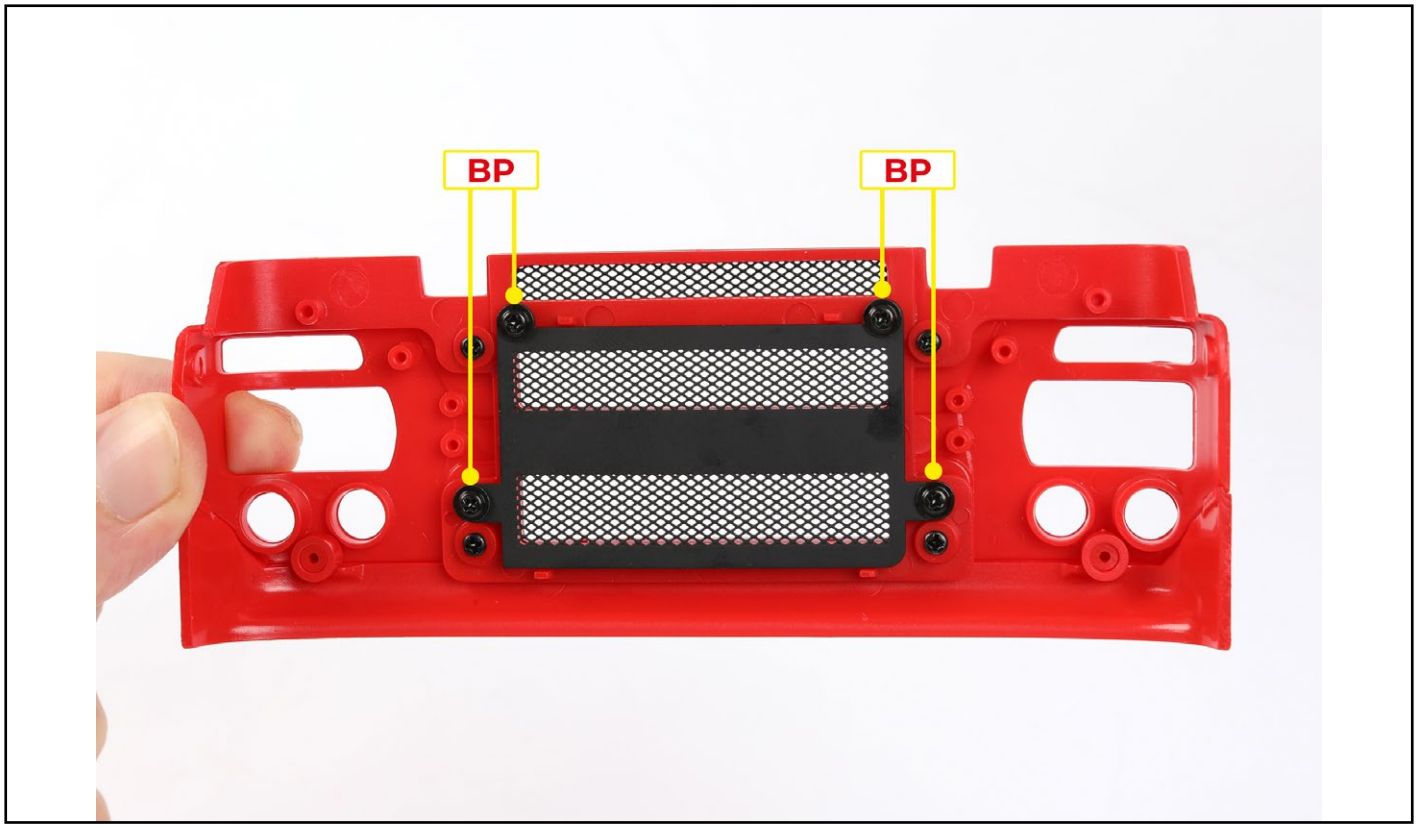


Step 4

Position front bumper 3 (2-C) on the back of the assembled bumper, making sure the parts are oriented correctly and the holes align with the locating pins. Secure the parts together with six AP screws

Stage 02: Building the front bumper

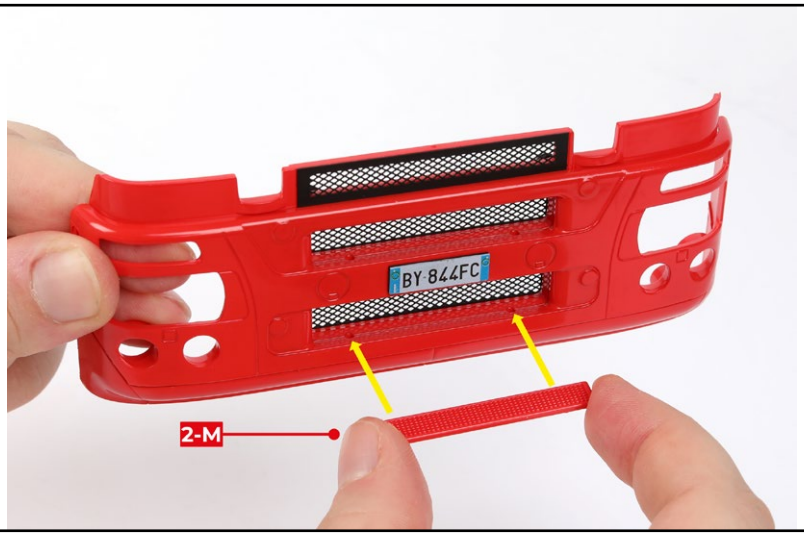


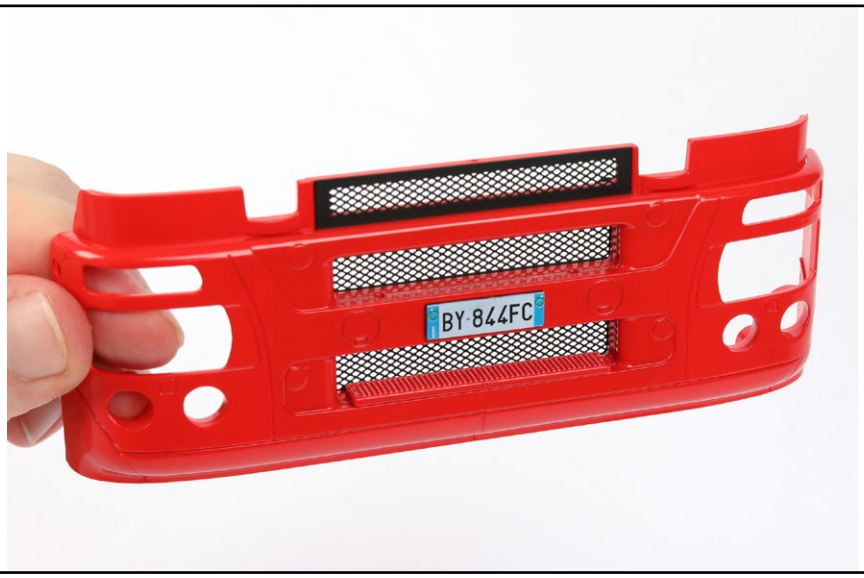


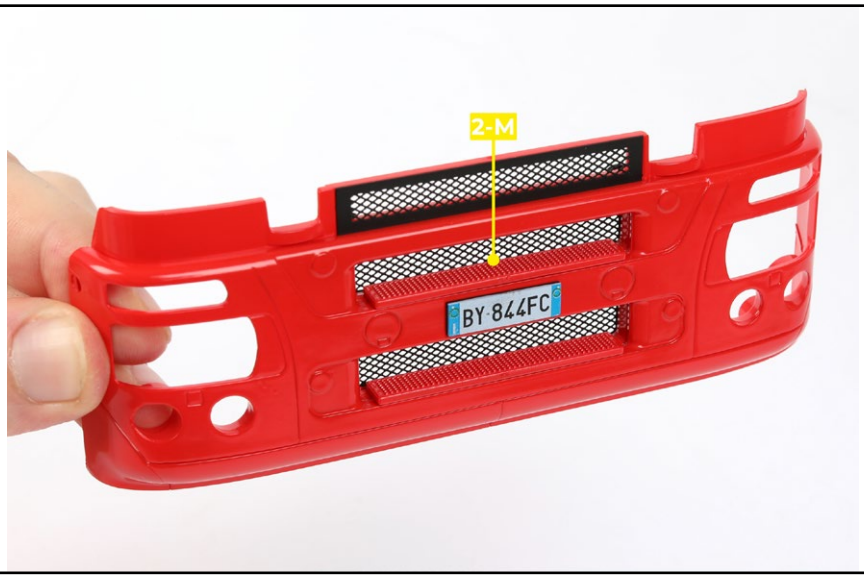
Step 5

Position bumper grille 1 (2-D) on the back of the assembled front bumper, aligning the holes with the corresponding locating pins. Secure it with four BP screws.

Stage 02: Building the front bumper





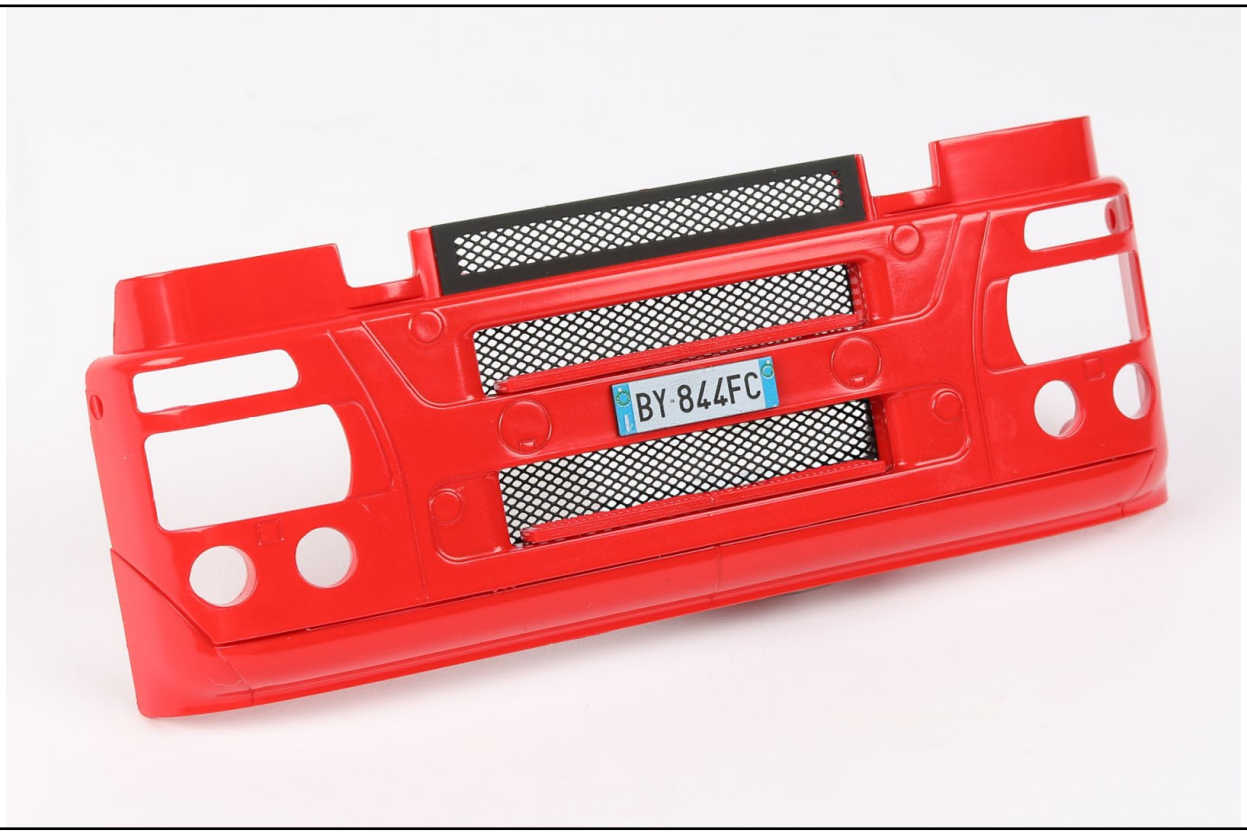


Step 6

Position the two front access steps 2-M on the front of the bumper, aligning their locating pins with the corresponding holes. Press gently to secure them in place.

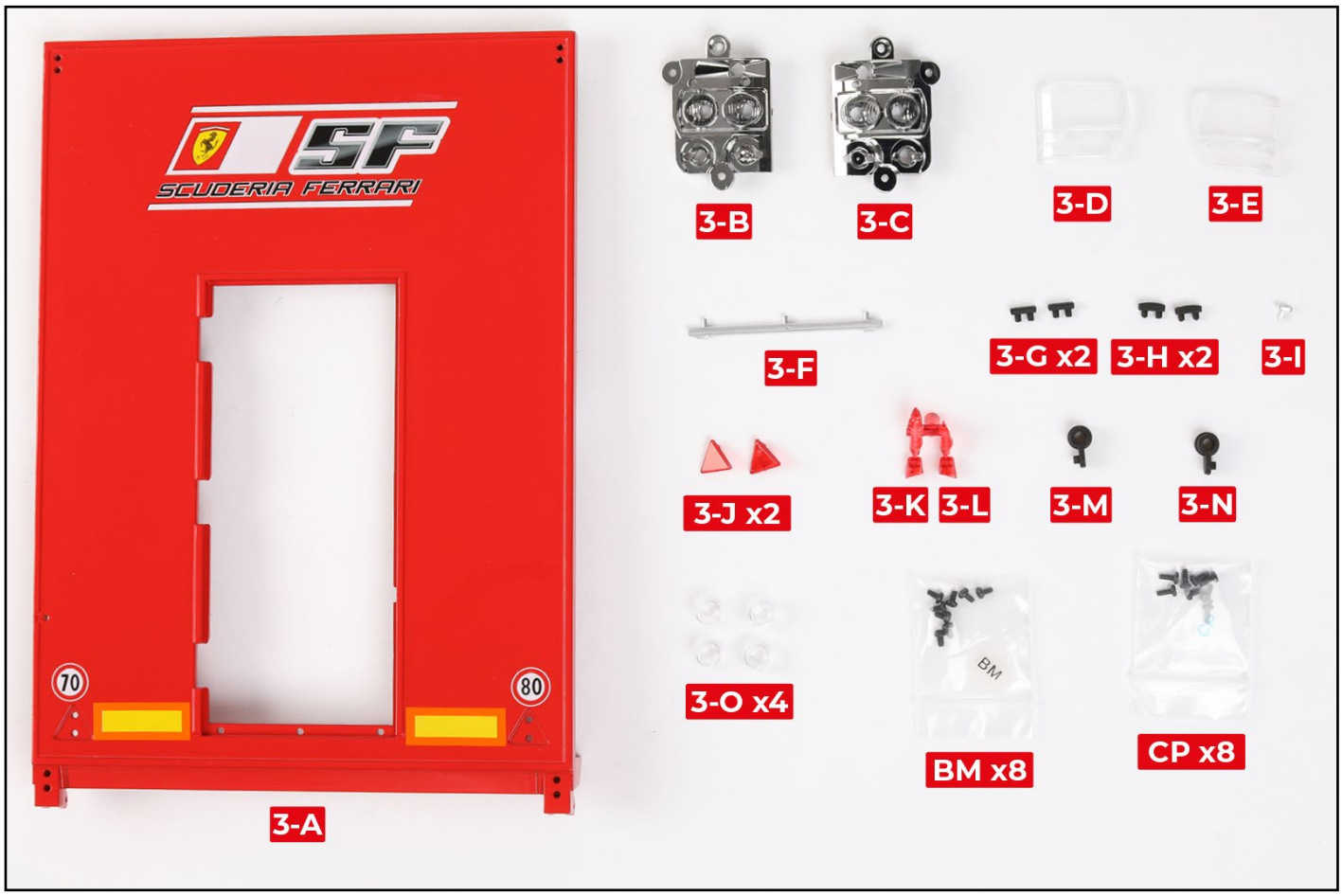
Stage 02: Building the front bumper

STAGE 02 COMPLETE



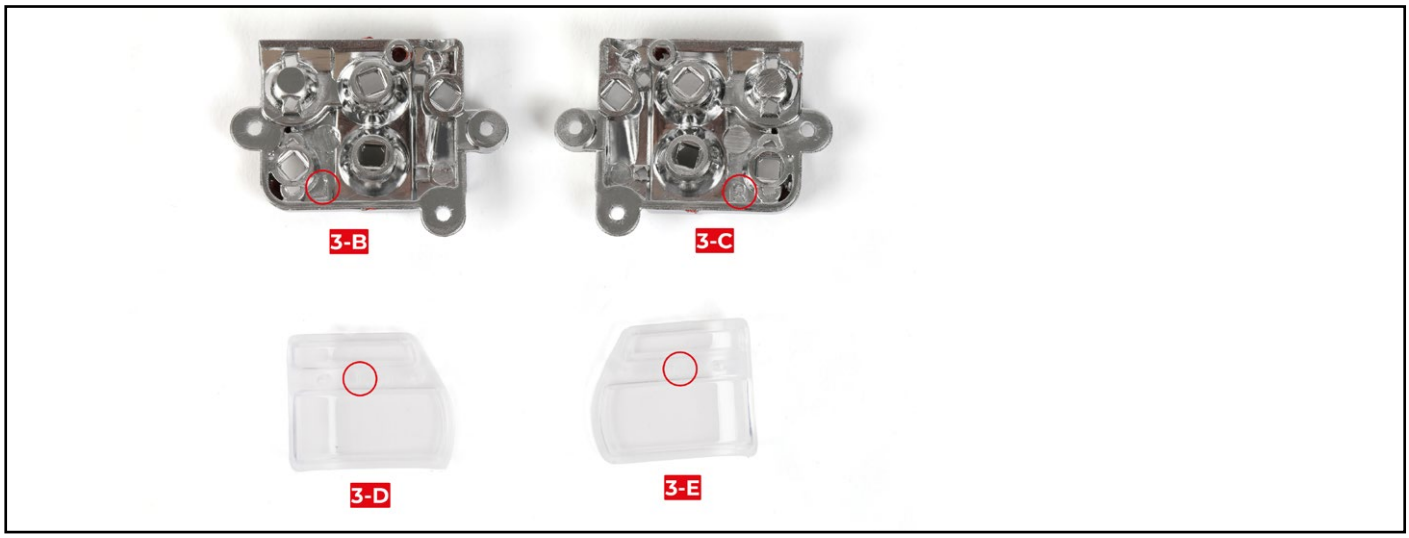
Stage 03: Building the headlights and rear trailer panel

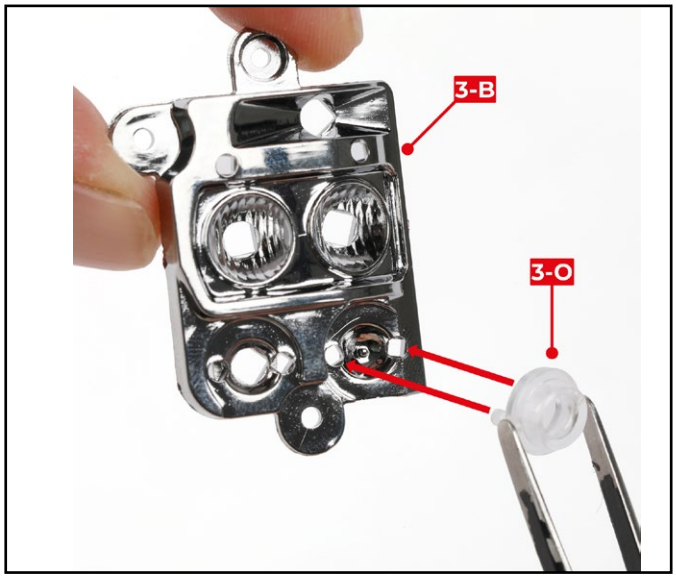
STAGE 03 PARTS

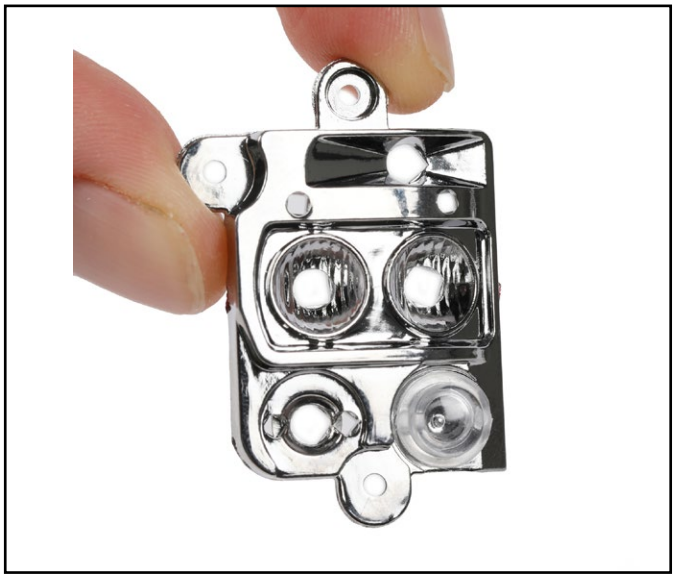


3-A: Trailer rear panel
3-B: Left headlight housing
3-C: Right headlight housing
3-D: Left headlight lens
3-E: Right headlight lens
3-F: Access step
3-G: Upper bump stops
3-H: Lower bump stops
3-I: Rear door stop
3-J: Reflectors
3-K: Indicator light
3-L: Indicator light
3-M: Indicator light housing
3-N: Indicator light housing
3-O: Fog lights
BM: 8 screws
CP: 8 screws

Stage 03: Building the headlights and rear trailer panel





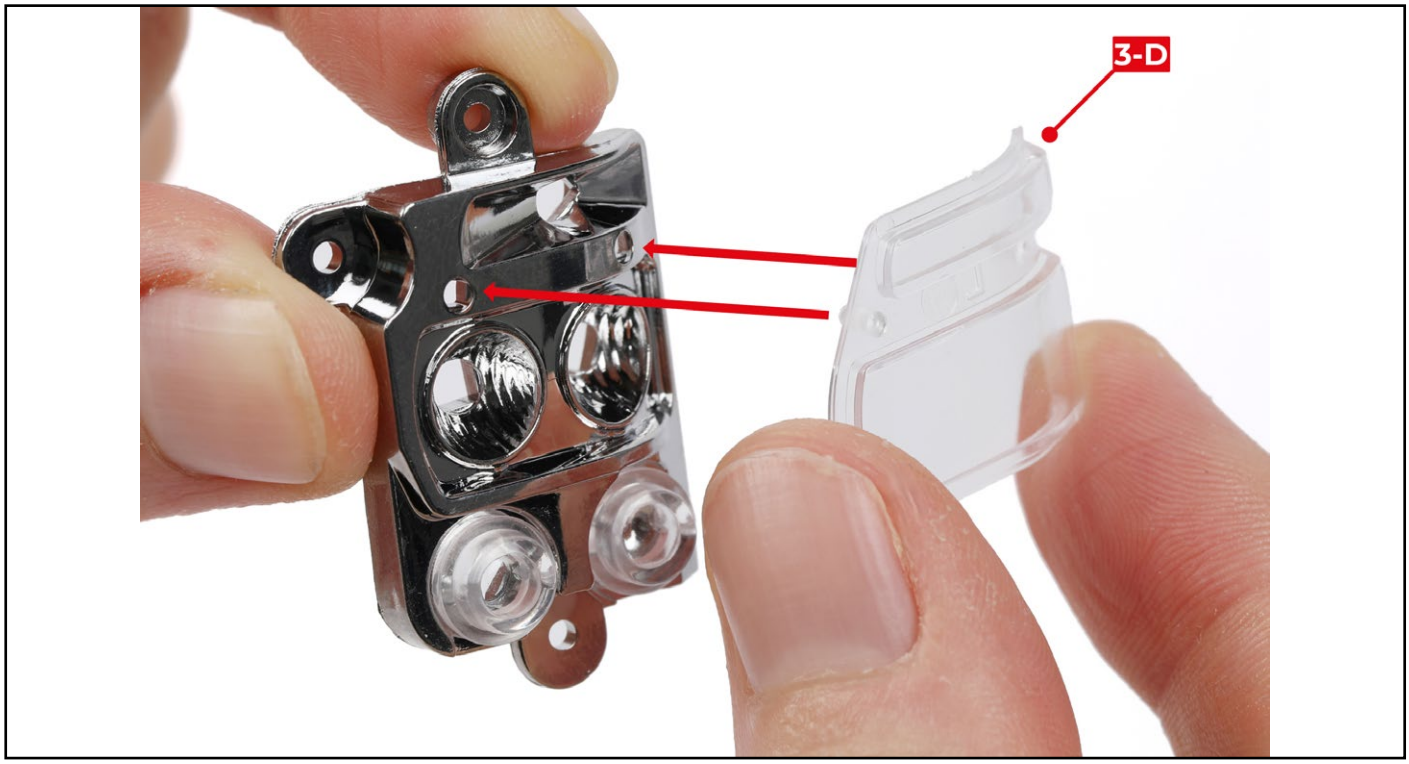




Step 1

Identify the parts shown in the image: 3-B, 3-C, 3-D and 3-E. Position two fog lights 3-O in the lower left and lower right recesses of the right headlight housing 3-C as shown.

Stage 03: Building the headlights and rear trailer panel

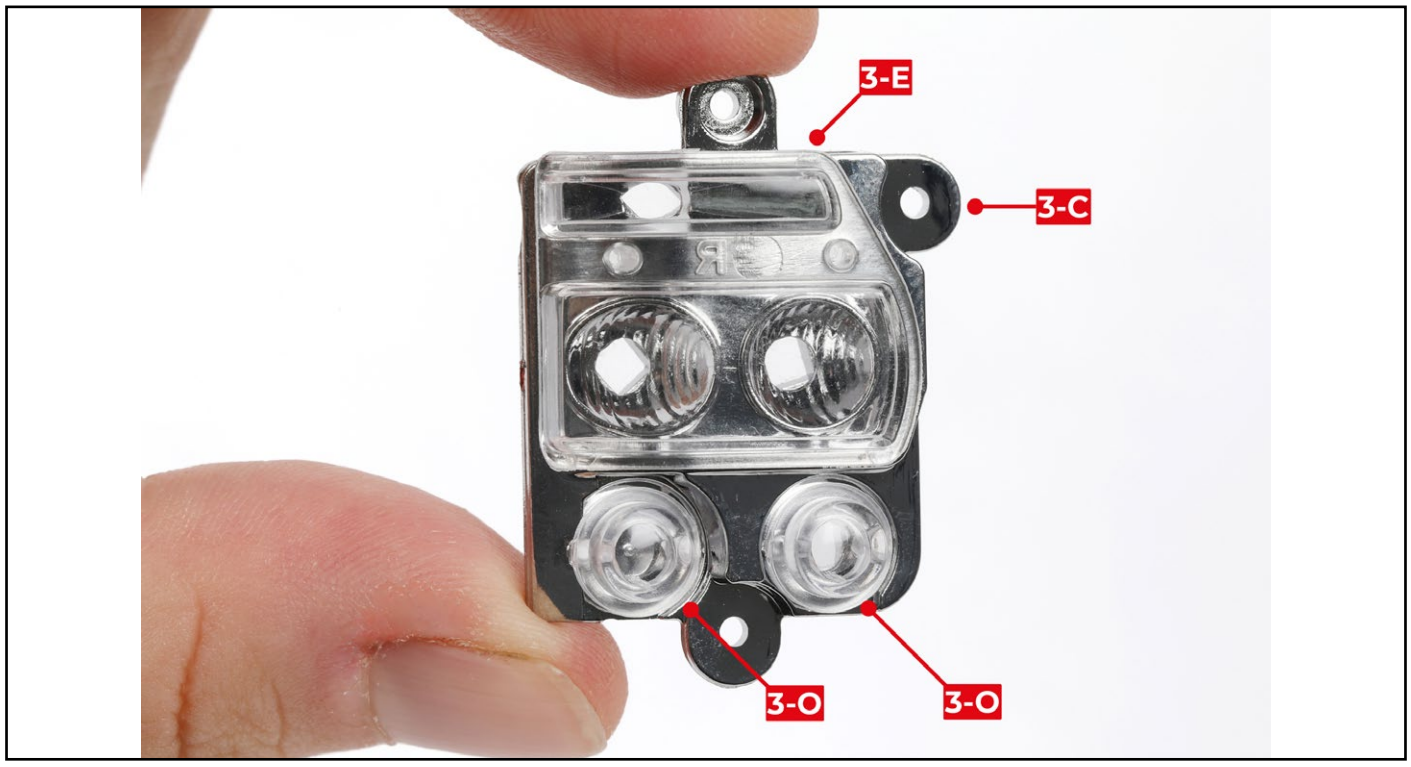




Step 2

Fit the left headlight lens 3-D to the left headlight housing 3-B, pressing it gently into place.

Stage 03: Building the headlights and rear trailer panel

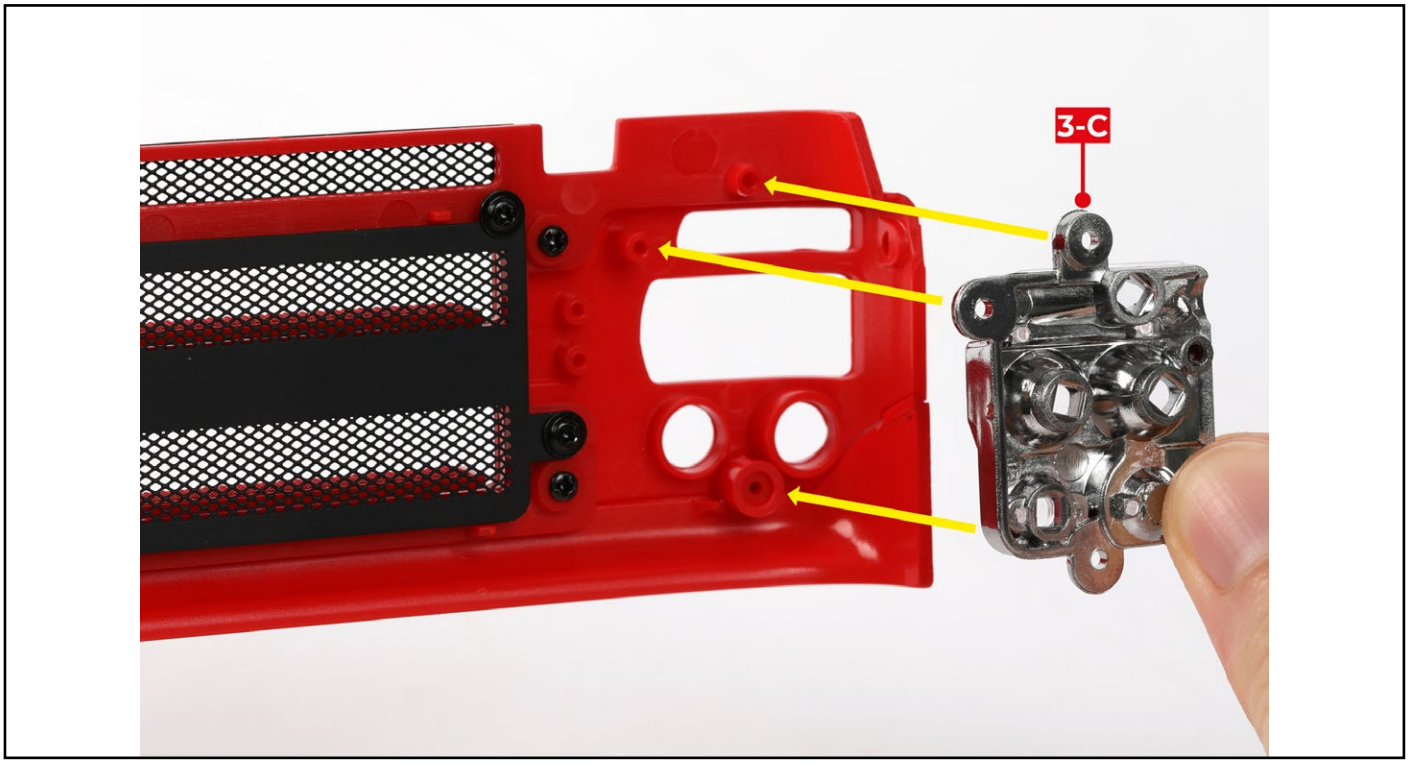


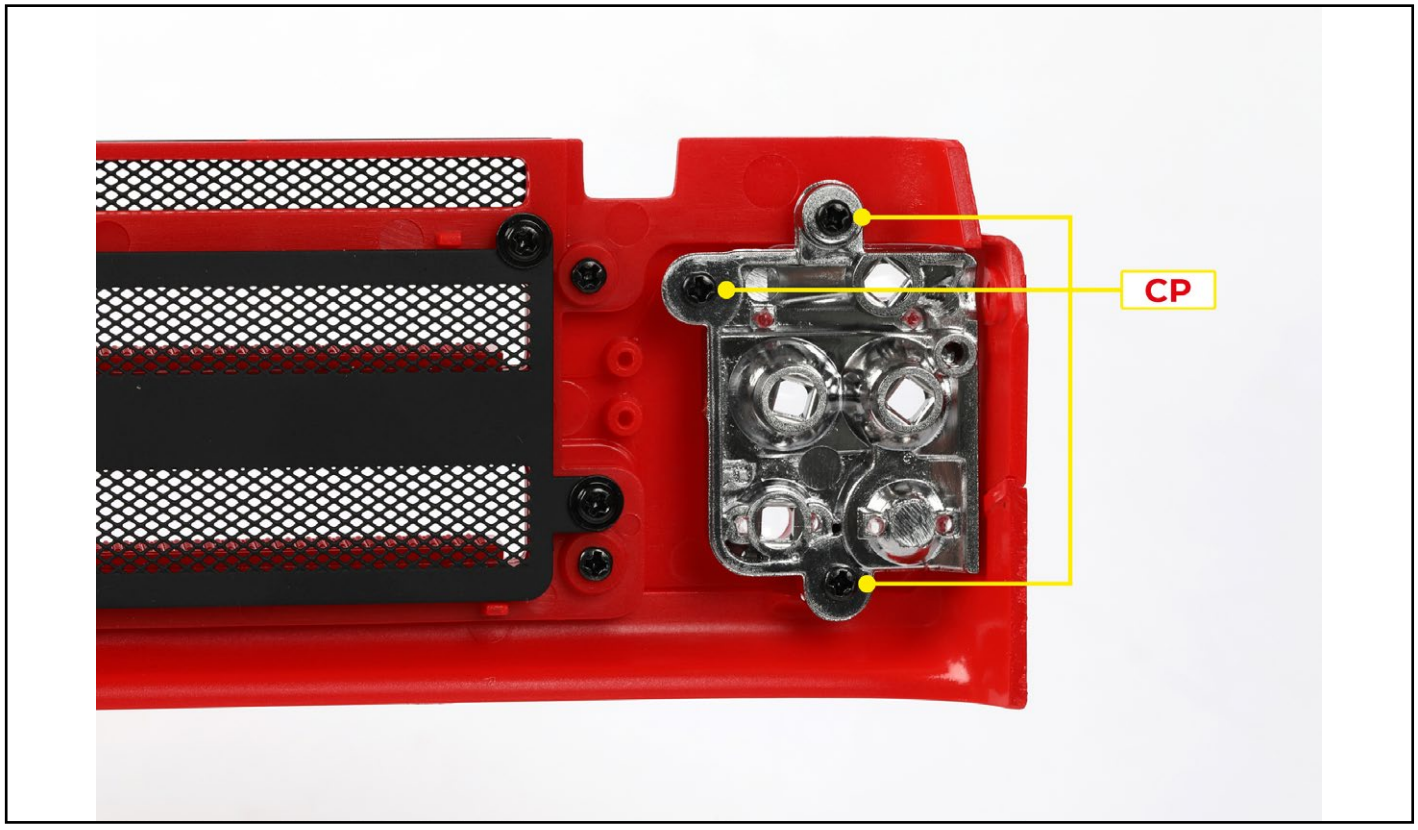


Step 3

Assemble the right headlight housing 3-C in the same way, fitting the remaining two fog lights 3-O and the right headlight lens 3-E.

Stage 03: Building the headlights and rear trailer panel

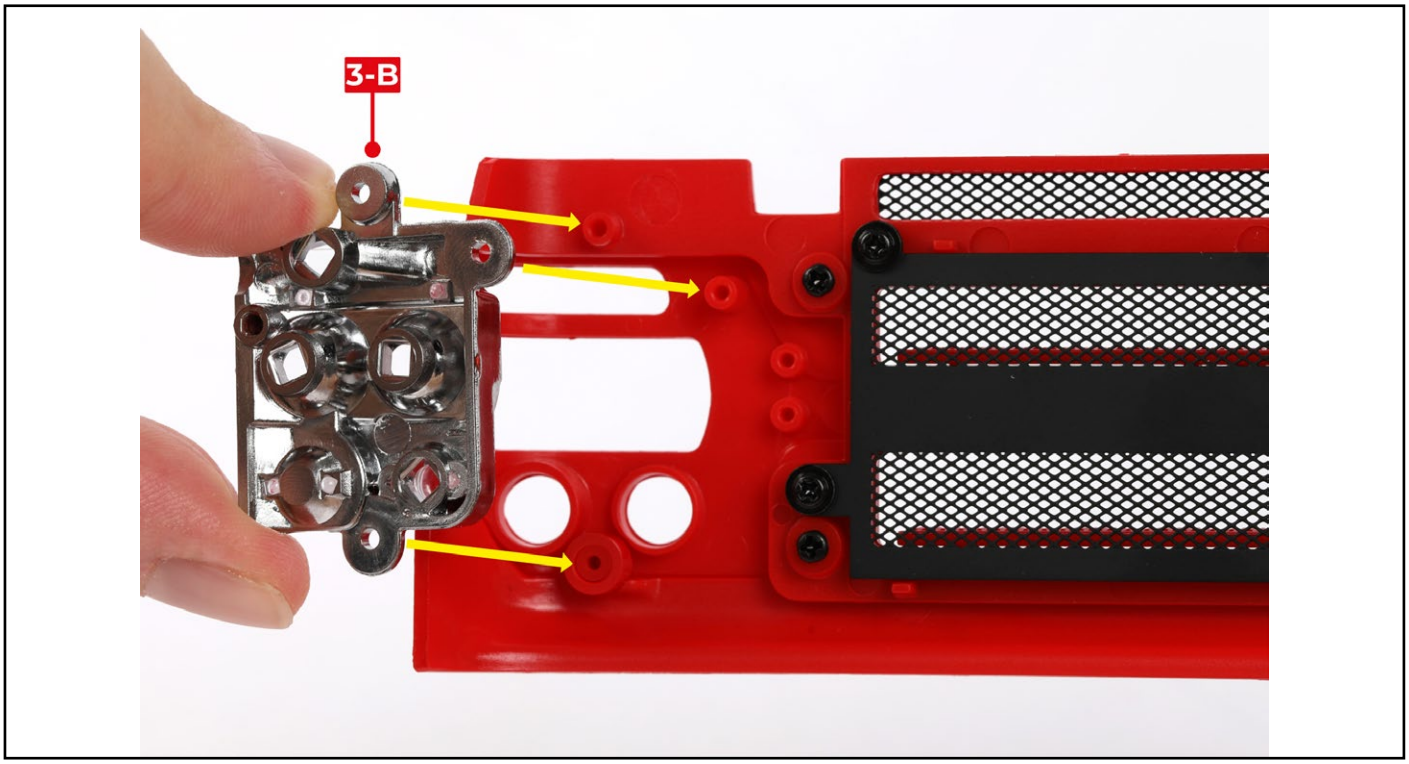


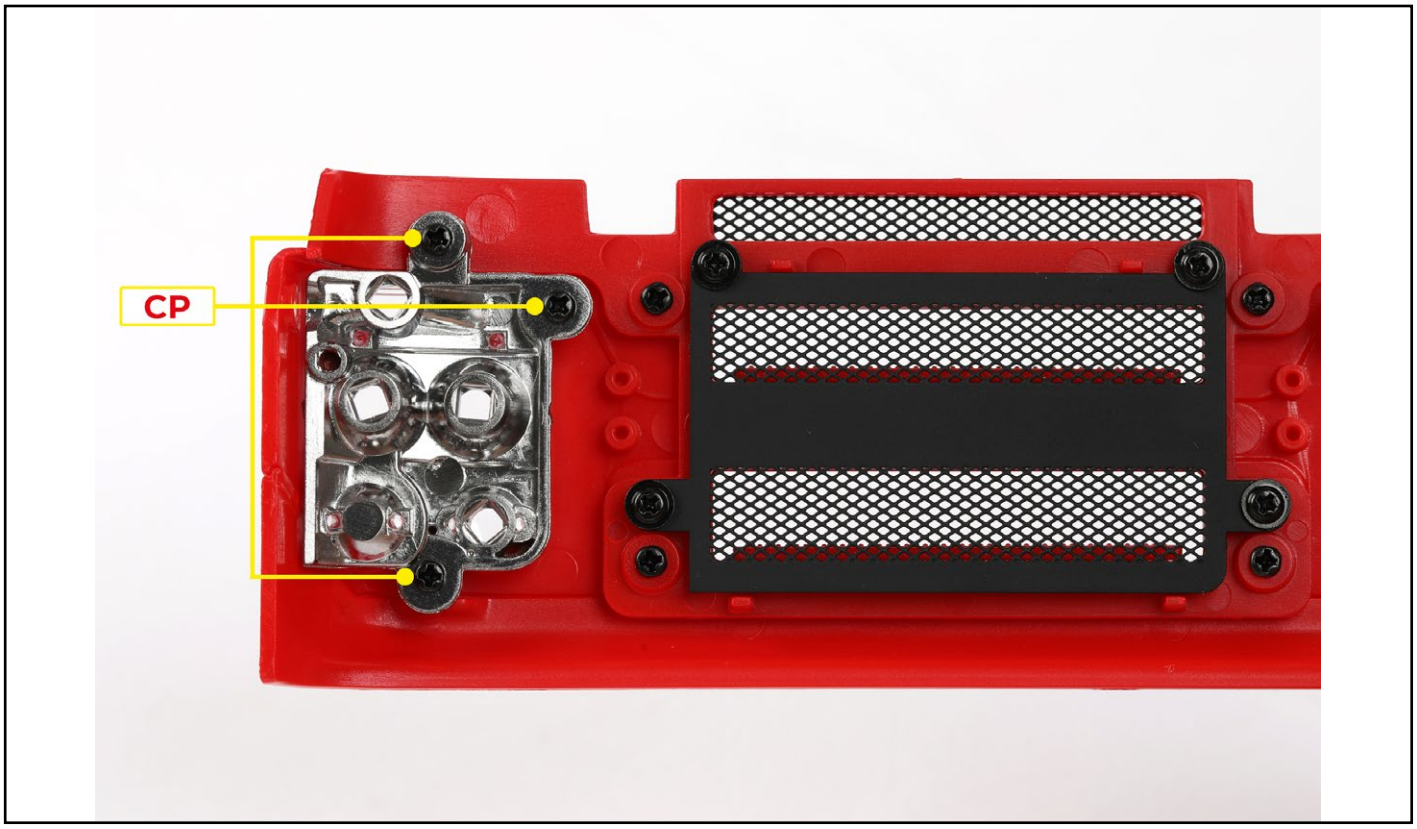


Step 4

Retrieve the front bumper assembled in Stage 2. Position the right headlight housing 3-C on the back of the bumper, aligning the three mounting points with the corresponding holes. Secure the right headlight housing 3-C with three CP screws.

Stage 03: Building the headlights and rear trailer panel

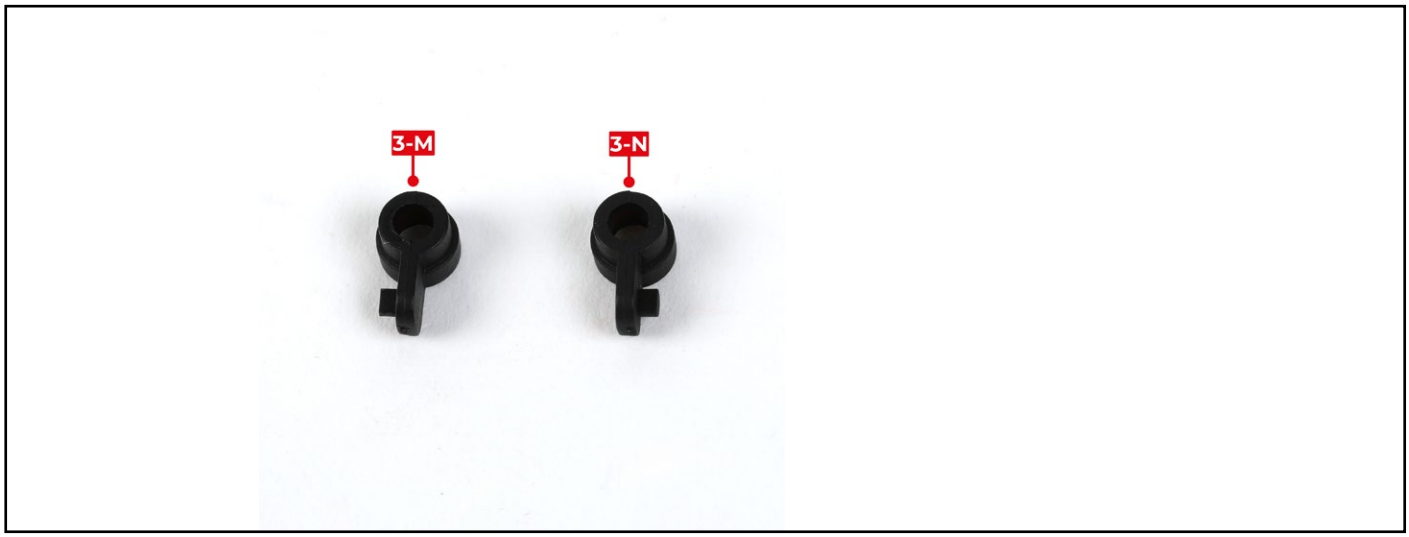


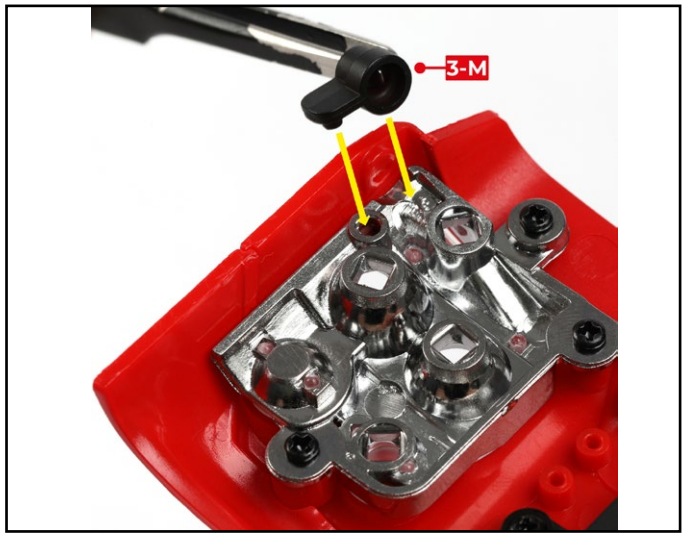


Step 5

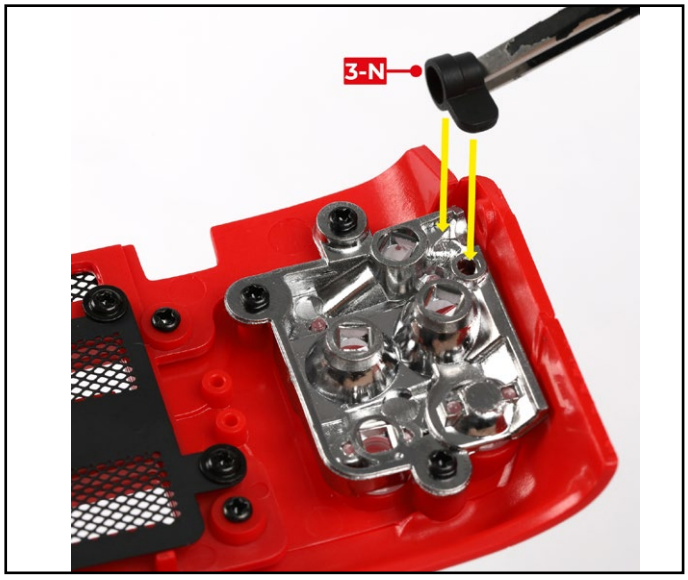
Position the left headlight housing 3-B on the back of the bumper in the same way, then secure it with three CP screws.

Stage 03: Building the headlights and rear trailer panel







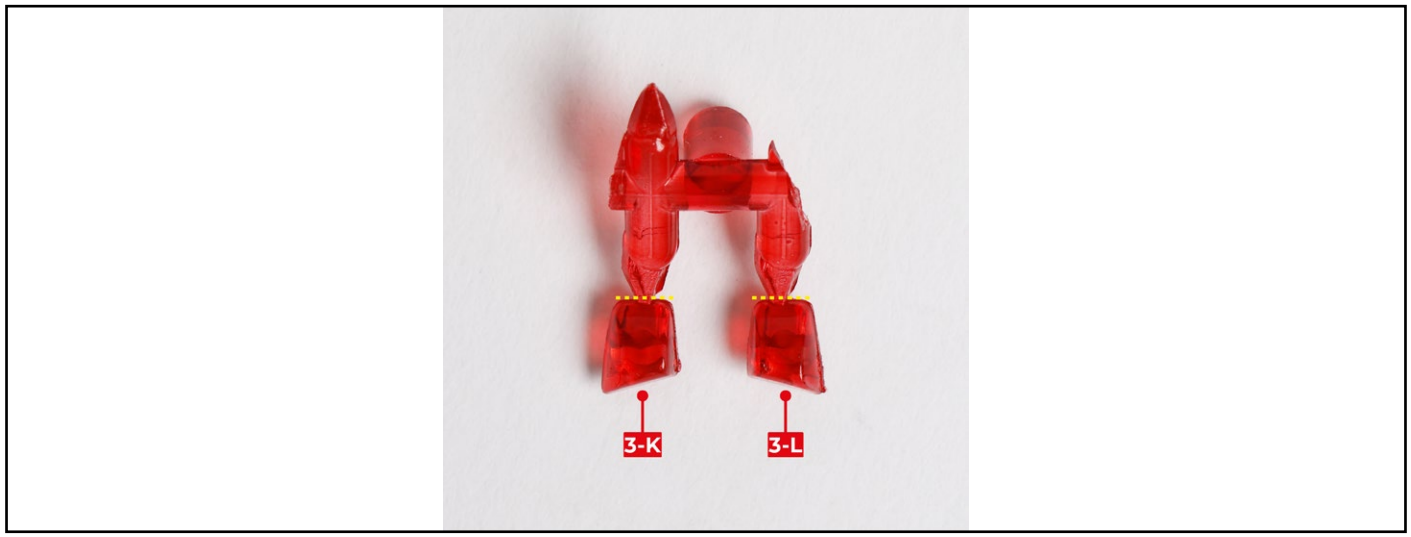




Step 6

Identify the parts shown in the image: 3-M and 3-N. Press the right and left indicator light housings 3-M and 3-N into their corresponding positions on the back of the front bumper.

Stage 03: Building the headlights and rear trailer panel





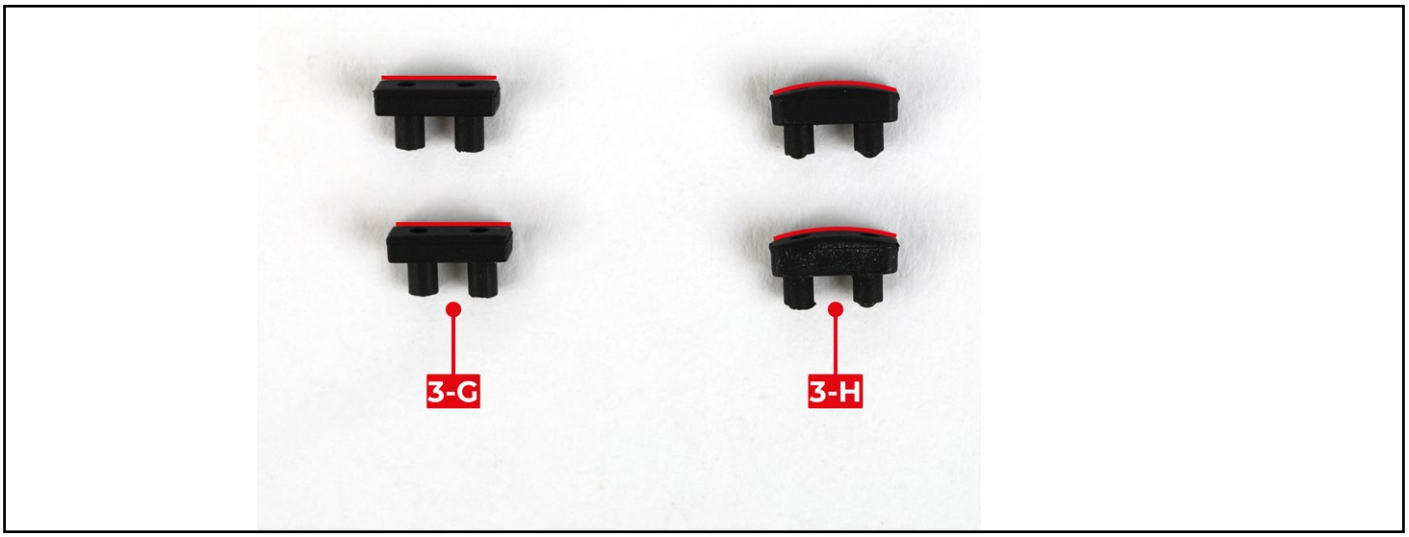


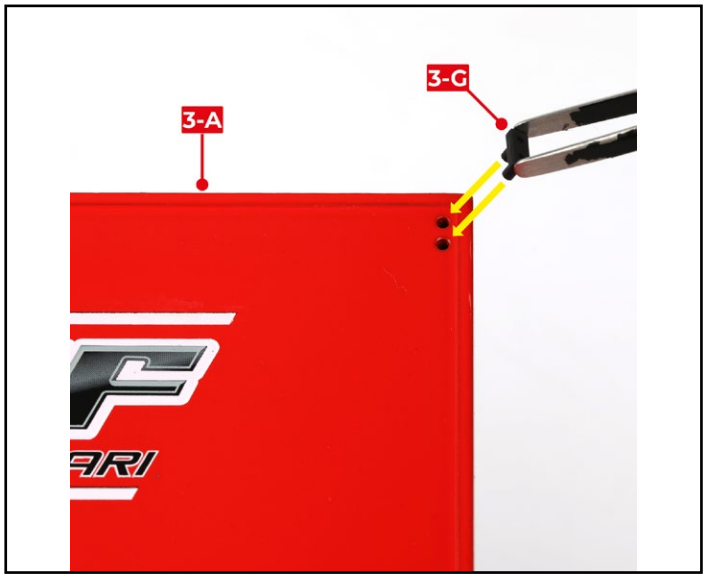


Step 7

Identify the parts 3-K and 3-L and cut them from the sprue. Press the two indicator lights 3-K and 3-L into their corresponding positions on the front of the bumper.

Stage 03: Building the headlights and rear trailer panel









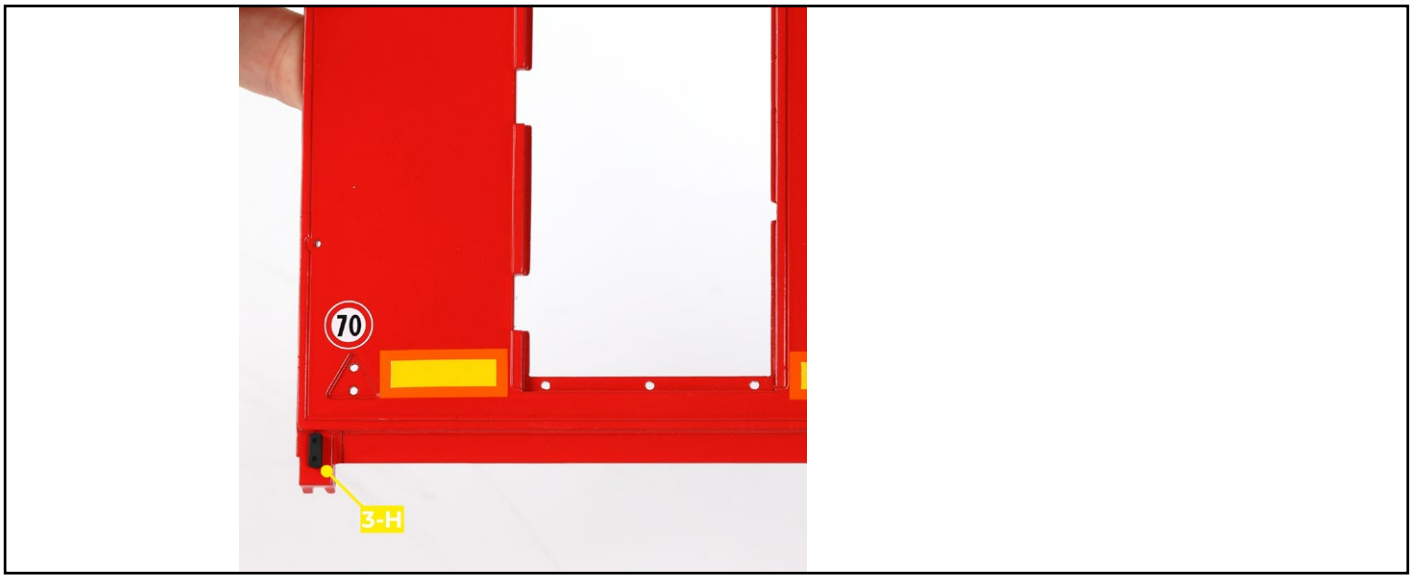
Step 8

Identify parts 3-G and 3-H using the image. On the right side of the trailer rear panel 3-A, position one upper bump stop 3-G and press it gently into place. Fit the upper bump stop 3-G to the left side in the same way.

Stage 03: Building the headlights and rear trailer panel



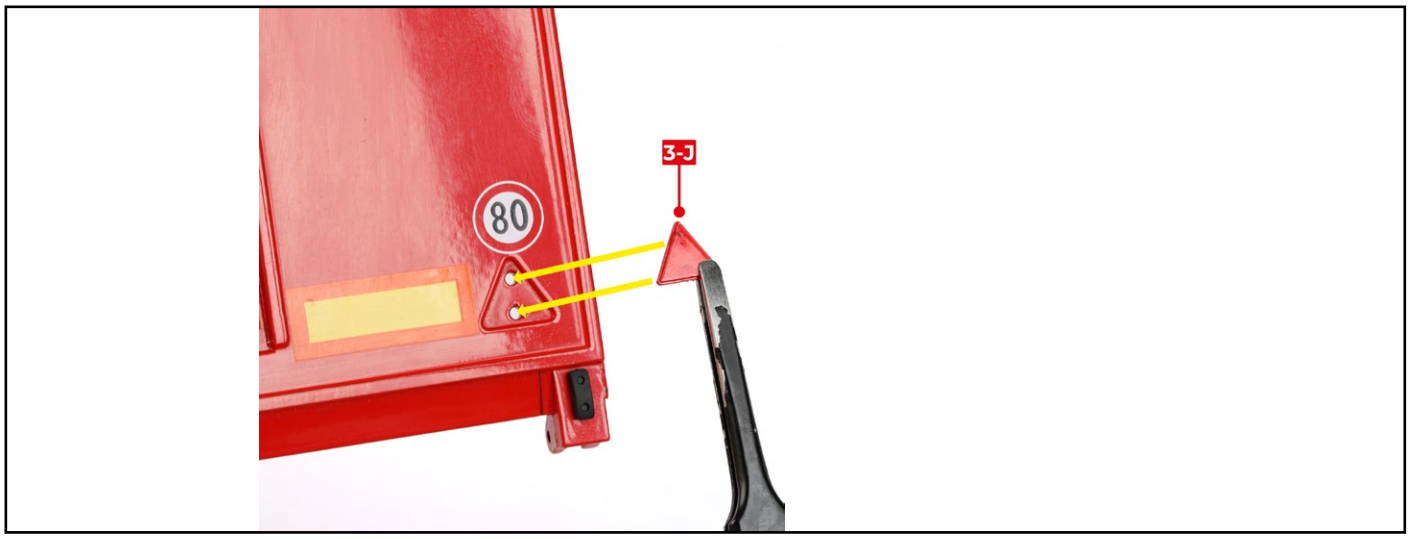




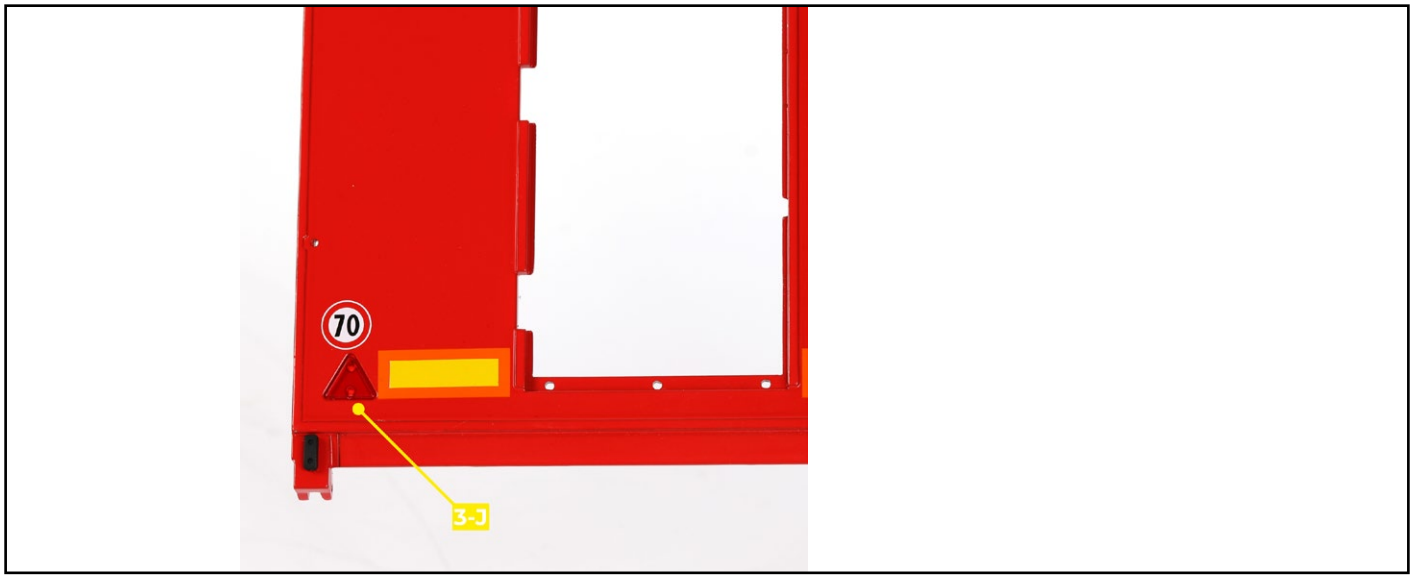
Step 9

On the right side of the trailer rear panel 3-A, position one lower bump stop 3-H to the right side of the trailer rear panel and gently press it into place. Fit the corresponding lower bump stop 3-H to the left side in the same way.

Stage 03: Building the headlights and rear trailer panel







Step 10

Fit the reflector 3-J to both sides of the trailer rear panel. Press each part gently into place.

Stage 03: Building the headlights and rear trailer panel

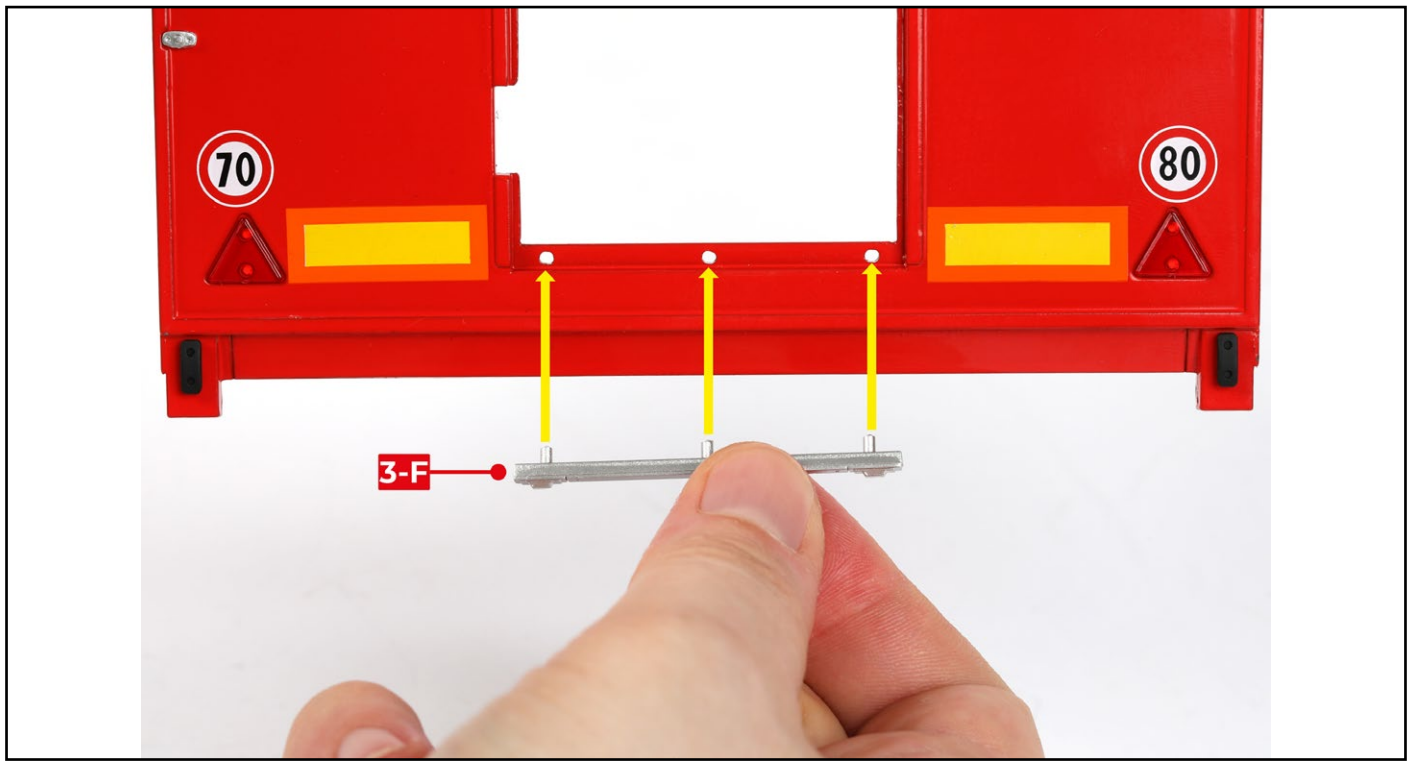


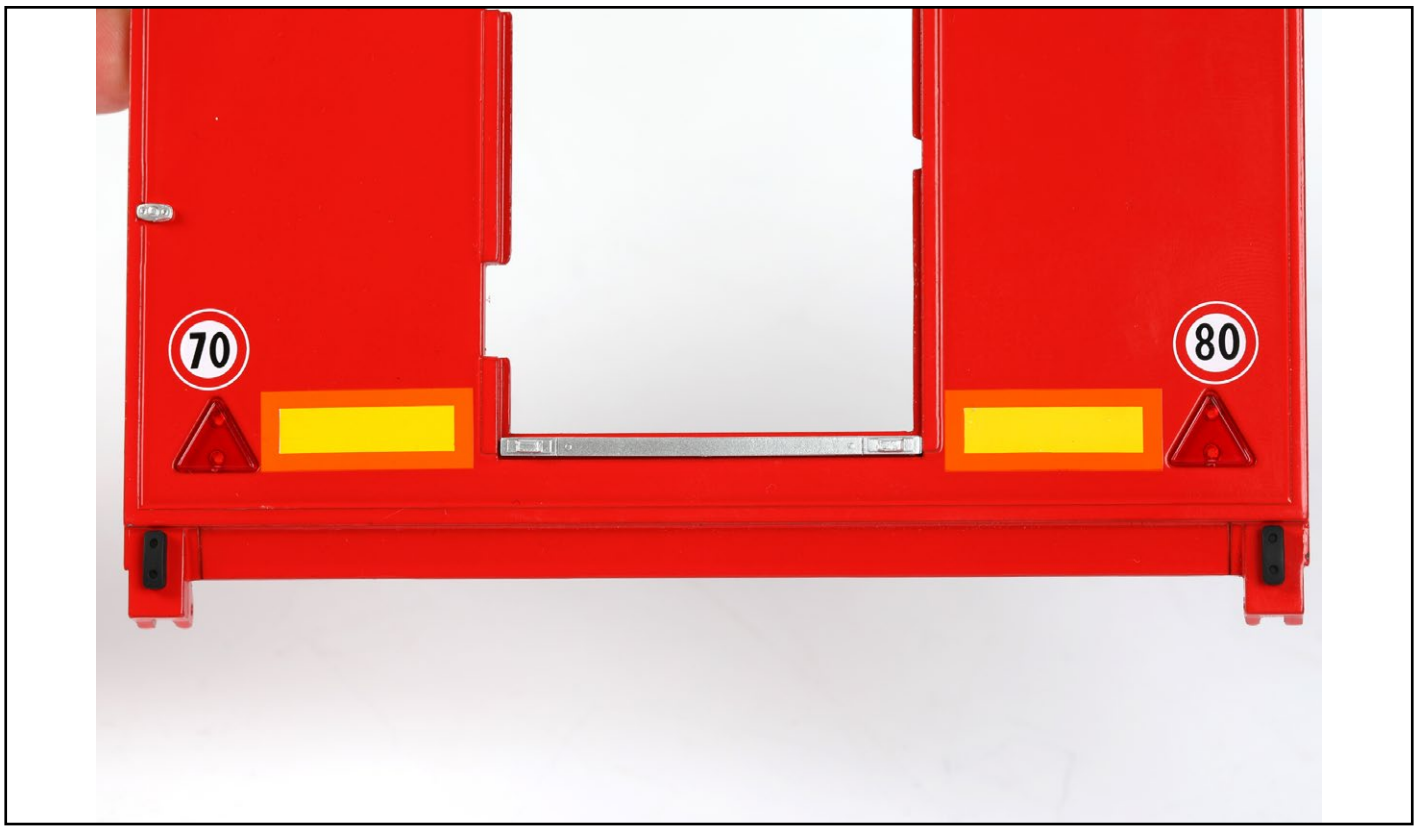


Step 11

Align the locating pins on the rear door stop 3-I with the corresponding holes in the trailer rear panel 3-A, then press the part gently into place.

Stage 03: Building the headlights and rear trailer panel





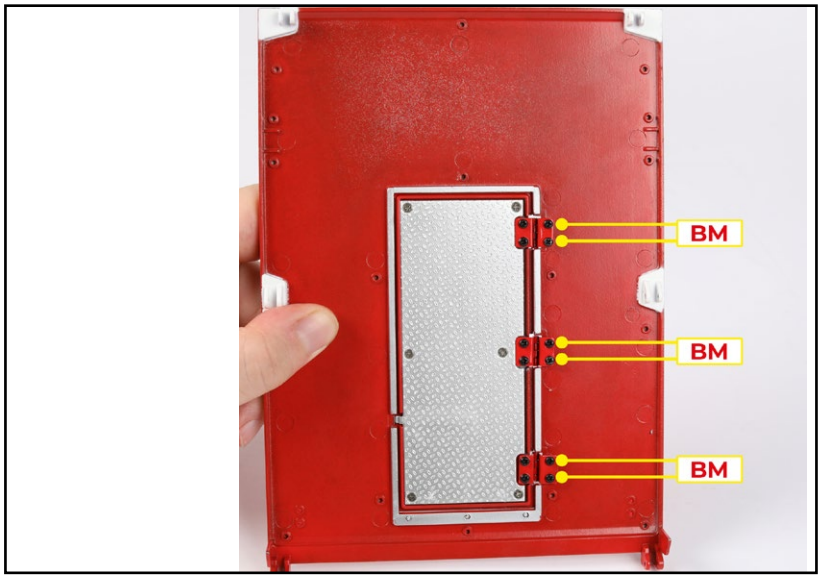
Step 12

Align the locating pins on the access step 3-F with the corresponding holes in the trailer rear panel 3-A, then press the part gently into place.

Stage 03: Building the headlights and rear trailer panel







Step 13

Retrieve the tailgate door assembled in Stage 1 and position it in the opening in the trailer rear panel 3-A. Secure the tailgate hinges to the trailer rear panel with six BM screws.

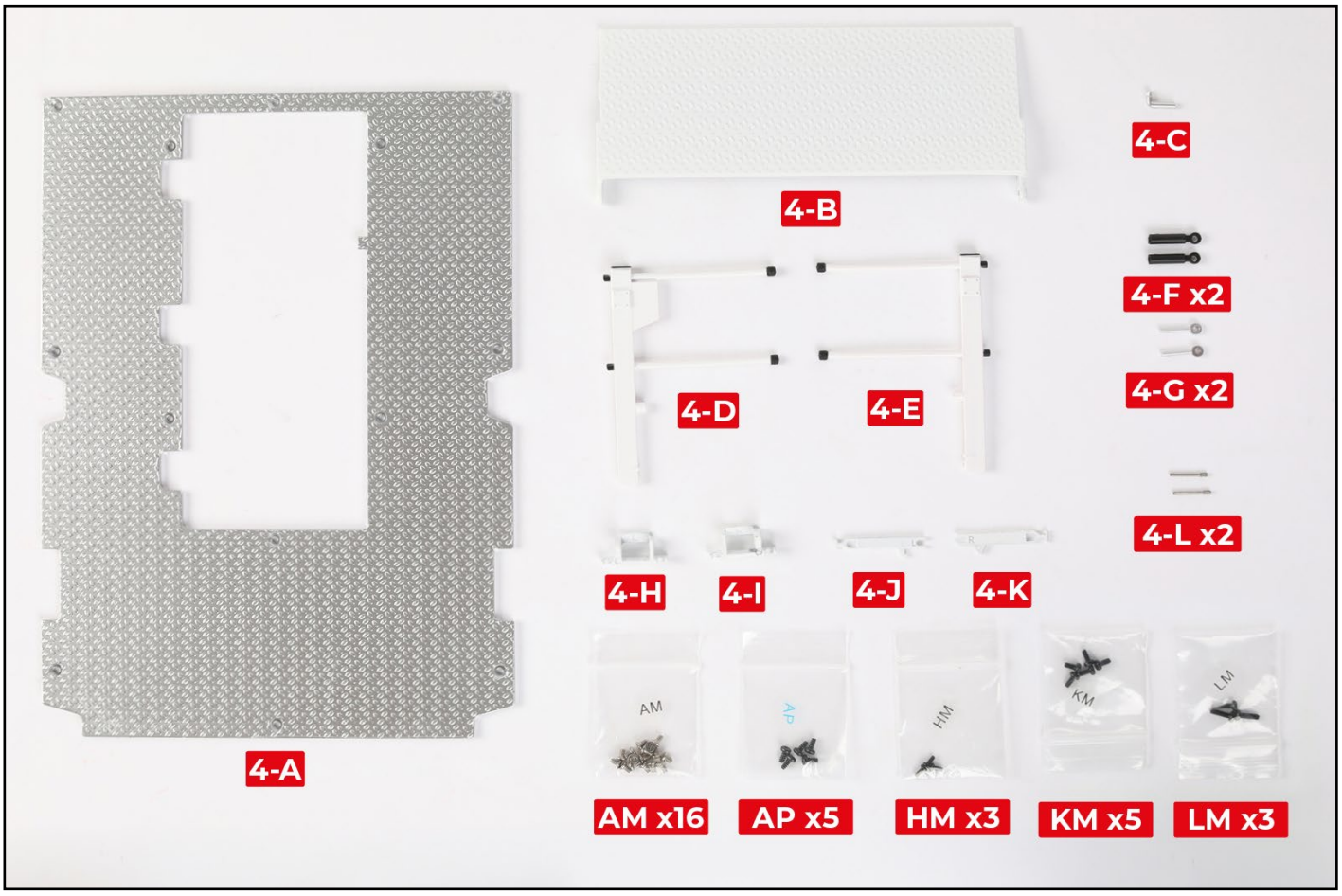
Stage 03: Building the headlights and rear trailer panel

STAGE 03 COMPLETE



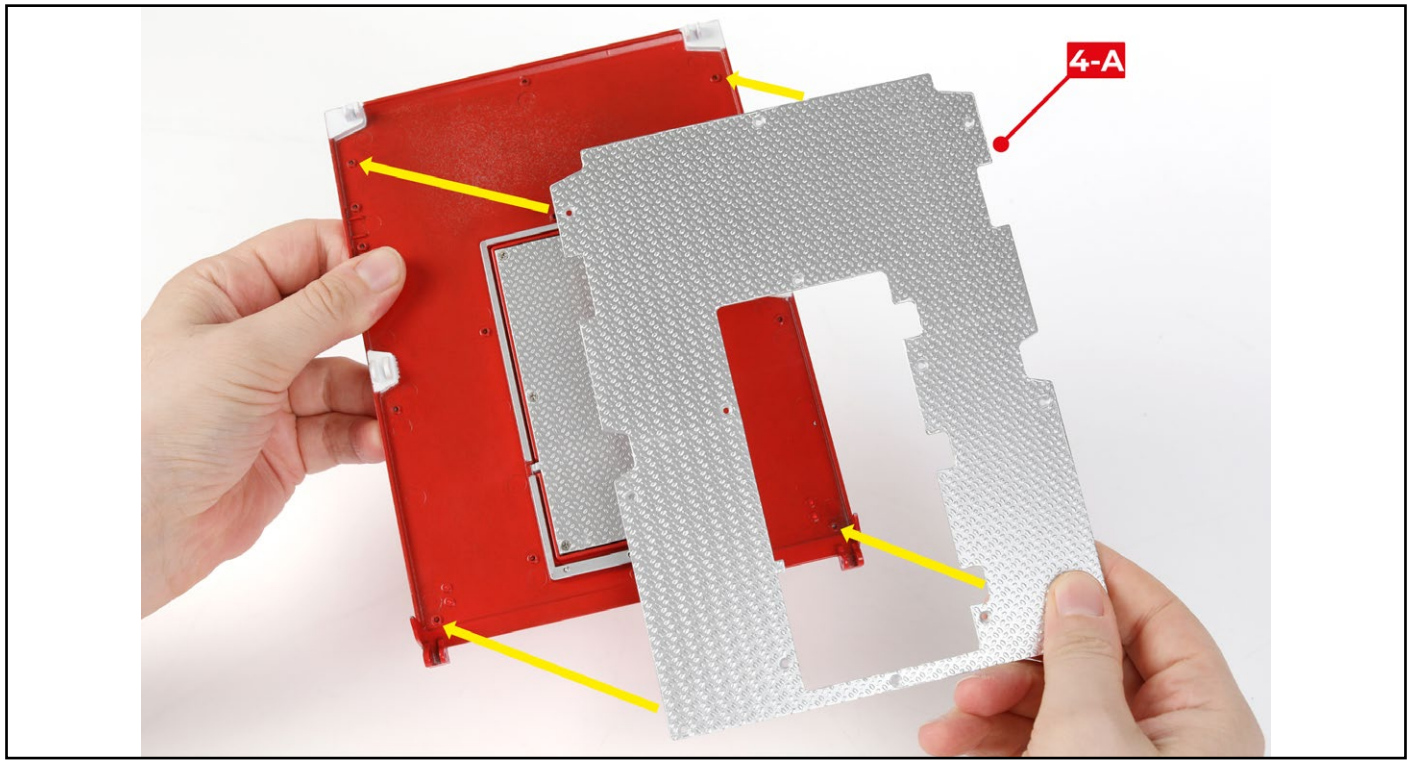
Stage 04: Fitting the inner rear panel and loading platform

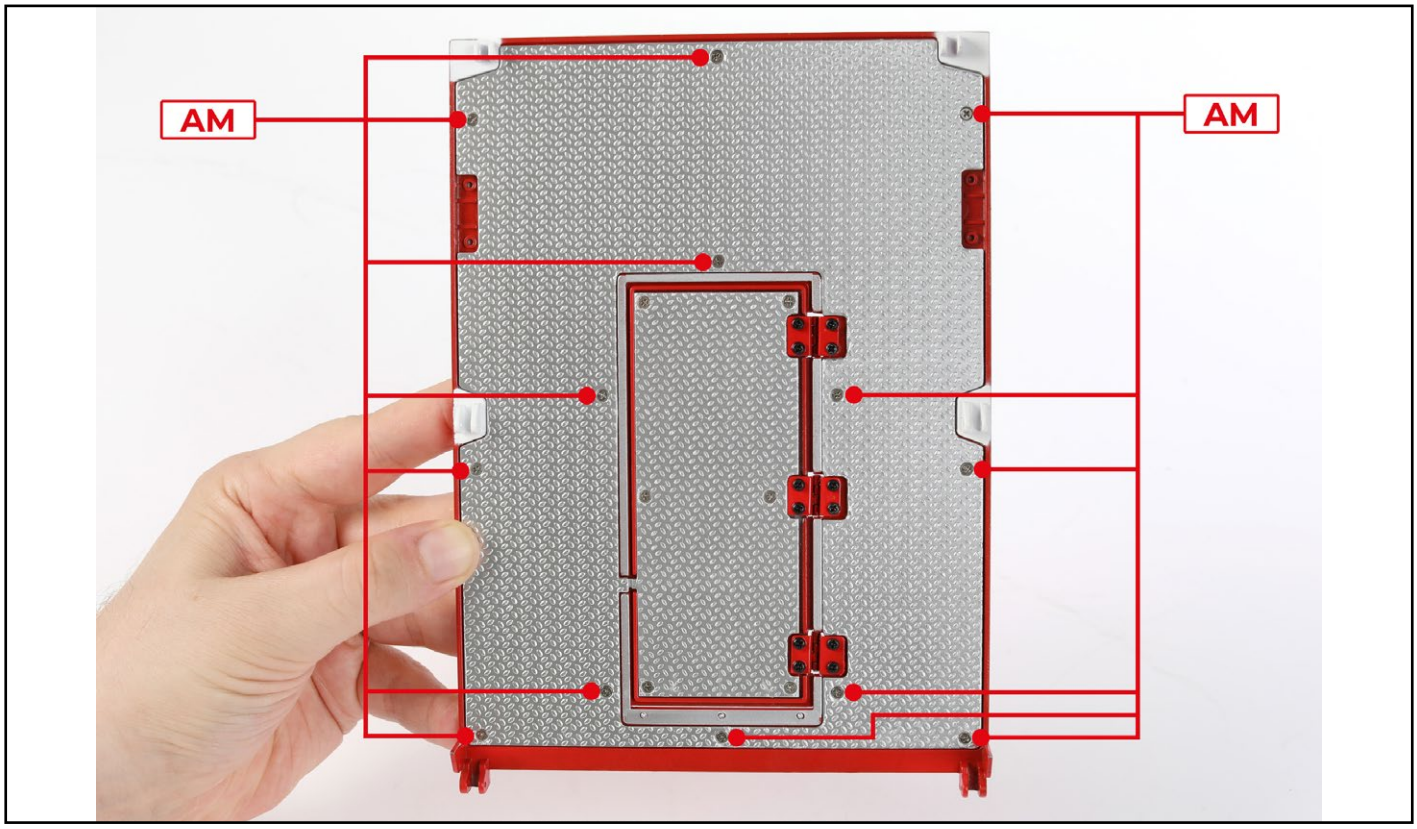
STAGE 04 PARTS



4-A: Inner rear panel
4-B: Loading platform
4-C: Handle
4-D: Left loading platform rail
4-E: Right loading platform rail
4-F: Hydraulic cylinders
4-G: Hydraulic pistons
4-H: Left bracket
4-I: Right bracket
4-J: Left safety bar
4-K: Right safety bar
4-L: Rail pins
AM: 16 screws
AP: 5 screws
HM: 3 screws
KM: 5 screws
LM: 3 screws

Stage 04: Fitting the inner rear panel and loading platform

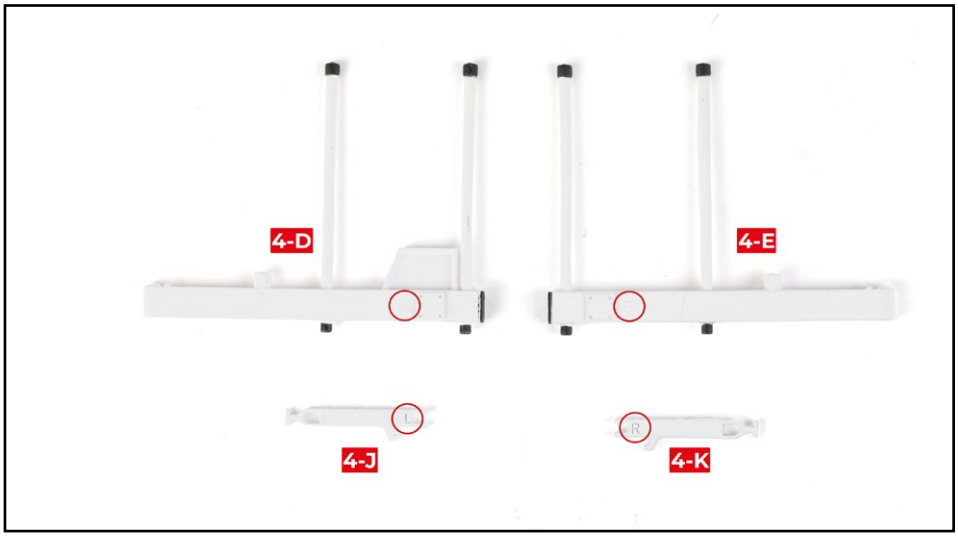


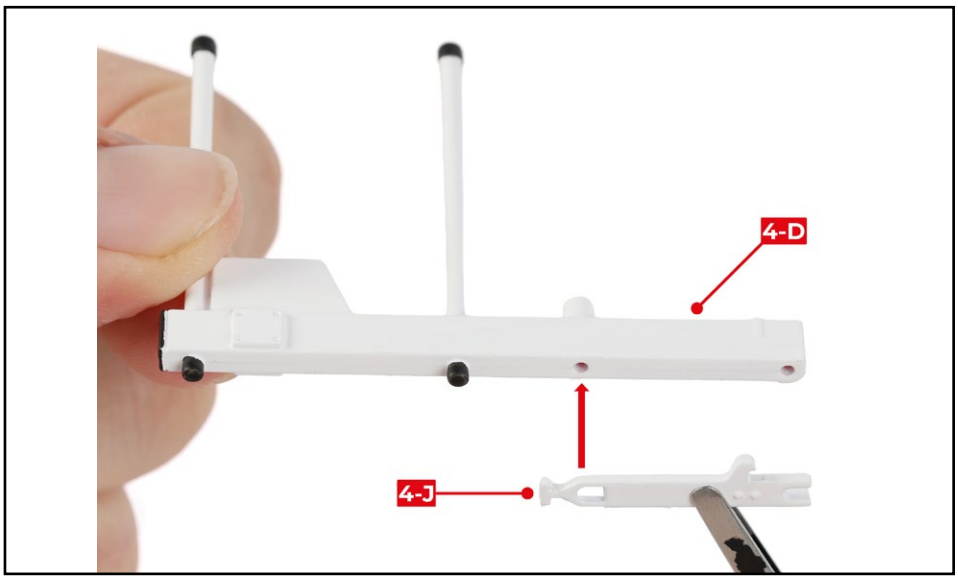


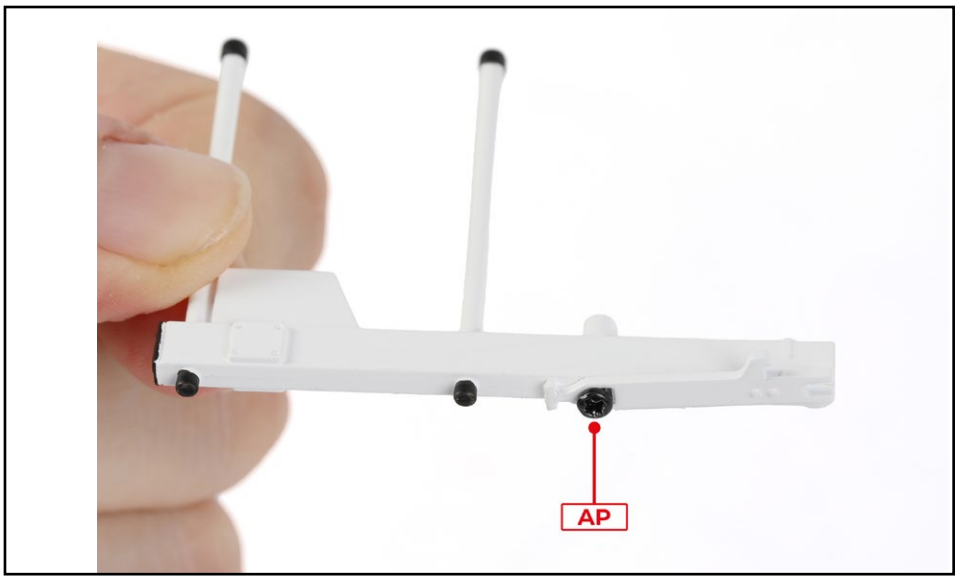
Step 1

Position the inner rear panel 4-A on the inside of the trailer rear panel assembled in Stage 3, aligning the opening with the tailgate door as shown. Secure the inner rear panel 4-A with thirteen AM screws

Stage 04: Fitting the inner rear panel and loading platform



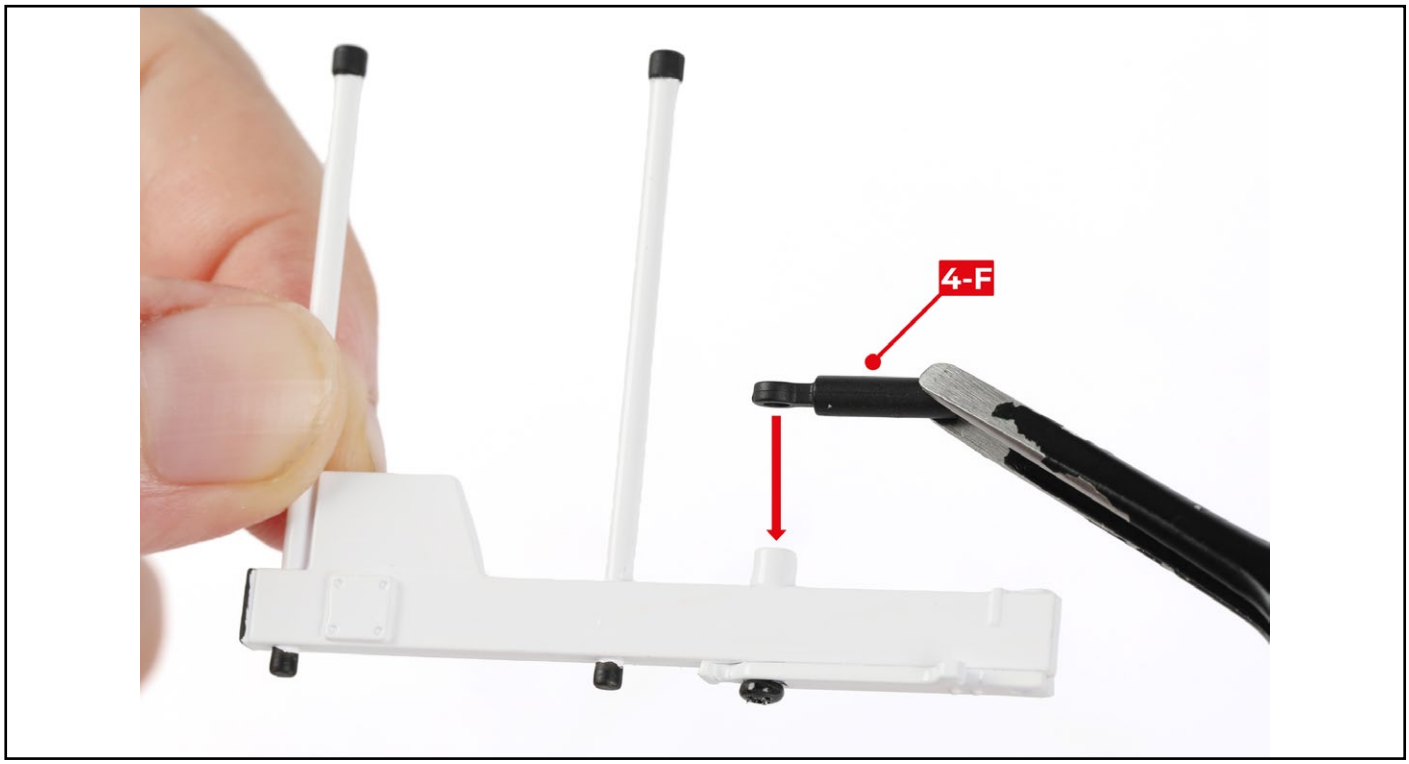


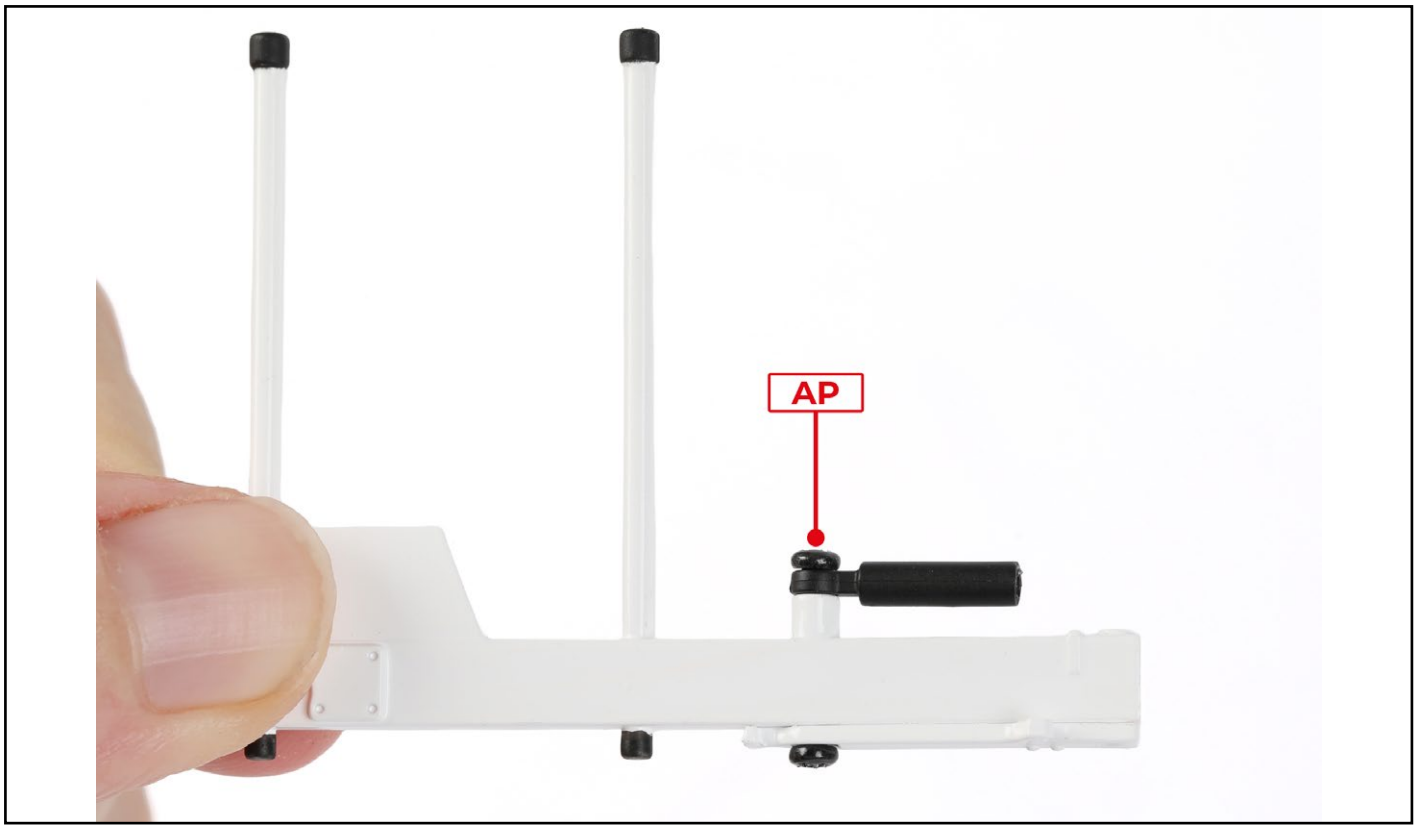


Step 2

Identify the left and right loading platform rails 4-D and 4-E, and the left and right safety bars 4-J and 4-K. Position the left safety bar 4-J on the left loading platform rail 4-D as shown, then secure it with one AP screw.

Stage 04: Fitting the inner rear panel and loading platform

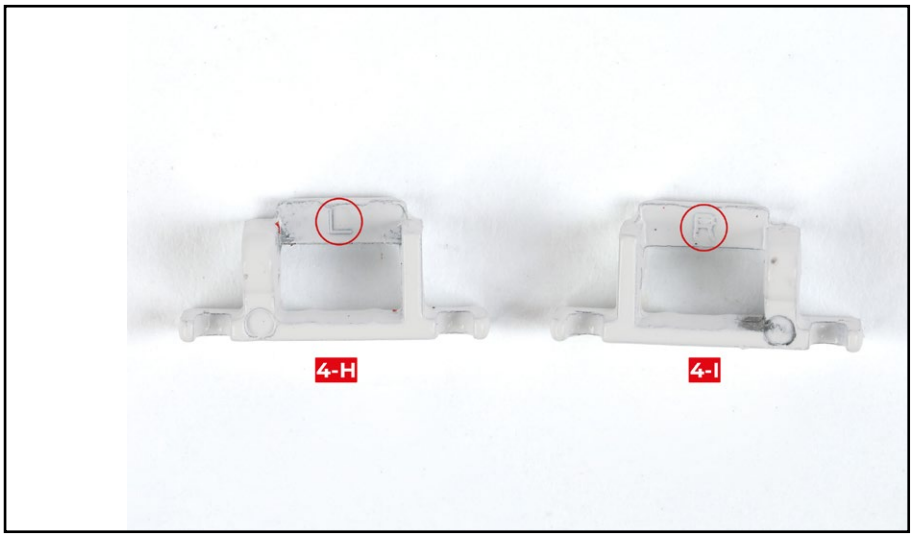


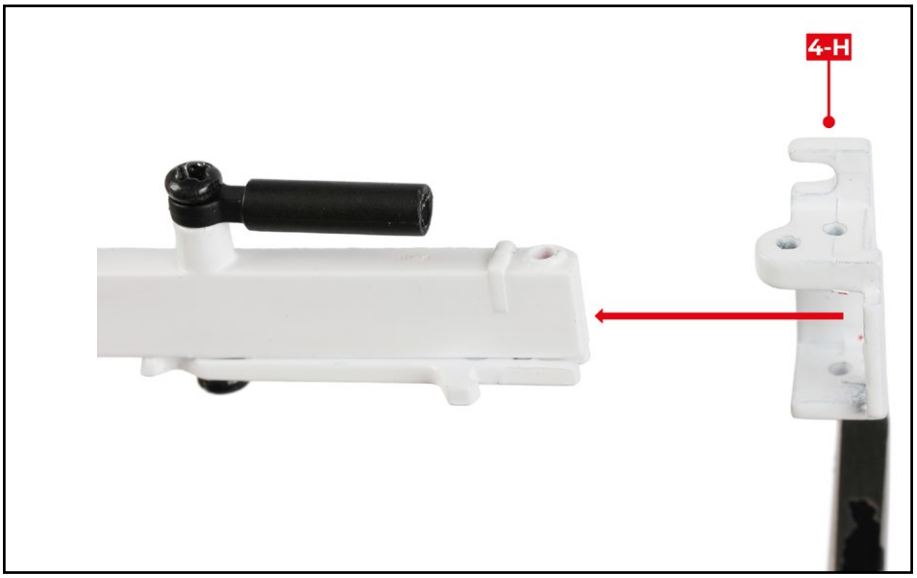


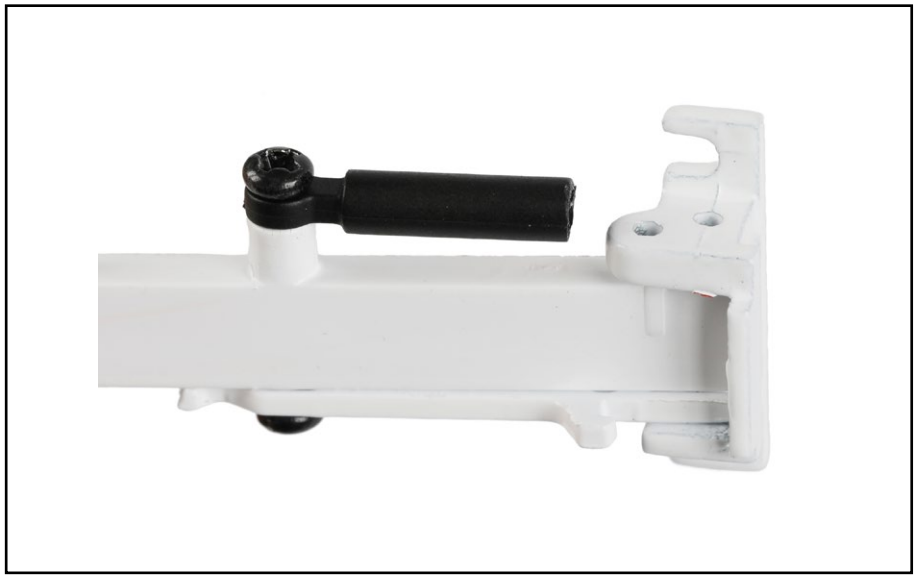
Step 3

Position one hydraulic cylinder 4-F on the left loading platform rail 4-D as shown, then secure it with one AP screw.

Stage 04: Fitting the inner rear panel and loading platform



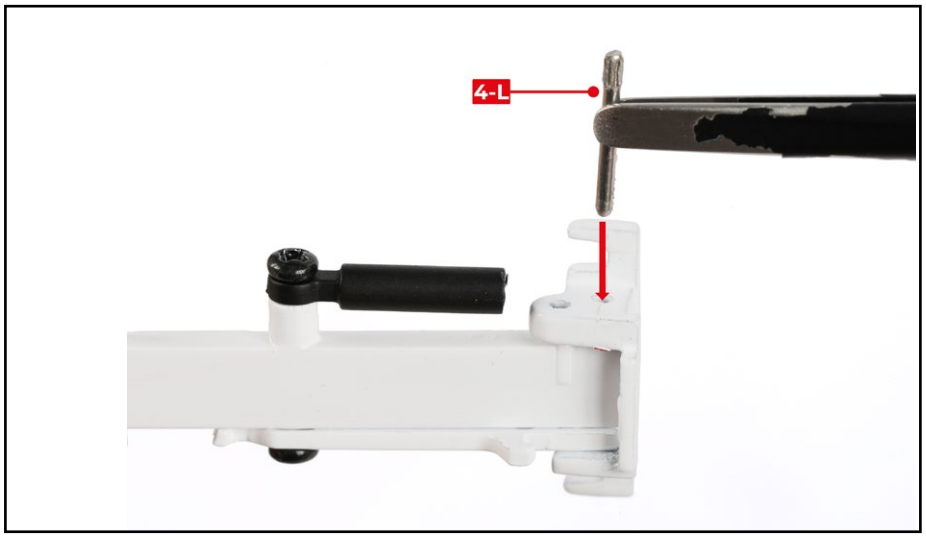


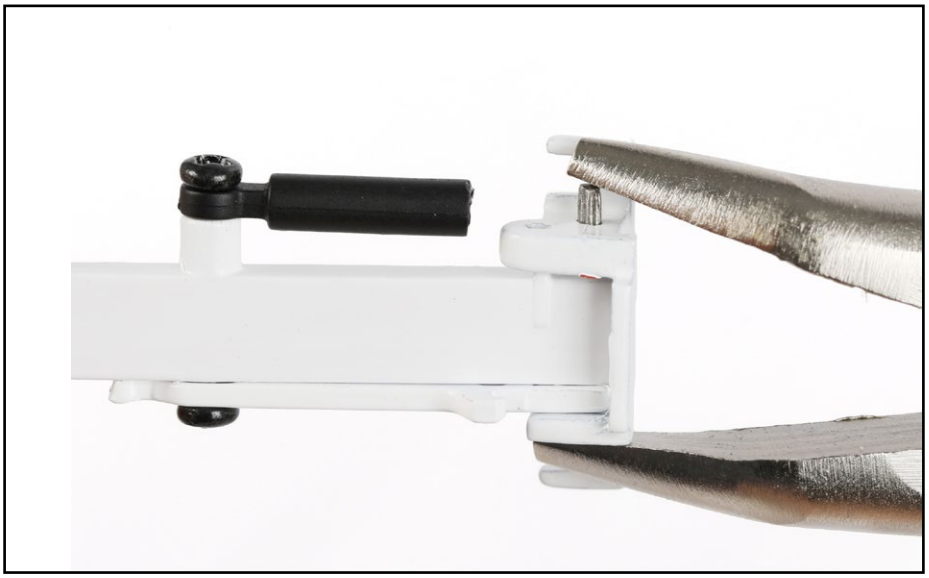


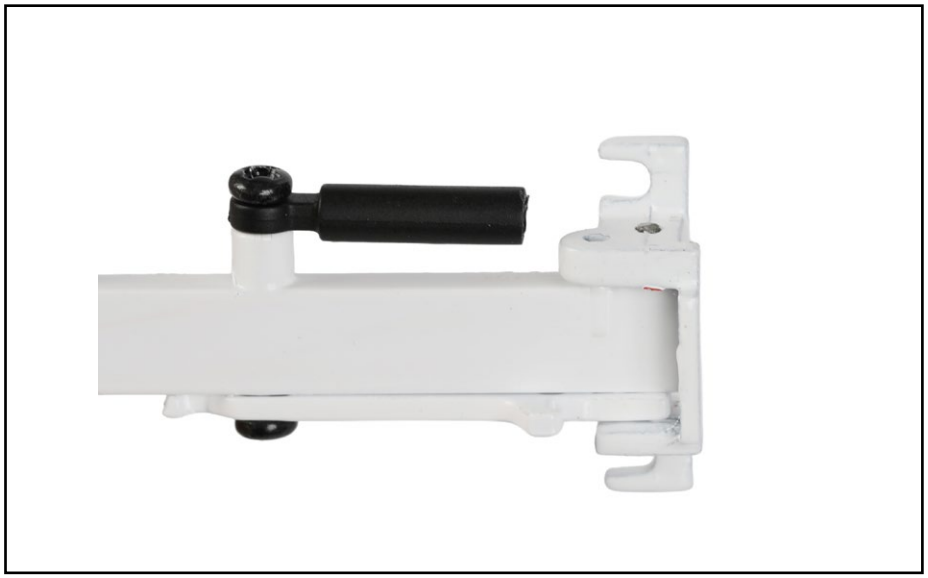
Step 4

Identify the left bracket 4-H and orient it as shown. Fit the left bracket 4-H onto the end of the left loading platform rail 4-D.

Stage 04: Fitting the inner rear panel and loading platform



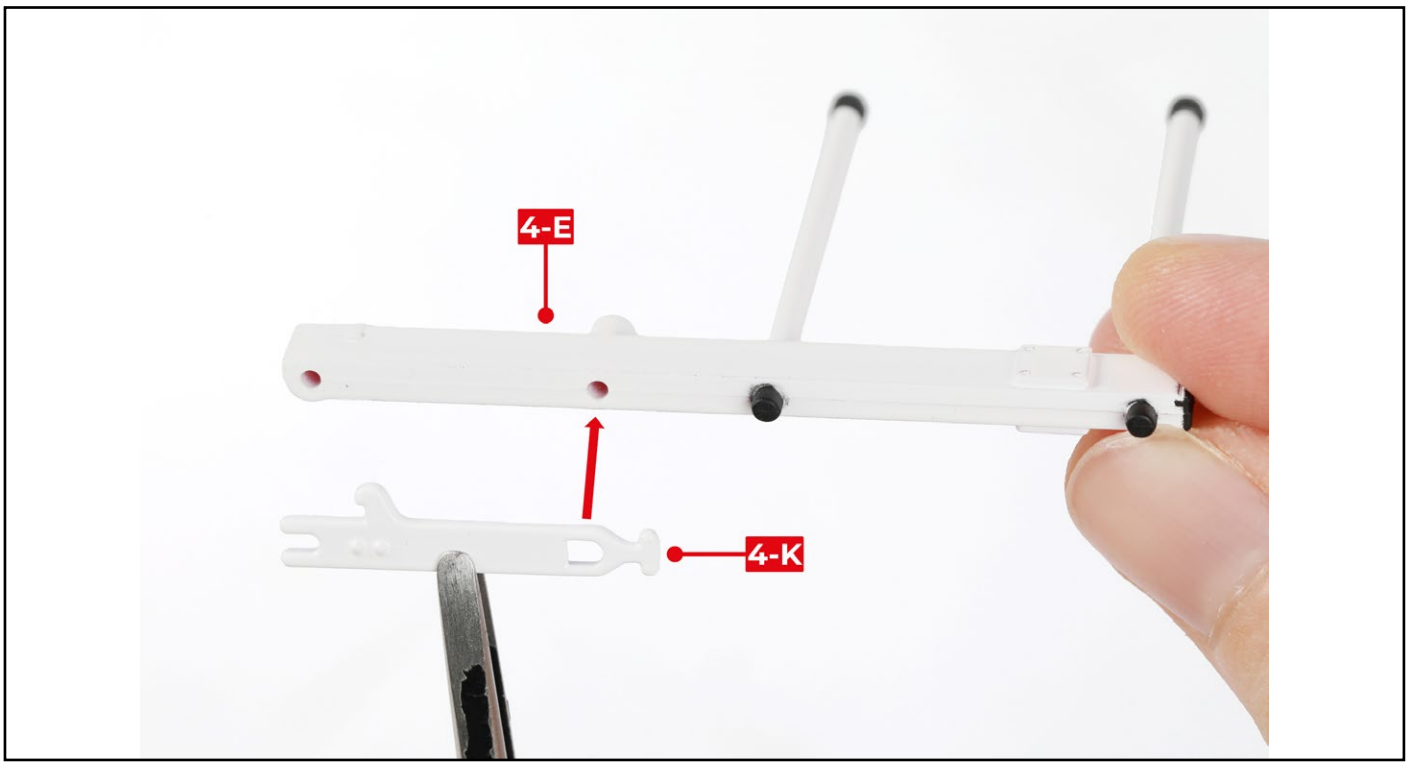


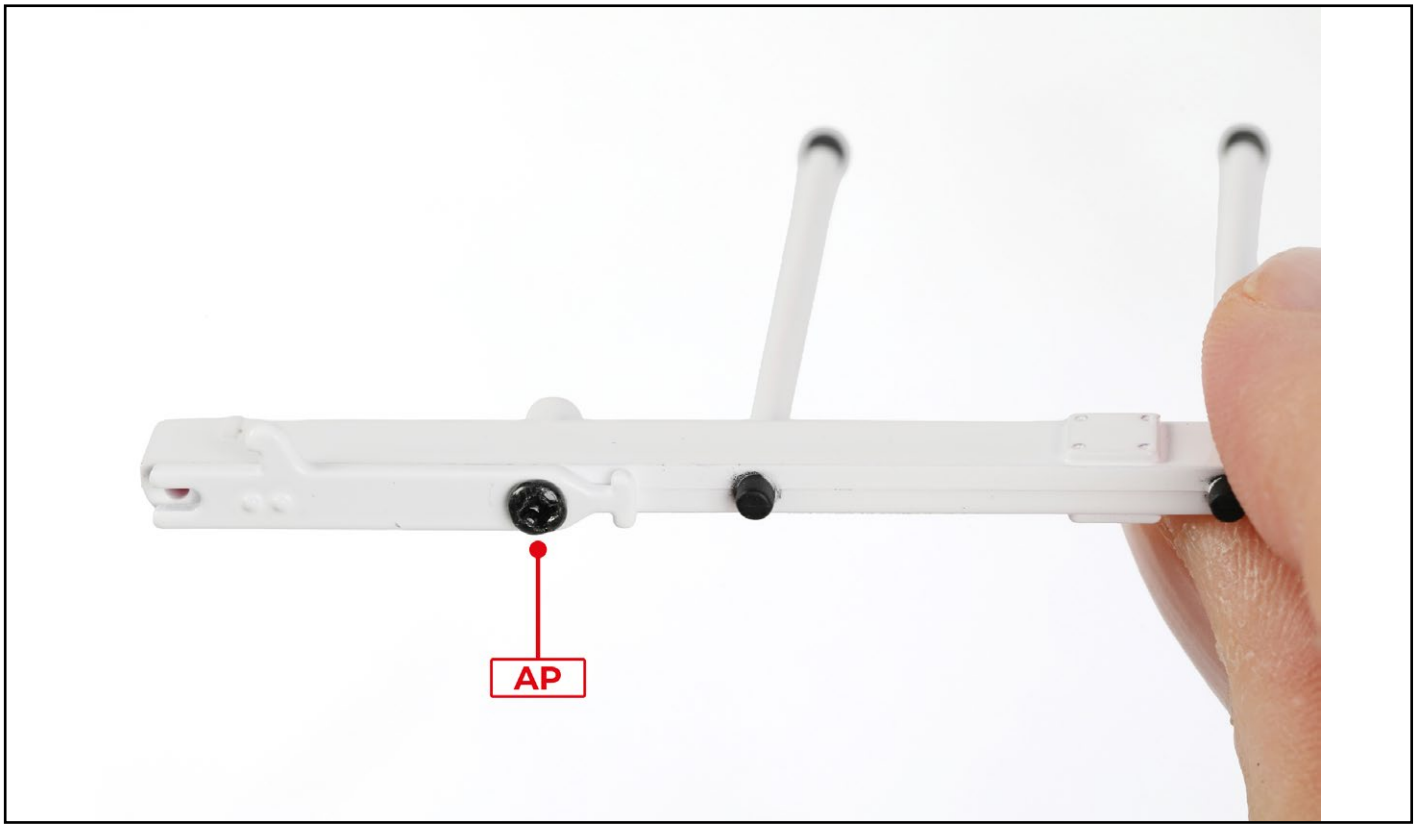


Step 5

Insert one rail pin 4-L as shown.

Stage 04: Fitting the inner rear panel and loading platform

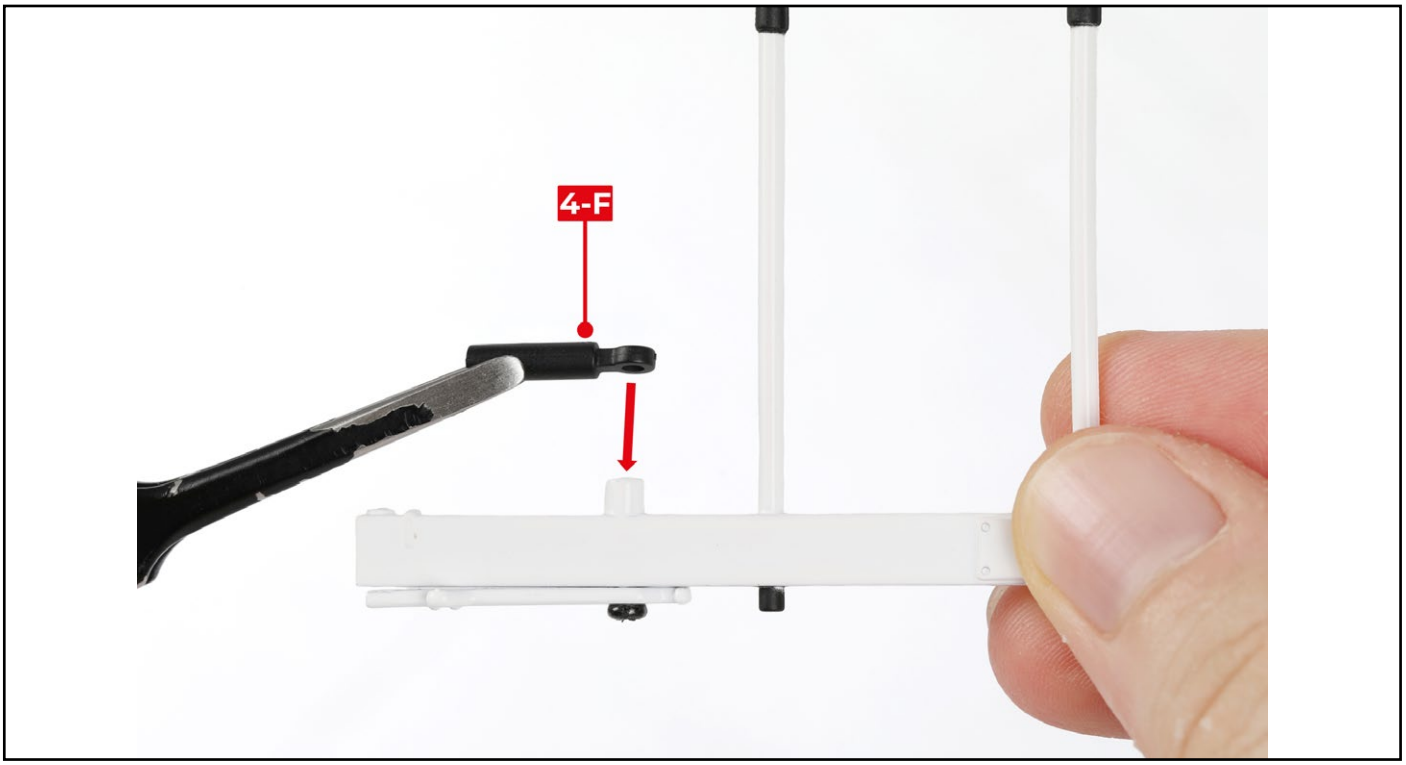


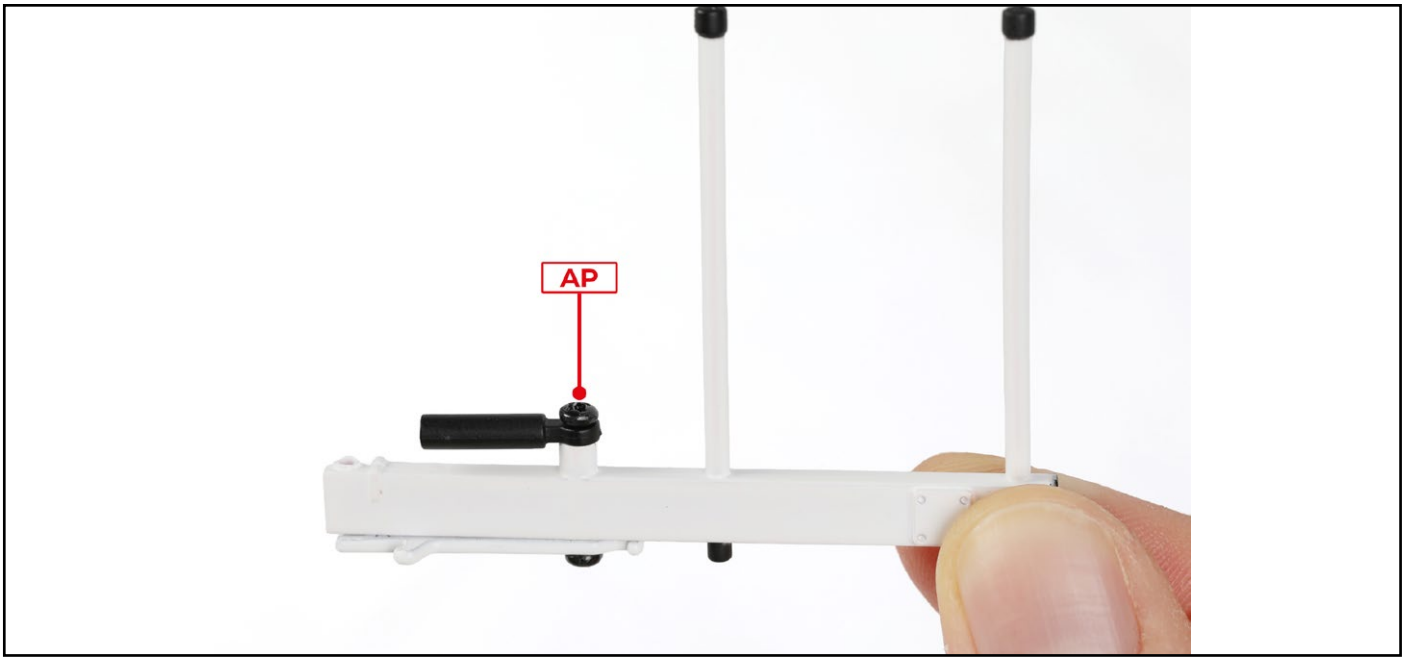


Step 6

Position the right safety bar 4-K on the right loading platform rail 4-E as shown, then secure it with one AP screw.

Stage 04: Fitting the inner rear panel and loading platform

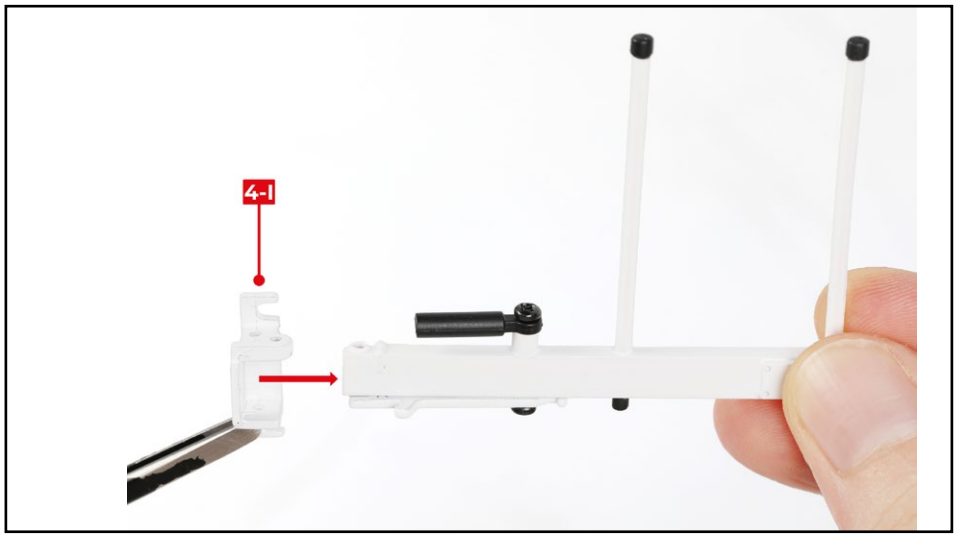


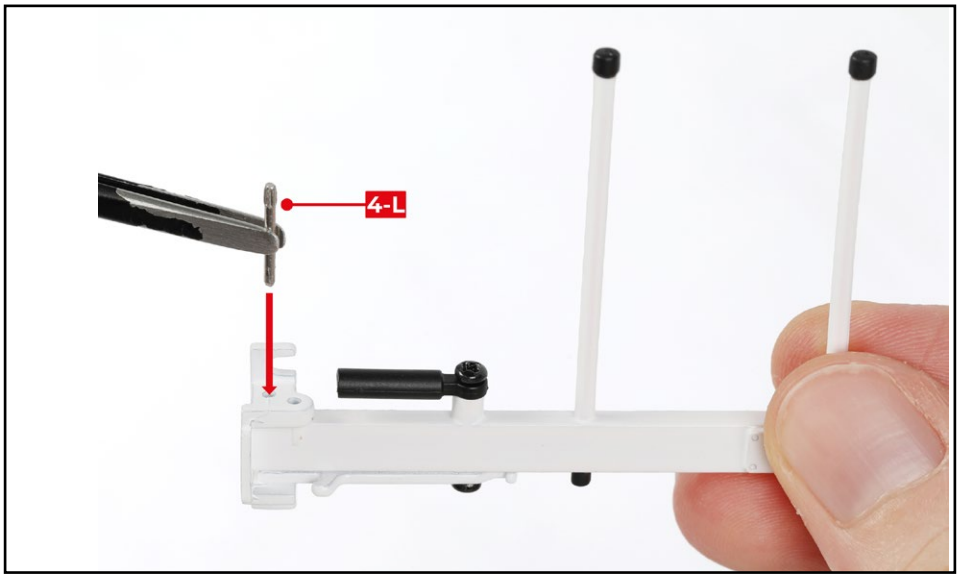


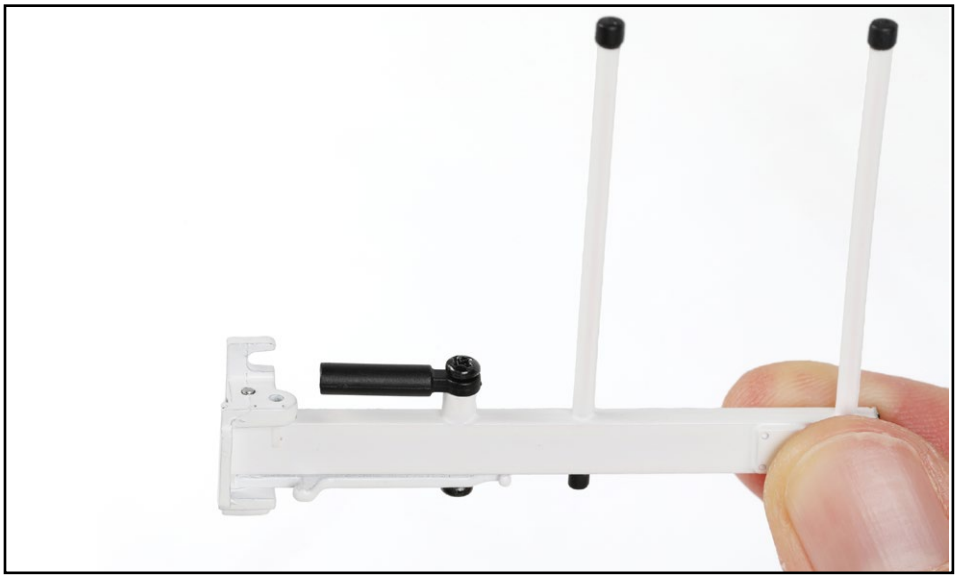
Step 7

Align the hole in the hydraulic cylinder 4-F with the hole in the right loading platform rail 4-E, then secure the parts with one AP screw.

Stage 04: Fitting the inner rear panel and loading platform



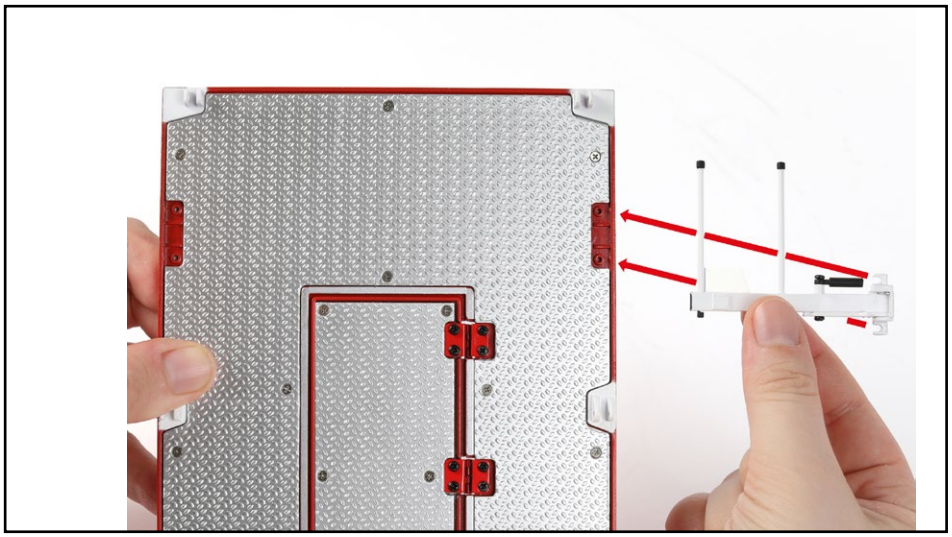


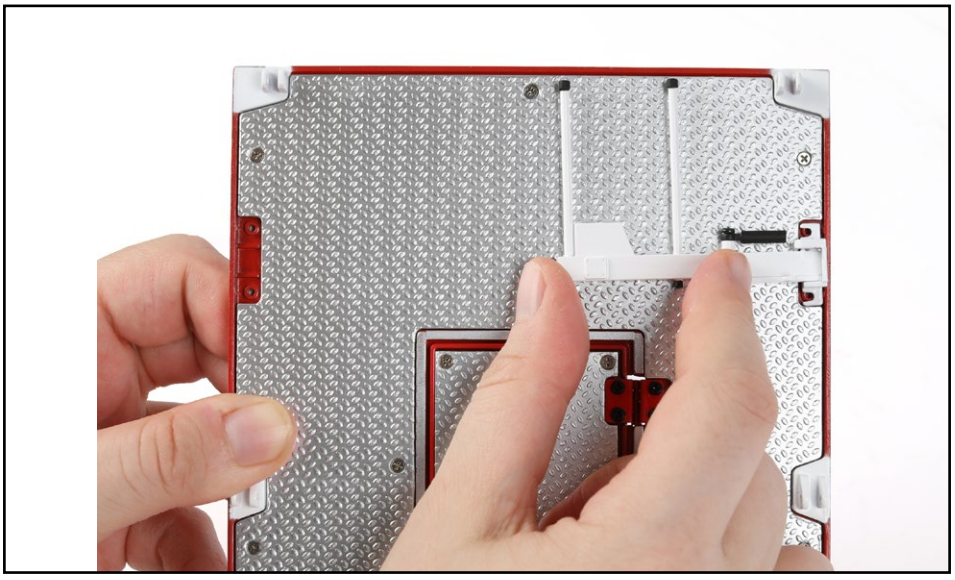


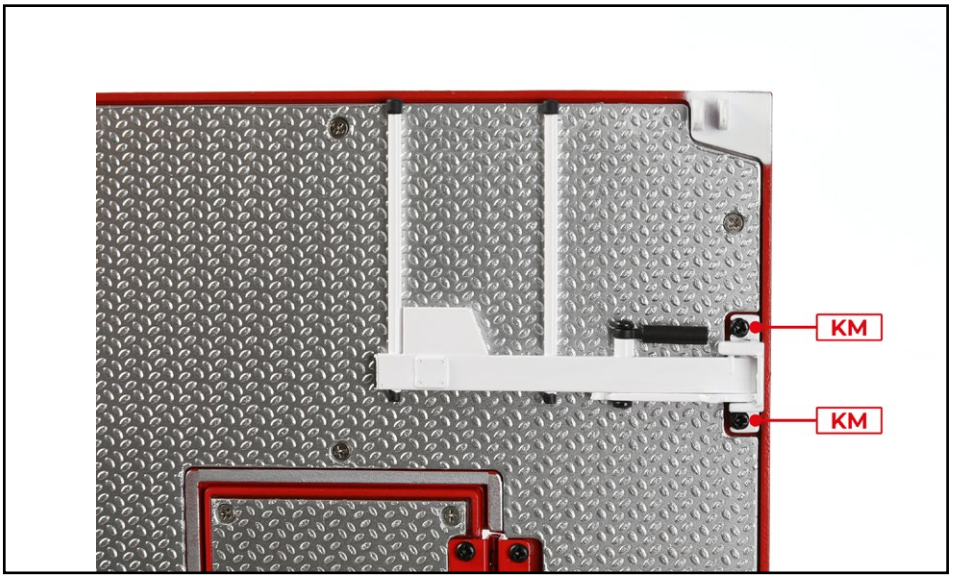
Step 8

Identify the right bracket 4-I and orient it as shown. Fit the right bracket onto the end of the right loading platform rail, then insert one rail pin 4-L as shown.

Stage 04: Fitting the inner rear panel and loading platform



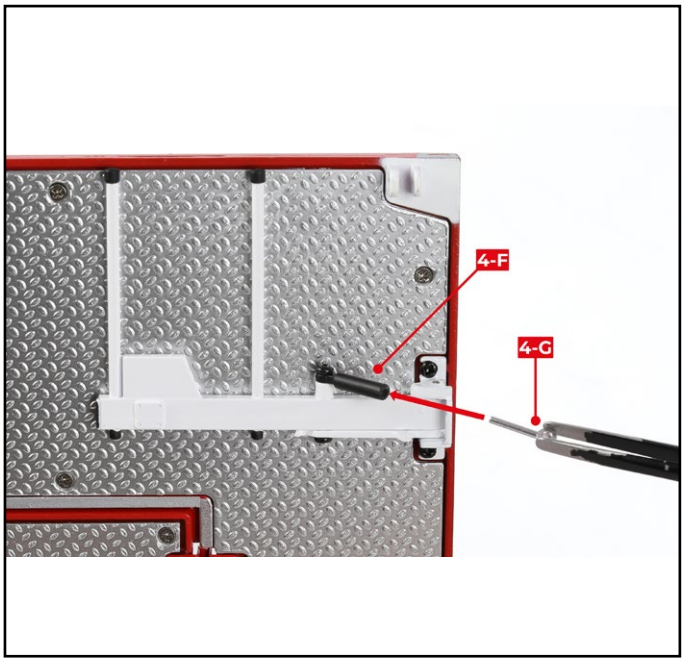


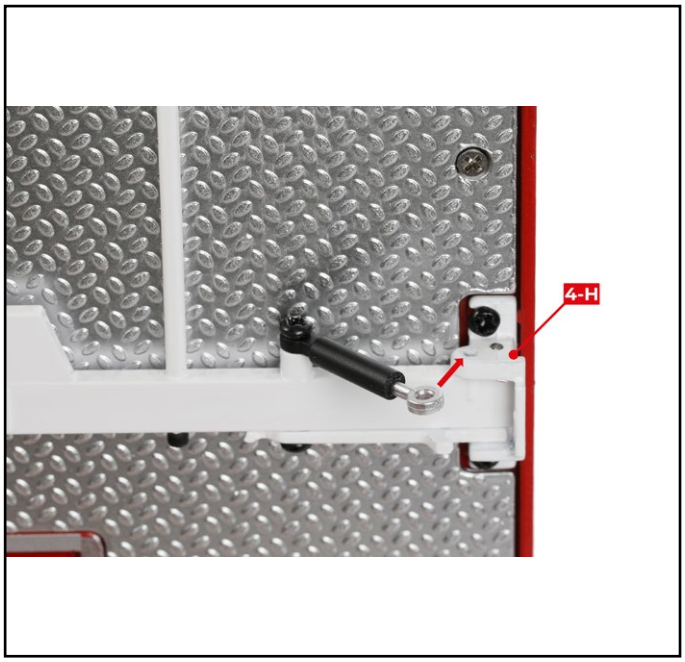


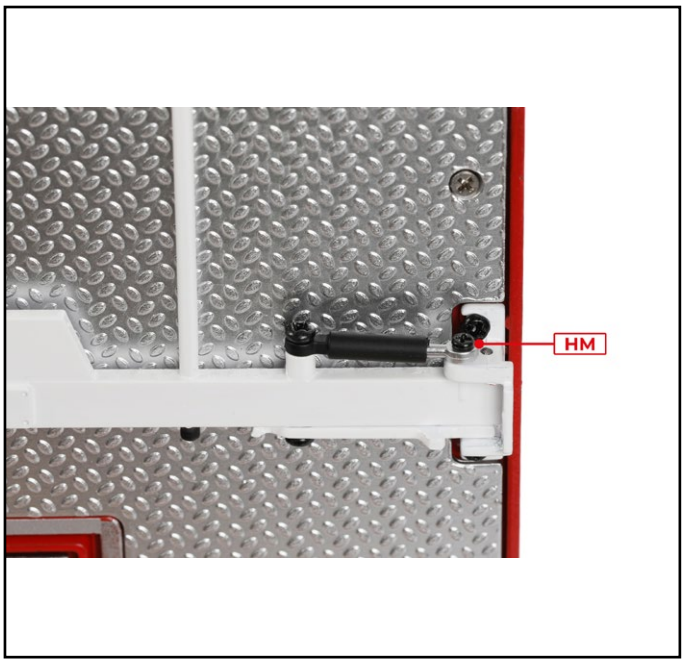
Step 9

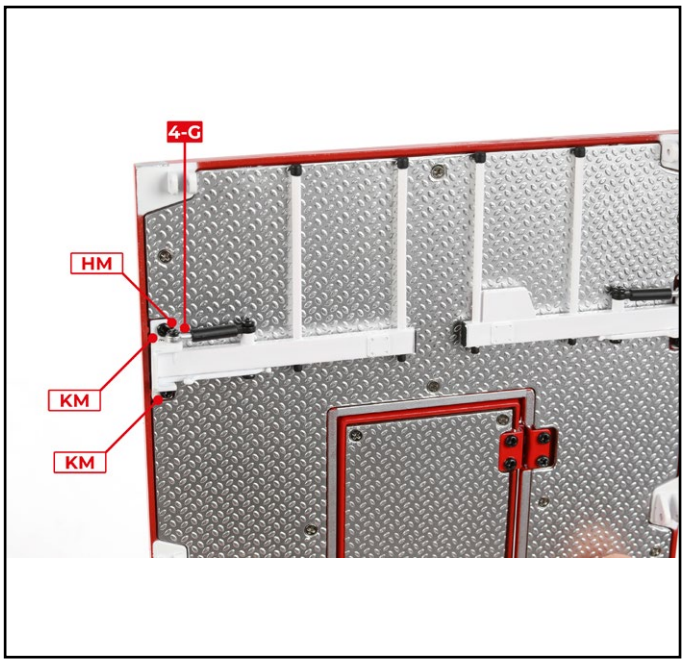
Position the left bracket 4-H in the corresponding recess on the inside of the trailer rear panel as shown. Secure the left bracket 4-H with two KM screws.

Stage 04: Fitting the inner rear panel and loading platform





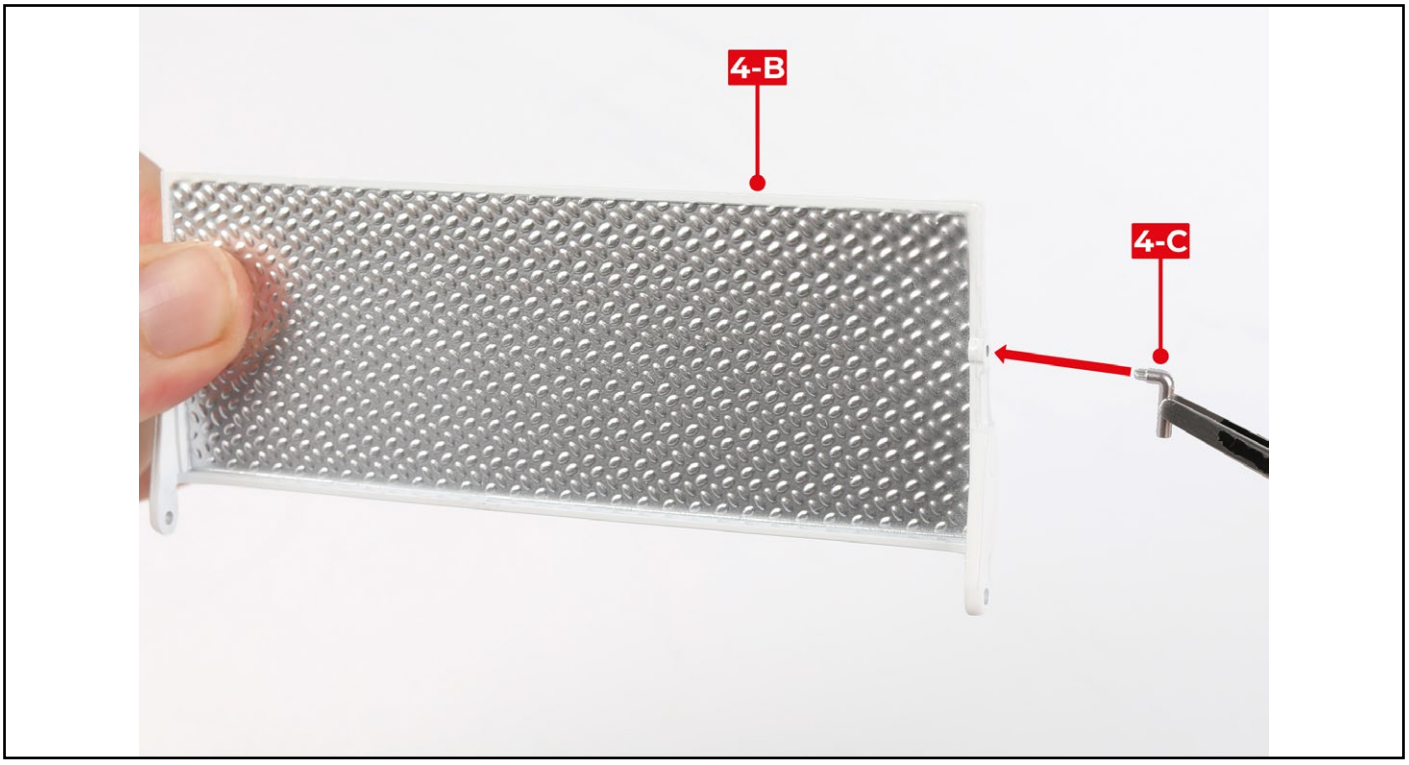


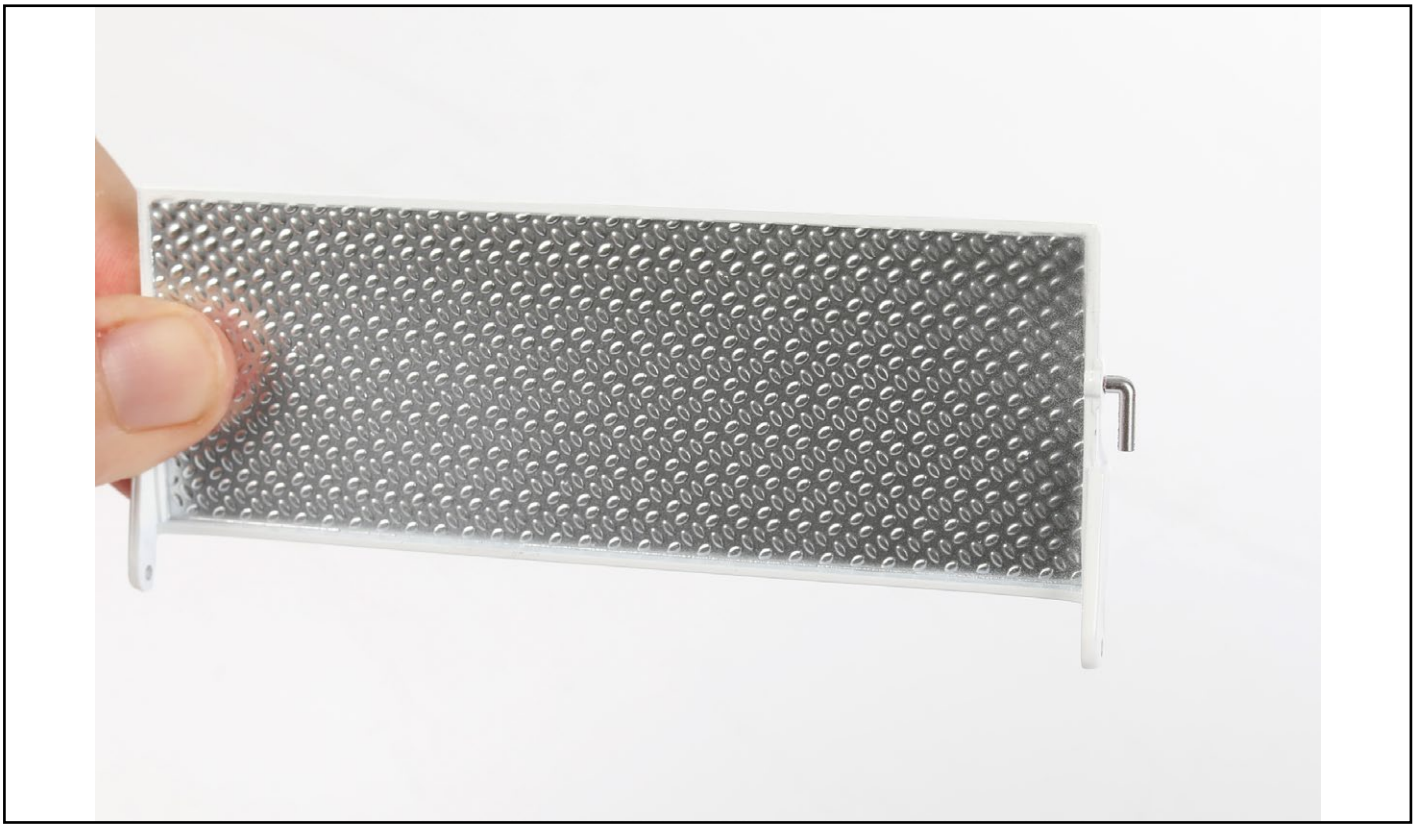


Step 10

Insert one hydraulic piston 4-G into the hydraulic cylinder 4-F as shown. Position the end of the hydraulic piston 4-G on the left bracket 4-H, then secure it with one HM screw.
Repeat steps 9 and 10 to attach the right loading platform.

Stage 04: Fitting the inner rear panel and loading platform

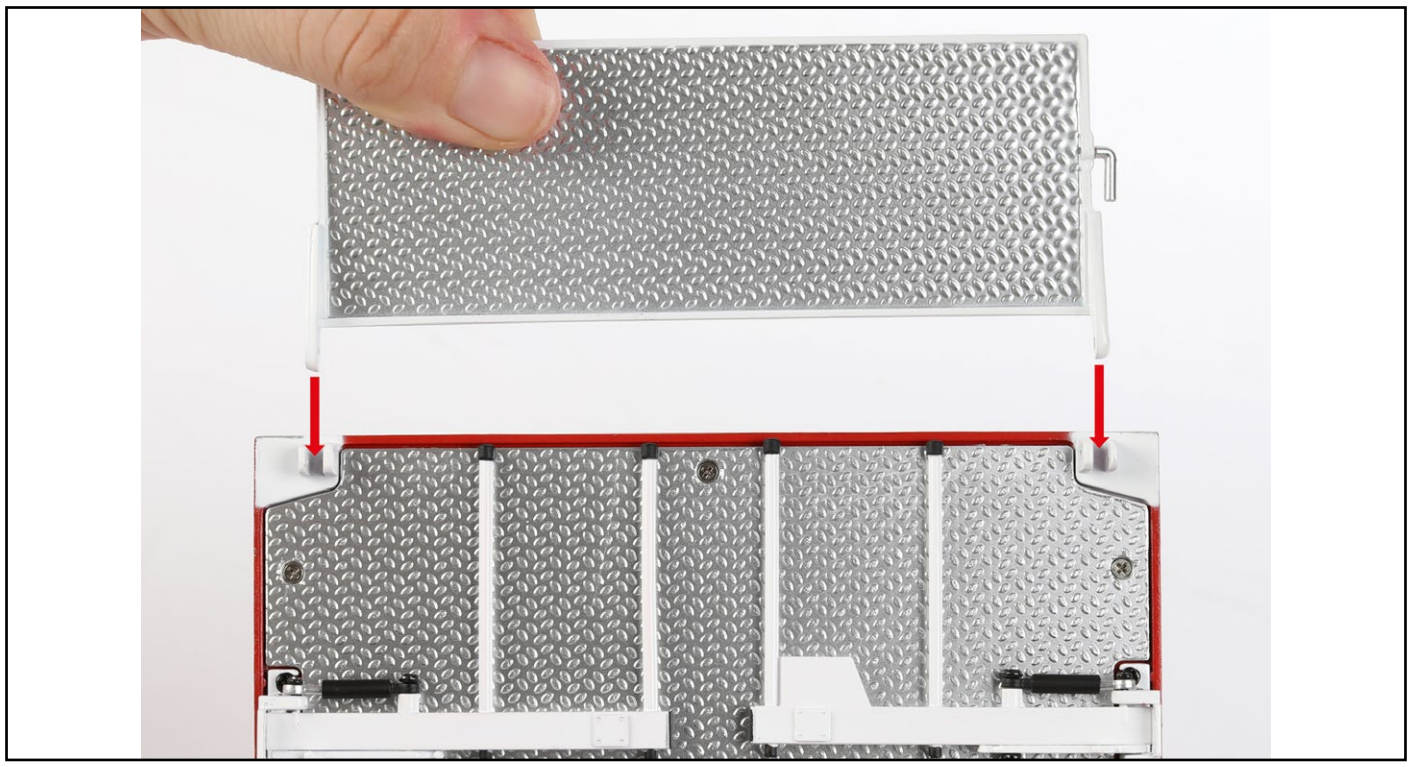


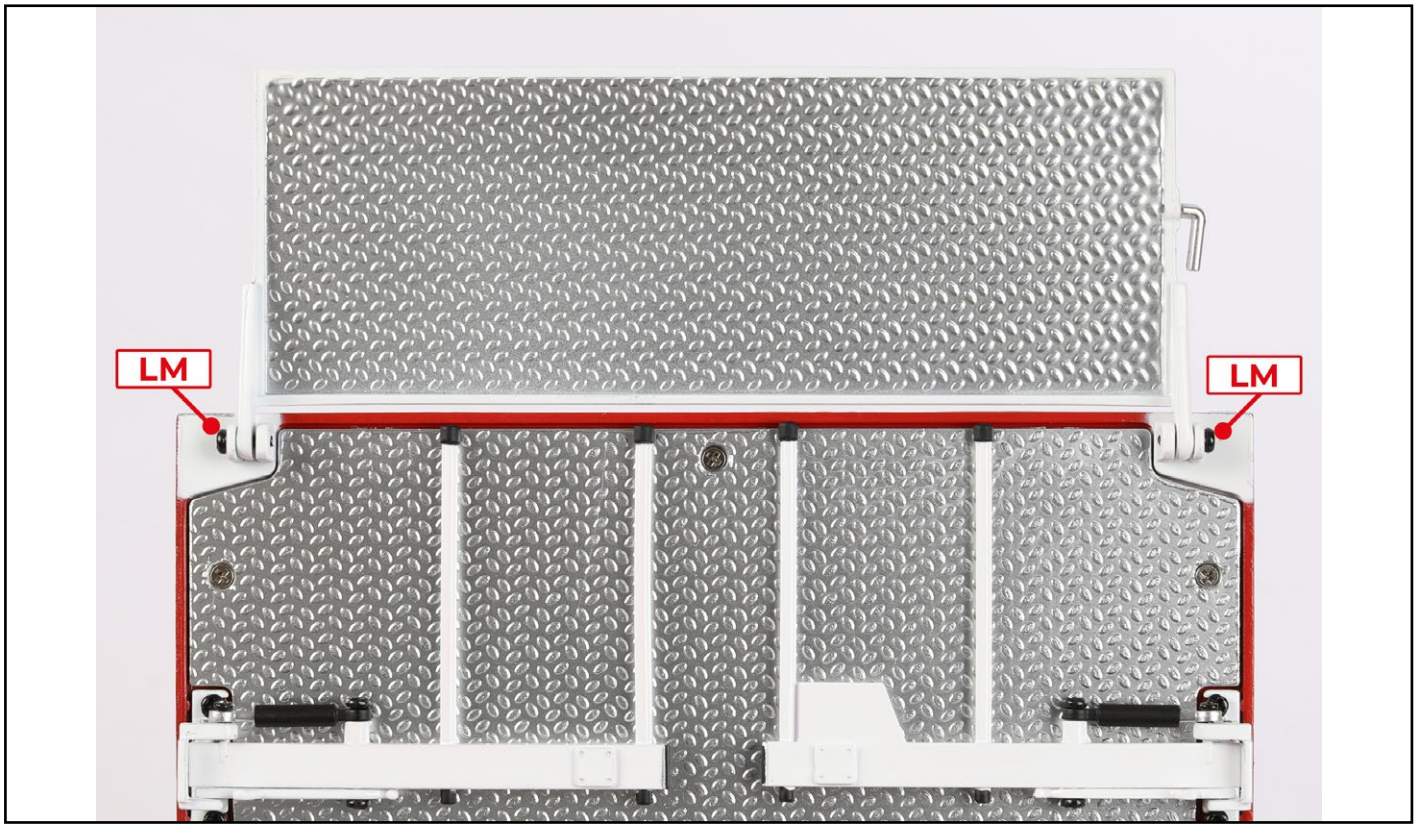


Step 11

Fit the handle 4-C to the loading platform 4-B as shown. Press the handle 4-C firmly into place.

Stage 04: Fitting the inner rear panel and loading platform

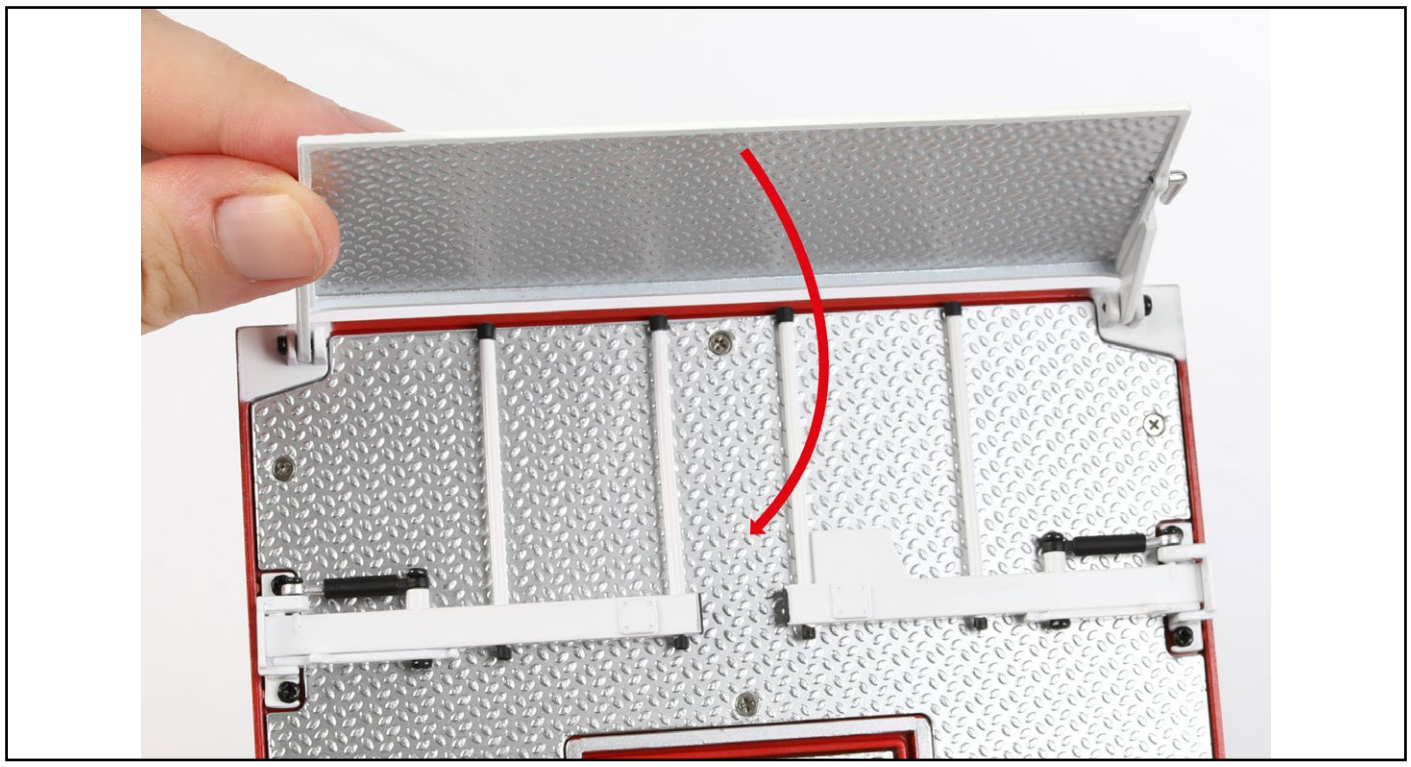




Step 12

Position the loading platform 4-B on the inside of the trailer rear panel, inserting the locating tabs into the upper hinges as shown, then secure it with two LM screws.

Stage 04: Fitting the inner rear panel and loading platform



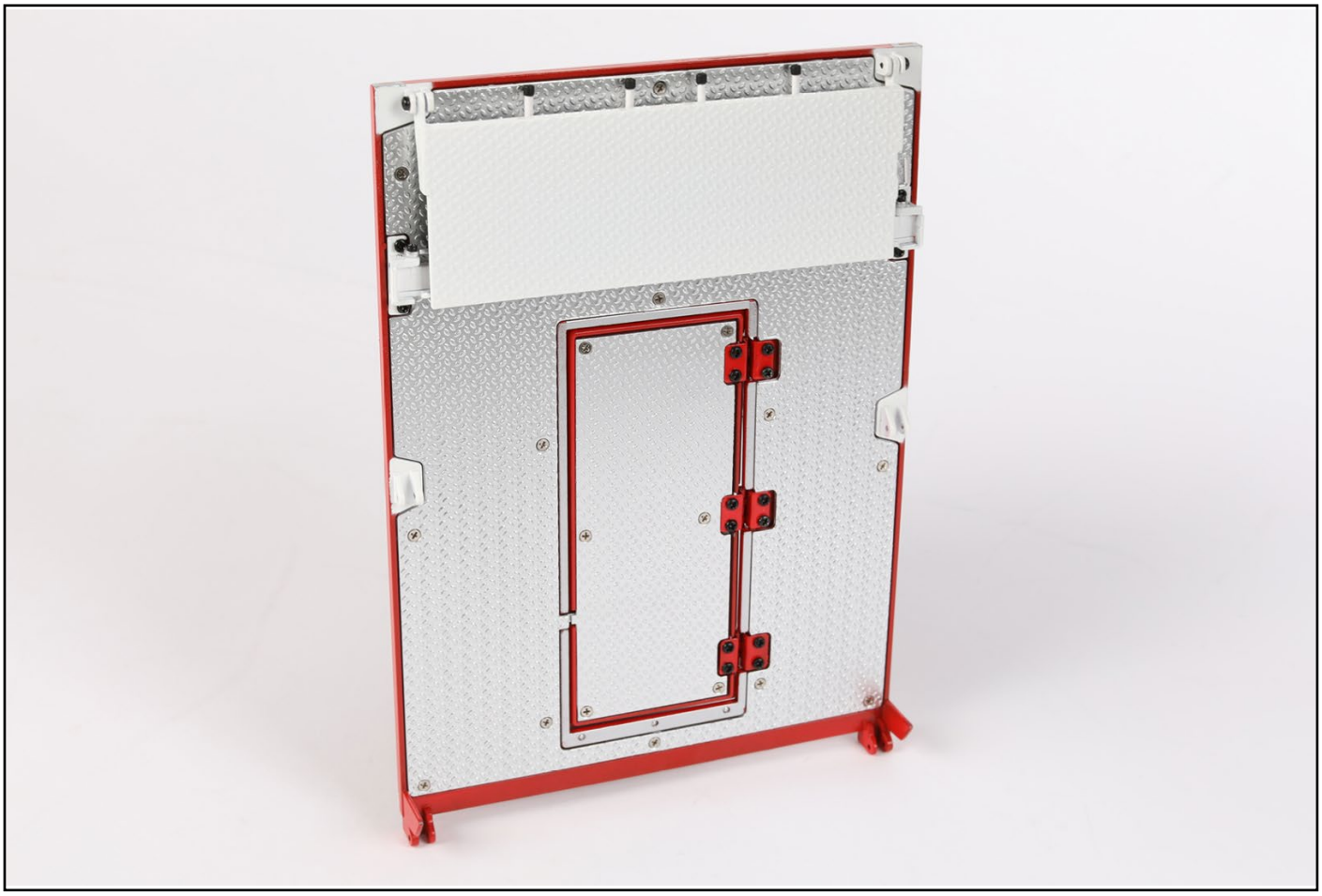


Step 13

Close the loading platform as shown.

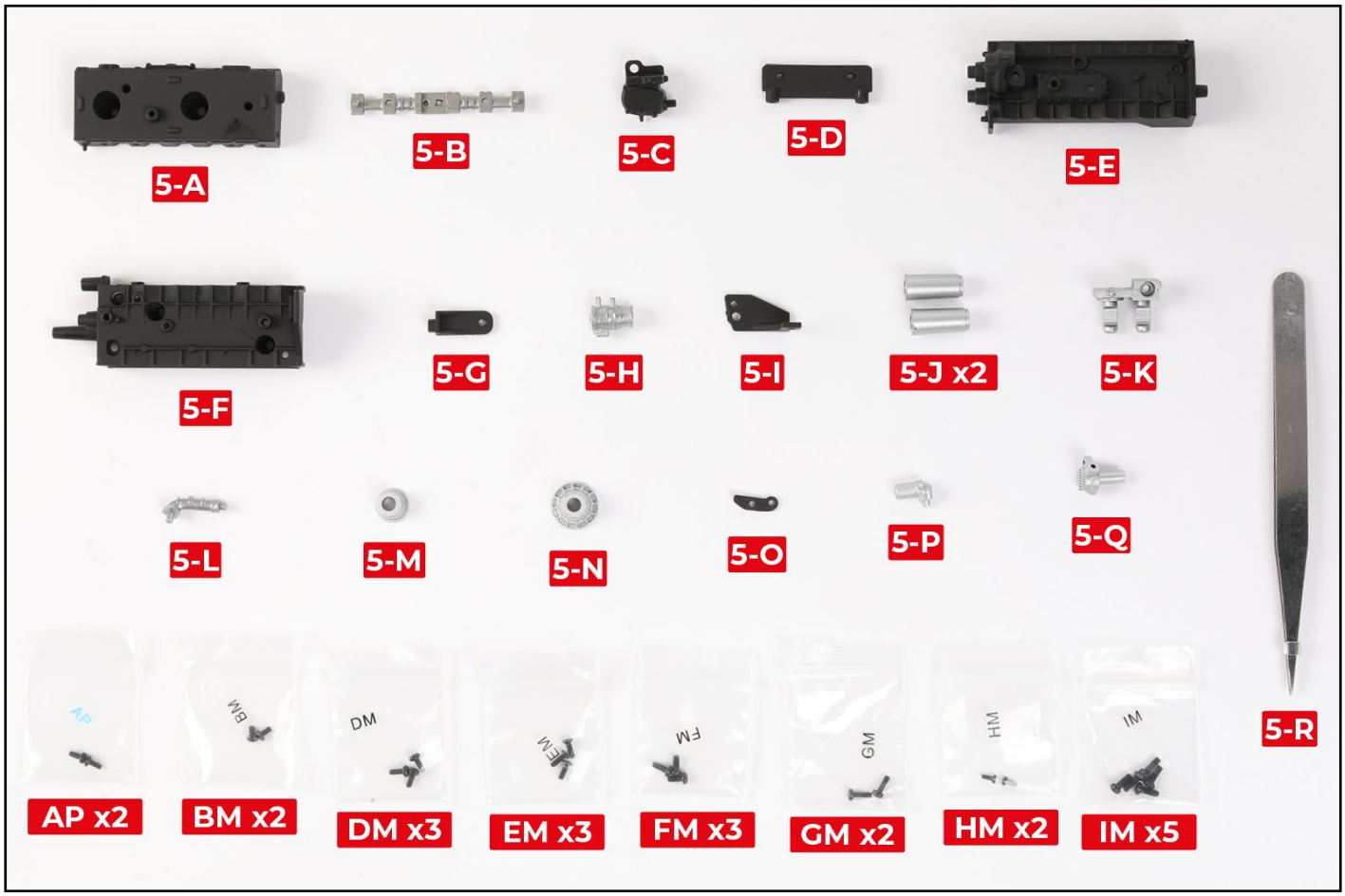
Stage 04: Fitting the inner rear panel and loading platform

STAGE 04 COMPLETE



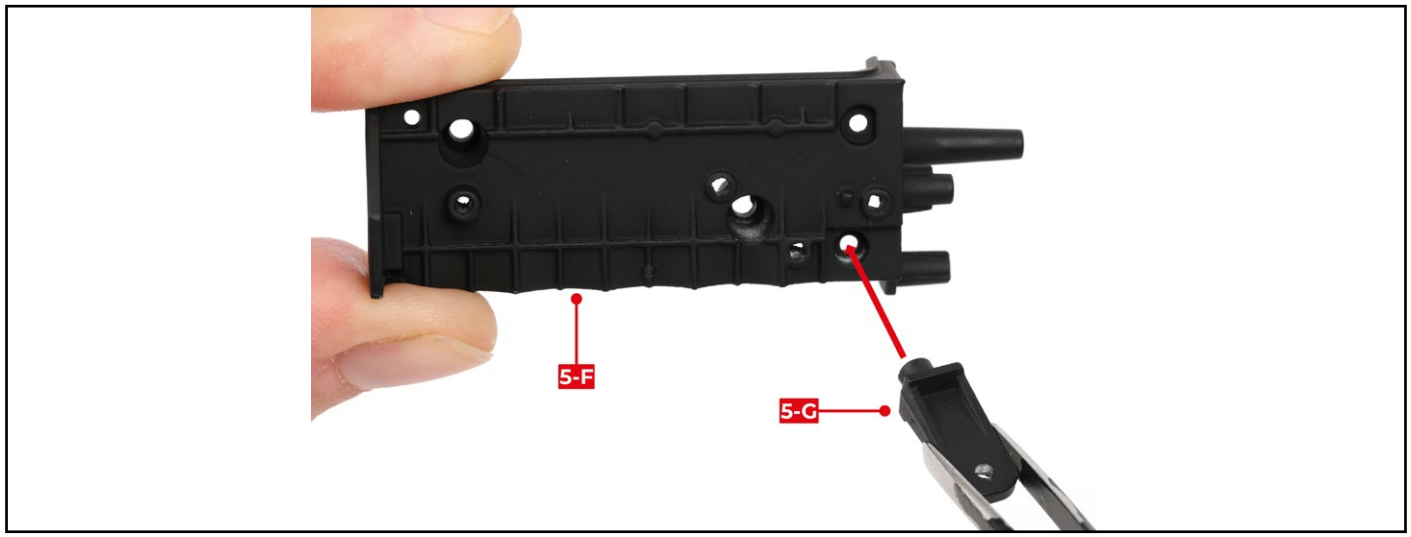
Stage 05: Building the engine (1)

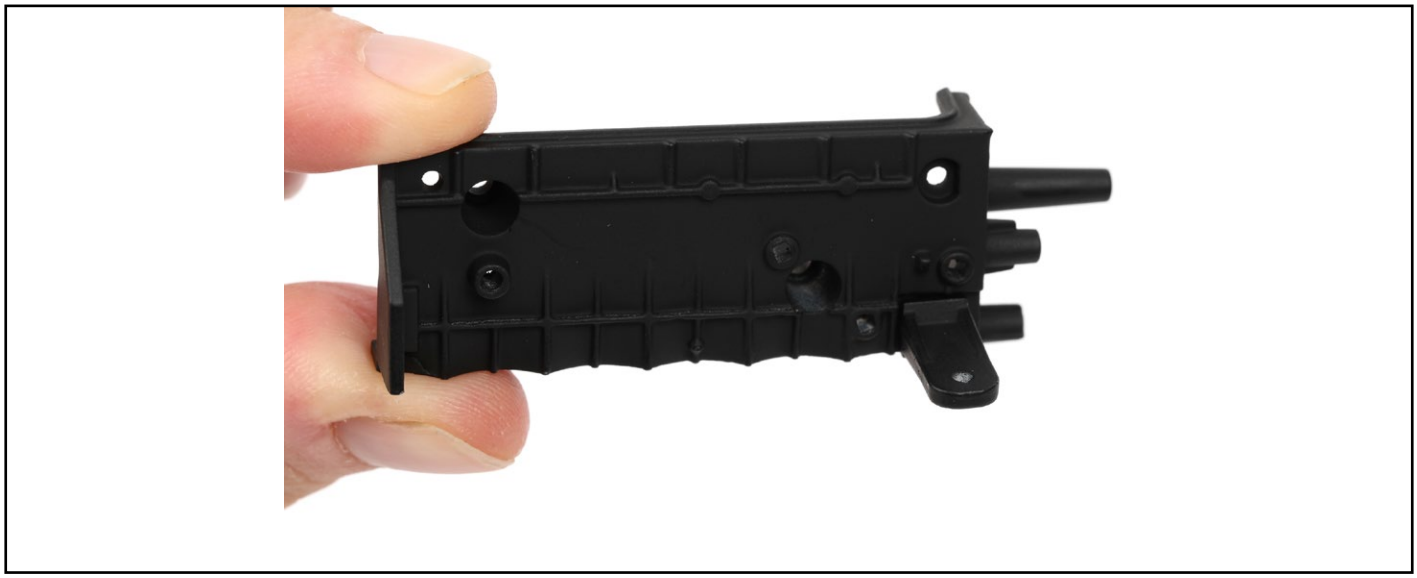
STAGE 05 PARTS

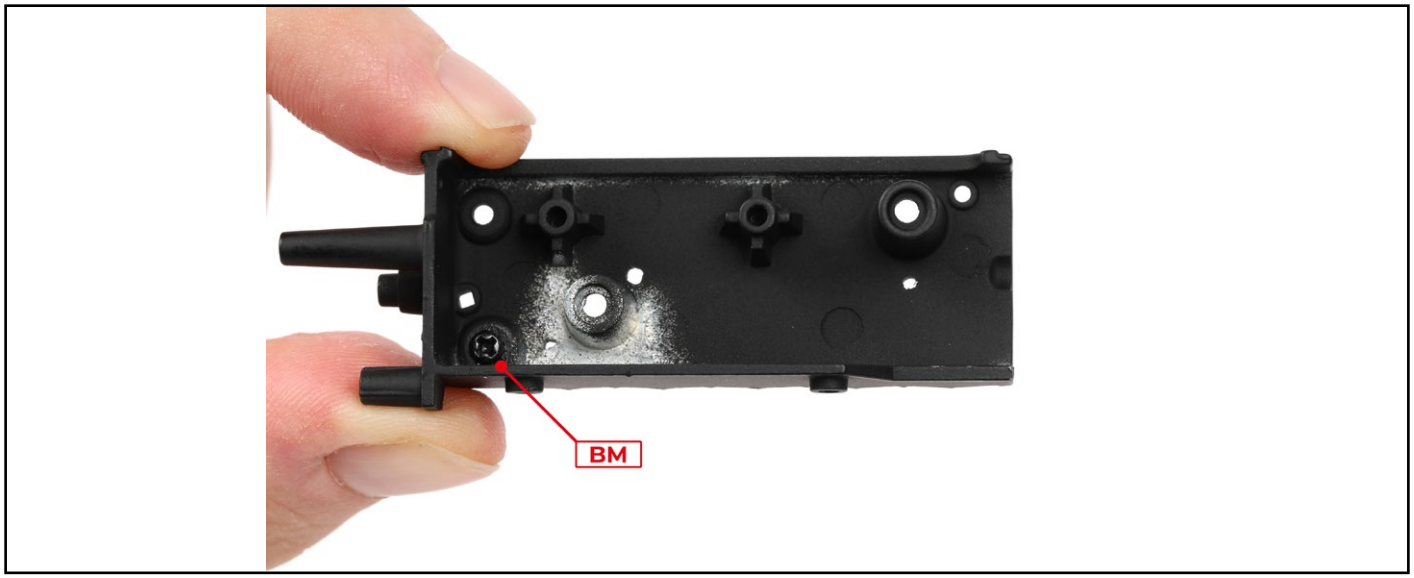


5-A: Cylinder head
5-B: Exhaust manifold
5-C: Thermostat housing
5-D: Mounting bracket
5-E: Left engine block
5-F: Right engine block
5-G: Right engine mount
5-H: A/C compressor
5-I: Left engine mount
5-J: Engine oil filters
5-K: Oil filter bracket
5-L: Cooling duct
5-M: Fan coupling 1
5-N: Fan coupling 2
5-O: Lifting hook
5-P: VGT air filter
5-Q: Rear alternator mount
5-R: Tweezers
AP: 2 screws
BM: 2 screws
DM: 3 screws
EM: 3 screws
FM: 3 screws
GM: 2 screws
HM: 2 screws
IM: 5 screws

Stage 05: Building the engine (1)



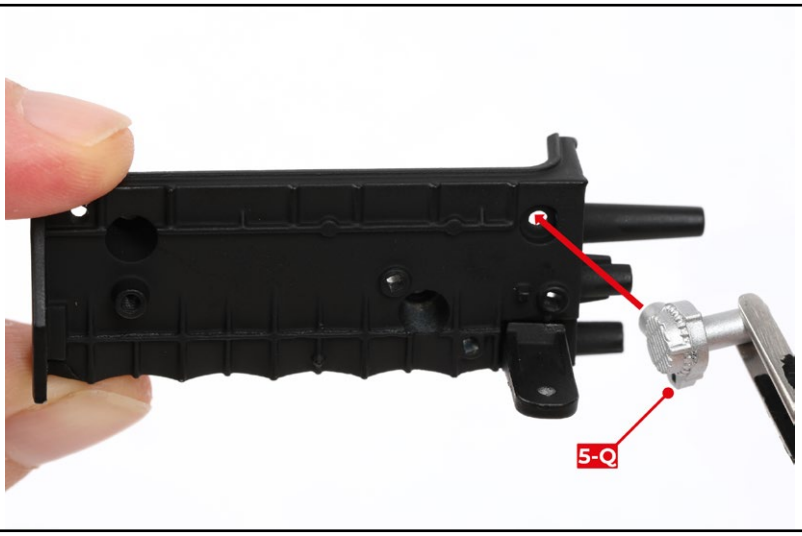




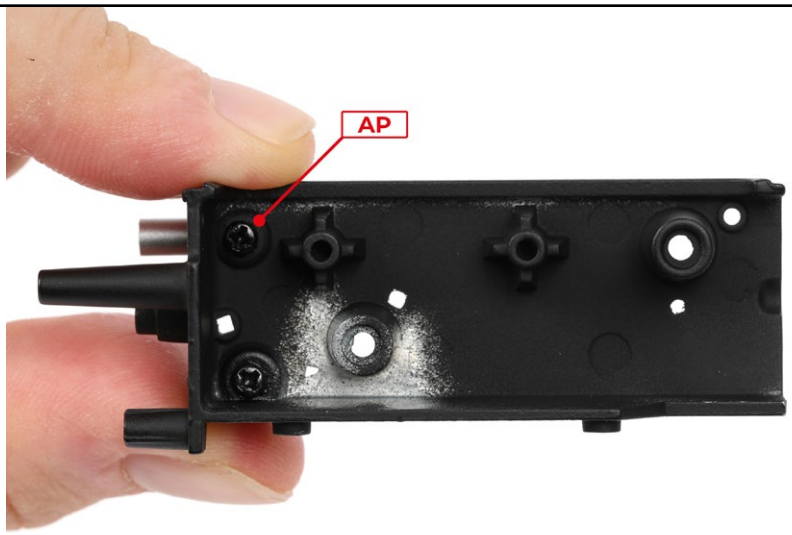
Step 1

Position the right engine mount 5-G on the right engine block 5-F as shown, then secure the right engine mount 5-G to the right engine block 5-F with one BM screw.

Stage 05: Building the engine (1)



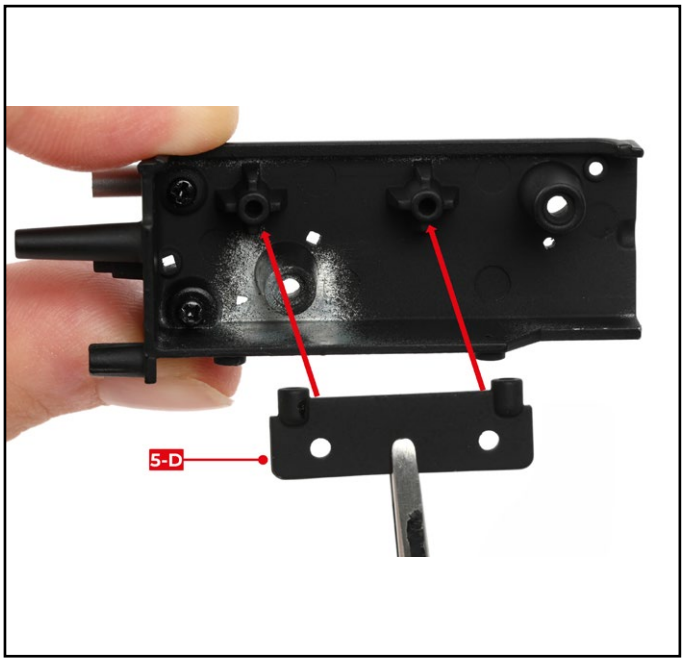


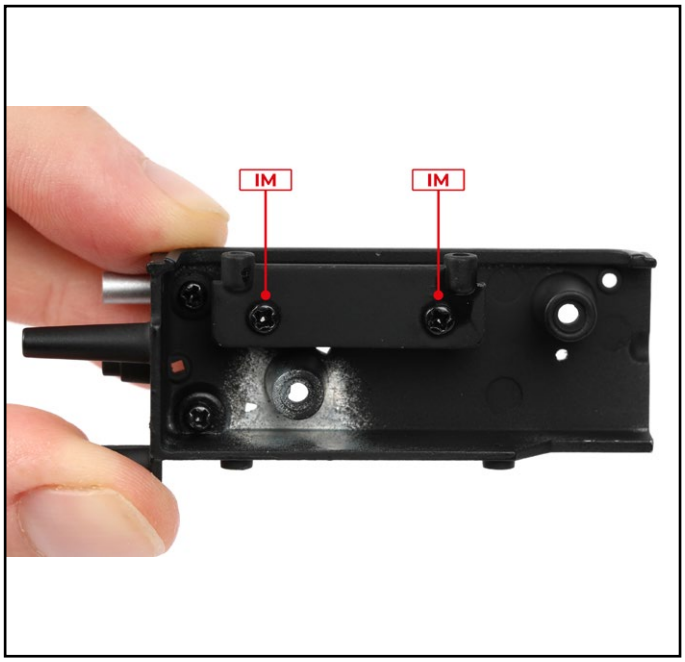


Step 2

Position the rear alternator mount 5-Q on the right engine block 5-F as shown, then secure it with one AP screw.

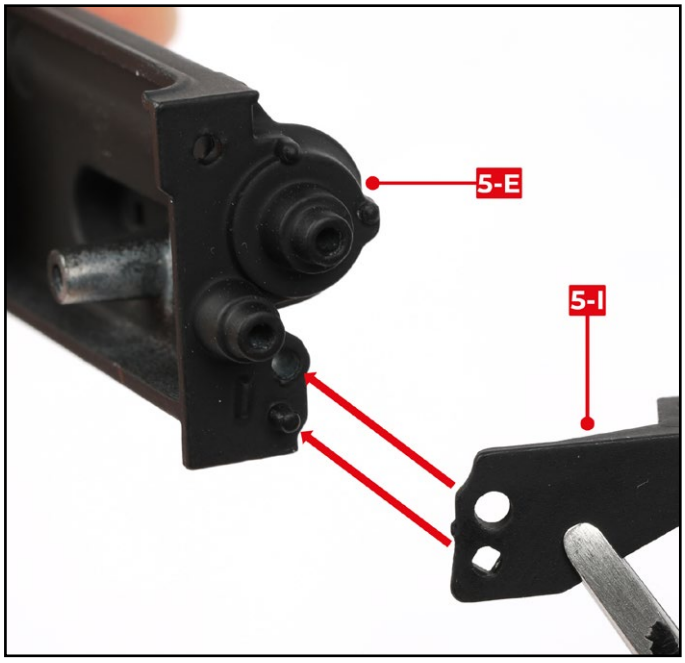
Stage 05: Building the engine (1)

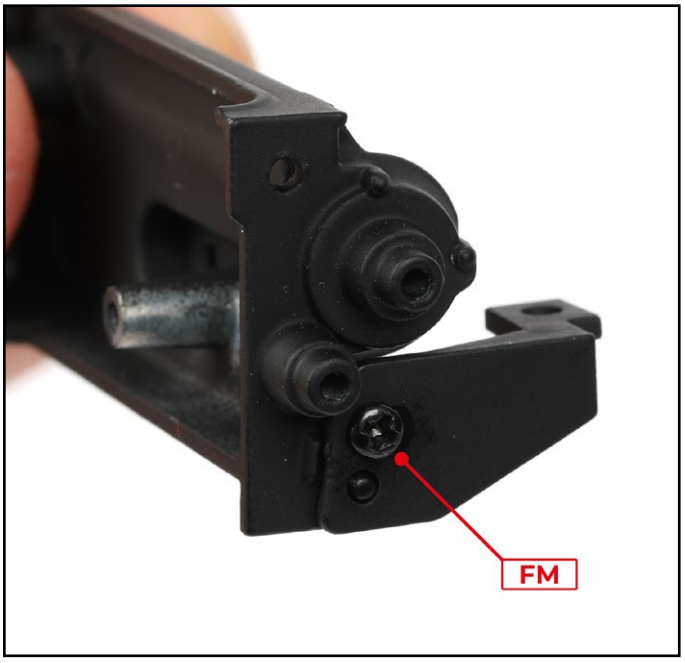




Step 3

Position the mounting bracket 5-D on the right engine block as shown, then secure it with two IM screws.

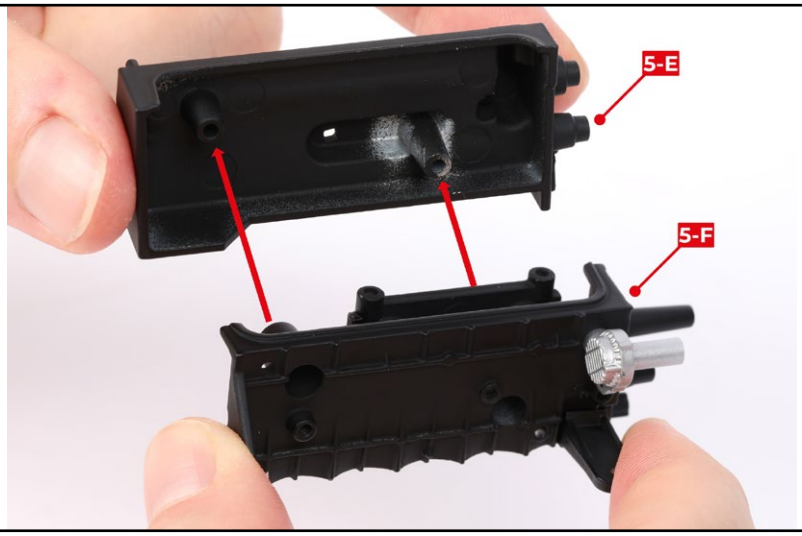


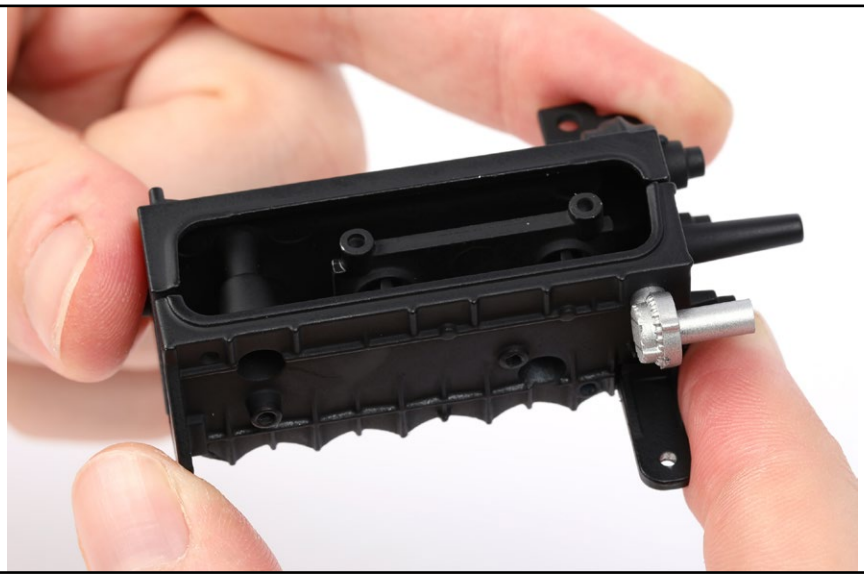


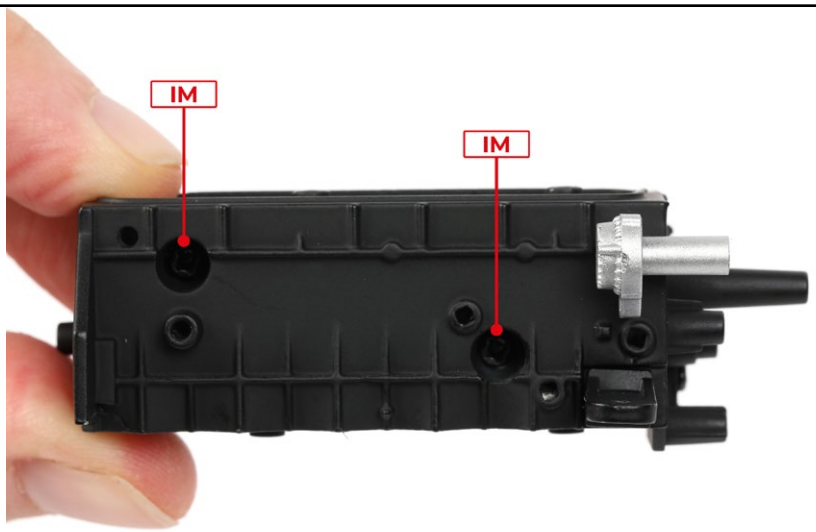
Step 4

Position the left engine mount 5-I on the left engine block 5-E as shown, then secure it with one FM screw.

Stage 05: Building the engine (1)



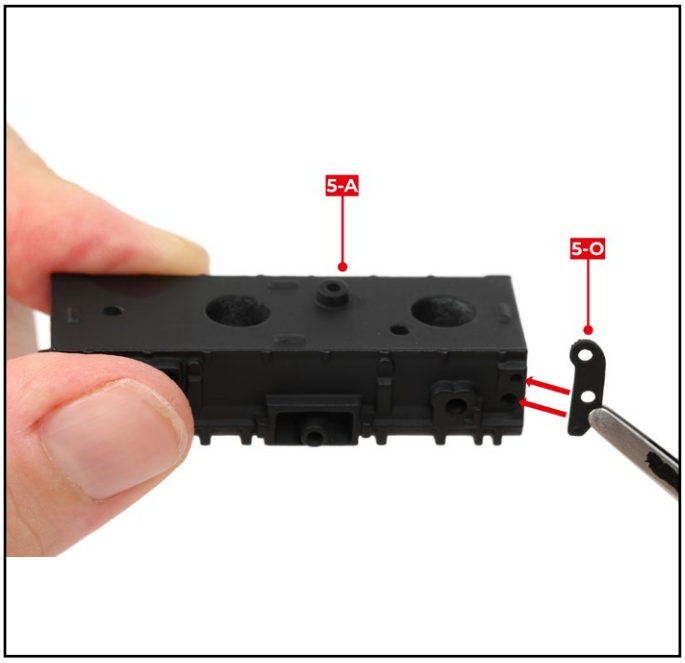


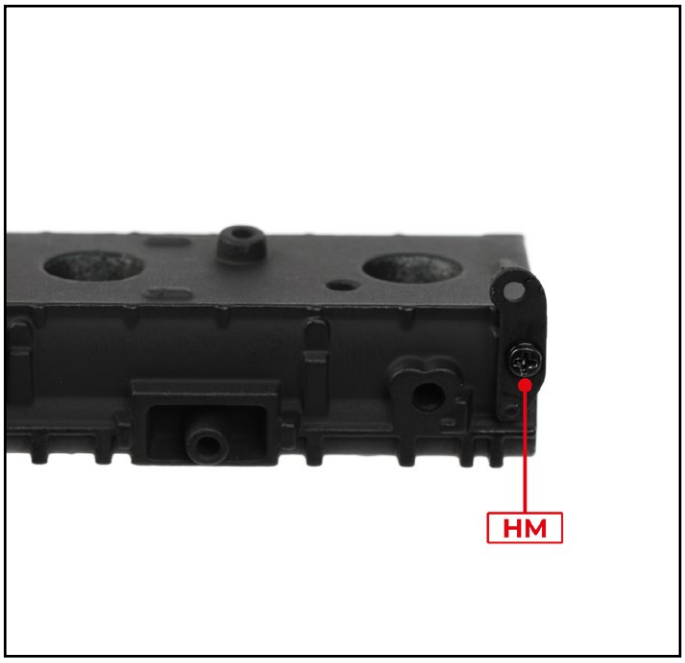


Step 5

Join the left and right engine blocks 5-E and 5-F together, then secure them with two IM screws.

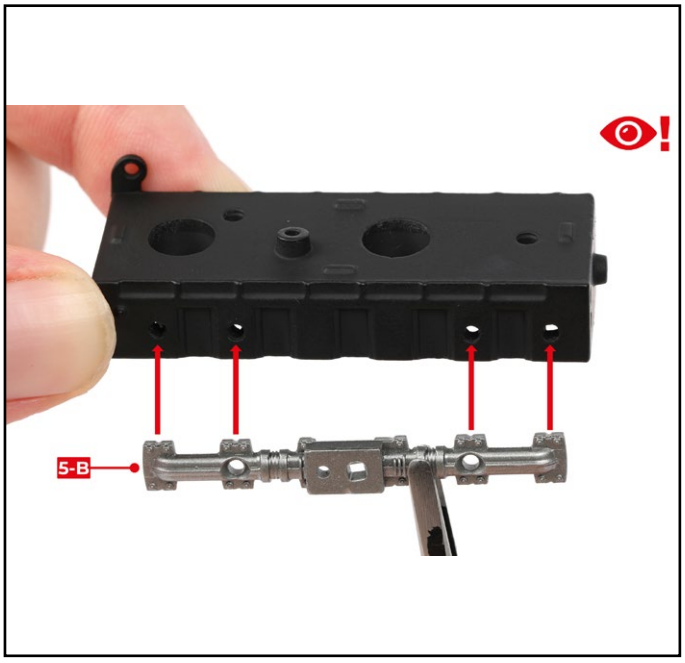
Stage 05: Building the engine (1)

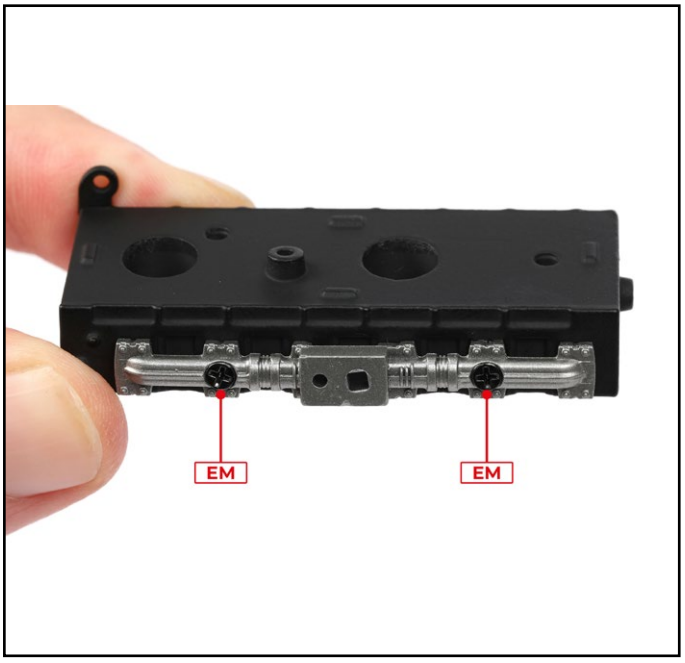




Step 6

Position the lifting hook 5-O on the cylinder head 5-A as shown, then secure it with one HM screw.

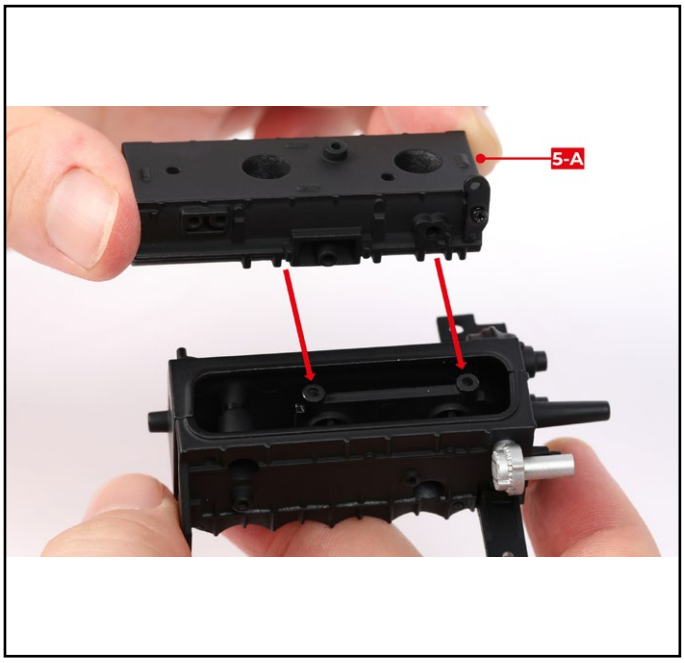


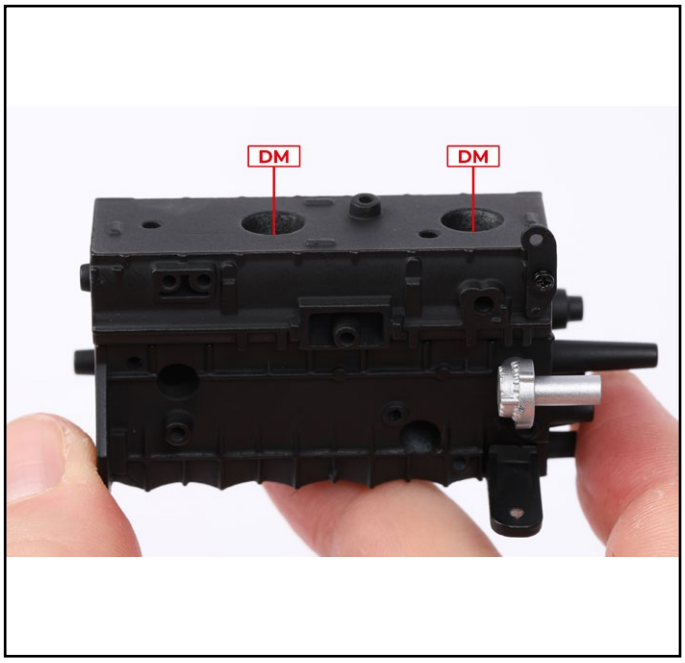


Step 7

Position the exhaust manifold 5-B on the cylinder head A, making sure the parts are oriented as shown, then secure it with two EM screws.

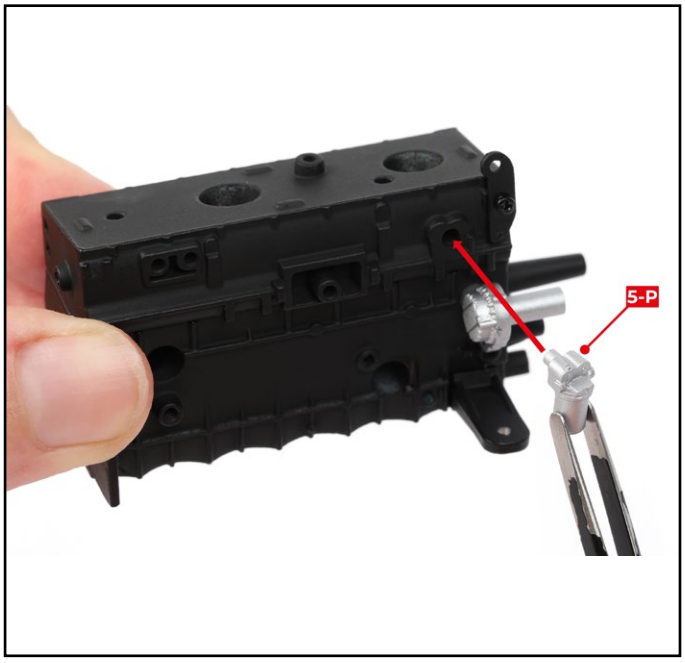
Stage 05: Building the engine (1)

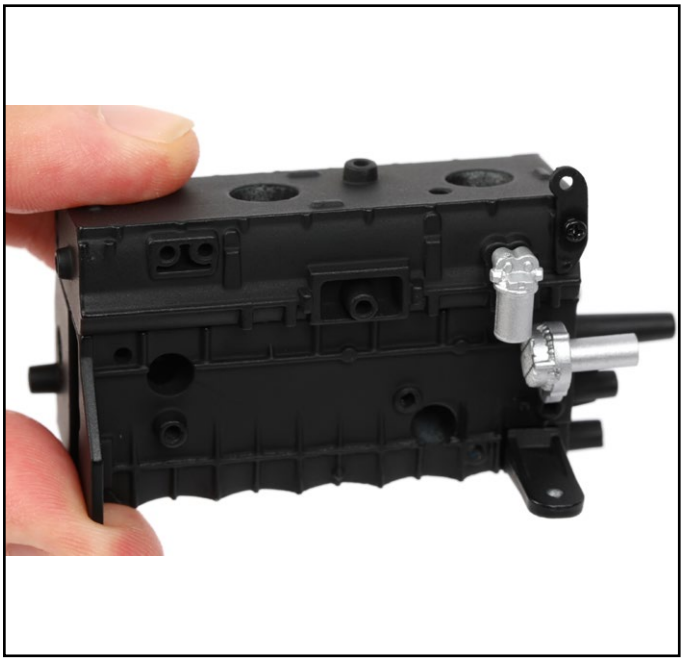




Step 8

Position the cylinder head 5-A on the assembled engine block, then secure it with two DM screws.

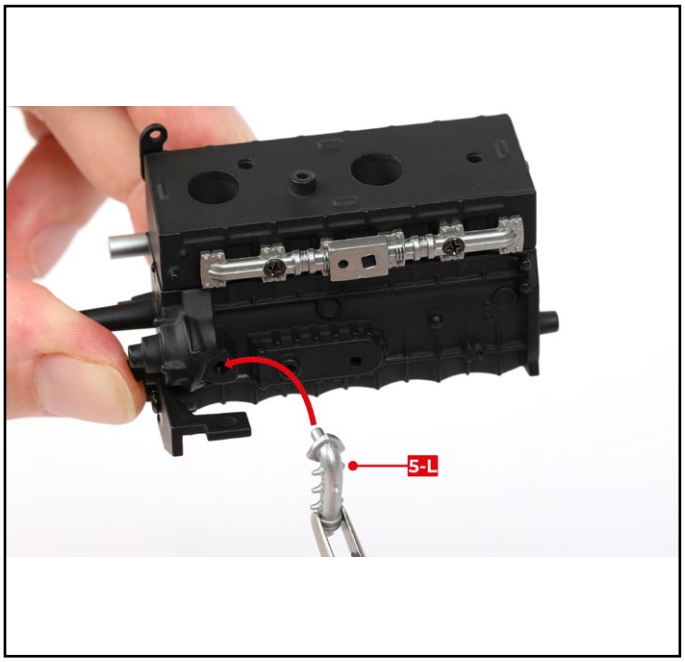


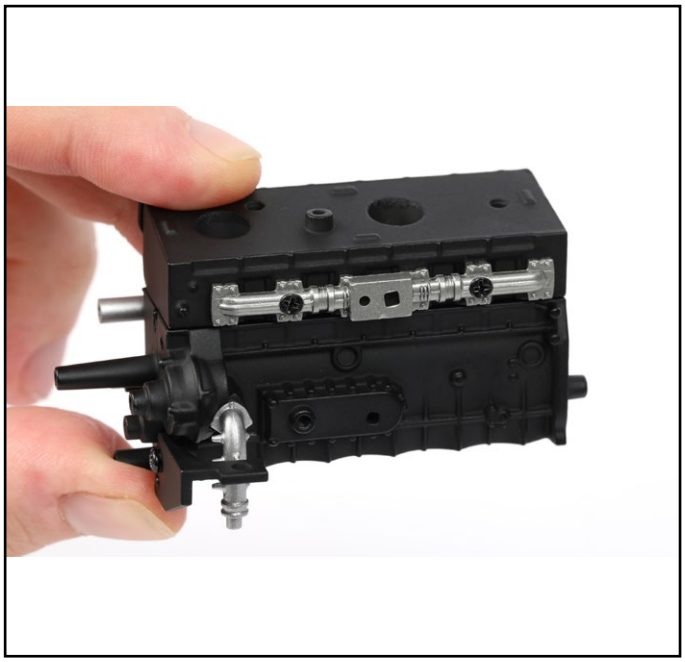


Step 9

Position the VGT air filter 5-P in the corresponding recess in the cylinder head, then press it gently into place.

Stage 05: Building the engine (1)

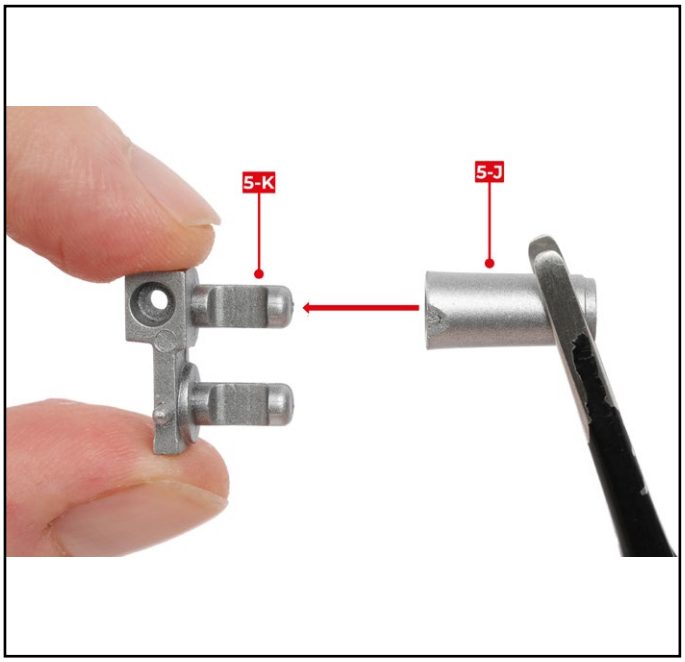


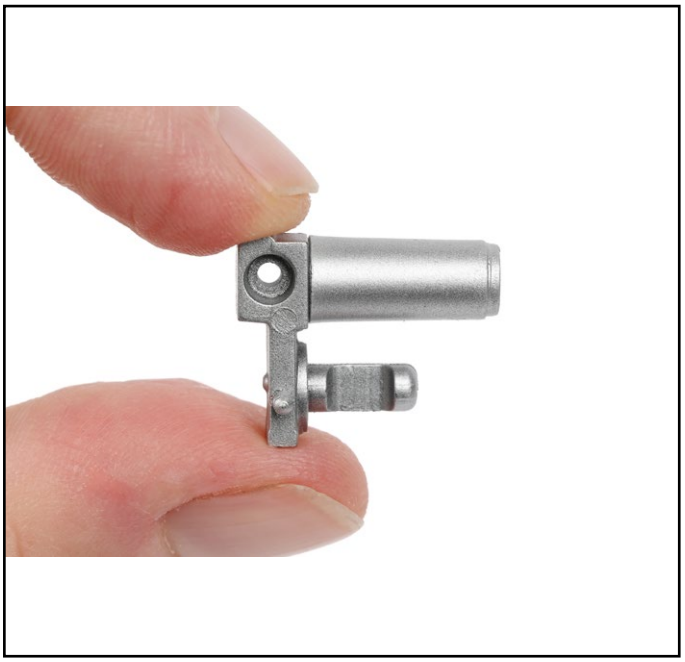


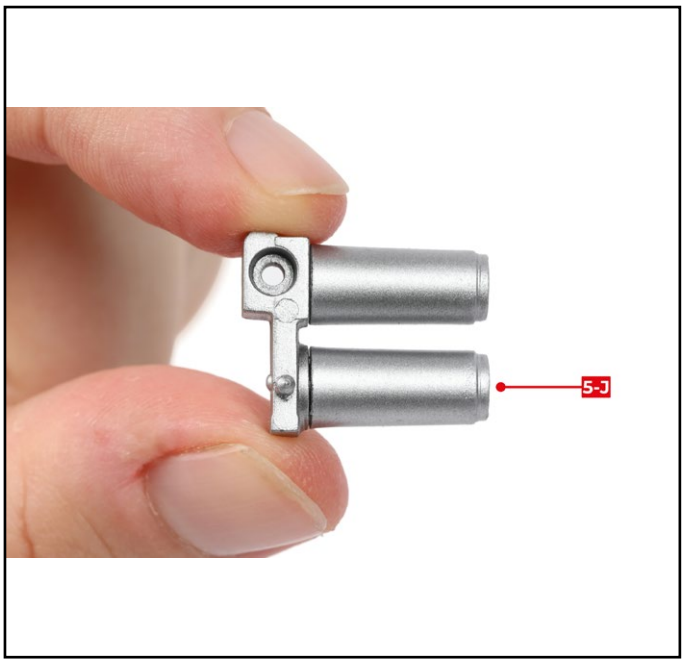
Step 10

Position the cooling duct 5-L in the corresponding recess on the right engine block, then press it into place.

Stage 05: Building the engine (1)



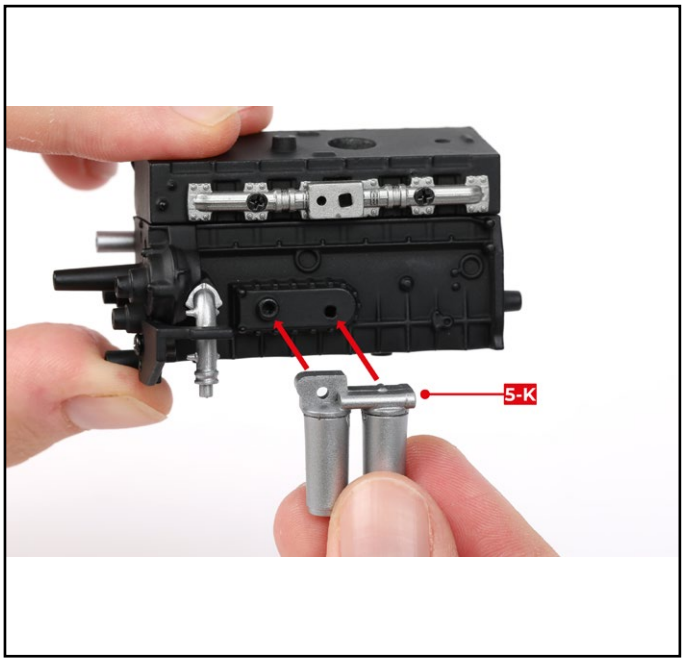


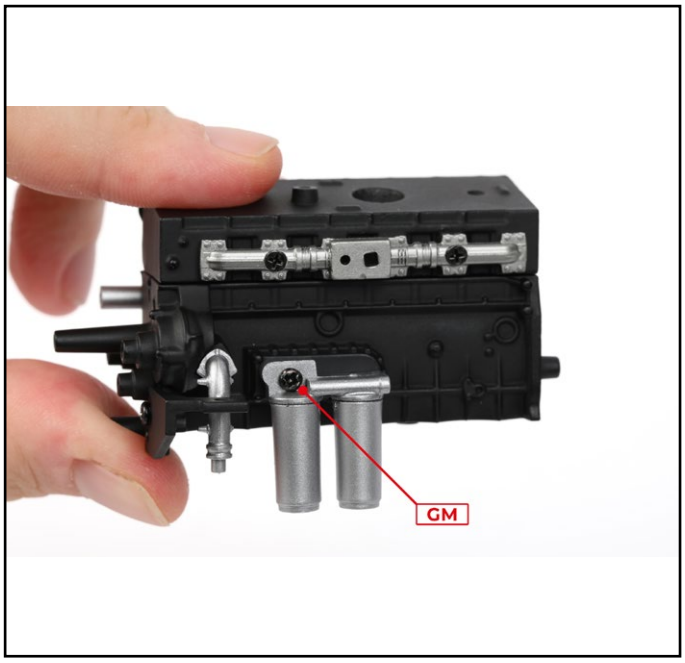


Step 11

Fit the engine oil filters 5-J to the oil filter bracket 5-K as shown.

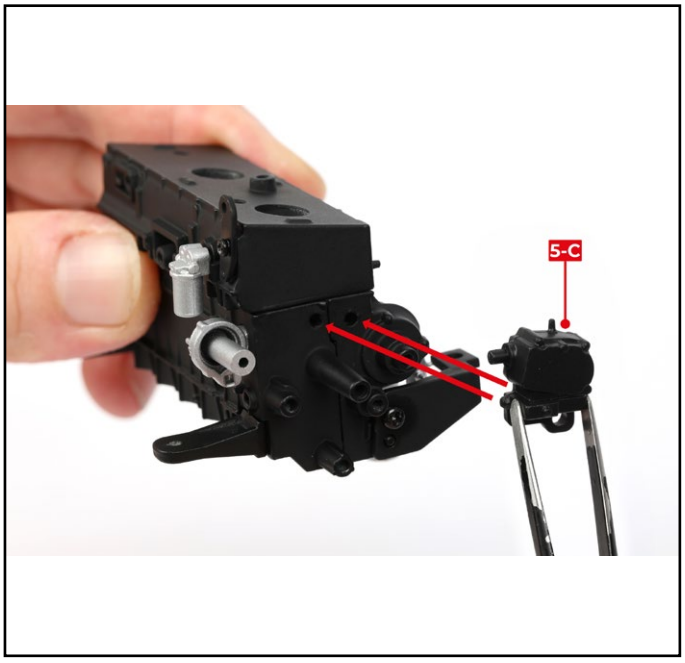
Stage 05: Building the engine (1)

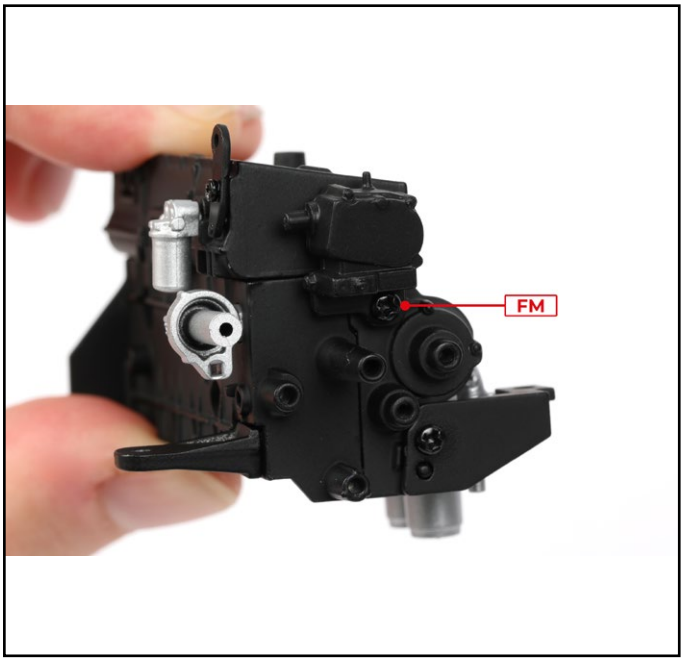




Step 12

Position the oil filter assembly on the engine block as shown, then secure it with one GM screw.

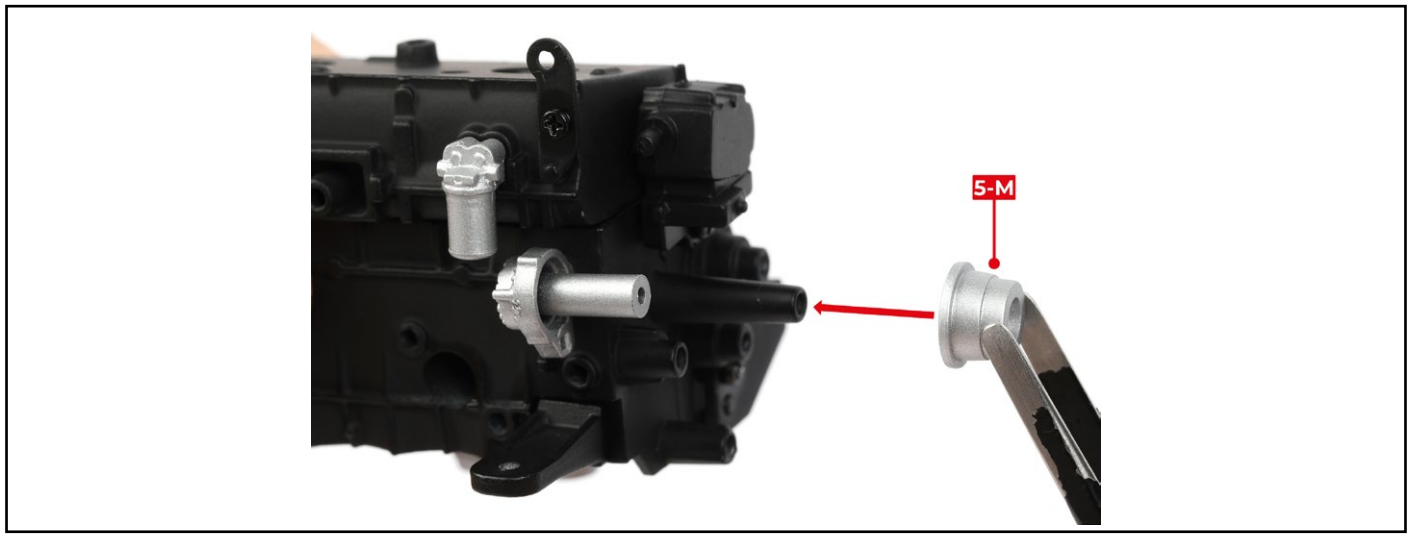


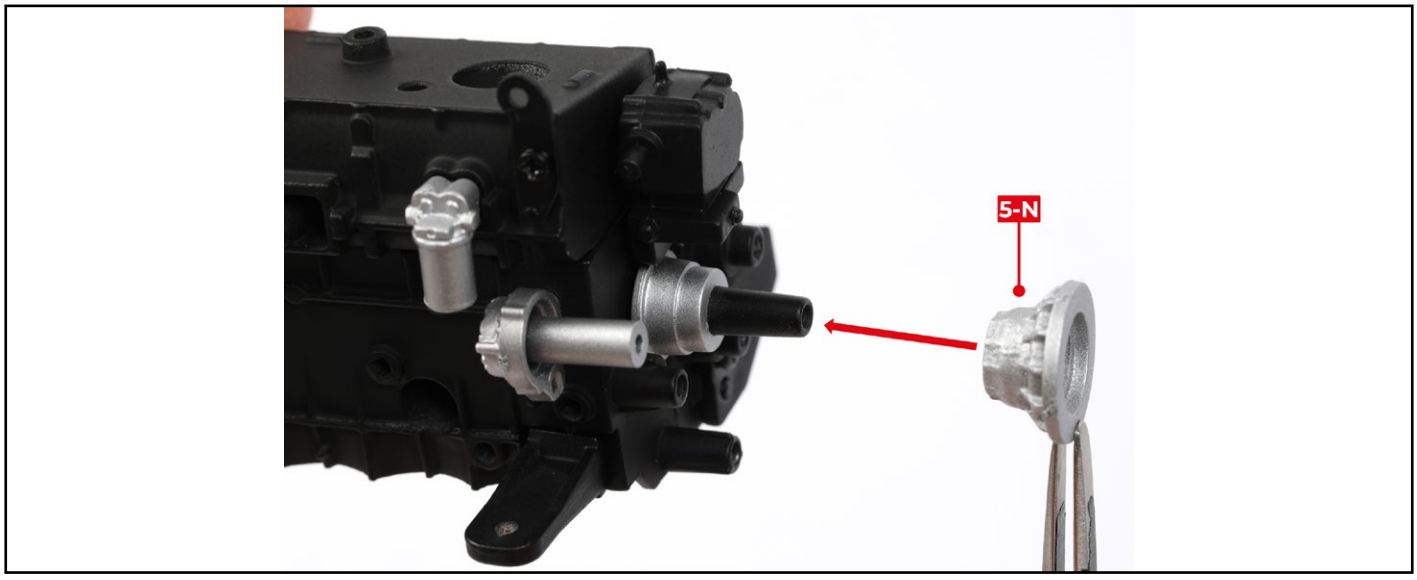


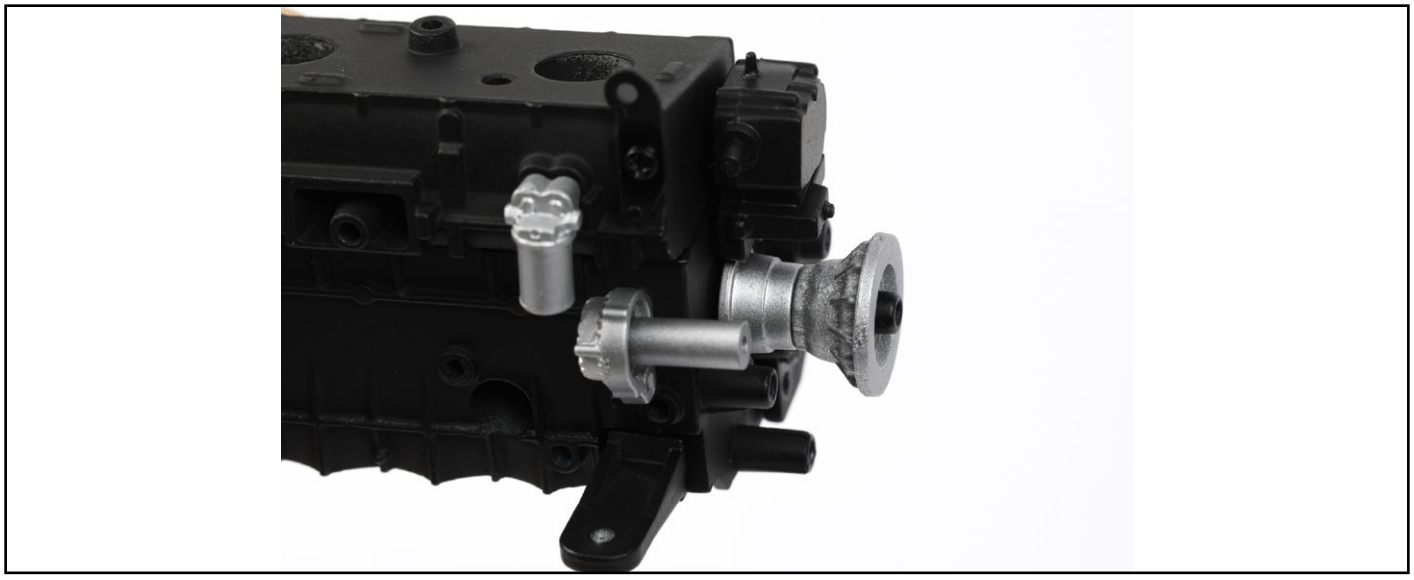
Step 13

Position the thermostat housing 5-C on the engine block as shown, then secure it with one FM screw.

Stage 05: Building the engine (1)





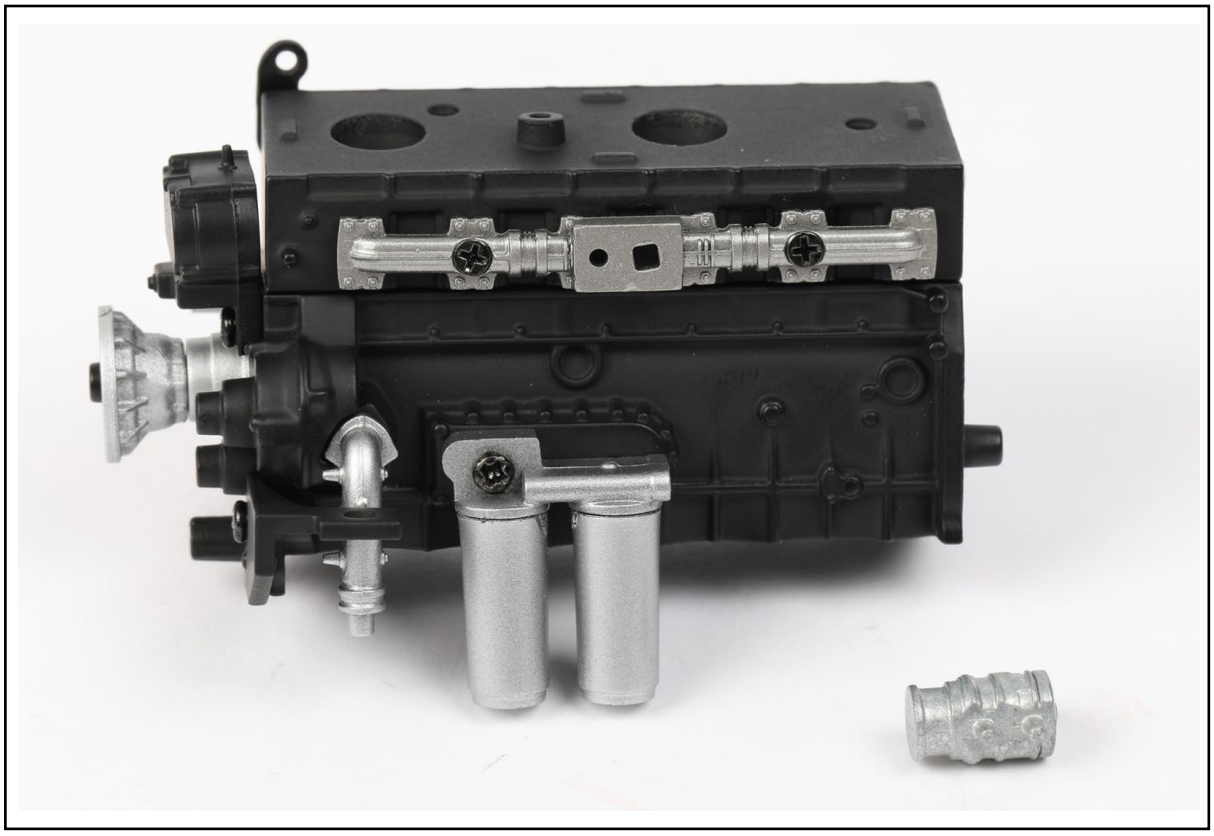


Step 14

Position fan coupling 1 (5-M) on the engine block, then position fan coupling 2 (5-N) on the engine block, making sure it is oriented as shown, then press it into place.

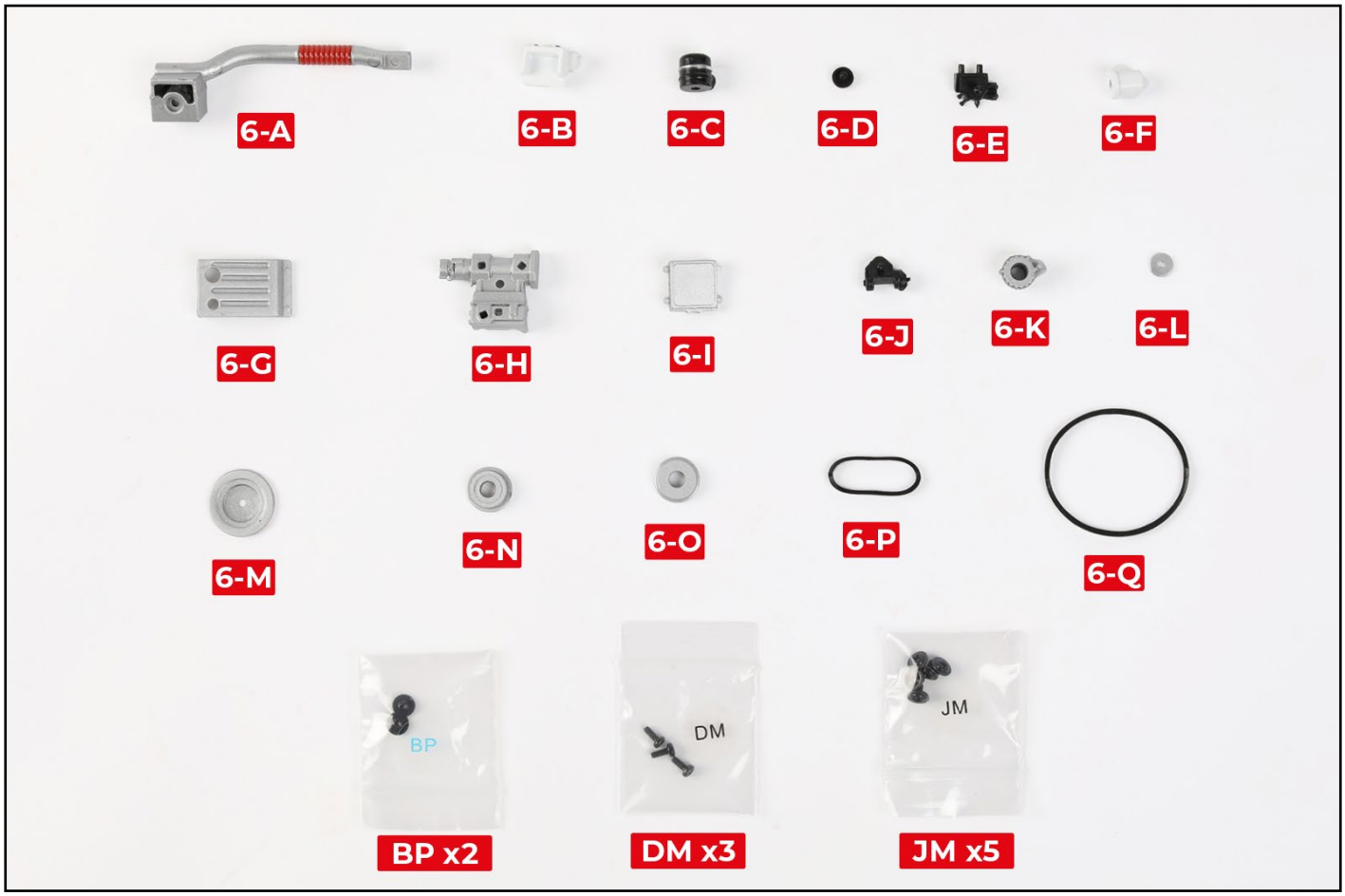
Stage 05: Building the engine (1)

STAGE 05 COMPLETE



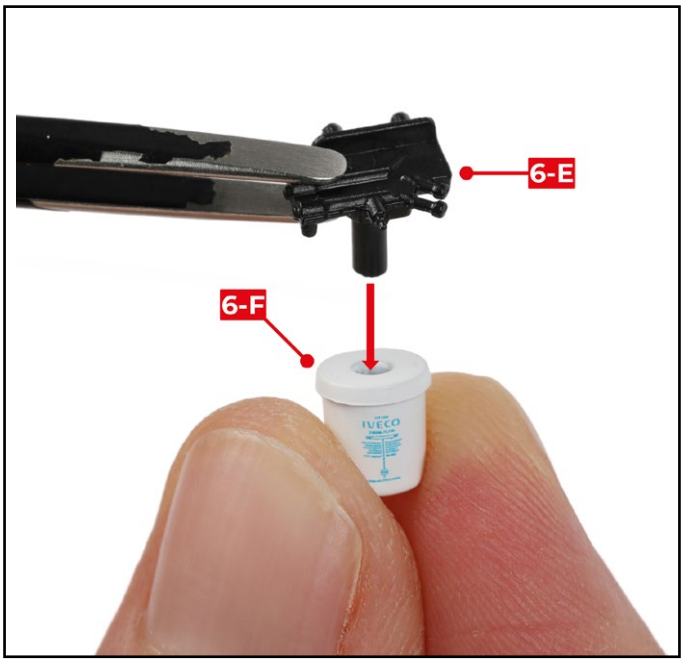
Stage 6: Building the engine (2)

STAGE 06 PARTS



6-A: Air intake duct
6-B: Power steering reservoir bracket
6-C: Power steering reservoir
6-D: Power steering reservoir cap
6-E: Diesel filter housing
6-F: Diesel filter
6-G: Air compressor shield
6-H: Power steering pump
6-I: Electronic control unit (ECU)
6-J: Alternator bracket
6-K: Front alternator housing
6-L: Alternator pulley
6-M: Camshaft pulley 1
6-N: Camshaft pulley 2
6-O: Camshaft pulley 3
6-P: Air compressor belt
6-Q: Poly-V belt
BP: 2 screws
DM: 3 screws
JM: 5 screws

Stage 6: Building the engine (2)

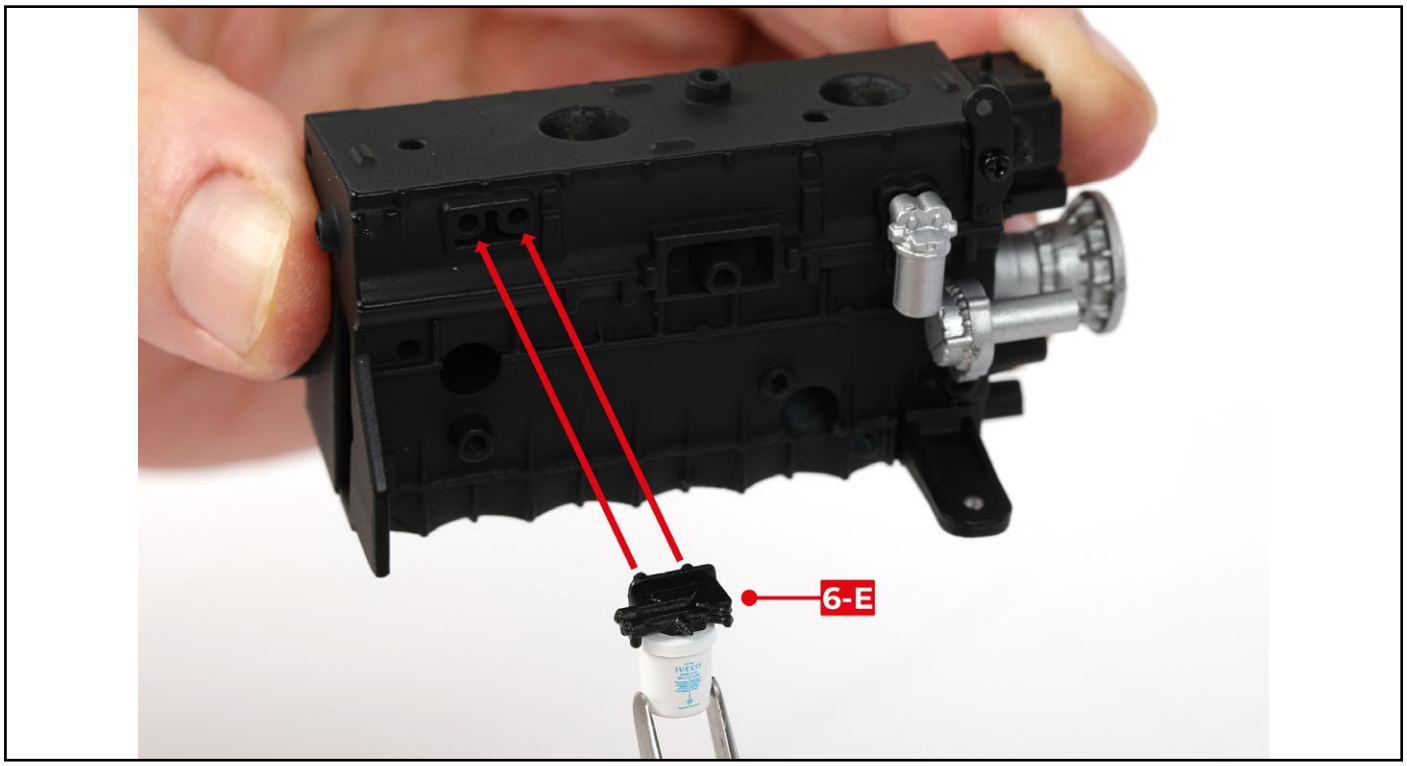


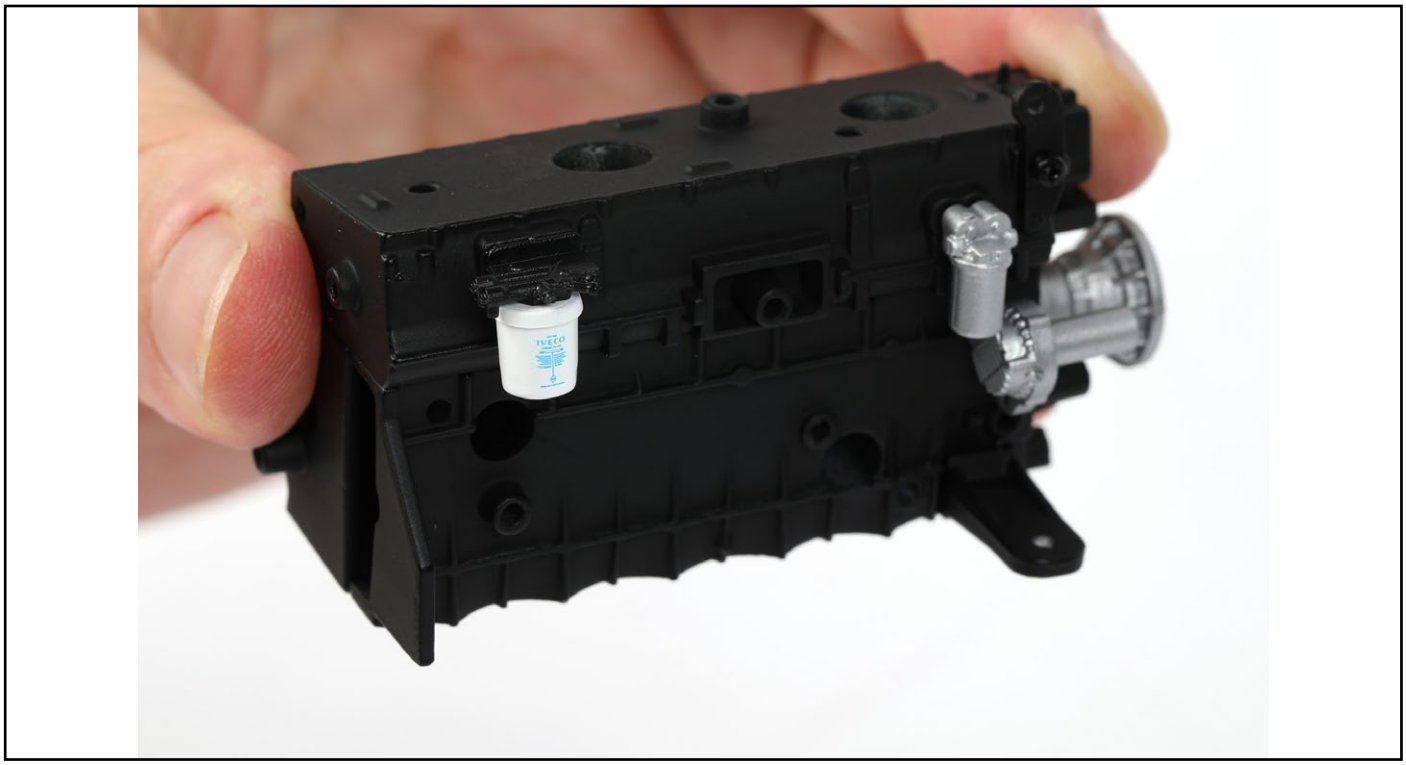


Step 1

Fit the diesel filter housing 6-E into the diesel filter 6-F.

Stage 6: Building the engine (2)

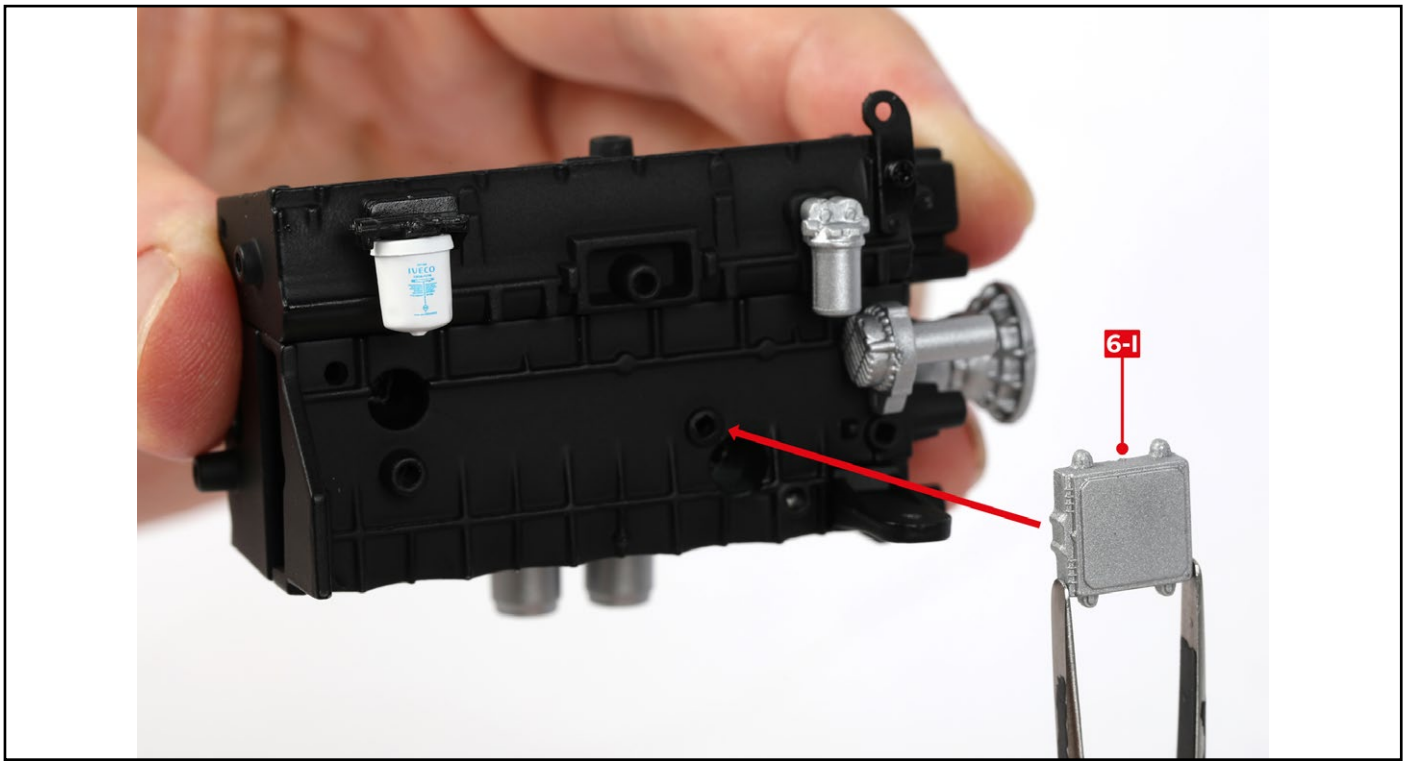


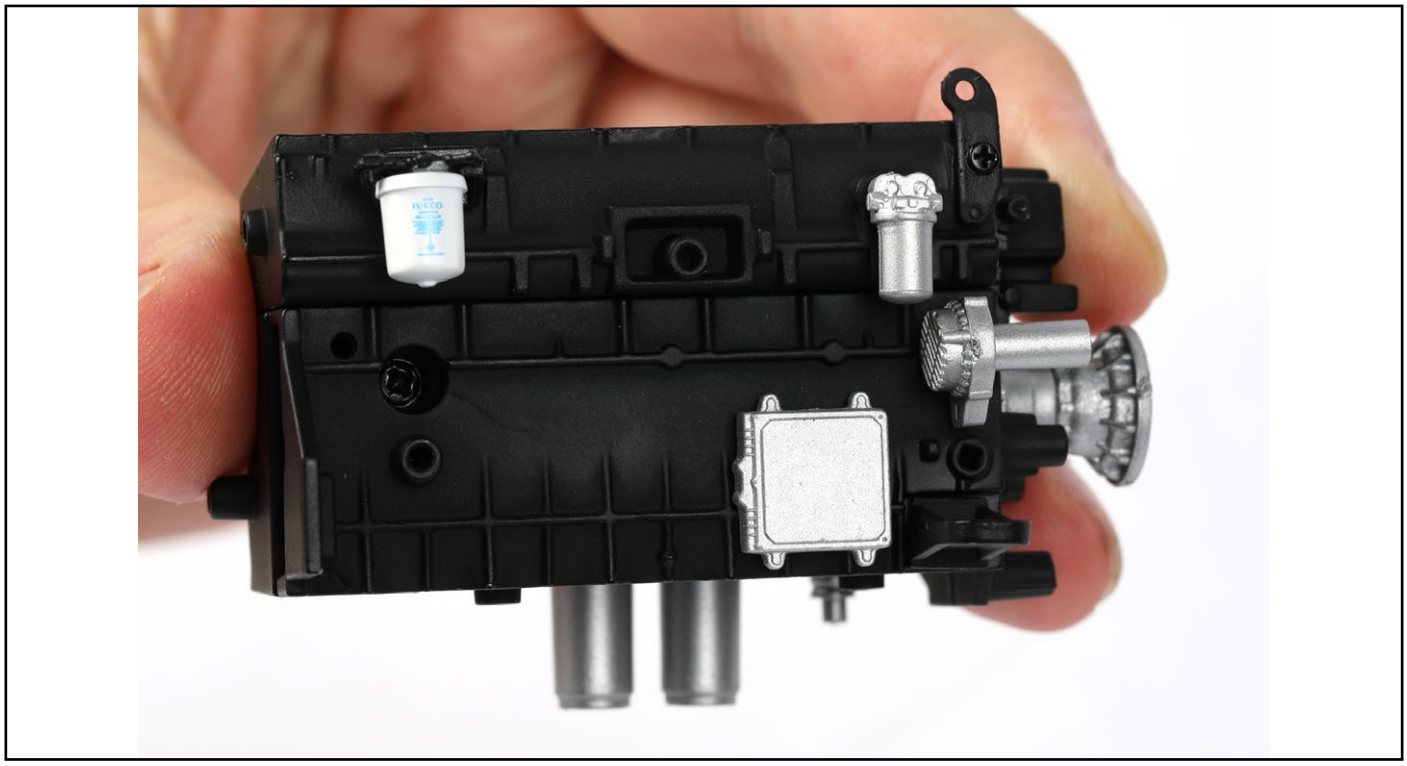


Step 2

Position the diesel filter assembly on the engine block, aligning the locating pins on the housing with the corresponding holes. Press gently to secure it in place.

Stage 6: Building the engine (2)

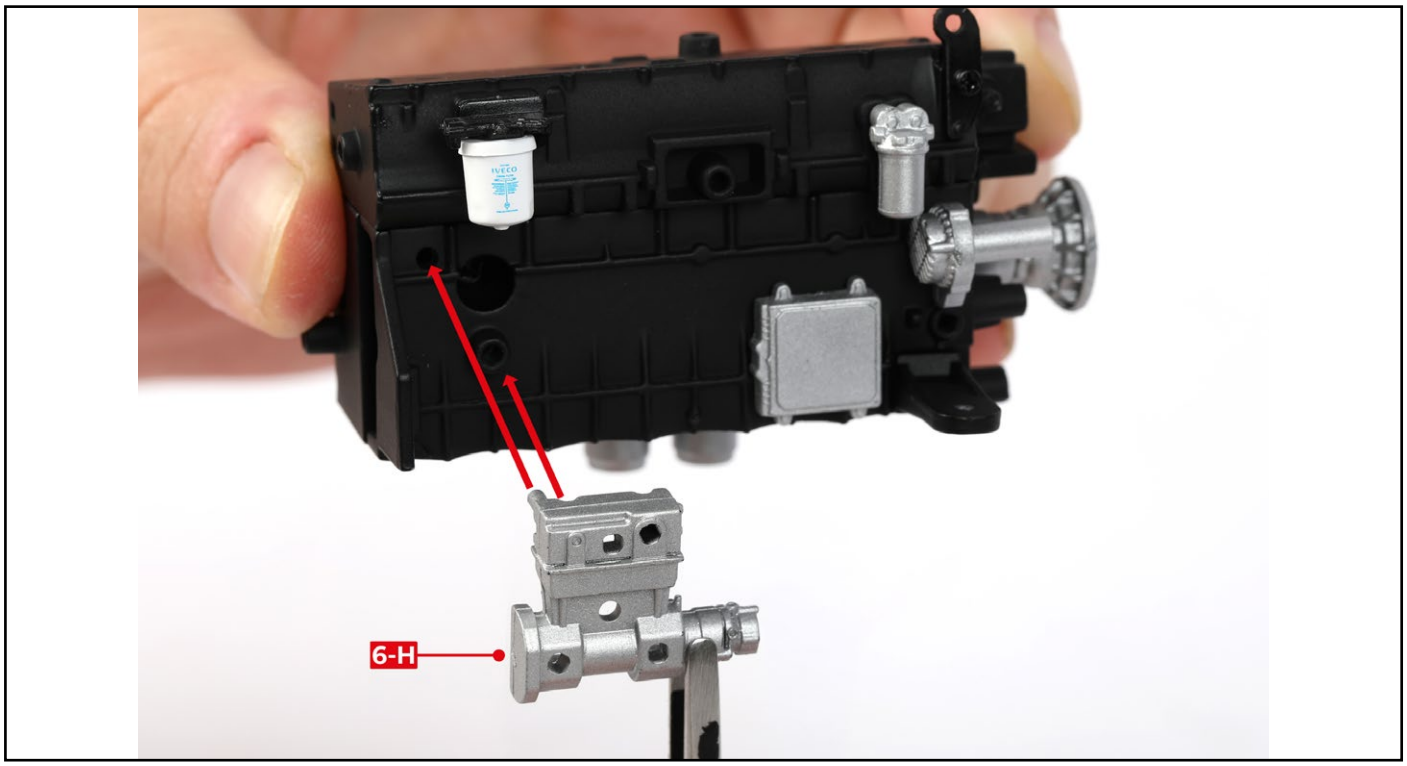


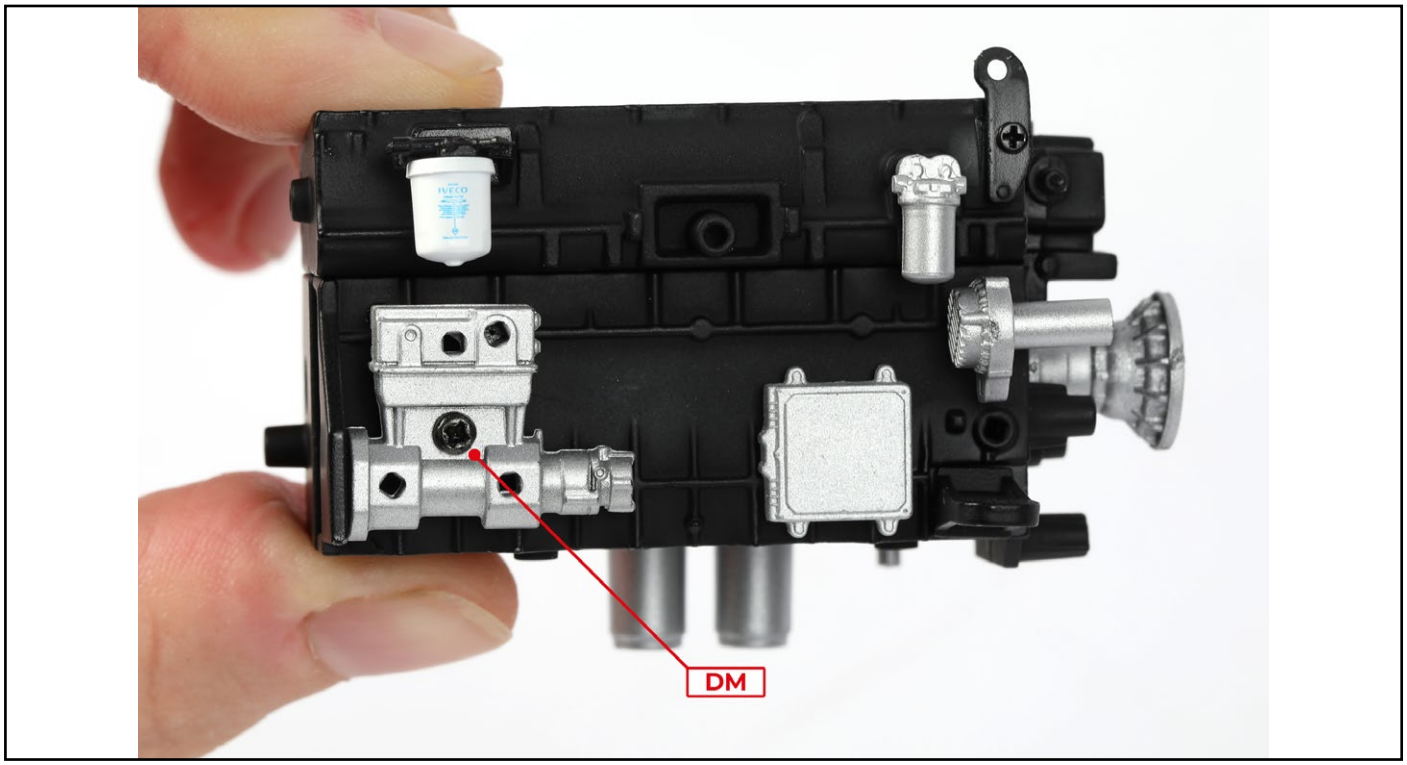


Step 3

Position the electronic control unit 6-I on the engine block, aligning the locating pins with the corresponding holes. Press it into place.

Stage 6: Building the engine (2)

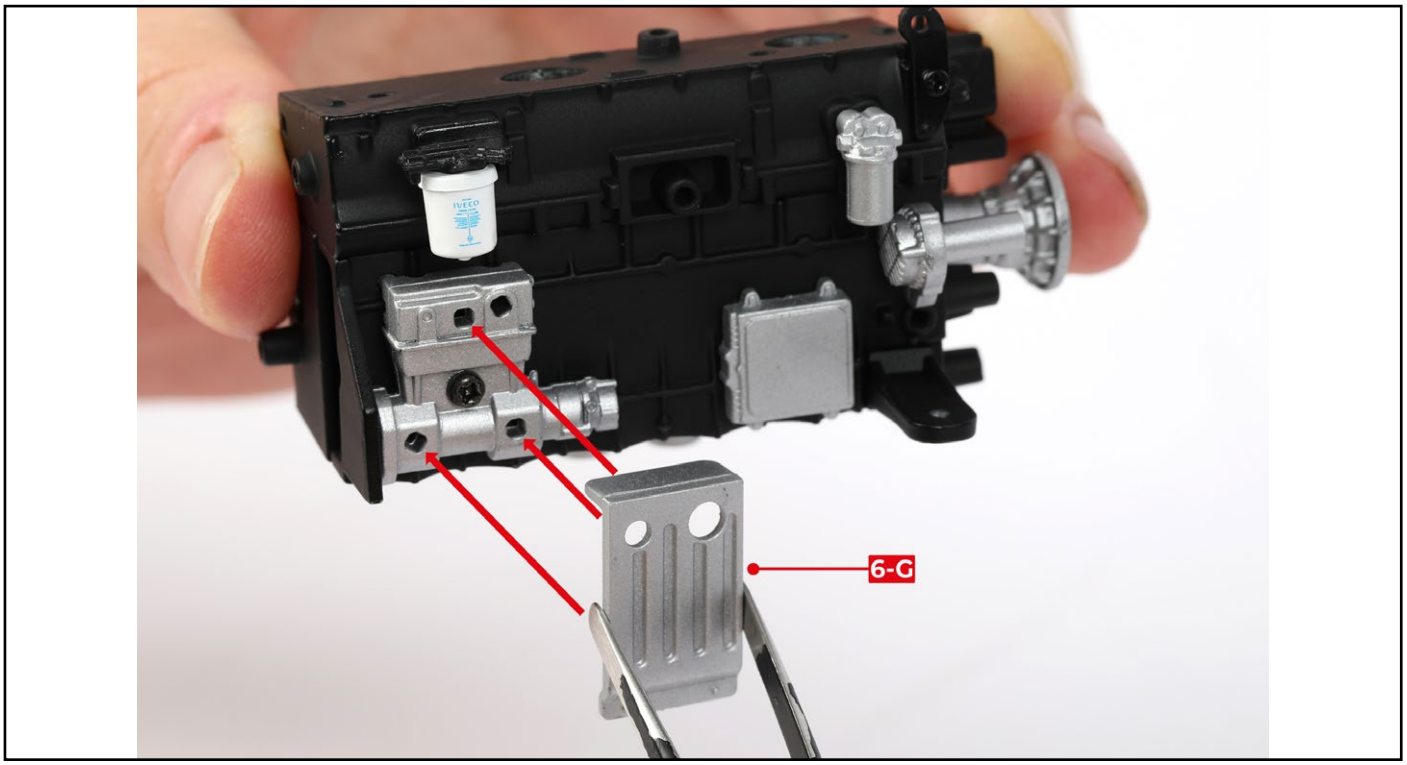


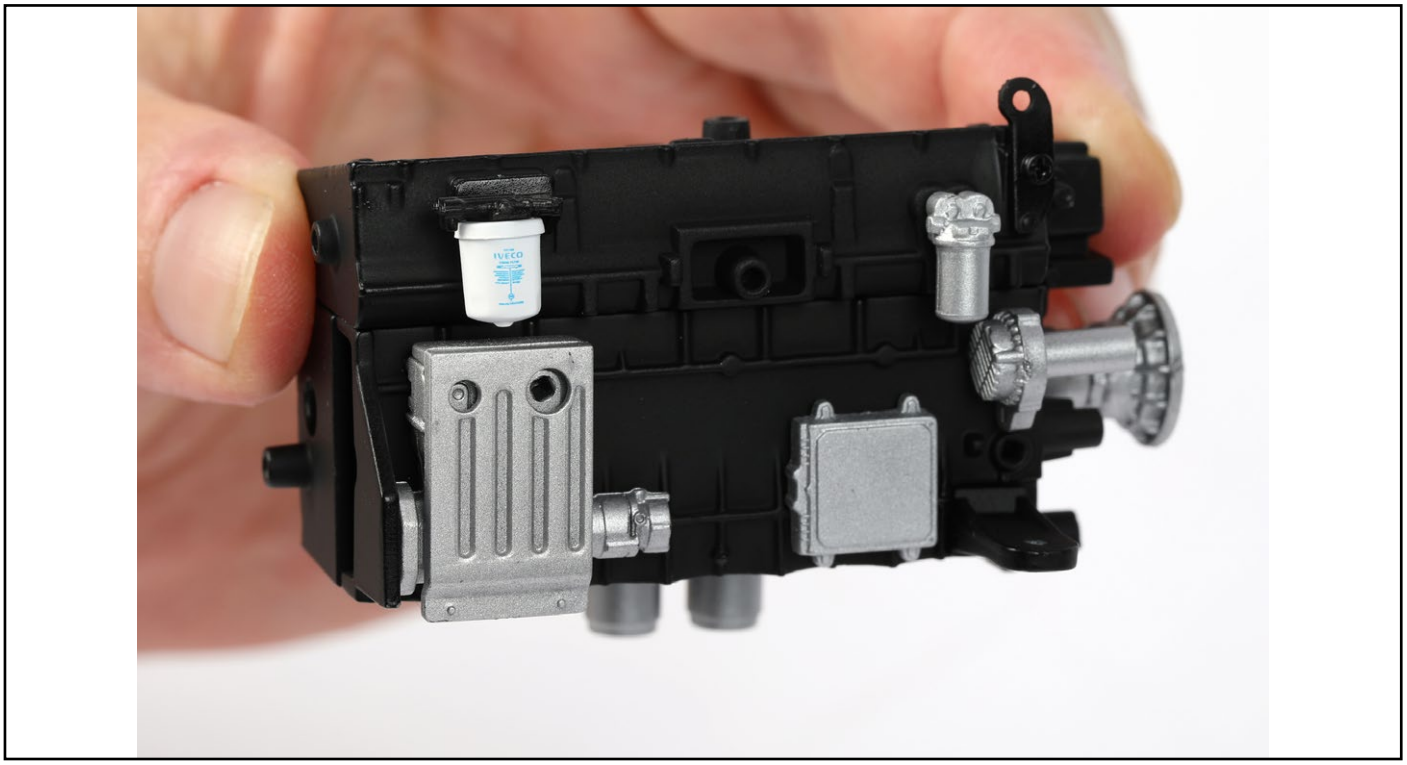


Step 4

Position the power steering pump 6-H on the engine block as shown, then secure it with one DM screw.

Stage 6: Building the engine (2)

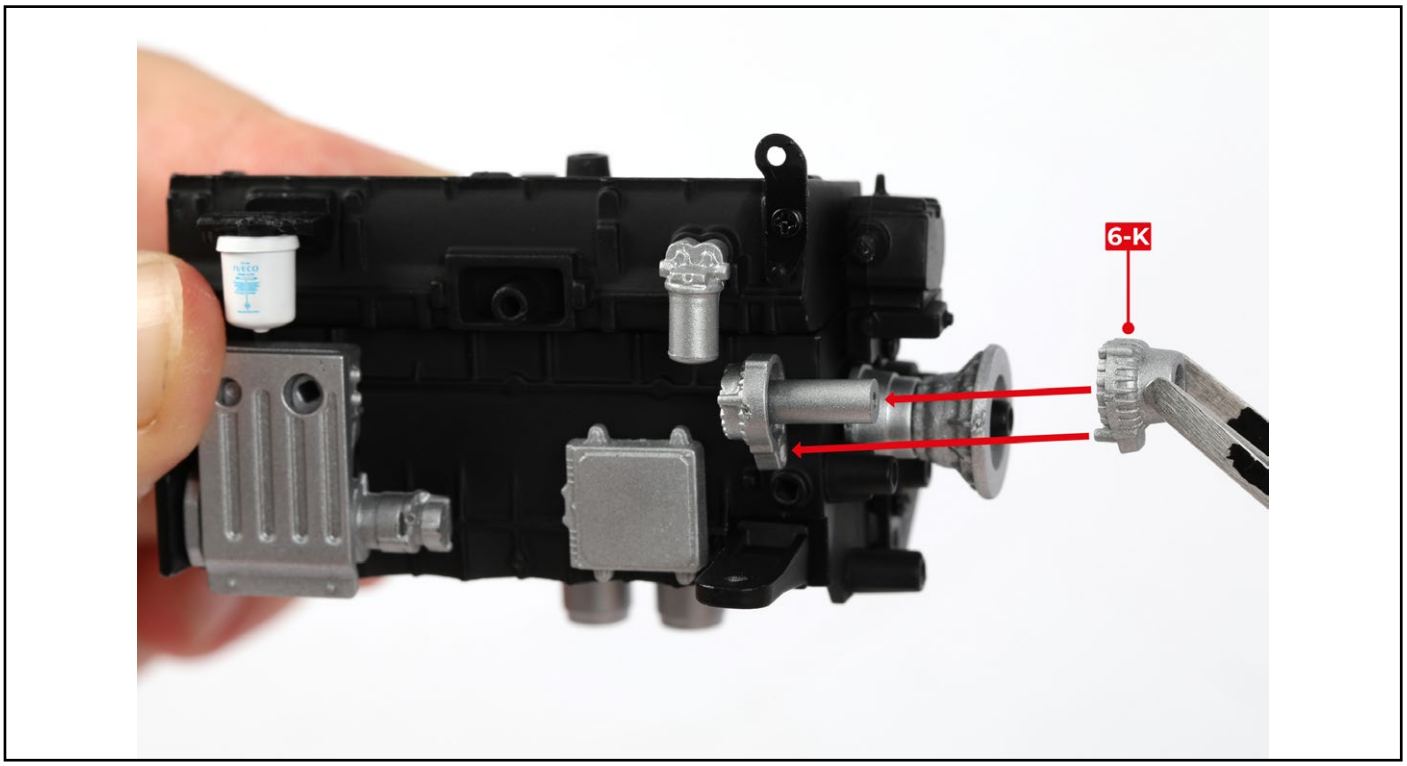


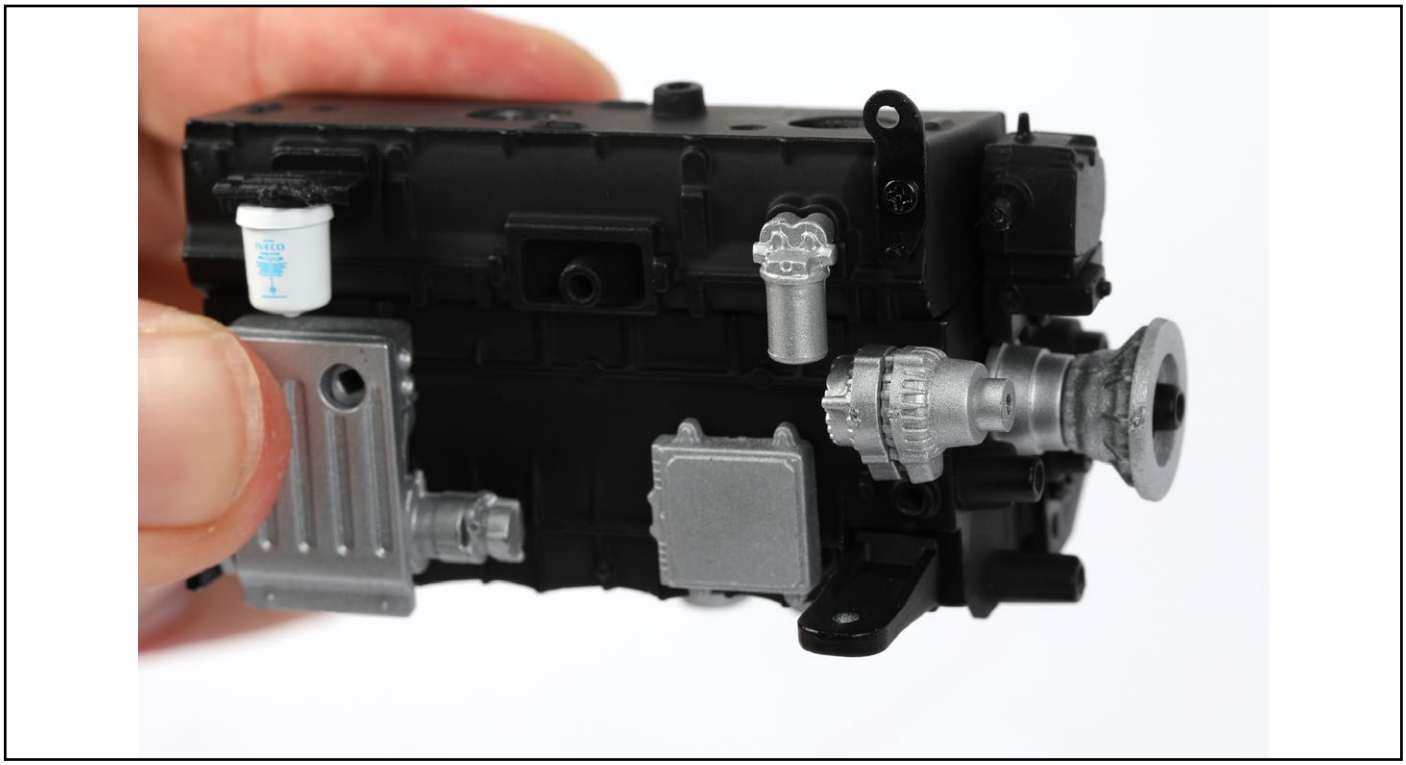


Step 5

Position the air compressor shield 6-G on the engine block, aligning the locating pins with the corresponding holes. Press it into place.

Stage 6: Building the engine (2)

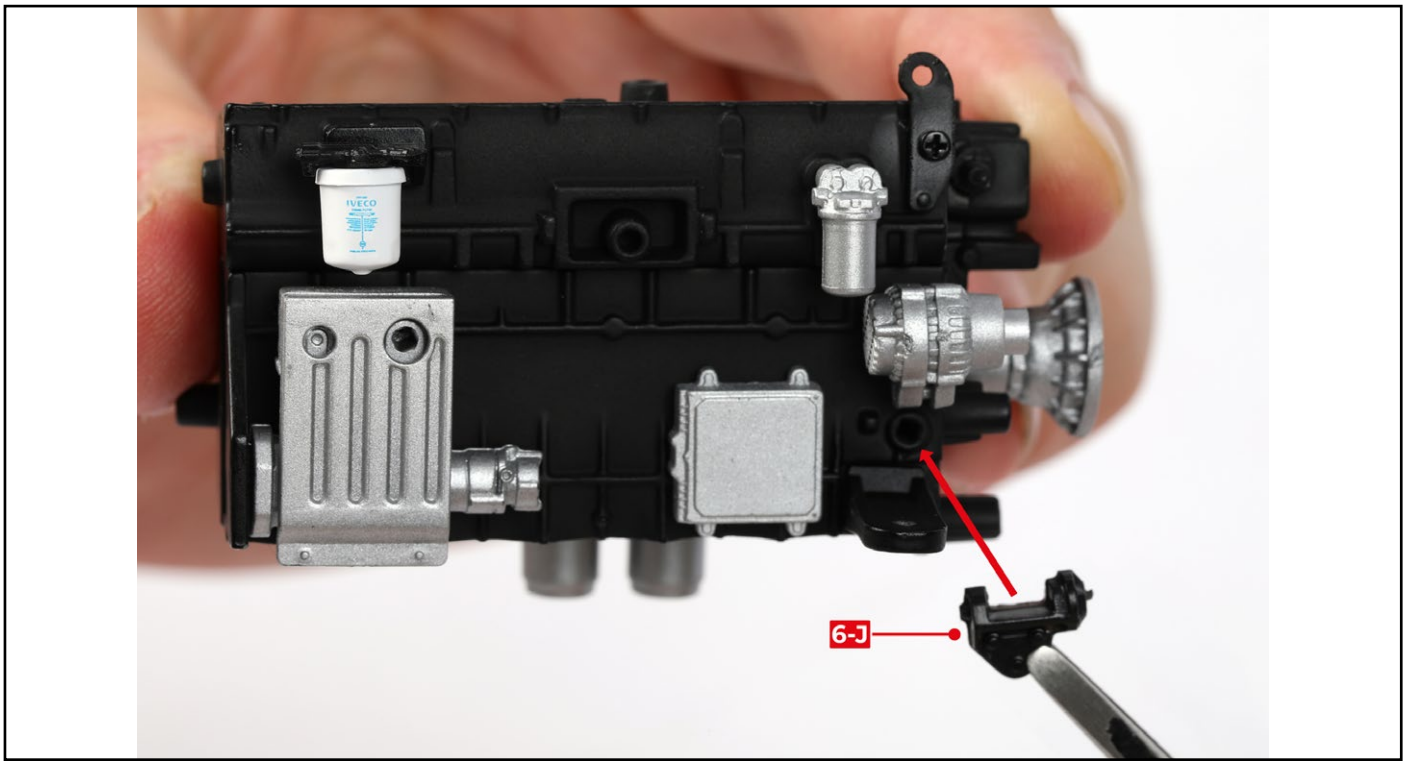


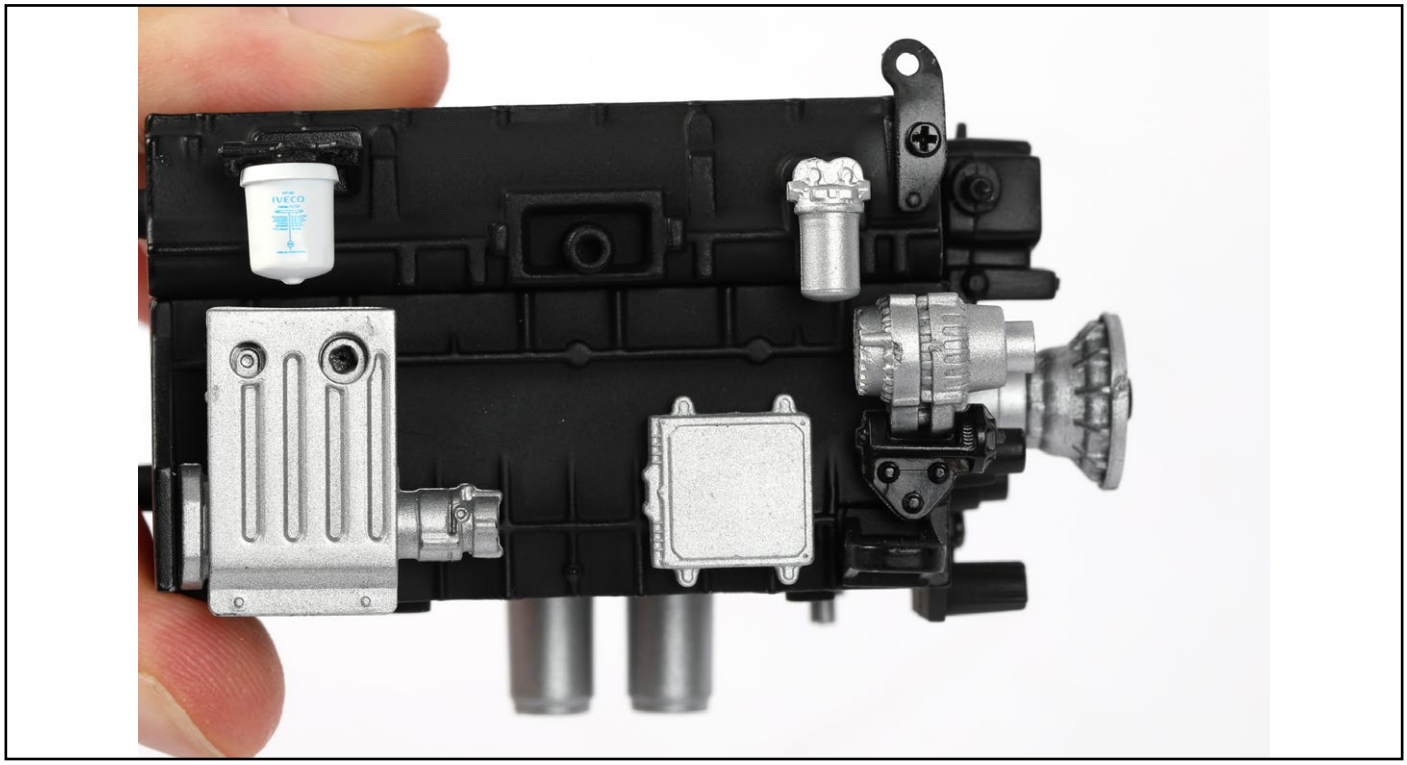


Step 6

Position the front alternator housing 6-K in the rear alternator mount fitted to the engine block in the previous stage.

Stage 6: Building the engine (2)

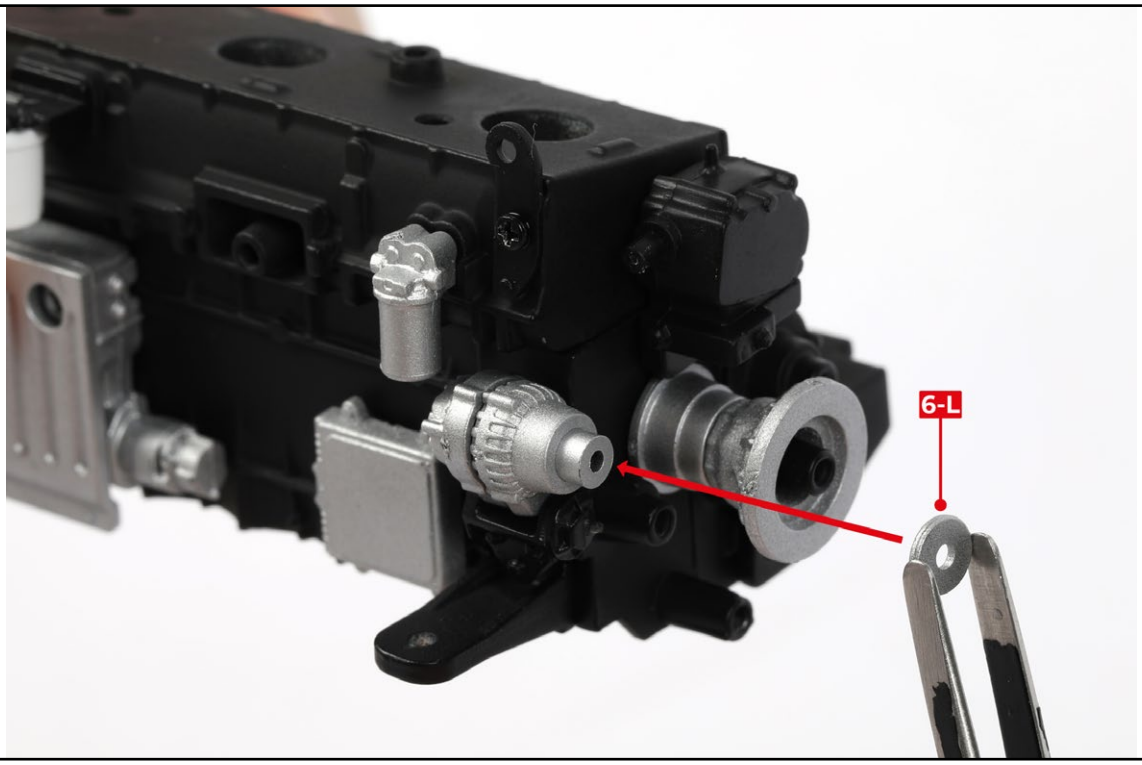


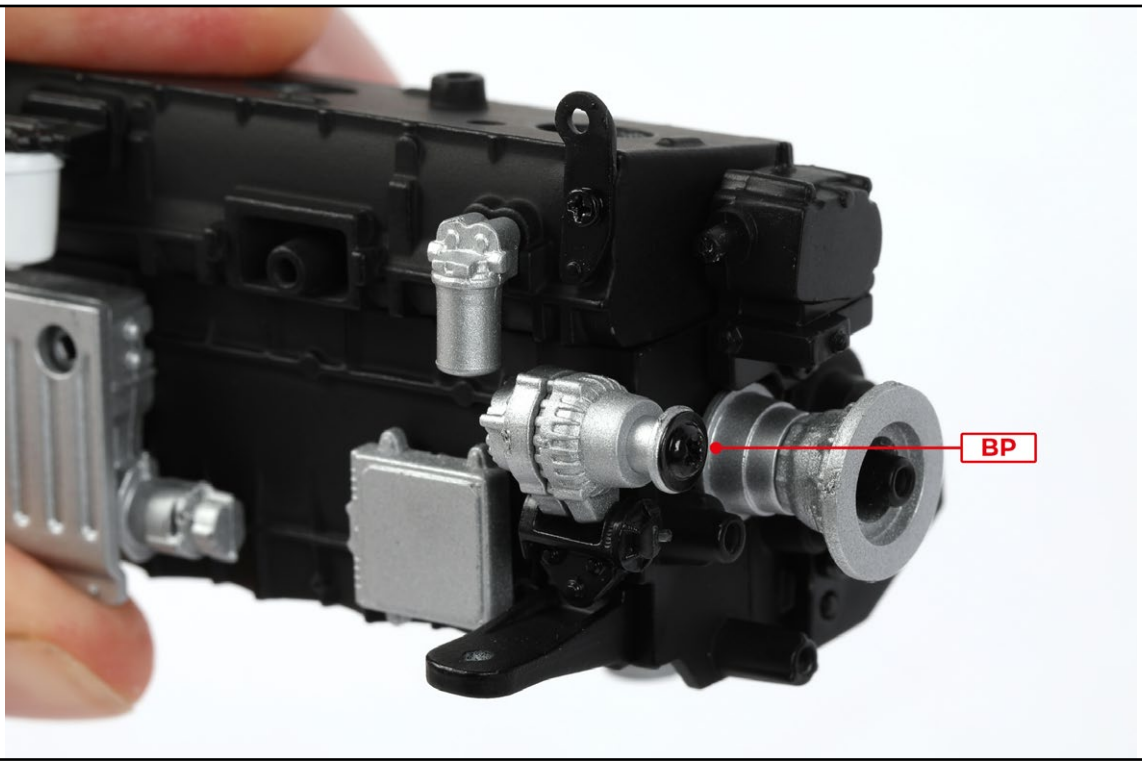


Step 7

Position the alternator bracket 6-J as shown, aligning the locating pins with the corresponding holes. Press firmly to secure it in place.

Stage 6: Building the engine (2)

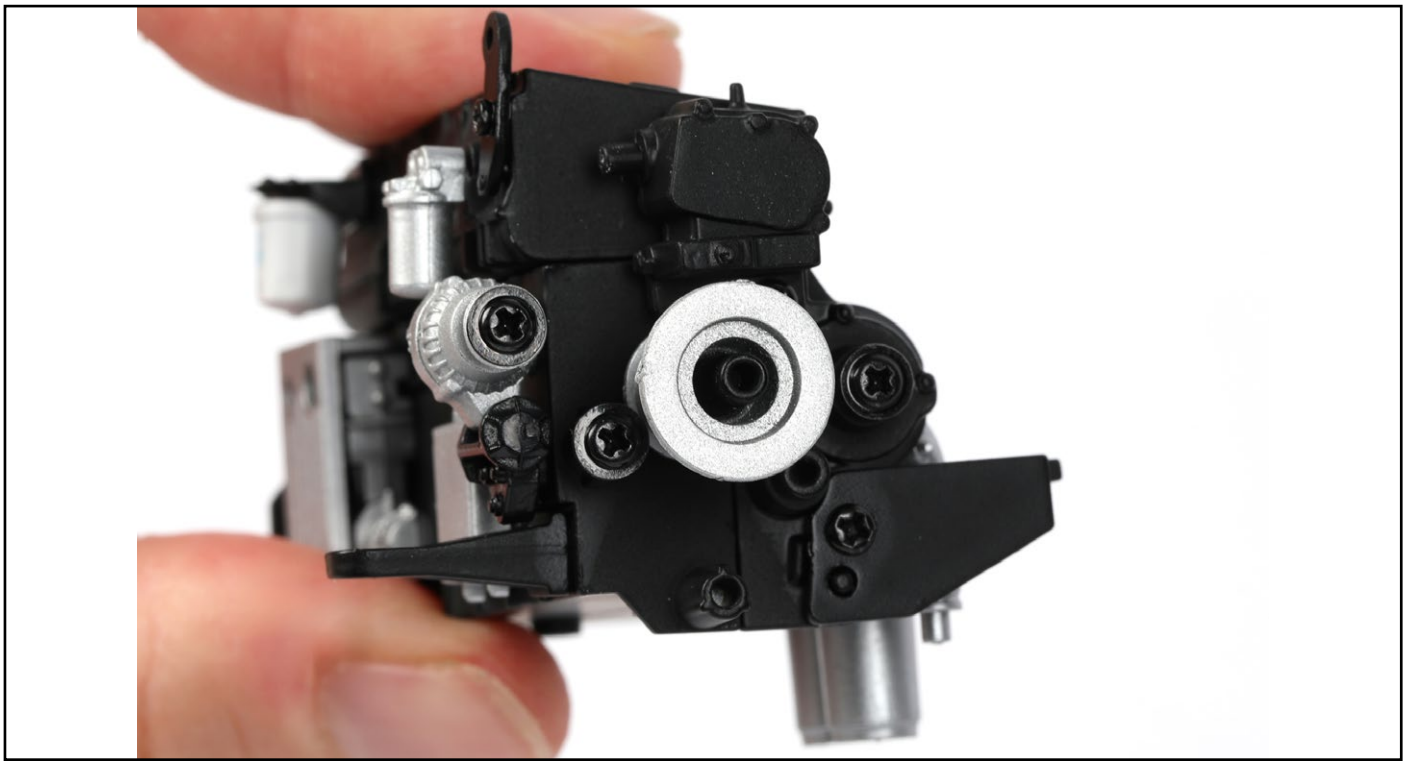


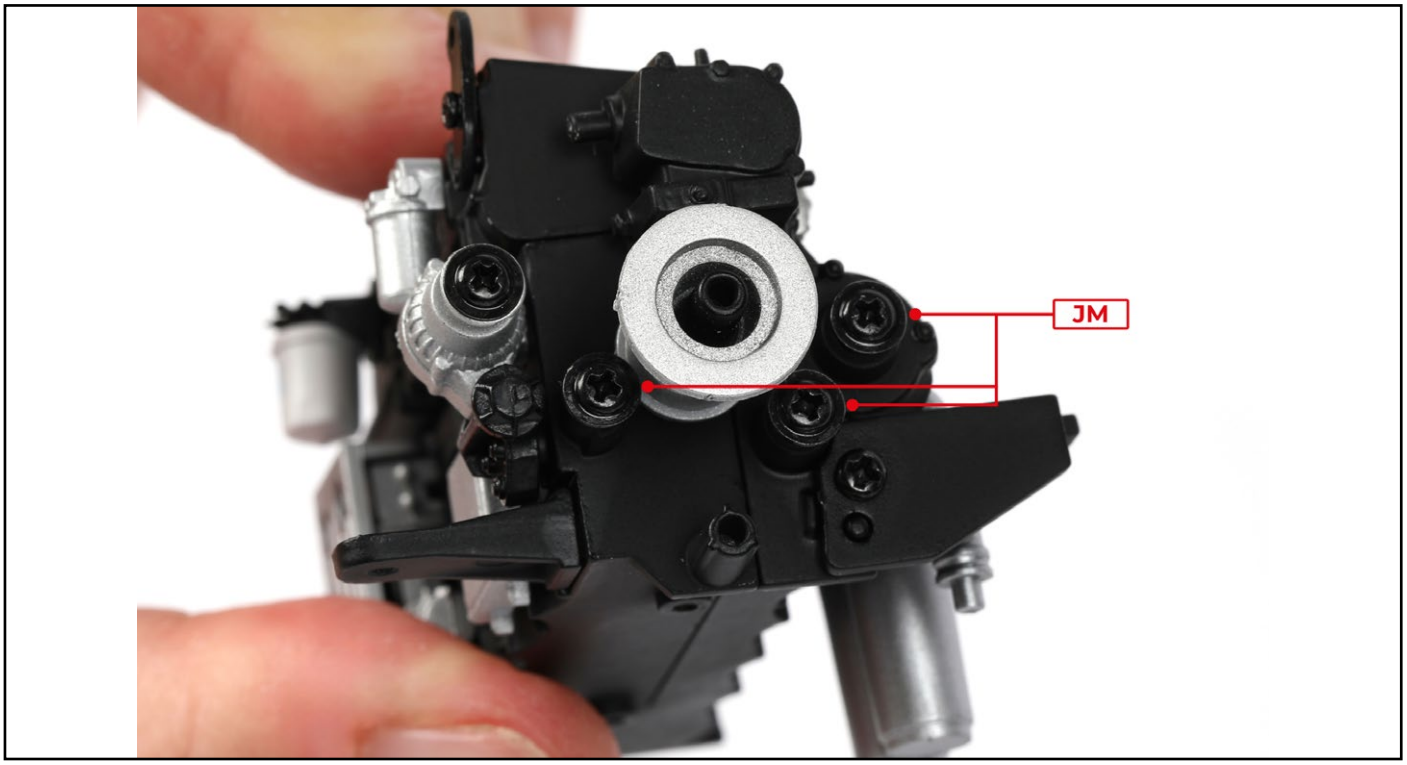


Step 8

Position the alternator pulley 6-L on the front alternator housing 6-K as shown, then secure it with one BP screw.

Stage 6: Building the engine (2)

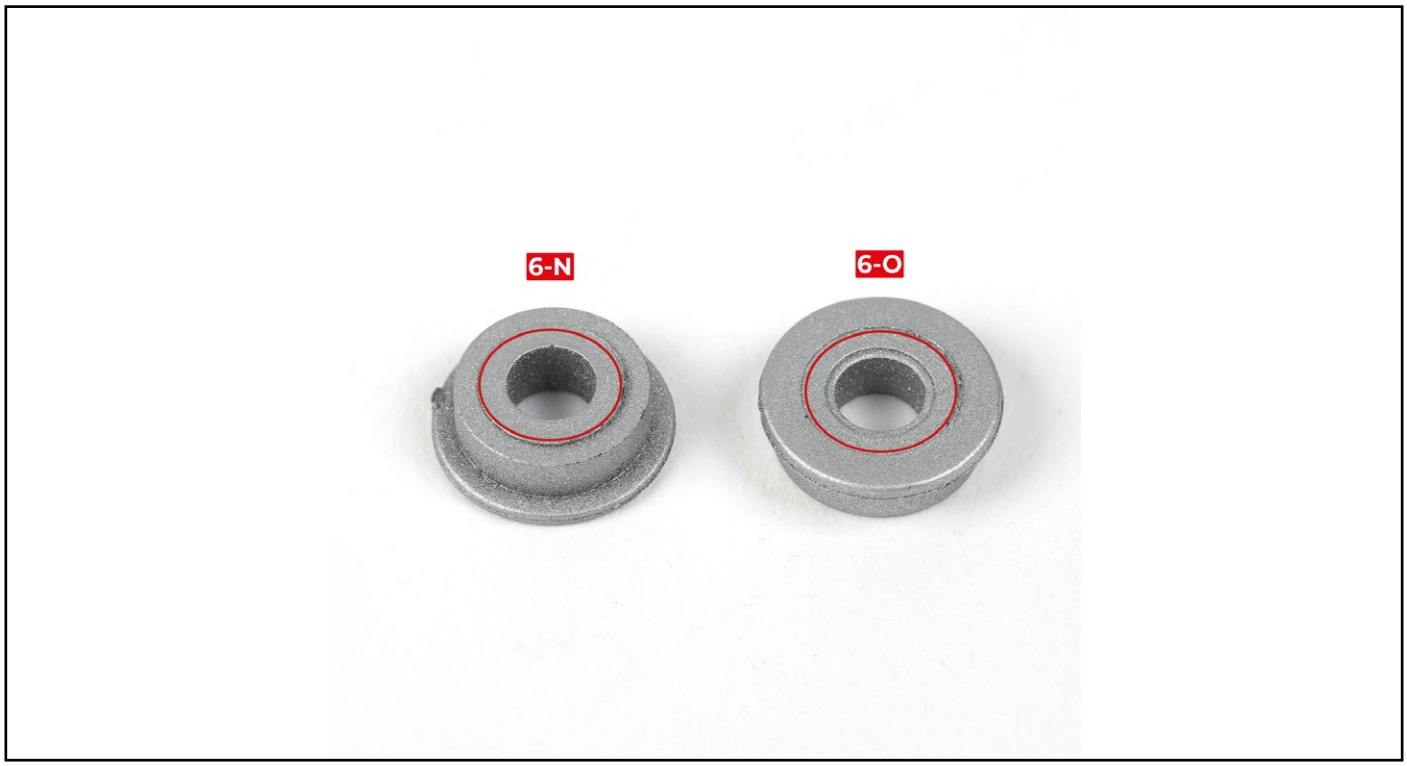




Step 9

Locate the first corresponding hole on the engine block and screw in one JM screw. This screw will act as a guide for the Poly-V belt. Then, screw two more JM screws into the corresponding holes as shown.

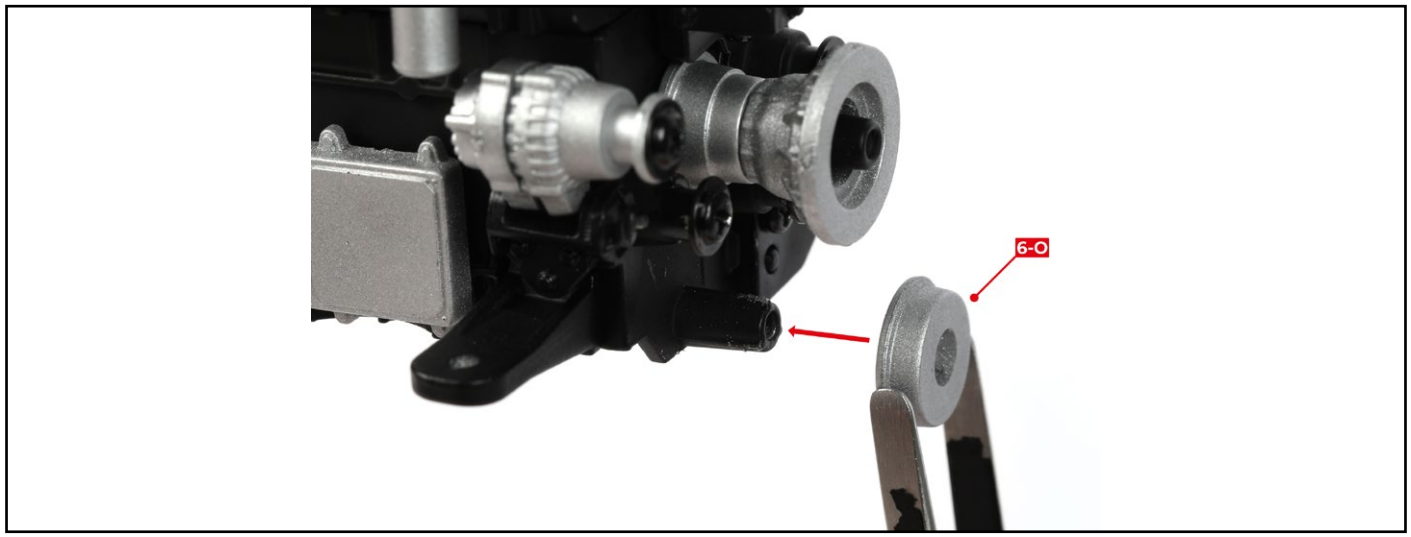
Stage 6: Building the engine (2)

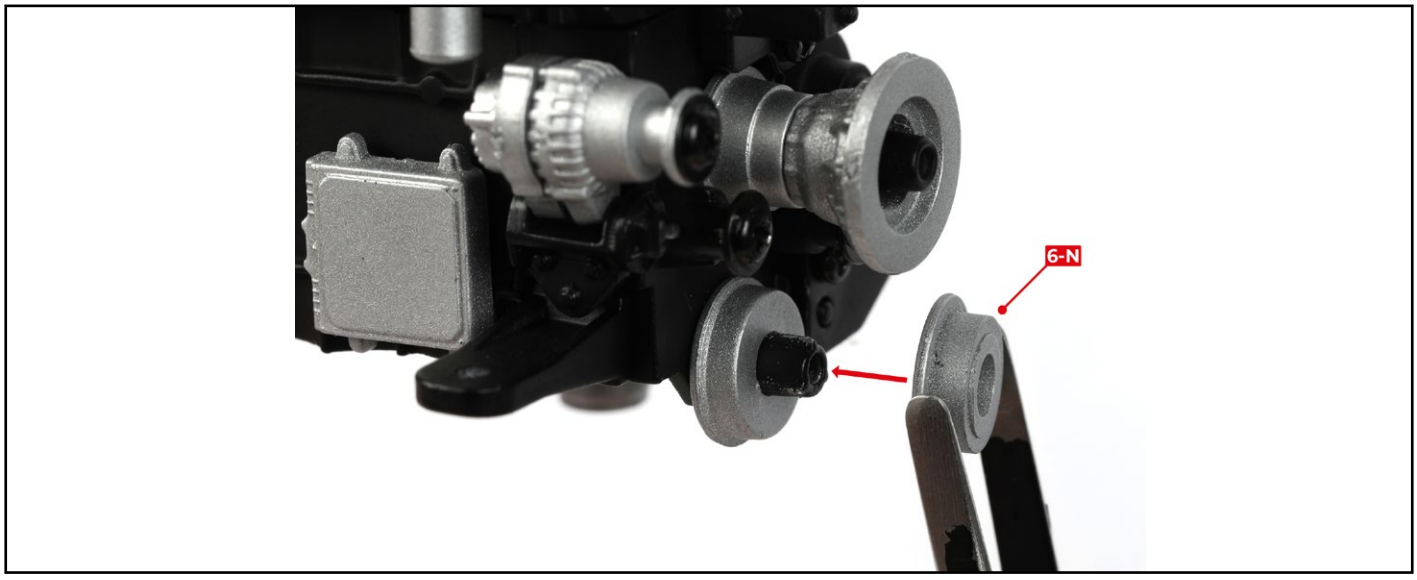


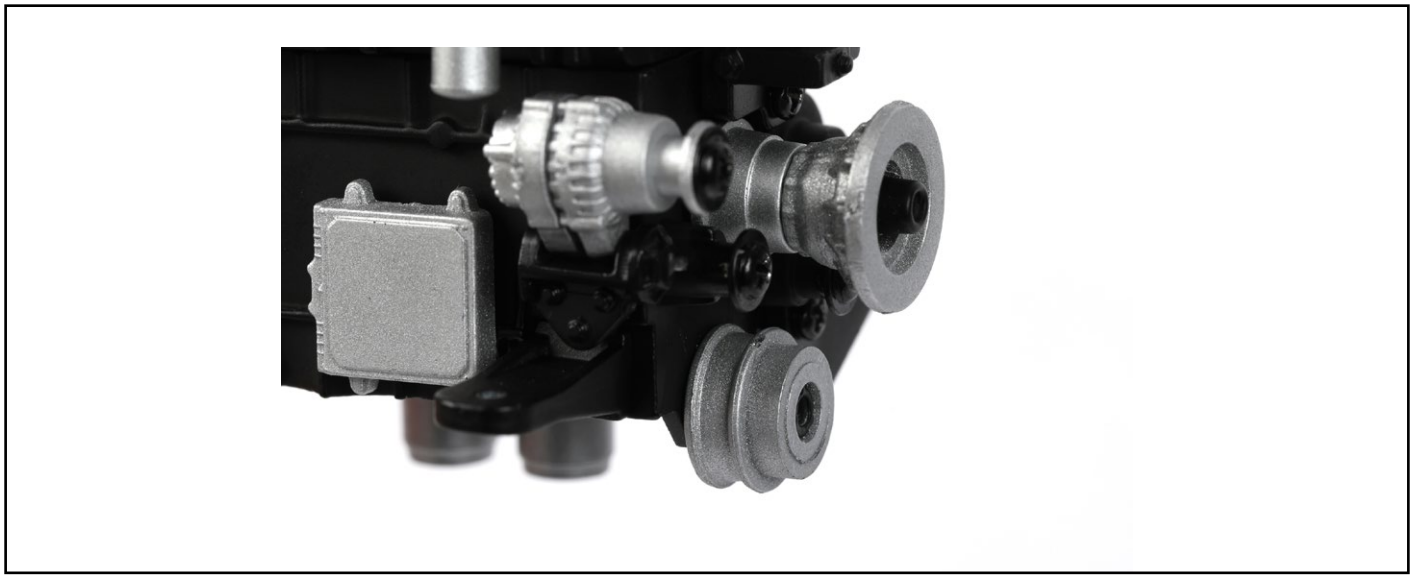
Step 10

Identify parts 6-N and 6-O as shown.

Stage 6: Building the engine (2)



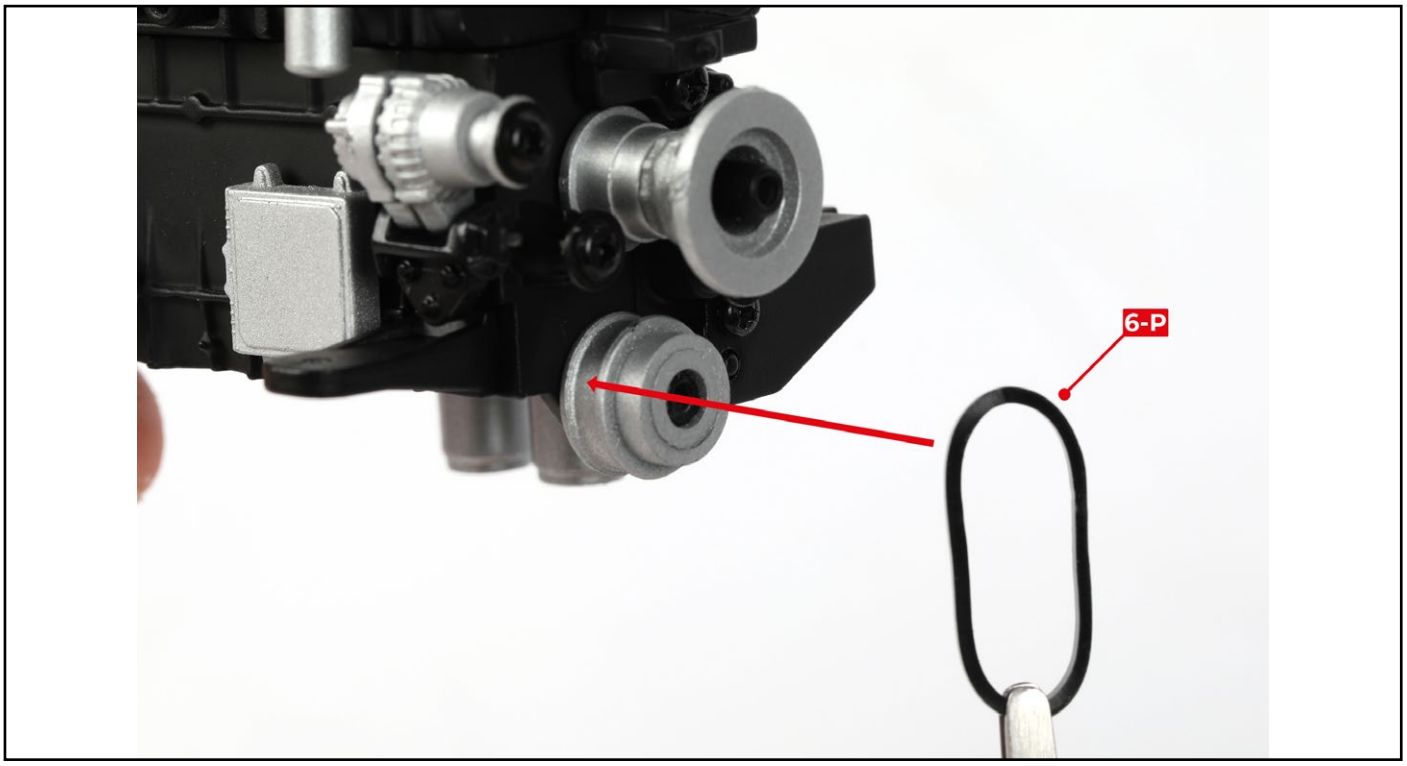


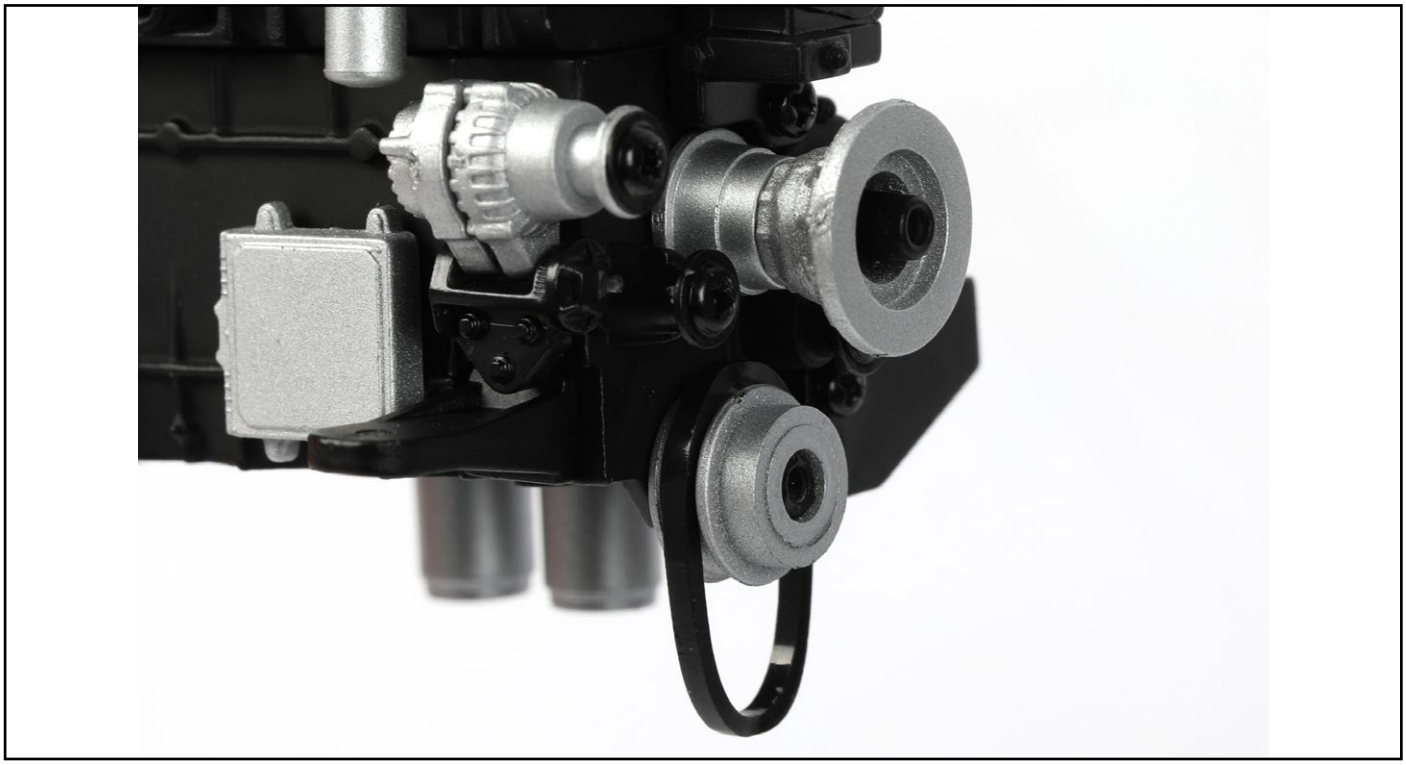


Step 11

Position camshaft pulley 3 (6-O) on the corresponding shaft as shown. Then, fit camshaft pulley 2 (6-N) onto the corresponding shaft.

Stage 6: Building the engine (2)

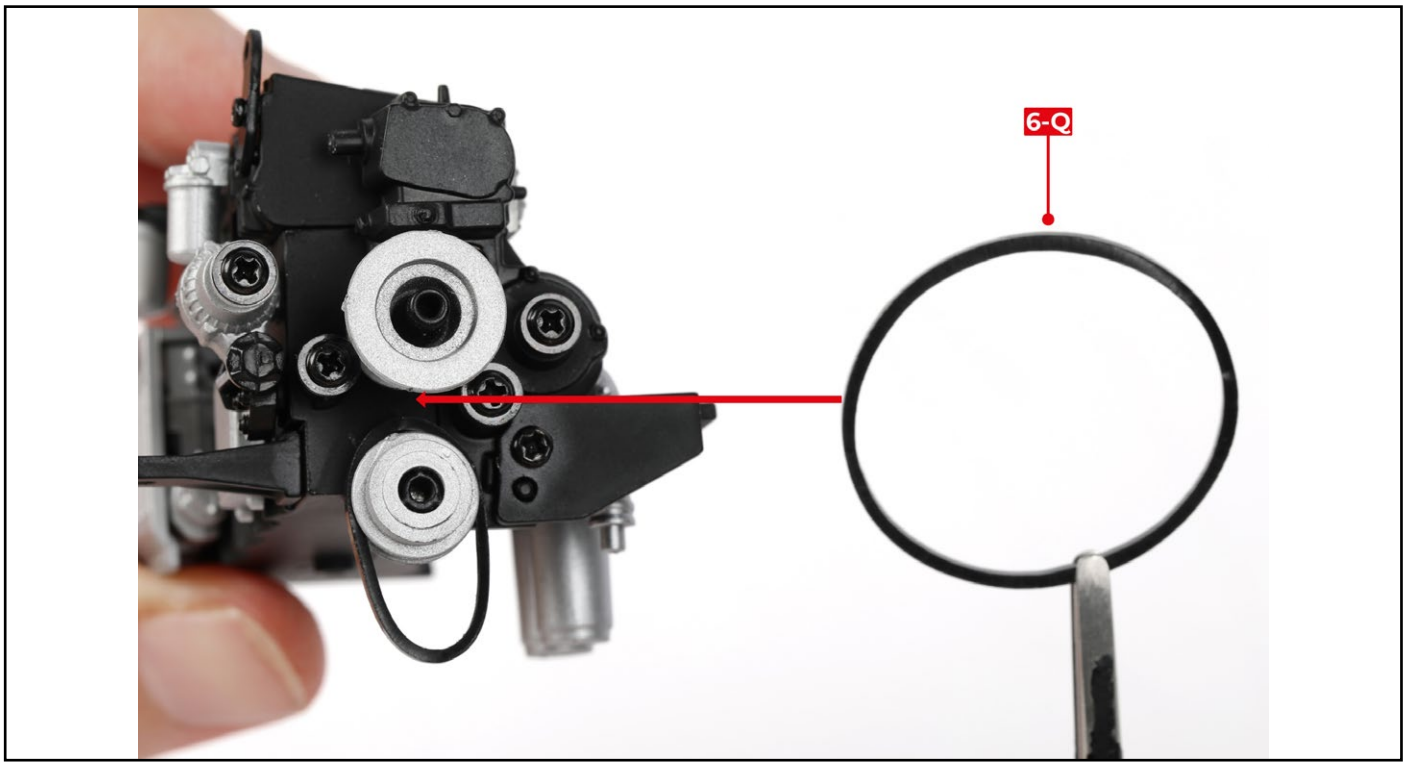


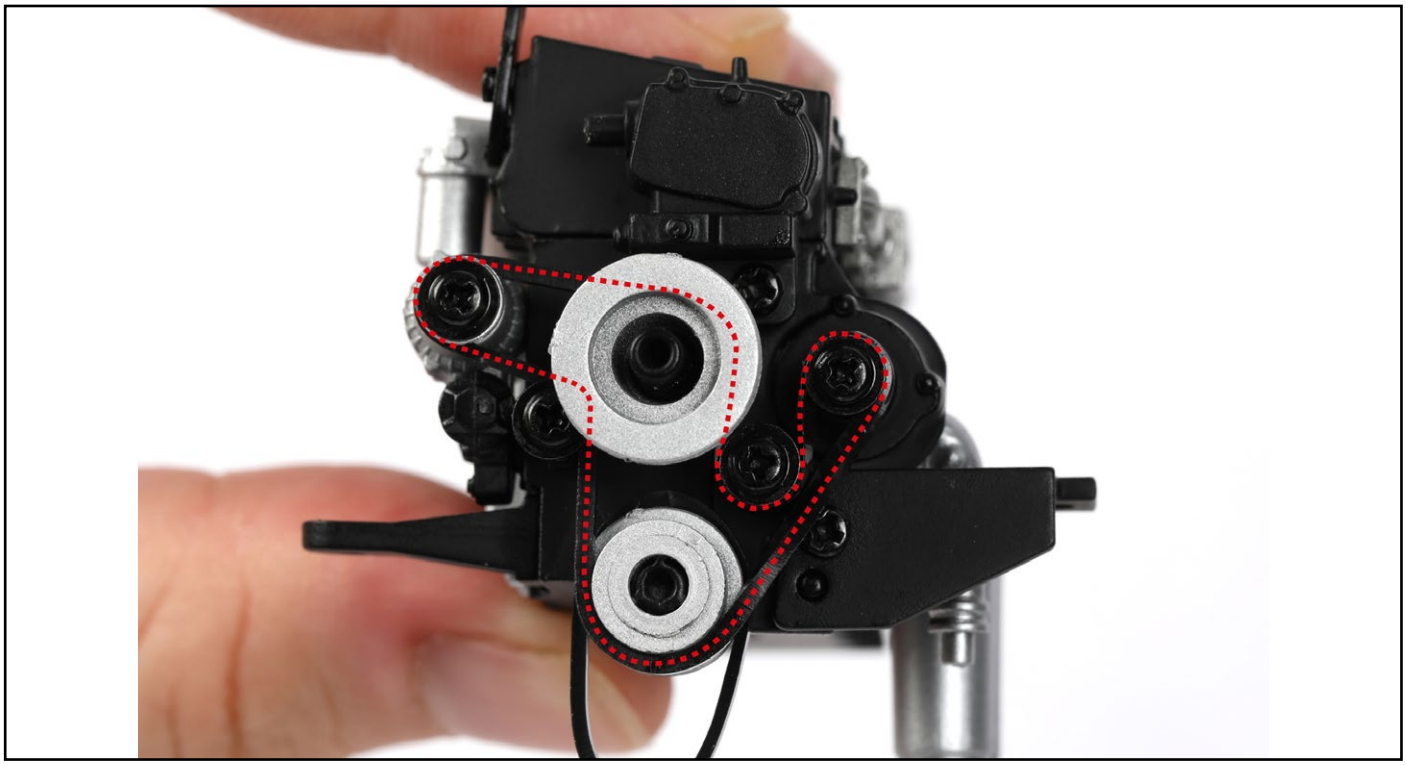


Step 12

Position the air compressor belt 6-P around camshaft pulley 3 (6-O) as shown. Keep the belt and pulley in position for now.

Stage 6: Building the engine (2)

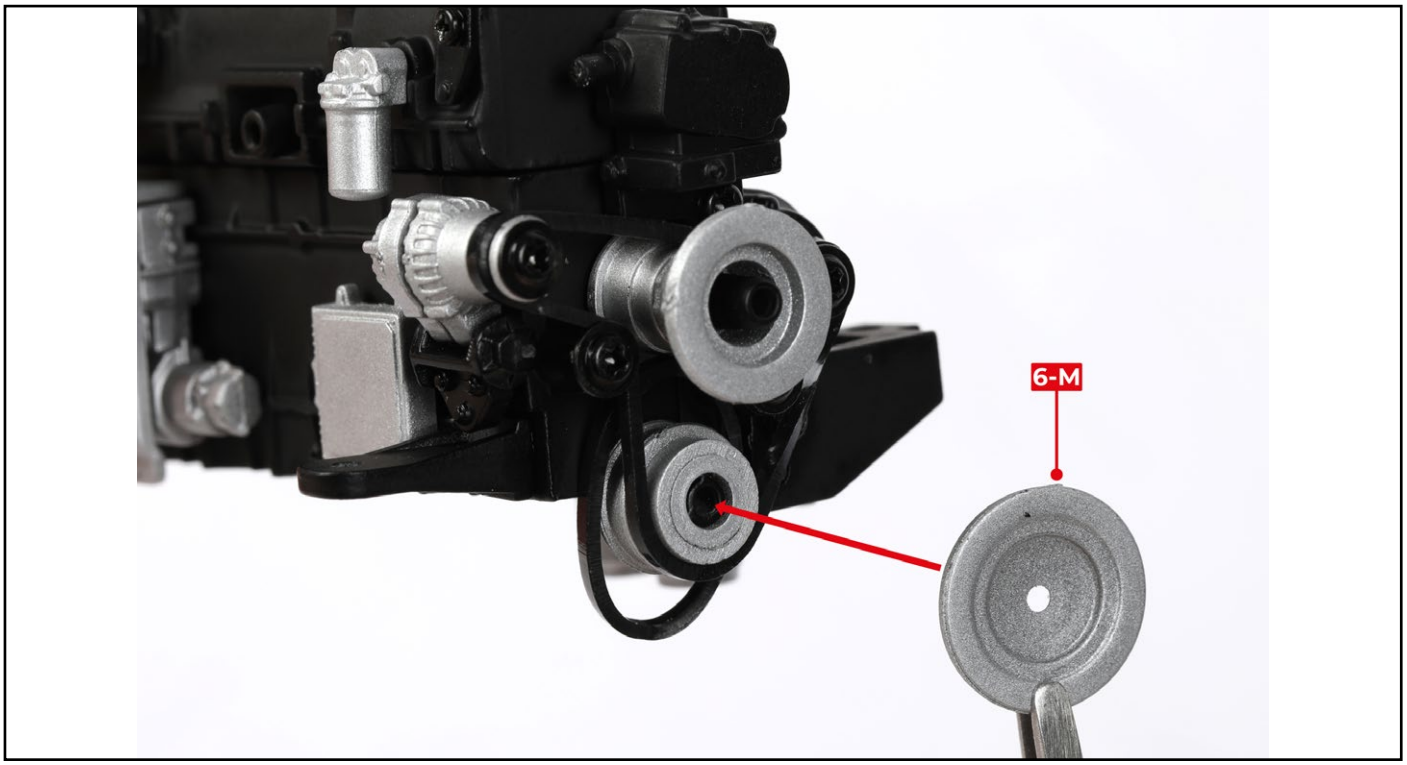


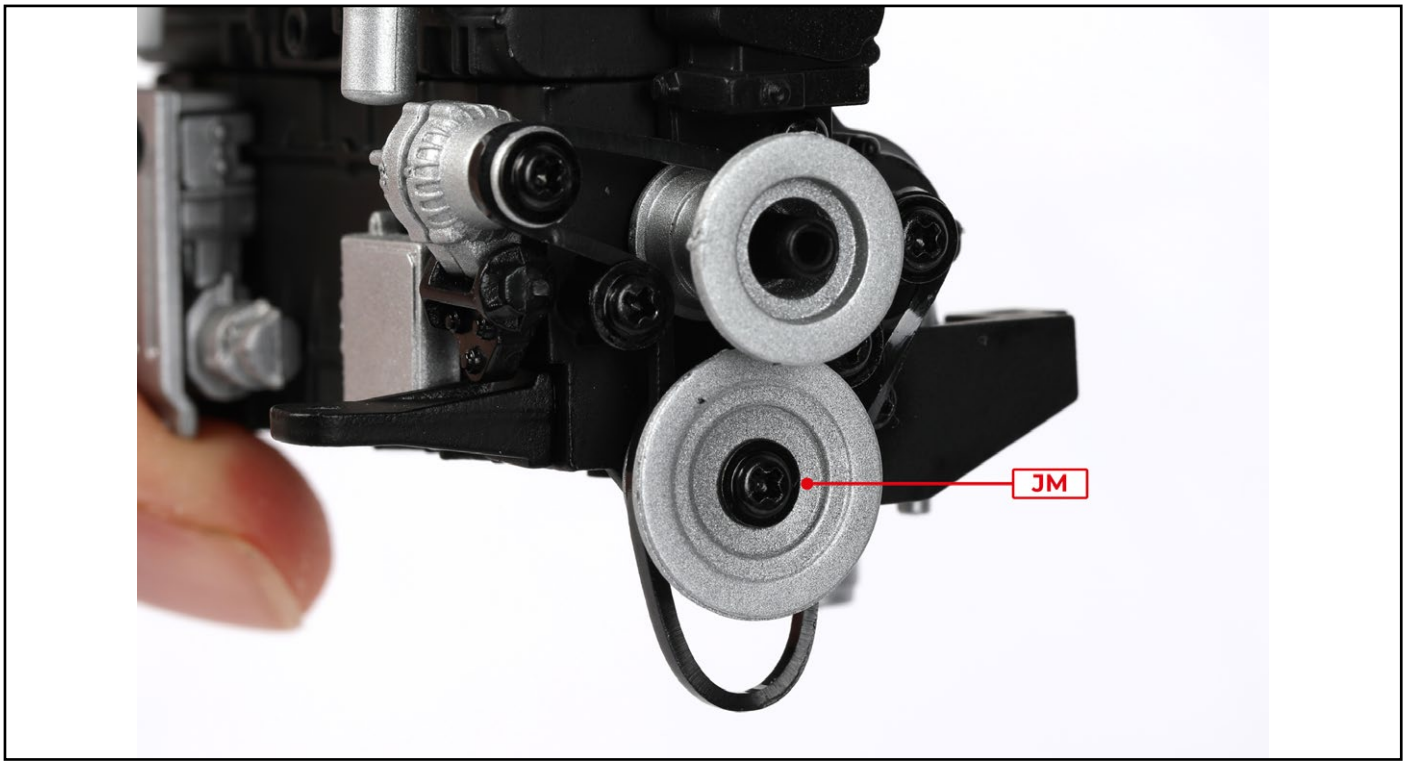


Step 13

Using the tweezers, carefully position the Poly-V belt 6-Q around the pulleys and guide screws as shown.

Stage 6: Building the engine (2)

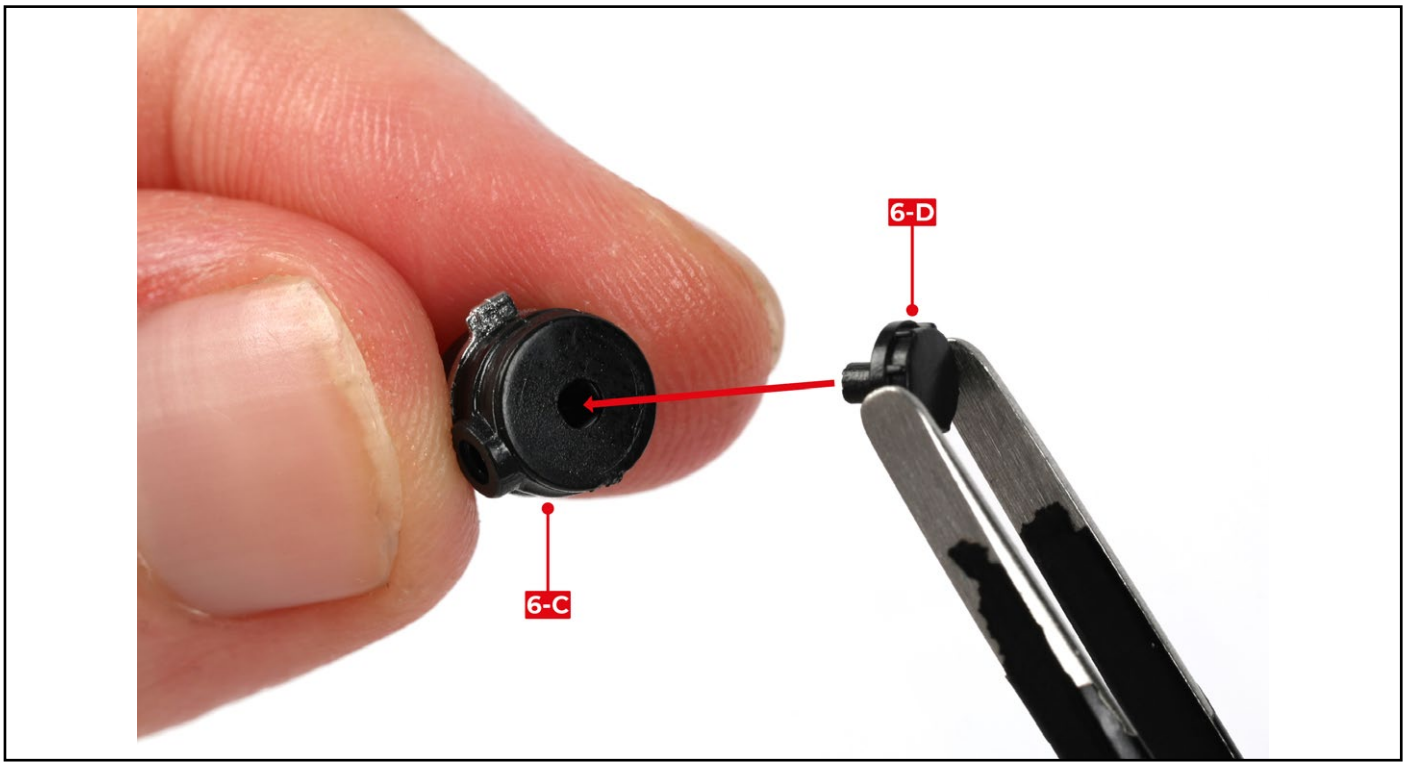




Step 14

Position camshaft pulley 1 (6-M) as shown. Check that both belts are positioned correctly, then secure the pulley with one JM screw.

Stage 6: Building the engine (2)

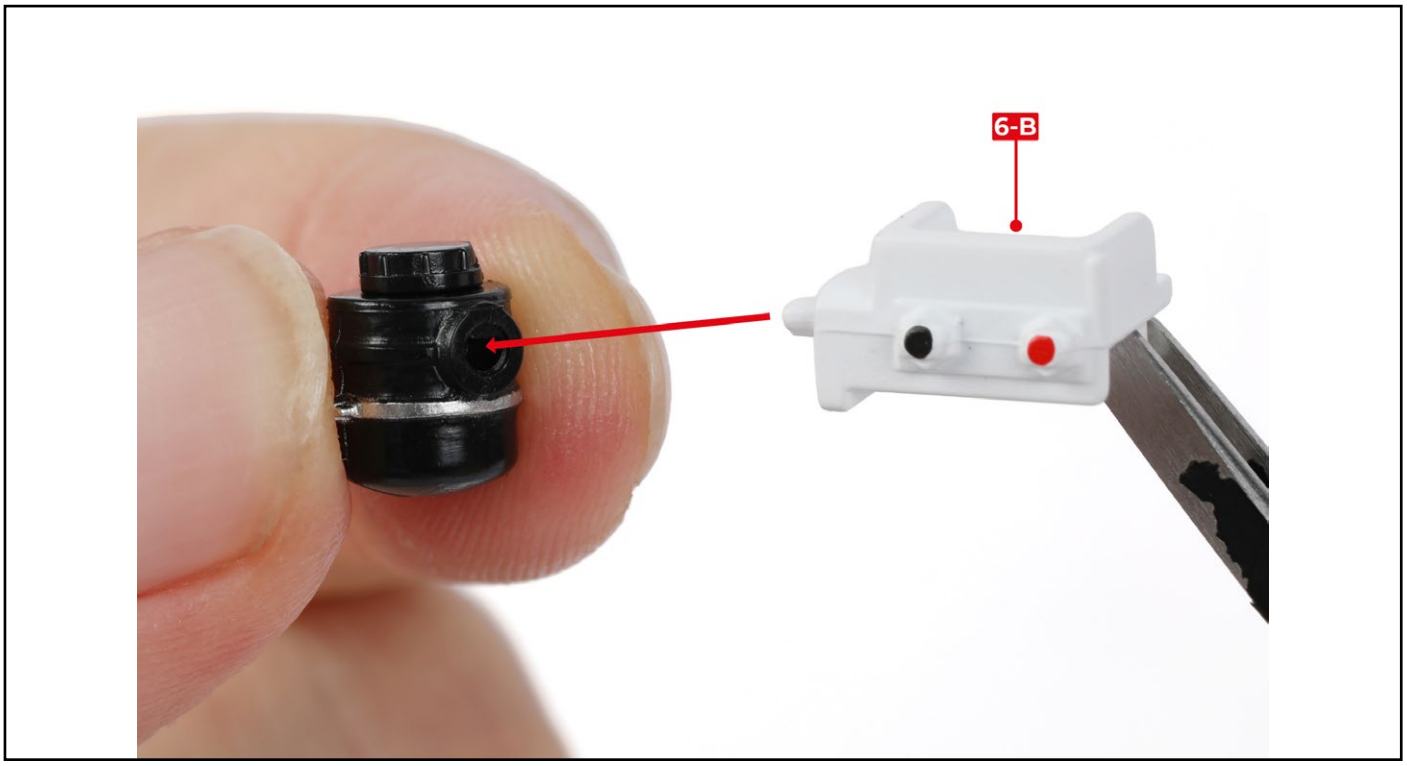




Step 15

Position the cap 6-D on the power steering reservoir 6-C, then press the parts together to secure them.

Stage 6: Building the engine (2)

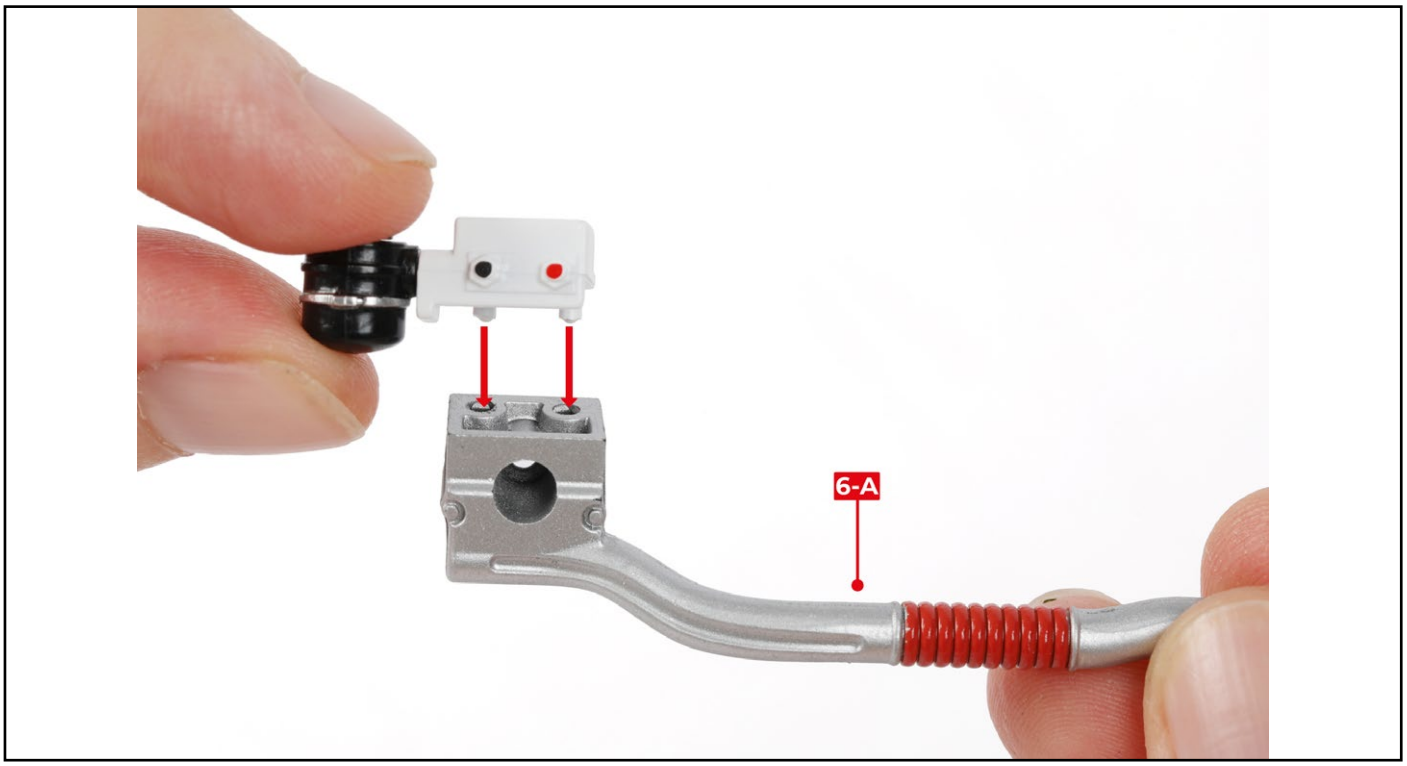


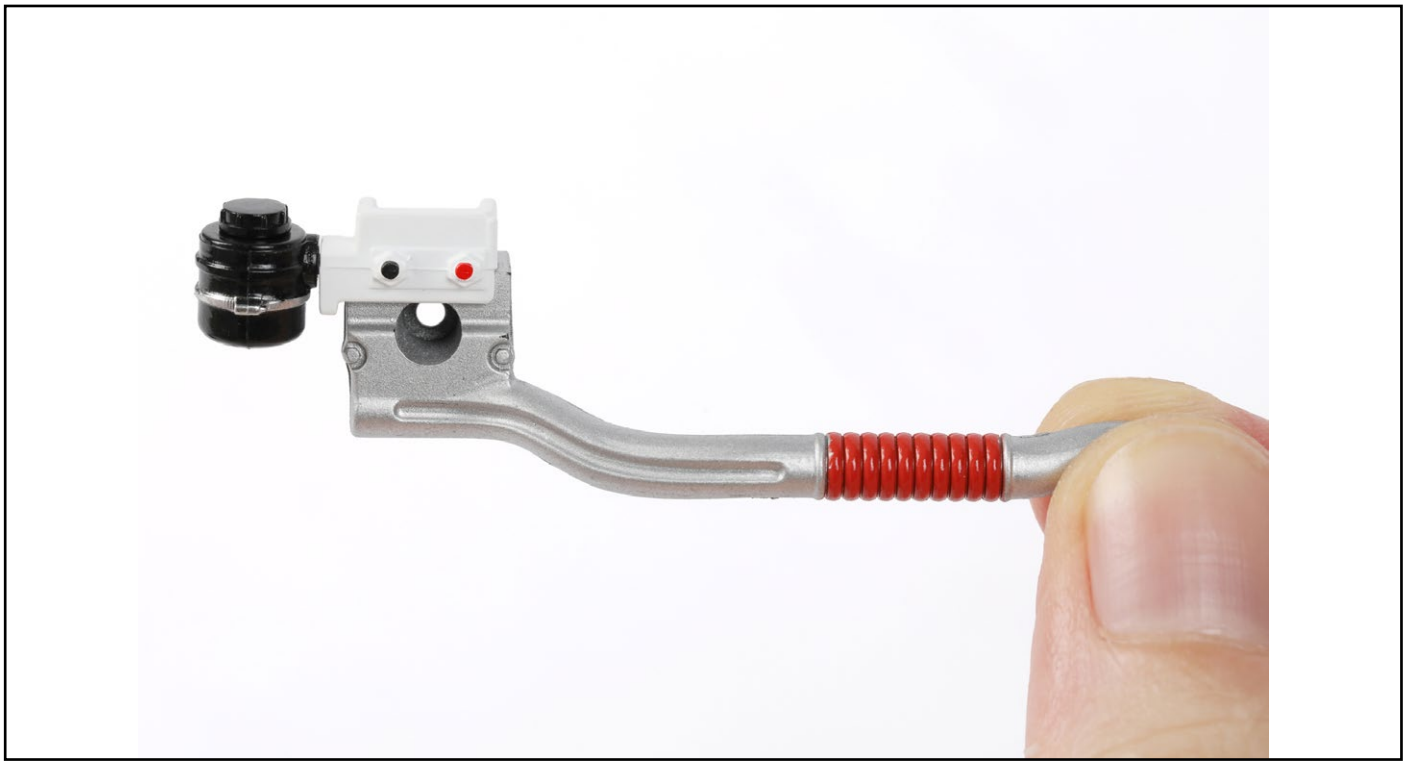


Step 16

Fit the power steering reservoir bracket 6-B to the power steering reservoir 6-C.

Stage 6: Building the engine (2)

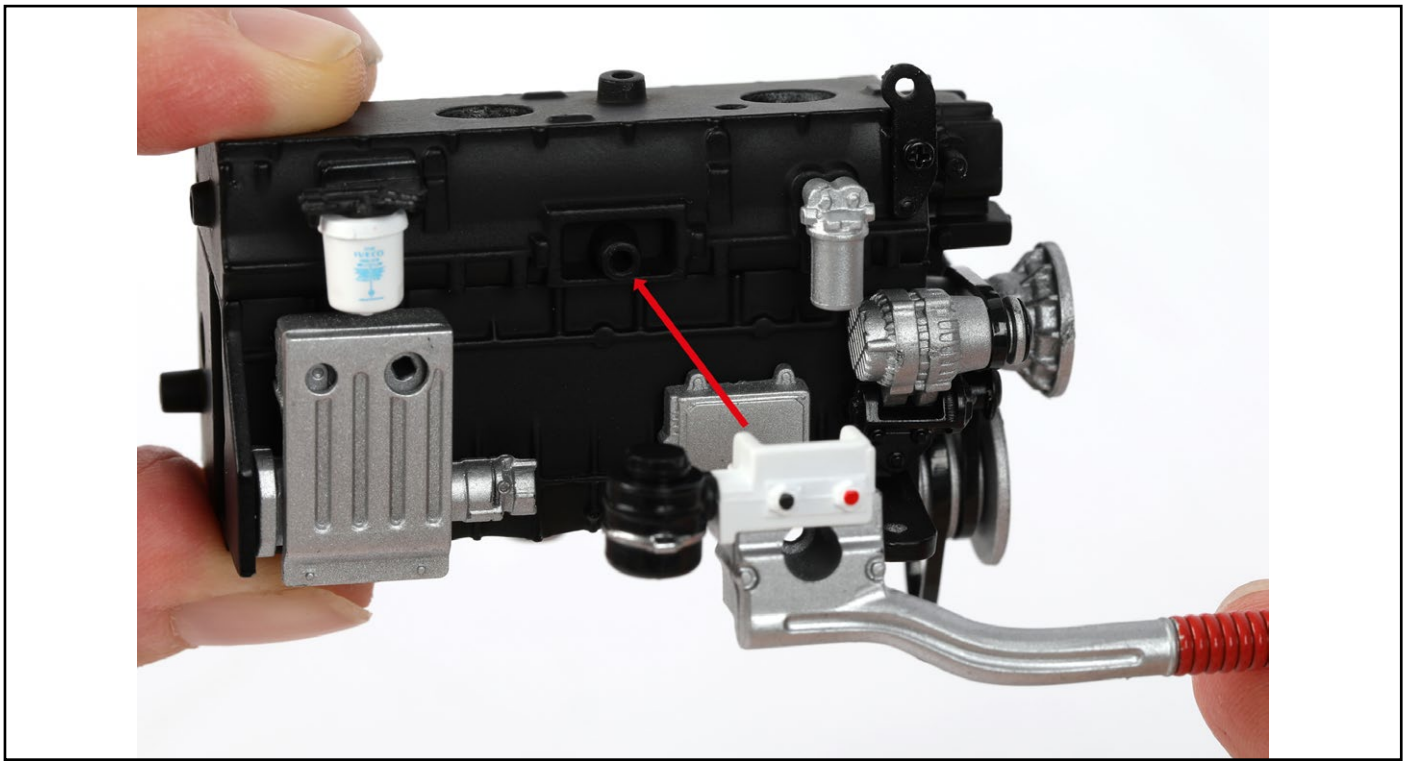


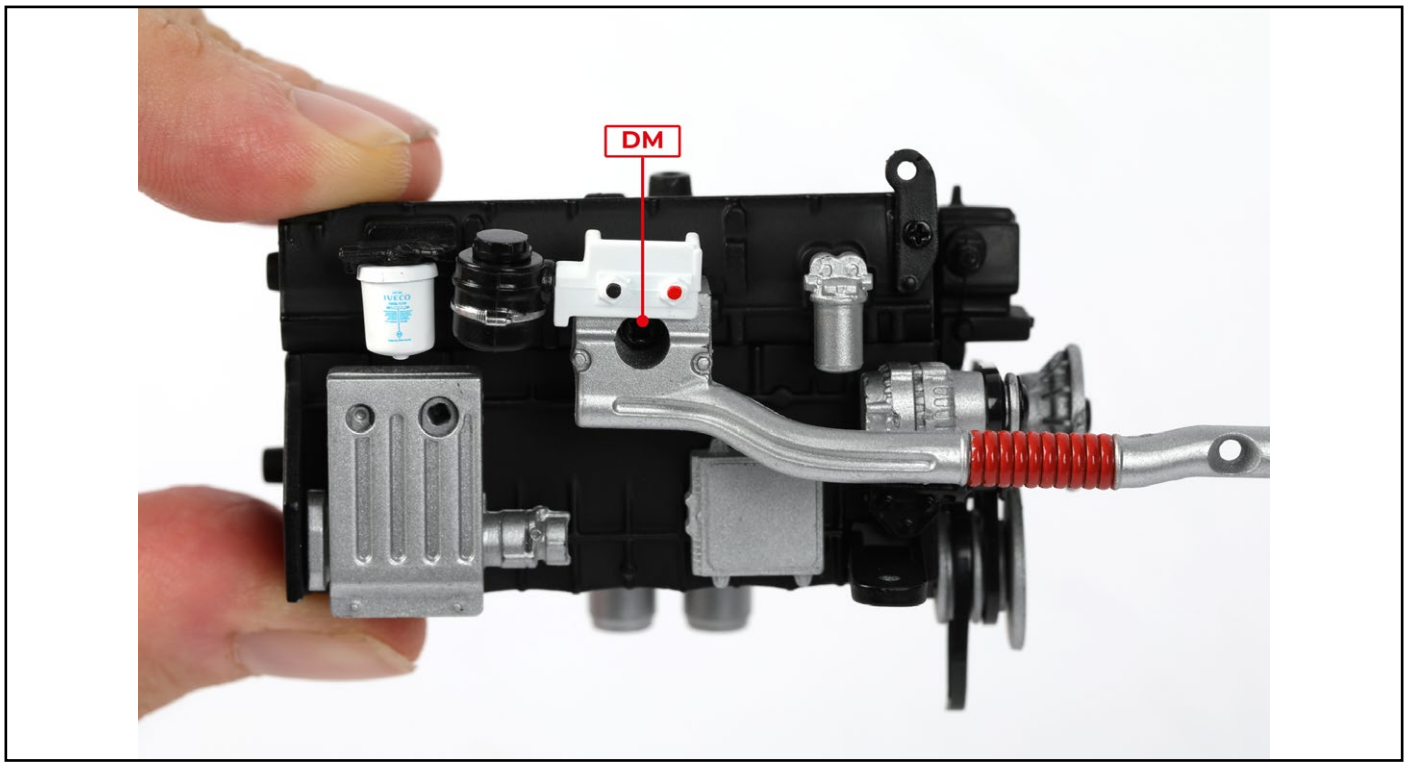


Step 17

Fit the power steering reservoir bracket 6-B to the air intake duct 6-A as shown, then press firmly to secure the parts together.

Stage 6: Building the engine (2)



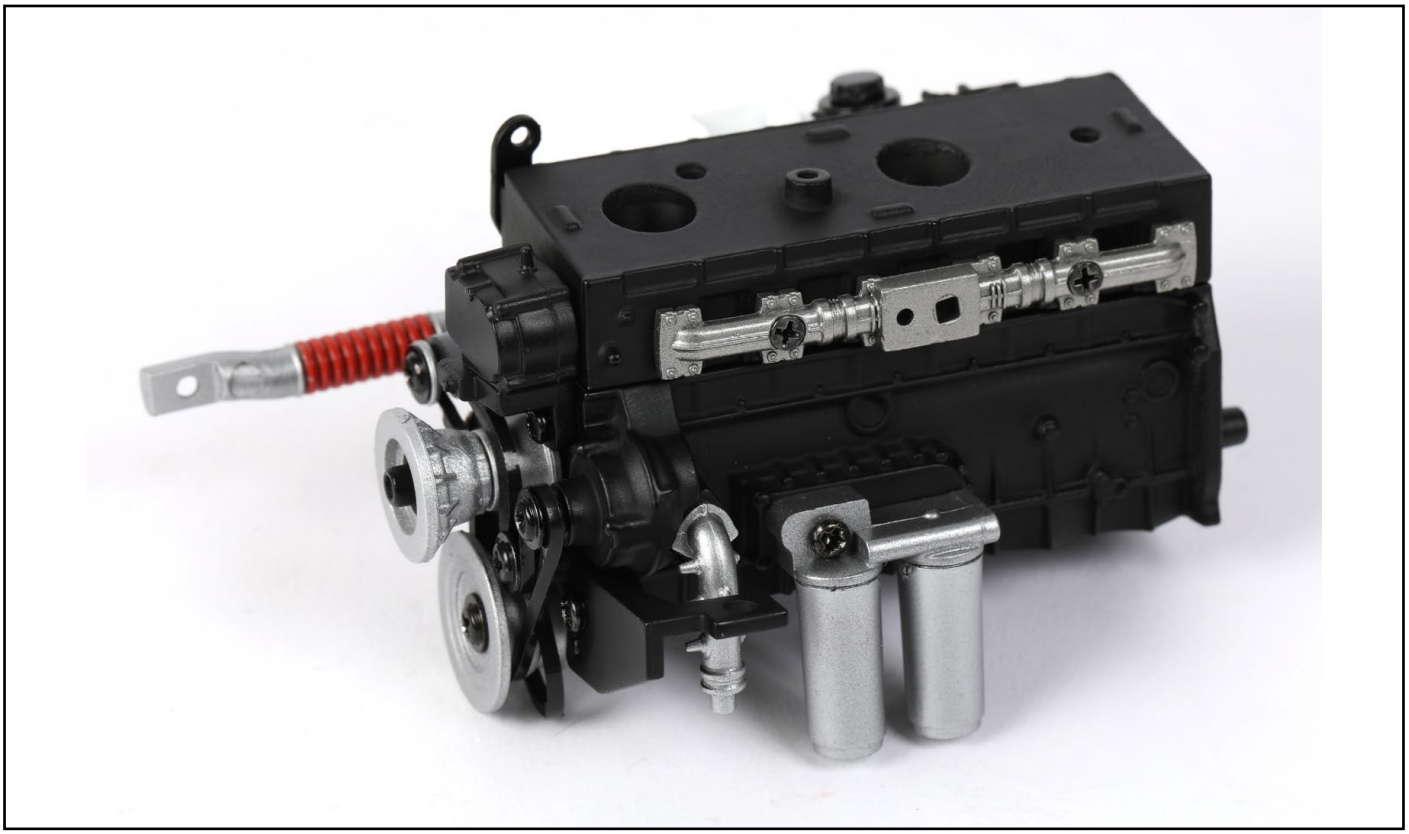


Step 18

Position the air intake duct assembly on the engine block as shown, then secure it with one DM screw.

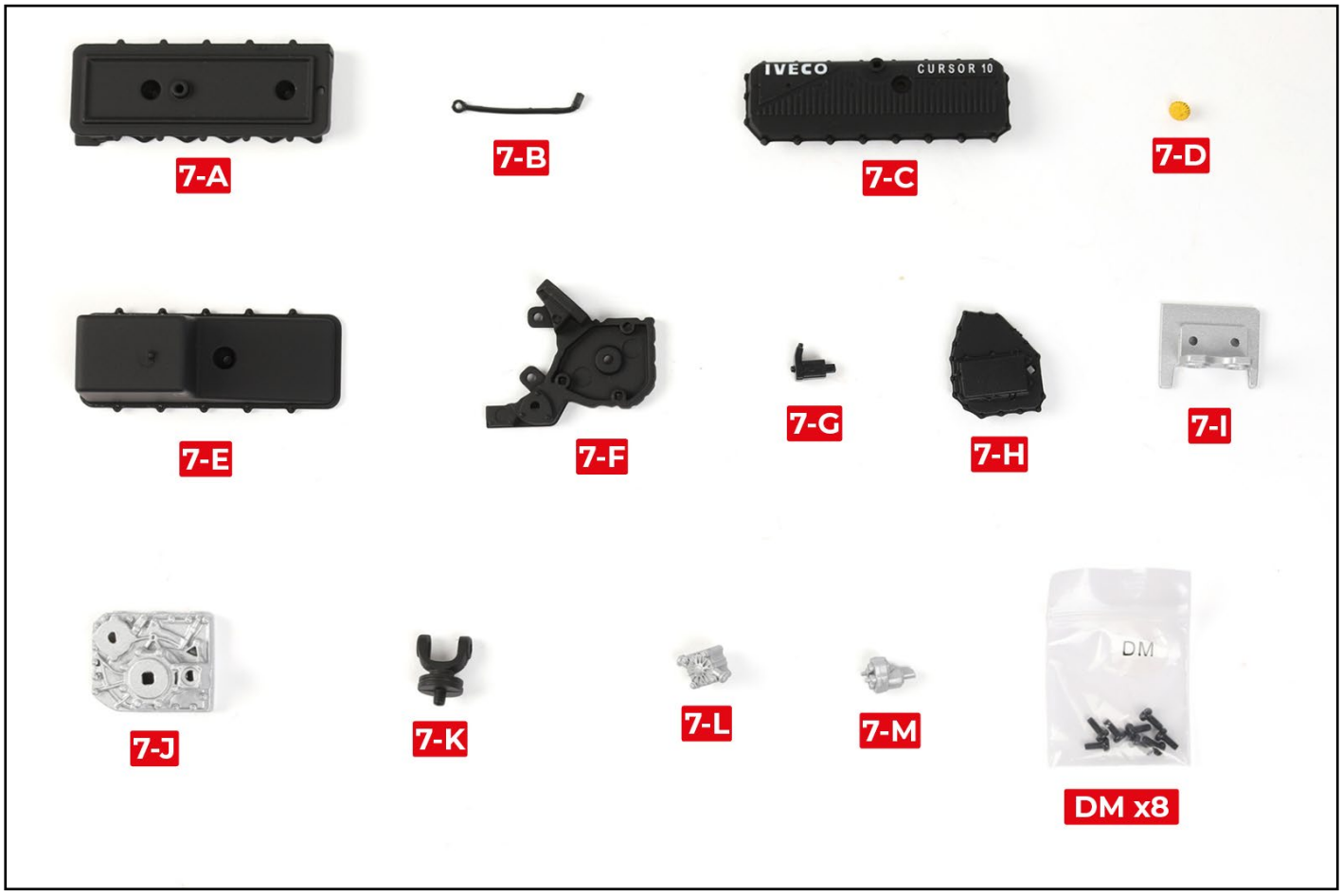
Stage 6: Building the engine (2)

STAGE 06 COMPLETE



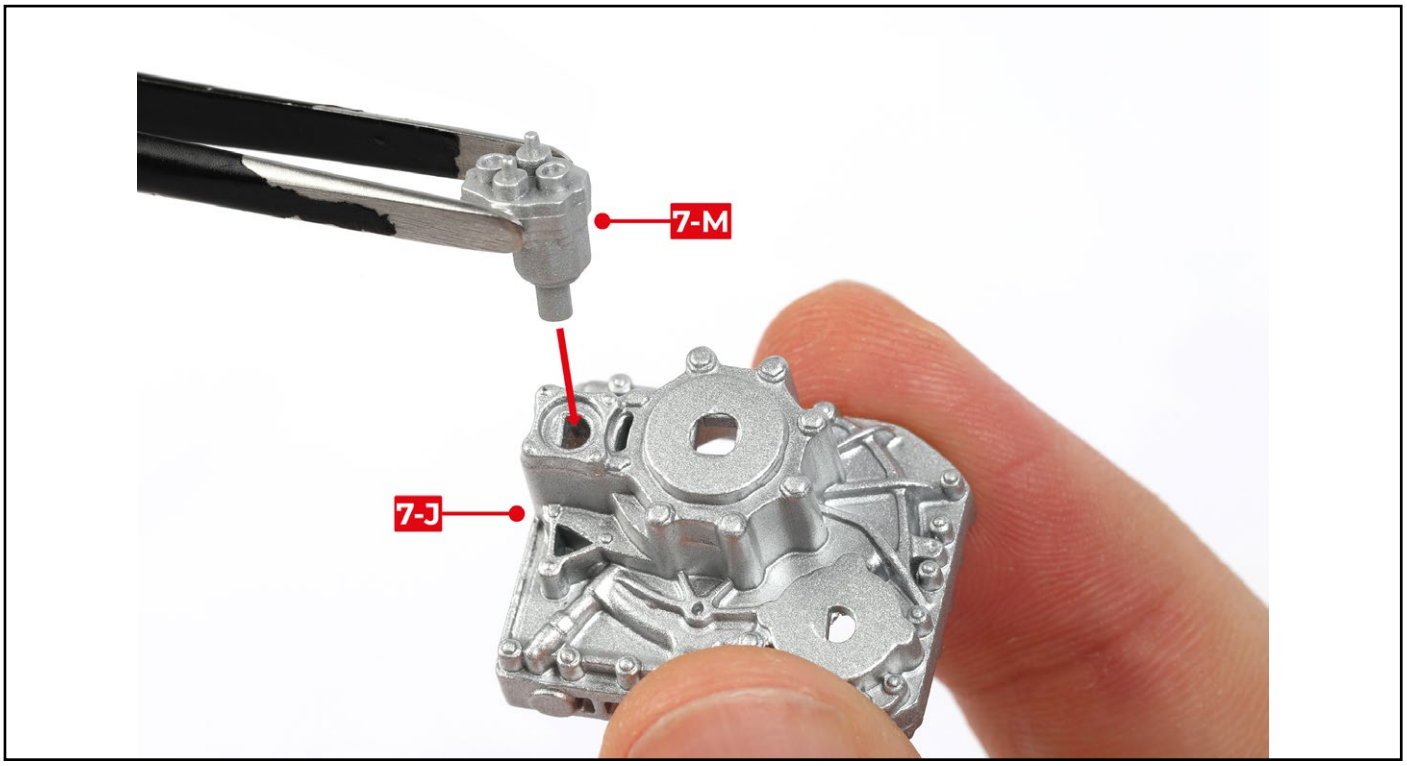
Stage 7: Building the engine (3)

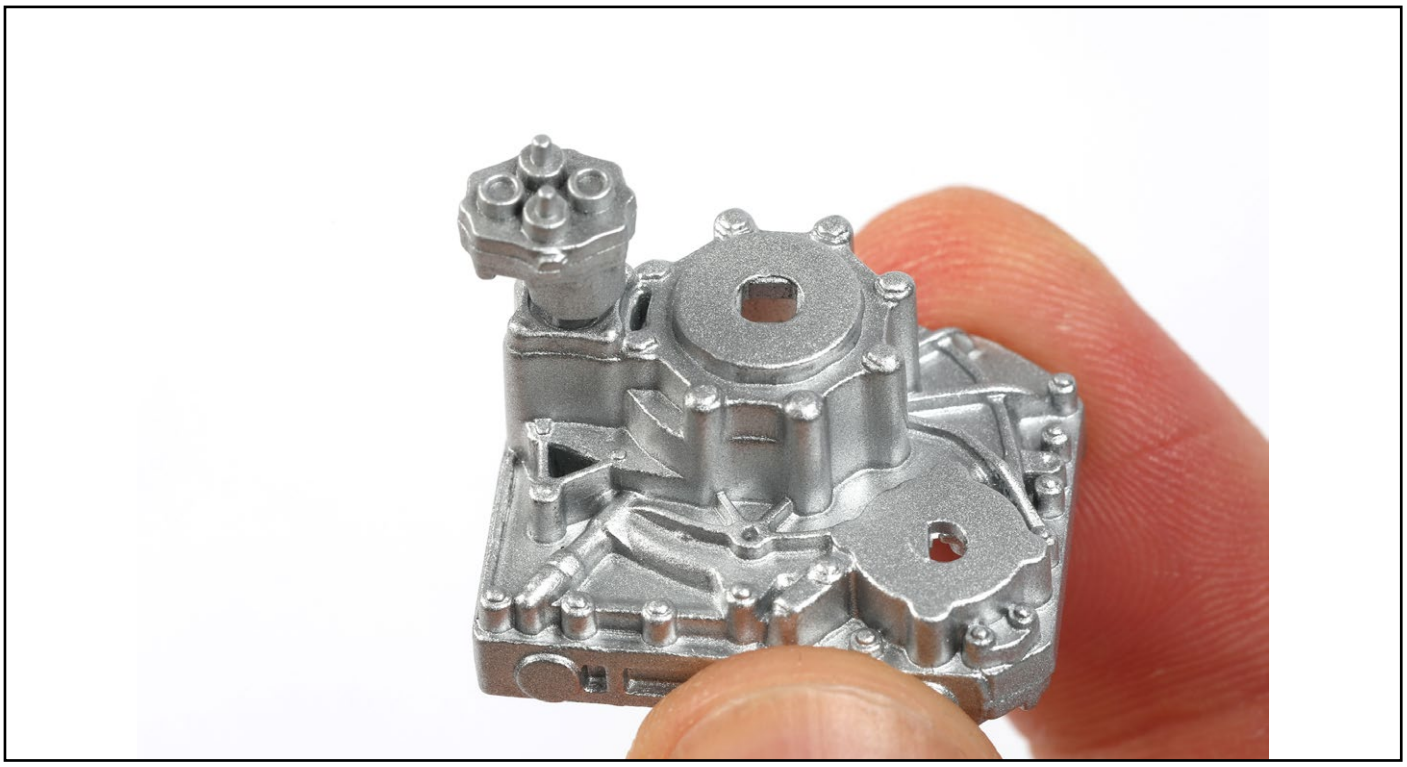
STAGE 07 PARTS



7-A: Crankcase
7-B: Oil dipstick
7-C: Valve cover
7-D: Oil filler cap
7-E: Engine oil sump
7-F: Engine timing housing
7-G: Diesel high-pressure pump
7-H: Engine timing cover
7-I: Gearbox housing
7-J: Rear gearbox housing
7-K: Driveshaft yoke
7-L: PTO 1 (Power Take-Off)
7-M: PTO 2 (Power Take-Off)
DM: 8 screws (1.7 × 4 mm)

Stage 7: Building the engine (3)

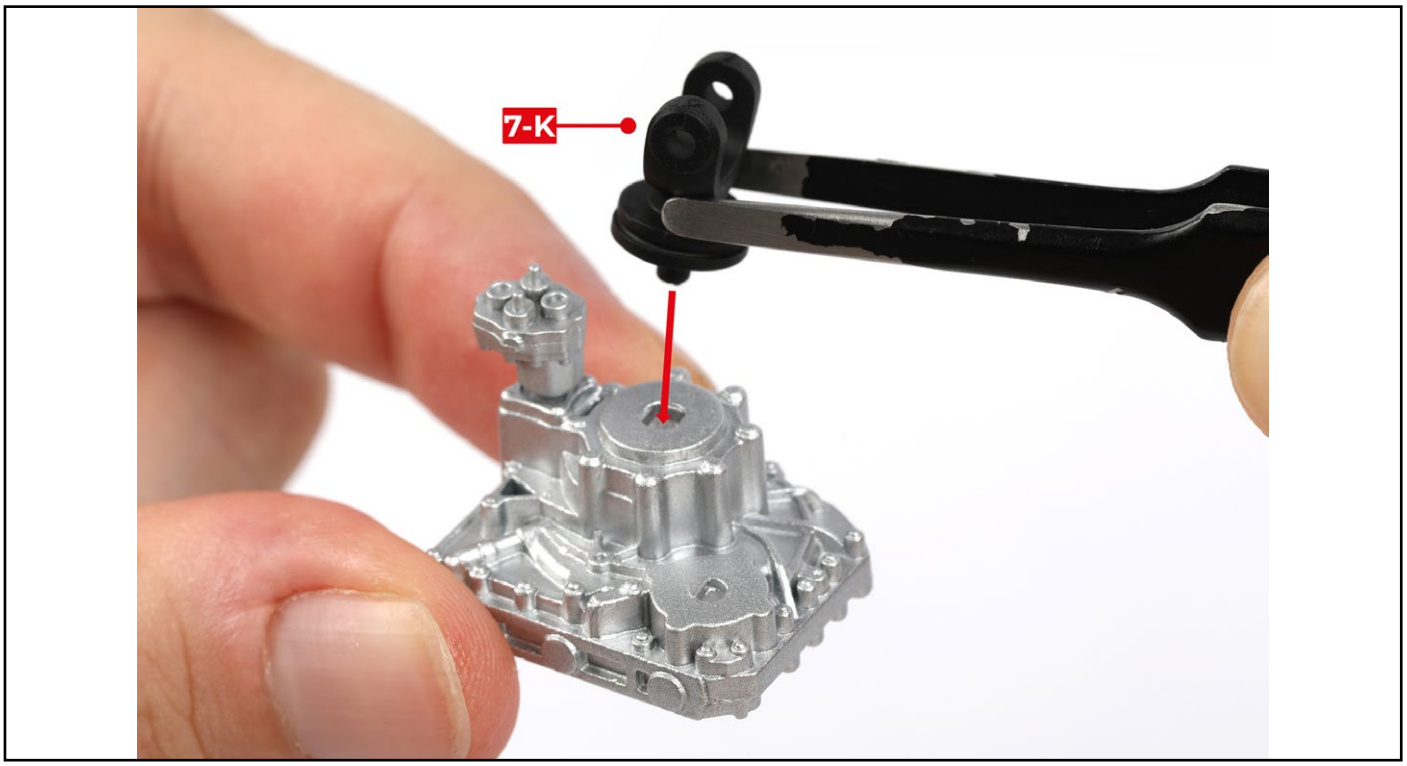




Step 1

Locate the corresponding recess for PTO 2 (7-M) on the rear gearbox housing 7-J, then fit PTO 2 into place.

Stage 7: Building the engine (3)

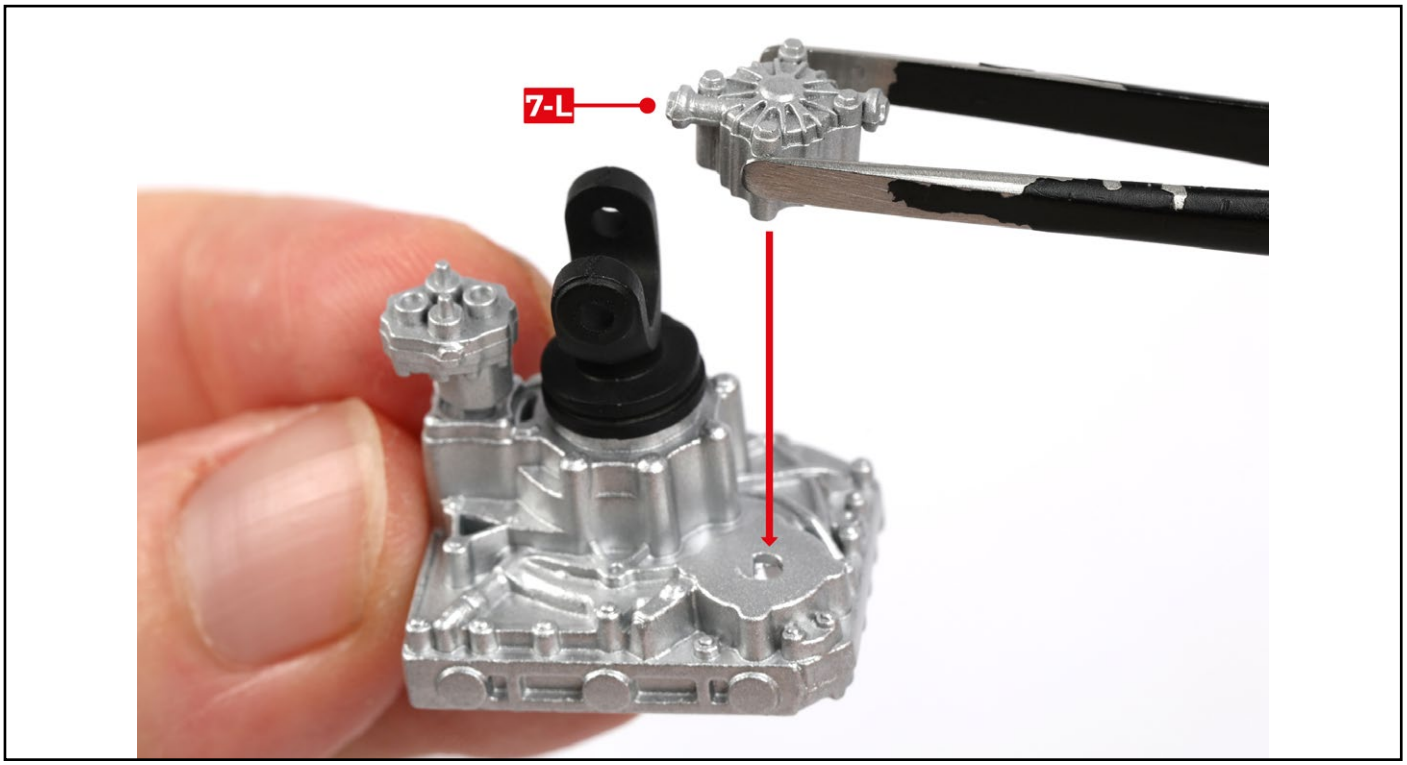




Step 2

Insert the locating pin on the driveshaft yoke 7-K into the shaped central recess in the rear gearbox housing 7-J. Press firmly into place and check that it is secure.

Stage 7: Building the engine (3)

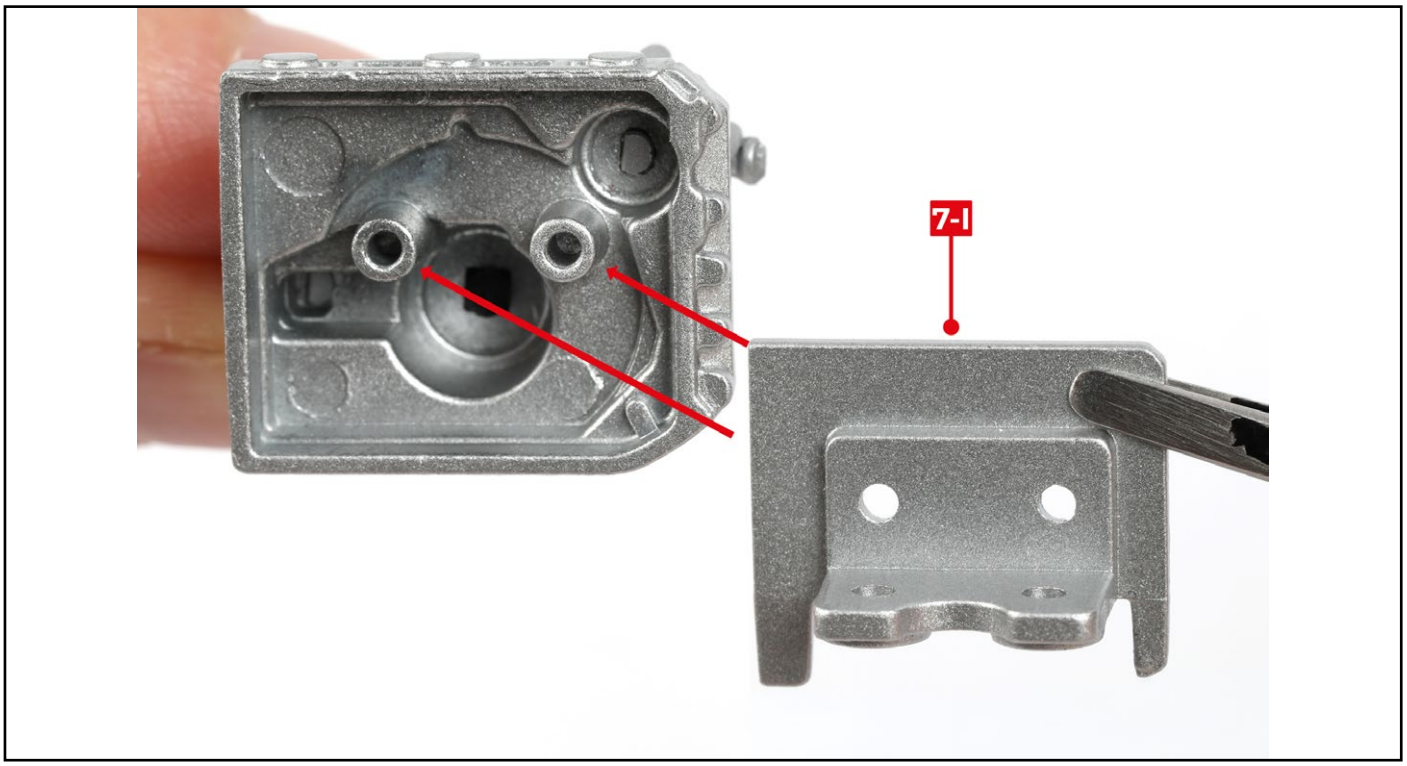


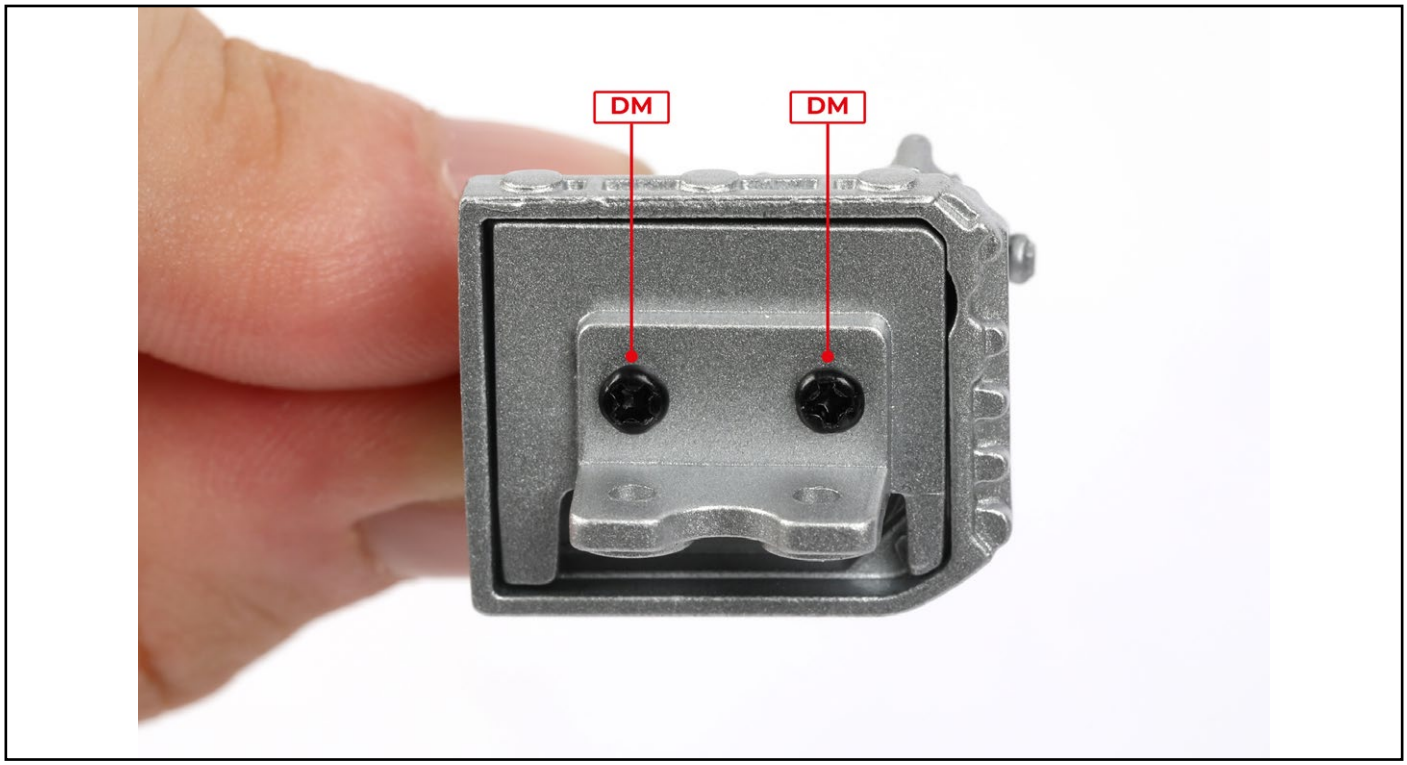


Step 3

Fit PTO 1 (7-L) into the corresponding recess in the rear gearbox housing 7-J as shown.

Stage 7: Building the engine (3)

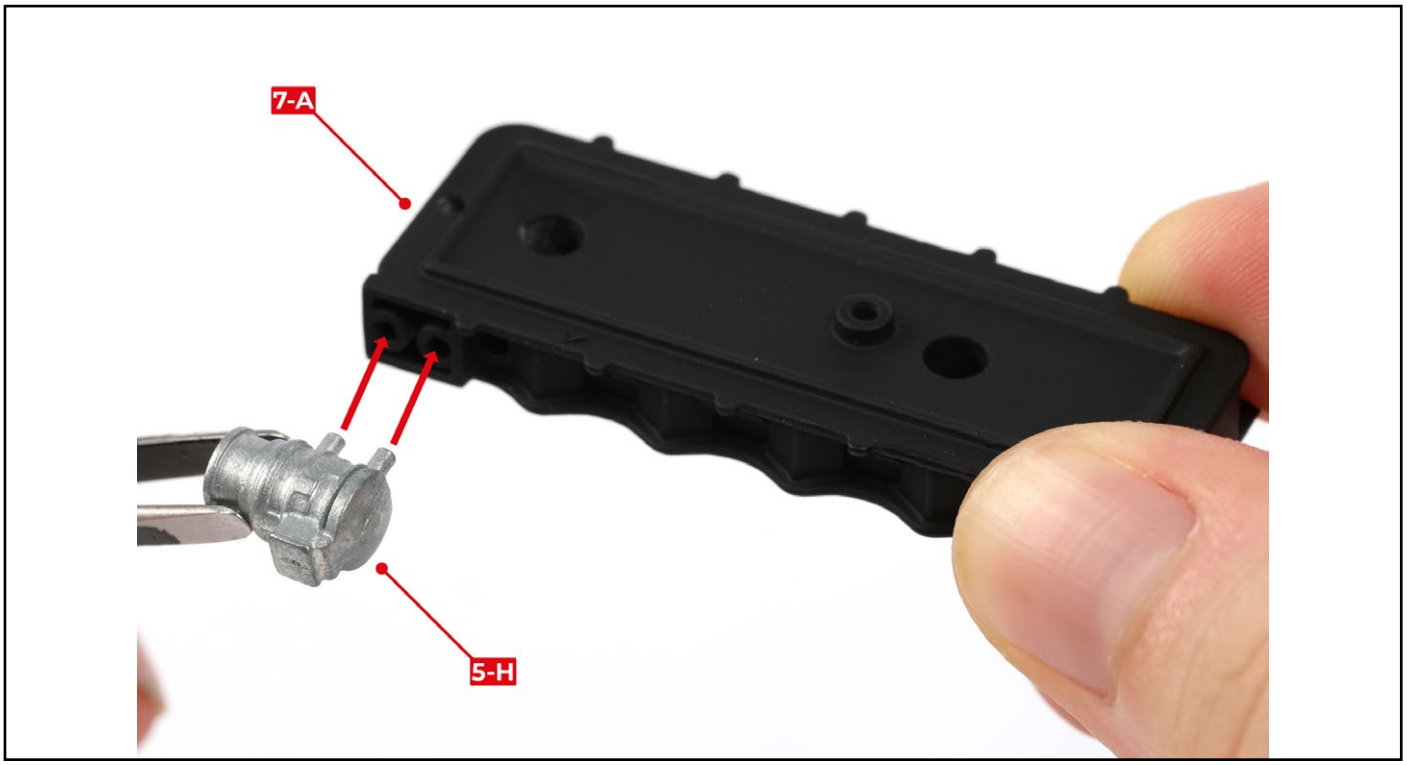




Step 4

Position the gearbox housing 7-I on the rear gearbox housing 7-J, making sure it is oriented as shown, then secure the parts together with two DM screws.

Stage 7: Building the engine (3)

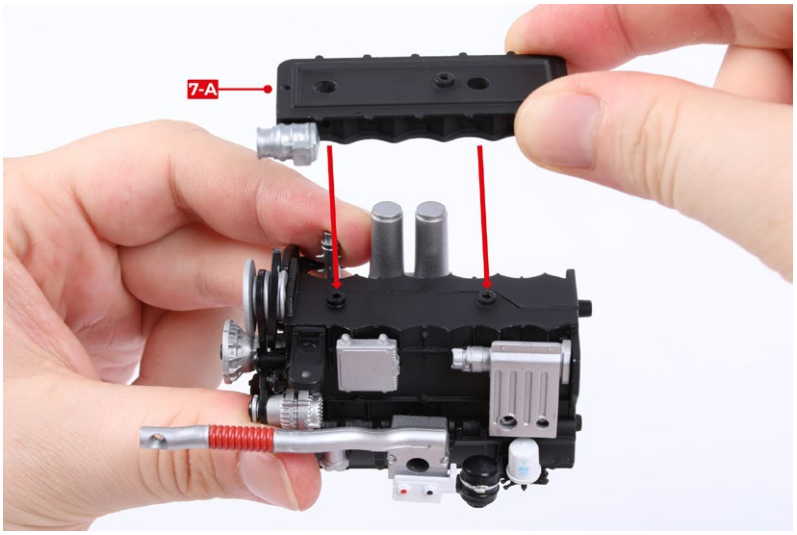


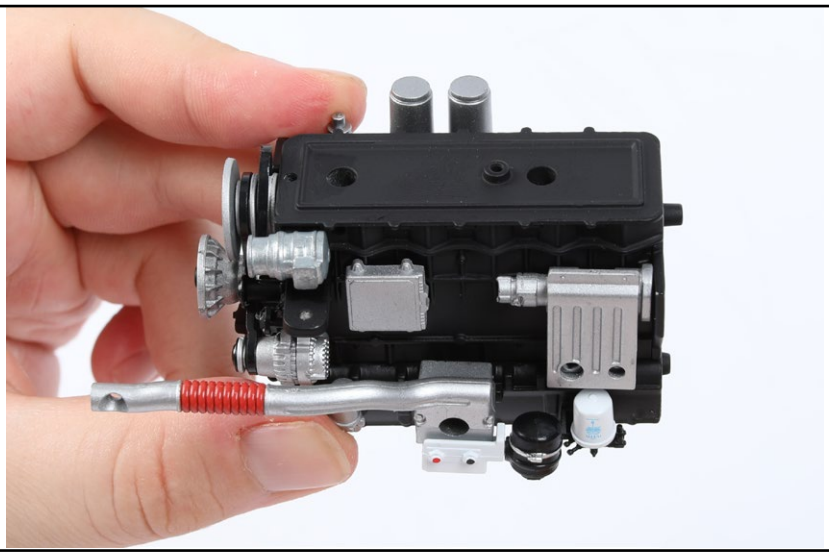


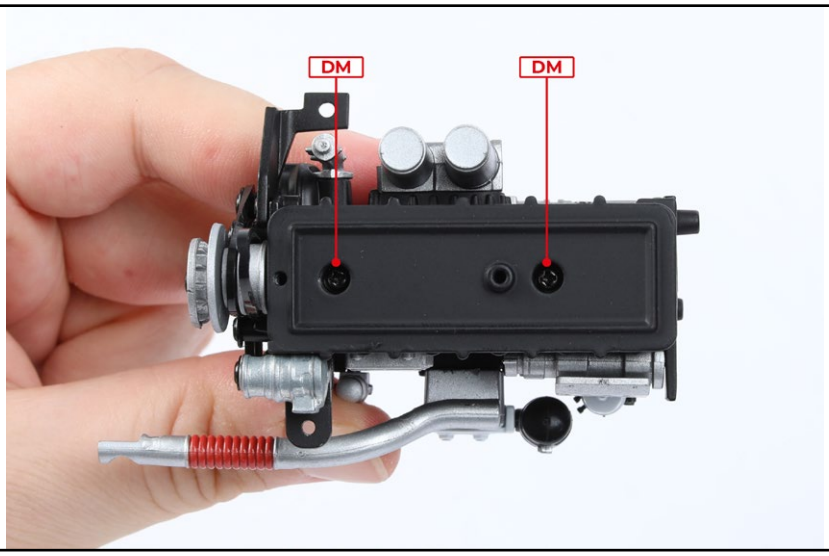
Step 5

Retrieve the crankcase 7-A and the A/C compressor from the earlier stage. Position the A/C compressor on the crankcase, aligning its locating pins with the corresponding holes.

Stage 7: Building the engine (3)



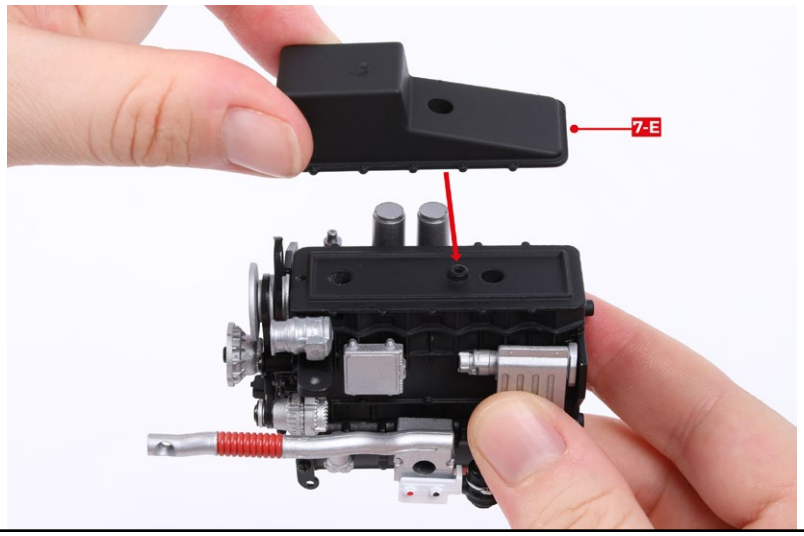


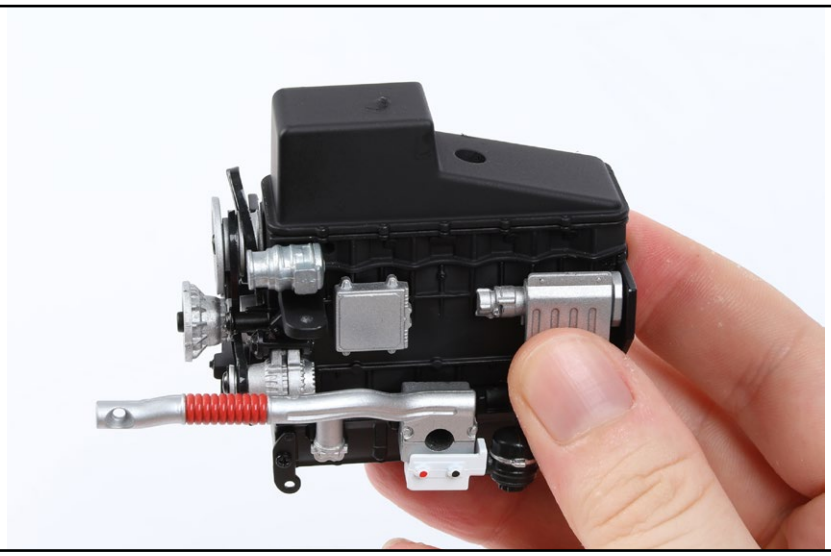


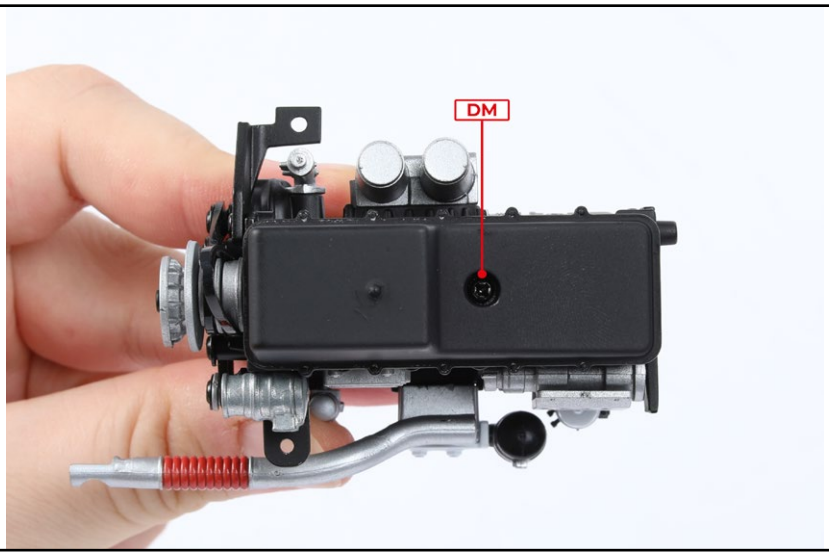
Step 6

Retrieve the engine assembly completed so far. Position the crankcase 7-A as shown, then secure it with two DM screws.

Stage 7: Building the engine (3)



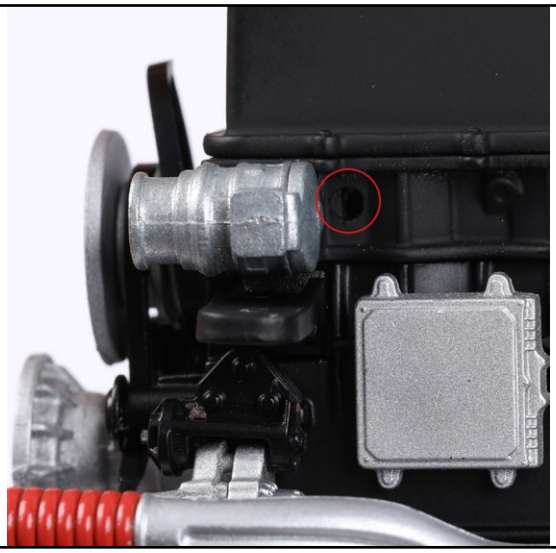


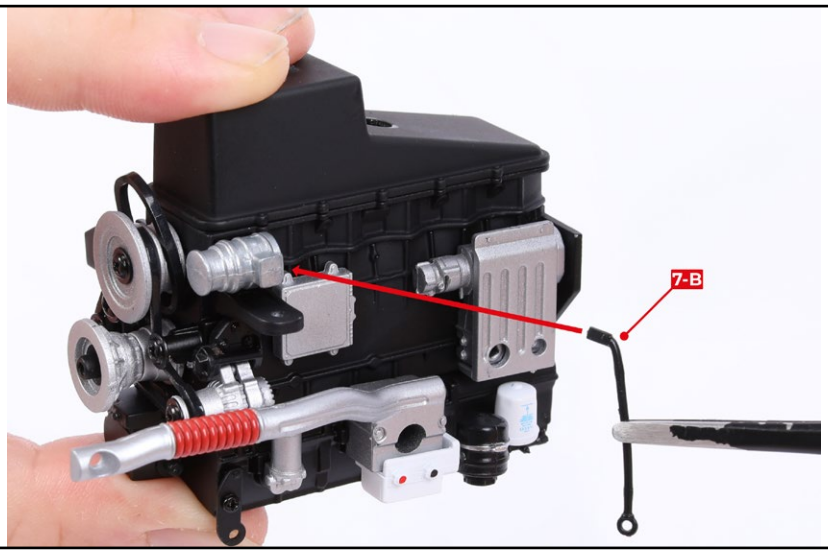


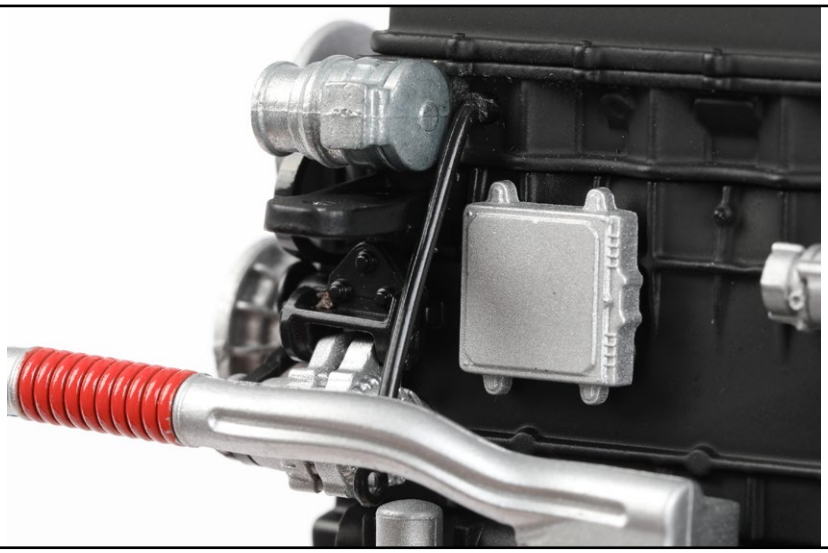
Step 7

Position the engine oil sump 7-E on the crankcase 7-A as shown, then secure it with one DM screw.

Stage 7: Building the engine (3)



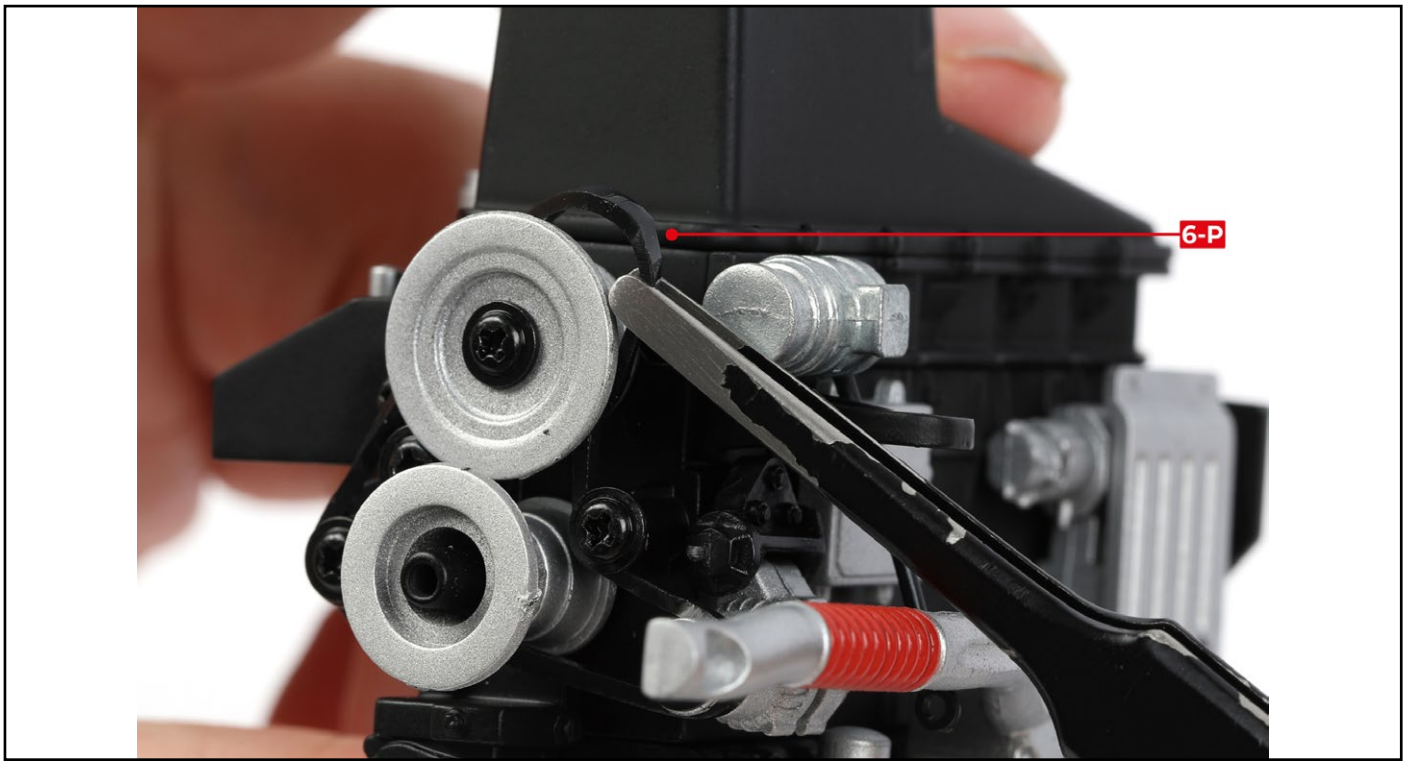


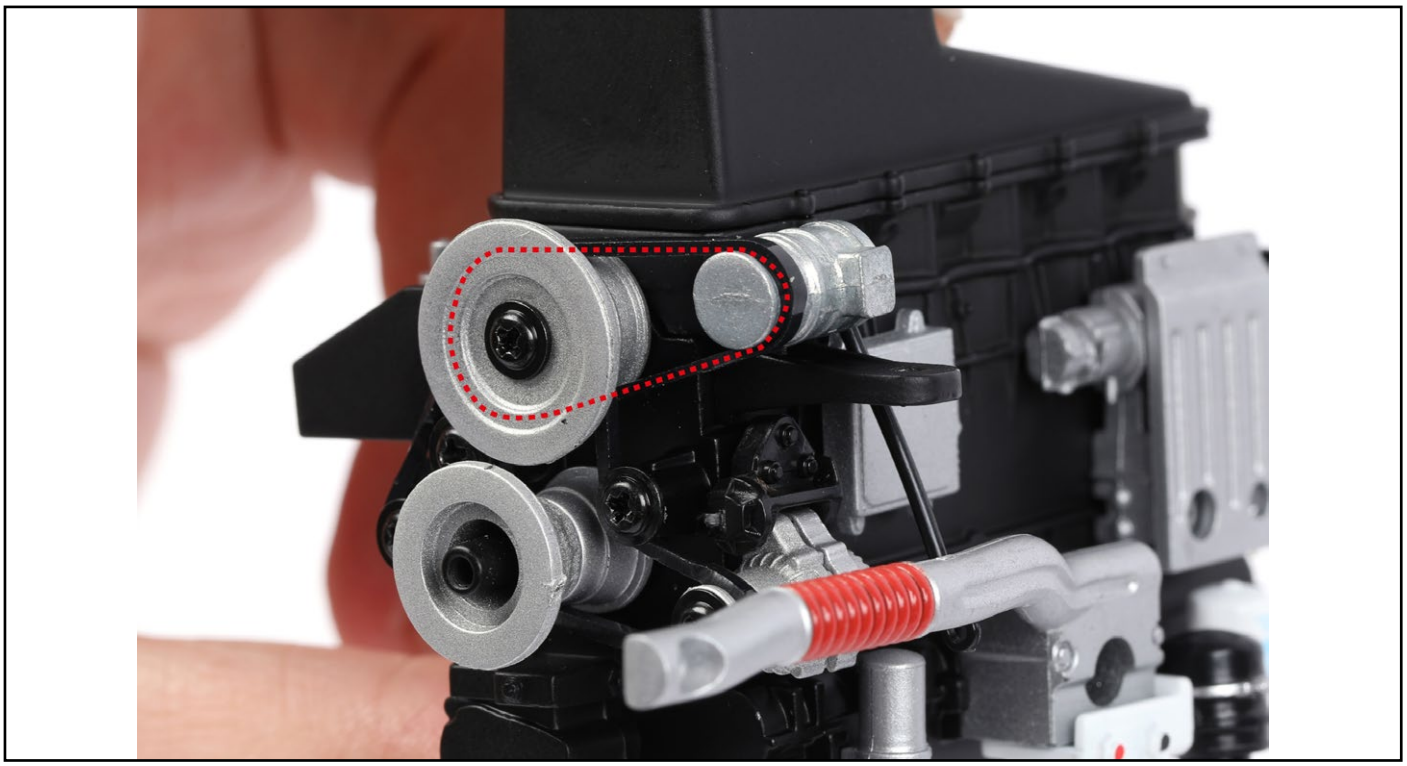


Step 8

Position the oil dipstick 7-B in the corresponding hole as shown, then press gently to secure it in place.

Stage 7: Building the engine (3)

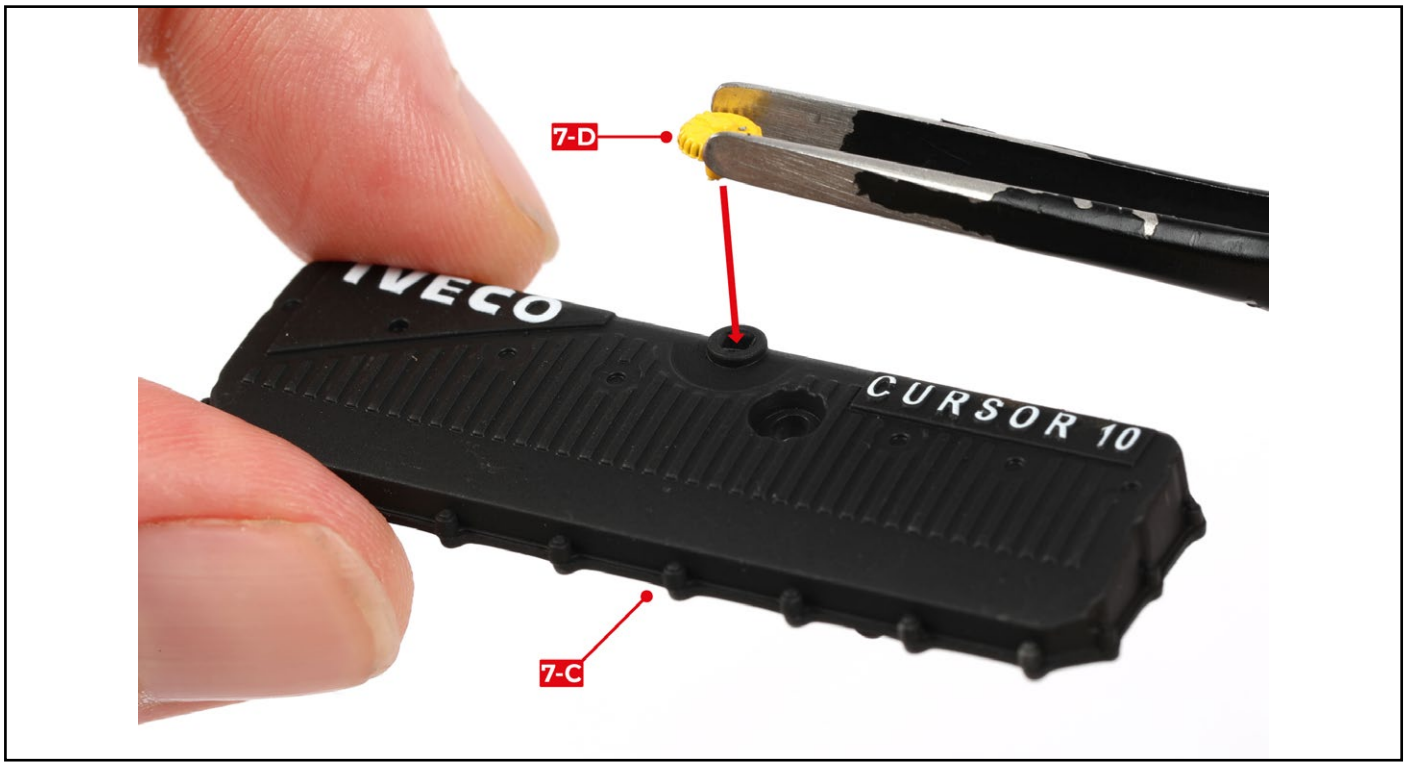




Step 9

Using the tweezers, fit the air compressor belt 6-P around the A/C compressor as shown. Check that both belts 6-P and 6-Q are correctly positioned around the camshaft pulleys.

Stage 7: Building the engine (3)





Step 10

Position the oil filler cap 7-D on the valve cover 7-C, then press it into place.

Stage 7: Building the engine (3)



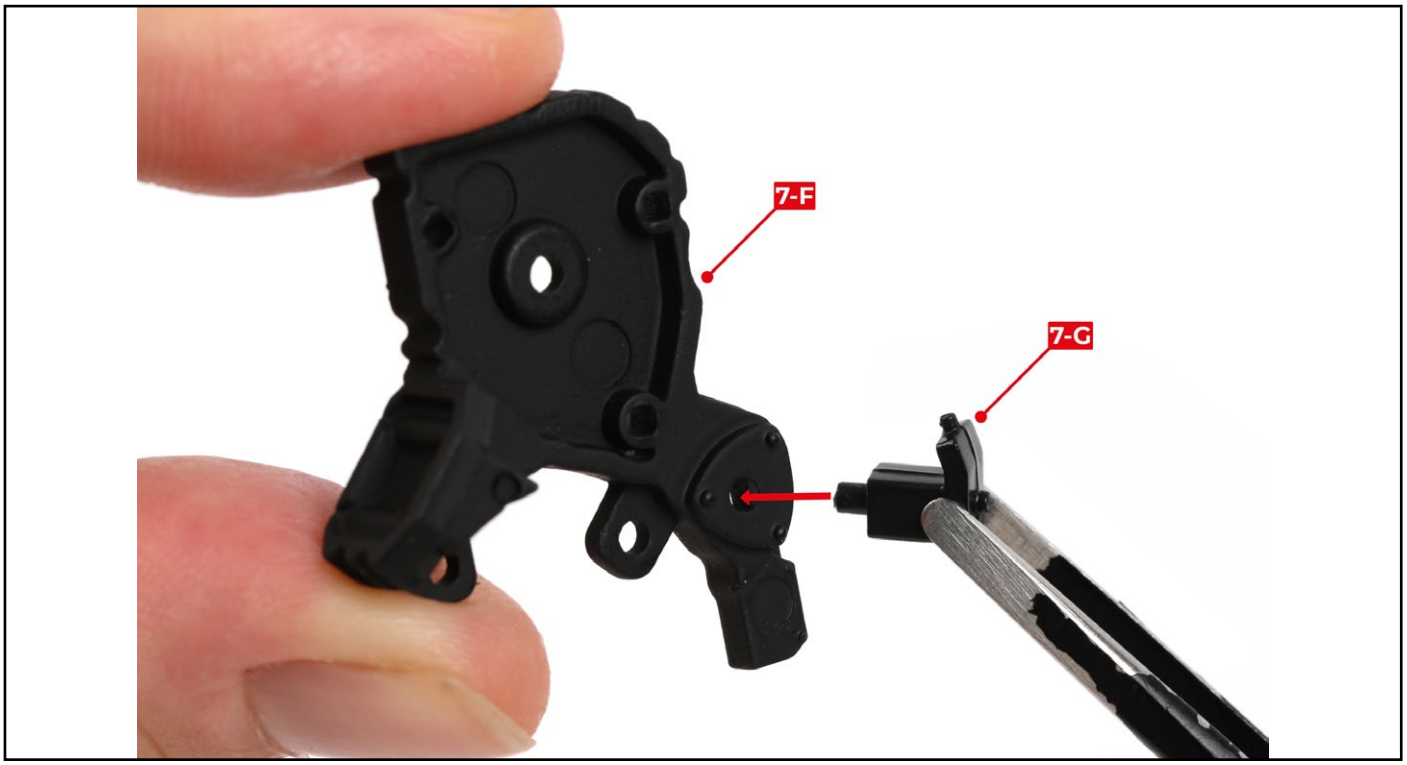




Step 11

Position the valve cover 7-C on the engine block as shown, then secure it with one DM screw.

Stage 7: Building the engine (3)



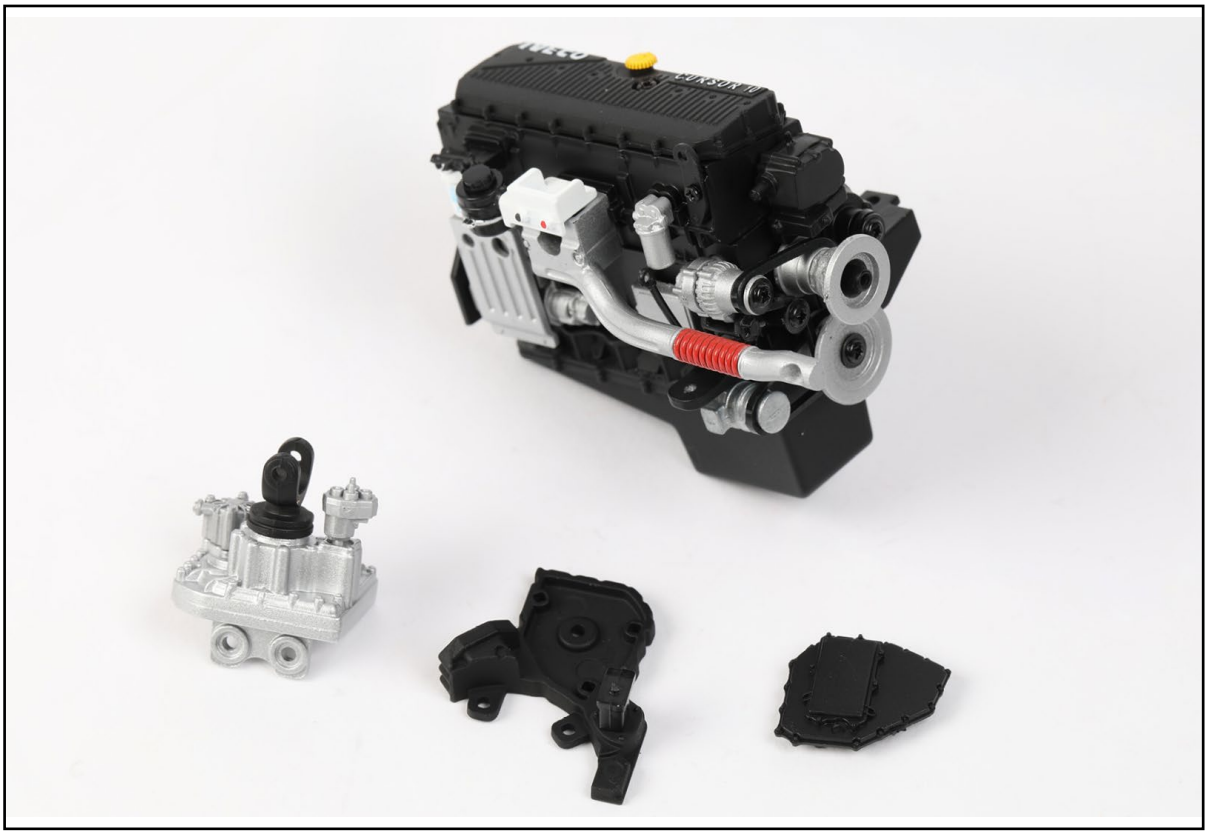


Step 12

Position the diesel high-pressure pump 7-G on the engine timing housing 7-F as shown, then press gently to secure it in place.

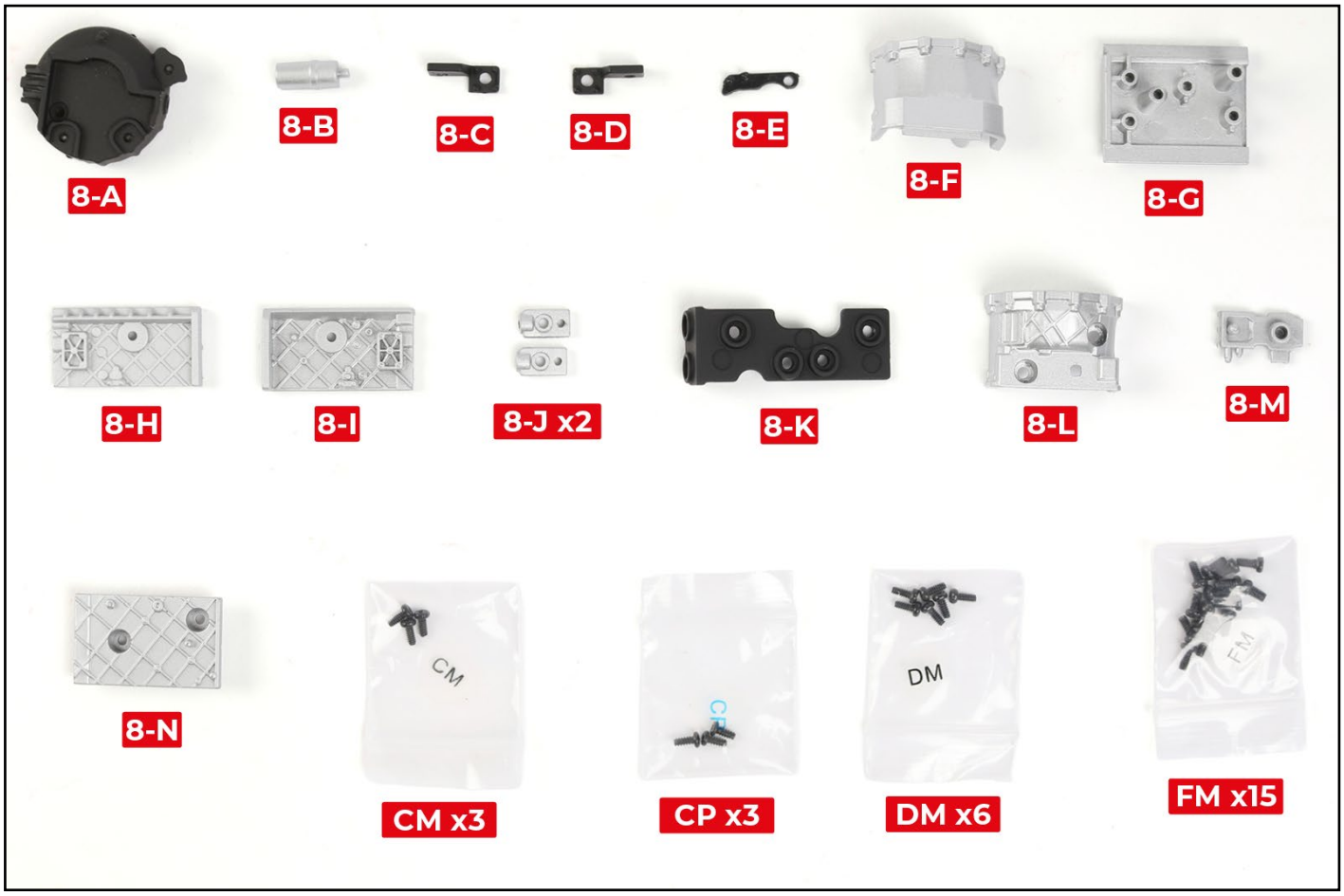
Stage 7: Building the engine (3)

STAGE 07 COMPLETE



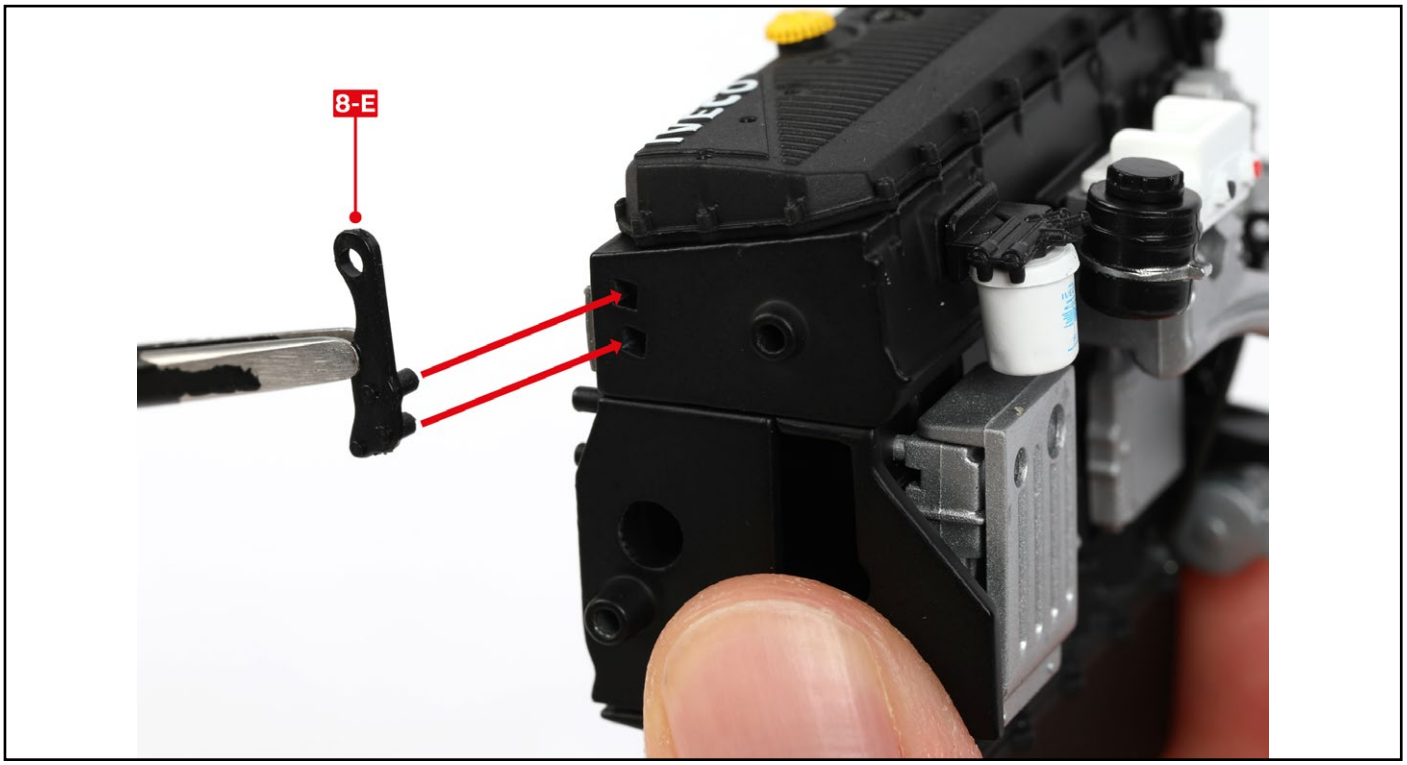
Stage 08: Building the engine and the gearbox

STAGE 08 PARTS



8-A Clutch housing
8-B Starter motor
8-C Right gearbox mount
8-D Left gearbox mount
8-E Rear engine lifting hook
8-F Gearbox housing 1
8-G Gearbox housing 2
8-H Gearbox housing 3
8-I Gearbox housing 4
8-J Gearbox brackets
8-K Inner gearbox bracket
8-L Gearbox housing 5
8-M Gearbox control housing
8-N Gearbox housing 6
CM 3 screws (2 × 3 mm)
CP 3 screws (1.7 × 4 mm)
DM 6 screws (1.7 × 4 mm)
FM 15 screws (2 × 4 mm)

Stage 08: Building the engine and the gearbox

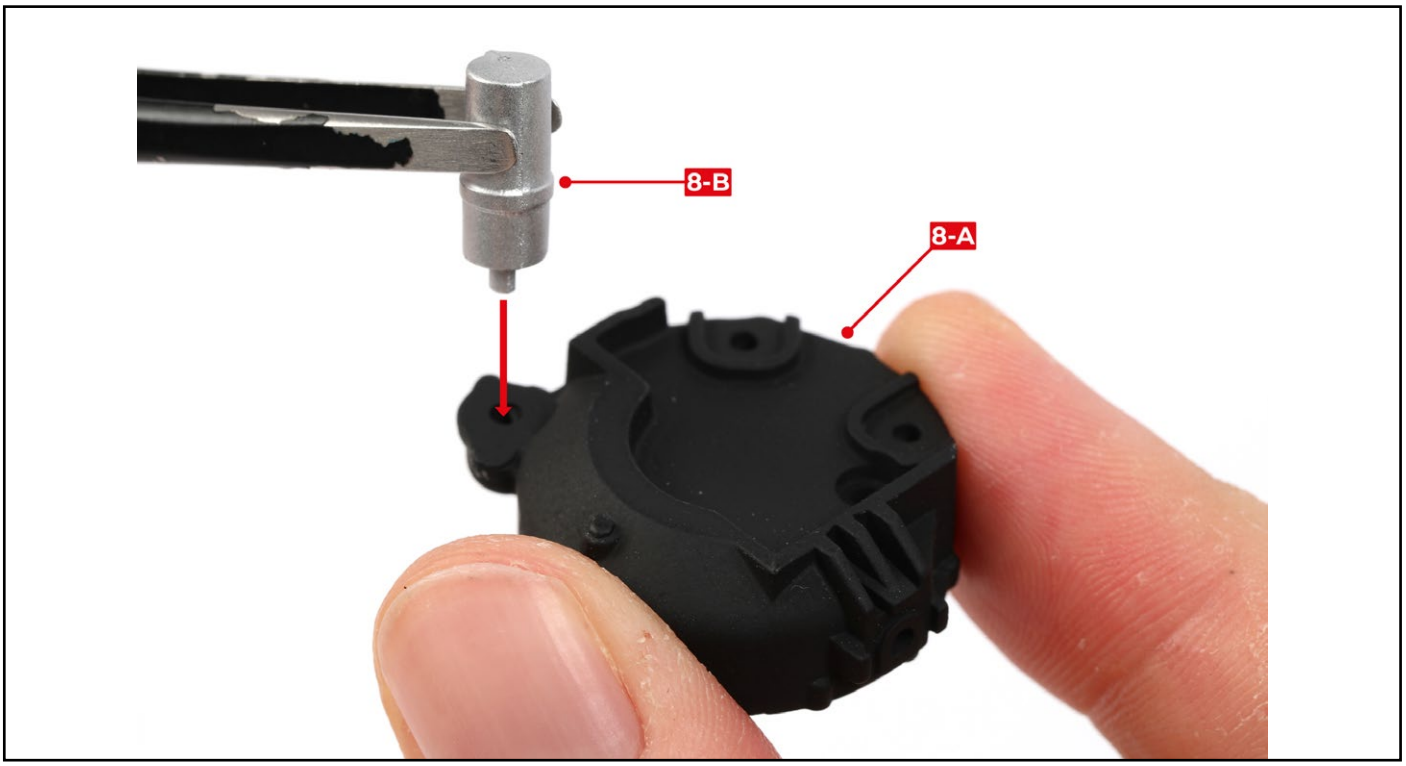




Step 1

Position the rear engine lifting hook 8-E on the engine block, aligning the hole and locating pins as shown. Press it into place.

Stage 08: Building the engine and the gearbox



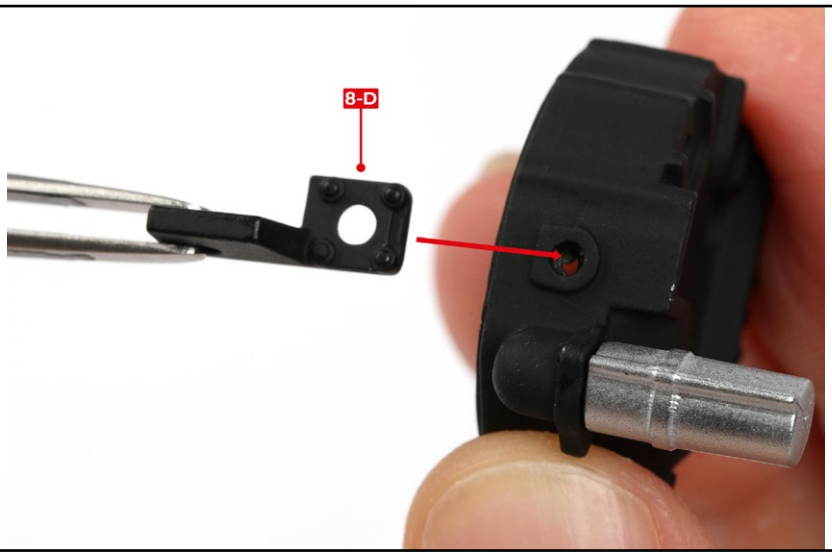


Step 2

Fit the starter motor 8-B into the corresponding recess on the front of the clutch housing 8-A as shown.

Stage 08: Building the engine and the gearbox



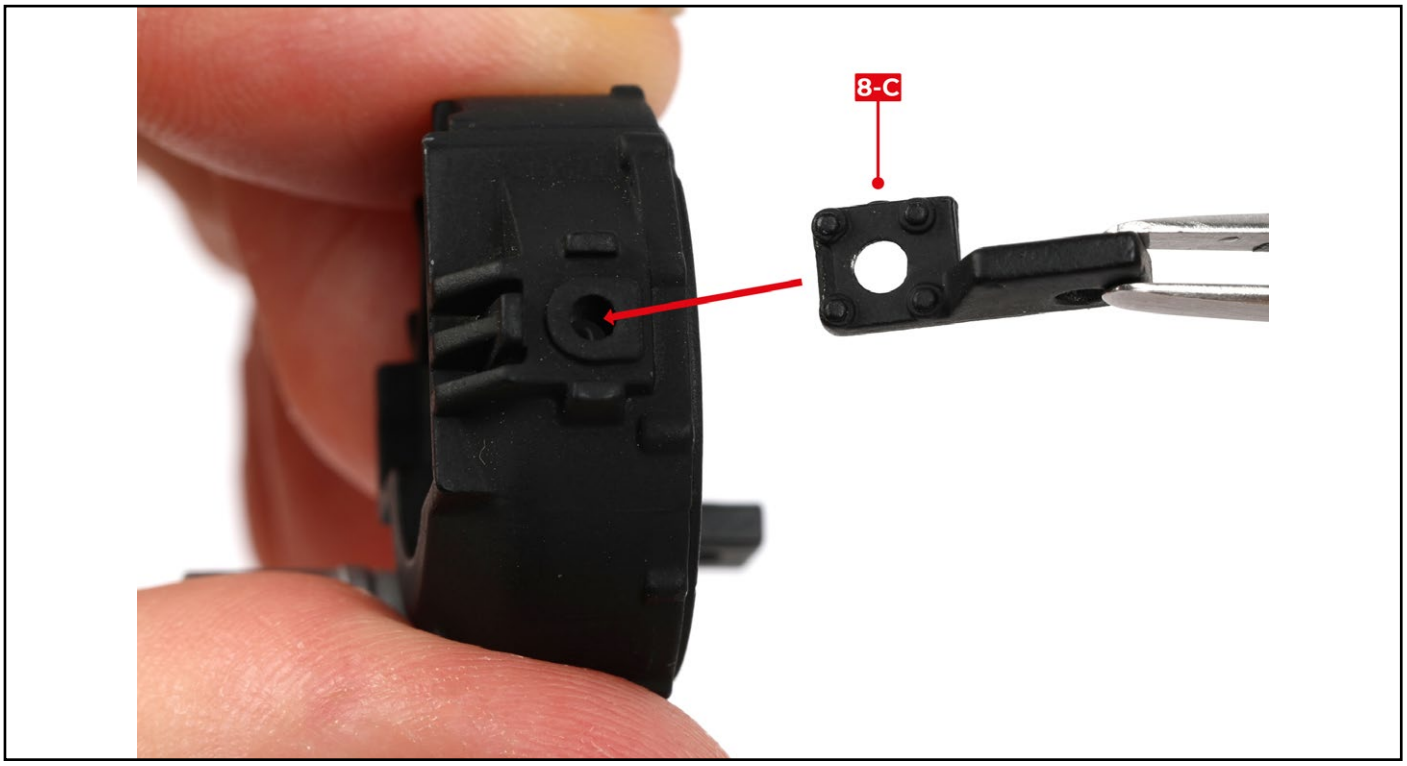


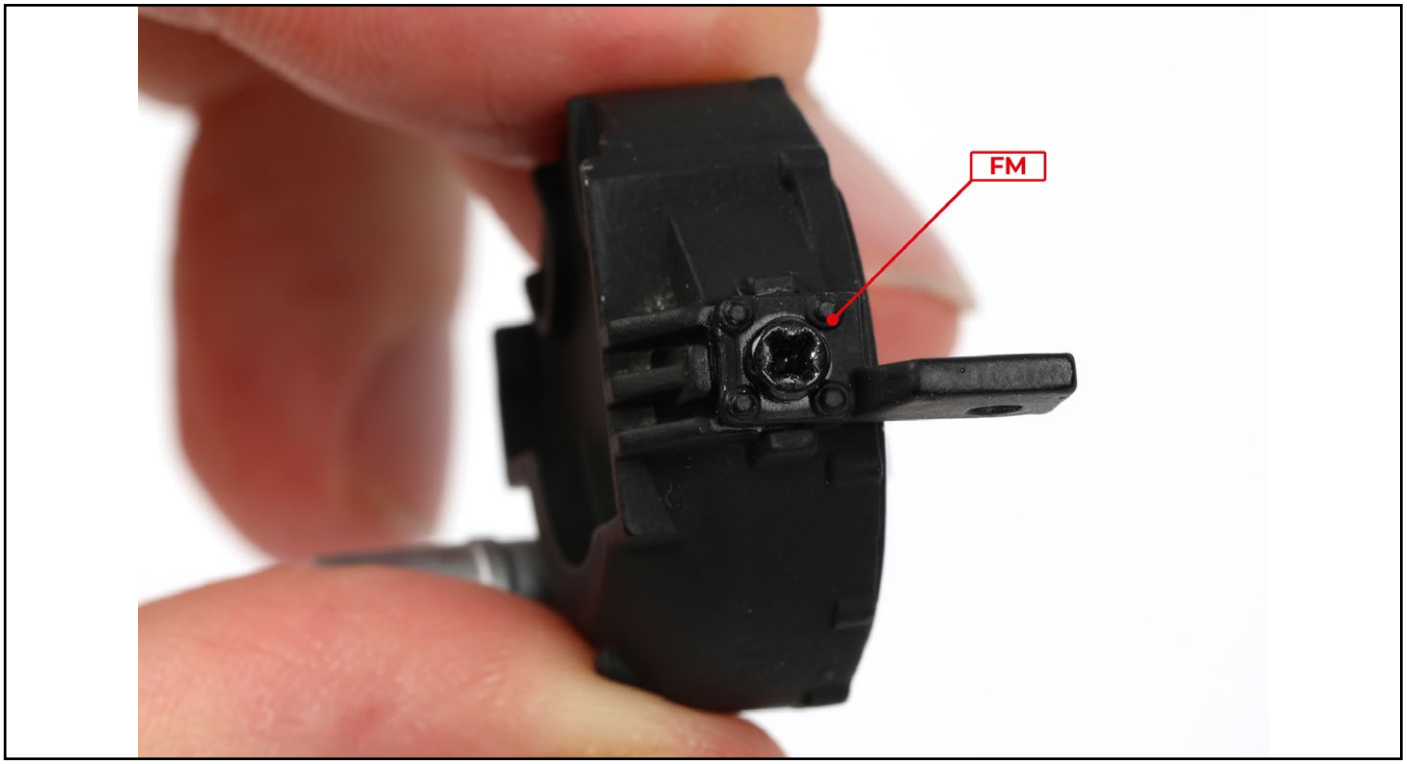


Step 3

Identify parts 8-C and 8-D as shown. Position the left gearbox mount 8-D on the front of the clutch housing 8-A as shown, then secure it with one FM screw.

Stage 08: Building the engine and the gearbox

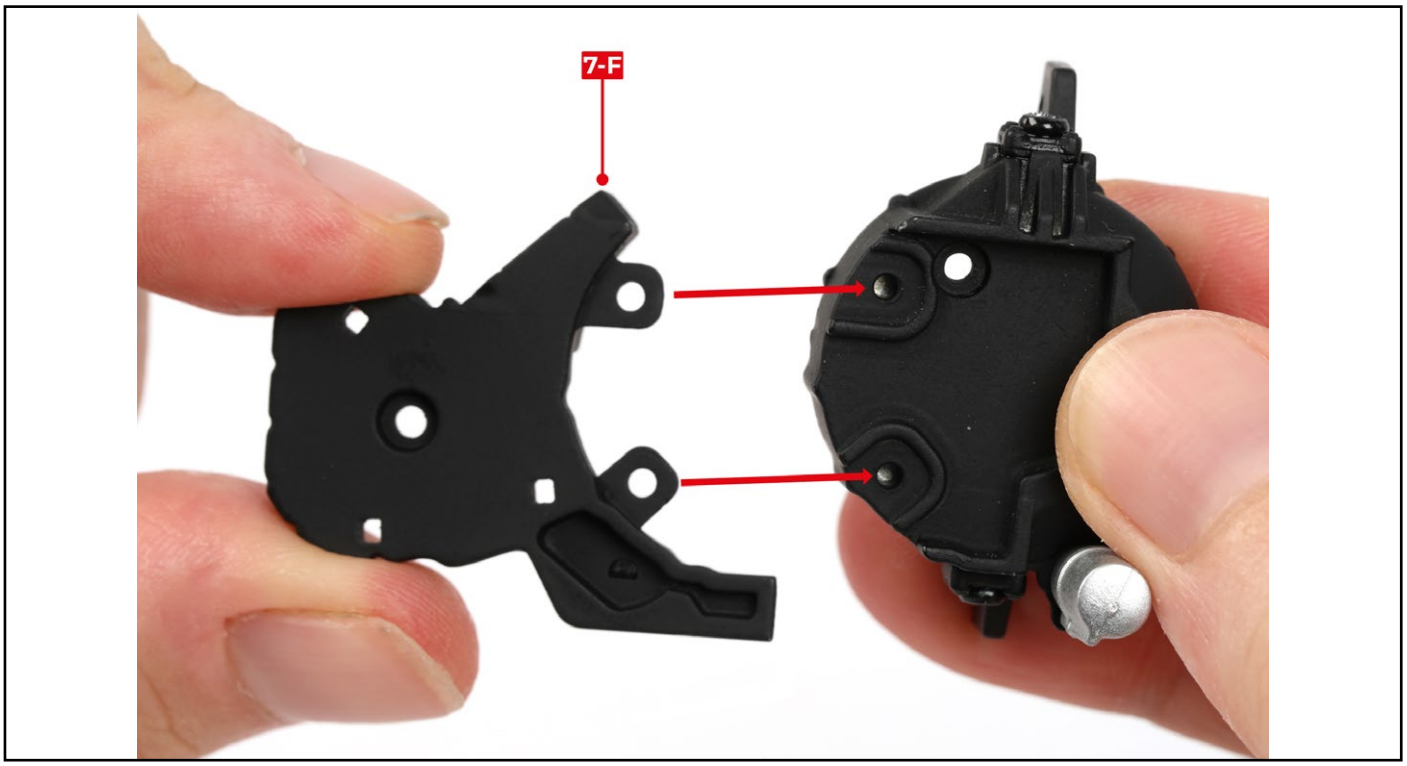


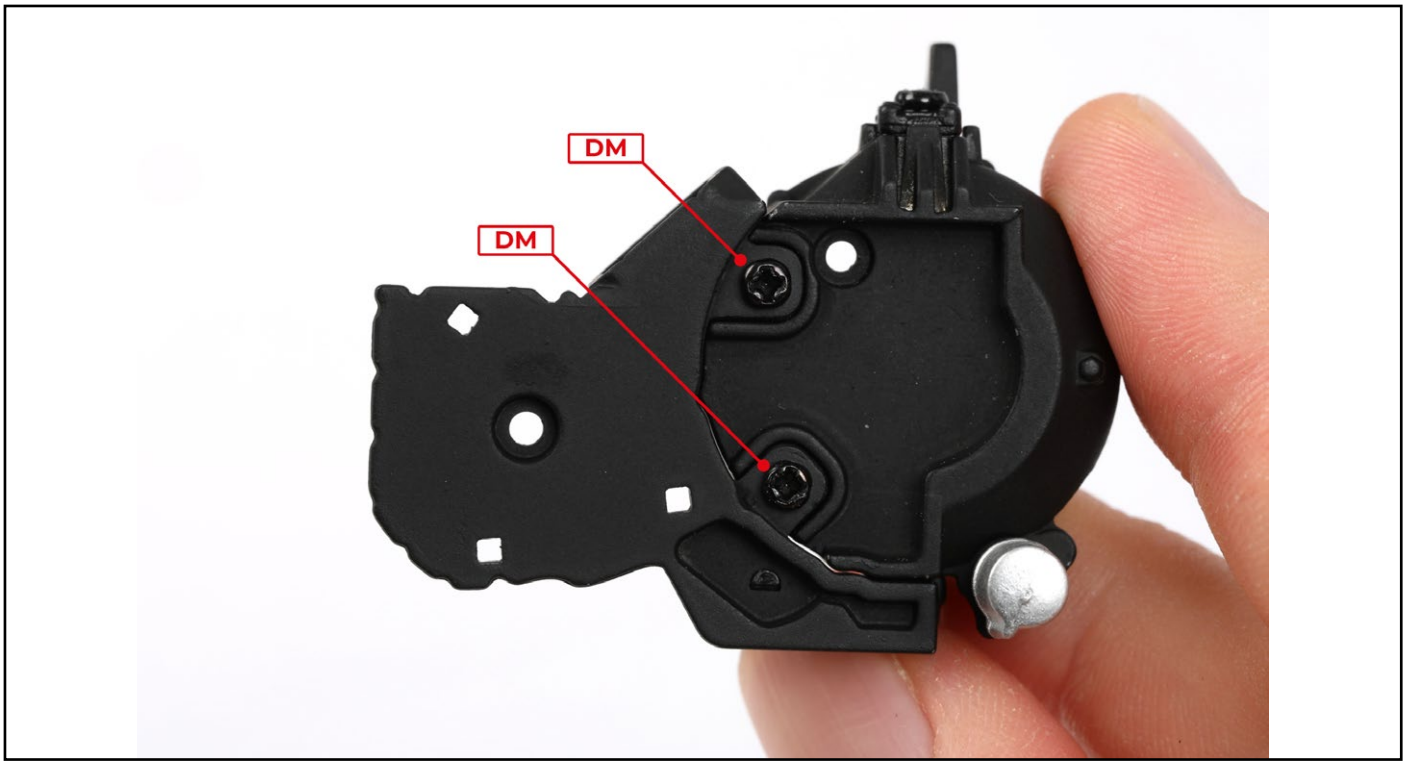


Step 4

Position the right gearbox mount 8-C on the opposite side of the clutch housing 8-A, then secure it with one FM screw.

Stage 08: Building the engine and the gearbox

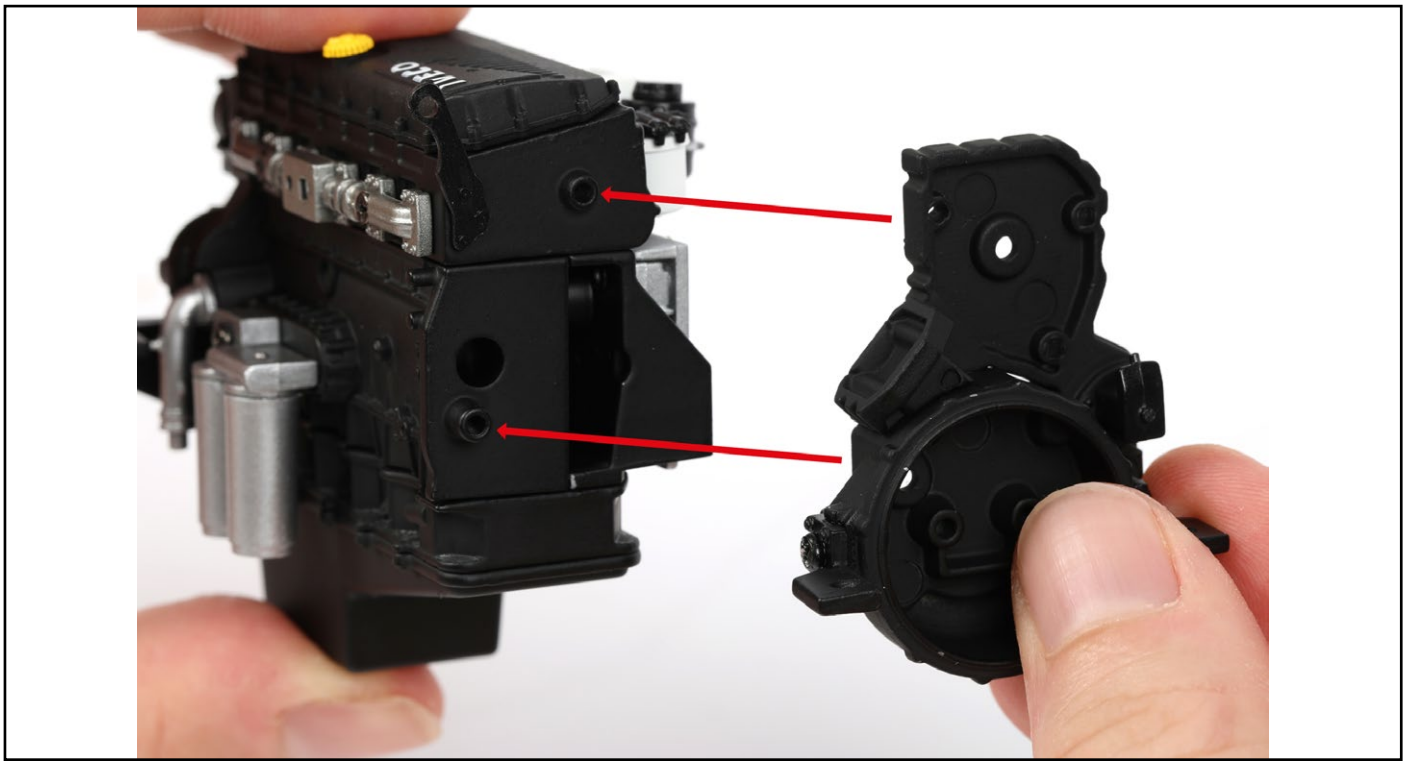


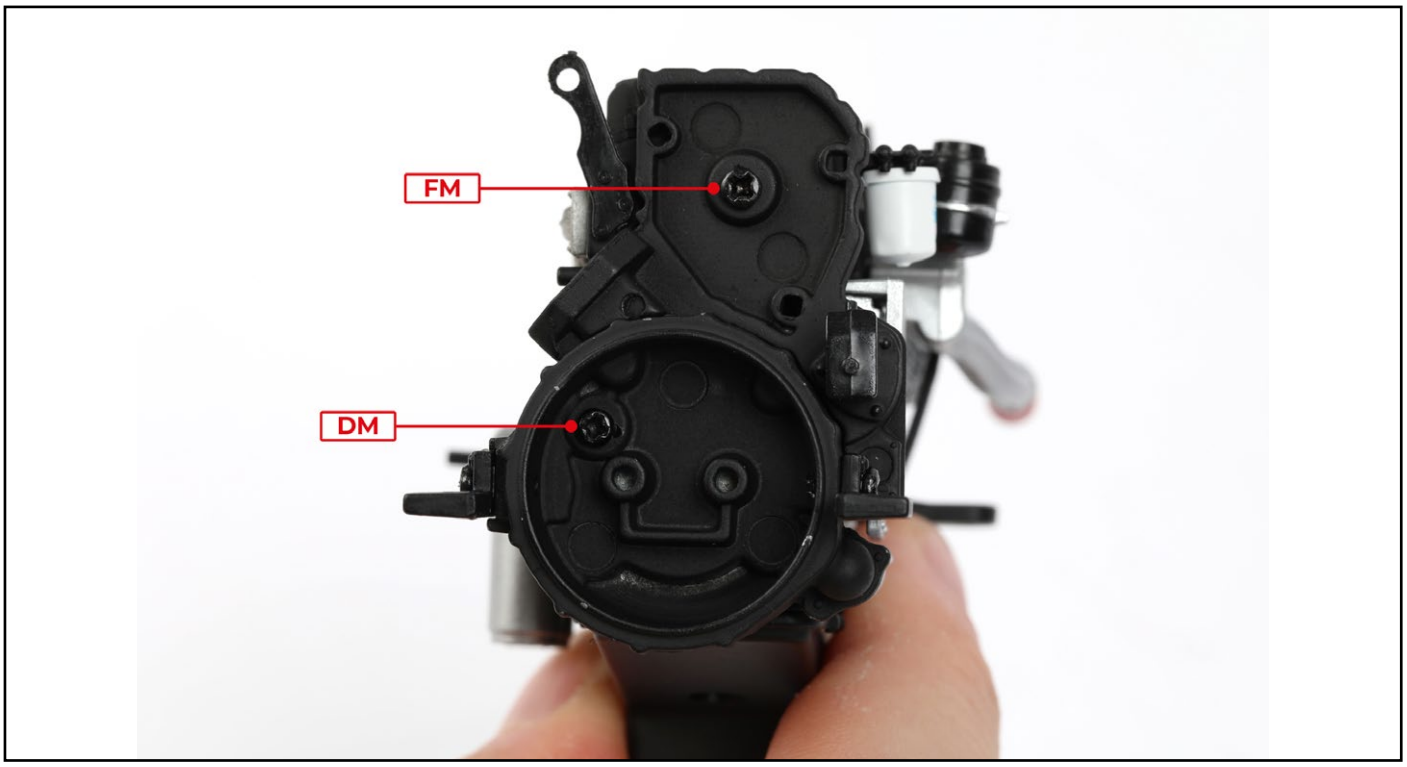


Step 5

Retrieve the engine timing housing 7-F from Stage 7. Position it on the front of the clutch housing 8-A as shown, then secure it with two DM screws.

Stage 08: Building the engine and the gearbox

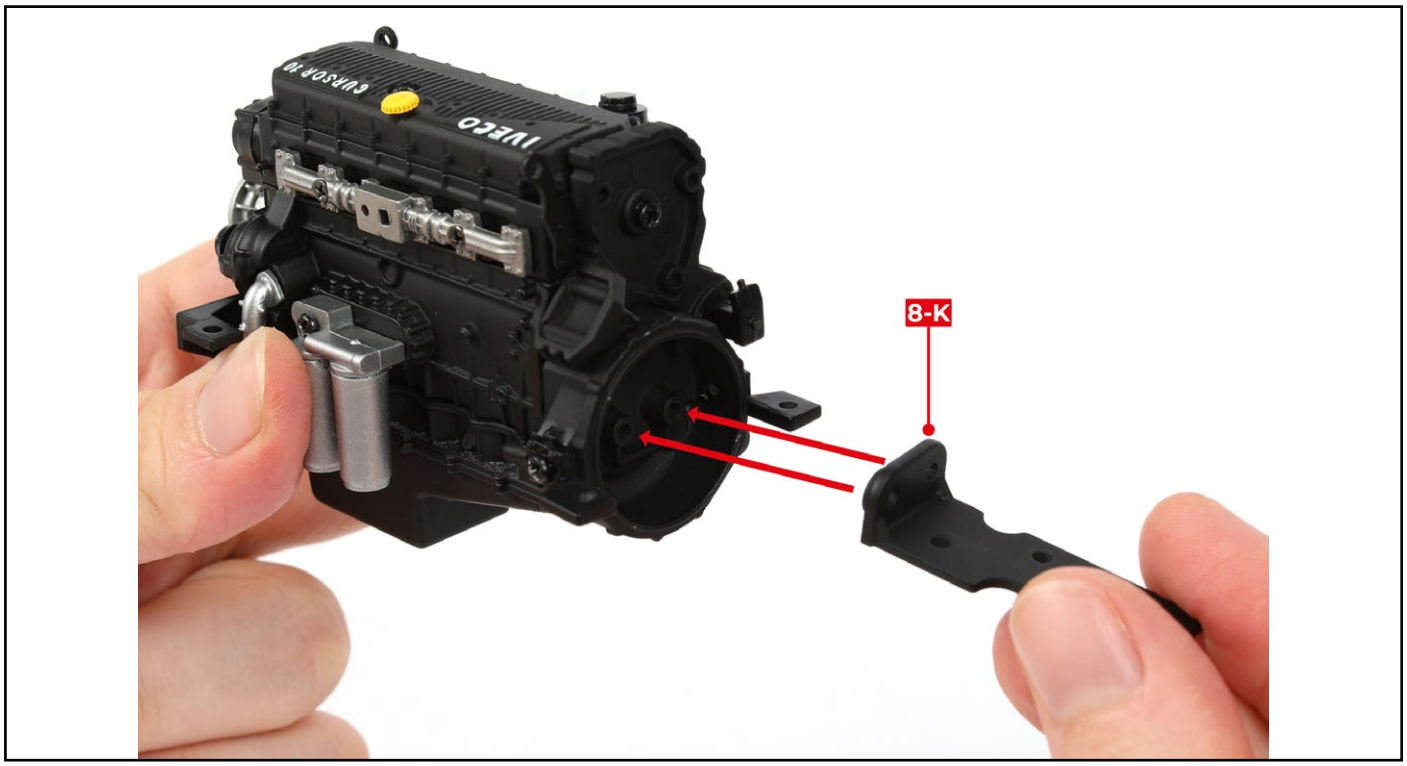


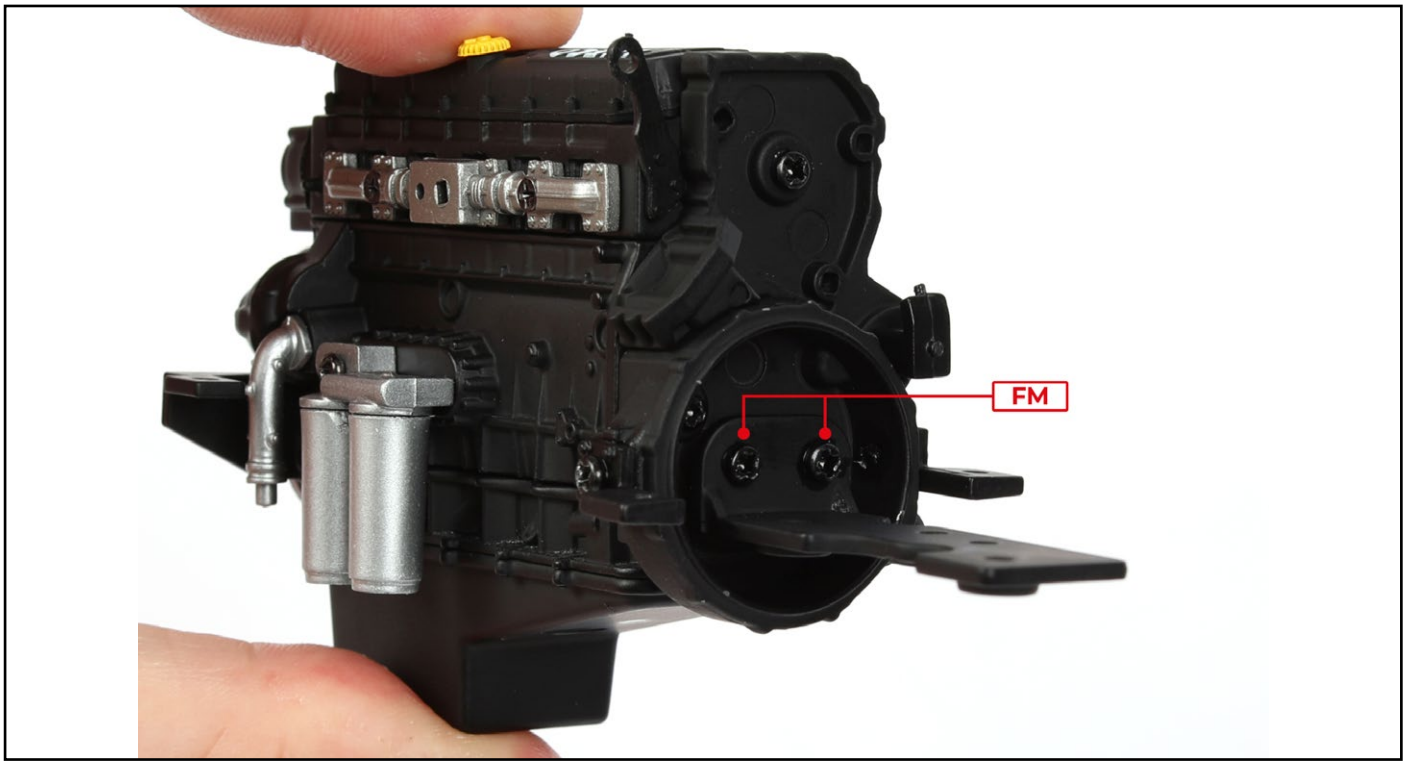


Step 6

Position the clutch housing assembly on the engine block as shown, then secure it with one FM screw and one DM screw.

Stage 08: Building the engine and the gearbox

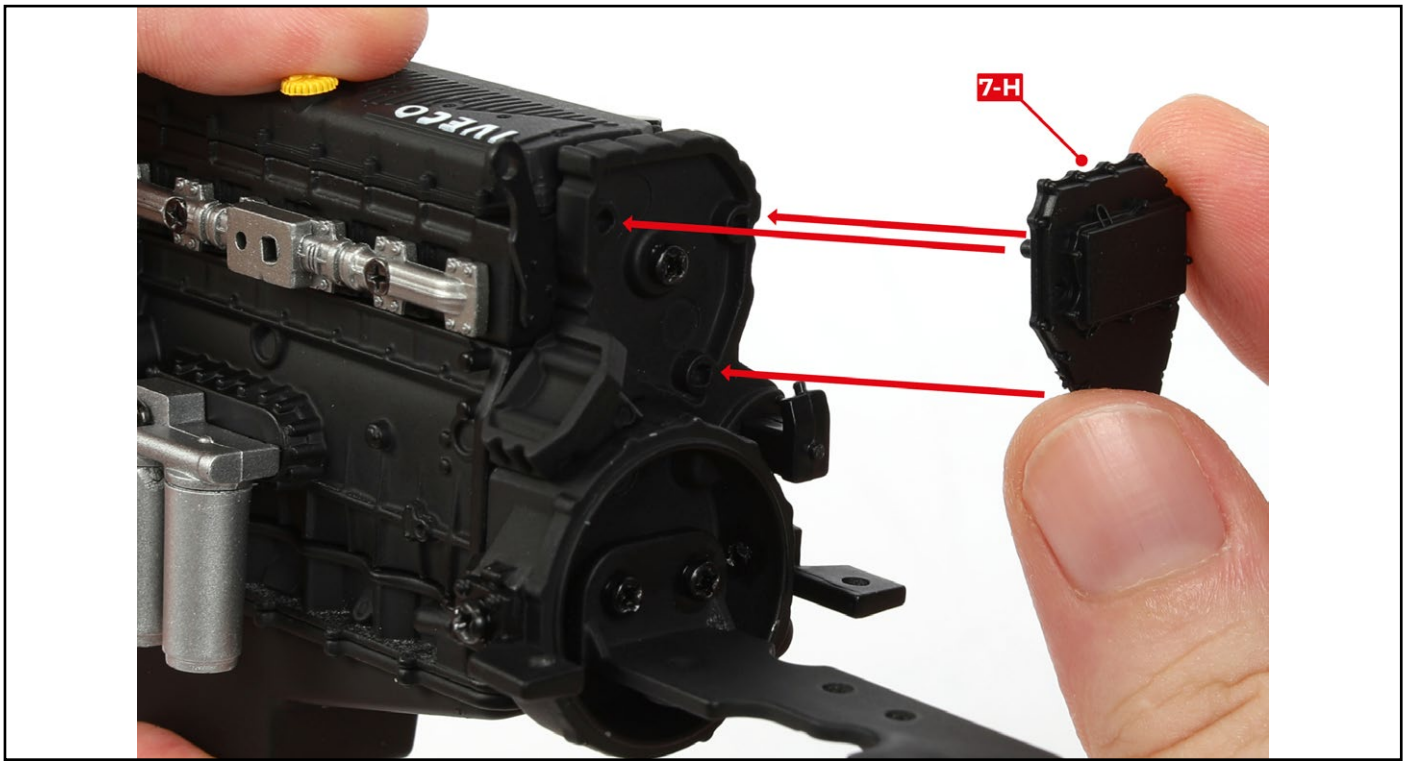




Step 7

Position the inner gearbox bracket 8-K in the centre of the clutch housing 8-A as shown, then secure it with two FM screws.

Stage 08: Building the engine and the gearbox

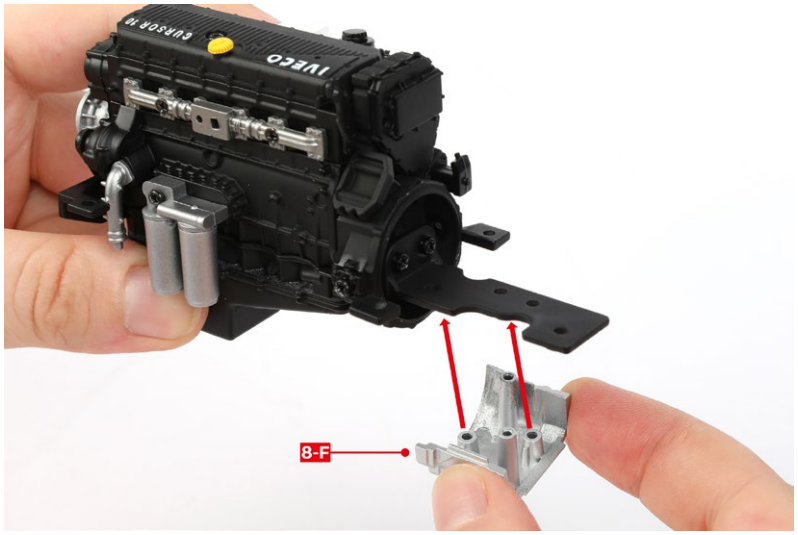


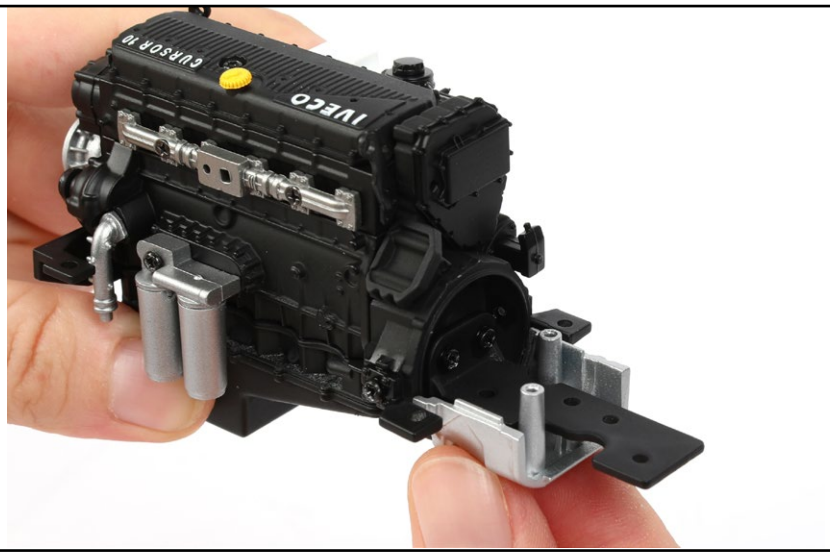


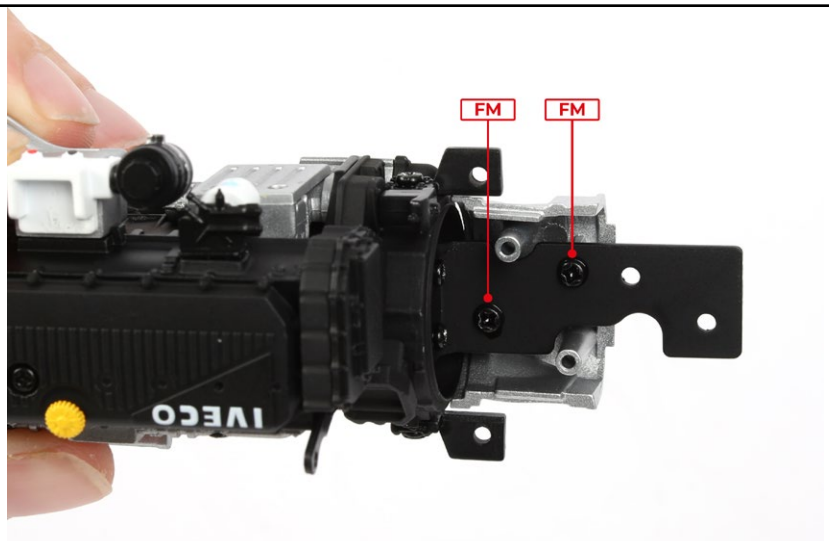
Step 8

Retrieve the engine timing cover 7-H from Stage 7 and fit it to the engine timing housing 7-F as shown.

Stage 08: Building the engine and the gearbox



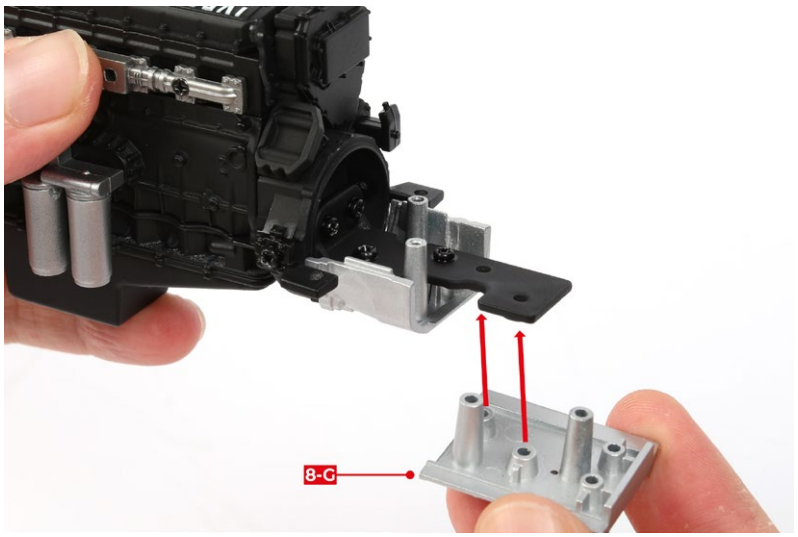


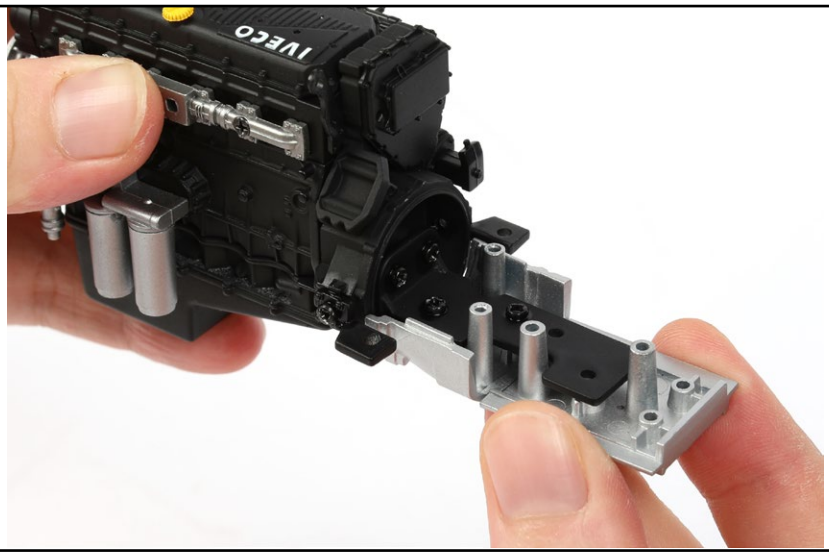


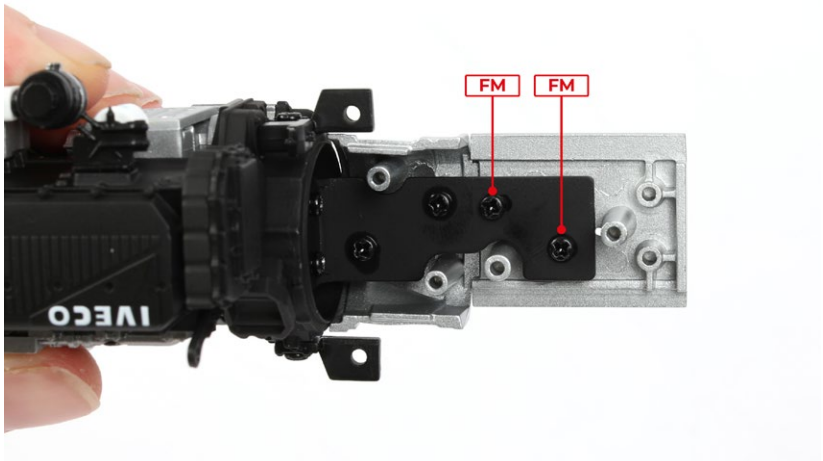
Step 9

Position gearbox housing 1 (8-F) as shown, making sure it is oriented correctly, then, secure it with two FM screws.

Stage 08: Building the engine and the gearbox



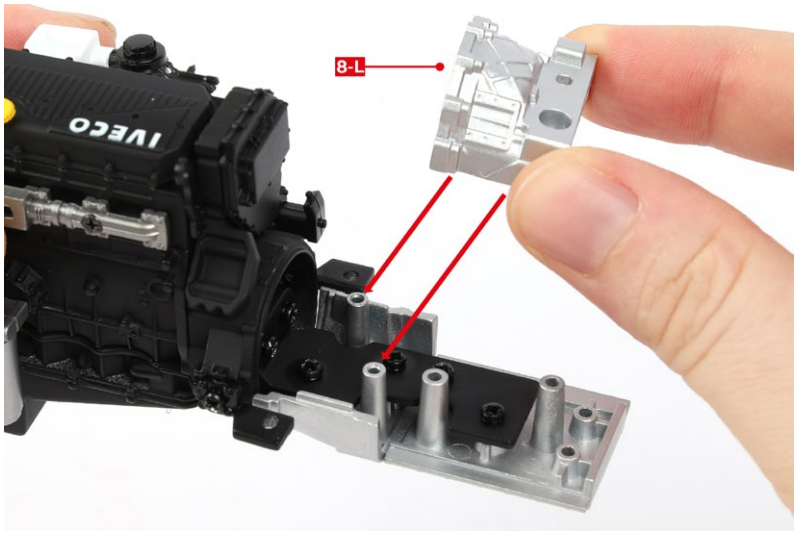




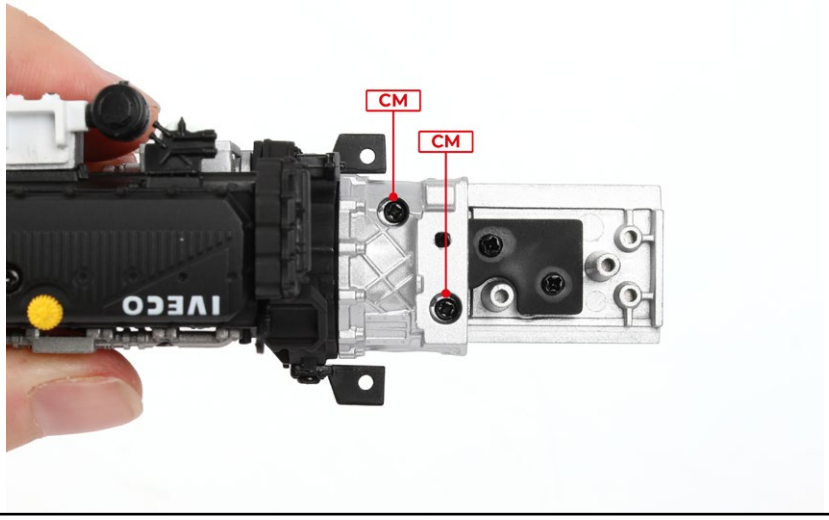
Step 10

Position gearbox housing 2 (8-G) as shown, then secure it to the inner gearbox bracket 8-K with two FM screws.

Stage 08: Building the engine and the gearbox



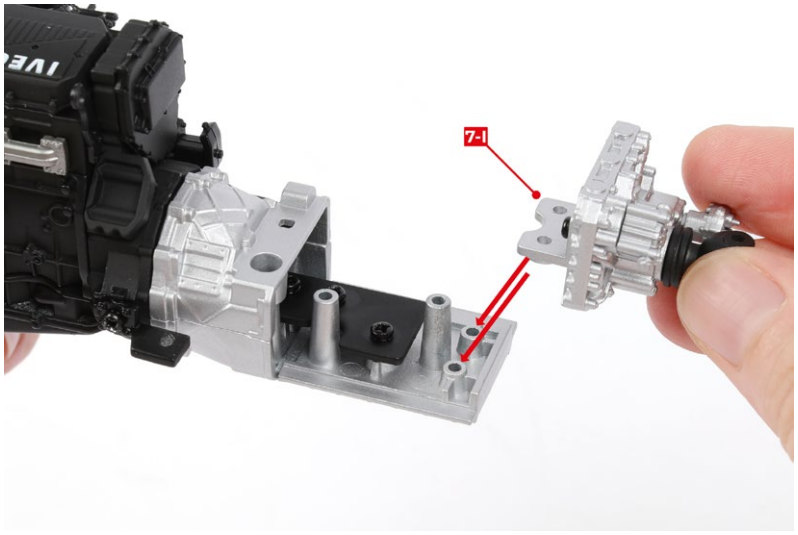


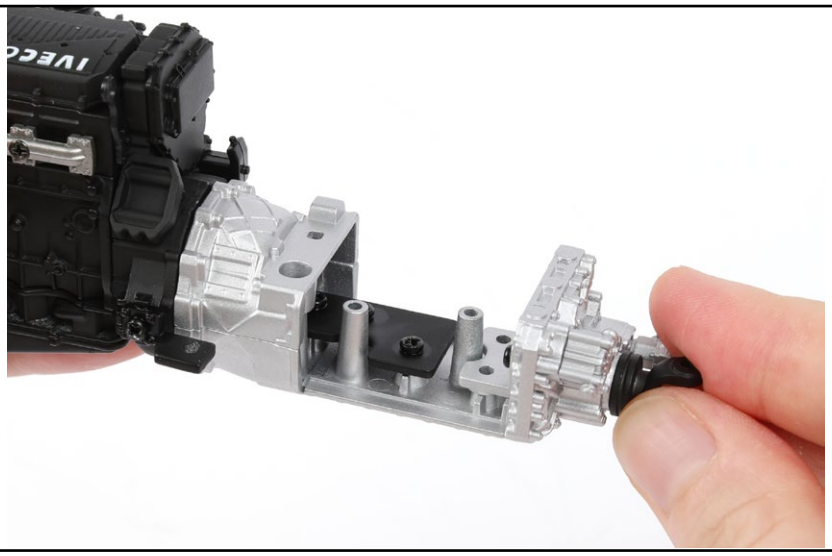


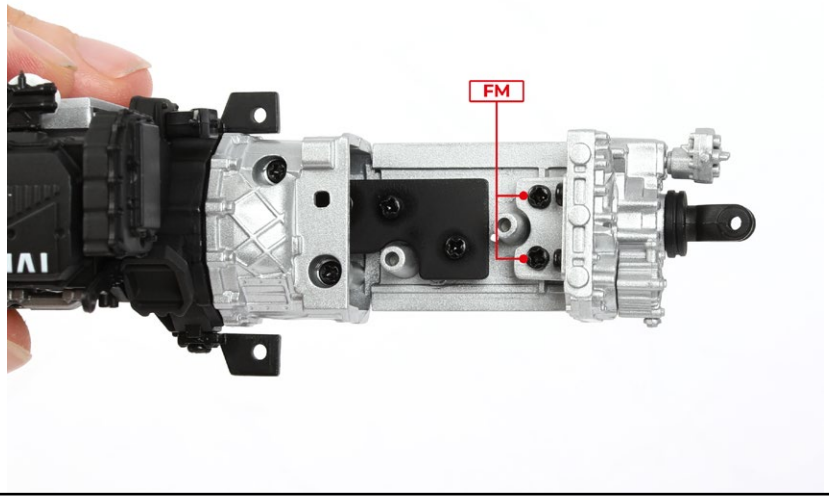
Step 11

Position gearbox housing 5 (8-L) as shown, making sure it is oriented correctly, then secure it to the lower gearbox housing with two CM screws.

Stage 08: Building the engine and the gearbox



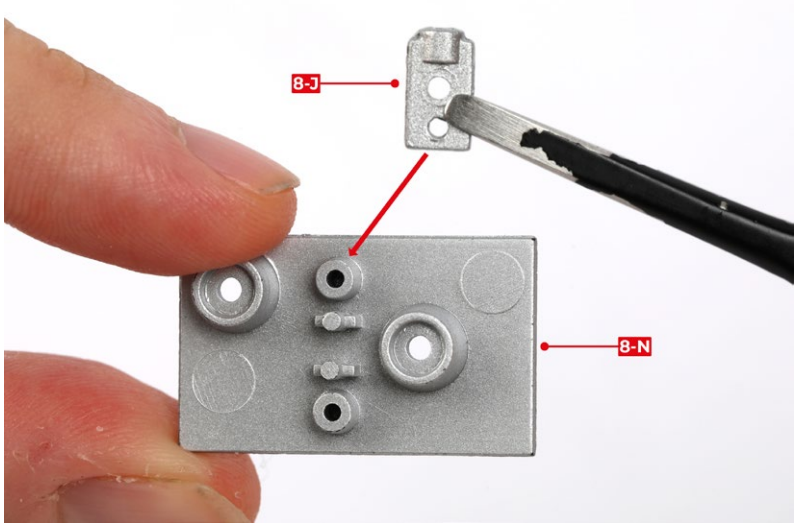


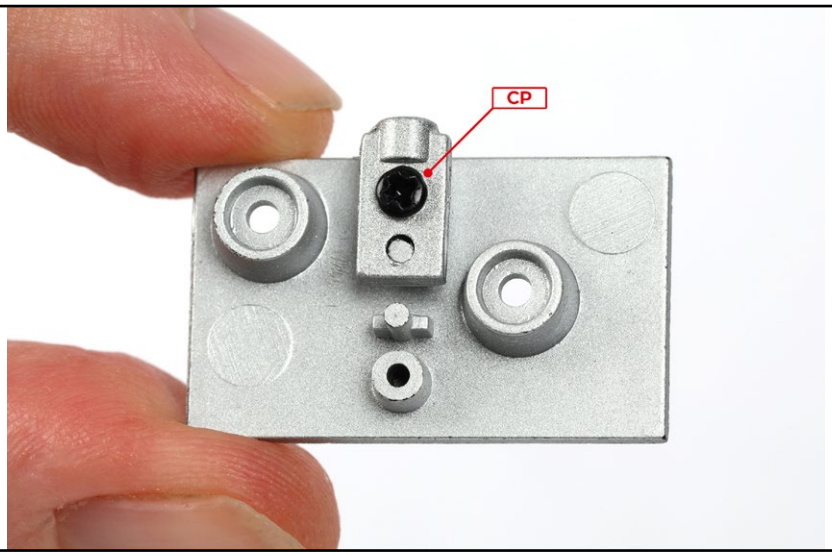


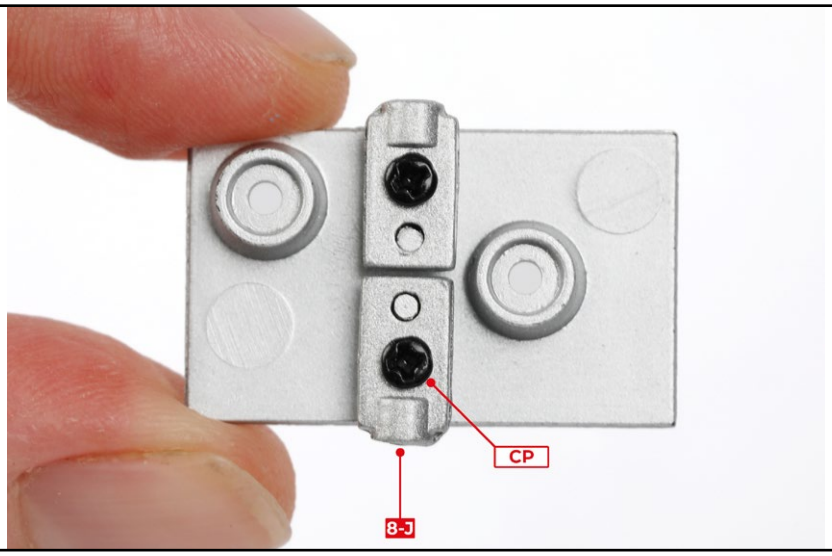
Step 12

Retrieve the gearbox housing 7-I assembled in Stage 7. Position it on gearbox housing 2 (8-G) as shown, then secure it with two FM screws.

Stage 08: Building the engine and the gearbox





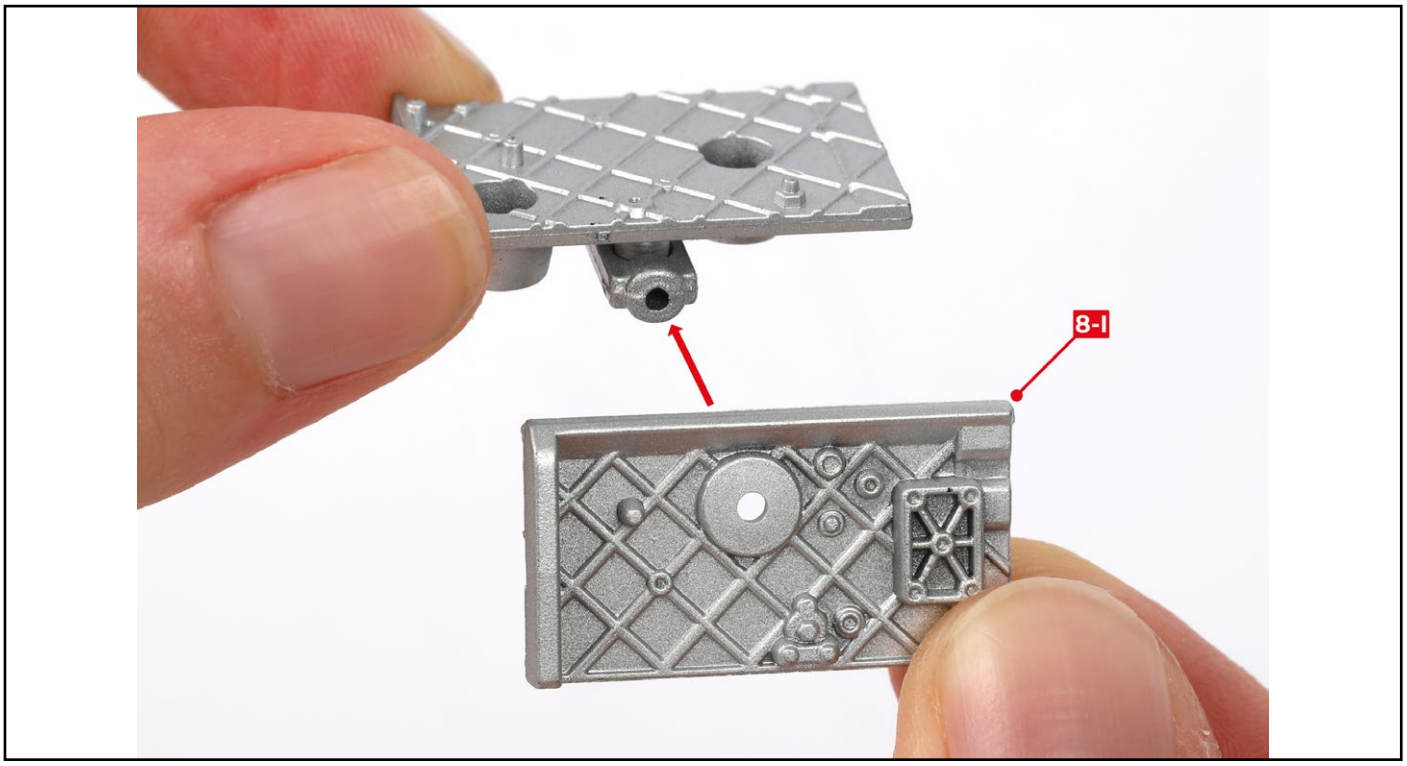


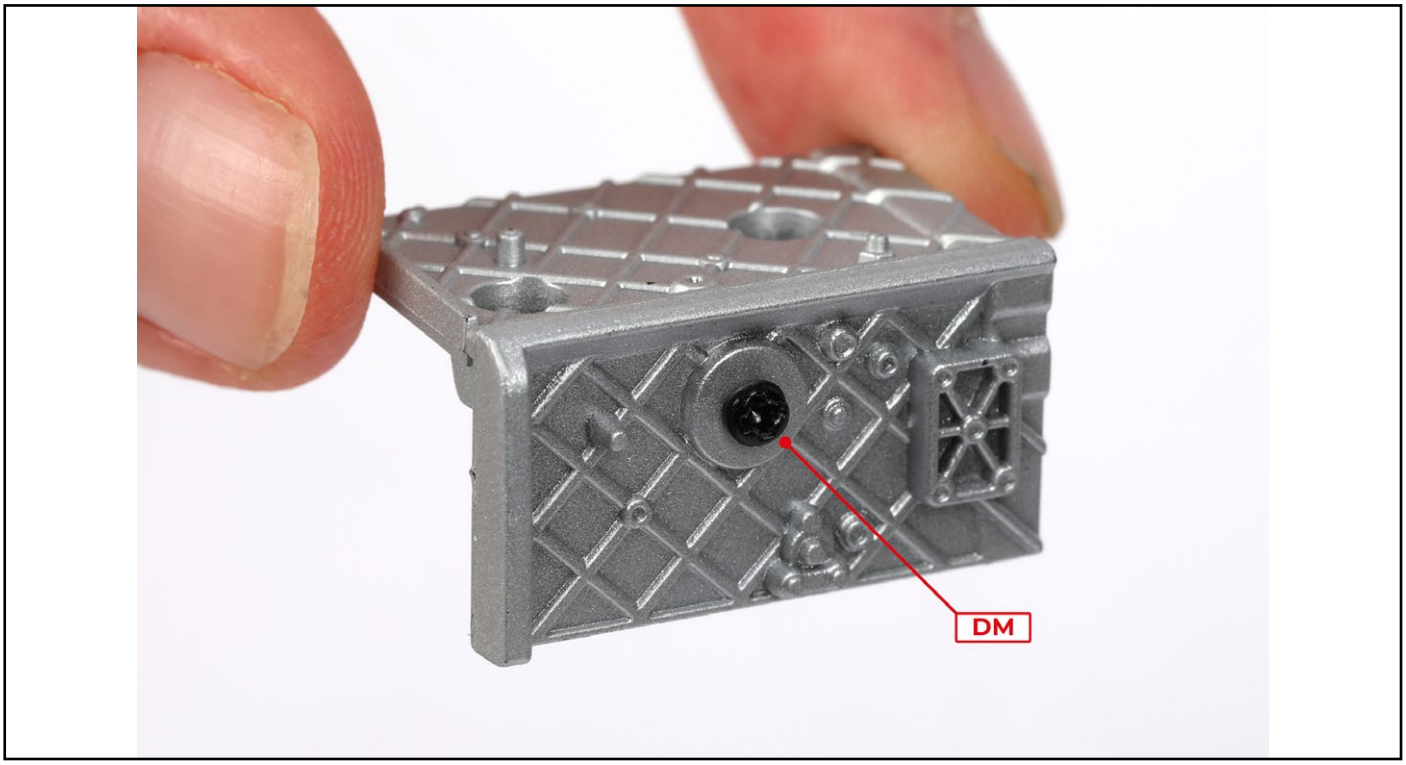
Step 13

Position the two gearbox brackets 8-J on the inside of gearbox housing 6 (8-N) as shown.

Secure the two gearbox brackets 8-J with two CP screws.

Stage 08: Building the engine and the gearbox

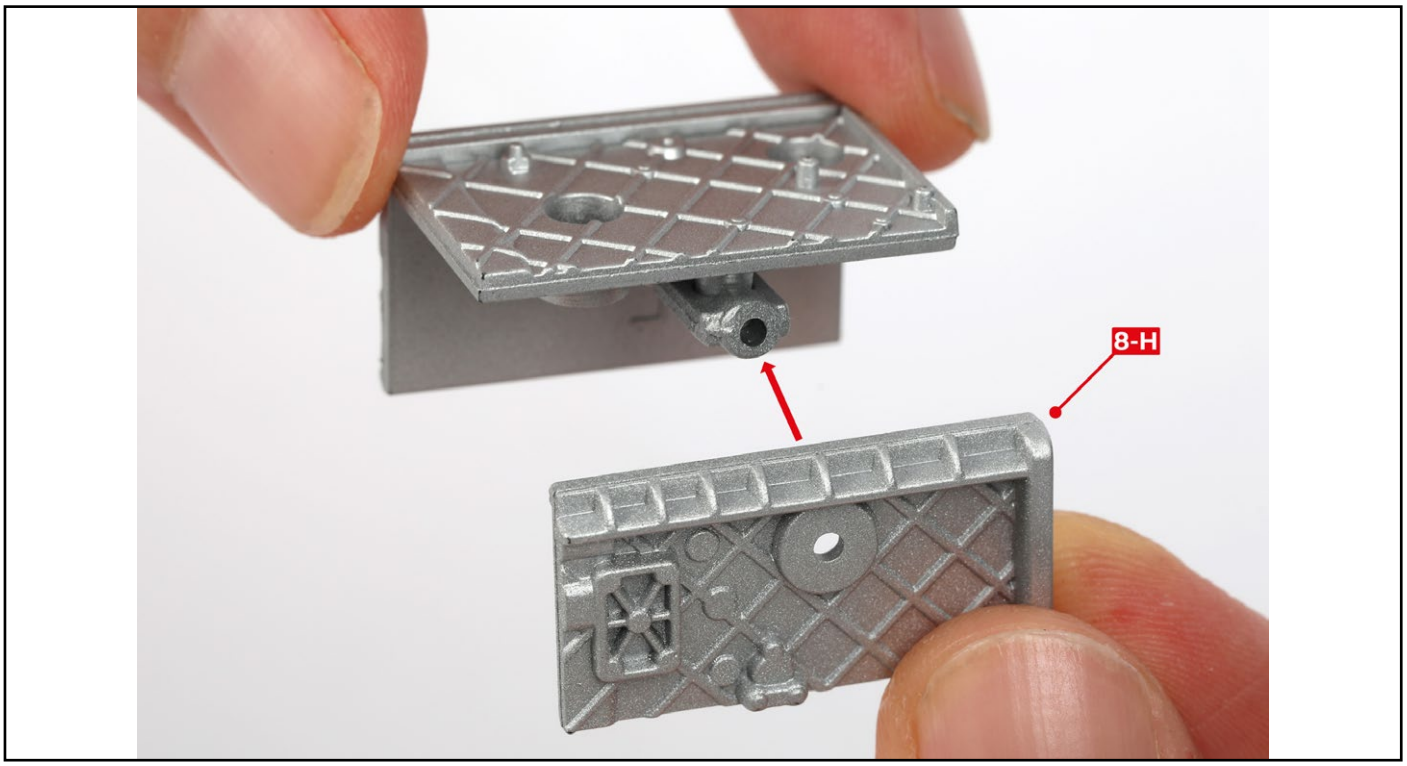


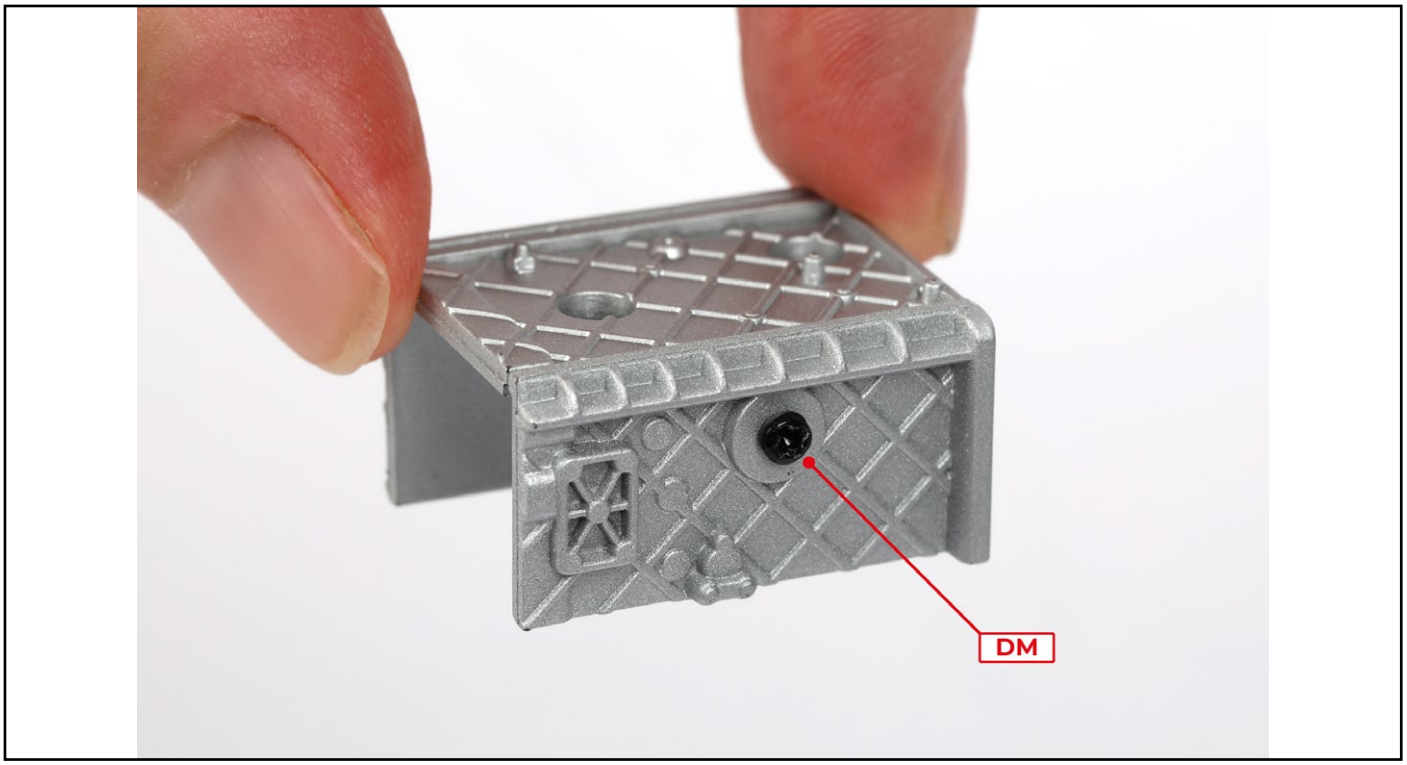


Step 14

Position gearbox housing 4 (8-I) on gearbox housing 6 (8-N) as shown, then secure it with one DM screw.

Stage 08: Building the engine and the gearbox

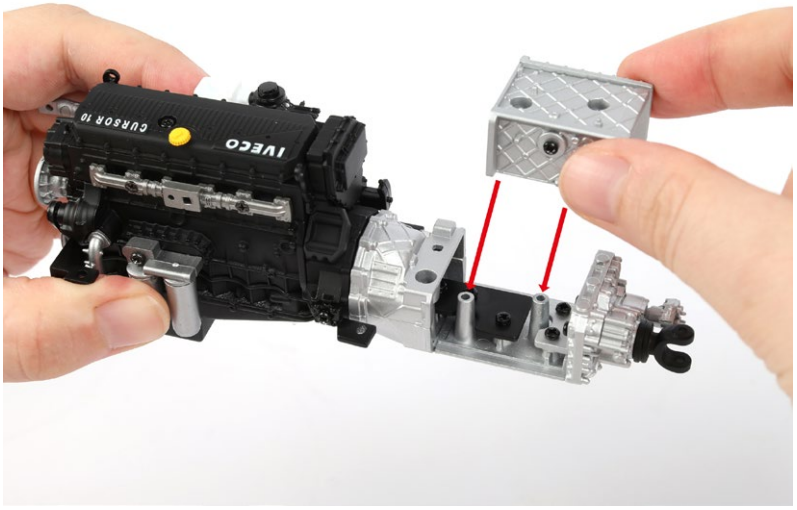


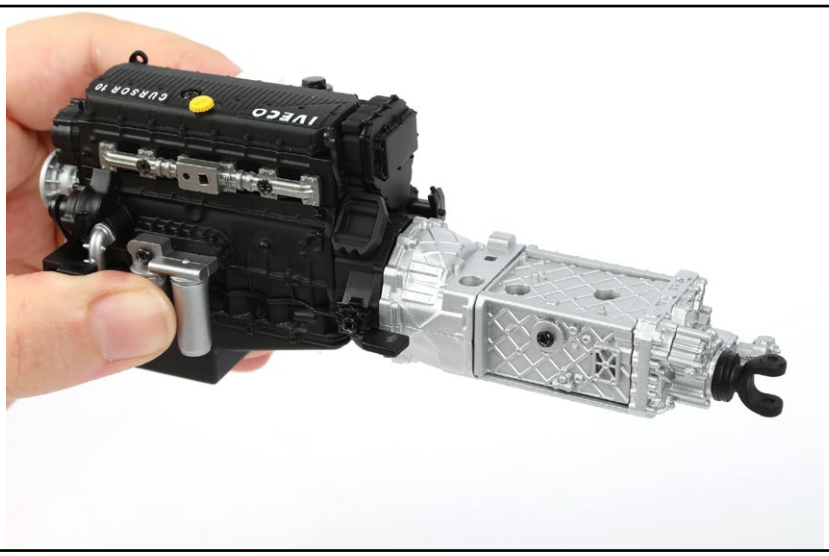


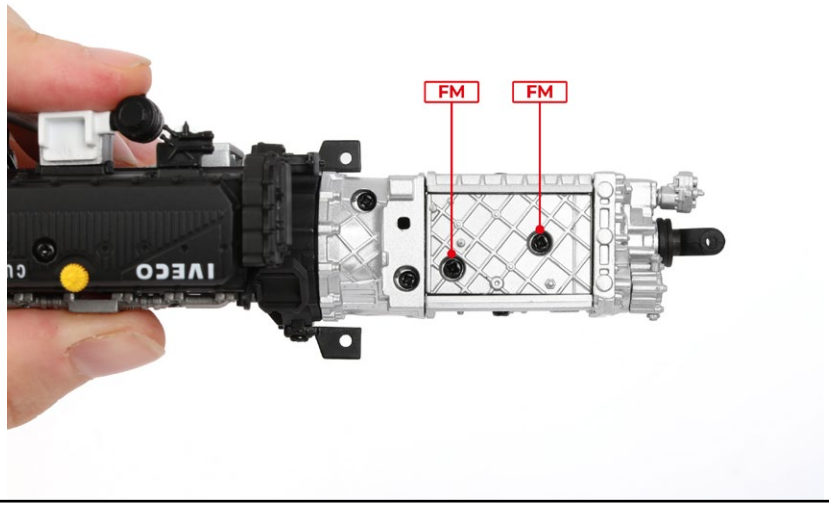
Step 15

Fit gearbox housing 3 (8-H) to the gearbox housing assembly as shown, then secure it with one DM screw.

Stage 08: Building the engine and the gearbox



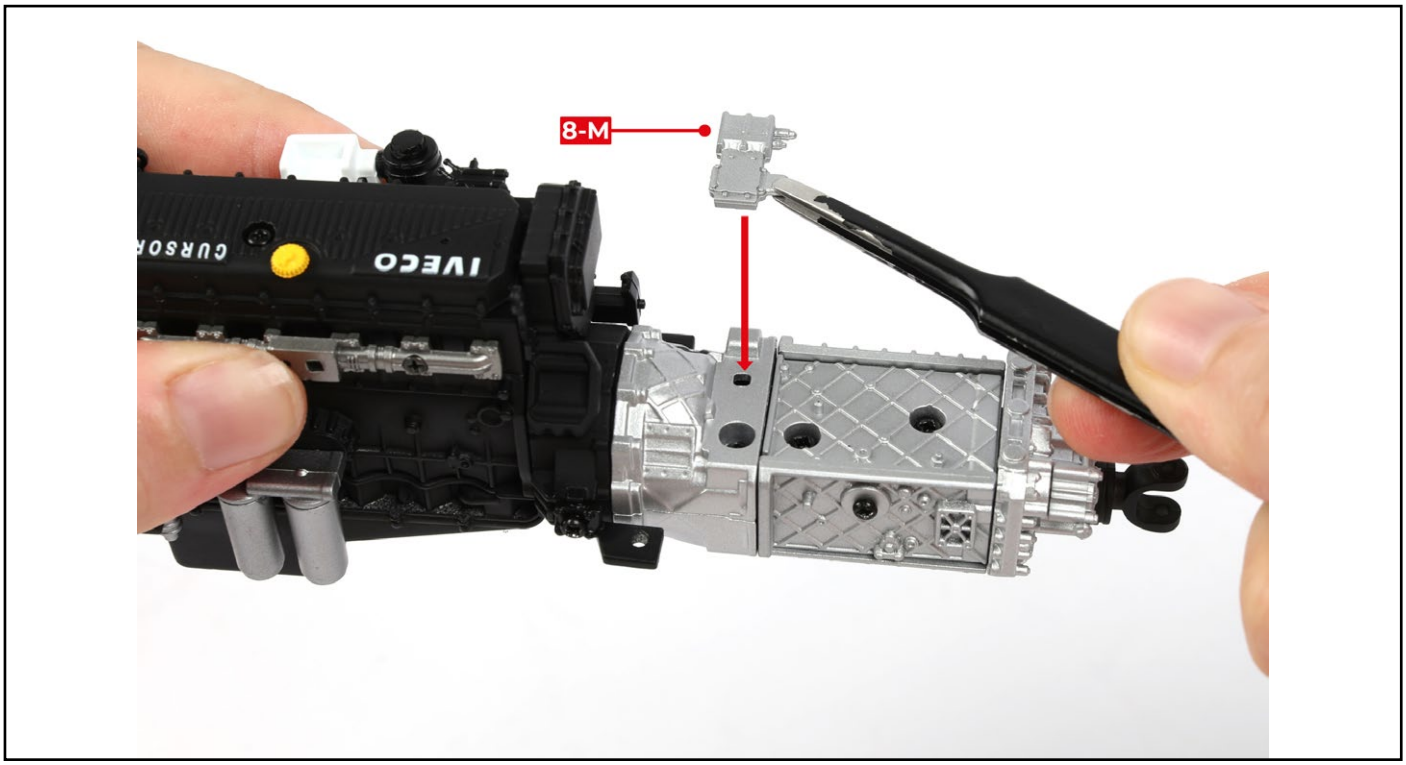


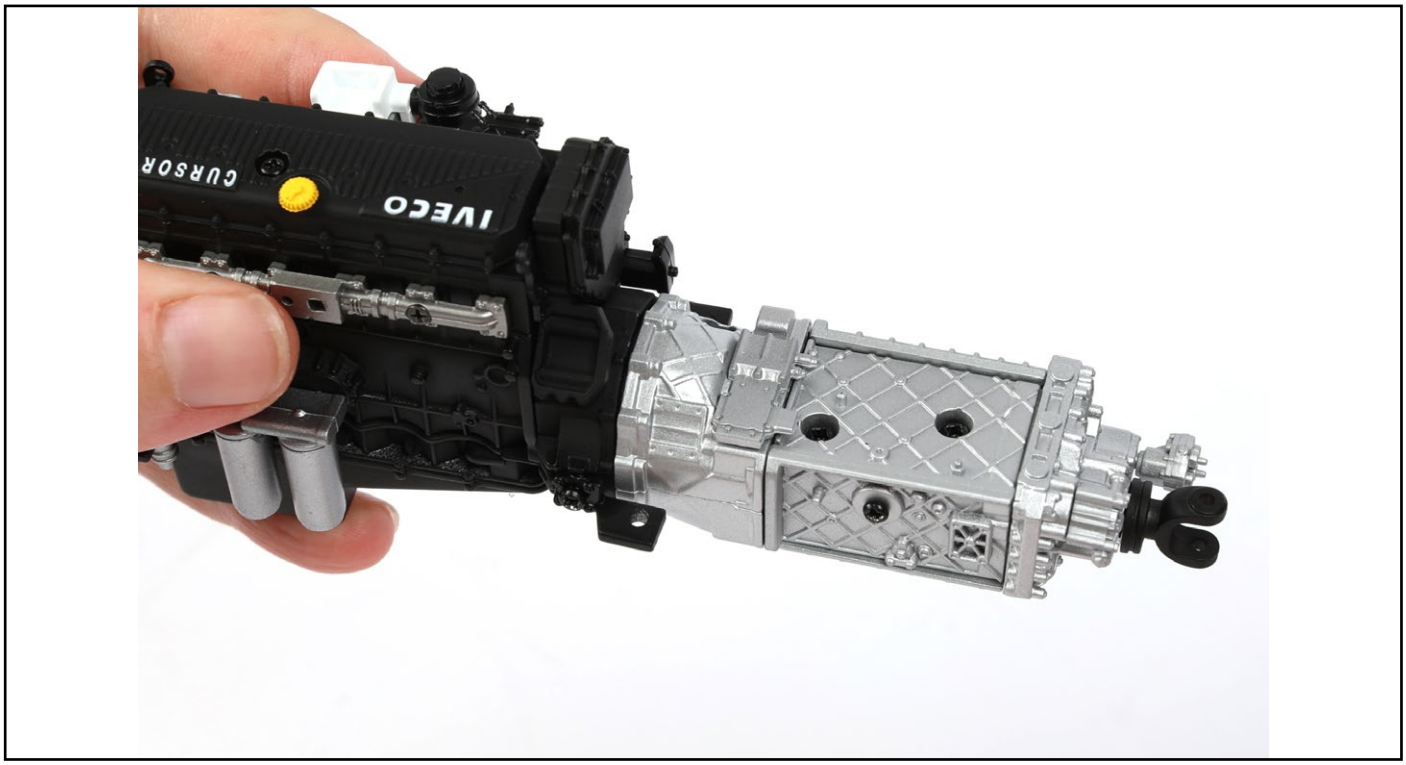


Step 16

Position the completed gearbox housing subassembly on the main gearbox assembly as shown, then secure it with two FM screws.

Stage 08: Building the engine and the gearbox



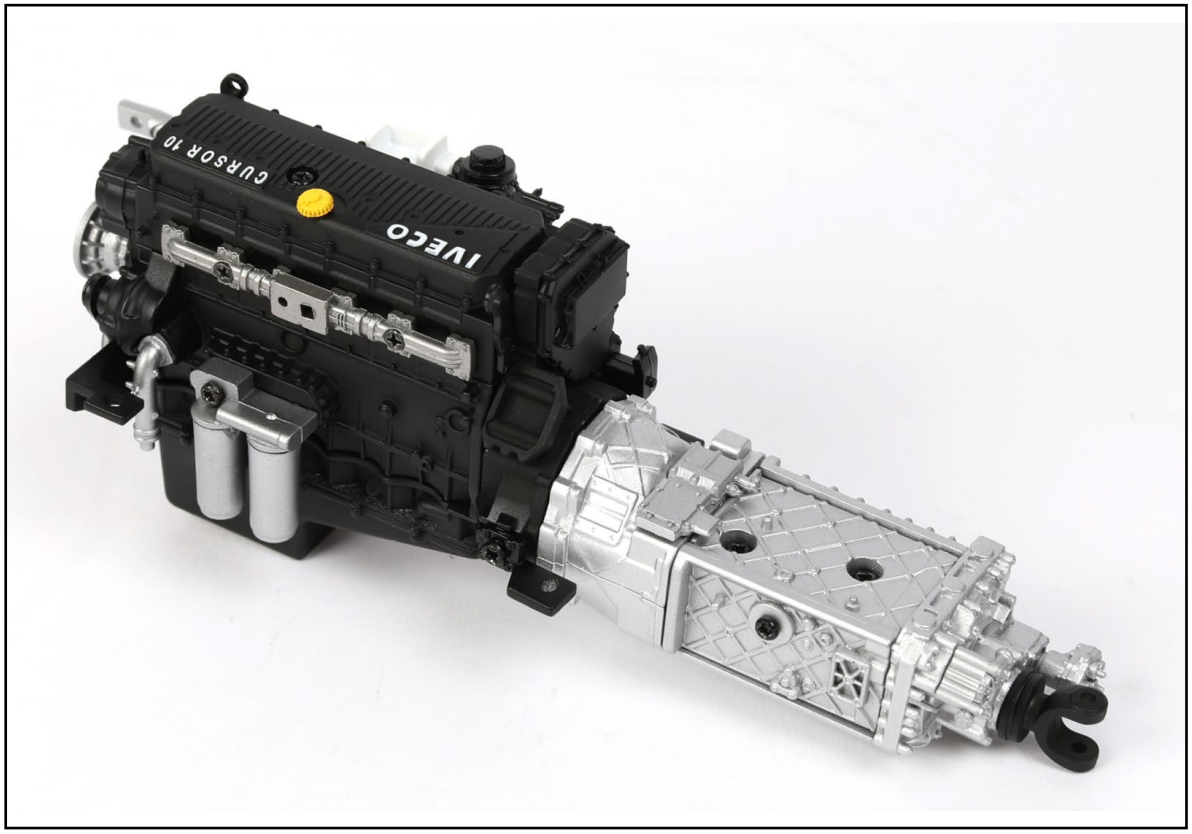


Step 17

Press the gearbox control housing 8-M into place as shown.

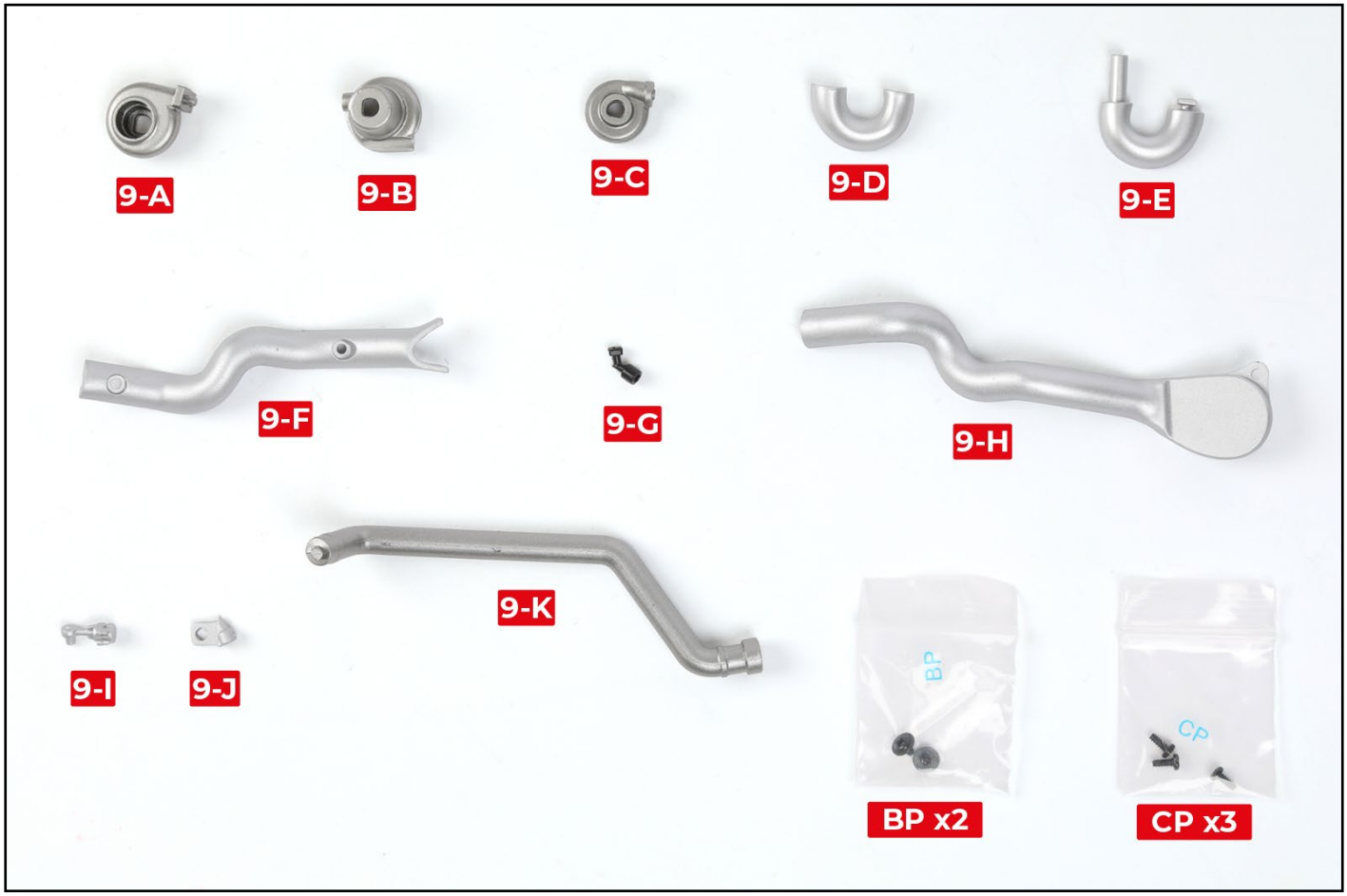
Stage 08: Building the engine and the gearbox

STAGE 08 COMPLETE



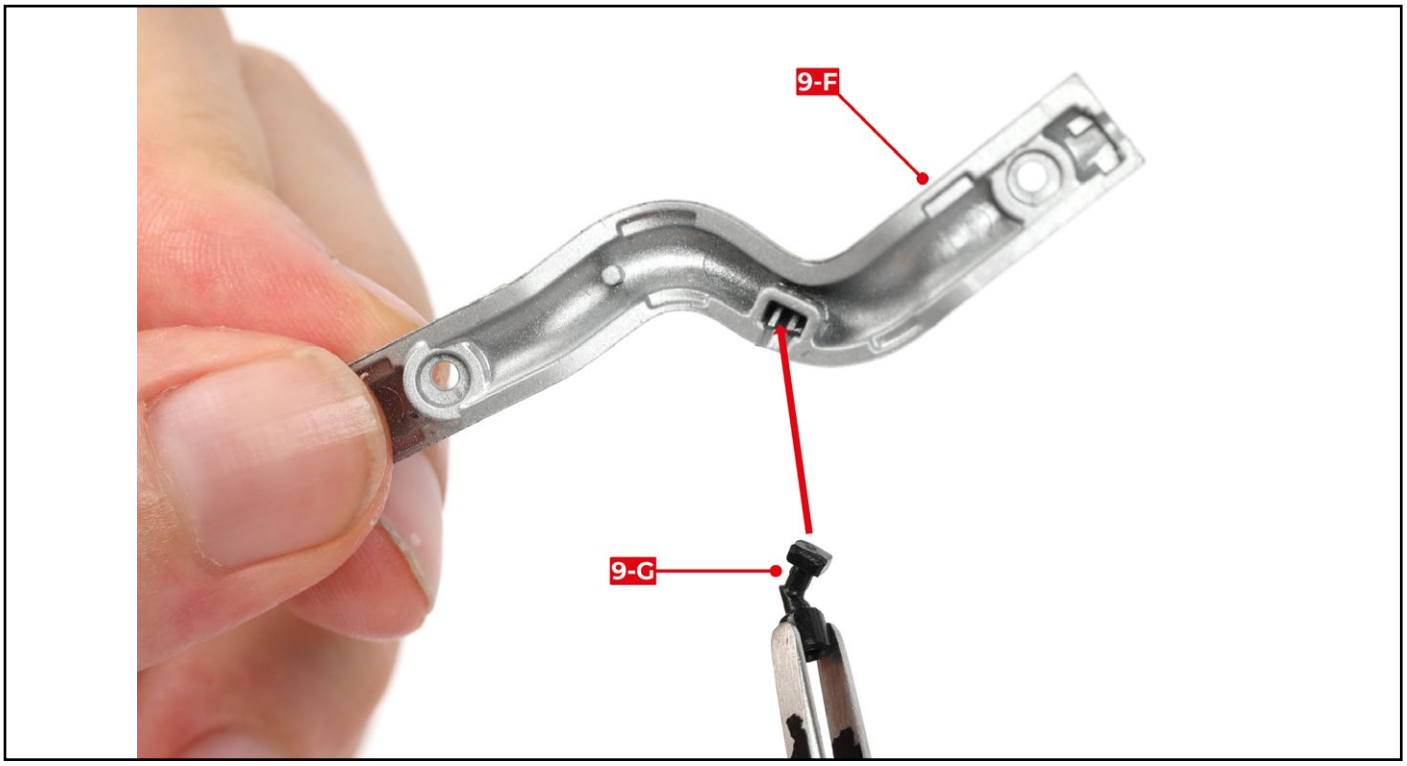
Stage 09: Building the exhaust pipes and the turbocharger

STAGE 09 PARTS



9-A Turbocharger turbine housing 1
9-B Turbocharger turbine housing 2
9-C Turbocharger compressor housing
9-D Turbocharger air inlet 1
9-E Turbocharger air inlet 2
9-F Turbocharger air inlet 3
9-G Air compressor pipe connector
9-H Turbocharger air inlet 4
9-I VGT actuator
9-J PCV pipe connector
9-K Exhaust pipe
BP 2 screws (1.7 × 3 × 5 mm)
CP 3 screws (1.7 × 4 mm)

Stage 09: Building the exhaust pipes and the turbocharger



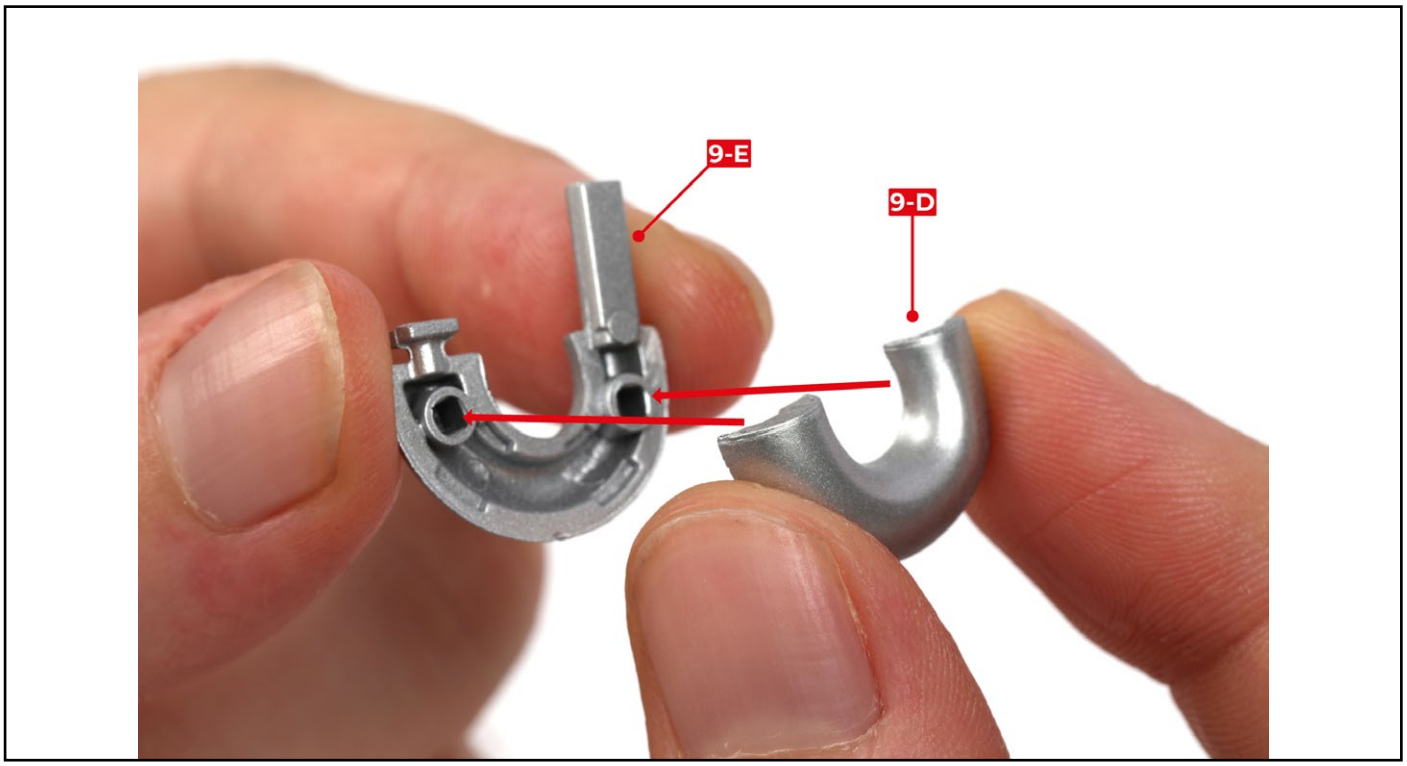


Step 1

Locate the recess for the air compressor pipe connector 9-G on turbocharger air inlet 3 (9-F).

Fit the air compressor pipe connector 9-G into the recess on turbocharger air inlet 3 (9-F) as shown.

Stage 09: Building the exhaust pipes and the turbocharger

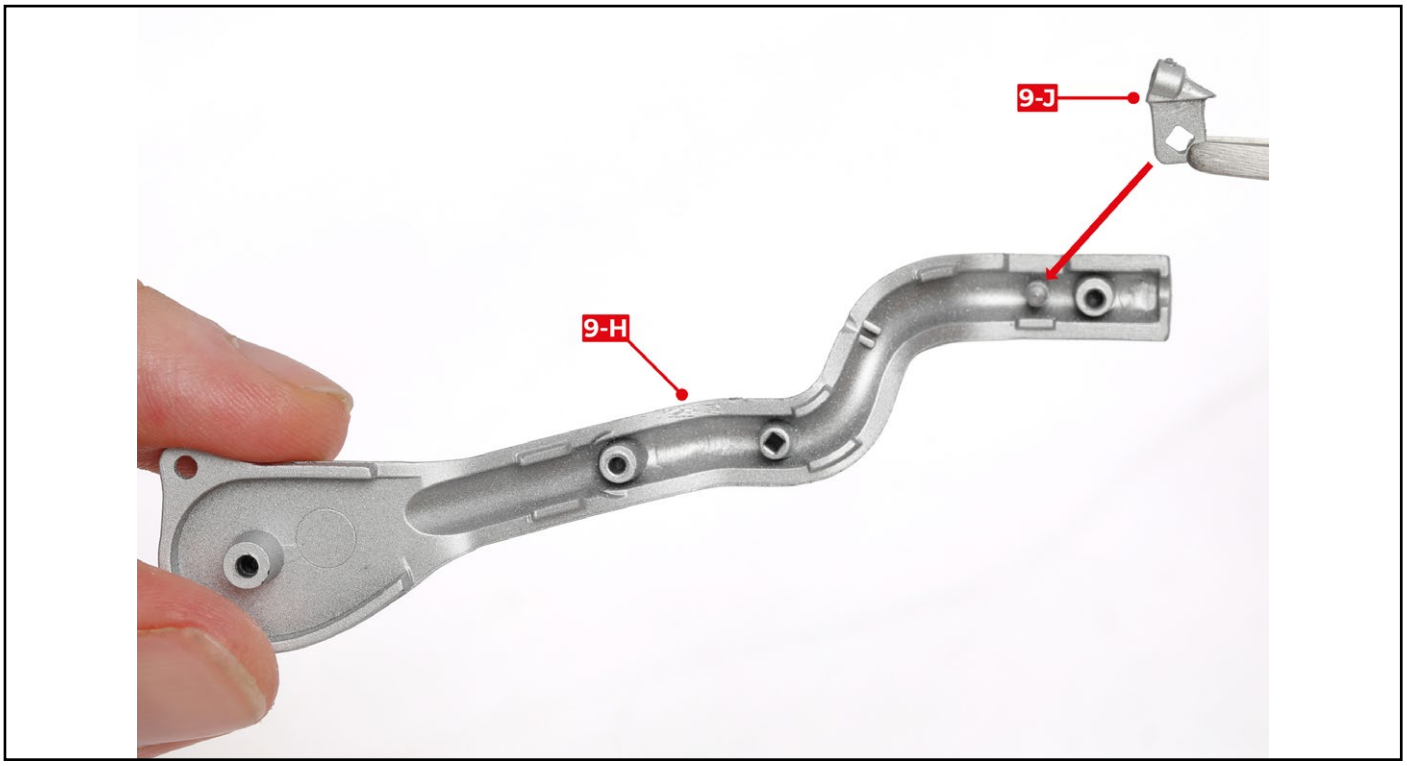


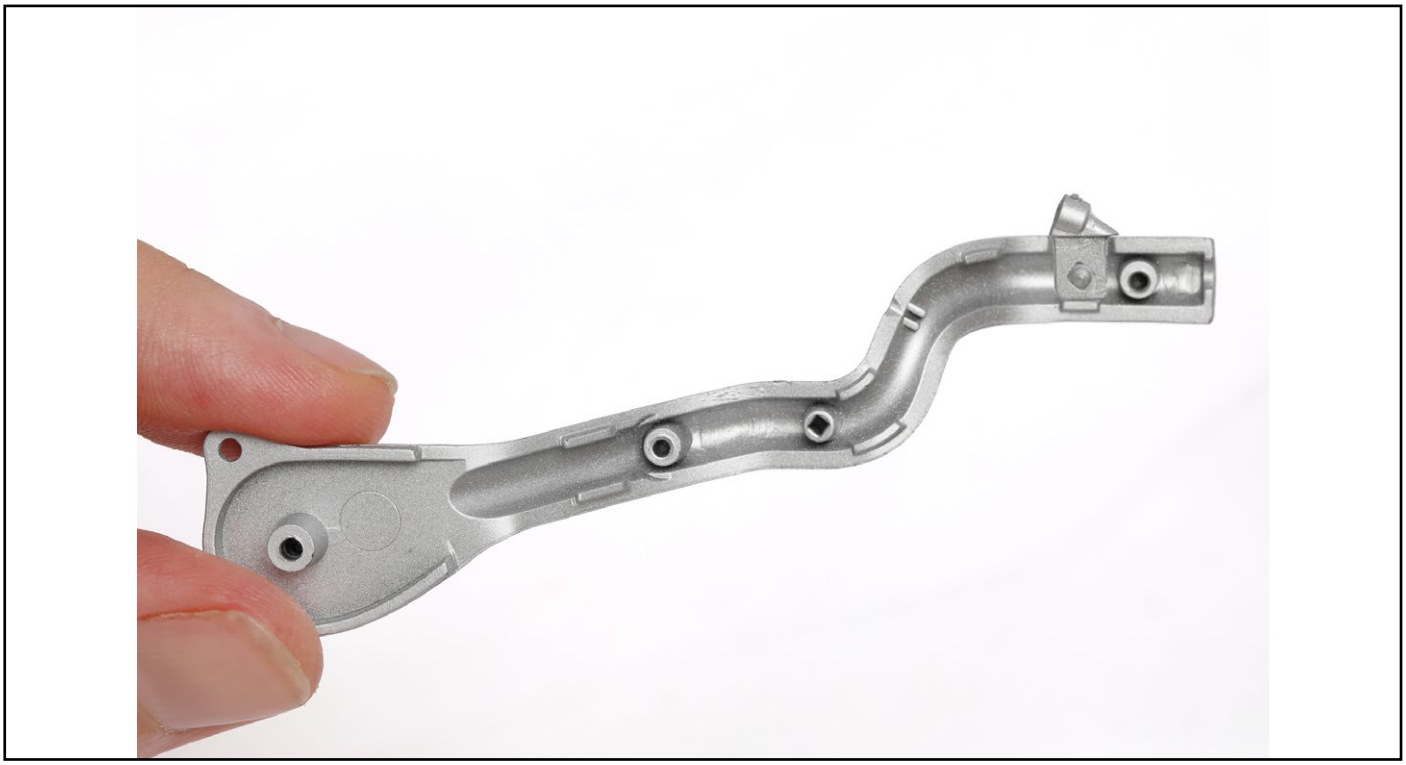


Step 2

Align turbocharger air inlets 1 and 2, (9-D and 9-E), as shown, then press the parts gently together to secure them.

Stage 09: Building the exhaust pipes and the turbocharger



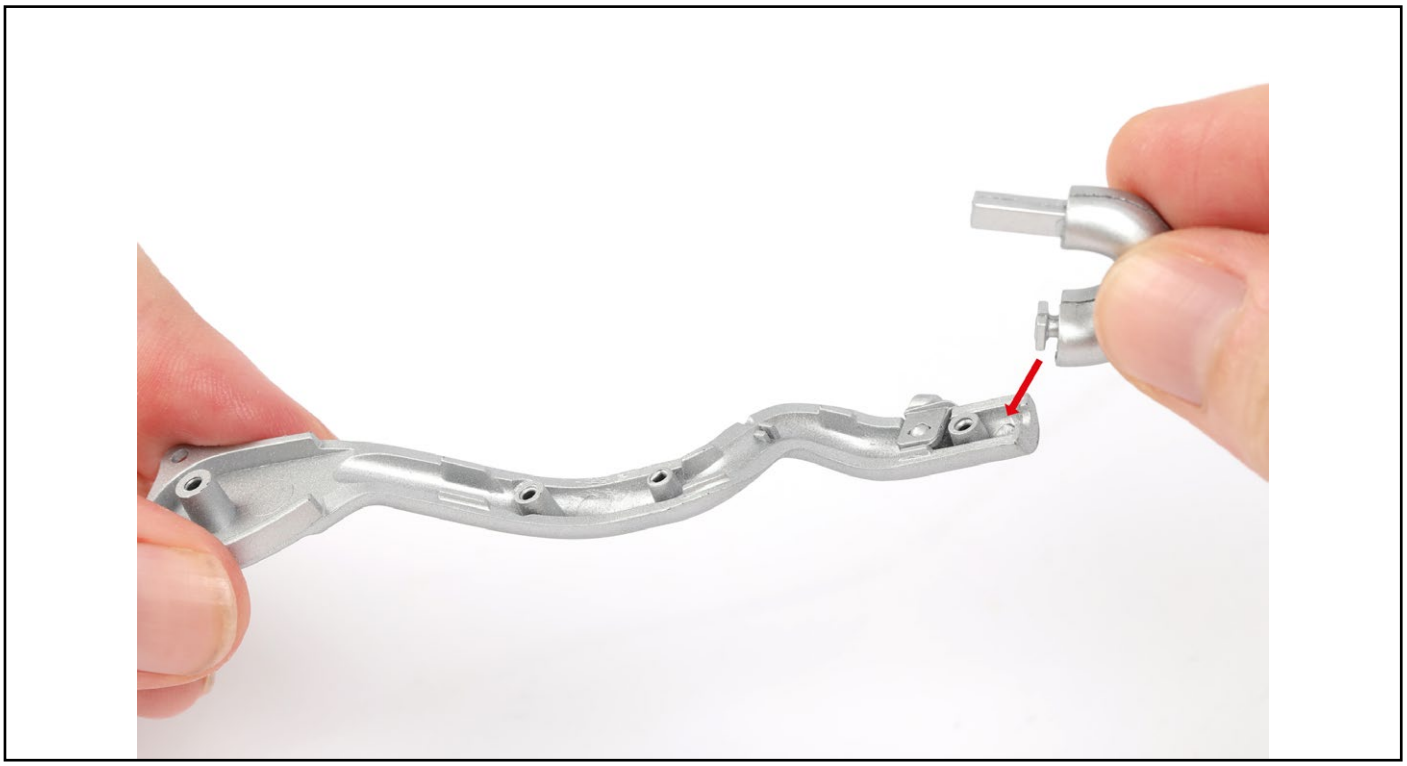


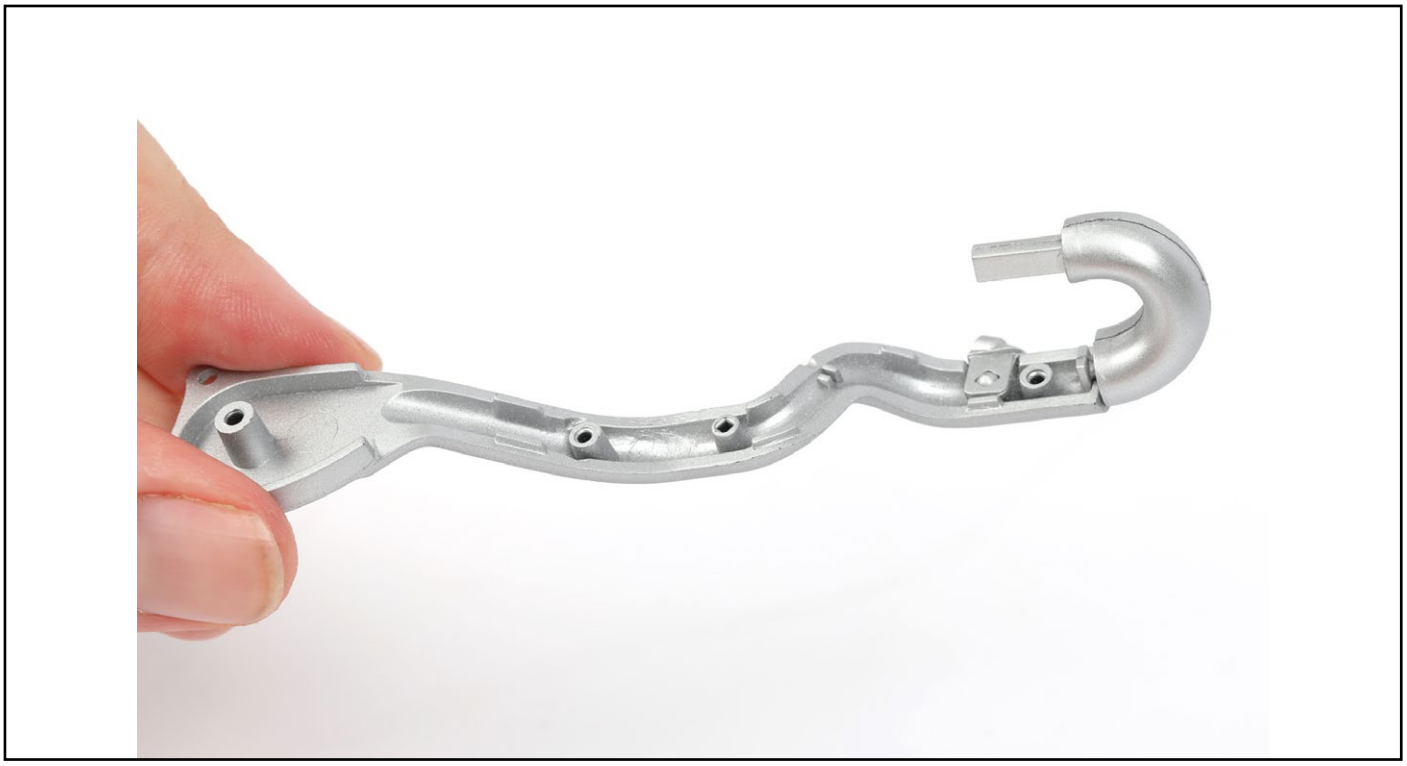
Step 3

Locate the recess for the PCV pipe connector 9-J on turbocharger air inlet 4 (9-H).

Position the PCV pipe connector 9-J on turbocharger air inlet 4 (9-H) as shown, then press it into place.

Stage 09: Building the exhaust pipes and the turbocharger

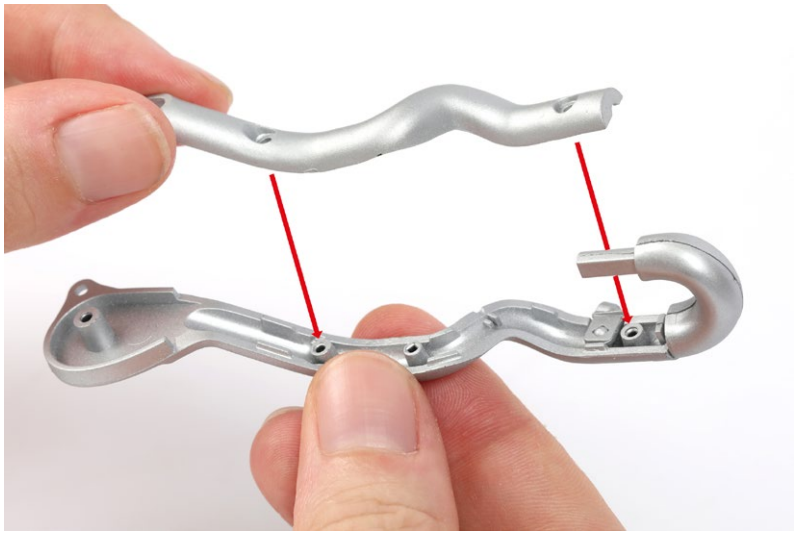




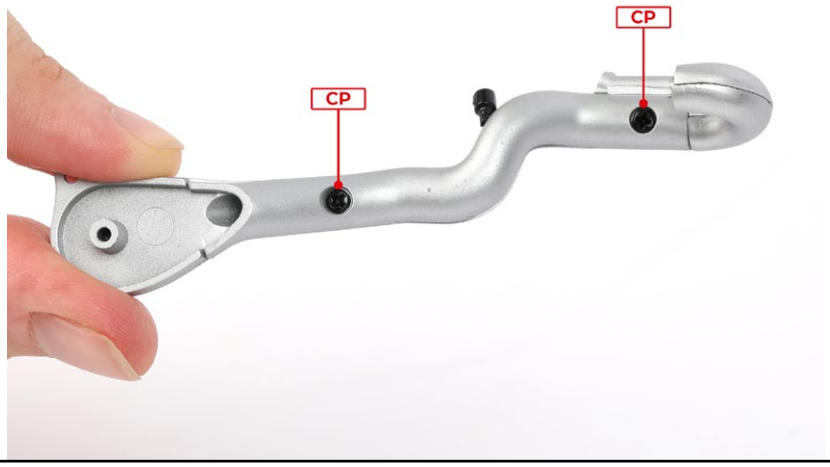
Step 4

Fit the turbocharger air inlet assembly from Step 2 into the corresponding recess on the turbocharger air inlet 4 assembly. Make sure the parts are oriented as shown and keep them in this position for the following steps.

Stage 09: Building the exhaust pipes and the turbocharger



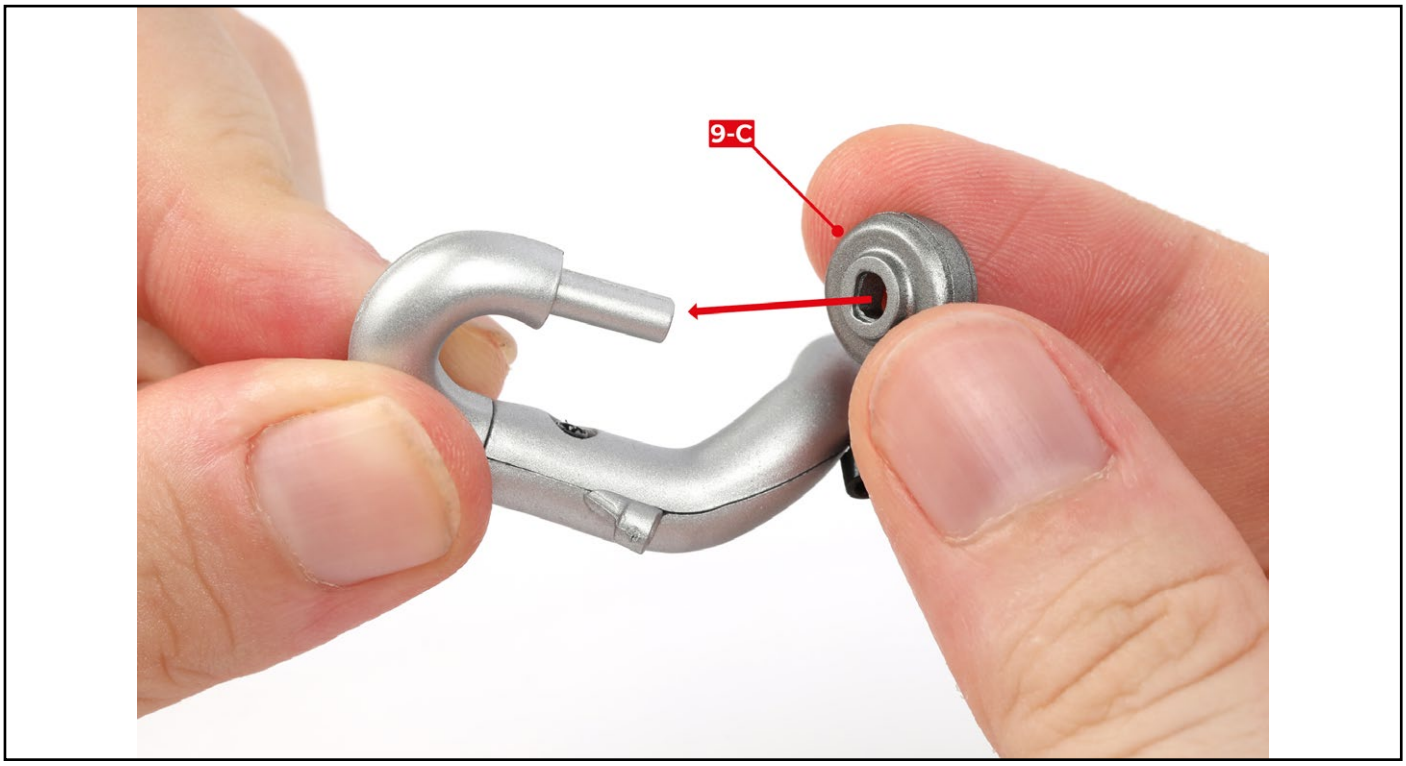




Step 5

Position turbocharger air inlet 3 (9-F) against turbocharger air inlet 4 (9-H) as shown, then secure the parts together with two CP screws.

Stage 09: Building the exhaust pipes and the turbocharger

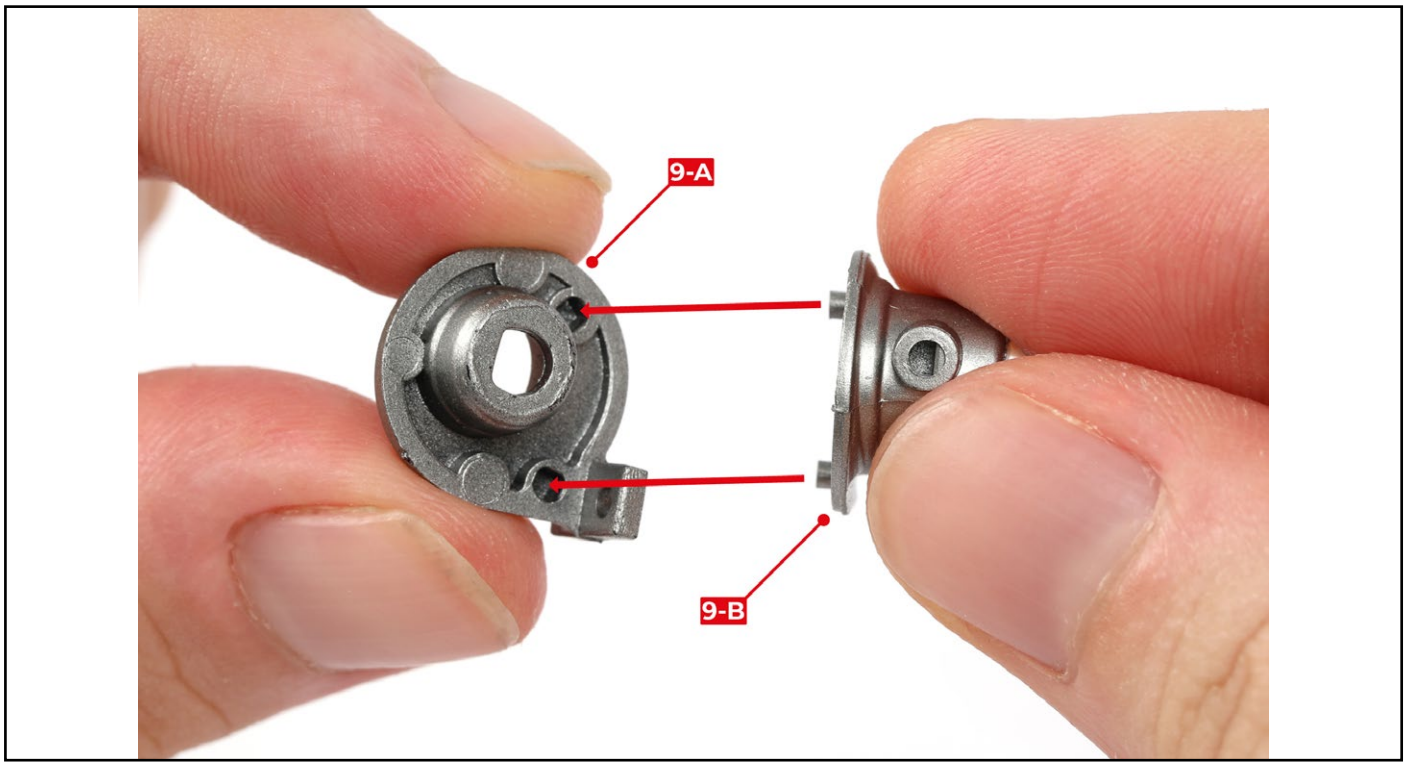


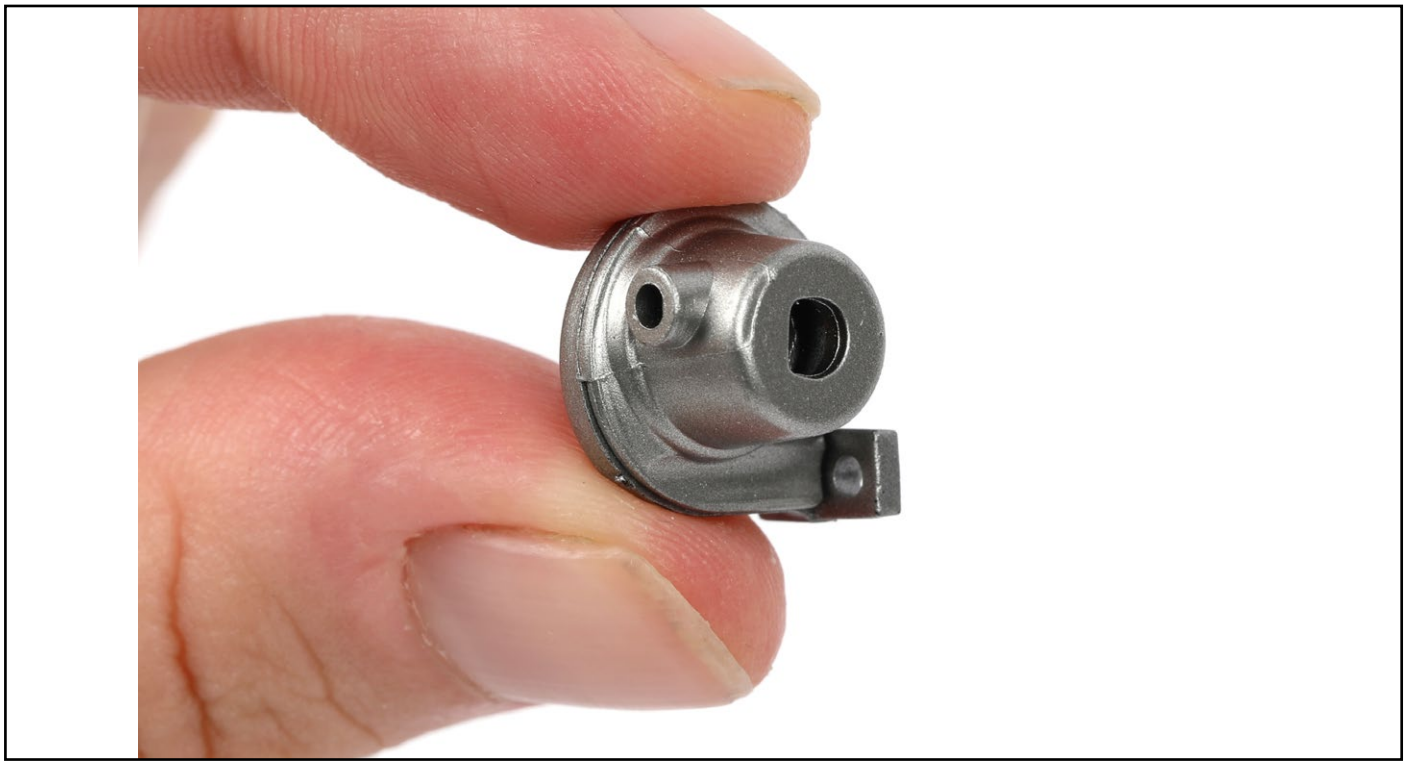


Step 6

Position the turbocharger compressor housing 9-C on the turbocharger air inlet assembly as shown, making sure it is oriented correctly.

Stage 09: Building the exhaust pipes and the turbocharger

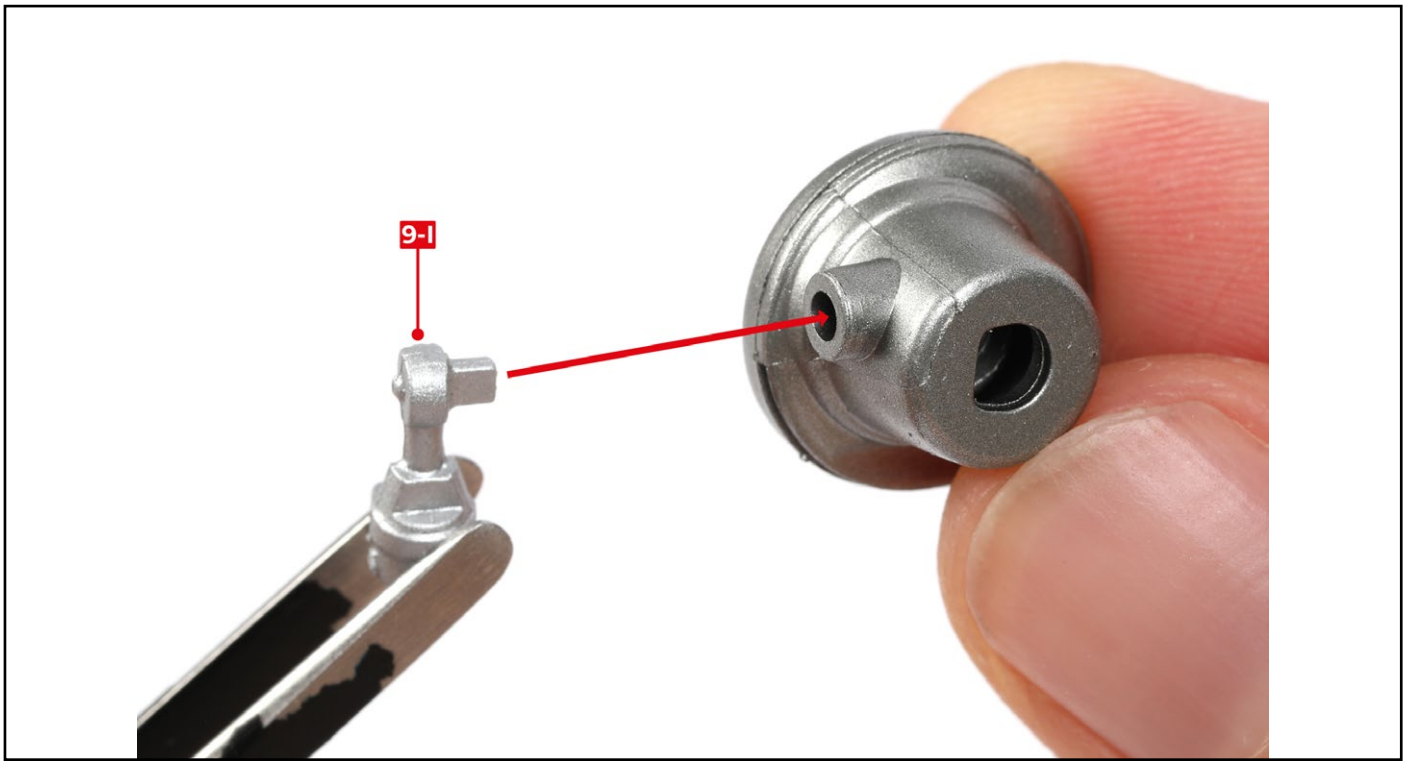




Step 7

Align turbocharger turbine housings 1 and 2, (9-A and 9-B), as shown, then press the parts together to secure them.

Stage 09: Building the exhaust pipes and the turbocharger



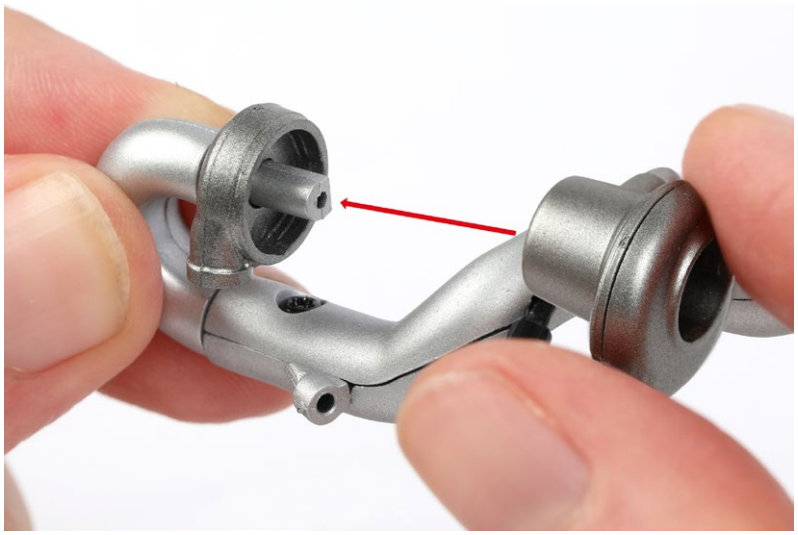


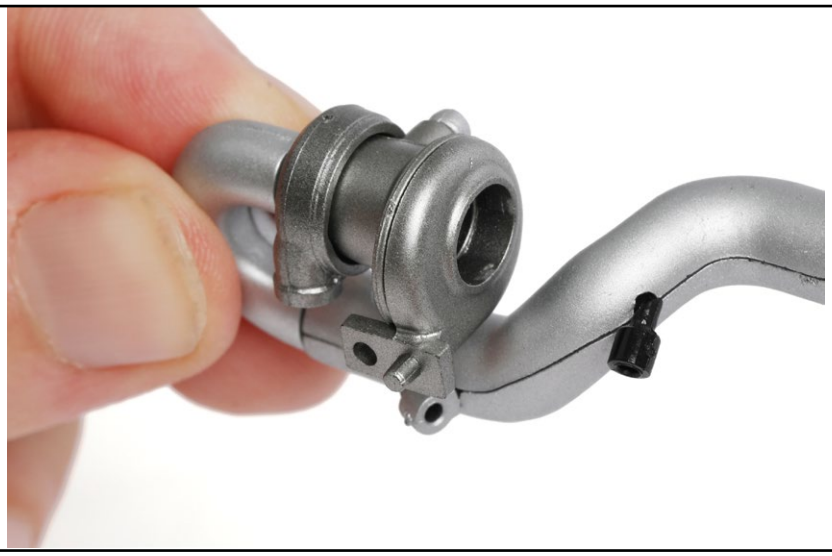
Step 8

Retrieve the VGT actuator 9-I and locate its mounting point on turbocharger turbine housing 2 (9-B).

Press the VGT actuator 9-I into place on the assembled turbocharger turbine housing.

Stage 09: Building the exhaust pipes and the turbocharger



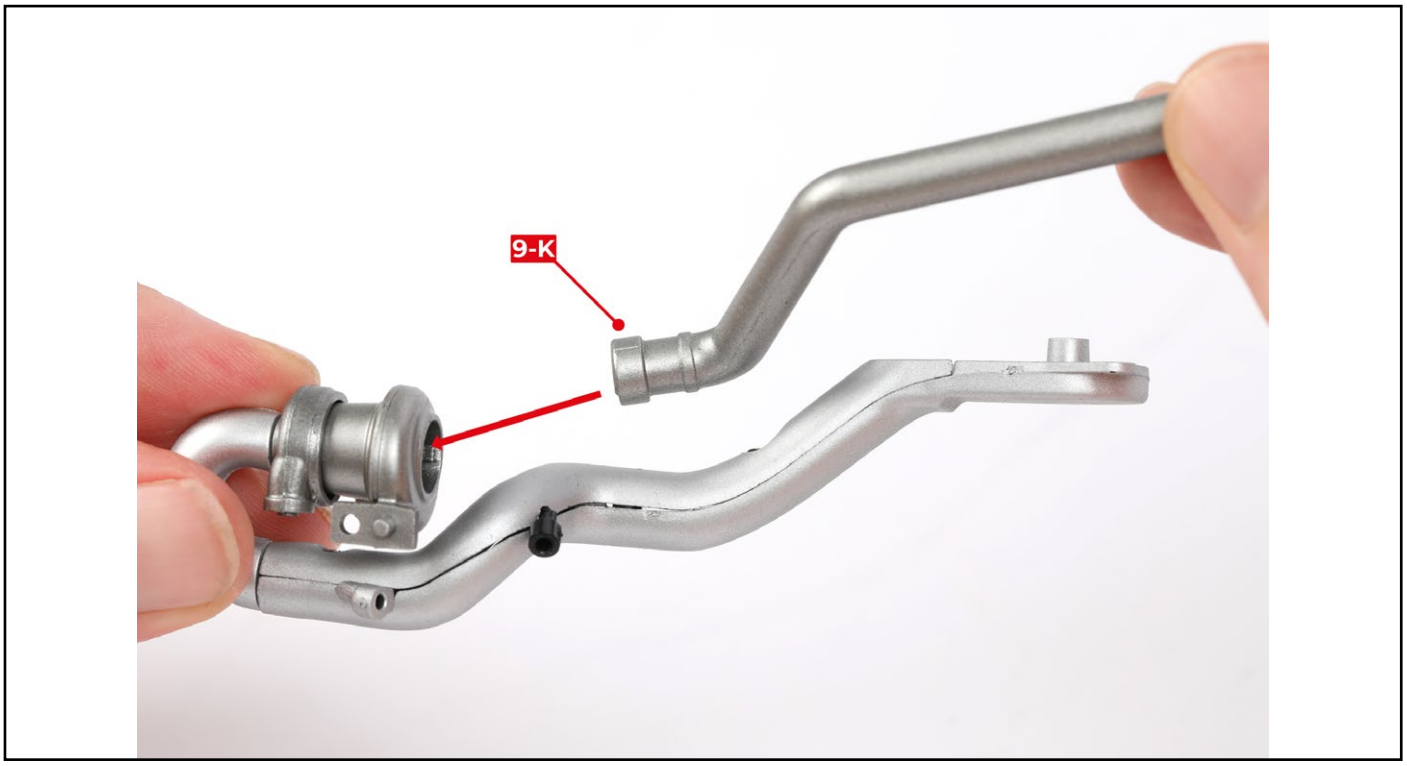


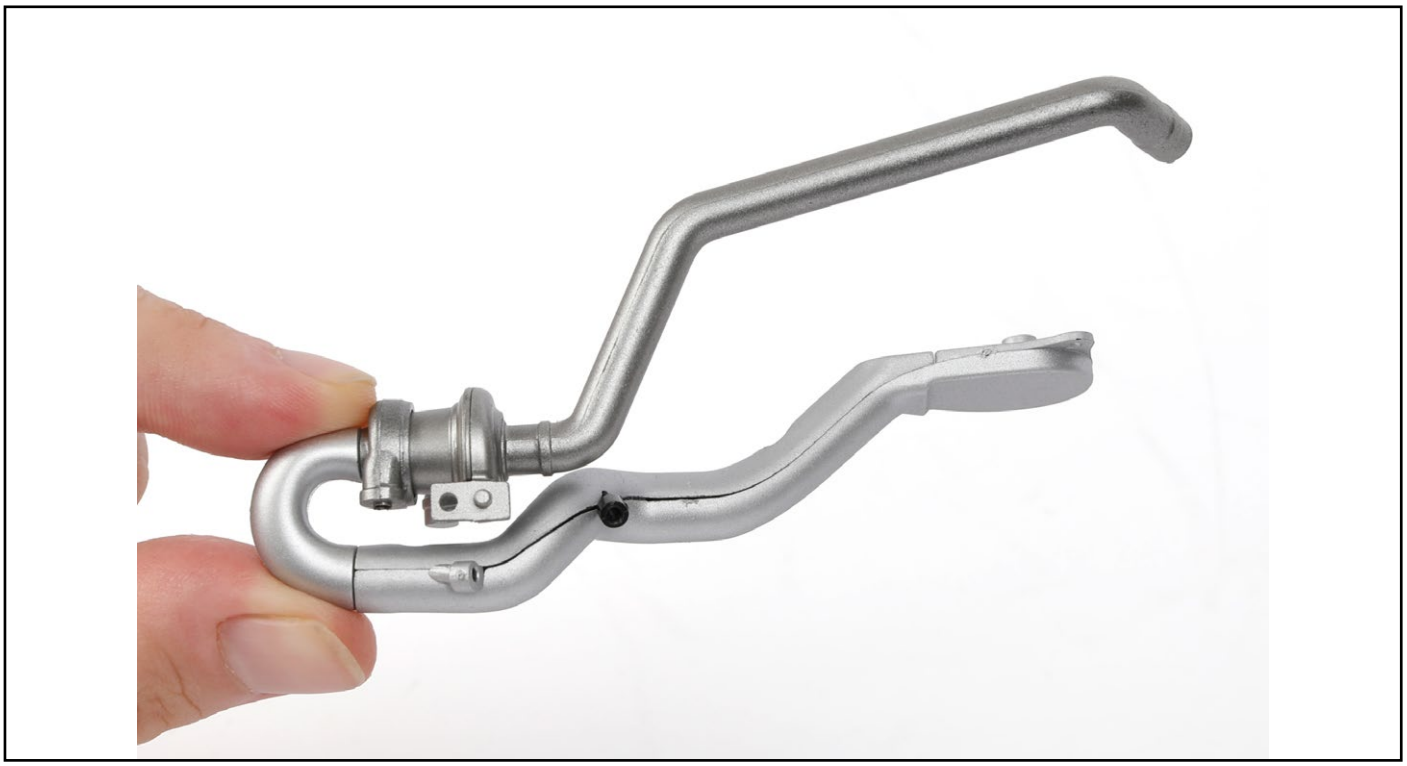


Step 9

Position the turbine housing assembly on the turbocharger compressor housing 9-C as shown, then secure it with one BP screw.

Stage 09: Building the exhaust pipes and the turbocharger





Step 10

Position the exhaust pipe 9-K as shown, then insert it into the opening in the assembled turbocharger turbine housing and press gently to secure it in place.

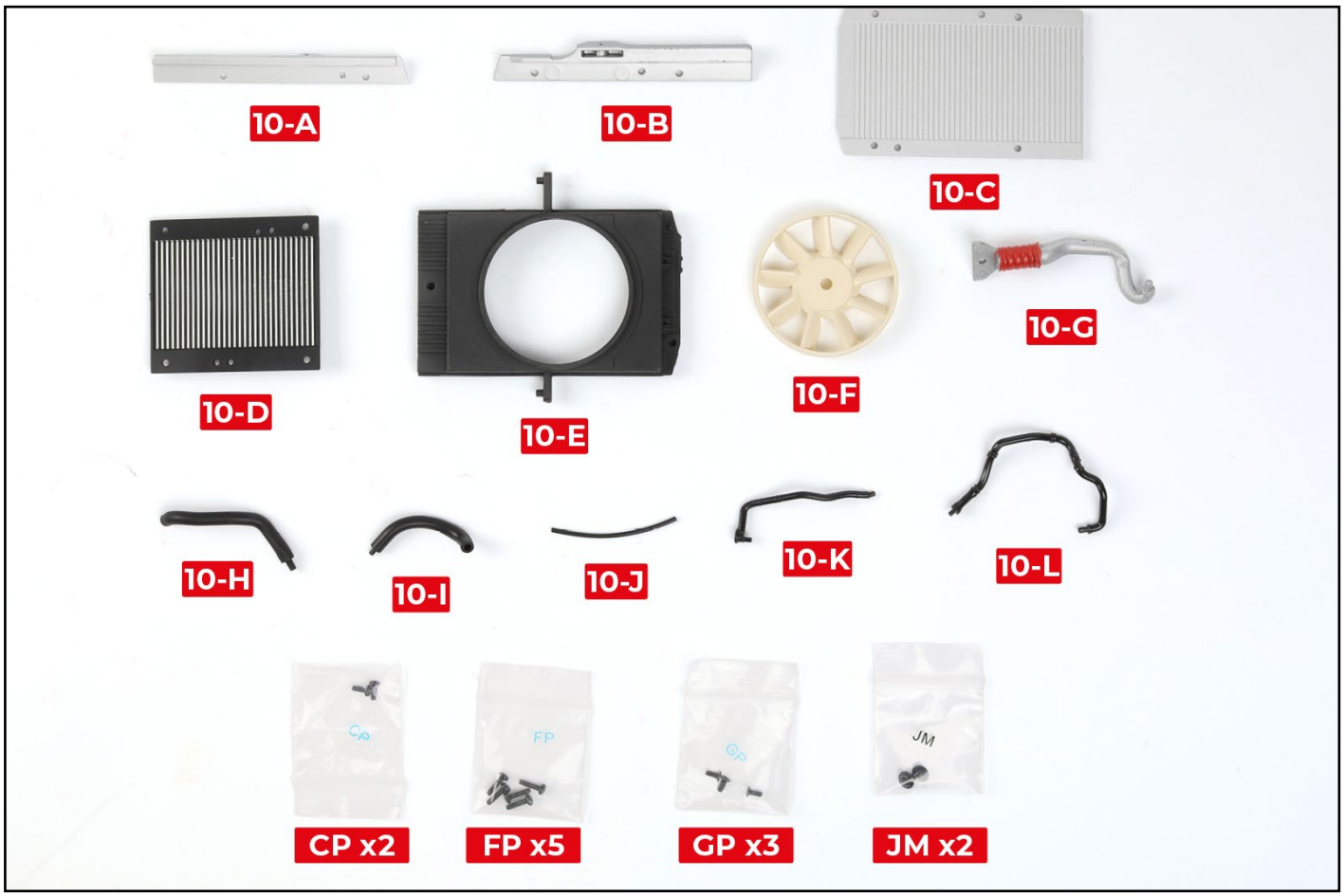
Stage 09: Building the exhaust pipes and the turbocharger

STAGE 09 COMPLETE



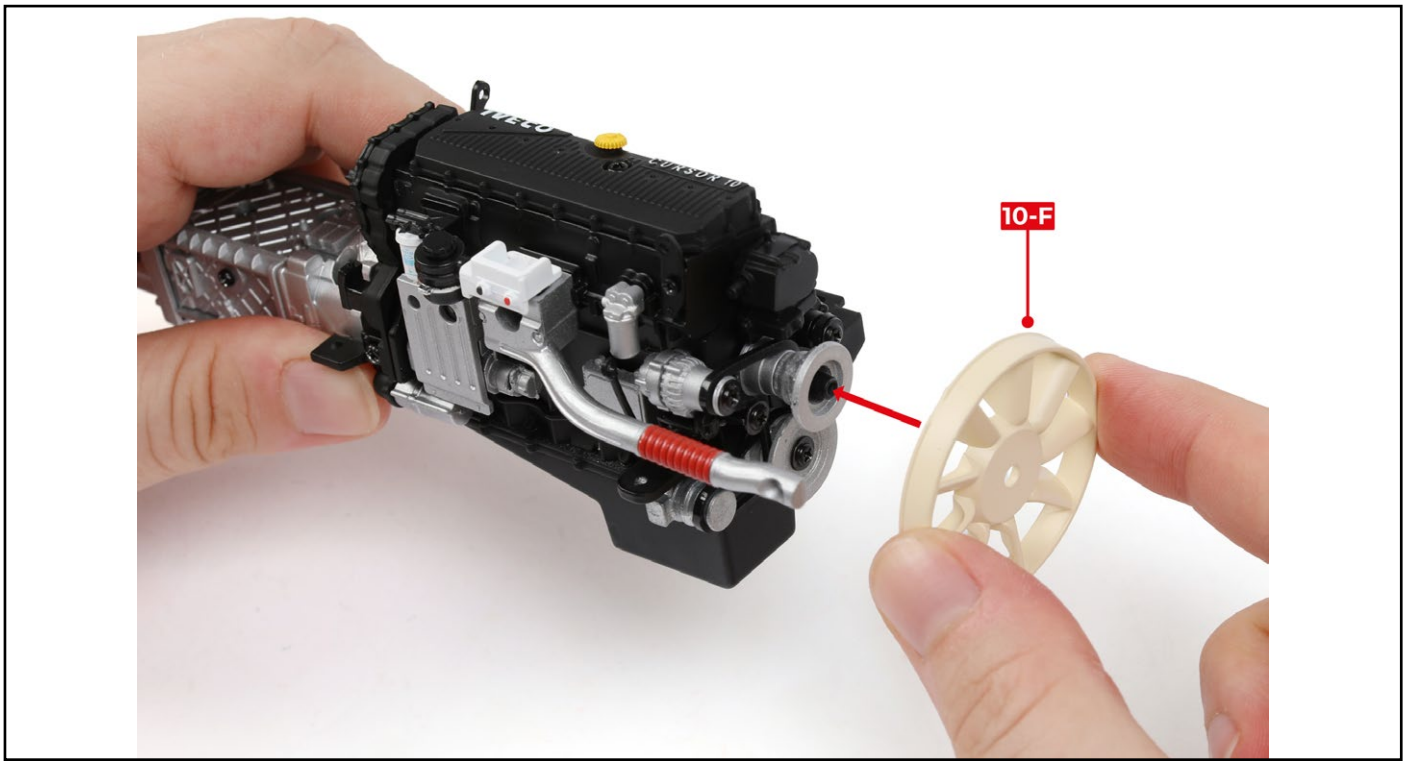
Stage 10: Attaching the radiator and the cooling system

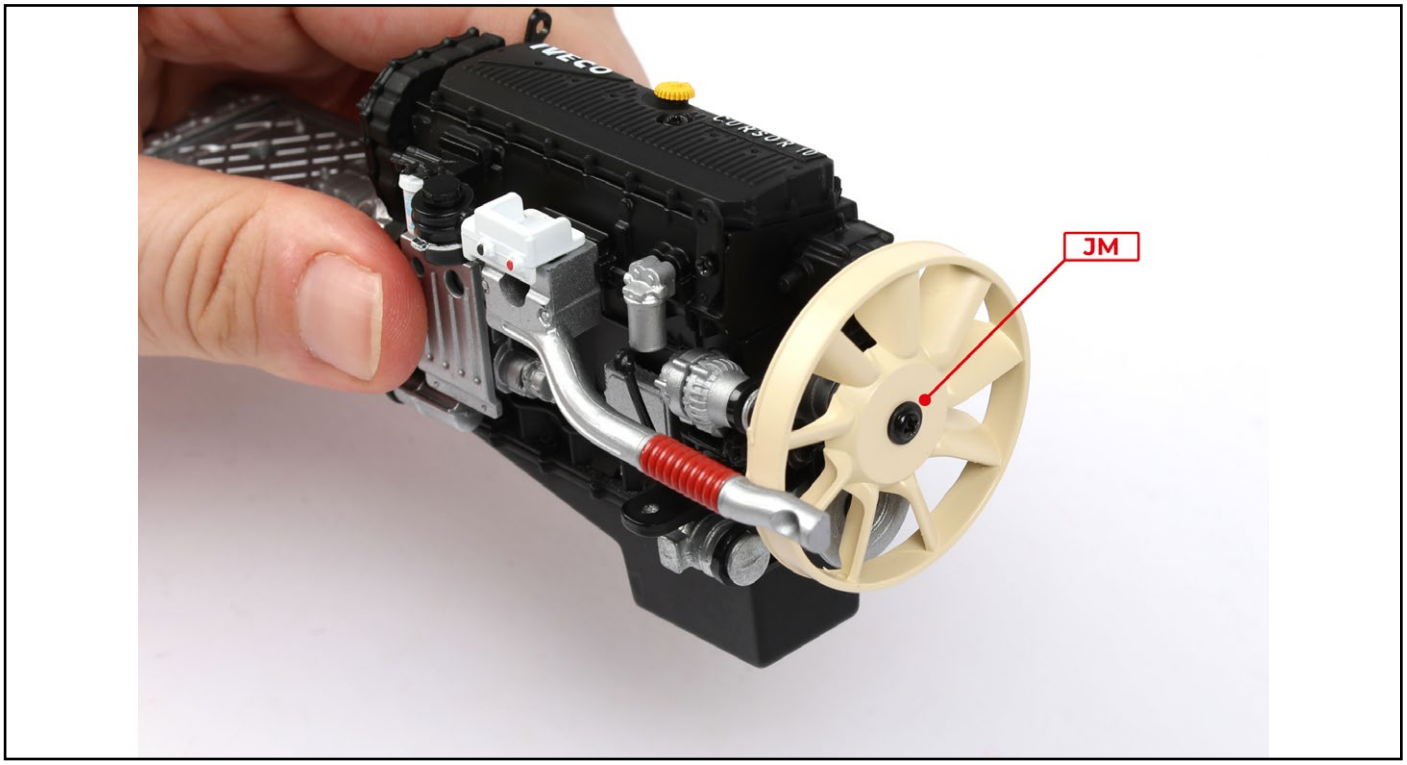
STAGE 10 PARTS



10-A: Left radiator element
10-B: Right radiator element
10-C: Radiator core
10-D: Intercooler core
10-E: Radiator cover
10-F: Cooling fan
10-G: Compressed-air duct
10-H: Lower radiator hose
10-I: Upper radiator hose
10-J: Thermostat hose
10-K: PCV hose
10-L: Air compressor hose
CP 2 screws (1.7 × 4 mm)
FP 5 screws (1.7 × 6 mm)
GP 3 screws (1.7 × 4 mm)
JM 2 screws (1.7 × 3 × 5 mm)

Stage 10: Attaching the radiator and the cooling system

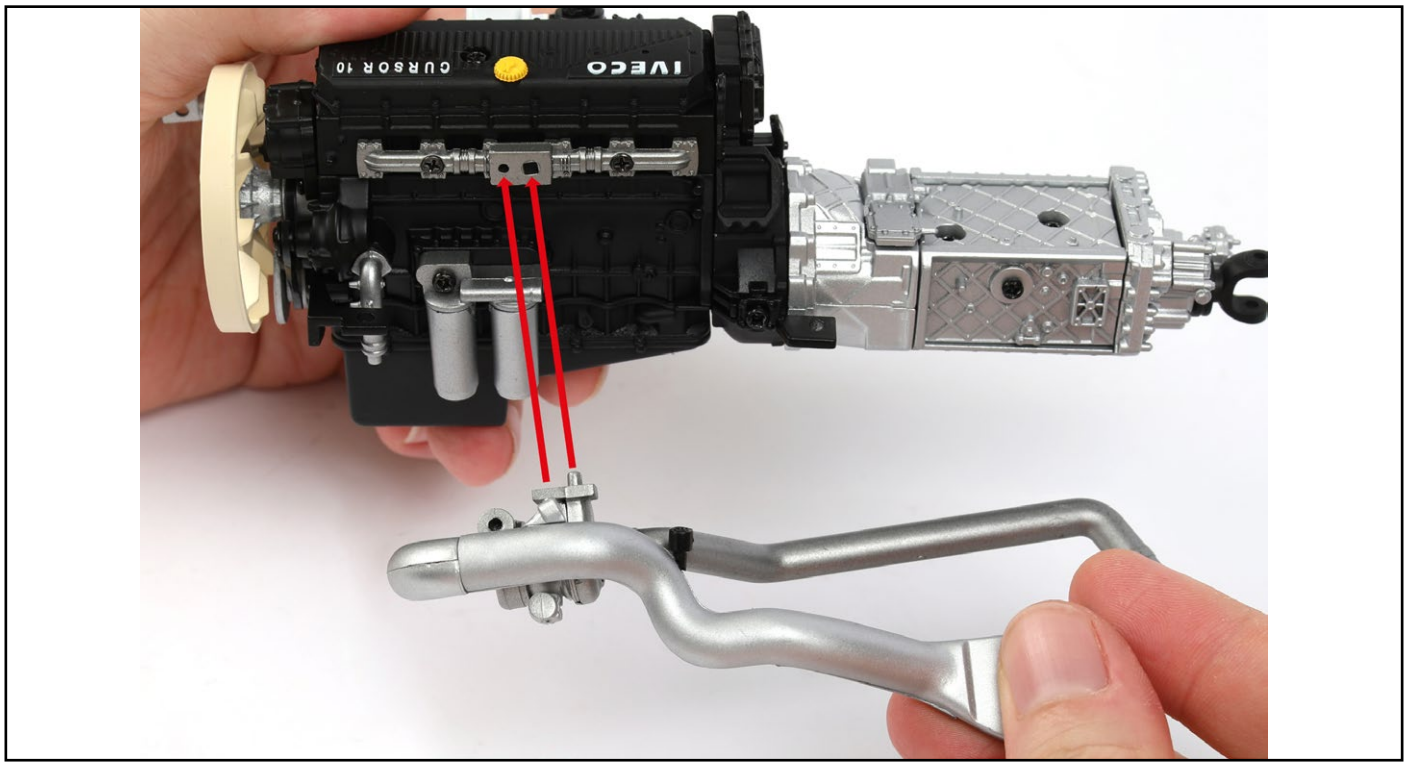


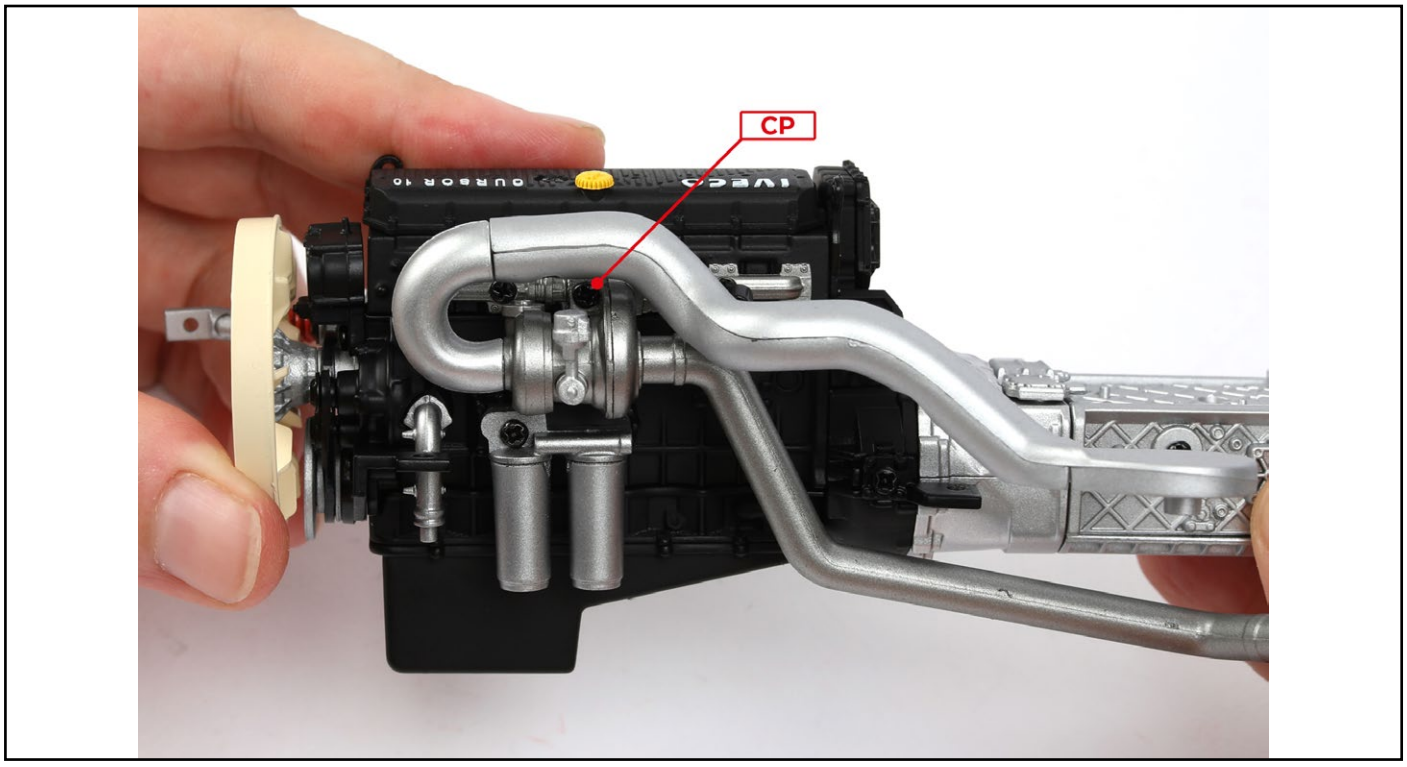


Step 1

Retrieve the engine assembly completed so far. Position the cooling fan 10-F as shown, then secure it with one JM screw.

Stage 10: Attaching the radiator and the cooling system

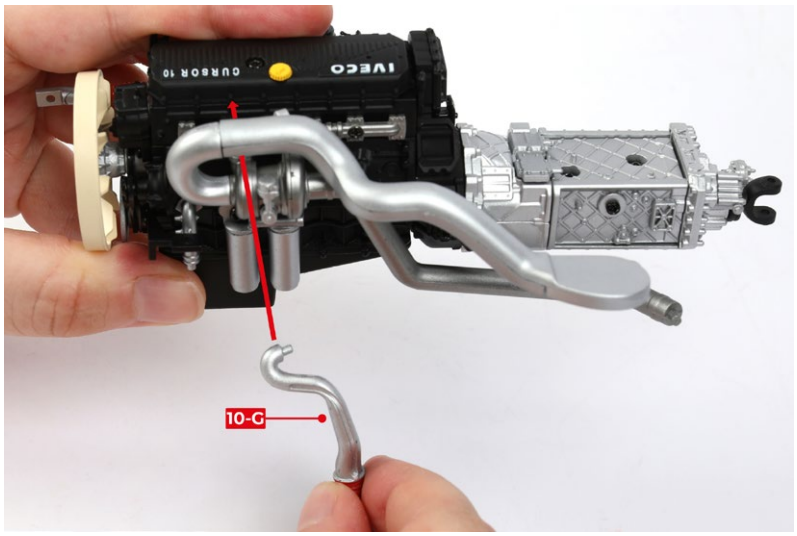




Step 2

Retrieve the turbocharger and exhaust pipe assembly from Stage 9. Position the turbocharger assembly on the exhaust manifold as shown, making sure it is oriented correctly, then secure it with one CP screw.

Stage 10: Attaching the radiator and the cooling system



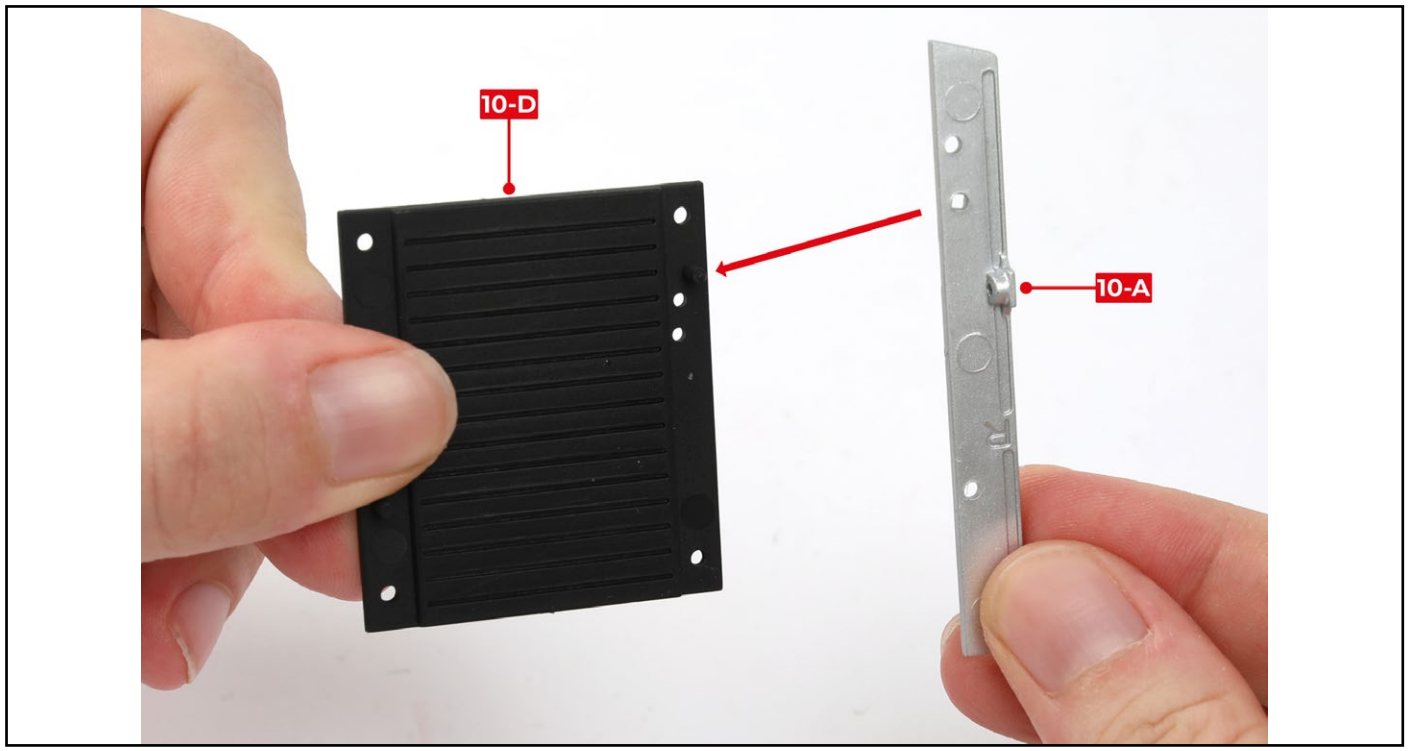


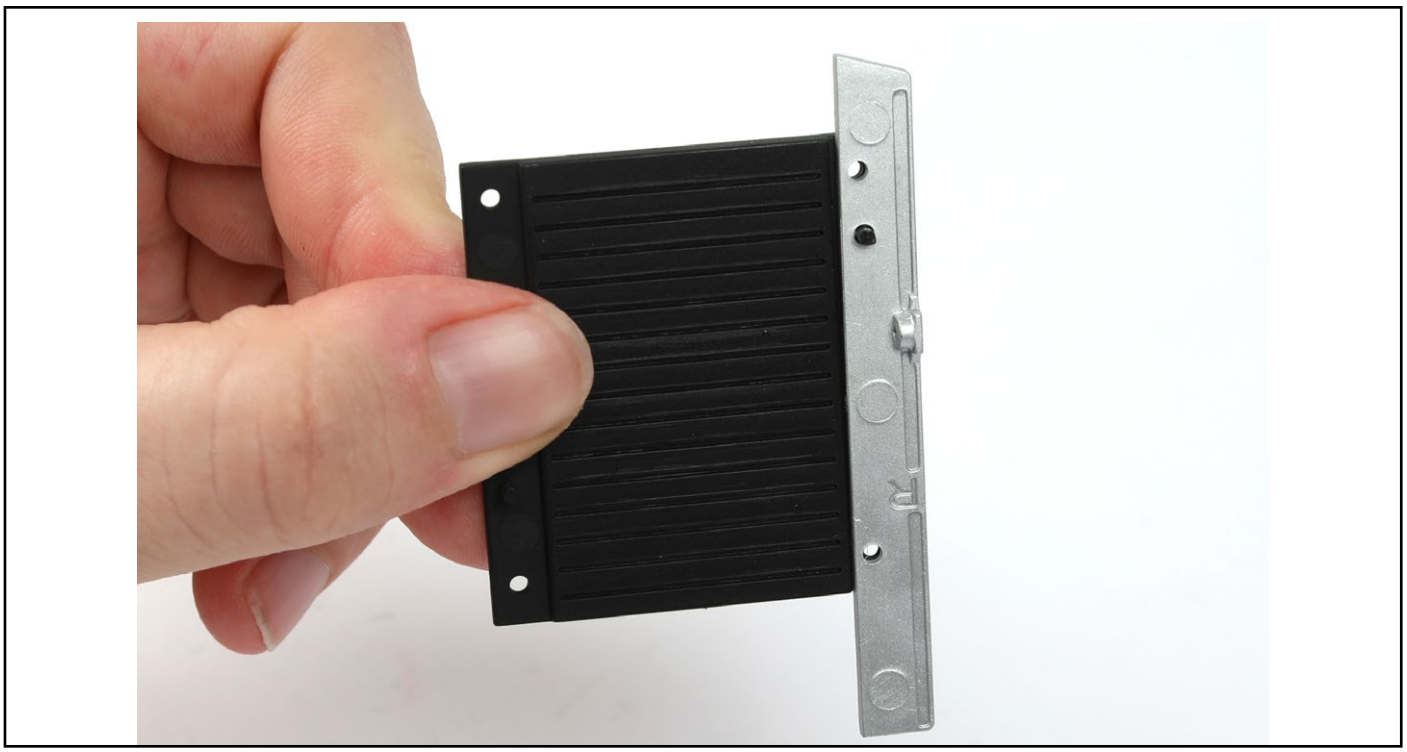


Step 3

Fit the compressed-air duct 10-G to the air compressor as shown, making sure it is positioned correctly, then press gently to secure it in place.

Stage 10: Attaching the radiator and the cooling system

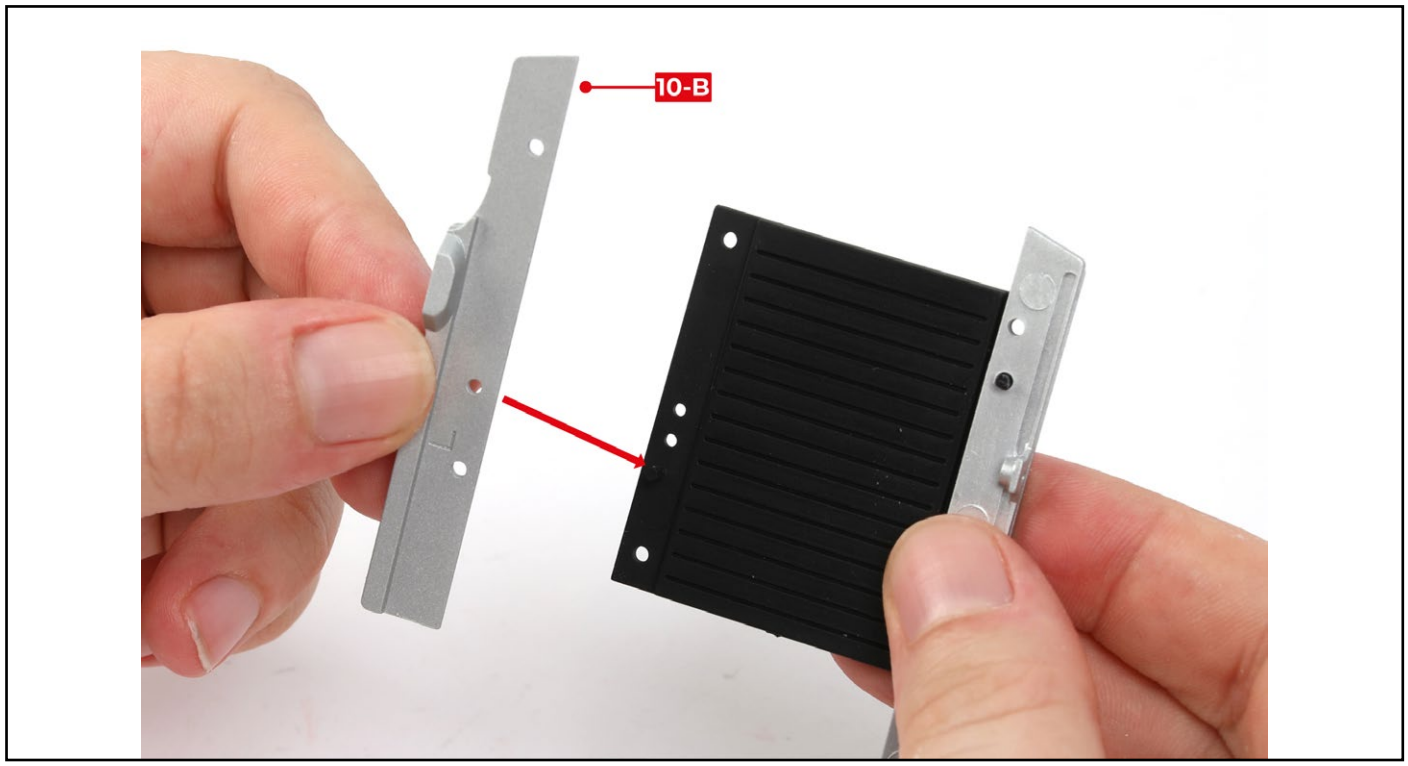


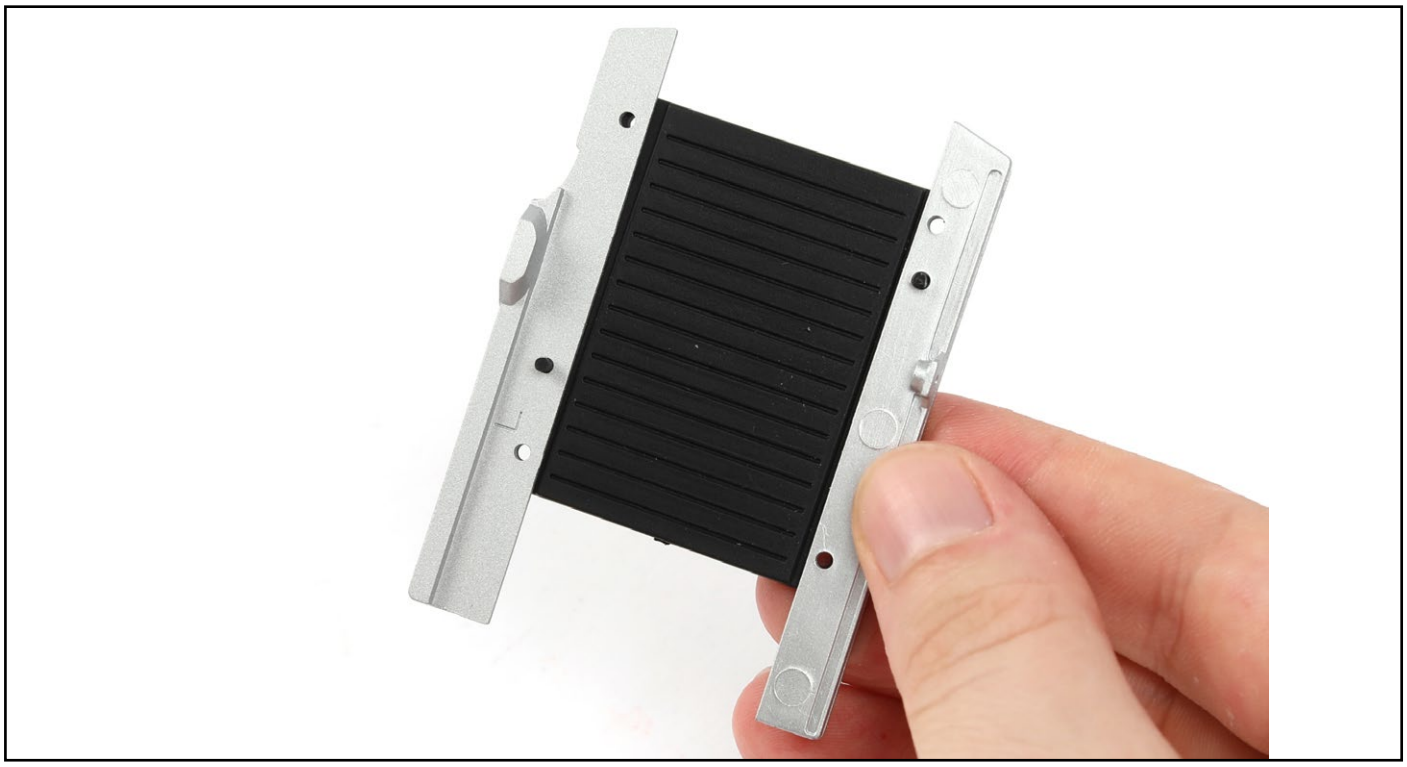


Step 4

Position the left radiator element 10-A on the intercooler core 10-D as shown, aligning the holes with the corresponding locating pins.

Stage 10: Attaching the radiator and the cooling system

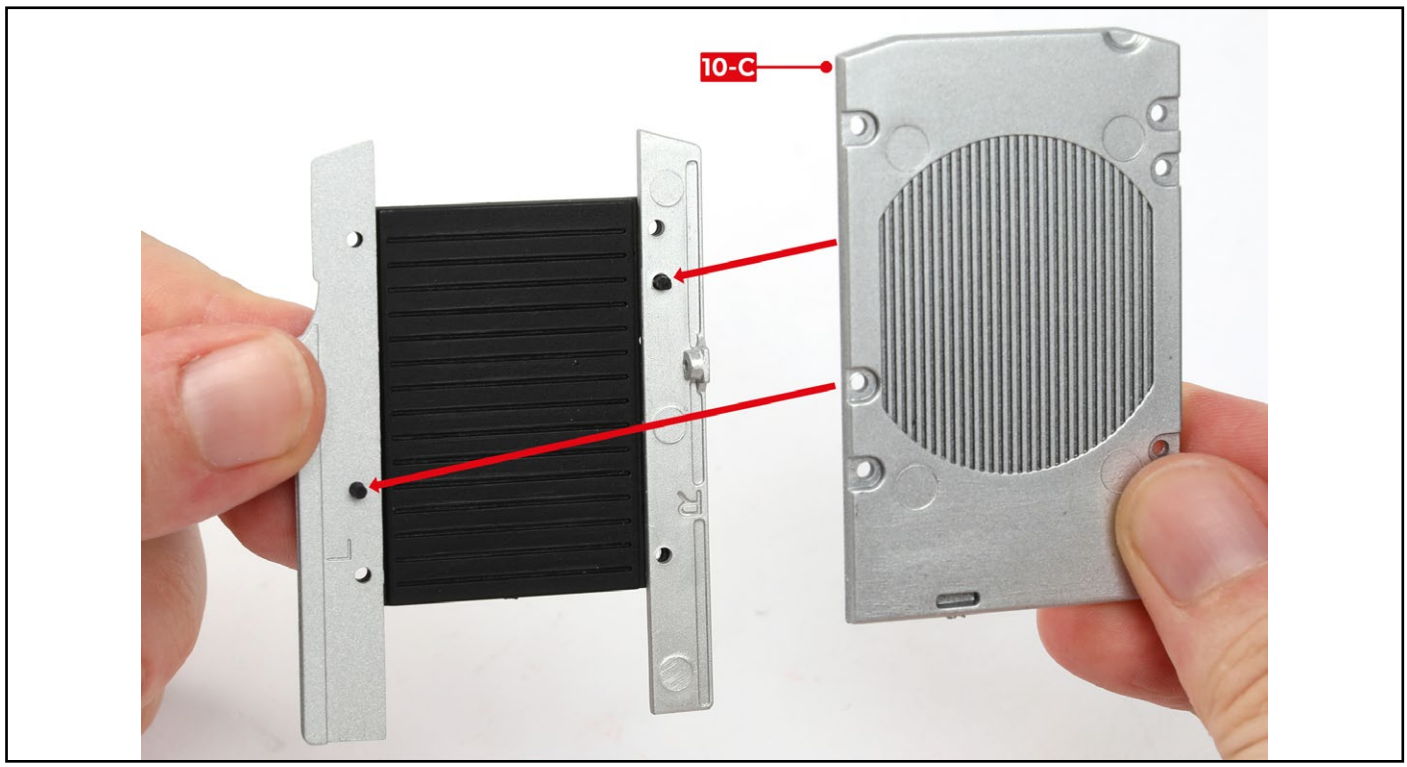




Step 5

Position the right radiator element 10-B on the intercooler core 10-D in the same way.

Stage 10: Attaching the radiator and the cooling system

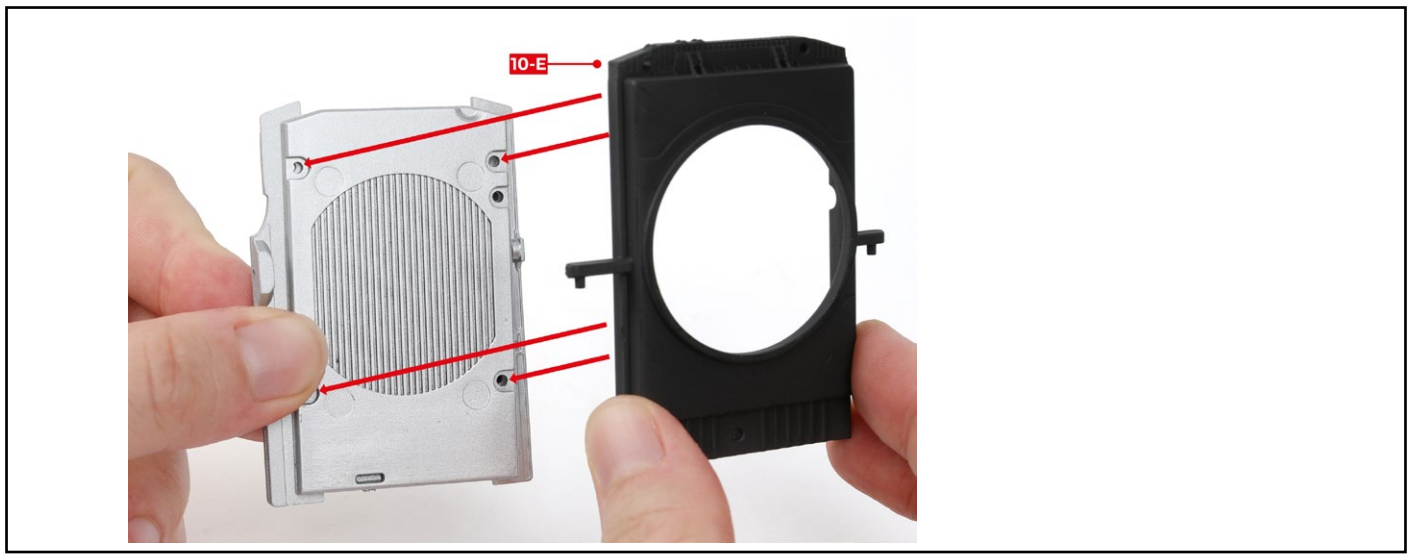




Step 6

Position the radiator core 10-C on the intercooler assembly, aligning the locating pins with the corresponding smaller holes as shown.

Stage 10: Attaching the radiator and the cooling system



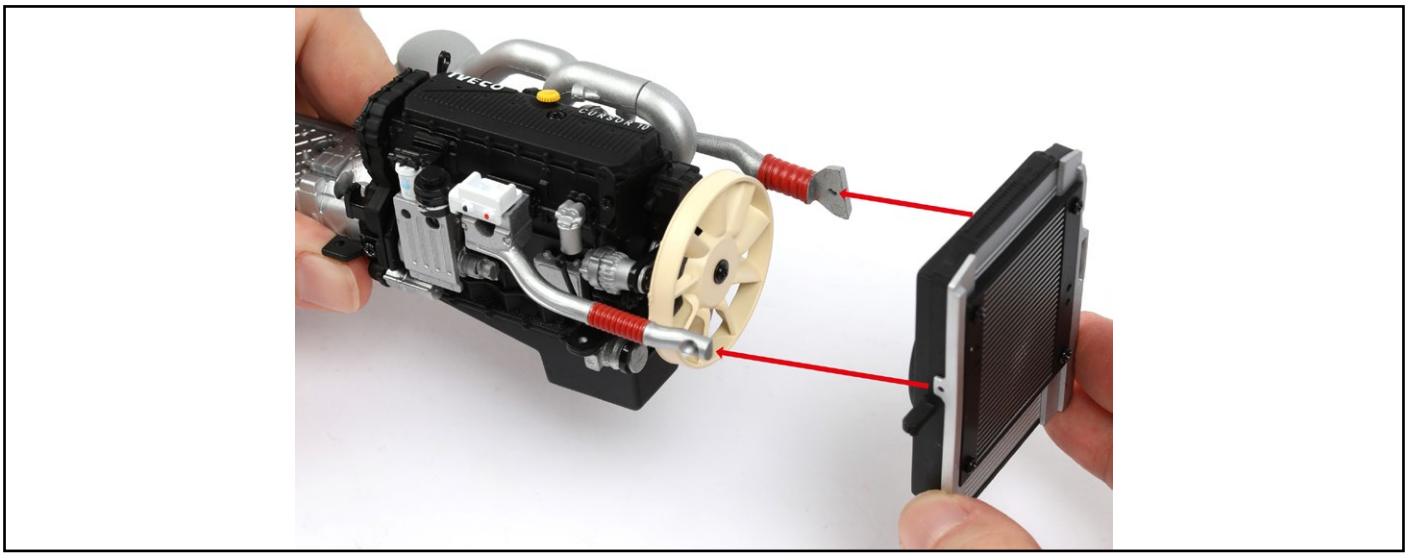


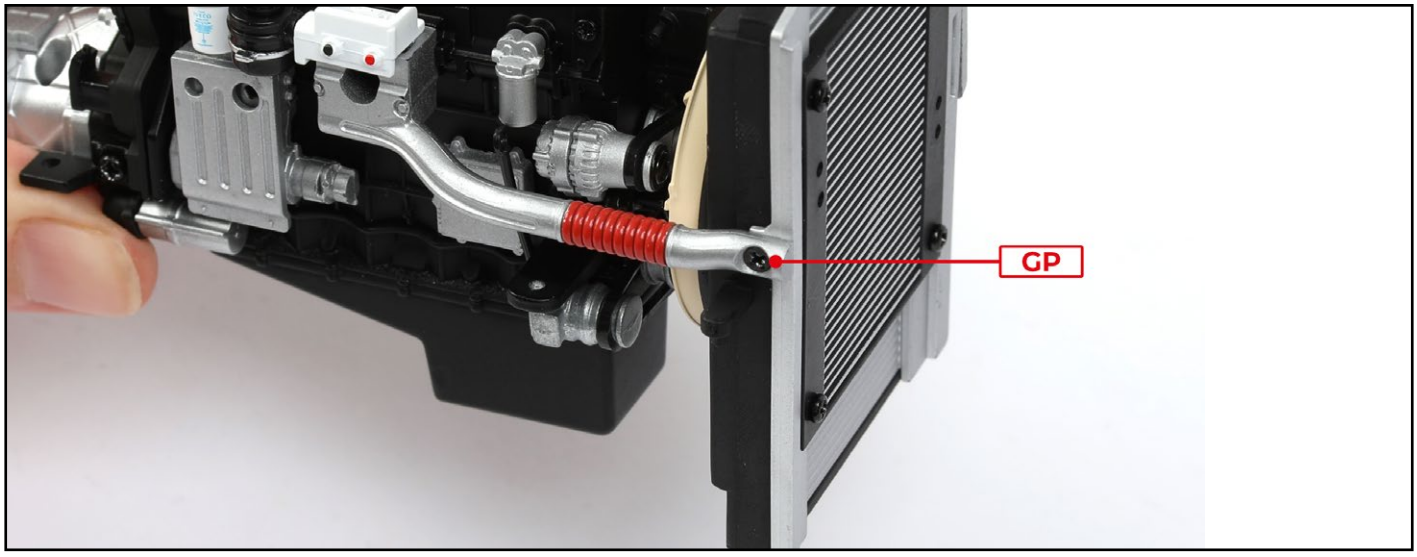


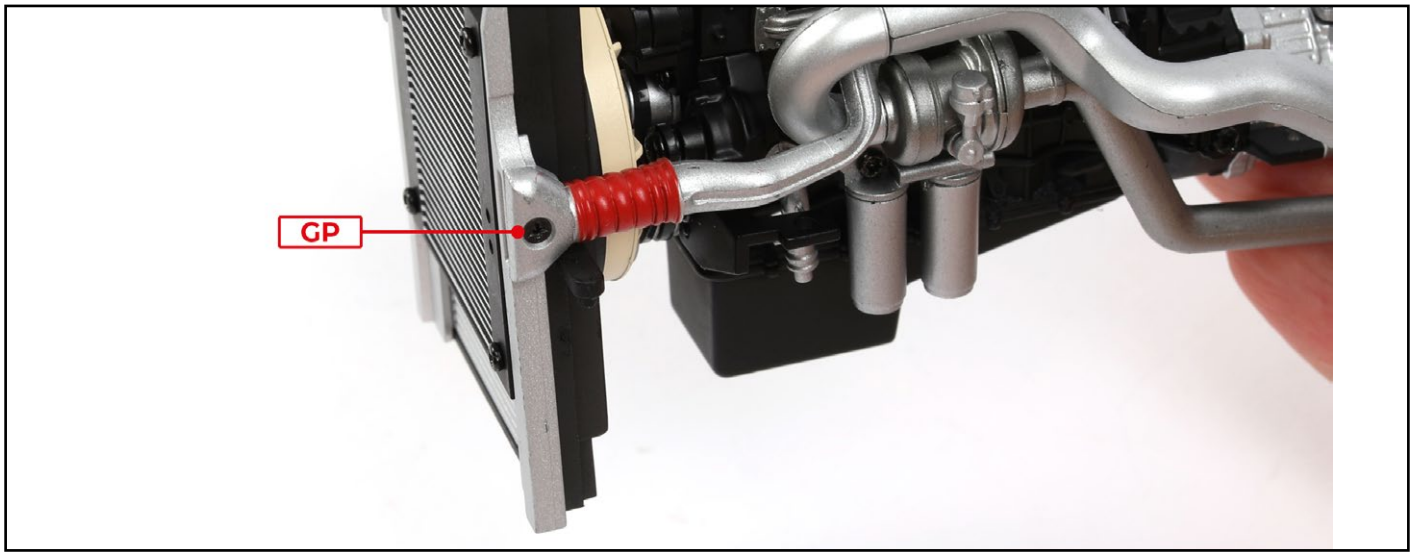
Step 7

Position the radiator cover 10-E over the radiator and intercooler cores as shown, making sure it is oriented correctly. Secure the radiator assembly from the rear with four FP screws.

Stage 10: Attaching the radiator and the cooling system



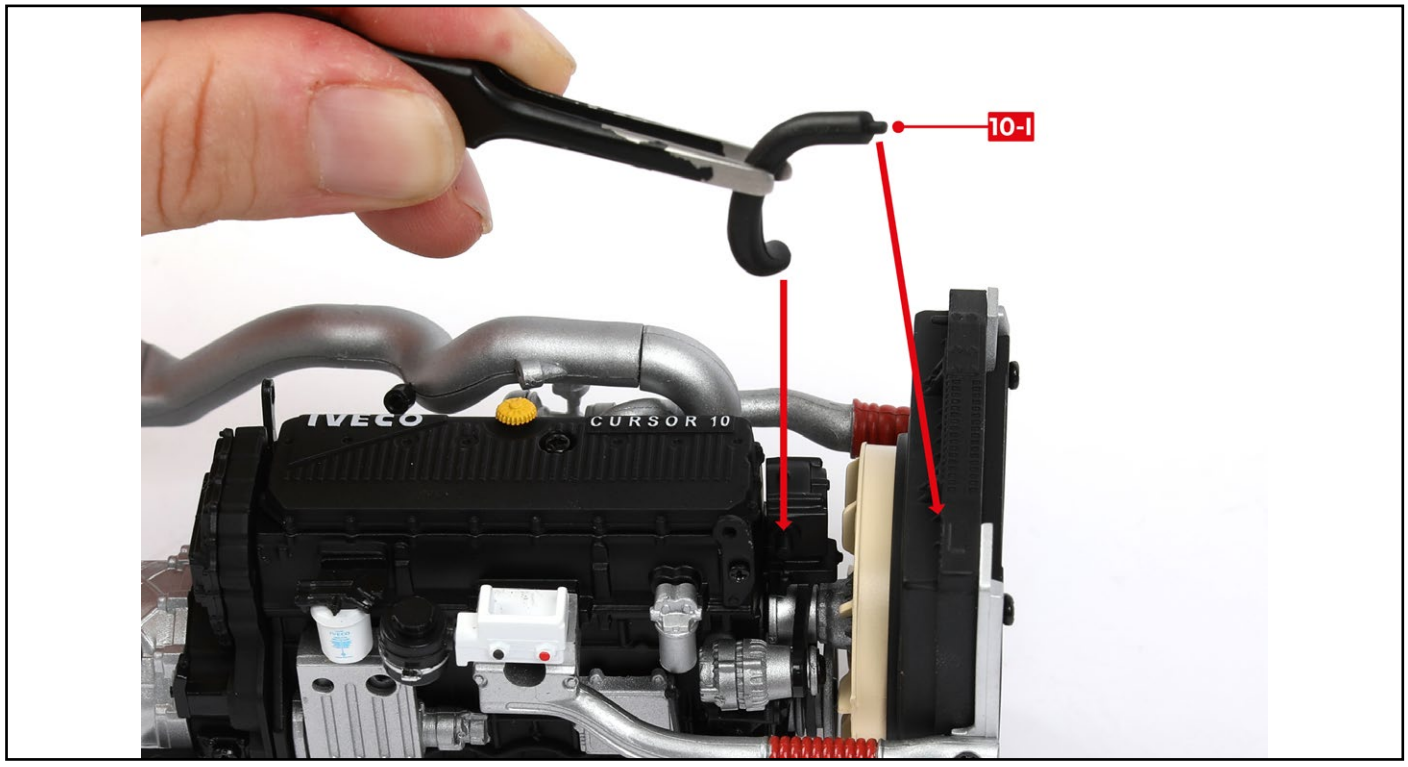


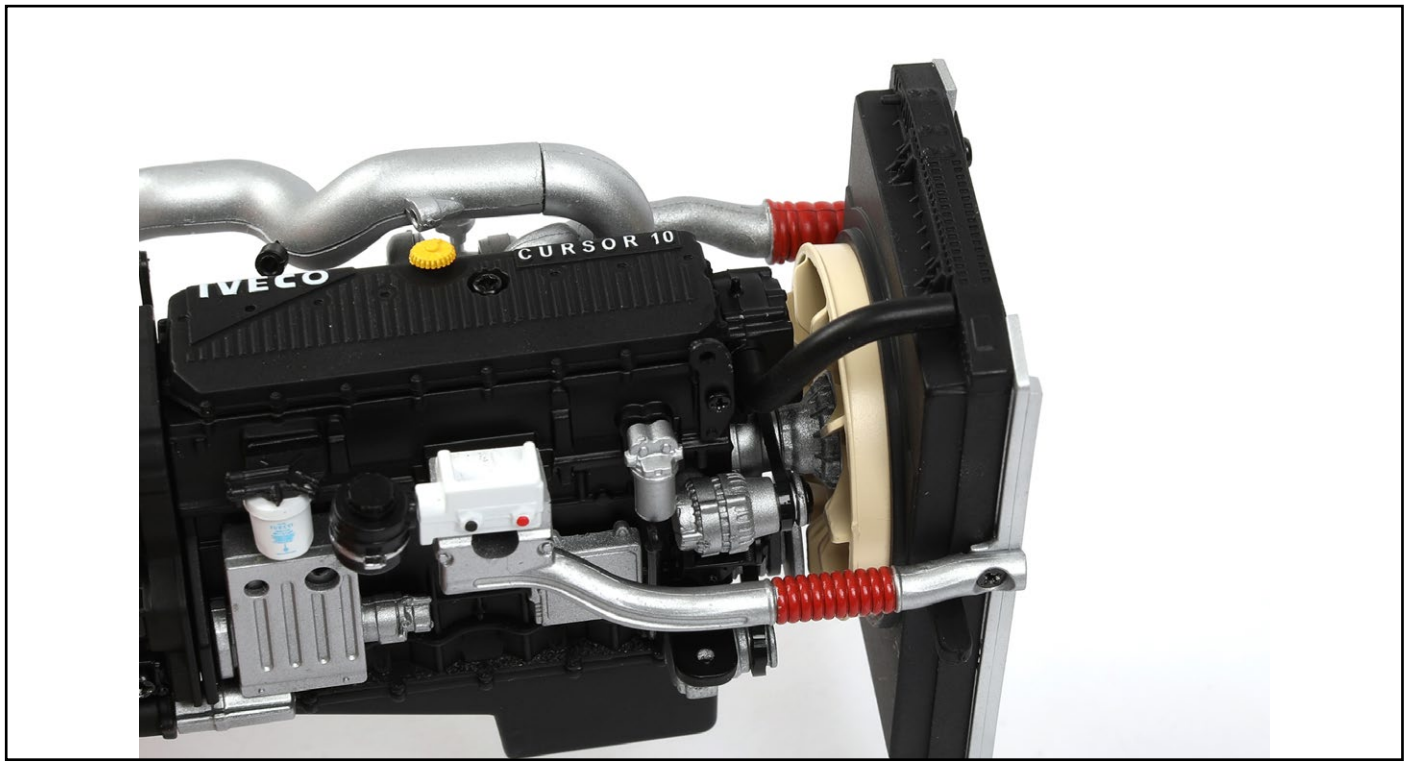


Step 8

Position the radiator assembly in front of the cooling fan 10-F as shown, then secure it to the air ducts with two GP screws.

Stage 10: Attaching the radiator and the cooling system

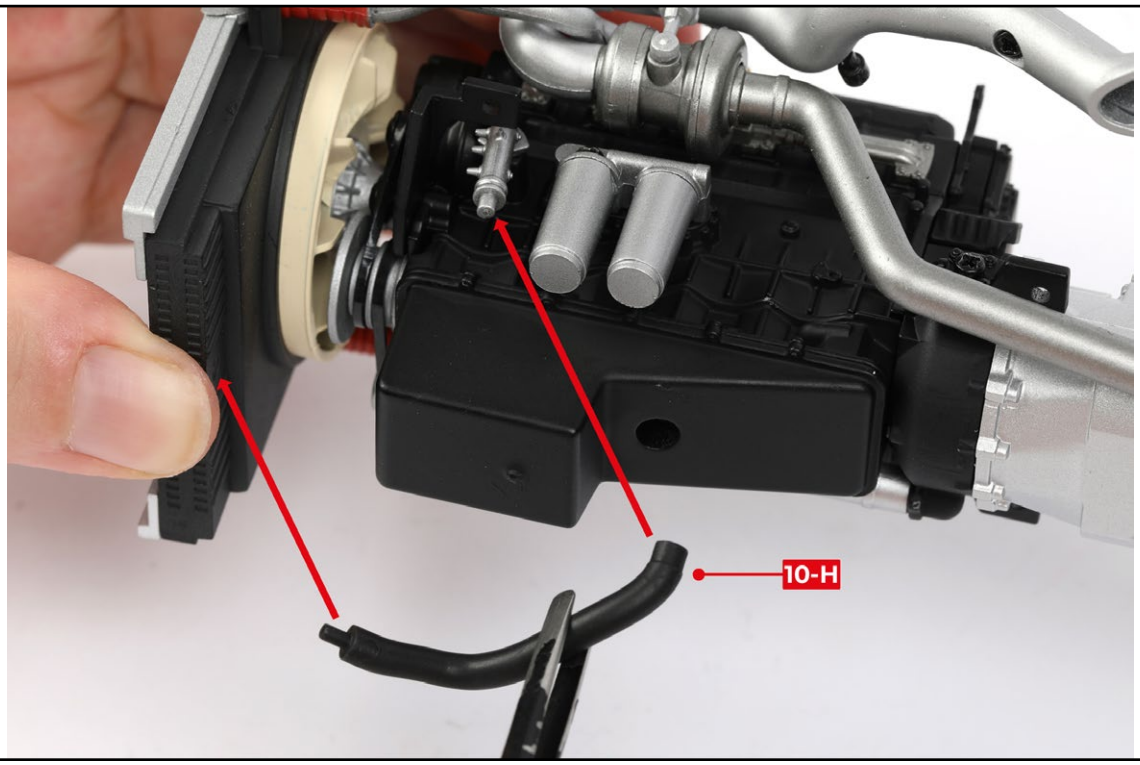


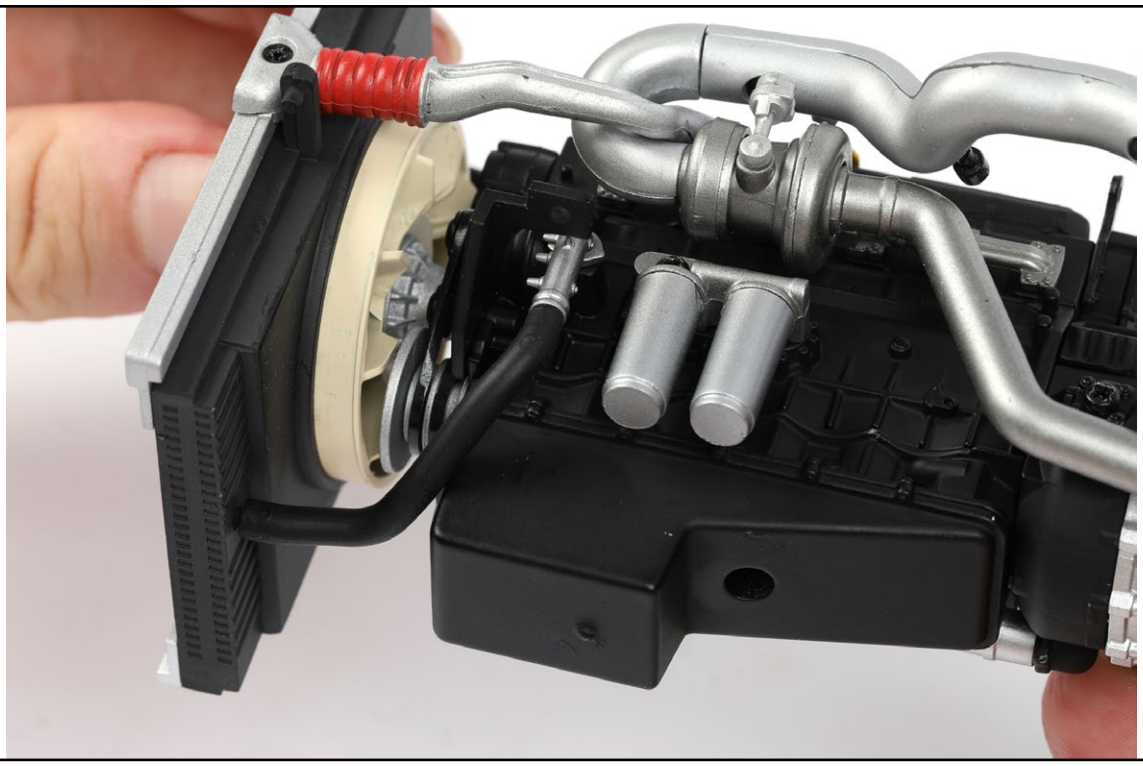


Step 9

Position the upper radiator hose 10-I as shown. Connect one end to the thermostat and the other end to the radiator.

Stage 10: Attaching the radiator and the cooling system

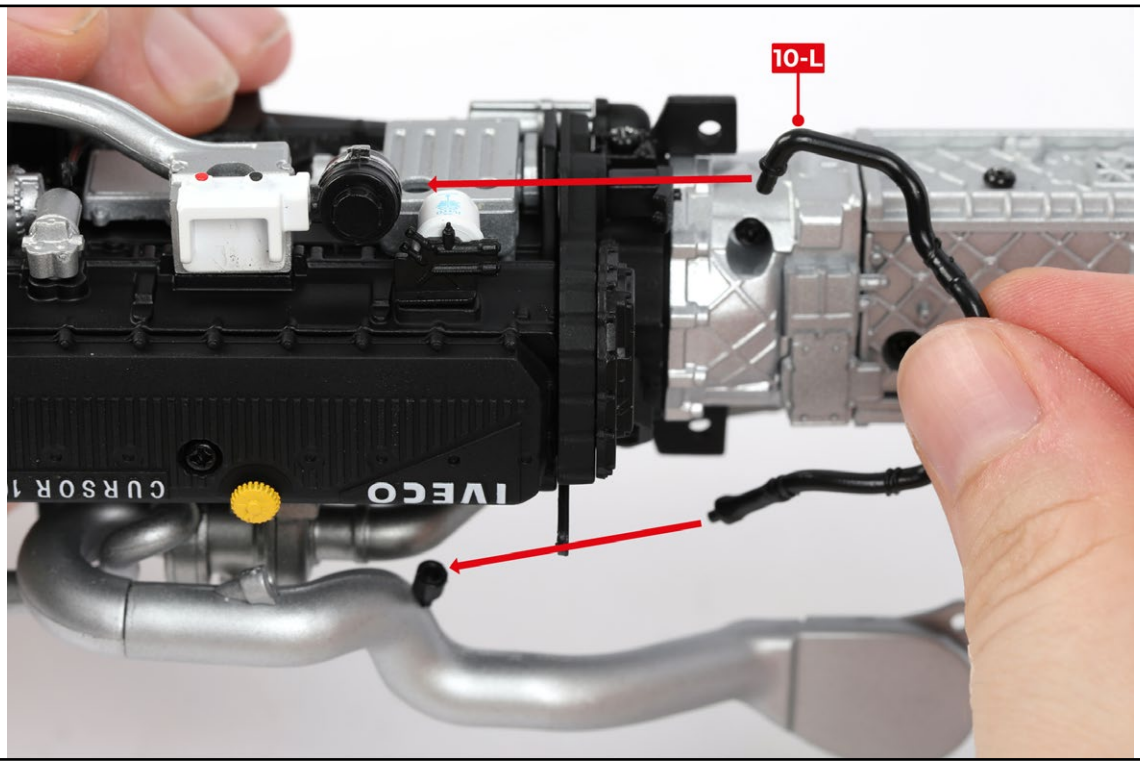


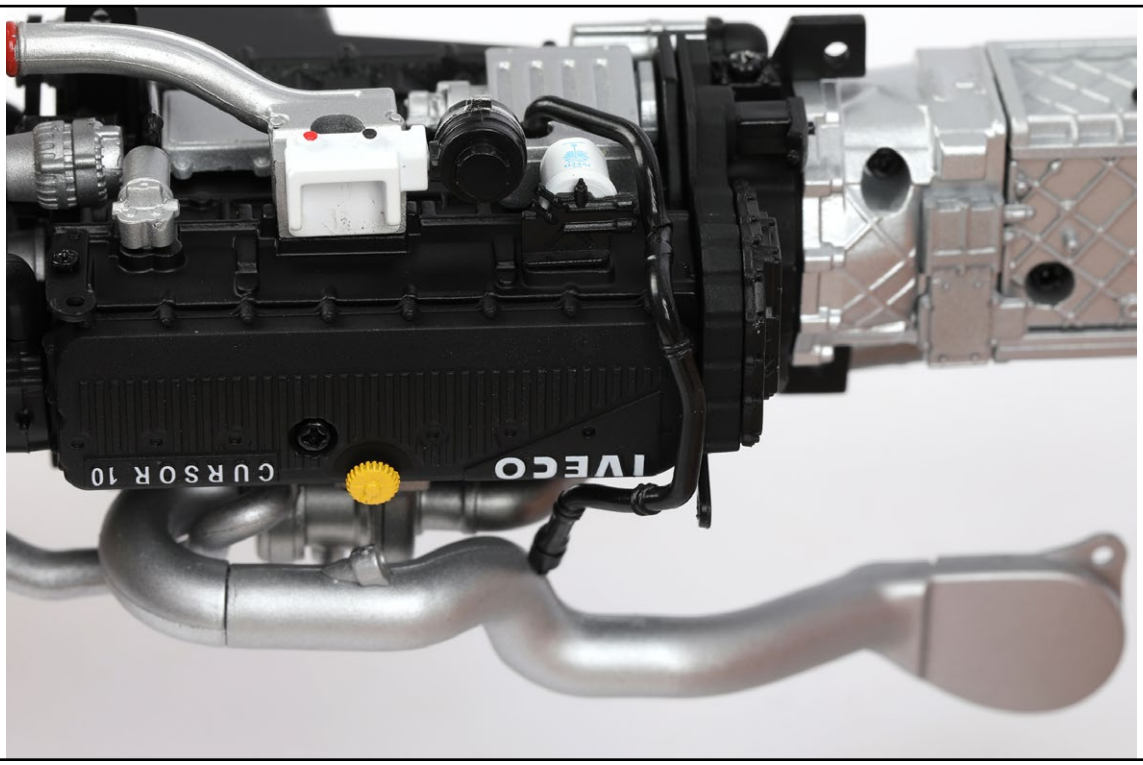


Step 10

Fit the lower radiator hose 10-H between the radiator and the cooling duct on the engine block as shown.

Stage 10: Attaching the radiator and the cooling system

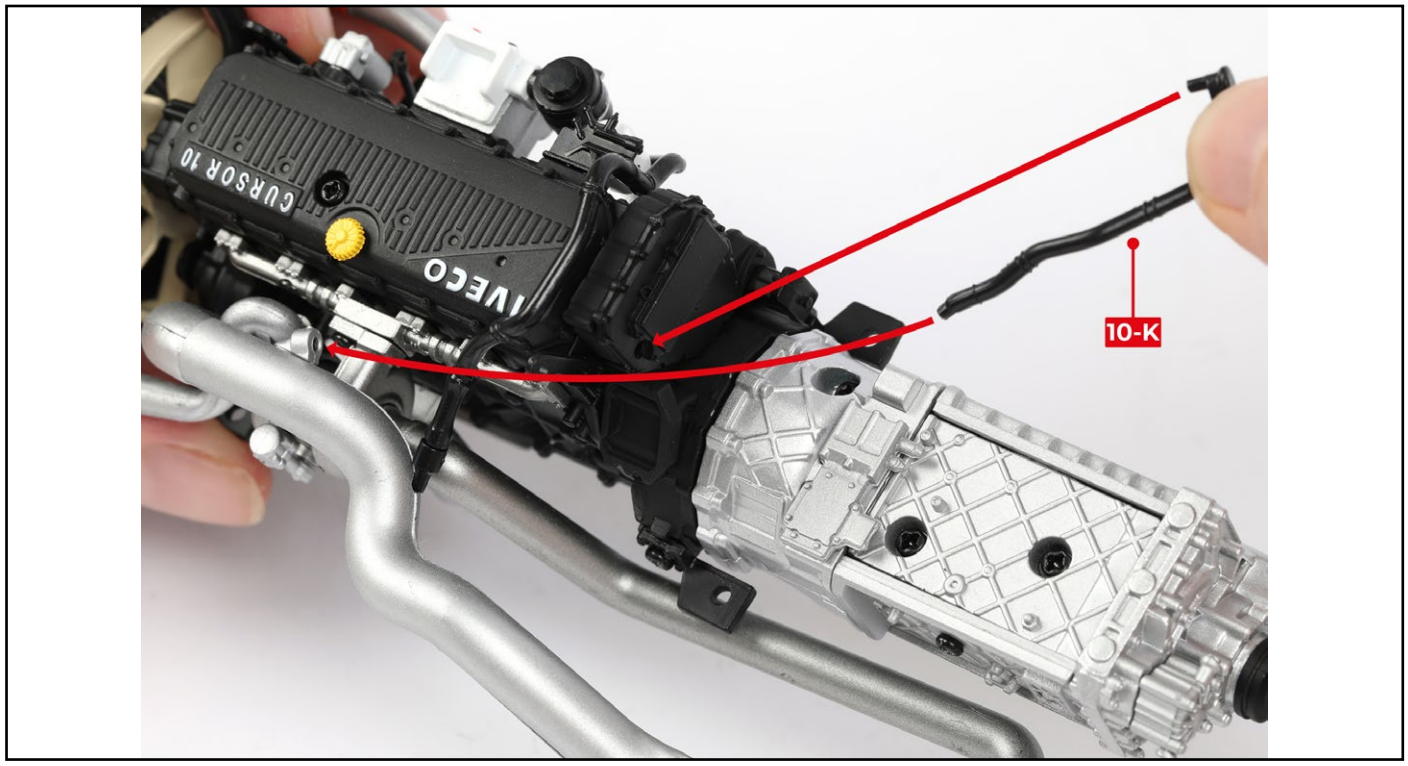




Step 11

Fit the air compressor hose 10-L between the turbocharger and the power steering pump as shown.

Stage 10: Attaching the radiator and the cooling system

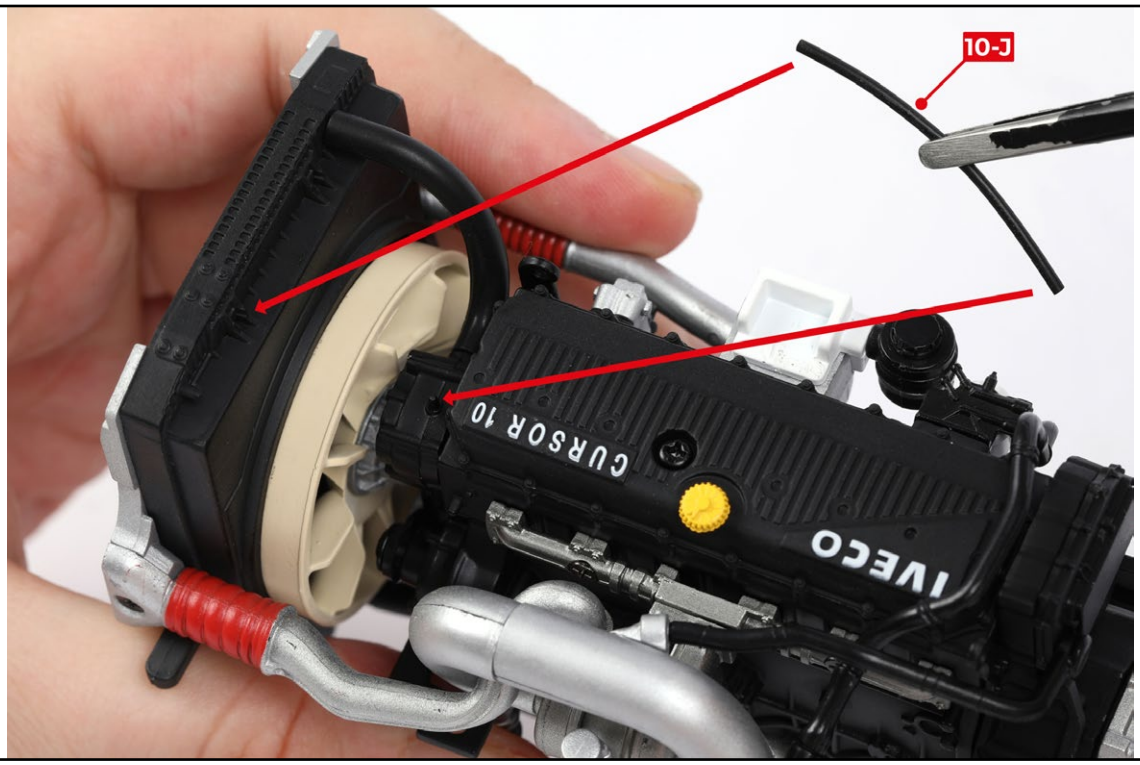


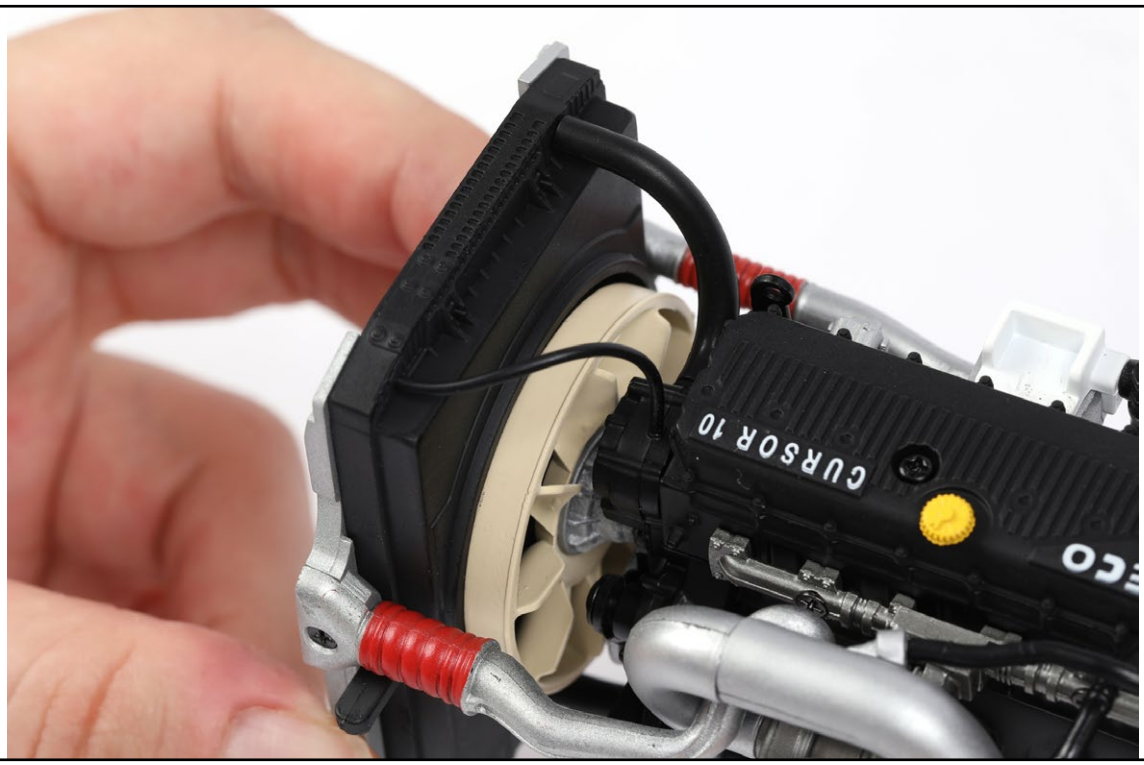


Step 12

Connect the PCV hose 10-K between the turbocharger connector and the engine timing housing as shown.

Stage 10: Attaching the radiator and the cooling system



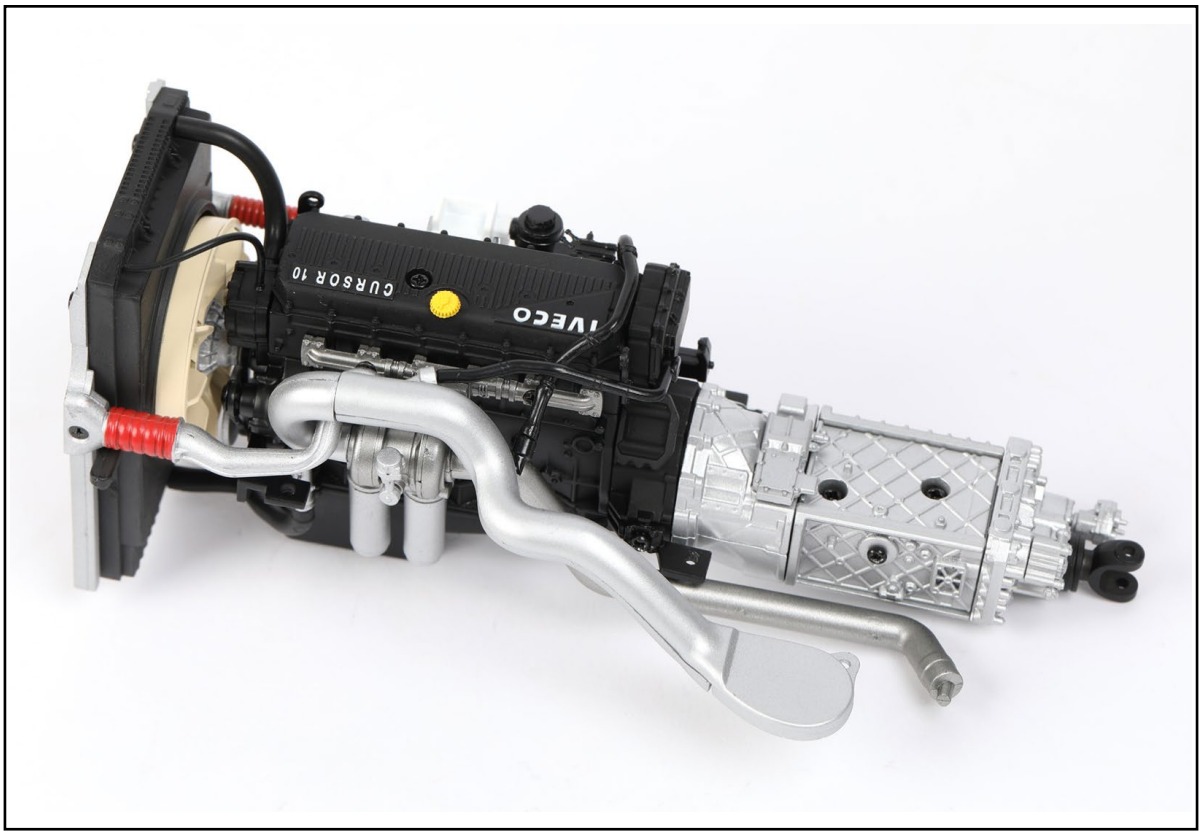


Step 13

Connect the thermostat hose 10-J between the radiator and the thermostat as shown.

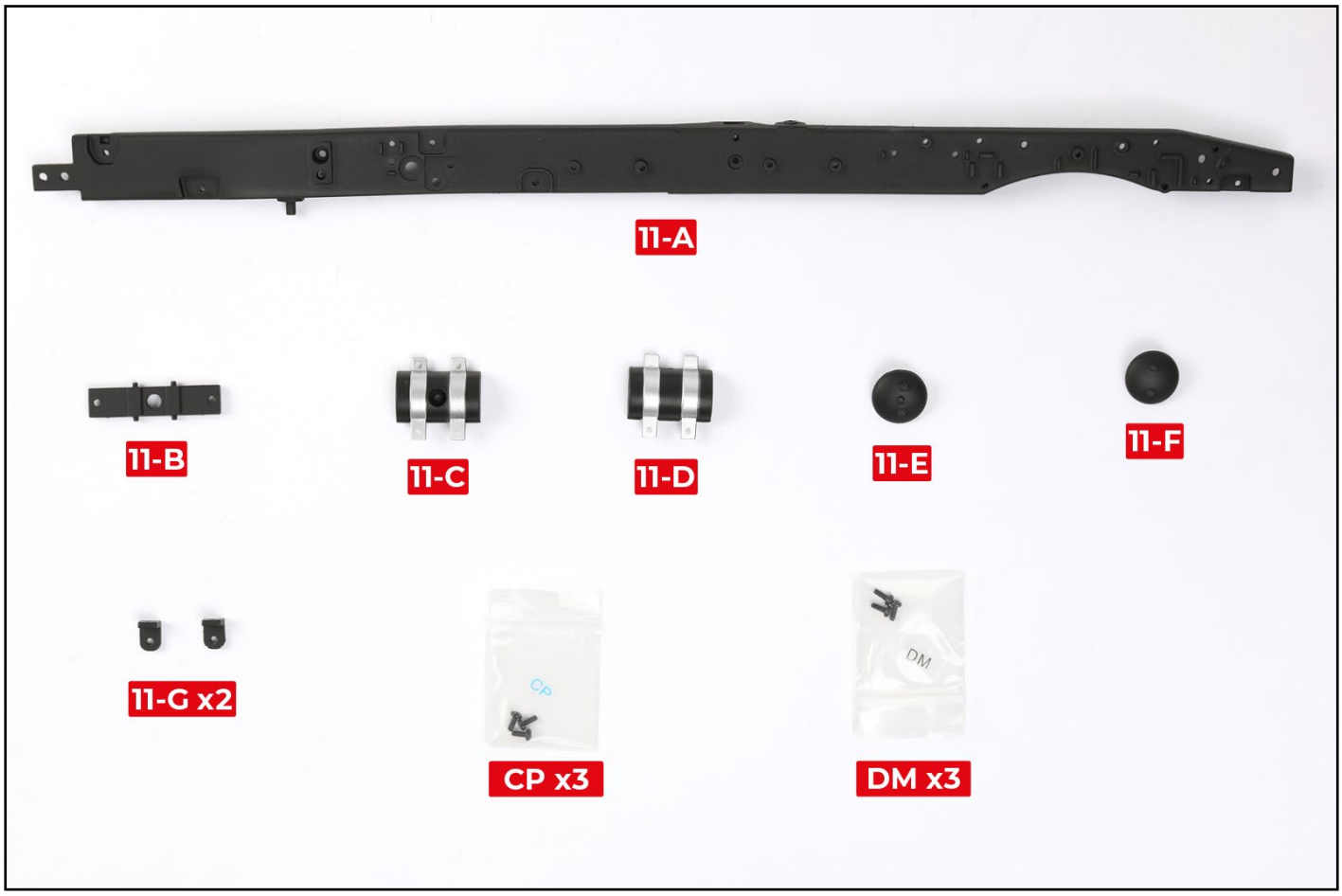
Stage 10: Attaching the radiator and the cooling system

STAGE 10 COMPLETE



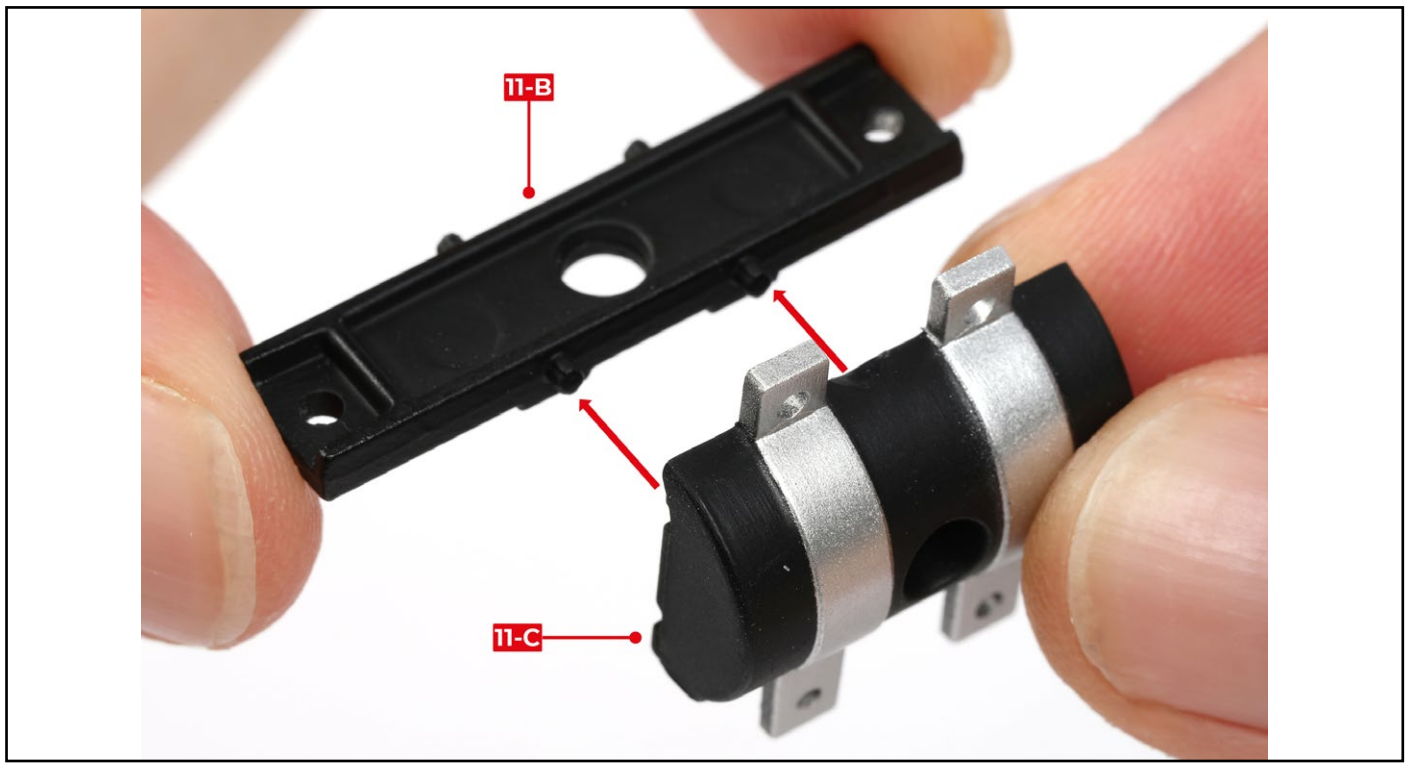
Stage 11: Attaching the air reservoir to the left chassis rail

STAGE 11 PARTS



11-A: Left tractor chassis rail
11-B: Tractor chassis crossmember
11-C: Front air reservoir section
11-D: Rear air reservoir section
11-E: Right air reservoir end cap
11-F: Left air reservoir end cap
11-G: Mounting clamps
CP 3 screws (1.7 × 4 mm)
DM 3 screws (1.7 × 4 mm)

Stage 11: Attaching the air reservoir to the left chassis rail

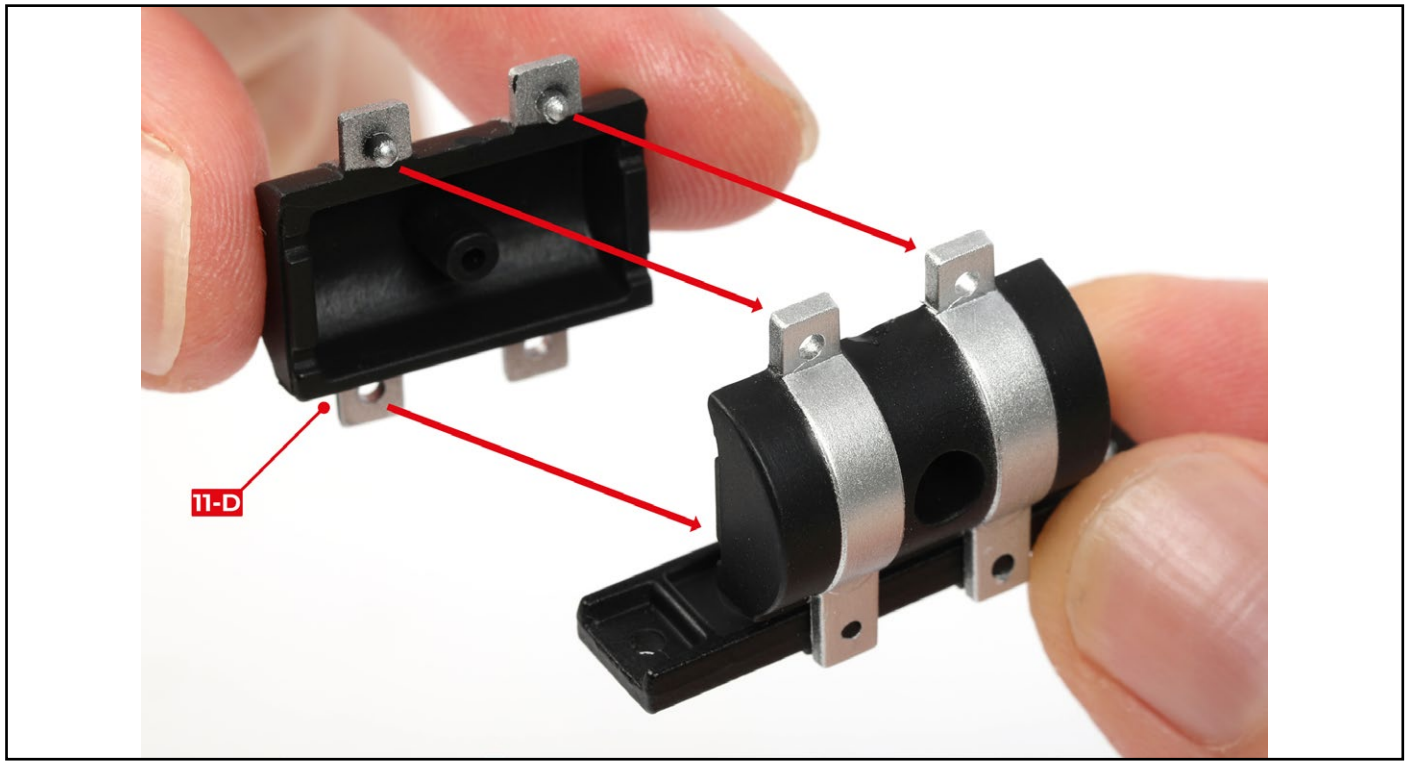




Step 1

Identify the tractor chassis crossmember 11-B and the front air reservoir section 11-C. Position the front air reservoir section 11-C on the chassis crossmember 11-B as shown, aligning the holes with the corresponding locating pins. Press the parts together to secure them.

Stage 11: Attaching the air reservoir to the left chassis rail



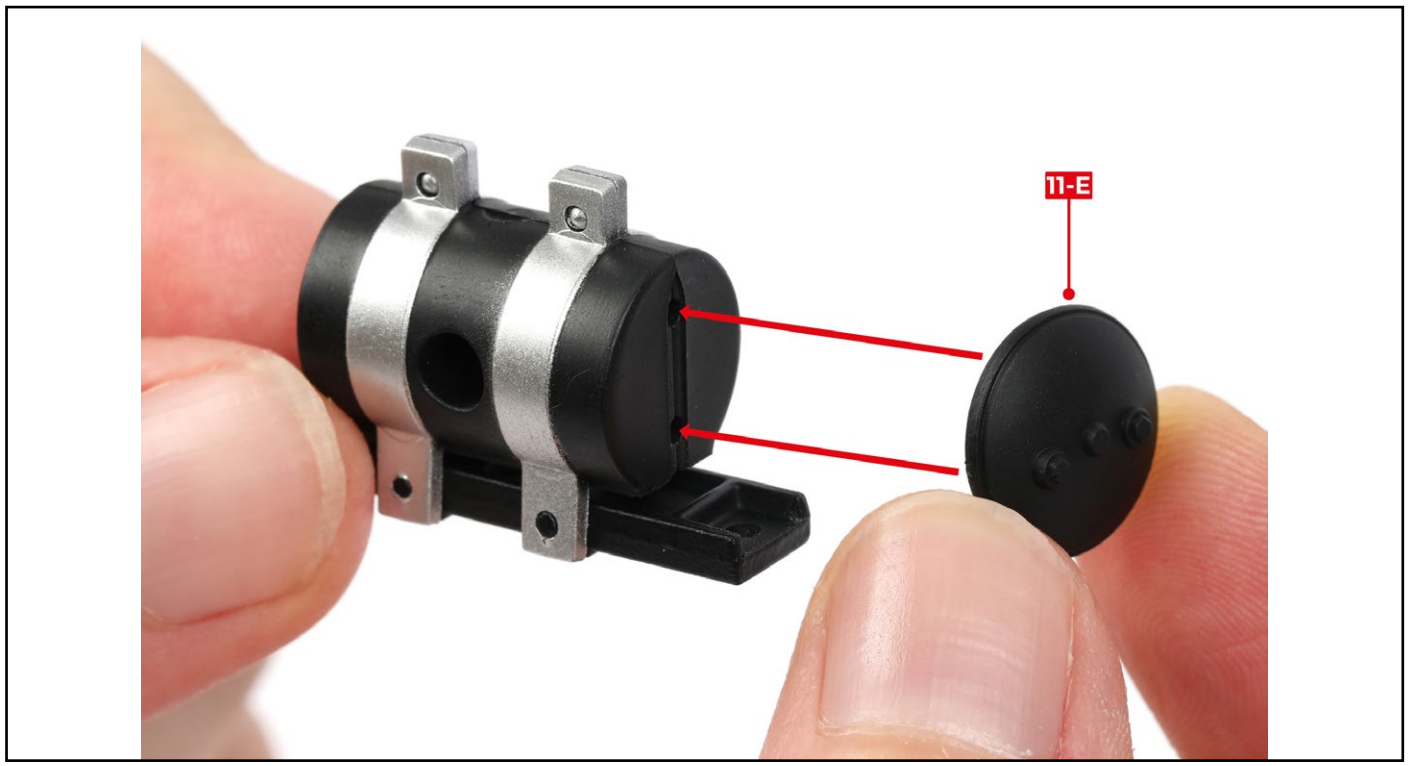


Step 2

Position the rear air reservoir section 11-D on the opposite side of the chassis crossmember 11-B as shown.

Secure the front and rear air reservoir sections together with one CP screw.

Stage 11: Attaching the air reservoir to the left chassis rail



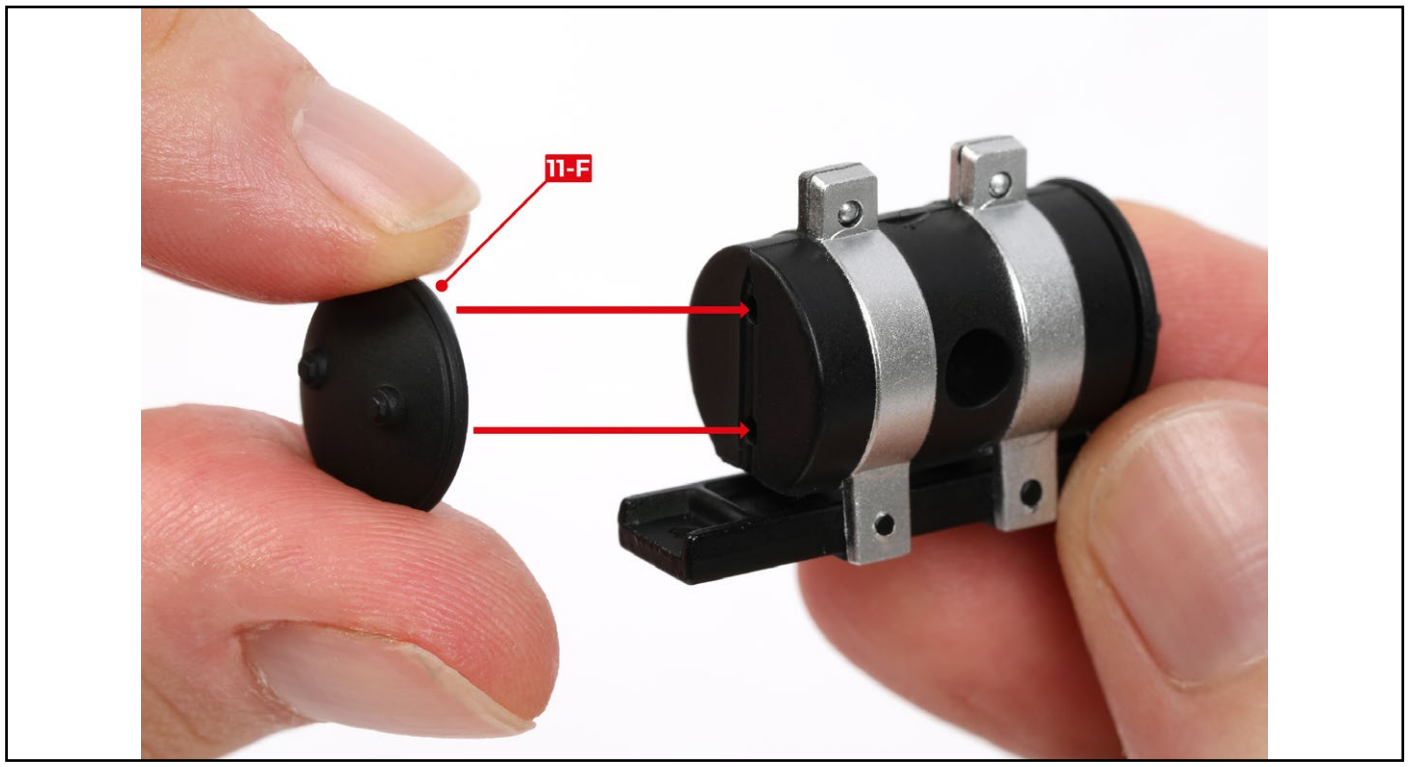


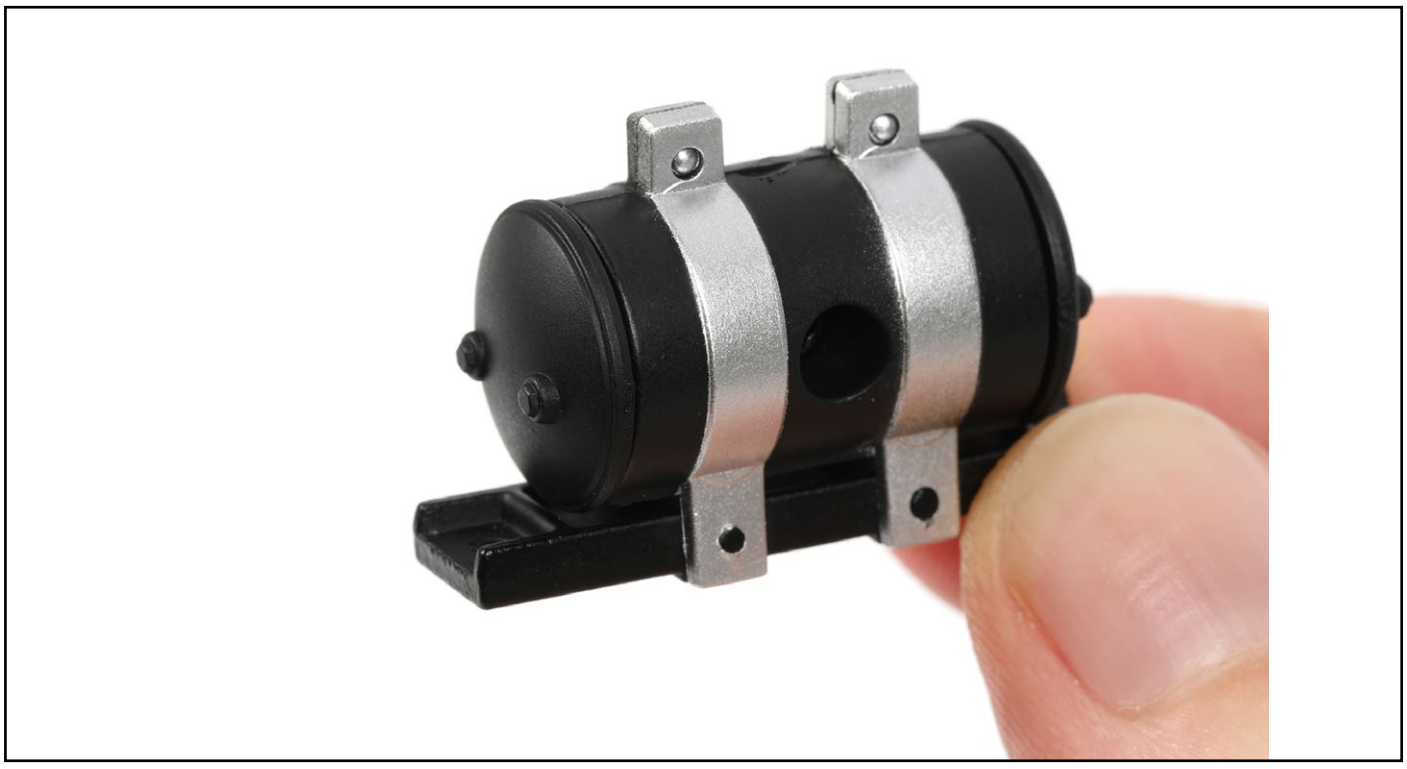
Step 3

Identify the right air reservoir end cap 11-E.

Fit the right air reservoir end cap 11-E to the air reservoir body as shown.

Stage 11: Attaching the air reservoir to the left chassis rail

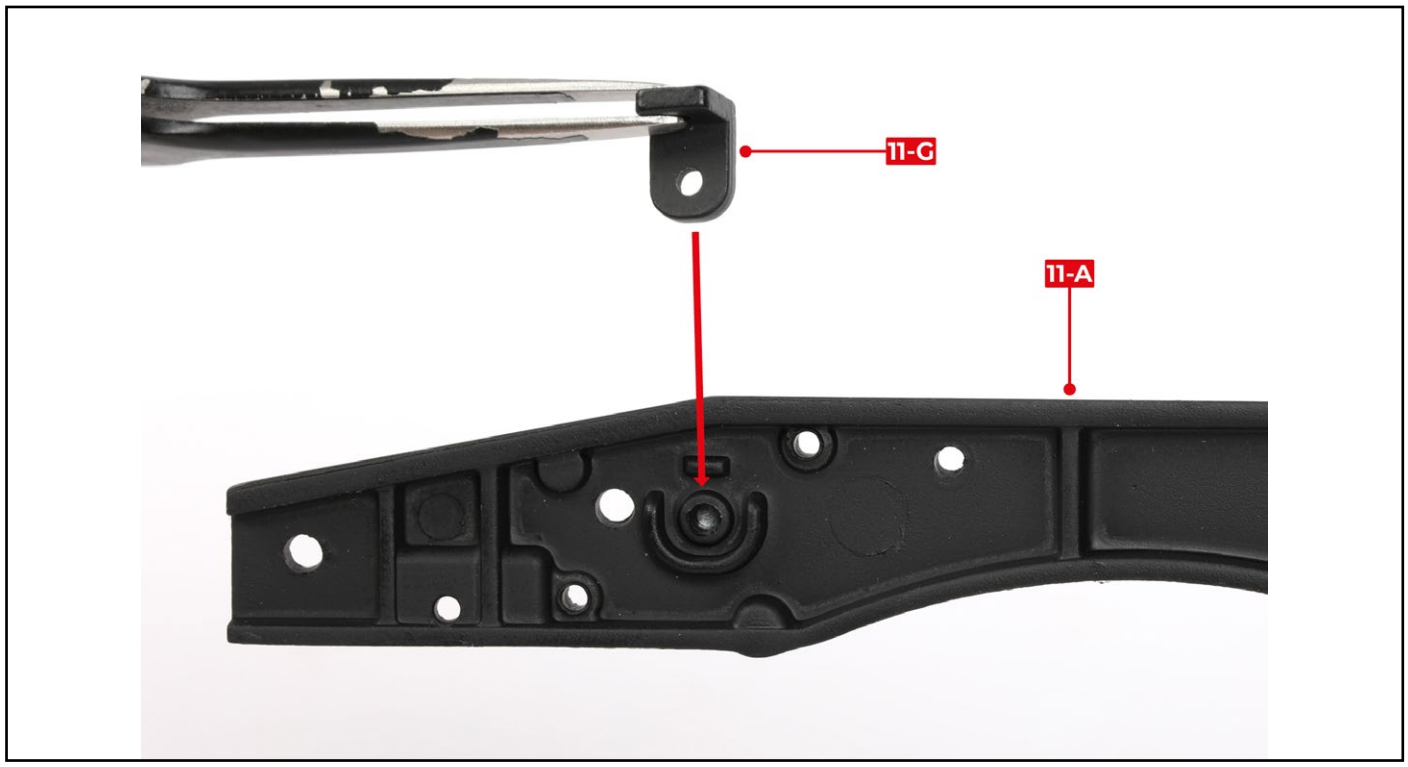


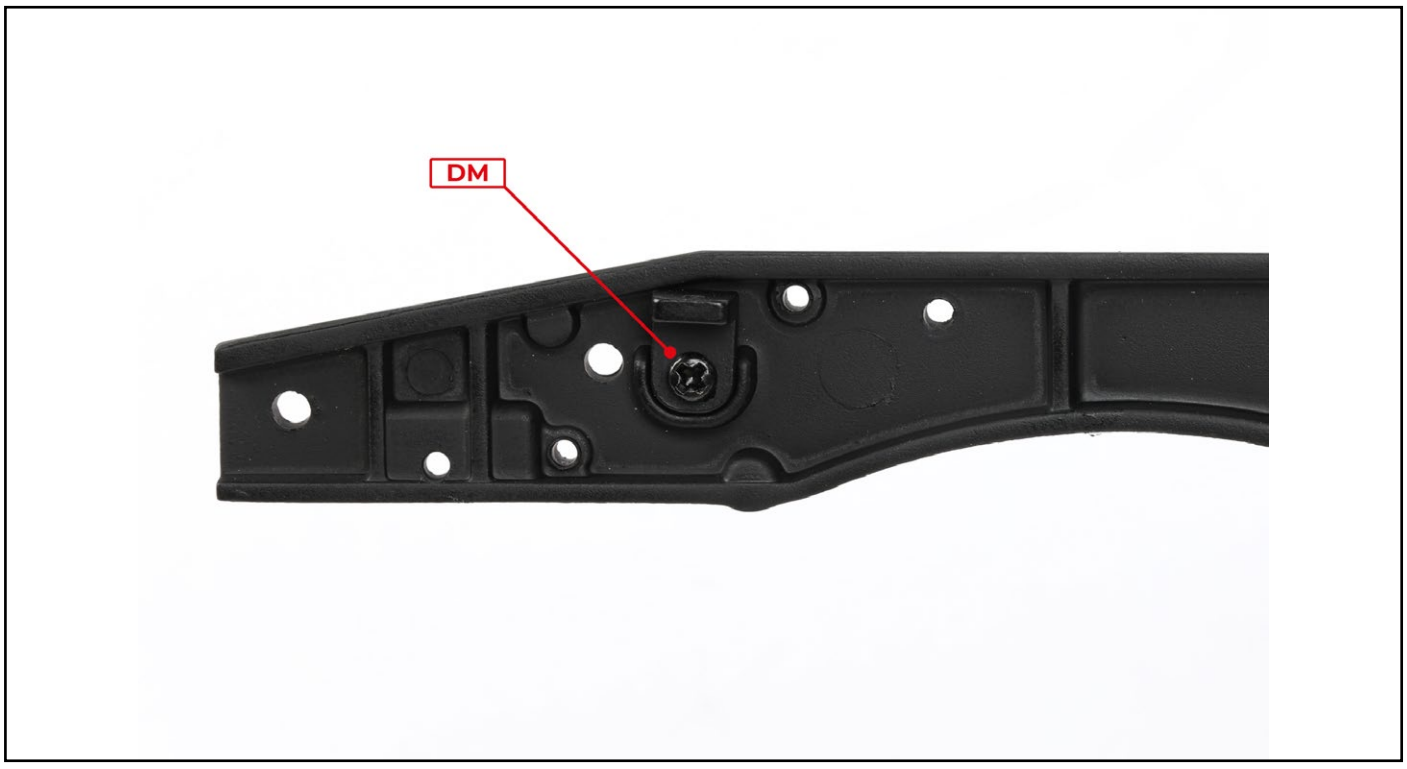


Step 4

Identify the left air reservoir end cap 11-F. Fit the left air reservoir end cap 11-F to the air reservoir body as shown.

Stage 11: Attaching the air reservoir to the left chassis rail



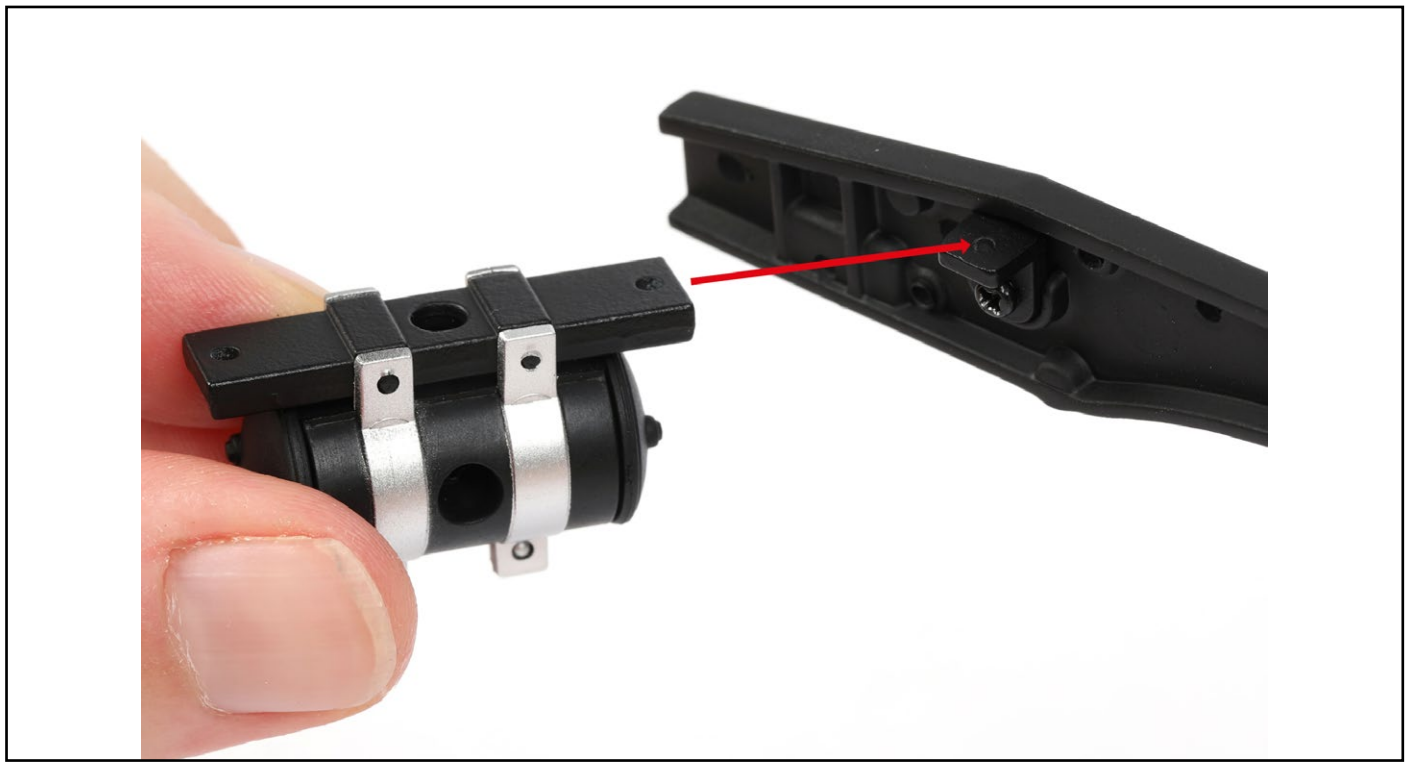


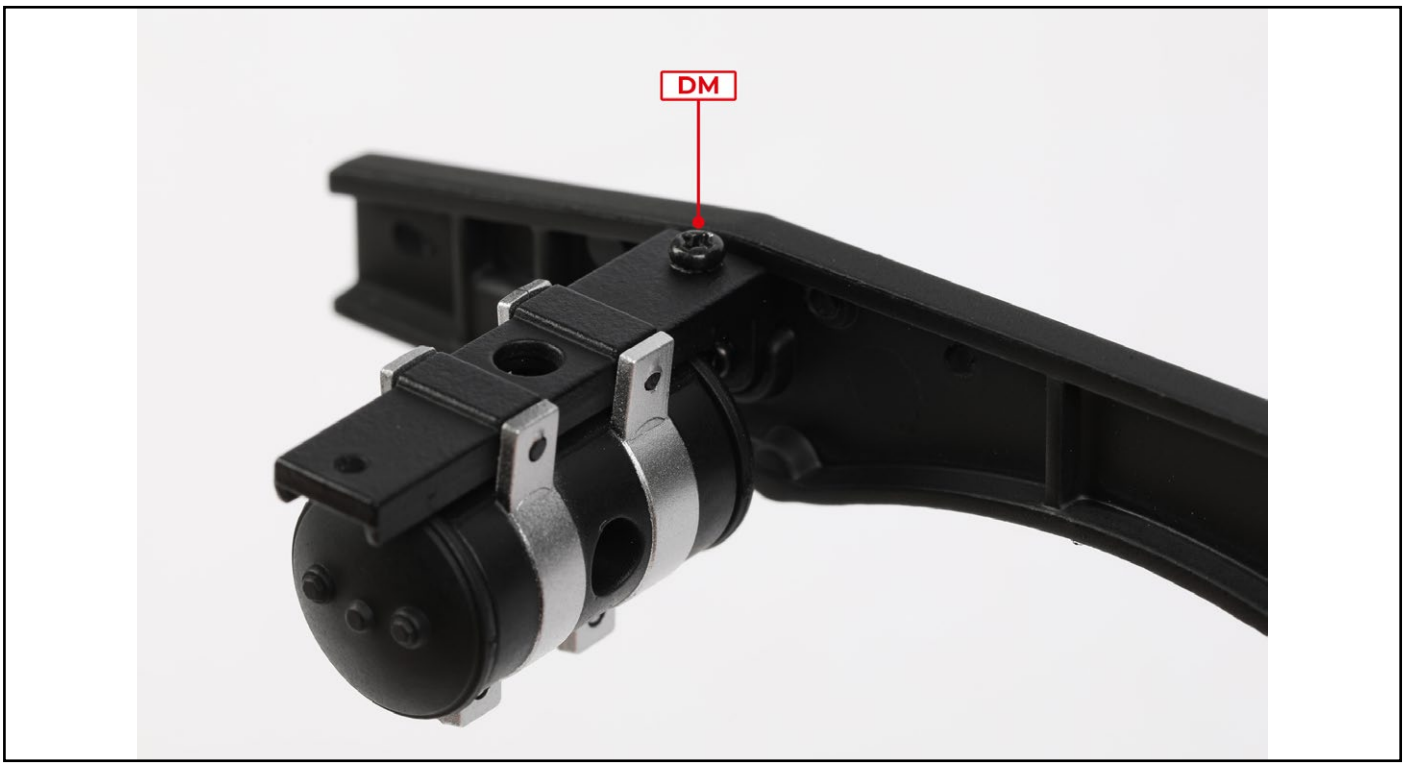
Step 5

Locate the mounting point for one mounting clamp 11-G on the left tractor chassis rail 11-A.

Position the mounting clamp 11-G as shown, then secure it to the chassis rail with one DM screw.

Stage 11: Attaching the air reservoir to the left chassis rail





Step 6

Position the chassis crossmember and air reservoir assembly against the mounting clamp 11-G as shown, making sure it is oriented correctly.

Secure the chassis crossmember 11-B to the mounting clamp 11-G with one DM screw.

Stage 11: Attaching the air reservoir to the left chassis rail

STAGE 11 COMPLETE

