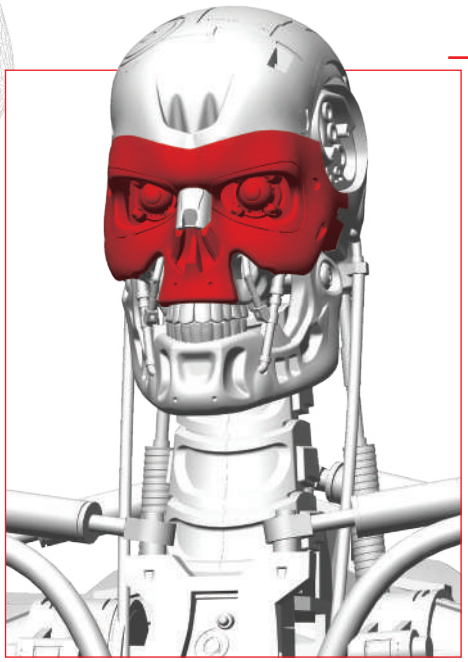
STAGE 01: COMPONENTS FOR THE HEAD AND EYES

In this first stage, you will assemble the first part of the head of your T-800, beginning with the eyes. Once the model is finished, the eyes are lit by red LED diodes and move from right to left.



LIST OF PIECES

1-1	Chrome eye and nasal sockets
1-2	Matte black inner eye sockets
1-3	Eye socket brace
1-4	Chrome eye orbits
1-5	Red eye caps
1-6	LED diodes for the eyes
1-7	Eye orbit brace
1-8	3x PB screws (2x4 mm)

YOU WILL ALSO NEED

A small cross-point screwdriver (Phillips PH00 or similar) with a shaft of at least 2 inches.

EXPERT TIP!

The screwdriver can be magnetized by stroking it with a magnet (fridge magnet, etc.) enabling it to hold the screws and make assembly easier.

STEP 1

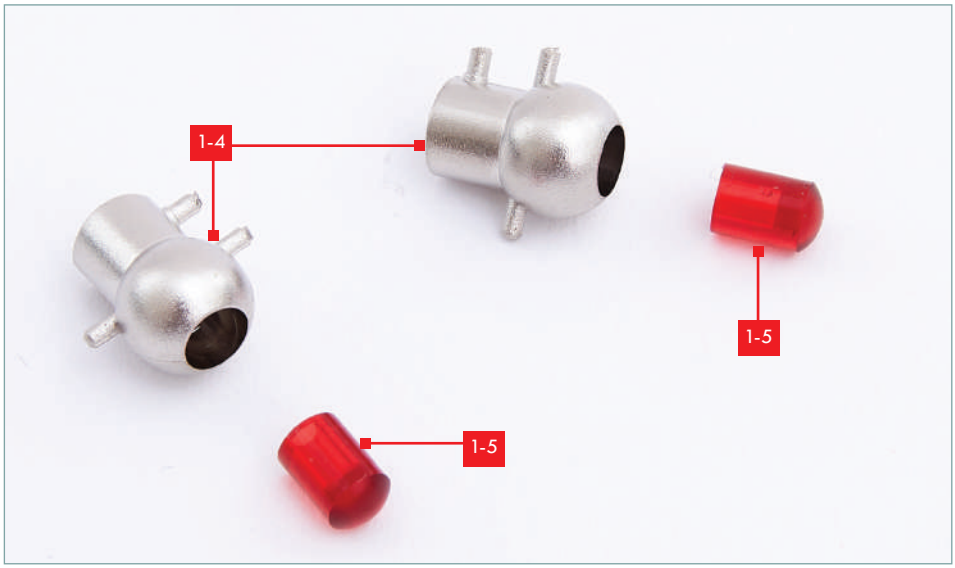
Before starting your assembly, carefully examine all of the pieces you have received with the first stage of your Terminator T-800 model. Make sure that the components you have received match the list of components in this stage, and that you have identified each part and its related number.

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

STEP 2

In this stage, you won't need to assemble the chrome eye and nasal sockets (Part **1-1**) or the eye orbit brace (Part **1-7**), so you can safely put those to one side.

Make sure wherever you are storing the additional components is well-organized, so that you can keep track of the parts from pack to pack.



STEP 3

The first step on the road to assembly begins with the T-800's eyes, specifically, embedding the red eye caps (**1-5**) into the chrome-plated ocular orbits (**1-4**).

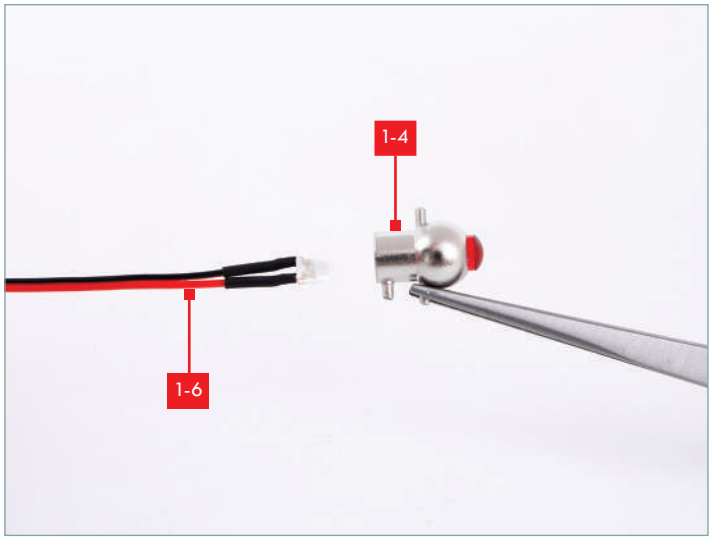
Push one of the red eye caps into one of the orbits, using a gentle but firm touch to push it in until it can go no further.

STEP 4

Next, do the same with the second eye cap and second orbit.

It is very important that the two pieces are properly fitted together — the red eye cap should protrude over the edge of the orbit slightly, but should be firmly attached to the orbit.

Check that your two pairs of pieces look the same when assembled as the photos here.



STEP 5

Find the two LED diodes (**1-6**). These are fragile elements, so take care as you gently insert each LED into its corresponding place in the back of the eye orbit.

Align the black and red wires vertically, as shown, and hold the eye orbit **1-4** so that the pins are aligned vertically. Insert the LEDs into the orbits as shown.

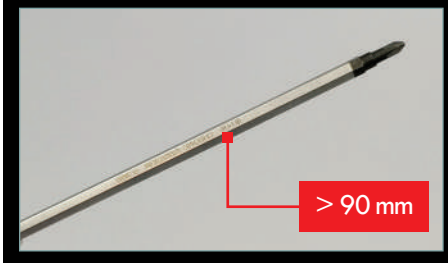
STEP 6

Repeat to fit the second LED into the second eye orbit. This is how the two eyes of your T-800 should look once assembled.

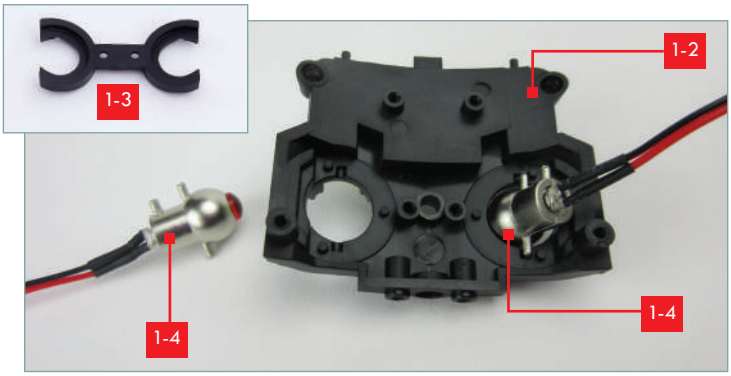
In Stage 03, you will plug the LED connections (at the other end of the black and red cables) into a circuit board, allowing the eyes to be lit by turning on the corresponding switch.

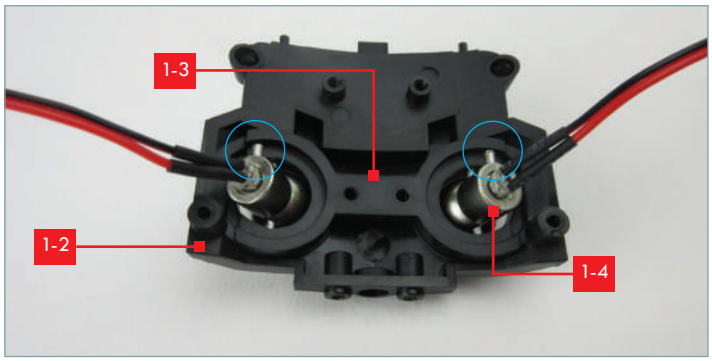
EXPERT TIP!

During the course of assembling your T-800, you may need to use some specific tools that may not already be in your toolbox.



The first of these is a Phillips (cross-head) precision screwdriver, with a PH00 tip. As the build progresses, you may need a longer screwdriver to comfortably reach the most tricky parts of the model, so when you get the chance, you may find it helpful to add a screwdriver with a shaft length of at least 90 mm to your collection of tools. Until then a small, cross-head screwdriver will do the trick, especially for the first four stages.





STEP 7

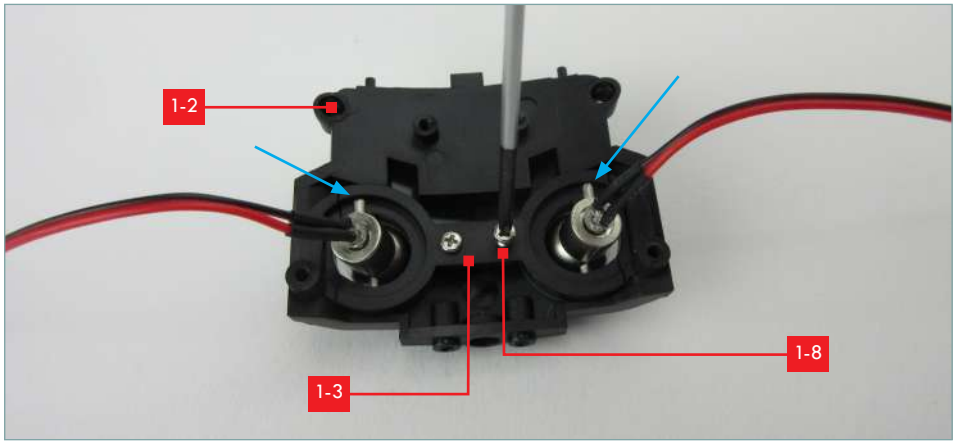
Now, find the matte black inner eye sockets (**1-2**), and the eye socket brace (**1-3**). You will also need two PB 2x4 mm screws (**1-8**).

With the concave side of the eye sockets facing towards you (and the 'nose' section facing away), place each eye into a socket, matching the vertical slots in the black plastic to the thin, cylindrical pins in the back of each eye. With part **1-2** in this orientation, two pins point upwards, and one points downwards. If in doubt, use the photograph to guide your placement. Be careful, as the eyes are still loose at this stage, until fixed in place by the brace, **1-3**, in the next step.

STEP 8

Once the eyes are in place, push the eye socket brace (**1-3**) into the appropriate spot behind both eyes, following the convex shape of the eye sockets. One of the pins at the top of each of the eye orbits (**1-4**) is on top of the rim of the eye socket brace (circled); the others are held in place behind it.

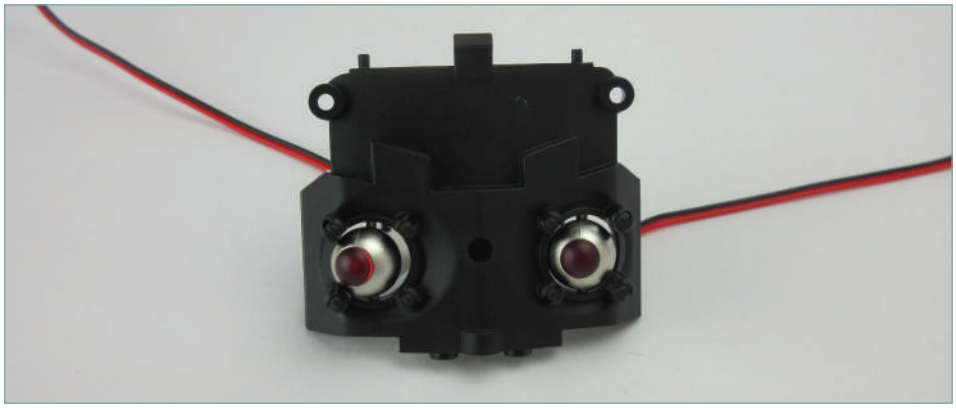
The eye socket brace holds the eye orbits in place, making sure that the eyes remain in their housing, but also allowing them to be moved from side to side.



STEP 9

To finish this segment, secure the eye socket brace in place using two of three PB 2x4 mm screws supplied (**1-8**).

Use a small, cross-point screwdriver (Phillips PH00 or similar) to gently insert and turn the screws until they make a firm connection. Make sure that the pegs on parts **1-4** are still fitting in the recesses, and that the sides with two pegs point upwards in this orientation (blue arrows).



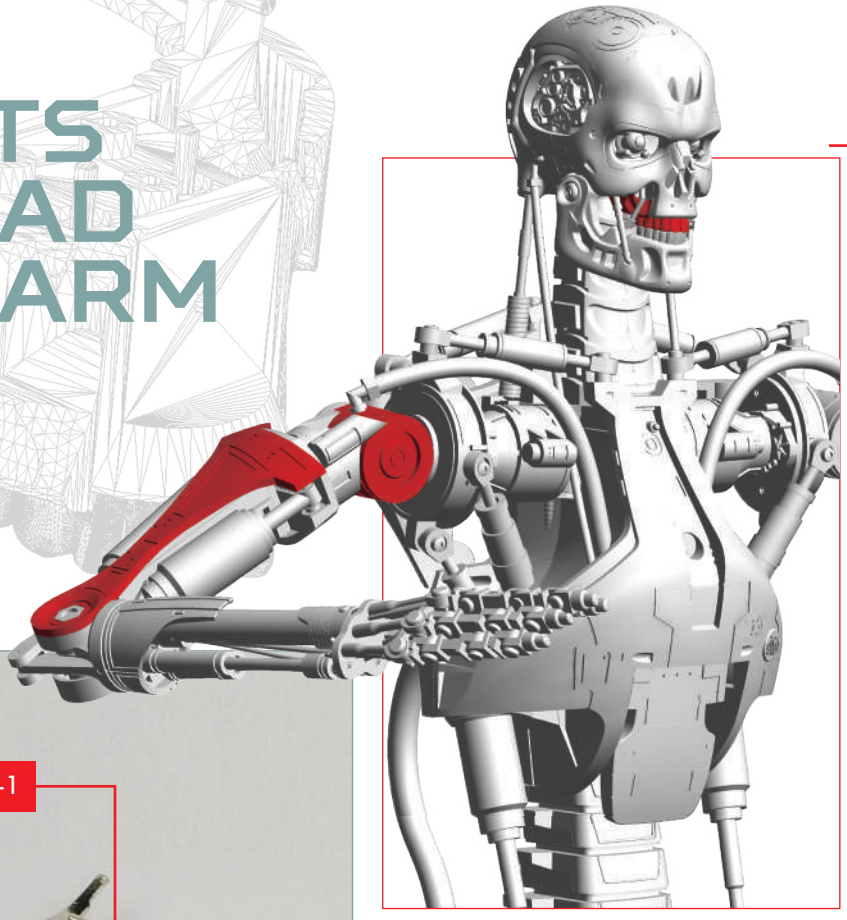
STAGE COMPLETE!

With these easy steps, you have completed the first stage of your Terminator T-800.

Before you finish, go back through the step-by-step photos to ensure that all the components are where they should be. Keep the unused parts and the head assembly safely stored until they are needed again.

STAGE 02: COMPONENTS FOR THE HEAD AND RIGHT ARM

In Stage 02, you'll begin to assemble the Terminator T-800 Endoskeleton's haunting, skeletal grin. You'll start with the upper jaw area and teeth, and then put together the first segment of the right arm.



LIST OF PIECES

2-1	Upper jaw
2-2	Upper teeth
2-3	Right arm component A
2-4	Right arm component B
2-5	Right arm component C
2-6	3x PB screws (2x6 mm) (1 spare)
2-7	3x PB screws (2x4 mm) (1 spare)
2-8	3x KB screws (2x6 mm) (1 spare)

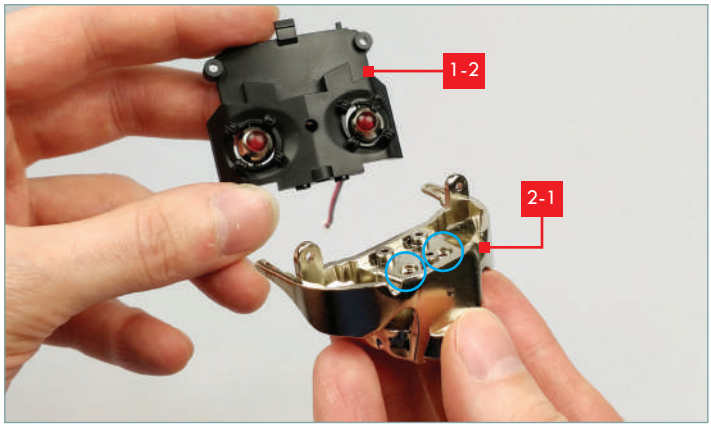
YOU WILL ALSO NEED

A suitable cross-point screwdriver (assembly is much easier if you magnetize your screwdriver!), superglue gel, and a cocktail stick or toothpick.

STEP 1

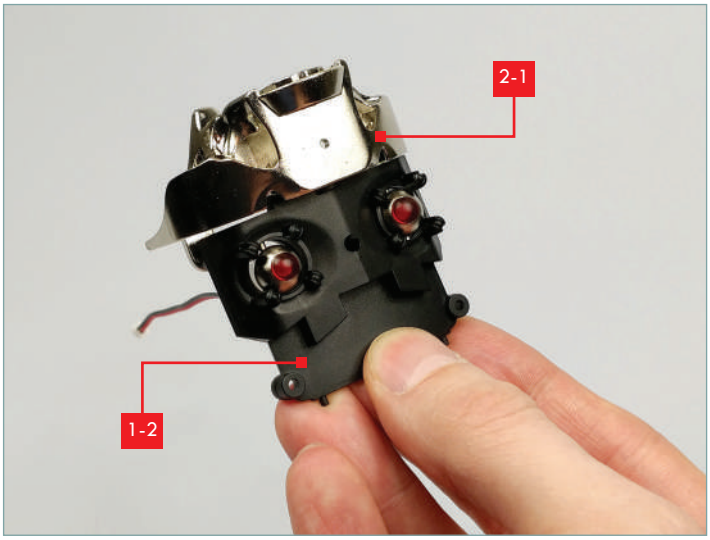
Before you get started, make sure to carefully examine all of the pieces you have received with this second stage. Go over the components to make sure they match the list of components in this stage, and that you have identified each part and its related number. As with stage 01, not all of the pieces that come with this stage will be assembled immediately. In this case, you can safely put **2-3** – Right arm component A – to one side, for use in a future assembly session.

Make sure you have your screwdriver handy before moving to the next step. Please note the subtle difference between the KB 2x6 mm and the PB 2x6 mm screws; the KB screws have a countersunk head whilst the PB screws have a larger, rounded head.



STEP 2

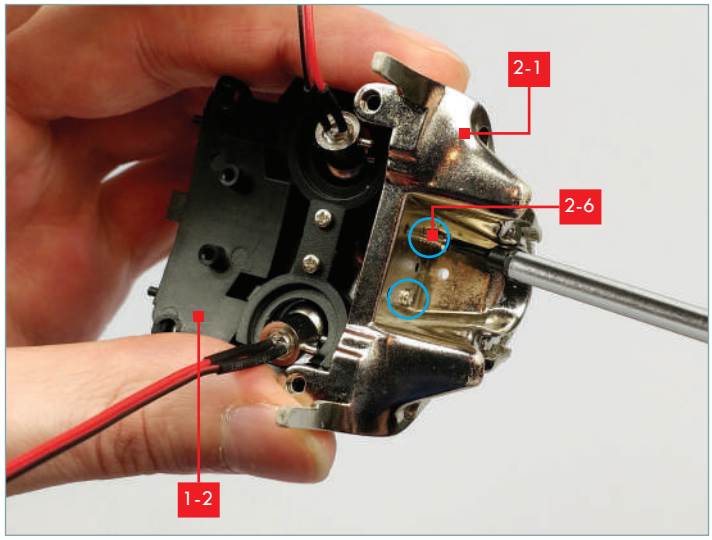
The first thing you will do in this stage is to insert the upper jaw (**2-1**) into the black eye socket section that you assembled in stage 01. Note that the upper jaw (**2-1**) has a set of screw holes (circled in blue) that match up with a set of holes in the inside of the eye socket section.



STEP 3

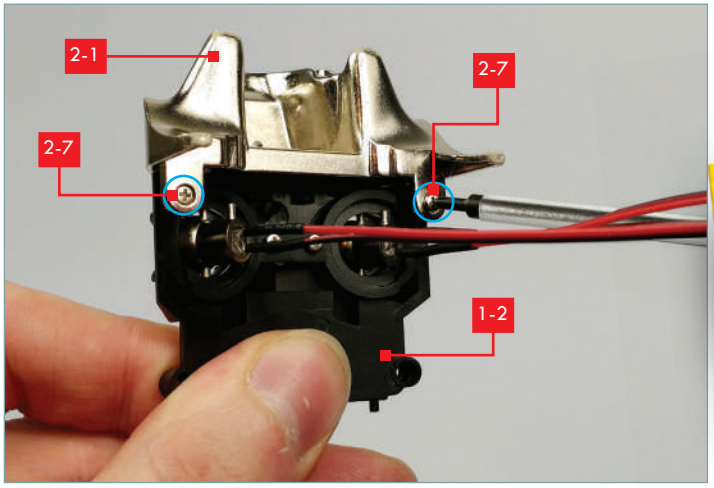
Fit the pieces together, taking care not to damage the cables of the LEDs you have already installed.

Next, find two PB 2x6 mm screws (**2-6**); the longer of the screws, with the rounded head.



STEP 4

Using your screwdriver, insert the two PB 2x6 mm screws (**2-6**) into their respective holes on the underside of the upper jaw (**2-1**), under the eyes, as shown in the photo (circled in blue). Tighten them firmly into place, without forcing them.



STEP 5

Take two PB 2x4 mm (**2-7**) screws (the shorter ones with a round head) and insert them through the holes in the upper jaw and into the eye socket assembly. The screw holes are on either side of the eye sockets, as shown circled in blue. As before, screw them home, but without forcing them beyond a firm fit.

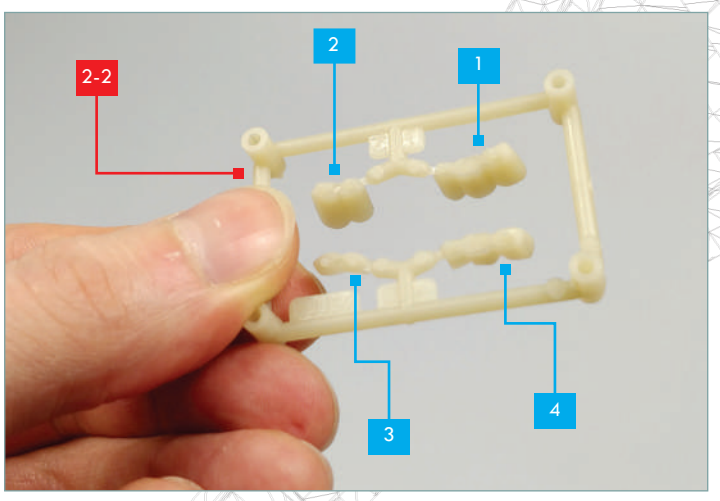
EXPERT TIP!

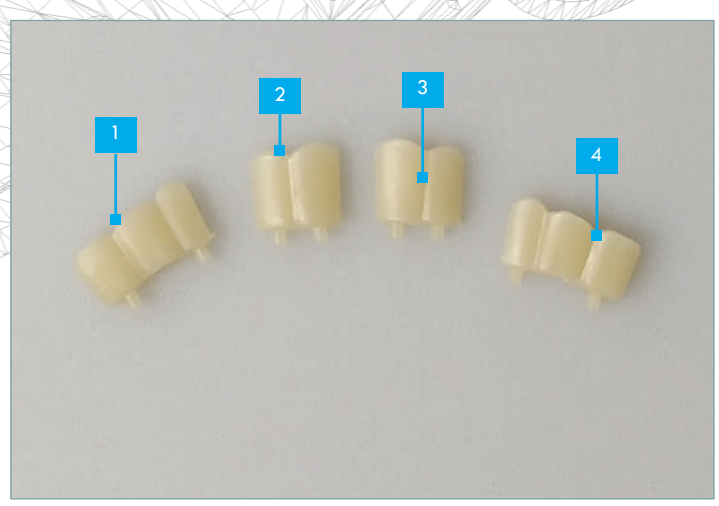
Using superglue as part of your build.

When using superglue, always apply it extremely sparingly! We recommend that you use superglue gel, which can be applied with great accuracy to the relevant surfaces using a cocktail stick or a toothpick.

Apply a tiny drop of superglue to one of the surfaces to be bonded, press the surfaces together, and hold them in place for a few moments in order for the glue to fix.

Be careful, and remember that superglue can also bond skin as easily as it does anything else, which is why using cocktail sticks is recommended for added precision.





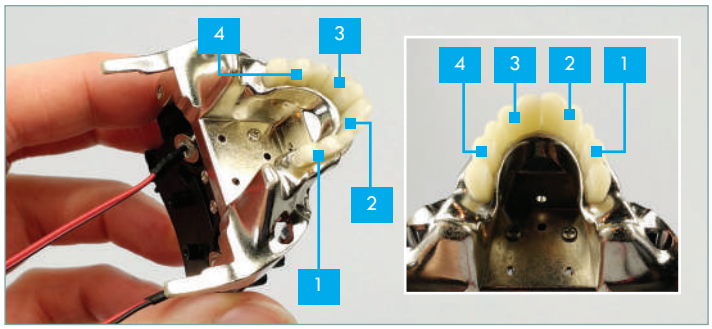
STEP 6

You can now move on to fitting the upper teeth (**2-2**) into the upper jaw. Each of the four sets of teeth are different, and so it is vital that you note the part number of the teeth on the framework before you remove them. If necessary, smooth any remaining rough edges with a fine file or sandpaper.

Keep them clearly numbered until they are fitted. You may find it helpful to also study the photograph to the right once you have removed the teeth from the framework, and especially if you lose track of which piece is which.

We recommend using a craft knife or a set of small side-cutting pliers to remove the teeth from the framework, as more delicate pieces can become damaged by twisting them.

Always take care when using a craft knife or a bladed tool.



STEP 7

Test-fit all of the teeth in place, checking they match the inset photograph.

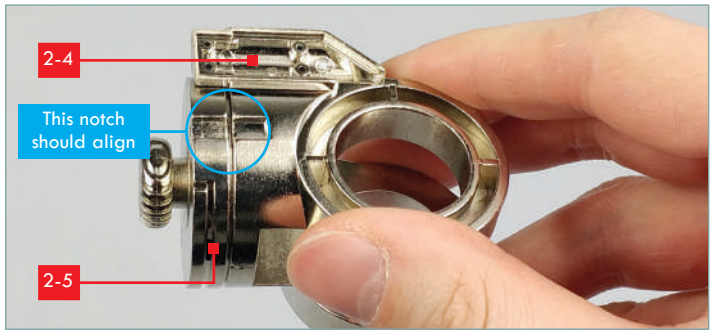
Then remove the first set of teeth and apply a tiny drop of thick superglue, with a cocktail stick, to the locating pins on the top of the teeth.

Fix the teeth section in place, holding them secure for a few seconds whilst the glue sets. Repeat this process for the remaining three sets of teeth.

STEP 8

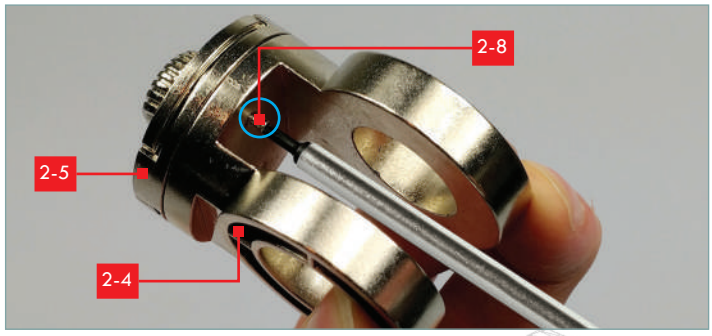
With the teeth carefully affixed, it's time to assemble the first pieces of the right arm.

Take right arm components B (**2-4**) and C (**2-5**) which were both supplied with this stage.



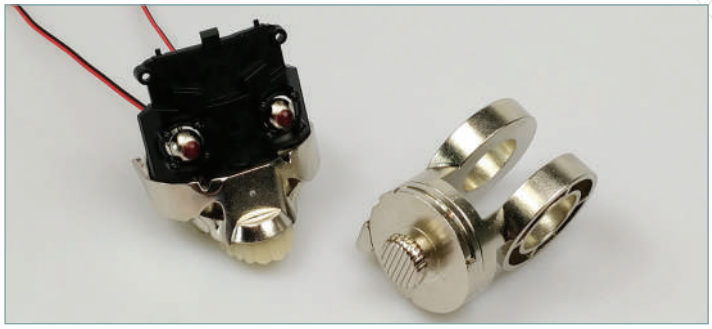
STEP 9

Fit the two pieces (**2-4** and **2-5**) together, as shown in the photograph. Ensure that the two screw holes of component C (**2-5**) match up with component B (**2-4**), and that they fit correctly. There is a notch on one side of both parts which should align, as shown.



STEP 10

Next, secure the two pieces to each other using two KB 2x6 mm screws (**2-8**), which have the smaller, countersunk head. Always remember not to use excessive force when you drive these small screws home, as you could damage one or both of the pieces.



STAGE COMPLETE!

After stage 02, the head of your Terminator T-800 is now taking shape. Before you finish, check that the components you've assembled match with what has been shown in the pictures at each step, and in this final example.

Lastly, don't forget to keep safe the pieces and screws that you have not yet used, ready for a later session. Some small, clear plastic bags labelled with either a sticker or a note, are especially useful for the screws.

STAGE 03: COMPONENTS FOR THE RIGHT ARM AND FIRST FINGER

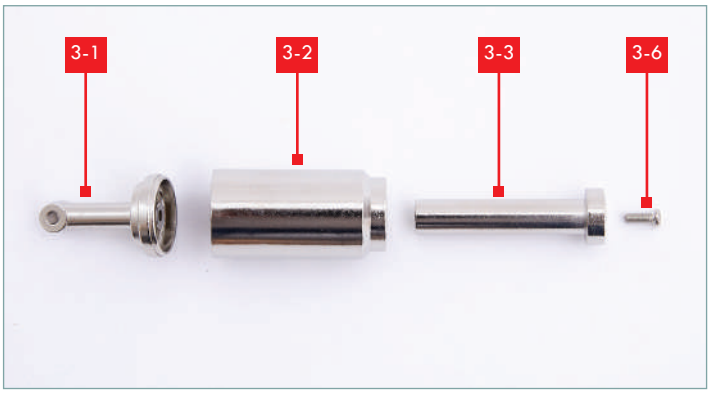
With the pieces you've received in this stage, you will be able to assemble a new element for the Terminator T-800 Endoskeleton's right arm, piece together the first articulated finger, and use a diode tester kit to check the LED eyes are working perfectly!

LIST OF PIECES

3-1	Right arm component D
3-2	Right arm component E
3-3	Right arm component F
3-4	AAA battery holder
3-5	LED test circuit board
3-6	2x PM screws (3x8 mm) (1 spare)
3-7	Right hand first finger component A
3-8	Right hand first finger component B
3-9	Right hand first finger component C
3-10	Right hand first finger component D
3-11	Right hand first finger component E
3-12	3x Articulating connector A
3-13	3x Articulating connector B
3-14	3x Sleeves for connectors A

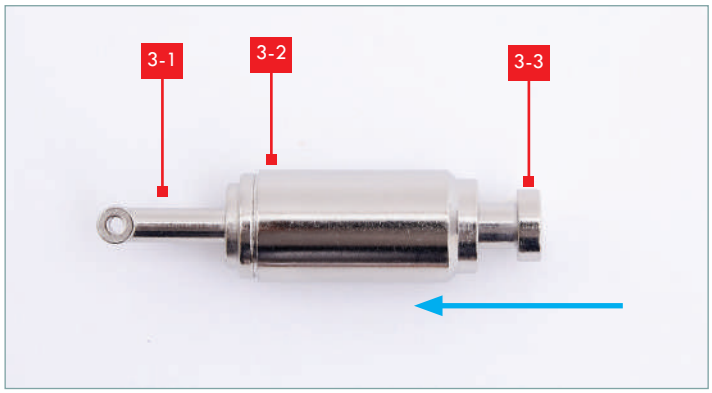
YOU WILL ALSO NEED

A suitable cross-point screwdriver and 3x AAA batteries.



STEP 1

Take the right arm parts (**3-1**, **3-2** and **3-3**) and a PM 3x8 mm screw (**3-6**) and place them on your work surface in the order that they are to be connected, as shown.



STEP 2

Fit part **3-1** into the wider end of part **3-2**, and insert part **3-3** into the thinner end, as shown by the blue arrow.

STEP 3

Insert part **3-3** fully and secure all three parts together by fitting a PM 3x8 mm screw (**3-6**) through part **3-2** into part **3-1**.

For this you will need a cross-point screwdriver with a shaft of at least 2 inches.

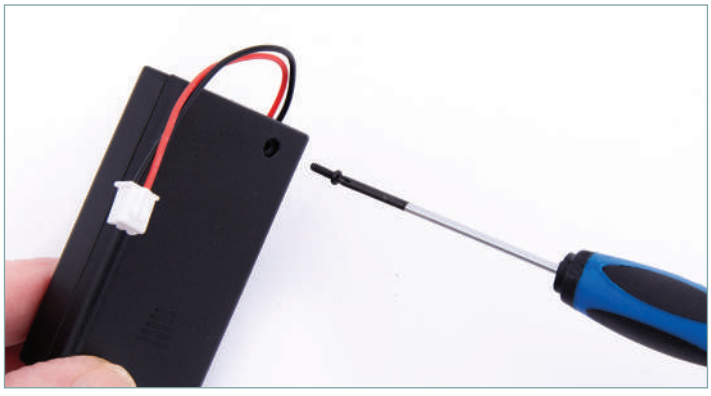
Once assembled, put the arm unit safely aside until it is needed in the next stage.

EXPERT TIP!

Having a magnetized screwdriver helps hold the screw and keeps it in place on the tip.

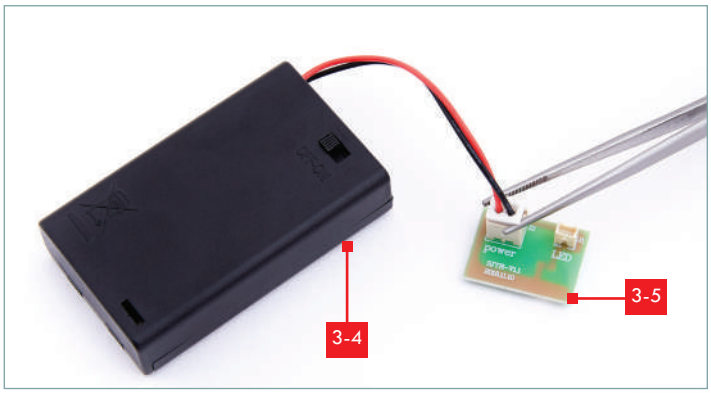
STEP 4

Next, take the battery box (**3-4**), which holds three AAA batteries. Remove the screw on the lid (circled in blue) and slide open. Fit the batteries, noting where the +ve and –ve terminals go.



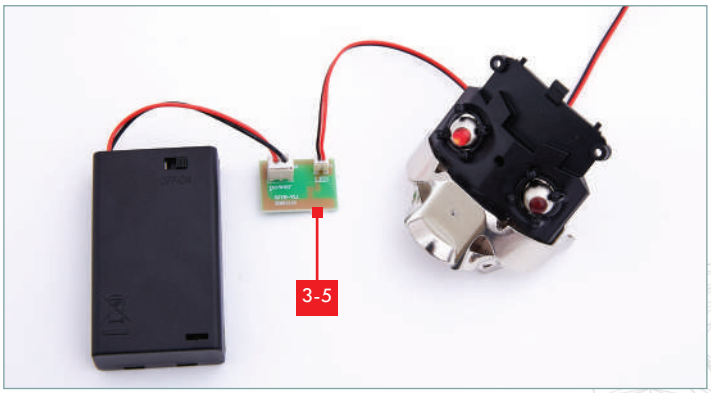
STEP 5

After fitting the batteries, replace the lid of the box and secure the screw. It is always good practice to leave a power supply turned off when connections are being made.



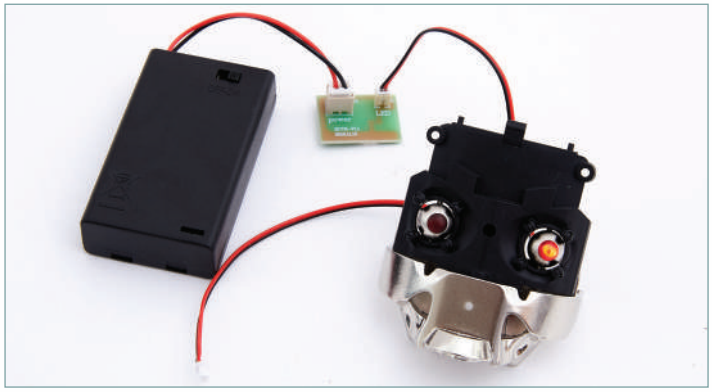
STEP 6

Check that the switch on the battery box is off. Plug the cable from the battery box into the larger socket marked POWER on the circuit board (**3-5**). It may help to use tweezers to guide the connector into place.



STEP 7

Take the head assembly from the previous stage and connect one of the eye cables to the smaller socket on the circuit board (**3-5**) marked 'LED'. Switch the battery box on to see the eye light up.



STEP 8

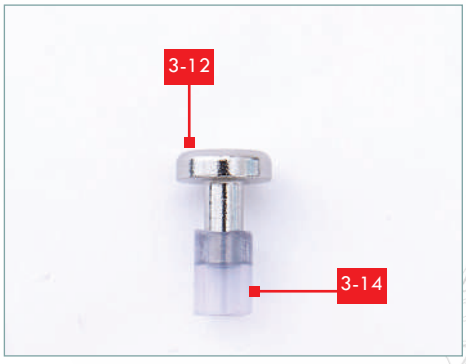
Turn the power off, and then repeat the process with the second eye. Once tested, turn the power off and safely store the head assembly, circuit board and battery box.

LEDS

A colourful source of electroluminescence — the term for when a material emits light when an electrical current is passed through it — LEDs have been part of our lives since the 1960s.

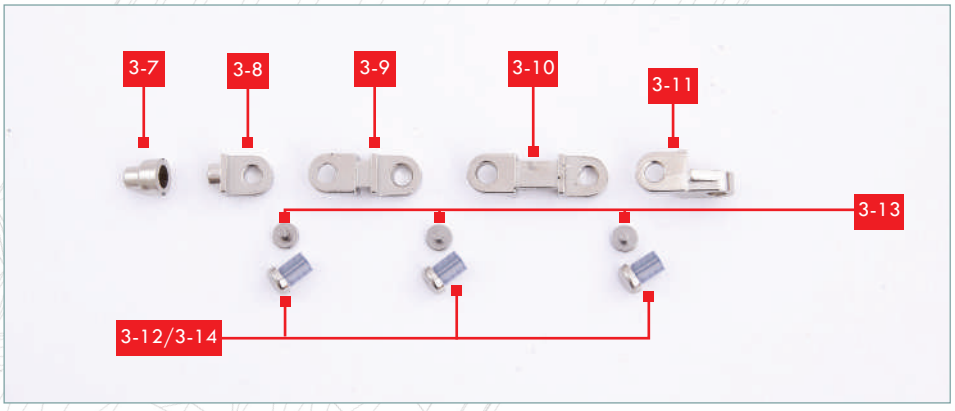
Though the earliest LEDs were of low intensity and only red in color (as seen in early alarm clocks and electronic calculators), subsequent breakthroughs increased both their brightness and colour palette, with blue, green, and, ultimately, white forms appearing on the market, and their uses diversifying accordingly.

LEDs are vastly more efficient than standard bulbs and other forms of artificial illumination, which is why they are increasingly replacing many forms of traditional lighting, both on the street and in the home. LEDs can now be found powering the screens of many smartphones, as well as enormous outdoor advertising displays, street lights, traffic lights, TV screens, and more.



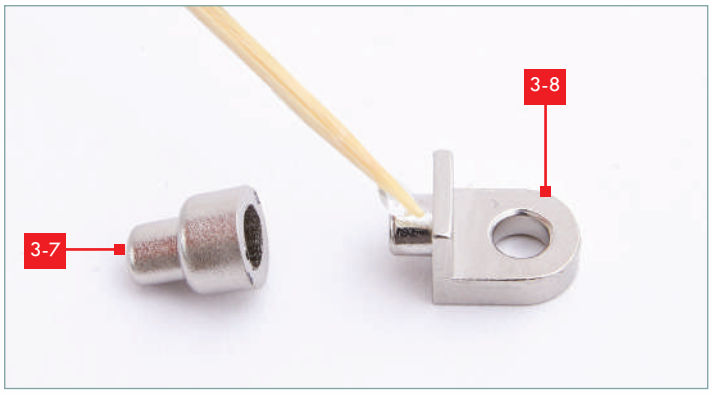
STEP 9

Before you start construction of the first finger, fit the three plastic sleeves (**3-14**) on to the articulating connectors A (**3-12**).



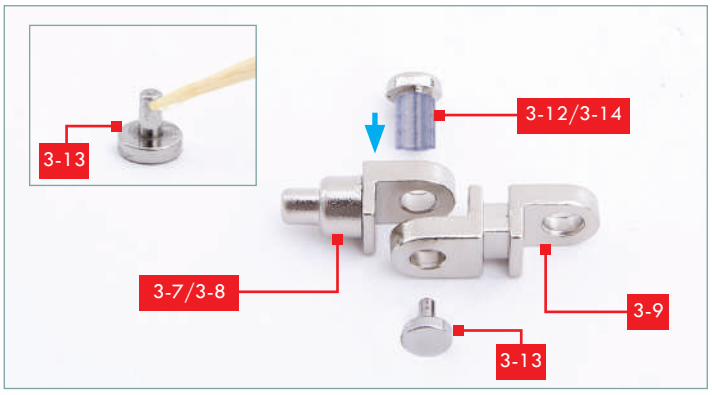
STEP 10

Take the finger parts (**3-7**, **3-8**, **3-9**, **3-10** and **3-11**) and lay them out in order, with connectors A and B in place between them, as shown.



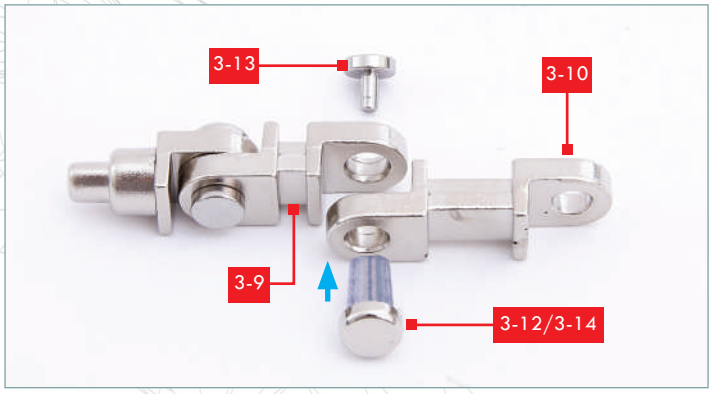
STEP 11

Begin the assembly by fitting part **3-7** onto part **3-8**. Using a cocktail stick, apply a little superglue gel to the peg on part **3-8** before fixing the peg into the recess in part **3-7**.



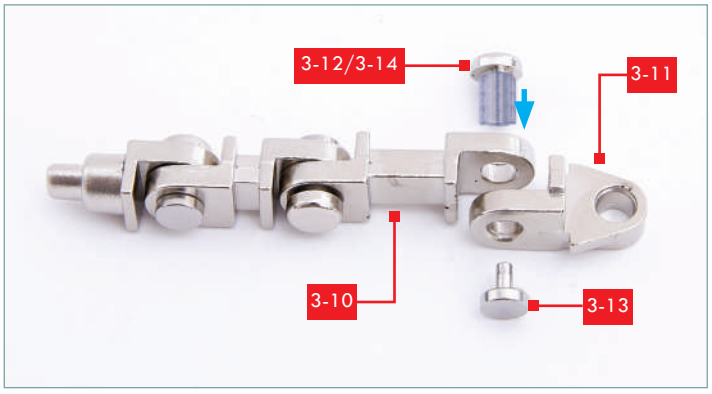
STEP 12

The assembled parts **3-7**/**3-8** connect to part **3-9** using one each of the connectors **3-12**/**3-14** and **3-13**. Fit part **3-12**/**3-14** through the holes in parts **3-8** and **3-9** (blue arrow). Apply glue to the pin on connector **3-13** (inset) and fix the connectors together to form a flexible joint.



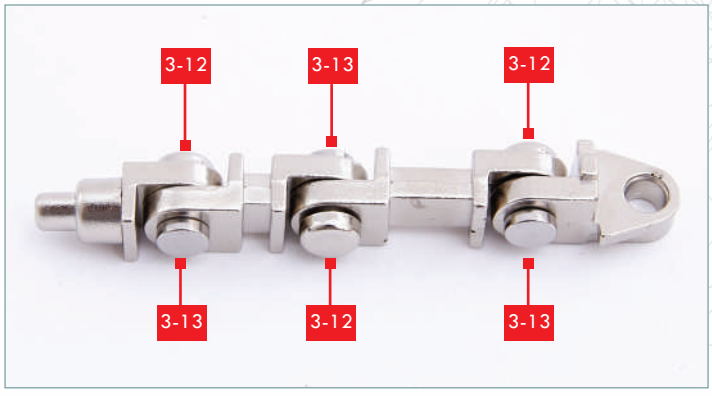
STEP 13

In a similar way, this assembly is connected to part **3-10** using one each of the connectors **3-12** and **3-13**. Ensure that connetor **3-12** has a plastic sleeve, and apply glue to the pin on connector **3-13**. Note that connector **3-12** is inserted on the other side to the previous step.



STEP 14

The finger assembly is finished by attaching part **3-11** in the same way, with connectors **3-12** and **3-13**. Note that part **3-12** has again swapped sides. Ensure that connector **3-12** has a plastic sleeve, and apply glue to connector **3-13** to fix in place.



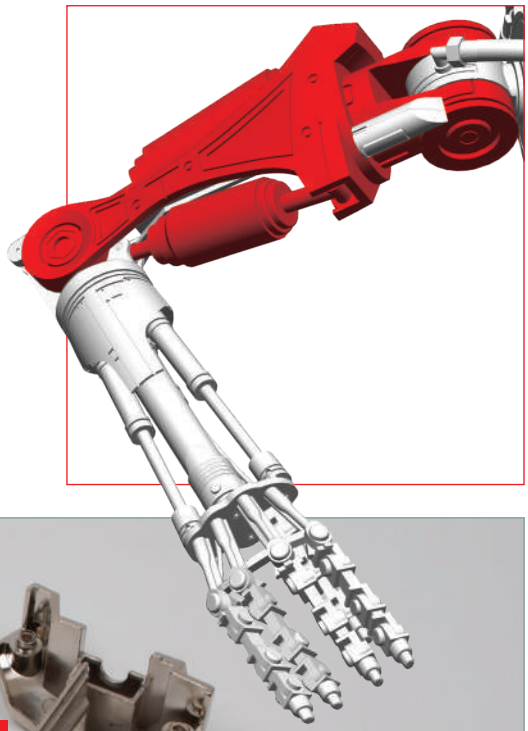
STEP 15

The first finger of your Terminator T-800 is now complete. Check that all the parts are connected as shown above, with connectors **3-12** and **3-13** in the positions indicated.

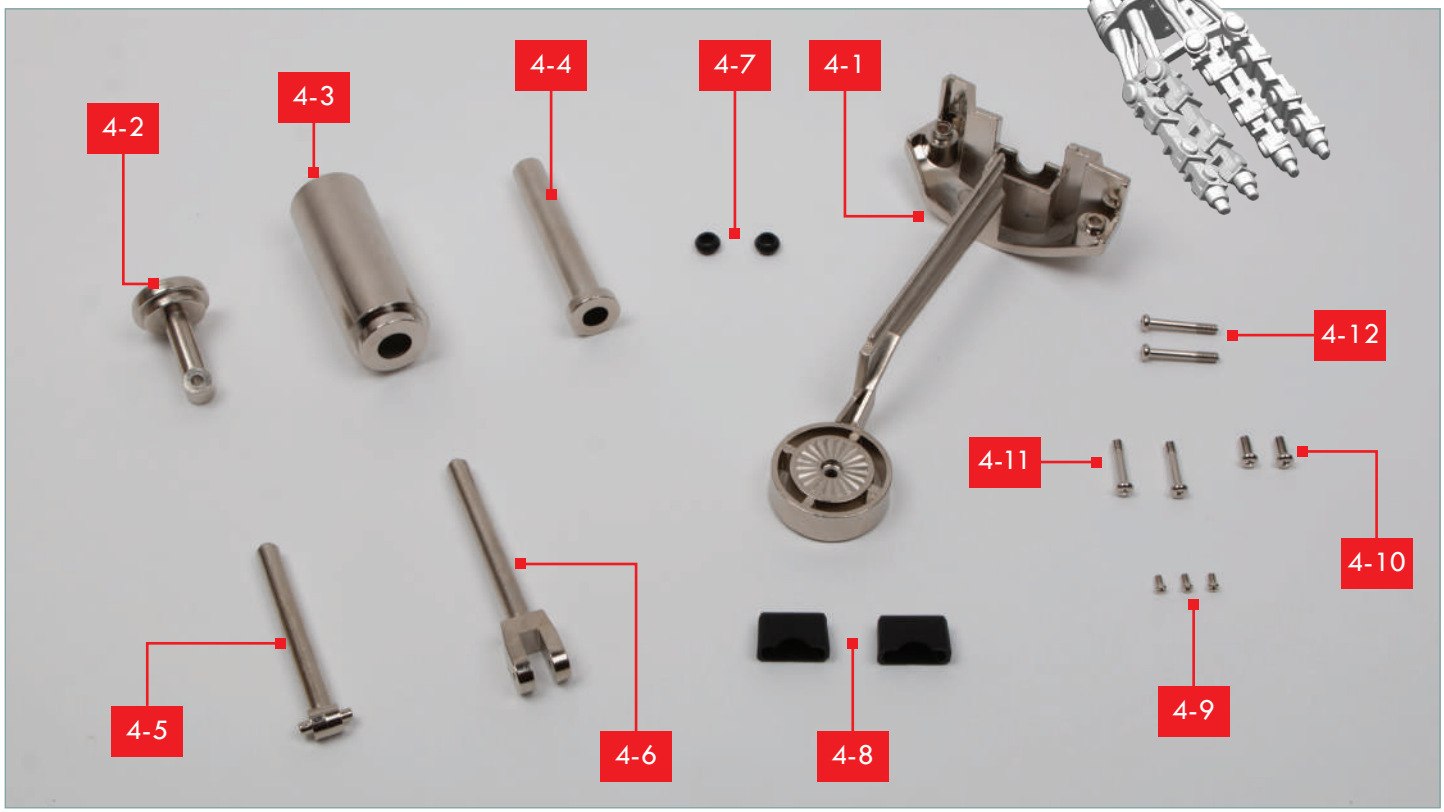
STAGE COMPLETE!

The photograph shows the assembly you have completed in this stage.

STAGE 04: NEW COMPONENTS FOR THE UPPER RIGHT ARM



With the pieces you've received in this stage, together with the other elements of the right arm you have already assembled, you will be able to construct the Terminator T-800 Endoskeleton's upper right arm.

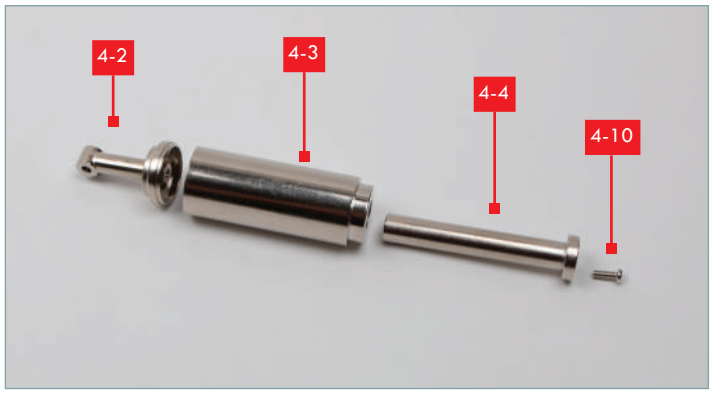


LIST OF PIECES

4-1	Right arm component G
4-2	Right arm component H
4-3	Right arm component I
4-4	Right arm component J
4-5	Right arm rod A
4-6	Right arm rod B
4-7	Rubber washers for right arm rods
4-8	Plastic grips for combined right arm component B&C
4-9	3x PM screws (2x4 mm) (1 spare)
4-10	2x PM screws (3x8 mm) (1 spare)
4-11	2x PM screws (3x16 mm) (1 spare)
4-12	2x PM screws (3x20 mm) (1 spare)

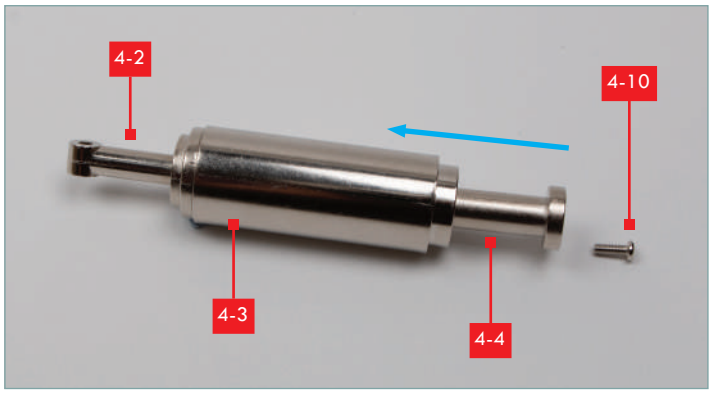
YOU WILL ALSO NEED

A suitable cross-point screwdriver and the right arm components you have previously assembled in stages 02 and 03.



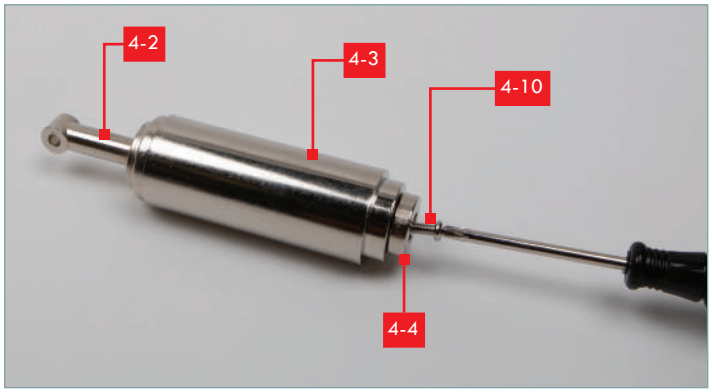
STEP 1

A second cylinder is constructed in a similar way to the one in the previous stage. Begin by laying out the required parts.



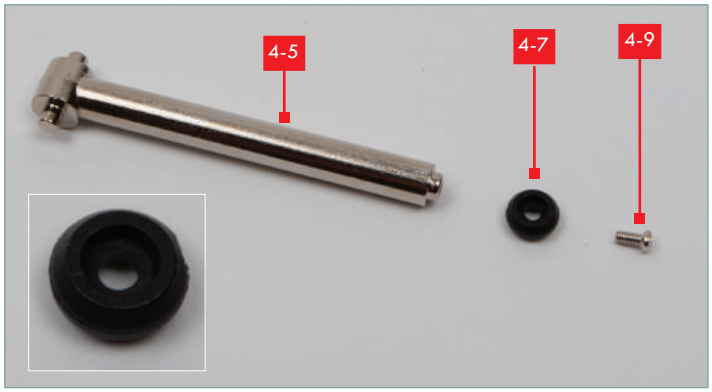
STEP 2

As before, place part **4-2** onto the left end of part **4-3** and insert part **4-4** into the other end as shown by the blue arrow.



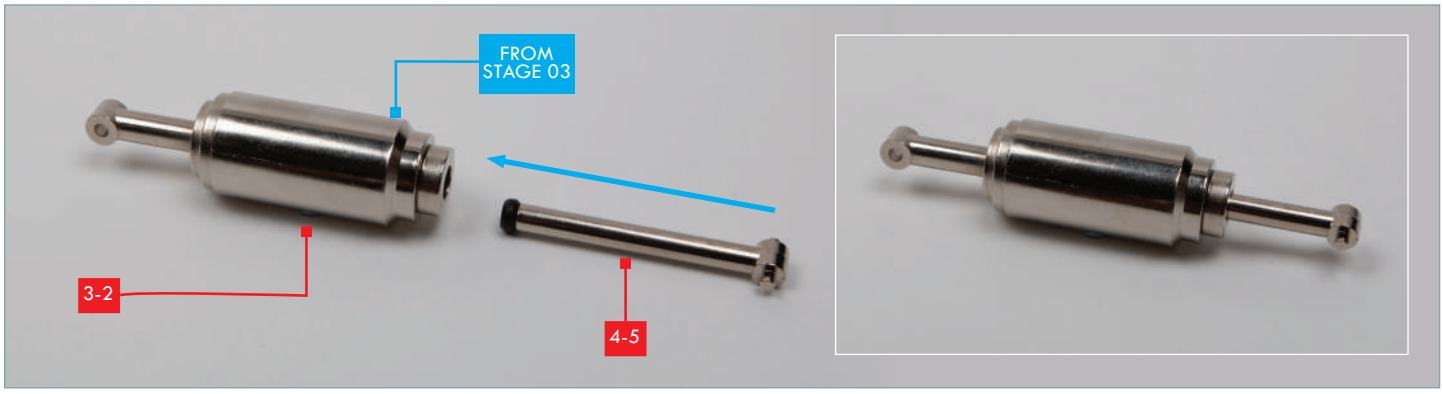
STEP 3

Insert part **4-4** fully and secure in place by fitting the PM 3x8 mm screw (**4-10**) through part **4-3** into part **4-2**. For this you will need a long cross-point screwdriver.



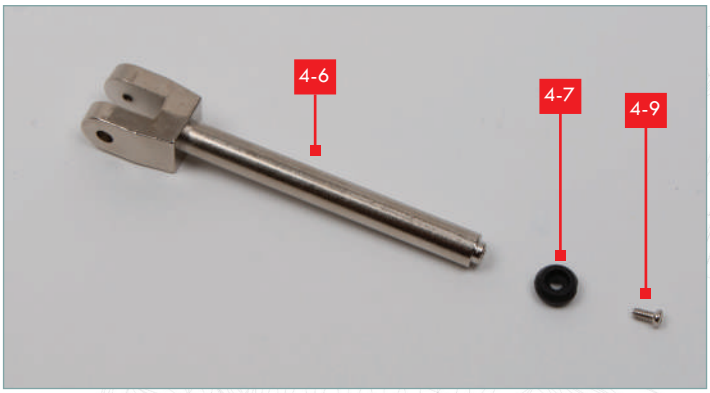
STEP 4

Take arm rod part **4-5**, a rubber washer **4-7** and a PM 2x4 mm screw (**4-9**). Note that one side of the rubber washer has a recess which fits onto the end of the rod **4-5** (see inset).



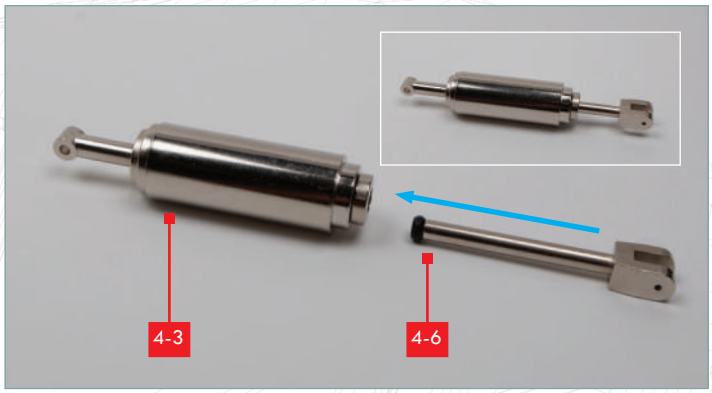
STEP 5

Secure the washer in place on the end of the rod with a PM 2x4 mm screw (**4-9**). Be careful not to over-tighten the screw and apply too much pressure to the washer. Then take the cylinder assembly (**3-2**), which was constructed in the previous stage, and slide the rod (**4-5**) into it, as indicated by the blue arrow. The inset photograph shows the completed assembly.



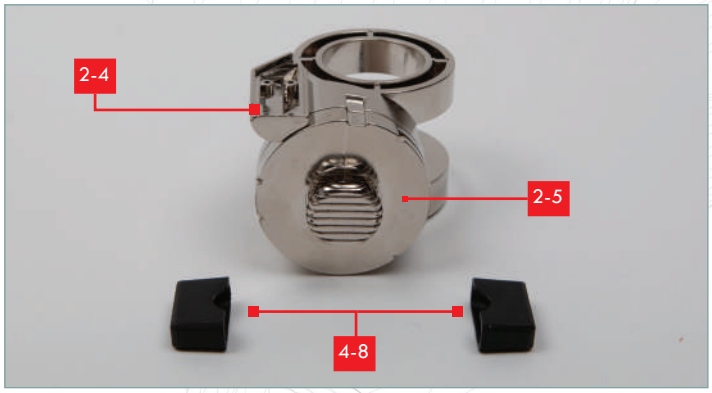
STEP 6

Next repeat the process with arm rod part **4-6**, rubber washer **4-7** and a PM 2x4 mm screw (**4-9**). Again note that the recess on one side of the washer fits over the end of the rod **4-6**.



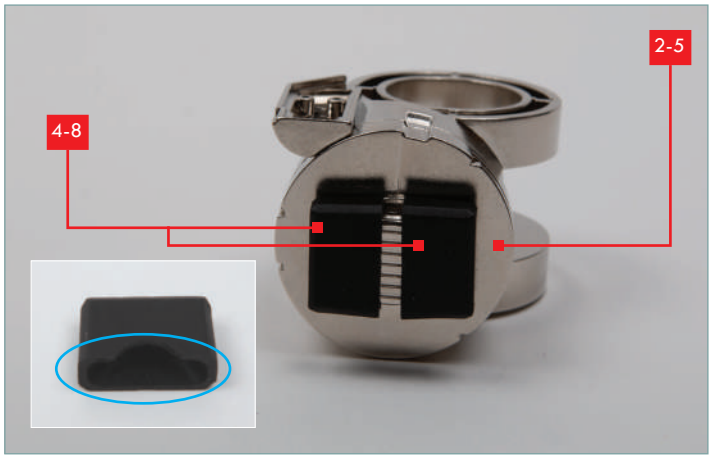
STEP 7

After securing the washer in place on the end of the rod with a PM 2x4 mm screw, again taking care not to over-tighten it, take the cylinder assembly (**4-3**) which was completed in step 3 of this stage and slide the rod (**4-6**) into it (indicated by the blue arrow). The inset photograph shows the completed assembly.



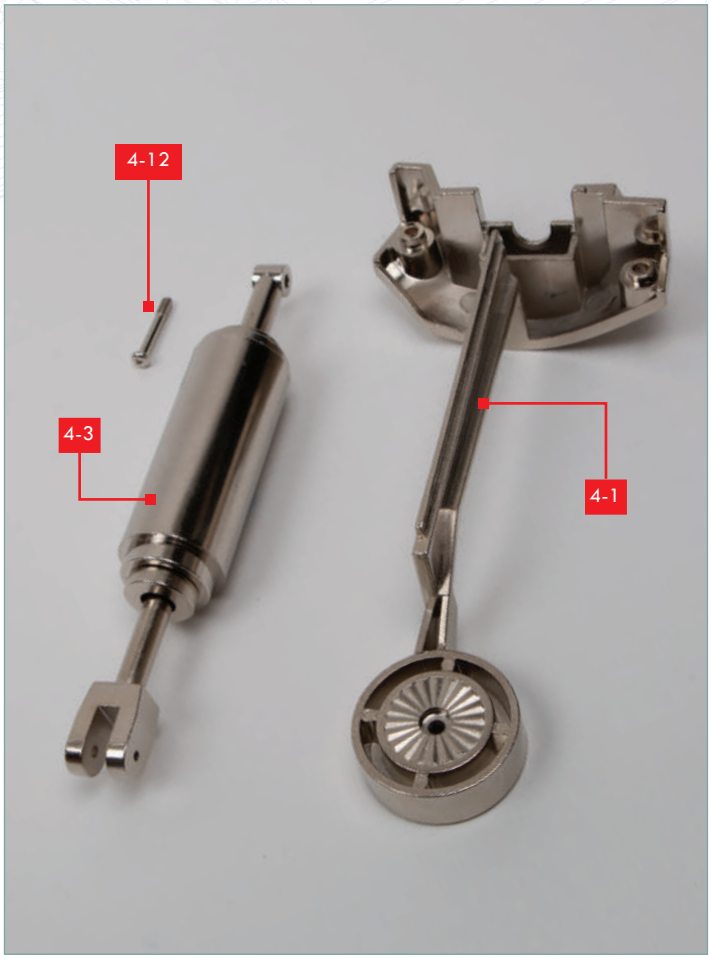
STEP 8

Take the assembly **2-4**/**2-5**, which was completed in stage 02, along with plastic grips **4-8**, supplied with this stage.



STEP 9

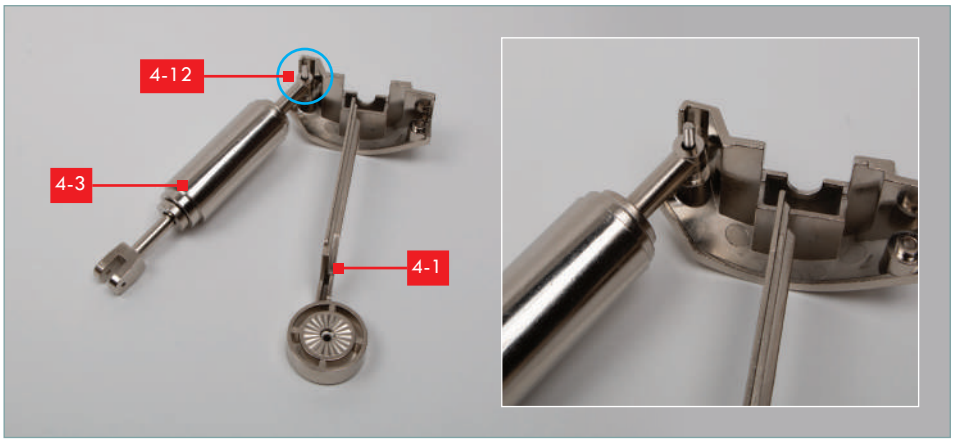
Fit the plastic grips, parts **4-8**, on the end of the button-like protrusion, as shown. One side of the grip has a recess (see inset) which fits towards the back. The parts may not fit securely at present but they will be held firmly in place in a later step.



STEP 10

Before progressing further, read carefully through to the end of the stage 04 assembly guide as several parts need to be placed before they are secured together.

Take part **4-1**, the piston assembly **4-3** and a PM 3x20 mm screw (**4-12**) and lay them on the work surface, as shown.

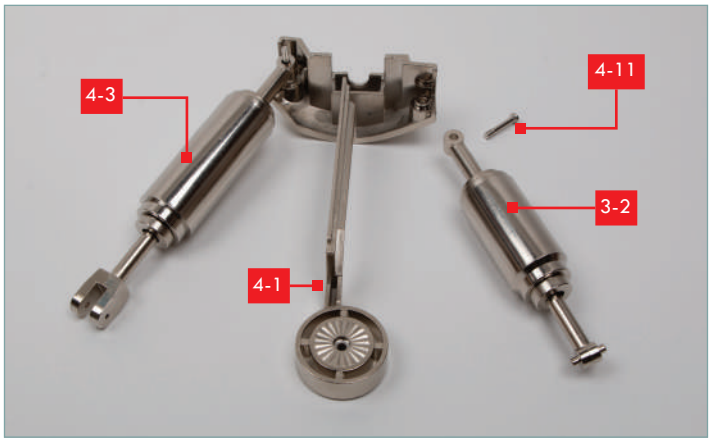


EXPERT TIP!

You may find it helpful to temporarily hold the screws in place from the back with small pieces of tape.

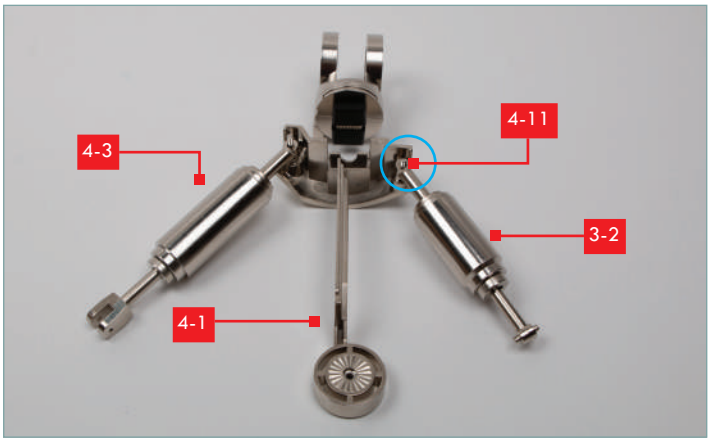
STEP 11

Begin by fitting the PM 3x20 mm screw (**4-12**) from the back and place the hole at the end of the piston assembly **4-3** over it (circled in blue). See inset.



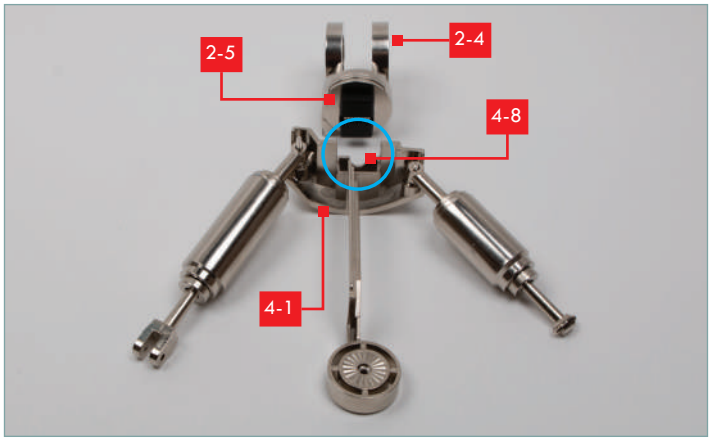
STEP 12

Next take the piston assembly which was completed in step 5 and a slightly shorter PM 3x16 mm screw (**4-11**) and place them on the work surface, as shown.



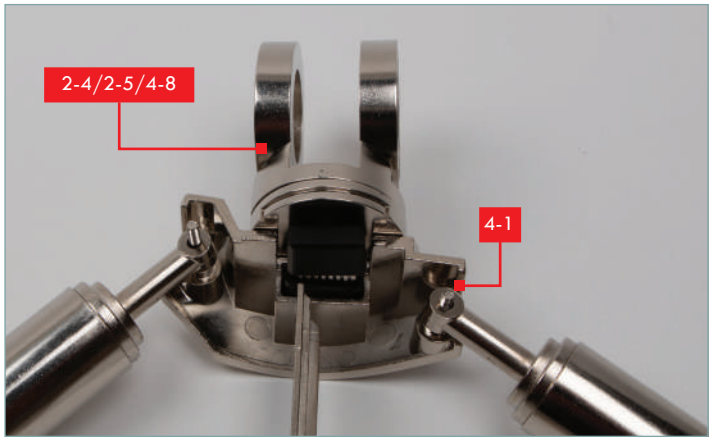
STEP 13

In a similar way insert the PM 3x16 mm screw from the back and place the end of the piston assembly **3-2** over it (circled blue).



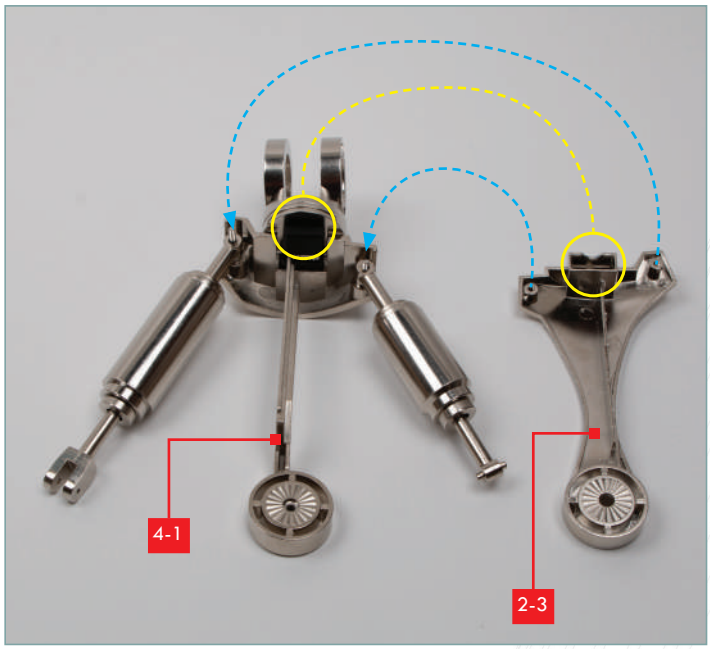
STEP 14

Take the assembly **2-4**/**2-5**/**4-8** which was worked on in steps 8 and 9 and place it on the work surface, as shown. Note the slot on part **4-1**, circled in blue, which receives a grip (**4-8**) in the next step.



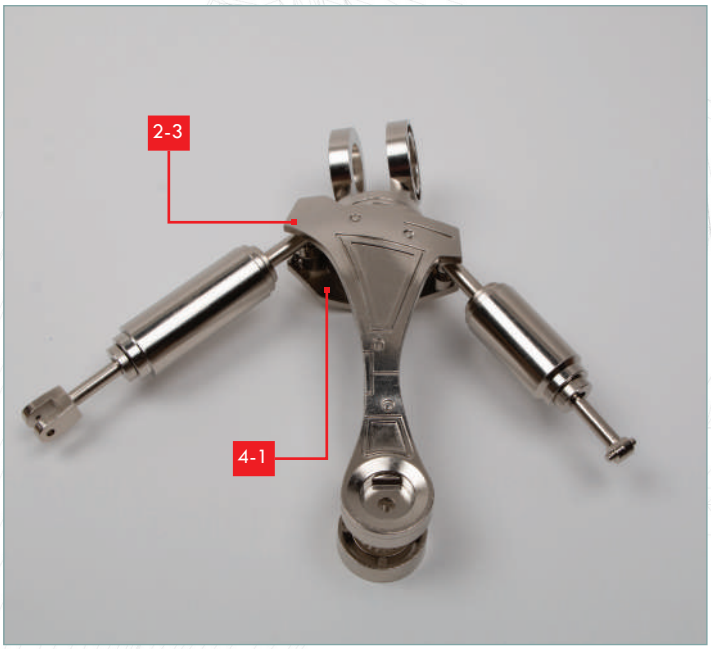
STEP 15

Insert the assembly **2-4**/**2-5**/**4-8** into the slot in part **4-1**, as shown.



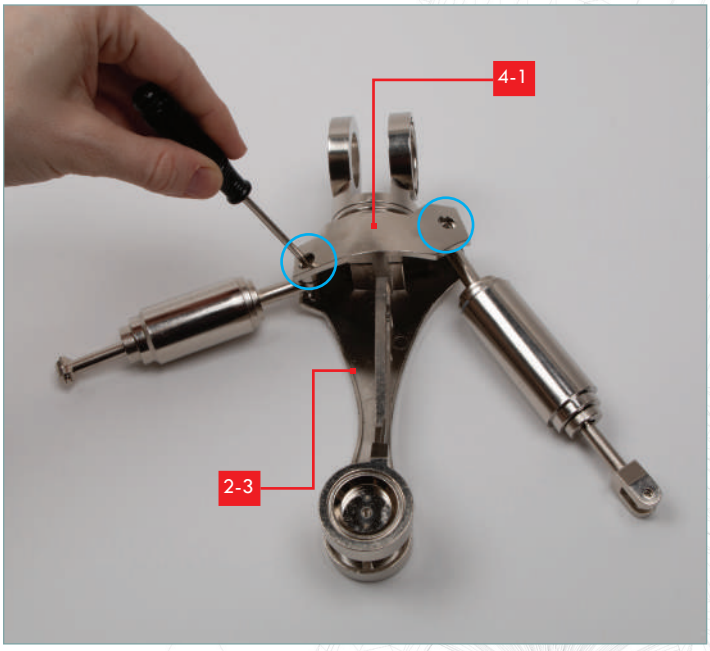
STEP 16

Next, take part **2-3** which was supplied with stage 02 and lay it next to the assembled parts. Study the photograph carefully, following the dotted lines to see where the parts connect when it is fitted on top.



STEP 17

Turn part **2-3** over and align it on top of the previously assembled parts. When the screws and grip **4-8** are located in their sockets, gently hold the assembly, squeezing the parts slightly together. Then very carefully turn the entire assembly over. See also next step.



STEP 18

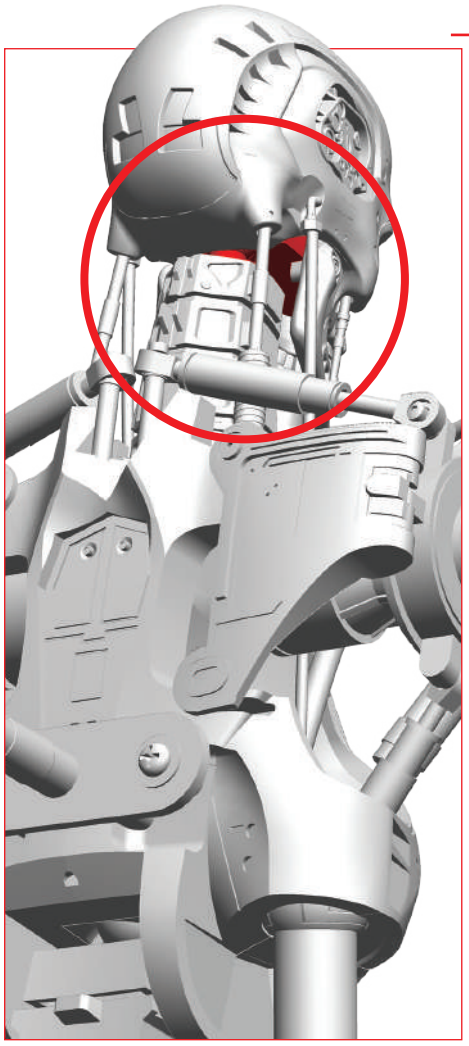
The screws (circled in blue) are then tightened. This action will close the parts together and firmly secure the assembly.

STAGE COMPLETE

The photograph shows the assembly completed in this stage. Don't worry, the joints (**3-1** and **4-2**) are meant to be slightly loose at this point.

STAGE 05: COMPONENTS FOR THE LOWER JAW AND NECK

In stage 05, you'll be assembling the T-800 Endoskeleton's all-important lower jaw, and the first ball joint in your cyborg's body.

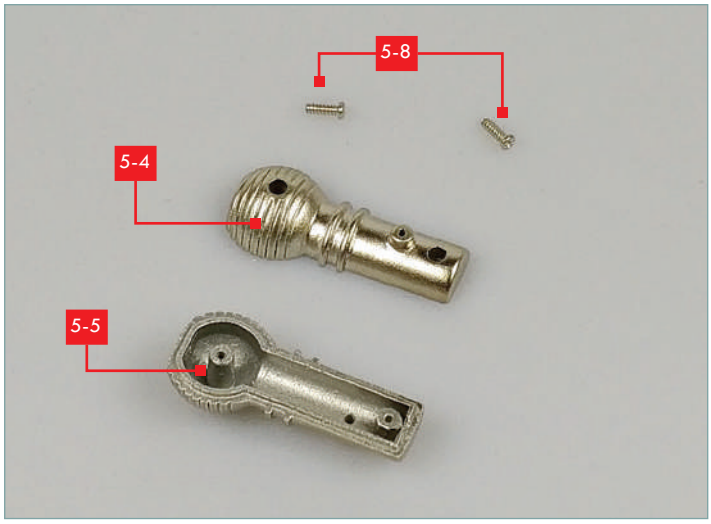


LIST OF PIECES

5-1	Lower jaw
5-2	Ring
5-3	Ball joint socket
5-4	Ball joint – A
5-5	Ball joint – B
5-6	Ball joint Cover
5-7	4x PM screws (2x6 mm) (Black)
5-8	3x PB screws (2x6 mm) (Silver)

YOU WILL ALSO NEED

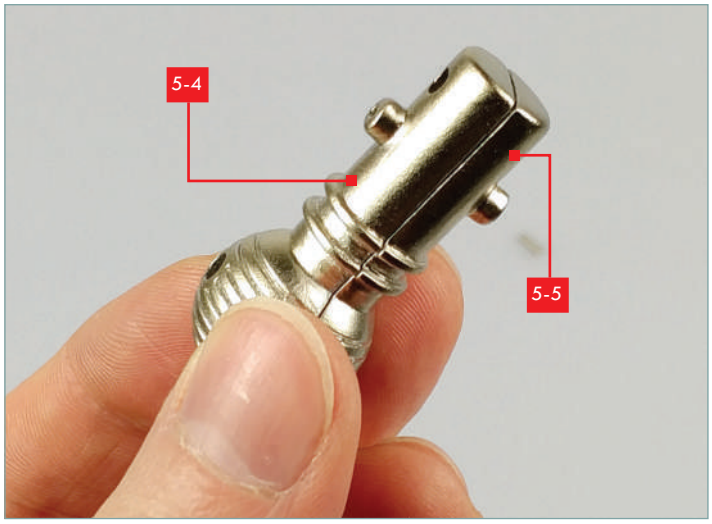
A suitable cross-point screwdriver.



STEP 1

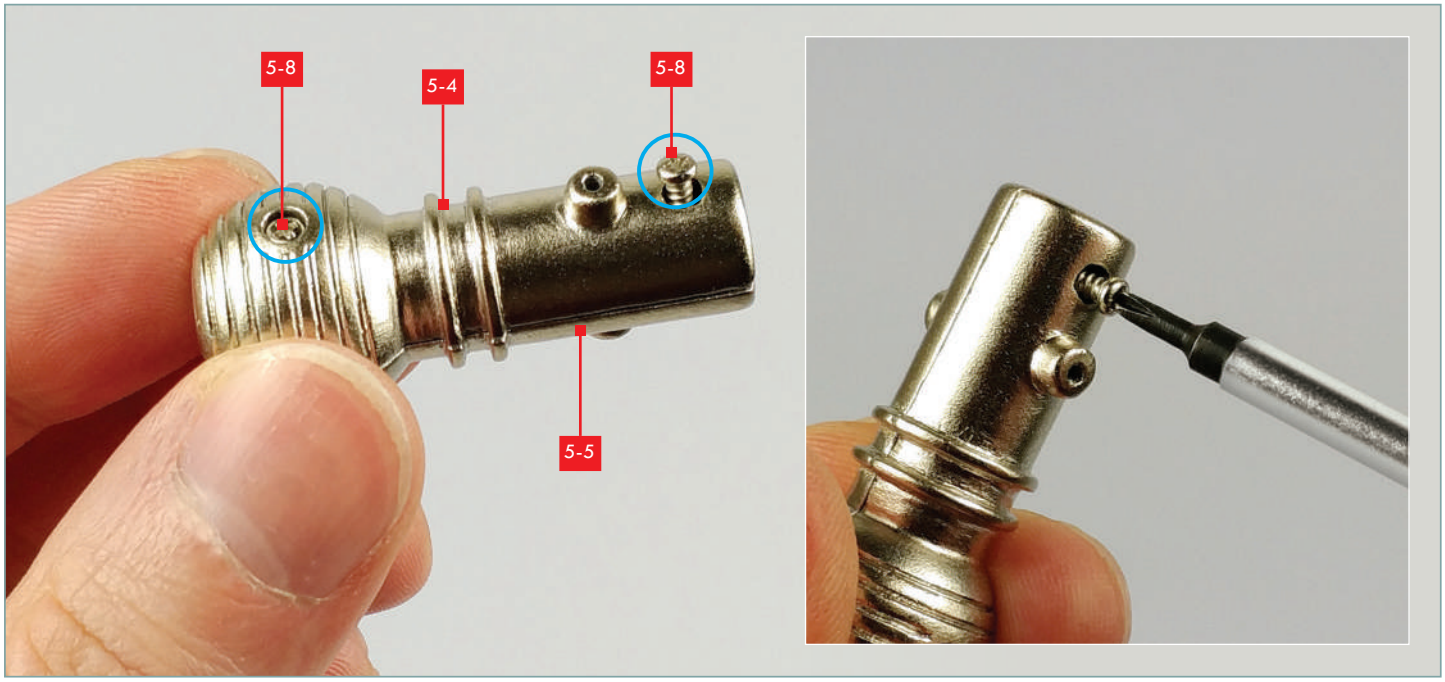
After double-checking your pieces from this stage match the checklist, take the ball joints A (**5-4**) and B (**5-5**) and place them on the work surface.

You'll also need two of the silver screws supplied with this stage — Screw PB 2x6 mm (**5-8**).



STEP 2

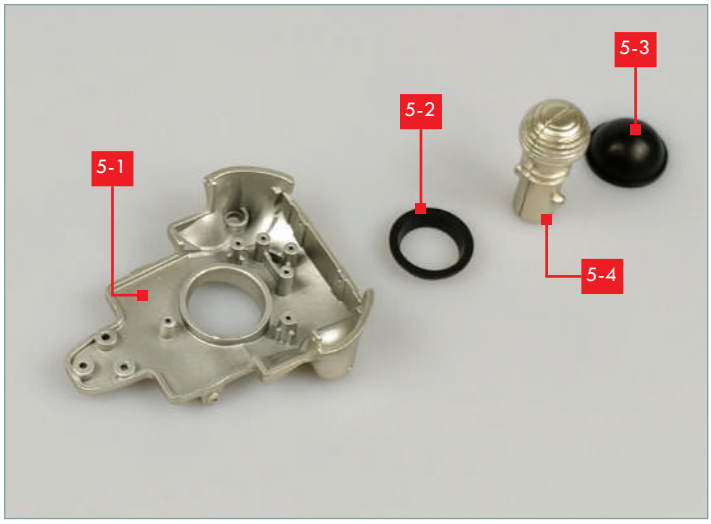
Align the screw holes, then push pieces **5-4** and **5-5** together, as shown.



STEP 3

Insert a **5-8** screw into each of the two screw holes on **5-4**, marked in blue in the photo above.

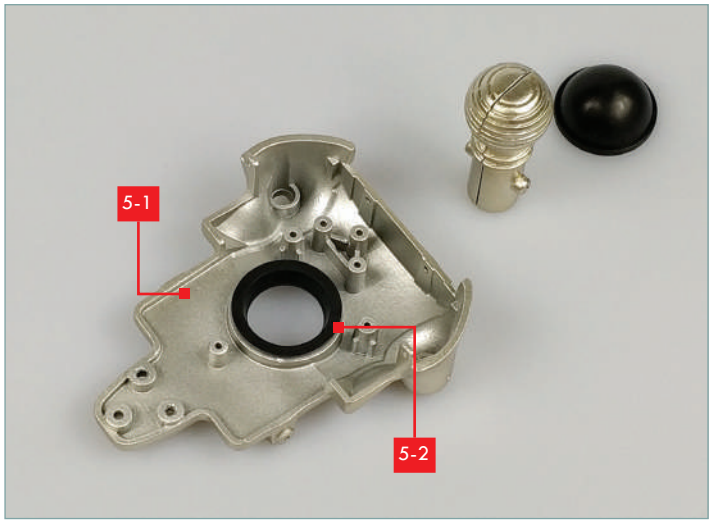
Using your cross-point screwdriver, screw them home. The screws should be recessed within their screw holes when you are finished.



STEP 4

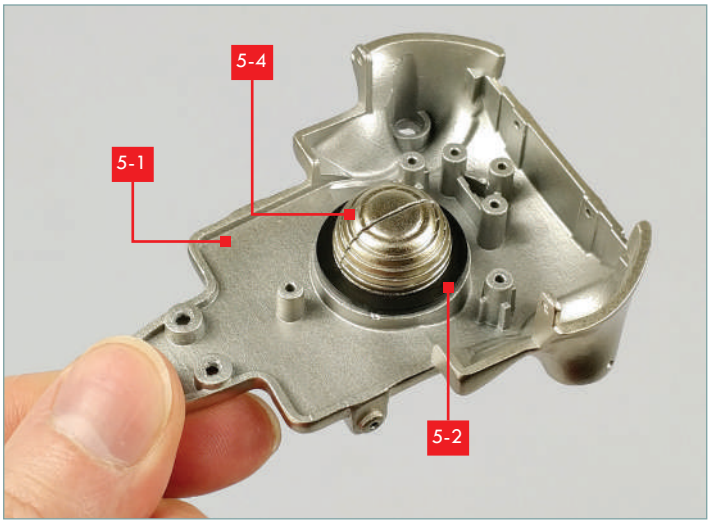
With the ball joint assembly completed (called **5-4** from now on), you'll move on to the neck piece itself.

Find the Lower Jaw (**5-1**), the Lower Jaw Ring (**5-2**), and the ball joint socket (**5-3**).



STEP 5

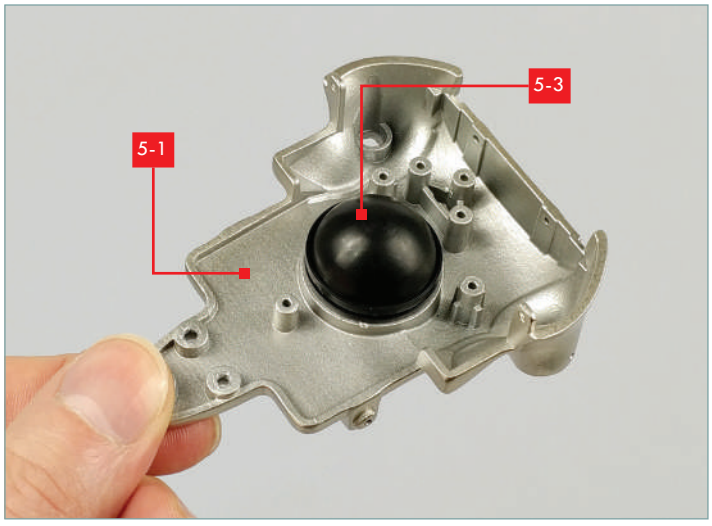
Insert **5-2** into the receiving hole in **5-1**. Make sure it sits evenly.



STEP 6

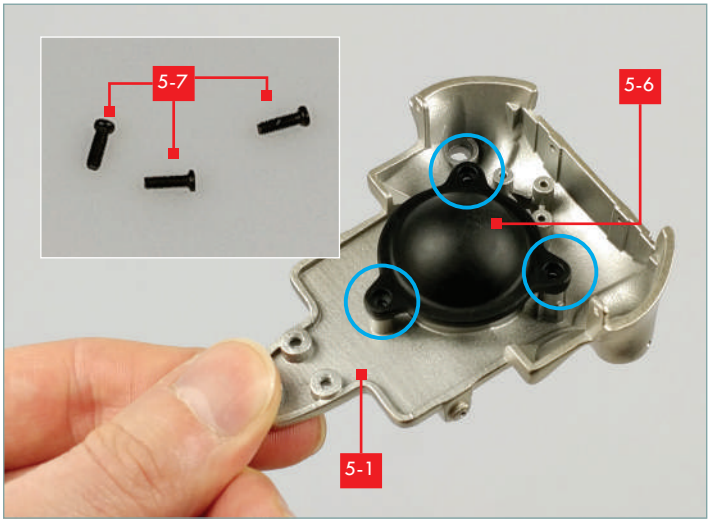
Insert the ball joint assembly **5-4** into the ring **5-2**.

The ball joint will retain freedom of movement, allowing you to pose your T-800 Endoskeleton's head when it is attached to the body.



STEP 7

Place the ball joint socket (**5-3**) on top of the ball joint, as shown.

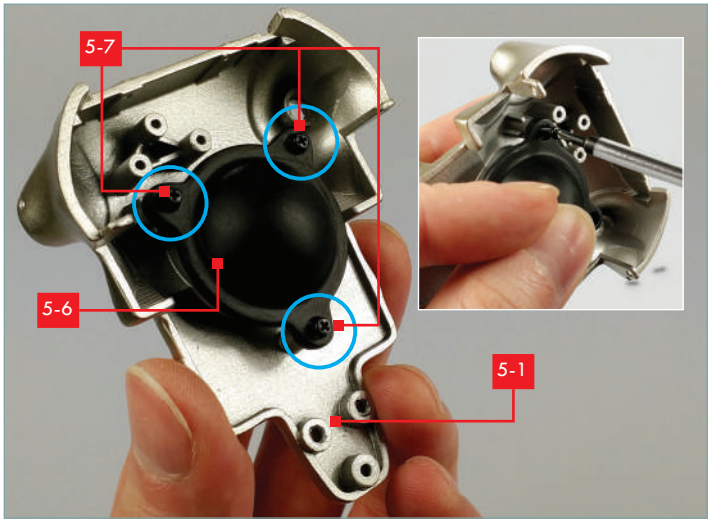


STEP 8

Next, take the ball joint cover (**5-6**) and place it over **5-3**, which was fitted in the previous step.

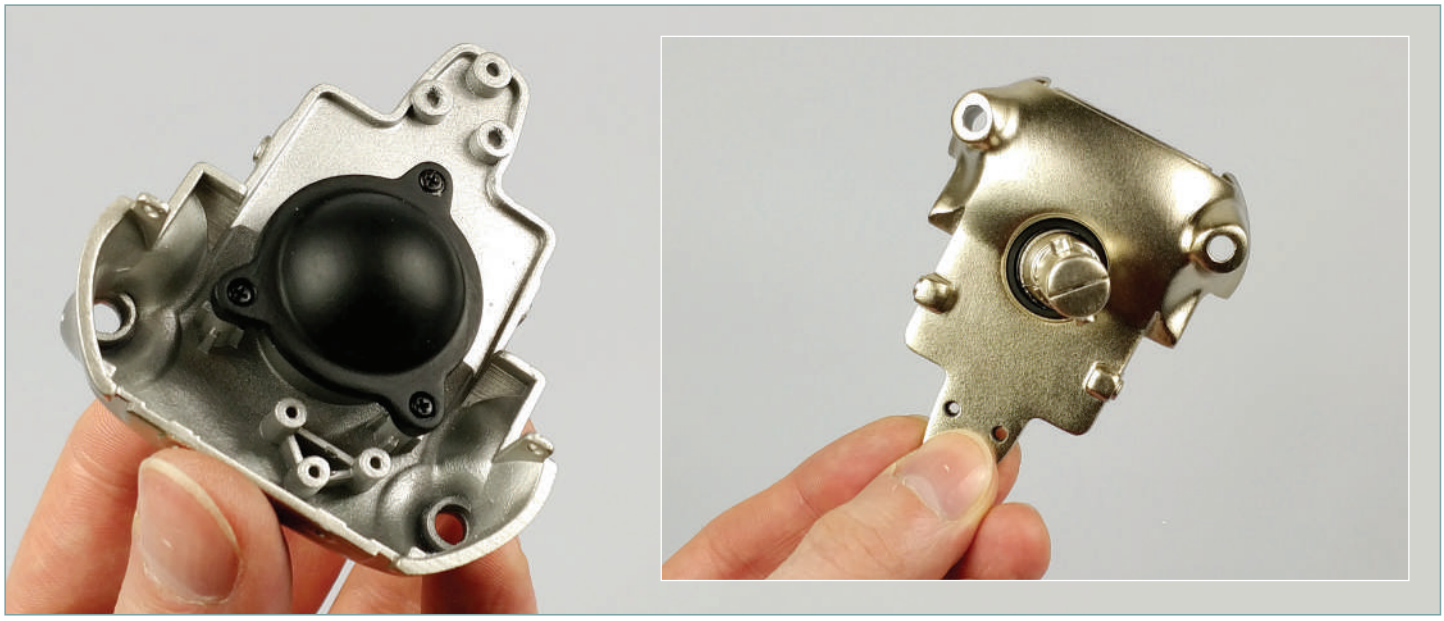
Align the three screw holes in the cover with the three screw holes on **5-1**, marked with blue circles in the photo.

You'll need three of the black screws supplied with this stage for the next step – PM 2x6 mm screws, labelled **5-7**.



STEP 9

Screw the three screws (**5-7**) through the cover to securely fasten the ball joint into place.

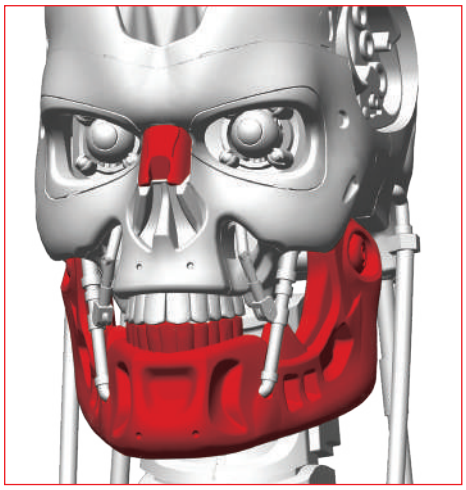


STAGE COMPLETE!

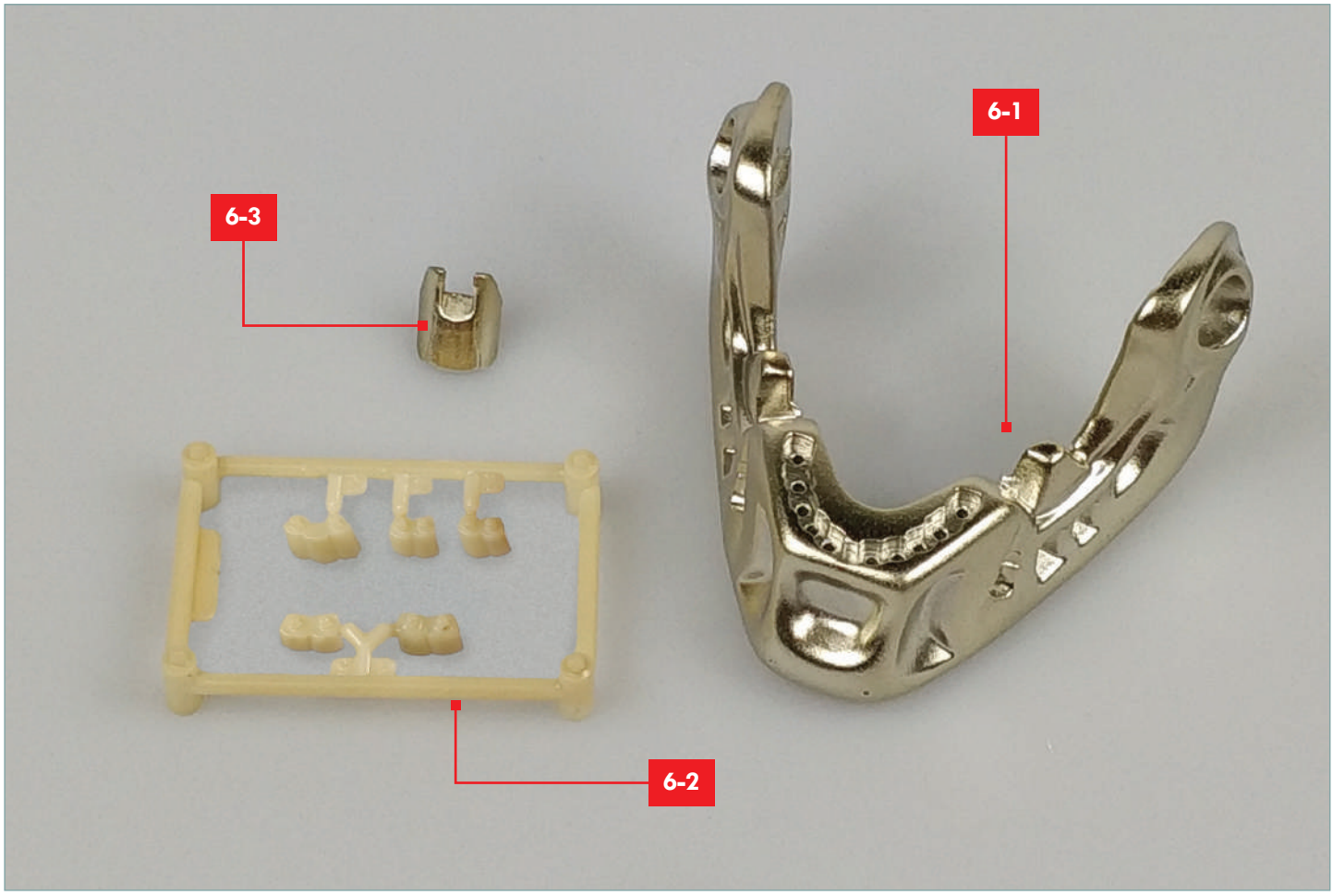
This is how your Lower Jaw should look once you've finished this stage's steps.

Check your version against the photos, and, once you're happy, store the pieces safely, along with the spare screws. In the next stage, we'll be building out more of the skull!

STAGE 06: THE TEETH OF THE LOWER JAW, AND THE BRIDGE OF THE NOSE



In this stage, you'll insert the teeth into the T-800 Endoskeleton's lower jaw, and add the bridge of the nose.

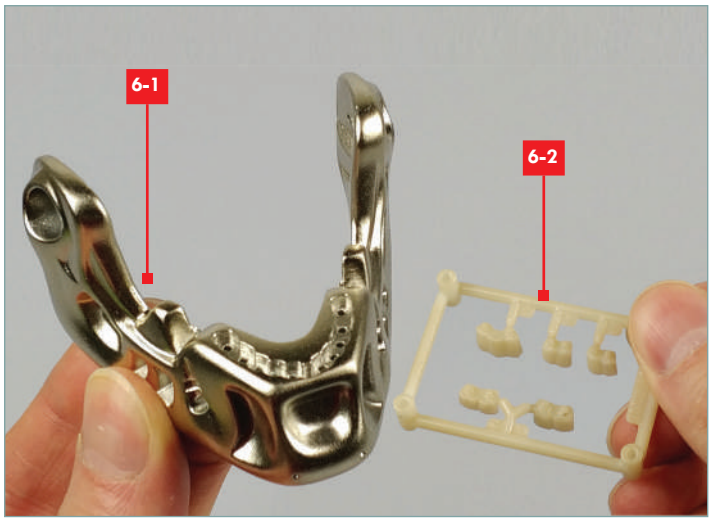


LIST OF PIECES

6-1	Lower jaw
6-2	Lower teeth
6-3	Bridge of nose

YOU WILL ALSO NEED

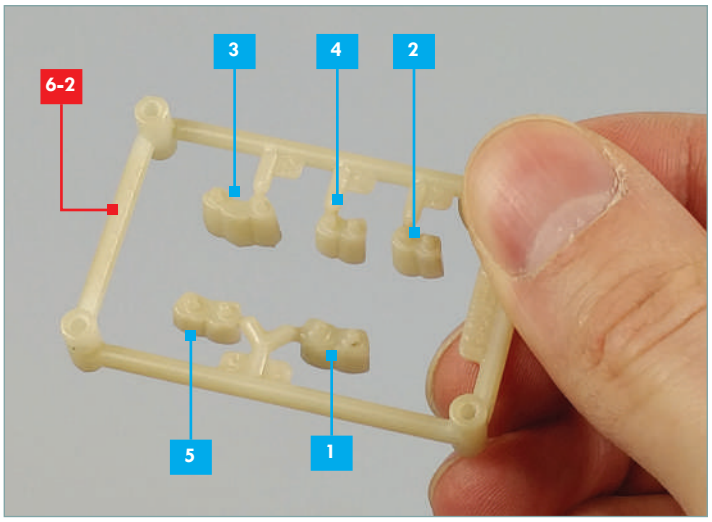
Superglue gel, and a cocktail stick or toothpick with which to apply it.



STEP 1

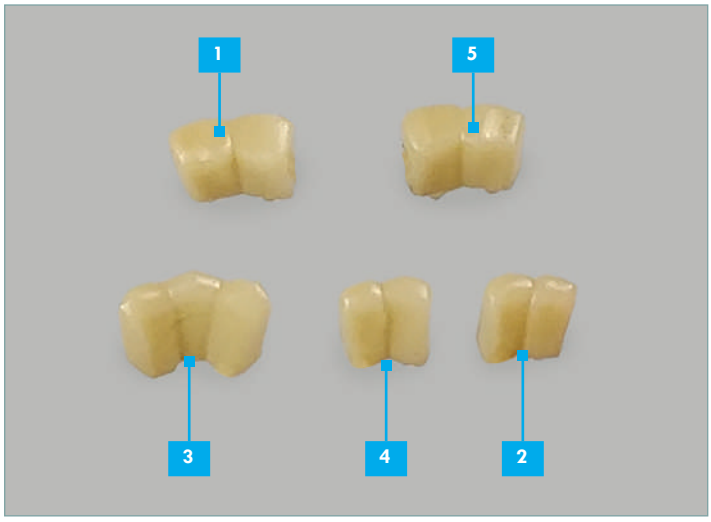
Check that you have all three pieces supplied with this stage, and then find the lower jaw **(6-1)** and the framework with the lower teeth **(6-2)**.

You will also need the superglue and a cocktail stick or similar with which to apply it.



STEP 2

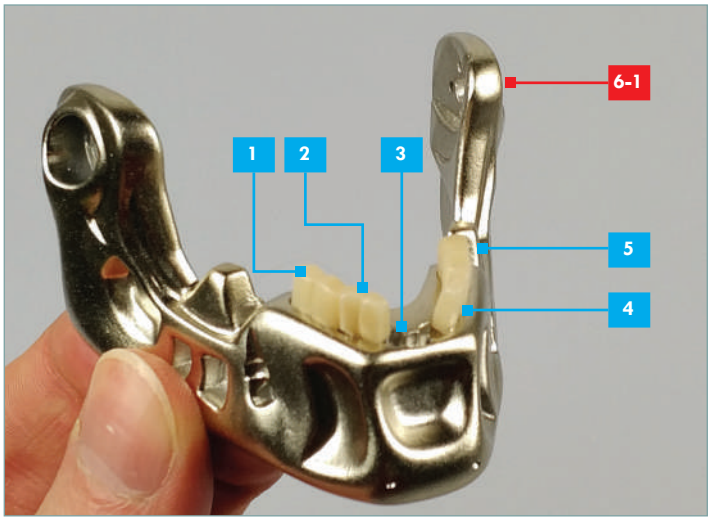
As with the upper teeth back in stage 02, each of the five sets of teeth **(6-2)** are different, so it is important that you note the part number of the teeth on the framework before you remove them, as shown in the photo above. Keep them clearly numbered until they are fitted. You may find it helpful to also study the photograph below once you have removed the teeth from the framework, and especially if you lose track of which piece is which.



STEP 3

Using a craft knife, small side-cutting pliers or similar, remove the teeth from the framework.

Always take care when using a craft knife or a bladed tool.

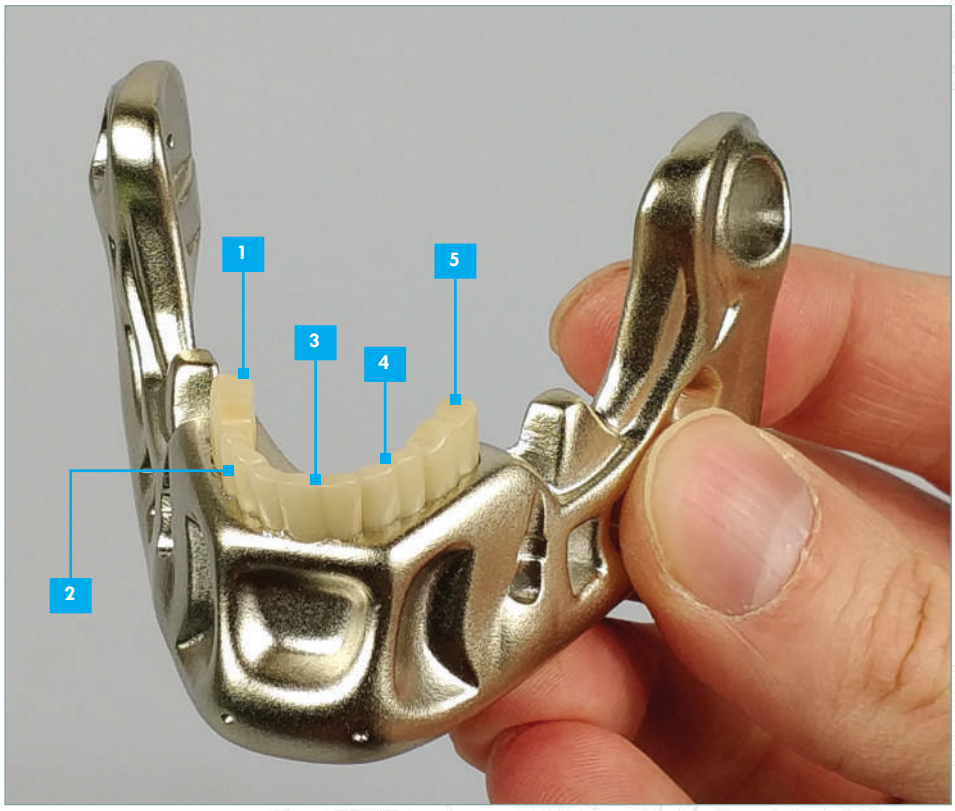


STEP 4

First, test-fit all of the teeth in place, checking they match the next photograph. You may find it easier to fit the front teeth last.

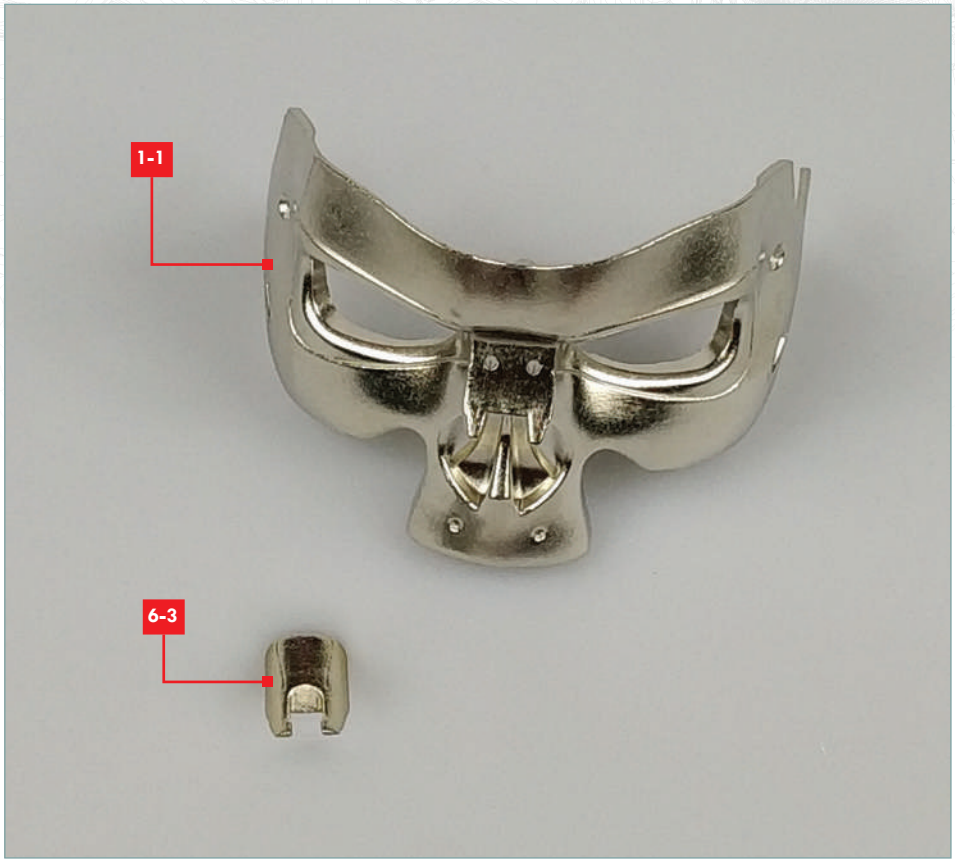
Then remove the first set of teeth and apply a tiny drop of superglue, with a cocktail stick, to the locating pins on the underside of the teeth.

Fix the glued section in place, holding it secure for a few seconds while the glue sets. Repeat this process for the remaining four sets of teeth.



STEP 5

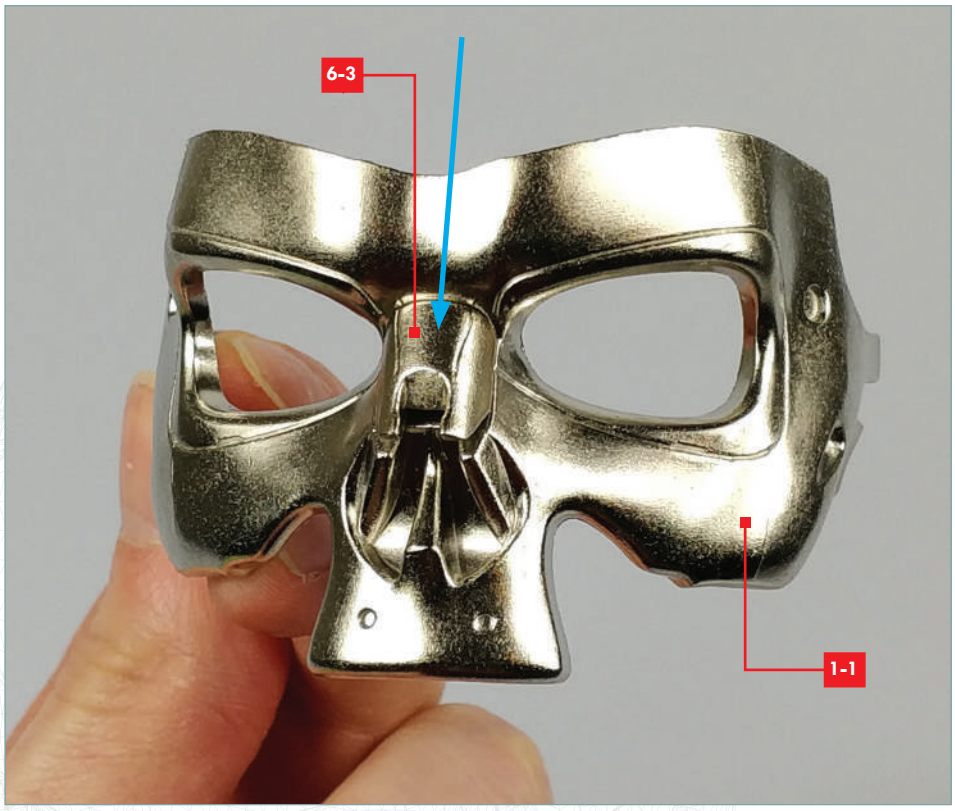
When glued into the lower jaw, the teeth should look like the above.



STEP 6

Next, take the bridge of the nose **(6-3)** from this stage, and the faceplate **(1-1)** from stage 01.

Check that **6-3** is correctly oriented, with the plated side facing outwards and the two 'prongs' pointing down towards the nostrils.



STEP 7

There are two small pins on the back of **6-3**. As with the teeth, apply a tiny drop of superglue with a cocktail stick to these locating pins.

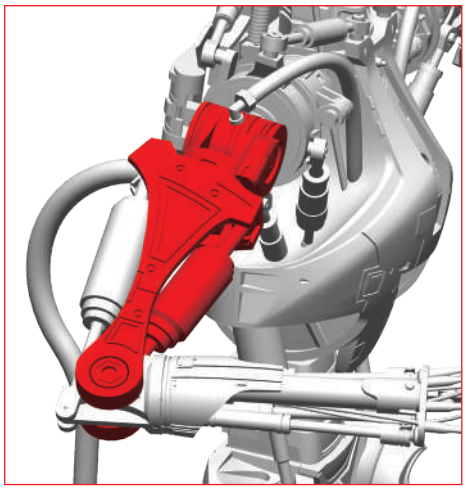
Fix part **6-3** in place on the faceplate, as shown, holding it secure for a few seconds while the glue sets.

STAGE COMPLETE

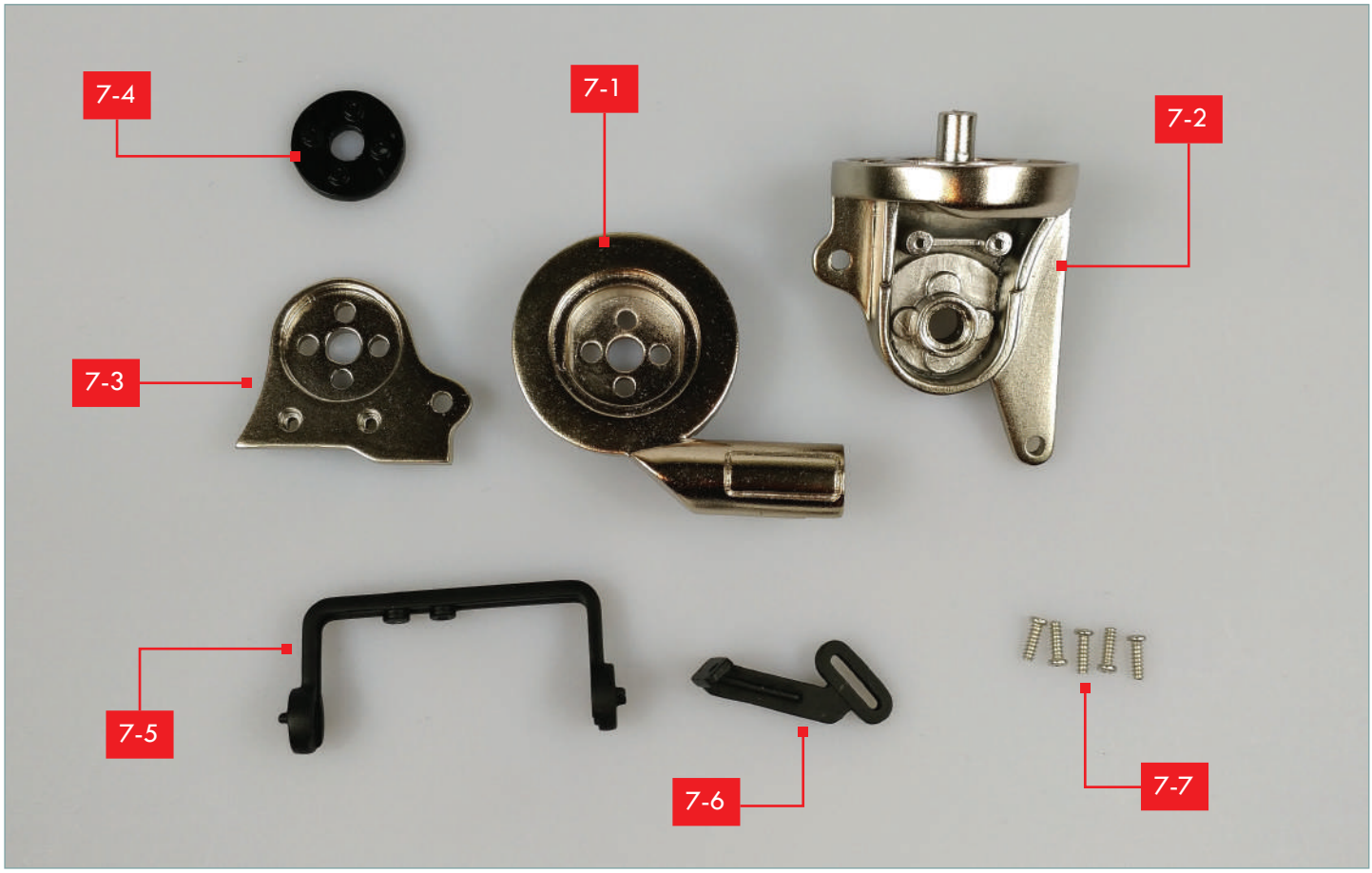
This is how your lower jaw and faceplate should look.

Check your version against the photos, and, once you're happy, store the pieces safely.

STAGE 07: COMPONENTS FOR THE UPPER ARM AND HEAD MOTOR



In this stage, you'll continue work on the upper arm from stage 04, and begin assembling the head motor joint.

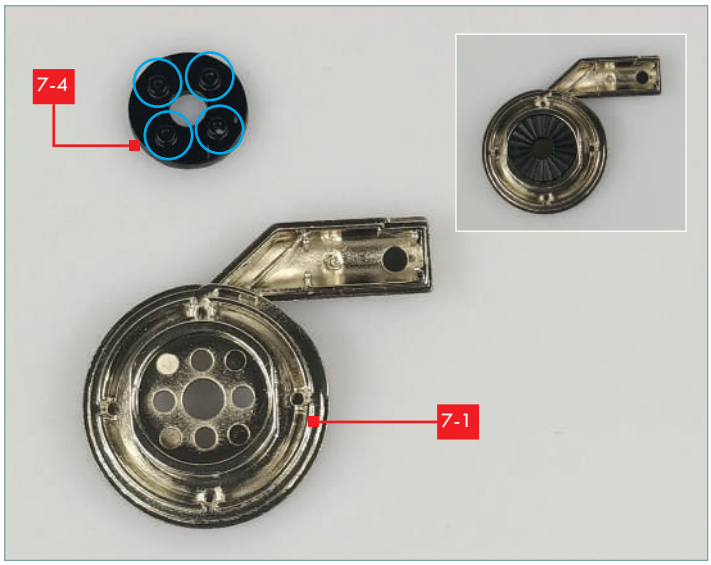


LIST OF PIECES

7-1	Upper arm A	7-5	Head motor joint A
7-2	Upper arm B	7-6	Head motor joint B
7-3	Upper arm C	7-7	5x PB screws (2x6 mm) (1 spare)
7-4	Upper arm ring		

YOU WILL ALSO NEED

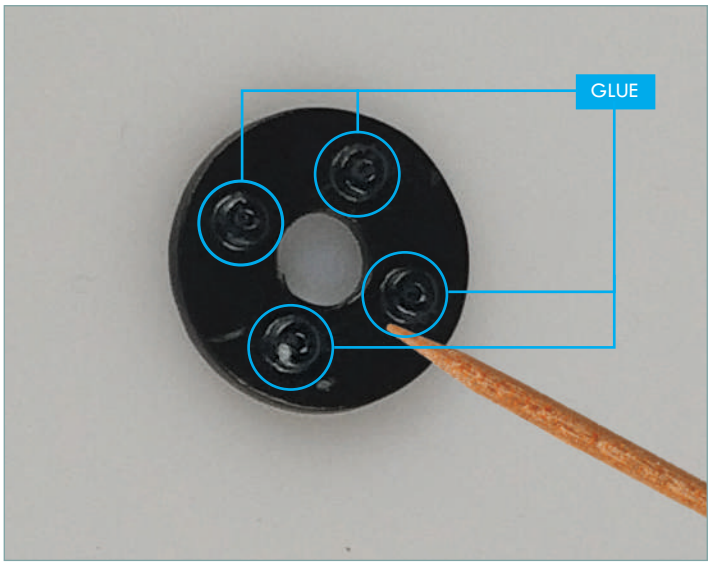
Superglue gel, and a cocktail stick or toothpick with which to apply it, the completed arm from stage 04 and a suitable cross-point screwdriver.



STEP 1

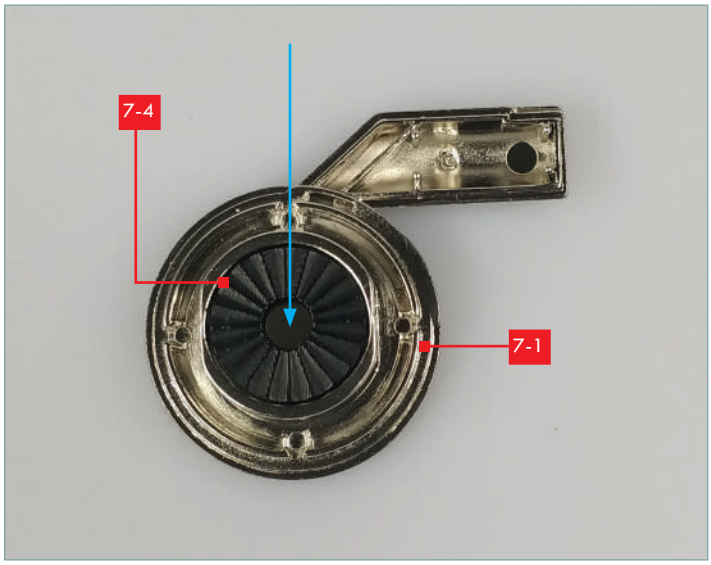
Check that you have all of the pieces supplied with this stage, and then find upper arm A (**7-1**) and the upper arm ring (**7-4**). Note the four pegs (circled in blue) on part **7-4** which fit into matching holes in part **7-1**. Test fit the parts together as shown in the inset.

Note: these parts may come packaged together.



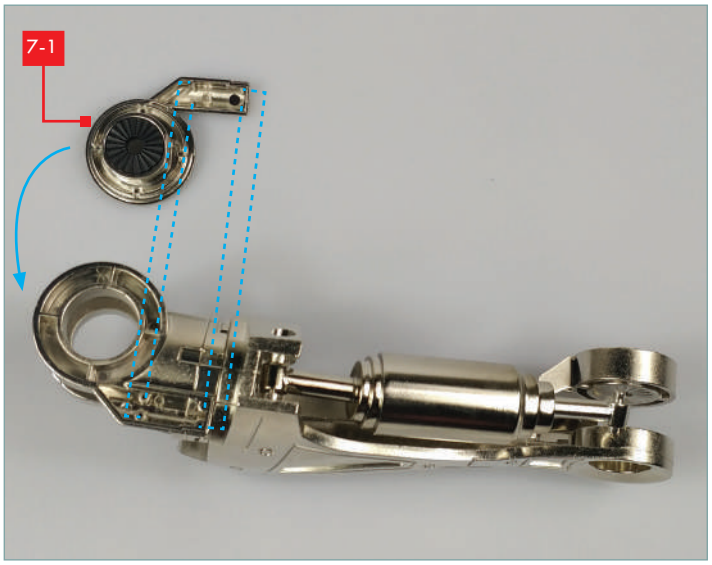
STEP 2

Take **7-4** and apply superglue to the outer edges of the four pegs on its underside, as shown in the photo, taking care that the glue doesn't accidently fill the holes. Using a cocktail stick or similar may help with the application of the glue.



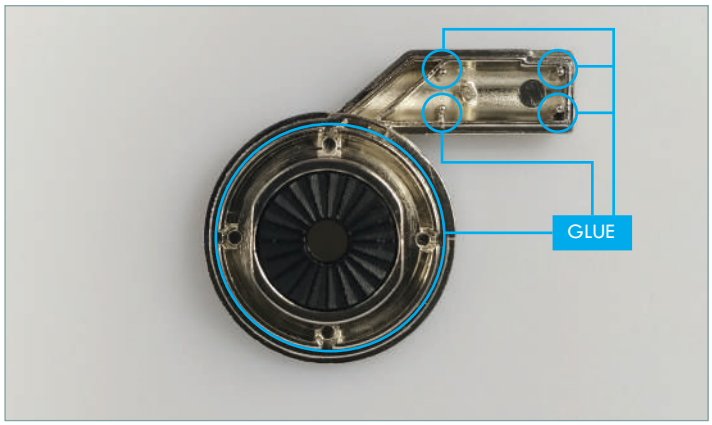
STEP 3

Once the glue is applied, secure part **7-4** into the recessed area on part **7-1**. As before, the pegs on the reverse of part **7-4** fit neatly into the matching holes in part **7-1**.



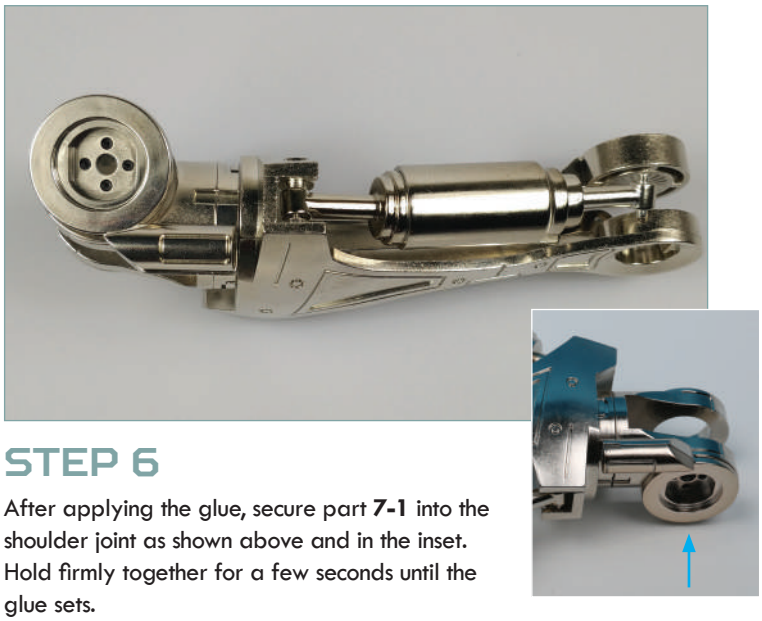
STEP 4

Next, take your completed part **7-1**/**7-4** along with the completed upper right arm assembly from stage 04. Test-fit part **7-1** into the shoulder joint as shown. Use the four pins in the 'half-pipe' section to help locate the piece correctly. See also the photographs in step 6.



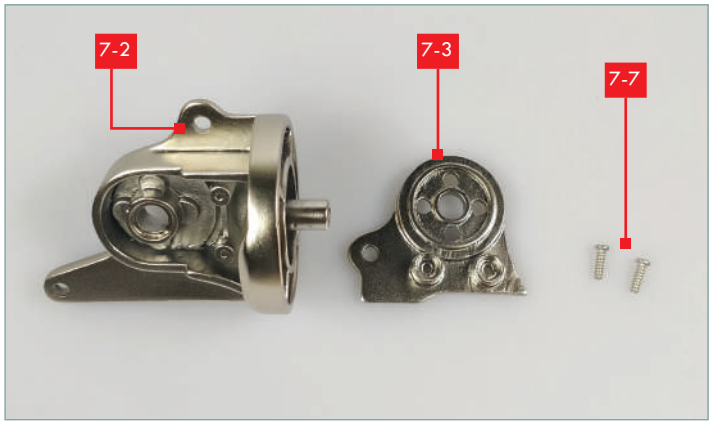
STEP 5

Once you're comfortable with the fit, apply superglue to the four pins, and to the edges of the inner circumference of **7-1**, using the photo as a guide.



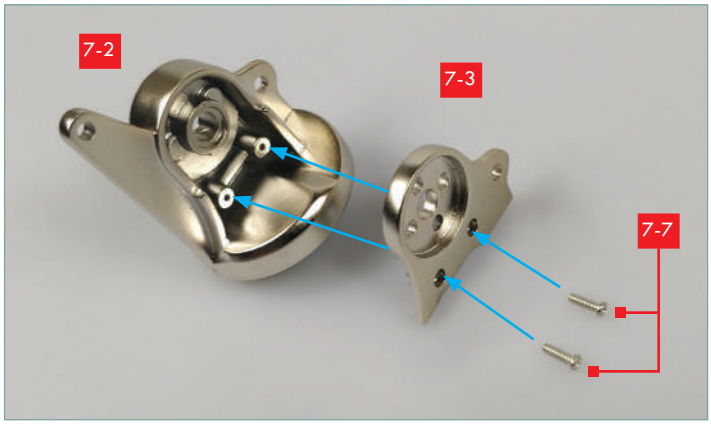
STEP 6

After applying the glue, secure part **7-1** into the shoulder joint as shown above and in the inset. Hold firmly together for a few seconds until the glue sets.



STEP 7

Next, take upper arm parts B (**7-2**) and C (**7-3**), along with two PB 2x6 mm screws (**7-7**).



STEP 8

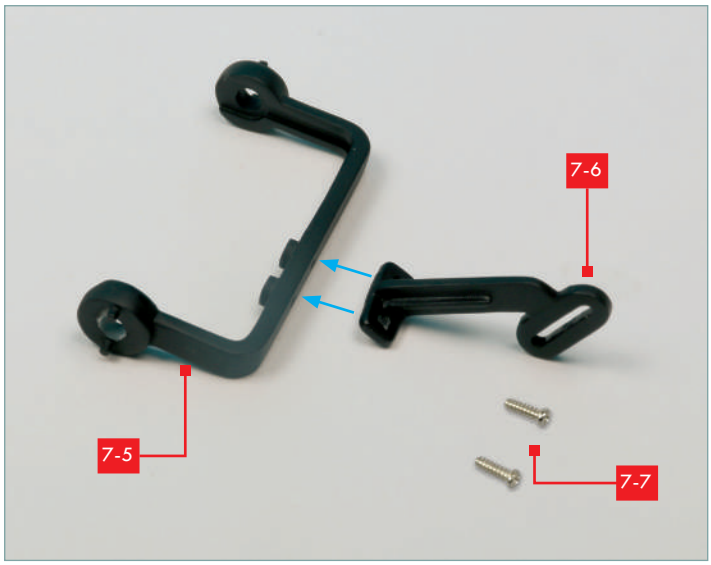
Part **7-3** locates into part **7-2**, and is held in place with the two screws, as shown.

STEP 9

After test-fitting the parts together, insert two PB 2x6 mm screws into the screw holes as illustrated, and tighten to secure the two parts.

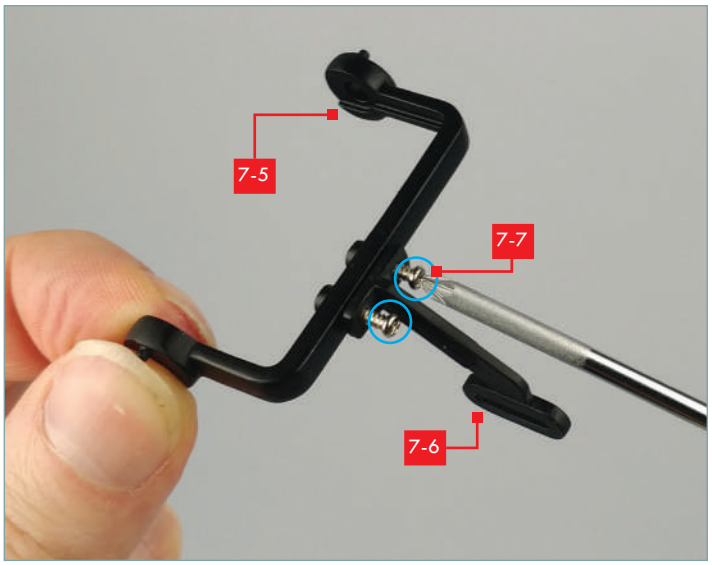
STEP 10

The component looks like this once screwed together. Note how the screws are sunk within the holes.



STEP 11

Finally, take head motor joint A (**7-5**) and head motor joint B (**7-6**) along with two PB 2x6 mm screws (**7-7**). Part **7-6** is joined to part **7-5**, as indicated by the blue arrows.



STEP 12

Insert the two screws into the holes, as shown, and tighten to secure the two parts together.

STEP 13

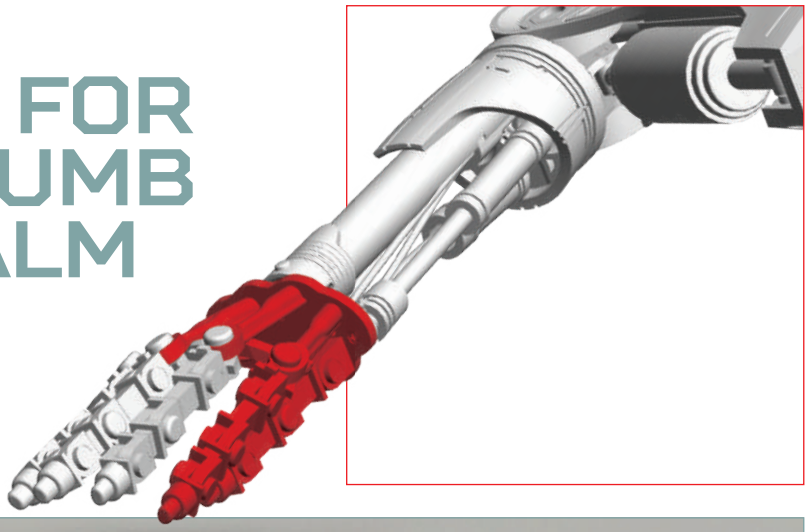
The piece looks like this once assembled.

STAGE COMPLETE

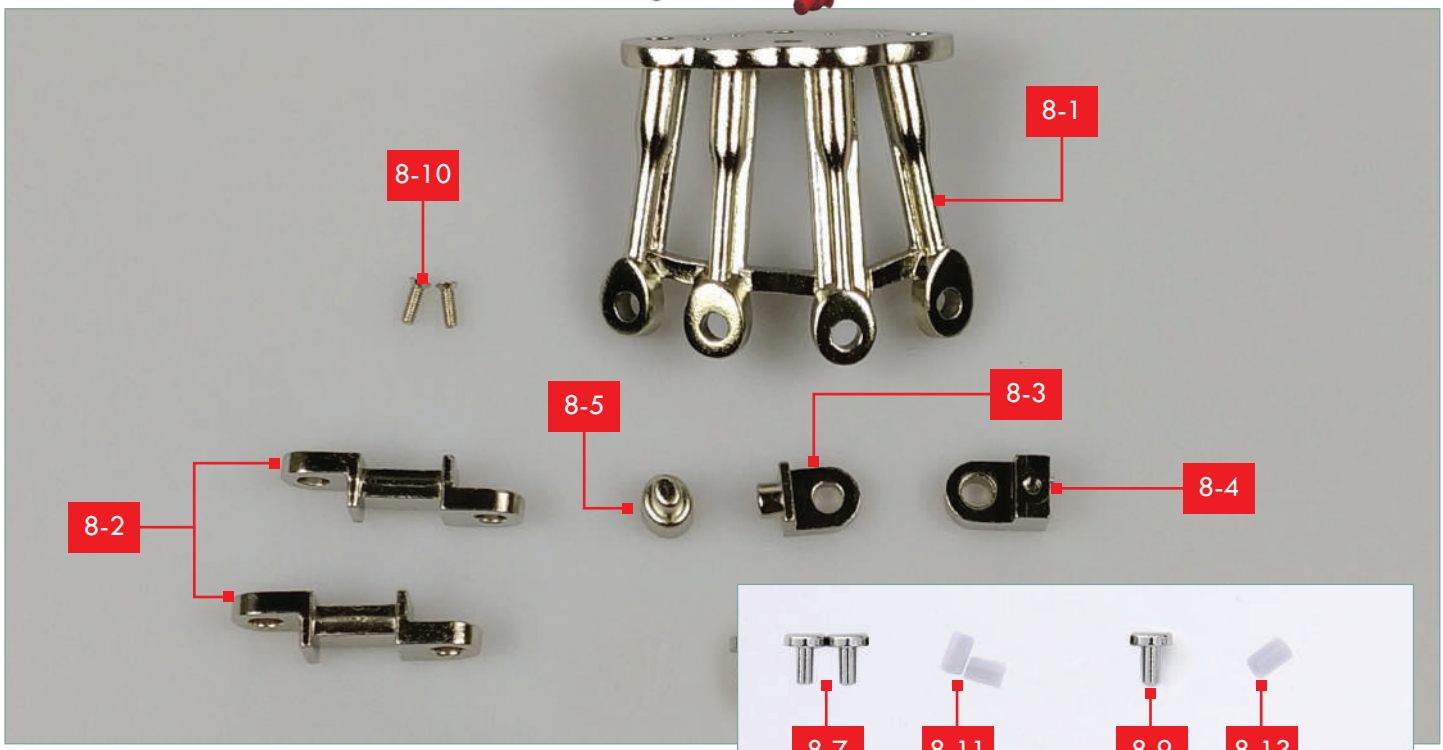
This is how all three components should look once you've finished this session's steps.

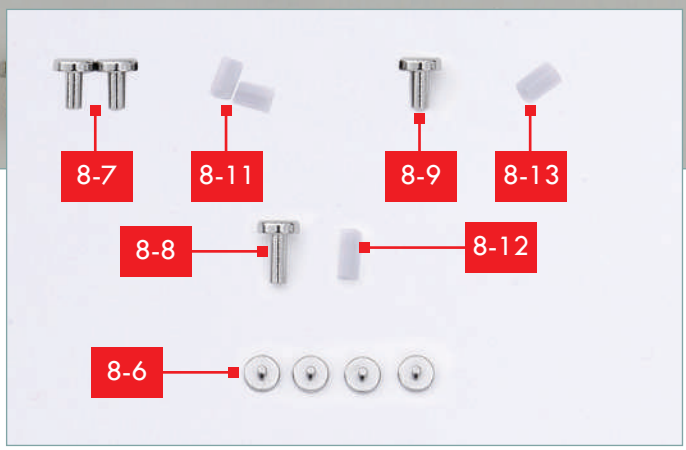
Check your pieces against the photos, and, once you're happy, store them away safely.

STAGE 08: COMPONENTS FOR THE RIGHT THUMB AND RIGHT PALM



In this stage, you'll assemble the right thumb and attach it to the palm, alongside the first finger you assembled in stage 03.



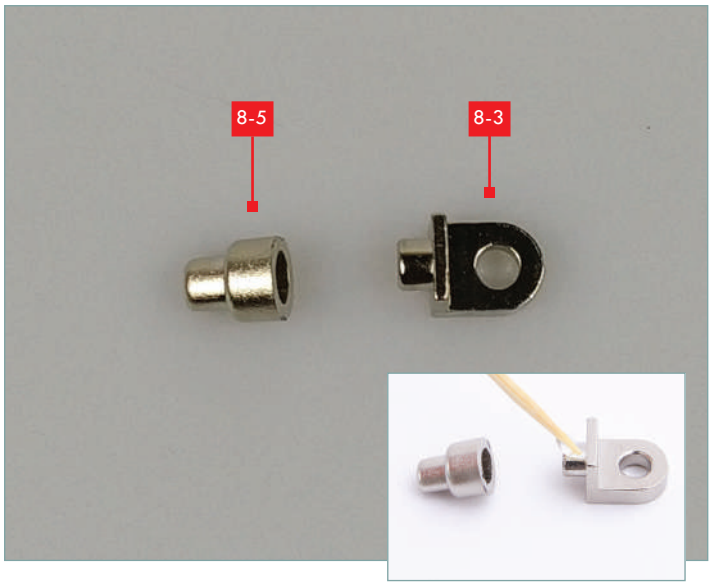


LIST OF PIECES

8-1	Right palm	8-9	Right thumb connector D
8-2	2x Right thumb A	8-10	2x KM screws (2x6 mm) (1 spare)
8-3	Right thumb B	8-11	2x Plastic sleeves for parts 8-7
8-4	Right thumb C	8-12	Plastic sleeve for part 8-8
8-5	Right thumb D	8-13	Plastic sleeve for part 8-9
8-6	4x Right thumb connector A		
8-7	2x Right thumb connector B		
8-8	Right finger connector C		

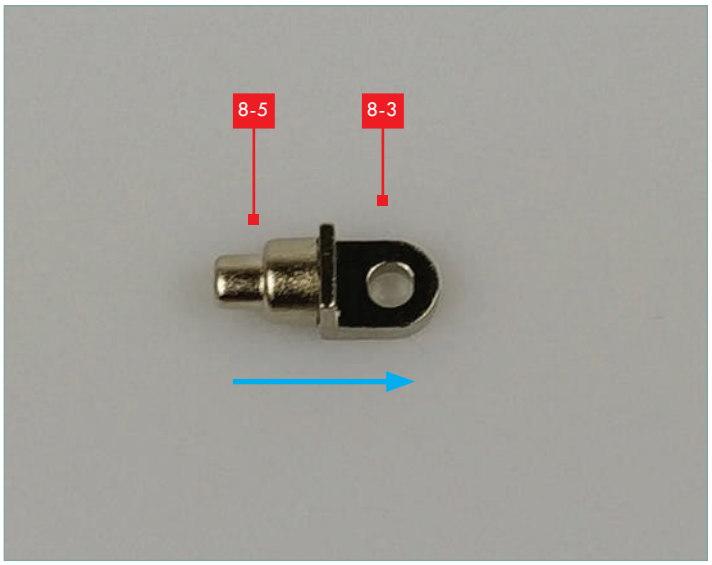
YOU WILL ALSO NEED

A suitable cross-point screwdriver, superglue gel and the completed finger from stage 03.



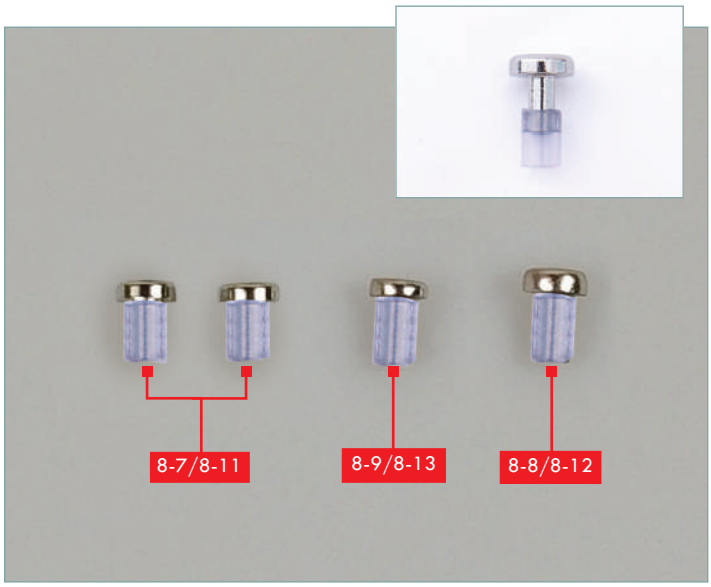
STEP 1

Check that you have all of the pieces supplied with this stage, and then find right thumb D (**8-5**) and right thumb B (**8-3**). Apply a little superglue to the peg on part **8-3** (inset).



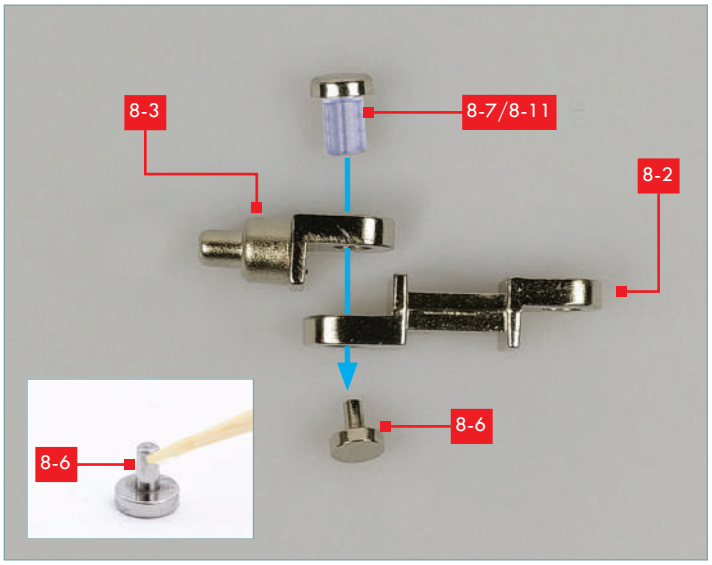
STEP 2

Fix **8-5** onto **8-3**, as shown by the blue directional arrow. This combined piece will be called **8-3** from now on.



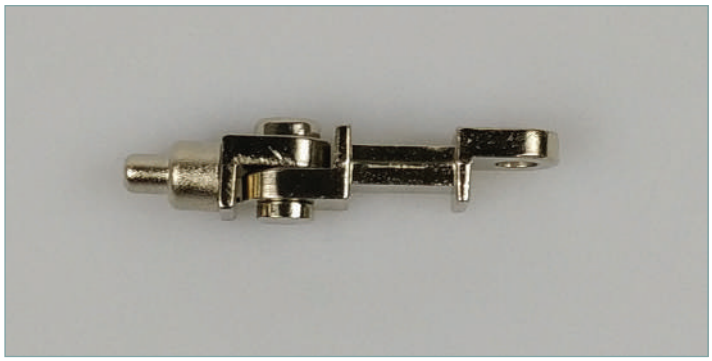
STEP 3

Take the connectors **8-7** (x2), **8-8** and **8-9**. Fit the plastic sleeves **8-11**, **8-12** and **8-13** onto the shafts of the connectors (inset). Note that the shafts are the same diameters, but there are three different lengths. Carefully rank the connector/sleeve assemblies in order of length.



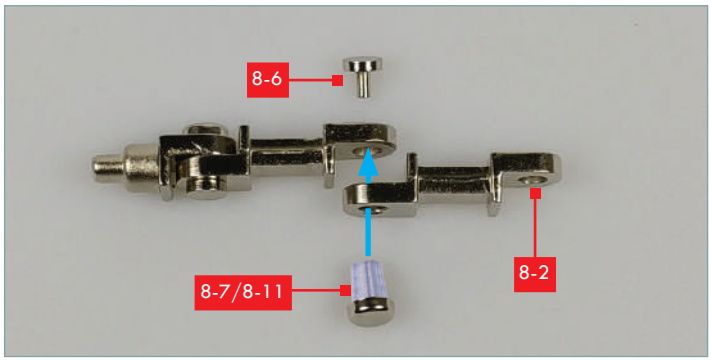
STEP 4

Take part **8-2** along with part **8-3** and check how they connect, as shown. Take one of the connectors **8-7**, with plastic sleeve **8-11** fitted, and fit through the holes in parts **8-3** and **8-2**. Apply a little superglue to the pin on connector **8-6** (inset) and fix the joint together.



STEP 5

The first section of the thumb looks like this when completed.

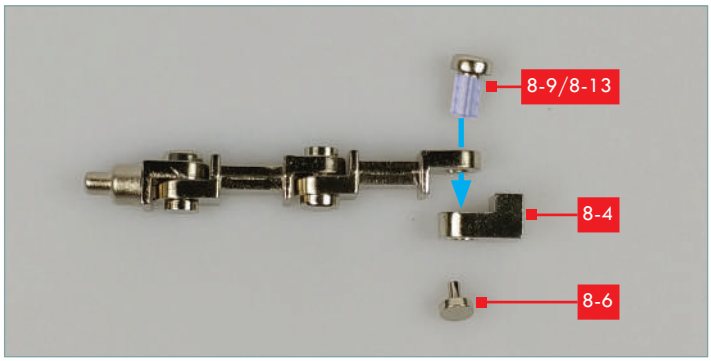


STEP 6

Now, take the thumb section **8-2** and position it as shown. This time, connector **8-7** (with plastic sleeve) is fitted through from the other side, as indicated by the blue arrow. Apply a little superglue to one of the connectors **8-6** and fix the joint together.

STEP 7

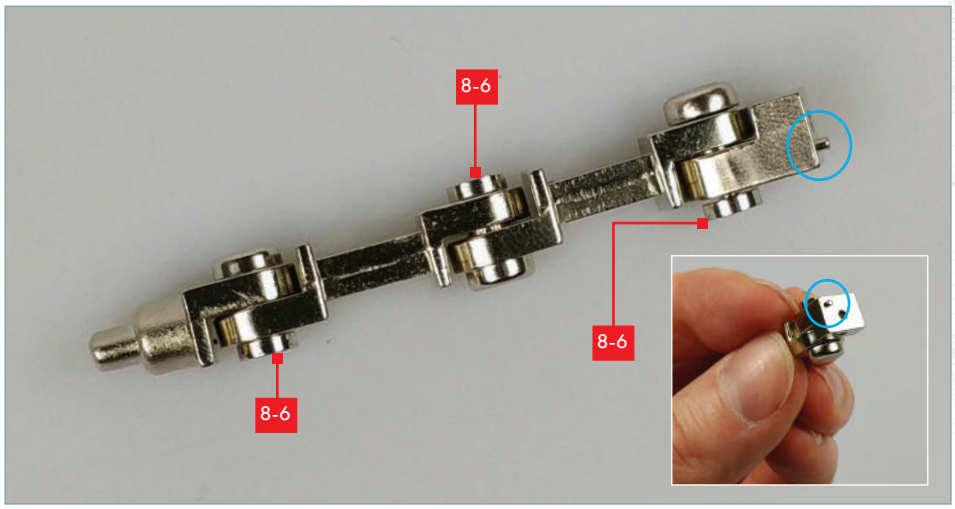
The first two joints of the thumb look like this when completed.



STEP 8

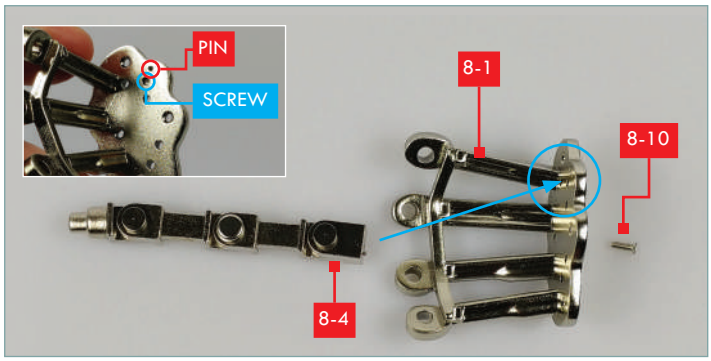
To your first two joints, now add the connector (**8-9**) — which is the longest of the three kinds of connectors in this stage — complete with its sleeve. Position right thumb C (**8-4**) as shown. Fit the connector **8-9** through the joint, as indicated by the arrow.

Apply a little superglue to the connector **8-6** and fix the joint together.



STEP 9

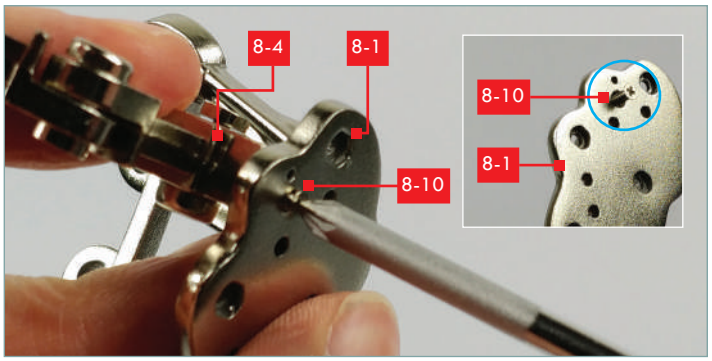
Your completed thumb will look like this, with the connectors arranged alternately. Take particular note of the locating pin, as shown in the inset (circled in blue) which will be important in the next step.



STEP 10

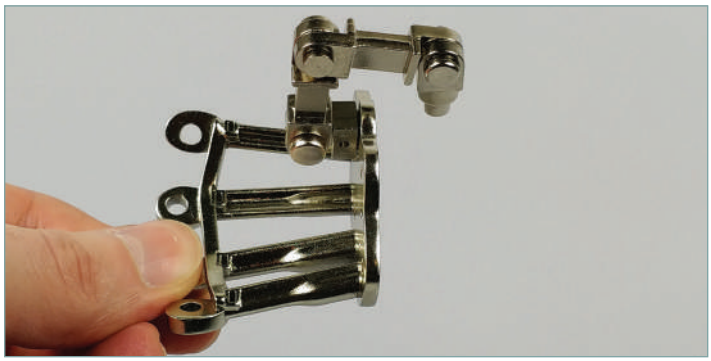
Now, find the right palm (**8-1**) and a KM 2x6 mm screw (**8-10**). Lay them out in your workspace as shown in the photo.

The locating pin on part **8-4** fits into the hole marked 'pin', which will help keep the thumb from rotating as the screw is tightened.



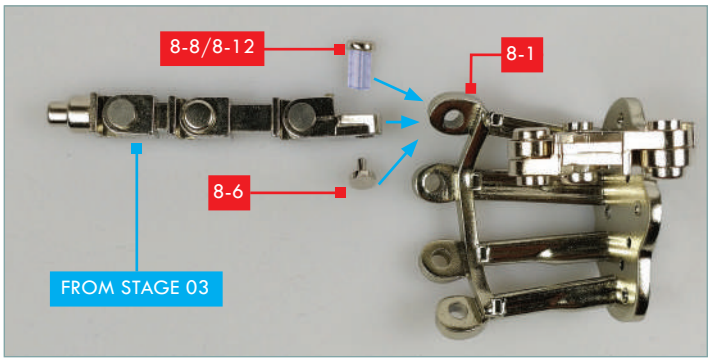
STEP 11

Insert the locating pin on part **8-4** into the matching hole in **8-1** (inset step 10). Whilst holding part **8-4** in place, insert a KM 2x6 mm screw (**8-10**), as shown, and screw it in place.



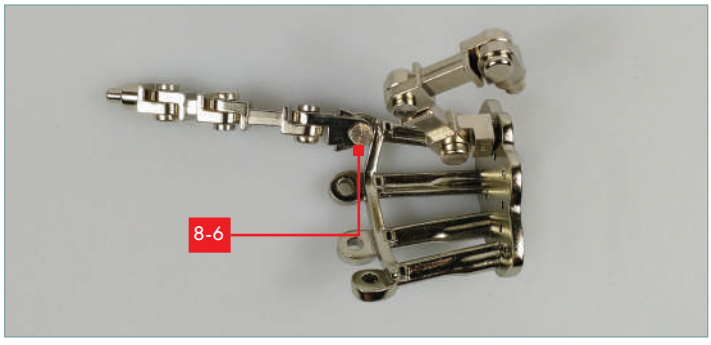
STEP 12

The thumb will look like this once attached (the digits are fully articulated).



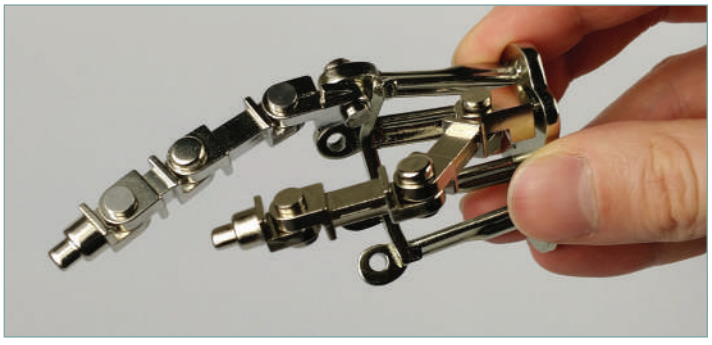
STEP 13

Finally, take the finger you assembled in stage 03, together with the final two connectors — **8-8** (with sleeve) and **8-6**. The finger is attached to the knuckle in the index finger position, as shown. Fit connector **8-8** (with sleeve) through the knuckle socket on part **8-1** and then through part **8-6**. Apply a little superglue to connector **8-6** and fix the joint together.



STEP 14

The finger should look like this when connected to the knuckle, with **8-8** on top, and **8-6** underneath when viewed in this orientation.



STAGE COMPLETE

This is how your palm, thumb, and first finger should look when assembled.

Check your version against the photos, and, once you're happy, store the pieces until it's time to add the next finger.