



Pack 02

BUILD INSTRUCTIONS

**STAGE 06: CONSTRUCTING THE OIL SUMP
AND FIXING THE BRACKETS**

**STAGE 07: ASSEMBLING THE GEARBOX AND
FITTING THE SHIFTER LINKAGE**

**STAGE 08: BUILDING AND FITTING THE BELL
HOUSING AND THE STARTER MOTOR**

STAGE 09: INSTALLING THE CYLINDER HEADS

**STAGE 10: ATTACHING THE AIR METER
TO THE FUEL INJECTION UNIT**

**STAGE 11: PREPARING THE INTAKE MANIFOLD
AND FITTING FUEL PIPES AND HOSES**

**STAGE 12: ASSEMBLING THE ENGINE BLOCK
AND ATTACHING THE FUEL INJECTION UNIT**

**STAGE 13: CONNECTING THE SPARK PLUGS
AND SHIELDING THE CABLES**

**STAGE 14: FITTING THE ALTERNATOR AND
ATTACHING THE BELTS**

STAGE 15: BUILDING THE LEFT CONTROL ARM

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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.

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

The screwdriver can be magnetized by stroking it with a magnet (fridge magnet, etc.) enabling it to hold the 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 put a tiny smear of Vaseline, soap or light oil on the thread. That will lubricate it and make it easier to drive home.

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.

Left and Right! When building your Corvette, the left- or right-hand side refers to that side as if you are sitting in the car.



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.

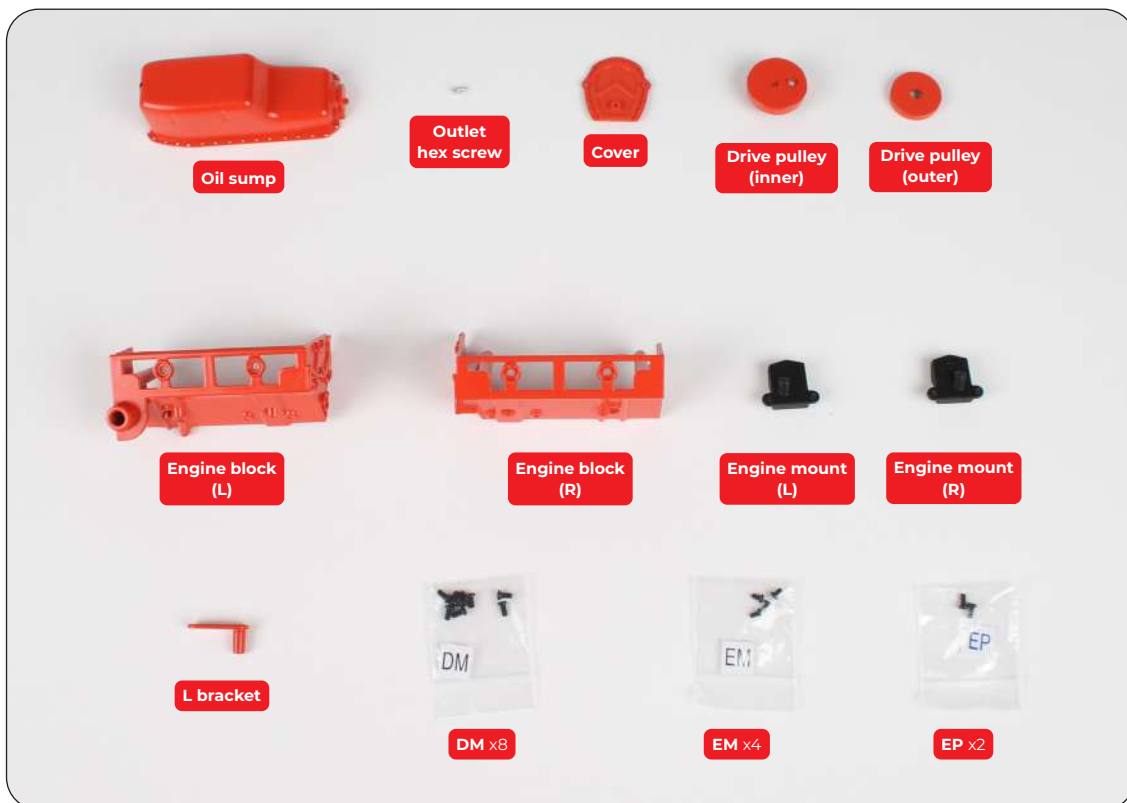
Stage 06: Constructing the Oil Sump and Fixing the Brackets

In the first stage for this pack you'll construct the oil sump and attach the brackets for mounting the engine onto it.

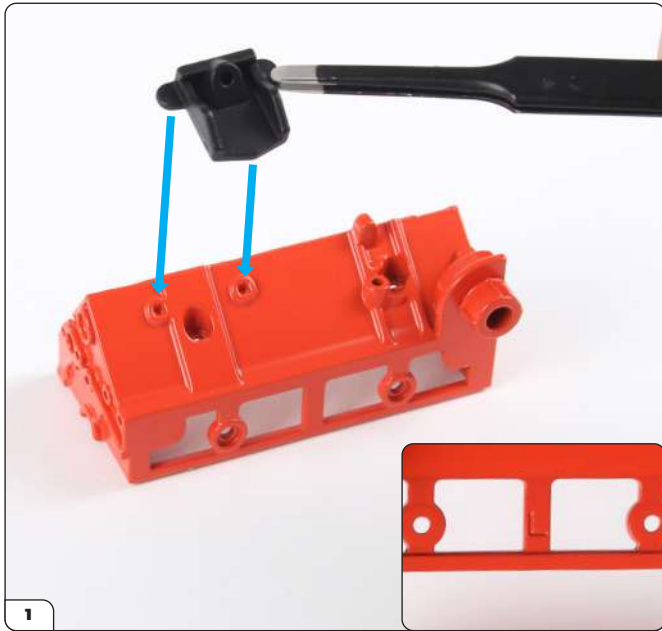


STAGE 06 PARTS LIST

Name
Oil sump
Outlet hex screw
Cover
Drive pulley (inner)
Drive pulley (outer)
Engine block (L)
Engine block (R)
Engine mount (L)
Engine mount (R)
L bracket
DM screws x8
EM screws x4
EP screws x2



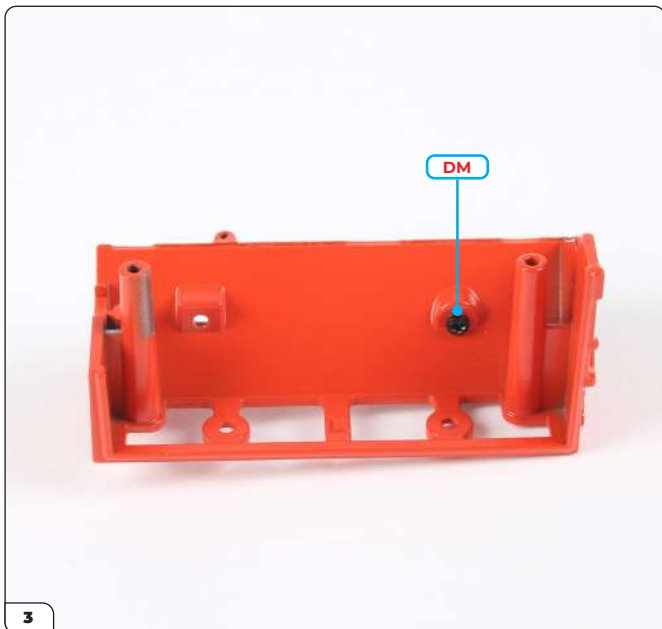
Stage 06: Constructing the Oil Sump and Fixing the Brackets



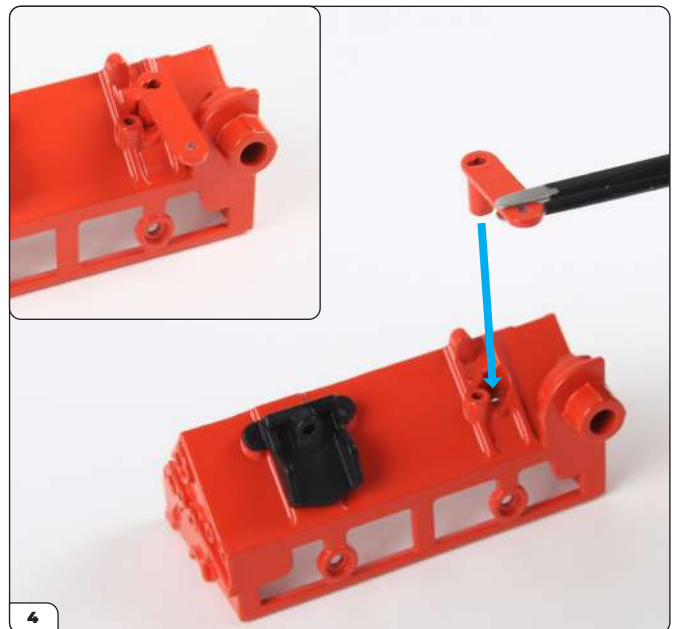
1 Align the left engine mount (marked 'L') with the left engine block (marked 'L', inset) as shown.



2 Push the pins of the engine mount into the holes.

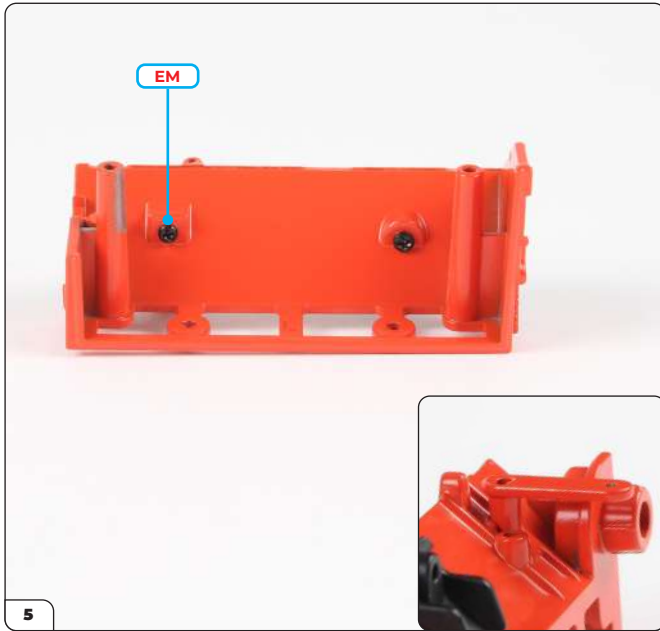


3 Fix the parts together using a DM screw.

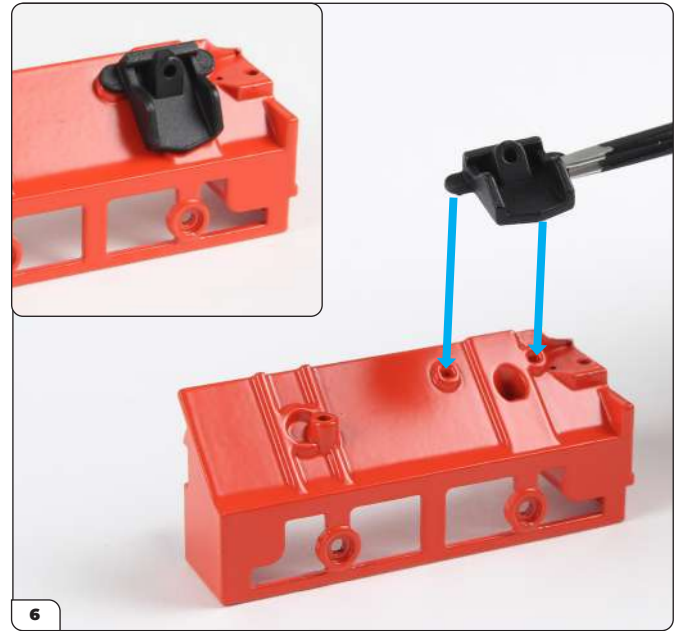


4 Align the L bracket with the engine block (arrow) then fit in place (inset).

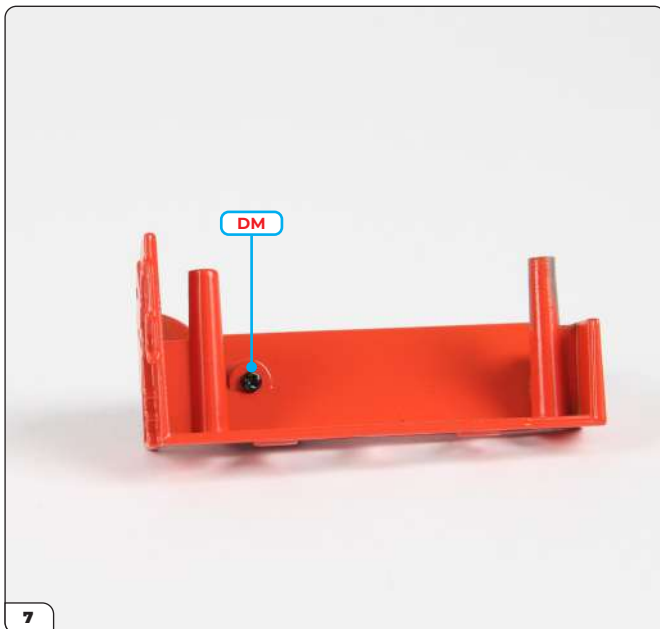
Stage 06: Constructing the Oil Sump and Fixing the Brackets



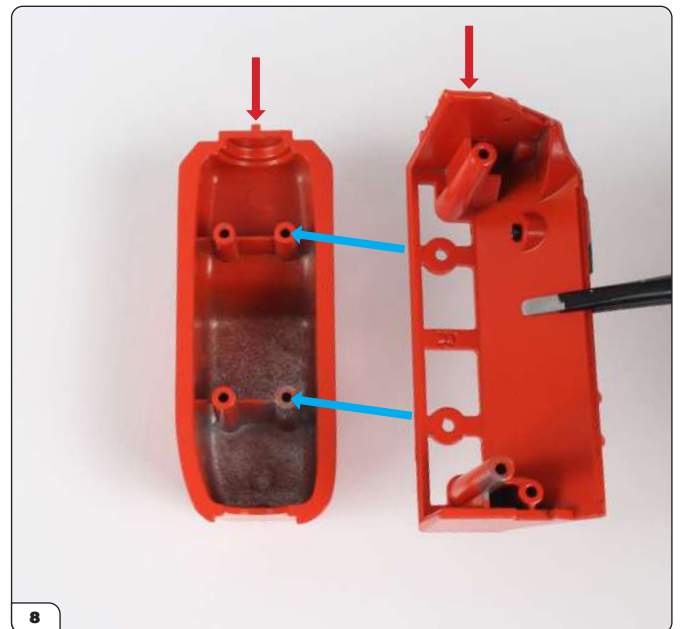
Fix the L bracket using an EM screw. Check it stays perpendicular while screwing (inset).



Align the right engine mount with the right engine block (both marked 'R') as shown then push in place (inset).

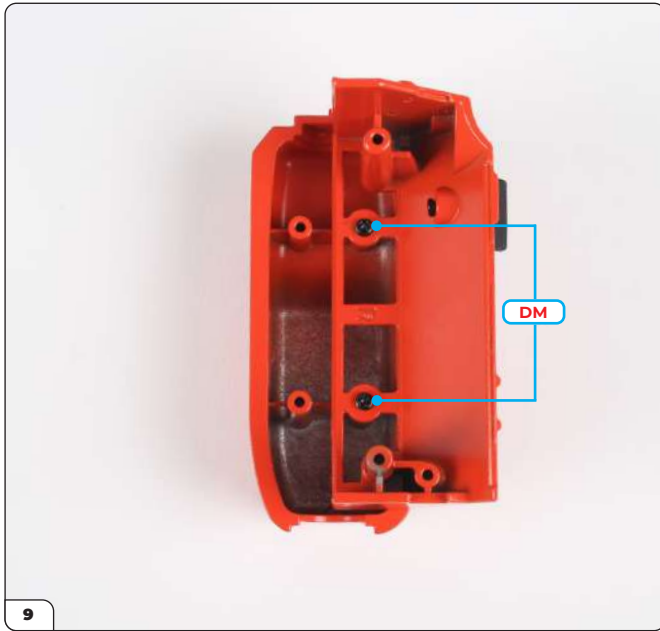


Fix it using a DM screw.

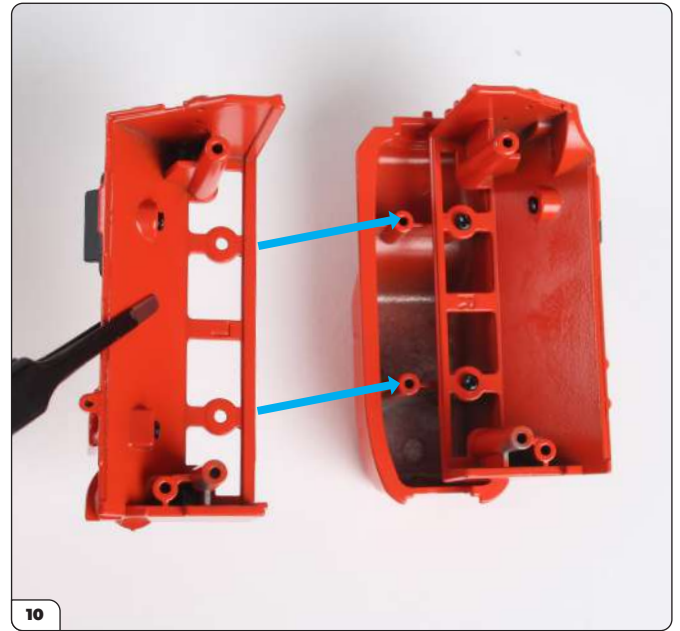


Align the two holes of the right engine block with those of the oil sump (blue arrows). Note the orientation of the parts (red arrows).

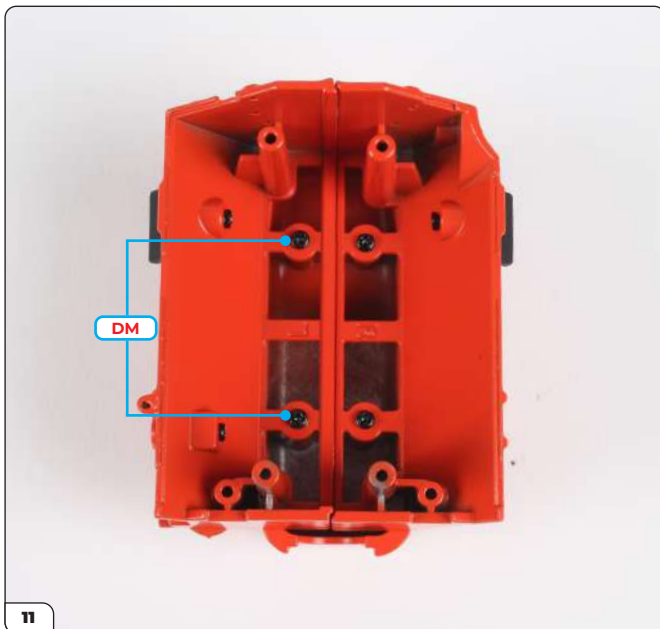
Stage 06: Constructing the Oil Sump and Fixing the Brackets



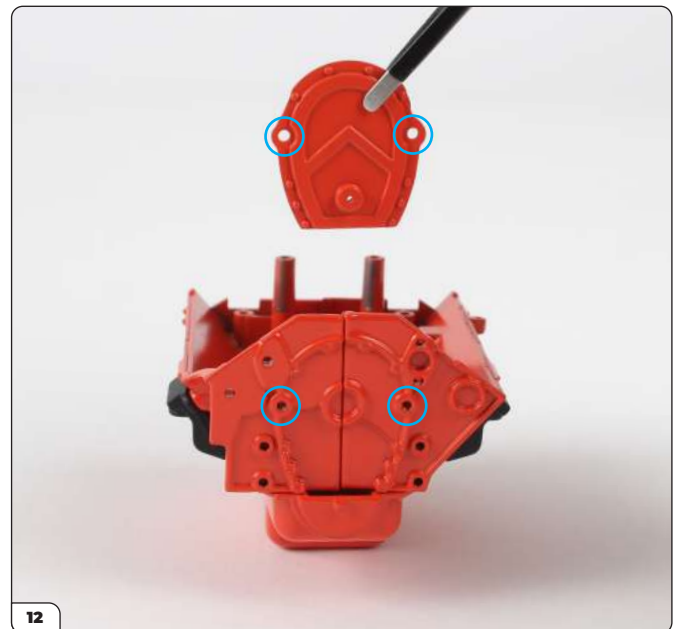
Fix the parts together using 2x DM screws.



Align the left engine block with the oil sump (arrows).

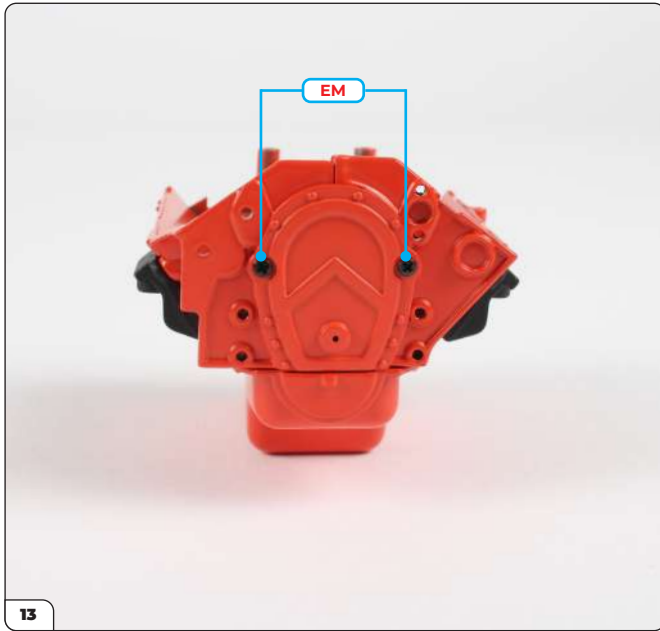


Fix using 2x DM screws.



Place the assembly with the detailed panel facing you as shown and align the oil sump cover with the two screw holes (circled).

Stage 06: Constructing the Oil Sump and Fixing the Brackets



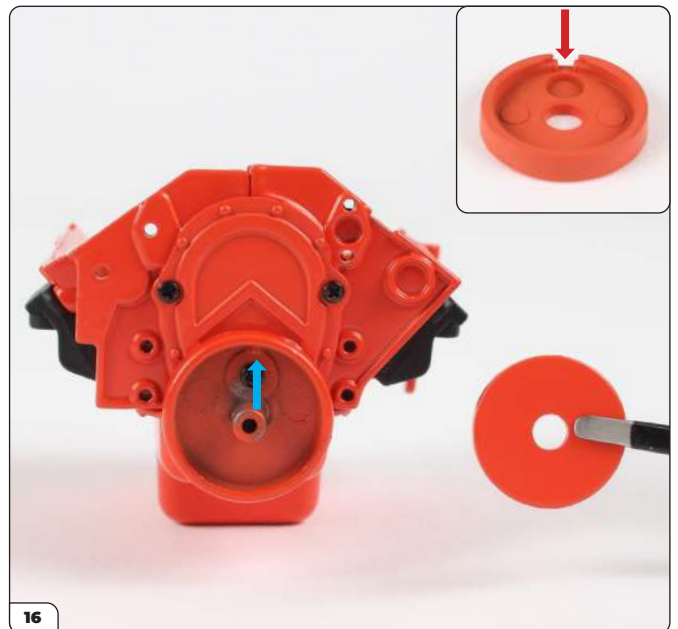
Position the cover then secure it using 2x EM screws.



Align the hole in the drive pulley (inner) with the small hole in the cover (circled).



Position the pulley then secure with an EP screw. Use oil to lubricate the screw if needed.



Align the drive pulley (outer) with the inner pulley. Note the outer pulley has a notch (inset, red arrow) which matches the inner pulley's protrusion (blue arrow).

Stage 06: Constructing the Oil Sump and Fixing the Brackets



Press the parts firmly together.



Locate the small hole in the oil sump and press the outlet hex screw in firmly (arrow) – it should angle away from the sump (inset).

STAGE COMPLETE



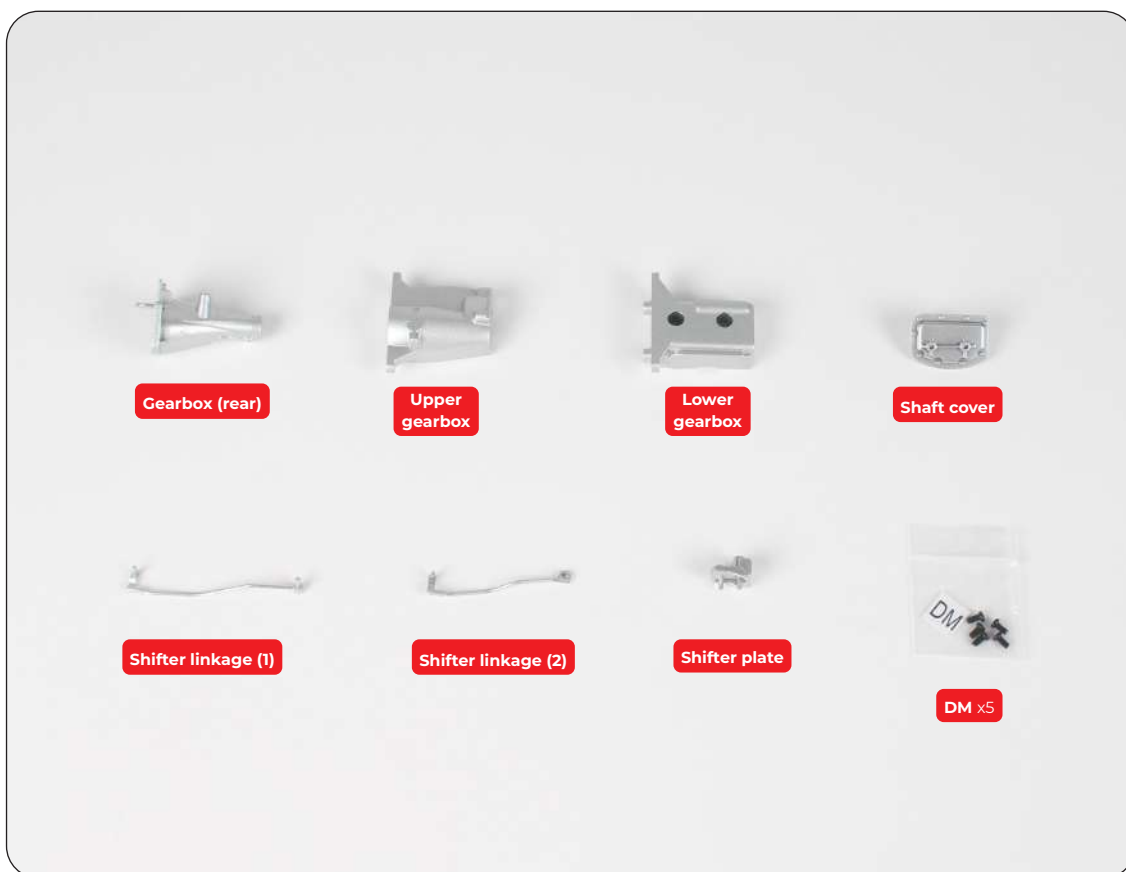
Stage 07: Assembling the Gearbox and Fitting the Shifter Linkage

You'll now begin to assemble the gearbox by fitting the housing together then attaching the shifter plate and the shifter linkage.

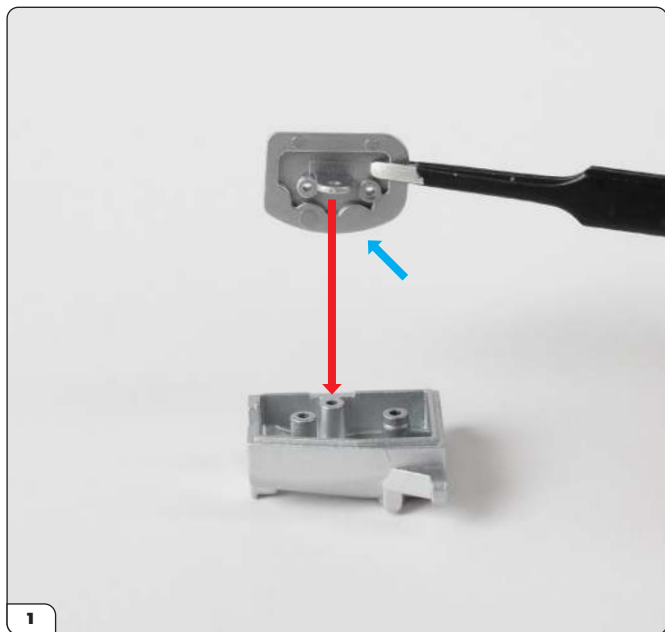


STAGE 07 PARTS LIST

Name
Gearbox (rear)
Upper gearbox
Lower gearbox
Shaft cover
Shifter linkage (1)
Shifter linkage (2)
Shifter plate
DM screws x5



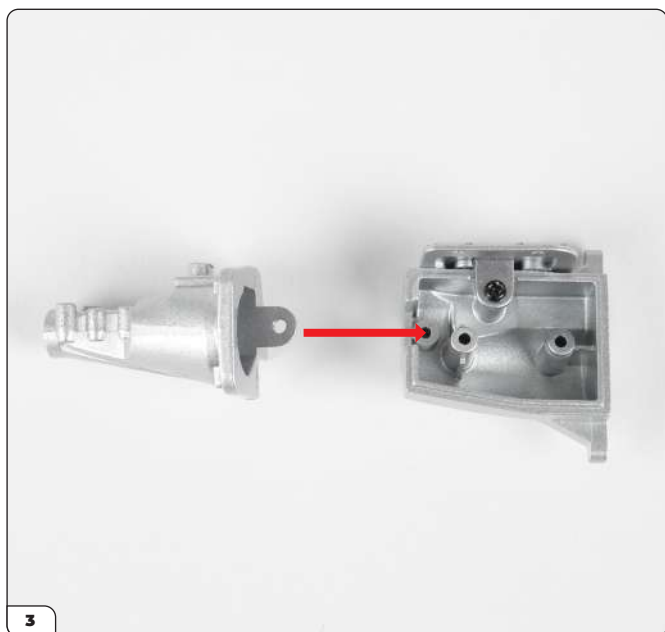
Stage 07: Assembling the Gearbox and Fitting the Shifter Linkage



1
Align the shaft cover with the upper gearbox as shown (red arrow). Ensure the curved edge is oriented downwards (blue arrow).



2
Fit its tab over the screw hole then secure using a DM screw.

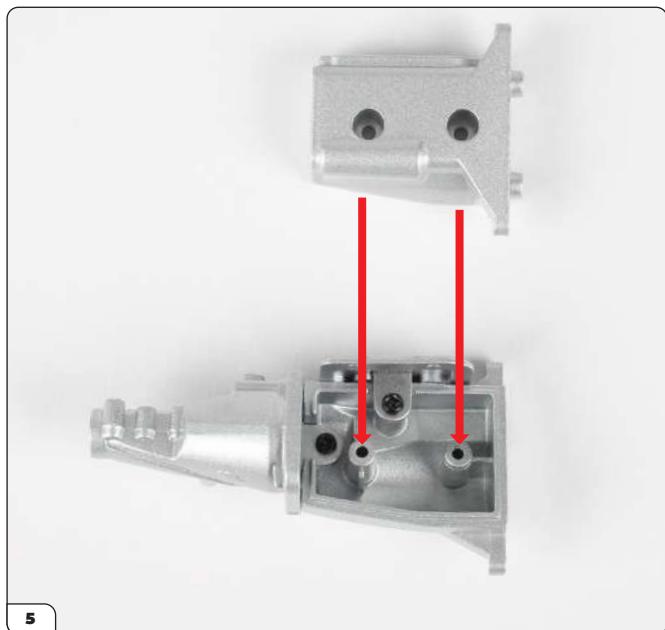


3
Align the gearbox (rear) with the assembly (arrow).



4
Fit its tab over the screw hole and fix using a DM screw.

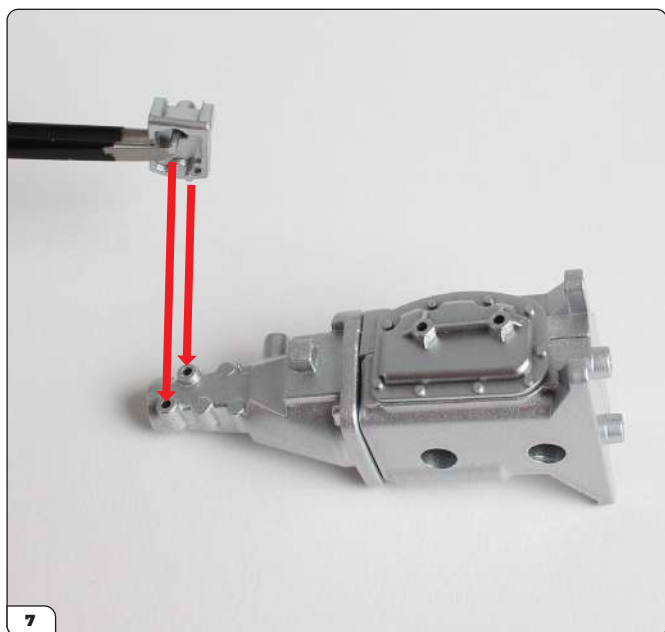
Stage 07: Assembling the Gearbox and Fitting the Shifter Linkage



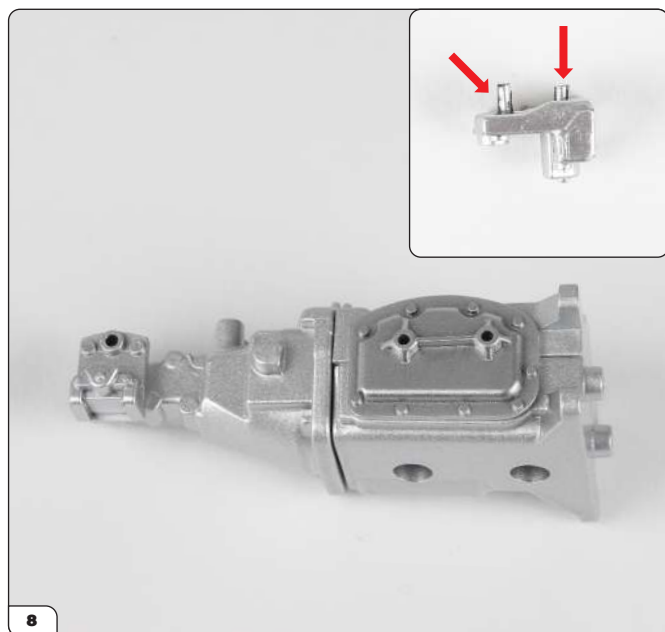
Align the lower gearbox with the assembly as shown (arrows).



Fit it in place then secure using 2x DM screws.

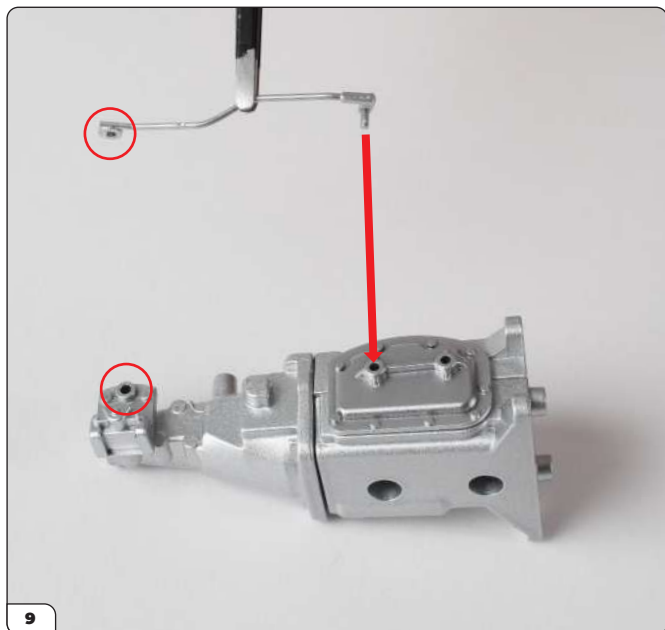


Align the shifter plate with the gearbox as shown (arrows).

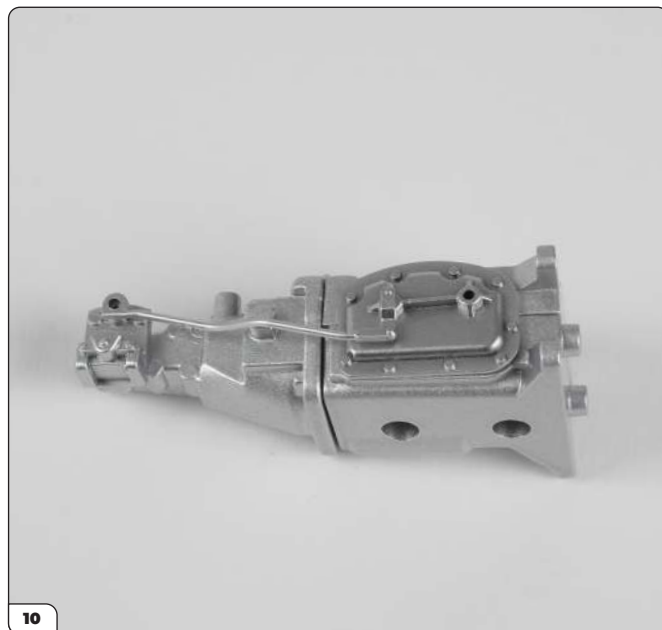


Test fit the shifter plate – remove excess paint from its pins (inset, arrows) if necessary. Press the plate firmly in place.

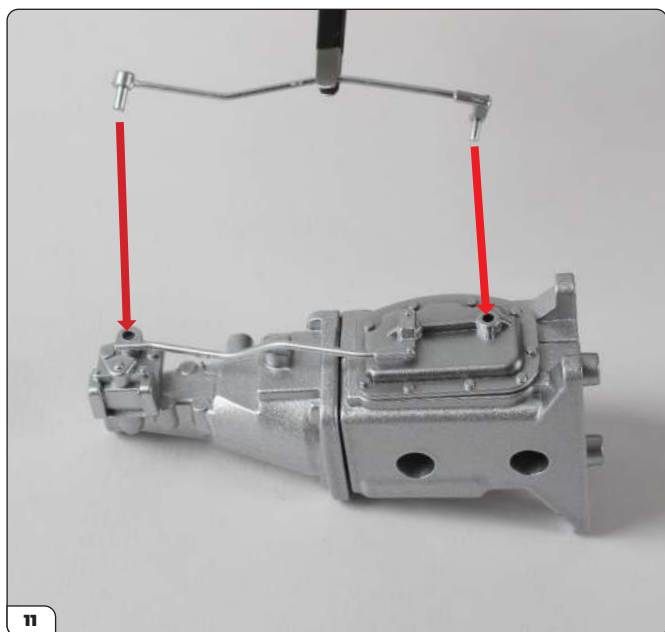
Stage 07: Assembling the Gearbox and Fitting the Shifter Linkage



Align the shorter shifter linkage (2) with the assembly. Its pin fits into the inner hole of the cover (arrow) while its hole will align with the hole in the shifter plate (circled).



Press the linkage in place.



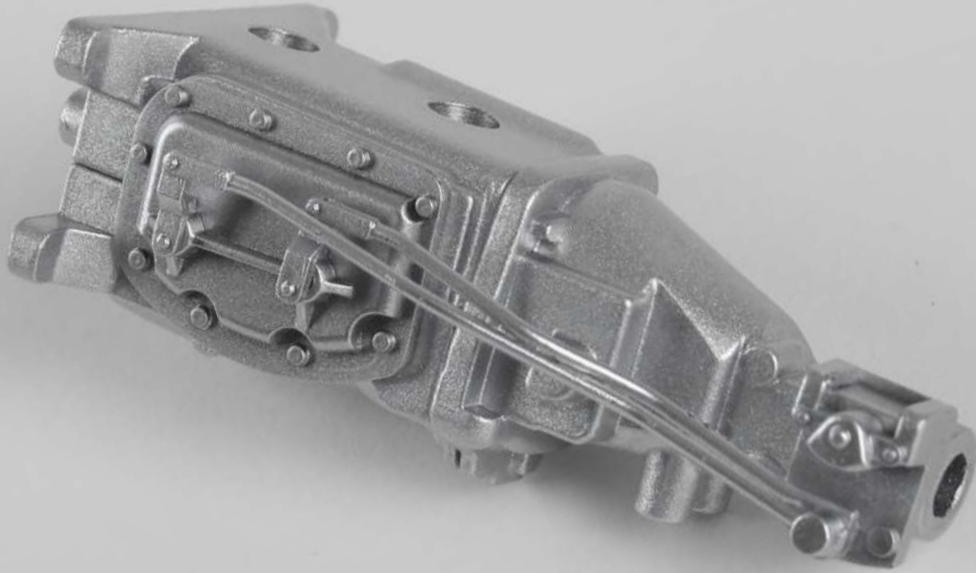
Align the longer shifter linkage (1) with the assembly, orienting it as shown (arrows).



Press the pins firmly into the holes..

Stage 07: Assembling the Gearbox and Fitting the Shifter Linkage

STAGE COMPLETE



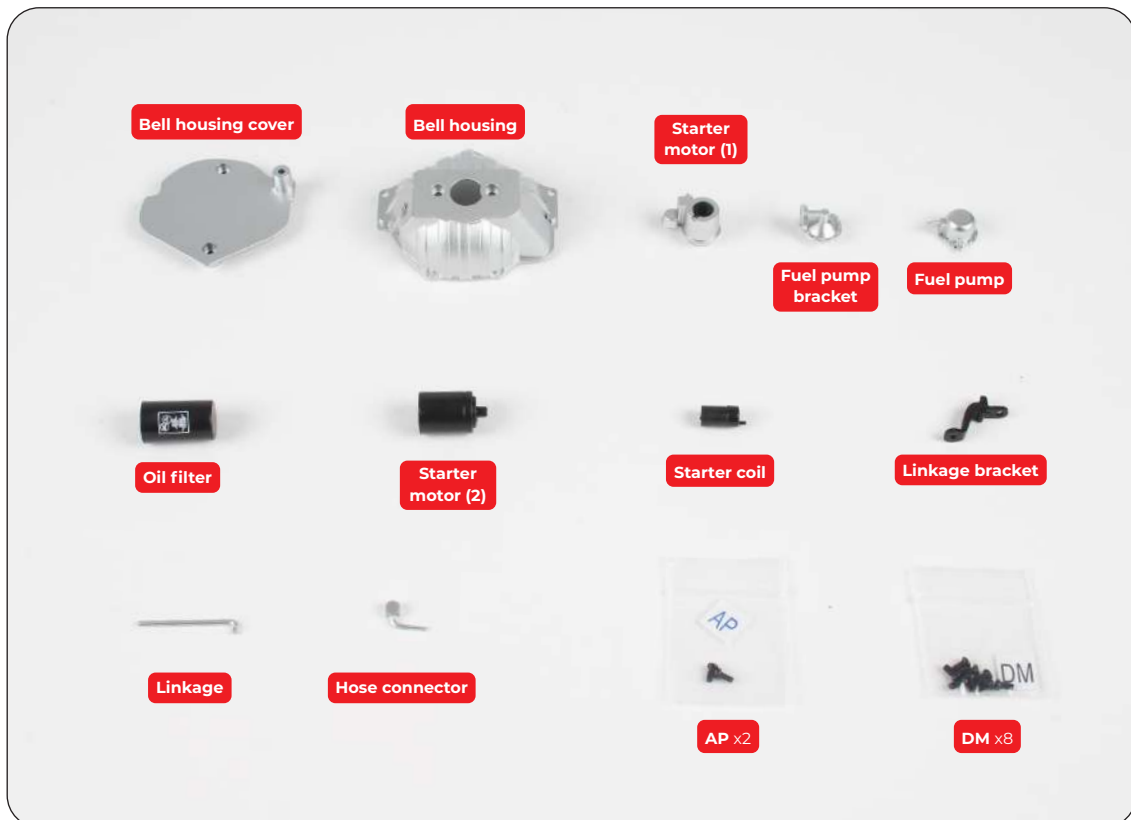
Stage 08: Building and Fitting the Bell Housing and the Starter Motor

For this stage you'll work on the bell housing and starter motor, then fit the fuel pump and oil filter.



STAGE 08 PARTS LIST

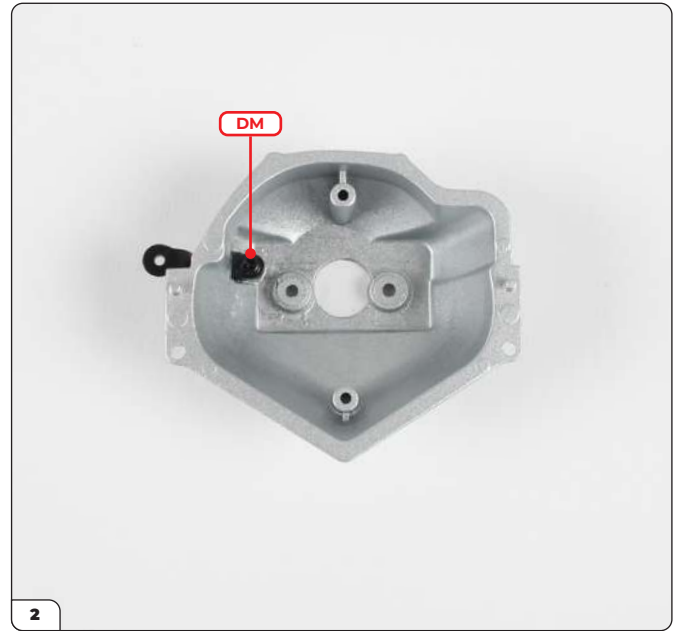
Name
Bell housing cover
Bell housing
Starter motor (1)
Fuel pump bracket
Fuel pump
Oil filter
Starter motor (2)
Starter coil
Linkage bracket
Linkage
Hose connector
AP screws x2
DM screws x8



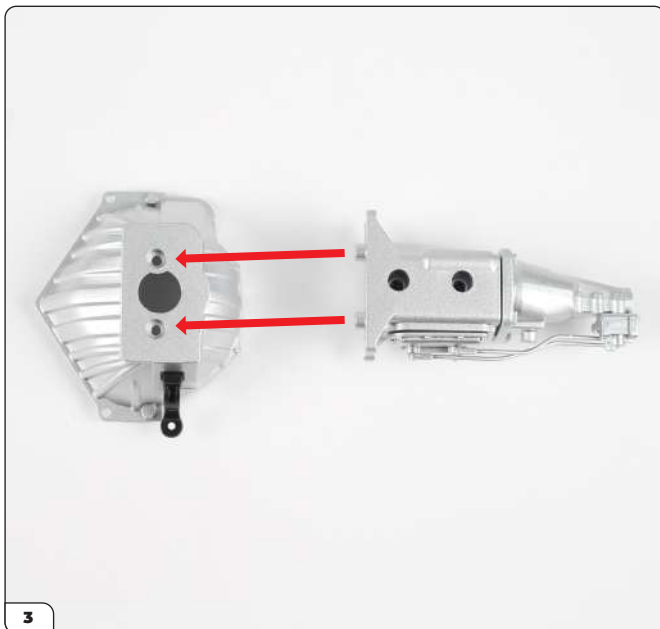
Stage 08: Building and Fitting the Bell Housing and the Starter Motor



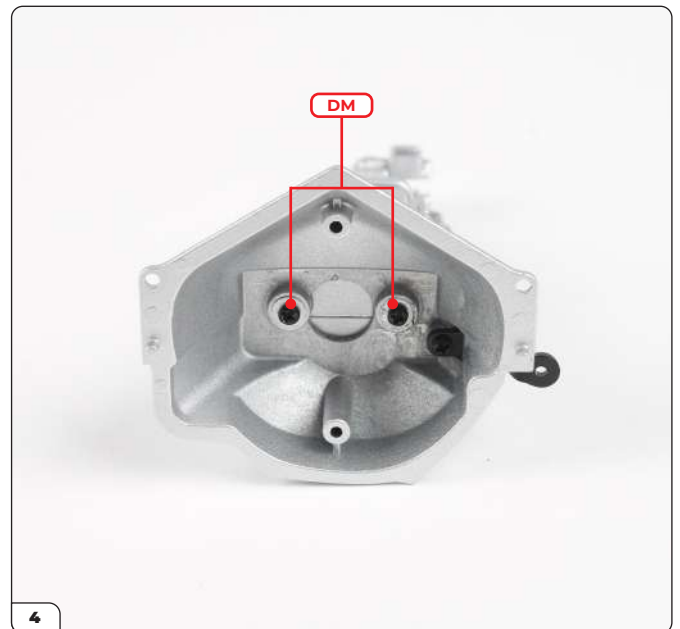
Align the tab of the linkage bracket with the slot in the bell housing as shown (arrow).



Push into position then secure in place using a DM screw.



Retrieve the gearbox assembly from Stage 7. Align the bell housing with it as shown (arrows).

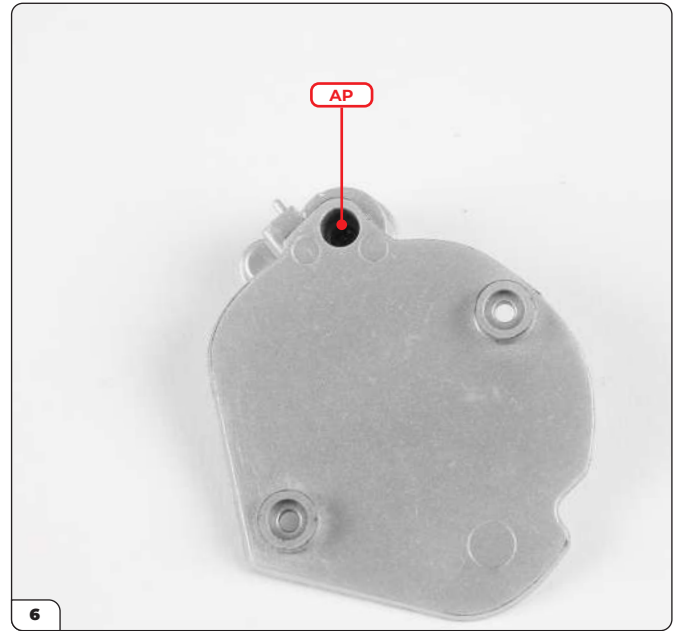


Fit together and fix in place using 2x DM screws.

Stage 08: Building and Fitting the Bell Housing and the Starter Motor



Align the starter motor (1) with the bell housing cover using the notch and protrusion (inset, circled) as a guide.



Fit together and secure using an AP screw.

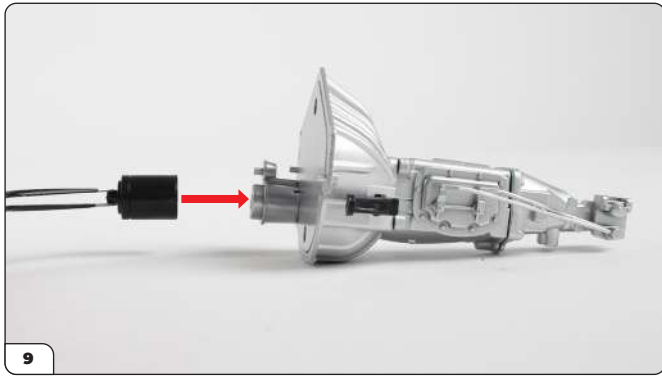


Align the screw holes of the bell housing cover with the assembly as shown (circled).



Position the cover then secure using 2x DM screws.

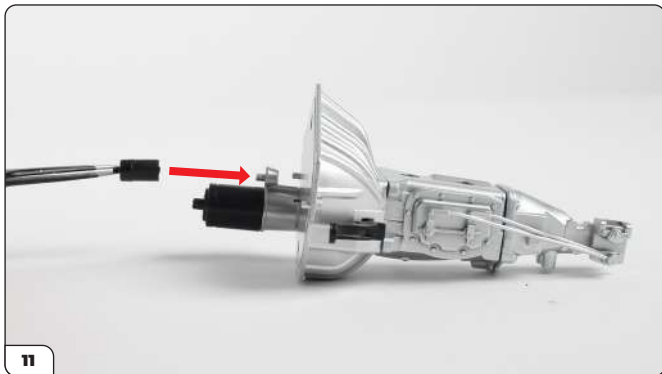
Stage 08: Building and Fitting the Bell Housing and the Starter Motor



Align the second starter motor (2) with the first starter motor (arrow).



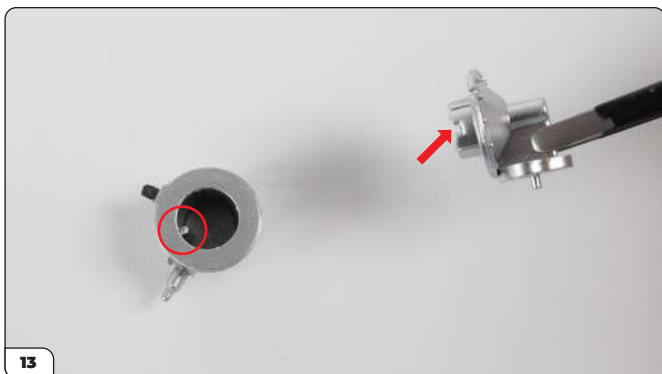
Firmly press into place.



Align the starter coil with the small silver pin (arrow).



Push the starter coil onto the pin.

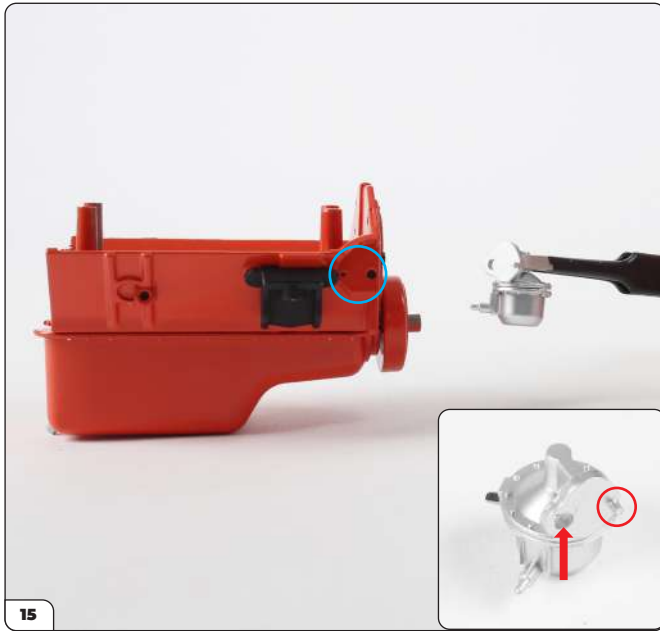


Take the fuel pump and its bracket. Note the protrusion (circled) and notch (arrow) for fitting the parts.

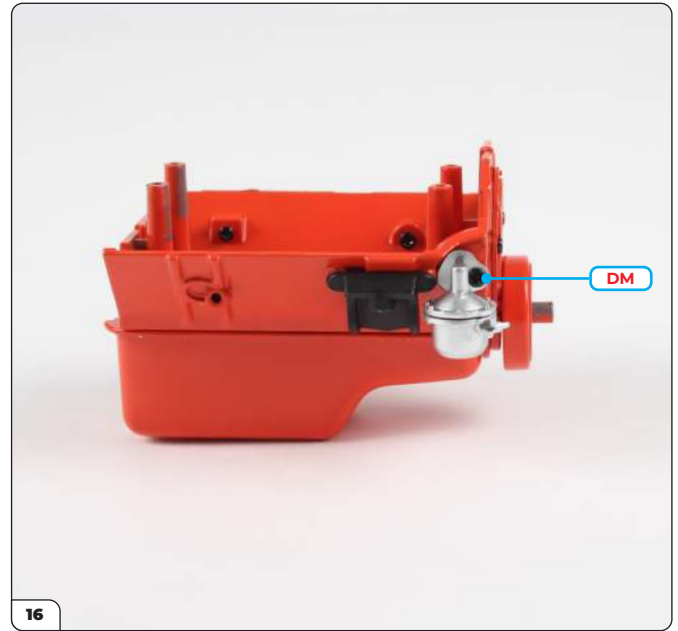


Press the parts firmly together.

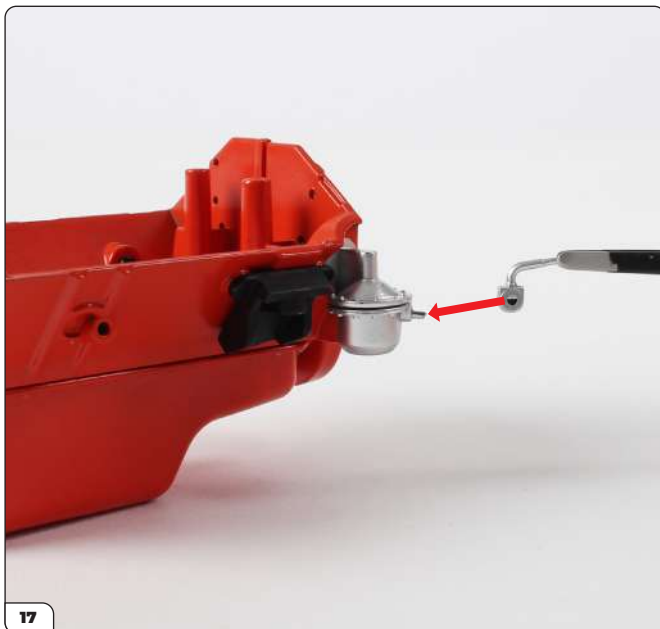
Stage 08: Building and Fitting the Bell Housing and the Starter Motor



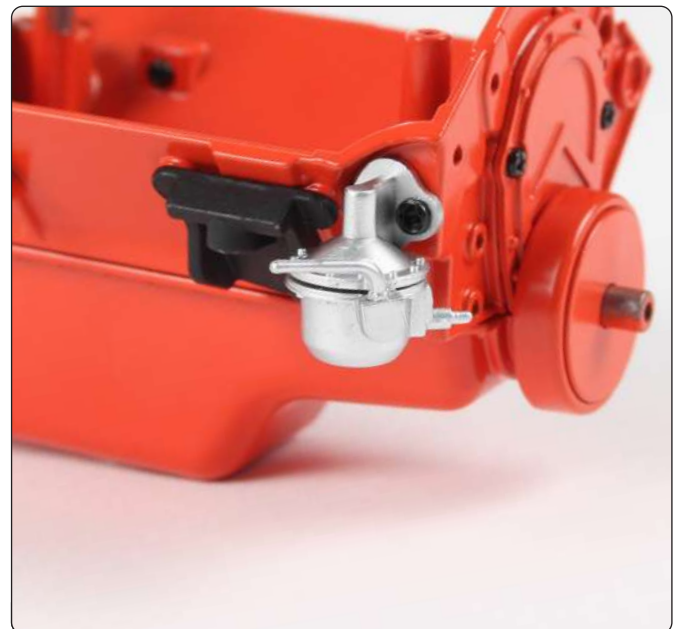
Align the fuel pump bracket with the oil sump (Stage 6). Note the pin (inset, circled) and the large hole (inset, arrow) on the bracket for fitting it onto the oil sump (blue circle).



Fit the bracket in place and secure using a DM screw.

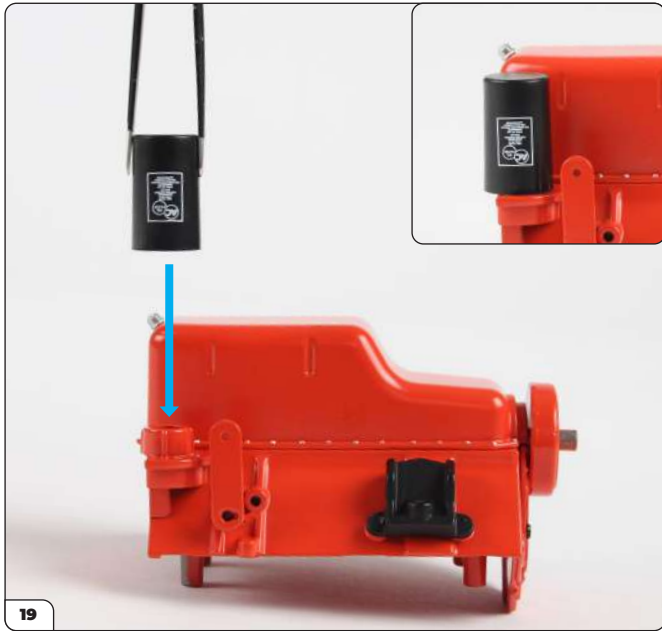


Align the hose connector's D-shaped hole with the pin of the fuel pump (arrow).



Push into place as shown.

Stage 08: Building and Fitting the Bell Housing and the Starter Motor



19 Align the oil filter with the oil sump (arrow) so that the writing faces outwards, then fit in place (inset).



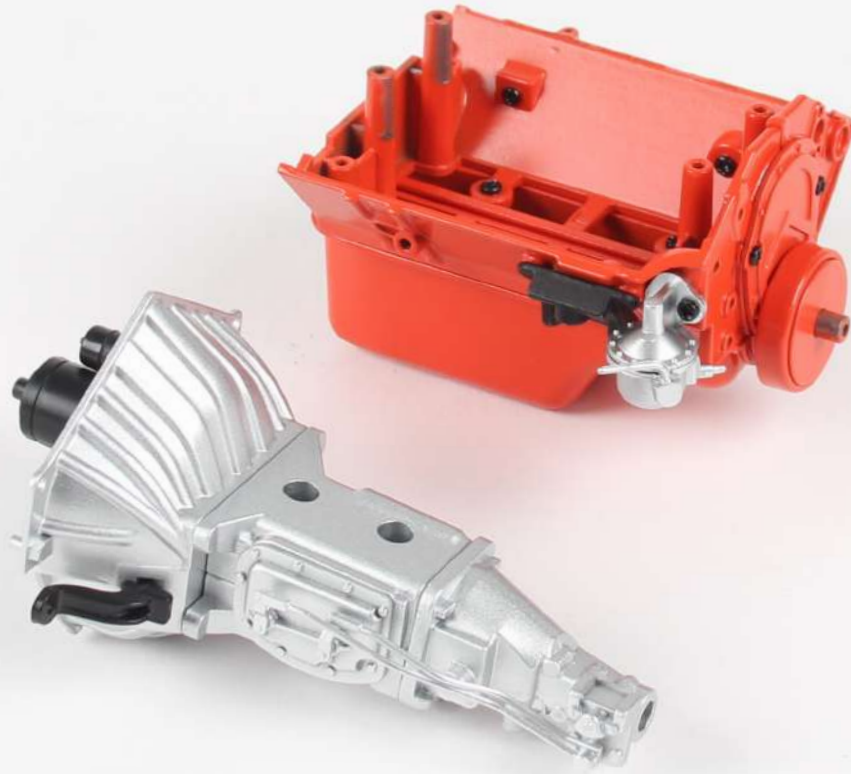
20 Align the linkage with the oil sump (arrow).



21 Press the linkage into the hole then rotate it to the angle shown.

Stage 08: Building and Fitting the Bell Housing and the Starter Motor

STAGE COMPLETE



Stage 09: Installing the Cylinder Heads

For this stage you'll install the left and right cylinder heads, exhaust manifolds, oil dipstick and attach a hose to the fuel injection unit.



STAGE 09 PARTS LIST

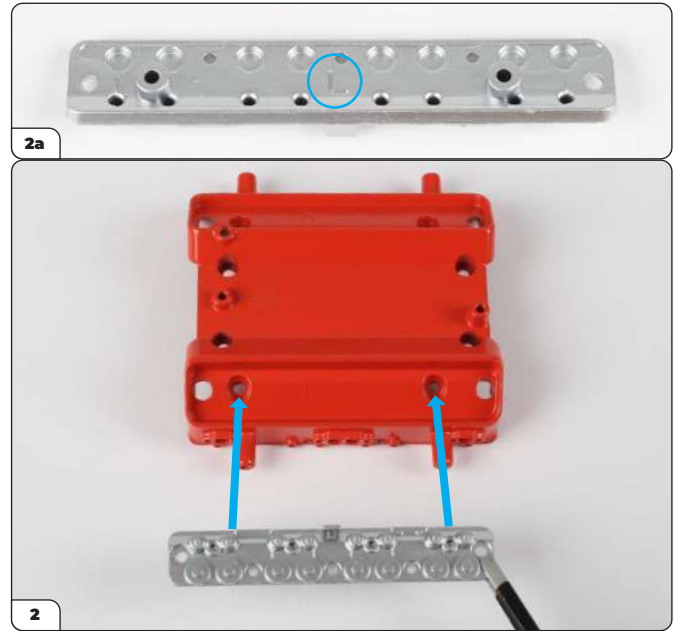
Name
Engine block top cover
Oil dipstick
Lower bracket
Hose
Cylinder head (L)
Cylinder head (R)
Valve cover (L)
Valve cover (R)
Exhaust manifold (L)
Exhaust manifold (R)
EP screws x10
FP screws x3
DM screws x5



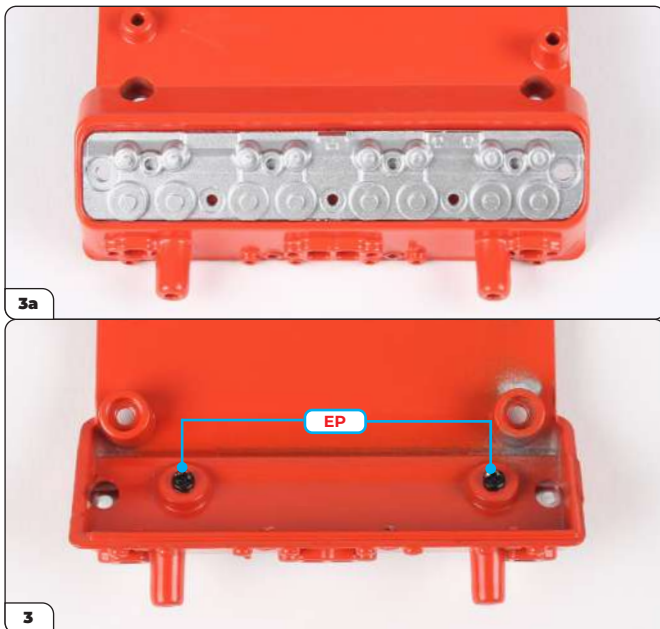
Stage 09: Installing the Cylinder Heads



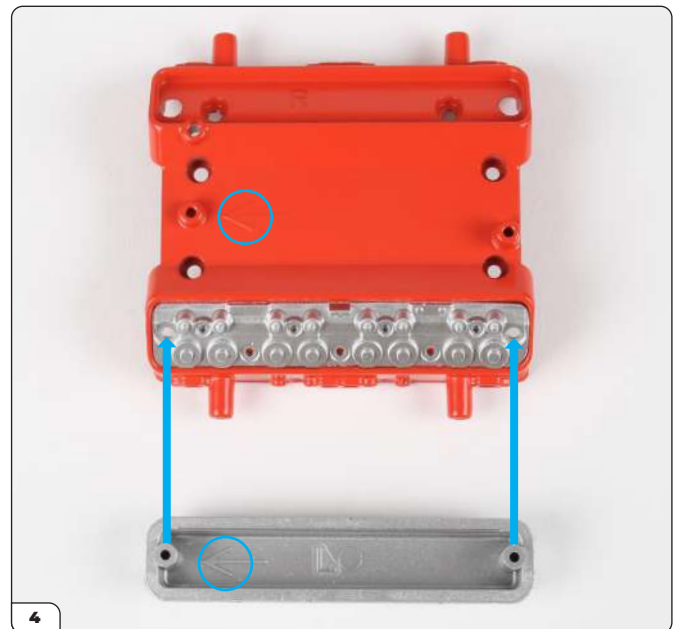
Lay the engine block top cover on your work surface with the arrow pointing left (circled).



Align the left cylinder head (marked 'L', 2a) with the cover (arrows).

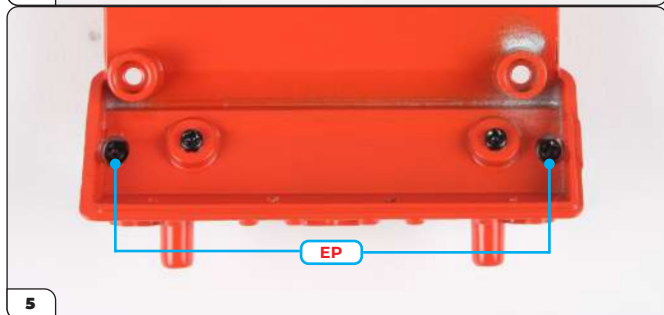


Fit the cylinder head in position (3a) then secure using 2x EP screws.



Align the arrow on the inside of the left valve cover with the one on the engine block cover (circled) as shown. The cover has two raised screw holes which fit into the cylinder head (arrows).

Stage 09: Installing the Cylinder Heads



Fit the valve cover in place (5a) and secure using 2x EP screws.



Place the engine block cover with the arrow on the right-hand side (circled), then align the right cylinder head with it (arrows).

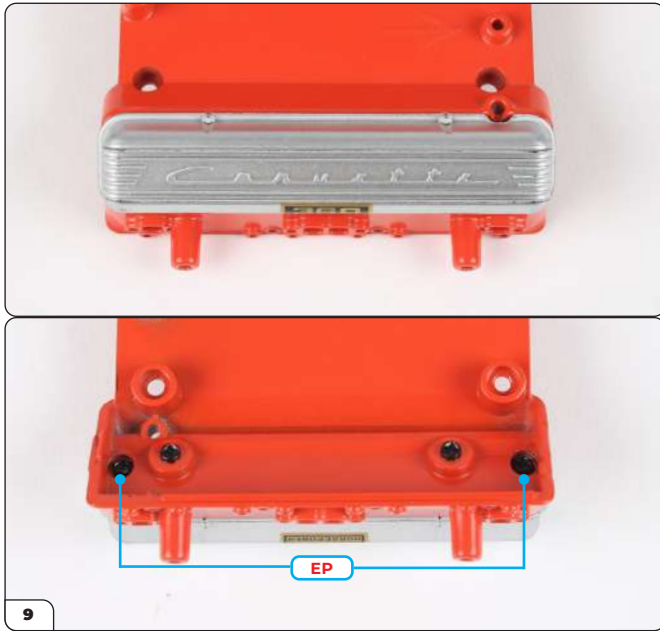


Fit the cylinder head in position and secure using 2x EP screws.



Align the right valve cover with the cylinder head (arrows).

Stage 09: Installing the Cylinder Heads



Fit the valve cover and secure in place using 2x EP screws.



Place the assembly with the arrow pointing left (circled). Align the holes of the left exhaust manifold (red arrows) with the raised screw holes on the cover (blue arrows).



Fit the manifold in place and fix using 2x DM screws.



Turn the assembly around (arrow pointing right, circled) and fit the right exhaust manifold in the same way (arrows).

Stage 09: Installing the Cylinder Heads



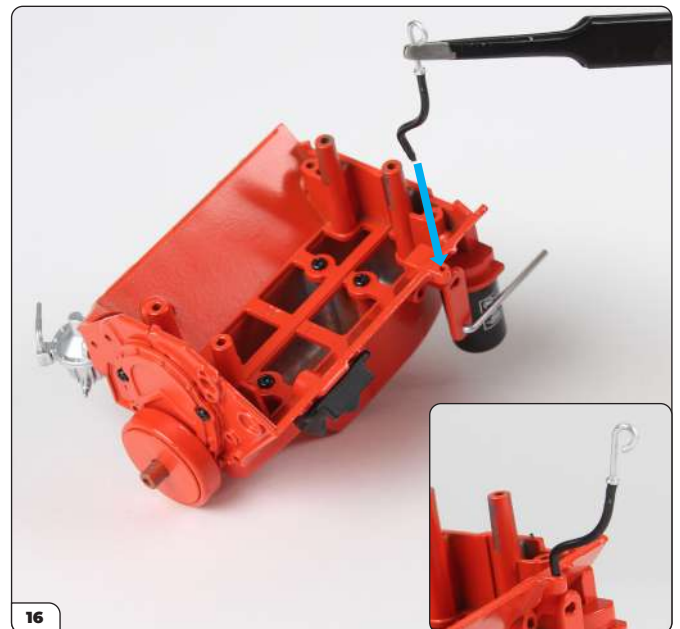
Fix the manifold using 2x DM screws.



Align the lower bracket with the right exhaust manifold (arrows).



Fit the bracket then secure it using 2x FP screws. Note the tab of the bracket is pointing upwards (arrow).

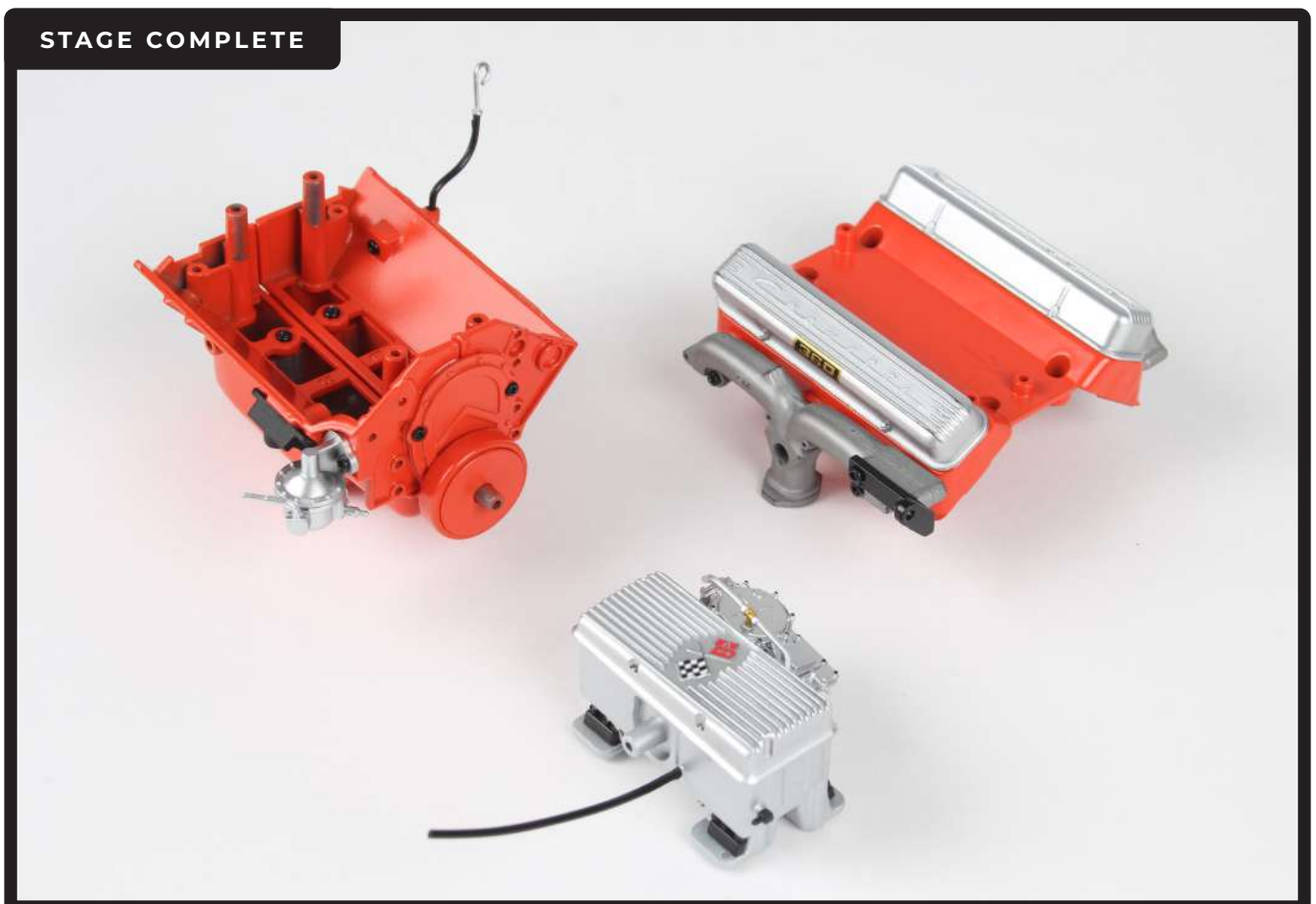


Retrieve the oil sump from Stage 8 and push the dipstick's pin into the small hole (arrow).

Stage 09: Installing the Cylinder Heads



Retrieve the fuel injection assembly from Stage 5 and fit one end of the hose over the small pin (arrow).



Stage 10: Attaching the Air Meter to the Fuel Injection Unit

You'll build the air meter in this stage, which measures the flow of air going into the engine, and attach it to the fuel injection unit.

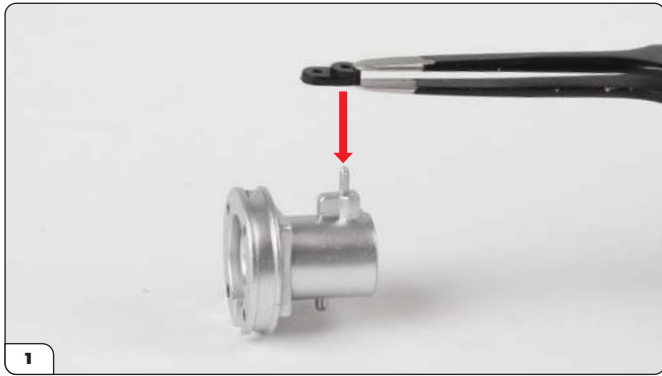


STAGE 10 PARTS LIST

Name
Air meter body
Diffuser cone
Choke valve
Air meter linkage
Throttle adjuster linkage
Fuel pipe (long)
Fuel pipe (short)
Bracket
Hose (long)
Hose (short)
Tweezers
AM screws x2



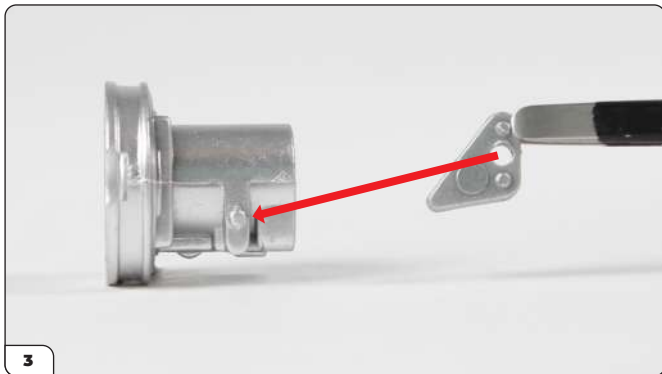
Stage 10: Attaching the Air Meter to the Fuel Injection Unit



Align the bracket with the air meter body as shown.



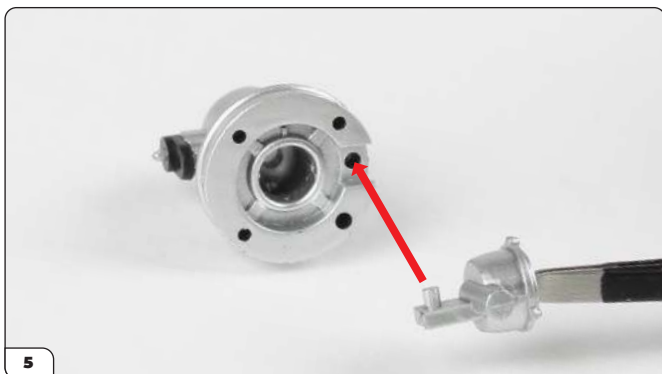
Push firmly in place.



Align the air meter linkage with the body as shown.



Press the linkage onto the pin.



Align the choke valve with the hole in the recess of the body.



Push into place.

Stage 10: Attaching the Air Meter to the Fuel Injection Unit



Align the body with the fuel injection assembly (Stage 9) as shown.



Push into place and secure with an AM screw (inset).



Align the diffuser cone with the body. One hole and pin are larger (circled) – use these to align the cone in the correct orientation.



Fit the pins into the holes and press firmly in place.

Stage 10: Attaching the Air Meter to the Fuel Injection Unit



Align the throttle adjuster linkage with the assembly. First press the shaped pin into the hole in the side of the assembly (red arrow).



Next push the pin at the end of the linkage into the hole in the bracket (blue circle) then insert the throttle return pin into the hole at the base of the assembly (green arrow).

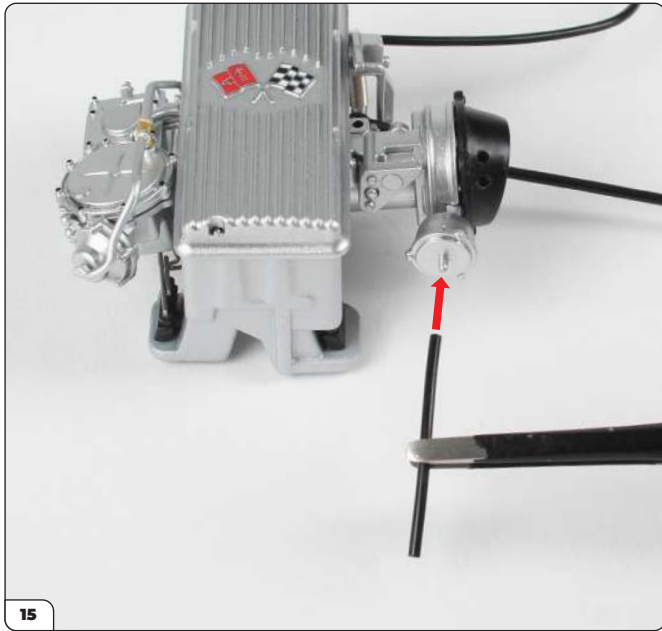


Align the long hose with the black pin of the assembly (arrow).



Push into place.

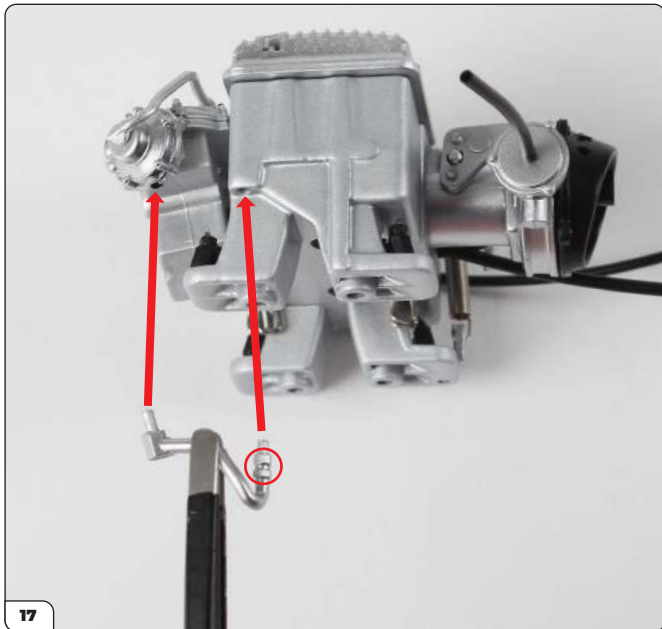
Stage 10: Attaching the Air Meter to the Fuel Injection Unit



Align the short hose with the silver pin of the choke valve (arrow).



Fit the hose over the pin.

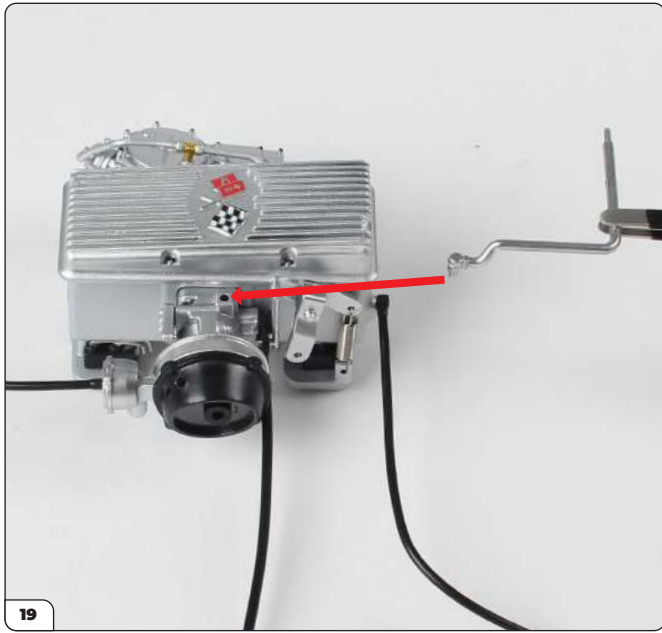


Align the small fuel pipe with the two holes in the fuel injection housing as shown (arrows). Ensure the two small hex bolts are oriented on the right (circled).



Press the pipe in place.

Stage 10: Attaching the Air Meter to the Fuel Injection Unit



19 Fit the pin on the curved end of long fuel pipe into the air meter body as shown (arrow).



20 This shows the long fuel pipe in place.

STAGE COMPLETE



Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses

In this stage you'll add components to the engine block cover before fitting the fuel injection unit.

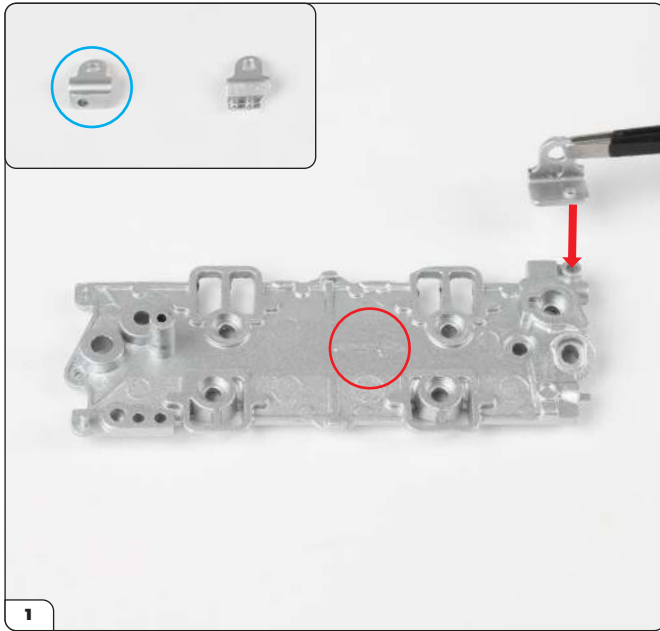


STAGE 11 PARTS LIST

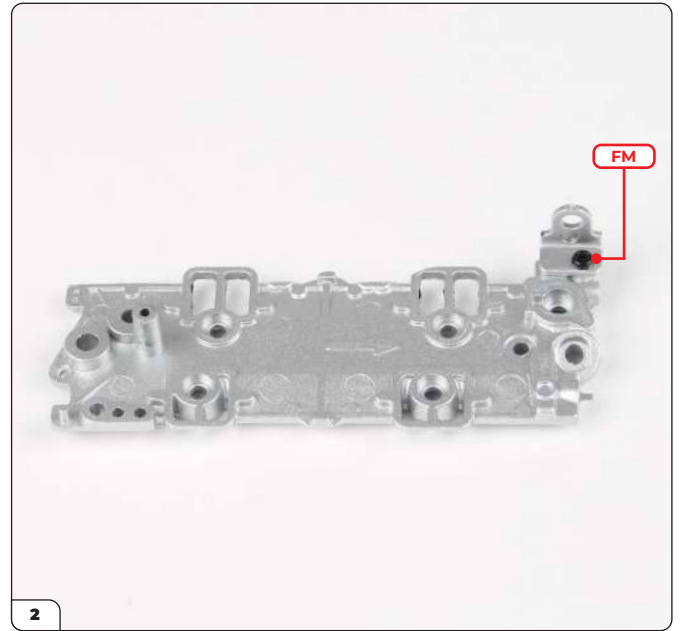
Name	Name
Intake manifold	Fuel filler tube
Fuel hose	Lug (1)
Fuel filter	Lug (2)
Ignition coil (1)	Fuel hose (54 mm)
Filter	Fuel hose (42 mm)
Fuel pipe (short)	Fuel hose (37 mm)
Fuel pipe (long)	Fuel hose (31 mm)
Ignition coil (2)	EP screw x3
Injection distributor	DM screw x5
Water pump	FM screw x2



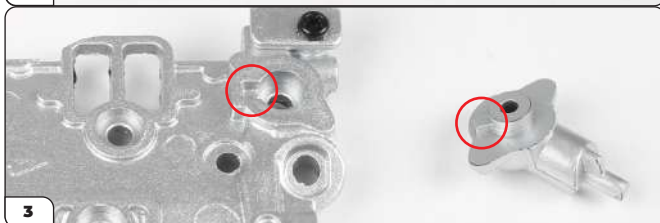
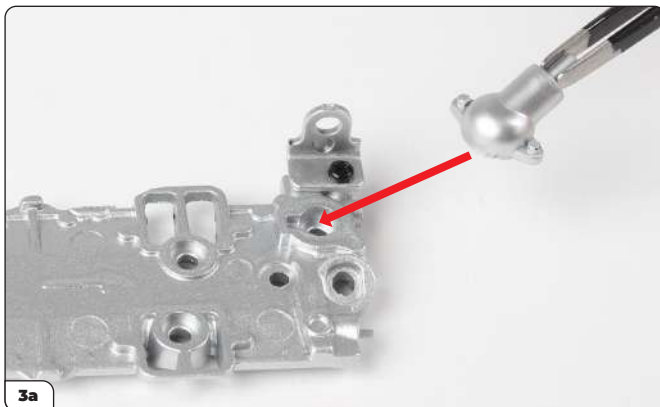
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



Align the first lug (circled in blue, inset) with the intake manifold (arrow). Note the arrow pointing right, circled in red.



Press the lug in to place then secure using an FM screw.

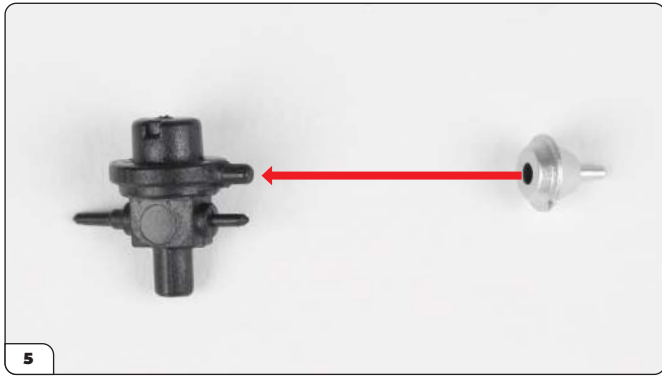


Fit the water pump into the shaped recess in front of the lug (arrow, 3a). Use the notch and protrusion to orient the parts correctly (circled).



Secure in place from the reverse side using an EP screw (inset image).

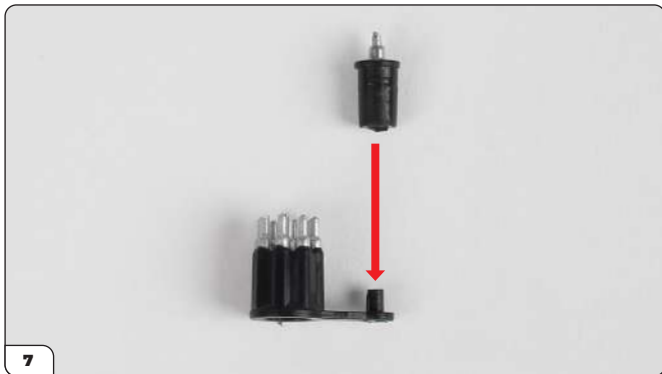
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



5 Align the injection distributor and filter as shown (arrow).



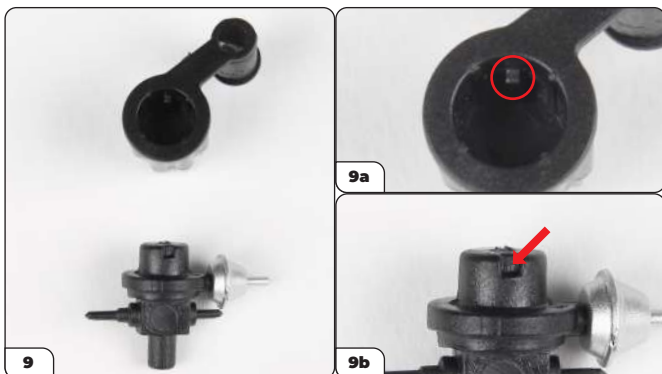
6 Push together.



7 Align the two parts of the ignition coil as shown.



8 Push together.

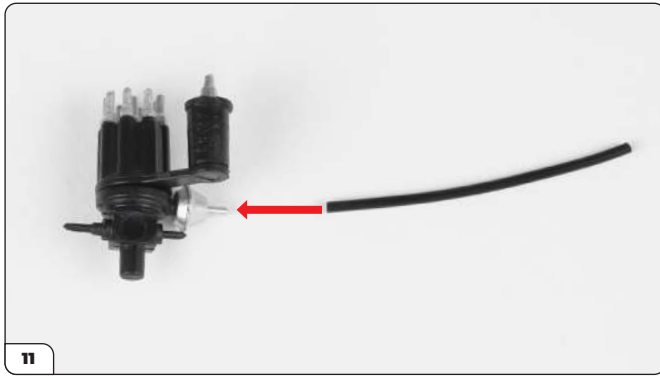


9 Locate the protrusion inside the coil (circled, 9a). This fits into the recess on top of the distributor (arrow, 9b).



10 Fit the ignition coil onto the distributor.

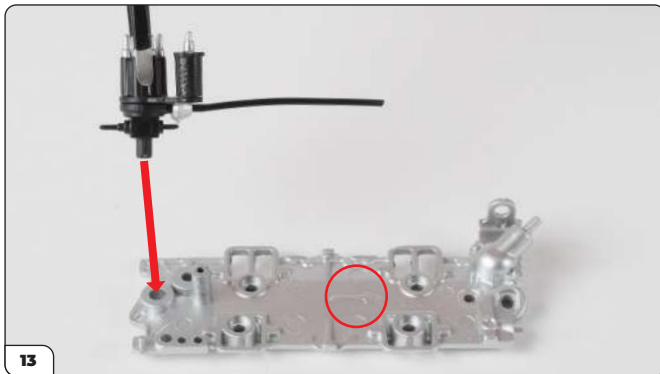
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



Align the shortest fuel hose (approx. 32 mm) with the silver pin of the distributor.



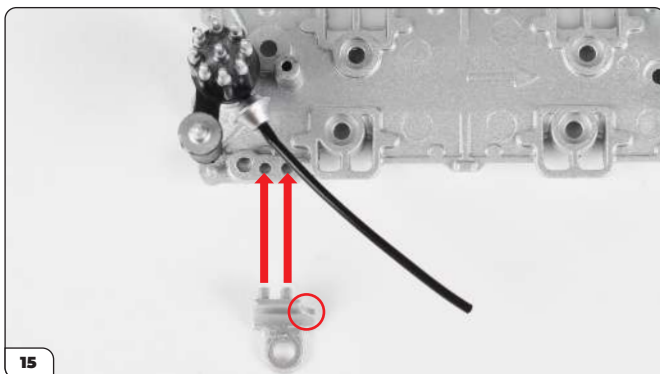
Fit the fuel hose over the pin.



Place the manifold on your work surface (arrow pointing right, circled) and align the distributor.



Push the distributor into place.

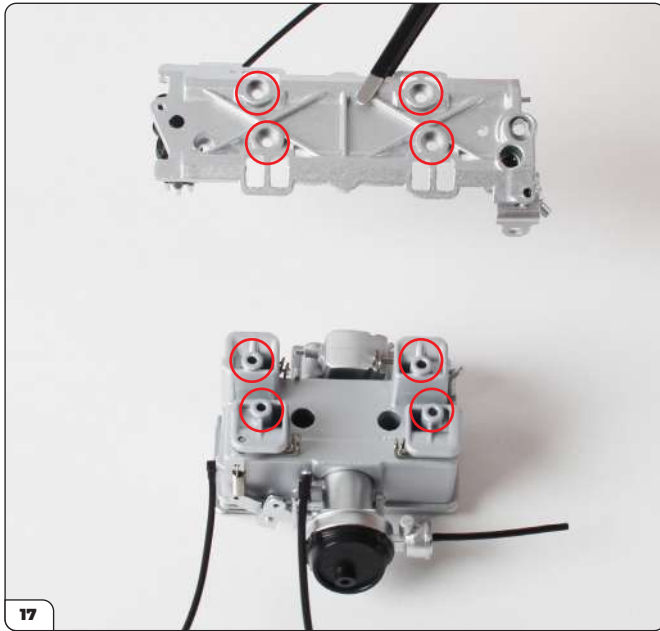


Align the remaining lug with the two holes next to the distributor (arrows). Note the orientation of the recess (circled).

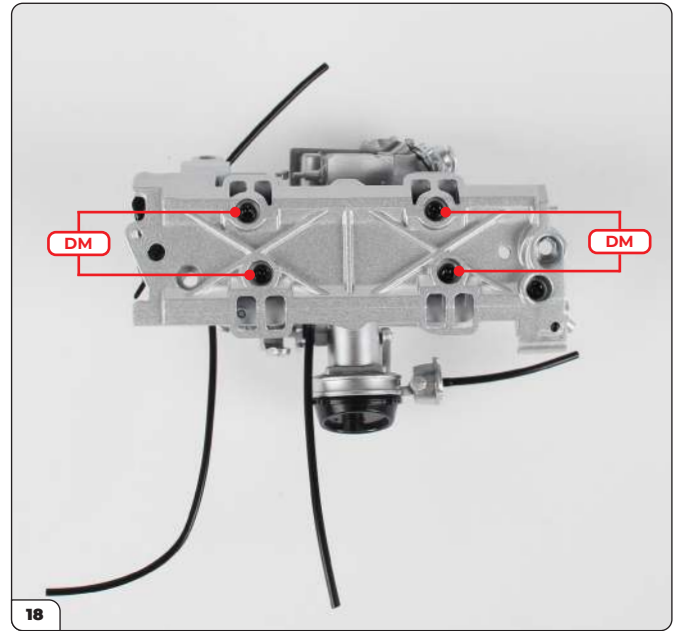


Press the lug in place.

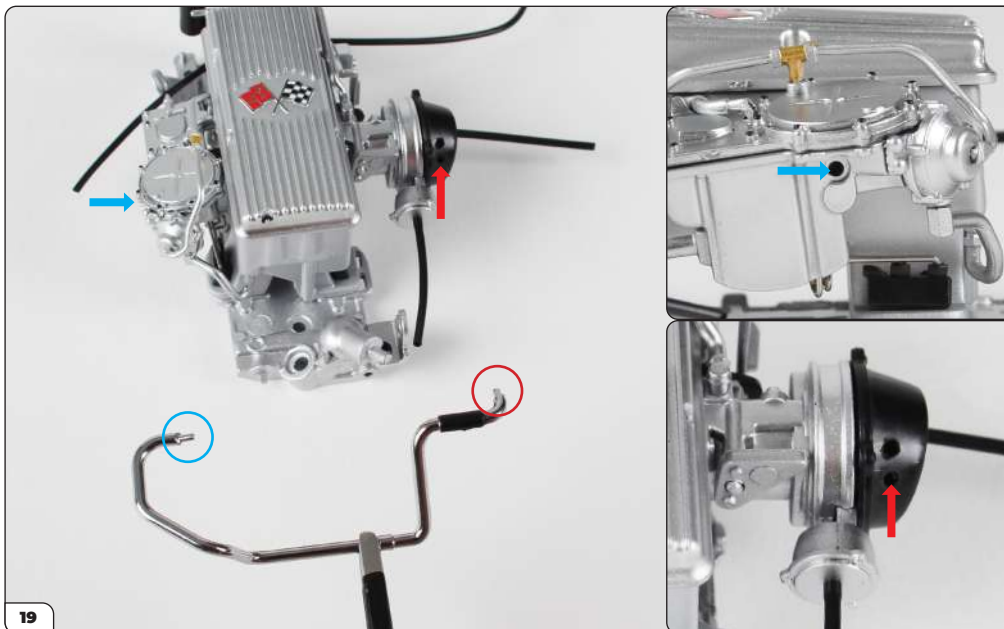
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



Align the intake manifold with the fuel injection unit as shown and locate the fixing points (circled).



Fit the manifold in place and secure using 4x DM screws.



Align the long fuel pipe with the assembly. The pins on the pipe fit into holes in the assembly, as indicated by the circles and arrows.

Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



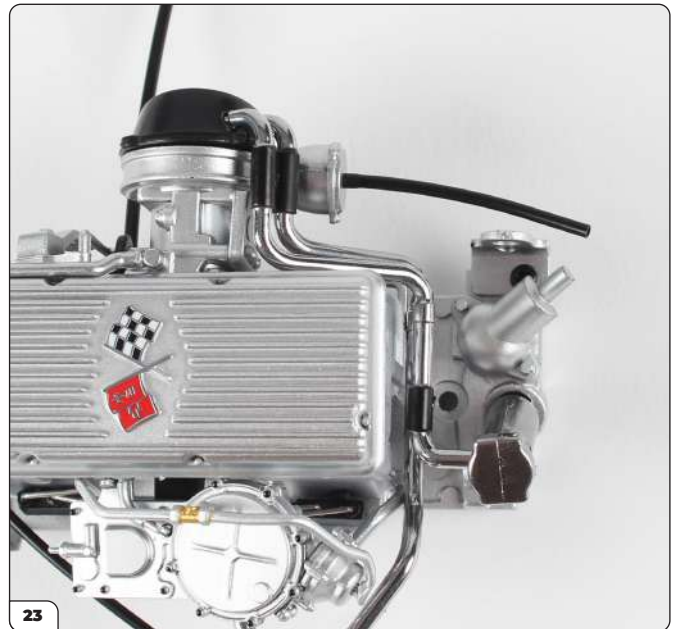
Fit into place as shown.



Fit the short fuel pipe and the fuel filler tube together as shown. Ensure the detail on the pipe (arrow) is closer to the tube.

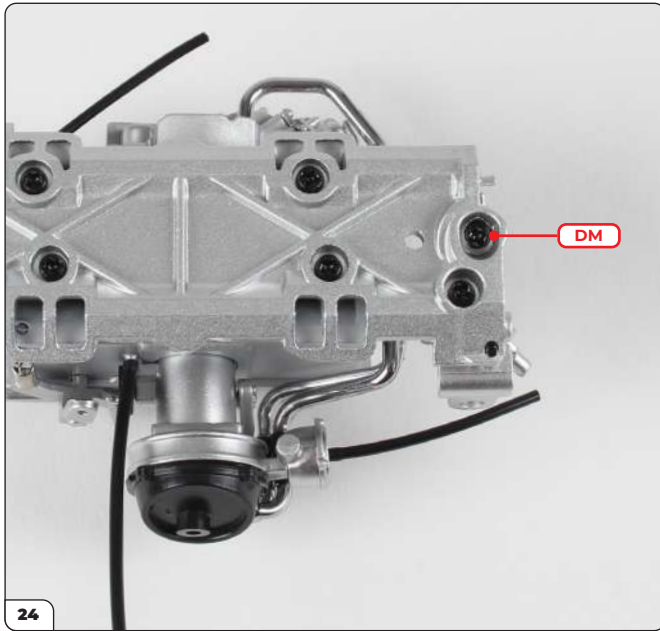


Fit the fuel filler tube into the recessed screw hole (arrow) then push the pin into the remaining hole in the diffuser cone (circled).

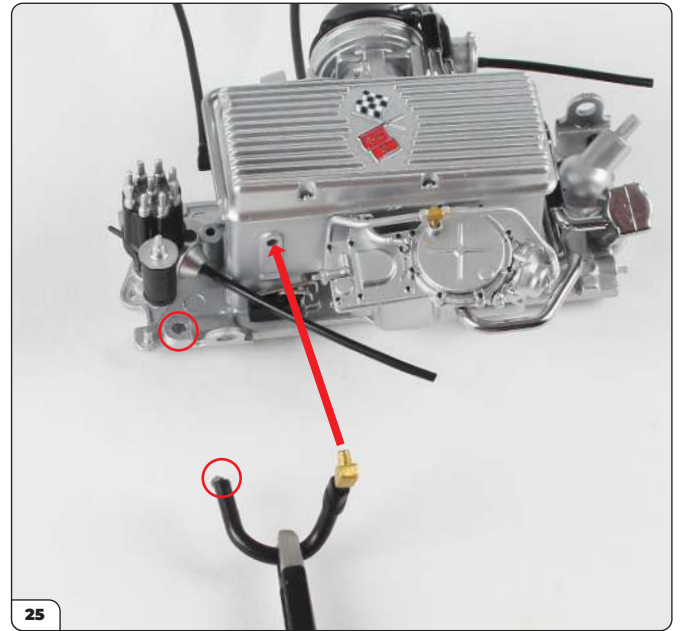


The parts should look like this once fitted.

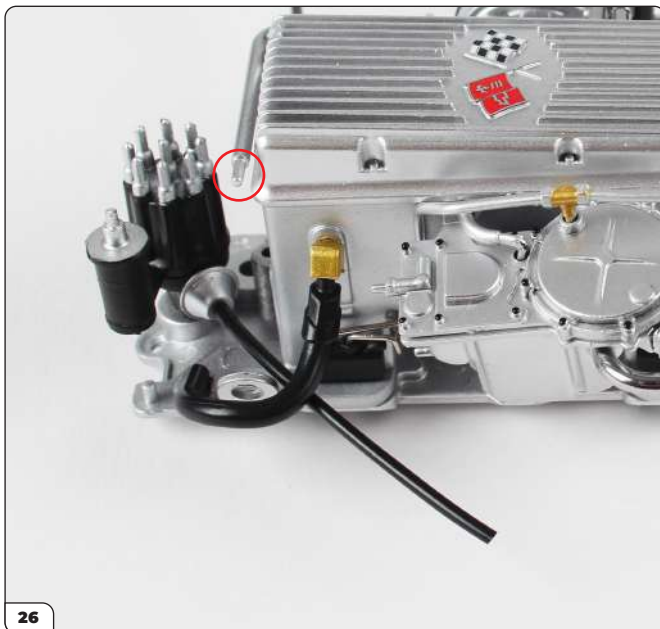
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



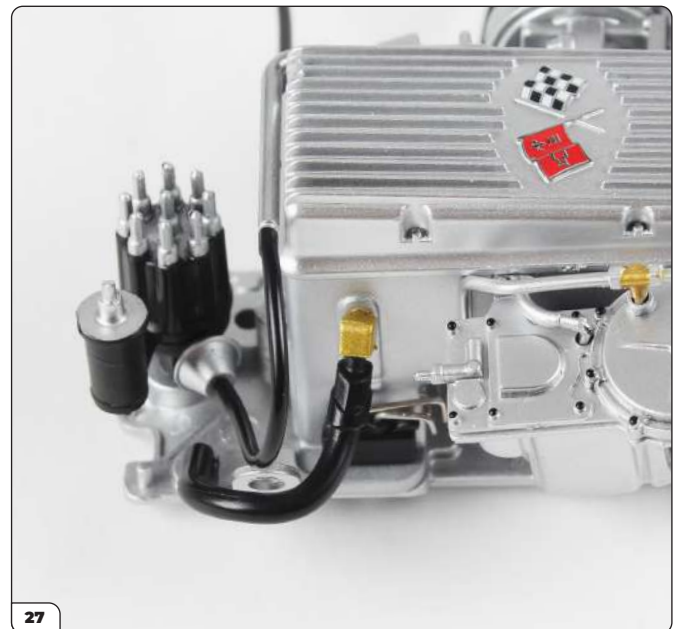
Secure the tube from the reverse side using a DM screw.



Align the fuel hose with the assembly as shown. The gold pin fits into a hole on the fuel injector (arrow), the black pin fits into a hole in the manifold (circled).

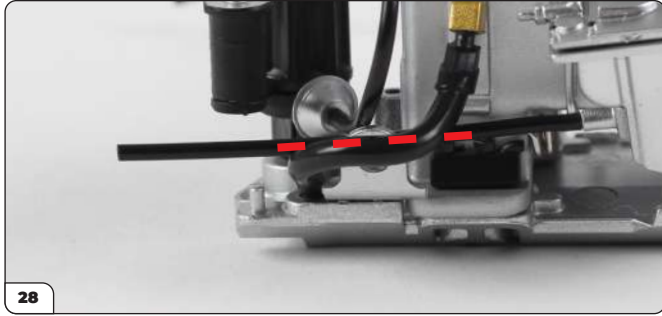
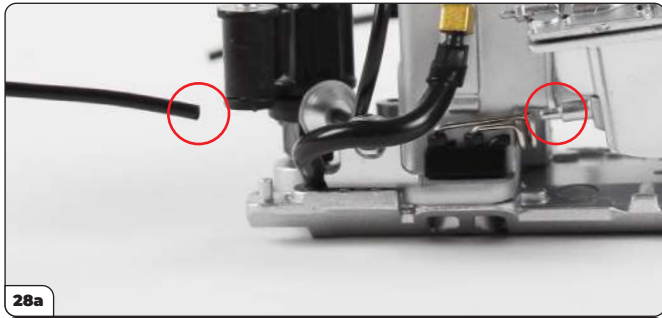


Fit the fuel hose in place. Note the silver pin on the fuel pipe (circled).

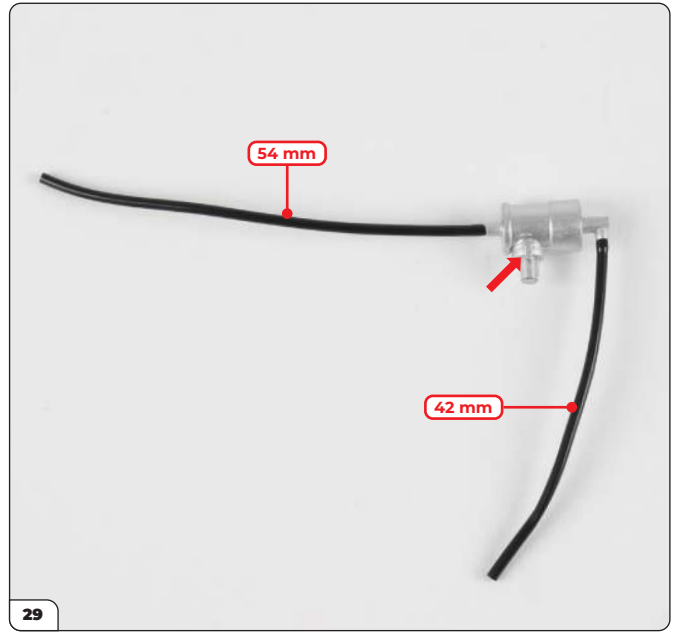


Fit the end of the loose fuel hose onto the pin as shown.

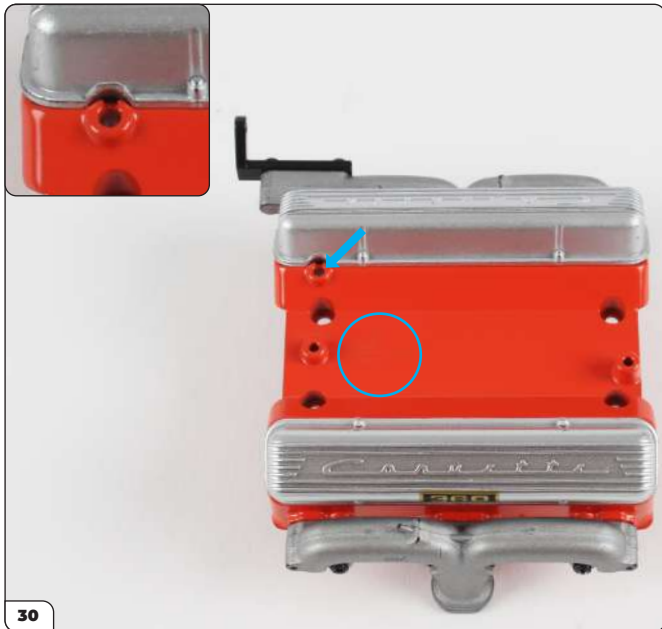
Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses



Guide the shorter fuel hose (approx. 37 mm) through to the pin on the fuel meter (circled, 28a) passing it behind the black fuel hose and lug (dashed line).



Fit the two remaining hoses onto the small silver pins of the filter as shown. Note the protrusion on the fuel filter (arrow)



Place the engine block assembly on your work surface with the arrow pointing left (circled). Note the notch (arrow) on the raised screw hole (inset).



Press the filter into the hole using the protrusion and notch as a guide.

Stage 11: Preparing the Intake Manifold and Fitting Fuel Pipes and Hoses

STAGE COMPLETE



Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit

You'll now assemble parts for the engine block.



STAGE 12 PARTS LIST

Name	Name
Cooling fan	Hose connector
Engine block (rear)	Hose (short)
Water pump	Hose (115 mm)
Fan clutch (inner)	AP screw x3
Fan clutch (outer)	DM screw x12
Fan motor	FM screw x4
Pulley (2)	
Pulley (3)	
Pulley (4)	
Pulley (5)	
Pulley (6)	



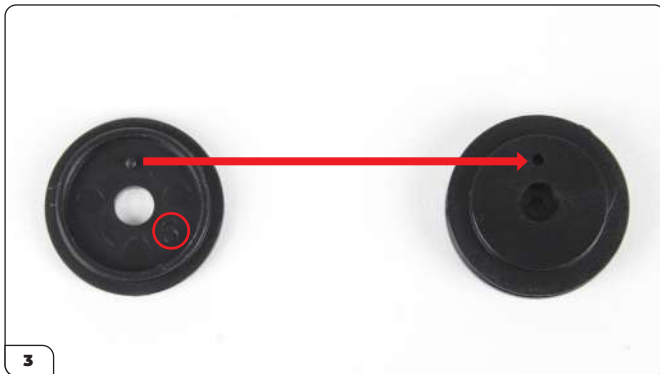
Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



Take the pulleys marked '6' and '4' (circled). There is a hole in '4' which fits onto the pin of '6' (arrows).



Fit the parts together and check that the fit is flush.



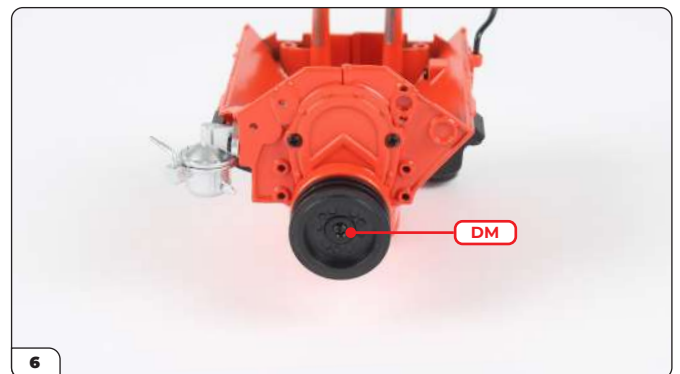
Align pulley '5' (circled) with the assembly. The pin on '5' fits into the hole in '6' (arrow).



Fit the parts together as shown.

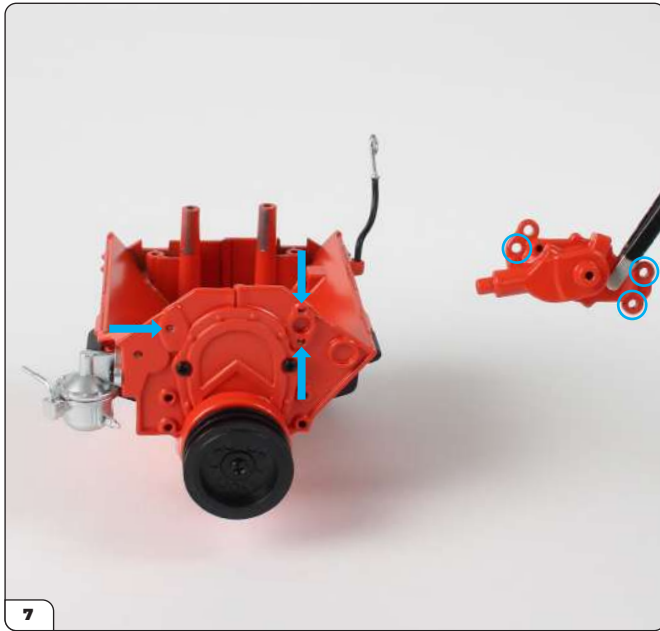


Align the pulley (with '5' facing upwards) with the engine block from Stage 9 (arrow).



Fit then fix using a DM screw.

Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



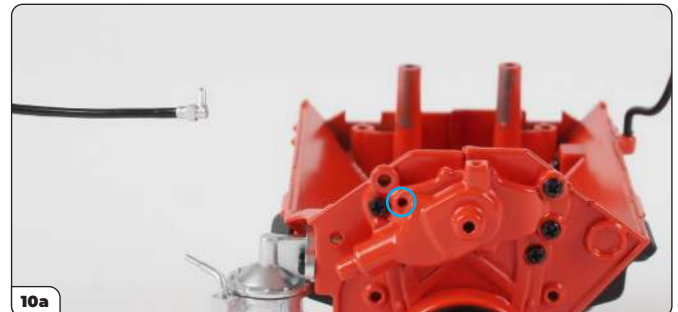
Take the water pump and the engine block as shown. Locate the fixing points in the pump (circled) and the block (arrows).



Fit the pump in place and secure using 3x FM screws.

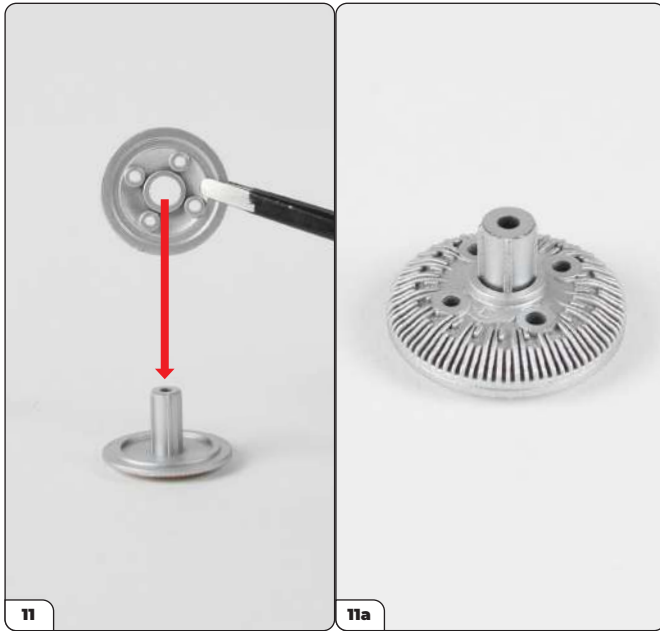


Fit the hose connector into the longer hose (approx. 115 mm) as shown.

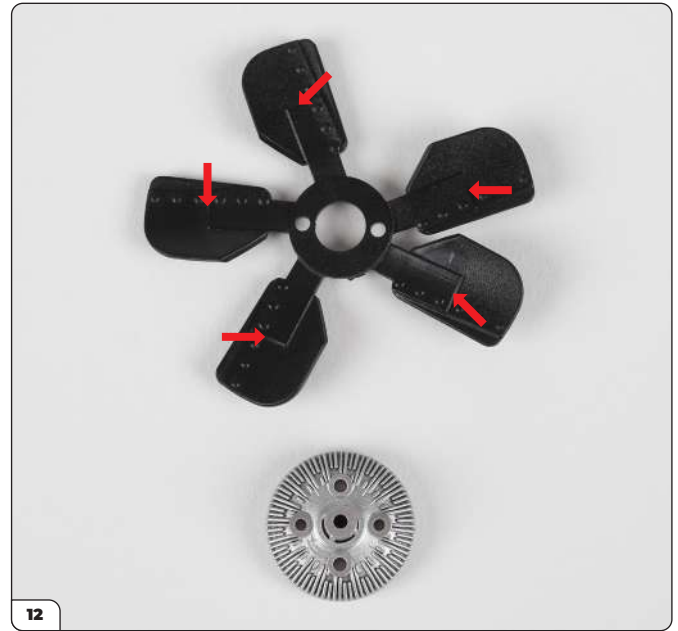


Locate the hole in the water pump (circled, 10a) and fit the hose connector.

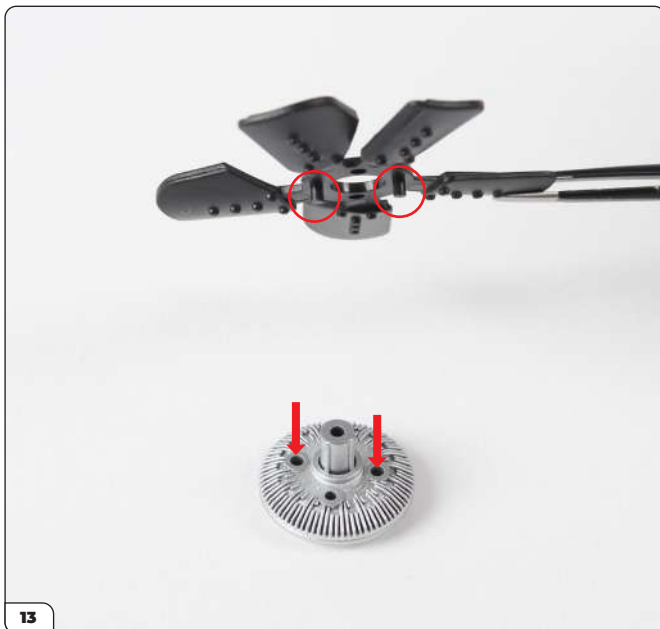
Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



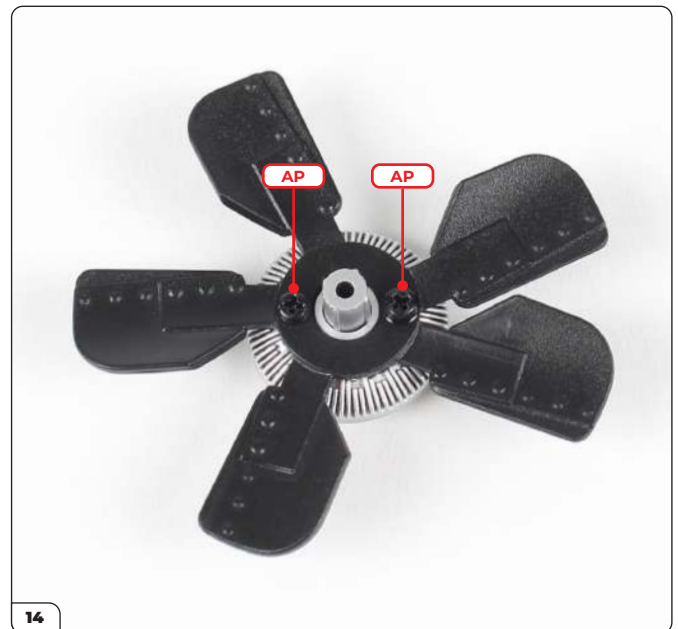
Align the inner and outer parts of the fan clutch as shown (arrow) then fit the parts together (11a).



Take the cooling fan and place it with the ridged areas (arrows) facing upwards.

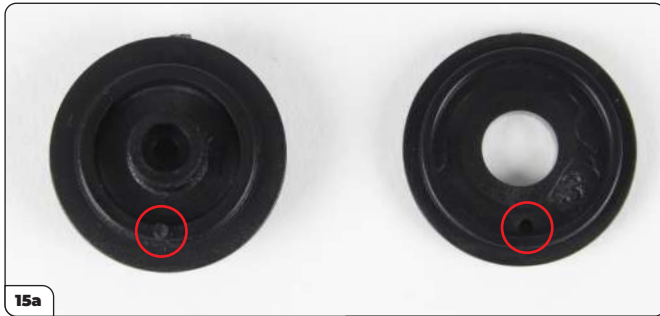


Hold the fan and align the two pins (circled) with the holes in the clutch (arrows). Test fit the parts – the holes and pins are different sizes.

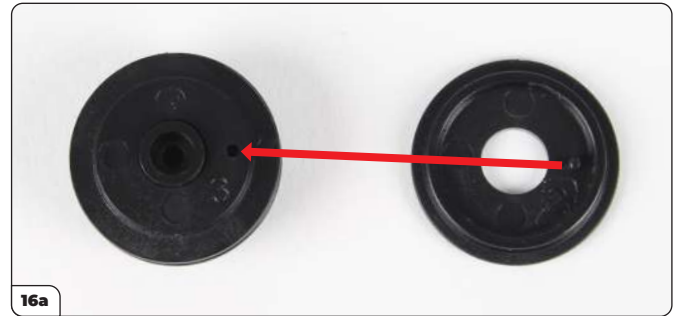


Fit together and secure using 2x AP screws.

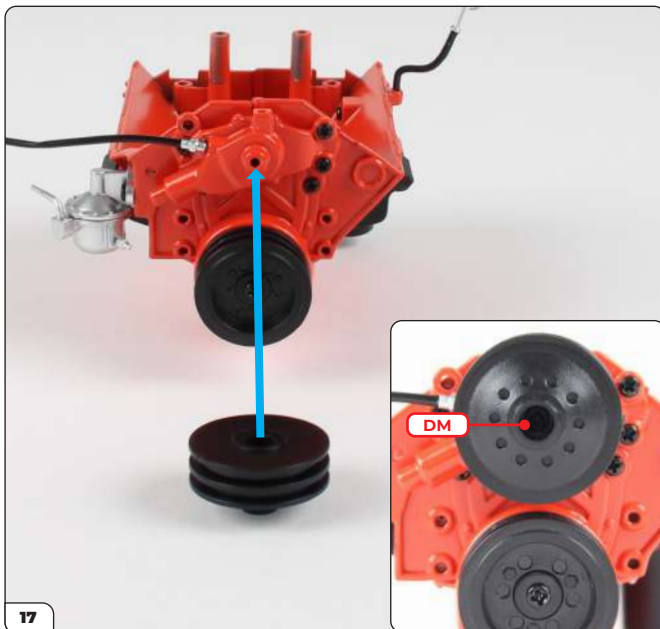
Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



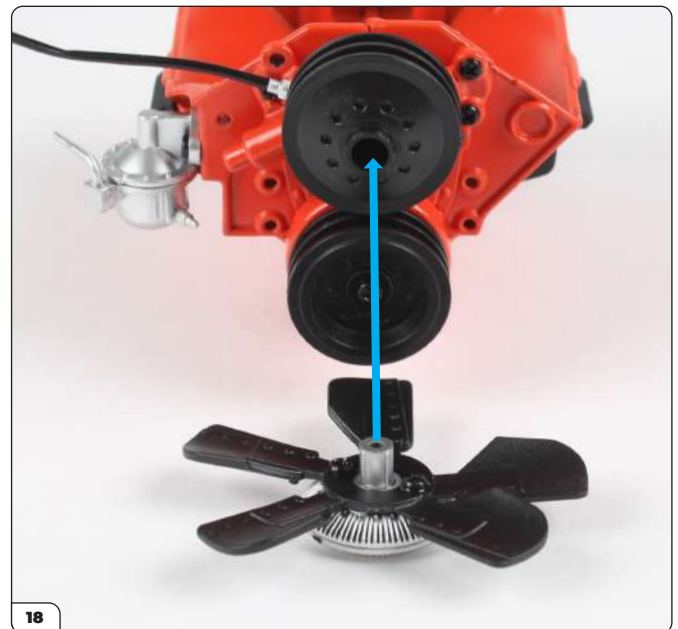
Next take pulley '1' and locate the pin which fits into the hole in '3' (circled, 15a). Press together and check that the fit is flush.



Take pulley '2' and fit it into pulley '3' (arrow, 16a).

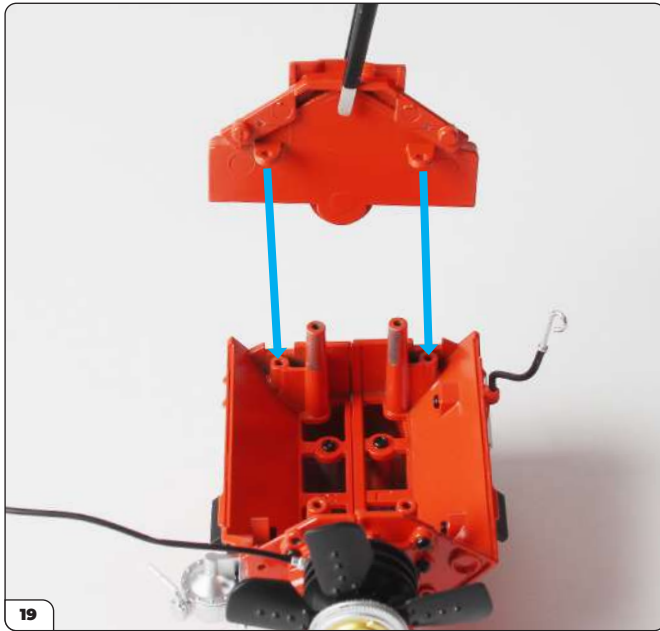


Position the pulley onto the raised screw hole of the water pump (arrow), and secure in place using a DM screw (inset).

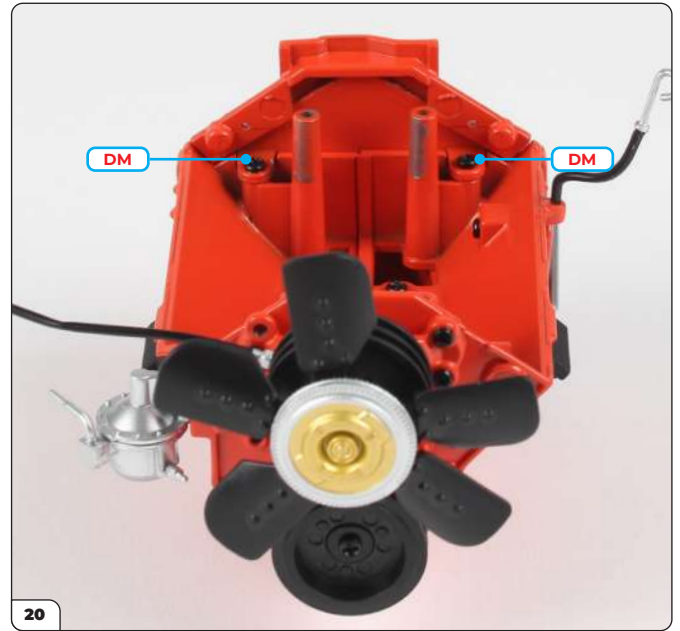


Press the clutch into the centre of the pulley.

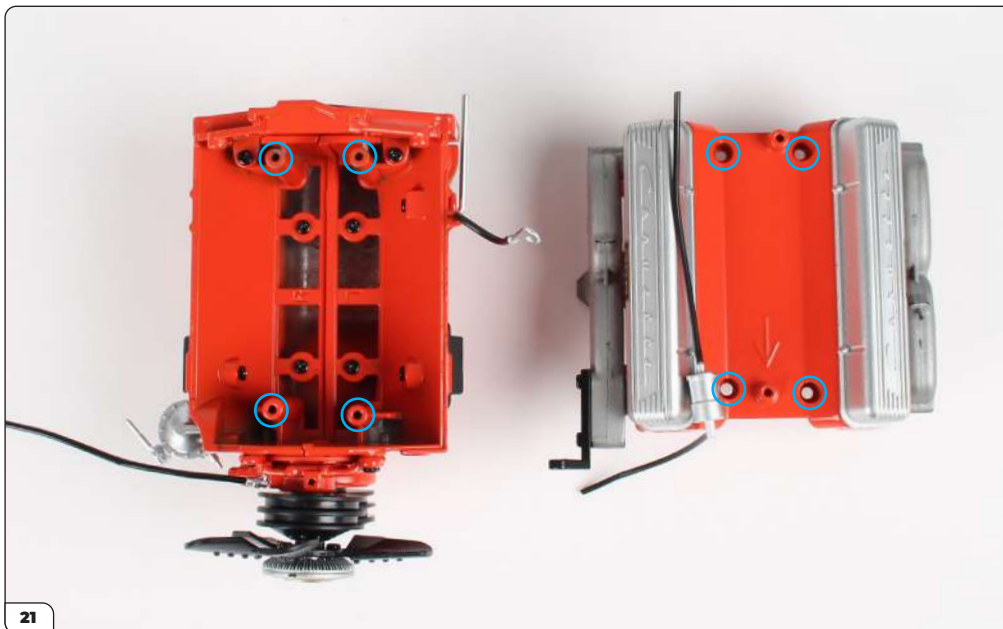
Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



Align the tabs on the rear of the engine block with the screw posts on the assembly.

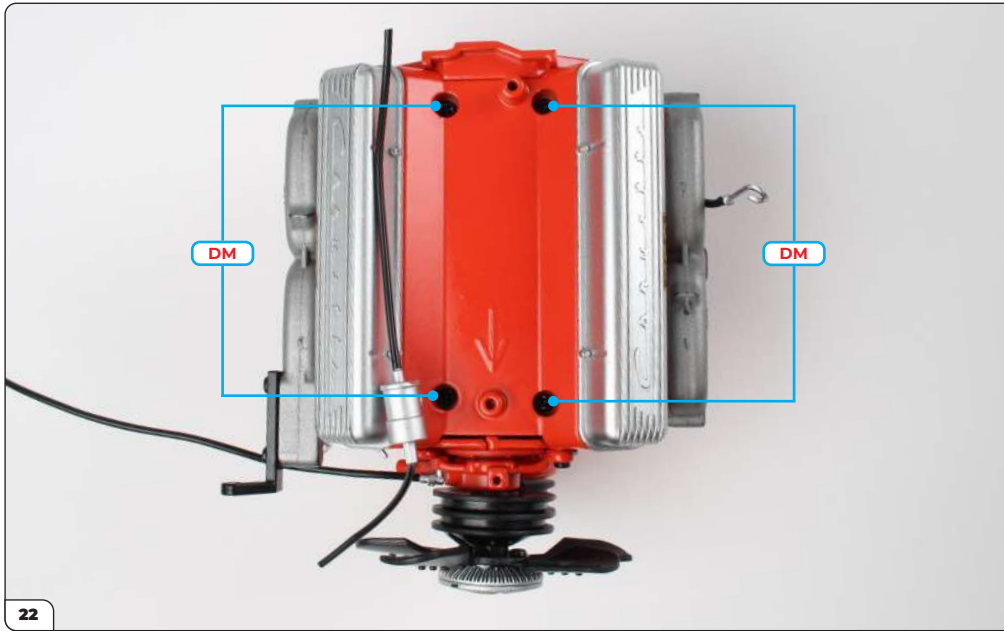


Secure using 2x DM screws.

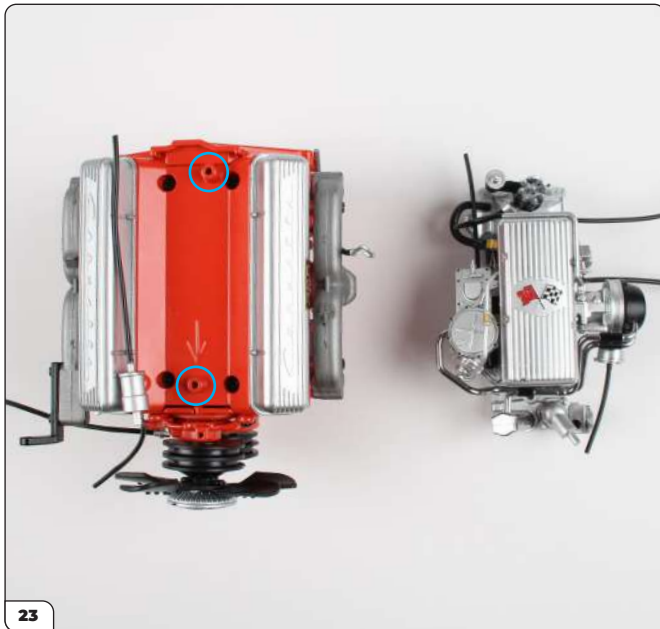


Retrieve the top of the engine block from Stage 11 and locate the four fixing points on each part (circled).

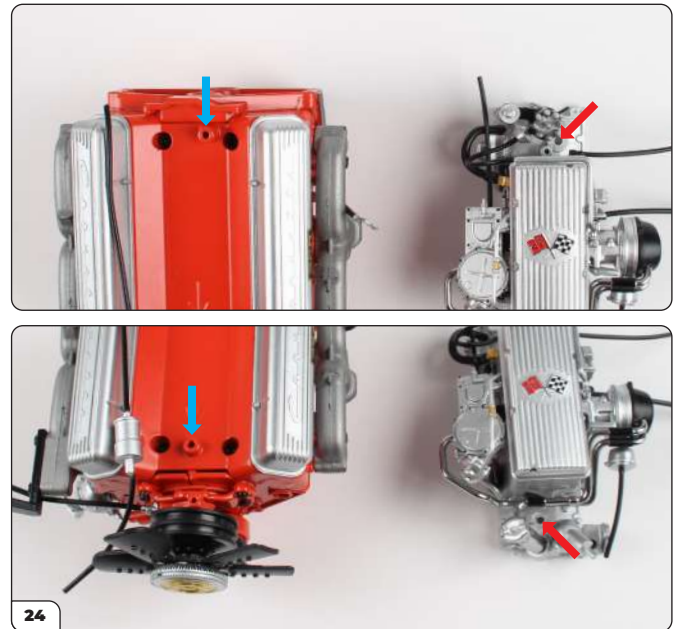
Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



Place the top onto the bottom then secure using 4x DM screws.

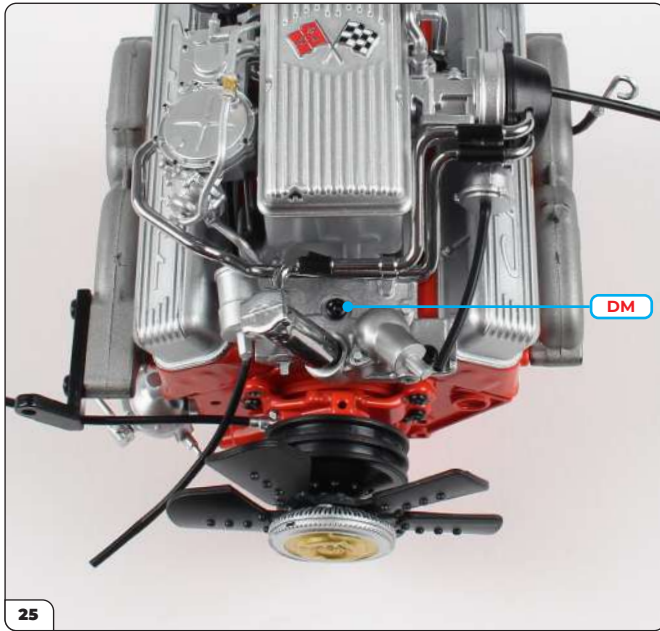


Align the fuel injection unit from Stage 11 with the assembly as shown. Locate the two holes on the engine block for fitting the unit (circled).

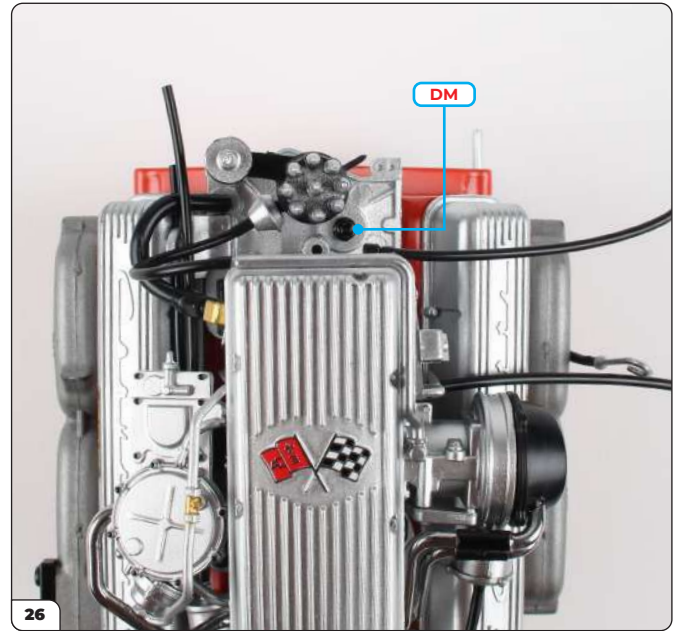


Locate the two holes in the fuel injection unit (red arrows). Position these holes over the holes in the block (blue arrows).

Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



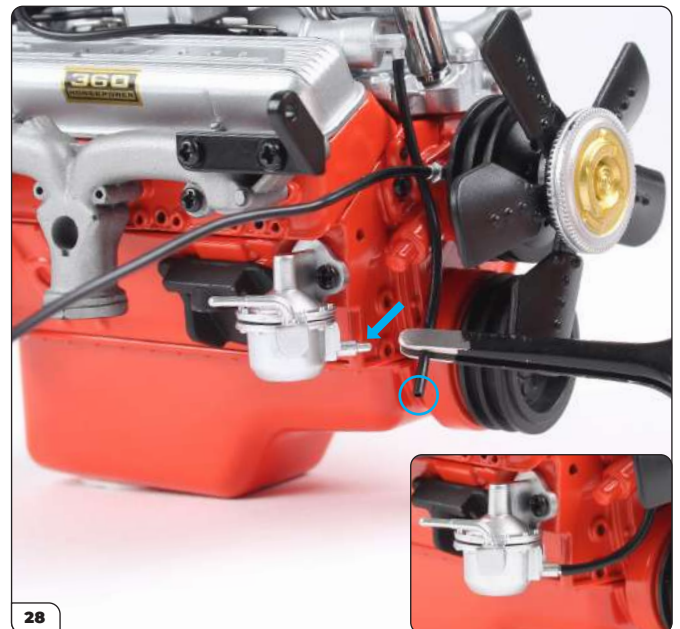
Secure the front using a DM screw.



Secure the back using another DM screw.



Locate the end of the longer hose connected to the fuel filter (circled) and plug it onto the pin on the fuel meter (arrow).



Locate the end of the shorter hose connected to the fuel filter (circled) and plug it onto the small pin on the fuel pump (arrow).

Stage 12: Assembling the Engine Block and Attaching the Fuel Injection Unit



The short hose fits into the two holes at the front of the assembly (circled).



Push the pins into the holes as shown.



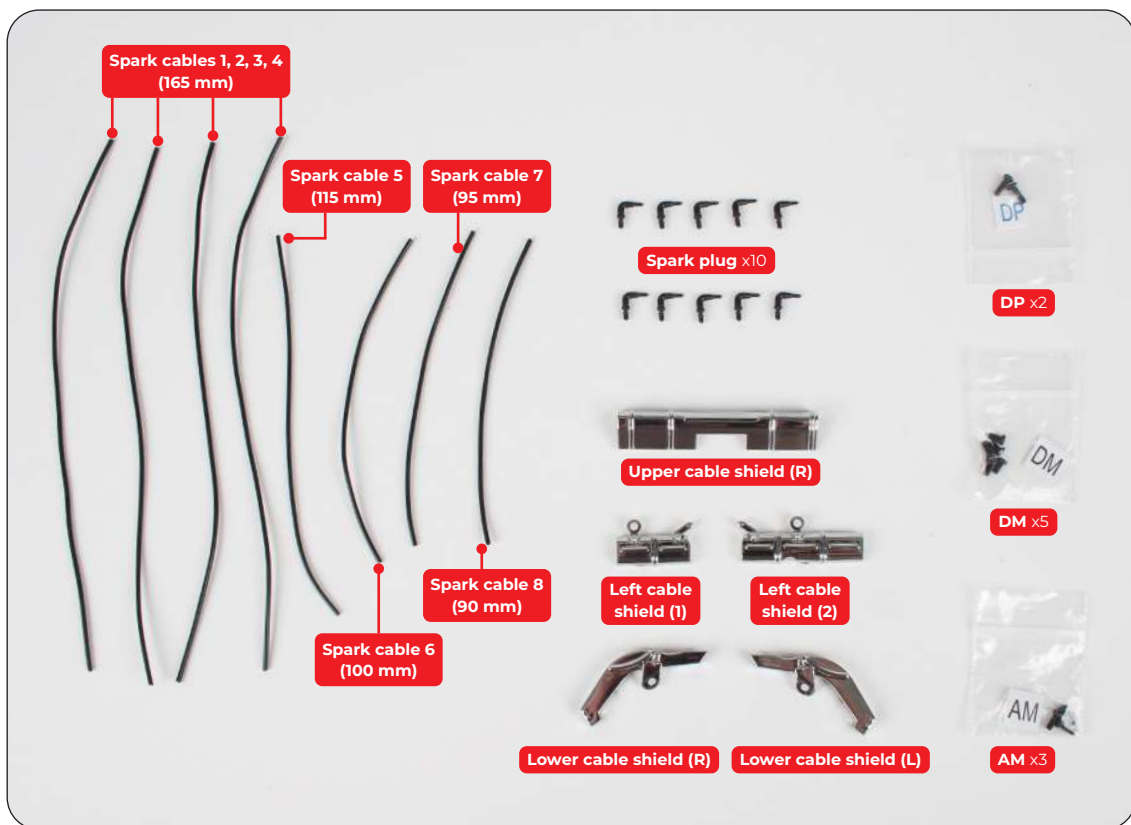
Stage 13: Connecting the Spark Plugs and Shielding the Cables

Next you'll install the spark plugs on the engine block and fit the spark cables and protective shields.



STAGE 13 PARTS LIST

Name	Name
Spark cable 1 (165 mm)	Left cable shield (1)
Spark cable 2 (165 mm)	Left cable shield (2)
Spark cable 3 (165 mm)	Lower cable shield (R)
Spark cable 4 (165 mm)	Lower cable shield (L)
Spark cable 5 (115 mm)	DP screw x2
Spark cable 6 (100 mm)	DM screw x5
Spark cable 7 (95 mm)	AM screw x3
Spark cable 8 (90 mm)	
Spark plug x10	
Upper cable shield (R)	



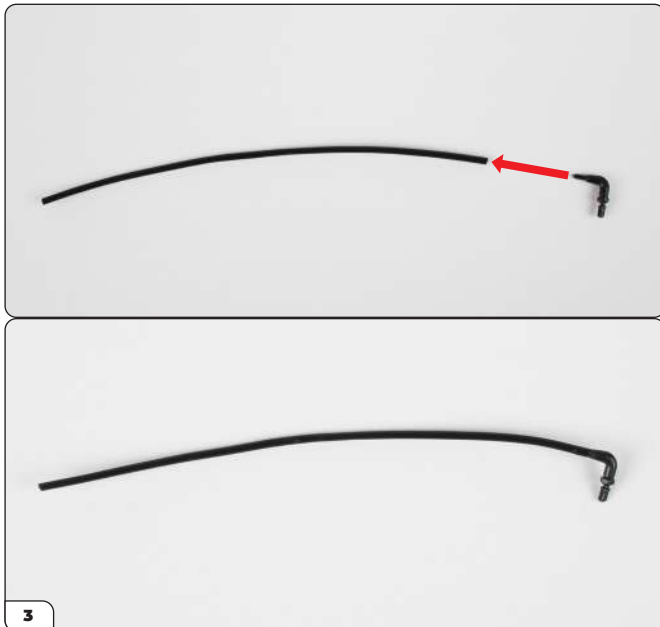
Stage 13: Connecting the Spark Plugs and Shielding the Cables



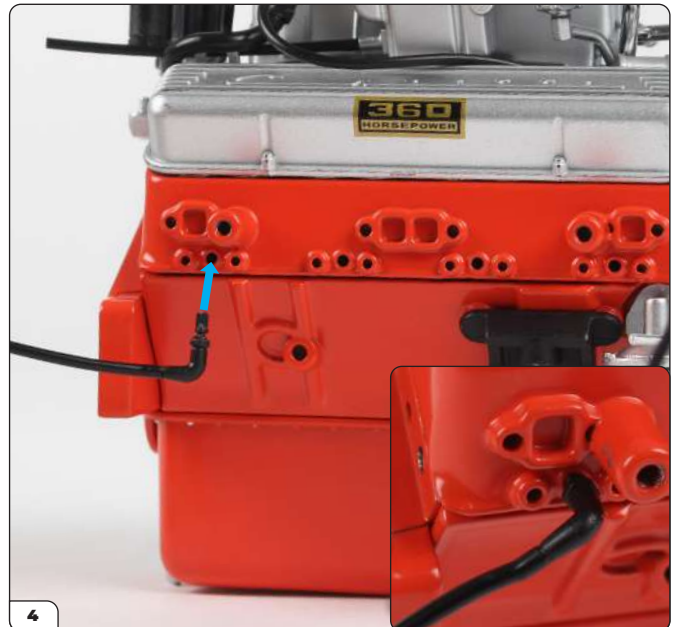
Retrieve the engine block assembly from the previous stage and remove the DM screws from the right exhaust manifold.



Remove the right exhaust manifold and set it aside. Note the four holes for installing the spark plugs.

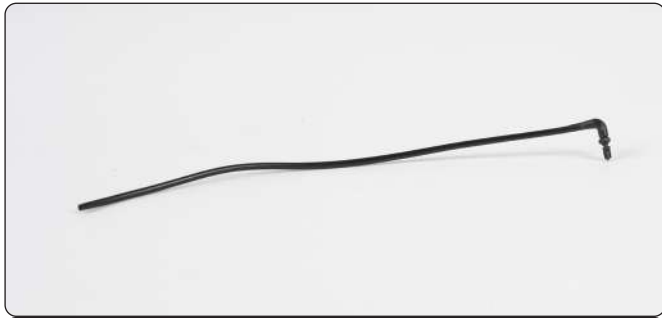


Fit the thin pin on one of the spark plugs into the shortest (90 mm) spark cable, using a small drop of super glue to secure it.

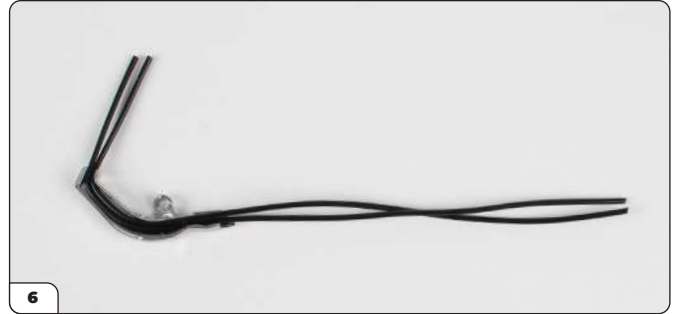


Push the thick pin of the spark plug into the leftmost hole (arrow) and turn it to the orientation shown (inset).

Stage 13: Connecting the Spark Plugs and Shielding the Cables



5 Fit a spark plug into the 100 mm long cable then push it into the next hole in sequence (arrow).



6 Take two of the longest (165 mm) spark cables and the right lower cable shield (marked 'R', circled). Press both of the cables into the recessed side of the shield (bottom image).



7 Align the tab of the right lower cable shield with the assembly as shown (arrow).



8 Fit the shield then secure it using a DM screw.

Stage 13: Connecting the Spark Plugs and Shielding the Cables



Take a spark plug and fit the thick pin into the next hole in sequence.



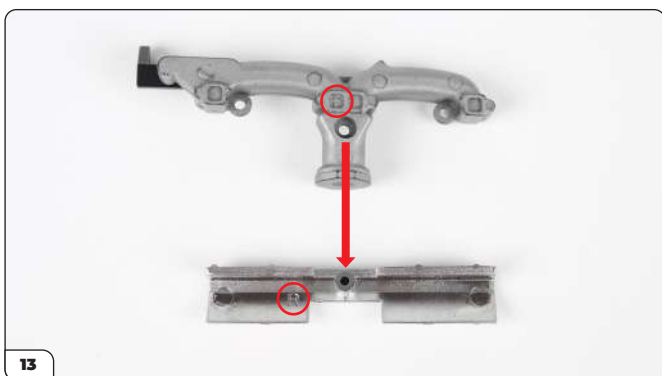
Fit another spark plug into the last hole (circled), then turn both plugs to the orientation shown.



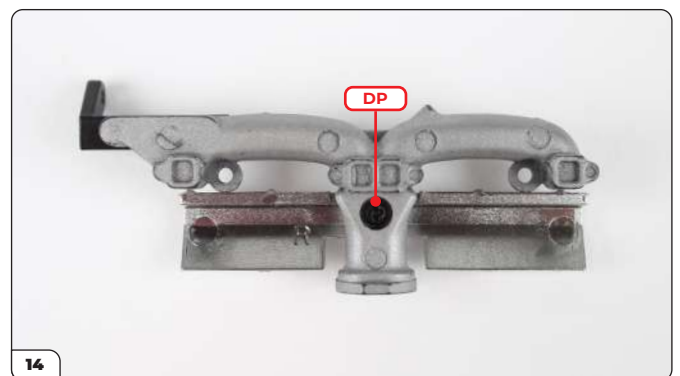
Fit the end of the innermost spark cable (arrow) onto the third spark plug (circled).



Fit the end of the outermost cable (arrow) onto the fourth spark plug (circled).

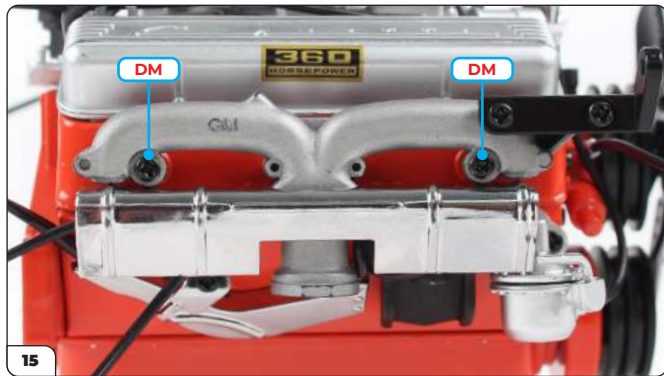


Take the right exhaust manifold with the upper cable shield (both marked 'R', circled) and align the parts as shown (arrow).



Fit the manifold in place and secure using a DP screw.

Stage 13: Connecting the Spark Plugs and Shielding the Cables



Secure the right exhaust manifold back onto the assembly using the two DM screws removed previously.



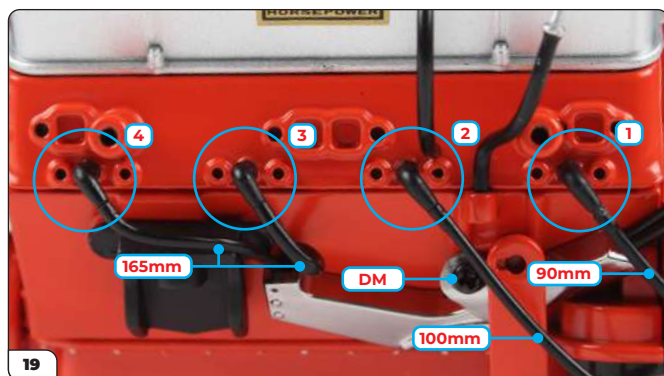
Face the left-hand side of the assembly towards you. Unfasten the two DM screws from the left exhaust manifold (arrows) and remove it.



Take the end of the hose protruding from the fuel injection unit and fit it onto the small pin (circled).



The next steps are to fit the spark plugs and cables into the four holes in sequence (arrows) in the same way as before.

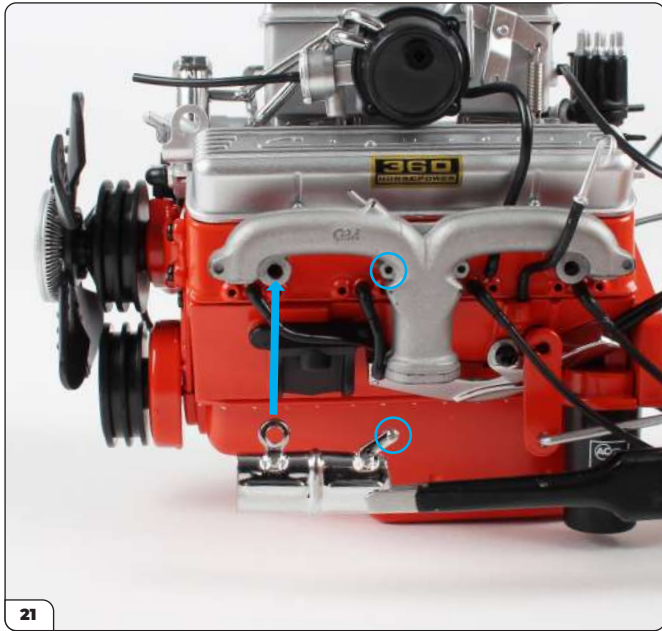


Fit the four spark plug cables (circled in sequence) and the left lower cable shield (securing it with a DM screw) by repeating steps 3 to 12.

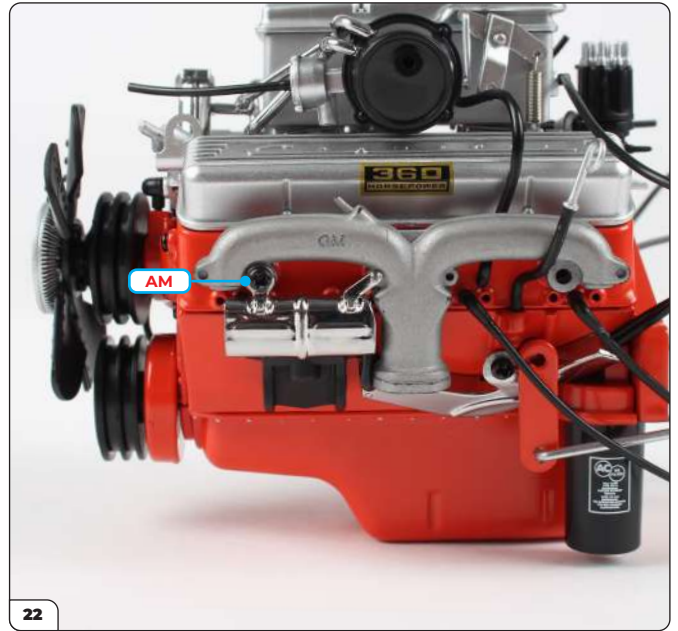


Fit the left exhaust manifold back in place.

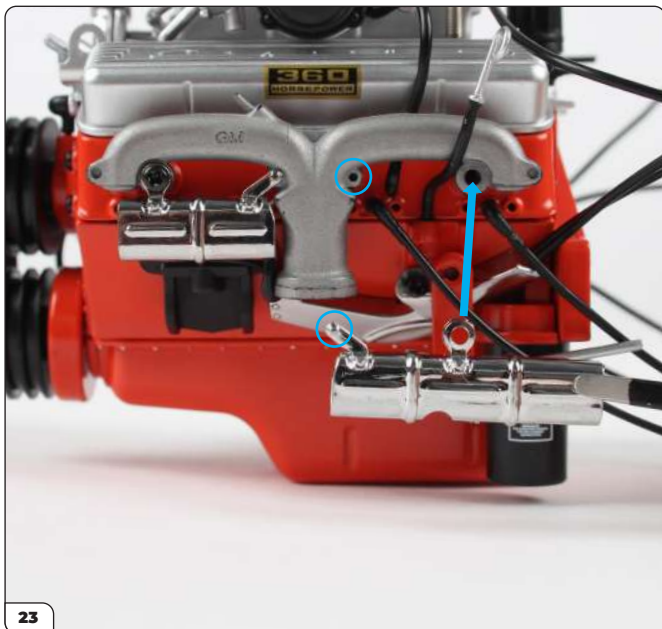
Stage 13: Connecting the Spark Plugs and Shielding the Cables



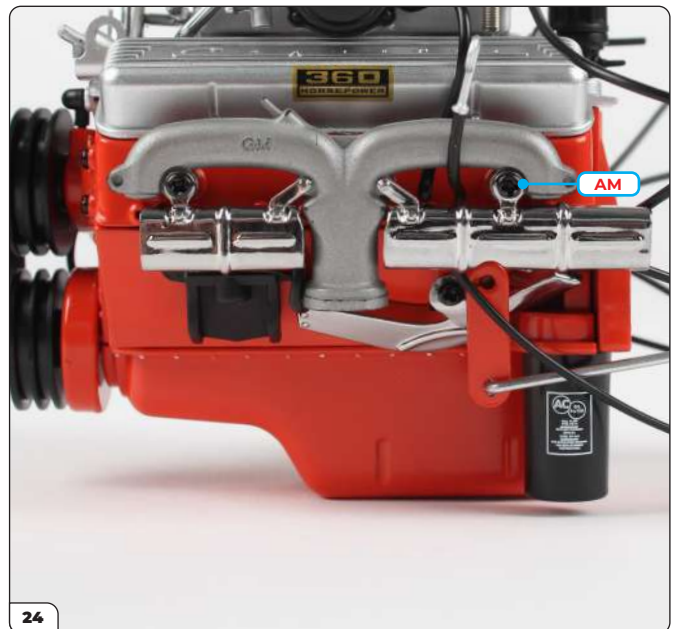
Align the screw hole (arrow) and pin (circled) of the smaller left cable shield with the manifold as shown.



Fit the shield and secure using an AM screw.



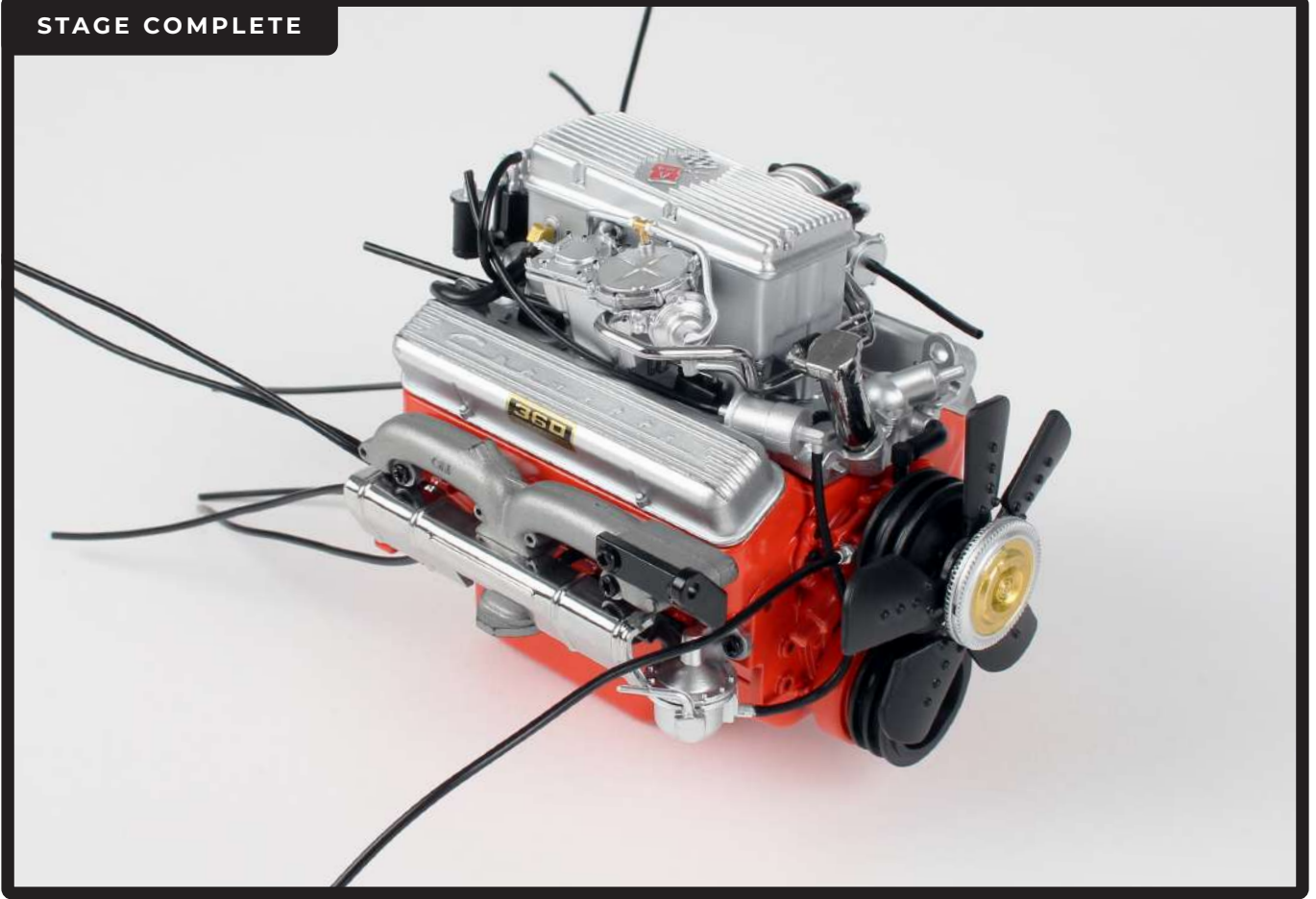
Align the larger left cable shield with the manifold.



Fit in place and secure using an AM screw.

Stage 13: Connecting the Spark Plugs and Shielding the Cables

STAGE COMPLETE



Stage 14: Fitting the Alternator and Attaching the Belts

Next you'll install the alternator, connect the spark cables to the ignition coil, and fit the top shield in place. You'll also fit the gearbox and engine block together before adding the belts.

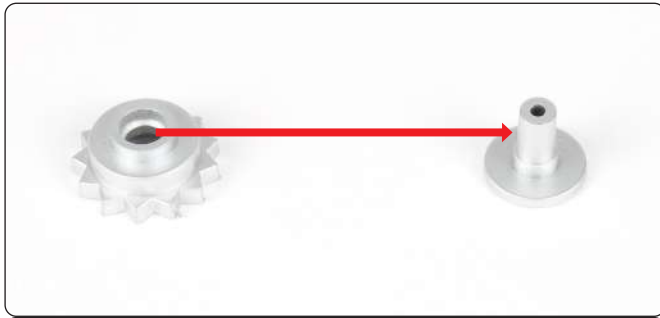


STAGE 14 PARTS LIST

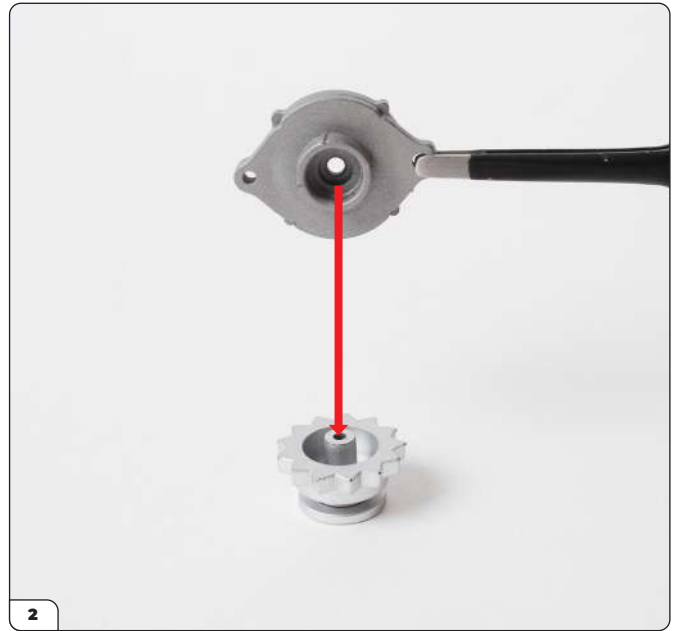
Name	Name
Top cable shield	Pulley (2)
Left cable shield	Coil cover
Right cable shield	Hose (26 mm)
Alternator (rear)	Belt (large)
Alternator (front)	Belt (small)
Steering pump cap	AP screw x3
Steering pump bracket	EP screw x3
Steering pump cover	FP screw x2
Alternator bracket	DM screw x6
Gearbox sticker	FM screw x2
Coil	GM screw x3
Pulley (1)	



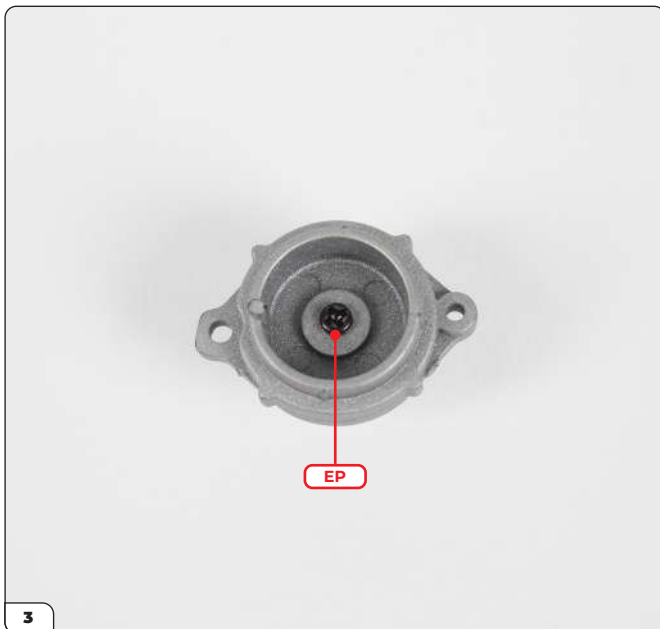
Stage 14: Fitting the Alternator and Attaching the Belts



Fit the coil onto the raised post of the coil cover as shown.



Align the alternator front with the coil as shown then press it into the coil.



Secure in place using an EP screw.

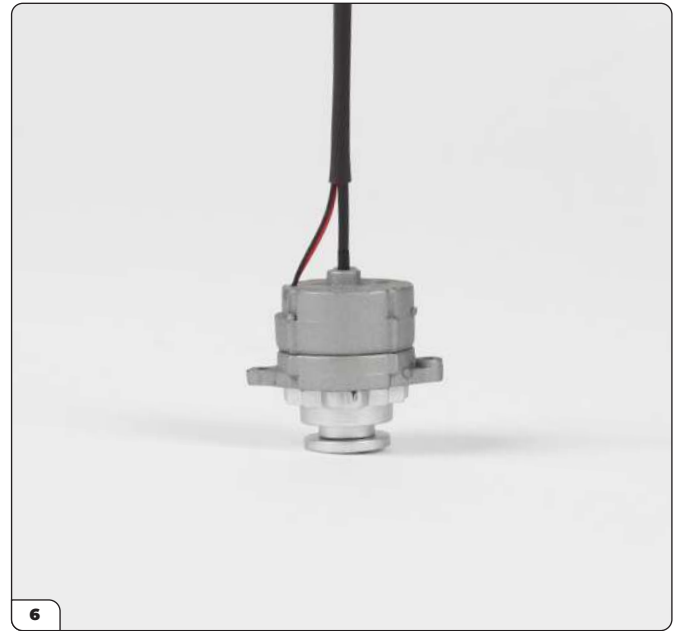


Take the alternator rear then locate the hole on the inside (circled) and the pin on the assembly (arrow).

Stage 14: Fitting the Alternator and Attaching the Belts



Align the rear with the front as shown.



Firmly press together.

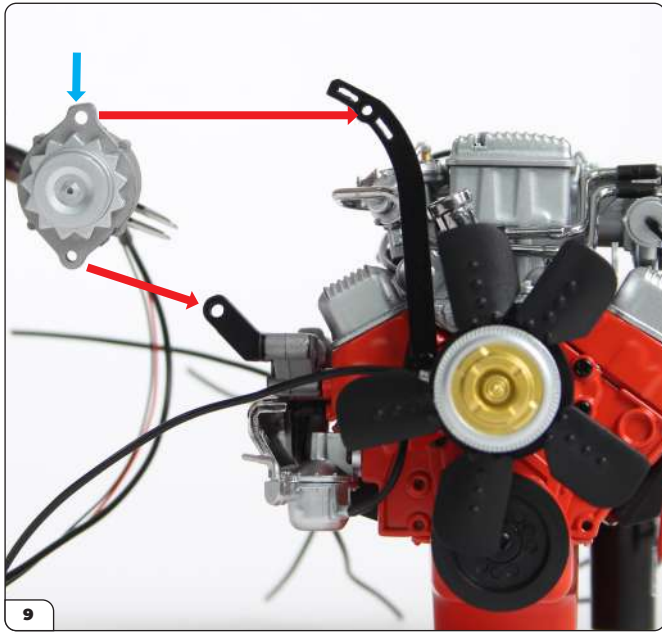


Retrieve the engine block assembly and place it with the front facing you. Align the alternator bracket with the hole located behind the cooling fan (arrow).

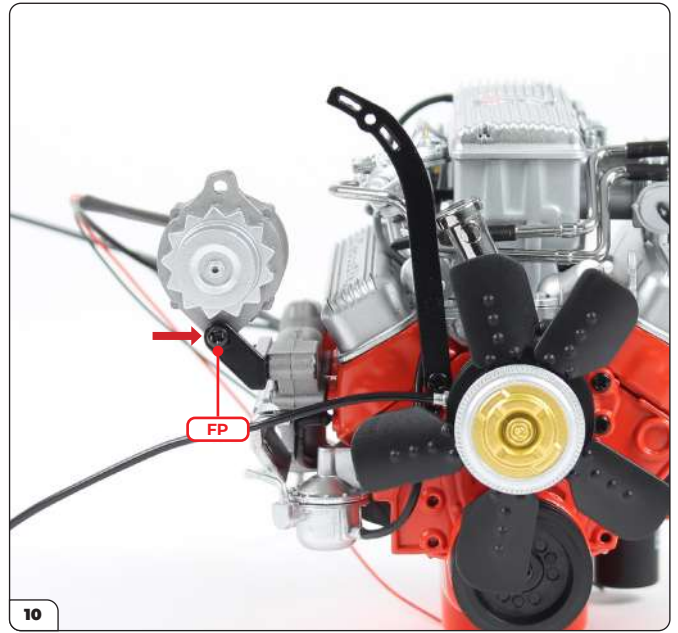


Place the bracket over the hole then fix it using a DM screw – don't fully tighten the screw as the bracket should be able to move.

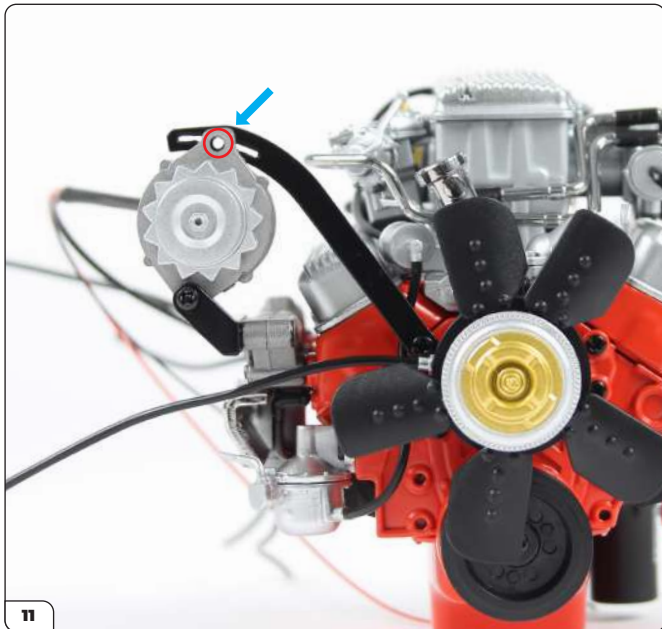
Stage 14: Fitting the Alternator and Attaching the Belts



Lift the bracket upright then align the alternator with it (red arrows). Note the flat tab is oriented upwards (blue arrow).



Position the alternator behind the right exhaust manifold bracket (arrow) and secure using an FP screw.

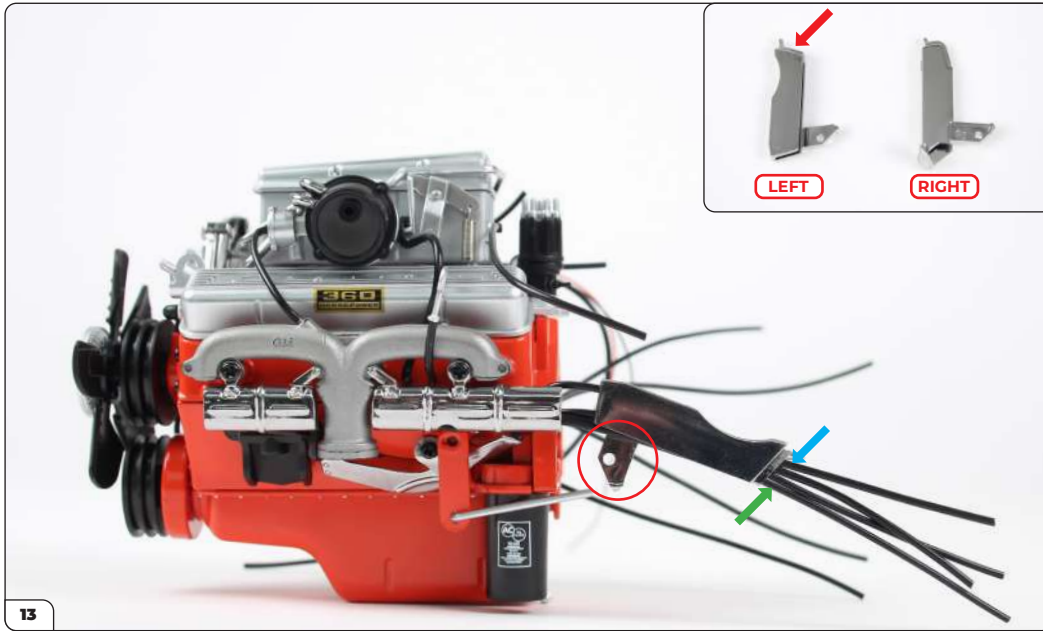


Lower the alternator bracket behind the alternator (blue arrow). Check the holes are aligned (circled).

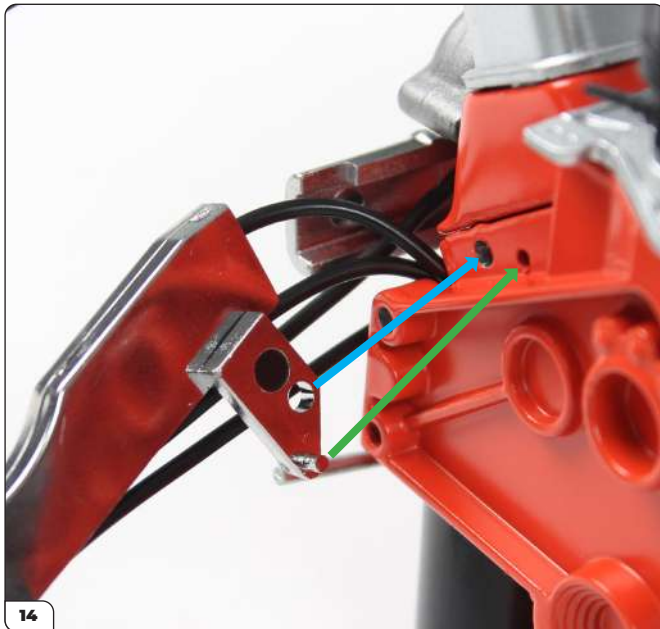


Secure the alternator using an FM screw.

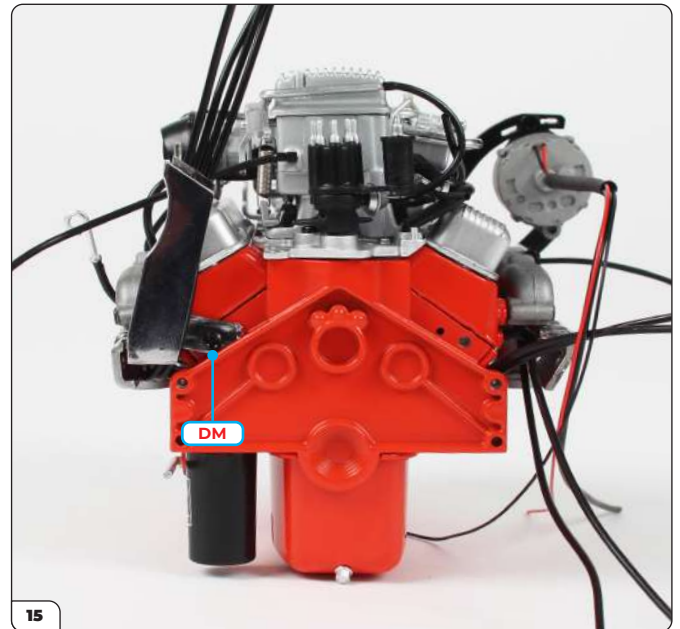
Stage 14: Fitting the Alternator and Attaching the Belts



Take the left cable shield (inset) and place the block with the left-hand side facing you. Orient the shield's tab downwards (circled), then fit the spark cables inside it, starting with the longest cables (165 mm, blue arrow) and ending with the shortest (95 mm, green arrow).

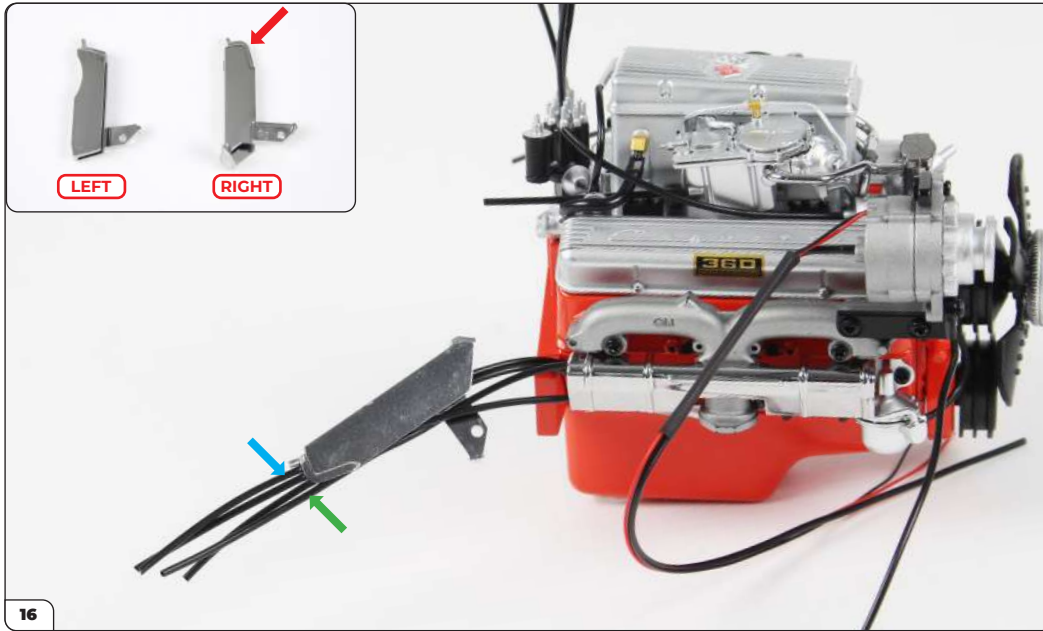


Locate the small and large hole on the engine block for fitting the shield (green and blue arrows).

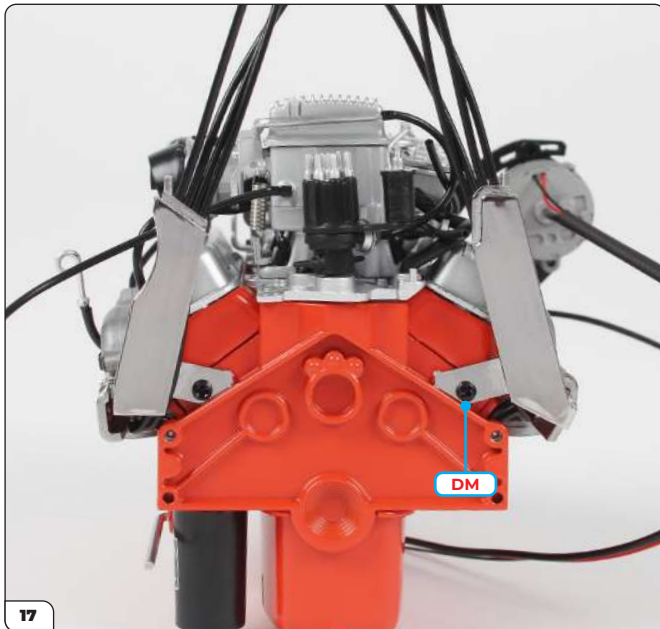


Press the shield in place then secure using a DM screw.

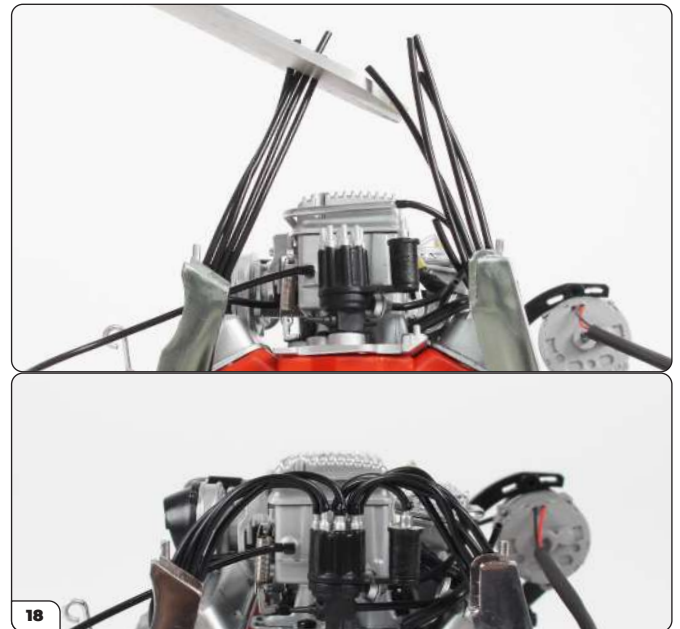
Stage 14: Fitting the Alternator and Attaching the Belts



Face the right-hand side of the assembly towards you, then take the right cable shield (inset). Press the spark cables into the shield from longest (blue arrow) to shortest (green arrow).

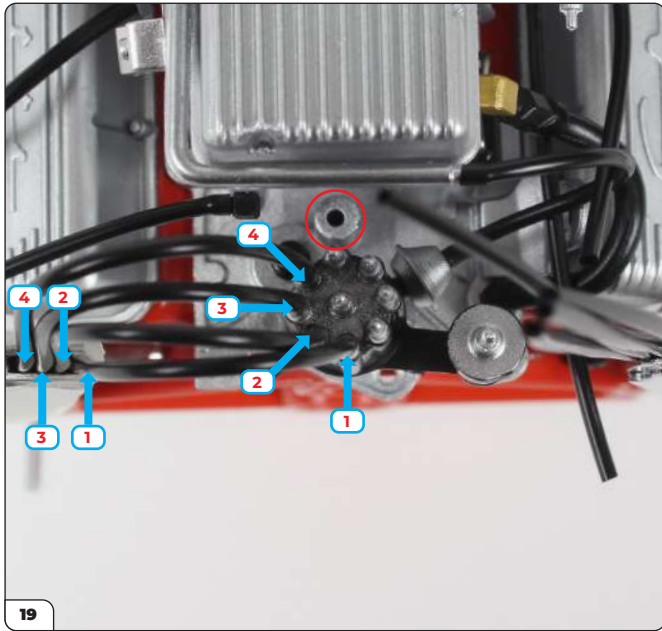


Press the shield in place and secure using a DM screw.

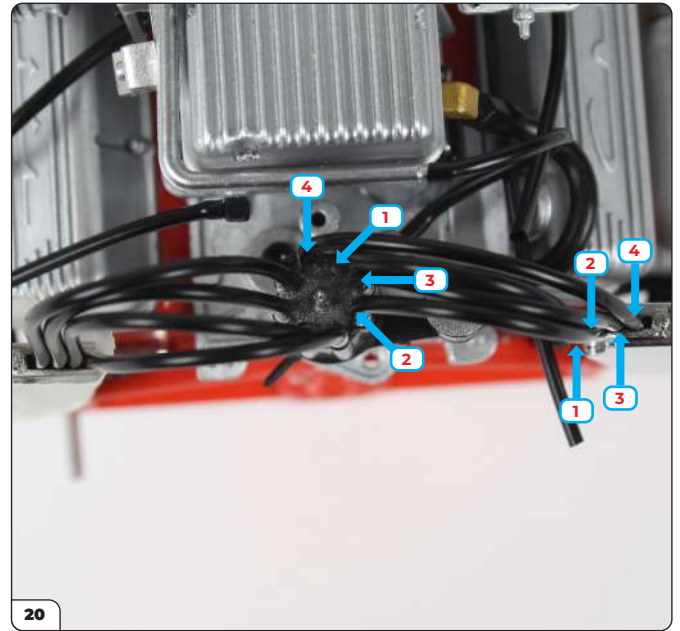


Pull the cables taut through the shields then trim the ends to the same length. Test fit some of the cables (see steps 19 and 20) and position the top cable shield (see steps 25 and 26) to find the right length. The bottom image shows the approximate length of the cables when fitted.

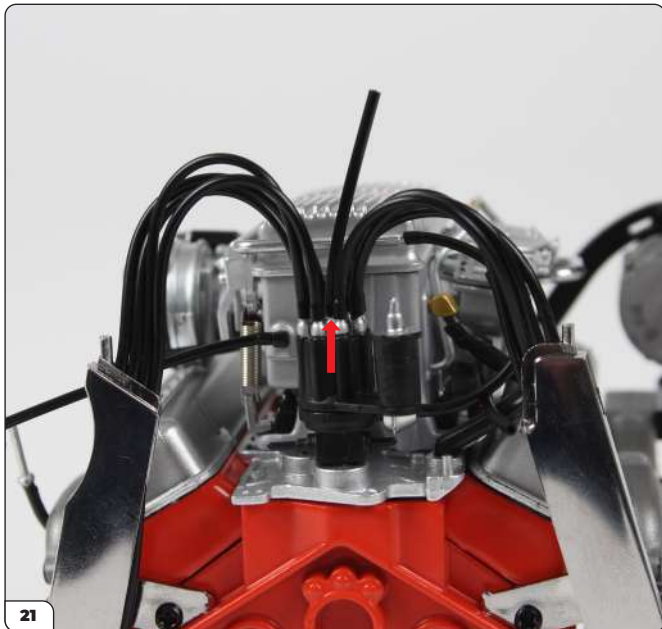
Stage 14: Fitting the Alternator and Attaching the Belts



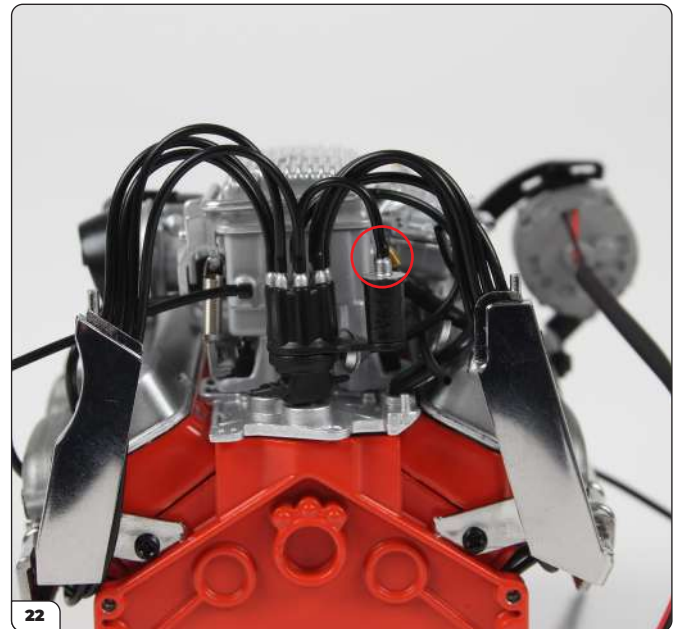
Starting with the left-hand cables, fit the ends onto the ignition coil. The cable closest to the coil fits over the pin at the 6 o'clock position (blue arrow, '1'). Fit the cables sequentially clockwise as indicated. Note the post for step 26 (circled).



The cables on the right-hand side fit in out of sequence. Follow the numbers indicated to fit the cables.



Fit the 26 mm hose onto the remaining pin in the centre of the ignition coil (arrow).



Fit the other end of the hose onto the pin on the offset part of the ignition coil (circled).

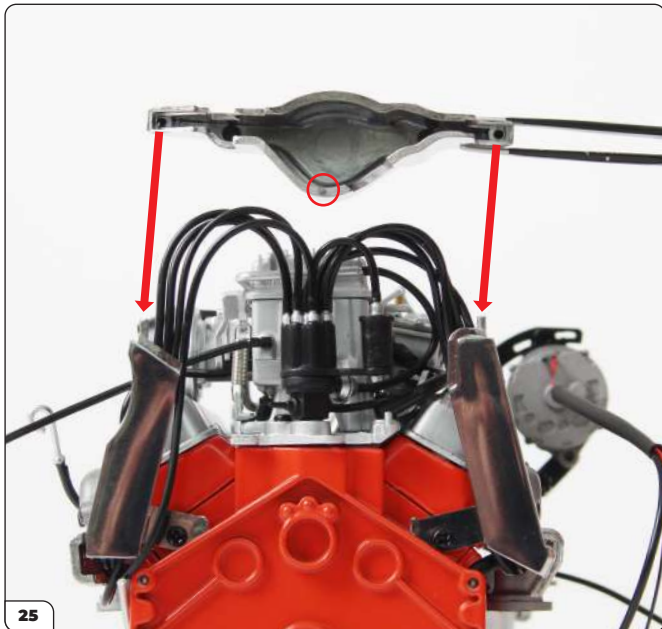
Stage 14: Fitting the Alternator and Attaching the Belts



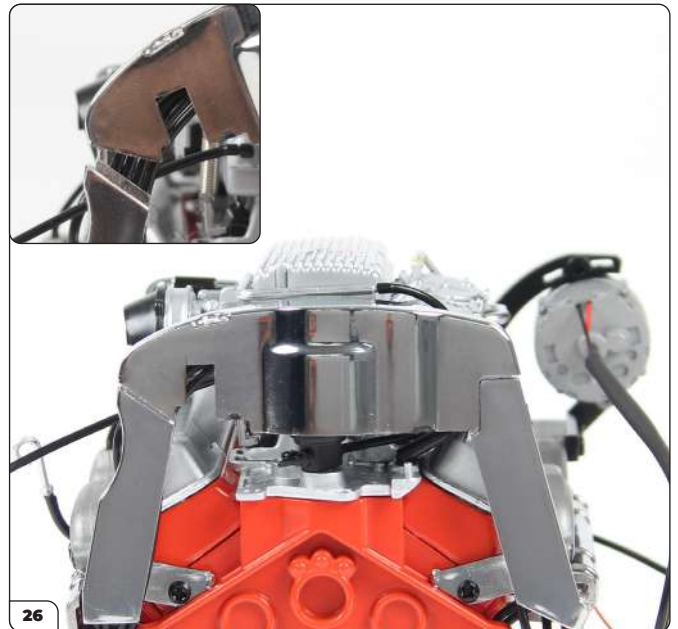
Locate the loose end of the hose on the fuel meter (arrow).



Plug the loose end onto the black pin underneath the ignition coil (circled).

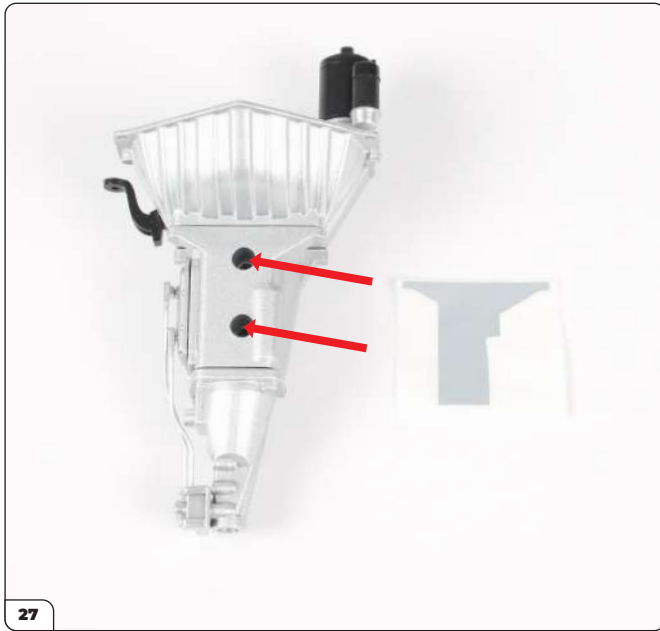


Align the top shield cover with the assembly as shown (arrows). The top cable shield also has a pin (circled) which fits into the post highlighted in step 19.



Fit the top shield over the cables, first guiding the cables neatly into the left side (inset) then lowering the right side and pressing firmly in place.

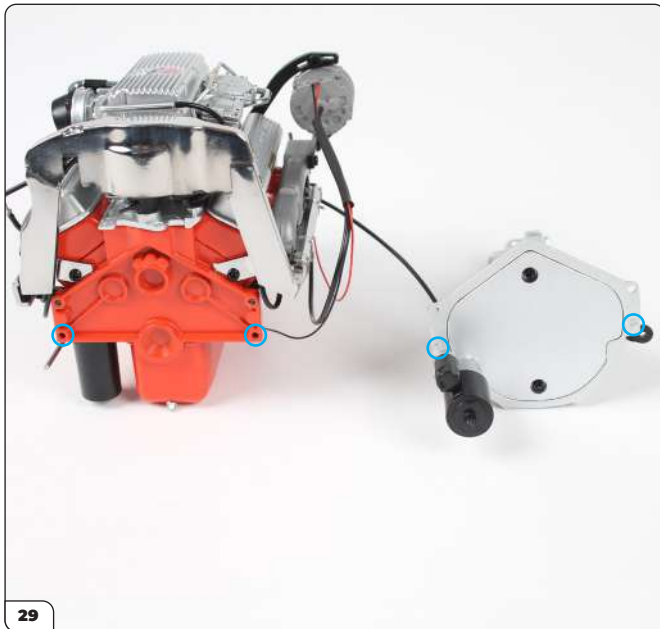
Stage 14: Fitting the Alternator and Attaching the Belts



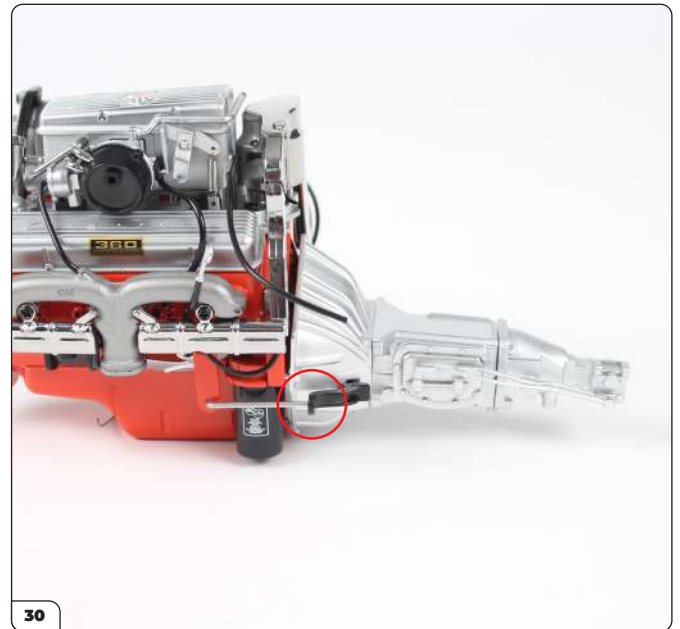
Next retrieve the gearbox assembly from Stage 8 and the gearbox sticker which covers up the screw holes (arrows).



Peel the sticker from its backing paper and apply it to the gearbox.

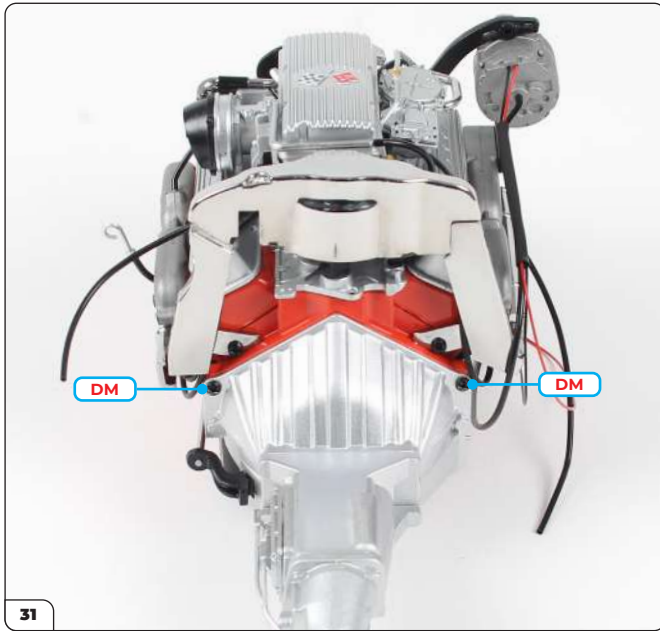


Take the gearbox assembly and the engine block assembly then locate the fixing points – two pins on the gearbox and two small holes in the block (circled).



Fit the gearbox onto the block, ensuring the end of the linkage fits into the hole in the linkage bracket (circled).

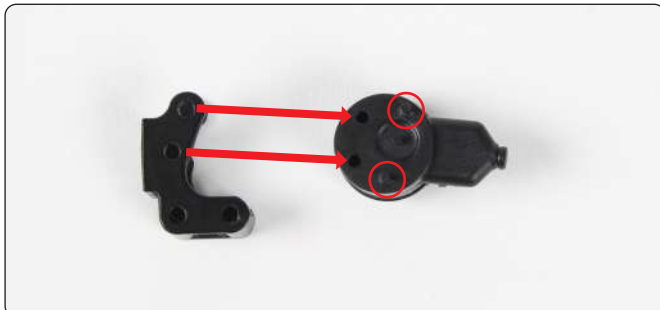
Stage 14: Fitting the Alternator and Attaching the Belts



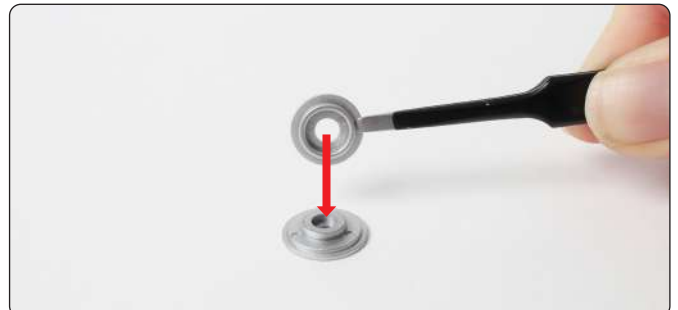
Secure the assemblies using 2x DM screws.



Take the steering pump cap along with its cover (32a). Locate the notch in the cap which fits into the protrusion on the cover (circled). Firmly press the parts together.

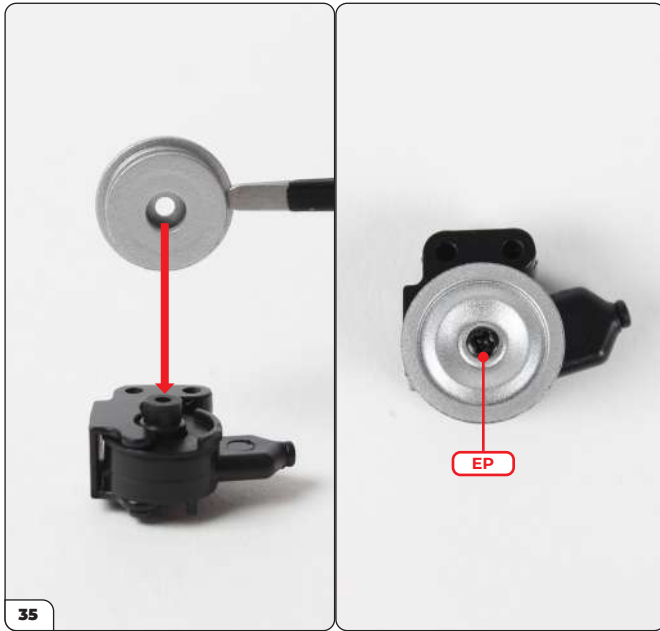


Place the steering pump cap so that the two pins are facing upwards (circled) then align the steering pump bracket with it (arrows). Fit the bracket then secure using 2x AP screws.

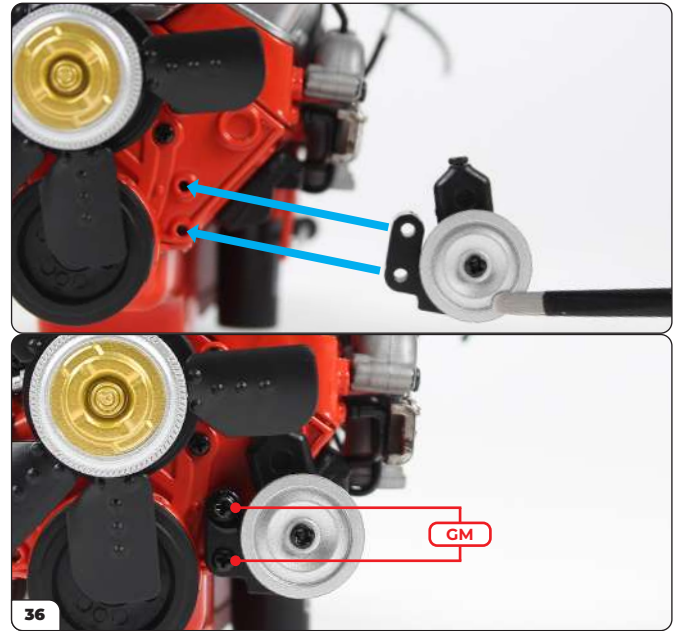


Align the two parts of the pulley and press them together firmly as shown.

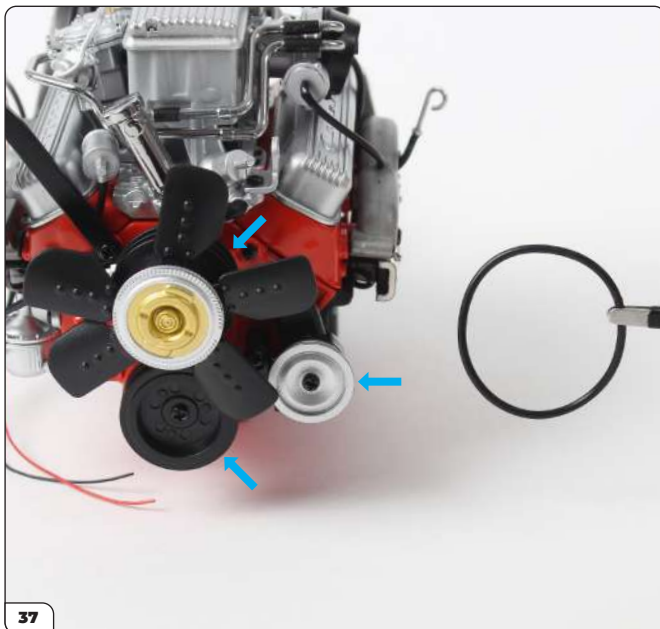
Stage 14: Fitting the Alternator and Attaching the Belts



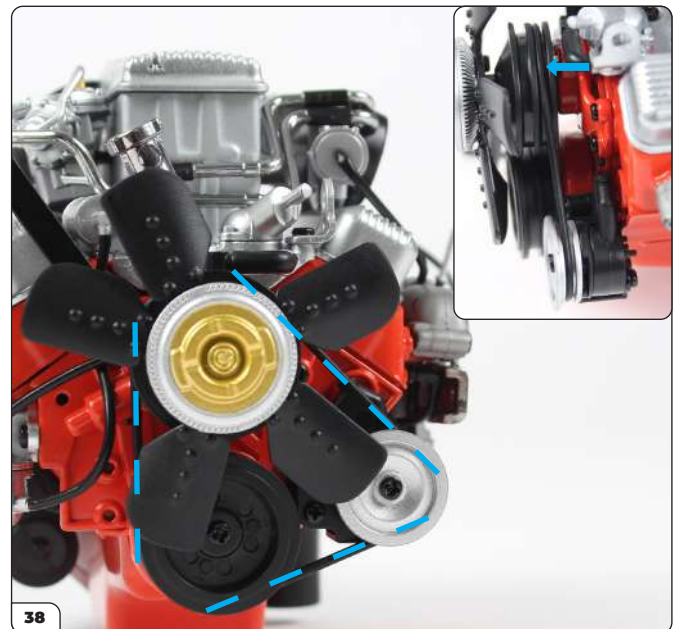
Push the pulley onto the raised screw hole of the cap (arrow) then secure using an EP screw.



Face the cooling fan towards you then align the steering pump cap and the two holes in the block (arrows). Position it in place then secure with 2x GM screws.

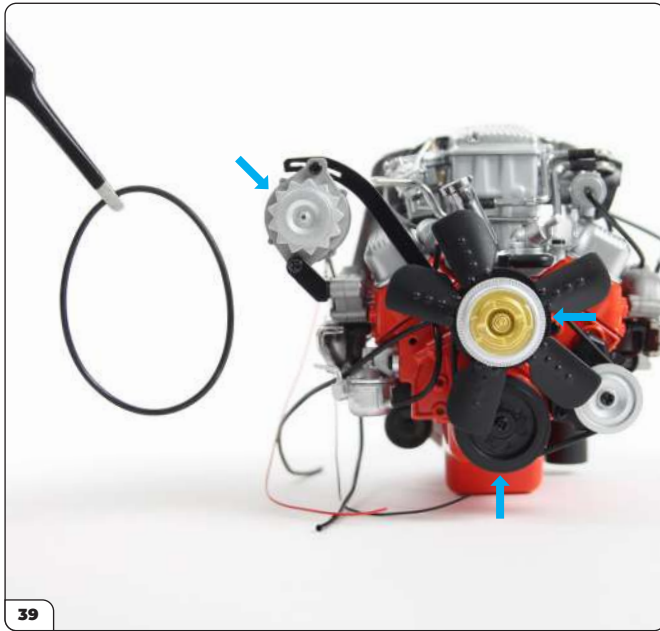


Take the small belt and locate the two central pulleys and the pulley of the steering pump cap (arrows).

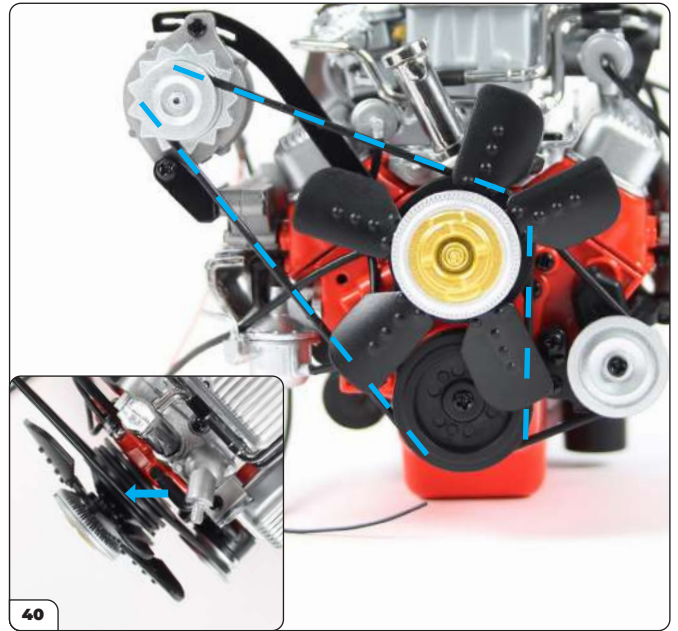


Wrap the belt around the inner channels of the central pulleys (inset, arrow) and the silver pulley of the steering pump, as indicated by the dashed lines.

Stage 14: Fitting the Alternator and Attaching the Belts



Now take the large belt and locate the two central pulleys and the pulley of the alternator (arrows).



Wrap the belt around the outer channels of the central pulleys (inset, arrow) and the alternator.

STAGE COMPLETE



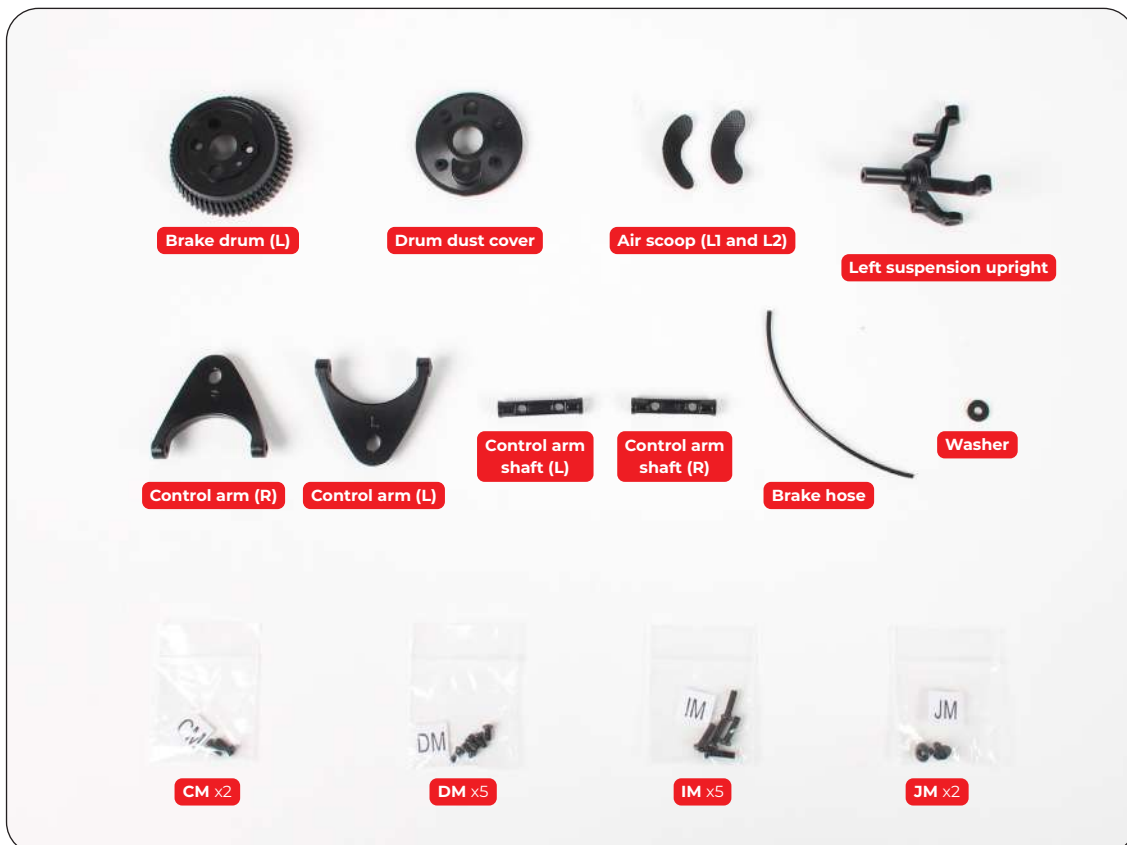
Stage 15: Building the Left Control Arm

In the final stage of this pack, you'll build the control arm and brake drum for the wheel.



STAGE 15 PARTS LIST

Name	Name
Brake drum (L)	CM screw x2
Drum dust cover	DM screw x5
Air scoop (L1 and L2)	IM screw x5
Left suspension upright	JM screw x2
Control arm (R)	
Control arm (L)	
Control arm shaft (L)	
Control arm shaft (R)	
Brake hose	
Washer	



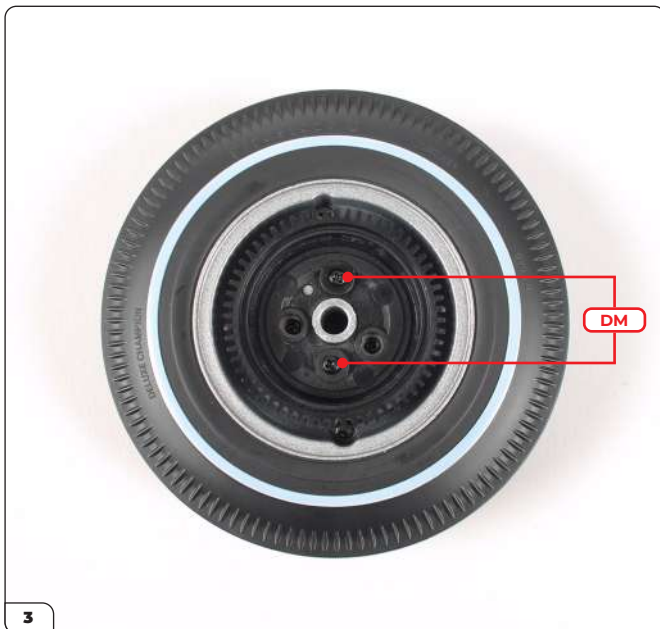
Stage 15: Building the Left Control Arm



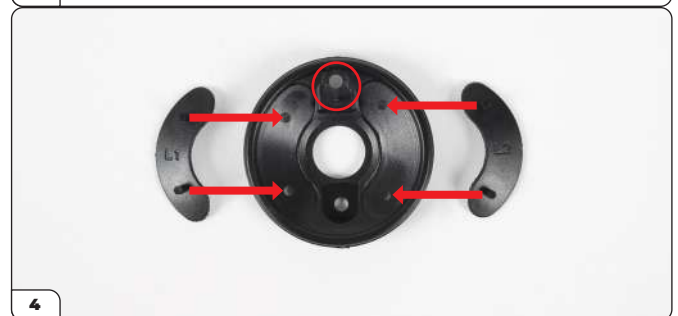
Take the left brake drum and the wheel assembled in Stage 4. Remove the three-bar spinner (arrow).



Align the parts as shown. The screw holes of the drum fit over the screw holes of the rim (circled).



Fit the drum and secure using 2x DM screws.



Take the air scoops which are marked with 'L1' and 'L2' (circled, 4a). Place the drum dust cover face up with the pin towards the top (circled). Align the air scoops with the cover as shown (arrows).

Stage 15: Building the Left Control Arm



Take the air scoop marked 'L2' and fit it onto the cover (arrows).



Fit the other air scoop ('L1') onto the cover, then align the brake hose with the small black pin (arrow).



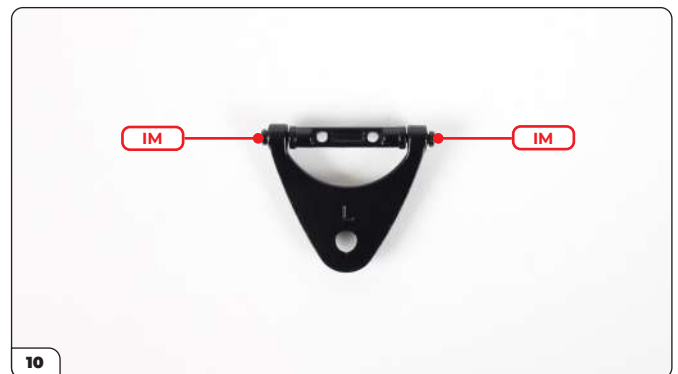
Fit the brake hose over the pin as shown.



Pair the control arms and the control arm shafts into left and right by locating the 'L' and 'R' printed on each part (circled).



Position the left shaft in the left control arm and take 2x IM screws which will be driven through from outside the control arm (arrows).



Secure the control arm shaft using the IM screws.

Stage 15: Building the Left Control Arm



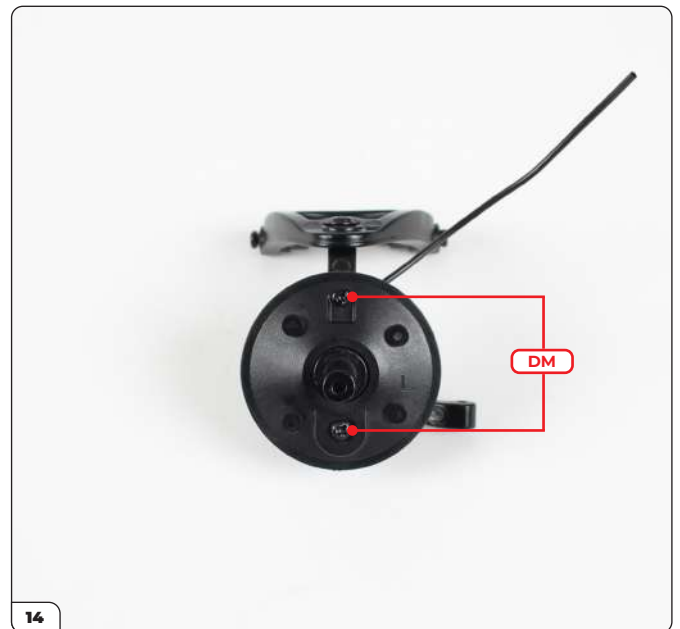
Align the left suspension upright with the control arm.



Fit the control arm onto the screw post and secure using a JM screw.



Align the drum dust cover with the left suspension (arrow).



Position the cover as shown then secure using 2x DM screws.

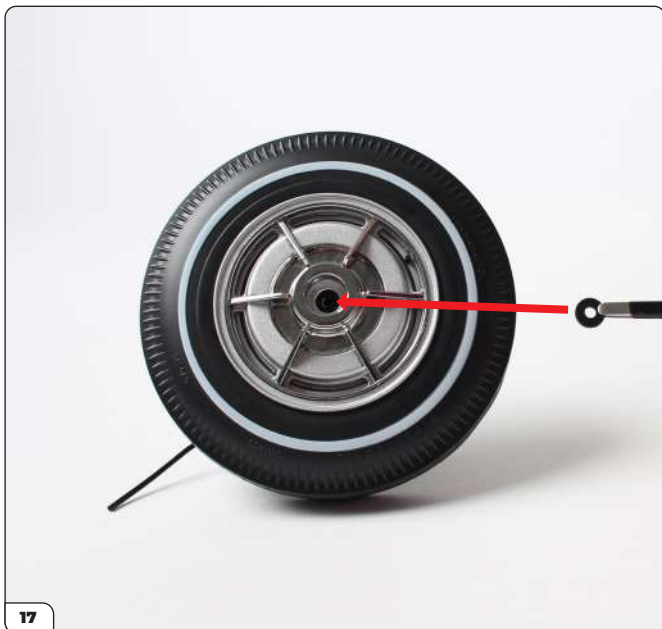
Stage 15: Building the Left Control Arm



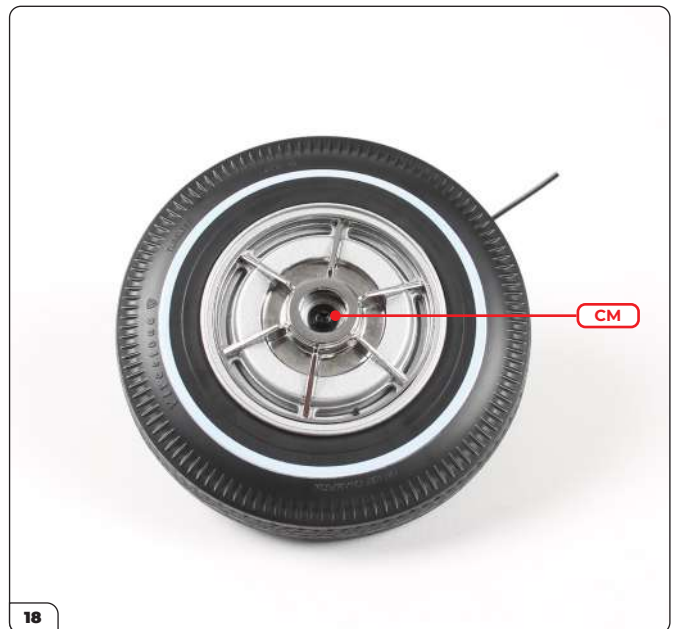
Align the suspension upright with the wheel as shown (arrow).



Fit the upright into the wheel.



Keeping the upright in position, turn the wheel over and place the washer in the centre of the wheel cover (arrow).

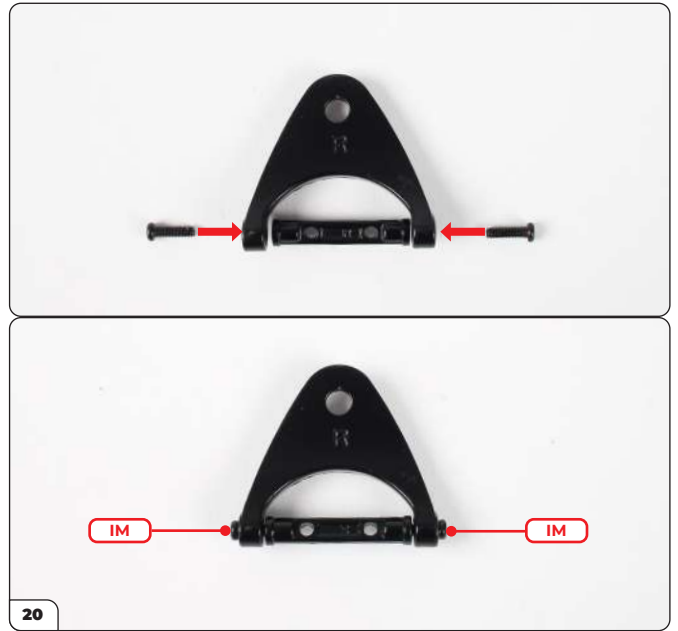


Secure the upright and wheel together by driving a CM screw through the washer. Check the wheel turns smoothly – if not, tighten the screws of the wheel rims and drum dust cover.

Stage 15: Building the Left Control Arm



Replace the three bar spinner (arrow).



Fit the right control arm and its shaft in the same way as before and fix using 2x IM screws.

